

Ecological No Net Loss Assessment Report

Prepared for

**Suzanne Skinner
7601 W. Mercer Way
Mercer Island, WA 98040**

Prepared by



Northwest Environmental Consulting, LLC
3639 Palatine Avenue North
Seattle, WA 98103
206-234-2520

August 2022

Purpose

The purpose of this report is to fulfill the requirements of City of Mercer Island Municipal Code (MICC) 19.13.050 Shoreline Master Program by assessing overall project impacts and proposed mitigation to determine if the project meets the “No Net Loss” General Regulation of the Shoreline Master Program.

No Net Loss is defined as “An ecological concept whereby conservation losses in one geographic or otherwise defined area are equaled by conservation gains in function in another area.”

Permits are being applied for a dock and bulkhead repair.

Location

The subject property is located at 7601 W. Mercer Way (King County parcel number 9389700005) in the City of Mercer Island, Washington (see Appendix A – Sheet A1.0). The parcel is on the waterfront of Lake Washington, which contains several endangered fish species listed under the Endangered Species Act and Washington State designated priority fish species.

Project Description

The proposed work includes repairing the existing dock by repairing 12 existing wood pilings (3, 10-inch, 2 12-inch, 2 13-inch, 3 14-inch, 1 16-inch and 1 18-inch) by pile splicing. The existing failing wood bulkhead and stairs will be removed and a new granite rock bulkhead and stairs will be constructed replacing approximately 116 linear feet of bulkhead. See sheets A2.0 to A5.0.

During construction, a floating boom with silt boom will surround the work barge and work area. See sheet A6.0 for a list of BMPs.

Native trees including a Pacific willow will be planted along the shoreline and the existing vegetation will be preserved. See sheets A7.0 and A8.0.

Project drawings are included in Attachment A.

Approach

Northwest Environmental Consulting LLC (NVEC) biologist Brad Thiele conducted a site visit on August 16, 2022 to evaluate conditions on site and adjacent to the site. NVEC also consulted the following sources for information on potential critical fish and wildlife habitat along this shoreline:

- Washington Department of Fish and Wildlife (WDFW): Priority Habitats and Species online database (<http://apps.wdfw.wa.gov/phsontheweb/>)
- WDFW SalmonScape online database of fish distribution and ESA listing units (<https://apps.wdfw.wa.gov/salmonscape/>)

- Mercer Island GIS online database (<https://chgis1.mercergov.org/Html5Viewer/Index.html?viewer=PubMaps&viewer=PubMaps>)

Site Description

The subject property is a shoreline tract in a residential neighborhood. It has shoreline on its western boundary with residential properties to the north and south.

The only existing structures on the property are the house and dock (Photos 1 through 6). The subject property yard is extensively vegetated with maintained lawn, landscaped beds, trees and footpaths. Three mature big leaf maples and 2 lodgepole pines are planted overhanging the shoreline. The other vegetation includes a laurel hedge, English ivy and other ornamental vegetation.

The shoreline includes a wood bulkhead along the length of the shoreline. The substrate of the lake is gravel and cobble. Eurasian milfoil has colonized the shoreline starting about 30 feet from the shore.

The property to the north and south have similar configurations with various shoreline plantings, bulkheads and docks.

Species Use

WDFW's PHS mapping and SalmonScape mapping tools show the following salmonid species using Lake Washington for migration and/or rearing: residential coastal cutthroat (*Oncorhynchus clarkii*), winter steelhead (*O. mykiss*), Dolly Varden/bull trout (*Salvelinus malma*), sockeye salmon (*O. nerka*), fall Chinook (*O. tshawytscha*), coho salmon (*O. kisutch*), and kokanee (*O. nerka*). The SalmonScape database maps the site as accessible to the Endangered Species Units (ESU) of Threatened Chinook and steelhead. Juveniles may rear in the waters near the project when traveling from spawning sites on other lake tributaries to the lake's outlet at the Hiram M. Chittenden Locks. The project site is accessible to any fish migrating or rearing in the lake.

Sockeye spawning has been mapped along the shoreline at the site.

Mercer Island GIS does not show any stream on or adjacent to the property. The nearest reference is a piped watercourse about 600 feet to the south of the project.

No other priority habitats are directly associated with or mapped within 1,500 feet of the project site for aquatic or terrestrial species.

Project Impacts and Conservation Measures

Direct Impacts:

Sediments: Sediment disturbance may occur below the OHWM and along the shoreline of Lake Washington during pile repair. Additionally, the tug and barge propwash may disturb sediments temporarily when making trips to/from the site. Pile repair is not a significant source of turbidity.

Removal of the existing timber bulkhead and constructing a new rock bulkhead has the potential

to create turbidity. A boom with a silt curtain will surround the work area to decrease the potential of turbidity from leaving the site. Any disturbed soils landward of the bulkhead will be stabilized upon completing the work.

Shoreline: Planting additional native vegetation will increase the habitat functions of the shoreline by creating shade along the shoreline that will be an improvement from the existing baseline habitat conditions at the project site. These plants will provide overhanging cover for fish, structural diversity for birds and wildlife, detritus for aquatic invertebrates and long-term recruitment of woody material and other allochthonous food sources. The proposed planting plan is included (see Appendix A - Sheet A7.0 – 8.0). The existing trees and vegetation will be preserved and is already providing these shoreline functions, the additional willow will increase these functions over the existing in the longterm.

Changing the bulkhead from a near vertical wall to rock will reduce the effects of reflecting waves that cause additional sediment erosion from the lake bed along the bulkhead. The rock bulkhead provides more surface area and creates an uneven surface that helps to attenuate wave action along the shoreline and reduces the occurrence of reflecting waves. This will help stabilized substrates along the shoreline and lead to more sorted substrates along the shoreline.

Lakebed: No change in lakebed coverage will occur.

Noise: Construction equipment will create noise audible to neighbors and in-water. Noise disturbance will be short-term and should have negligible effects on fish and wildlife in the area. Work will be completed during the in-water work window when juvenile fish are not expected to be present.

Potential spills: Short-term risks include the potential for petroleum spills that can occur with any equipment operation. The level of potential impact to the aquatic environment is expected to be minimal because of a crew trained in spill containment measures will be on site should a spill occur and will begin cleanup immediately if a spill is to occur.

Indirect Impacts:

Shading: The project will not affect overwater coverage.

Recreational Boating: The project supports continued recreational boating, which has been identified as a limiting factor for salmonid populations in Lake Washington. The dock and bulkhead repair will not introduce additional boating to Lake Washington, as the owners could still access the lake from a public boat launch or private moorage facility.

Other Conservation measures:

Work window: The work will be completed during the prescribed in-water work window for this area of Lake Washington (July 16 to December 31). Operating within this time frame helps protect Chinook salmon, steelhead, bull trout and other salmonid fish species by doing work when juvenile fish are not expected to be present. The work can also occur when lake levels are lower in the fall.

Best Management Practices: Applicable BMPs will be used, such as a floating boom and silt curtain around the in-water work area, to contain any floating debris that may escape during construction. The barge will have a perimeter containment sock to absorb oil and grease that might inadvertently wash from the barge during construction.

Hazardous material containment supplies such as spill absorbent pads and trained personnel will be required onsite during any phase of construction where machinery is in operation near surface waters.

In-lieu Fee: The shoreline on the subject property will be planted with native, overhanging vegetation and additional mitigation planting is not possible. The project also requires approval from the National Marine Fisheries Service (NMFS). NMFS has developed a calculator to determine appropriate mitigation costs for proposed in-water structures in Lake Washington. This calculator has established a fund that owners can pay into if they are not willing or cannot find mitigation to offset impacts from the project. The owner is not able to complete the required mitigation at the subject property and the property owners will pay into the in-lieu fee program to mitigate project impacts. An in-lieu fee program is defined as follows:

“A program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements... Similar to a mitigation bank, an in-lieu fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor.” (Fed. Reg. 40 CFR Part 230)

The fee has been determined using the Restoration And Permitting (RAP) Calculator for Lake Washington and will be paid to King County Water & Land Resources Division. This funding has been used to remove 350 derelict piles from the mouth of the Cedar River in Lake Washington.

Conclusion

Juvenile Chinook salmon, and other salmonids, rear and migrate along the Lake Washington shoreline.

There will be temporary impacts from noise and disturbed sediments during construction. No change to overwater is proposed.

Changing the bulkhead from a vertical structure to rock helps attenuate wave action and reduces the occurrence of erosion of shoreline substrates from occurring.

A shoreline planting plan will be implemented, mature lodgepole pines and big leaf maple are already present and functioning to improve the shoreline conditions. The owner will also add one pacific willow to the shoreline. The owner has also opted to pay into the In Lieu Fee program that will be used for conservation projects that benefit salmon in King County.

The project will minimize construction effects on the environment by following the prescribed fish window and using applicable BMPs to prevent construction spills and floating debris from escaping the area. The construction crew will retrieve all dropped items from the bottom and dispose of them properly.

This project has been designed to meet current dock replacement standards and will use Best Management Practices to reduce project impacts. The conservation measures are designed to improve ecological functions or prevent further degradation of habitat **and will result in No Net Loss of ecological functions** at the site.

Document Preparers

Brad Thiele

Biologist

28 years of experience

Northwest Environmental Consulting, LLC. (NVEC)

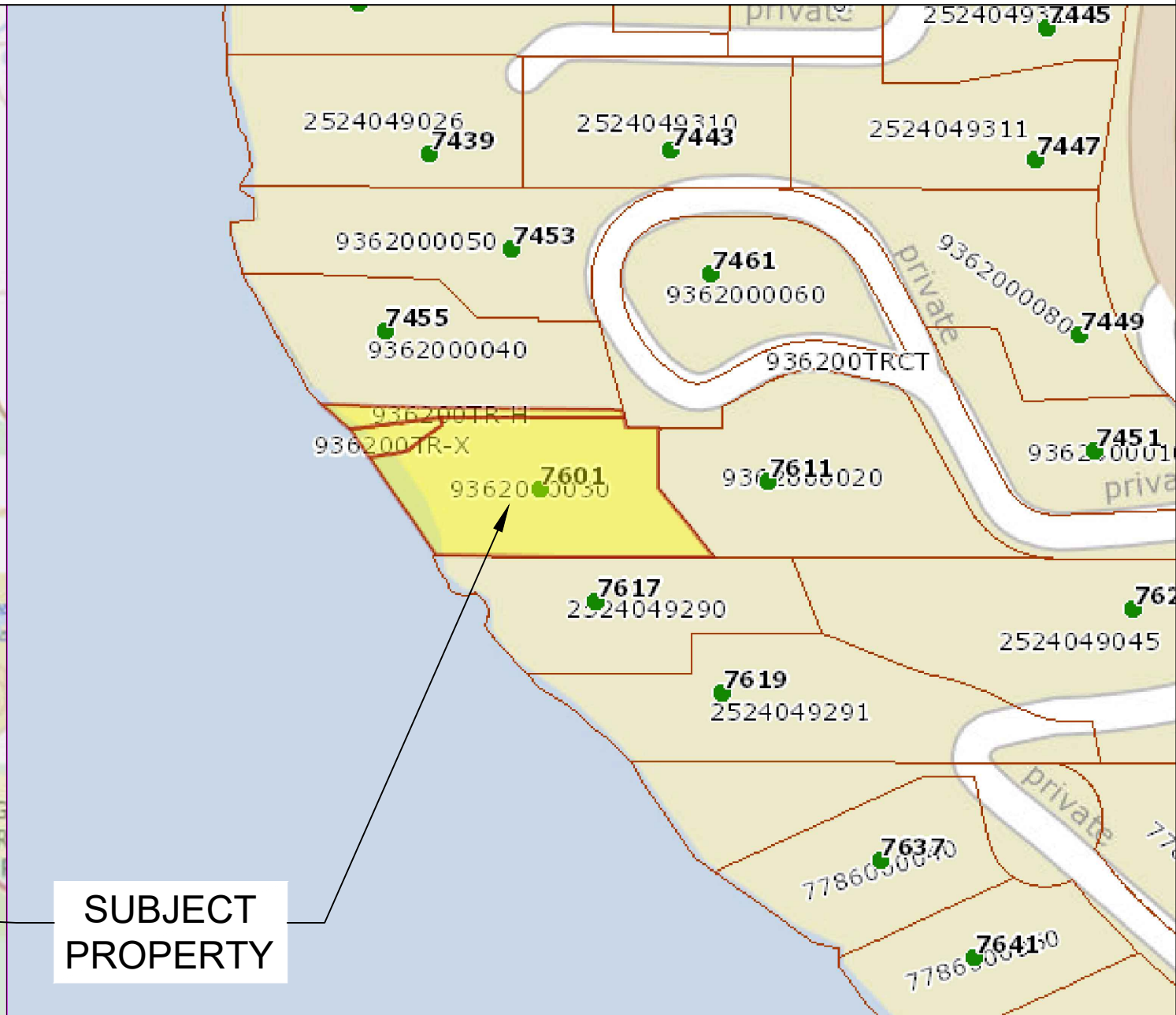
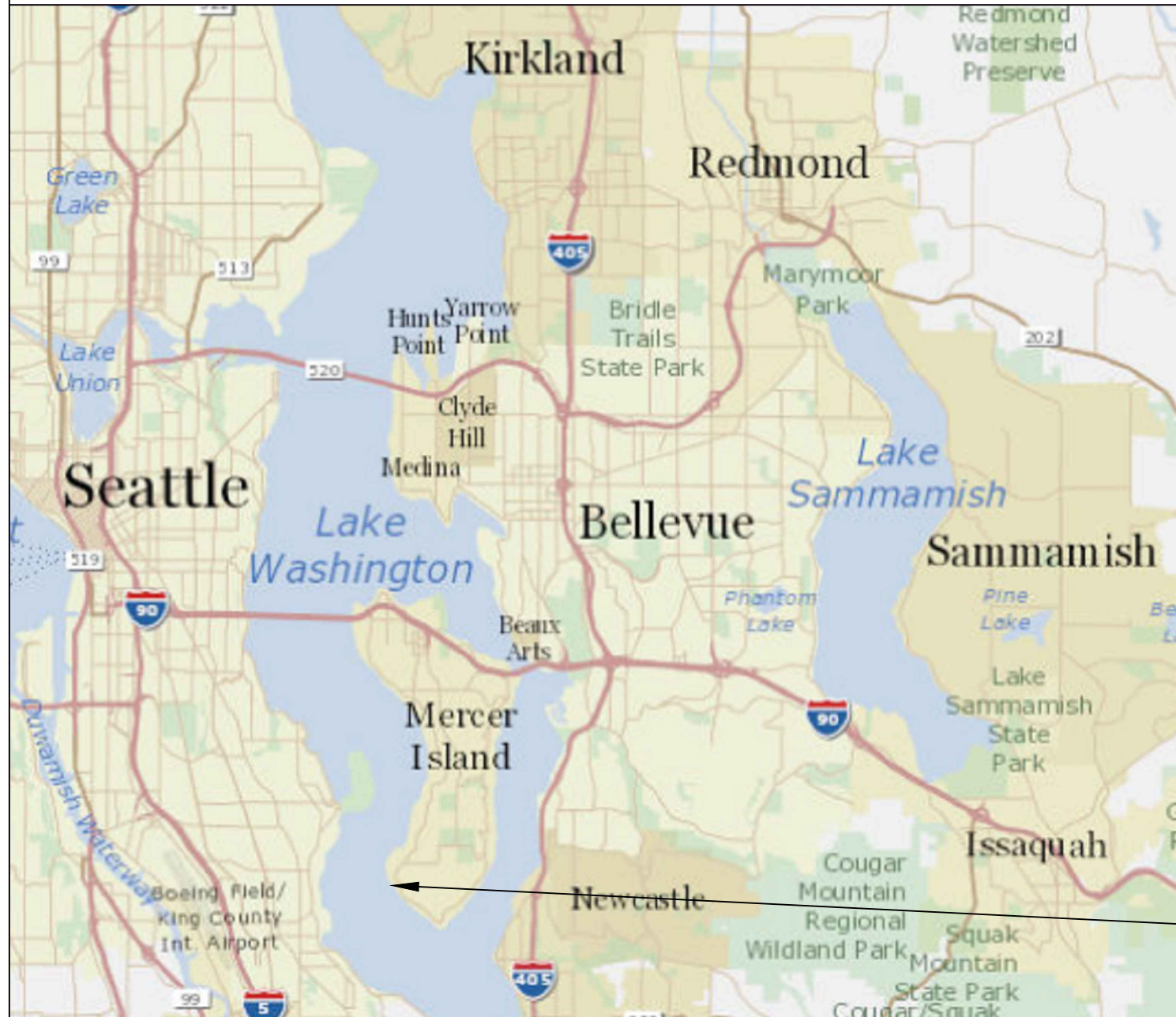
NWEC followed standard acceptable field methods and protocols at the time work was performed. These standards may include delineation of wetland and stream boundaries, characterization, rating, functional analyses, impact assessments and mitigation of impacts. The conclusions and findings in this report are based on field observations and measurements and represent our best professional judgment and to some extent rely on other professional service firms and available site information. Within the limitations of project scope, budget, and seasonal variations, we believe the information provided herein is accurate and true to the best of our knowledge. Northwest Environmental Consulting does not warrant any assumptions or conclusions not expressly made in this report or based on information or analyses other than what is included herein.

REFERENCES

- ThruFlow. 2021. Legacy Series. Online at <https://thruflow.com/products/legacy/>.
- US Army Corps of Engineers (USACE). 2004. Final Biological Evaluation, Regional General Permit: Construction of New or Expansion of Existing Residential Overwater Structures and Driving of Moorage Piling. Lake Washington, Lake Sammamish, the Sammamish River and Lake Union, Including the Lake Washington Ship Canal, in the State of Washington.
- Washington Department of Fish and Wildlife (WDFW). 2022. Priority Habitats and Species. Online database. Accessed August 2022 at <http://apps.wdfw.wa.gov/phsontheweb/>
- WDFW. 2022. SalmonScape. Online database. Accessed August 2022 at <http://apps.wdfw.wa.gov/salmonscape/>

Appendix A: Project Drawings

SITE PLAN



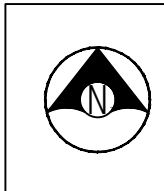
**SUBJECT
PROPERTY**

Pin: 936200-0030

Legal Description: WHITE-WILKINSON ADD LOT C MI SP #78-4-016 REC # 7805310900 TGW UND INT IN TR X SD SP TGW UND 1/7 INT IN PVT RD & 2ND CL SH LDS ADJ SD SP DAF - LOTS B & C SD PLAT

Plat Block:
Plat Lot:

LAT: 47.53453 LONG: -122.24246



Seaborn Pile Driving
1080 W Ewing St
Seattle, WA 98119

Office: 206-236-1700 ext. 3
www.seabornpiledriving.com

Scope of Work: We propose to repair (12) existing piles and replace the existing 115'- 9" wood bulkhead and stairs with new granite rock.

County: King County
Location: Lake Washington

Applicant: Skinner Residence
7601 W. Mercer Way
Mercer Island, WA 98040

Datum: CORPS OF ENGINEERS 1919
SW Quarter Of Section 25, Township 24, Range 04

Adjacent Owners:
INKROCK HOLDING LIMITED
7617 W MERCER WAY 98040

**SHEET
A1.0**

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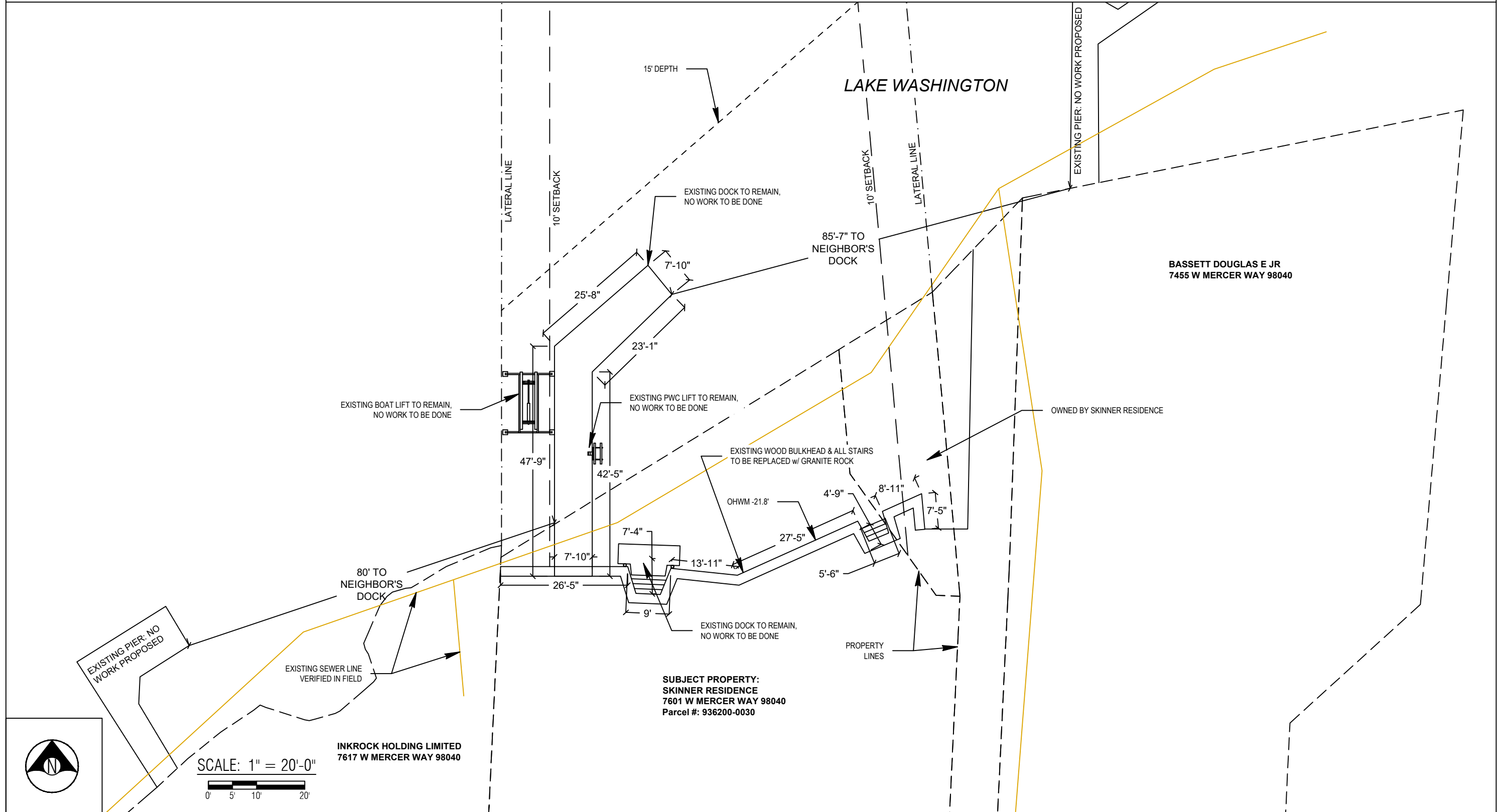
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Created: 03/25/22

BASSETT DOUGLAS E JR
7455 W MERCER WAY 98040

EXISTING CONDITIONS

****CLEAN UP LAKE AROUND PROJECT****



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Location: Lake Washington

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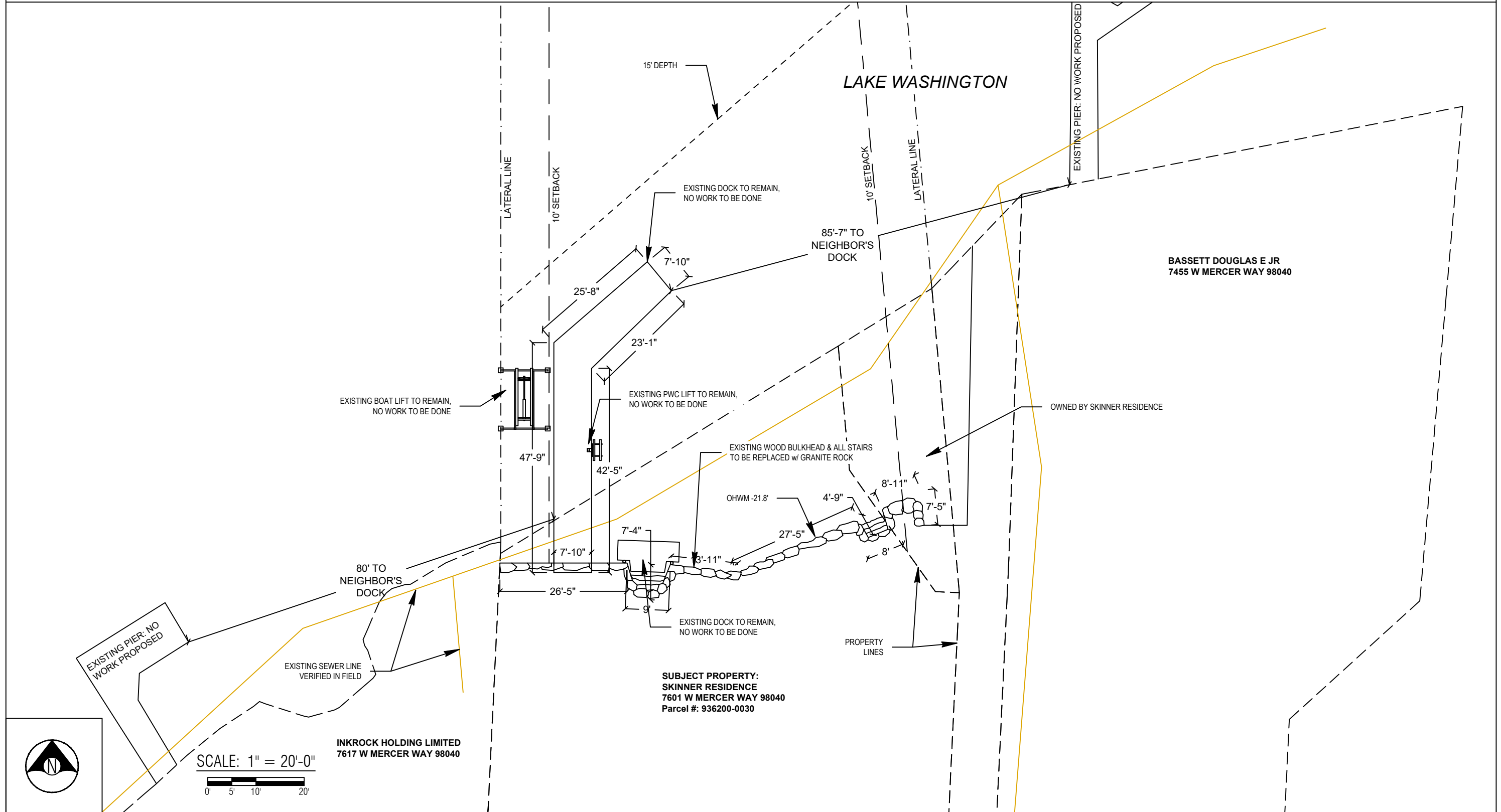
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**SHEET
A2.0**

PROPOSED CONDITIONS

****CLEAN UP LAKE AROUND PROJECT****



SCALE: 1" = 20'-0"
 0' 5' 10' 20'

INKROCK HOLDING LIMITED
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 County: King County
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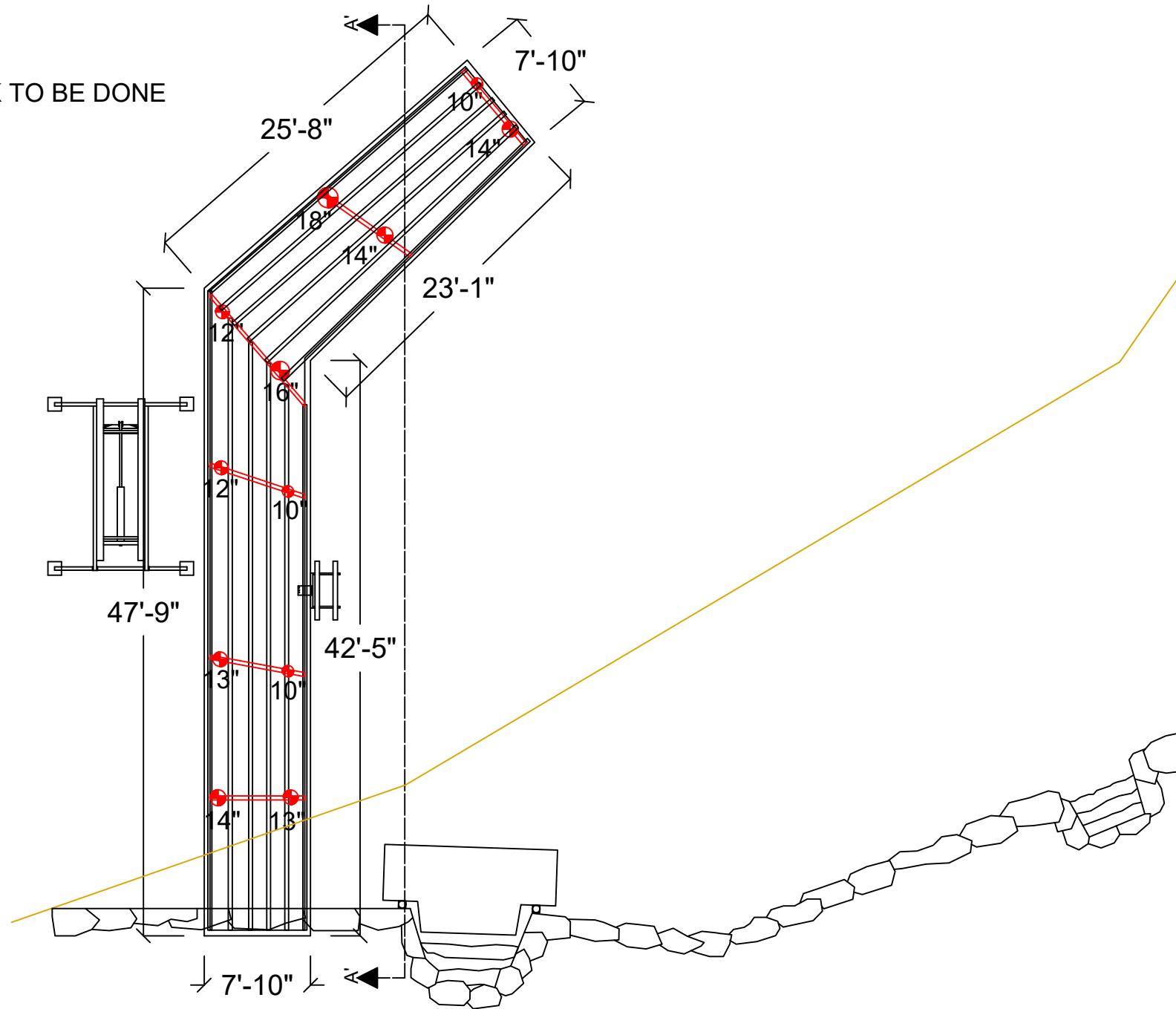
PIER DETAILS - EXISTING/PROPOSED

LEGEND

EXISTING DOCK TO REMAIN

⊕ (12) EXISTING PILES - TO BE REPAIRED

561 SQFT OF DOCK - TO REMAIN, NO WORK TO BE DONE



PLAN VIEW



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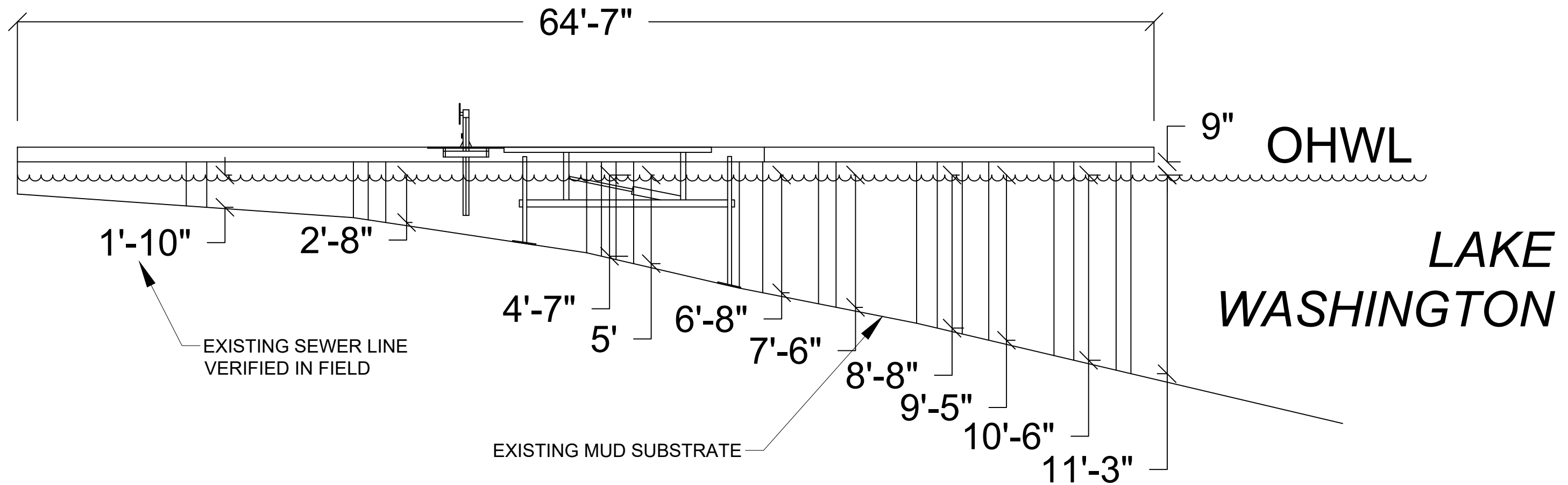
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**SHEET
A4.0**

PIER DETAILS EXISTING/PROPOSED



SECTION VIEW: A'-A'



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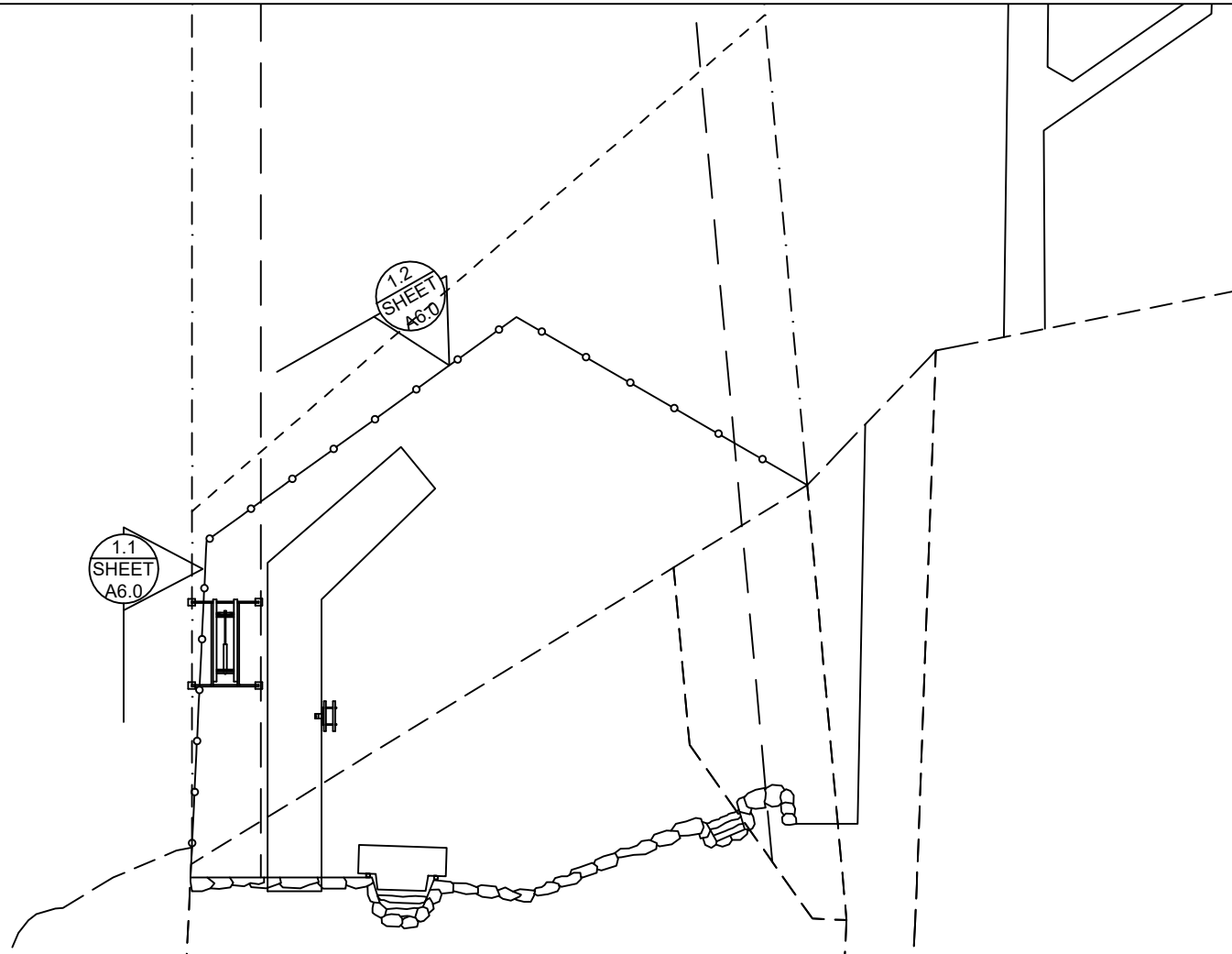
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7617 W MERCER WAY 98040

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BMP INFORMATION

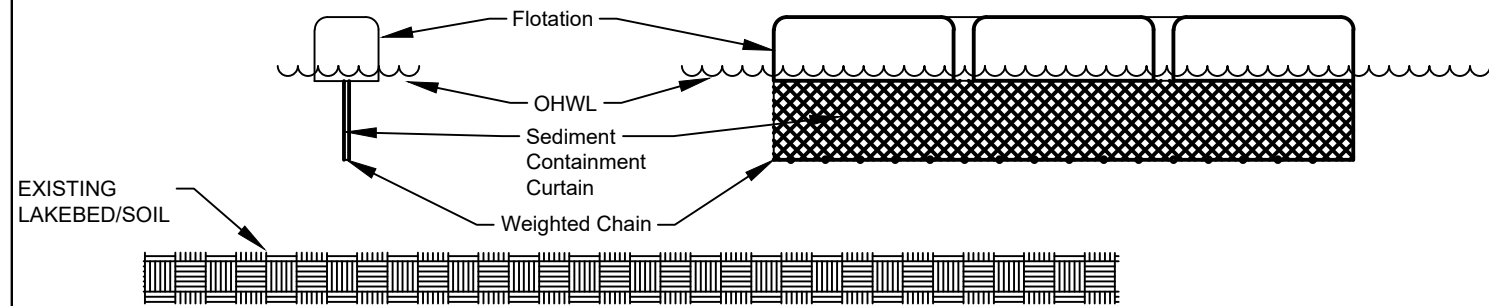


BMP NOTES:

- A. Constant vigilance shall be kept for the presence of protected fish species during all aspects of the proposed action, particularly during in-water activities such as vessel movement, deployment of anchors & spuds, pile driving, dredging, and placement of gravels and other fill.
1. The project manager shall designate an appropriate number of competent observers to survey the project site and adjacent areas for protected species, including the presence of fish as conditions allow.
 2. Visual surveys shall be made prior to the start of work each day, and prior to resumption of work following any break of more than an hour. Periodic additional visual surveys throughout the work day are strongly recommended.
 3. All in-water work shall be done during the in-water work window for the waterbody. Where there is a difference between the USCOE and WDFW work windows, the overlap of the two shall apply.
 4. All pile driving and extraction shall be postponed or halted when obvious aggregations or schooling of fish are observed within 50 yards of that work, and shall only begin/resume after the animals have voluntarily departed the area.
 5. When piloting vessels, vessel operators shall operate at speeds and power settings to avoid grounding vessels, and minimize substrate scour and mobilization of bottom sediments.
- B. No contamination of the marine environment shall result from project-related activities.
1. Appropriate materials to contain and clean potential spills shall be stored and readily available at the work site and/or aboard project-related vessels.
 2. The project manager and heavy equipment operators shall perform daily pre-work equipment inspections for cleanliness and leaks. All heavy equipment operations shall be postponed or halted should a leak be detected, and shall not proceed until the leak is repaired and the equipment is cleaned.
 3. To the greatest extent practicable, utilize biodegradable oils for equipment that would be operated in or near water.
 4. Fueling of land-based vehicles and equipment shall take place at least 50 feet away from the water, preferably over an impervious surface. Fueling of vessels shall be done at approved fueling facilities.
 5. Turbidity and siltation from project-related work shall be minimized and contained through the appropriate use of erosion control practices, effective silt containment devices, and the curtailment of work during adverse weather and tidal/flow conditions.
 6. All wastes shall be collected and contained for proper disposal at approved upland disposal sites appropriate for the material(s).
 7. When removing piles and other similarly treated wood, containment booms must fully enclose the work area. Wood debris, oils, and any other materials released into lake waters must be collected, removed, and properly disposed of at approved disposal sites.
 8. All in- and over-water wood cutting would be limited to the minimum required to remove the subject wood component, and all cutting work should be enclosed within floating containment booms.
 9. When removing piles, no actions shall be taken that would cause adhering sediments to return to lake waters.
 10. Above-water containment shall be installed around removed piles to prevent sediment laden waters from returning to lake waters.
 11. Construction staging (including stocking of materials, etc.) will occur on the supply barge.
 12. All Exposed wood to be used on the project will be treated with a cheminite treatment.

DETAIL 1.1

DETAIL 1.2



DETAIL 1.1 & 1.2



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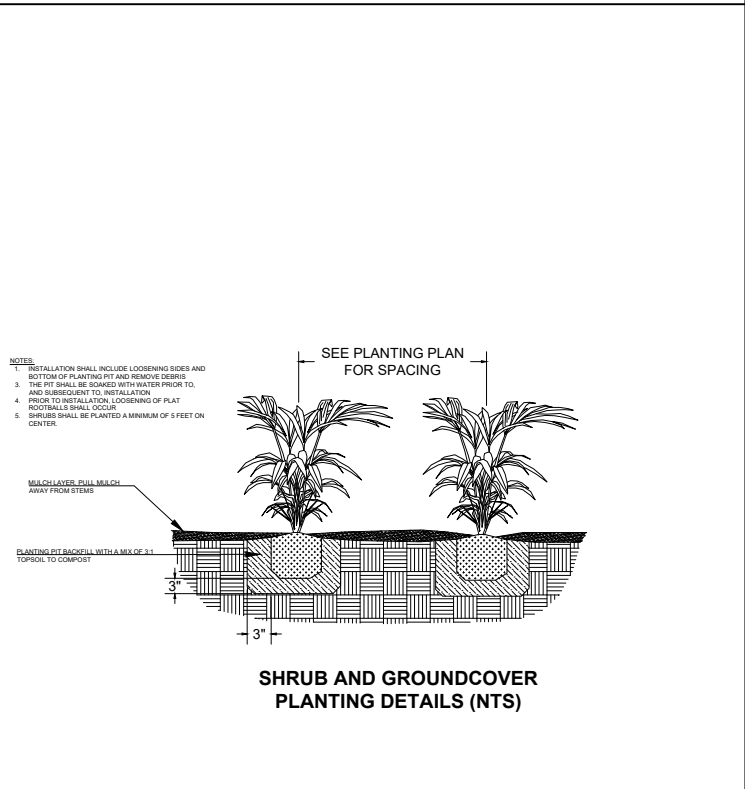
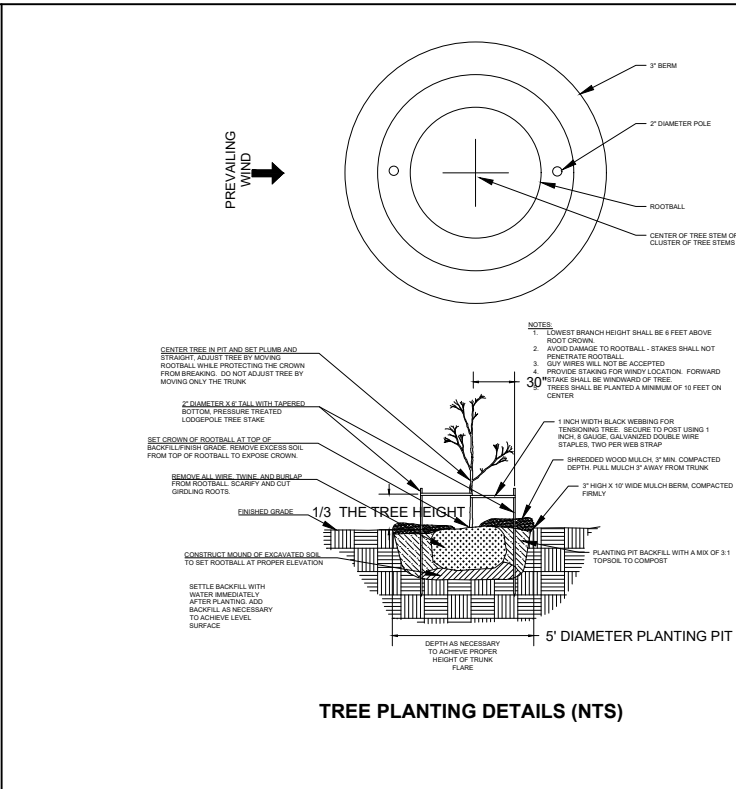
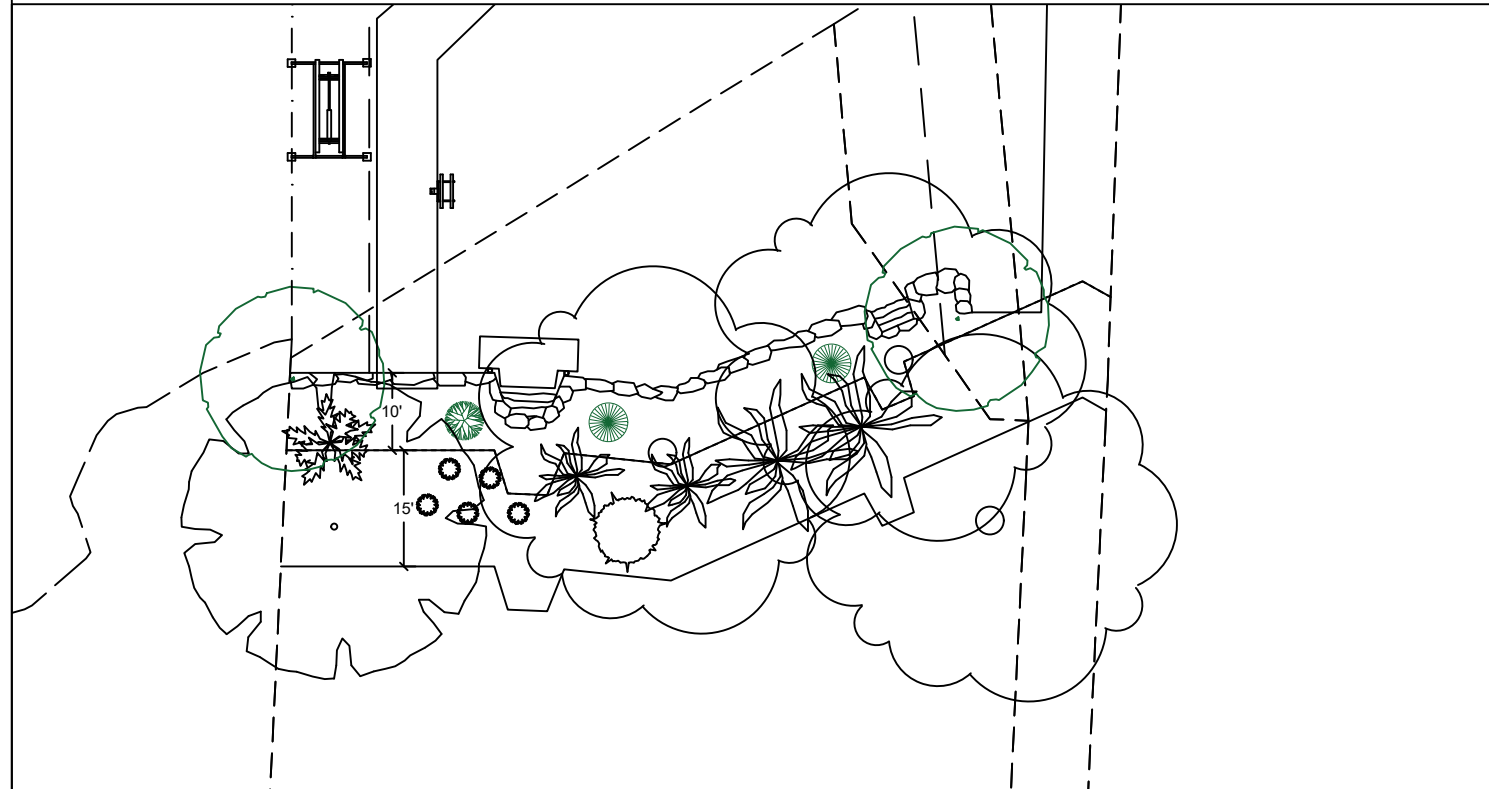
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MITIGATION PLAN



Notes:

1. Shrubs are show, and shall be planted, at least five feet on center. Trees are show, and shall be planted, at least ten feet to center.
2. The property owner will implement and abide by the shoreline planting plan. The plants shall be installed before or concurrent with the work authorized by this permit. A report, as-built drawing and photographs demonstrating the plants have been installed or a report on the status of project construction will be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch, within 12 months from the date of permit issuance. This reporting requirement may be met by completing and submitting a U.S. Army Corps of Engineers approved Report for Mitigation Work Completion form.
3. The property owner will maintain and monitor the survival of installed shoreline plantings for five years after the U.S. Army Corps of Engineers accepts the as-built report. Installed plants shall achieve 100% survival during monitoring Years 1 and 2. Installed plants shall achieve at least 80% survival during monitoring Years 3, 4 and 5. Percent survival is based on the total number of plants installed in accordance with the approved riparian planting plan. Individual plants that die will be replaced with native riparian species in order to meet the survival performance standards.
4. The property owner will provide annual monitoring reports for five years (Monitoring Years 1-5). Each annual monitoring report will include written and photographic documentation on plant mortality and replanting efforts and will document whether the performance standards are being met. Photos will be taken from established points and used repeatedly for each monitoring year. In addition to photos at designated points, photo documentation will include a panoramic view of the entire planting area. Submitted photos will be formatted on standard 8 1/2 x 11" paper, dated with the date the photo was taken, and clearly labeled with the direction from which the photo was taken. The photo location points will be identified on an appropriate drawing. Annual shoreline planting monitoring reports will be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch, by November 31 of each monitoring year. This reporting requirement may be met by completing and submitting a U.S. Army Corps of Engineers approved Mitigation Planting Monitoring Report form.

Request for credit of existing plant:

SYMBOL	SCIENTIFIC NAME	COMMON NAME	QTY
	Salix sitchensis	Sitka Willow	1

PROPOSED PLANTING SPECIES/QUANTITIES

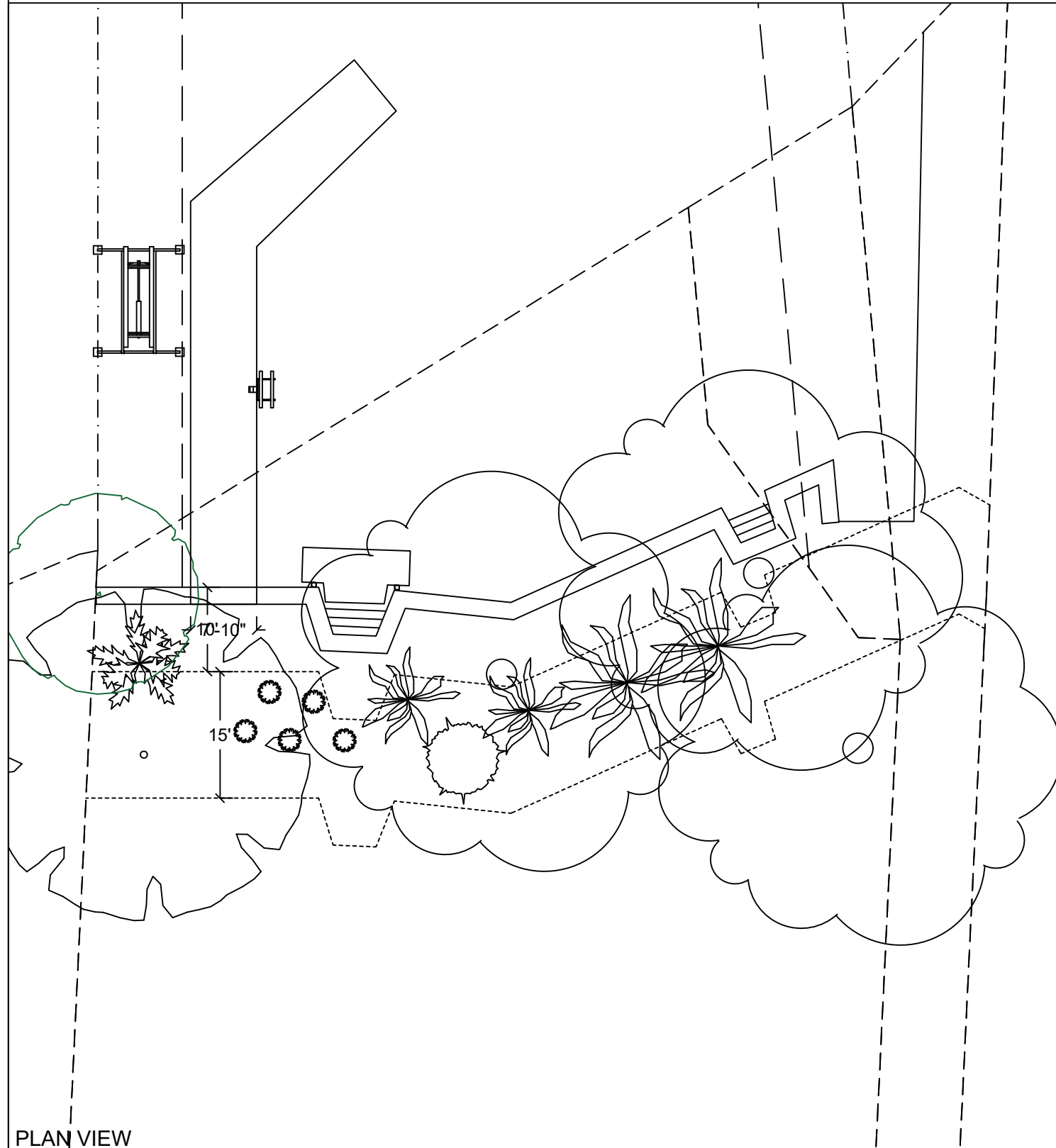
SYMBOL	LATIN NAME	COMMON NAME	QTY	SIZE
	Rosa Nutkana	Nootka Rose	1	1 Gallon
	Philadelphus lewisii	Mock Orange	2	1 Gallon
	Salix Sitchensis	Sitka Willow	1	5 ft

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EXISTING PLANT PLAN



PLAN VIEW

EXISTING PLANTING SPECIES/QUANTITIES

SYMBOL	SCIENTIFIC NAME	COMMON NAME	QTY	SIZE
	<i>Pinus contorta</i>	Lodgepole Pine	3	~30'
	<i>Wintercreeper euonymus</i>	Fortune's spindle	4	varies
	<i>Phorium tenex</i>	New Zealand flax	1	~5'
	<i>Salix sitchensis</i>	Sitka Willow	1	~15'
	<i>Pinus mugo</i>	Dwarf Mugo Pine	1	~8'
	<i>Muhlenbergia rigens</i>	Deergrass	6	~3'

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Created: 03/25/22
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**SHEET
A8.0**

GENERAL NOTES:

MATERIALS SPEC LIST:

Sewer:

- * All sewer is field verified by probing the lake bed manually during the allowed work windows for the area.

Piles:

- * Repair piles are done as a sleeve/strap method

CODE REFERENCES: Mercer Island

We are applying for the permit to be reviewed under the:

“Development Standards for Replacement, Repair and Maintenance of Overwater Structures, Including Moorage Facilities” per MIMC 19.13050(F)(2).

2. Development Standards for Replacement, Repair and Maintenance of Overwater Structures, Including Moorage Facilities. The maintenance, repair and complete replacement of legally existing overwater structures is permitted; provided, that:

i. All permit requirements of federal and state agencies are met;

N/A

ii. The area, width, or length of the structure is not increased, but may be decreased;

The structure is not being altered.

iii. The height of any structure is not increased, but may be decreased; provided, that the height above the OHWM may be increased as provided in subsection (F)(2)(ix)(b) of this section;

The height of the structure is not being altered.

iv. The location of any structure is not changed unless the applicant demonstrates to the director’s satisfaction that the proposed change in location results in: (A) a net gain in ecological function, and (B) a higher degree of conformity with the location standards for a new overwater structure;

The location of the structure is not being altered.

v. Piles shall not be treated with pentachlorophenol, creosote, CCA or comparably toxic compounds. If ammoniacal copper zinc arsenate (ACZA) pilings are proposed, the applicant shall meet all of the best management practices, including a post-treatment procedure, as outlined in the amended Best Management Practices of the Western Wood Preservers. All piling sizes are in nominal diameter; Any paint, stain or preservative applied to components of the overwater structure must be leach resistant, completely dried or cured prior to installation. Materials shall not be treated with pentochlorophenol, creosote, CCA or comparably toxic compounds;

Piles are being repaired with epoxy coated steel.

vii. The applicant shall abide by the work windows for listed species established by the U.S. Army Corps of Engineers and Washington Fish and Wildlife;

All work will be done within the work windows.

viii. Disturbance of bank vegetation shall be limited to the minimum amount necessary to accomplish the project. Disturbed bank vegetation shall be replaced with native, locally adapted herbaceous and/or woody vegetation. Herbaceous plantings shall occur within 48 hours of the completion of construction. Woody vegetation components shall be planted in the fall or early winter, whichever occurs first. The applicant shall take appropriate measures to ensure revegetation success; Ch. 19.13 Shoreline Master Program | Mercer Island City Code Page 29 of 34 The Mercer Island City Code is current through Ordinance 20C-13, passed June 16, 2020.

No bank vegetation will be disturbed.

ix. Structural Repair. The structural repair, which may include replacement of framing elements, of moorage facilities that results in the repair of more than 50 percent of the structure’s framing elements within a five-year period shall comply with subsections (F)(2)(ix)(a) through (F)(2)(ix)(c) of this section. For this section, framing elements include, but are not limited to, stringers, piles, pile caps, and attachment brackets, as shown in Figure D:

a. One hundred percent of the decking area of the pier, dock, and any platform lifts must be fully grated with materials that allow a minimum of 40 percent light transmittance;

The structure is not being altered.

b. The height above the OHWM for moorage facilities, except floats, shall be a minimum of one and one-half feet and a maximum of five feet; and

The structure is not being altered.

c. An existing moorage facility that is five feet wide or more within 30 feet waterward from the OHWM shall be replaced or repaired with a moorage face

The structure is not being altered.

Last permit issued for property: 0602-106 BLDG Permit

Dock established/constructed: 1997 (bulkhead), 1998 (dock)



Seaborn Pile Driving
1080 W Ewing St
Seattle, WA 98119

Office: 206-236-1700 ext. 3
www.seabornpiledriving.com

Scope of Work: We propose to repair (12) existing piles and replace the existing 115'- 9" wood bulkhead and stairs with new granite rock.

County: King County
Location: Lake Washington

Applicant: Skinner Residence
7601 W. Mercer Way
Mercer Island, WA 98040

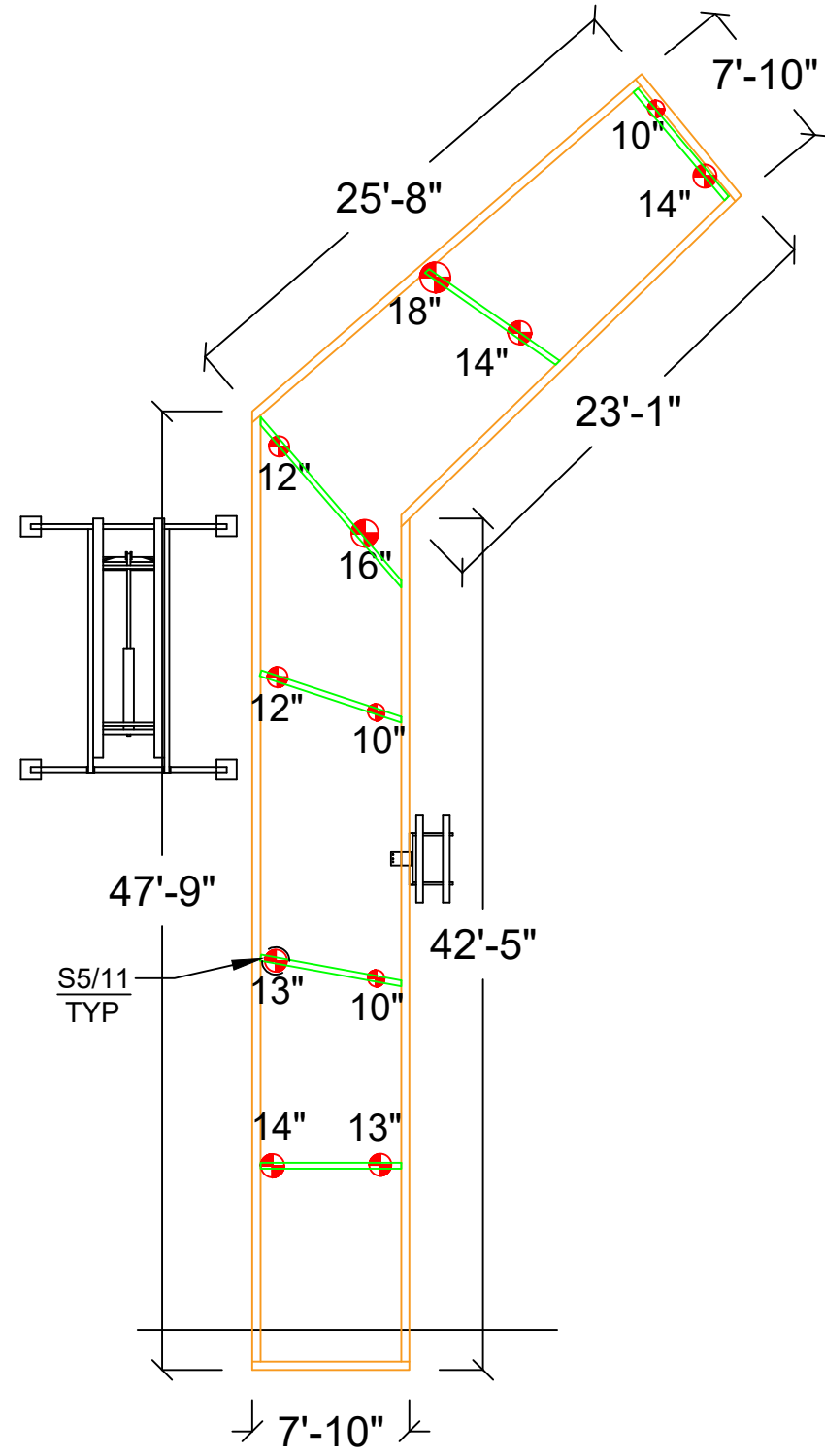
Datum: CORPS OF ENGINEERS 1919
SW Quarter Of Section 25, Township 24, Range 04

Adjacent Owners:
INKROCK HOLDING LIMITED
7617 W MERCER WAY 98040

BASSETT DOUGLAS E JR
7455 W MERCER WAY 98040

SHEET
A9.0

FRAMING PLAN



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DETAILS - REPAIR

S1 DETAIL NOT IN USE

S2 DETAIL NOT IN USE

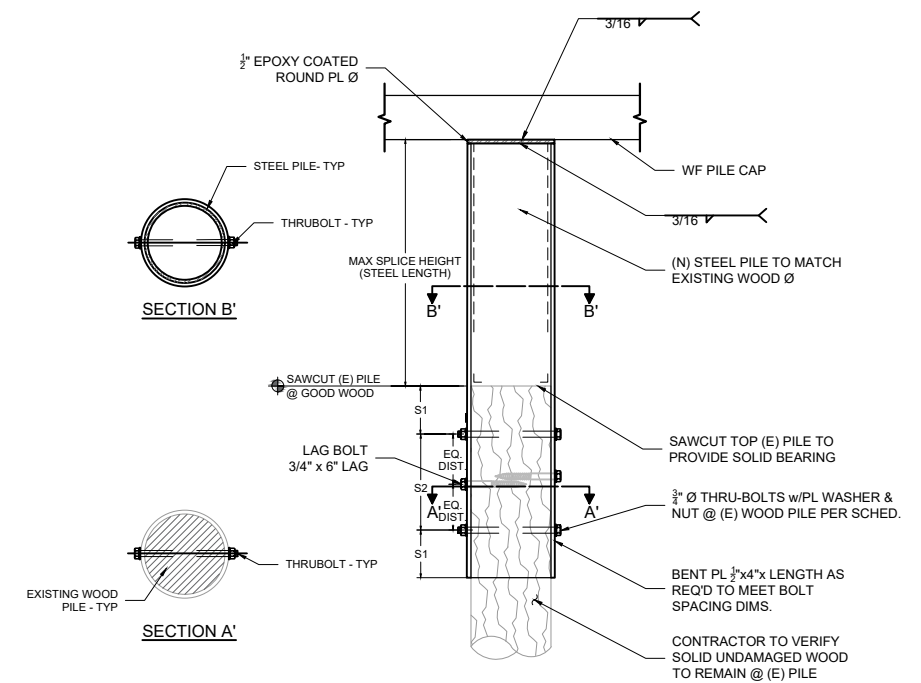
S3 DETAIL NOT IN USE

S4 DETAIL NOT IN USE

S5 SLEEVE PILE REPAIR - TYP
SCALE: 1/2" = 1'

STEEL SLEEVE TABLE				
PILE Ø	MAX SPLICE HEIGHT	S1	S2	S3
9"	15"	6"	12"	3"
12"+	28"	6"	12"	3"

- NOTES:
- 1) MAX PILE LOAD = 1,200 # / PILE (BOAT LOAD PARALLEL TO DOCK). CONTACT ENGINEERING IF BOAT SIZE EXCEEDS GENERAL NOTES MAXIMUM ALLOWABLE.
 - 2) MINIMUM BOLT SPACING = 3"
 - 3) STRAP AXIS SHALL BE ORIENTED PERPENDICULAR TO LONGITUDINAL AXIS OF DOCK.



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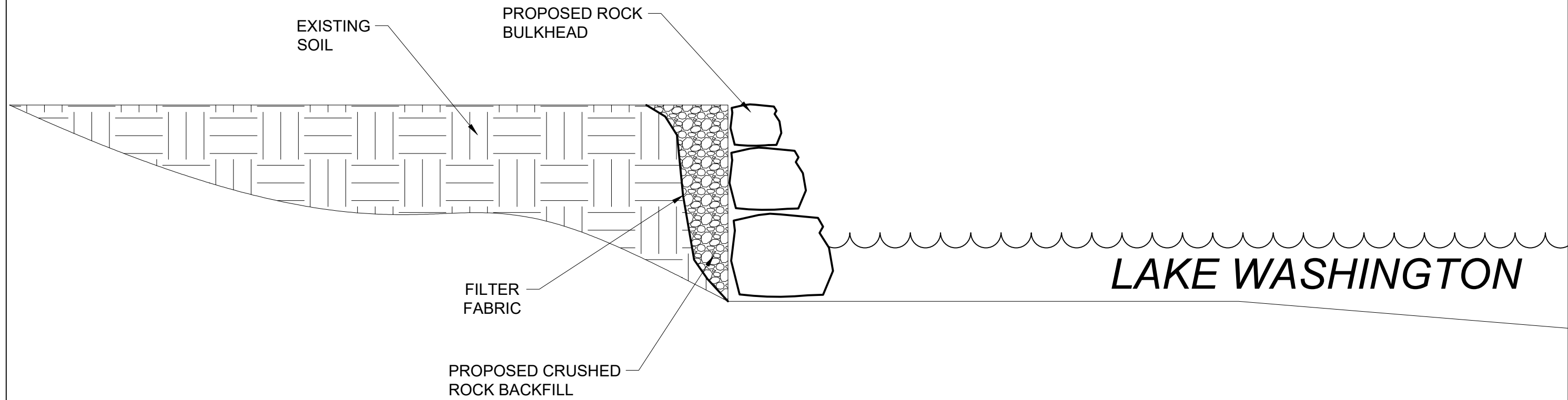
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BULKHEAD DETAIL



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IMPERVIOUS SURFACE CALCULATIONS

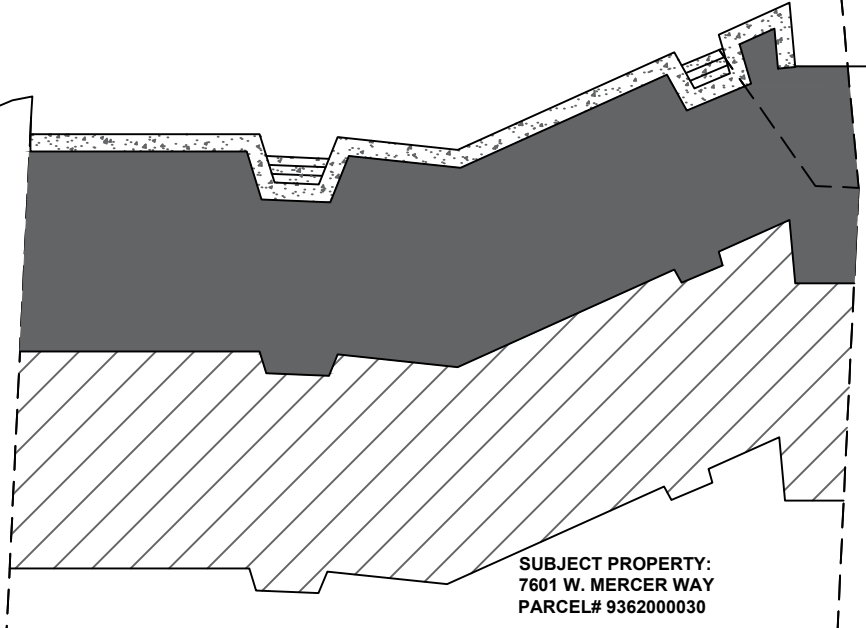
EXISTING

Allowed Impervious Quantities

SETBACK (sq ft)	% ALLOWED	COMPARABLE QUANTITIES	REMARKS	PROPOSED
0'-25' SETBACK (2387.4073 sq ft)	50%	10.7271% (257.1879 sq ft)	0%	10.7271% (257.1879 sq ft)
25'-50' SETBACK (2382.2152 sq ft)	20%	0% (0 sq ft)	0%	0% (0 sq ft)
50'-100' SETBACK (2382.2152 sq ft)	0%	0% (0 sq ft)	0%	0% (0 sq ft)

LEGEND

DESCRIPTION	AREA	MATCH
25'-50' SETBACK	2382.2152 sq ft	[Diagonal Hatching]
0'-25' SETBACK	2387.4073 sq ft	[Solid Grey]
BULKHEAD - CONCRETE 25' SETBACK	257.1879 sq ft	[Stippled]

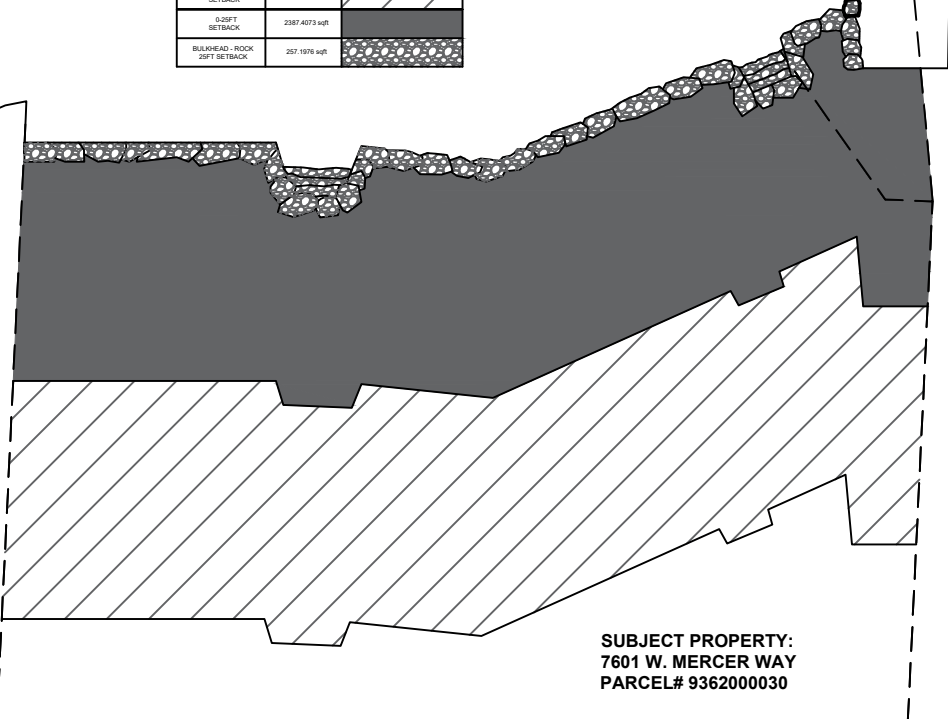


SUBJECT PROPERTY:
7601 W. MERCER WAY
PARCEL# 9362000030

PROPOSED

LEGEND

DESCRIPTION	AREA	MATCH
25'-50' SETBACK	2382.2152 sq ft	[Diagonal Hatching]
0'-25' SETBACK	2387.4073 sq ft	[Solid Grey]
BULKHEAD - ROCK 25' SETBACK	257.1879 sq ft	[Stippled]



SUBJECT PROPERTY:
7601 W. MERCER WAY
PARCEL# 9362000030



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Appendix B: Site Photographs



Photo 1 - Existing dock looking waterward.



Photo 2 - Existing dock looking landward.



Photo 3 - Shoreline conditions looking north of the dock. Bulkhead to be replaced.



Photo 4 - Shoreline conditions looking south of the dock. Bulkhead to be replaced.



Photo 5 - Shoreline conditions north of the site.



Photo 6 - Shoreline conditions south of the site.