

ORDINANCE No. 119507

COUNCIL BILL No. 112644

The City

ORDINANCE _____

AN ORDINANCE relating to building and construction codes: repealing Section 22.300.010 of the Seattle Municipal Code (Ordinance 118553), and adopting a new Section 22.300.015 to adopt the 1999 National Electrical Code with Seattle amendments as the Seattle Electrical Code.

Honorable President:
Your Committee on _____

to which was referred the within Council report that we have considered the same

COMPTROLLER FILE No. _____

6-21-99 Full Council

Introduced: <u>4-19-99</u>	By: <u>Drago TD</u>
Referred: <u>4-19-99</u>	To: <u>Business, Economic & Community Development</u>
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TD

Legis Department

The City of Seattle--Legislative Department

REPORT OF COMMITTEE

Date Reported
and Adopted

Committee President:

Committee on

which was referred the within Council Bill No.

that we have considered the same and respectfully recommend that the same:

2-21-99 Full Council: Passed 8-0 (Excused: Pagelew)

Committee Chair

ORDINANCE 119507

AN ORDINANCE relating to building and construction codes: repealing Section 22.300.010 of the Seattle Municipal Code (Ordinance 118553), and adopting a new Section 22.300.015 to adopt the 1999 National Electrical Code with Seattle amendments as the Seattle Electrical Code.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.300.010 of the Seattle Municipal Code adopting the 1996 National Electrical Code as adopted in Ordinance 118553 is hereby repealed, and a new Section 22.300.015 is added to the Seattle Municipal Code to read as follows:

22.300.015 Adoption of the National Electrical Code.

The National Electrical Code, 1999 edition, published by the National Fire Protection Association, one copy of which is filed with the City Clerk in C.F. 303073, is hereby adopted and by this reference made a part of this subtitle. The National Electrical Code, 1999 edition, together with the amendments and additions thereto adopted by Ordinance 119507 constitute the Seattle Electrical Code.

Section 2. The National Electrical Code, 1999 edition, is amended by adding Chapters 1, 2 and 3 as follows:

**CHAPTER 1
APPLICATION OF THIS CODE**

Section 101. Title. This code shall be known as the "Seattle Electrical Code Supplement" and may be so cited. It is referred to herein as the "Electrical Code" or "this code."

Section 102. Purpose. The purpose of this code is to protect persons, buildings and the contents thereof in a practical manner from hazards arising from the use of electricity for lights, heat, power, radio, signaling and other purposes. An additional purpose of this code is to provide equal, higher or better standards of construction and/or equal, higher or better standards of materials, devices, appliances and equipment than that required by the State of Washington under the provisions of Chapter 19.28 RCW (Revised Code of Washington). This code is intended to provide for and promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this code. This code is not intended as a design specification nor an instruction manual for untrained persons.

Section 103. Scope. The Electrical Code shall apply to all electrical wiring and equipment, including communications systems, installed or used within the City.

Exception No. 1: Installations in ships and watercraft not connected to public utilities, railway rolling stock, aircraft or automotive vehicles.

Exception No. 2: Installations of railways or generation, transformation, transmission or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.



1 *Exception No. 3: Installations of communication equipment under exclusive control*
2 *of communication utilities, located outdoors or in building spaces used exclusively*
3 *for such installations.*

4 *Exception No. 4: Installation of communication or signaling equipment used*
5 *exclusively for the operation of a municipal fire alarm or police telegraph system.*

6 *Exception No. 5: Installations under the exclusive control of electric utilities for the*
7 *purpose of communication, metering or for the generation, control, transformation,*
8 *transmission and distribution of electric energy located in buildings used for such*
9 *purposes or leased by the utility or on public highways, streets, roads or other public*
10 *ways, or outdoors on established rights on private property up to service point as*
11 *defined in this code. The installation and maintenance of all service conductors up*
12 *to the point of connection to the consumer's service entrance conductors shall be*
13 *the responsibility of the serving utility.*

14 **Section 104. APPLICATION TO EXISTING BUILDINGS**

15 (a) **Additions, Alterations and Repairs.** Additions, alterations and repairs may be
16 made to the electrical system of existing buildings or structures without making the
17 entire electrical system comply with all of the requirements of this code for new
18 buildings or structures, provided the additions, alterations or repairs that are made
19 shall comply with the requirements of this code except as otherwise specifically
20 provided in other applicable retroactive ordinances of the City.

21 *Exception: Subject to the approval of the building official, repairs may be made with*
22 *the same materials of which the building or structure is constructed, provided the*
23 *repair complies with the electrical code in effect at the time of original installation*
24 *and provided further that no change shall be permitted which increases its hazard.*

25 (b) **Existing Electrical Systems.** Electrical systems in existence at the time of the
26 passage of this code may continue to be used provided such use was legal at the
27 time of the passage of this code and provided continued use is not dangerous to life
28 or limb.

29 (c) **Maintenance.** All buildings or structures, both existing and new, and all parts
30 thereof shall be maintained in a safe condition. All devices or safeguards which are
31 required by this code or which were required by a code in effect when the building
32 or structure was erected, altered or repaired shall be maintained in good working
33 order. The owner or the owner's agent shall be responsible for the maintenance of
34 buildings and structures.

35 It shall be the duty of the owner or the owner's agent to maintain in a safe
36 and usable condition all parts of buildings or equipment which are intended to assist
37 in the extinguishing of fire, or to prevent the origin or spread of fire, or to safeguard
38 life or property. It shall be unlawful to fail to immediately comply with any notice or
39 order of the fire chief or the building official.

40 *Exception: The building official may modify the requirements of this subsection*
41 *where all or a portion of a building is unoccupied.*

1 (d) **Historic Buildings and Structures.** The building official may modify the
2 specific requirements of this code as it applies to buildings and structures
3 designated as landmarks of historical or cultural importance and require in lieu
4 thereof alternate requirements which, in the opinion of the building official, will result
5 in a reasonable degree of safety to the public and the occupants of those buildings.

6 A historic building or structure is one which has been designated for
7 preservation by City Landmarks Preservation Board or the State of Washington, has
8 been listed, or has been determined eligible to be listed, in the National Register of
9 Historic Places, has been officially nominated for such status, or is a structure
10 contributing to the character of a designated landmark or special review district.

11 (e) **Moved Buildings.** Buildings or structures moved into or within the city shall
12 comply with standards adopted by the building official. No building shall be moved
13 into or within the City unless, prior to moving, the building official has inspected the
14 building for compliance with those standards and the permit holder has agreed to
15 correct all deficiencies found and has been issued an electrical permit for the work.
16 Any moved building that is not in complete compliance with those standards within
17 one year from the date of permit issuance and is found to be a public nuisance may
18 be abated.

19 **Section 105. Tests.** Whenever there is insufficient evidence of compliance with
20 the provisions of this code or evidence that any material or construction does not
21 conform to the requirements of this code, the building official may require tests as
22 proof of compliance to be made at no expense to the City.

23 Test methods shall be specified by this code or by other recognized test
24 standards. If there are no recognized and accepted test methods for the proposed
25 alternate, the building official shall determine the test procedures.

26 All tests shall be made by an approved agency. Reports of tests shall be
27 retained by the building official.

28 **Section 106. Alternate Materials and Methods of Wiring.** This code does not
29 prevent the use of any material, method or design of wiring not specifically allowed
30 or prohibited by this code, provided the alternate has been approved and its use
31 authorized by the building official.

32 The building official may approve an alternate, provided he/she finds that the
33 proposed alternate complies with the provisions of this code and the alternate, when
34 considered together with other safety features or relevant circumstances, will
35 provide at least an equivalent level of strength, effectiveness, fire resistance,
36 durability, safety and sanitation.

37 The building official may require that sufficient evidence or proof be
38 submitted to reasonably substantiate any claims regarding the use or suitability of
39 the alternate. The building official may, but is not required to, record the approval of
40 alternate materials and methods and any relevant information in the files of the
41 building official or on the approved permit plans.



1 may enter any building or premises to disconnect utility service or energy supply.
2 Utility service shall be discontinued until the equipment, appliances, devices or
3 wiring found to be defective or defectively installed are removed or restored to a
4 safe condition.

5 It shall be unlawful for any person to reconnect any electrical equipment
6 which has been disconnected by the building official until the equipment has been
7 placed in a safe condition and approved by the building official.

8 (f) **Liability.** Nothing contained in this code is intended to be, nor shall be
9 construed to create or form the basis for any liability on the part of the City or its
10 officers, employees or agents, for any injury or damage resulting from the failure of
11 a building to conform to the provisions of this code, or by reason or in consequence
12 of any inspection, notice, order, certificate, permission or approval authorized or
13 issued or done in connection with the implementation or enforcement of this code,
14 or by reason of any action or inaction on the part of the City related in any manner
15 to the enforcement of this code by its officers, employees or agents.

16 Neither the building official nor any employee charged with the enforcement
17 of this code shall be personally liable for any damage that accrues to persons or
18 property as a result of any act or omission committed in the discharge of their
19 duties, provided that the building official or employee acted in good faith and without
20 malice.

21 (g) **Code Interpretation or Explanation.** Electrical inspectors may give information
22 as to the meaning or application of the National Electrical Code and the Seattle
23 Supplement, but shall not lay out work or act as consultants for contractors, owners
24 or users.

25 (h) **Cooperation of Other Officials and Officers.** The building official may
26 request, and shall receive so far as may be necessary in the discharge of duties,
27 the assistance and cooperation of other officials of the City of Seattle and officers of
28 public and private utilities.

29 **Section 203. Unsafe Conditions.** The building official may inspect any new or
30 existing electrical installation or equipment, and if the installation or equipment is
31 found to be maintained or used in an unsafe condition or found to be in violation of
32 this code, the building official shall serve upon the owner or user a notice or order
33 requiring correction. Any person served such notice who fails to comply with the
34 order therein shall be in violation of this ordinance and subject to the penalties
35 provided in this code.

36 Whenever the building official finds that any building or structure, or portion
37 thereof, is in such a dangerous and unsafe condition as to constitute an imminent
38 hazard to life or limb, the building official may issue an emergency order directing
39 that the building or structure, or portion thereof, be restored to a safe condition. The
40 order shall specify the time for compliance. The order may also require that the
41 building or structure, or portion thereof, be vacated within a reasonable time, to be
42 specified in the order. In the case of extreme danger, the order may specify

1 immediate vacation of the building or structure, or may authorize disconnection of
2 the utilities or energy source pursuant to Section 202(e). No person shall occupy
3 the building or structure, or portion thereof, after the date on which it is required to
4 be vacated until it is restored to a safe condition as required by the order and this
5 code. It shall be unlawful for any person to fail to comply with an emergency order
6 issued by the building official.

7 **Section 204. VIOLATIONS AND PENALTIES**

8 (a) **Violations.** It shall be a violation of this code for any person, firm or corporation
9 to erect, construct, enlarge, repair, move, improve, remove, convert or demolish,
10 equip, occupy, or maintain any building or structure in the City, contrary to or in
11 violation of any of the provisions of this code.

12 It shall be a violation of this code for any person, firm or corporation to aid,
13 abet, counsel, encourage, hire, commend, induce or otherwise procure another to
14 violate or fail to comply with any of the provisions of this code.

15 It shall be a violation of this code for any person, firm or corporation to use
16 any materials or to install any device, appliance or equipment which does not
17 comply with applicable standards of this code or which has not been approved by
18 the building official.

19 (b) **Civil Penalty.** Any person, firm or corporation failing to comply with the
20 provisions of this code shall be subject to a cumulative civil penalty in an amount
21 not to exceed \$500 per day for each violation from the date the violation occurs or
22 begins until compliance is achieved.

23 (c) **Criminal Penalties.** 1. Anyone violating or failing to comply with any order
24 issued by the building official pursuant to this code shall, upon conviction thereof, be
25 punished by a fine of not more than \$1,000 or by imprisonment for not more than
26 360 days, or by both such fine and imprisonment. Each day's violation or failure to
27 comply shall constitute a separate offense.

28 2. Anyone violating or failing to comply with any of the provisions of this
29 code and who within the past five years has had a judgment against them pursuant
30 to Section 204(b), shall upon conviction thereof be fined in a sum not to exceed
31 \$500 or by imprisonment for not more than 180 days, or by both such fine and
32 imprisonment. Each day's violation or failure to comply shall constitute a separate
33 offense.

34 (d) **Additional Relief.** The building official may seek legal or equitable relief to
35 enjoin any acts or practices and abate any condition which constitutes a violation of
36 this code when civil or criminal penalties are inadequate to effect compliance.

37 **Section 205. Notices.** It shall be unlawful for any person to remove, mutilate,
38 destroy or conceal any lawful notice issued or posted by the building official
39 pursuant to the provisions of this code.

40 The building official may record a copy of any order or notice with the
41 Department of Records and Elections of King County.



1 The building official may record with the Department of Records and
2 Elections of King County a notification that a permit has expired without a final
3 inspection after reasonable efforts have been made to obtain a final inspection.

4 **Section 206. RULES OF THE BUILDING OFFICIAL**

5 (a) **Authority.** The building official is authorized to promulgate, adopt and issue the
6 following rules:

7 (1) "Electrical Wiring Standards" to promulgate standards which are
8 acceptable as a method or as an alternative design for meeting code required
9 performance criteria, to edit or update national standards which are referenced in
10 the Electrical Code and to eliminate conflicts among code requirements.

11 (2) "Code Interpretations" to interpret and clarify conditions or language
12 expressed in this code.

13 (3) "Product Approvals" to approve a specific building construction material
14 or product, or a particular component fabricator which has been found acceptable
15 as meeting required performance criteria of this code.

16 (4) Any other rule necessary for administration of the purpose and intent of
17 this code.

18 (b) **Procedure for Adoption of Rules.** The building official shall promulgate, adopt
19 and issue rules according to the procedures as specified in Chapter 3.02 of the
20 Seattle Municipal Code.

21 **Section 207. Construction Codes Advisory Board.** An Electrical Code
22 Committee of the Construction Codes Advisory Board, as established in Section
23 105 of the Seattle Building Code, may examine proposed new editions of, and
24 amendments to this code and any proposed administrative rules promulgated to
25 enforce this code. The Electrical Code Committee may make recommendations to
26 the building official and to the City Council relating to this code and administrative
27 rules. The committee shall be called on an as-needed basis for the Construction
28 Codes Advisory Board.

29 **Section 208. Appeals.** Appeals from decisions or actions pertaining to the
30 administration and enforcement of this code shall be addressed to the building
31 official. The applicant may request a review by a panel of the Construction Codes
32 Advisory Board, convened by the Board Chair. The chair shall select a panel of at
33 least three members from the Electrical Code Committee. The results of the panel's
34 review shall be advisory only.

35 **CHAPTER 3**
36 **PERMITS AND INSPECTIONS**

37 **Section 301. PERMITS**

38 (a) **Permits Required.** It shall be unlawful to install, alter, extend or connect any
39 electrical equipment in a building or premises, or allow the same to be done, without
40 first obtaining a permit for the work from the building official.

41 (b) **Exempted Work.** An electrical permit shall not be required for the following
42 work:

1 (1) Replacing flush or snap switches, fuses, lamp sockets, receptacles, or
2 ballasts.

3 (2) Reconnecting or replacing a range within an individual dwelling unit, hot
4 plate, water heater, electric baseboard, wall heating unit to a circuit which has been
5 lawfully installed and approved, when no alteration of the circuit is necessary.

6 (3) The setting of meters by the City Light Department of the City of Seattle
7 or anyone else engaged in the business of supplying electricity to the public,
8 provided that meter loops have been installed under permit and that such meters
9 are not connected to any electrical installation regulated by this code until approval
10 for such connection has been given by the building official.

11 (4) The installation of 1000 feet or less of wiring for communications systems.

12 (5) The installation or repair of electrical equipment installed in connection
13 with an elevator, dumbwaiter, or similar conveyance provided that work is covered
14 under the issuance of an elevator permit.

15 Exemption from the permit requirements of this code shall not be deemed to
16 grant authorization for any work to be done in any manner in violation of the
17 provisions of this code or any other laws or ordinances of the City.

18 (c) **Flood Hazard Areas.** In addition to the permit required by this section, all work
19 to be performed in areas of special flood hazard, as identified in the report entitled
20 "Flood Insurance Study for King County, Washington and Incorporated Areas" and
21 the accompanying Flood Insurance Rate Maps filed in C.F. 295948, is subject to
22 additional standards and requirements, including floodplain development approval
23 or a Floodplain Development License, as set forth in Chapter 25.06, the Seattle
24 Floodplain Development Ordinance.

25 **Section 302. APPLICATION AND PLANS**

26 (a) **Application.** Application for an electrical permit shall be made on a form
27 provided by the building official. Each application shall state the name and address
28 of the owner or occupant in possession of the building or premises where the work
29 is to be done, the name of the licensed contractor, if any, that will be responsible for
30 the installation, and such other information as the building official may require.
31 Application shall include documentation of compliance with the Seattle Energy
32 Code. The building official may refuse to issue or revoke a permit if any statement
33 in the permit application is found to be untrue.

34 (b) **Plans and Specifications. 1. General.** In addition to the requirements of
35 Section 302(a), two sets of plans and specifications shall be submitted with each
36 application for an electrical permit for an installation of: services or feeders of 400
37 amperes or over; all switches or circuit breakers rated 400 amperes or over; any
38 proposed installation which cannot be adequately described on the application form;
39 and installations of emergency generators.

40 *Exception: Plans and specifications shall not be required for installations for one-*
41 *and two-family dwellings.*

1 Two sets of electrical plans shall be submitted with each application for an
2 electrical permit for new or altered electrical installations in educational, institutional,
3 and health or personal care occupancies as indicated in Section 300-1(c) of this
4 code.

5 *Exception: One set of electrical plans shall be submitted with each application*
6 *when a service or feeder is new or altered and the sum of the equipment ampere*
7 *rating is less than 200 amperes.*

8 Three sets of plans and specifications for fire alarm systems shall be
9 submitted. See Seattle Fire Code Section 1007.3.1 for required submittal
10 information.

11 **2. Clarity of Plans.** Plans shall be drawn to a clearly indicated and
12 commonly accepted scale of not less than 1/8 inch to 1 foot upon substantial paper
13 such as blueprint quality or standard drafting paper. The plans shall be of microfilm
14 quality and limited to a minimum size of 11 inches by 17 inches and maximum size
15 of 41 inches by 54 inches. Plans shall indicate the nature and extent of the work
16 proposed and shall show in detail that it will conform to the provisions of this code.
17 All electrical work shall be readily distinguishable from other mechanical work. If
18 plans are incomplete, unintelligible or indefinite, the building official may require that
19 the plans be prepared by a licensed electrical engineer, or may reject or refuse to
20 examine such plans, even though a plan examination fee has been paid.

21 **3. Information on plans and specifications.** Information on plans and
22 specifications shall include the following:

- 23 (1) The type of occupancy and a complete scope of work.
- 24 (2) A complete riser and one line diagram to include all service and feeder
25 connections.
- 26 (3) Clear identification of all circuitry, to include but not limited to: circuit
27 numbers, wire sizes, insulation types, conduit sizes and types.
- 28 (4) A complete set of switchboard and panel schedules. These shall include all
29 load calculations and demand factors used for computation.
- 30 (5) A complete project load summary to include existing loads as applicable
31 (peak demands as per NEC excepted) and all added loads. Electrical
32 calculations, heat loss calculations and lighting summaries may be
33 submitted on separate computation sheets.
- 34 (6) Fault current calculations and the listed interrupting rating of all feeder and
35 service equipment.
- 36 (7) Voltage characteristics of all electrical systems and equipment.
- 37 (8) A key to all symbols used.
- 38 (9) A fixture schedule showing all pertinent fixture information.
- 39 (10) Any other information as may be required by the plans examiner.

40 (c) **Advance Plan Examination.** An architect or engineer registered in the State of
41 Washington may apply for an electrical permit and may request an advance plan
42 examination of electrical plans where the electrical contractor has not yet been

1 selected. Upon submission of an application including required plans, and payment
2 of fifty percent of the estimated permit fee, the Department will review the
3 application. When the application and plans are found to be in compliance with the
4 Seattle Electrical Code, the Department will approve the application and plans as
5 ready for issuance. Neither the permit nor the plans shall be issued until the
6 remainder of the fee is paid and the electrical contractor's name and license number
7 is placed on the permit.

8 PERMITS

9 **Section 303. (a) Issuance. 1. General.** The application and plans filed by an
10 applicant for a permit shall be checked by the building official. Such plans may be
11 reviewed by other departments of the City to check compliance with the laws and
12 ordinances under their jurisdiction. If the building official finds that the work as
13 described in an application for permit and the plans filed therewith conforms to the
14 requirements of this code and other pertinent laws and ordinances and that the fees
15 specified in the Fee Subtitle have been paid, the building official shall issue a permit
16 to the applicant who becomes the permit holder. The building official may refuse to
17 issue an electrical permit to any person who refuses or fails to complete the work
18 permitted by an existing permit on the same building or premises.

19 *Exception No. 1: The building official may issue a permit for the installation of part*
20 *of the electrical system of a building or structure before complete plans for the*
21 *whole building or structure have been submitted or approved, provided adequate*
22 *information and detailed statements have been filed complying with all pertinent*
23 *requirements of this code. Holders of such permits may proceed at their own risk*
24 *without assurance that the permit for the entire building or structure will be granted.*

25 *Exception No. 2: A permit may be issued for work to commence prior to the*
26 *approval of plans, if such approval is delayed beyond 10 working days after the*
27 *plans have been submitted for examination. The holders of such permits may*
28 *proceed at their own risk, with the understanding that any work undertaken prior to*
29 *approval of plans shall be done in accordance with the provisions of this code and*
30 *in accordance with the plans as subsequently approved.*

31 **2. Compliance with Approved Plans and Permit.** When issuing a permit,
32 the building official shall endorse the permit in writing and endorse in writing or
33 stamp the plans **APPROVED**. Approved plans shall not be changed, modified or
34 altered without authorization from the building official, and all work shall be done in
35 accordance with the approved plans, except as the building official may require
36 during field inspection to correct errors or omissions.

37 **3. Amendments to the Permit.** When substitutions and changes are made
38 during construction, approval shall be secured prior to execution; however, the
39 electrical inspector may approve minor modifications to the plans for work not
40 reducing the fire and life safety of the structure. Substitutions, changes and
41 clarifications shall be as shown on two sets of plans which shall be submitted to the
42 building official, accompanied by redesign fees, prior to occupancy. These changes

1 shall conform to the requirements of this code and other pertinent laws and
2 ordinances.

3 **4. Requirement for License.** No electrical permit shall be issued to an
4 applicant who is engaging in or conducting or carrying on the business of installing
5 wires or equipment to convey electric current or of installing apparatus to be
6 operated by electric current unless the applicant possesses a valid State of
7 Washington license as required by RCW 19.28. The licensed installer responsible
8 for the work shall be identified on the electrical permit.

9 *Exception: Persons not possessing a license may obtain an electrical permit in*
10 *order to do electrical work at a residence, farm, place of business or other property*
11 *which they own as described in RCW 19.28.610.*

12 **5. Cancellation of Permit Application.** If a permit is not issued after a
13 period of sixty days from the date of approval for issuance or if corrections are not
14 received after a period of sixty days from the date of notification of required
15 corrections, the building official may initiate cancellation procedures. Prior to
16 cancellation, the building official shall notify the applicant that the permit application
17 will expire and shall be canceled after 30 days. After the applicant has been
18 notified, the site may be inspected to verify that no work has taken place. The
19 application shall be canceled 30 days after notice has been sent to the applicant,
20 and it and any accompanying plans and specifications destroyed and the portion of
21 the fee paid forfeited. Upon written request of the applicant, the building official may
22 extend the life of the permit application for a period not to exceed six months, with
23 no further extensions possible, except that applications may be further extended by
24 the building official where permit issuance is delayed by litigation, appeals or similar
25 problems.

26 (b) **Retention of Plans and Permits.** One set of approved plans, which may be on
27 microfilm, shall be retained by the building official. One set of approved plans shall
28 be returned to the applicant and shall be kept at the site or the building or work at all
29 times during which the work authorized thereby is in progress. The plans shall be
30 available at the site of the work or installation for use by inspection personnel at all
31 times. The permit issued by the building official shall be kept posted on the
32 premises at all times during the course of the installation or work.

33 (c) **Validity.** The issuance or granting of a permit or approval of plans shall not be
34 construed to be a permit for, or an approval of, any violation of any of the provisions
35 of this code or any other ordinance. No permit presuming to give authority to violate
36 or cancel the provisions of this code shall be valid, except insofar as the work or use
37 which it authorizes is lawful.

38 The issuance of a permit based upon plans shall not prevent the building
39 official from later requiring the corrections of errors in the plans. The issuance of a
40 permit based upon plans shall not be construed as permitting violations of this code
41 or of any other ordinance of the City.



1 The issuance of an electrical permit shall not prevent the building official from
2 requiring correction of conditions found to be in violation of this code or any other
3 ordinance of the City. The period of time for which a permit is issued shall not be
4 construed to extend or otherwise affect any period of time for compliance specified
5 in any notice or order issued by the building official or other administrative authority
6 requiring the correction of any such conditions.

7 (d) **Expiration and Renewal.** 1. **Expiration.** Permits and renewed permits shall
8 expire one year from the date of issuance.

9 *Exception No. 1: Initial permits for major construction projects that require more
10 than one year to complete, according to a construction schedule submitted by the
11 applicant, may be issued for a period that provides reasonable time to complete the
12 work but in no case longer than three years.*

13 *Exception No. 2: Permits which expire in less than one year may be issued where
14 the building official determines a shorter period is appropriate.*

15 2. **Renewal.** Permits may be renewed and renewed permits may be further
16 renewed by the building official provided the following conditions are met:

- 17 A. Application for renewal shall be made within the thirty-day period immediately
18 preceding the date of expiration of the permit;
19 B. The work authorized by the permit has been started and is progressing at a
20 rate approved by the building official;
21 C. If an application for renewal is made either more than one year after the
22 effective date of a new or revised edition of the Electrical Code, the permit
23 shall not be renewed unless:
24 (i) The building official determines that the permit complies, or is modified to
25 comply, with the code or codes in effect on the date of application for
26 renewal; or
27 (ii) The work authorized by the permit is substantially underway and
28 progressing at a rate approved by the building official.

29 Permits may also be renewed where commencement or completion of the
30 work authorized by the permit was delayed by litigation, appeals, strikes or other
31 causes related to the work authorized by the permit, beyond the permit holder's
32 control.

33 3. **Re-establishment.** A new permit shall be required to complete work
34 where a permit has expired and was not renewed.

35 *Exception: A permit which has been expired for less than one year may be
36 reestablished upon approval of the building official provided it complies with Items B
37 and C of Section 303(d)2, above.*

38 (e) **Suspension or Revocation.** The building official may, by written order,
39 suspend or revoke a permit issued under the provisions of this code whenever the
40 permit is issued in error or on the basis of incorrect information, or in violation of any
41 ordinance or regulation or any provision of this code.

1 (f) **Permit for Temporary Installations.** The building official may issue permits for
2 temporary electrical installations for use during the construction of buildings or for
3 carnivals, conventions, festivals, fairs, the holding of religious services, temporary
4 lighting of streets and the like if it is found that life or property will not be
5 jeopardized.

6 Permission to use a temporary installation shall be granted for no longer than
7 six months, except that a permit for a temporary installation to be used for the
8 construction of a building may be issued for the necessary period of construction.
9 Should temporary lighting be over the street area, proper authority for use of the
10 street shall first be obtained from the Seattle Transportation Department. All
11 temporary installations shall comply with all other requirements of this code.

12 **Section 304. Permit Fees.** A fee for each electrical permit and for other activities
13 related to the enforcement of this Code shall be paid as set forth in the Fee Subtitle.

14 **Section 305. INSPECTIONS**

15 (a) **General.** It shall be unlawful to connect or to allow the connection of any
16 electrical installations, extensions thereof, or electrical equipment to the electric
17 current until the work is inspected and approved by the building official.

18 (b) **Inspection Requests.** It shall be the duty of the owner of the property, the
19 owner's authorized agent, or the person designated by the owner/agent to do the
20 work authorized by a permit to notify the building official that work requiring
21 inspection as specified in this section is ready for inspection. Where a permit has
22 been issued to a licensed contractor, it shall be the duty of the contractor to notify
23 the building official that work requiring inspection is ready for inspection.

24 It shall be the duty of the person requesting any inspections required by this
25 code to provide access to and means for proper inspection of the work. It shall be
26 the duty of the permit holder to cause the work to be accessible and exposed for
27 inspection purposes. Neither the building official nor the City shall be liable for
28 expense entailed in the required removal or replacement of any material to allow
29 inspection.

30 (c) **Inspection Record.** Work requiring a permit shall not be commenced until the
31 permit holder or agent has posted an inspection record in a conspicuous place on
32 the premises and in a position which allows the building official to conveniently
33 make the required entries thereon regarding inspection of the work. This record
34 shall be maintained in such position by the permit holder until final approval has
35 been granted by the building official and the serving utility has made the connection
36 to the electric current.

37 (d) **Approvals Required.** No work shall be done on any part of the building or
38 structure beyond the point indicated in each successive inspection without first
39 obtaining the written approval of the building official. Written approval shall be given
40 only after an inspection has been made of each successive step in the construction
41 as indicated by each of the inspections required in Section 305(e) below.



1 (e) **Required Inspections.** 1. **Cover Inspection.** Cover inspections may be
2 required when all of the following work has been completed:

3 A. All piping, ducts, plumbing and like installations of other trades which are
4 liable to interfere or run in close proximity to the electrical installation are
5 permanently in place and inspected, but prior to any work to cover or conceal any
6 installation of electrical equipment, and;

7 B. Electrical Equipment grounding (boxes, equipment, conductors and
8 provisions for grounding receptacles, etc.) for all systems shall be completely made-
9 up.

10 C. For conduit systems, after all conduit has been installed and properly
11 secured to the structure.

12 2. **Final Inspection.** A final inspection shall be made after all wiring has
13 been completed and all permanent fixtures such as switches, outlet receptacles,
14 plates, electric hot water tanks, lighting fixtures and all other equipment has been
15 properly installed. The permit holder shall call for a final inspection when the work
16 described on the permit has been completed.

17 (f) **Other Inspections.** In addition to the called inspections specified in Subsection
18 (e), the building official may make or require any other inspections of any
19 construction work to ascertain compliance with the provisions of this code and other
20 laws which are enforced by the building official.

21 Where work, for which any permit or approval is required, is commenced or
22 performed prior to making formal application and receiving the building official's
23 permission to proceed, the building official may make a special investigation
24 inspection before a permit may be issued for the work. Where a special
25 investigation is made, a special investigation fee may be assessed in accordance
26 with the Fee Subtitle.

27 (g) **Reinspections.** The building official may require a reinspection when work for
28 which inspection is called is not complete, corrections called for are not made, the
29 permit card is not properly posted on the work site, the approved plans are not
30 readily available to the inspector, for failure to provide access on the date for which
31 inspection is requested, or when deviations from plans which require the approval of
32 the building official have been made without proper approval.

33 For the purpose of determining compliance with Section 104(c) Maintenance,
34 the building official or the fire chief may cause any structure to be reinspected.

35 The building official may assess a reinspection fee as set forth in the Fee
36 Subtitle for any action listed above for which reinspection may be required, whether
37 or not a reinspection is actually performed. A reinspection fee shall not be
38 assessed the first time the work subject to inspection is rejected for failure to comply
39 with the requirements of this Code.

40 In instances where reinspection fees have been assessed, no additional
41 inspection of the work shall be performed until the required fees have been paid.
42

1 Electrical raceways pertaining to fire and life safety devices may be installed within
2 a required stairway enclosure.

3 Equipment containing overcurrent protection shall be so placed that lowest
4 possible overcurrent device will be no less than one foot above the floor or working
5 platform.
6

7 **Section 6.** The National Electrical Code, 1999 edition, is amended by
8 adding Section 110-23 as follows:

9 **110-23. Electrified Fences.** Electrified fences, associated equipment and similar
10 devices shall be permitted only by special permission from the Building Official.
11

12 **Section 7.** The National Electrical Code, 1999 edition, is amended by
13 adding Section 110-26(e) as follows:

14 **(e) Headroom.** The minimum headroom of working spaces about service
15 equipment, switchboards, panelboards, or motor control centers shall be 6-1/2 ft
16 (1.98 m). Where the electrical equipment exceeds 6-1/2 ft (1.98 m) in height, the
17 minimum headroom shall be not less than the height of the equipment.
18 ~~((Exception: Service equipment or panelboards, in existing dwelling units, that do~~
19 ~~not exceed 200 amperes.))~~
20

21 **Section 8.** Section 210-8(a) of the National Electrical Code, 1999 edition,
22 is amended as follows:

23 **(a) Dwelling Units.** All 125-volt, single-phase, 15- and 20-ampere receptacles
24 installed in the locations specified below shall have ground-fault circuit-interrupter
25 protection for personnel.

26 (1) Bathrooms.

27 (2) Garages, and also accessory buildings that have a floor located at or below
28 grade level not intended as habitable rooms and limited to storage areas, work
29 areas, and areas of similar use.

30 *Exception No. 1: Receptacles that are not readily accessible.*

31 *Exception No. 2: A single receptacle or a duplex receptacle for two appliances*
32 *located within dedicated space for each appliance that, in normal use, is not easily*
33 *moved from one place to another, and that is cord- and plug-connected in*
34 *accordance with Section 400-7(a)(6), (a)(7), or (a)(8).*

35 Receptacles installed under the exceptions to Section 210-8(a)(2) shall not
36 be considered as meeting the requirements of Section 210-52(g).

37 (3) Outdoors.

1 *Exception: Receptacles that are not readily accessible and are supplied by a*
2 *dedicated branch circuit for electric snow-melting or deicing equipment shall be*
3 *permitted to be installed in accordance with the applicable provisions of Article 426.*

4 (4) Crawl spaces. Where the crawl space is at or below grade level.

5 (5) Unfinished basements. For purposes of this section, unfinished basements are
6 defined as portions or areas of the basement not intended as habitable rooms
7 and limited to storage areas, work areas, and the like.

8 *Exception No. 1: Receptacles that are not readily accessible.*

9 *Exception No. 2: A single receptacle or a duplex receptacle for two appliances*
10 *located within dedicated space for each appliance that, in normal use, is not easily*
11 *moved from one place to another, and that is cord- and plug-connected in*
12 *accordance with Section 400-7(a)(6), (a)(7), or (a)(8).*

13 Receptacles installed under the exceptions to Section 210-8(a)(5) shall not
14 be considered as meeting the requirements of Section 210-52(g).

15 (6) Kitchens. Where the receptacles are installed to serve the countertop surfaces.

16 (7) ~~((Wet-bar))~~ All other sinks. Where the receptacles are installed to serve the
17 countertop surfaces and are located within 6 ft (1.83 m) of the outside edge of
18 the ~~((wet-bar))~~ sink. Receptacle outlets shall not be installed in a face-up
19 position in the work surfaces or countertops.
20

21 **Section 9.** The National Electrical Code, 1999 edition, is amended by
22 adding Section 215-12 as follows:

23 **215-12. Panelboards.** Panelboards, existing or installed in an individual unit of
24 multifamily dwellings, shall be supplied by one feeder.
25

26 **Section 10.** Section 220-3(a) of the National Electrical Code, 1999 edition,
27 is amended as follows:

28 (a) **Lighting Load for Specified Occupancies.** A unit load of not less than that
29 specified in Table 220-3(a) for occupancies specified therein shall constitute the
30 minimum lighting load for each square foot (0.093 m²) of floor area. The floor area
31 for each floor shall be computed from the outside dimensions of the building,
32 dwelling unit, or other area involved. For dwelling units, the computed floor area
33 shall not include open porches, garages, or unused or unfinished spaces not
34 adaptable for future use.

35 FPN: The unit values herein are based on minimum load conditions and 100 percent power
36 factor, and may not provide sufficient capacity for the installation contemplated.

37 *Exception: Occupancy Lighting Loads. In determining feeder and service entrance*
38 *conductor sizes and equipment ratings, the currently adopted Seattle Energy Code*



1 Unit Lighting Power Allowance table and footnotes may be used in lieu of NEC
2 Table 220-3(a).

3
4 **Section 11.** Section 220-15 of the National Electrical Code, 1999 edition,
5 is amended as follows:

6 **220-15. Fixed Electric Space Heating.** Fixed electric space heating loads shall
7 be computed at 100 percent of the total connected load; however, in no case shall a
8 feeder or service load current rating be less than the rating of the largest branch
9 circuit supplied. Where fixed electric space heating is installed as the primary
10 means of heating, heat loss calculations shall be submitted.

11 Exception: ((Where reduced loading of the conductors results from units operating
12 on-duty cycle, intermittently, or from all units not operating at one time, the authority
13 having jurisdiction may grant permission for feeder conductors to have an ampacity
14 less than 100 percent, provided the conductors have an ampacity for the load so
15 determined.)) A minimum demand factor of 75 percent of the installed heating
16 capacity may be used in sizing service entrance and feeder equipment for dwelling,
17 commercial and industrial occupancies when electric service is provided to four or
18 more fixed space heaters, or electric furnaces sequentially controlled. These
19 exceptions shall not apply when optional calculations allowed by Section 220-32 are
20 used.

21
22 **Section 12.** Section 220-17 of the National Electrical Code, 1999 edition,
23 is amended as follows:

24 **220-17. Appliance Load - Dwelling Unit(s).** It shall be permissible to apply a
25 demand factor of 75 percent to the nameplate rating load of four or more appliances
26 fastened in place, other than electric ranges, clothes dryers, space-heating
27 equipment, or air-conditioning equipment, that are served by the same feeder or
28 service in a one-family, two-family, or multifamily dwelling. For space heating
29 equipment, see Section 220-15.

30
31 **Section 13.** Section 230-1 of the National Electrical Code, 1999 edition, is
32 amended as follows:

33 **230-1. Scope.**

34 (a) This article covers service conductors and equipment for control and protection
35 of services and their installation requirements.

36 (FPN): See Figure 230-1.

37 (b) **Service Requirements.** The serving utility shall be consulted by the owner, the
38 owner's agent or the contractor making the installation regarding service entrance
39 location before installing equipment. Provisions for metering equipment, attachment



1 of service drop, or for an underground service lateral shall be made at a location
2 acceptable to the serving utility.

3
4 **Section 14.** The National Electrical Code, 1999 edition, is amended by
5 adding Section 230-10 as follows:

6 **230-10. Service Point Connection.** Service point connections shall comply with
7 paragraphs (1) through (3) below.

8 (1) For overhead service drop conductors from the utility pole to the point of
9 attachment to the building, connections of the service entrance conductors shall be
10 at a weatherhead outside the building.

11 (2) For underground service connections outside of buildings, connection
12 shall be made in one of the following:

13 (i) A service terminal box or current transformer cabinet.

14 (ii) A handhole or power transformer installed outdoors in accordance with
15 requirements of the utility, the Seattle Building Code, or any other applicable
16 ordinance.

17 (iii) A meter socket of 200 amperes minimum size, direct-metered.

18 (3) For underground service connections inside of buildings, connection
19 shall be made to one of the following:

20 (i) Where utility-supplied conductors are used, a service terminal box or
21 current transformer cabinet connected by no more than eighteen inches of rigid
22 conduit inside the building.

23 (ii) A transformer vault within the building.

24 (iii) A meter socket of 200 amperes minimum size, direct-metered.

25 **Section 15.** The National Electrical Code, 1999 edition, is amended by
26 adding Section 230-5 as follows:

27 **230-5. Types of Services.** All services shall be single-phase or three-phase 4-
28 wire. Three-phase 3-wire services shall not be installed unless prior approval is
29 granted by the utility and the building official.

30
31 **Section 16.** Section 230-28 of the National Electrical Code, 1999 edition,
32 is amended as follows:

33 **230-28. Service Masts as Supports.**

34 (a) Where a service mast is used for the support of service-drop conductors, it shall
35 be of adequate strength or be supported by braces or guys to withstand safely the
36 strain imposed by the service drop. Where raceway-type service masts are used,
37 all raceway fittings shall be identified for use with service masts. Only power
38 service-drop conductors shall be permitted to be attached to a service mast.



1 (b) Where service masts are used for support of the service-drop conductors, the
2 conduit shall be secured as required by WAC 296-46-23028 Drawings E-101, E-
3 102, and E-103.

4 (c) Service drops to buildings with service conduits extended through the roof shall
5 be attached to the bracket installed on the mast, or other approved supporting
6 structure located within 24 inches of the mast.

7 Service conduits for mast-type services shall be rigidly supported with
8 minimum 5/16-inch U-bolts fastened through at least 2-inch solid wood backing. A
9 minimum of 2 x 6 inch wood solidly secured between rafters shall be installed and
10 drilled for snug fit of the conduit.

11 Brackets shall be installed to permit a clearance of not less than 18 inches
12 from the roof to the lowest wire. Service conduits through the roof shall be a
13 minimum of 2-inch rigid steel conduit. Service conduits over 26 inches above the
14 roof shall be rigidly supported with brackets or guy wires. The serving utility shall be
15 consulted for bracket and guy wire requirements.

16 In no case shall a coupling be installed between the last support below the
17 roof line to the bracket. All connections and service drops shall be below the
18 weatherhead.

19 Openings where service conduits pass through the roof shall be made
20 watertight with approved neoprene or lead flashings.

21
22 **Section 17.** Section 230-29 of the National Electrical Code, 1999 edition,
23 is amended as follows:

24 **230-29. Supports Over Buildings and Wires on or about Buildings or**
25 **Structures Over Water.** ~~((Service drop conductors passing over a roof shall be~~
26 ~~securely supported by substantial structures. Where practicable, such supports~~
27 ~~shall be independent of the building.))~~

28 (a) All service entrance conductors for piers, docks, wharves and other structures
29 over water shall terminate in a disconnecting means or service equipment at the
30 street side or end of such structure, or as otherwise approved by the building
31 official.

32 Exception: When the vault for the utility transformer is located over water, a
33 disconnecting means for the service entrance conductors shall be provided
34 immediately outside the vault at a location acceptable to the building official.

35 FPN): For utility service conductors on piers, docks or wharves, refer to "Requirements for
36 Electric Service Connection" published by Seattle City Light.

37 (b) Service entrance conduit containing wires not protected by circuit breakers or
38 switches and fuses shall follow and be supported on parapets or other walls and
39 shall not be laid upon or across roofs.

40 (c) All service entrance conduits in the Fire District shall terminate on the side of
41 the building nearest to the lines or mains of the utility. The service shall not

1 terminate over adjacent private property, and shall extend to the street or alley wall
2 of the buildings.

3 (d) Open wiring for service conductors shall contact the building at only one point
4 except where the utility will agree to contact the building at more than one point.

5 (e) No wire access fittings or junction boxes of any type shall be permitted within 15
6 feet of the ground level on street, alley, or driveway margins.

7
8 **Section 18.** The National Electrical Code, 1999 edition, is amended by
9 adding Section 230-33 as follows:

10 **230-33. Conversion to Underground Service or Increasing Existing Overhead**
11 **Services.** Where service for an existing single-family dwelling is converted to an
12 underground service or where existing overhead services are increased, the
13 following requirements shall be met:

14 (a) Unless a 200 ampere meter enclosure was provided for the existing service, a
15 new 200 ampere approved wide meter enclosure shall be permitted to be installed
16 over the existing meter enclosure. Service grounding continuity shall be maintained
17 and the perimeter of such new enclosure shall be sealed watertight with a silicone
18 sealant or approved equivalent.

19 (b) Conversions to underground service shall have existing overhead service
20 conductors removed and the top opening of the existing conduit at the weatherhead
21 shall be closed.

22 (c) Where a new meter enclosure is installed the interior of the existing meter
23 enclosure shall be removed and service conductors of the same size as those
24 removed shall be installed from the new meter enclosure to the existing service
25 panel. Conductors shall be run through a 2-inch bushing in the back of such new
26 enclosure, through the void area between enclosures, and continue in the existing
27 conduit to the panel.

28 (d) Any exposed wood or combustible material between the two meter enclosures
29 shall be covered with noncombustible material.

30 (e) On installations where a meter has been moved outdoors, the existing meter
31 shall be removed. An approved fitting shall be installed on the existing conduit with
32 new conduit of the same size as the existing, to extend from such fitting to a new
33 200 ampere meter enclosure.

34 (f) Conductors shall be continuous from the new meter enclosure to the service
35 panel.

36 (g) On existing services, a weatherhead-to-weatherhead connection shall be
37 permitted. The distance between weatherheads shall not exceed 24 inches.
38

39 **Section 19.** Section 230-43 of the National Electrical Code, 1999 edition,
40 is amended as follows:

1 **230-43. Wiring Methods For 600 Volts, Nominal, or Less.** Service-entrance
2 conductors shall be installed in accordance with the applicable requirements of this
3 Code covering the type of wiring method used and shall be limited to the following
4 methods:

- 5 ~~((1) Open wiring on insulators~~
6 ~~(2) Type IGS cable))~~
7 (3) Rigid metal conduit
8 (4) Intermediate metal conduit
9 ~~((5) Electrical metallic tubing~~
10 ~~(6) Electrical nonmetallic tubing (ENT)~~
11 ~~(7) Service entrance cables~~
12 ~~(8) Wireways))~~
13 (9) Busways
14 ~~((10) Auxiliary gutters))~~
15 (11) Rigid nonmetallic conduit
16 (12) Cablebus
17 ~~((13) Type MC cable))~~
18 (14) Mineral-insulated, metal-sheathed cable
19 ~~((15) Flexible metal conduit not over 6 ft (1.83m) long or liquidtight flexible metal~~
20 ~~conduit not over 6 ft (1.83 m) long between raceways, or between raceway~~
21 ~~and service equipment, with equipment bonding jumper routed with the~~
22 ~~flexible metal conduit or liquidtight flexible metal conduit according to the~~
23 ~~provisions of Section 250-102(a), (b), (c), and (e)~~
24 ~~(16) Liquidtight flexible nonmetallic conduit))~~
25 Cable tray systems shall be permitted to support cables for use as service-
26 entrance conductors in accordance with Article 318.

27
28 **Section 20.** The National Electrical Code, 1999 edition, is amended by
29 adding Section 230-44 as follows:

30 **230-44. Service-Entrance Conductor Length**

- 31 **(a) Length at service head.** Service-entrance conductors shall extend at least 18
32 inches from the service head to permit connection to the service drop.
33 **(b) Inside a building.** Service-entrance conductor raceways shall extend no more
34 than 15 feet inside a building.

35
36 **Section 21.** Section 230-46 of the National Electrical Code, 1999 edition,
37 is repealed.

38
39 **Section 22.** Section 230-52 of the National Electrical Code, 1999 edition,
40 is repealed.

1
2 **Section 23.** The National Electrical Code, 1999 edition, is amended by
3 adding Sections 230-62(c) and (d) as follows:

4 (c) **Location.** Service equipment shall be readily accessible and shall not be
5 located in a bathroom, clothes closet, shower room, cupboard, attic, stairway, nor
6 above a washer, range, dryer, water heater, sink, plumbing fixture or drain board.

7 (d) **Accessible.** Service equipment shall be readily accessible after any
8 subsequent building additions.

9
10 **Section 24.** Section 230-82 of the National Electrical Code, 1999 edition,
11 is amended as follows:

12 **230-82. Equipment Connected to the Supply Side of Service Disconnect.** Only
13 the following equipment shall be permitted to be connected to the supply side of the
14 service disconnecting means:

15 (1) Cable limiters or other current-limiting devices by special permission of the
16 building official.

17 When fault current limiters are installed on the line side (utility's side) of the
18 first disconnect or main breaker, there shall be a "current limiter enclosure" for the
19 installation of such current limiters which shall meet the following requirements:

20 (a) The "current limiter enclosure" shall be separate from the utility's service
21 termination point. The weatherhead, service terminal box, meter socket or current
22 transformer can is not an acceptable location.

23 (b) The "current limiter enclosure" shall not be used for service taps or
24 extensions and shall be clearly recognized and marked "fault current limiters."

25 (2) Meters nominally rated not in excess of 600 volts, provided all metal housings
26 and service enclosures are grounded in accordance with Article 250. Taps
27 under meter socket lugs shall not be permitted, except by prior approval from
28 the building official.

29 (3) Instrument transformers (current and voltage), high-impedance shunts, surge-
30 protective devices identified for use on the supply side of the service
31 disconnect, load management devices, and surge arresters

32 (4) Taps used only to supply load management devices, circuits for stand-by power
33 systems, fire pump equipment, and fire and sprinkler alarms, if provided with
34 service equipment and installed in accordance with requirements for service-
35 entrance conductors

36 (5) Solar photovoltaic systems or interconnected electric power production sources
37 (See Articles 690 or 705 as applicable.)

38 (6) Control circuits for power-operable service disconnecting means, if suitable
39 overcurrent protection and disconnecting means are provided

40 (7) Ground-fault protection systems where installed as part of listed equipment, if
41 suitable overcurrent protection and disconnecting means are provided

1 (8) Current transformer cabinets shall contain only the main service conductors,
2 metering equipment and secondary wiring. One tap shall be permitted on the
3 load side of the current transformers on all installations for legally-required
4 standby service and one tap shall be permitted on the load side of the current
5 transformers for a fire pump service. One additional normal power service tap
6 from the current transformer enclosure may be made by special permission of
7 the service utility. In a single-family dwelling, two connections shall be
8 permitted on the load side of the current transformers. No other taps shall be
9 permitted. Approved terminal lugs shall be provided for the main service
10 conductors and for all taps.

11 (9) Listed service accessory buss gutters or termination boxes that are approved
12 for use on the line side of service equipment. Junction and pull boxes are not
13 permitted
14

15 **Section 25.** Section 230-90(a) of the National Electrical Code, 1999
16 edition, is amended as follows:

17 **(a) Ungrounded Conductor.** Such protection shall be provided by an overcurrent
18 device in series with each ungrounded service conductor that has a rating or setting
19 not higher than the allowable ampacity of the conductor.

20 *Exception No. 1: For motor-starting currents, ratings that conform with Sections*
21 *430-52, 430-62, and 430-63 shall be permitted.*

22 *Exception No. 2: Fuses and circuit breakers with a rating or setting that conform*
23 *with Section 240-3(b) or (c) and Section 240-6 shall be permitted.*

24 *Exception No. 3: Two to six circuit breakers or sets of fuses shall be permitted as*
25 *the overcurrent device to provide the overload protection. The sum of the ratings of*
26 *the circuit breakers or fuses shall be permitted to exceed the ampacity of the*
27 *service conductors, provided the calculated load in accordance with Article 220*
28 *does not exceed the ampacity of the service conductors.*

29 If the service-entrance conductors are sized less than the rating of the
30 service equipment, an engraved permanent placard that clearly identifies the
31 service-entrance conductor ampacity must be installed.

32 *Exception No. 4: Overload protection for fire pump supply conductors shall conform*
33 *with Section 695-4(b)(1).*

34 *Exception No. 5: Overload protection for 120/240-volt, 3-wire, single-phase*
35 *dwelling services shall be permitted in accordance with the requirements of Section*
36 *310-15(b)(6).*

37 FPN: See Standard for the Installation of Centrifugal Fire Pumps, NFPA 20-1996.

38 A set of fuses shall be considered all the fuses required to protect all the
39 ungrounded conductors of a circuit. Single-pole circuit breakers, grouped in
40 accordance with Section 230-71(b), shall be considered as one protective device.
41

1 **Section 26.** Section 250-56 of the National Electrical Code, 1999 edition,
2 is amended as follows:

3 **250-56. Resistance of Made Electrodes.** A single electrode consisting of a rod,
4 pipe, or plate (~~that does not have a resistance to ground of 25 ohms or less~~) shall
5 be augmented by one additional electrode of any of the types specified in Section
6 250-50 or 250-52. (~~Where multiple rod, pipe, or plate electrodes are installed to~~
7 ~~meet the requirements of this section,)~~ They shall be not less than ((6)) 8 ft (~~((1.83))~~)
8 2.44 m apart.

9 (FPN): The paralleling efficiency of rods longer than 8 ft (2.44 m) is improved by spacing
10 greater than 6 ft (1.83 m).

11
12 **Section 27.** The National Electrical Code, 1999 edition, is amended by
13 adding Section 250-104(e) as follows:

14 **(e) Water System Requirements.** It is unlawful to connect to or use any water
15 main or water pipe belonging to Seattle Public Utilities distribution and transmission
16 systems for electrical grounding purposes.

17
18 **Section 28.** The National Electrical Code, 1999 edition, is amended by
19 adding Section 300-1(c) as follows:

20 **(c) Wiring Methods for Designated Building Occupancies.** See classifications
21 and definitions of occupancies in Washington Administrative Code Section 296-46-
22 130 and Section 296-46-140.

23
24 **Section 29.** Section 300-23 of the National Electrical Code, 1999 edition,
25 is amended as follows:

26 **300-23. Panels Designed to Allow Access.** Cables, raceways, and equipment
27 installed behind panels designed to allow access, including suspended ceiling
28 panels, shall be arranged and secured so as to allow the removal of panels and
29 access to the equipment. All out-of-service cable shall be removed from accessible
30 ceiling spaces.

31
32 **Section 30.** Section 324-4 of the National Electrical Code, 1999 edition, is
33 amended as follows:

34 **324-4. Uses Not Permitted.** Concealed knob-and-tube wiring shall not be used in
35 commercial garages, theaters and similar locations, motion picture studios,
36 hazardous (classified) locations, or in the hollow spaces of walls, ceilings, and attics



1 where such spaces are insulated by loose, rolled, or foamed-in-place insulating
2 material that envelops the conductors.

3 Exception: This provisions of 324-4 shall not be construed to prohibit the
4 installation of loose or rolled thermal insulating material in such a concealed space
5 provided all the following conditions are met:

6 (1) The wiring shall be surveyed by an appropriately-licensed electrical
7 contractor who shall certify that the wiring is in good condition with no evidence of
8 improper overcurrent protection, conductor insulation failure or deterioration, and
9 with no improper connections or splices. Repairs, alterations or extensions of or to
10 the electrical system shall be inspected by an electrical inspector as defined in
11 RCW 19.28.070.

12 (2) The insulation shall meet Class I specifications as identified in the
13 Uniform Building Code, with a flame spread factor of 25 or less as tested using
14 ASTM E84-98e1 Foam insulation may not be used with knob-and-tube wiring.

15 (3) All knob-and-tube circuits shall have over-current protection limited to 15
16 amp, or protection which is appropriate for the wire size. Over-current protection
17 devices must either be circuit breakers or S-type adapters, equipped with S-type
18 fuses.

19
20 **Section 31.** Section 336-4 of the National Electrical Code, 1999 edition, is
21 amended as follows:

22 **336-4. Uses Permitted.** Type NM, Type NMC, and Type NMS cables shall be
23 permitted to be used in the following:

- 24 (1) One- and two-family dwellings
25 (2) Multifamily dwellings and other structures, except as prohibited in Section 336-5
26 (3) Cable trays, where the cables are identified for the use

27 (FPN): See Section 310-10 for temperature limitation of conductors.

28 (a) **Type NM.** Type NM cable shall be permitted for ~~((both exposed and))~~
29 concealed work in normally dry locations. It shall be permissible to install or fish
30 Type NM cable in air voids in masonry block or tile walls where such walls are not
31 exposed or subject to excessive moisture or dampness.

32 (b) **Type NMC.** Type NMC cable shall be permitted as follows:

- 33 (1) For ~~((both exposed and))~~ concealed work in dry, moist, damp, or corrosive
34 locations
35 (2) In outside and inside walls of masonry block or tile
36 (3) In a shallow chase in masonry, concrete, or adobe protected against nails or
37 screws by a steel plate at least 1/16 in. (1.59 mm) thick, and covered with
38 plaster, adobe, or similar finish

39 (c) **Type NMS.** Type NMS cable shall be permitted for ~~((both exposed and))~~
40 concealed work in normally dry locations. It shall be permissible to install or fish
41 Type NMS cable in air voids in masonry block or tile walls where such walls are not

1 exposed or subject to excessive moisture or dampness. Type NMS cable shall be
2 used as permitted in Article 780.
3

4 **Section 32.** Section 336-5(a) of the National Electrical Code, 1999 edition,
5 is amended as follows:

6 (a) **Types NM, NMC, and NMS.** Types NM, NMC, and NMS cables shall not be
7 used in the following:

8 (1) In any multifamily dwelling or other structure exceeding three floors above
9 grade

10 ((For the purpose of this article, the first floor of a building shall be that floor
11 that has 50 percent or more of the exterior wall surface area level with or above
12 finished grade.)) The Department's building permit shall be used to determine the
13 number of habitable floors above grade. One additional level that is the first level
14 and not designed for human habitation and used only for vehicle parking, storage,
15 or similar use shall be permitted.

16 (2) As service-entrance cable

17 (3) In commercial garages having hazardous (classified) locations as provided in
18 Section 511-3

19 (4) In theaters and similar locations, except as provided in Article 518, Places of
20 Assembly

21 (5) In motion picture studios

22 (6) In storage battery rooms

23 (7) In hoistways

24 (8) Embedded in poured cement, concrete, or aggregate

25 (9) In any hazardous (classified) location, except as permitted by Sections 501-
26 4(b), Exception, 502-4(b), Exception, and 504-20

27 (10) In any building or structure located in the Fire District
28

29 **Section 33.** Section 336-6 of the National Electrical Code, 1999 edition, is
30 amended as follows:

31 **336-6. Exposed Work—General.** In exposed work, except as provided in Section
32 300-11(a), the cable shall be installed as specified in (a) ~~((through))~~ (b), (d), and (e)
33 below.

34 ~~(((a) To Follow Surface. The cable shall closely follow the surface of the building~~
35 ~~finish or of running boards.))~~

36 (a) Work Considered as Concealed. Nonmetallic-sheathed cable shall be
37 considered as concealed where installed in inaccessible void areas of buildings or
38 where run in between or through bored holes of studs, joists and similar members
39 as required in Section 300-4, provided that all outlet, junction or device boxes shall
40 be installed as required for concealed work.

1 (b) **Protection from Physical Damage.** The cable shall be protected from physical
2 damage where necessary by conduit, electrical metallic tubing, Schedule 80 PVC
3 rigid nonmetallic conduit, pipe, guard strips, listed surface metal or nonmetallic
4 raceway, or other means. ~~((Where passing through a floor, the cable shall be
5 enclosed in rigid metal conduit, intermediate metal conduit, electrical metallic tubing,
6 Schedule 80 PVC rigid nonmetallic conduit, listed surface metal or nonmetallic
7 raceway, or other metal pipe extending at least 6 in. (152 mm) above the floor.))~~
8 Nonmetallic-sheathed cable shall not be considered as concealed by boxing in, or
9 by the use of running boards, and shall not be run across the face of ceilings, walls,
10 beams or similar unoccupied locations.

11 Exception No. 1: Nonmetallic-sheathed cable may be installed in the attic space of
12 buildings, provided such cable is protected from physical damage by the use of
13 running boards, conduit, guard strips or other approved means as required in
14 Section 336-6(d).

15 Exception No. 2: Exposed nonmetallic-sheathed cable which is properly supported
16 and neatly disposed may enter the top section only of a surface-mounted main
17 service panel where the distance from the top of the panel to the bottom of the
18 ceiling joist above does not exceed 2-1/2 feet.

19 ~~((c) **In Unfinished Basements.** Where the cable is run at angles with joists in
20 unfinished basements, it shall be permissible to secure cables not smaller than two
21 No. 6 or three No. 8 conductors directly to the lower edges of the joists. Smaller
22 cables shall either be run through bored holes in joists or on running boards.))~~

23 (d) **In Accessible Attics.** The installation of cable in accessible attics or roof
24 spaces shall also comply with Section 333-12.

25 (e) **Unexcavated Spaces.** Type NM cable installed in compliance with the
26 requirements of this section may be used in unexcavated spaces under dwellings
27 provided that all outlet and junction boxes are installed in accessible locations.

28
29 **Section 34.** Section 336-21 of the National Electrical Code, 1999 edition,
30 is repealed.

31
32 **Section 35.** Section 338-2 of the National Electrical Code, 1999 edition, is
33 repealed.

34
35 **Section 36.** The National Electrical Code, 1999 edition, is amended by
36 adding Section 338-3(d) as follows:



1 (d) **Uses not permitted.** Type SE and USE cables shall not be permitted in the
2 Fire District.
3

4 **Section 37.** Article 342 of the National Electrical Code, 1999 edition, is
5 repealed.
6

7 **Section 38.** Section 348-4, 348-5 and 348-6 of the National Electrical
8 Code, 1999 edition, are amended as follows:

9 **348-4. Uses Permitted.**

10 * * *

11 (b) **Corrosion Protection.** Ferrous or nonferrous electrical metallic tubing, elbows,
12 couplings, and fittings shall be permitted to be installed in concrete above grade,
13 ~~((in direct contact with the earth,))~~ or in areas subject to severe corrosive influences
14 where protected by corrosion protection and judged suitable for the condition.

15 FPN: See Section 300-6 for information on protection against corrosion.

16 **348-5. Uses Not Permitted.** Electrical metallic tubing shall not be used

- 17 (1) Where, during installation or afterward, it will be subject to severe physical
18 damage.
19 (2) Where protected from corrosion solely by enamel.
20 (3) In cinder concrete or cinder fill where subject to permanent moisture unless
21 protected on all sides by a layer of noncinder concrete at least 2 in. (50.8 mm)
22 thick or unless the tubing is at least 18 in. (457 mm) under the fill.
23 (4) In any hazardous (classified) location except as permitted by Sections 502-4,
24 503-3, and 504-20.
25 (5) For the support of fixtures or other equipment except conduit bodies no larger
26 than the largest trade size of the tubing. Where practicable, dissimilar metals in
27 contact anywhere in the system shall be avoided to eliminate the possibility of
28 galvanic action.

29 *Exception: Aluminum fittings and enclosures shall be permitted to be used with*
30 *steel electrical metallic tubing.*

31 (6) In direct contact with earth or in concrete at or below grade.

32 **348-6. Wet Locations.** All supports, bolts, straps, screws, etc., shall be of
33 corrosion-resistant materials or protected against corrosion by corrosion-resistant
34 materials. Circuits installed in electrical metallic tubing in wet locations shall use
35 equipment grounding wires sized according to Section 250-122.

36 FPN: See Section 300-6 for information on protection against corrosion.
37



1 **Section 39.** Section 370-1 of the National Electrical Code, 1999 edition, is
2 amended as follows:

3 **370-1. Scope.** This article covers the installation and use of all boxes and conduit
4 bodies used as outlet, junction, or pull boxes, depending on their use, and
5 manholes and other electric enclosures intended for personnel entry. Cast, sheet
6 metal, nonmetallic, and other boxes such as FS, FD, and larger boxes are not
7 classified as conduit bodies. This article also includes installation requirements for
8 fittings used to join raceways and to connect raceways and cables to boxes and
9 conduit bodies.

10 See Section 1206 of the Seattle Building Code for location of outlet boxes in
11 sound transmission control assemblies.
12

13 **Section 40.** Section 380-3(a) of the National Electrical Code, 1999 edition,
14 is amended as follows:

15 **380-3 Enclosure.**

16 **(a) General.** Switches and circuit breakers shall be of the externally operable type
17 mounted in an enclosure listed for the intended use. The minimum wire-bending
18 space at terminals and minimum gutter space provided in switch enclosures shall
19 be as required in Section 373-6.

20 ~~((Exception No. 1: Pendant and surface type snap switches and knife switches~~
21 ~~mounted on an open face switchboard or panelboard shall be permitted without~~
22 ~~enclosures.~~

23 ~~Exception No. 2: Switches and circuit breakers installed in accordance with~~
24 ~~Sections 110-27(a) (1), (2), (3), or (4) shall be permitted without enclosures.))~~
25

26 **Section 41.** Section 380-10(a) of the National Electrical Code, 1999
27 edition, is repealed.

28
29 **Section 42.** The National Electrical Code, 1999 edition, is amended by
30 adding Section 380-13(e) as follows:

31 **(e) Capacity Limitation.** All switches shall be of the interlocking type. All switches
32 used as service disconnecting means or those rated over 300 volts shall have two
33 way interlocking.
34



1 **Section 43.** Section 450-10 of the National Electrical Code, 1999 edition,
2 is amended as follows:

3 **450-10. Grounding.** (a) Exposed noncurrent-carrying metal parts of transformer
4 installations, including fences, guards, etc., shall be grounded where required under
5 the conditions and in the manner specified for electric equipment and other exposed
6 metal parts in Article 250.

7 **(b) Transformer Neutral Grounding.** Where services over 600 volts are supplied
8 from multi-ground, neutral systems in which transformer protection is provided by
9 fuses in the primary feeders as provided in the National Electrical Code, Section
10 450-3(a), the grounded neutral conductor shall be connected to a grounding
11 electrode at each transformer location. Where the secondary of the transformer or
12 transformers is grounded, the secondary ground shall be connected to the common
13 neutral ground.

14 Exception: Will not apply to industrial distribution systems.
15

16 **Section 44.** The National Electrical Code, 1999 edition, is amended by
17 adding Sections 450-19 and 450-20 as follows:

18 **450-19. Location.**

19 **(a) Location of Pad-Mounted Transformers.**

20 **Definition -** A pad-mounted transformer installation is an installation of an
21 oil-filled transformer outdoors wherein all bushings, handholes and live and
22 operating parts are guarded by a solid metal enclosure so secured as to be
23 available to authorized qualified personnel only. This will not prohibit the use of
24 approved glass monitoring devices or properly baffled ventilators.

25 (1) Where a pad-mounted transformer is to be installed adjacent to a structure
26 of combustible material, it shall not be closer than 10 feet. This ten-foot separation
27 shall be measured from the nearest metal portion of the pad-mounted transformer
28 installation to the nearest building features required to be safeguarded. In the case
29 of overhanging eaves or roof lines of combustible material on standard single story
30 structure, the ten-foot measurement shall be made in such a way as to provide at
31 least ten feet of clear space between the eaves and the nearest metal portion of the
32 pad-mounted transformer installed outside a vertical line extended from the ends of
33 the eaves to the ground if this distance is at least ten feet horizontally from a
34 combustible wall. In addition, the grade of the ground at the location of the pad-
35 mounted transformer shall be such that any oil leaking from the transformer will flow
36 away from the building and will not form pools.

37 Exception: In urban residential areas where improved alleyways are used, and
38 where a pad-mounted transformer is to be installed adjacent to a structure of
39 combustible material, it shall not be closer than 2 feet provided the structure is
40 noninhabited, such as a detached automobile garage.

1 (2) Pad-mounted transformer installations shall not be made nearer than two
2 feet, measured horizontally, to a noncombustible building surface having no doors,
3 windows or other openings closer than indicated in paragraph (2).

4 (3) Pad-mounted transformer installations shall not be located where
5 exposed to damage by automobiles, trucks or other mobile types of machinery.
6 Where transformers are installed in areas subject to other than pedestrian traffic,
7 they shall be provided with additional guarding.

8 (4) Pad-mounted transformer installations shall meet the requirements for
9 being effectively grounded as provided in Section 250-2, National Electrical Code.

10 (b) **Total Underground Transformers.** Enclosures for total underground
11 transformers shall not be located within 10 feet of a doorway or fire escape.
12 Adequate space shall be maintained above the total underground transformer
13 enclosure so that a boom may be used to lift the transformer.

14 (c) **Transformer Vaults.** Articles 450-41 through 450-48, inclusive, of the NEC are
15 repealed. See the Seattle Building Code, Section 414 and Appendix Chapter 4 for
16 construction requirements for transformer vaults.

17 **450-20. Rating of Dry-Type Transformers.** Dry-type transformers shall be rated
18 not less than the load served as determined in accordance with Article 220 of the
19 National Electrical Code.

20
21 **Section 45.** Sections 450-41 through 450-48 of the National Electrical
22 Code, 1999 edition, are repealed.

23
24 **Section 46.** Section 553-4 of the National Electrical Code, 1999 edition, is
25 amended as follows:

26 **553-4 Location of Service Equipment.** The service equipment for a floating
27 building shall be located adjacent to, but not in or on, the building.

28 Exception: In existing situations, the service equipment may be located in or on the
29 building by special permission.

30
31 **Section 47.** The National Electrical Code, 1999 edition, is amended by
32 adding Section 555-12 as follows:

33 **555-12. Lighting Fixtures.** All walkways over water shall be illuminated to provide
34 safe access. All lighting fixtures shall be listed for the use.

35
36 **Section 48.** Section 620-5 of the National Electrical Code, 1999 edition, is
37 amended as follows:



1 **620-5. Working Clearances.** Working space shall be provided about controllers,
2 disconnecting means, and other electrical equipment. The minimum working space
3 shall not be less than that specified in ~~((Section 140-26(a)))~~ the Seattle Building
4 Code, Section 3016.3.

5 ~~Where conditions of maintenance and supervision ensure that only qualified~~
6 ~~persons will examine, adjust, service, and maintain the equipment, the clearance~~
7 ~~requirements of Section 110-26(a) shall be waived as permitted in (a) through (d).~~

8 ~~(a) Flexible Connections to Equipment.~~ Electrical equipment in (1) through (4)
9 is provided with flexible leads to all external connections so that it can be
10 repositioned to meet the clear working space requirements of Section 110-26(a).

11 ~~(1) Controllers and disconnecting means for dumbwaiters, escalators, moving~~
12 ~~walks, wheelchair lifts, and stairway chair lifts installed in the same space with the~~
13 ~~driving machine~~

14 ~~(2) Controllers and disconnecting means for elevators installed in the hoistway or~~
15 ~~on the car~~

16 ~~(3) Controllers for door operators~~

17 ~~(4) Other electrical equipment installed in the hoistway or on the car~~

18 ~~(b) Guards.~~ Live parts of the electrical equipment are suitably guarded, isolated or
19 insulated, and the equipment can be examined, adjusted, serviced, or maintained
20 while energized without removal of this protection.

21 ~~FPN: See definition of Exposed in Article 100.~~

22 ~~(c) Examination, Adjusting, and Servicing.~~ Electrical equipment is not required
23 to be examined, adjusted, serviced, or maintained while energized.

24 ~~(d) Low Voltage.~~ Uninsulated parts are at a voltage not greater than 30 volts
25 rms, 42 volts peak, or 60 volts dc.)

26 The clear working space in front of a disconnecting means shall be not less
27 than 48 inches (1.22m) in depth and 30 inches (.76m) in width.

28 Elevator machine rooms are required to have not less than 7 feet 0 inches of
29 headroom, per ASME A17.1, Rule 101.4.

30
31 **Section 49.** Section 620-21 of the National Electrical Code, 1999 edition,
32 is amended as follows:

33 **620-21. Wiring Methods.** Conductors and optical fibers located in hoistways, in
34 escalator and moving walk wellways, in wheelchair lifts, stairway chair lift runways,
35 and machinery spaces, in or on cars, and in machine and control rooms, not
36 including the traveling cables connecting the car or counterweight and hoistway
37 wiring, shall be installed in rigid metal conduit, intermediate metal conduit, electrical
38 metallic tubing, rigid nonmetallic conduit, or wireways, ~~((or shall be Type MC, MI, or~~
39 ~~AC cable))~~ unless otherwise ~~((permitted))~~ specified in (a) through (c).

40 Type MC cable or Type MI cable shall be permitted to be installed in elevator
41 spaces only by special permission and prior approval of the building official.

42 **(a) Elevators.**

1 **(1) Hoistways.**

2 ~~((a))~~ Nonmetallic raceways and wireways shall only be installed in
3 hoistways not required to be noncombustible fire resistant construction. Flexible
4 metal conduit, liquidtight flexible metal conduit, or liquidtight flexible nonmetallic
5 conduit shall be permitted in hoistways between risers and limit switches, interlocks,
6 operating buttons, and similar devices. Flexible conduit runs are limited to 6 feet
7 (1.83 m) in length.

8 ~~((b) Cables used in Class 2 power limited circuits shall be permitted to be~~
9 ~~installed between risers and signal equipment and operating devices provided the~~
10 ~~cables are supported and protected from physical damage and are of a jacketed~~
11 ~~and flame-retardant type.))~~

12 Feeders shall be permitted inside the hoistway for elevators with driving
13 machine motors located in the hoistway or on the car or counterweight.

14 **(2) Cars.**

15 (a) Nonmetallic raceways and wireways shall only be installed on cars
16 located in hoistways not required to be noncombustible fire resistant construction.
17 Flexible metal conduit, liquidtight flexible metal conduit, or liquidtight flexible
18 nonmetallic conduit of 3/8-in. nominal trade size or larger, not exceeding ~~((6 ft (1.83~~
19 ~~m)))~~ 3 feet (.915 m) in length shall be permitted on cars where located so as to be
20 free from oil and if securely fastened in place. Flexible conduit shall not be located
21 where it can be walked on or damaged.

22 *Exception: Liquidtight flexible nonmetallic conduit of 3/8 in. nominal trade size or*
23 *larger, as defined by Section 351-22(2), shall be permitted in lengths not in excess*
24 *of 6 ft (1.83 m).*

25 (b) Hard-service cords and junior hard-service cords that conform to the
26 requirements of Article 400 (Table 400-4) shall be permitted as flexible connections
27 between the fixed wiring on the car and devices on the car doors or gates. Hard-
28 service cords only shall be permitted as flexible connections for ~~((the))~~ portable type
29 top-of-car operating devices or ~~((the))~~ car-top work lights. Devices or fixtures shall
30 be grounded by means of an equipment grounding conductor run with the circuit
31 conductors. Cables with smaller conductors and other types and thicknesses of
32 insulation and jackets shall be permitted as flexible connections between the fixed
33 wiring on the car and devices on the car doors or gates, if listed for this use.

34 ~~((c) Flexible cords and cables that are components of listed equipment and~~
35 ~~used in circuits operating at 30 volts rms or less or 42 volts dc or less shall be~~
36 ~~permitted in lengths not to exceed 6 ft (1.83 m) provided the cords and cables are~~
37 ~~supported and protected from physical damage and are of a jacketed and flame-~~
38 ~~retardant type.))~~

39 (d) Flexible metal conduit, liquidtight flexible metal conduit, liquidtight flexible
40 nonmetallic conduit or flexible cords and cables, or conductors grouped together
41 and taped or corded that are part of listed equipment, a driving machine, or a driving

1 machine brake shall be permitted on the car assembly, in lengths not to exceed ((6
2 ft (1.83 m))) 3 feet (.915 m) without being installed in a raceway and where located
3 to be protected from physical damage and are of a flame-retardant type.

4 **(3) Machine Room and Machinery Spaces.**

5 (a) Flexible metal conduit, liquidtight flexible metal conduit, or liquidtight
6 flexible nonmetallic conduit of 3/8 in. nominal trade size or larger, not exceeding 6 ft
7 (1.83 m) in length, shall be permitted between control panels and machine motors,
8 machine brakes, motor-generator sets, disconnecting means, and pumping unit
9 motors and valves.

10 *Exception: Liquidtight flexible nonmetallic conduit, as defined in Section 351-22(2),*
11 *shall be permitted to be installed in lengths not in excess of 6 ft (1.83 m).*

12 (b) Where motor-generators, machine motors, or pumping unit motors and
13 valves are located adjacent to or underneath control equipment and are provided
14 with extra-length terminal leads not exceeding 6 ft (1.83 m) in length, such leads
15 shall be permitted to be extended to connect directly to controller terminal studs
16 without regard to the carrying-capacity requirements of Articles 430 and 445.
17 Auxiliary gutters shall be permitted in machine and control rooms between
18 controllers, starters, and similar apparatus.

19 ~~((c) Flexible cords and cables that are components of listed equipment and
20 used in circuits operating at 30 volts rms or less or 42 volts dc or less shall be
21 permitted in lengths not to exceed 6 ft (1.83 m) provided the cords and cables are
22 supported and protected from physical damage and are of a jacketed and flame-
23 retardant type.))~~

24 (d) On existing or listed equipment, conductors shall also be permitted to be
25 grouped together and taped or corded without being installed in a raceway. Such
26 cable groups shall be supported at intervals not over 3 ft (914 mm) and located so
27 as to be protected from physical damage.

28 **(4) Counterweight.** Nonmetallic raceways and wireways shall only be
29 installed on counterweights installed in hoistways not required to be noncombustible
30 fire resistant construction. Flexible metal conduit, liquidtight flexible metal conduit,
31 liquidtight flexible nonmetallic conduit or flexible cords and cables, or conductors
32 grouped together and taped or corded that are part of listed equipment, a driving
33 machine, or a driving machine brake shall be permitted on the counterweight
34 assembly, in lengths not to exceed 6 ft (1.83 m) without being installed in a raceway
35 and where located to be protected from physical damage and are of a flame-
36 retardant type.

37 **(b) Escalators.**

38 (1) Flexible metal conduit, or liquidtight flexible metal conduit, or liquidtight
39 flexible nonmetallic conduit shall be permitted in escalator and moving walk
40 wellways. Flexible metal conduit or liquidtight flexible metal conduit of 3/8-in.
41 nominal trade size shall be permitted in lengths not in excess of 6 ft (1.83 m).



1 *Exception: 3/8 in. nominal trade size or larger liquidtight flexible nonmetallic*
2 *conduit, as defined in Section 351-22(2), shall be permitted to be installed in lengths*
3 *in excess of 6 ft (1.83 m).*

4 ~~((2) Cables used in Class 2 power limited circuits shall be permitted to be~~
5 ~~installed within escalators and moving walkways provided the cables are supported~~
6 ~~and protected from physical damage and are of a jacketed and flame retardant~~
7 ~~type.))~~

8 (3) Hard-service cords that conform to the requirements of Article 400 (Table
9 400-4) shall be permitted as flexible connections on escalators and moving walk
10 control panels and disconnecting means where the entire control panel and
11 disconnecting means are arranged for removal from machine spaces as permitted
12 in Section 620-5.

13 **(c) Wheelchair Lifts and Stairway Chair Lift Raceways.**

14 (1) Flexible metal conduit or liquidtight flexible metal conduit shall be
15 permitted in wheelchair lifts and stairway chair lift runways and machinery spaces.
16 Flexible metal conduit or liquidtight flexible conduit of 3/8-in. nominal trade size shall
17 be permitted in lengths not in excess of 6 ft (1.83 m).

18 *Exception: 3/8 in. nominal trade size or larger liquidtight flexible nonmetallic*
19 *conduit, as defined in Section 351-22(2), shall be permitted to be installed in lengths*
20 *in excess of 6 ft (1.83 m).*

21 (2) ~~Traveling ((G))~~cables used in Class 2 power-limited circuits shall be
22 permitted to be installed within wheelchair lifts and stairway chair lift runways and
23 machinery spaces provided the cables are supported and protected from physical
24 damage and are of a jacketed and flame-retardant type.

25
26 **Section 50.** Section 620-22(a) of the National Electrical Code, 1999
27 edition, is amended as follows:

28 **620-22. Branch Circuits for Car Lighting, Receptacles(s), Ventilation, Heating,**
29 **and Air Conditioning.**

30 **(a) Car Light Source.** A separate branch circuit shall supply the car lights,
31 receptacles(s), auxiliary lighting power source, and ventilation on each elevator car.
32 The overcurrent device protecting the branch circuit shall be located in the elevator
33 machine room/machinery space.

34 Required lighting shall not be connected to the load side terminals of a
35 ground-fault circuit-interrupter receptacle(s).

36
37 **Section 51.** Section 620-44 of the National Electrical Code, 1999 edition,
38 is amended as follows:

39 **620-44. Installation of Traveling Cables.** Traveling cable shall be permitted to be
40 run without the use of a raceway for a distance not exceeding 6 ft (1.83 m) in length
41 as measured from the first point of support on the elevator car or hoistway wall, or



1 counterweight where applicable, provided the conductors are ~~((grouped together~~
2 ~~and taped or corded, or))~~ in the original sheath.

3 Traveling cables shall be permitted to be continued to elevator controller
4 enclosures and to elevator car and machine room connections, as fixed wiring,
5 ~~((provided they are suitably supported and protected from physical damage))~~ and
6 shall be installed in conduits or raceways.

7
8 **Section 52.** Section 620-51(b) of the National Electrical Code, 1999
9 edition, is amended as follows:

10 **(b) Operation.** No provision shall be made to open or close this disconnecting
11 means from any other part of the premises. If sprinklers are installed in hoistways,
12 machine rooms, or machinery spaces, the disconnecting means shall be permitted
13 to ~~((automatically))~~ open the power supply to the affected elevator(s) prior to the
14 application of water. No provision shall be made to automatically close this
15 disconnecting means. Power shall only be restored by manual means.

16 (FPN): To reduce hazards associated with water on live elevator electrical equipment.

17
18 **Section 53.** Section 620-71 of the National Electrical Code, 1999 edition,
19 is amended as follows:

20 **620-71. Guarding Equipment.** Elevator, dumbwaiter, escalator, and moving walk
21 driving machines; motor-generator sets; motor controllers; and disconnecting
22 means shall be installed in a room or enclosure set aside for that purpose unless
23 otherwise permitted in (a) or (b). The room or enclosure shall be secured against
24 unauthorized access.

25 Non-elevator equipment, wiring, pipes, etc., are prohibited in elevator
26 hoistways, pits, machine rooms and spaces. Only such equipment and wiring that
27 pertain to the elevator and its operation are permitted in these elevator spaces. See
28 Section 3022 of the Seattle Building Code.

29 By special permission, when prior written approval is obtained from the
30 building official, elevator motor controllers and driving machines may be permitted
31 inside the hoistway.

32 **(a) Motor Controllers.** Motor controllers shall be permitted outside the spaces
33 herein specified, provided they are in enclosures with doors or removable panels
34 that are capable of being locked in the closed position and the disconnecting means
35 is located adjacent to or is an integral part of the motor controller. Motor controller
36 enclosures for escalator or moving walks shall be permitted in the balustrade on the
37 side located away from the moving steps or moving treadway. If the disconnecting
38 means is an integral part of the motor controller, it shall be operable without opening
39 the enclosure.

40 **(b) Driving Machines.** Elevators with driving machines located on the car,
41 counterweight, ~~((or in the hoistway,))~~ and driving machines for dumbwaiters,

1 wheelchair lifts, and stairway lifts shall be permitted outside the spaces herein
2 specified.

3
4 **Section 54.** Section 700-4 of the National Electrical Code, 1999 edition, is
5 amended as follows:

6 **700-4. Tests and Maintenance.**

7 **(a) Conduct or Witness Test.** The authority having jurisdiction shall conduct or
8 witness a test of the complete system upon installation and periodically afterward
9 under the control of the Seattle Fire Department.

10 **(b) Tested Periodically.** Systems shall be tested periodically by the building
11 owner and/or manager on a schedule acceptable to the authority having jurisdiction
12 to ensure the systems are maintained in proper operating condition.

13 **(c) Battery Systems Maintenance.** Where battery systems or unit equipments
14 are involved, including batteries used for starting, control, or ignition in auxiliary
15 engines, the authority having jurisdiction shall require periodic maintenance by the
16 building owner and/or manager.

17 **(d) Written Record.** A written record shall be kept of such tests and maintenance.

18 **(e) Testing Under Load.** Means for testing all emergency lighting and power
19 systems during maximum anticipated load conditions shall be provided.

20
21 **Section 55.** Section 700-16 of the National Electrical Code, 1999 edition,
22 is amended as follows:

23 **700-16. Emergency Illumination.** Emergency illumination shall include all
24 required means of egress lighting, illuminated exit signs, and all other lights
25 specified as necessary to provide required illumination.

26 Emergency lighting systems shall be designed and installed so that the
27 failure of any individual lighting element, such as the burning out of a light bulb,
28 cannot leave in total darkness any space that requires emergency illumination.

29 Where high-intensity discharge lighting such as high- and low-pressure
30 sodium, mercury vapor, and metal halide is used as the sole source of normal
31 illumination, the emergency lighting system shall be required to operate until normal
32 illumination has been restored.

33 *Exception: Alternative means that ensure emergency lighting illumination level is*
34 *maintained shall be permitted.*

35 Fixtures of alternate design may be used when specifically approved by the
36 building official.

37 Exit signs with open bottom lighting shall not be considered as taking the
38 place of a required pathway light unless specifically approved for the purpose.

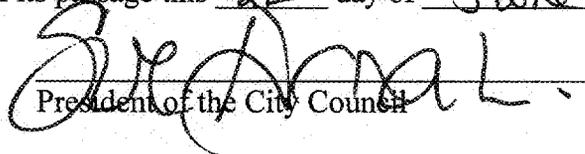
39 Exit illumination (pathway lighting) and emergency area lighting shall comply
40 with Chapter 10 of the Seattle Building Code.
41

1 **Section 56.** Section 701-10 of the National Electrical Code, 1999 edition,
2 is amended as follows:

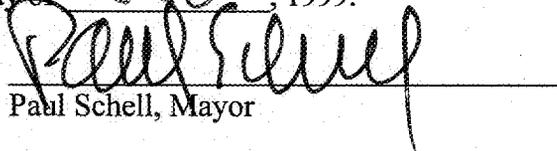
3 **701-10. Wiring Legally Required Standby Systems.** For shaft pressurization
4 installed according to exception 2 of Section 905.2.1 of the Seattle Building Code,
5 the legally required standby system wiring shall be kept entirely independent of all
6 other wiring and equipment and shall not enter the same raceway, cable, box, or
7 cabinet with other wiring. For other ((The)) legally required standby systems, wiring
8 shall be permitted to occupy the same raceways, cables, boxes, and cabinets with
9 other general wiring.

10 **Section 57.** This ordinance shall take effect and be in force thirty (30) days from and
11 after its approval by the Mayor, but if not approved and returned by the Mayor within ten
12 (10) days after presentation, it shall take effect as provided by the Municipal Code Section
13 1.04.020.

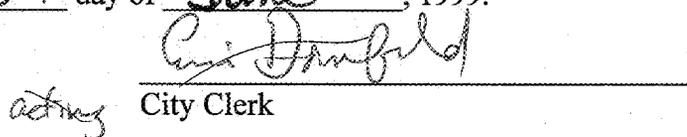
14
15 Passed by the City Council the 21st day of June, 1999 and signed by me
16 in open session in authentication of its passage this 21st day of June, 1999.

17
18 
19 _____
20 President of the City Council

21
22 Approved by me this 21st day of June, 1999.

23
24 
25 _____
26 Paul Schell, Mayor

27
28 Filed by me this 30th day of June, 1999.

29
30 
31 _____
32 acting City Clerk

33 (SEAL)
34
35





City of Seattle

Paul Schell, Mayor

Department of Design, Construction and Land Use
R. F. Krochalis, Director

MEMORANDUM

TO: Sue Donaldson, President, City Council

FROM: Rick Krochalis, Director

*RK by A. Smuckey
Acting*

Contact Staff: Maureen Traxler
Code Development Analyst Supervisor

DATE: April 8, 1999

RE: Proposed 1999 Seattle Electrical Code

The proposed 1999 Seattle Electrical Code is attached for your consideration. The Construction Codes Advisory Board and its Electrical Code Review Committee worked with Department staff to produce this code.

BACKGROUND

The National Electrical Code (NEC) is a model code published by the National Fire Protection Association. Seattle and the State of Washington have been adopting it for many years. A new edition is published every three years; the 1999 NEC was published late last year.

Both the State and Seattle amend the NEC to provide greater flexibility and to respond to local conditions and practices. For Seattle, there are also issues unique to a large city and issues involving coordination with City Light.

PUBLIC REVIEW

In early 1999 the Construction Codes Advisory Board appointed a committee to review the draft of the Code that was prepared by DCLU staff. Members of the committee included electrical contractors and engineers, organized labor, as well as the Seattle Fire Department and the State Department of Labor and Industries. The availability of the draft code and the activities of the Committee were announced to the public in DCLU's INFO newsletter and in the Daily Journal of Commerce. Environmental review has been completed.

The committee and staff reached agreement on all issues. On April 1, 1999 CCAB reviewed the proposed code and recommended adoption.

PROPOSED CHANGES

Very few new amendments are proposed for the 1999 Seattle Electrical Code. A more complete list of changes is attached, but the most significant changes from the current code include:

- Changes to Section 302 to clarify what information is required on applications.
- A NEC change allowing service entrance conductors to be spliced is deleted. There initially was some disagreement with the Electrical Code Review committee which was resolved by agreeing to reconsider the amendment when we review the next code.
- Outlets are prohibited from being positioned face-up in a countertop near a sink.
- Amendments related to marinas are deleted, which may result in some boat spaces being without shore power.

If you have any questions, please contact Maureen Traxler at maureen.traxler@ci.seattle.wa.us or (206)233-3892.

SUMMARY OF CHANGES TO 1999 SEATTLE ELECTRICAL CODE

Following is a list of the most significant differences between the 1999 Seattle Electrical Code and the current edition—the 1996 Seattle Electrical Code. The list includes all the changes in the Seattle amendments. A more complete description of the changes in the 1999 National Electrical Code (NEC) is found in *Analysis of the 1999 National Electrical Code*, published by the International Association of Electrical Inspectors. Most of the changes in the 1999 NEC are changes in formatting and structure of the code sections, or are clarifications of existing provisions.

106 Alternate Materials and Methods of Wiring. Language more similar to the current editions of the Seattle Building and Mechanical codes is added. This language gives DCLU clearer authority to approve variations from strict compliance with the code when we believe all the features of the building make it as safe as if there had been literal compliance with the code.

Several sections. The name of the Department is changed to Design, Construction and Land Use.

302(b) Plans and Specifications. A cross reference is added to alert the reader that the Seattle Fire Code has specific requirements for information to be submitted about fire alarm systems.

In subsection 2, a sentence is deleted that specified the types of paper that are not acceptable for plans.

Several changes were made to Subsection 3 to clarify the information required on plans.

305(e) Required Inspections. A requirement is moved here from its previous location in Article 250 requiring that grounding be completely made up at the time of the cover inspection.

100 Definitions. Text that had been in the definition of “service point” is relocated to Section 230-10. The text contains regulatory provisions rather than strictly definitional matter. The text was not changed other than to format it for its new location.

110-13 Mounting, Cooling and Location of Equipment. The Seattle amendment is placed in a new subsection and the title of the section is revised, but the text is not changed.

210-8 Ground-fault Circuit Interrupter Protection for Personnel. The NEC revised the language in item 2(a) and the exception to item 3. New language is added to NEC item 7 that prohibits outlets from being positioned face-up in a countertop surface near a sink.

215-12 Panelboards. The Seattle language that requires panelboards in multifamily buildings to be supplied by a single feeder is moved to this section because of a change in NEC Section 215-2. The language of the amendment has not changed.

220-5 Individual Branch Circuits. Obsolete Seattle amendments are deleted; DCLU and CCAB believe the NEC standards are sufficient.

225-8 Disconnection. The Seattle amendment is deleted because the topic is adequately covered by NEC 225-30.

230-40 Number of Service Entrance Conductor Sets. Seattle amendments are moved to **230-44** because of a change in NEC format.

230-46 Spliced Conductors. One of the more significant NEC changes is found in this section, which allows spliced service entrance conductors. Although there was a difference of opinion between the CCAB committee and DCLU staff, the consensus was to continue to disallow splicing of service entrance conductors. We will reconsider this decision when reviewing the next edition of the Electrical Code.

230-82 Equipment Connected to Supply Side of Service Disconnect. New Seattle language is added to allow taps under meter socket lugs with prior approval from DCLU. Such taps were prohibited by the 1996 Code, but staff found some circumstances where it is appropriate.

Item 9 is amended to codify an existing practice of allowing service accessory buss gutters or termination boxes, but the Code has not explicitly provided for it.

230-90 Service Equipment Overcurrent Protection. Exception 3 of the NEC has been revised to clarify a technical requirement related to calculating the rating of overcurrent devices. The Seattle amendment was revised to require a permanent engraved placard for identification where service entrance conductors are sized smaller than the rating of the service equipment, and is very similar to language being adopted by several other cities in King County. The discrepancy in sizing can be a problem for future owners or tenants who assume the conductors have capacity equal to the rating of the service equipment.

250-104 Bonding of Piping Systems and Exposed Structural Steel. An existing Seattle amendment is deleted. The amendment had specified that metallic water lines be bonded together and not used as grounding means. This requirement is covered adequately in the NEC.

300-23 Spread of Fire or Products of Combustion. A Seattle amendment had required that nonrated cable be removed from ceiling spaces. The amendment is revised to require that cable be removed whether or not it is rated. The amendment is relocated from **300-21**.

Article 305 Temporary Wiring. The NEC has been revised to allow nonmetallic cable on construction sites without limitations. DCLU considered limiting its use in the downtown Fire District, but determined that wasn't necessary. CCAB concurred.

Article 334 Metal Clad Cable: Type MC. Special restrictions on metal-clad cable are deleted from the Seattle Code. We believe that adequate standards for support and use are now present.

336-5 Uses Not Permitted (Nonmetallic Sheathed Cable). The NEC eliminated a prohibition on use of soft cable feeders in single-family residences over one story. The limitation in the National Code now only applies to multifamily buildings. There will be no change in practice in Seattle because we had been allowing this use of the material.

348-8 Use of Electrical Metallic Tubing (EMT) in Wet Locations. In previous codes, Seattle prohibited use of EMT in wet locations. However, we wanted to allow it in wet locations where it is appropriate, even though there are locations where it should not be used. The amendment, therefore, requires ground wires where EMT is used in wet locations.

Article 384 Switchboards and Panelboards. An amendment prohibiting outdoor panelboards is deleted.

555-4 Marinas and Boatyards. Amendments are deleted, resulting in a change that will allow some boat spaces in marinas to be without a shore power outlet. Other amendments that are adequately covered elsewhere are deleted.

620-21 Wiring Methods for Elevator Equipment. Amendments prohibiting rigid nonmetallic conduit in elevator applications are added. In coordination with DCLU's Elevator Inspection section, some restrictions on the use of flexible and PVC materials have been eliminated.

700-12(b) Generator Set (Source of Power). A Seattle amendment specifying that the fuel source for emergency generator sets be located on site has been deleted from the Electrical Code. The Building Code requires on-site fuel in high rise buildings, which is the only place where generators are commonly used.

710-11 Legally Required Standby Systems. An amendment requiring that standby power for shaft pressurization systems in low-rise buildings be available within 10 seconds is deleted. Typically, standby power is required to become available within 60 seconds, so this amendment was deleted for consistency with other standby systems.



City of Seattle

Paul Schell, Mayor

Department of Design, Construction and Land Use

R. F. Krochalis, Director

MEMORANDUM

TO: Sue Donaldson, President, Seattle City Council

FROM: Maureen Traxler ^{MT}
Code Development Analyst Supervisor

DATE: June 10, 1999

RE: Changes to Proposed 1999 Seattle Electrical Code

We have made a few changes to the 1999 Seattle Electrical Code ordinance since the Council Committee was briefed on May 4. I have attached a revised version of the ordinance with flags marking the pages that were changed.

The most significant changes were made in response to discussions with a manufacturer of nonmetallic wiring products. Article 620 of the original version of the ordinance prohibited nonmetallic flexible conduit for use with elevators and escalators. After discussions between the manufacturer and DCLU's electrical and elevator inspection staff, we are proposing to allow flexible nonmetallic conduit in all but noncombustible fire-rated hoistways.

Joyce Kling had some additional suggestions. We made changes in response to all but one of them. In Section 33 of the ordinance, which is Section 336-6 of the Electrical Code, Ms. Kling suggested that we renumber the proposed subsection (e) to be subsection (c). We decided not to make that change in case another section of the Electrical Code makes a cross reference to (c).

In Sections 348-4 and 348-5 Ms. Kling pointed out an apparent inconsistency regarding the installation of electrical metallic tubing in concrete. To remove the inconsistency, we added the phrase "above grade" to Section 348-4.

Her final suggestion improves the readability of the code. In Section 620(a)(2)(a), we separated the final sentence into two sentences.



ORDINANCE _____

AN ORDINANCE relating to building and construction codes: repealing Section 22.300.010 of the Seattle Municipal Code (Ordinance 118553), and adopting a new Section 22.300.015 to adopt the 1999 National Electrical Code with Seattle amendments as the Seattle Electrical Code.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. Section 22.300.010 of the Seattle Municipal Code adopting the 1996 National Electrical Code as adopted in Ordinance 118553 is hereby repealed, and a new Section 22.300.015 is added to the Seattle Municipal Code to read as follows:

22.300.015 Adoption of the National Electrical Code.

The National Electrical Code, 1999 edition, published by the National Fire Protection Association, one copy of which is filed with the City Clerk in C.F. 303073, is hereby adopted and by this reference made a part of this subtitle. The National Electrical Code, 1999 edition, together with the amendments and additions thereto adopted by Ordinance _____ constitute the Seattle Electrical Code.

Section 2. The National Electrical Code, 1999 edition, is amended by adding Chapters 1, 2 and 3 as follows:

CHAPTER 1

APPLICATION OF THIS CODE

Section 101. Title. This code shall be known as the "Seattle Electrical Code Supplement" and may be so cited. It is referred to herein as the "Electrical Code" or "this code."

Section 102. Purpose. The purpose of this code is to protect persons, buildings and the contents thereof in a practical manner from hazards arising from the use of electricity for lights, heat, power, radio, signaling and other purposes. An additional purpose of this code is to provide equal, higher or better standards of construction and/or equal, higher or better standards of materials, devices, appliances and equipment than that required by the State of Washington under the provisions of Chapter 19.28 RCW (Revised Code of Washington). This code is intended to provide for and promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this

1 code. This code is not intended as a design specification nor an instruction manual
2 for untrained persons.

3 **Section 103. Scope.** The Electrical Code shall apply to all electrical wiring and
4 equipment, including communications systems, installed or used within the City.

5 *Exception No. 1: Installations in ships and watercraft not connected to public*
6 *utilities, railway rolling stock, aircraft or automotive vehicles.*

7 *Exception No. 2: Installations of railways or generation, transformation,*
8 *transmission or distribution of power used exclusively for operation of rolling stock*
9 *or installations used exclusively for signaling and communication purposes.*

10 *Exception No. 3: Installations of communication equipment under exclusive control*
11 *of communication utilities, located outdoors or in building spaces used exclusively*
12 *for such installations.*

13 *Exception No. 4: Installation of communication or signaling equipment used*
14 *exclusively for the operation of a municipal fire alarm or police telegraph system.*

15 *Exception No. 5: Installations under the exclusive control of electric utilities for the*
16 *purpose of communication, metering or for the generation, control, transformation,*
17 *transmission and distribution of electric energy located in buildings used for such*
18 *purposes or leased by the utility or on public highways, streets, roads or other*
19 *public ways, or outdoors on established rights on private property up to service*
20 *point as defined in this code. The installation and maintenance of all service*
21 *conductors up to the point of connection to the consumer's service entrance*
22 *conductors shall be the responsibility of the serving utility.*

23 **Section 104. APPLICATION TO EXISTING BUILDINGS**

24 (a) **Additions, Alterations and Repairs.** Additions, alterations and repairs may be
25 made to the electrical system of existing buildings or structures without making the
26 entire electrical system comply with all of the requirements of this code for new
27 buildings or structures, provided the additions, alterations or repairs that are made
28 shall comply with the requirements of this code except as otherwise specifically
29 provided in other applicable retroactive ordinances of the City.

30 *Exception: Subject to the approval of the building official, repairs may be made*
31 *with the same materials of which the building or structure is constructed, provided*
32 *the repair complies with the electrical code in effect at the time of original*

1 *installation and provided further that no change shall be permitted which increases*
2 *its hazard.*

3 (b) **Existing Electrical Systems.** Electrical systems in existence at the time of the
4 passage of this code may continue to be used provided such use was legal at the
5 time of the passage of this code and provided continued use is not dangerous to
6 life or limb.

7 (c) **Maintenance.** All buildings or structures, both existing and new, and all parts
8 thereof shall be maintained in a safe condition. All devices or safeguards which are
9 required by this code or which were required by a code in effect when the building
10 or structure was erected, altered or repaired shall be maintained in good working
11 order. The owner or the owner's agent shall be responsible for the maintenance of
12 buildings and structures.

13 It shall be the duty of the owner or the owner's agent to maintain in a safe
14 and usable condition all parts of buildings or equipment which are intended to assist
15 in the extinguishing of fire, or to prevent the origin or spread of fire, or to safeguard
16 life or property. It shall be unlawful to fail to immediately comply with any notice or
17 order of the fire chief or the building official.

18 *Exception: The building official may modify the requirements of this subsection*
19 *where all or a portion of a building is unoccupied.*

20 (d) **Historic Buildings and Structures.** The building official may modify the
21 specific requirements of this code as it applies to buildings and structures
22 designated as landmarks of historical or cultural importance and require in lieu
23 thereof alternate requirements which, in the opinion of the building official, will result
24 in a reasonable degree of safety to the public and the occupants of those buildings.

25 A historic building or structure is one which has been designated for
26 preservation by City Landmarks Preservation Board or the State of Washington,
27 has been listed, or has been determined eligible to be listed, in the National
28 Register of Historic Places, has been officially nominated for such status, or is a
29 structure contributing to the character of a designated landmark or special review
30 district.

31 (e) **Moved Buildings.** Buildings or structures moved into or within the city shall
32 comply with standards adopted by the building official. No building shall be moved
33 into or within the City unless, prior to moving, the building official has inspected the
34 building for compliance with those standards and the permit holder has agreed to
35 correct all deficiencies found and has been issued an electrical permit for the work.

1 Any moved building that is not in complete compliance with those standards within
2 one year from the date of permit issuance and is found to be a public nuisance may
3 be abated.

4 **Section 105. Tests.** Whenever there is insufficient evidence of compliance with
5 the provisions of this code or evidence that any material or construction does not
6 conform to the requirements of this code, the building official may require tests as
7 proof of compliance to be made at no expense to the City.

8 Test methods shall be specified by this code or by other recognized test
9 standards. If there are no recognized and accepted test methods for the proposed
10 alternate, the building official shall determine the test procedures.

11 All tests shall be made by an approved agency. Reports of tests shall be
12 retained by the building official.

13 **Section 106. Alternate Materials and Methods of Wiring.** This code does not
14 prevent the use of any material, method or design of wiring not specifically allowed
15 or prohibited by this code, provided the alternate has been approved and its use
16 authorized by the building official.

17 The building official may approve an alternate, provided he/she finds that the
18 proposed alternate complies with the provisions of this code and the alternate,
19 when considered together with other safety features or relevant circumstances, will
20 provide at least an equivalent level of strength, effectiveness, fire resistance,
21 durability, safety and sanitation.

22 The building official may require that sufficient evidence or proof be
23 submitted to reasonably substantiate any claims regarding the use or suitability of
24 the alternate. The building official may, but is not required to, record the approval
25 of alternate materials and methods and any relevant information in the files of the
26 building official or on the approved permit plans.

27 **Section 107. Modifications.** The building official may grant modifications
28 for individual cases whenever there are practical difficulties involved in carrying out
29 the provisions of this code. The building official must first find that a special
30 individual reason makes the strict letter of this code impractical and that the
31 modification is in conformity with the intent and purpose of this code and does not
32 lessen any fire protection requirements or any degree of structural integrity. The
33 building official may, but is not required to, record the approval of modifications and
34 any relevant information in the files of the building official or on the approved permit
35 plans.

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CHAPTER 2

ORGANIZATION AND ENFORCEMENT

Section 201. Authority. Whenever the term or title "Authority Having Jurisdiction," "Administrative Authority," "Responsible Official," "Building Official," "Chief Inspector" or "Code Enforcement Officer" is used in this code, it shall be construed to mean the Director of the Department of Design, Construction and Land Use of the City of Seattle.

Section 202. POWERS AND DUTIES OF THE BUILDING OFFICIAL

(a) **General.** The building official is authorized and directed to interpret and enforce the provisions and intent of this code.

Compliance with the requirements of this code shall be the obligation of the owner of the building, structure or premises, the duly authorized agent of the owner, or other person responsible for the condition or work, and not of the City or any of its officers or employees.

(b) **Deputies.** The building official may appoint such officers, inspectors, assistants and other employees as shall be authorized from time to time. The building official may deputize such employees as may be necessary to carry out the functions of the Department of Design, Construction and Land Use.

(c) **Right of Entry.** With the consent of the owner or occupier of a building or premises, or pursuant to a lawfully issued warrant, the building official may enter a building or premises at any reasonable time to perform the duties imposed by this code.

(d) **Stop Orders.** Whenever any installation, alteration, repair or removal of electrical work is being done contrary to the provisions of this code, or in the event of dangerous or unsafe conditions related to electrical work, the building official may order the affected work stopped and a notice describing the violation in writing posted on the premises or served on any person responsible for the condition or work. It shall be unlawful for any person to engage in or cause any further work to be done until authorization from the building official is received.

(e) **Authority to Disconnect Utilities.** The building official shall have the authority to disconnect or order discontinuance of any utility service or energy supply to buildings, structures or equipment therein regulated by this code in cases of emergency or where necessary for safety to life and property. The building official

1 may enter any building or premises to disconnect utility service or energy supply.
2 Utility service shall be discontinued until the equipment, appliances, devices or
3 wiring found to be defective or defectively installed are removed or restored to a
4 safe condition.

5 It shall be unlawful for any person to reconnect any electrical equipment
6 which has been disconnected by the building official until the equipment has been
7 placed in a safe condition and approved by the building official.

8 **(f) Liability.** Nothing contained in this code is intended to be, nor shall be
9 construed to create or form the basis for any liability on the part of the City or its
10 officers, employees or agents, for any injury or damage resulting from the failure of
11 a building to conform to the provisions of this code, or by reason or in consequence
12 of any inspection, notice, order, certificate, permission or approval authorized or
13 issued or done in connection with the implementation or enforcement of this code,
14 or by reason of any action or inaction on the part of the City related in any manner
15 to the enforcement of this code by its officers, employees or agents.

16 Neither the building official nor any employee charged with the enforcement
17 of this code shall be personally liable for any damage that accrues to persons or
18 property as a result of any act or omission committed in the discharge of their
19 duties, provided that the building official or employee acted in good faith and
20 without malice.

21 **(g) Code Interpretation or Explanation.** Electrical inspectors may give
22 information as to the meaning or application of the National Electrical Code and the
23 Seattle Supplement, but shall not lay out work or act as consultants for contractors,
24 owners or users.

25 **(h) Cooperation of Other Officials and Officers.** The building official may
26 request, and shall receive so far as may be necessary in the discharge of duties,
27 the assistance and cooperation of other officials of the City of Seattle and officers of
28 public and private utilities.

29 **Section 203. Unsafe Conditions.** The building official may inspect any new or
30 existing electrical installation or equipment, and if the installation or equipment is
31 found to be maintained or used in an unsafe condition or found to be in violation of
32 this code, the building official shall serve upon the owner or user a notice or order
33 requiring correction. Any person served such notice who fails to comply with the
34 order therein shall be in violation of this ordinance and subject to the penalties
35 provided in this code.

1 Whenever the building official finds that any building or structure, or portion
2 thereof, is in such a dangerous and unsafe condition as to constitute an imminent
3 hazard to life or limb, the building official may issue an emergency order directing
4 that the building or structure, or portion thereof, be restored to a safe condition.
5 The order shall specify the time for compliance. The order may also require that the
6 building or structure, or portion thereof, be vacated within a reasonable time, to be
7 specified in the order. In the case of extreme danger, the order may specify
8 immediate vacation of the building or structure, or may authorize disconnection of
9 the utilities or energy source pursuant to Section 202(e). No person shall occupy
10 the building or structure, or portion thereof, after the date on which it is required to
11 be vacated until it is restored to a safe condition as required by the order and this
12 code. It shall be unlawful for any person to fail to comply with an emergency order
13 issued by the building official.

14 **Section 204. VIOLATIONS AND PENALTIES**

15 (a) **Violations.** It shall be a violation of this code for any person, firm or corporation
16 to erect, construct, enlarge, repair, move, improve, remove, convert or demolish,
17 equip, occupy, or maintain any building or structure in the City, contrary to or in
18 violation of any of the provisions of this code.

19 It shall be a violation of this code for any person, firm or corporation to aid,
20 abet, counsel, encourage, hire, commend, induce or otherwise procure another to
21 violate or fail to comply with any of the provisions of this code.

22 It shall be a violation of this code for any person, firm or corporation to use
23 any materials or to install any device, appliance or equipment which does not
24 comply with applicable standards of this code or which has not been approved by
25 the building official.

26 (b) **Civil Penalty.** Any person, firm or corporation failing to comply with the
27 provisions of this code shall be subject to a cumulative civil penalty in an amount
28 not to exceed \$500 per day for each violation from the date the violation occurs or
29 begins until compliance is achieved.

30 (c) **Criminal Penalties.** 1. Anyone violating or failing to comply with any order
31 issued by the building official pursuant to this code shall, upon conviction thereof,
32 be punished by a fine of not more than \$1,000 or by imprisonment for not more
33 than 360 days, or by both such fine and imprisonment. Each day's violation or
34 failure to comply shall constitute a separate offense.

1 2. Anyone violating or failing to comply with any of the provisions of this
2 code and who within the past five years has had a judgment against them pursuant
3 to Section 204(b), shall upon conviction thereof be fined in a sum not to exceed
4 \$500 or by imprisonment for not more than 180 days, or by both such fine and
5 imprisonment. Each day's violation or failure to comply shall constitute a separate
6 offense.

7 (d) **Additional Relief.** The building official may seek legal or equitable relief to
8 enjoin any acts or practices and abate any condition which constitutes a violation of
9 this code when civil or criminal penalties are inadequate to effect compliance.

10 **Section 205. Notices.** It shall be unlawful for any person to remove, mutilate,
11 destroy or conceal any lawful notice issued or posted by the building official
12 pursuant to the provisions of this code.

13 The building official may record a copy of any order or notice with the
14 Department of Records and Elections of King County.

15 The building official may record with the Department of Records and
16 Elections of King County a notification that a permit has expired without a final
17 inspection after reasonable efforts have been made to obtain a final inspection.

18 **Section 206. RULES OF THE BUILDING OFFICIAL**

19 (a) **Authority.** The building official is authorized to promulgate, adopt and issue the
20 following rules:

21 (1) "Electrical Wiring Standards" to promulgate standards which are
22 acceptable as a method or as an alternative design for meeting code required
23 performance criteria, to edit or update national standards which are referenced in
24 the Electrical Code and to eliminate conflicts among code requirements.

25 (2) "Code Interpretations" to interpret and clarify conditions or language
26 expressed in this code.

27 (3) "Product Approvals" to approve a specific building construction material
28 or product, or a particular component fabricator which has been found acceptable
29 as meeting required performance criteria of this code.

30 (4) Any other rule necessary for administration of the purpose and intent of
31 this code.

1 (b) **Procedure for Adoption of Rules.** The building official shall promulgate, adopt
2 and issue rules according to the procedures as specified in Chapter 3.02 of the
3 Seattle Municipal Code.

4 **Section 207. Construction Codes Advisory Board.** An Electrical Code
5 Committee of the Construction Codes Advisory Board, as established in Section
6 105 of the Seattle Building Code, may examine proposed new editions of, and
7 amendments to this code and any proposed administrative rules promulgated to
8 enforce this code. The Electrical Code Committee may make recommendations to
9 the building official and to the City Council relating to this code and administrative
10 rules. The committee shall be called on an as-needed basis for the Construction
11 Codes Advisory Board.

12 **Section 208. Appeals.** Appeals from decisions or actions pertaining to the
13 administration and enforcement of this code shall be addressed to the building
14 official. The applicant may request a review by a panel of the Construction Codes
15 Advisory Board, convened by the Board Chair. The chair shall select a panel of at
16 least three members from the Electrical Code Committee. The results of the
17 panel's review shall be advisory only.

18 CHAPTER 3

19 PERMITS AND INSPECTIONS

20 Section 301. PERMITS

21 (a) **Permits Required.** It shall be unlawful to install, alter, extend or connect any
22 electrical equipment in a building or premises, or allow the same to be done,
23 without first obtaining a permit for the work from the building official.

24 (b) **Exempted Work.** An electrical permit shall not be required for the following
25 work:

26 (1) Replacing flush or snap switches, fuses, lamp sockets, receptacles, or
27 ballasts.

28 (2) Reconnecting or replacing a range within an individual dwelling unit, hot
29 plate, water heater, electric baseboard, wall heating unit to a circuit which has been
30 lawfully installed and approved, when no alteration of the circuit is necessary.

31 (3) The setting of meters by the City Light Department of the City of Seattle
32 or anyone else engaged in the business of supplying electricity to the public,

1 provided that meter loops have been installed under permit and that such meters
2 are not connected to any electrical installation regulated by this code until approval
3 for such connection has been given by the building official.

4 (4) The installation of 1000 feet or less of wiring for communications
5 systems.

6 (5) The installation or repair of electrical equipment installed in connection
7 with an elevator, dumbwaiter, or similar conveyance provided that work is covered
8 under the issuance of an elevator permit.

9 Exemption from the permit requirements of this code shall not be deemed to
10 grant authorization for any work to be done in any manner in violation of the
11 provisions of this code or any other laws or ordinances of the City.

12 (c) **Flood Hazard Areas.** In addition to the permit required by this section, all work
13 to be performed in areas of special flood hazard, as identified in the report entitled
14 "Flood Insurance Study for King County, Washington and Incorporated Areas" and
15 the accompanying Flood Insurance Rate Maps filed in C.F. 295948, is subject to
16 additional standards and requirements, including floodplain development approval
17 or a Floodplain Development License, as set forth in Chapter 25.06, the Seattle
18 Floodplain Development Ordinance.

19 **Section 302. APPLICATION AND PLANS**

20 (a) **Application.** Application for an electrical permit shall be made on a form
21 provided by the building official. Each application shall state the name and address
22 of the owner or occupant in possession of the building or premises where the work
23 is to be done, the name of the licensed contractor, if any, that will be responsible for
24 the installation, and such other information as the building official may require.
25 Application shall include documentation of compliance with the Seattle Energy
26 Code. The building official may refuse to issue or revoke a permit if any statement
27 in the permit application is found to be untrue.

28 (b) **Plans and Specifications. 1. General.** In addition to the requirements of
29 Section 302(a), two sets of plans and specifications shall be submitted with each
30 application for an electrical permit for an installation of: services or feeders of 400
31 amperes or over; all switches or circuit breakers rated 400 amperes or over; any
32 proposed installation which cannot be adequately described on the application
33 form; and installations of emergency generators.

1 *Exception: Plans and specifications shall not be required for installations for one-*
2 *and two-family dwellings.*

3 Two sets of electrical plans shall be submitted with each application for an
4 electrical permit for new or altered electrical installations in educational, institutional,
5 and health or personal care occupancies as indicated in Section 300-1(c) of this
6 code.

7 *Exception: One set of electrical plans shall be submitted with each application*
8 *when a service or feeder is new or altered and the sum of the equipment ampere*
9 *rating is less than 200 amperes.*

10 Three sets of plans and specifications for fire alarm systems shall be
11 submitted. See Seattle Fire Code Section 1007.3.1 for required submittal
12 information.

13 **2. Clarity of Plans.** Plans shall be drawn to a clearly indicated and
14 commonly accepted scale of not less than 1/8 inch to 1 foot upon substantial paper
15 such as blueprint quality or standard drafting paper. The plans shall be of microfilm
16 quality and limited to a minimum size of 11 inches by 17 inches and maximum size
17 of 41 inches by 54 inches. Plans shall indicate the nature and extent of the work
18 proposed and shall show in detail that it will conform to the provisions of this code.
19 All electrical work shall be readily distinguishable from other mechanical work. If
20 plans are incomplete, unintelligible or indefinite, the building official may require that
21 the plans be prepared by a licensed electrical engineer, or may reject or refuse to
22 examine such plans, even though a plan examination fee has been paid.

23 **3. Information on plans and specifications.** Information on plans and
24 specifications shall include the following:

- 25 (1) The type of occupancy and a complete scope of work.
- 26 (2) A complete riser and one line diagram to include all service and feeder
27 connections.
- 28 (3) Clear identification of all circuitry, to include but not limited to: circuit
29 numbers, wire sizes, insulation types, conduit sizes and types.
- 30 (4) A complete set of switchboard and panel schedules. These shall include all
31 load calculations and demand factors used for computation.

- 1 (5) A complete project load summary to include existing loads as applicable
2 (peak demands as per NEC excepted) and all added loads. Electrical
3 calculations, heat loss calculations and lighting summaries may be
4 submitted on separate computation sheets.
- 5 (6) Fault current calculations and the listed interrupting rating of all feeder and
6 service equipment.
- 7 (7) Voltage characteristics of all electrical systems and equipment.
- 8 (8) A key to all symbols used.
- 9 (9) A fixture schedule showing all pertinent fixture information.
- 10 (10) Any other information as may be required by the plans examiner.

11 (c) **Advance Plan Examination.** An architect or engineer registered in the State
12 of Washington may apply for an electrical permit and may request an advance plan
13 examination of electrical plans where the electrical contractor has not yet been
14 selected. Upon submission of an application including required plans, and payment
15 of fifty percent of the estimated permit fee, the Department will review the
16 application. When the application and plans are found to be in compliance with the
17 Seattle Electrical Code, the Department will approve the application and plans as
18 ready for issuance. Neither the permit nor the plans shall be issued until the
19 remainder of the fee is paid and the electrical contractor's name and license
20 number is placed on the permit.

21 PERMITS

22 **Section 303. (a) Issuance. 1. General.** The application and plans filed by an
23 applicant for a permit shall be checked by the building official. Such plans may be
24 reviewed by other departments of the City to check compliance with the laws and
25 ordinances under their jurisdiction. If the building official finds that the work as
26 described in an application for permit and the plans filed therewith conforms to the
27 requirements of this code and other pertinent laws and ordinances and that the fees
28 specified in the Fee Subtitle have been paid, the building official shall issue a permit
29 to the applicant who becomes the permit holder. The building official may refuse to
30 issue an electrical permit to any person who refuses or fails to complete the work
31 permitted by an existing permit on the same building or premises.

32 *Exception No. 1: The building official may issue a permit for the installation of part*
33 *of the electrical system of a building or structure before complete plans for the*

1 whole building or structure have been submitted or approved, provided adequate
2 information and detailed statements have been filed complying with all pertinent
3 requirements of this code. Holders of such permits may proceed at their own risk
4 without assurance that the permit for the entire building or structure will be granted.

5 *Exception No. 2: A permit may be issued for work to commence prior to the*
6 *approval of plans, if such approval is delayed beyond 10 working days after the*
7 *plans have been submitted for examination. The holders of such permits may*
8 *proceed at their own risk, with the understanding that any work undertaken prior to*
9 *approval of plans shall be done in accordance with the provisions of this code and*
10 *in accordance with the plans as subsequently approved.*

11 **2. Compliance with Approved Plans and Permit.** When issuing a permit,
12 the building official shall endorse the permit in writing and endorse in writing or
13 stamp the plans **APPROVED**. Approved plans shall not be changed, modified or
14 altered without authorization from the building official, and all work shall be done in
15 accordance with the approved plans, except as the building official may require
16 during field inspection to correct errors or omissions.

17 **3. Amendments to the Permit.** When substitutions and changes are made
18 during construction, approval shall be secured prior to execution; however, the
19 electrical inspector may approve minor modifications to the plans for work not
20 reducing the fire and life safety of the structure. Substitutions, changes and
21 clarifications shall be as shown on two sets of plans which shall be submitted to the
22 building official, accompanied by redesign fees, prior to occupancy. These
23 changes shall conform to the requirements of this code and other pertinent laws
24 and ordinances.

25 **4. Requirement for License.** No electrical permit shall be issued to an
26 applicant who is engaging in or conducting or carrying on the business of installing
27 wires or equipment to convey electric current or of installing apparatus to be
28 operated by electric current unless the applicant possesses a valid State of
29 Washington license as required by RCW 19.28. The licensed installer responsible
30 for the work shall be identified on the electrical permit.

31 *Exception: Persons not possessing a license may obtain an electrical permit in*
32 *order to do electrical work at a residence, farm, place of business or other property*
33 *which they own as described in RCW 19.28.610.*

34 **5. Cancellation of Permit Application.** If a permit is not issued after a
35 period of sixty days from the date of approval for issuance or if corrections are not
36 received after a period of sixty days from the date of notification of required

1 corrections, the building official may initiate cancellation procedures. Prior to
2 cancellation, the building official shall notify the applicant that the permit application
3 will expire and shall be canceled after 30 days. After the applicant has been
4 notified, the site may be inspected to verify that no work has taken place. The
5 application shall be canceled 30 days after notice has been sent to the applicant,
6 and it and any accompanying plans and specifications destroyed and the portion of
7 the fee paid forfeited. Upon written request of the applicant, the building official
8 may extend the life of the permit application for a period not to exceed six months,
9 with no further extensions possible, except that applications may be further
10 extended by the building official where permit issuance is delayed by litigation,
11 appeals or similar problems.

12 **(b) Retention of Plans and Permits.** One set of approved plans, which may be on
13 microfilm, shall be retained by the building official. One set of approved plans shall
14 be returned to the applicant and shall be kept at the site or the building or work at
15 all times during which the work authorized thereby is in progress. The plans shall
16 be available at the site of the work or installation for use by inspection personnel at
17 all times. The permit issued by the building official shall be kept posted on the
18 premises at all times during the course of the installation or work.

19 **(c) Validity.** The issuance or granting of a permit or approval of plans shall not be
20 construed to be a permit for, or an approval of, any violation of any of the provisions
21 of this code or any other ordinance. No permit presuming to give authority to
22 violate or cancel the provisions of this code shall be valid, except insofar as the
23 work or use which it authorizes is lawful.

24 The issuance of a permit based upon plans shall not prevent the building
25 official from later requiring the corrections of errors in the plans. The issuance of a
26 permit based upon plans shall not be construed as permitting violations of this code
27 or of any other ordinance of the City.

28 The issuance of an electrical permit shall not prevent the building official
29 from requiring correction of conditions found to be in violation of this code or any
30 other ordinance of the City. The period of time for which a permit is issued shall not
31 be construed to extend or otherwise affect any period of time for compliance
32 specified in any notice or order issued by the building official or other administrative
33 authority requiring the correction of any such conditions.

34 **(d) Expiration and Renewal. 1. Expiration.** Permits and renewed permits shall
35 expire one year from the date of issuance.

1 *Exception No.1: Initial permits for major construction projects that require more*
2 *than one year to complete, according to a construction schedule submitted by the*
3 *applicant, may be issued for a period that provides reasonable time to complete the*
4 *work but in no case longer than three years.*

5 *Exception No.2: Permits which expire in less than one year may be issued where*
6 *the building official determines a shorter period is appropriate.*

7 **2. Renewal.** Permits may be renewed and renewed permits may be further
8 renewed by the building official provided the following conditions are met:

9 A. Application for renewal shall be made within the thirty-day period
10 immediately preceding the date of expiration of the permit;

11 B. The work authorized by the permit has been started and is progressing at a
12 rate approved by the building official;

13 C. If an application for renewal is made either more than one year after the
14 effective date of a new or revised edition of the Electrical Code, the permit
15 shall not be renewed unless:

16 (i) The building official determines that the permit complies, or is modified to
17 comply, with the code or codes in effect on the date of application for
18 renewal; or

19 (ii) The work authorized by the permit is substantially underway and
20 progressing at a rate approved by the building official.

21 Permits may also be renewed where commencement or completion of the
22 work authorized by the permit was delayed by litigation, appeals, strikes or other
23 causes related to the work authorized by the permit, beyond the permit holder's
24 control.

25 **3. Re-establishment.** A new permit shall be required to complete work
26 where a permit has expired and was not renewed.

27 *Exception: A permit which has been expired for less than one year may be*
28 *reestablished upon approval of the building official provided it complies with Items B*
29 *and C of Section 303(d)2, above.*

30 (e) **Suspension or Revocation.** The building official may, by written order,
31 suspend or revoke a permit issued under the provisions of this code whenever the

1 permit is issued in error or on the basis of incorrect information, or in violation of
2 any ordinance or regulation or any provision of this code.

3 **(f) Permit for Temporary Installations.** The building official may issue permits for
4 temporary electrical installations for use during the construction of buildings or for
5 carnivals, conventions, festivals, fairs, the holding of religious services, temporary
6 lighting of streets and the like if it is found that life or property will not be
7 jeopardized.

8 Permission to use a temporary installation shall be granted for no longer
9 than six months, except that a permit for a temporary installation to be used for the
10 construction of a building may be issued for the necessary period of construction.
11 Should temporary lighting be over the street area, proper authority for use of the
12 street shall first be obtained from the Seattle Transportation Department. All
13 temporary installations shall comply with all other requirements of this code.

14 **Section 304. Permit Fees.** A fee for each electrical permit and for other activities
15 related to the enforcement of this Code shall be paid as set forth in the Fee Subtitle.

16 **Section 305. INSPECTIONS**

17 **(a) General.** It shall be unlawful to connect or to allow the connection of any
18 electrical installations, extensions thereof, or electrical equipment to the electric
19 current until the work is inspected and approved by the building official.

20 **(b) Inspection Requests.** It shall be the duty of the owner of the property, the
21 owner's authorized agent, or the person designated by the owner/agent to do the
22 work authorized by a permit to notify the building official that work requiring
23 inspection as specified in this section is ready for inspection. Where a permit has
24 been issued to a licensed contractor, it shall be the duty of the contractor to notify
25 the building official that work requiring inspection is ready for inspection.

26 It shall be the duty of the person requesting any inspections required by this
27 code to provide access to and means for proper inspection of the work. It shall be
28 the duty of the permit holder to cause the work to be accessible and exposed for
29 inspection purposes. Neither the building official nor the City shall be liable for
30 expense entailed in the required removal or replacement of any material to allow
31 inspection.

32 **(c) Inspection Record.** Work requiring a permit shall not be commenced until the
33 permit holder or agent has posted an inspection record in a conspicuous place on
34 the premises and in a position which allows the building official to conveniently

1 make the required entries thereon regarding inspection of the work. This record
2 shall be maintained in such position by the permit holder until final approval has
3 been granted by the building official and the serving utility has made the connection
4 to the electric current.

5 **(d) Approvals Required.** No work shall be done on any part of the building or
6 structure beyond the point indicated in each successive inspection without first
7 obtaining the written approval of the building official. Written approval shall be
8 given only after an inspection has been made of each successive step in the
9 construction as indicated by each of the inspections required in Section 305(e)
10 below.

11 **(e) Required Inspections. 1. Cover Inspection.** Cover inspections may be
12 required when all of the following work has been completed:

13 A. All piping, ducts, plumbing and like installations of other trades which are
14 liable to interfere or run in close proximity to the electrical installation are
15 permanently in place and inspected, but prior to any work to cover or conceal any
16 installation of electrical equipment, and;

17 B. Electrical Equipment grounding (boxes, equipment, conductors and
18 provisions for grounding receptacles, etc.) for all systems shall be completely
19 made-up.

20 C. For conduit systems, after all conduit has been installed and properly
21 secured to the structure

22 **2. Final Inspection.** A final inspection shall be made after all wiring has
23 been completed and all permanent fixtures such as switches, outlet receptacles,
24 plates, electric hot water tanks, lighting fixtures and all other equipment has been
25 properly installed. The permit holder shall call for a final inspection when the work
26 described on the permit has been completed.

27 **(f) Other Inspections.** In addition to the called inspections specified in Subsection
28 (e), the building official may make or require any other inspections of any
29 construction work to ascertain compliance with the provisions of this code and other
30 laws which are enforced by the building official.

31 Where work, for which any permit or approval is required, is commenced or
32 performed prior to making formal application and receiving the building official's
33 permission to proceed, the building official may make a special investigation
34 inspection before a permit may be issued for the work. Where a special

1 investigation is made, a special investigation fee may be assessed in accordance
2 with the Fee Subtitle.

3 (g) **Reinspections.** The building official may require a reinspection when work for
4 which inspection is called is not complete, corrections called for are not made, the
5 permit card is not properly posted on the work site, the approved plans are not
6 readily available to the inspector, for failure to provide access on the date for which
7 inspection is requested, or when deviations from plans which require the approval
8 of the building official have been made without proper approval.

9 For the purpose of determining compliance with Section 104(c) Maintenance,
10 the building official or the fire chief may cause any structure to be reinspected.

11 The building official may assess a reinspection fee as set forth in the Fee
12 Subtitle for any action listed above for which reinspection may be required, whether
13 or not a reinspection is actually performed. A reinspection fee shall not be
14 assessed the first time the work subject to inspection is rejected for failure to
15 comply with the requirements of this Code.

16 In instances where reinspection fees have been assessed, no additional
17 inspection of the work shall be performed until the required fees have been paid.

18
19 **Section 3.** The National Electrical Code, 1999 edition, is amended by
20 repealing Sections 90-1 and 90-2.

21
22 **Section 4.** Article 100 of the National Electrical Code, 1999 edition, is
23 amended as follows:

24 **ARTICLE 100—DEFINITIONS**

25 **Scope.** This article contains only those definitions essential to the proper
26 application of this Code. It is not intended to include commonly defined general
27 terms or commonly defined technical terms from related codes and standards. In
28 general, only those terms that are used in two or more articles are defined in Article
29 100. Other definitions are included in the article in which they are used but may be
30 referenced in Article 100.

1 Part A of this article contains definitions intended to apply wherever the
2 terms are used throughout this Code. Part B contains definitions applicable only to
3 the parts of articles specifically covering installations and equipment operating at
4 over 600 volts, nominal.

5 Terms and phrases used in this code but not defined herein shall be as
6 defined in the Seattle Building Code and the Seattle Mechanical Code. Where
7 undefined terms are used, the definitions of Webster's Third New International
8 Dictionary of the English Language, Unabridged, copyright 1986, shall apply.

9 **A. General**

10 * * *

11 **Service Point.** The point of connection between the facilities of the serving
12 utility and the premises wiring. For requirements for service point connections, see
13 Section 230-10.

14 **Service Terminal Box.** An approved box to be used exclusively for the
15 connection of the utility distribution system to the consumer's service entrance
16 conductors.

17 * * *

18 **Section 5.** Section 110-13 of the National Electrical Code, 1999 edition,
19 is amended as follows:

20 **110-13. Mounting, ((and)) Cooling and Location of Equipment.**

21 * * *

22 (c) Location. No electrical equipment shall project beyond the face of the wall in
23 halls, corridors or other locations which would reduce the width required by the
24 Building Code for such locations. No electrical equipment such as pull boxes,
25 junction boxes, conduit, panels, transformers, water heaters, motors, compressors,
26 or similar equipment shall be installed within a required stairway enclosure.
27 Electrical raceways pertaining to fire and life safety devices may be installed within
28 a required stairway enclosure.

29 Equipment containing overcurrent protection shall be so placed that lowest
30 possible overcurrent device will be no less than one foot above the floor or working
31 platform.

1
2 **Section 6.** The National Electrical Code, 1999 edition, is amended by
3 adding Section 110-23 as follows:

4 **110-23. Electrified Fences.** Electrified fences, associated equipment and similar
5 devices shall be permitted only by special permission from the Building Official.

6
7 **Section 7.** The National Electrical Code, 1999 edition, is amended by
8 adding Section 110-26(e) as follows:

9 **(e) Headroom.** The minimum headroom of working spaces about service
10 equipment, switchboards, panelboards, or motor control centers shall be 6-1/2 ft
11 (1.98 m). Where the electrical equipment exceeds 6-1/2 ft (1.98 m) in height, the
12 minimum headroom shall be not less than the height of the equipment.

13 ~~((Exception: Service equipment or panelboards, in existing dwelling units, that do
14 not exceed 200 amperes.))~~

15
16 **Section 8.** Section 210-8(a) of the National Electrical Code, 1999 edition,
17 is amended as follows:

18 **(a) Dwelling Units.** All 125-volt, single-phase, 15- and 20-ampere receptacles
19 installed in the locations specified below shall have ground-fault circuit-interrupter
20 protection for personnel.

21 (1) Bathrooms.

22 (2) Garages, and also accessory buildings that have a floor located at or below
23 grade level not intended as habitable rooms and limited to storage areas, work
24 areas, and areas of similar use.

25 *Exception No. 1: Receptacles that are not readily accessible.*

26 *Exception No. 2: A single receptacle or a duplex receptacle for two appliances
27 located within dedicated space for each appliance that, in normal use, is not easily
28 moved from one place to another, and that is cord- and plug-connected in
29 accordance with Section 400-7(a)(6), (a)(7), or (a)(8).*

1 Receptacles installed under the exceptions to Section 210-8(a)(2) shall not
2 be considered as meeting the requirements of Section 210-52(g).

3 (3) Outdoors.

4 *Exception: Receptacles that are not readily accessible and are supplied by a*
5 *dedicated branch circuit for electric snow-melting or deicing equipment shall be*
6 *permitted to be installed in accordance with the applicable provisions of Article 426.*

7 (4) Crawl spaces. Where the crawl space is at or below grade level.

8 (5) Unfinished basements. For purposes of this section, unfinished basements are
9 defined as portions or areas of the basement not intended as habitable rooms
10 and limited to storage areas, work areas, and the like.

11 *Exception No. 1: Receptacles that are not readily accessible.*

12 *Exception No. 2: A single receptacle or a duplex receptacle for two appliances*
13 *located within dedicated space for each appliance that, in normal use, is not easily*
14 *moved from one place to another, and that is cord- and plug-connected in*
15 *accordance with Section 400-7(a)(6), (a)(7), or (a)(8).*

16 Receptacles installed under the exceptions to Section 210-8(a)(5) shall not
17 be considered as meeting the requirements of Section 210-52(g).

18 (6) Kitchens. Where the receptacles are installed to serve the countertop surfaces.

19 (7) ~~((Wet bar))~~ All other sinks. Where the receptacles are installed to serve the
20 countertop surfaces and are located within 6 ft (1.83 m) of the outside edge of
21 the ~~((wet bar))~~ sink. Receptacle outlets shall not be installed in a face-up
22 position in the work surfaces or countertops.

23
24 **Section 9.** The National Electrical Code, 1999 edition, is amended by
25 adding Section 215-12 as follows:

26 **215-12. Panelboards.** Panelboards, existing or installed in an individual unit of
27 multifamily dwellings, shall be supplied by one feeder.

1 **Section 10.** Section 220-3(a) of the National Electrical Code, 1999 edition,
2 is amended as follows:

3 **(a) Lighting Load for Specified Occupancies.** A unit load of not less than that
4 specified in Table 220-3(a) for occupancies specified therein shall constitute the
5 minimum lighting load for each square foot (0.093 m²) of floor area. The floor area
6 for each floor shall be computed from the outside dimensions of the building,
7 dwelling unit, or other area involved. For dwelling units, the computed floor area
8 shall not include open porches, garages, or unused or unfinished spaces not
9 adaptable for future use.

10 FPN: The unit values herein are based on minimum load conditions and 100 percent power
11 factor, and may not provide sufficient capacity for the installation contemplated.

12 Exception: Occupancy Lighting Loads. In determining feeder and service entrance
13 conductor sizes and equipment ratings, the currently adopted Seattle Energy Code
14 Unit Lighting Power Allowance table and footnotes may be used in lieu of NEC
15 Table 220-3(a).

16
17 **Section 11.** Section 220-15 of the National Electrical Code, 1999 edition,
18 is amended as follows:

19 **220-15. Fixed Electric Space Heating.** Fixed electric space heating loads shall
20 be computed at 100 percent of the total connected load; however, in no case shall
21 a feeder or service load current rating be less than the rating of the largest branch
22 circuit supplied. Where fixed electric space heating is installed as the primary
23 means of heating, heat loss calculations shall be submitted.

24 Exception: ((Where reduced loading of the conductors results from units operating
25 on duty cycle, intermittently, or from all units not operating at one time, the authority
26 having jurisdiction may grant permission for feeder conductors to have an ampacity
27 less than 100 percent, provided the conductors have an ampacity for the load so
28 determined.)) A minimum demand factor of 75 percent of the installed heating
29 capacity may be used in sizing service entrance and feeder equipment for dwelling,
30 commercial and industrial occupancies when electric service is provided to four or
31 more fixed space heaters, or electric furnaces sequentially controlled. These
32 exceptions shall not apply when optional calculations allowed by Section 220-32
33 are used.

34

1 **Section 12.** Section 220-17 of the National Electrical Code, 1999 edition,
2 is amended as follows:

3 **220-17. Appliance Load - Dwelling Unit(s).** It shall be permissible to apply a
4 demand factor of 75 percent to the nameplate rating load of four or more
5 appliances fastened in place, other than electric ranges, clothes dryers, space-
6 heating equipment, or air-conditioning equipment, that are served by the same
7 feeder or service in a one-family, two-family, or multifamily dwelling. For space
8 heating equipment, see Section 220-15.

9
10 **Section 13.** Section 230-1 of the National Electrical Code, 1999 edition, is
11 amended as follows:

12 **230-1. Scope.**

13 (a) This article covers service conductors and equipment for control and protection
14 of services and their installation requirements.

15 (FPN): See Figure 230-1.

16 **(b) Service Requirements.** The serving utility shall be consulted by the owner, the
17 owner's agent or the contractor making the installation regarding service entrance
18 location before installing equipment. Provisions for metering equipment,
19 attachment of service drop, or for an underground service lateral shall be made at a
20 location acceptable to the serving utility.

21
22 **Section 14.** The National Electrical Code, 1999 edition, is amended by
23 adding Section 230-10 as follows:

24 **230-10. Service Point Connection.** Service point connections shall comply with
25 paragraphs (1) through (3) below.

26 (1) For overhead service drop conductors from the utility pole to the point of
27 attachment to the building, connections of the service entrance conductors shall be
28 at a weatherhead outside the building.

29 (2) For underground service connections outside of buildings, connection
30 shall be made in one of the following:

1 (i) A service terminal box or current transformer cabinet.

2 (ii) A handhole or power transformer installed outdoors in accordance with
3 requirements of the utility, the Seattle Building Code, or any other applicable
4 ordinance.

5 (iii) A meter socket of 200 amperes minimum size, direct-metered.

6 (3) For underground service connections inside of buildings, connection
7 shall be made to one of the following:

8 (i) Where utility-supplied conductors are used, a service terminal box or
9 current transformer cabinet connected by no more than eighteen inches of rigid
10 conduit inside the building.

11 (ii) A transformer vault within the building.

12 (iii) A meter socket of 200 amperes minimum size, direct-metered.

13 **Section 15.** The National Electrical Code, 1999 edition, is amended by
14 adding Section 230-5 as follows:

15 **230-5. Types of Services.** All services shall be single-phase or three-phase 4-
16 wire. Three-phase 3-wire services shall not be installed unless prior approval is
17 granted by the utility and the building official.

18
19 **Section 16.** Section 230-28 of the National Electrical Code, 1999 edition,
20 is amended as follows:

21 **230-28. Service Masts as Supports.**

22 (a) Where a service mast is used for the support of service-drop conductors, it shall
23 be of adequate strength or be supported by braces or guys to withstand safely the
24 strain imposed by the service drop. Where raceway-type service masts are used,
25 all raceway fittings shall be identified for use with service masts. Only power
26 service-drop conductors shall be permitted to be attached to a service mast.

27 (b) Where service masts are used for support of the service-drop conductors, the
28 conduit shall be secured as required by WAC 296-46-23028 Drawings E-101, E-
29 102, and E-103.

1 (c) Service drops to buildings with service conduits extended through the roof shall
2 be attached to the bracket installed on the mast, or other approved supporting
3 structure located within 24 inches of the mast.

4 Service conduits for mast-type services shall be rigidly supported with
5 minimum 5/16-inch U-bolts fastened through at least 2-inch solid wood backing. A
6 minimum of 2 x 6 inch wood solidly secured between rafters shall be installed and
7 drilled for snug fit of the conduit.

8 Brackets shall be installed to permit a clearance of not less than 18 inches
9 from the roof to the lowest wire. Service conduits through the roof shall be a
10 minimum of 2-inch rigid steel conduit. Service conduits over 26 inches above the
11 roof shall be rigidly supported with brackets or guy wires. The serving utility shall
12 be consulted for bracket and guy wire requirements.

13 In no case shall a coupling be installed between the last support below the
14 roof line to the bracket. All connections and service drops shall be below the
15 weatherhead.

16 Openings where service conduits pass through the roof shall be made
17 watertight with approved neoprene or lead flashings.

18
19 **Section 17.** Section 230-29 of the National Electrical Code, 1999 edition,
20 is amended as follows:

21 **230-29. Supports Over Buildings and Wires on or about Buildings or**
22 **Structures Over Water.** ~~((Service drop conductors passing over a roof shall be~~
23 ~~securely supported by substantial structures. Where practicable, such supports~~
24 ~~shall be independent of the building.))~~

25 (a) All service entrance conductors for piers, docks, wharves and other structures
26 over water shall terminate in a disconnecting means or service equipment at the
27 street side or end of such structure, or as otherwise approved by the building
28 official.

29 *Exception: When the vault for the utility transformer is located over water, a*
30 *disconnecting means for the service entrance conductors shall be provided*
31 *immediately outside the vault at a location acceptable to the building official.*

32 FPN): For utility service conductors on piers, docks or wharves, refer to "Requirements for
33 Electric Service Connection" published by Seattle City Light.

1 (b) Service entrance conduit containing wires not protected by circuit breakers or
2 switches and fuses shall follow and be supported on parapets or other walls and
3 shall not be laid upon or across roofs.

4 (c) All service entrance conduits in the Fire District shall terminate on the side of
5 the building nearest to the lines or mains of the utility. The service shall not
6 terminate over adjacent private property, and shall extend to the street or alley wall
7 of the buildings.

8 (d) Open wiring for service conductors shall contact the building at only one point
9 except where the utility will agree to contact the building at more than one point.

10 (e) No wire access fittings or junction boxes of any type shall be permitted within 15
11 feet of the ground level on street, alley, or driveway margins.

12
13 **Section 18.** The National Electrical Code, 1999 edition, is amended by
14 adding Section 230-33 as follows:

15 **230-33. Conversion to Underground Service or Increasing Existing Overhead**
16 **Services.** Where service for an existing single-family dwelling is converted to an
17 underground service or where existing overhead services are increased, the
18 following requirements shall be met:

19 (a) Unless a 200 ampere meter enclosure was provided for the existing service, a
20 new 200 ampere approved wide meter enclosure shall be permitted to be installed
21 over the existing meter enclosure. Service grounding continuity shall be maintained
22 and the perimeter of such new enclosure shall be sealed watertight with a silicone
23 sealant or approved equivalent.

24 (b) Conversions to underground service shall have existing overhead service
25 conductors removed and the top opening of the existing conduit at the weatherhead
26 shall be closed.

27 (c) Where a new meter enclosure is installed the interior of the existing meter
28 enclosure shall be removed and service conductors of the same size as those
29 removed shall be installed from the new meter enclosure to the existing service
30 panel. Conductors shall be run through a 2-inch bushing in the back of such new
31 enclosure, through the void area between enclosures, and continue in the existing
32 conduit to the panel.

1 (d) Any exposed wood or combustible material between the two meter enclosures
2 shall be covered with noncombustible material.

3 (e) On installations where a meter has been moved outdoors, the existing meter
4 shall be removed. An approved fitting shall be installed on the existing conduit with
5 new conduit of the same size as the existing, to extend from such fitting to a new
6 200 ampere meter enclosure.

7 (f) Conductors shall be continuous from the new meter enclosure to the service
8 panel.

9 (g) On existing services, a weatherhead-to-weatherhead connection shall be
10 permitted. The distance between weatherheads shall not exceed 24 inches.

11
12 **Section 19.** Section 230-43 of the National Electrical Code, 1999 edition,
13 is amended as follows:

14 **230-43. Wiring Methods For 600 Volts, Nominal, or Less.** Service-entrance
15 conductors shall be installed in accordance with the applicable requirements of this
16 Code covering the type of wiring method used and shall be limited to the following
17 methods:

18 ~~((1) Open wiring on insulators~~

19 ~~(2) Type IGS cable))~~

20 (3) Rigid metal conduit

21 (4) Intermediate metal conduit

22 ~~((5) Electrical metallic tubing~~

23 ~~(6) Electrical nonmetallic tubing (ENT)~~

24 ~~(7) Service entrance cables~~

25 ~~(8) Wireways))~~

26 (9) Busways

27 ~~((10) Auxiliary gutters))~~

1 (11) Rigid nonmetallic conduit

2 (12) Cablebus

3 ~~((13) Type MC cable))~~

4 (14) Mineral-insulated, metal-sheathed cable

5 ~~((15) Flexible metal conduit not over 6 ft (1.83m) long or liquidtight flexible metal
6 conduit not over 6 ft (1.83 m) long between raceways, or between raceway
7 and service equipment, with equipment bonding jumper routed with the
8 flexible metal conduit or liquidtight flexible metal conduit according to the
9 provisions of Section 250-102(a), (b), (c), and (e))~~

10 ~~(16) Liquidtight flexible nonmetallic conduit))~~

11 Cable tray systems shall be permitted to support cables for use as service-
12 entrance conductors in accordance with Article 318.

13
14 **Section 20.** The National Electrical Code, 1999 edition, is amended by
15 adding Section 230-44 as follows:

16 **230-44. Service-Entrance Conductor Length**

17 **(a) Length at service head.** Service-entrance conductors shall extend at least 18
18 inches from the service head to permit connection to the service drop.

19 **(b) Inside a building.** Service-entrance conductor raceways shall extend no
20 more than 15 feet inside a building.

21
22 **Section 21.** Section 230-46 of the National Electrical Code, 1999 edition,
23 is repealed.

24
25 **Section 22.** Section 230-52 of the National Electrical Code, 1999 edition,
26 is repealed.

1 **Section 23.** The National Electrical Code, 1999 edition, is amended by
2 adding Sections 230-62(c) and (d) as follows:

3 (c) **Location.** Service equipment shall be readily accessible and shall not be
4 located in a bathroom, clothes closet, shower room, cupboard, attic, stairway, nor
5 above a washer, range, dryer, water heater, sink, plumbing fixture or drain board.

6 (d) **Accessible.** Service equipment shall be readily accessible after any
7 subsequent building additions.

8
9 **Section 24.** Section 230-82 of the National Electrical Code, 1999 edition,
10 is amended as follows:

11 **230-82. Equipment Connected to the Supply Side of Service Disconnect.**

12 Only the following equipment shall be permitted to be connected to the supply side
13 of the service disconnecting means:

- 14 (1) Cable limiters or other current-limiting devices by special permission of the
15 building official.

16 When fault current limiters are installed on the line side (utility's side) of the
17 first disconnect or main breaker, there shall be a "current limiter enclosure" for the
18 installation of such current limiters which shall meet the following requirements:

19 (a) The "current limiter enclosure" shall be separate from the utility's service
20 termination point. The weatherhead, service terminal box, meter socket or current
21 transformer can is not an acceptable location.

22 (b) The "current limiter enclosure" shall not be used for service taps or
23 extensions and shall be clearly recognized and marked "fault current limiters."

- 24 (2) Meters nominally rated not in excess of 600 volts, provided all metal housings
25 and service enclosures are grounded in accordance with Article 250. Taps
26 under meter socket lugs shall not be permitted, except by prior approval from
27 the building official.

- 28 (3) Instrument transformers (current and voltage), high-impedance shunts, surge-
29 protective devices identified for use on the supply side of the service
30 disconnect, load management devices, and surge arresters

- 1 (4) Taps used only to supply load management devices, circuits for stand-by power
2 systems, fire pump equipment, and fire and sprinkler alarms, if provided with
3 service equipment and installed in accordance with requirements for service-
4 entrance conductors
- 5 (5) Solar photovoltaic systems or interconnected electric power production sources
6 (See Articles 690 or 705 as applicable.)
- 7 (6) Control circuits for power-operable service disconnecting means, if suitable
8 overcurrent protection and disconnecting means are provided
- 9 (7) Ground-fault protection systems where installed as part of listed equipment, if
10 suitable overcurrent protection and disconnecting means are provided
- 11 (8) Current transformer cabinets shall contain only the main service conductors,
12 metering equipment and secondary wiring. One tap shall be permitted on the
13 load side of the current transformers on all installations for legally-required
14 standby service and one tap shall be permitted on the load side of the current
15 transformers for a fire pump service. One additional normal power service tap
16 from the current transformer enclosure may be made by special permission of
17 the service utility. In a single-family dwelling, two connections shall be
18 permitted on the load side of the current transformers. No other taps shall be
19 permitted. Approved terminal lugs shall be provided for the main service
20 conductors and for all taps.
- 21 (9) Listed service accessory buss gutters or termination boxes that are approved
22 for use on the line side of service equipment. Junction and pull boxes are not
23 permitted

24
25 **Section 25.** Section 230-90(a) of the National Electrical Code, 1999
26 edition, is amended as follows:

27 **(a) Ungrounded Conductor.** Such protection shall be provided by an overcurrent
28 device in series with each ungrounded service conductor that has a rating or setting
29 not higher than the allowable ampacity of the conductor.

30 *Exception No. 1: For motor-starting currents, ratings that conform with Sections*
31 *430-52, 430-62, and 430-63 shall be permitted.*

1 *Exception No. 2: Fuses and circuit breakers with a rating or setting that conform*
2 *with Section 240-3(b) or (c) and Section 240-6 shall be permitted.*

3 *Exception No. 3: Two to six circuit breakers or sets of fuses shall be permitted as*
4 *the overcurrent device to provide the overload protection. The sum of the ratings of*
5 *the circuit breakers or fuses shall be permitted to exceed the ampacity of the*
6 *service conductors, provided the calculated load in accordance with Article 220*
7 *does not exceed the ampacity of the service conductors.*

8 If the service-entrance conductors are sized less than the rating of the
9 service equipment, an engraved permanent placard that clearly identifies the
10 service-entrance conductor ampacity must be installed.

11 *Exception No. 4: Overload protection for fire pump supply conductors shall*
12 *conform with Section 695-4(b)(1).*

13 *Exception No. 5: Overload protection for 120/240-volt, 3-wire, single-phase*
14 *dwelling services shall be permitted in accordance with the requirements of Section*
15 *310-15(b)(6).*

16 FPN: See *Standard for the Installation of Centrifugal Fire Pumps*, NFPA 20-1996.

17 A set of fuses shall be considered all the fuses required to protect all the
18 ungrounded conductors of a circuit. Single-pole circuit breakers, grouped in
19 accordance with Section 230-71(b), shall be considered as one protective device.

20
21 **Section 26.** Section 250-56 of the National Electrical Code, 1999 edition,
22 is amended as follows:

23 **250-56. Resistance of Made Electrodes.** A single electrode consisting of a rod,
24 pipe, or plate ~~((that does not have a resistance to ground of 25 ohms or less))~~ shall
25 be augmented by one additional electrode of any of the types specified in Section
26 250-50 or 250-52. ~~((Where multiple rod, pipe, or plate electrodes are installed to~~
27 ~~meet the requirements of this section,))~~ They shall be not less than ~~((6))~~ 8 ft ~~((1.83))~~
28 2.44 m) apart.

29 (FPN): The paralleling efficiency of rods longer than 8 ft (2.44 m) is improved by spacing
30 greater than 6 ft (1.83 m).

1 **Section 27.** The National Electrical Code, 1999 edition, is amended by
2 adding Section 250-104(e) as follows:

3 **(e) Water System Requirements.** It is unlawful to connect to or use any water
4 main or water pipe belonging to Seattle Public Utilities distribution and transmission
5 systems for electrical grounding purposes.

6
7 **Section 28.** The National Electrical Code, 1999 edition, is amended by
8 adding Section 300-1(c) as follows:

9 **(c) Wiring Methods for Designated Building Occupancies.** See classifications
10 and definitions of occupancies in Washington Administrative Code Section 296-46-
11 130 and Section 296-46-140.

12
13 **Section 29.** Section 300-23 of the National Electrical Code, 1999 edition,
14 is amended as follows:

15 **300-23. Panels Designed to Allow Access.** Cables, raceways, and equipment
16 installed behind panels designed to allow access, including suspended ceiling
17 panels, shall be arranged and secured so as to allow the removal of panels and
18 access to the equipment. All out-of-service cable shall be removed from accessible
19 ceiling spaces.

20
21 **Section 30.** Section 324-4 of the National Electrical Code, 1999 edition, is
22 amended as follows:

23 **324-4. Uses Not Permitted.** Concealed knob-and-tube wiring shall not be used in
24 commercial garages, theaters and similar locations, motion picture studios,
25 hazardous (classified) locations, or in the hollow spaces of walls, ceilings, and attics
26 where such spaces are insulated by loose, rolled, or foamed-in-place insulating
27 material that envelops the conductors.

28 Exception: This provisions of 324-4 shall not be construed to prohibit the
29 installation of loose or rolled thermal insulating material in such a concealed space
30 provided all the following conditions are met:

1 (1) The wiring shall be surveyed by an appropriately-licensed electrical
2 contractor who shall certify that the wiring is in good condition with no evidence of
3 improper overcurrent protection, conductor insulation failure or deterioration, and
4 with no improper connections or splices. Repairs, alterations or extensions of or to
5 the electrical system shall be inspected by an electrical inspector as defined in
6 RCW 19.28.070.

7 (2) The insulation shall meet Class I specifications as identified in the
8 Uniform Building Code, with a flame spread factor of 25 or less as tested using
9 ASTM E84-98e1 Foam insulation may not be used with knob-and-tube wiring.

10 (3) All knob-and-tube circuits shall have over-current protection limited to 15
11 amp, or protection which is appropriate for the wire size. Over-current protection
12 devices must either be circuit breakers or S-type adapters, equipped with S-type
13 fuses.

14
15 **Section 31.** Section 336-4 of the National Electrical Code, 1999 edition, is
16 amended as follows:

17 **336-4. Uses Permitted.** Type NM, Type NMC, and Type NMS cables shall be
18 permitted to be used in the following:

- 19 (1) One- and two-family dwellings
20 (2) Multifamily dwellings and other structures, except as prohibited in Section 336-5
21 (3) Cable trays, where the cables are identified for the use

22 (FPN): See Section 310-10 for temperature limitation of conductors.

23 (a) **Type NM.** Type NM cable shall be permitted for ~~((both exposed and))~~
24 concealed work in normally dry locations. It shall be permissible to install or fish
25 Type NM cable in air voids in masonry block or tile walls where such walls are not
26 exposed or subject to excessive moisture or dampness.

27 (b) **Type NMC.** Type NMC cable shall be permitted as follows:

- 28 (1) For ~~((both exposed and))~~ concealed work in dry, moist, damp, or corrosive
29 locations
30 (2) In outside and inside walls of masonry block or tile

1 (3) In a shallow chase in masonry, concrete, or adobe protected against nails or
2 screws by a steel plate at least 1/16 in. (1.59 mm) thick, and covered with
3 plaster, adobe, or similar finish

4 (c) **Type NMS.** Type NMS cable shall be permitted for ~~((both exposed and))~~
5 concealed work in normally dry locations. It shall be permissible to install or fish
6 Type NMS cable in air voids in masonry block or tile walls where such walls are not
7 exposed or subject to excessive moisture or dampness. Type NMS cable shall be
8 used as permitted in Article 780.

9
10 **Section 32.** Section 336-5(a) of the National Electrical Code, 1999 edition,
11 is amended as follows:

12 (a) **Types NM, NMC, and NMS.** Types NM, NMC, and NMS cables shall not be
13 used in the following:

14 (1) In any multifamily dwelling or other structure exceeding three floors above
15 grade

16 ~~((For the purpose of this article, the first floor of a building shall be that floor
17 that has 50 percent or more of the exterior wall surface area level with or above
18 finished grade.))~~ The Department's building permit shall be used to determine the
19 number of habitable floors above grade. One additional level that is the first level
20 and not designed for human habitation and used only for vehicle parking, storage,
21 or similar use shall be permitted.

22 (2) As service-entrance cable

23 (3) In commercial garages having hazardous (classified) locations as provided in
24 Section 511-3

25 (4) In theaters and similar locations, except as provided in Article 518, Places of
26 Assembly

27 (5) In motion picture studios

28 (6) In storage battery rooms

29 (7) In hoistways

30 (8) Embedded in poured cement, concrete, or aggregate

1 (9) In any hazardous (classified) location, except as permitted by Sections 501-
2 4(b), Exception, 502-4(b), Exception, and 504-20

3 (10) In any building or structure located in the Fire District

4
5 **Section 33.** Section 336-6 of the National Electrical Code, 1999 edition, is
6 amended as follows:

7 **336-6. Exposed Work—General.** In exposed work, except as provided in Section
8 300-11(a), the cable shall be installed as specified in (a) ~~((through))~~ (b), (d), and (e)
9 below.

10 ~~(((a) To Follow Surface. The cable shall closely follow the surface of the building~~
11 ~~finish or of running boards.))~~

12 (a) Work Considered as Concealed. Nonmetallic-sheathed cable shall be
13 considered as concealed where installed in inaccessible void areas of buildings or
14 where run in between or through bored holes of studs, joists and similar members
15 as required in Section 300-4, provided that all outlet, junction or device boxes shall
16 be installed as required for concealed work.

17 (b) Protection from Physical Damage. The cable shall be protected from physical
18 damage where necessary by conduit, electrical metallic tubing, Schedule 80 PVC
19 rigid nonmetallic conduit, pipe, guard strips, listed surface metal or nonmetallic
20 raceway, or other means. ~~((Where passing through a floor, the cable shall be~~
21 enclosed in rigid metal conduit, intermediate metal conduit, electrical metallic
22 tubing, Schedule 80 PVC rigid nonmetallic conduit, listed surface metal or
23 nonmetallic raceway, or other metal pipe extending at least 6 in. (152 mm) above
24 the floor.)) Nonmetallic-sheathed cable shall not be considered as concealed by
25 boxing in, or by the use of running boards, and shall not be run across the face of
26 ceilings, walls, beams or similar unoccupied locations.

27 Exception No. 1: Nonmetallic-sheathed cable may be installed in the attic space of
28 buildings, provided such cable is protected from physical damage by the use of
29 running boards, conduit, guard strips or other approved means as required in
30 Section 336-6(d).

31 Exception No. 2: Exposed nonmetallic-sheathed cable which is properly supported
32 and neatly disposed may enter the top section only of a surface-mounted main

1 service panel where the distance from the top of the panel to the bottom of the
2 ceiling joist above does not exceed 2-1/2 feet.

3 ~~((e) **In Unfinished Basements.** Where the cable is run at angles with joists in~~
4 ~~unfinished basements, it shall be permissible to secure cables not smaller than two~~
5 ~~No. 6 or three No. 8 conductors directly to the lower edges of the joists. Smaller~~
6 ~~cables shall either be run through bored holes in joists or on running boards.))~~

7 (d) **In Accessible Attics.** The installation of cable in accessible attics or roof
8 spaces shall also comply with Section 333-12.

9 (e) **Unexcavated Spaces.** Type NM cable installed in compliance with the
10 requirements of this section may be used in unexcavated spaces under dwellings
11 provided that all outlet and junction boxes are installed in accessible locations.

12
13 **Section 34.** Section 336-21 of the National Electrical Code, 1999 edition,
14 is repealed.

15
16 **Section 35.** Section 338-2 of the National Electrical Code, 1999 edition, is
17 repealed.

18
19 **Section 36.** The National Electrical Code, 1999 edition, is amended by
20 adding Section 338-3(d) as follows:

21 (d) **Uses not permitted.** Type SE and USE cables shall not be permitted in the
22 Fire District.

23
24 **Section 37.** Article 342 of the National Electrical Code, 1999 edition, is
25 repealed.

26
27 **Section 38.** Section 348-4, 348-5 and 348-6 of the National Electrical
28 Code, 1999 edition, are amended as follows:

1 **Section 39.** Section 370-1 of the National Electrical Code, 1999 edition, is
2 amended as follows:

3 **370-1. Scope.** This article covers the installation and use of all boxes and conduit
4 bodies used as outlet, junction, or pull boxes, depending on their use, and
5 manholes and other electric enclosures intended for personnel entry. Cast, sheet
6 metal, nonmetallic, and other boxes such as FS, FD, and larger boxes are not
7 classified as conduit bodies. This article also includes installation requirements for
8 fittings used to join raceways and to connect raceways and cables to boxes and
9 conduit bodies.

10 See Section 1206 of the Seattle Building Code for location of outlet boxes in
11 sound transmission control assemblies.

12
13 **Section 40.** Section 380-3(a) of the National Electrical Code, 1999 edition,
14 is amended as follows:

15 **380-3 Enclosure.**

16 **(a) General.** Switches and circuit breakers shall be of the externally operable type
17 mounted in an enclosure listed for the intended use. The minimum wire-bending
18 space at terminals and minimum gutter space provided in switch enclosures shall
19 be as required in Section 373-6.

20 ~~((Exception No. 1: Pendant and surface type snap switches and knife switches~~
21 ~~mounted on an open face switchboard or panelboard shall be permitted without~~
22 ~~enclosures.~~

23 ~~Exception No. 2: Switches and circuit breakers installed in accordance with~~
24 ~~Sections 110-27(a) (1), (2), (3), or (4) shall be permitted without enclosures.))~~

25
26 **Section 41.** Section 380-10(a) of the National Electrical Code, 1999
27 edition, is repealed.

28
29 **Section 42.** The National Electrical Code, 1999 edition, is amended by
30 adding Section 380-13(e) as follows:

1 (e) **Capacity Limitation.** All switches shall be of the interlocking type. All switches
2 used as service disconnecting means or those rated over 300 volts shall have two
3 way interlocking.

4
5 **Section 43.** Section 450-10 of the National Electrical Code, 1999 edition,
6 is amended as follows:

7 **450-10. Grounding.** (a) Exposed noncurrent-carrying metal parts of transformer
8 installations, including fences, guards, etc., shall be grounded where required under
9 the conditions and in the manner specified for electric equipment and other
10 exposed metal parts in Article 250.

11 (b) Transformer Neutral Grounding. Where services over 600 volts are supplied
12 from multi-ground, neutral systems in which transformer protection is provided by
13 fuses in the primary feeders as provided in the National Electrical Code, Section
14 450-3(a), the grounded neutral conductor shall be connected to a grounding
15 electrode at each transformer location. Where the secondary of the transformer or
16 transformers is grounded, the secondary ground shall be connected to the common
17 neutral ground.

18 Exception: Will not apply to industrial distribution systems.

19
20 **Section 44.** The National Electrical Code, 1999 edition, is amended by
21 adding Sections 450-19 and 450-20 as follows:

22 **450-19. Location.**

23 (a) **Location of Pad-Mounted Transformers.**

24 **Definition** - A pad-mounted transformer installation is an installation of an
25 oil-filled transformer outdoors wherein all bushings, handholes and live and
26 operating parts are guarded by a solid metal enclosure so secured as to be
27 available to authorized qualified personnel only. This will not prohibit the use of
28 approved glass monitoring devices or properly baffled ventilators.

29 (1) Where a pad-mounted transformer is to be installed adjacent to a structure
30 of combustible material, it shall not be closer than 10 feet. This ten-foot separation
31 shall be measured from the nearest metal portion of the pad-mounted transformer

1 installation to the nearest building features required to be safeguarded. In the case
2 of overhanging eaves or roof lines of combustible material on standard single story
3 structure, the ten-foot measurement shall be made in such a way as to provide at
4 least ten feet of clear space between the eaves and the nearest metal portion of the
5 pad-mounted transformer installed outside a vertical line extended from the ends of
6 the eaves to the ground if this distance is at least ten feet horizontally from a
7 combustible wall. In addition, the grade of the ground at the location of the pad-
8 mounted transformer shall be such that any oil leaking from the transformer will flow
9 away from the building and will not form pools.

10 *Exception: In urban residential areas where improved alleyways are used, and*
11 *where a pad-mounted transformer is to be installed adjacent to a structure of*
12 *combustible material, it shall not be closer than 2 feet provided the structure is*
13 *noninhabited, such as a detached automobile garage.*

14 (2) Pad-mounted transformer installations shall not be made nearer than two
15 feet, measured horizontally, to a noncombustible building surface having no doors,
16 windows or other openings closer than indicated in paragraph (2).

17 (3) Pad-mounted transformer installations shall not be located where
18 exposed to damage by automobiles, trucks or other mobile types of machinery.
19 Where transformers are installed in areas subject to other than pedestrian traffic,
20 they shall be provided with additional guarding.

21 (4) Pad-mounted transformer installations shall meet the requirements for
22 being effectively grounded as provided in Section 250-2, National Electrical Code.

23 (b) **Total Underground Transformers.** Enclosures for total underground
24 transformers shall not be located within 10 feet of a doorway or fire escape.
25 Adequate space shall be maintained above the total underground transformer
26 enclosure so that a boom may be used to lift the transformer.

27 (c) **Transformer Vaults.** Articles 450-41 through 450-48, inclusive, of the NEC are
28 repealed. See the Seattle Building Code, Section 414 and Appendix Chapter 4 for
29 construction requirements for transformer vaults.

30 **450-20. Rating of Dry-Type Transformers.** Dry-type transformers shall be rated
31 not less than the load served as determined in accordance with Article 220 of the
32 National Electrical Code.

33

1 **Section 45.** Sections 450-41 through 450-48 of the National Electrical
2 Code, 1999 edition, are repealed.

3
4 **Section 46.** Section 553-4 of the National Electrical Code, 1999 edition, is
5 amended as follows:

6 **553-4 Location of Service Equipment.** The service equipment for a floating
7 building shall be located adjacent to, but not in or on, the building.

8 Exception: In existing situations, the service equipment may be located in or on the
9 building by special permission.

10
11 **Section 47.** The National Electrical Code, 1999 edition, is amended by
12 adding Section 555-12 as follows:

13 **555-12. Lighting Fixtures.** All walkways over water shall be illuminated to provide
14 safe access. All lighting fixtures shall be listed for the use.

15
16 **Section 48.** Section 620-5 of the National Electrical Code, 1999 edition, is
17 amended as follows:

18 **620-5. Working Clearances.** Working space shall be provided about controllers,
19 disconnecting means, and other electrical equipment. The minimum working space
20 shall not be less than that specified in ~~((Section 110-26(a)))~~ the Seattle Building
21 Code, Section 3016.3.

22 ~~Where conditions of maintenance and supervision ensure that only qualified~~
23 ~~persons will examine, adjust, service, and maintain the equipment, the clearance~~
24 ~~requirements of Section 110-26(a) shall be waived as permitted in (a) through (d).~~

25 ~~(a) Flexible Connections to Equipment.~~ Electrical equipment in (1) through (4)
26 is provided with flexible leads to all external connections so that it can be
27 repositioned to meet the clear working space requirements of Section 110-26(a).

28 ~~(1) Controllers and disconnecting means for dumbwaiters, escalators, moving~~
29 ~~walks, wheelchair lifts, and stairway chair lifts installed in the same space with the~~
30 ~~driving machine~~

1 ~~(2) Controllers and disconnecting means for elevators installed in the hoistway or~~
2 ~~on the car~~

3 ~~(3) Controllers for door operators~~

4 ~~(4) Other electrical equipment installed in the hoistway or on the car~~

5 ~~(b) Guards. Live parts of the electrical equipment are suitably guarded, isolated or~~
6 ~~insulated, and the equipment can be examined, adjusted, serviced, or maintained~~
7 ~~while energized without removal of this protection.~~

8 FPN: ~~See definition of Exposed in Article 100.~~

9 ~~(c) Examination, Adjusting, and Servicing. Electrical equipment is not required~~
10 ~~to be examined, adjusted, serviced, or maintained while energized.~~

11 ~~(d) Low Voltage. Uninsulated parts are at a voltage not greater than 30 volts~~
12 ~~rms, 42 volts peak, or 60 volts dc.)~~

13 The clear working space in front of a disconnecting means shall be not less
14 than 48 inches (1.22m) in depth and 30 inches (.76m) in width.

15 Elevator machine rooms are required to have not less than 7 feet 0 inches of
16 headroom, per ASME A17.1, Rule 101.4.

17
18 **Section 49.** Section 620-21 of the National Electrical Code, 1999 edition,
19 is amended as follows:

20 **620-21. Wiring Methods.** Conductors and optical fibers located in hoistways, in
21 escalator and moving walk wellways, in wheelchair lifts, stairway chair lift runways,
22 and machinery spaces, in or on cars, and in machine and control rooms, not
23 including the traveling cables connecting the car or counterweight and hoistway
24 wiring, shall be installed in rigid metal conduit, intermediate metal conduit, electrical
25 metallic tubing, rigid nonmetallic conduit or wireways, ~~((or shall be Type MC, MI, or~~
26 ~~AG cable)) unless otherwise ((permitted)) specified in (a) through (c).~~

27 Type MC cable or Type MI cable shall be permitted to be installed in elevator
28 spaces only by special permission and prior approval of the building official.

29 **(a) Elevators.**

1 **(1) Hoistways.**

2 ~~(((a)))~~ Rigid nonmetallic conduit shall not be installed in hoistways. Flexible
3 metal conduit~~((,))~~ or liquidtight flexible metal conduit, ((or liquidtight flexible
4 ~~nonmetallic conduit))~~ shall be permitted in hoistways between risers and limit
5 switches, interlocks, operating buttons, and similar devices. Flexible metal conduit
6 runs are limited to 6 feet (1.83 m) in length.

7 ~~(((b) Cables used in Class 2 power limited circuits shall be permitted to be~~
8 ~~installed between risers and signal equipment and operating devices provided the~~
9 ~~cables are supported and protected from physical damage and are of a jacketed~~
10 ~~and flame retardant type.))~~

11 Feeders shall be permitted inside the hoistway for elevators with driving
12 machine motors located in the hoistway or on the car or counterweight.

13 **(2) Cars.**

14 ~~(a)~~ Rigid nonmetallic conduit shall not be installed on cars. Flexible metal
15 conduit~~((,))~~ or liquidtight flexible metal conduit, ((or liquidtight flexible nonmetallic
16 ~~conduit of 3/8 in. nominal trade size or larger,))~~ not exceeding ~~((6 ft (1.83 m)))~~ 3 feet
17 (.915 m) in length shall be permitted on cars where located so as to be free from oil
18 and if securely fastened in place and cannot be walked on or damaged.

19 ~~((Exception: Liquidtight flexible nonmetallic conduit of 3/8 in. nominal trade size or~~
20 ~~larger, as defined by Section 351-22(2), shall be permitted in lengths in excess of 6~~
21 ~~ft (1.83 m).))~~

22 ~~(b)~~ Hard-service cords and junior hard-service cords that conform to the
23 requirements of Article 400 (Table 400-4) shall be permitted as flexible connections
24 between the fixed wiring on the car and devices on the car doors or gates. Hard-
25 service cords only shall be permitted as flexible connections for ~~((the))~~ portable type
26 top-of-car operating devices or ~~((the))~~ car-top work lights. Devices or fixtures shall
27 be grounded by means of an equipment grounding conductor run with the circuit
28 conductors. Cables with smaller conductors and other types and thicknesses of
29 insulation and jackets shall be permitted as flexible connections between the fixed
30 wiring on the car and devices on the car doors or gates, if listed for this use.

31 ~~(((c) Flexible cords and cables that are components of listed equipment and~~
32 ~~used in circuits operating at 30 volts rms or less or 42 volts dc or less shall be~~
33 ~~permitted in lengths not to exceed 6 ft (1.83 m) provided the cords and cables are~~

1 supported and protected from physical damage and are of a jacketed and flame-
2 retardant type.))

3 (d) Flexible metal conduit, liquidtight flexible metal conduit, liquidtight flexible
4 nonmetallic conduit or flexible cords and cables, or conductors grouped together
5 and taped or corded that are part of listed equipment, a driving machine or a
6 driving machine brake shall be permitted on the car assembly, in lengths not to
7 exceed 6 ft (1.83 m) without being installed in a raceway and where located to be
8 protected from physical damage and are of a flame-retardant type.

9 **(3) Machine Room and Machinery Spaces.**

10 (a) Flexible metal conduit(~~(-)~~) or liquidtight flexible metal conduit, (~~(or~~
11 ~~liquidtight flexible nonmetallic conduit of 3/8 in. nominal trade size or larger,~~) not
12 exceeding 6 ft (1.83 m) in length, shall be permitted between control panels and
13 machine motors, machine brakes, motor-generator sets, (~~(disconnecting means,~~)
14 and pumping unit motors and valves.

15 ~~((Exception: Liquidtight flexible nonmetallic conduit, as defined in Section 351-~~
16 ~~22(2), shall be permitted to be installed in lengths in excess of 6 ft (1.83 m).))~~

17 (b) Where motor-generators, machine motors, or pumping unit motors and
18 valves are located adjacent to or underneath control equipment and are provided
19 with extra-length terminal leads not exceeding 6 ft (1.83 m) in length, such leads
20 shall be permitted to be extended to connect directly to controller terminal studs
21 without regard to the carrying-capacity requirements of Articles 430 and 445.
22 Auxiliary gutters shall be permitted in machine and control rooms between
23 controllers, starters, and similar apparatus.

24 ~~((c) Flexible cords and cables that are components of listed equipment and~~
25 ~~used in circuits operating at 30 volts rms or less or 42 volts dc or less shall be~~
26 ~~permitted in lengths not to exceed 6 ft (1.83 m) provided the cords and cables are~~
27 ~~supported and protected from physical damage and are of a jacketed and flame-~~
28 ~~retardant type.))~~

29 (d) On existing or listed equipment, conductors shall also be permitted to be
30 grouped together and taped or corded without being installed in a raceway. Such
31 cable groups shall be supported at intervals not over 3 ft (914 mm) and located so
32 as to be protected from physical damage.

33 **(4) Counterweight.** Rigid nonmetallic conduit shall not be installed on
34 counterweights. Flexible metal conduit, liquidtight flexible metal conduit, ((liquidtight

1 ~~flexible nonmetallic conduit~~) or flexible cords and cables, or conductors grouped
2 together and taped or corded that are part of listed equipment, a driving machine,
3 or a driving machine brake shall be permitted on the counterweight assembly, in
4 lengths not to exceed 6 ft (1.83 m) without being installed in a raceway and where
5 located to be protected from physical damage and are of a flame-retardant type.

6 **(b) Escalators.**

7 (1) Flexible metal conduit ~~((;))~~ or liquidtight flexible metal conduit, ~~((or~~
8 liquidtight flexible nonmetallic conduit)) shall be permitted in escalator and moving
9 walk wellways. Flexible metal conduit or liquidtight flexible metal conduit of 3/8-in.
10 nominal trade size shall be permitted in lengths not in excess of 6 ft (1.83 m).

11 *Exception: 3/8 in. nominal trade size or larger liquidtight flexible nonmetallic*
12 *conduit, as defined in Section 351-22(2), shall be permitted to be installed in*
13 *lengths in excess of 6 ft (1.83 m).*

14 ~~((2) Cables used in Class 2 power-limited circuits shall be permitted to be~~
15 ~~installed within escalators and moving walkways provided the cables are supported~~
16 ~~and protected from physical damage and are of a jacketed and flame-retardant~~
17 ~~type.))~~

18 (3) Hard-service cords that conform to the requirements of Article 400
19 (Table 400-4) shall be permitted as flexible connections on escalators and moving
20 walk control panels and disconnecting means where the entire control panel and
21 disconnecting means are arranged for removal from machine spaces as permitted
22 in Section 620-5.

23 **(c) Wheelchair Lifts and Stairway Chair Lift Raceways.**

24 (1) Flexible metal conduit or liquidtight flexible metal conduit shall be
25 permitted in wheelchair lifts and stairway chair lift runways and machinery spaces.
26 Flexible metal conduit or liquidtight flexible conduit of 3/8-in. nominal trade size
27 shall be permitted in lengths not in excess of 6 ft (1.83 m).

28 *Exception: 3/8 in. nominal trade size or larger liquidtight flexible nonmetallic*
29 *conduit, as defined in Section 351-22(2), shall be permitted to be installed in*
30 *lengths in excess of 6 ft (1.83 m).*

31 (2) Traveling ~~((G))~~ cables used in Class 2 power-limited circuits shall be
32 permitted to be installed within wheelchair lifts and stairway chair lift runways and

1 machinery spaces provided the cables are supported and protected from physical
2 damage and are of a jacketed and flame-retardant type.

3
4 **Section 50.** Section 620-22(a) of the National Electrical Code, 1999
5 edition, is amended as follows:

6 **620-22. Branch Circuits for Car Lighting, Receptacles(s), Ventilation, Heating,
7 and Air Conditioning.**

8 **(a) Car Light Source.** A separate branch circuit shall supply the car lights,
9 receptacles(s), auxiliary lighting power source, and ventilation on each elevator car.
10 The overcurrent device protecting the branch circuit shall be located in the elevator
11 machine room/machinery space.

12 Required lighting shall not be connected to the load side terminals of a
13 ground-fault circuit-interrupter receptacle(s).

14
15 **Section 51.** Section 620-32 of the National Electrical Code, 1999 edition,
16 is amended as follows:

17 **620-32. Metal Wireways ((and Nonmetallic Wireways)).** The sum of the cross-
18 sectional area of the individual conductors in a wireway shall not be more than 50
19 percent of the interior cross-sectional area of the wireway.

20 Vertical runs of wireways shall be securely supported at intervals not
21 exceeding 15 ft (4.57 m) and shall have not more than one joint between supports.
22 Adjoining wireway sections shall be securely fastened together to provide a rigid
23 joint.

24
25 **Section 52.** Section 620-44 of the National Electrical Code, 1999 edition,
26 is amended as follows:

27 **620-44. Installation of Traveling Cables.** Traveling cable shall be permitted to be
28 run without the use of a raceway for a distance not exceeding 6 ft (1.83 m) in length
29 as measured from the first point of support on the elevator car or hoistway wall, or
30 counterweight where applicable, provided the conductors are ((grouped together
31 and taped or corded, or)) in the original sheath.

1 Traveling cables shall be permitted to be continued to elevator controller
2 enclosures and to elevator car and machine room connections, as fixed wiring,
3 ~~((provided they are suitably supported and protected from physical damage))~~ and
4 shall be installed in conduits or raceways.

5
6 **Section 53.** Section 620-51(b) of the National Electrical Code, 1999
7 edition, is amended as follows:

8 **(b) Operation.** No provision shall be made to open or close this disconnecting
9 means from any other part of the premises. If sprinklers are installed in hoistways,
10 machine rooms, or machinery spaces, the disconnecting means shall be permitted
11 to ~~((automatically))~~ open the power supply to the affected elevator(s) prior to the
12 application of water. No provision shall be made to automatically close this
13 disconnecting means. Power shall only be restored by manual means.

14 (FPN): To reduce hazards associated with water on live elevator electrical equipment.

15
16 **Section 54.** Section 620-71 of the National Electrical Code, 1999 edition,
17 is amended as follows:

18 **620-71. Guarding Equipment.** Elevator, dumbwaiter, escalator, and moving walk
19 driving machines; motor-generator sets; motor controllers; and disconnecting
20 means shall be installed in a room or enclosure set aside for that purpose unless
21 otherwise permitted in (a) or (b). The room or enclosure shall be secured against
22 unauthorized access.

23 Non-elevator equipment, wiring, pipes, etc., are prohibited in elevator
24 hoistways, pits, machine rooms and spaces. Only such equipment and wiring that
25 pertain to the elevator and its operation are permitted in these elevator spaces.
26 See Section 3022 of the Seattle Building Code.

27 By special permission, when prior written approval is obtained from the
28 building official, elevator motor controllers and driving machines may be permitted
29 inside the hoistway.

30 **(a) Motor Controllers.** Motor controllers shall be permitted outside the spaces
31 herein specified, provided they are in enclosures with doors or removable panels
32 that are capable of being locked in the closed position and the disconnecting

1 means is located adjacent to or is an integral part of the motor controller. Motor
2 controller enclosures for escalator or moving walks shall be permitted in the
3 balustrade on the side located away from the moving steps or moving treadway. If
4 the disconnecting means is an integral part of the motor controller, it shall be
5 operable without opening the enclosure.

6 **(b) Driving Machines.** Elevators with driving machines located on the car,
7 counterweight, ~~((or in the hoistway,))~~ and driving machines for dumbwaiters,
8 wheelchair lifts, and stairway lifts shall be permitted outside the spaces herein
9 specified.

10
11 **Section 55.** Section 700-4 of the National Electrical Code, 1999 edition, is
12 amended as follows:

13 **700-4. Tests and Maintenance.**

14 **(a) Conduct or Witness Test.** The authority having jurisdiction shall conduct or
15 witness a test of the complete system upon installation and periodically afterward
16 under the control of the Seattle Fire Department.

17 **(b) Tested Periodically.** Systems shall be tested periodically by the building
18 owner and/or manager on a schedule acceptable to the authority having jurisdiction
19 to ensure the systems are maintained in proper operating condition.

20 **(c) Battery Systems Maintenance.** Where battery systems or unit equipments
21 are involved, including batteries used for starting, control, or ignition in auxiliary
22 engines, the authority having jurisdiction shall require periodic maintenance by the
23 building owner and/or manager.

24 **(d) Written Record.** A written record shall be kept of such tests and maintenance.

25 **(e) Testing Under Load.** Means for testing all emergency lighting and power
26 systems during maximum anticipated load conditions shall be provided.

27
28 **Section 56.** Section 700-16 of the National Electrical Code, 1999 edition,
29 is amended as follows:

1 **700-16. Emergency Illumination.** Emergency illumination shall include all
2 required means of egress lighting, illuminated exit signs, and all other lights
3 specified as necessary to provide required illumination.

4 Emergency lighting systems shall be designed and installed so that the
5 failure of any individual lighting element, such as the burning out of a light bulb,
6 cannot leave in total darkness any space that requires emergency illumination.

7 Where high-intensity discharge lighting such as high- and low-pressure
8 sodium, mercury vapor, and metal halide is used as the sole source of normal
9 illumination, the emergency lighting system shall be required to operate until normal
10 illumination has been restored.

11 *Exception: Alternative means that ensure emergency lighting illumination level is*
12 *maintained shall be permitted.*

13 Fixtures of alternate design may be used when specifically approved by the
14 building official.

15 Exit signs with open bottom lighting shall not be considered as taking the
16 place of a required pathway light unless specifically approved for the purpose.

17 Exit illumination (pathway lighting) and emergency area lighting shall comply
18 with Chapter 10 of the Seattle Building Code.

19
20 **Section 57.** Section 701-10 of the National Electrical Code, 1999 edition,
21 is amended as follows:

22 **701-10. Wiring Legally Required Standby Systems.** For shaft pressurization
23 installed according to exception 2 of Section 905.2.1 of the Seattle Building Code,
24 the legally required standby system wiring shall be kept entirely independent of all
25 other wiring and equipment and shall not enter the same raceway, cable, box, or
26 cabinet with other wiring. For other ((The)) legally required standby systems, wiring
27 shall be permitted to occupy the same raceways, cables, boxes, and cabinets with
28 other general wiring.

29 **Section 58.** This ordinance shall take effect and be in force thirty (30) days from and
30 after its approval by the Mayor, but if not approved and returned by the Mayor within ten
31 (10) days after presentation, it shall take effect as provided by the Municipal Code Section
32 1.04.020.

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Passed by the City Council the _____ day of _____, 1999 and signed by me
in open session in authentication of its passage this _____ day of _____, 1999.

President of the City Council

Approved by me this _____ day of _____, 1999.

Paul Schell, Mayor

Filed by me this _____ day of _____, 1999.

City Clerk

(SEAL)

TIME AND DATE STAMP

SPONSORSHIP

THE ATTACHED DOCUMENT IS SPONSORED FOR FILING WITH THE CITY COUNCIL BY THE MEMBER(S) OF THE CITY COUNCIL WHOSE SIGNATURE(S) ARE SHOWN BELOW:

_____ *Jan Diego* _____

FOR CITY COUNCIL PRESIDENT USE ONLY

COMMITTEE(S) REFERRED TO: _____

PRESIDENT'S SIGNATURE



STATE OF WASHINGTON - KING COUNTY

107856
City of Seattle, City Clerk

—ss.

No. ORD IN FULL

Affidavit of Publication

The undersigned, on oath states that he is an authorized representative of The Daily Journal of Commerce, a daily newspaper, which newspaper is a legal newspaper of general circulation and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continuously as a daily newspaper in Seattle, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of this newspaper. The Daily Journal of Commerce was on the 12th day of June, 1941, approved as a legal newspaper by the Superior Court of King County.

The notice in the exact form annexed, was published in regular issues of The Daily Journal of Commerce, which was regularly distributed to its subscribers during the below stated period. The annexed notice, a

CT:ORD 119507/FULL

was published on

07/16/99

The amount of the fee charged for the foregoing publication is the sum of \$ _____, which amount has been paid in full.

H. Patterson

Subscribed and sworn to before me on

07/16/99

McQuinn

Notary Public for the State of Washington,
residing in Seattle

screws by a steel plate at least 1/16 in. (0.39 mm) thick, and covered with plaster, scabbe, or similar finish.

(c) TYPE NMS. Type NMS cable shall be permitted for (both exposed and) concealed work in normally dry locations. It shall be permissible to install fish tape NMS cable in air voids in masonry block or tile walls where such walls are not exposed or subject to excessive moisture or dampness. Type NMS cable shall be used as permitted in Article 748.

City of Seattle

ORDINANCE 118507

AN ORDINANCE relating to building and construction codes, repealing Section 22.300.010 of the Seattle Municipal Code (Ordinance 118563), and adopting a new Section 22.300.015 to adopt the 1999 National Electrical Code with Seattle amendments as the Seattle Electrical Code.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

SECTION 1. Section 22.300.010 of the Seattle Municipal Code adopting the 1996 National Electrical Code as adopted in Ordinance 118563 is hereby repealed, and a new Section 22.300.015 is added to the Seattle Municipal Code to read as follows:

22.300.015 Adoption of the National Electrical Code.

The National Electrical Code, 1999 edition, published by the National Fire Protection Association, the copy of which is filed with the City Clerk in C.F. 309072, is hereby adopted and by this reference made a part of this subtitle. The National Electrical Code, 1999 edition, together with the amendments and additions thereto adopted by Ordinance 118507 constitute the Seattle Electrical Code.

SECTION 2. The National Electrical Code, 1999 edition, is amended by adding Chapters 1, 2 and 3 as follows:

CHAPTER 1

APPLICATION OF THIS CODE

SECTION 101. TITLE. This code shall be known as the "Seattle Electrical Code Supplement" and may be so cited. It is referred to herein as the "Electrical Code" or "this code."

SECTION 102. PURPOSE. The purpose of this code is to protect persons, buildings and the contents thereof in a practical manner from hazards arising from the use of electricity for lights, heat, power, radio, signaling and other purposes. An additional purpose of this code is to provide equal, higher or better standards of construction and/or equal, higher or better standards of materials, devices, appliances and equipment than that required by the State of Washington under the provisions of Chapter 19.28 RCW (Revised Code of Washington). This code is intended to provide for and promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this code. This code is not intended as a design specification nor an instruction manual for untrained persons.

SECTION 103. SCOPE. The Electrical Code shall apply to all electrical wiring and equipment, including communications systems, installed or used within the City.

Exception No. 1. Installations in ships and watercraft not connected to public utility, railway rolling stock, aircraft or automotive vehicles.

Exception No. 2. Installations of railways or generation, transformation, transmission or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes.

Exception No. 3. Installations of communication equipment under exclusive control of communication utilities, located outdoors or in building spaces used exclusively for such installations.

Exception No. 4. Installation of communication or signaling equipment used exclusively for the operation of a municipal fire alarm or police telegraph system.

Exception No. 5. Installations under the exclusive control of electric utilities for the purpose of communication, metering or for the generation, control, transformation, transmission and distribution of electric energy located in buildings used for such purposes or leased by the utility or on public highways, streets, roads or other public ways, or outdoors on established rights on private property up to service point as defined in this code. The installation and maintenance of all service conductors up to the point of connection to the consumer's service entrance conductors shall be the responsibility of the serving utility.

permitted without enclosures.

Exception No. 2. Switches and circuit breakers installed in accordance with Sections 110.27(a) (1), (2), (3), or (4) shall be permitted without enclosures.)

SECTION 41. Section 380.10(a) of the National Electrical Code, 1999 edition, is repealed.

SECTION 42. The National Electrical Code, 1999 edition, is amended by adding:

The building official may require that sufficient evidence or proof be submitted to reasonably substantiate any claims regarding the use or suitability of the alternate. The building official may, but is not required to, record the approval of alternate materials and methods and any relevant information in the files of the building official or on the approved permit plans.

SECTION 107. MODIFICATIONS. The building official may grant modifications for individual cases whenever there are practical difficulties involved in carrying out the provisions of this code. The building official must first find that a special individual reason makes the strict letter of this code impractical and that the modification is in conformity with the intent and purpose of this code and does not lessen any fire protection requirements or any degree of structural integrity. The building official may, but is not required to, record the approval of modifications and any relevant information in the files of the building official or on the approved permit plans.

CHAPTER 2

ORGANIZATION AND ENFORCEMENT

SECTION 201. AUTHORITY. Whenever the term or title "Authority Having Jurisdiction," "Administrative Authority," "Responsible Official," "Building Official," "Chief Inspector" or "Code Enforcement Officer" is used in this code, it shall be construed to mean the Director of the Department of Design, Construction and Land Use of the City of Seattle.

SECTION 202. POWERS AND DUTIES OF THE BUILDING OFFICIAL

(a) GENERAL. The building official is authorized and directed to interpret and enforce the provisions and intent of this code.

Compliance with the requirements of this code shall be the obligation of the owner of the building, structure or premises, the duly authorized agent of the owner, or other person responsible for the condition or work, and not of the City or any of its officers or employees.

(b) DEPUTIES. The building official may appoint such officers, inspectors, assistants and other employees as shall be authorized from time to time. The building official may deputize such employees as may be necessary to carry out the functions of the Department of Design, Construction and Land Use.

(c) RIGHT OF ENTRY. With the consent of the owner or occupier of a building or premises, or pursuant to a lawfully issued warrant, the building official may enter a building or premises at any reasonable time to perform the duties imposed by this code.

(d) STOP ORDERS. Whenever any installation, alteration, repair or removal of electrical work is being done contrary to the provisions of this code, or in the event of dangerous or unsafe conditions related to electrical work, the building official may order the affected work stopped and a notice describing the violation in writing posted on the premises or served on any person responsible for the condition or work. It shall be unlawful for any person to engage in or cause any further work to be done until authorization from the building official is received.

(e) AUTHORITY TO DISCONNECT UTILITIES. The building official shall have the authority to disconnect or order discontinuance of any utility service or energy supply to buildings, structures or equipment therein regulated by this code in cases of emergency or where necessary for safety to life and property. The building official may enter any building or premises to disconnect utility service or energy supply. Utility service shall be discontinued until the equipment, appliances, devices or wiring found to be defective or defectively installed are removed or restored to a safe condition.

It shall be unlawful for any person to reconnect any electrical equipment which has been disconnected by the building official until the equipment has been placed in a safe condition and approved by the building official.

(f) LIABILITY. Nothing contained in this code is intended to be, nor shall be construed to create or form the basis for any liability on the part of the City or its officers, employees or agents, for any injury

condition which constitutes a violation of this code when civil or criminal penalties are inadequate to effect compliance.

SECTION 205. NOTICES. It shall be unlawful for any person to remove, mutilate, destroy or conceal any lawful notice issued or posted by the building official pursuant to the provisions of this code.

The building official may record a copy of any order or notice with the Department of Records and Elections of King County.

The building official may record with the Department of Records and Elections of King County a notification that a permit has expired without a final inspection after reasonable efforts have been made to obtain a final inspection.

SECTION 206. RULES OF THE BUILDING OFFICIAL

(a) AUTHORITY. The building official is authorized to promulgate, adopt and issue the following rules:

(1) "Electrical Wiring Standards" to promulgate standards which are acceptable as a method or as an alternative design for meeting code required performance criteria, to edit or update national standards which are referenced in the Electrical Code and to eliminate conflicts among code requirements.

(2) "Code Interpretations" to interpret and clarify conditions or language expressed in this code.

(3) "Product Approvals" to approve a specific building construction material or product, or a particular component fabricator which has been found acceptable as meeting required performance criteria of this code.

(4) Any other rule necessary for administration of the purpose and intent of this code.

(b) PROCEDURE FOR ADOPTION OF RULES. The building official shall promulgate, adopt and issue rules according to the procedures as specified in Chapter 3.02 of the Seattle Municipal Code.

SECTION 207. CONSTRUCTION CODES ADVISORY BOARD. An Electrical Codes Committee of the Construction Codes Advisory Board, as established in Sec. 106 of the Seattle Building Code, may amend proposed new editions of, and amendments to this code and any proposed administrative rules promulgated to enforce this code. The Electrical Codes Committee may make recommendations to the building official and to the City Council relating to this code and administrative rules. The committee shall be called on an as-needed basis for the Construction Codes Advisory Board.

SECTION 208. APPEALS. Appeals from decisions or actions pertaining to the administration and enforcement of this code shall be addressed to the building official. The applicant may request a review by a panel of the Construction Codes Advisory Board, convened by the Board Chair. The chair shall select a panel of at least three members from the Electrical Codes Committee. The result of the panel's review shall be advisory only.

CHAPTER 3

PERMITS AND INSPECTIONS

SECTION 301. PERMITS

(a) PERMITS REQUIRED. It shall be unlawful to install, alter, extend or connect any electrical equipment in a building or premises, or allow the same to be done, without first obtaining a permit for the work from the building official.

(b) EXEMPTED WORK. An electrical permit shall not be required for the following work:

(1) Replacing fuses or snap switches, fuses, lamp sockets, receptacles, or ballasts.

(2) Reconnecting or replacing a range within an individual dwelling unit, hot plate, water heater, electric baseboard, wall heating unit to a circuit which has been lawfully installed and approved, when no alteration of the circuit is necessary.

(3) The setting of meters by the City Light Department of the City of Seattle or anyone else engaged in the business of supplying electricity to the public, provided that meter loops have been installed under permit and that such meters are not connected to any electrical installation regulated by this code until approval for such connection has been given by the building official.

(4) The installation of 1000 feet or less of wiring for communication systems.

(5) The installation or repair of electrical equipment installed in connection with an elevator, dumbwaiter, or similar conveyances provided that work is covered under the issuance of an elevator permit.

Accommodating means shall be permitted to

(c) ADVANCE PLAN EXAMINATION. An architect or engineer registered in the State of Washington may apply for an electrical permit and may request an advance plan examination of electrical plans where the electrical contractor has not yet been selected. Upon submission of an application including required plans, and payment of fifty percent of the estimated permit fee, the Department will review the application. When the application and plans are found to be in compliance with the Seattle Electrical Code, the Department will approve the application and plans as ready for issuance. Neither the permit nor the plans shall be issued until the remainder of the fee is paid and the electrical contractor's name and license number is placed on the permit.

PERMITS

SECTION 303. (a) ISSUANCE. 1. GENERAL. The application and plans filed by an applicant for a permit shall be checked by the building official. Such plans may be reviewed by other departments of the City to check compliance with the laws and ordinances under their jurisdiction. If the building official finds that the work as described in an application for permit and the plans filed therewith conform to the requirements of this code and other pertinent laws and ordinances and that the fees specified in the Fee Schedule have been paid, the building official shall issue a permit to the applicant who becomes the permit holder. The building official may refuse to issue an electrical permit to any person who refuses or fails to complete the work permitted by an existing permit on the same building or premises.

Exception No. 1: The building official may issue a permit for the installation of part of the electrical system of a building or structure before complete plans for the whole building or structure have been submitted and approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. Holders of such permits may proceed at their own risk without assurance that the permit for the entire building or structure will be granted.

Exception No. 2: A permit may be issued for work to commence prior to the approval of plans, if such approval is delayed beyond 10 working days after the plans have been submitted for examination. The holders of such permits may proceed at their own risk, with the understanding that any work undertaken prior to approval of plans shall be done in accordance with the provisions of this code and in accordance with the plans as subsequently approved.

2. COMPLIANCE WITH APPROVED PLANS AND PERMIT. When issuing a permit, the building official shall endorse the permit in writing and endorse in writing or stamp the plans APPROVED. Approved plans shall not be changed, modified or altered without authorization from the building official, and all work shall be done in accordance with the approved plans, except as the building official may require during field inspection to correct errors or omissions.

3. AMENDMENTS TO THE PERMIT. When substitutions and changes are made during construction, approval shall be secured prior to execution; however, the electrical inspector may approve minor modifications of the plans for work not reducing the fire and life safety of the structure. Substitutions, changes and clarifications shall be as shown on two sets of plans which shall be submitted to the building official, accompanied by redesign fees, prior to occupancy. These changes shall conform to the requirements of this code and other pertinent laws and ordinances.

4. REQUIREMENT FOR LICENSE. No electrical permit shall be issued to an applicant who is engaging in or conducting or carrying on the business of installing wires or equipment to convey electric current or of installing apparatus to be operated by electric current unless the applicant possesses a valid State of Washington license as required by RCW 19.28. The licensed installer responsible for the work shall be identified on the electrical permit.

Exception: Persons not possessing a license may obtain an electrical permit in order to do electrical work at a residence, farm, place of business or other property which they own as described in RCW 19.28.010.

5. CANCELLATION OF PERMIT APPLICATION. If a permit is not issued after a period of sixty days from the date of approval for issuance or if corrections are not received after a period of sixty days from the date of notification of required corrections, the building official may initiate cancellation procedures. Prior to cancellation, the building official shall notify the applicant that the permit application will expire and shall be canceled after 30 days.