Ecological No Net Loss Assessment Report

Prepared for

Sam Leclercq 4548 E Mercer Way Mercer Island, WA 98040

Prepared by

W Northwest Environmental Consulting, LLC

Northwest Environmental Consulting, LLC 600 North 36th Street, Suite 423 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) 19.07.110 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 extension and repair.

Location

The subject property is located at 4548 E Mercer Way (King County parcel number 1824059033) in the City of Mercer Island, Washington (see Appendix A – Sheet A1.0). The parcel is on the waterfront of Lake Washington, a shoreline of the state, that contains several endangered fish species listed under the Endangered Species Act and Washington State designated priority fish species.

Project Description

The proposed work includes permitting an existing unpermitted platform lift, a new boat lift, and two dock mounted personal watercraft lifts. No work is being proposed to the existing bulkhead or dock. (See Appendix A – Sheets 2.0 - 6.0)

During construction, a floating boom will surround the work barge and work area. (See Appendix A – Sheets A7.0)

A shoreline vegetation plan is proposed, that will add 2 native trees and 4 native shrubs. These shoreline plantings will provide shade and allow allochthonous material to enter the lake along the shoreline and improve shoreline conditions (see Appendix A – Sheet A8.0).

Approach

Northwest Environmental Consulting LLC (NWEC) biologist Brad Thiele conducted a site visit on August 16, 2022 to evaluate conditions on site and adjacent to the site. NWEC 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=PubM aps)

Site Description

The subject property is a shoreline tract in a residential neighborhood. It has shoreline on its eastern boundary with single-family homes to the north and south also with lake front access.

The only existing structures on the property are the house and the existing dock. The yard is landscaped with beds and lawn. The lawn extents to the landward side of the bulkhead and no plantings are present along the shoreline.

The shoreline is bulkhead with a concrete bulkhead with steps down into the water north of the dock. A chain-link fence is present along the top of bulkhead. Shoreline substrates include mostly sand along the bulkhead shifting to sands and gravels about 10 feet from shore. Milfoil was present starting about 120 feet from shore.

The neighboring properties include armored shoreline, lawn, and landscaped beds. See attached photos in Appendix B – Photos.

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 migrate and 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. The shoreline is or is close to a mapped sockeye salmon spawning location.

Priority Habitats and Species mapping does not show any other aquatic or terrestrial occurrences within 1,500 feet of the project location.

The Mercer Island GIS does not show any environmental layers on or on the adjacent properties.

Project Impacts and Conservation Measurements

Direct Impacts:

Sediments: Sediment disturbance will occur below the OHWM and along the shoreline of Lake Washington lift installation and relocation. Additionally, the tug and barge propwash may disturb sediments temporarily when making trips to/from the site.

Impacts to sediments should be negligible as any movement of the lifts is done by lifting and not dragging the lift. The lift is set gently on the bottom using the crane and will not result in much bottom substrate disturbance.

Shoreline: Planting additional native vegetation, especially a native western red cedar and shorepine, 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 A8.0).

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 impact to the aquatic environment is expected to be reduced because a crew competent using spill containment measures will be on site and employ these measures should a spill occur.

Indirect Impacts:

Shading: The lifts will not contribute to shading significantly.

Recreational Boating: The project supports continued recreational boating, which has been identified as a limiting factor for salmonid populations in Lake Washington. The new moorage 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 April 30). 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.

Best Management Practices: Applicable BMPs will be used, such as a floating boom 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 containment materials 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.

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. The work is considered minor and these impacts will be temporary with negligible effects. The new free standing lifts will be place as far from shore as possible in water about 7 feet or deeper.

A shoreline planting plan will be implemented and will add native trees and shrubs to the shoreline that will provide natural shading, allochthonous food sources and will eventually be a source of woody materials and will improve shoreline conditions at the site in the long-term to offset temporary construction impacts. The planting includes 2 native trees and 4 native shrubs.

The project will minimize construction effects on the environment by following the prescribed fish window and using applicable BMPs to prevent construction spills, turbidity, 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 residential dock standards and will use Best Management Practices to reduce project impacts during construction. The conservation measures are designed to improve ecological functions or prevent further degradation of habitat. The project will improve shoreline conditions, reduce overwater coverage in the nearshore and reduce effective overwater coverage at the site. The proposed project has been designed to improve baseline ecological conditions at the site **and will result in No Net Loss of ecological functions**.

Document Preparers

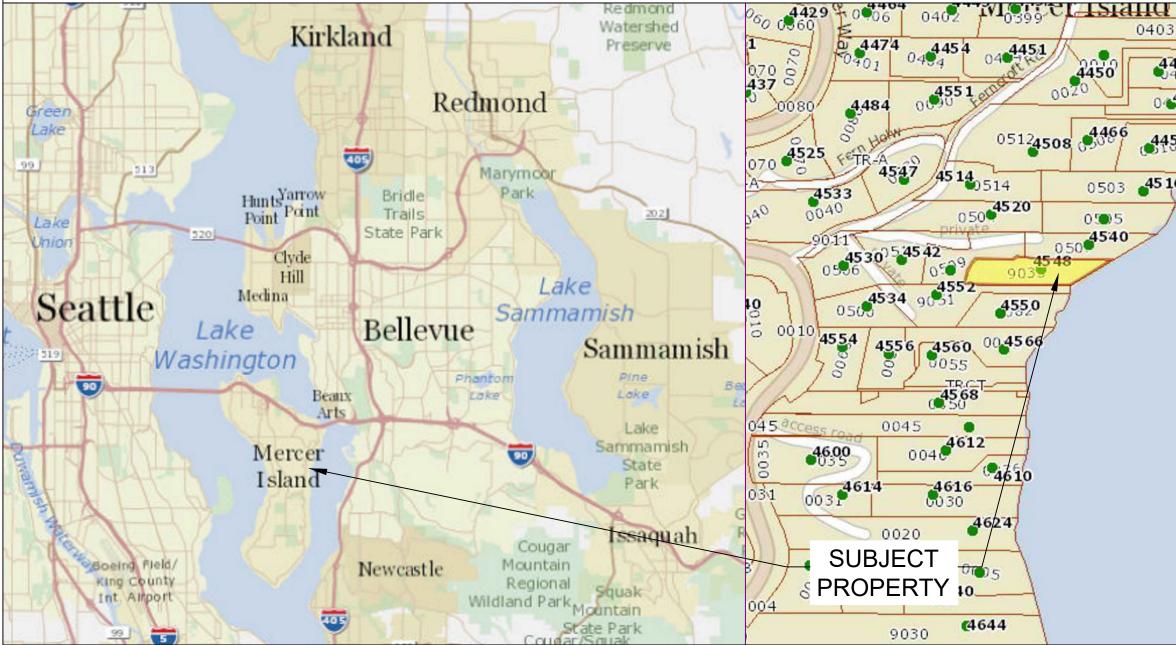
Brad Thiele	Biologist	28 years of experience	Northwest Environmental
			Consulting, LLC (NWEC)

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.

- King County. 2022. King County iMap. Online database. Accessed March 2022 at https://gismaps.kingcounty.gov/iMap/
- Washington Department of Fish and Wildlife (WDFW). 2022. Priority Habitats and Species. Online database. Accessed April 2021 at http://apps.wdfw.wa.gov/phsontheweb/
- WDFW. 2022. SalmonScape. Online database. Accessed March 2022 at http://apps.wdfw.wa.gov/salmonscape/

Appendix A: Project Drawings

SITE PLAN

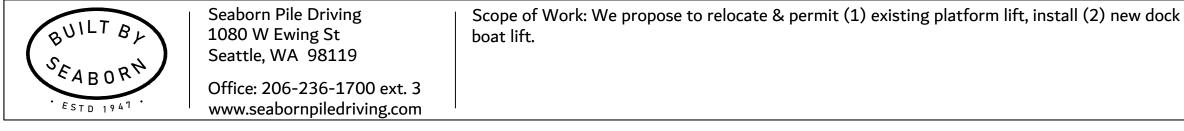


Pin: 182405-9033

Legal Description: LOT 2 & SH LDS ADJ MERCER ISLAND SHORT PLAT NO 84-0415 REC NO 840625-9006 SD SHORT PLAT DAF - 560 FT OF TR 6 & OF GL 2 IN SE 1/4 18-24-5 LY ELY & NLY OF LN BAA MERCER WAY TH N89-16-30E ALG SD S LN TAP ON SELY LN OF FERNCROFT RD AF 5999004 DIST N 89-16-30 E 1150 FT M/L FR SW COR SD TR 6 TH NELY ALG SD SELY LN 103.17 FT M/L TO NELY L 65.16 FT TAP ON S LN SD TR 6 TH S 47-19-30 E 87.86 FT TH N 89-16-30 E TO SH LN OF LAKE & TERM SD LN

Plat Block: Plat Lot:

LAT: 47.56444 LONG: -122.20957



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k mounted PWC lifts, and inst	all (1) new	SHEET	1.0
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GENERAL NOTES:

MATERIALS SPEC LIST:

Boat Lifts:

- * SL8012ARW 146" x 167"
- * Dock mounted PWC lift 34"x16"

Sewer:

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

CODE REFERENCES: Mercer Island

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

"Alternative Development Standards" per MIMC 19.13050(F)(3).

The code official shall approve moorage facilities not in compl subsection (F)(1) or (F)(2) of this section subject to both U.S. A Department of Fish and Wildlife approval to an alternate proje other applicable provisions in this chapter shall be met:

i. The dock must be no larger than authorized through state an Master Program | Mercer Island City Code Page 30 of 34 The N Ordinance 20C-13, passed June 16, 2020.

The dock is not being altered.

ii. The maximum width must comply with the width of moorage specified in subsection D of this section (Table D);

N/A

iii. The minimum water depth must be no shallower than auth

N/A

iv. The applicant must demonstrate to the code official's satisf create a net loss in ecological function of the shorelands; and

The No Net Loss report is attached.

v. The applicant must provide the city with documentation of the U.S. Army Corps of Engineers and the Washington Departm

The plan is under review by the CORPS and WDFW.

Mitigation Disturbance of bank vegetation shall be limited to the m project. Disturbed bank vegetation shall be replaced with native, low vegetation. Herbaceous plantings shall occur within 48 hours of the components shall be planted in the fall or early winter, whichever o measures to ensure revegetation success;

Last permit issued for property: 1410-015 Building Permit on 10/2 Dock established/constructed: 7/27/1984

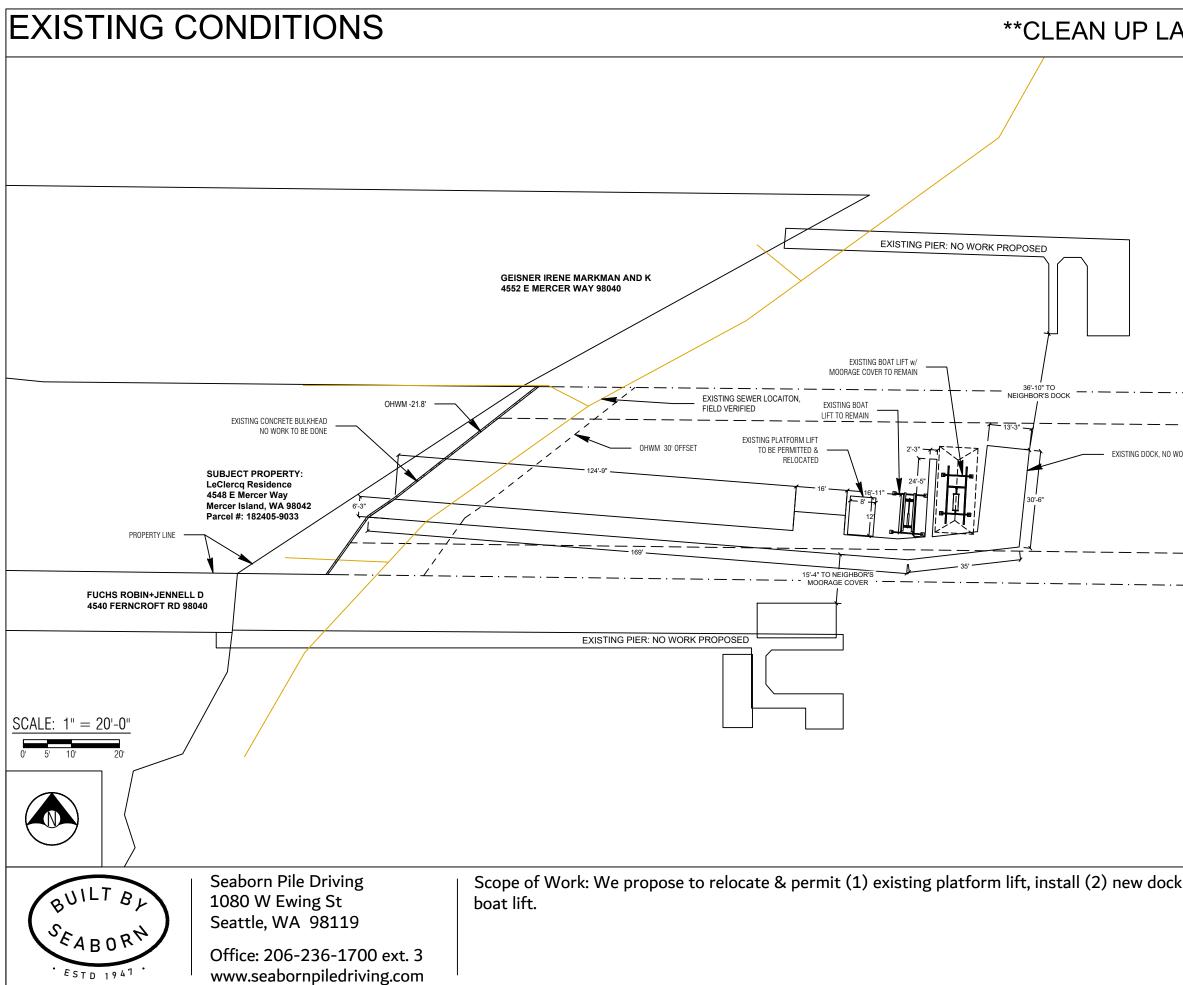


Seaborn Pile Driving 1080 W Ewing St Seattle, WA 98119 Office: 206-236-1700 ext. 3

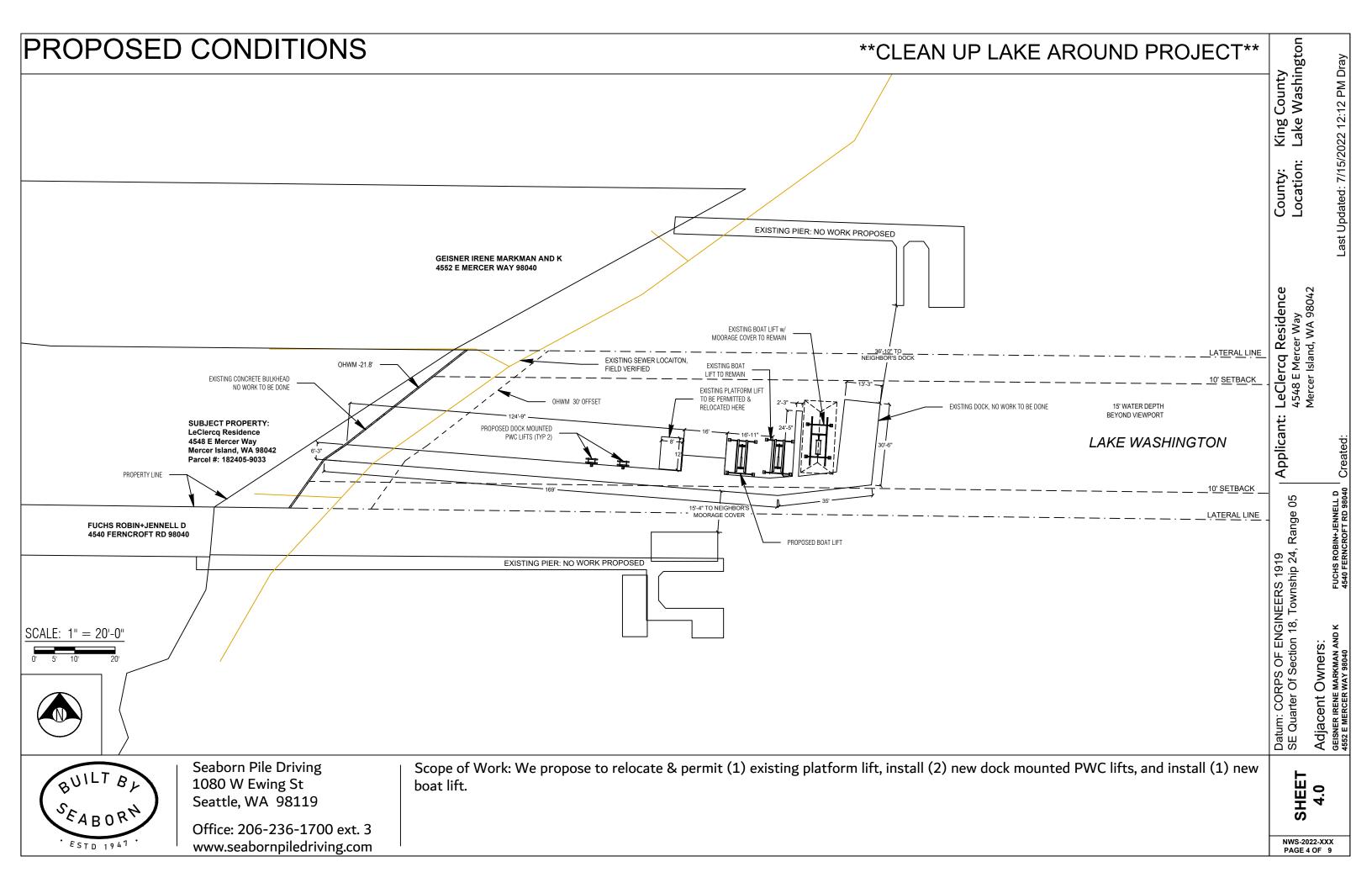
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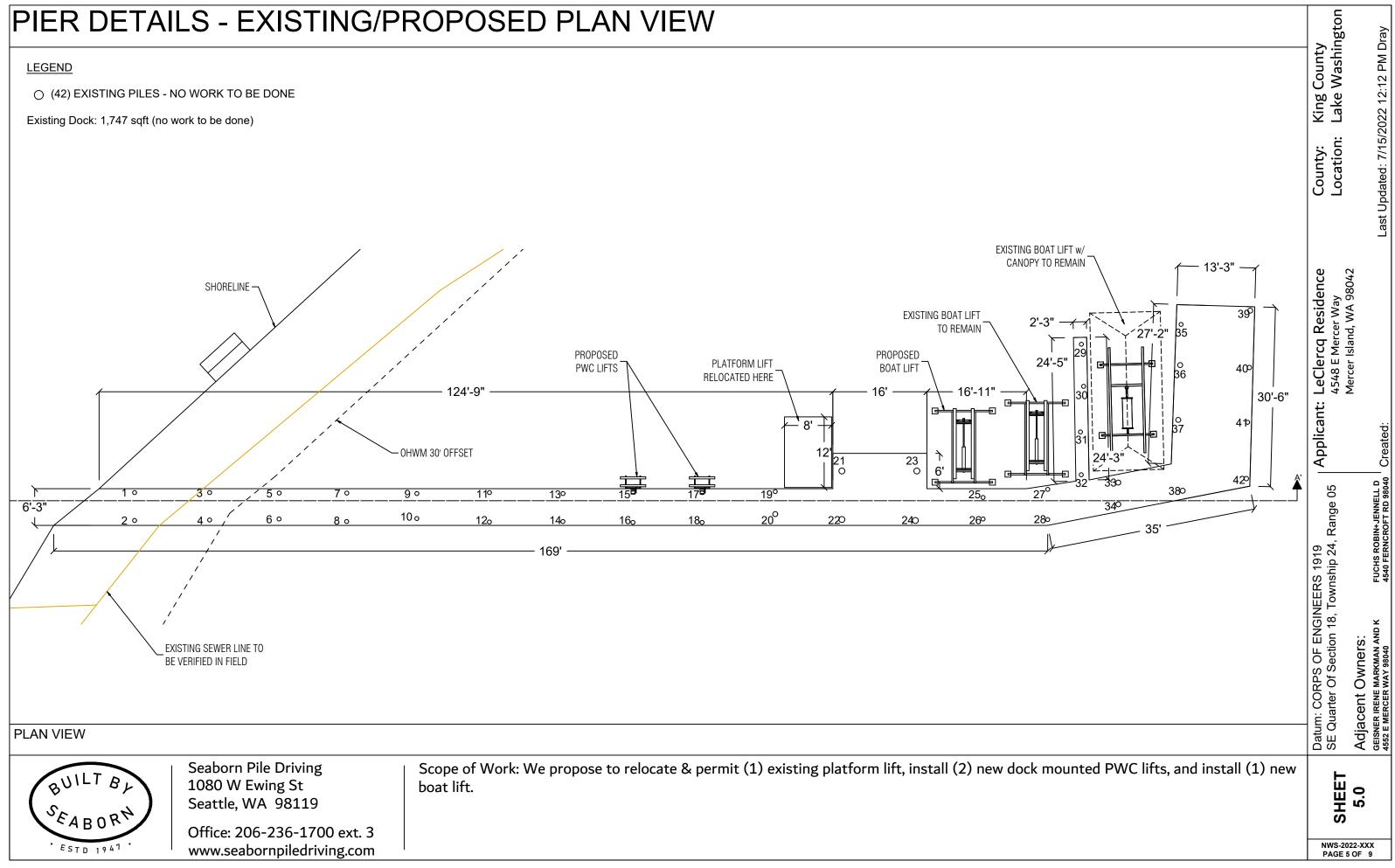
Scope of Work: We propose to relocate & permit (1) existing platform lift, install (2) new dock boat lift.

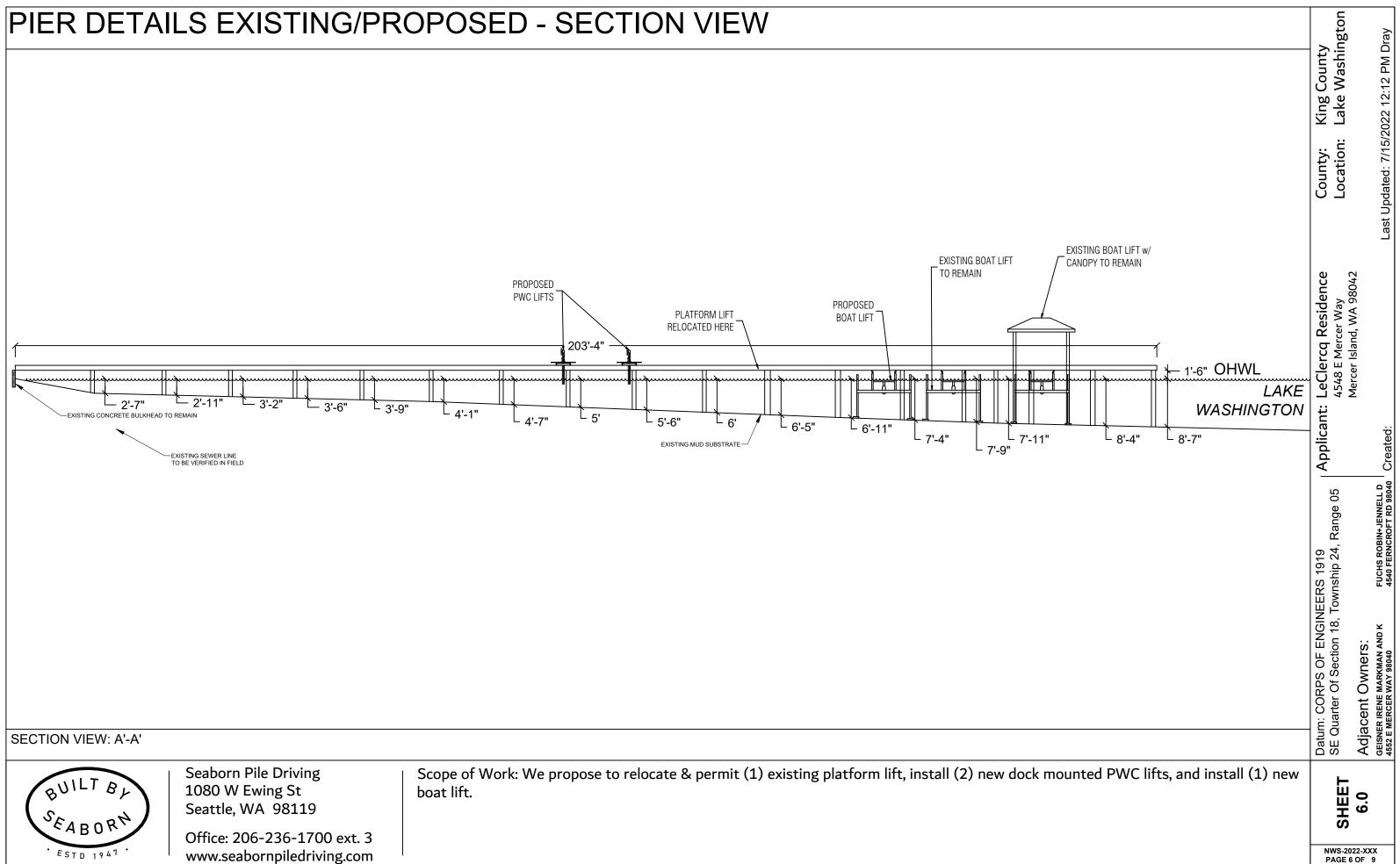
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of approval of the moorage facilities by both	Created:
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Army Corps of Engineers and Washington fect design. The following requirements and all and federal approval; Ch. 19.13 Shoreline Mercer Island City Code is current through	Last Updated: 7/
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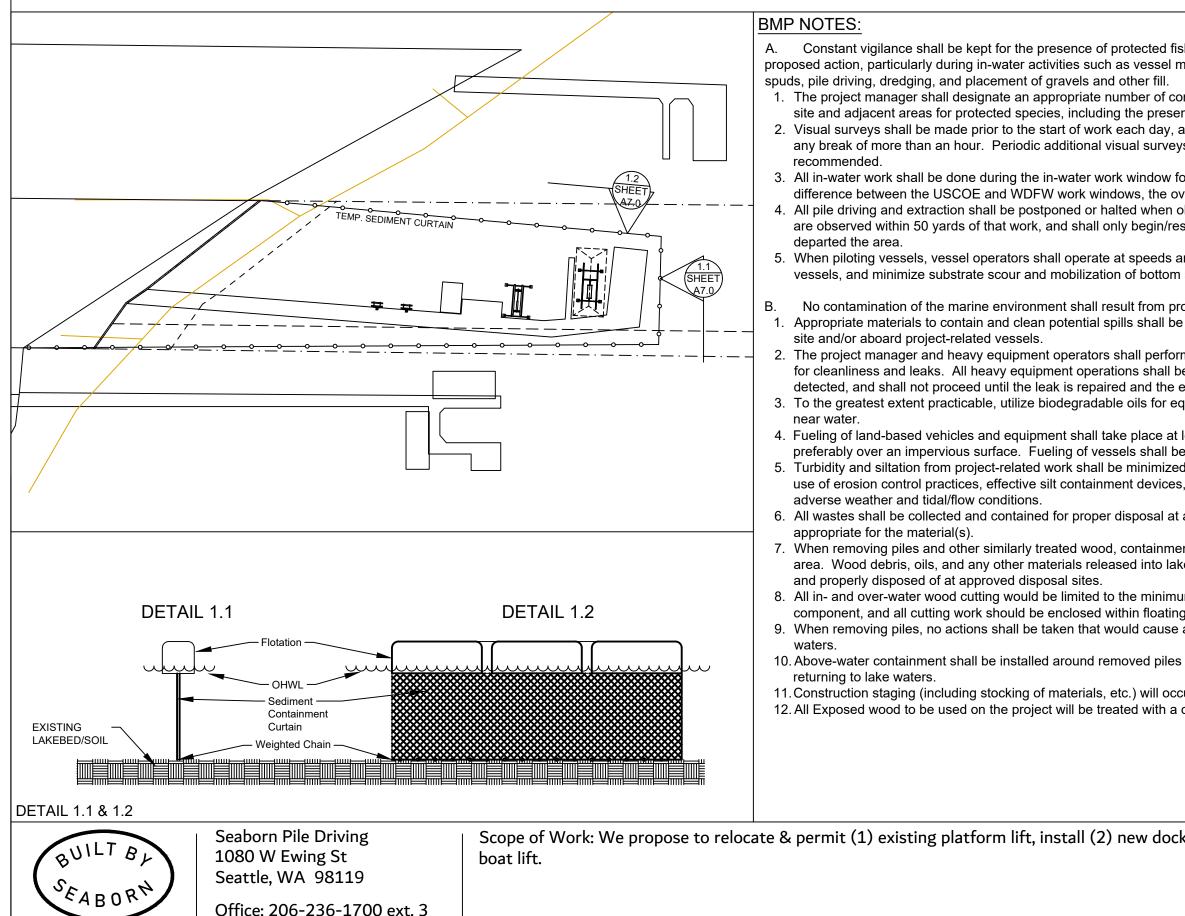






BMP INFORMATION

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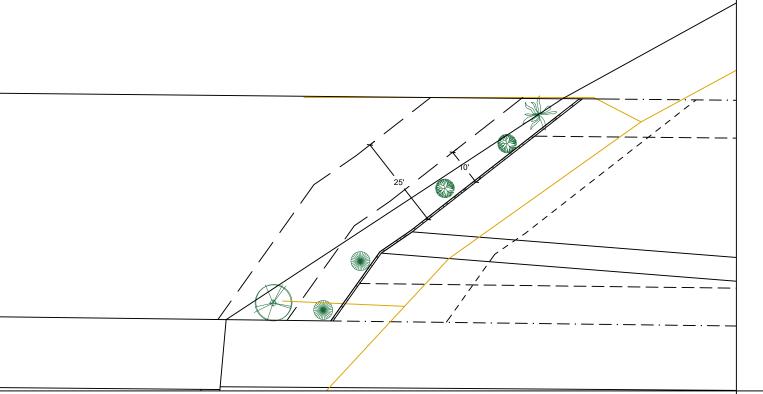
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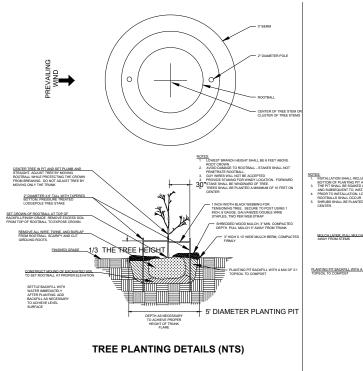
Constant vigilance shall be kept for the presence of protected fisl proposed action, particularly during in-water activities such as vessel m spuds, pile driving, dredging, and placement of gravels and other fill.

- 1. The project manager shall designate an appropriate number of con site and adjacent areas for protected species, including the preser
- 2. Visual surveys shall be made prior to the start of work each day, a any break of more than an hour. Periodic additional visual surveys recommended.
- 3. All in-water work shall be done during the in-water work window for difference between the USCOE and WDFW work windows, the over
- 4. All pile driving and extraction shall be postponed or halted when ol are observed within 50 yards of that work, and shall only begin/res departed the area.
- 5. When piloting vessels, vessel operators shall operate at speeds a vessels, and minimize substrate scour and mobilization of bottom
- No contamination of the marine environment shall result from pro
- 1. Appropriate materials to contain and clean potential spills shall be site and/or aboard project-related vessels.
- 2. The project manager and heavy equipment operators shall perforn for cleanliness and leaks. All heavy equipment operations shall be detected, and shall not proceed until the leak is repaired and the ed
- 3. To the greatest extent practicable, utilize biodegradable oils for eq near water.
- 4. Fueling of land-based vehicles and equipment shall take place at l preferably over an impervious surface. Fueling of vessels shall be
- 5. Turbidity and siltation from project-related work shall be minimized use of erosion control practices, effective silt containment devices. adverse weather and tidal/flow conditions.
- 6. All wastes shall be collected and contained for proper disposal at appropriate for the material(s).
- 7. When removing piles and other similarly treated wood, containment area. Wood debris, oils, and any other materials released into lake and properly disposed of at approved disposal sites.
- 8. All in- and over-water wood cutting would be limited to the minimum component, and all cutting work should be enclosed within floating
- 9. When removing piles, no actions shall be taken that would cause waters.
- 10. Above-water containment shall be installed around removed piles returning to lake waters.
- 11. Construction staging (including stocking of materials, etc.) will occu
- 12. All Exposed wood to be used on the project will be treated with a c

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h species during all aspects of the novement, deployment of anchors & mpetent observers to survey the project	King County Lake Washington		Last Updated: 7/15/2022 12:12 PM Dray
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or the waterbody. Where there is a rerlap of the two shall apply. bvious aggregations or schooling of fish sume after the animals have voluntarily	Lo Co		Last Updat
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n daily pre-work equipment inspections e postponed or halted should a leak be equipment is cleaned. uipment that would be operated in or	LeClercq Residence 4548 E Mercer Way	Mercer Island, WA 98042	
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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.

PROPOSED PLANTING SPE

SYMBOL	LATIN NAME	C
	Thuja plicata	W
	Pinus contorta v contorta	
	Rosa nutkana	
	Philadelphus lewisii	

PLANTS: Shrubs to be installed 5ft on center and trees to existing plants for credit have been established for 5 year

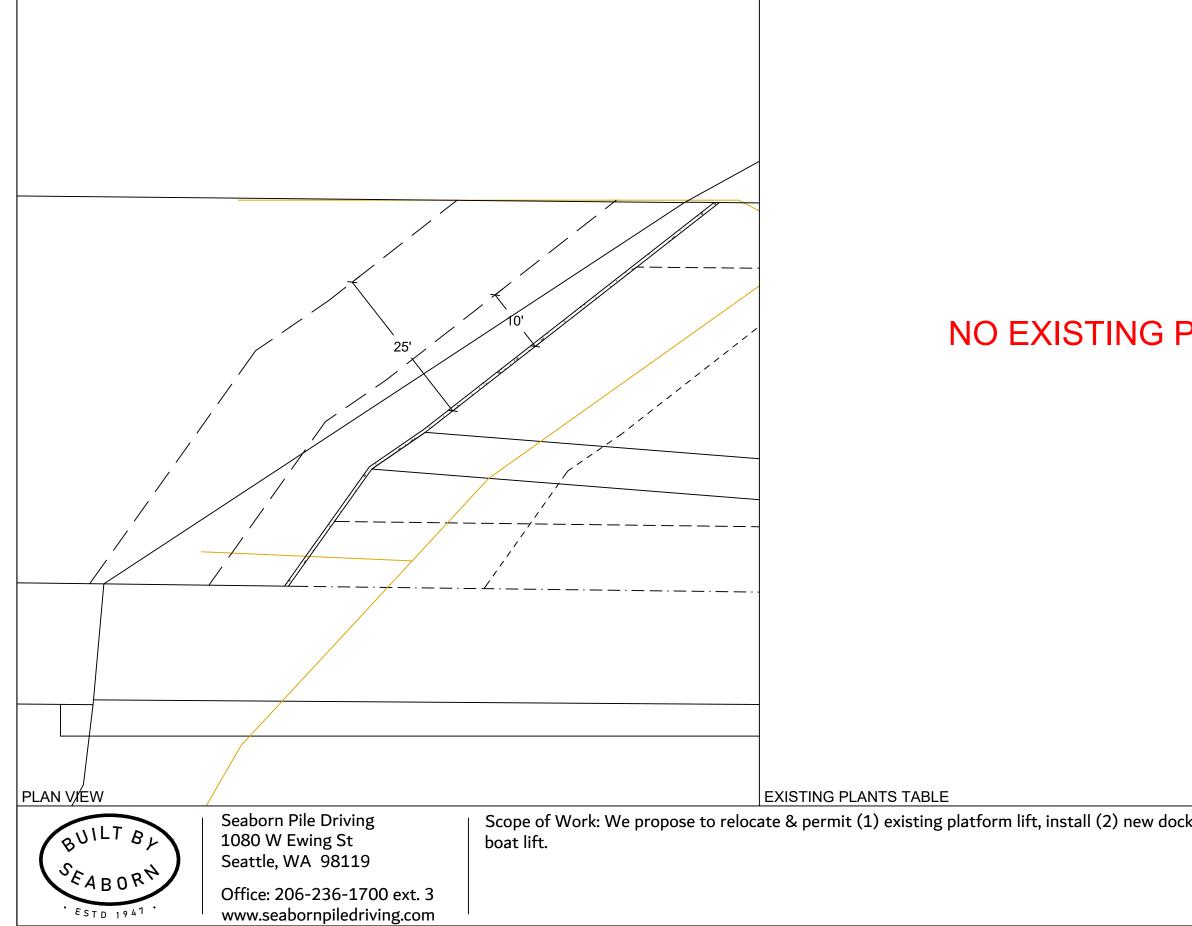
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EXISTING PLANT PLAN



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Appendix B: Site Photographs



Photo 1 - Existing dock looking waterward.



Photo 2 - Existing dock looking landward.



Photo 3 - Existing shoreline conditions looking north.



Photo 4 - Existing shoreline conditions looking south.



Photo 5 - Shoreline conditions north of the project site.



Photo 6 - Existing shoreline conditions south of the project site.