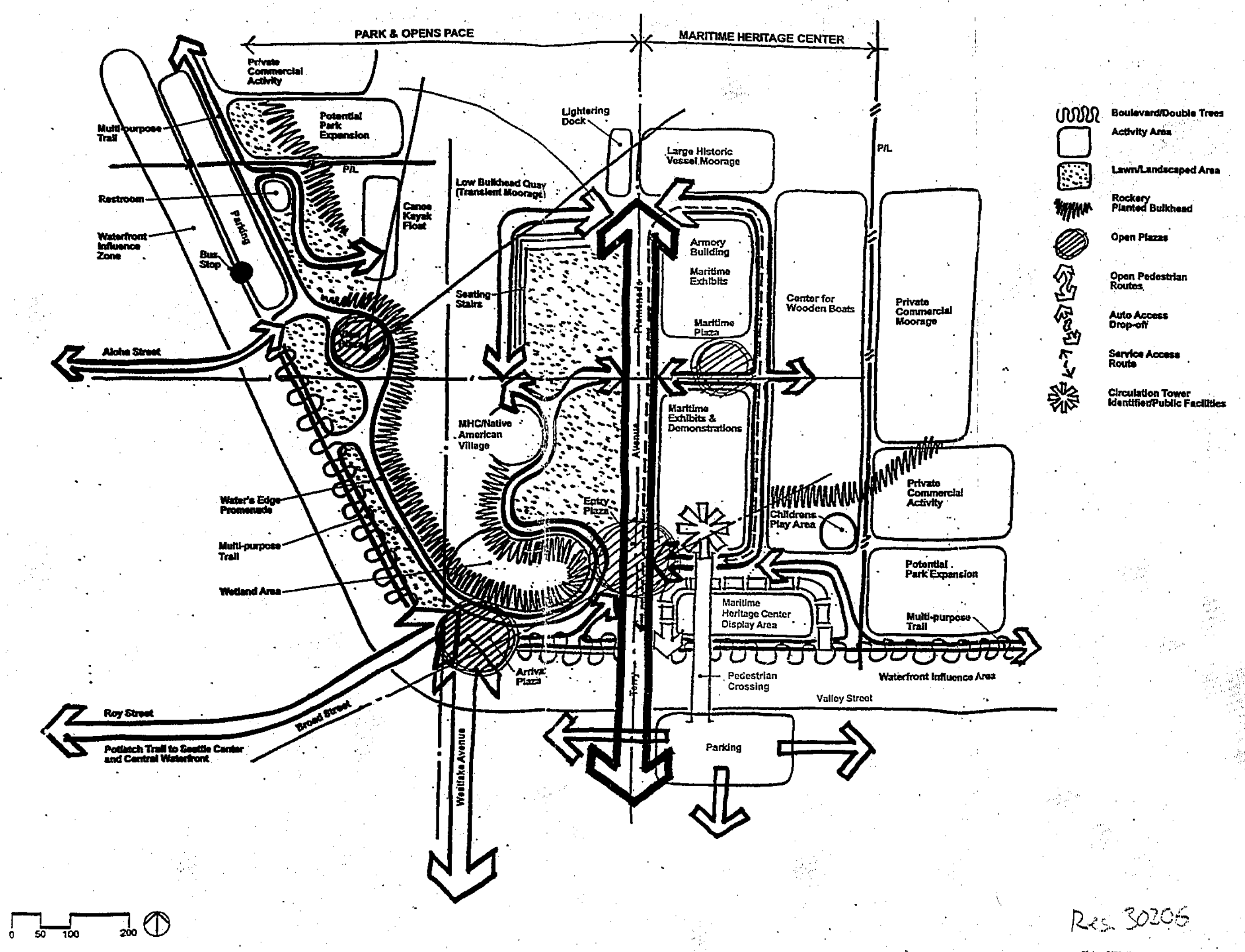
Exhibit A

Concept Diagram



South Lake Union Park

Master Plan Update

Res. 30206

EXHIBIT B

SOUTH LAKE UNION PARK MASTER PLAN

Reasons for Master Plan Update

In 1986 City Council Resolution 27462 instructed the Department of Parks and Recreation to evaluate alternative concept plans for a major park at South Lake Union. The subsequent Phase I Planning Study in 1987 described and evaluated seven alternatives. An Environmental Impact Statement evaluated and compared variations on two of these alternatives, and in 1991 the City Council adopted a master plan for South Lake Union Park by Resolution 28444. Interim improvements were then made to open the City-owned portions of the park to public use.

By 1999 it became clear that the 1991 master plan needed updating. With the City acquiring the Naval Reserve property in 2000, it is timely to clarify the earlier plan's guidelines for reusing the Armory Building, and incorporating it into the park plan. The 1999 South Lake Union Neighborhood Plan also recommended several modifications of the park master plan. The City's plan for redeveloping its surplus South Lake Union properties along the Mercer/Valley corridor provided a context for modifying the park plan's traffic and parking assumptions. The Maritime Heritage Foundation's evolution into a larger and more viable organization warrants some reconfiguration and enlargement of the physical area they would manage in the park, with an operating agreement for that purpose.

Summary of Master Plan Concept

In broad outline, South Lake Union Park will encompass approximately 12 acres at the south end of Lake Union, with possible expansions at its east and west ends. The park will include a Maritime Heritage Center, allowing enlargement and reconfiguration of the existing Northwest Seaport and Center for Wooden Boats facilities and programs. The Maritime Heritage activities and facilities could expand within the former Naval Reserve Armory building and adjacent spaces, including the Wharf Project to provide moorage for large historic vessels, and a Native American Canoe Center. The amount of space dedicated to those activities will depend upon the Foundation's fulfillment of criteria set forth in a detailed Memorandum of Agreement with the City. The City's usage of the Armory Building for community-based and other activities could change over time in relation to the Maritime Heritage Center's increasing use.

The area generally west of the Terry Avenue right-of-way will be designed and used for public park, recreational and open space, typically accommodating non-scheduled recreation activities such as launching of hand-carried small boats, picnicking, and walking, as well as occasional scheduled events. The area east of Terry Avenue will be used primarily for Maritime Heritage Center facilities and activities. Public access

corridors will be designated along the entire lake frontage of the park including the Maritime Heritage area east of Terry Avenue. Several "internal" public access and view corridors will also be maintained within the Maritime Heritage Center east of the Terry Avenue alignment.

Specific aspects of the Plan Concept Diagram (Exhibit A) and the Illustrative Site Plan (in Attachment 1) are explained in more detail below.

Maritime Heritage Center: The Maritime Heritage Center (MHC) will provide a regional focus for hands-on preservation of Pacific Northwest traditional boat building and maritime history. Maritime heritage uses will include moorage of large historic vessels moored at the Wharf (north of the Armory Building), together with some maritime exhibits inside the Armory Building, in nearby open plaza spaces and possibly in one or more new structures south of the Armory Building. The "Maritime Exhibits and Demonstrations" area could include open display of equipment, boats, and occasional small-scale repair/outfitting of the vintage large and small vessels moored nearby.

The Wharf, approximately 240 foot in width with a series of slips oriented generally in a north-south alignment, will provide long-term moorage with a probable capacity of 5 large heritage vessels, and an adjacent short-term space to the west for occasional visiting vessels, and related visitor facilities. A pedestrian ferry, water taxi and/or tour boat landing may be accommodated at the foot of the Terry Avenue Promenade. The MHC can also arrange for occasional short-term moorage of visiting heritage vessels along the bulkhead on the east side of Waterway 3.

The Center for Wooden Boats (CWB) will expand its complex of floats and floating structures as generally shown on the Illustrative Plan, in Attachment 1. It will accommodate approximately 200 small wooden boats for display and public rental. Its floating dock system in Waterway 4 will provide public access to the CWB's floating repair shop, boathouse and administration building as well as to the boats themselves. Some of their float space will be allocated to transient day moorage for tying up visiting small boats.

All of these MHC uses will be located generally east of the Terry Avenue Promenade that is intended to be a primarily pedestrian public access and view corridor. (The Native American Canoe House cluster located west of the Terry Avenue corridor is also a part of the MHC, and is discussed separately below.) The specific square footage and configuration of MHC facilities in the areas shown for them on Exhibit A in Attachment 1 will not be known until more detailed design and financial feasibility studies are completed.

Uses of the Naval Armory Building: For at least an initial phase of park development the Seattle Department of Parks and Recreation will occupy and operate the Armory Building, with some allocation of office, meeting and exhibit space for the Maritime Heritage Foundation to be considered in an interim use agreement. The exact mix of the

Department's recreation-related uses is not yet determined. Over a period of time, observing milestones and criteria set forth in a Memorandum of Agreement, the City may reduce its recreational use of the Armory Building area, allowing the MHF to expand its programs if and when it demonstrates capability to do so. If it is determined by the City that it is desirable to put the Armory building to use to meet other public needs it reserves the right to do so. Physical modifications of the building will be limited according to terms of a covenant imposed by the Navy and the State Historic Preservation Officer, which identified both external and internal features considered significant in determining the building's eligibility for the National Register of Historic Places.

Native American Canoe Center: This approximately ½ acre site will feature a Northwest Canoe Center longhouse and a carving shed, together occupying approximately 5,000 sq. ft. The Canoe Center will provide for launching and retrieval of Native American canoes from a restored beach on the east side of Waterway 3. The low-profile buildings will be integrated with the pathway system and landscape design, providing a transition between the adjacent natural area and the walkway along the low bulkhead quay to the north. Organizationally and programmatically, the Native American Canoe Center will be part of the MHF, although its location in the public open space part of the park will require coordinating its public access and operation with the surrounding park.

Picnic and Sitting Areas: Tables and benches will be distributed in appropriate areas of the park, accessible by the pathways and capitalizing on views of the lake. The concentrations of activities and events in and near the Maritime Heritage Center could support an outdoor seating area in conjunction with light food and beverage service. Due to the park's relatively small size, it will not include large concentrations of picnic tables or shelters for scheduled use, as they typically draw large groups of people with sizable access and parking needs.

Children's Play Area: While small-scale informal play is anticipated in many areas of the park, a structured play area that may become a "destination playground" is shown in the MHF's more active part of the park. In that location the nearby maritime exhibits may reinforce a nautical theme for the play area and equipment, and youthful energy will find a good outlet while adults explore the exhibits at a leisurely pace.

Parking: The plan concept diagrams (Exhibit A and Attachment 1) depict consolidated parking located south across Valley Street, connected to the park by a safe and convenient pedestrian crossing. Developing and operating a parking area available to park visitors at times of heavy use, especially summer evenings and weekends, may represent a considerable development expense in this thriving lakefront area. At this master plan level, the park is estimated to need approximately 150 spaces for summer daytime use, with expansion capability of approximately 250 spaces to handle larger events on weekends and other times when shared parking use would be possible.

Pedestrian Connection to Parking: The City's current studies of traffic management solutions in the Mercer Corridor may conclude that a signalized at-grade pedestrian connection between the park and the parking area may be feasible even with the high traffic volumes on Valley Street. However, the heavy through traffic may preclude that option. A pedestrian skybridge over the street may be the only way to provide the necessary separation of pedestrians from vehicles. In either case, the garage, pedestrian crossing, and park entry plaza will be designed to make this arrival experience convenient and pleasant. Any pedestrian skybridge proposal will be subject to Council approval.

Auto/Bus Drop-Off Area: This mode of vehicular access is accommodated via a loop off of Valley Street, connecting with the same entry plaza used by pedestrians descending from the skybridge. The entry plaza will provide visitor information and services including a restroom. A small maritime display area within the vehicular loop will help to identify and characterize the park. The drop-off area will allow school and tour buses and other groups to disembark close enough to the center of activities, without intruding into the park's pedestrian precincts.

Service and Other Specialized Vehicular Access: The plan diagrams feature an open pedestrian route from the main entry plaza northward along the Terry Avenue alignment. For most times of park operation, this will be an exclusively pedestrian precinct. For public safety reasons it will be designed to accommodate emergency vehicles when necessary. As shown in Exhibit A and Attachment 1, the promenade could have a turnaround at its northern end for vehicular access on special occasions. The "Terry Avenue Promenade" route will provide emergency and service vehicle access to the Wharf area north of the Armory, as well as to the pier along the east side of the Armory so that a vehicular loop runs southward to the auto/ bus drop-off.

Landscaped and Hard Surface Areas: This is an urban park in an area planned for high-density commercial and institutional development. As such, the plan concept diagrams show a substantial amount of "hardscape" in the form of plazas, walkways, vehicular drop-off driveway, and maritime activity areas. However, the plan also anticipates that part of the park's value will be realized in the "softer" components represented on the concept diagrams as Lawn/Landscape areas. The park design will balance these areas with the other park elements to provide a restful and beautiful setting for relaxation, walking, views, picnicking, unstructured play.

Visitors who come to the park for maritime displays, events and general recreation will be accommodated on designated hard spaces including the shoreline promenade and pathways, the maritime plaza(s), the Wharf, the Westlake and Terry Avenue arrival plazas, the main entry gate/ observation tower. These paved areas will be functionally and visually distinct from the turf/landscape areas described above. Paving materials, textures and colors can be varied in different parts of the park.

South Lake Union Park's expected use for occasional large public gatherings, e.g. the annual Wooden Boat Festival, concerts, etc., will not preclude large green spaces for

more typical public use and enjoyment. One of these is the large turf/landscape area west of the Armory Building. The principle at stake is to avoid excessive paving of the park to withstand crowds that gather fairly infrequently. Sufficient green space is needed for summer days when people can relax in grassy surroundings. A substantial amount of green space is also valuable during the long wet season when people's enjoyment of the park will often be from a passing vehicle, or during brief walks in the park.

Wetland Area: The plan update continues a variation of the 1991 plan's wetland habitat area at the south end of Waterway Number 3. About one acre in size, this will be a kind of "wetland garden" feature in the park. Detailed design may lead to a configuration different from that shown on the conceptual diagrams. It should be designed to make a smooth transition between the high-bank terraced shoreline on the west side of Waterway 3, and the low-bank restored beach where canoes are launched at the Native American Canoe Center on the waterway's east side. Aside from the visual quality this feature may add to the park, it also affords an opportunity to enhance the lake's habitat, offsetting and mitigating other structured improvements along the shoreline. It can provide an opportunity for biofiltration of stormwater runoff from the park's hard-surfaced areas. The wetland can also increase the park's potential for natural as well as cultural interpretation.

Shoreline Renovation: South Lake Union Park will offer various shoreline characteristics along its approximately ½-mile length. It includes high-bank, terraced and revegetated lakefront on the west side of Waterway Number 3 (see Sections A, B and C), the wetland area at the south end of the waterway and the Native American Canoe Center's restored beach on the east side of the waterway(see Sections D and G). North and east of that the shoreline assumes a more rectangular, structured form of the existing Navy bulkhead quay, lowered so that pedestrians along the quay walkway will be about 18" above the summer lake level (see Section E). On special occasions, sizable heritage vessels can tie up alongside this quay, but most of the time it will be open to assure good views of the lake.

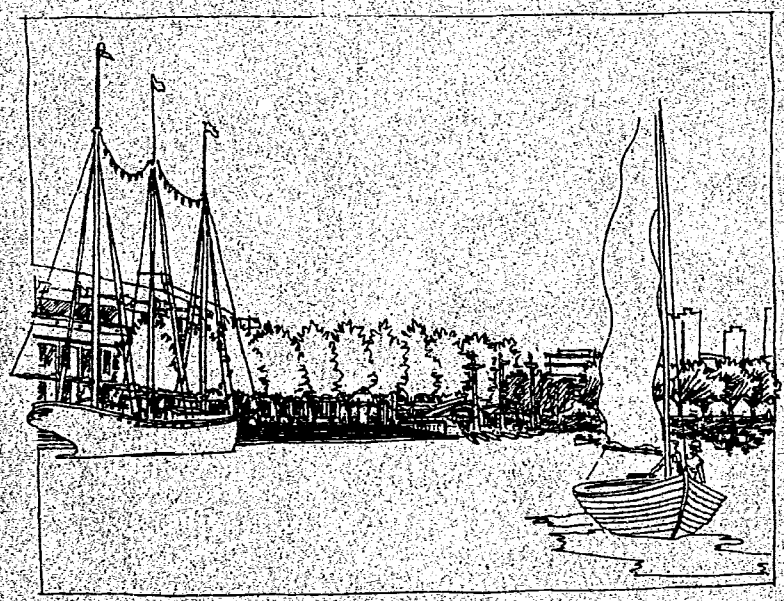
East of the Terry Avenue corridor, the shoreline pathway will rise gradually to meet the Armory Building and adjacent wharf elevation. The wharf when reconstructed will be narrower than it is today, reconfigured to allow visitors to walk between several of the heritage vessels moored there, as well as being able to continue walking eastward to Waterway 4. The old Navy pier along the east side of the Armory Building will be brought up to code to support emergency vehicle access, as well as continuous pedestrian movement. The shoreline at the south end of Waterway 4 will accommodate public access to the Center for Wooden Boats' floating buildings and moorage. The walkway system there will link directly to the public shoreline path system of the existing private Henry Pier and Chandler's Cove on the west side of Waterway 4.

Even though pedestrians along the Waterway 3 shoreline will in some places be close to the lake level, the pathway design will encourage direct contact with the water in just two places—at the kayak/canoe float on the west side of the waterway, and at the Native

American Canoe Center's restored beach on the opposite bank. Elsewhere contaminated sediments remaining from previous industrial uses will for the foreseeable future restrict water contact recreation.

Pedestrian/Bike Trail: The pedestrian/bike trail around the perimeter of the park will connect the present trail terminus along Fairview Avenue East with the new Westlake Multipurpose Trail to be constructed in the year 2000. This trail connection cannot allow high-speed bike travel, but will incorporate design of the park's perimeter in a sweeping curve that offers another way for people to experience the park in passing around it. It will connect with but be separate from the internal pathway system for pedestrians in the park.

Park Design Theme Extension: As envisioned in the Neighborhood Plan recommendations, park design features are expected to influence neighborhood design and redevelopment. Certain aspects of the park may become part of the surrounding area's design vernacular, setting a tone for public spaces and the rights-of-way so that the park's influence goes beyond its boundaries. This may be expressed in the quality of materials used in the park, setting a different qualitative standard than found in the utilitarian design of many parks.



Attachment 1

South Lake Union Park

Master Plan Update Background Information

June, 2000

City of Seattle Department of Parks & Recreation

Kato & Warren

In association with

Parsons Brinckerhoff

Hewitt Architects

Jones & Jones

South Lake Union Park

Master Plan Update Background Information

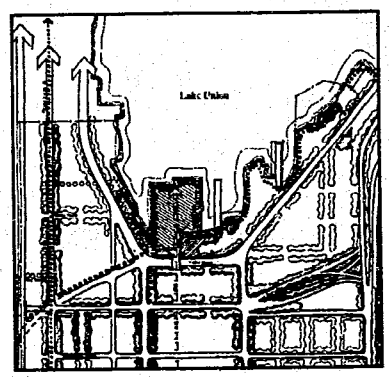
June, 2000

Table of Contents

South Lake Union Park · Master Plan Update

■ Introduction/Background

Historically the south end of Lake Union played an important part in Seattle's industrial beginnings, the site of lumber mills, boat building, and light manufacturing. In 1942 the U.S. Naval Reserve Center located to the area and maintained a training center on the lake until the late 1980s, when the Navy moved the Reserve Center operations to Everett, Washington. At that time the Seattle City Council requested the Department of Parks and Recreation to evaluate a range of concepts for a major park at the 12-acre site. Local community members and boat enthusiasts met with parks staff to discuss options that would accommodate both recreational open space and maritime-related activities while offering residents access to the lake.



Open Space Plan

■ 1991 Plan

The 1991 South Lake Union Park Master Plan was based on a carefully crafted balance of open space recreation features and activities associated with the area's maritime history. On the east side of the site a Maritime Heritage Center (MHC) was created, dedicated to historic boats and boat restoration interests. Moorage for historic vessels was featured, as well as a Center for Wooden Boats that included a network of floating docks, a floating repair shop, and boathouse. While the future of the Naval Reserve Armory Building was undecided in 1991, retaining it as a potential major park feature was recommended.

On the west side of the site open grass lawn, tables for picnicking, public gathering space, natural wetland area, and shoreline promenade were included. Launching for sailboards, canoes, kayaks, and rowboats was provided, as well as transient moorage for visiting small boats. Restrooms and on-site parking were included, as was a strong link from the park to the surrounding neighborhoods across heavily traveled arterials bordering the site. An environmental impact statement (EIS) was prepared and the plan was adopted by the City but not funded.
(*Source: Attachment A, South Lake Union Park, Recommended Plan Concept "C-1", Summary*)

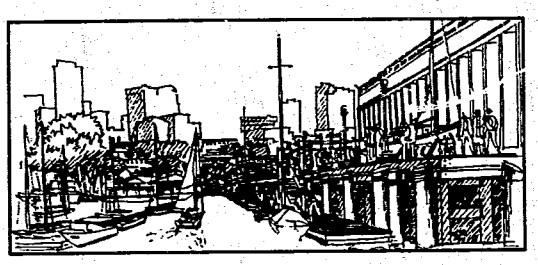
■ Seattle Commons

In 1994 the concept of a "Seattle Commons" emerged from a group of interested citizens who envisioned the creation of a major park in the South Lake Union neighborhood. This park would have extended from Denny Way to Lake Union and would have included development of the South Lake Union Park based on the 1991 Plan. Substantial land use and transportation features were included, along with a funding package that required voter approval. On two different occasions the proposed park failed to gain sufficient votes and the concept was not pursued further.

■ South Lake Union Neighborhood Plan

After the second voter rejection of the Seattle Commons in 1997, interested community members organized to discuss the future of the area. Many had participated in earlier studies and the group was able to form consensus by focusing on a select group of issues that included parks and open space, transportation and circulation, neighborhood character, and the treatment of local arterials. A decision was made to revisit the 1991 park plan and to emphasize the site's potential as both neighborhood open space and an attraction that could promote the city's maritime heritage. The neighborhood plan, adopted in March, 1999, supported the basic balance of uses embodied in the 1991 plan with minor adjustments to site layout and the recommendation to utilize the Armory structure, which had now been declared surplus, for maritime heritage purposes. (*Source: South Lake Union Neighborhood Plan*)

Center for Wooden Boats and Armory

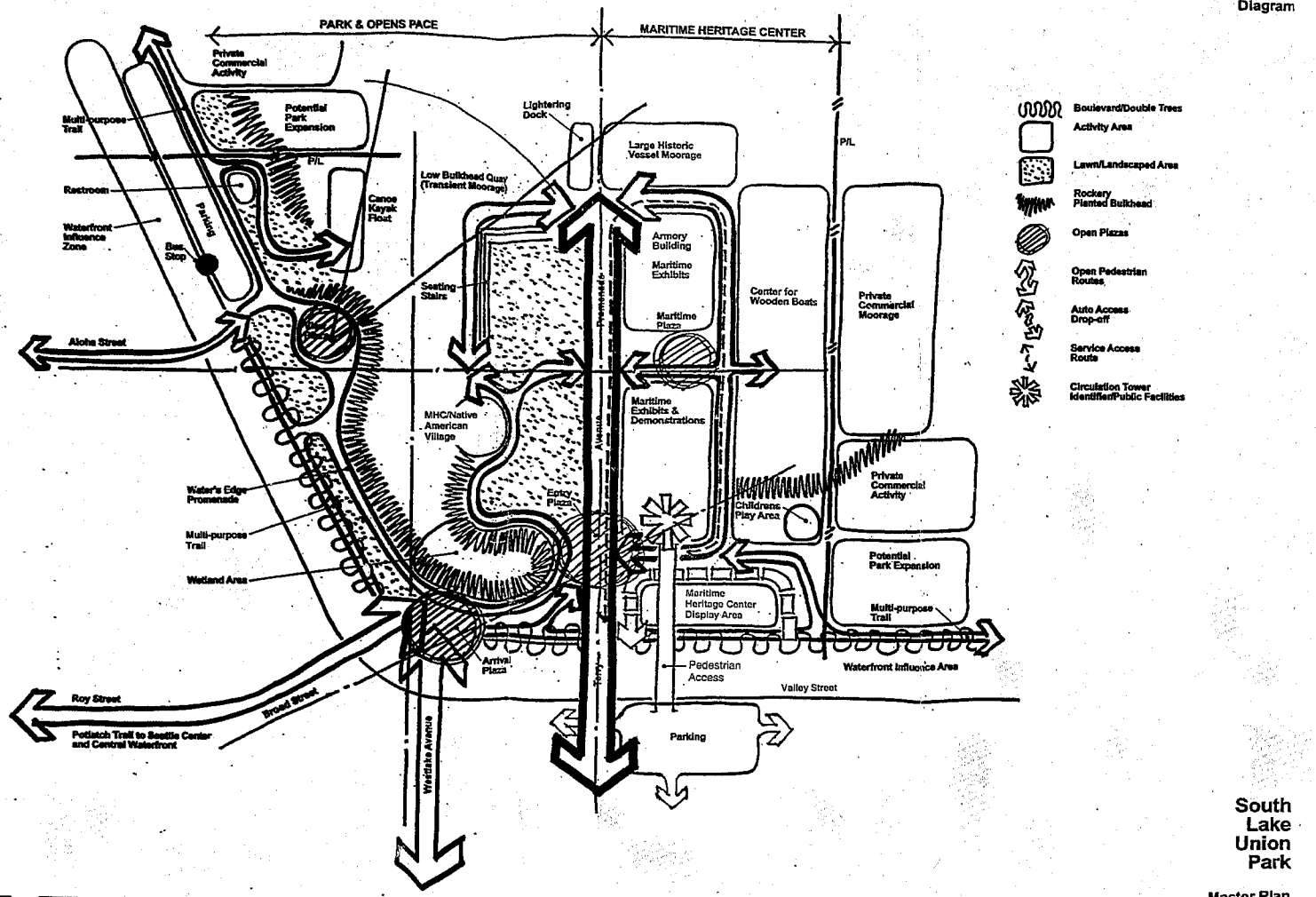


■ Update Process · 1999 Advisory Committee

Beginning in late 1999, an advisory committee of area property owners, maritime concerns, business interests, neighborhood planning committee members, and lay citizens, many of whom had worked on the South Lake Union Neighborhood Plan, was established by the Park Department. This group re-examined the 1991 Park Master Plan and relevant recommendations contained in the Neighborhood Plan. The group's efforts focused on balancing the site's maritime heritage aspects and lively waterfront setting with its potential to provide much-needed passive open space for the surrounding urban neighborhood. Capitalizing on existing boat-related activities, it was decided that maritime heritage interests could be accommodated east Terry Avenue, while open space for passive recreation could be provided west of this street.

The City's pending acquisition of the Naval Reserve property in 2000 and the Maritime Heritage Foundation's evolution into a larger and more viable organization added further impetus to moorage of historic vessels and boat restoration on the east side of the site. Redesign of the lake edge on the west side could provide opportunities for the recreational needs of the community. Recommended modifications to the park master plan that had been included in the 1999 South Lake Union Neighborhood Plan were also considered and generally supported. The City's plan for redevelopment of its surplus properties along the Mercer/Valley Corridor provided an additional context for modifying the earlier park plan's traffic and parking assumptions. The Advisory Committee's summary comments are included in Appendix "A."

A Concept Plan, shown in the following graphic, contains elements to be included in the park. This Plan highlights important features such as circulation, shoreline treatment, views, edge treatment of adjacent arterials, basic site uses, and activity zones that are recommended for adoption as the Master Plan Update. Following this is an Illustrative Plan that suggests in greater detail how the ideas in the Concept Plan could be developed.

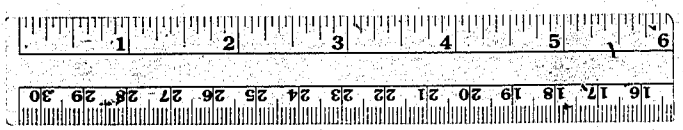


Concept Diagram

- Boulevard/Double Trees
- Activity Area
- Lawn/Landscaped Area
- Rockery Planted Bulkhead
- Open Plazas
- Open Pedestrian Routes
- Auto Access Drop-off
- Service Access Route
- Circulation Tower Identifier/Public Facilities

South Lake Union Park

Master Plan Update



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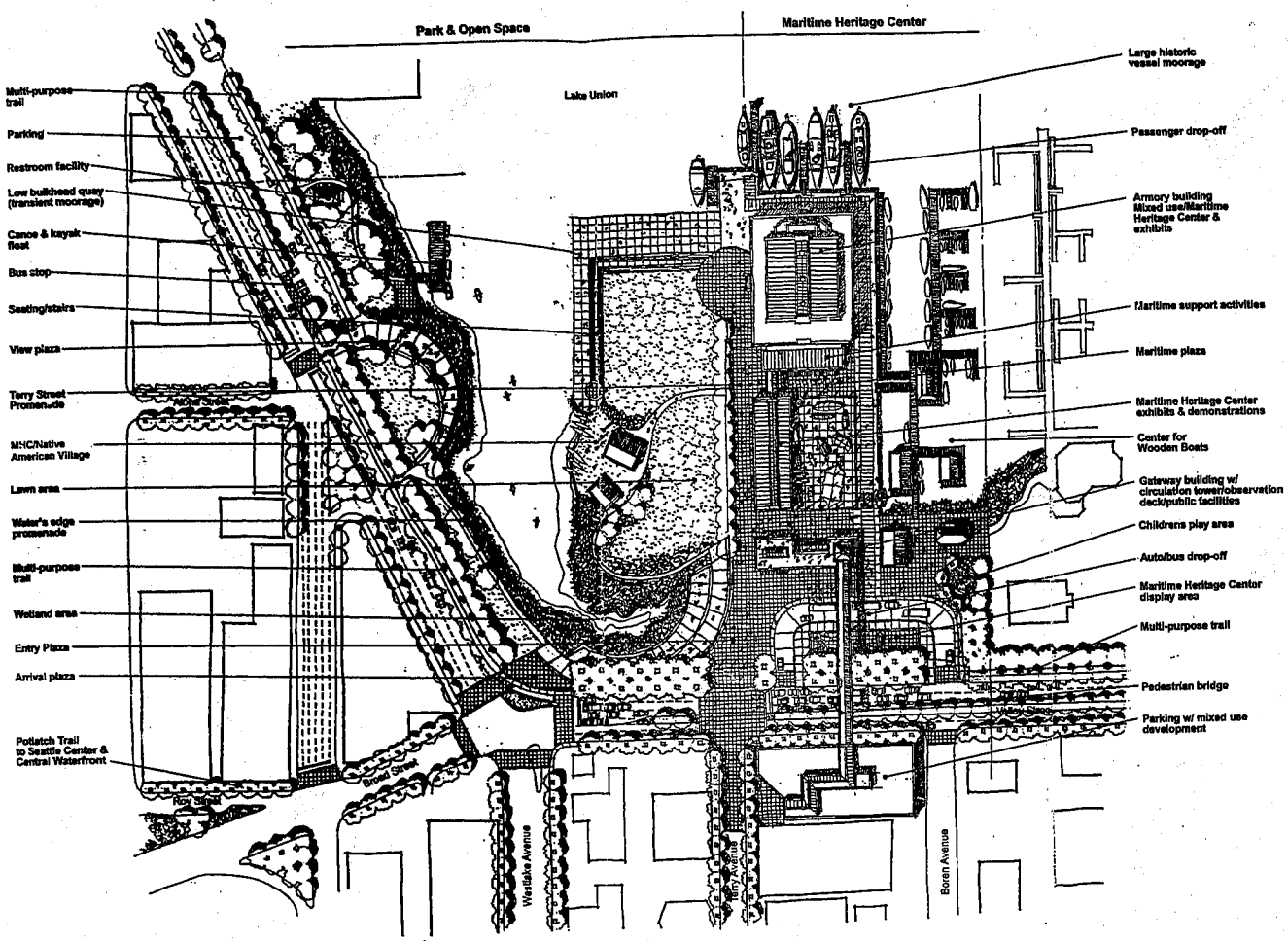
Illustrative Plan



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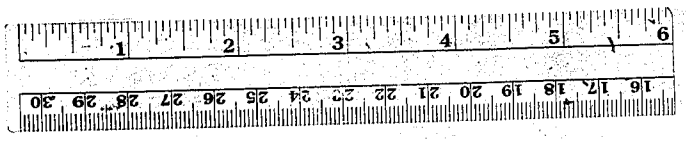
NOTE: This is illustrative of one way the park could be developed based on the Concept Plan

15 March, 2000, Kato & Walters/Parsons Brinckerhoff/Hewitt Architects/[illegible] Jones

South Lake Union Park

Master Plan Update



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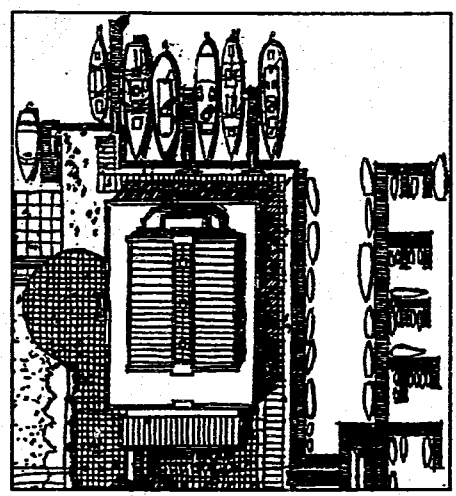
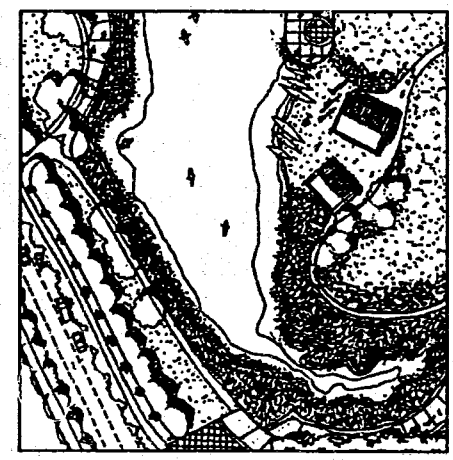
■ Resulting Recommendations



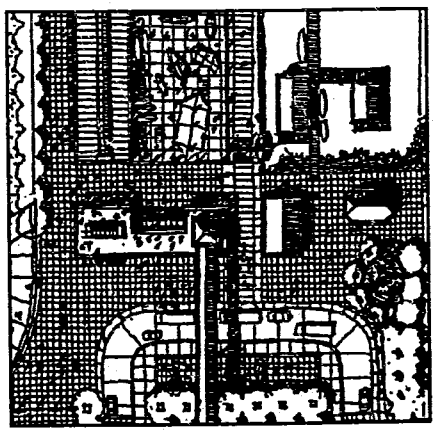
Northeast Corner of Maritime Heritage Center

Overview: East of Terry Avenue as it extends into the site, the Maritime Heritage Foundation (including the Center for Wooden Boats, Northwest Seaport, the United Indians of All Tribes Foundation, the Virginia V Foundation, and the Northwest Schooner Society) will offer educational experiences and a variety of options for learning about the local culture of boats. Historic vessels will be moored adjacent to this center at the north end of the site while a demonstration and exhibition center will be part of a central maritime-theme plaza. This chance to observe the sights and sounds of boat building/restoration and to learn the historic role that boats played in our history will be unique among Seattle's learning opportunities. The Center for Wooden Boats will continue to occupy Waterway 4 and will expand its program, while the Armory will be programmed for museum-type maritime displays.

On the west side of the park, grass pathways and open space in a landscaped, less structured environment will provide picnickers and strollers with passive recreation options. Modification of the existing bulkhead on the waterfront west of Terry Avenue will allow casual visitors to reach the water's edge where they can sit or stroll, enjoying views across the lake to the north. An open lawn stretches south of this feature, and into it is set a Northwest Indian canoe house where hand-crafted canoes will be built. At the lake's southern end (Waterway 3) a wetland will be created and native vegetation will be planted. Parallel with Westlake Avenue on the west side of Waterway 3 will be a linear park with pedestrian/bike paths, benches, and a view plaza. Also on this side an upgraded canoe and kayak float will be built for those small craft, linked by a footpath to a nearby parking lot.

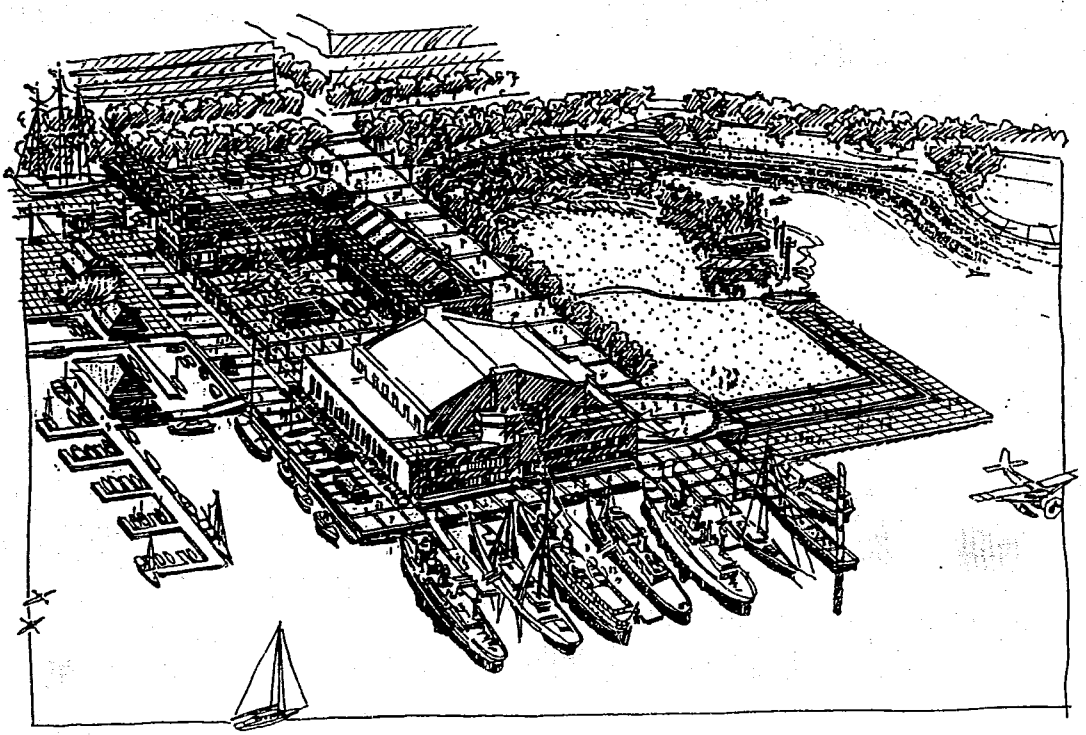


Waterway 3 with Passive Park, Wetland, and Maritime Heritage Center's Native American Village



Entry Plaza and southern portion of Maritime Heritage Center

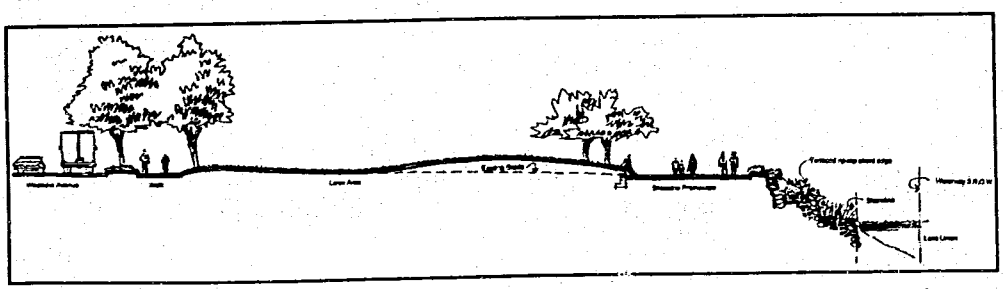
Because of the numerous activities on the east side of the site, there will be a substantial amount of "hardscape" in the form of a large entryway and plaza, walkways, vehicular drop-off driveway, and paved maritime activity areas. Visitors will be able to enjoy exhibits and demonstrations, visit a museum, and walk out to see historic vessels moored at the lake's edge. Special treatment of essential crossing points will be built into the street pavement at Terry Avenue across Valley Street as well as along the intersection of Westlake Avenue and Broad Street. Less paving and more vegetation will characterize the western portion of the site. The interface between land and water will have a variety of treatments, from the hard-edged bulkhead quay (allowing limited transient moorage) to a terraced, stone-lined edge and wetland area.



Comparison of Adopted Master Plan and Proposed Update

1991 Master Plan	Proposed Update
Maritime Heritage Center (MHC) in compact two-acre "village" near center, with about two acres of use in Waterway 4.	MHC development could occur throughout the area east of Terry Avenue, southward to Valley Street
Moorage for large heritage vessels along 450 lineal feet of the Navy east pier on Waterway 4.	Moorage for five large historic vessels, moved to the wharf north of Armory Building.
Center for Wooden Boats shares Waterway 4 with large heritage vessels.	Waterway 4 dedicated to Center for Wooden Boats, with expanded floats and small boat operations.
Free public access throughout site, fees only collectible at heritage vessel entries	Same, with additional allowance for collecting fees at designated historical exhibits on land in the MHC.
Naval Reserve Armory Building not clearly designated for re-use – possible clearance of site for open space.	Armory to be retained. Balance between maritime heritage and multi-purpose community use of building expected to change over time to match MHC's capacity to operate a maritime heritage museum.
30 parking spaces on park site, 80 spaces in surface lot across Valley Street. Additional spaces along Westlake Avenue North to serve canoe/ kayak float.	Parking structure across Valley Street with pedestrian overpass to park if grade crossing of Valley at Terry is not feasible. Passenger drop-off area off Valley Street near MHC. Additional parking along Westlake Avenue North to serve canoe/kayak float and passive park.
Public gathering space in plaza at end of pier east of Terry Avenue (extended) for about 600 people maximum. Removal of Waterway 3 bulkhead and creation of "soft" shoreline.	Retention of existing bulkhead instead of creation of "soft" shoreline west of Terry Avenue. Allows for occasional larger public gatherings.
Natural area about one acre in size near the south end of Waterway 3, with walkways, viewing platforms.	Similar, extending further east, blending in with new Native American Canoe House site to the north at Waterway 3 shoreline. Provides water quality function for site runoff.

Source: South Lake Union Master Plan Advisory Committee

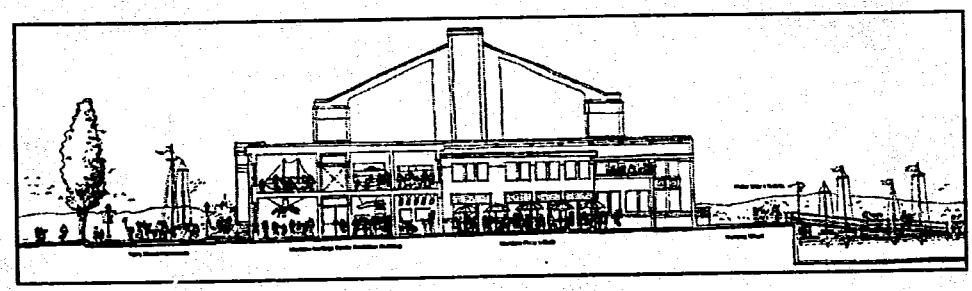


Section looking north on the west side of the park

■ Maritime/Built Features

- The **Maritime Heritage Center**, centered in the heart of the eastern portion of the park, will serve to preserve northwest maritime traditions. The facility will contain maritime-related activities, exhibits, and demonstrations.

- The **Naval Reserve Armory Building** is proposed to serve as a maritime exhibit and activity center. For at least the initial phase of park development, the Department of Parks and Recreation will occupy this building until this facility is ready to operate.



East-west cross-section through Maritime Heritage Center Site

- An expanded **Center for Wooden Boats** will be able to accommodate up to 200 small wooden boats for display and public rental in Waterway 4. A floating repair shop, boathouse, and administration building will be part of this center.

- **Northwest Seaport Operations** will have three historic ships on display and will continue restoration activities, although on a modified scale, at the site.

- The **United Indians of All Tribes Native American Village**, across a grass lawn from the Maritime Heritage Center, will feature a longhouse where canoes will be built and where launching facilities will be provided. This facility will also provide storage for canoes and will provide canoe-carving exhibitions for visitors.

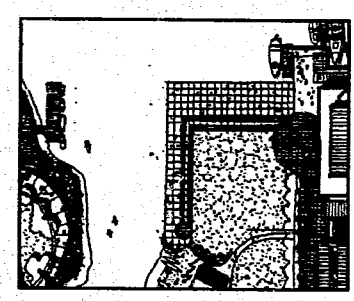
- A 240-foot wide **Wharf** with a series of slips will provide berthing and visitor facilities for up to eight large heritage vessels.

- An **Entry Tower** with observation deck will include a gateway building connected to the skybridge that will also serve to welcome visitors to the active maritime displays. It will house public restrooms and other comfort amenities.

- **Children's Play Area**: A small, structured play area with a maritime theme will provide an active area for children's play.

■ Passive Recreation/Natural Features

- West of Terry Avenue at its north end, a **Plaza** will be built in conjunction with a modified existing bulkhead where visitors can stroll to the water's edge to watch boaters and kayakers and enjoy the views across the lake toward Gas Works Park.



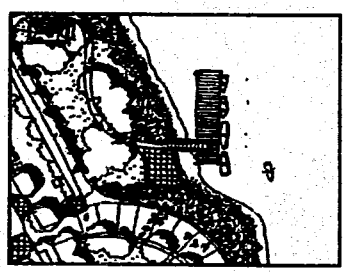
Plaza at north end of Terry Avenue

- **Picnic and Sitting Areas** will be in the open grass along the western side of the park, near the Canoe Center, and along the western edge of the site as it parallels Westlake Avenue.

- A **View Plaza/Promenade** on the western side will offer views across a small inlet to the activities in the center of the park as well as views north and east to Lake Union. A terraced edge along the lake's west side will be planted with native plants.

- Nearly an acre of land at the south end of Waterway 3 will be converted to a **wetland** and water quality feature. The area will be accessible for interpretive programs along specific walkways, although access into the water will be precluded with a dense growth of native wetland plants.

- An **Upgraded Canoe/Kayak Float** will be built on the west side of the park, with easy portage up to the nearby parking lot.



Canoe/Kayak Float

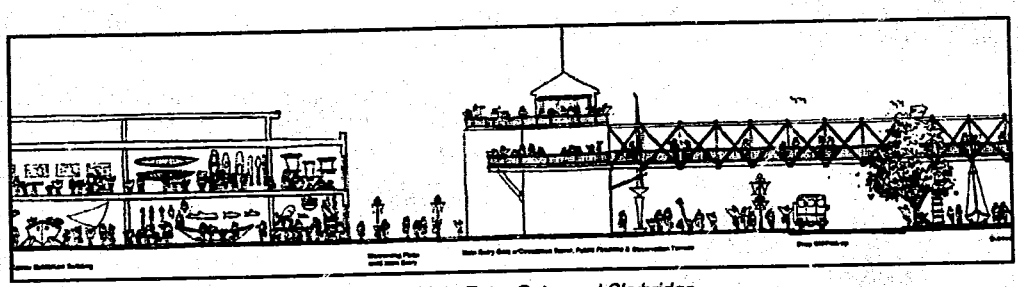
■ Circulation/Access

- A **Multi-Purpose Trail** will be created along the perimeter of the park, skirting it along the northwest side (Westlake Avenue) and connecting with both the Westlake trail to Fremont and the Potlatch Trail (to Seattle Center and the Central Waterfront) along Roy Street. The trail would also continue to the east along Valley Street, connecting to pedestrian facilities along Fairview Avenue.

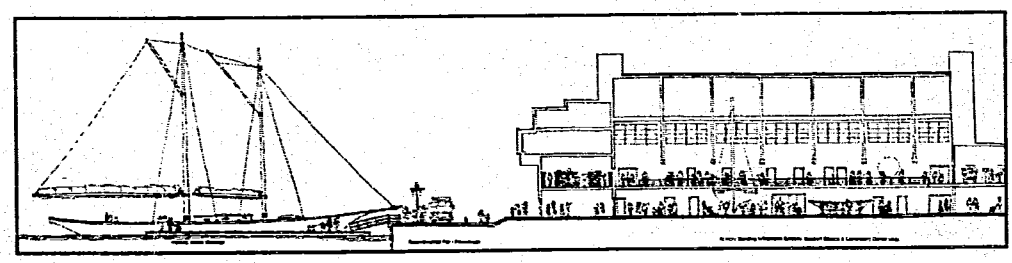
- **Pedestrian Connections** across Valley Street may include a stop light near a proposed new parking garage on the south side of that street. An at-grade connection between the park and a parking structure is yet to be determined. A pedestrian skybridge over the street may be necessary to separate pedestrians from the heavy volume of traffic along that corridor. Elsewhere, pedestrian links into the park would be emphasized with special paving materials at junctions points, such as at Aloha and Broad Streets and at Westlake and Terry Avenues.

- **Parking** will be provided south of Valley Street in a structure that will also offer mixed use development. Additional parking will be provided along the west side of the park, adjacent to the passive open space, and parallel with Westlake Avenue. A summer day-use need for roughly 150 spaces has been determined, with 100 additional spaces needed for larger events on weekends.

- A **Car/Bus Drop Off Area** will provide access into the site from Valley Street at the entrance to the main park features.



Maritime Heritage Center Exhibition Building, Main Entry Gate, and Skybridge



Maritime Heritage Center Historic Ship Wharf and Armory Building

■ Implementation and Planning

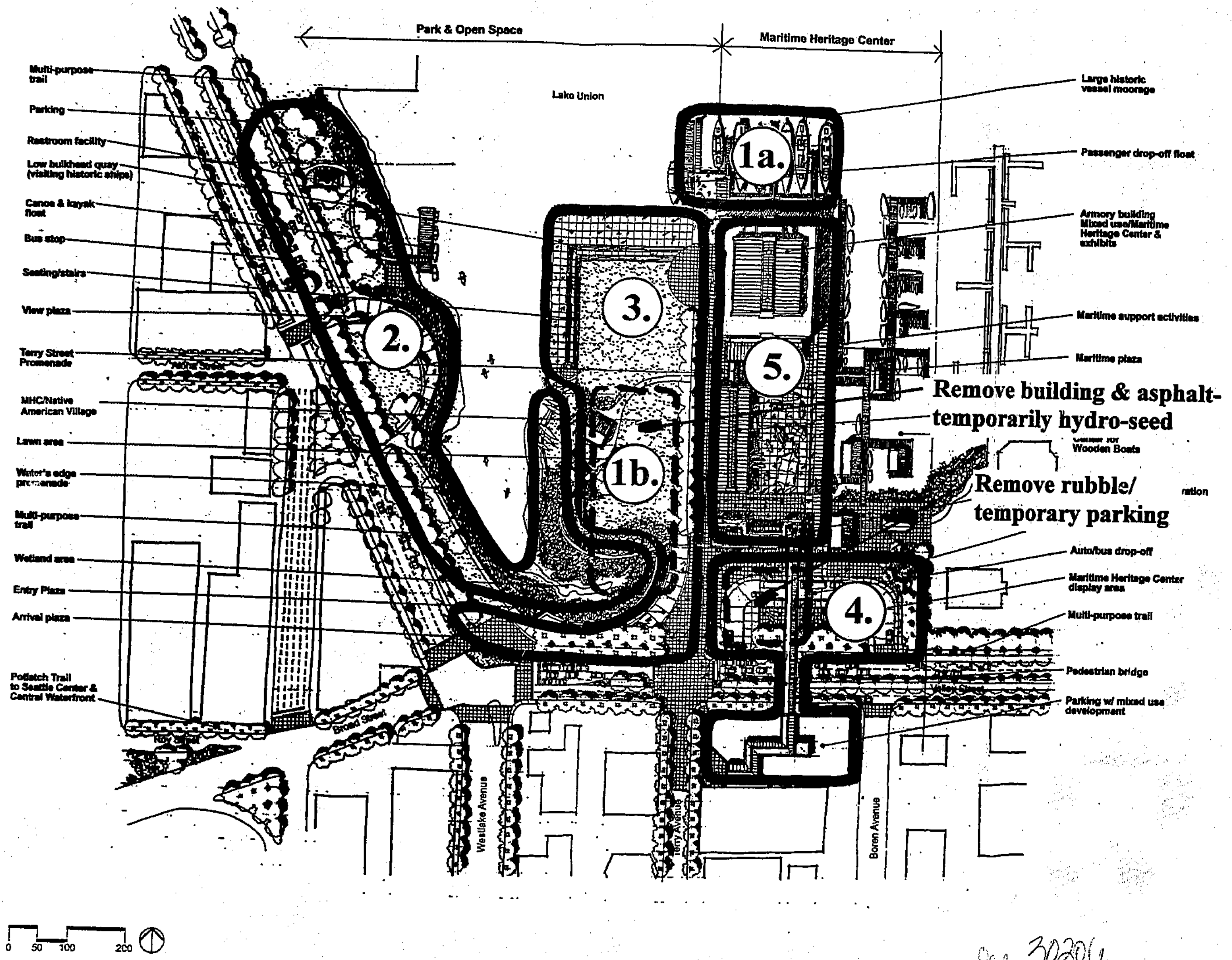
An analysis of the park phasing option was undertaken and resulted in a recommendation that opens up the passive west side of the park as part of the early phase of work. This approach is based on the ability of the Seattle Parks Department to proceed with design and permitting for the entire area from Terry Avenue west to Westlake. This portion of the park, with the exception of the Native American Village, is all under the programming direction of the City. As shown on the attached Preliminary Phasing diagram, areas **1b**, **2** and **3** would all be able to proceed independent of what happens east of Terry Avenue.

Another element that can proceed independently is the wharf reconstruction north of the Armory which will provide moorage for large historic vessels. It is shown as area **1a** on the attached diagram.

Interim parking would be provided north of Valley Street by expanding the existing parking lot (currently serving the Center for Wooden Boats) to the west up to Terry Avenue. This would require removal of the existing grassy mound and buried rubble that the mound covers. This interim parking area can serve to support the entire passive park area which would be developed west of Terry Avenue until such time as the garage south of Valley is developed. It would also continue to serve the Center for Wooden Boats and would support visitation to the historic ships at the new wharf. Once the garage is developed, the interim parking lot would be converted to the auto/bus drop-off area and display area as shown on the Concept Plan (area **4**).

If development of the parking garage occurs at a pace matching that of the development of the passive west side, the interim parking lot would not be built and development of area 4, the auto/bus drop-off could proceed. Preparation for Maritime Center Historic activities areas could proceed at any time but would need to be done in conjunction with the building of a parking garage.

Preliminary Phasing



South Lake Union Park

Master Plan Update

Res 30206

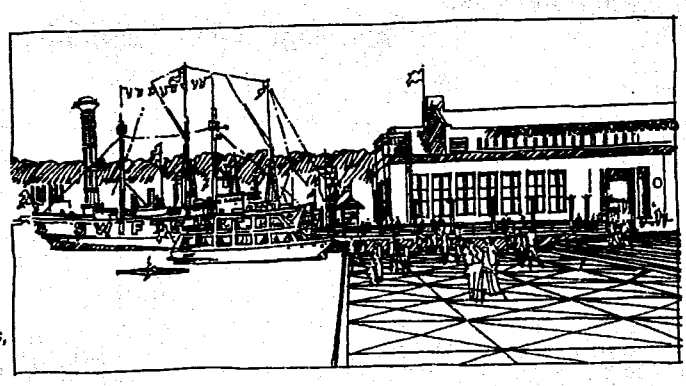
15 April, 2000

12 X

■ Budget-Level Cost Determination

A budget-level cost determination was prepared based on the schematic Concept Plan and the specifics shown in the Illustrative Plan. As such, it is subject to further refinement as work proceeds. Costs shown include contingency, inflation, sales tax, and design fees, and are based on year 2000 prices.

▪ Terry Street Promenade	$ 2,079,000.00
▪ Entry Plaza	$ 4,370,000.00
▪ Low Bulkhead Quay	$ 1,374,000.00
▪ Wetland Area	$ 2,112,000.00
▪ Lawn Area	$ 242,000.00
▪ Terraced Shoreline/Waterway 3	$ 615,000.00
▪ Water Edge Promenade/ View Plaza	$ 1,126,000.00
▪ Structures (includes restrooms, docks, pedestrian overpass, children's play area)	$ 4,355,000.00
▪ Utilities (water, sewer, electrical, sewer pump stations	$ 1,126,000.00
▪ Frontage Improvements (Valley, Westlake Terry Avenue, Broad Street)	$11,154,000.00
Total	**$28,553,000.00**



Low Bulkhead Quay, historic vessels, and water taxi in front of Armory

Support Studies and Analyses

In arriving at the Master Plan Update, numerous studies and analyses were undertaken and included the following:

■ Armory Analysis

Structural, mechanical, geotechnical, ADA, and hazardous materials evaluations were undertaken to describe the Armory Building's life/safety characteristics. Other issues related to future potential public uses, such as public assembly (museums, conferences, etc) food service, and community center-type activities, were also assessed.

■ Shoreline/Bulkhead Analysis

Analysis was performed to evaluate the prospect of retaining a shoreline configuration similar to the existing one in comparison to the configuration adopted in the 1991 South Lake Union Park Master Plan.

■ Neptune Building

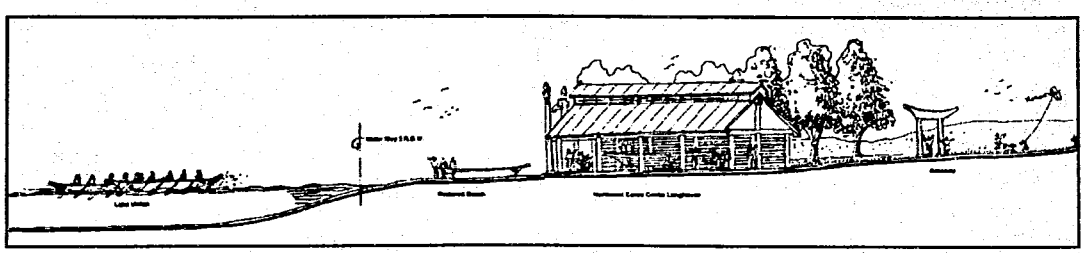
Built by the U.S. Navy in 1958 to supplement activities of the adjacent U.S. Naval Reserve Center on Lake Union, this building contained classrooms, shops, and offices and was used for training purposes until 1998 when Naval Reserve activities were relocated. An evaluation of its historic significance as a Seattle landmark was completed but resulted in a lack of findings to support nomination of the facility. It will be removed as part of the process of creating the open lawn area.

■ Maritime Heritage Foundation Program

Numerous maritime/boating interests have joined together to create a facility at the lake's edge. These include the Center for Wooden Boats, Northwest Seaport (historic vessel restoration), the United Indians of All Tribes Foundation, the Virginia V Foundation, and the Northwest Schooner Society. Their program for development has generally been included in the site development described above.

■ Wharf Study

This ongoing study focuses on the provision of moorage slips for historic vessels. It also includes assessment of access/circulation requirements, utility needs, security features, design theme, and phasing. Approximately 240 lineal feet of waterfront on the north end of the Armory are available for this use.



Maritime Heritage Center's Native American Village

■ Park Program Refinement

Aspects of non-maritime park activities were reviewed and refined, including site circulation (pedestrian and bicycle trails), shoreline treatment, water uses (taxi, hand launch, temporary moorage), natural areas, landscaping, hardscapes, open lawn areas, play areas, and service/ emergency access.

■ Parking

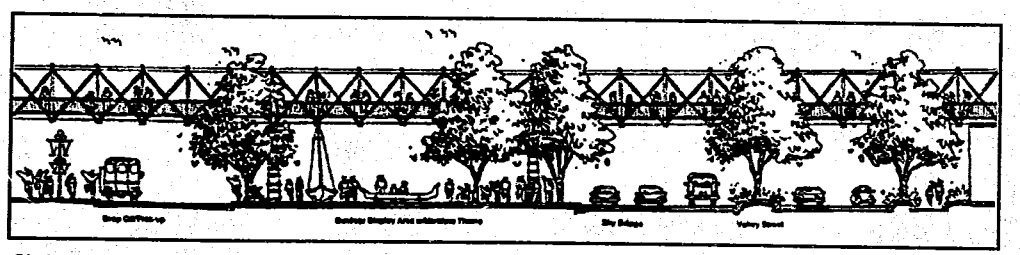
An analysis of parking and access requirements was undertaken to update data and projections in the 1991 EIS for South Lake Union Park, including: 1) proposed city and museum uses of the Armory Building, 2) unprogrammed drop-in use of the park, 3) the Center for Wooden Boats, 4) historic vessels at the Wharf, 5) small craft activity on the west side of Waterway 3, and 6) anticipated special events.

■ Development Guidelines

These guidelines address development of the waterfront area around the park and include graphic and verbal design imagery as well as design guidelines for the park itself.

■ Utilities

The full extent of utilities required at the site, including water, sewer, and electrical have been assessed. Combined Sewer Overflow improvements being considered by Metro have also been reviewed.



Skybridge over Valley Street

■ Permit Requirements

These requirements are being coordinated with specialized permit studies for the proposed Wharf project and wetland creation.

■ SEPA

SEPA analysis and documentation is being added to the 1991 EIS for the project site.

■ Urban Design Study

An assessment of opportunities and constraints within the South Lake Union vicinity was undertaken and looked at different development scenarios of city-owned properties in the area immediately south of the park site. The study highlights the potential for redevelopment in this area.

Appendix A

Advisory Committee Summary – "Exhibit B"

ADVISORY COMMITTEE SUMMARY - EXHIBIT B

March 17, 2000

Kenneth R. Bounds, Superintendent
Seattle Department of Parks and Recreation
100 Dexter Avenue North
Seattle, WA 98109

Subject: South Lake Union Park Master Plan Update

Dear Ken:

Enclosed is the recommendation of the South Lake Union Park Master Plan Update Committee together with attachments and explanatory material. The recommendations are encompassed in the master plan concept diagram designated as Exhibit A, augmented as follows:

Exhibit B is a narrative explanation of the elements of the concept diagram. This explanation addresses only design elements. The committee recognized that the ultimate execution of the Master Plan would involve issues beyond the scope of the committee such as the detailed space allocation within the park for Maritime Historical Foundation activities both within and without the armory building, provision for parking and traffic management outside of the park boundaries, the possible temporary utilization of existing structures not contemplated in the recommended master plan, and, of course, any financial considerations incident to plan execution.

Exhibit C is merely an example of a possible treatment of a plan element for illustrative purposes and is not, as such, to be construed as part of the Master Plan update.

I am pleased to report that the deliberations of the committee were conducted informally and differing positions were resolved through extended discussion. Although meeting notes were kept to summarize key issues along the way, no official minutes were kept of the meetings and no votes or divisions were necessary. One public meeting was held and the committee subsequently met and took into consideration salient points raised at the meeting. In short the recommendations of the committee represent a consensus and can be considered unanimous.

On behalf of the committee I'd like to thank you for offering us the opportunity to participate in such a worthwhile endeavor. Each of us on the committee is confident that the South Lake Union Park has the promise to be the crown jewel of the Seattle park system.

Sincerely,

Bill Arntz, Chairman

EHM
06/27/00
SLUP Committee 3-16

"EXHIBIT B"

SOUTH LAKE UNION PARK MASTER PLAN

Advisory Committee's March 17, 2000, Recommendations for Updating the South Lake Union Park Master Plan

Reasons for Master Plan Update

In 1986 City Council Resolution 27462 instructed the Department of Parks and Recreation to evaluate alternative concept plans for a major park at South Lake Union. The subsequent Phase I Planning Study in 1987 described and evaluated seven alternatives. An Environmental Impact Statement evaluated and compared variations on two of these alternatives, and in 1991 the City Council adopted a master plan for South Lake Union Park by Resolution 28444. Interim improvements were then made to open the City-owned portions of the park to public use.

By 1999 it became clear that the 1991 master plan needed updating. With the City acquiring the Naval Reserve property in 2000, it is timely to clarify the earlier plan's guidelines for reusing the Armory Building, and incorporating it into the park plan. The 1999 South Lake Union Neighborhood Plan also recommended several modifications of the park master plan. The City's plan for redeveloping its surplus South Lake Union properties along the Mercer/Valley corridor provided a context for modifying the park plan's traffic and parking assumptions. The Maritime Heritage Foundation's evolution into a larger and more viable organization warrants some reconfiguration and enlargement of the physical area they would manage in the park, with an operating agreement for that purpose.

Summary of Master Plan Concept

In broad outline, South Lake Union Park will encompass approximately 12 acres at the south end of Lake Union, with possible expansions at its east and west ends. The park will include a Maritime Heritage Center, allowing enlargement and reconfiguration of the existing Northwest Seaport and Center for Wooden Boats facilities and programs. The Maritime Heritage activities and facilities could expand within the former Naval Reserve Armory building and adjacent spaces, including the Wharf Project to provide moorage for large historic vessels, and a Native American Canoe Center. The amount of space dedicated to those activities will depend upon the Foundation's fulfillment of criteria set forth in a detailed Memorandum of Understanding with the City. The City's usage of the Armory Building for community-based and other activities could change over time in relation to the Maritime Heritage Center's increasing use.

The area generally west of the Terry Avenue right-of-way will be designed and used for public park, recreational and open space, typically accommodating non-scheduled recreation activities such as launching of hand-carried small boats, picnicking, and walking, as well as occasional scheduled events. The area east of Terry Avenue will be used primarily for Maritime Heritage Center facilities and activities. Public access corridors will be designated along the entire lake frontage of the park including the Maritime Heritage area east of Terry Avenue. Several "internal" public access and view corridors will also be maintained within the Maritime Heritage Center east of the Terry Avenue alignment.

Specific aspects of the Plan Concept Diagram (Exhibit A) and the Illustrative Site Plan (Exhibit C) are explained in more detail below.

Maritime Heritage Center: The Maritime Heritage Center (MHC) will provide a regional focus for hands-on preservation of Pacific Northwest traditional boat building and maritime history. Maritime heritage uses will include moorage of large historic vessels moored at the Wharf (north of the Armory Building), together with some maritime exhibits inside the Armory Building, in nearby open plaza spaces and possibly in one or more new structures south of the Armory Building. The "Maritime Exhibits and Demonstrations" area could include open display of equipment, boats, and occasional small-scale repair/outfitting of the vintage large and small vessels moored nearby.

The Wharf, approximately 240 foot in width with a series of slips oriented generally in a north-south alignment, will provide long-term moorage with a probable capacity of 5 large heritage vessels, and an adjacent short-term space to the west for occasional visiting vessels, and related visitor facilities. A pedestrian ferry, water taxi and/or tour boat landing may be accommodated at the foot of the Terry Avenue Promenade. The MHC can also arrange for occasional short-term moorage of visiting heritage vessels along the bulkhead on the east side of Waterway 3.

The Center for Wooden Boats will expand its complex of floats and floating structures as generally shown on the Illustrative Plan, Exhibit "C". It will accommodate approximately 200 small wooden boats for display and public rental. Its floating dock system in Waterway 4 will provide public access to the CWB's floating repair shop, boathouse and administration building as well as to the boats themselves. Some of their float space will be allocated to transient day moorage for tying up visiting small boats.

All of these MHC uses will be located generally east of the Terry Avenue Promenade that is intended to be a primarily pedestrian public access and view corridor. (The Indian Canoe House cluster located west of the Terry Avenue corridor is also a part of the MHC, and is discussed separately below.) The specific square footage and configuration of MHC facilities in the areas shown for

them on Exhibits A and C will not be known until more detailed design and financial feasibility studies are completed.

Uses of the Naval Armory Building: For at least an initial phase of park development the Seattle Department of Parks and Recreation will occupy and operate the Armory Building, with some allocation of office, meeting and exhibit space for the Maritime Heritage Foundation to be considered. The exact mix of the Department's recreation-related uses is not yet determined. Over a period of time, observing milestones and criteria set forth in a City/MHF Memorandum of Understanding, the City may reduce its recreational use of the Armory Building area, allowing the MHF to expand its programs if and when it demonstrates capability to do so. Physical modifications of the building will be limited according to terms of a covenant with the Navy and the State Historic Preservation Officer, which identified both external and internal features considered significant in determining the building's eligibility for the National Register of Historic Places.

Native American Canoe Center: This approximately ½ acre site will feature a Northwest Canoe Center longhouse and a carving shed, together occupying approximately 5,000 sq. ft. The Canoe Center will provide for launching and retrieval of Native American canoes from a restored beach on the east side of Waterway 3. The low-profile buildings will be integrated with the pathway system and landscape design, providing a transition between the adjacent natural area and the walkway along the low bulkhead quay to the north. Organizationally and programmatically, the Native American Canoe Center will be part of the MHF, although its location in the public open space part of the park will require coordinating its public access and operation with the surrounding park.

Picnic and Sitting Areas: Tables and benches will be distributed in appropriate areas of the park, accessible by the pathways and capitalizing on views of the lake. The concentrations of activities and events in and near the Maritime Heritage Center could support an outdoor seating area in conjunction with light food and beverage service. Due to the park's relatively small size, it will not include large concentrations of picnic tables or shelters for scheduled use, as they typically draw large groups of people with sizable access and parking needs.

Children's Play Area: While small-scale informal play is anticipated in many areas of the park, a structured play area that may become a "destination playground" is shown in the MHF's more active part of the park. In that location the nearby maritime exhibits may reinforce a nautical theme for the play area and equipment, and youthful energy will find a good outlet while adults explore the exhibits at a leisurely pace.

Parking: The plan concept diagrams (Exhibits A and C) depict consolidated parking located south across Valley Street, connected to the park by a safe and convenient pedestrian crossing. Developing and operating a parking area

available to park visitors at times of heavy use, especially summer evenings and weekends, will represent a considerable development expense in this thriving lakefront area. At this master plan level, the park is estimated to need approximately 150 spaces for summer daytime use, with expansion capability of approximately 250 spaces to handle larger events on weekends and other times when shared parking use would be possible.

Pedestrian Connection to Parking: The City's current studies of traffic management solutions in the Mercer Corridor may conclude that a signalized, at-grade pedestrian connection between the park and the parking area could allow sufficient traffic volumes on Valley Street. However, the heavy through traffic may preclude that option. A pedestrian skybridge over the street may then be the only practical way to provide the necessary separation of pedestrians from vehicles. In either case, the parking area, the pedestrian crossing, and park entry plaza will be designed to make the arrival experience convenient and pleasant.

Auto/Bus Drop-Off Area: This mode of vehicular access is accommodated via a loop off of Valley Street, connecting with the same entry plaza used by pedestrians. The entry plaza will provide visitor information and services including a restroom. A small maritime display area within the vehicular loop will help to identify and characterize the park. The drop-off area will allow school and tour buses and other groups to disembark close enough to the center of activities, without intruding into the park's pedestrian precincts.

Service and Other Specialized Vehicular Access: The plan diagrams depict an open pedestrian route from the main entry plaza northward along the Terry Avenue alignment. For most times of park operation, this will be an exclusively pedestrian precinct. For public safety reasons it will be designed to accommodate emergency vehicles when necessary. As shown in Exhibits A and C, the promenade could have a turnaround at its northern end for vehicular access on special occasions. The "Terry Avenue Promenade" route will provide emergency and service vehicle access to the Wharf area north of the Armory, as well as to the pier along the east side of the Armory so that a vehicular loop runs southward to the auto/bus drop-off area.

Landscaped and Hard Surface Areas: This is an urban park in an area planned for high-density commercial, cultural and residential development. As such, the plan concept diagrams show a substantial amount of "hardscape" in the form of plazas, walkways, vehicular drop-off driveway, main entry gate and maritime activity areas. These hard surfaced areas will accommodate visitors who come to the park for maritime displays, events and general recreation. These paved areas will be functionally and visually distinct from the turf/landscape areas described below. Paving materials, textures and colors can be varied in different parts of the park.

The plan also anticipates that part of the park's value will be realized in the "softer" components represented on the concept diagrams as Lawn/Landscape areas. The park design will balance these areas with the "harder" park elements to provide a restful and picturesque setting for relaxation, walking, views, picnicking, and unstructured play. The master plan avoids excessive paving of the park to withstand crowds that gather infrequently. South Lake Union Park's expected use for occasional large public gatherings, e.g. the annual Wooden Boat Festival and other like events, will not preclude large green spaces for more typical public use and enjoyment. One of these is the large turf/landscape area west of the Armory Building.

Wetland Area: The plan concept diagrams depict a slight variation of the 1991 plan's wetland habitat area at the south end of Waterway Number 3. About one acre in size, this will be a kind of "wetland garden" feature in the park. Detailed design may lead to a configuration somewhat different from that shown on the conceptual diagrams. It should be designed to make a smooth transition between the high-bank terraced shoreline on the west side of Waterway 3, and the low-bank restored beach where canoes are launched at the Native American Canoe Center on the waterway's east side. Aside from the visual quality this feature may add to the park, it also affords an opportunity to enhance the lake's habitat, offsetting and mitigating other structured improvements along the shoreline. It can provide an opportunity for biofiltration of stormwater runoff from the park's hard-surfaced areas. The wetland can also increase the park's potential for natural as well as cultural interpretation.

Shoreline Renovation: South Lake Union Park will offer various shoreline characteristics along its approximately ½-mile length. It includes high-bank, terraced and revegetated lakefront on the west side of Waterway Number 3 (see Site Sections A, B and C), the wetland area at the south end of the waterway and the Native American Canoe Center's restored beach on the east side of the waterway(see Site Sections D and G). North and east of that the shoreline assumes the more rectilinear, hard-edged structure of the existing Navy bulkhead quay, lowered so that pedestrians along the quay walkway will be about 18" above the summer lake level (see Site Section E). On special occasions, sizable heritage vessels can tie up alongside this quay, but most of the time it will be open to assure good views of the lake.

East of the Terry Avenue corridor, the shoreline pathway will rise to meet the Armory Building's and adjacent wharf's elevation. The wharf when reconstructed will be narrower than it is today, reconfigured to allow visitors to walk between several of the heritage vessels moored there, as well as being able to continue walking eastward to Waterway 4. The old Navy pier along the east side of the Armory Building will be brought up to code to support emergency vehicle access, as well as continuous pedestrian movement there. The shoreline at the south end of Waterway 4 will accommodate public access to the Center for Wooden Boats' floating buildings and moorage. The walkway system there will

link directly to the public shoreline path system of the existing private H.C. Henry Pier and Chandler's Cove on the west side of Waterway 4.

Even though pedestrians along the Waterway 3 shoreline will in some places be close to the lake level, the pathway design will encourage direct contact with the water in just two places—at the kayak/canoe float on the west side of the waterway, and at the Native American Canoe Center's restored beach on the opposite bank. Elsewhere contaminated sediments remaining from previous industrial uses will for the foreseeable future restrict water contact recreation.

Pedestrian/Bike Trail: The pedestrian/bike trail around the perimeter of the park will connect the present trail terminus on Fairview Avenue East with the new Westlake Multipurpose Trail to be constructed in the year 2000. This trail connection cannot allow high-speed bike travel, but will incorporate design of the park's perimeter in a sweeping curve that offers another way for people to experience the park in passing around it. It will connect with but be separate from the internal pathway system for pedestrians in the park.

Park Design Theme Extension: As envisioned in the Neighborhood Plan recommendations, park design features are expected to influence neighborhood design and redevelopment. Certain aspects of the park may become part of the surrounding area's design vernacular, setting a tone for public spaces and rights-of-way so that the park's influence goes beyond its boundaries.

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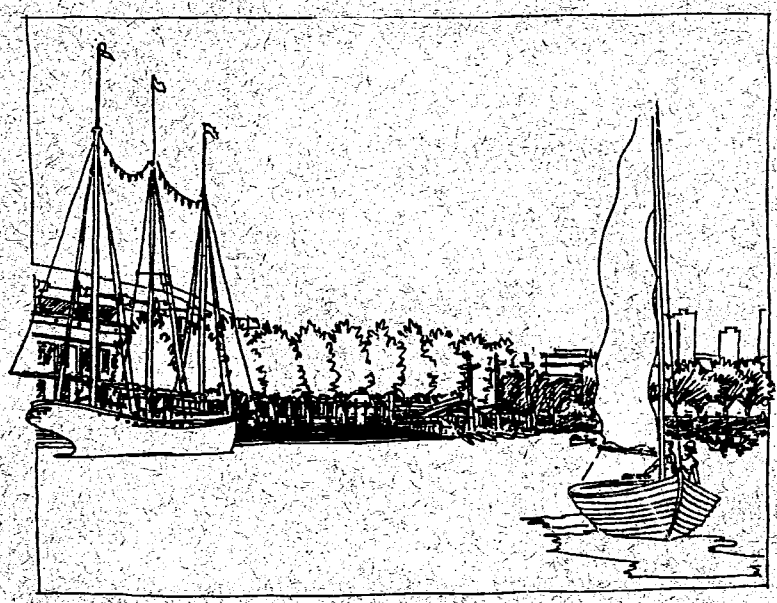


Attachment 1

South Lake Union Park

Master Plan Update Background Information

Appendices B, C, D & E

June, 2000

City of Seattle Department of Parks & Recreation

Kato & Warren

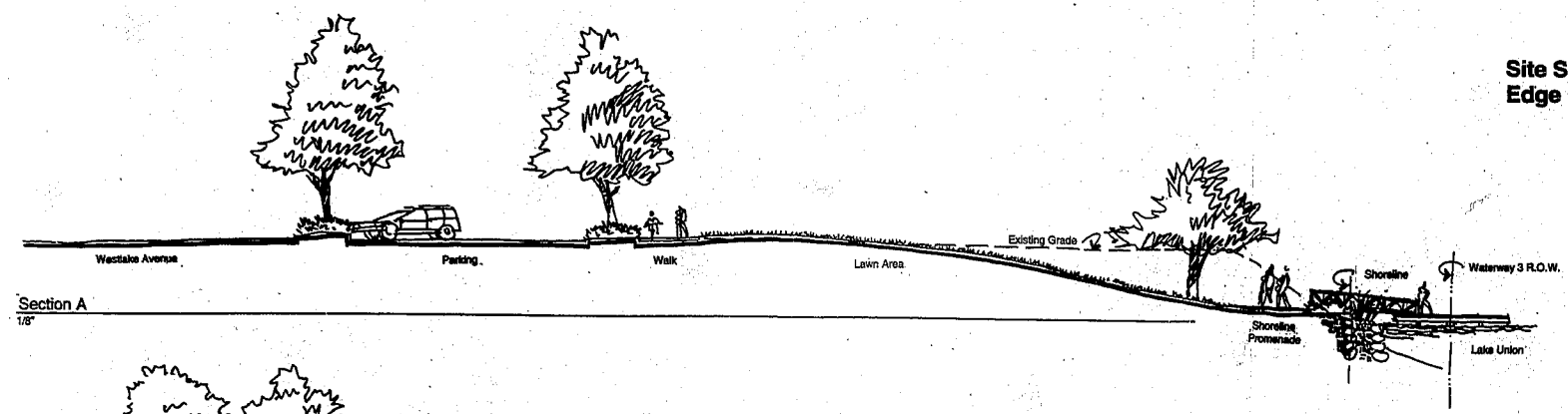
in association with

Parsons Brinckerhoff
Hewitt Architects
Jones & Jones

Appendix B

Illustrative Sections

Site Sections/ Edge Conditions



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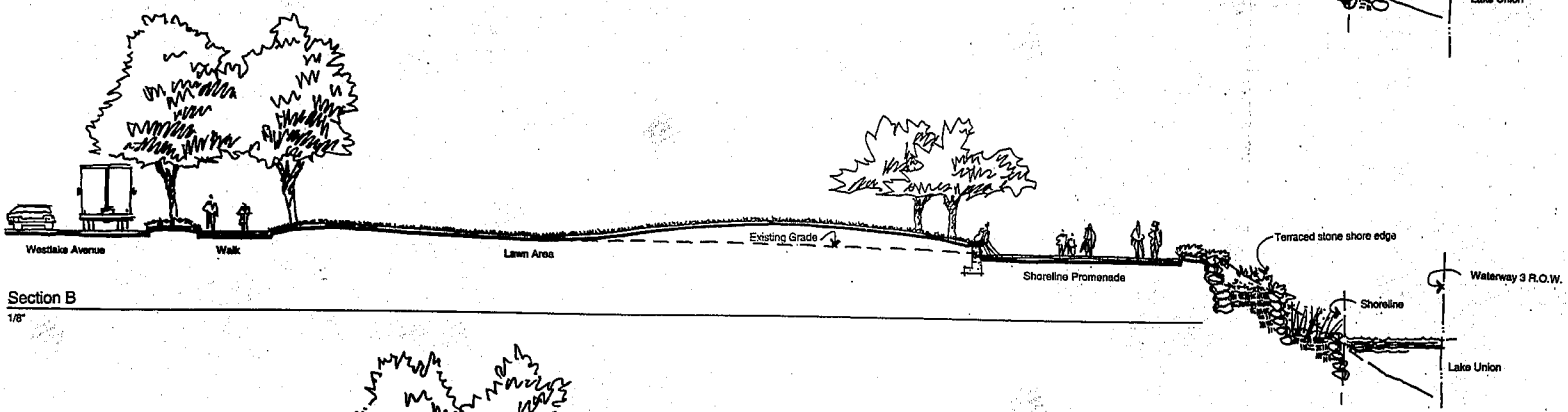

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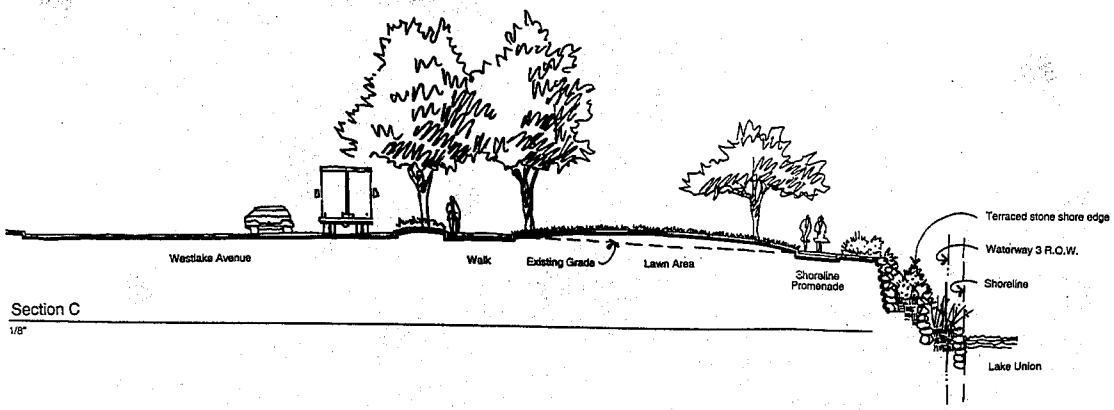

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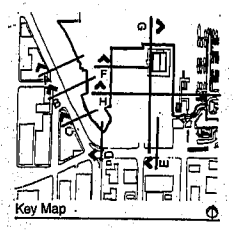
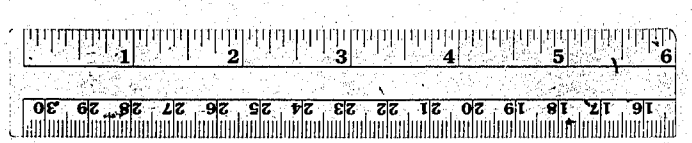


South Lake Union Park

Master Plan Update

30206

01.10.00 Kato & Warren/Parsons Brinckerhoff/Hewitt Architects



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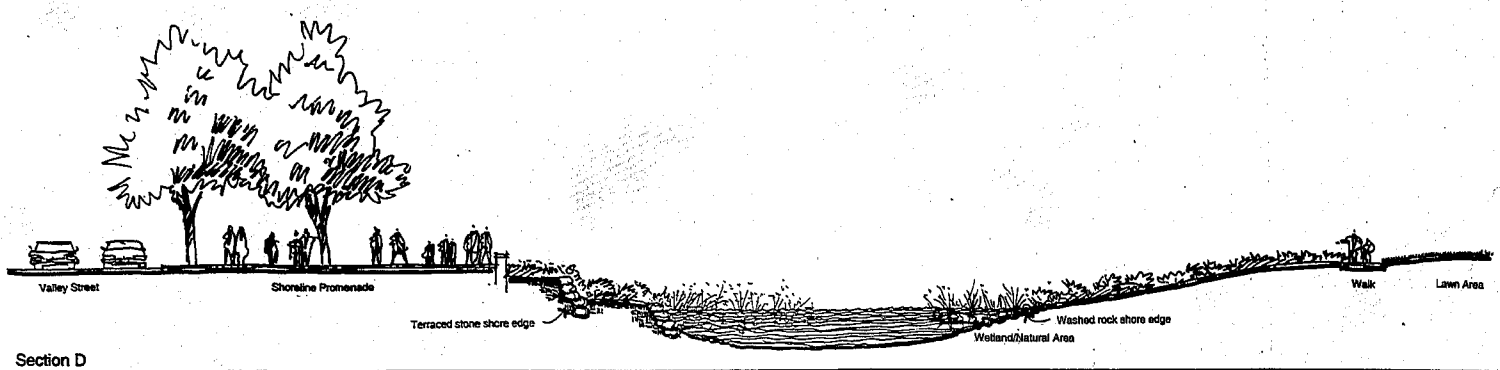
Site Sections/ Edge Conditions



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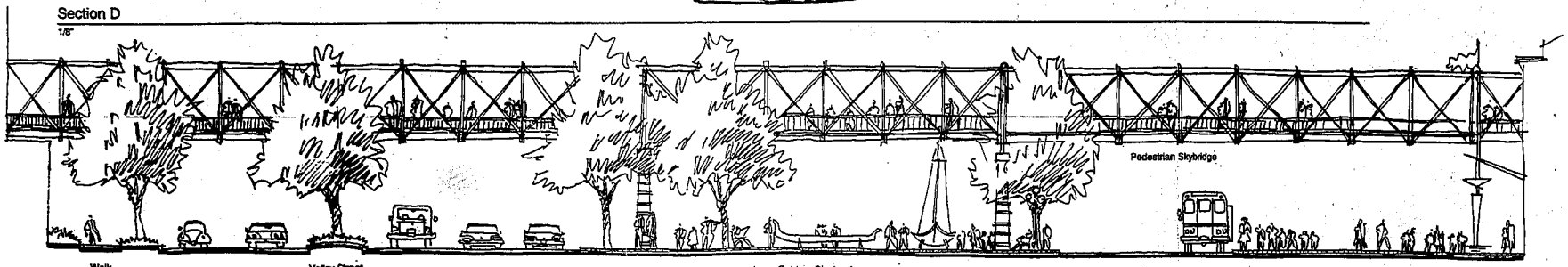

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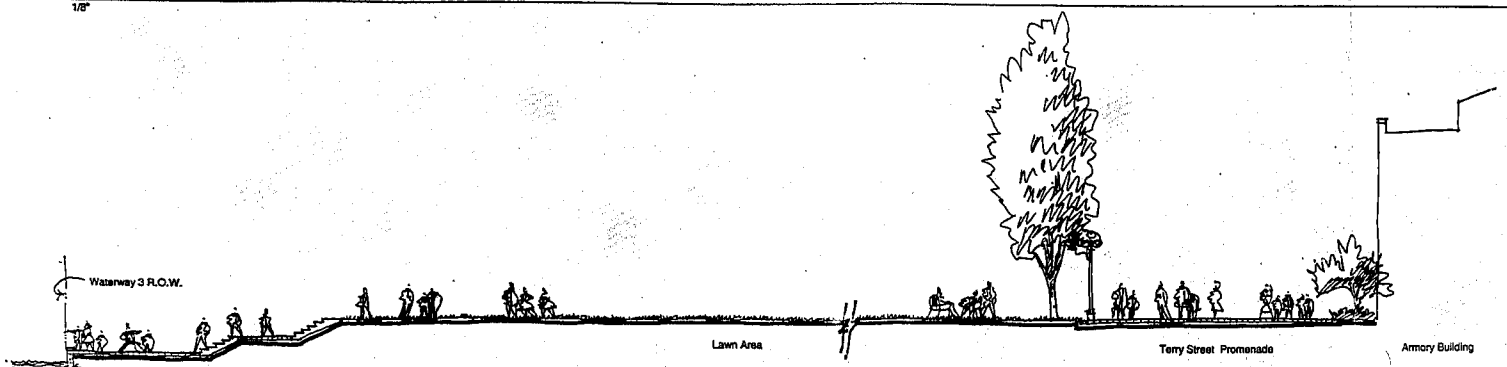

Section F
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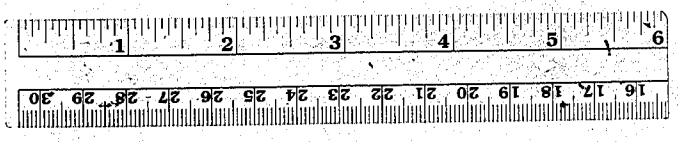
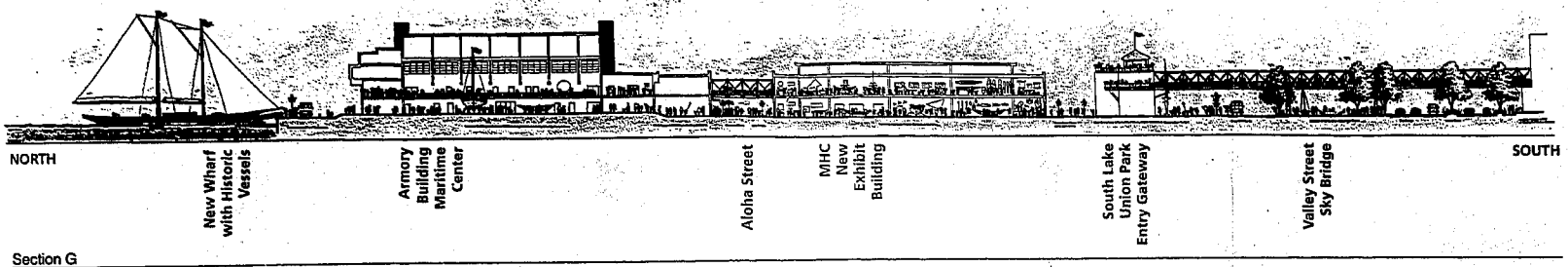
South Lake Union Park

Master Plan Update

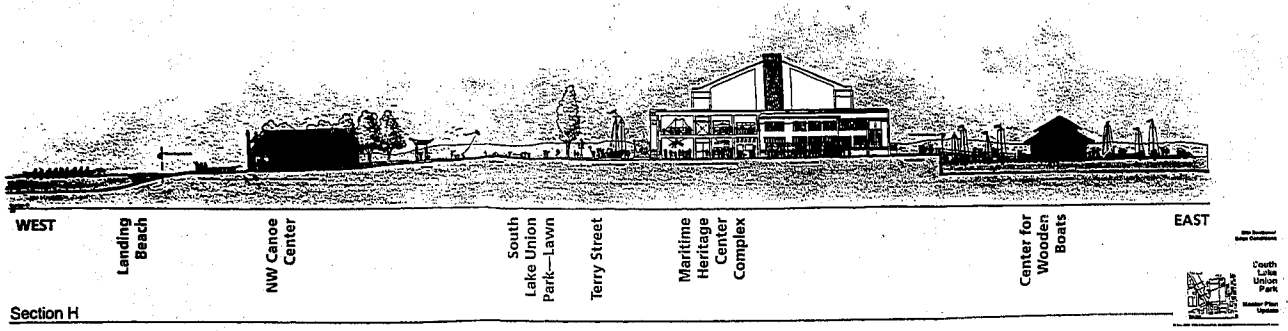
30206

01.10.00 Kato & Warren/Parsons Brinckerhoff/Hewitt Architects





Section G



Section H

30206

CITY CLERK

12X

Appendix C

Neptune Building Landmark Nomination

CITY OF SEATTLE
LANDMARKS PRESERVATION BOARD

LANDMARK NOMINATION FORM

Current Name:	Neptune Building	**Year Built:** 1958
Historic Names:	Building 27 Naval Reserve Training and Recruitment Building	
Street and Number:	845 Terry Avenue North	
Assessor's File No.	302504-1908	
Legal Description:	**Plat :** Lake Union Shorelands	**Block:** 75 **Lot:** 8-9
Present Owner:	Seattle Department of Parks and Recreation	**Present Use:** Vacant
Address:	100 Dexter Avenue North Seattle WA 98109	
Original Owner:	U.S. Navy	**Original Use:** training and shops
Architect:	Paul Thiry Bassetti Norton Mettler (remodeling, 1970)	
Builder:	N.D. McDonald Construction Company	

DESCRIPTION:
Present and original physical appearance and characteristics

The Neptune Building, also known as Building 27, was built by the U.S. Navy in 1958 to supplement the activities of the adjacent U.S. Naval Reserve Center on Lake Union. It contains classrooms, shops and offices and was used for training purposes until 1998 when Naval Reserve activities were relocated. The property is currently vacant except for minor storage and workshop use by maritime heritage organizations. The Navy is in the process of transferring the property to the City of Seattle for park use.

Setting:
The Neptune Building is on the north side of Valley Street where Terry Avenue North dead-ends at Lake Union, near Westlake Avenue North. To the northeast and east are the Naval Reserve Center and the Center for Wooden Boats; on the west is a slip currently occupied by an historic tugboat. Parking lots flank the north and south sides, with vacant property owned by the Seattle Department of Parks and Recreation abutting the south parking lot.

Historically, this was one of Seattle's oldest industrial districts, and this building replaced seven dilapidated wooden structures used by Belknap Glass. While some light industry remains, over the past twenty years the area has been transformed into a restaurant, hotel and maritime heritage center.

Exterior Appearance
Neptune Hall is a two-story, flat-roofed, rectangular reinforced concrete structure, with an exterior of glass and aluminum. It is supported by a regular grid of steel "H" columns encased in concrete, which are pulled back just inside the peripheral glass walls. The building has regular four-foot bays (28 bays on the north and south elevations, 20 bays on the east and west), with each one articulated by narrow aluminum mullions.

Its most distinctive features are the horizontal bands of alternating turquoise blue enameled spandrels and continuous ribbon windows. Windows are primarily fixed pane, with operable awning windows on alternate lower sections. The flat roof, faced by a metal fascia, projects about two feet beyond the walls, creating a narrow overhang.

The main entrance is located closest to the Naval Reserve Center, toward the east end of the the north facade. The entry, with double glass doors, is deeply recessed, and sheltered by an arched metal canopy suspended by two cables above and supported by two metal knee brackets below. The south side of the building, opening to the parking lot and detached garage, has three entries. A double glass and aluminum door in the center allows passage of large equipment and supplies. At each end is a deeply recessed aluminum door, protected by flat fiberglass canopies on a metal framework supported by metal brackets. An additional unprotected glass door is found at each of the short ends of the building as well. The front doors were replaced in 1970; the rest of the doors appear to be original.

Interior

The interior remains much as it was originally. Slight alterations, such as lowered ceilings and floor plan modifications, were designed by Bassetti Norton Mettler in 1970.

Each floor has an internal core containing stairways, mechanical equipment and service rooms, bounded by a corridor lined with classrooms, offices and workshops. Stairways at each end of the north corridor are enclosed at the bottom, but open at the second floor level. Interiors are finished with asphalt tile floors, painted plaster walls, and suspended acoustical ceilings with fluorescent light fixtures. Narrow moldings surrounding some doorways are the only ornament. Wood paneling has been added to some classrooms, especially on the east side; many have blackboards. Doors are metal; some have windows, others have only ventilation panels.

The first floor has an office near the main entry and eight classrooms along the north and east sides. The west side has a large room with laboratory counters and two rooms that were once workshops but are now used for storage by maritime heritage groups. The carpentry shop on the south side is the only part of the building now in active use, by these groups,. The southwest corner of the first floor has a large electrical equipment room, obviously sized to support elaborate workshop equipment. The central core on this floor contains a large boiler room, restrooms and other service areas.

The second floor contains about a dozen classrooms of varius sizes and some small offices. The central core has a group of three rooms including a laboratory suite, along with restrooms and mechanical rooms. According to the plans, this was originally designed to contain a small medical facility with an office, ward, pharmacy and laboratory.

BUILDING HISTORY

The Neptune Building has always been owned by the U. S. Navy and has had essentially the same use throughout its history, as a training facility for naval reservists. Specific activities have changed to some extent over the past forty years, with corresponding minor changes in the floor plan. In recent years it has accommodated recruitment offices as well as training activities. The facility was vacated in 1998.

THE ARCHITECT

The Neptune Building was designed by Paul Thiry (1904-93), one of Washington's most noted architects of the period. Thiry graduated from the University of Washington School of Architecture in 1928. He opened his own practice the following year, working primarily on small private homes and apartment buildings, using mostly popular Norman or Colonial styles. During the 1930s Thiry traveled abroad, where he was exposed to European Modernism and met Le Corbusier in Paris. Upon his return in 1935, he pioneered the use of the new International Style for his own home, but found that most local homeowners preferred a more regional variant, using gently sloped roofs and natural wood siding rather than the stark white cubical forms found in Europe.

During World War II, Thiry was involved, through several architectural partnerships, in large-scale housing and military projects, including 6,000 dwellings and community facilities in Port Orchard and the Naval Advance Base Depot in Tacoma.

After the war his practice flourished, expanding to include museums, churches, libraries and schools. Thiry was also noted for his planning work, particularly his participation in the National Capitol Planning Commission. Locally, he achieved recognition for his work on the Seattle Planning Commission between 1952 and 1961, when he resigned in protest over planned freeway construction. He enjoys an international reputation for his modern houses and churches, designed in a Pacific Northwest variant of the Modernist style. He was named a fellow of the American Association of Architects in 1951.

Thiry was particularly interested in experimental concrete technology, shown dramatically in his churches and his most notable structure, the Seattle Center Coliseum (now KeyArena). Thiry was the master planner for Century 21, the Seattle World's Fair, overseeing design and construction of the fair's buildings. His own design for the Washington State Pavilion, which became the Coliseum, received considerable notice for its innovative design and engineering and the pioneering use of concrete.

The Coliseum was, at the time of its construction in 1961, one of the world's longest clear-span buildings, with a 400-by-400 foot roof supported by four deep, triangular truss members. The trusses support a two-way system of steel cable that forms hyperbolic paraboloids with suspended vertical cables. Horizontal cables rigged over the vertical cables provide a rigid, self-supporting and highly stable cover. The unique trusses have a triangular form that provides its own bracing and eliminates the need for other bracing.

The interior of this building was remodeled after the fair, under Thiry's direction, to accommodate ice hockey and basketball. It was remodeled again in 1997, increasing its capacity by digging out the floor. However, its primary feature, the clear-span roof with its truss support system, remains intact.

Other Thiry works during this period, besides the 1958 Neptune Building, include the Museum of History and Industry (altered, 1950), the Northeast Branch of the Seattle Public Library (1954), Cedar Park Elementary School (1958), the Washington State Library (1954-59) in Olympia, St. George's Catholic Church (1957), Mercer Island Presbyterian Church (1960-63) and St. Demetrios Greek Orthodox Church (1964-68).

Several Thiry buildings completed in the 1950s received comment in the architectural press.

Northeast Branch Library, 6801 35th Avenue NE (1953-54)
This Northwest Modern building received recognition for its use of exposed steel beams and its open interior space lighted by large clerestory windows. Victor Steinbrueck described it as "a prototype for handsome neighborhood libraries... a building of lasting quality." It remains

in use as a library and appears to be unaltered.

St. George's Catholic Church, 5306 13th Avenue South (1956-57)
This gable-roofed church was described as "a concrete structure of simple dignity" by Victor Steinbrueck. Thiry also designed other local religious facilities at about the same time, including a round church and buildings for Our Lady of the Lake parish in Lake City.

Cedar Park Elementary School, 3737 North 135th Street (1957-58)
This gabled-roof concrete building has classrooms with large expanses of glass arranged around a courtyard. It is owned by the Seattle School District and is currently used as artist housing.

The International Style
The Neptune Building is distinctly different from other buildings designed by Thiry during this period. They are distinguished by their adaptation of the Pacific Northwest Modern style and their innovative use of glass, concrete and metal. In contrast, the Neptune Building is in the stark and uniform International style, which had become the primary design vocabulary of the 1950s.

The International Style developed in Europe in the 1920s. The glass-skinned buildings are sometimes called "miesian," in reference to German architectural pioneer Ludwig Mies van de Rohe. His style is minimalist in concept, devoid of regional characteristics and connections to its surroundings, rejecting all nonessential decorative elements and stressing functionality.

International Style buildings are characterized by simple geometric forms, often rectilinear, making use of reinforced concrete and steel construction with a non-structural skin. Wall surfaces are smooth and unadorned, typically of glass, steel or stucco with a complete absence of ornamentation and decoration. They have large areas, or curtain walls, of glass, with metal window frames, often in horizontal bands. The structures are generally symmetrical, appearing as a series of repetitive elements.

The first major example of the style in the Pacific Northwest was in Portland, Pietro Belluschi's Equitable Savings and Loan Building (1944-48). The best known examples were in New York including Lever House (Skidmore, Owings and Merrill, 1951-52) and the Seagram Building (Mies van de Rohe and Philip Johnson, 1954-58). Smaller structures were also constructed, such as a four-story Manufacturers Hanover Trust (1953-54) branch in which the first two floors appear to be a single glass enclosed space. Total visual accessibility, especially on the lower floors, was often a key characteristic.

In the 1950s, when Seattle experienced a significant amount of construction, glass-walled International Style buildings of all sizes became widely accepted. They were considered suitable for virtually all commercial and institutional purposes. Because their modular construction made them economical, the style was often used for government buildings,

schools and hospitals as well as office structures.

Seattle's best-known example of the International Style is the Norton Building (1959-60), designed by Skidmore, Owings & Merrill with the local firm of Bindon and Wright. Victor Steinbrueck said that this building with "its orderly aluminum and black glass skin....seems to approach the ultimate in curtain wall design." (The originally transparent glass lobby has been altered).

Although the Norton Building was the first of the city's numerous glass-and-aluminum curtain wall towers, many smaller buildings in this style were being built at about the same time. One that is very similar to the Neptune Building is the three-story Swedish Medical Center Annex (600 Broadway at James), originally designed for Blue Cross by John Maloney in 1958. The International Style is also very apparent in the work of pioneering Modernist architect Lister Holmes, who used the style for small buildings as early as 1936. His extant buildings include the Seattle Public Schools Administration Building (815 4th Avenue North) of 1950 and Catherine Blaine Junior High (now elementary) School (1949-50) in Magnolia.

Other small-scale examples of the International Style designed during this period include: Our Lady of Fatima School (James Klontz, 1953), 505 Yale Avenue North (1960), 529 Warren Avenue North (1955), Swedish Hospital Family Medicine at 1401 Madison Street (James M. Klontz, 1962) and 2371 Eastlake Avenue East (1965). (See Attachment for photos.)

STATEMENT OF SIGNIFICANCE

The Neptune Building is a modest example of the international style, done by the office of one of Seattle's major Modernist architects. However, in 1958, the International style was was common in Seattle, and used by many other architects. As noted above, numerous similar examples of this style exist, on all scales, throughout much of Seattle.

In contrast, the other works produced by Thiry's office during the 1950s-60s are known for their references to the Pacific Northwest Modern style and typically feature innovative use of materials. The buildings described on pages 3-4 all predate the Neptune Building, and are more distinctive in design.

Three architects (Robert Patton, Morris Jellison and Earl Muir) who worked in Thiry's office at this time were interviewed. All worked on the design of the Neptune Building and their initials are on the drawings. All said that this building was not particularly memorable or notable, as far as they were concerned. Muir recalled that the glass curtain wall design was not typical of the office's work and was fun to work on because it was different from their usual designs. Patton called it "an ordinary curtain wall structure." Jellison said it was "an ordinary everyday workable building," noting that the glass curtain wall design was most likely selected as the most economical means to meet the needs expressed by the Navy while remaining within the budget provided.

None of the three architects remembered any details about the client relationship with the Navy or the reason why the office was doing a military project at that time. Thiry evidently did no other Navy work after the war. However, the architects mentioned that the office had a staff of at least six or seven, and the work was welcome, despite the strict budget and program requirements. The U.S. Navy current project manager, Carol Slade, has no additional information about the Thiry contract.

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_____ *Seattle Cityscape*. Seattle: University of Washington Press, 1962.

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Personal communication, 1999:
Morris Jellison, architect
Earl Muir, architect
Robert Patton, architect
Carol Slade, U.S. Navy

Appendix D

Armory/Bulkhead Evaluation

South Lake Union Park Master Plan Update

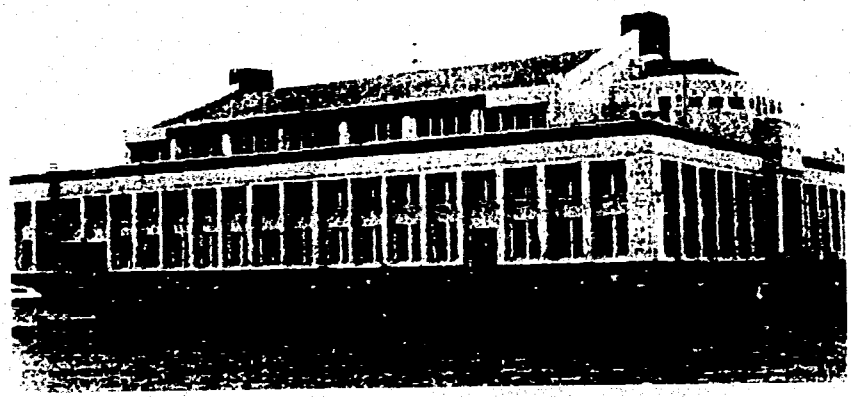
Appendix / Structures

Foundations

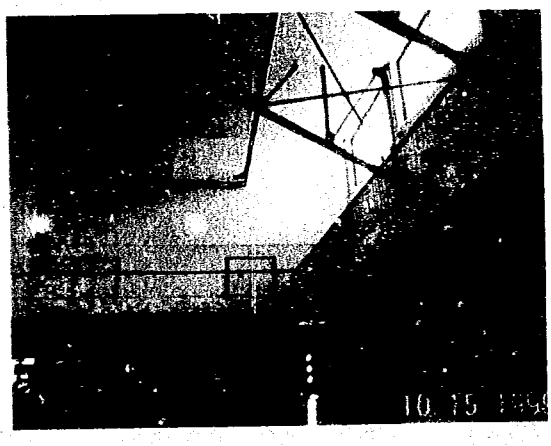
The South Lake Union Park site is located on an area at the south end of Lake Union, originally a shallow bay, that has been filled with a heterogeneous mixture of low-grade materials over the course of many years. The fill materials are underlain by a weak layer of organic clay and peat, which is in turn underlain by sand at a depth of about 70 feet below the water surface.

Soil boring records and settlement information is presented in reference 1.

Reserve Training Building (Building 10)



Oblique of RTB Looking SW, 1997 (from reference 8)



Interior of RTB, 1999

Building 10 was designed by William R. Grant and B. Marcus Priteca. Mr. Priteca was a prominent Seattle architect, recognized as the leading theater architect of his time in North America.

Construction was completed between October 5, 1940 and July 4, 1942. The building has steel roof trusses, a reinforced concrete frame supported on concrete floors and a timber pile foundation (see Figure 1). Concrete columns support the first floor slab on the concrete pile caps. The timber piles are cut-off below water level to prevent deterioration of the piles.

A partial set of prints of the original structural drawings was secured from micro-fiche at EFANW. The Foundation Plan Footing Schedule, drawing 20-34-20, was not available, but should be located at the Archives at 6125 Sandpoint Way N in Seattle. The accession number is 181-87-0135; location 154464 Box 52. Access may be arranged through records administrator Mona Randel at 360 396 0209.

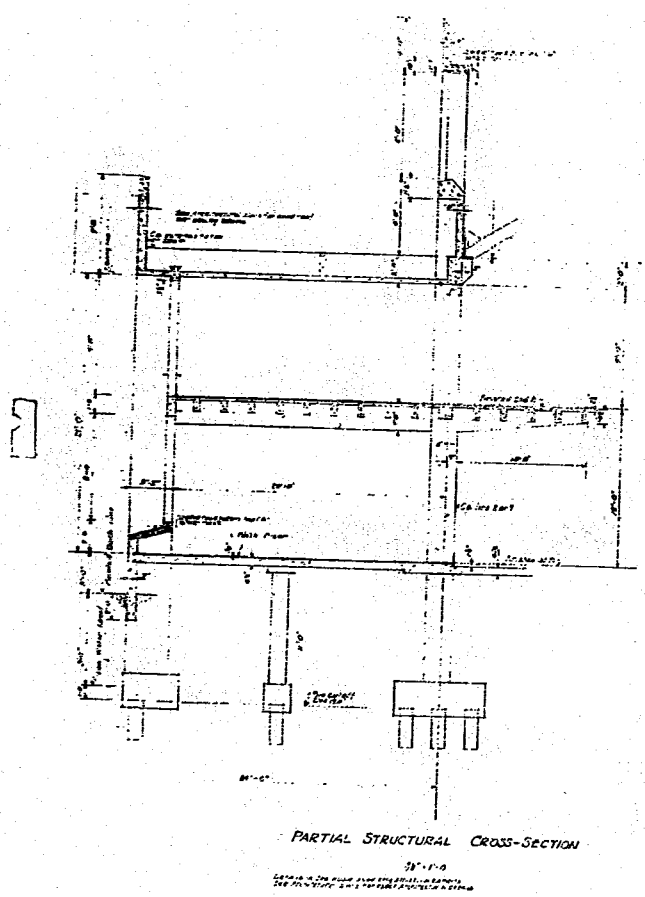


Figure 1
Typical Section
Original Drawings

A 1972 report (reference 1) indicated that settlements of the building between 1955 and 1972 varied uniformly from zero at the southwest corner to approximately one tenth of a foot at the northeast corner.

A 1990 Draft EIS (reference 4), using information from Naval maintenance personnel, concluded that the stability and state of repair of the Armory building appeared to be good. It was also noted that the transition between the pile-supported Armory building and the adjacent fill to the south and the west was apparently made with a timber retaining structure for which details were unknown.

Quay Wall

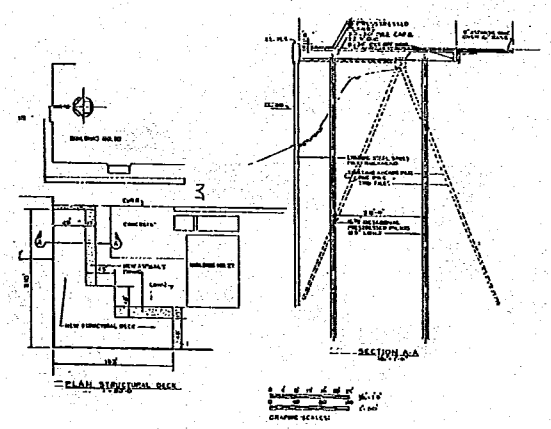
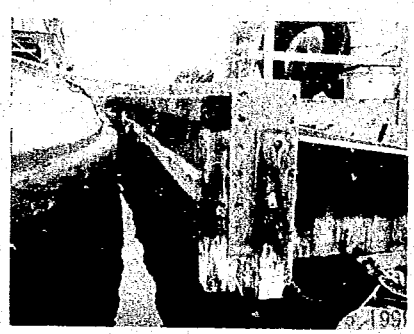


Figure 2, Quay Wall Structure
(from reference 1)



Coping Wall, 1999

Reference 4 describes the quay wall as follows:

"The fill materials that comprise the northwest corner of the peninsula that extends into Lake Union are retained by a bulkhead. Based on a 1954 report by Shannon & Wilson, Inc., the existing bulkhead consists of ZP-38 steel sheet pile sections 75 to 80 feet long, with a concrete coping wall. Two-inch-diameter, 30-foot-long tie rods at 7-1/2-foot spacing connect the bulkhead to an anchoring system consisting of two wood tension piles and one wood compression pile per tie rod. All anchor piles are reported to be about 80 feet long and were driven on a 12 vertical on 5 horizontal incline. The location of the anchor pile groups are presently marked with concrete planters. The horizontal tie rods are at an elevation about 5 feet below the top of the concrete coping wall."

"The bulkhead was constructed in the summer and fall of 1953. During the initial backfilling operations for the newly constructed bulkhead, a total of about 3,700 cubic yards of sand and gravel were placed behind the bulkhead. Shortly after filling operations were started, outward movements of the bulkhead and anchorage system were observed and backfilling was discontinued in about October 1953. Measurements made

by the Navy show that this outward movement continued at a more or less constant rate for several years with a maximum rate of approximately 6 inches per year."

"In 1955, the gravel backfill was removed and replaced with wood chips (hog fuel) to halt the outward movement of the bulkhead. Since that time, the bulkhead has apparently not moved significantly but has required regular maintenance of soft spots and sinkholes that develop adjacent to the bulkhead. These soft spots and sinkholes may be caused by decomposition of the hog fuel, by gradual waterlogging and subsequent settlement of the hog fuel, or by loss of fine-grained material through joints or holes in the sheet piles."

An underwater inspection in 1987 (reference 2) found the sheet pile bulkhead to be in surprisingly good condition, due to the steel's complete immersion in fresh water. No maintenance was required at the time, but re-inspection was recommended in 5 years. In view of the observation that "All sheet piles interlocks were intact, and no evidence of active fill loss or other anomalies were detected", it appears that soft spots and sinkholes behind the bulkhead are caused by changes in the hog fuel backfill.

Conclusions

Building 10 appears to be a potentially valuable asset for the park, both for the architectural quality of the building and the nature of the space that it provides.

An inspection needs to be carried out to determine any change in settlement of the building, identify necessary repairs for structural deterioration, and define the retaining system between the building and adjacent fills.

If a change in use is proposed for the building, the Seattle Building Code has requirements explained in the Department of Land Use Client Assistance Memo 314 and Director's Rule 32-96 (attached). It will be necessary to demonstrate adequacy of the life safety and seismic systems of the building. This will require that a seismic survey and report be prepared by a structural engineer, licensed in the State of Washington, that identifies deficiencies and recommends mitigation for the deficiencies.

Mr. Priteca's design drawings for the reinforced concrete building appear to well detailed, and although code requirements have changed a great deal during the life of this building, it appears that seismic hazard mitigation should not be cost prohibitive. It can be noted that Building 10 performed well in the 1949 and 1965 earthquakes. Also, difficulty experienced in the demolition of one of Mr. Priteca's theaters in downtown Seattle demonstrated the toughness of his reinforced concrete buildings.

The quay wall also appears to provide a potentially useful separation between the park and Lake Union. An inspection needs to be carried out to identify any change in deterioration from the 1987 inspection and to project the expected life of the structure. In view of the early stability problem of the wall and the low grade hog fuel backfill behind the wall, future walkways or decks adjacent to the quay wall should be independently

supported on piling to the competent material about 70 feet below lake level, as suggested in reference 1.

References

1. Wisbeck & Konzen, 1972, Engineering Structural Investigation for Building 10, Pier, Quay Wall and Parking Area at the Naval Reserve Center, Seattle, Washington

2. Ogletree Engineering Inc., 1987, Underwater Facilities Inspections and Assessments at Naval Reserve Center, Seattle, Washington

3. Streeter/Dermanis and Associates Architects, 1990, Adaptive Re-Use of the Naval Reserve Center at South Lake Union, Seattle, Washington

4. TRA et al, 1990, South Lake Union Park Draft Environmental Impact Statement

5. SWMB et al, 1993, 35% Design Submittal for FY93 O&MN Special Project R4-90 Structural Repairs to North Pier and FY93 O&MN Special Project R5-90 Repair Shoreline Riprap at the Naval Reserve Center, Seattle, Washington

6. City of Seattle Office of Management and Planning, 1995, Seattle Commons/South Lake Union Plan Final Environmental Impact Statement Volume 3A Technical Appendices

7. URS et al, June 1995, Draft Final Environmental Baseline Survey Report, Naval Reserve Readiness Center, Seattle, Washington

8. 1997, Draft Cultural Resources Survey an l Assessment, Naval Reserve Readiness Center, Seattle, Washington

Department of Construction and Land Use
CLIENT ASSISTANCE MEMO

314

Seattle Building Code Requirements for Existing Buildings That Undergo Substantial Alterations

September 1996

INTRODUCTION

Section 3403.11 of the Seattle Building Code defines and lists special requirements for buildings that undergo substantial alterations or repairs. The intent of this client assistance memo is to clarify the definitions of substantial alteration and to provide guidance in how DCLU applies Section 3403. For accessibility requirements, refer to Chapter 11 which treats alterations differently.

When designing an alteration of an existing building, the building owner and the designer should first determine whether the project will be considered substantial. In many cases, it will be difficult to determine whether or not a project is substantial. In those cases, a pre-application meeting is advised so DCLU may gather the information it needs to make a determination. If the project is considered substantial, the next step is for the designer to evaluate the building's structural and life safety systems.

It is important to note that Section 3403.11 does not require a substantially-altered building to comply with all of the current code; it requires compliance only with specific sections. This CAM will list those sections and give some guidance in determining how DCLU will apply them.

DEFINITIONS

The five definitions of substantial alterations as listed in section 3403.11.2 are:

1. Extensive structural repair.
2. Remodeling or additions which substantially extend the useful physical and/or economic life of the building or significant portion of the building, such as remodeling a complete floor other than typical office tenant remodeling.
3. A change of a significant portion of a building to an occupancy that is more hazardous than the existing occupancy, based on the combined life and fire risk as determined by the building official. Table 34-A may be used by the building official as a guideline. A change of tenant does not necessarily constitute a change of occupancy.
4. Reoccupancy of a building that has been substantially vacant for more than 12 months in occupancies other than Group R, Division 3.
5. A significant increase in the occupant load of an unreinforced masonry building.

To what kind of projects will these definitions typically apply?

Definition 1

Extensive structural repair occurs when the structural system of a building undergoes significant repairs. When severe deterioration of significant portions of a building's structural system is repaired, or when significant damage is repaired, the work will be considered substantial. A building which suffers severe damage in a earthquake or fire is likely to require extensive structural repair and therefore would trigger the requirements for a substantial alteration.* Typical projects which would not be considered extensive are replacement of an exterior stair or repair/replacement of water-damaged beams in a roof structure.

* Full compliance with the code is required by Section 3403.5 when the cost of repair to a damaged building exceeds 60% of the building's value.

Definition 2

Extending the useful physical and/or economic life of a building is the trigger most frequently used in determining whether a building is a substantial alteration. It is also one of the most difficult to determine, and varies considerably depending on the nature of the work being done and the condition of the building.

Routine maintenance of a building, by itself, will not trigger this requirement. Routine maintenance typically includes items such as painting, reroofing, replacement of light fixtures or replacement of plumbing fixtures. When routine maintenance has been delayed to the point where the building has suffered significant deterioration and requires expensive restoration, it may be considered substantial. Routine maintenance combined with some improvement work may also be considered substantial.

There are many ways to look at this definition of substantial alteration. Listed below are some of the criteria that are used most often.

Cost of project. Improvements to major systems such as electrical, plumbing and mechanical are often thought of as "hard costs"—the costs are relatively large and can only be justified over a longer period of time. Hard cost improvements thus more clearly extend the life of the building and carry more weight in determining whether a project is substantial. On the other hand, routine maintenance is often thought of as "soft costs"—items that are replaced on a regular basis. Many projects consist of a combination of work involving both soft and hard costs which most often will be considered to substantially extend the life of the building.

For the typical project, if the cost is high relative to the value of the building, it will be considered substantial. For example, if a project consists of new carpet, paint, upgrade of light fixtures, new toilets and sinks, a new roof and patching of plaster, and the cost is more than half the value of the building, it would probably be considered a substantial alteration. Even though most of these items alone would only be considered maintenance, the total amount of work would be great enough to justify a conclusion that the project is a substantial alteration. The fifty percent figure used here is not intended to be a fixed percentage but only as an example.

Existing conditions. A careful review of existing conditions is important in determining whether a given proposal will trigger substantial alteration requirements. A relatively new building may undergo a face lift with expensive new finish work and some minor alterations and yet not trigger special requirements, while a very old and poorly maintained building that undergoes a similar project may be viewed as a substantial alteration. There are two reasons for this. One reason is a desire to correct the more serious life-safety hazards likely to be present in older buildings. The other reason is that the relative cost of the new work in relation to the value of the existing building is higher in the older building. In this case, the ratio of project cost to building value is viewed as being directly related to the extent to which the life of the building is being extended.

Size of project relative to building size and extent of use. Alteration projects vary considerably from total building renovation to renovation of a portion of a floor; building use varies from fully occupied to completely vacant. It is the particular combination of these two items that becomes important in evaluating whether a project is substantial. A large new restaurant in a fully occupied high-rise building clearly is not a substantial alteration project. However, a similar project in an older, partially-occupied, three-story building is likely to be substantial. For example, many older downtown buildings have very limited, if any, use of their upper floors. Renovation of the tenant spaces on the lower floors of such a building, even though of a moderate size and scope relative to building size, may trigger the substantial alteration requirements.

When determining whether a project extends the useful life of a building, DCLU will consider all these factors in combination.

Definition 3

A change to an occupancy that is more hazardous than the existing occupancy is determined by referring to Table 34-A of the Seattle Building Code. Occupancies have been assigned a hazard rating based on factors such as the number of people expected to be present in the building, whether the people are awake, the amount of combustible materials present and likelihood that a fire will occur.

Questions about interpreting this trigger occur when only a portion of a building changes to a higher hazard rating. In those cases the deciding factors are generally the percentage of the building that is changing to the higher-rated hazard, and how significantly the hazard is increased. A small Group B restaurant space (hazard rating 9) that is converted into a Group B retail space (hazard rating 12) in a large building such as a high-rise will generally not trigger the requirements for a substantial alteration because the change in hazard rating is relatively small, and affects only a small portion of the building. However, converting a significant portion of a building from a low hazard to a high hazard rating usually will trigger the requirements for a substantial alteration. For example, the conversion of an entire floor of a three-story building from a Group S-1 warehouse (hazard rating 5) into a Group A-3 assembly space (hazard rating 12) would be considered a substantial alteration.

Definition 4

Reoccupancy of a building that has been substantially vacant for more than 12 months in occupancies other than Group R, Division 3.

The intent of this provision is to ensure that buildings with low or minimal usage are properly retrofitted when they become more fully occupied. A typical example is a multistory mixed use building with a business on the first floor and

vacant second and third floors. An owner who wishes to reoccupy these upper floors will be required to comply with the substantial alteration requirements of Section 3403.11.

Definition 5

A significant increase in the occupant load of an unreinforced masonry building. Substantial alteration requirements are necessary when an unreinforced masonry building is changed to a use that will have a significantly higher occupant load, based on Table 10-A of the Seattle Building Code.

What do I have to do if my project is a substantial alteration?

The intent of Section 3403.11 of the Seattle Building Code is to provide improved structural and fire life safety to a building that undergoes a substantial alteration. The extent of the improvements required is based on the size and scope of work and the relative hazard that exists. The ability of the design team to assess these two items and present proposals that appropriately address the hazards is critical to ensuring a successful resolution to this key Building Code requirement.

When a project has been defined as a substantial alteration, Section 3403.11.1 requires that the project be made to conform with the requirements of Sections 403 (high rise buildings, when applicable), 510 (special requirements for the Fire District, when applicable), Sections 713.10 (smoke dampers), 713.11 (fire dampers), 801 through 805, 808 (interior finishes), 904 (fire-extinguishing systems), and Chapter 10 (means of egress) and the fire alarm requirements of Chapter 3. Section 3403.11.3 requires evaluation and mitigation of seismic deficiencies.

It is incumbent upon the design professionals to provide a critical evaluation of the adequacy of the life safety and seismic systems in the building. The basis for evaluation shall be the above-mentioned sections of the Building Code, or for seismic systems, either Chapter 16 of the Building Code or an approved alternate standard. Directors Rule 32-96 lists approved alternate standards. The evaluation must include a detailed and prioritized list of all items found to be deficient.

Ideally, all items found to be deficient will be corrected. However, in many cases it is recognized that to remedy all deficiencies will impose severe hardships on the building owner. The Building Code provides DCLU with significant flexibility to resolve specific hardship issues. There are three methods by which the applicant may seek relief. Section 104.14 allows DCLU to modify the code where the applicant demonstrates that the specific code requirements are impractical. Section 104.15 allows the applicant to identify design solutions which will provide equivalent protection. Section 3403.3 allows the building official to waive code requirements in some circumstances.

The determination to modify or waive a code requirement is dependent on the ability of the design team to provide adequate justification for a proposal. Justification may include *cost benefit analysis, functional issues, total costs, testing, risk analysis, professional judgment,* and *redundancies.* The more comprehensive and well-justified the applicant's analysis of the issues involved in the project, the more likely the applicant will succeed in obtaining approval for the proposal.

What do I need to do for a pre-application conference?

For many applicants it is desirable to meet with the building official to get *concept approval* of significant code issues prior to applying for a building permit. These concept approvals can be in the form of applicant generated minutes which will be reviewed and approved by the building official. Concept approval can greatly facilitate the plan review process.

If a project applicant wishes to have a pre-application conference in order to determine if their project is a substantial alteration or if they wish to resolve code issues prior to permit application, they may set up a pre-application meeting with DCLU staff. The pre-application conference is an opportunity for the applicant to present their proposals and appropriate justifications.

DCLU Director's Rule 32-96

Applicant:	Page	Supersedes:
City of Seattle Department of Construction and Land Use	1 of 4	N/A
	Publication: Aug. 8, 1996	**Effective:** Sept. 16, 1996
Subject:	**Code and Section Reference:**	
Seismic Survey and Report Requirements	Section 3403.11 Seattle Building Code	
	Type of Rule: Code Interpretation	
	Ordinance Authority: SMC 3.060.040	
Building Code/Technical Requirements	**Approved** R F Krochalis **Date** 9/5/96	

A. BACKGROUND

The purpose of this rule is to describe the requirements of a seismic survey and report for existing buildings undergoing a seismic retrofit, as required by Section 3403.11 of the Seattle Building Code.

For substantial alterations to existing buildings, the seismic safety objective of the Department of Construction and Land Use is to provide substantial life safety to the occupants. In an earthquake, a building which has been substantially altered is not expected to significantly jeopardize life due to structural collapse, falling hazards or blocked routes of entrance or egress. Buildings which meet this objective may still suffer significant damage in an earthquake.

B. RULE

I. Report standards

A seismic survey and report when required by Section 3403.11 shall address the existence, nature and extent of structural deficiencies and shall recommend solutions for mitigation of all structural deficiencies found. Minimum design forces to be used for analysis shall be 1994 SBC force levels or, if approved by the building official, both the force levels and evaluation procedure of an alternate approach may be used.

Typically approved alternates may be one of the following:

NEHRP Handbook for the Seismic Evaluation of Existing Buildings (also known as FEMA Document Number 178).

The 1991 Uniform Code for Building Conservation (for unreinforced masonry buildings only).

Methods for Evaluating the Seismic Strength of Existing Buildings (also known as ATC -14).

Department of Defense Tri-services manual

Other alternate methodologies may be submitted for review and approval, provided adequate documentation is included to justify their approval.

II. Report contents

1. The seismic survey and report shall be prepared by a structural engineer licensed in the state of Washington.

2. General information. When a structural survey is performed and a structural report prepared, the report shall, as a minimum, contain the following information:

A. The street address of the building.

B. A description of the building including the number of stories and the floor area of each floor.

C. The date the building was constructed and the dates of any significant additions, if known.

D. A list of all occupancy types, both existing and proposed.

E. Identification of all lateral force resisting systems with plans and elevations indicating locations as appropriate.

F. Condition of structural systems, such as identification of dry rot, deteriorated brick or mortar, cracked or spalled concrete, etc.

G. Testing requirements needed to substantiate the conclusions of the structural report. Unless otherwise approved by the building official, test reports shall be submitted prior to permit issuance.

H. Conclusions. The report shall include identification and prioritization of all significant deficiencies based on earthquake hazard. The report must also include a conceptual remediation proposal for each deficiency. If the recommendations do not include full mitigation of identified deficiencies, then a separate request for a waiver or modification must be submitted which justifies such a waiver or modification. Justification may include cost benefit analysis, functional issues, total costs, testing, engineering judgment, redundancy, etc. The engineer shall also include a statement that indicates whether or not the intent of the recommendations is to meet the substantial life safety objective of this rule. If there are significant waivers or modifications such that the project will fail to meet the substantial life safety objective, then the engineer shall specify the level of risk reduction that is intended to be achieved.

III. Test requirements for Unreinforced Masonry buildings

The following special requirements shall apply to all unreinforced masonry buildings (URM) to which this rule applies.

1. GENERAL. All unreinforced masonry walls used to carry vertical loads or seismic forces parallel and perpendicular to the wall plane and which exceed the thresholds for testing for the standard used, shall be tested as specified in this subsection.

2. MORTAR.

a. TESTS. The quality of mortar in all masonry walls shall be determined by performing in-place shear tests in accordance with U.B.C. Standard 21-6. Alternative methods of testing may be approved by the building official for masonry walls other than brick.

b. LOCATION OF TESTS. The shear tests shall be taken at locations representative of the mortar conditions throughout the entire building, taking into account variations in workmanship at different building height levels, variations in weathering of the exterior surfaces, and variations in the condition of the interior surfaces due to deterioration caused by leaks and condensation of water and/or by the deleterious effects of other substances contained within the building. The exact test location shall be determined at the building site by the engineer responsible for the structural design work. An accurate record of all such tests and their location in the building shall be recorded and these results shall be accepted by the structural engineer and then submitted to the Department of Construction and Land Use for approval as part of the structural survey and report.

3. URM Wall Ties

Existing URM wall ties shall be tested in accordance with UBC Standard 21-7.

IV. Special requirements for URM buildings

Roof-to-wall ties and floor-to-wall ties shall be provided around the entire perimeter of a URM building. Existing anchors must meet, or shall be upgraded to meet, the minimum requirements of Section A110(a) of the UCBC Appendix Chapter 1, or new anchors meeting the minimum requirements of Section A110(a) shall be installed. If the building is a historic building as defined in Section 3403.8, wall anchors conforming to Item 5.b. in Table No A-1-D of the UCBC Appendix Chapter 1 may be used.

V. Parapets

Parapets which exceed the H/T thresholds of the standards used for analysis shall be braced.

Appendix E

Utilities Evaluation

South Lake Union Park Master Plan Update
Summary of Utility Improvements

Water

Existing Conditions

Currently, the Naval Reserve Center and The Center for Wooden Boats are served from eight and six-inch water mains in Terry Avenue. These mains are connected to the City distribution system at the intersection of Terry and Valley. Seattle public Utilities also has a 24-inch "High Service Main" in Valley Street and Westlake Avenue along the entire frontage of the project (See Figure 1 and attached Water Department Records).

Proposed Improvements

Water improvements will be necessary to update the Navel Reserve Center to current standards. An eight-inch loop water main has been assumed necessary to improve fire flow and drinking water quality for the Center. Fire service loops were assumed to be required for new parking lots. A total of 1,500 feet of water main is anticipated (See Figure 1).

Sanitary Sewer

Existing Conditions

Sanitary Sewer Service for the Naval Facility is provided through two lift stations; one located south of the existing building on the east side of Terry, and one located on the wet side of Terry. The condition of both of these lift stations is unknown. Both of these lifts stations discharge to the combined sewer located beneath Valley Street. The combined sewer also has a small overflow located in Westlake, just north of the intersection on Westlake and Valley Street. This over flow discharges through park property to Lake Union (See Figure 2 and attached Sewer Record Cards).

Proposed Conditions

Sanitary sewer improvements will be required to accommodate the increased usage of the park. A restaurant facility would require an oil/water separator. Seattle Public Utilities requires that any buildings with a finished floor elevation lower than 10.5 feet above Mean Sea Level be serviced through a lift station. This is to avoid combined sewer overflows from backing up into buildings. All facilities should have new lift stations installed. The remote location of the restroom facility along the northwest area of the park will require more than one lift station.

King County and Seattle Public Utilities is currently developing construction documents for a major combined sewer overflow project in the area of Westlake Avenue and Valley

Street. The finished project is entirely below grade, however has a potential short term impact to the site during construction in the Fall of 2002. An oversize collector manhole is planned for the intersection of Westlake and Valley, which may have an impact on the final design of this intersection. The combined sewer overflow will not be able to serve the project site.

Storm water

Existing Conditions

Storm water from the site currently flows to both the existing combined sewer lift stations and Lake Union. The site outside of the Naval Reserve Center has an undeveloped storm system which discharges to the Lake. Seattle sewer records indicate some catch basins discharge to the combined sewer lift station.

The City also has a storm sewer line from the south west of the site which discharges through the park site into Lake Union. This 36-inch storm main will need to be preserved in the park plans.

Proposed Conditions

Seattle Drainage Code allows direct discharge to Lake Union without detention provided that discharge is treated for water quality. The Park Master Plan includes a constructed wetland that will provide the water quality treatment. Special features for collecting runoff from large landscaped and lawn areas will need to be provided to treat runoff for nutrients. Constructed wetlands are adequate for providing the necessary treatment for nutrients.

Electrical

Existing Conditions

Seattle City light has major transmission (115 KVA at approximately 100 feet above ground) and distribution (26 KV at 45 feet) lines overhead along the north side of Valley Street continuing west along Broad Street. Power lines along Westlake Avenue are underground. The naval building is served via overhead lines in Terry Avenue that terminate at a pole-mounted, three-phase transformer approximately 345 feet north of Valley Street. Other electrical equipment located on site is the property of the Park (see attached as-built field book notes).

Proposed Conditions

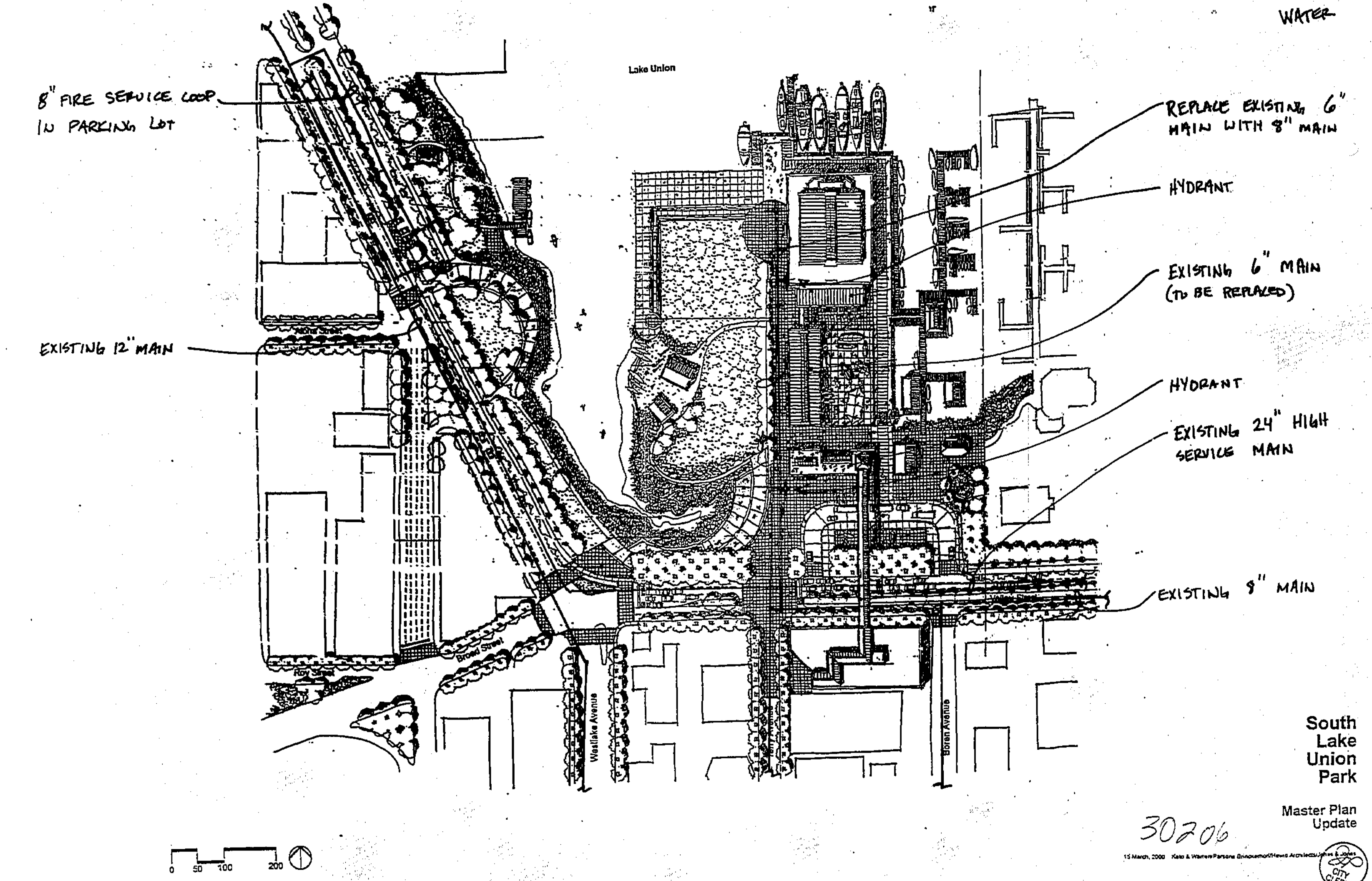
The overhead distribution system should be relocated underground along the entire frontage. The transmission system may be relocated underground, however, these systems are not typically underground. Seattle City Light is currently reviewing the

feasibility and reviewing costs to underground along the frontage. Since the distribution systems will be underground, all transformers currently serve the Naval Reserve Center and the Center for Wooden Boats will need to be replaced. All of these buildings and the new park facilities can be served by two centrally located underground transformers; one for three phase and one for single phase.

Figure 1

Illustrative Plan

WATER



South Lake Union Park

Master Plan Update

30206

15 March, 2000 Kato & Warren/Parsons Brinckerhoff/Hewitt Architects/Jones & Jones

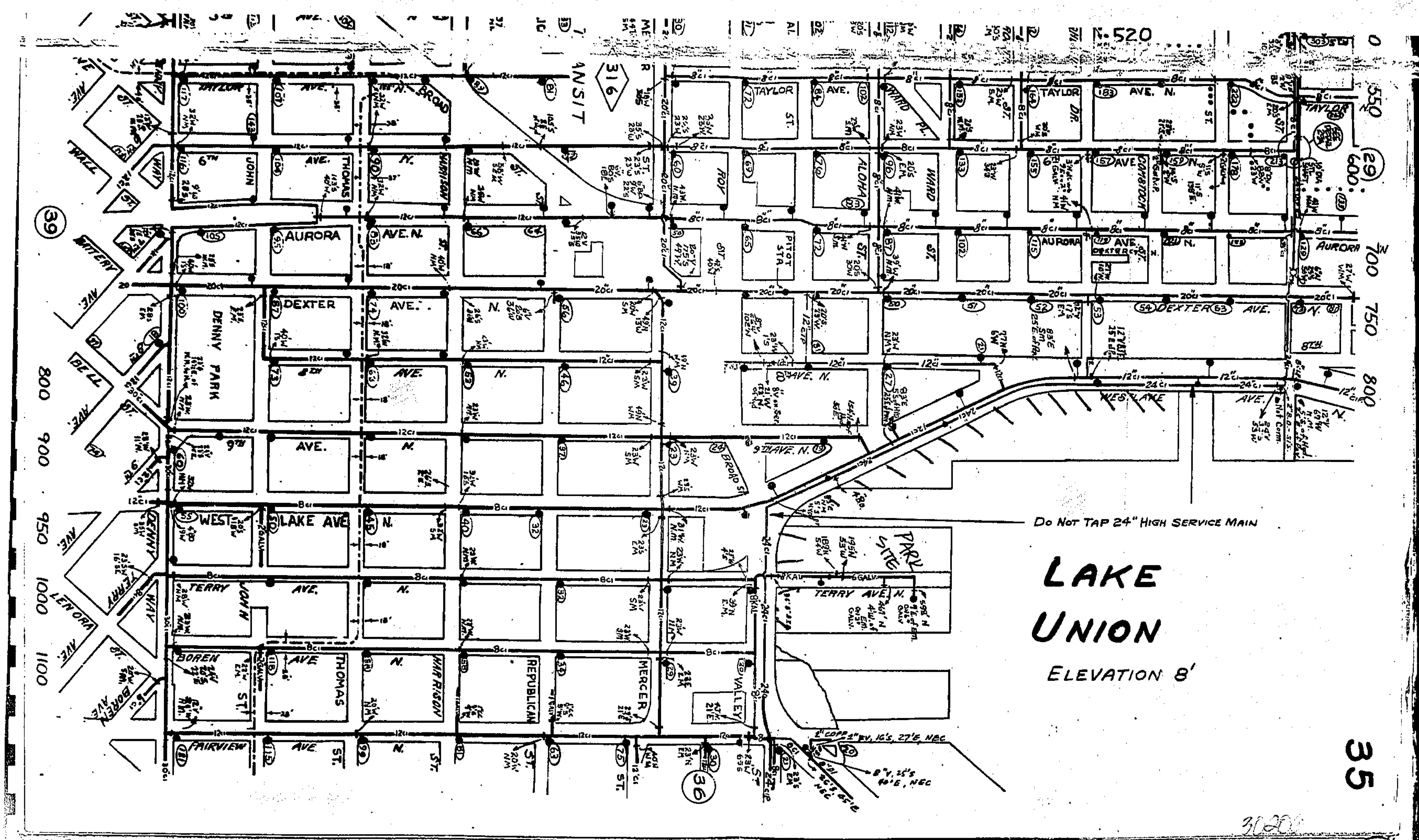
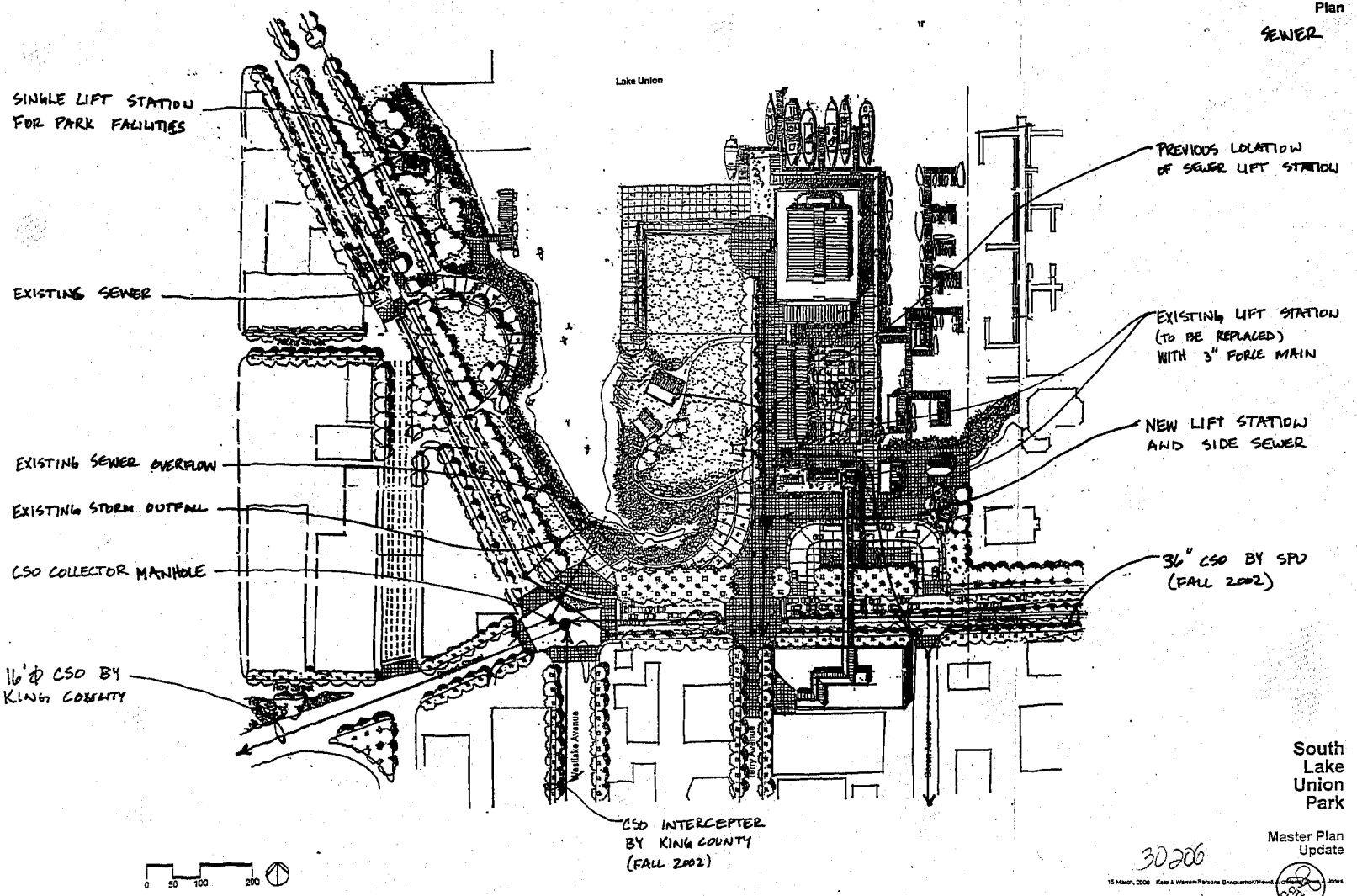

N-520
TAYLOR AVE. N.
6TH AVE. N.
AURORA AVE. N.
DEXTER AVE. N.
8TH AVE. N.
9TH AVE. N.
WESTLAKE AVE. N.
WEST LAKE AVE. N.
TERRY AVE. N.
BOREN AVE.
FAIRVIEW AVE. N.
JOHN ST.
THOMAS ST.
HARRISON ST.
REPUBLICAN ST.
MERCER ST.
VALLEY ST.
ROY ST.
ALOHA ST.
WARD ST.
WARD PL.
TAYLOR DR.
BROAD ST.
DENNY PARK
DENNY WAY
LENORA
BELL
BATTERY
WALL
PITOT STA
PARK SITE
TRANSIT
316
Do Not Tap 24" High Service Main
LAKE UNION
ELEVATION 8'
550
600
700
750
800
900
950
1000
1100
29
36
39
35

Figure 3
Illustrative Plan
SEWER



South Lake Union Park

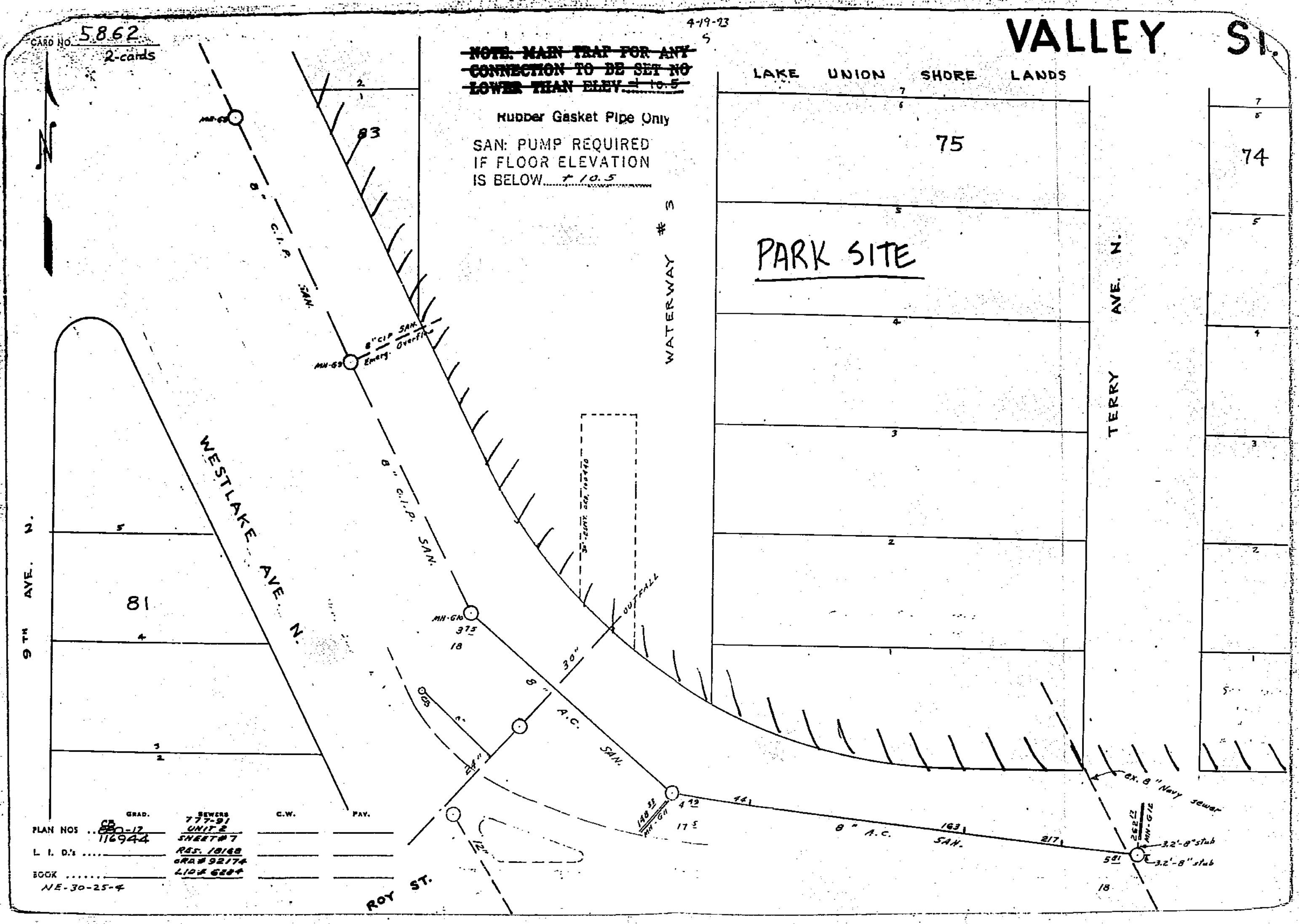
Master Plan Update

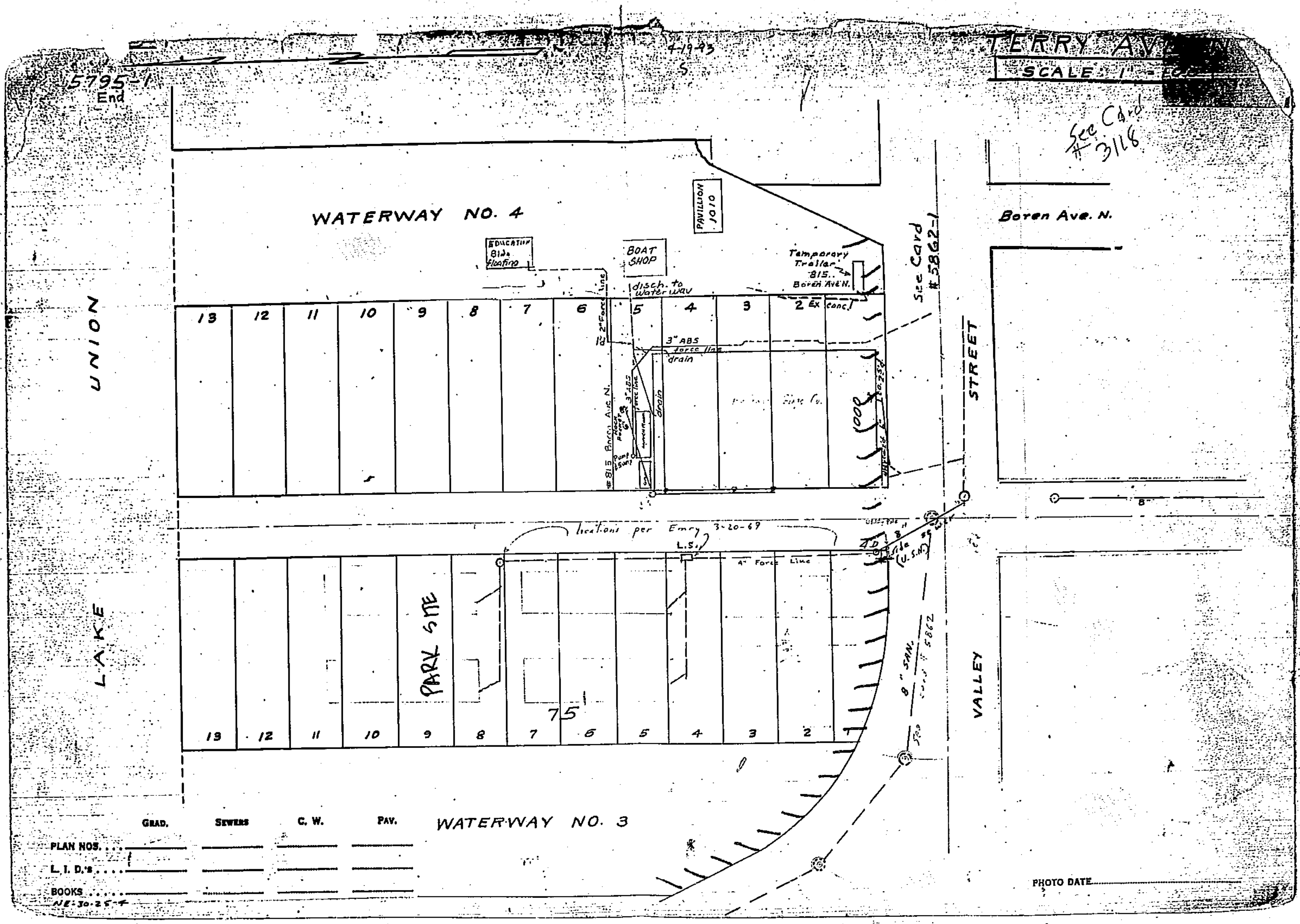
30206

15 March, 2000 Kate & Warren/Parsons Brinckerhoff/Peter

CITY CLERK

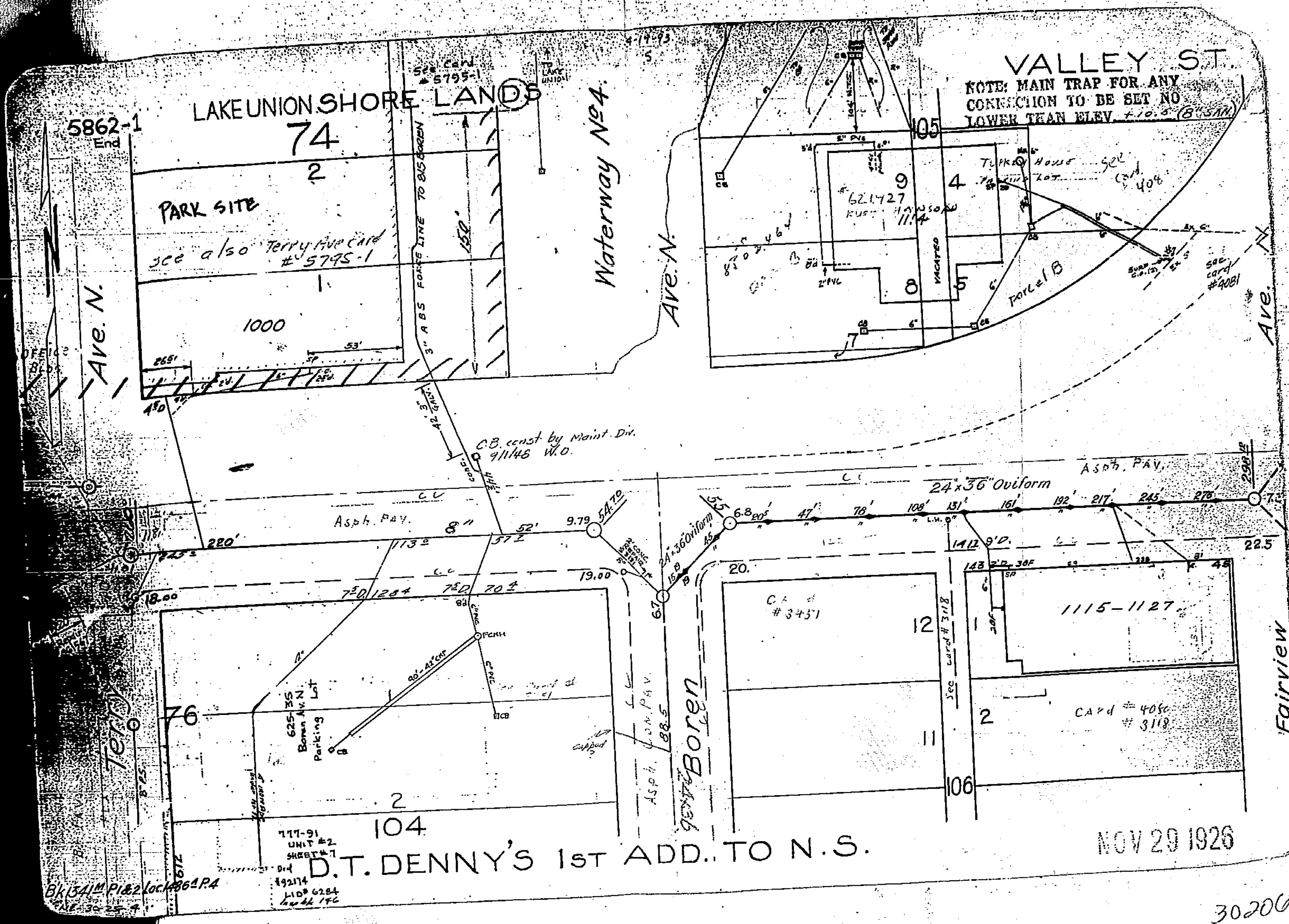
12Y


CARD NO. 5862
2-cards
4-19-73
NOTE. MAIN TRAP FOR ANY CONNECTION TO BE SET NO LOWER THAN ELEV. ± 10.5
Rubber Gasket Pipe Only
SAN: PUMP REQUIRED IF FLOOR ELEVATION IS BELOW + 10.5
VALLEY ST.
LAKE UNION SHORE LANDS
75
74
83
81
PARK SITE
WATERWAY # 3
TERRY AVE. N.
WESTLAKE AVE. N.
9TH AVE. N.
ROY ST.
8" C.I.P. SAN.
8" A.C. SAN.
OUTFALL
EX. 8" Navy sewer
3.2'-8" stub
PLAN NOS
L. I. D.'s
BOOK
NE-30-25-4
GRAD.
SEWERS
C.W.
PAV.
116944
777-91
UNIT 2
SHEET # 7
RES. 18148
ORD # 92174
LID # 6884
30206
12


5795-1
End
TERRY AV
SCALE 1"
See Card # 3118
WATERWAY NO. 4
PAVILLION 1010
EDUCATION Bldg floating
BOAT SHOP
Temporary Trailer 815 Boren AVE N.
disch. to water way
See Card # 5862-1
Boren Ave. N.
UNION
LAKE
STREET
VALLEY
3" ABS force line
drain
1000
locations per Emry 3-20-69
L.S.
4" Force Line
PARK SITE
75
8" SAN.
WATERWAY NO. 3
GRAD.
SEWERS
C. W.
PAV.
PLAN NOS.
L. I. D.'s
BOOKS
NE-30-25-4
PHOTO DATE

30200

12X


VALLEY ST.
NOTE: MAIN TRAP FOR ANY CONNECTION TO BE SET NO LOWER THAN ELEV.
LAKE UNION SHORE LANDS
74
5862-1
End
See card #5795-1
PARK SITE
see also Terry Ave card #5795-1
Waterway No. 4
Ave. N.
Terry Ave. N.
Boren Ave. N.
Fairview Ave. N.
3" ABS FORCE LINE TO 815 BOREN
C.B. const by Maint. Div. 9/1/48 W.O.
Asph. Pav.
24"x36" Oviform
105
106
104
1000
Parcel B
Card #3451
See card #3118
1115-1127
Card #4050 #3118
625-35 Boren Ave. N. Parking Lot
D.T. DENNY'S 1ST ADD. TO N.S.
NOV 29 1926

30206

ELECTRICAL AS-BUILT
FIELD BOOK NOTES

3

Company: City Light

Permit No. 83813

Inspected By Ferko & Shattuck

Date Permit Granted 1-12-59
Date Work Started No notice
Date Work Finished 1/2/59

1/4 Sec. # 164
Jan 13, 1959
W.M.

Summary 60' 3" Fibre duct in concrete plus iron pipe bend up pole.