PORT OF ILWACO

Marine Structures Replacement

Ilwaco, WA

Appendix A7

WDFW HPA Permit No. 2024-6-66+01

State of Washington
Department of Fish and Wildlife
Mailing Address: PO Box 43234, Olympia, WA 98504-3234, (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia, WA

March 22, 2024

Moffatt & Nichol
Victoria England
600 University St
Seattle, WA 98101-4117

Dear Victoria England:

SUBJECT: YOUR APPLICATION FOR PORT OF ILWACO EAST BULKHEAD RESILIENCE PROJECT, WDFW APPLICATION ID: 32313

On January 10, 2024, the Washington Department of Fish and Wildlife (WDFW) first received your application materials for a Hydraulic Project Approval (HPA) for the project referenced above.

Your request for a minor modification of your existing HPA has been approved. You are authorized to conduct work through February 28th, 2025.

The new work window for each calendar year will be July 15th to February 28th. No other changes to this HPA are authorized through this letter.

Please attach this letter to your HPA on-site.

For additional guidance and information about the HPA application process, please visit WDFW's HPA website at https://wdfw.wa.gov/licenses/environmental/hpa.

If you have any questions, please call me at 360-480-2558.

Sincerely,

Lauren Bauernschmidt
Habitat Biologist

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: February 22, 2024
Project End Date: February 15, 2027

Permit Number: 2024-6-66+01
FPA/Public Notice Number: N/A
Application ID: 32313

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Port of Ilwaco	Moffatt & Nichol
ATTENTION: Tracy Lofstrom	ATTENTION: Victoria England
PO Box 307	600 University St
Ilwaco, WA 98624	Seattle, WA 98101-4117

Project Name: Port of Ilwaco East Bulkhead Resilience Project

Project Description: The proposed Port of Ilwaco East Bulkhead Resilience Project (herein referred to as the 'Project') would consist of three primary elements;

1. Replacing the failing east bulkhead with an anchored steel sheetpile bulkhead (Preferred Alternative)
2. Repairing slope protection north and south of the bulkhead an raising top of slope at the head of the slip approximately 1.5 feet to accommodate future sea level rise resilience.
3. Paving and regrading the upland wharf area (access driveway) directly landward of the bulkhead to mitigate the effects of sea level rise.

As part of the above elements, creosote-treated timber that configures the external wall of the existing bulkhead and retaining wall will be removed along with select derelict creosote-treated piles next to the bulkhead. Additional derelict creosote piles and cross members will be removed from the slip adjacent to the bulkhead as mitigation for Project impacts resulting from drainage rock fill placement between the existing bulkhead and the new bulkhead necessary to maintain water pressure equilibrium on both sides of the bulkhead. The removal of creosote from the marine environment will also mitigate for impacts associated with the riprap shoreline protection that is proposed to replace the derelict creosote treated timber revetment/retaining wall and associated elements. A fish mix gravel layer will be placed between HTL and the toe of the riprap on the surface of the rip rap slope protection at the head of the slip to provide beach nourishment and habitat improvements for fish passing through the marina as mitigation for Project impacts. Additionally, an approximately 2,510 sf area of derelict timber floats floating timber debris will be removed from the south portion of the marina as mitigation for Project impacts.

PROVISIONS

AUTHORIZED WORK TIMES

1. TIMING LIMITATION: To protect fish and shellfish habitats at the job site, work below the ordinary high water line must occur from July 1st and February 15th of any year.

2. APPROVED PLANS: Work must be accomplished per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled "rev2024Jan_213282 ILWACO-BH_JARPA figs_REV3_VRE.pdf" and uploaded on January 10th, 2024, except as modified by this Hydraulic Project Approval (HPA). You must have a copy of these plans and this HPA available on site during all phases of the project construction.

HYDRAULIC PROJECT APPROVAL

Issued Date: February 22, 2024
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FPA/Public Notice Number: N/A
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NOTIFICATION

3. PRE- AND POST-CONSTRUCTION NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting work, and again within seven days after completing the work. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will notify you or your agent before conducting the inspection.

4. PHOTOGRAPHS: You, your agent, or contractor must take photographs of the job site before the work begins and after the work is completed. You must upload the photographs to the post-permit requirement page in the Aquatic Protection Permitting System (APPS) or mail them to Washington Department of Fish and Wildlife at Post Office Box 43234, Olympia, Washington 98504-3234 within 30-days after the work is completed.

5. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS AND EQUIPMENT

6. Establish the staging area (used for activities such as equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants like petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

7. Check equipment daily for leaks and complete any required repairs before using the equipment in or near the water.

8. Lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols are recommended for use in equipment operated in or near water.

9. Operate vessels with minimal propulsion power to avoid prop scour damage to the bed and marine vegetation habitats.

10. Operate vessels during tidal elevations that are adequate to prevent grounding of the barge.

11. Do not stockpile construction material waterward of the ordinary high water line.

CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

12. Do not conduct project activities when the work area is inundated by tidal waters.

13. Containment booms are required during all in-water work.

14. Prevent contaminants from the project, such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials, from entering or leaching into waters of the state.

15. Use tarps or other methods to prevent treated wood, sawdust, trimmings, drill shavings and other debris from contacting the bed or waters of the state.

CONSTRUCTION MATERIALS

16. Do not use native bed material, other than material excavated for bulkhead footings or placement of bulkhead base rock, for project construction or fills.

17. To prevent leaching, construct forms to contain any wet concrete. Place impervious material over any exposed wet concrete that will come in contact with waters of the state. Forms and impervious materials must remain in place until

the concrete is cured.

18. Do not use wood treated with oil-type preservative (creosote, pentachlorophenol) in any hydraulic project. Wood treated with waterborne preservative chemicals (ACZA, ACQ) may be used if the Western Wood Preservers Institute has approved the waterborne chemical for use in the aquatic environment. The manufacturer must follow the Western Wood Preservers Institute guidelines and the best management practices to minimize the preservative migrating from treated wood into aquatic environments. To minimize leaching, wood treated with a preservative by someone other than a manufacturer must follow the field treating guidelines. These guidelines and best management practices are available at www.wwpinstitute.org.

BULKHEAD - TIMBER

19. Remove the existing timber bulkhead from the beach and deposit the bulkhead in an upland area above the limits of extreme high tide waters.

BULKHEAD - ROCK

20. As shown in the approved plans, the length of the new rock bulkhead must not exceed 95 ft.

21. Establish the waterward distance of the rock bulkhead from a permanent benchmark(s) (fixed objects) before starting work on the project. The benchmarks must be located and shown on supporting documents, marked in the field, and protected to serve as a post-project reference for ten years.

22. The waterward face of the rock bulkhead must be located no further waterward than the face of the existing functioning timber bulkhead as shown in the approved plans.

23. Build the rock bulkhead using clean, angular material of a sufficient durability and size to prevent its being broken up or washed away by high water or wave action.

BULKHEAD - SHEETPILE

24. The length of the new sheetpile bulkhead must not exceed 225 feet as shown in the approved plans.

25. Establish the waterward distance of the sheetpile bulkhead from a permanent benchmark(s) (fixed objects) before starting work on the project. The benchmarks must be located and shown on the approved plans, marked in the field, and protected to serve as a post-project reference for ten years.

26. The waterward face of the sheetpile bulkhead must be immediately waterward of and directly abutting the existing timber bulkhead. It must not encroach further waterward of the existing bulkhead than the thickness of the 3 inch sheetpile wall.

PILE REMOVAL & DRIVING

27. Remove the 67 creosote and steel existing piling and dispose of them in an upland area above extreme high tide waters.

28. The use of both a vibratory and/or an impact hammer is authorized for sheet pile installation under this Hydraulic Project Approval, however a vibratory driver is preferred.

29. Use appropriate sound attenuation when driving or proofing steel piling with an impact hammer.
a. For driving or proofing steel piling, 10 inches in diameter or less, install a 6 inch thick wood block, plastic or rubber between the piling and the impact hammer during impact pile driving operations or install a pile sleeve or bubble curtain around the piling during impact pile driving operations that distributes air bubbles around 100% of the perimeter of the piling over the full depth of the water column.
b. For driving or proofing steel piling greater than 10 inches in diameter, install a bubble curtain around the pile during piling impact driving operations that distributes air bubbles around 100% of the perimeter of the piling over the full depth of the water column.

30. Piling removal:
a. Vibratory or direct pull extraction is the preferred method of pile removal.

HYDRAULIC PROJECT APPROVAL

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b. Place the piling on a construction barge or other dry storage site after the piling is removed. The piling must not be shaken, hosed off, left hanging to dry or any other action intended to clean or remove adhering material from the piling near waters of the state.
c. If a treated wood piling breaks during extraction, remove the stump from the water column by fully extracting. If the stump cannot be fully extracted, remove the remainder of the stump with a clamshell bucket, chain, or similar means, or cut it off three feet below the mudline. Cap all buried cut stumps and fill holes left by piling extraction with clean sediment that matches the native material.
d. When removing creosote piling, containment booms and absorbent booms (or other oil absorbent fabric) must be placed around the perimeter of the work area to capture wood debris, oil, and other materials released into marine waters as a result of construction activities to remove creosote pilings. All debris on the bed and accumulated in containments structures must be collected and disposed upland at an approved disposal site.
e. Submit post-project surveys (e.g., underwater video, photos at low-tide) along transects within the project area to Washington Department of Fish and Wildlife within two weeks of pile removal to verify debris removal.

COMPENSATORY MITIGATION

31. All mitigation actions must be completed before February 15th, 2027.

DEMOBILIZATION/CLEANUP

32. Remove all trash and unauthorized fill in the project area, including concrete blocks or pieces, bricks, asphalt, metal, treated wood, glass, floating debris, and paper, that is waterward of the ordinary high water line and deposit upland.

33. Remove any riprap (including quarry spalls) scattered, or abandoned outside the original design footprint from the bed and deposit it an upland area above the limits of extreme high tidal water.

34. Do not burn wood, trash, waste, or other deleterious materials waterward of the ordinary high water line.

LOCATION #1:	Site Name: Port of Ilwaco Marina 117 Howerton Avenue Southeast, Ilwaco, WA 98624					
WORK START:	November 1, 2024			WORK END:	February 15, 2027	
WRIA		Waterbody:			Tributary to:	
24 - Willapa		Other			Other	
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
	33	10 N	11 W	46.30442	-124.03852	Pacific
Location #1 Driving Directions						

- From US 101 North traveling to the west
- In Ilwaco, turn left onto Elizabeth Ave SE
- Turn right onto Howerton Ave SE
- The site is located to the south of the intersection of Howerton Ave SE and Waterfront Way.

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

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This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

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MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

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A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist	Lauren.Bauernschmidt@dfw.wa.gov	Lauren Bauernschmidt	for Director
Lauren Bauernschmidt	360-480-2558		WDFW

PORT OF ILWACO

Marine Structures Replacement

Ilwaco, WA

Appendix A8

Ecology CZM CD

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

February 26, 2024

Port of Ilwaco
ATTN: Tracy Lofstrom
P.O. Box 307
Ilwaco, WA 98624

Re: Coastal Zone Management Federal Consistency Decision for Port of Ilwaco East Bulkhead Resilience Project (Corps No. **NWP-2022-525**), in Baker Bay, Ilwaco, Pacific County, Washington

Dear Tracy Lofstrom:

On September 8, 2023, the Department of Ecology (Ecology) received a Certification of Consistency with the Washington State Coastal Zone Management Program (CZMP) for the above project. Pursuant to Section 307(c)(3) of the Coastal Zone Management Act of 1972 as amended, Ecology concurs with Port of Ilwaco's determination that the proposed work is consistent with Washington's CZMP.

The proposed work includes replacing a failing bulkhead with a new structure and repair slope protection north and south of the existing bulkhead. Additional work entails paving and regrading the upland wharf area directly landward of the bulkhead to mitigate projected seal level rise.

Bulkhead Replacement: The majority of the existing bulkhead will be abandoned in place but the top several feet of timber above the timber wale may be removed and localized notching of the existing bulkhead to accommodate installing new tie-back ground anchors for the new bulkhead. The new bulkhead will be constructed directly adjacent to the existing structure. New sheet pile will be driven into the substrate and drainage rock will be placed between the existing bulkhead and the new bulkhead wall to maintain water pressure equilibrium on both sides of the bulkhead. The length of the bulkhead will remain the same but will be ~3 feet higher than the existing structure to accommodate for projected sea level rise.

Slope Protection Repair: An existing creosote treated timber retaining wall located to the north of the bulkhead will be completely removed and replaced with 198 cubic yards of riprap. A layer

of fish mix rock will be placed over the riprap located below the high tide line to provide fish habitat. To the south of the existing bulkhead, 14 cubic yards of concrete rubble will be replaced with 35 cubic yards of riprap.

To mitigate for aquatic impacts the following actions will be taken:

- Removal of ~28 creosote-treated timber piles and 3 steel piles will be removed adjacent to the existing bulkhead.
- Removal of 36 derelict creosote-treated timber piles and 3 creosote-treated timber pile caps.
- Removal of a derelict structure ~ 2510 square feet in area will be removed decreasing overwater coverage.

This activity is located at 117 Howerton Ave SE, Ilwaco in Baker Bay, Pacific County, Washington.

If you have any questions regarding Ecology's decision, please contact Brook Swensen at 564-999-1749.

Your right to appeal

You have a right to appeal this decision to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do all of the following within 30 days of the date of receipt of this decision:

- File your notice of appeal and a copy of this decision with the PCHB (see filing information below). "Filing" means actual receipt by the PCHB during regular business hours as defined in WAC 371-08-305 and -335. "Notice of appeal" is defined in WAC 371-08-340.

- Serve a copy of your notice of appeal and this decision on the Department of Ecology mail, in person, or by email (see addresses below).

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Filing an appeal

Filing with the PCHB

For the most current information regarding filing with the PCHB, visit: https://eluho.wa.gov/ or call: 360-664-9160.

Service on Ecology

Street Addresses:

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Addresses:

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

E-Mail Address:

ecologyappeals@ecy.wa.gov

Sincerely,

Loree' Randall, Section Manager
Aquatic Permitting & Protection Section
Shorelands and Environmental Assistance Program

Sent via e-mail: tlofstrom@portofilwaco.org

E-cc: Kinsey Friesen, U.S. Army Corps of Engineers
Victoria England, Moffat & Nichol
Brook Swensen, Ecology
fedconsistency@ecy.wa.gov

PORT OF ILWACO

Marine Structures Replacement

Ilwaco, WA

Appendix A9

Ecology WQC Order No. 22523

England, Victoria

From: Swensen, Brook (ECY) <bswe461@ECY.WA.GOV>
Sent: Tuesday, May 21, 2024 7:19 AM
To: England, Victoria; Friesen, Kinsey M CIV USARMY CENWP (USA)
Cc: Schwertner, Margaret; Tracy Lofstrom; HPA Applications (DFW); Bauernschmidt, Lauren N (DFW); Holly Beller; Stringer, Stuart; ECY RE FED NOTIFICATION (SEA)
Subject: RE: Port of Ilwaco Bulkhead Resilience Project NWP-2022-525; FWS/R1/2023-0026807; WCRO 2022-03087; HPA32313; WQC 22523

Thank you Victoria,

Ecology has no problem with the change in work window.

Brook Swensen *(she/her)*
Aquatic Permit Specialist |Aquatic Permitting & Protection Section
Work Hours 7-3:30 M-F
Cell: (564) 999-1749 | *bswe461@ecy.wa.gov*

From: England, Victoria <vengland@moffattnichol.com>
Sent: Monday, May 20, 2024 10:09 AM
To: Friesen, Kinsey M CIV USARMY CENWP (USA) <Kinsey.M.Friesen@usace.army.mil>
Cc: Schwertner, Margaret <mschwertner@moffattnichol.com>; Tracy Lofstrom <tlofstrom@portofilwaco.org>; HPA Applications (DFW) <hpaapplications@dfw.wa.gov>; Bauernschmidt, Lauren N (DFW) <Lauren.Bauernschmidt@dfw.wa.gov>; ECY RE FED PERMITS (SEA) <ECYREFEDPERMITS@ECY.WA.GOV>; Swensen, Brook (ECY) <bswe461@ECY.WA.GOV>; Holly Beller <treasurer@ilwaco-wa.gov>; Stringer, Stuart <sstringer@moffattnichol.com>
Subject: Port of Ilwaco Bulkhead Resilience Project NWP-2022-525; FWS/R1/2023-0026807; WCRO 2022-03087; HPA32313; WQC 22523

Hello,
This email serves as notification that the services, NMFS/NOAA (WCRO 2022-03087) and USFWS (FWS/R1/2023-0026807), have approved the requested early start date to the allowable in-water work window for the Port of Ilwaco Bulkhead Resilience project with the revised approved work window of September 1 through February 28. The attached include email approvals from the services as well as an approval of a minor modification of the project HPA 32313 (revising the in-water work window end date to February 28).

Please let us know if you have any questions.
Kind regards,

Victoria R. England, LG, Env SP
Senior Environmental Scientist

600 University Street, Suite 610 | Seattle, WA 98101
P 206.501.2332

moffatt & nichol

moffattnichol.com
Creative People, Practical Solutions.®

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

February 22, 2024

Port of Ilwaco
ATTN: Tracy Lofstrom
P.O. Box 307
Ilwaco, WA 98624

Re: Water Quality Certification Order No. **22523** (Corps No. NWP-2022-525), Port of Ilwaco East Bulkhead Resilience Project, Pacific County, Washington

Dear Tracy Lofstrom:

On July 6, 2023, the Port of Ilwaco submitted a request for a Section 401 Water Quality Certification (WQC) under the federal Clean Water Act for the Port of Ilwaco East Bulkhead Resilience project in Pacific County, Washington.

On behalf of the state of Washington, the Department of Ecology certifies with conditions that the work described in the Water Quality Certification Request and supplemental documents complies with applicable provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, as amended, and applicable state laws. **This certification is subject to the enclosed Water Quality Certification Order (WQC Order).**

Please ensure that anyone doing work under this WQC Order has read, is familiar with, and is able to follow all of the provisions within the attached WQC Order.

If you have any questions about this decision, please contact Brook Swensen at 564-999-1749. The enclosed WQC Order may be appealed by following the procedures described within.

Sincerely,

Loree' Randall

Loree' Randall, Section Manager
Aquatic Permitting & Protection Section
Shorelands and Environmental Assistance Program

Enclosure (1)

By certified mail: 9489 0090 0027 6383 2203 14

Sent via e-mail: tlofstrom@portofilwaco.org

E-cc: Kinsey Friesen, U.S. Army Corps of Engineers
Victoria England, Moffat & Nichol
Brook Swensen, Ecology
ECYREFEDPERMITS@ecy.wa.gov

In The Matter of Granting a Water Quality Certification With Conditions to Port of Ilwaco pursuant to 33 U.S.C. 1341 (FWPCA § 401), RCW 90.48.120, RCW 90.48.260 and Chapter 173-201A WAC

Port of Ilwaco
Attn: Tracy Lofstrom
P.O. Box 307
Ilwaco, Washington 98624

WQC Order No.	22523
Corps Reference No.	NWP-2022-525
Site Location	Port of Ilwaco East Bulkhead Resilience located within Baker Bay, Pacific County, Washington.

The Port of Ilwaco submitted a request for a Section 401 Water Quality Certification (WQC) under the federal Clean Water Act for the Port of Ilwaco East Bulkhead Resilience, Pacific County, Washington. The following required processing dates are listed below:

- On 12/8/2022, the Port of Ilwaco submitted a pre-filing meeting request.
- On 7/6/2023, Ecology received a request for Clean Water Section 401 Water Quality Certification.
- On 7/13/2023, the Port of Ilwaco submitted additional information, and the Department of Ecology (Ecology) considered the Request valid on this date.
- Ecology's "Reasonable Period of Time" for this project has been established as 7/6/2024.
- On 10/6/2023, the U.S. Army Corps of Engineers (Corps) issued a joint public notice.

This project proposes to replace a failing bulkhead with a new structure and repair slope protection north and south of the existing bulkhead. Additional work entails paving and regrading the upland wharf area directly landward of the bulkhead to mitigate projected seal level rise.

Bulkhead Replacement: The majority of the existing bulkhead will be abandoned in place but the top several feet of timber above the timber wale may be removed and localized notching of the existing bulkhead to accommodate installing new tie-back ground anchors for the new bulkhead. The new bulkhead will be constructed directly adjacent to the existing structure. New sheet pile will be driven into the substrate and drainage rock will be placed between the existing bulkhead and the new bulkhead wall to maintain water pressure equilibrium on both

sides of the bulkhead. The length of the bulkhead will remain the same but will be ~3 feet higher than the existing structure to accommodate for projected sea level rise.

Slope Protection Repair: An existing creosote treated timber retaining wall located to the north of the bulkhead will be completely removed and replaced with 198 cubic yards of riprap. A layer of fish mix rock will be placed over the riprap located below the high tide line to provide fish habitat. To the south of the existing bulkhead, 14 cubic yards of concrete rubble will be replaced with 35 cubic yards of riprap.

To mitigate for aquatic impacts the following actions will be taken:

- Removal of ~28 creosote-treated timber piles and 3 steel piles will be removed adjacent to the existing bulkhead.
- Removal of 36 derelict creosote-treated timber piles and 3 creosote-treated timber pile caps.
- Removal of a derelict structure ~ 2510 square feet in area will be removed decreasing overwater coverage.

The project site is located at 117 Howerton Ave SE, Ilwaco in Baker Bay, Pacific County, Washington, Section 33 and 34, Township 10 N., Range 11 W., within Water Resource Inventory Area (WRIA) 24 - Willapa.

With this WQC Order, Ecology is granting with conditions the Port of Ilwaco's request for a Section 401 Water Quality Certification for the Port of Ilwaco East Bulkhead Resilience project, provided that the activity is conducted in accordance with the Section 401 Water Quality Certification request and attachments Ecology received on 7/6/2023, and the following supporting documentation:

1. E-mail to Ecology dated 2/8/2024, regarding water quality monitoring and agreement to conduct physical sampling, if needed, to determine compliance with the water quality standards.

Based on the information submitted, Ecology has determined that the discharge from the project will comply with state water quality requirements. Prior to undertaking any changes that materially alter the project, the Port of Ilwaco must contact Ecology to determine whether a new Section 401 Water Quality Certification is required.

Issuance of this Section 401 Water Quality Certification for this proposal does not authorize the Port of Ilwaco to exceed applicable state water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), or sediment quality standards (Chapter 173-204 WAC). Furthermore, nothing in this Section 401 Water Quality Certification

absolves the Applicant from liability for contamination and any subsequent cleanup of surface waters, ground waters, or sediments resulting from project construction or operations.

Special Conditions:

1. No petroleum products, fresh concrete, lime or concrete, chemicals, or other toxic or deleterious materials shall be allowed to enter waters of the state.

    - Justification - Ecology must protect waters of the state from all discharges and potential discharges of pollution that can affect water quality to protect aquatic life and beneficial uses.

    - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.080, Chapter 173-201A WAC, WAC 173-201A-300 - 330, WAC 173-204-120, and WAC 173-225-010.

2. The following notifications shall be made via phone or e-mail (e-mail is preferred) to Ecology's Federal permit Manager via e-mail to fednotification@ecy.wa.gov and cc to brook.swensen@ecy.wa.gov Notifications shall be identified with WQC Order No. 22523, Corps Reference No. NWP-2022-525, and include the Project Proponent name, project name, project location, project contact and the phone number.

    a. Immediately following a violation of state water quality standards or when the project is out of compliance with any conditions of this WQC Order;

    b. At least 10 days prior to all pre-construction meetings

    c. At least 10 days prior to conducting initial in-water work activities.

    - Justification - Ecology has independent state authority to ensure protection of state water quality. Ecology must be aware of when a project starts and ends and whether there are any issues. This allows Ecology to evaluate compliance with the state water quality requirements.

    - Citation - Chapter 90.48 RCW, RCW 90.48.030, RCW 90.48.120, Chapter 173-201A WAC, WAC 173-201A-300 - 330, Chapter 173-204 WAC, and WAC 173-225-010.

In view of the foregoing and in accordance with 33 U.S.C. §1341, RCW 90.48.120, RCW 90.48.260 Chapter 173-200 WAC and Chapter 173-201A WAC, this WQC is granted with conditions to the Port of Ilwaco for the Port of Ilwaco East Bulkhead Resilience project.

This Certification is not effective until the U.S. Corps of Engineers (Corps) Seattle District issues a Department of the Army (DA) permit for this project. WQC Order No. **22523** will remain valid for the duration of the associated DA permit. The Port of Ilwaco should send a copy of the final

DA permit to fednotification@ecy.wa.gov within two weeks of receiving it. To transfer this Order to a new owner or operator, complete a Request for Transfer of Order form following the instructions at the top of the form. Link to form: https://apps.ecology.wa.gov/publications/SummaryPages/ECY070695.html.

Your right to appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal, you must do all of the following within 30 days of the date of receipt of this Order:

- File your notice of appeal and a copy of this Order with the PCHB (see filing information below). "Filing" means actual receipt by the PCHB during regular business hours as defined in WAC 371-08-305 and -335. "Notice of appeal" is defined in WAC 371-08-340.
- Serve a copy of your notice of appeal and this Order on the Department of Ecology mail, in person, or by email (see addresses below).

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Filing an appeal

Filing with the PCHB

For the most current information regarding filing with the PCHB, visit: https://eluho.wa.gov/ or call: 360-664-9160.

Service on Ecology

Street Addresses:

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Addresses:

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

E-Mail Address:

ecologyappeals@ecy.wa.gov

Americans with Disabilities Act Information

Accommodation Requests

To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6831 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Contact Information

Please direct all questions about this WQC Order to:

Brook Swensen
Department of Ecology
564-999-1749
brook.swensen@ecy.wa.gov

More Information

- **Pollution Control Hearings Board Website**
  https://eluho.wa.gov
- **Chapter 43.21B RCW - Environmental and Land Use Hearings Office – Pollution Control Hearings Board**
  http://app.leg.wa.gov/RCW/default.aspx?cite=43.21B
- **Chapter 371-08 WAC – Practice And Procedure**
  http://app.leg.wa.gov/WAC/default.aspx?cite=371-08
- **Chapter 34.05 RCW – Administrative Procedure Act**
  http://app.leg.wa.gov/RCW/default.aspx?cite=34.05
- **Chapter 90.48 RCW – Water Pollution Control**
  http://app.leg.wa.gov/RCW/default.aspx?cite=90.48
- **Chapter 173.204 WAC – Sediment Management Standards**
  http://apps.leg.wa.gov/WAC/default.aspx?cite=173-204

- **Chapter 173-200 WAC – Water Quality Standards for Ground Waters of the State of Washington**
  http://apps.leg.wa.gov/WAC/default.aspx?cite=173-200

- **Chapter 173-201A WAC – Water Quality Standards for Surface Waters of the State of Washington**
  http://apps.leg.wa.gov/WAC/default.aspx?cite=173-201A

Signature

Dated this 22nd day of February, 2024 at the Department of Ecology, Lacey, Washington.

_____

Loree' Randall, Section Manager
Aquatic Permitting & Protection Section
Shorelands and Environmental Assistance Program

England, Victoria

From: Kelley, Penny (ECY) <PKEL461@ECY.WA.GOV>
Sent: Thursday, February 8, 2024 11:18 AM
To: England, Victoria
Cc: Swensen, Brook (ECY); Tracy Lofstrom; Schwertner, Margaret
Subject: RE: Port of Ilwaco East Bulkhead Resilience Project - Ecology # 142236

Thank you for the response. Ecology is currently working on drafting up the 401 decision document. We do not have any further comments or questions regarding the project.

Penny Kelley
WSDOT Liaison
Work #/cell 360-280-8856
pkel461@ecy.wa.gov

From: England, Victoria <vengland@moffattnichol.com>
Sent: Thursday, February 8, 2024 10:35 AM
To: Kelley, Penny (ECY) <PKEL461@ECY.WA.GOV>
Cc: Swensen, Brook (ECY) <bswe461@ECY.WA.GOV>; Tracy Lofstrom <tlofstrom@portofilwaco.org>; Schwertner, Margaret <mschwertner@moffattnichol.com>
Subject: RE: Port of Ilwaco East Bulkhead Resilience Project - Ecology # 142236

External Email

Hi Penny,
The Port of Ilwaco, Port Manager Tracy Lofstrom cc-ed, is comfortable with the requirement to have turbidity monitoring equipment on hand during the Port of Ilwaco East Bulkhead Resilience Project (Ecology # 142236) in the event that instrumented monitoring gets triggered by the visual monitoring. Additionally, the Port has vessels that can be used as needed for sampling/monitoring purposes.

Please let us know if you have any other questions or require additional clarification.
Kind regards,
Victoria

Victoria R. England, LG
Senior Environmental Scientist

Moffatt & Nichol
600 University Street, Suite 610 | Seattle, WA 98101
P 206.501.2331 | **D** 206.501.2332

From: Kelley, Penny (ECY) <PKEL461@ECY.WA.GOV>
Sent: Thursday, February 1, 2024 9:34 AM
To: England, Victoria <vengland@moffattnichol.com>

Cc: Swensen, Brook (ECY) <bswe461@ECY.WA.GOV>
Subject: Port of Ilwaco East Bulkhead Resilience Project - Ecology # 142236

Hello Victoria,

Thank you for taking the time to discuss the Port of Ilwaco project yesterday. As we discussed, I am providing a summary of our discussion on WQ monitoring and some follow up points.

- All of the various aspects of work do not entail any in-water excavation.
- The floating booms referred to in the JARPA are surface only and not turbidity curtains
- It may be possible for the Port to require the contractor to have a curtain on hand as a contingency measure for turbidity
- The curtain would not be a contingency measure for piling work as that is a bit of a dispersed area of work
- A vibratory hammer would be used for the piling work which creates less turbidity
- EPA BMPs for pile removal will be required (also helps minimize turbidity problems)
- The Port believes visual monitoring is sufficient because the activities have minimal disturbance of the sediments
- Ecology is ok with visual monitoring as long as the Port agrees that monitoring equipment will be on hand to do physical sampling if needed.

I know you need to check with the Port about the curtain and the monitoring equipment and will loop back with Ecology. I do need the Port to agree to the equipment for water quality monitoring for us to agree that visual can be the main tool for monitoring and no plan is needed. One other point to bring up that we did not talk about; it is expected that physical sampling can be done if needed and that means thinking of access, usually a small boat. So when talking with the Port, that would be important to clarify. Please let Brook and myself know if there are any questions or concerns.

Penny Kelley
WSDOT Liaison
Work #/cell 360-280-8856
pkel461@ecy.wa.gov

PORT OF ILWACO

Marine Structures Replacement

Ilwaco, WA

Appendix A10

City of Ilwaco SEPA DNS and Checklist

CITY OF ILWACO

120 First Avenue North
PO Box 548 • Ilwaco, WA 98624
Phone: 360.642.3145
Fax: 360.642.3155
www.ilwaco-wa.gov

The City of Ilwaco is an equal opportunity provider and employer.

Determination of Non-Significance

PROJECT NAME: Port of Ilwaco East Bulkhead Resilience Project

APPLICANT NAME: Tracy Lofstrom (Port of Ilwaco Manager)

POINT OF CONTACT: Victoria England, Moffatt & Nichol

LOCATION OF PROPOSAL: 117 Howerton Avenue SE on the following tax parcels: 73048003011, 73048003009 and 73031013000.

DESCRIPTION OF PROPOSAL: At its commercial fishing wharf, currently occupied by Safe Coast Seafoods, the Port of Ilwaco proposes to replace the failing east bulkhead with a sheetpile bulkhead, replace the slope protection to the north and south of the east bulkhead, and pave and regrade the upland wharf area directly landward of the east bulkhead to mitigate the effects of sea level rise.

LEAD AGENCY: City of Ilwaco

THRESHOLD DETERMINATION: The lead agency, City of Ilwaco, has determined that this proposal will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) IS NOT required under RCW 43.21C.030(2)(c). This decision was made after reviewing the proposal and all supporting documents. This information is available to the public for review upon request at the City of Ilwaco Building and Planning Department, 120 First Avenue, Ilwaco, WA 98624 between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday, excluding holidays.

This Determination of Non-significance is issued using the DNS process in WAC 197-11-340; there is a comment period and an appeal period on the DNS.

( ) There is no comment period for the DNS.

(X) This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 14 days.

Date of Determination and Issuance: November 8, 2023

Deadline for Submitting Comments: 5:00 P.M. on November 22, 2023

Deadline for Submitting Appeals: 5:00 P.M. on November 22, 2023

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable: Port of Ilwaco East Bulkhead Resilience Project

2. Name of applicant: Tracy Lofstrom, Port Manager

3. Address and phone number of applicant and contact person:

Applicant Address: PO. Box 307
Ilwaco, WA 98624
Applicant Phone Number: (360) 642-3143
Applicant email: tlofstrom@portofilwaco.org

Contact Person: Victoria England (Moffatt & Nichol) 206-622-0222, email vengland@moffattnichol.com

4. Date checklist prepared: June 2023

5. Agency requesting checklist: City of Ilwaco

6. Proposed timing or schedule (including phasing, if applicable):

Start Date: November 2024 End Date: February 2025

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- Joint Aquatic Resources Permit Application (JARPA) and affiliated JARPA sheets (plans)
- Biological Evaluation (Moffatt & Nichol 2022) Submitted to NMFS December 2022
- 2023 Geotechnical Report – GeoEngineers
- 2022 Eelgrass Survey – GeoEngineers
- Cultural Resources Survey – Willamette CRA
- NEPA EA (in progress)
- Mitigation Sequencing Analysis and No Net Loss Narrative (Moffatt & Nichol 2023)

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No other known applications are pending for governmental approvals of other proposals directly affecting the property covered by this proposal.

10. List any government approvals or permits that will be needed for your proposal, if known.

- US Army Corps of Engineers (USACE) Section 10/404
- NOAA/NMFS: Endangered Species Act/Magnuson Stevenson Act consultation

- USFWS: Endangered Species Act
- City of Ilwaco: SEPA Determination
- City of Ilwaco Shoreline/Critical Areas Conditional Use Permit
- City of Ilwaco Master Planning Permit
- WA Dept. of Fish and Wildlife Hydraulic Project Approval (HPA)
- Dept. of Ecology (DOE) Coastal Zone Management (CZM) consistency
- WA Dept. of Natural Resources (DNR) Project Aquatic Use Authorization

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed Port of Ilwaco East Bulkhead Resilience Project (herein referred to as the 'Project') consists of three primary elements;

1. Replacing the failing creosote treated timber east bulkhead with an anchored steel sheetpile bulkhead;

2. Repairing slope protection north and south of the bulkhead; and,

3. Paving and grading the upland wharf area directly landward of the bulkhead to mitigate the effects of sea level rise.

As part of the above elements, creosote-treated timber that configures the external wall of the existing bulkhead and retaining wall will be removed along with select derelict creosote-treated piles next to the bulkhead. Additional derelict creosote piles and cross members will be removed from the slip adjacent to the bulkhead as mitigation for project impacts resulting from drainage rock fill placement between the existing bulkhead and the new bulkhead necessary to maintain water pressure equilibrium on both sides of the bulkhead. The removal of creosote from the marine environment will also mitigate impacts associated with the riprap shoreline protection that is proposed to replace the derelict creosote treated timber revetment/retaining wall and associated elements. A fish mix gravel layer will be placed between HTL and the toe of the riprap on the surface of the rip rap slope protection at the head of the slip to provide beach nourishment and habitat improvements for fish passing through the marina. Additionally, an approximately 2,510 sf derelict structure and associated floating timber debris will be removed from the south portion of the marina as mitigation for project impacts.

The proposed Project is required for improved the safety, efficiency, and reliable use of the wharf. The Port is a key hub for commercial fishing, seafood and aquaculture processing, and recreation activities that greatly benefit the regional economy. The commercial fishing wharf, operated by Safe Coast Seafoods, is one of the most active in the state, landing roughly $14 million in commercial seafood each year. Repair of the bulkhead wall is critical to ongoing operations at Safe Coast Seafoods. In its current condition, the bulkhead is in serious structural condition and at risk of failing. Recent biweekly

and monthly measurements have been completed to monitor ongoing movement of the bulkhead. The monitoring has recorded movement along 13 monitoring points along the face of the bulkhead ranging from approximately 0.06 inch to up to 0.31 inch waterward i since monitoring began in November 2022. The monitoring indicates that the bulkhead is the process of active failure. Frequent flooding due to high water levels from “king tides” and severe winter storm surges further threaten the structural capacity of the bulkhead.

Bulkhead failure would shut down cargo operations at the Port and negatively impact a wide variety of businesses in maritime and non-maritime sectors including Safe Coast Seafoods. The shutdown of the Safe Coast site due to failure of the bulkhead would lead to a series of economic impacts for many more workers and businesses and the region. Bulkhead failure would also adversely affect the Port of Ilwaco Marina operations, likely fully blocking at least one slip from use and potentially causing damage to adjacent float structures and tenant vessels. Until this project is completed, the facility is capacity-limited and at risk. The main access driveway to Safe Coast Seafoods has been blocked based on recommended load limitations in an effort to minimize vibration and load resulting from vehicles and machinery using the driveway located adjacent to the failing bulkhead. Without the Project, the eventual closure of the wharf will have cascading negative transportation and economic impacts for the region.

The Project would also serve the following purposes and provide the following benefits:

- The replacement bulkhead will serve as the initial phase to increase the facility’s climate change/sea level rise resiliency and will help protect wharf facilities from flooding. The bulkhead will be designed to accommodate the planned increase to wharf/Safe Coast facility ground floor elevations in the future.

- The top of the embankment elevation to the north of the bulkhead will be raised to approximately +14 feet (mean lower low water) MLLW and the existing creosote-treated retaining wall will be replaced with rip rap to improve shoreline protection. The increase to top of bank elevation will mitigate sea level rise impacts between the bulkhead and the marina access pier to the east.

- Re-grading and re-paving of the upland area behind the bulkhead wall will facilitate positive drainage away from the Safe Coast Seafoods buildings and help protect the facilities during flood events.

- The bulkhead replacement would prevent the shoreline from failing into a portion of the active Port of Ilwaco Marina, which would impact operations in the marina and potentially damage adjacent float structures and tenant vessels, if any, present at the time of failure.

- The new bulkhead will be designed to accommodate the temporary mooring of fishing vessels which will allow vessels to unload/load equipment and product and improve efficiencies at the Safe Coast Seafoods facility. Under existing conditions, the timber bulkhead is used for temporary mooring but cannot currently be used for loading/unloading of vessels due to its existing poor, unstable, deteriorating condition.

- The Project will allow trucks to drive safely on the bulkhead again, which will improve the efficiency of cargo transfer operations and improve the port’s competitiveness. The adjacent

roadway has been closed to vehicle access due to load limitations recommended based on the poor condition of the existing bulkhead, including measurements exhibiting ongoing movement of the failing bulkhead waterward as observed during monitoring episodes from November 2022 to the present.

- The removal of creosote-treated wood (north slip revetment, derelict piles and cross members, and portions of the existing bulkhead as safely able) from the marine environment will provide water quality benefits. Placement of a layer of fish mix gravel over the rip rap shoreline protection to be placed on the slope at the head of the adjacent slip.

The following is a more detailed description of the project elements.

Bulkhead Replacement

Construction sequencing for the proposed bulkhead replacement will likely be as follows:

- Localized demolition of the existing bulkhead wall
- Installation of the new steel sheet pile wall just waterward off the existing bulkhead.
- Placement of drainage rock between the existing bulkhead wall and new bulkhead wall

The majority of the existing timber bulkhead will be abandoned in place behind the replacement bulkhead in order to protect the existing buildings at the Safe Coast Seafoods facility, as complete removal of the existing timber bulkhead will undermine the stability of the soil behind the bulkhead and the adjacent building foundations threatening Safe Coast buildings, infrastructure, and operations. Portions of the existing creosote-treated bulkhead will be removed as feasible. Localized bulkhead demolition will likely consist of removal of the rotten top several feet of the existing creosote-treated timber piles above the timber wale location. This local demolition will take place above mean higher high water (MHHW). In addition, there may be localized notching of the bulkhead wall to accommodate the installation of the new tie-back ground anchors. Approximately twelve (12) 12-inch diameter creosote treated timber piles and three (3) 12-inch diameter steel pipe piles that are located directly waterward of the existing timber bulkhead will be removed. These piles will be removed by either pulling them out directly using a chain or with a vibratory hammer depending on the Contractors preferred means and methods. The piles will be cut at the mudline if complete removal is not possible or the piles break. Upland demolition will consist of removal of the existing pavement and surface features.

Post-localized demolition, a new steel sheet pile bulkhead wall will be installed in front of the existing timber bulkhead. The bulkhead wall will not increase in length. The top elevation of the new bulkhead wall will be approximately three feet (ft) higher than the existing top of bulkhead to accommodate high tides and sea level rise. It is anticipated that the steel sheet piles will be driven using a vibratory hammer. The option for impact proofing will also be included in the event that difficult driving conditions are encountered. The sheet pile wall will be approximately 225 linear feet (lf) and the sheet pile tip elevation will be approximately -40 to -50 feet MLLW. The top of the bulkhead pile cap will be set at an elevation of +14.0 feet MLLW.

The replacement bulkhead will include approximately 20 grouted ground anchors extending from the cast-in-place concrete pile caps down to the bedrock layer below the site. The grouted ground anchors will be either high strength steel strands or steel bars that are connected to the pile caps and driven at an approximately 1:1 angle to elevation -70 to -80 feet MLLW. The anchor tie backs will be grouted for a minimum of 25 feet into the underlying siltstone unit (top elevation approximately -57 feet MLLW). The ground anchors will be installed using either land-based equipment or from a barge depending on the Contractors preferred means and methods. The anchor holes will be drilled with a full-length casing. All drill spoils will be contained and prevented from entering marine waters. The anchor holes will be filled with grout using a tremie tube and then pressure grouted after the anchor tendons are installed. The anchors will be tensioned after all anchors have been installed and have reached the required grout and concrete strengths. The cast-in-place concrete pile cap will then be completed. The pile caps will be cast-in place in the dry and uncured concrete will not be allowed to come in contact with waters of Baker Bay.

The sheet pile placement in front of the existing bulkhead will result in an approximately 2- to 5-foot space between the existing bulkhead and the new bulkhead sheet piles. The area between the existing structure and the new bulkhead will be backfilled with drainage rock to allow for water to flow in and out of the soil supporting the Safe Coast Seafood facility. It is anticipated that approximately 450 cubic yards of free draining drainage rock backfill will be placed between the existing timber bulkhead and the replacement bulkhead (Table 1). The drainage rock will likely be placed using a clamshell operating from a barge. The clean drainage rock will be obtained from a commercial supplier. This placement will minimize the risk of slope failure that removing the existing structure would exacerbate. The drainage rock placement in the space between the existing and replacement bulkhead structures will minimize additional pressure from trapped groundwater behind the new bulkhead.

The new bulkhead (including drain rock installation area),and pile cap, will have a footprint of approximately 1,400 square feet (sf) in marine waters (measured below the high tide line [HTL]) (Table 1). Of the overall footprint in marine waters, 1,000 sf will come into contact with the bottom substrate and have benthic habitat impacts.

Slope Protection

Approximately 350 sf (approximately 14 cubic yards [cy]cy) of concrete debris shore protection from the shoreline to the south of the bulkhead wall will be removed to accommodate the bulkhead wall replacement (Table 1). Approximately sixteen (16) 12-inch diameter creosote timber piles associated with the existing timber retaining wall will be removed from the shoreline along the north end of the bulkhead wall. The existing creosote-treated timber retaining wall to the north of the bulkhead will be completely removed. The associated piles will be removed by either pulling them out using a chain or with a vibratory hammer depending on the Contractors preferred means and methods. The piles will be cut at the mudline if complete removal is not possible or the piles break during removal.

The 350 sf/14 cy of concrete rubble shore protection removed from the south portion of the project to accommodate installation of the new bulkhead will be replaced with approximately 35 cy of riprap in the same 350 sf area to maintain slope stability (Table 1). Of the 35 cy placed along the shoreline, 30 cy occurs below the HTL (Table 1).

One hundred ninety-eight (198) cy (2,200 sf) of riprap, 172 cy (1850 sf) of which occurs below the HTL, will be placed on the embankment to the north of the new bulkhead to replace the existing creosote treated timber retaining wall and provide shore protection (Table 1). The rip rap slope protection will serve as grade transitions from the vertical bulkhead structure to the adjacent sloped shorelines to the north and south. A layer of fish mix rock will be placed over the riprap located below HTL to provide fish habitat. The embankment height will be increased to an elevation of approximately +14.0 feet, MLLW between the bulkhead and the marina access pier to the east. The purpose of the increased embankment height is to mitigate the effects of sea level rise.

Paving and Grading

Upland paving and grading will be completed behind the bulkhead wall to mitigate sea level rise following construction of the new bulkhead. The driveway will be regraded and repaved with structural fill base course and asphalt pavement. This will consist of 8,000 sf of asphalt repaving. The upland area will be re-graded and re-paved to maintain positive drainage away from the Safe Coast Seafoods buildings. The bulkhead will be outfitted with scuppers to allow rainwater to flow into the marina rather than pooling along the driveway or draining toward the Safe Coast facilities.

Fill Impacts and Creosote Removal

Approximately twenty eight (28) creosote-treated timber piles (12-inch diameter) and three (3) steel piles (12-inch diameter) will be removed adjacent to the existing bulkhead and as part of the north shoreline rehabilitation. In addition, the Port proposes to remove approximately thirty-six (36) 12-inch diameter derelict creosote- treated timber piles and 3 creosote-treated timber pile caps as mitigation for the fill and benthic habitat impacts created by the placement of the new bulkhead wall in front of the existing structure. This will result in approximately 64 total creosote-treated timber piles and 3 steel piles being removed along with approximately 70 lf of creosote treated timber retaining wall, and 40 lf of creosote treated timber pile caps.

A derelict timber structure approximately 2,510 sf in area will be removed as part of the mitigation for project impacts. This will result in decreasing overwater coverage in the south portion of the marina at the location of the existing derelict timber structure.

Approximately 1,400 sf of fill below the HTL will result from the placement of the new bulkhead and drainage rock backfill (Table 1). Of the overall footprint, 1,000 sf will come into contact with the bottom substrate and result in benthic habitat impacts.

North shoreline riprap placement will occur in a 2,200 sf area, 1,850 sf of which occurs below the HTL and would result in benthic habitat impacts (Table 1). Approximately 750 sf of this will occur waterward of the existing retaining wall. A 6-inch layer (approximately 34 cy) of fish mix gravel will be placed below HTL to provide beach nourishment and improved habitat for fish passing through the marina.

South shoreline riprap placement will not result in any additional benthic habitat impacts (Table 1). The removal of approximately sixty-four (64) 12-inch creosote-treated timber piles, three (3) 12-inch steel piles, 70 lf of timber retaining wall, and 40 lf of derelict creosote-treated timber pile caps, will restore approximately 165 sf of benthic habitat (Table 1) and remove approximately 34 tons of creosote from the marine environment.

Table 1. Approximate Fill Impacts

Activity	Fill below HTL (sf)	Fill below HTL (cy)	Fill above HTL (sf)	Fill above HTL (cy)
Bulkhead wall and shoreline protection installation				
Sheetpile installation	400 sf	80 cy	0 sf	0 cy
Bulkhead drainage rock placement	1,000 sf	450 cy	0 sf	0 cy
Rip-rap shore protection and Fish Mix placement (north shoreline)	1,850 sf	172 cy	350 sf	26 cy
Concrete rubble removal (south shoreline)	-350 sf	-14 cy	-50 sf	-2 cy
Rip-rap replacement (south shoreline)	350 sf	30 cy	50 sf	5 cy
Subtotal	*3,250 sf*	*718cy*	*350sf*	*29cy*
Structure removal				
Pile removal adjacent to existing bulkhead	-12 sf	-6 cy	0 sf	0 cy
North shoreline- retaining wall removal	-85 sf	-12 cy	0 sf	0 cy
Derelict pile/timber removal	-68 sf	-12 cy	0 sf	0 cy
Derelict Timber structure/debris removal – South Marina	-2,510 sf	-350 cy	0 sf	0 cy
Subtotal	*-2,675 SF*	*-380 cy*	*0 sf*	*0 cy*
Creosote removal from the Environment	*34 tons*			

See the attached JARPA and JARPA sheets for additional Project description information.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Project occurs at the Port of Ilwaco on the southwest coast of Washington State, located just inside the Columbia River bar at the Pacific Ocean. The Port area generally consists of a marina used for year-round moorage of recreational and commercial fishing vessels, upland commercial buildings, and a boatyard. The Project site at the Port of Ilwaco is the bulkhead along the east side of the commercial fishing wharf (herein referred to as 'wharf') occupied by Safe Coast Seafoods. The approximate coordinates of the of the Project site are latitude 46.30498 and longitude -124.0408.

The wharf is an earth filled structure on the east side and pile supported on the west side. The wharf is protected by a timber bulkhead along the eastern limits of the wharf. To the north of the bulkhead wall, the shoreline is protected by a low creosote-treated timber retaining wall and large log. To the south of the bulkhead wall, shoreline protection consists of riprap and concrete rubble. The Safe Coast Seafoods buildings are located on the wharf. The Port and marina area is protected by a rubble breakwater.

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): **Flat**, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

The Project is located in-water and along the shoreline at an existing bulkhead wall and riprap shoreline. The bulkhead wall is located in a gradually sloping soft bottom habitat.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The Project is located in-water and along the shoreline. The predominant soil types are sandy silt and silt (GeoEngineers 2023).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Pavement settlement has been observed on the adjacent landward driveway and bulkhead movement measured during monthly monitoring (late 2022/early 2023) and access is now restricted based on those conditions and the condition of the deteriorating bulkhead. The 2022 geotechnical investigations (GeoEngineers, 2023) indicate that the project site is underlain by liquefiable soil.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Installation of the bulkhead wall, drainage rock, and riprap will result in approximately 3,250 sf of fill in marine waters (measured below the high tide line [HTL]). Approximately 1,000 sf of the fill would come into contact with the bottom substrate and result in permanent impacts to the existing aquatic soft bottom habitat.

Fill and benthic habitat impacts are anticipated to be offset by the removal of steel piles, and creosote-treated wood (piles, structures, and revetment), and floating debris from the marine environment and placement of a layer of fish mix over the riprap shore protection to be placed at the head of the slip as beach nourishment. The removal of approximately sixty-four (64) 12-inch creosote timber piles, three (3) 12-inch steel piles, 70 lf of timber retaining wall, 2,510 sf of floating timber debris and 40 lf of derelict timber pile caps, will restore approximately 2,675 sf of benthic habitat and remove approximately 890 cy or 34 tons of creosote from the marine environment (Table 8e). The removal of creosote-treated wood is anticipated to provide both water quality and benthic habitat improvements. A layer of fish mix rock/gravel (approximately 34 cy) will be placed over the portion of riprap placed below the HTL at the head of the slip to improve habitat and provide beach nourishment to that portion of shoreline. No additional mitigation is anticipated to be required and a mitigation plan has not been developed. See the attached Biological Evaluation, Section 1.3.4, and JARPA, Table 8e for additional information on fill impacts.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Regrading and repaving the drive behind the bulkhead will be completed as part of the project. Proper best management practices (BMPs), such as silt fence and/or straw wattles will be used to provide a physical barrier to avoid and minimize erosion and prevent construction debris from entering nearby marine surface waters. The completed project will restore existing pavement and ongoing use will not result in erosion potential. The proposed Project will stabilize the wharf and improve shoreline stability to the north and south of the bulkhead.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Upland repaving and regrading will be completed behind the bulkhead wall to mitigate sea level rise. The driveway will be regraded and repaved with structural fill base course and asphalt pavement. This will consist of 8,000 sf of asphalt repaving. The repaving will be completed in an a currently paved area except where the new drain rock will be placed between the new and existing bulkheads. There will be an increase to existing impervious surfaces of approximately 1,250 sf that includes the new bulkhead cap and the paved area surfacing the area between the existing bulkhead and the new bulkhead to accommodate regrading of the access driveway adjacent to the bulkhead.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Not applicable. The Project is not anticipated to contribute to erosion.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

The project will return normal operations along the driveway, bulkhead and marina slip adjacent to the bulkhead. Commercial fishing vessels, recreational vessels, employee vehicles and delivery trucks will continue to access the site.

Construction

Short-term construction-related air quality impacts and emissions could include dust from pavement work, which could cause temporary, localized increases in the ambient concentrations of fugitive dust and suspended particulate matter (PM) during repaving/regrading the adjacent drive. Construction activities will require the use of diesel-powered vessels and trucks, and other equipment such as generators and compressors. This equipment would emit air pollutants that could slightly degrade local air quality in the immediate vicinity of construction activities. These emissions would be temporary and localized. Some construction activities could also cause odors detectable to some people in the vicinity of the activity, especially during pavement repair operations. Such odors would be short-term and localized.

Operations and Maintenance

Maintenance and rehabilitation of the existing infrastructure will reestablish operational efficiency and will allow accommodation of the intended vessel traffic for which the terminal was originally approved and operated. This project does not expand the operational footprint of the seafood facility or marina nor does it result in an increase in vessel traffic relative to previous operations.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no off-site sources of emissions or odors that may affect the Project.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Impacts from elevation emissions are anticipated to be minimal and short-term. Measures to reduce emissions are not proposed.

3. Water [help]

a. **Surface Water:** [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The Project is located at the Port of Ilwaco Marina in Baker Bay near the mouth of the Columbia River.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, the Project occurs in-water and along the shoreline of Baker Bay within the Ilwaco Marina. See the project description in the Question 11 response and the attached JARPA and JARPA sheets.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

See 1e above. Installation of the bulkhead wall, drainage rock and riprap will result in approximately 3,050 sf of fill in marine waters (measured below the HTL). Approximately 1,200 sf of the fill would come into contact with the bottom substrate and result in permanent impacts to the existing aquatic soft bottom habitat.

Derelict creosote piles and structures present in the adjacent slip will be removed, restoring 165 sf of benthic habitat and removing approximately 20 tons of creosote from the marine environment which will improve the habitat conditions of the marina and lift its value from current conditions. The creosote treated timber revetment and debris present at the head of the adjacent slip will be removed and riprap will be placed as shore protection associated with raising the elevation of the top of the slope as part of sea level rise resilience. The north slip riprap area will be surface with fish mix rock to improve the habitat over the area of new riprap placed from the HTL down.

Additionally, floating timber debris will be removed from the south portion of the marina as part of proposed project mitigation. This will remove approximately 2,510 sf of overwater coverage present in that portion of the marina.

Fill and benthic habitat impacts are anticipated to be offset by the removal of steel piles, and creosote-treated wood (piles, structures, and revetment), and floating debris from the marine environment and placement of a layer of fish mix over the riprap shore protection to be placed at the head of the slip as beach nourishment. The removal of approximately sixty-four (64) 12-inch creosote timber piles, three (3) 12-inch steel piles, 70 lf of timber retaining wall, 2,510 sf of floating timber debris and 40 lf of derelict timber pile caps, will restore approximately 2,675 sf of benthic habitat and remove approximately 380 cy or 34 tons of creosote from the marine environment (Table 8e). The removal of creosote-treated wood is anticipated to provide both water quality and benthic habitat improvements. A layer of fish mix rock/gravel (approximately 34 cy) will be placed over the portion of riprap placed below the HTL at the head of the slip to improve habitat and provide beach nourishment to that portion of shoreline. No additional mitigation is anticipated to be required and a mitigation plan has not been developed.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No, the Project will not require surface water withdrawals or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. The Project occurs at the Port of Ilwaco on the north shore of Baker Bay near the mouth of the Columbia River. See the attached JARPA sheets.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

There will be no discharge of waste materials to surface waters. Please see the avoidance and minimization measures (AMMs) and Best Management Practices (BMPs) in the attached Biological Evaluation and JARPA.

b. **Ground Water:** [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No. Groundwater will not be withdrawn for drinking water or other purposes.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Waste material will not be discharged into the ground.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The Project only proposes the replacement of a bulkhead wall, repair of slope protection, and paving and grading the upland wharf area. The driveway will be regraded and repaved with structural fill base course and asphalt pavement. This will consist of 8,000 sf of asphalt repaving. The upland area will be re-graded and re-paved to maintain positive drainage away from the Safe Coast Seafoods buildings. The bulkhead will be outfitted with scuppers to allow rainwater to flow into the marina rather than pooling along the driveway or draining toward the Safe Coast facilities.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No. Waste materials would not enter ground or surface waters. Please see the AMMs and BMPs in the attached JARPA and Biological Evaluation.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

See c.1) above. The upland area will be regraded and repaved to maintain positive drainage away from the Safe Coast Seafoods buildings. Scuppers will be added to the new bulkhead to allow stormwater to drain off of the adjacent drive, away from the Safe Coast buildings. Existing stormwater drains off the drive via sheetflow.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Please see the AMMs in the attached JARPA and Biological Evaluation.

4. Plants [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
__X_shrubs (head of the adjacent slip)
__X_grass (head of the adjacent slip)
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
__ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Vegetation and terrestrial habitat conditions are limited within the Project area. The site is in an industrial area and is largely devoid of terrestrial vegetation. The Project would occur on an

existing wharf and associated bulkhead wall, retaining wall, and riprap shoreline. Little to no terrestrial and riparian habitat occurs here. The mudline at the base of the existing bulkhead is largely unvegetated and consists of a silty sand, sandy silt slope with riprap extending on the shore slope to the north and south of the bulkhead.

The upland area adjacent to the bulkhead is a paved driveway servicing the Safe Coast Seafood facility. Existing vegetation that could be removed or impacted by the Project consists of short-statured ruderal species behind the existing bulkhead wall and in viable spaces along the riprap shoreline. Upland vegetation observed along the shoreline during a 2022 site survey included clover species (*Trifolium species*), Japanese knotweed (*Polygonum cuspidatum*), various grasses, dandelion (*Tatxasum officinale*), and creeping buttercup (*Ranunculus repens*) (Geoengineers 2022).

A 2022 eelgrass survey was completed and observed that there is no eelgrass on or adjacent to the project site (GeoEngineers 2022). Eelgrass beds exist within the marina area, but do not occur within the Project footprint (GeoEngineers 2022). The eelgrass bed is not anticipated to be impacted by the proposed Project and is likely ephemeral in nature since the marina is periodically dredged for maintenance dredging under a separate permit. No wetlands or streams were identified within the marina.

c. List threatened and endangered species known to be on or near the site. No threatened and endangered plant species were observed on our near the site. Vegetation and terrestrial habitat conditions are limited within the Project area. The site is in an industrial area within an active marina that serves recreational boating and commercial fishing vessels and is largely devoid of terrestrial vegetation. The Project would occur on an existing wharf and associated bulkhead wall, retaining wall, and rip rap shoreline. Little to no terrestrial and riparian habitat occurs here. The mudline at the base of the existing bulkhead is largely unvegetated and consists of a silty sand, sandy silt slope with rip rap extending on the shore slope to the north and south of the bulkhead. The upland adjacent to the bulkhead is a paved driveway servicing the Safe Coast Seafood facility. Existing vegetation consists of short-statured ruderal species behind the existing bulkhead wall and in viable spaces along the rip rap shoreline. Upland vegetation observed along the shoreline during a 2022 site survey included clover species (Trifolium species), Japanese knotweed (Polygonum cuspidatum), varios grasses, dandelion (tatxasum officinale), and creeping buttercup (Ranunculus repens) (GeoEngineers 2022).

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Little to no terrestrial and riparian habitat occurs here. Vegetation that occurs within the project area and could be impacted during construction mainly consists of invasives. Substantial impacts to vegetation are not anticipated and measures to preserve or enhance vegetation are not proposed.

e. List all noxious weeds and invasive species known to be on or near the site.

Japanese knotweed (*Polygonum cuspidatum*), dandelion (t*atxasum officinale*), and creeping buttercup (*Ranunculus repens*) are known to occur at the site.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include: See bold

birds: hawk, heron, eagle, **songbirds**, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, **salmon**, **trout**, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site.

The species in the table below have the potential to occur within the Project vicinity. See the attached Biological Evaluation for additional information.

ESA-Listed Species with Potential to Occur Within the Project Action Area

Species	ESU/DPS	Scientific Name	Agency	Federal Status	Critical Habitat
Chinook Salmon	Lower Columbia River ESU	*Oncorhynchus tshawytcha*	NMFS	Threatened	Occurs in Project Area
	Snake River fall-run ESU			Threatened	
	Snake River spring/summer-run ESU			Threatened	
	Upper Columbia River spring-run ESU			Endangered	
	Upper Willamette River ESU			Threatened	
Chum Salmon	Columbia River ESU	*O. keta*	NMFS	Threatened	Occurs in Project Area
Coho Salmon	Lower Columbia River ESU	*O. kisutch*	NMFS	Threatened	Occurs in Project Area
Sockeye Salmon	Snake River ESU	*O. nerka*	NMFS	Endangered	Occurs in Project Area
Steelhead	Lower Columbia River DPS	*Onocorhynchus myskiss*	NMFS	Threatened	Occurs in Project Area
	Middle Columbia River DPS			Threatened	
	Snake River Basin DPS			Threatened	
	Upper Columbia River DPS			Threatened	
	Upper Willamette River DPS			Threatened	
Green sturgeon	Southern DPS	*Acipenser medirostris*	NMFS	Threatened	Occurs in Project Area
Eulachon	Southern DPS	*Thaleichthys pacificus*	NMFS	Threatened	Occurs in Project Area
Sea turtles	Leatherback	*Dermochelys coriacea*	NMFS	Endangered	None in Project Area
Killer Whale	Southern Resident	*Orcincus orca*	NMFS	Endangered	None in Project Area

Species	ESU/DPS	Scientific Name	Agency	Federal Status	Critical Habitat
Humpback Whale	Central America DPS	*Megaptera novaeangliae*	NMFS	Endangered	None in Project Area
	Mexico DPS			Threatened	None in Project Area
Bull Trout	N/A	*Salvelinus confluentus*	USFWS	Threatened	None in Project Area
Western Snowy Plover	N/A	*Charadrius nivosus nivosus*	USFWS	Threatened	None in Project Area
Marbled Murrelet	N/A	*Brachyramphus marmoratus*	USFWS	Threatened	None in Project Area
Streaked Horned Lark	N/A	*Eremophila alpestris strigata*	USFWS	Threatened	None in Project Area

The following Washington Department of Fish and Wildlife Priority Habitats and Species could occur in the Project vicinity.

- Coho Salmon (*Oncorhynchus kisutch*)
- Winter Steelhead (*Oncorhynchus mykiss*)
- Fall Chum (*Oncorhynchus keta*)
- Fall Chinook (*Oncorhynchus tshawytscha*)
- Marbled Murrelet (*Brachyramphus marmoratus*)
- Shorebird concentrations
- Waterfowl concentrations
- Wetlands
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Purple martin (*Progne subis*)

See the attached JARPA and Biological Evaluation for additional information.

c. Is the site part of a migration route? If so, explain.

Yes. Salmonids could use the Project vicinity during their migrations. In-water work will comply with the in-water work window for the area to avoid key migration times.

Baker Bay and the lower Columbia River are situated within the Pacific Flyway which supports a variety of migratory birds. The Pacific Flyway includes the entire west coast of North America reaching from northern Alaska and Canada to the southern tip of Mexico.

d. Proposed measures to preserve or enhance wildlife, if any:

Avoidance and minimization measures (AMMs) and BMPs will be implemented during construction to avoid and/or minimize impacts to wildlife. See the attached JARPA and Biological Evaluation for a full list of measures to preserve or enhance wildlife. Key AMMs/BMPs include:

- In-water construction activities will comply with the in-water construction window (anticipated to be November 1 through February 28)

- During any in-water and embankment work, containment booms will be used to surround the work areas or separate embankment work from surface water.
- Steel piling will be installed with a vibratory hammer when possible. Impact hammering will start with light tapping, then increase to full force gradually.
- A bubble curtain and one or more other noise attenuation methods will be used during impact installation or proofing of all steel piling.

e. List any invasive animal species known to be on or near the site.

There are no known invasive animal species that occur at or near the site.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The Project does not propose structures that will use energy into the future, however energy (fuel) will be consumed during demolition to operate equipment.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No. The Project would not affect potential use of solar energy.

c. What kinds of energy conservation features are included in the plans of this proposal?
List other proposed measures to reduce or control energy impacts, if any:

Not applicable. Energy use is anticipated to be minimal and short-term. Energy conservation measures are not proposed.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

A portion of the creosote-treated timber bulkhead, all of the creosote treated timber revetment and associated structures, and other creosote-treated structures (to be removed from the adjacent slip for mitigation) will be removed. While creosote-treated piles are being removed, a containment boom will surround the work area to contain and collect any floating debris and sheen. Debris will be retrieved and disposed of properly. See the full list of AMMs/BMPs in the attached JARPA and Biological Evaluation that would be implemented during creosote structure removal.

1) Describe any known or possible contamination at the site from present or past uses.

Creosote-treated timber structures are present at the site.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Creosote-treated timber exists within the Project area. No other hazardous chemicals or conditions are known to occur.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

The Project proposes to remove creosote treated wood from the marine environment. Please see the attached JARPA and Biological Evaluation for a discussion on the minimization measures proposed for creosote treated wood removal.

4) Describe special emergency services that might be required.

Special emergency services are not anticipated to be required.

5) Proposed measures to reduce or control environmental health hazards, if any:

Measures will be implemented to reduce the risk of creosote exposure during creosote-treated wood removal. Please see the attached JARPA and Biological Evaluation for a discussion on the minimization measures proposed for creosote treated wood removal.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

In-water construction noise sources include pile driving and the use of barge and boats. Above water construction include the use of a powered hand tools, barge, and tugboat. Please see Section 2.3 of the attached Biological Evaluation for additional information.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indi-cate what hours noise would come from the site.

Project noise will be short-term and limited to daylight hours. In-air pile driving noise could reach up to 105 A-weighted decibels (dBA). In-water pile driving noise could reach up to 170 dB root mean square (rms).

The marina is a seasonally busy commercial fishing and recreation marina. The project will not change the use of the marina and no longterm changes to noise are anticipated.

3) Proposed measures to reduce or control noise impacts, if any:

The proposed project will comply with City of Ilwaco noise ordnance 8.18.050.I limiting construction work between 7AM and 630PM Monday through Saturday and between 9AM and 5PM on Sundays.
The following measures would be implemented to reduce potential noise impacts:

- Steel piling will be installed with a vibratory hammer when possible. Impact hammering will start with light tapping, then increase to full force gradually.
- A bubble curtain and one or more other noise attenuation methods will be used during impact installation or proofing of all steel piling.
- Pile-driving will commence with a soft start procedure (ramping up) in order to alert nearby wildlife, allowing them to move out of the area prior to construction activities. For impact pile driving, contractors will be required to provide an initial set of strikes from the hammer at reduced percent energy, each strike followed by no less than a 30-second waiting

period. This procedure will be conducted a total of two times before impact pile driving begins.

- Use of a wood cushion block or other sound-reducing method shall be implemented if impact pile driving is to be employed. The use of wood cushion blocks during construction will result in a reduction in underwater noise.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The Project vicinity generally consists of a marina used for year-round moorage of recreational and commercial fishing vessels, upland commercial buildings, and a boatyard. The Project site is located at a commercial fishing wharf. The Project will return use of the wharf for temporary mooring for offloading and loading of equipment and product for the Safe Coast Seafoods facility. The completed Project will also return access to the adjacent driveway. The adjacent driveway access is currently strictly controlled and limited due to load limitations resulting from the poor condition of the existing bulkhead.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No. The Project site has not been used as working farmlands or working forest lands.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

Not applicable. The Project is not located near a farm or forest.

c. Describe any structures on the site.

The Project vicinity generally consists of a marina used for year-round moorage of recreational and commercial fishing vessels, upland commercial buildings, and a boatyard. The Project site is located at a commercial fishing wharf (herein referred to as 'wharf'). The wharf is an earth filled structure on the east side and pile supported on the west side. The wharf is protected by a timber bulkhead (to be replaced) along the eastern limits of the wharf. The Port of Ilwaco Marina is located waterward of the existing bulkhead. To the north of the bulkhead wall, the shoreline is protected by a low creosote-treated timber retaining wall and large log. To the south of the bulkhead wall, shoreline protection consists of riprap and concrete rubble. The Safe Coast Seafoods buildings are located on the wharf.

d. Will any structures be demolished? If so, what?

The following structures will be removed:

- Portions of existing creosote-treated timber bulkhead
- The creosote-treated timber retaining wall and associated treated timber debris
- Derelict creosote-treated piles and cross-members located in the slip next to the bulkhead

- Concrete rubble to the south of the bulkhead will be removed and replaced with riprap to accommodate construction of the bulkhead
- A floating timber structure will be removed from the south portion of the marina as part of project mitigation.

e. What is the current zoning classification of the site?

The Project is located within an area zoned as light industrial and adjacent to areas zoned as low density commercial (City of Ilwaco 2022).

f. What is the current comprehensive plan designation of the site?

The Project is located within an area zoned as light industrial and adjacent to areas zoned as low density commercial (City of Ilwaco 2022).

g. If applicable, what is the current shoreline master program designation of the site?

The upland areas are designated as 'high intensity'. Areas waterward of the ordinary highwater mark (OHWM) are designated as 'aquatic'.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The Project occurs in an area that is designated as a Fish and Wildlife Conservation area.

i. Approximately how many people would reside or work in the completed project?

Zero. People will not work or reside in the completed Project.

j. Approximately how many people would the completed project displace?

Zero. People would not be displaced by the Project.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None. No displacement impacts would occur.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

No measures are proposed. The Project would be compatible with existing land uses without additional measures.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

No measures are proposed. The Project would not impact agricultural or forest lands.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Zero.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Zero.

c. Proposed measures to reduce or control housing impacts, if any:

No measures are proposed. The Project would not result in housing impacts.

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The replacement bulkhead will be raised approximately 3 feet to accommodate sea level rise. The total height above HTL is 4.3 feet. The top of slope along the head of the adjacent slip will be raised approximately 1.5 feet to +14 feet MLLW.

b. What views in the immediate vicinity would be altered or obstructed?

Views are not anticipated to be impacted. As stated above, the top of the replaced bulkhead wall will be at elevation 14 ft MLLW, 4.3 feet above the HTL. The increase to the top of slope at the head of the slip to 14 feet MLLW is not anticipated to impact any views as the adjacent properties are used by commercial businesses and the increase of approximately 1.5 feet is not anticipated to adversely alter views from the businesses.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No measures are proposed. The Project is not anticipated to result in adverse impacts to aesthetics. The Project could provide aesthetic benefits by removing derelict structures.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Construction will occur during the daylight hours. Changes to longterm wharf lighting is not proposed.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No. Lighting is not proposed.

c. What existing off-site sources of light or glare may affect your proposal?

There are no known off-site sources of light or glare that may affect the Project.

d. Proposed measures to reduce or control light and glare impacts, if any:

No measures are proposed. The Project is not anticipated to result in light or glare impacts.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

The Port of Ilwaco marina is used for recreational activities such as boating, in addition to commercial uses.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The Project could temporarily disturb use of the adjacent Port of Ilwaco Marina during construction. However, impacts are anticipated to be minor, localized to the immediate area around the proposed activities, and the Project would not restrict use of the marina. Additionally, work will be completed Fall and Winter of the 2024/ 2025 season (work window for in-water work is limited to November 1 through February 28) which will avoid disruptions during the busy summer fishing season.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Substantial impacts to recreation are not anticipated and therefore no measures are proposed to reduce impacts. The bulkhead replacement would prevent the shoreline from falling into a portion of the active Port of Ilwaco Marina, which would impact operations and recreation at the marina.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

In 1968, the filling in of the former tidelands made the former Pioneer Packing Company cannery platform into a peninsula at the northwest corner of the mooring basin (USC&GS 1968;USGS 1969). The former Pioneer Packing Company cannery became Jessie's Ilwaco Fish Company in 1961, and the property is now home to Safe Coast Seafoods.
A cultural resources and historic and built environment assessment was completed for the Project and it was determined that there are no known archaeological resources within the Project area (WillametteCRA 2022) and that the adjacent seafood buildings should not be eligible for listing in the National Registry for Historic Places based on a lack of integrity of design, materials and workmanship (processing building)and/or age of the building (south building) (Willamette CRA 2023).

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No. A cultural resource and historic and built environment assessment was completed for the Project (WillametteCRA 2022 and 2023).

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

The following resources were reviewed by WillametteCRA as part of the cultural resource and historic built environment assessment completed for the Project (WillametteCRA 2022 and 2023 [Technical Addendum]):

- Documents on file with the Washington Department of Archaeology and Historic Preservation (DAHP) and the Oregon State Historic Preservation Office (SHPO) to determine if archaeological resources have been recorded in the Project vicinity, and to identify any previous archaeological studies in the area
- Copies of historical maps and records to assess the potential for historic-period archaeological resources in the Project vicinity
- Historic photographs and newspaper articles related to the Port at the Columbia Pacific Heritage Museum in Ilwaco
- A reconnaissance-level assessment of the current study area and archival research on 27 April 2022

- An aboveground resource survey, formally documenting the East Bulkhead on 10 June 2022
- A Historic Property Inventory (HPI) form
- Site survey of upland buildings completed 12 April 2023

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Impacts to historic and cultural resources are not anticipated. If archaeological materials or human remains be observed during Project activities, all work in the immediate vicinity shall stop and DAHP, the County planning office, and the affected Tribe(s) would be contacted.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The Project will mainly be completed from the water. Trucks may occasionally be used to transport materials.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The geographic area is currently served by public transit. The nearest bus stop is approximately 0.1 miles from the Project site.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Zero. The Project does not propose to eliminate or construct parking spaces.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways are not proposed. The existing private driveway will be regraded and repaved with structural fill base course and asphalt pavement. Upland paving and grading will then be completed behind the bulkhead wall to repair damage associated with bulkhead movement and driveway settlement and to mitigate sea level rise.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The maintenance and repair project will be completed on the east side of the Safe Coast Seafoods wharf adjacent to an Ilwaco Marina slip. The seafood facility is a busy seafood processing facility that processes fish products delivered by vessel and trucks. The marina is a seasonally busy small marina serving commercial fishing and recreation vehicles.
Maintenance and rehabilitation of the existing infrastructure will reestablish operational efficiency and will allow accommodation of the intended vessel and vehicle traffic for which bulkhead and adjacent drive were originally approved and operated. The project does not expand the operational footprint of the of the wharf or the marina nor result in

an increase in vessel or vehicular traffic relative to previous operations.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The Project will mainly be completed from the water. There may be occasional vehicular trips associated with construction activities, however these have not been quantified.
The vehicular and vessel traffic to and from the site after project completion will remain the same as existing conditions.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No. The Project will not impact the movement of agricultural and forest products on roads or streets. Transportation impacts have not been identified.

h. Proposed measures to reduce or control transportation impacts, if any:

No measures are proposed. Transportation impacts have not been identified.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No. The Project does not propose the construction of new structures that could require an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No measures are proposed. Public service impacts have not been identified.

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

Utilities do not service the structures that would be affected by this Project.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No utilities are proposed.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Tracy Lofstrom

Name of signee Tracy Lofstrom

Position and Agency/Organization Manager, Port of Illwaco

Date Submitted: 6/30/23

Responsible Official:
Holly Beller, City Administrator
120 First Avenue
Ilwaco, WA 98624
360-642-3145
treasurer@ilwaco-wa.gov

Signature: _____ Date: November 8, 2023

COMMENT PERIOD: In accordance with WAC 197-11-340, there is a fourteen-calendar day comment period for this Determination of Non-significance. Comments on the DNS addressing environmental issues shall be submitted to the City of Ilwaco Building and Planning Department at the address below.

APPEALS: Appeals to the above Determination of Non-Significance must be filed with the City of Ilwaco Building and Planning Department within fourteen calendar days of the date of issuance above. Appeals must be filed in writing with the City of Ilwaco Building and Planning Department at the address below. In accordance with IMW 15.50.140, Decisions of the hearing examiner may be appealed to the Pacific County Superior Court in accordance with Section 15.08.160 of this title. Appeals shall set forth the specific reason, rationale, and/or basis for the appeal.

PORT OF ILWACO

Marine Structures Replacement

Ilwaco, WA

Appendix A11

City of Ilwaco SCUP and Ecology SCUP No. 2024-SWRO-7840 with City Staff Report

120 First Avenue North
PO Box 548 • Ilwaco, WA 98624
Phone: 360.642.3145
Fax: 360.642.3155
planner@ilwaco-wa.gov
www.ilwaco-wa.gov

Shoreline Substantial Development and Shoreline Conditional Use Permit

Permit No.: 2024-002 **Issued:** February 6, 2024

Parcel No.(s): 73048003011, 73048003009, 73031013000 **Expires:** February 6, 2029

Project Location: 117 Howerton Avenue SE Ilwaco, WA 98624

Property Owner: Tracy Loftstrom, Port Manager, Port of Ilwaco

Applicant: Victoria England, Moffatt & Nichol

Project Description: Replace the failing east bulkhead with a sheetpile bulkhead, replace the slope protection to the north and south of the east bulkhead, and pave and regrade the upland wharf area directly landward of the east bulkhead.

Your application has been reviewed for compliance with all applicable policies and regulations. The following conditions of approval must be adhered to:

CONDITIONS OF APPROVAL

1. The permit shall not begin and is not authorized until twenty-one (21) days from the date of filing (February 6, 2024) as defined in RCW 90.58.140(6) and WAC 173-27-130, as amended, or until all review proceedings initiated within twenty-one (21) days from the date of such filings have been terminated, except as provided in RCW 90.58.140(5)(c) and (d).

2. All development must adhere to the recommendations included in the *Geotechnical Engineering Services Report* prepared by GeoEngineers dated October 4, 2023.

3. All local, state, and federal regulations are adhered to. Additional permits or authorizations from other agencies will be required, including, but not limited to, Washington Department of Fish and Wildlife, United States Army Corps of Engineers, Washington State Department of Ecology, and Washington State Department of Natural Resources Aquatic Resources Division.

4. Gravel, drainrock, and fish mix fill material shall be obtained from a state-authorized source in compliance with Shoreline Master Program Section 7.9(5).

5. Documentation must be provided that the mitigation measures have been implemented as proposed prior to the final inspection of the project.

6. The use or activity shall be commenced within two years of the effective date of this permit in compliance with WAC 173-27-090(2). The City may authorize a single extension for a period not to exceed one year based on reasonable factors, if a request for extension has been filed before the expiration date and notice of the proposed extension is given to parties of record.

7. Authorization to conduct development activities shall terminate five years after the effective date of the substantial development permit in compliance with WAC 173-27-090(3). The City may authorize a single extension for a period not to exceed one year based on reasonable factors, if a request for extension has been filed before the expiration date and notice of the proposed extension is given to parties of record.

8. Any and all future development on subject property requires permit approval from the City of Ilwaco.

9. The City of Ilwaco may revoke this permit if the permittee fails to comply with the conditions listed.

10. The undersigned may inspect the work authorized by this permit. The permittee shall provide unrestricted access to the construction site for inspection.

11. The City of Ilwaco reserves the right to amend or add conditions of approval, as necessary, to ensure that all local, state, and federal regulations are adhered to.

A copy of this permit, along with the approved site plan, shall be kept on the project site during construction and made available for inspection upon request by any City of Ilwaco representative. Any and all changes to the approved site plan will require additional review by the City of Ilwaco and may require additional fees for review. Questions regarding this permit can be addressed to Holly Beller, via email at treasurer@ilwaco-wa.gov, or by phone at (360) 642-3145.

BEFORE THE HEARING EXAMINER FOR THE CITY OF ILWACO

In the Matter of the Application of	)	**FILE NO: 2024-002**
The Port of Ilwaco	)	
Applicant/Owner, for a	)	**FINDINGS OF FACT,**
Shoreline Substantial Development Permit	)	**CONCLUSIONS OF LAW**
and Shoreline Conditional Use Permit	)	**AND DECISION**

INTRODUCTION

The applicant proposes to replace the failing east bulkhead with a sheet pile bulkhead, replace the shoreline protection improvements to the north and south of the east bulkhead and pave and regrade the upland wharf area directly landward of the east bulkhead. The replacement bulkhead has been designed to accommodate future sea level rise projections to mitigate the effects of climate change and future flooding events. The subject property is located at 117 Howerton Avenue SE Ilwaco, WA 98624 and consists of parcels 73048003011, 73048003009 and 73031013000.

The applicant submitted application materials on July 6, 2023. The proposed project does not meet the threshold for a categorical exemption and therefore requires a SEPA determination pursuant to Washington Administrative Code (WAC) §197-11-800. The applicant submitted a SEPA Checklist with its application and the City published a Notice of Application in the Chinook Observer on August 9, 2023 and issued a Determination of Non-Significance (DNS) and posted the determination to the Department of Ecology SEPA Register on November 6, 2023.

After an initial review of the application materials, the City issued a determination of completeness on August 1, 2023. The proposal is subject to the requirements of the IMC §15.18, Critical Areas, and the City of Ilwaco Shoreline Master Program (SMP).

The application was heard before Charles E. Black, Hearing Examiner on January 4, 2024 at 11 AM PST. Following the call to order, the Hearing Examiner explained the hearing process and Laura Jones, on-call City Planner, presented the staff report. The applicant, the City Administrator and interested members of the public attended the hearing in person and via Zoom.

Based on the information presented during the hearing, contained in the staff report and in the administrative record, the Hearing Examiner makes the following:

FINDINGS OF FACT

1. The applicant submitted a complete SEPA checklist with their application, and the City timely issued a Determination of Non-Significance (DNS). No public comments were received during the Notice of Application comment period and the SEPA review for the project is complete.
2. No changes to the existing permitted use of the site as a seafood processing facility are proposed with this application. The development will be limited to replacement of existing shoreline stabilization structures and regrading/paving of the existing access road.
3. Pursuant to SMP Table 7.1, fill below the ordinary high-water mark (OHWM) requires a shoreline conditional use permit. Accordingly, a mitigation sequence analysis is required under §6.3(2)(B).
4. As described in the Mitigation Sequencing and No Net Loss Narrative prepared by Moffatt & Nichol on behalf of the applicant, mitigation sequencing was followed during the design of this project proposal and compensatory mitigation is anticipated to result in no net loss of shoreline ecological functions. Avoidance by taking no action was demonstrated to be infeasible as it was documented in the Geotechnical Engineering Report that the bulkhead is at risk of failure.

Additional alternatives were considered but were deemed infeasible or inadequate. The project proposal has been minimized to the extent practicable. Avoidance and minimization measures, including BMPs, will be implemented throughout construction. The applicant has prepared a compensatory mitigation plan that enhances the aquatic environment compared to current conditions. Additional monitoring efforts are not expected to be necessary for this project proposal as outlined in the findings of SMP §6.3(4).

5. The Geotechnical Engineering Report prepared by GeoEngineers establishes that the bulkhead is in serious structural condition and at risk of failing. Frequent flooding due to high water levels from "king tides" and severe winter storm surges further threaten the structural capacity of the bulkhead. Softer alternatives are not feasible to protect the existing wharf and facilities.

6. The proposed mitigation to offset the expected project impacts include piling removal, removal of creosote from the aquatic environment, beach nourishment, and removal of floating timber debris/overwater coverage from the marine environment. Approximately twenty-eight (28) creosote treated timber piles (12-inch diameter) and three (3) steel piles (12-inch diameter) will be removed adjacent to the existing bulkhead and as part of the north shoreline rehabilitation. In addition, the Port proposes to remove approximately thirty-six (36) 12-inch diameter derelict creosote-treated timber piles and 3 creosote-treated timber pile caps as mitigation for the fill and benthic habitat impacts created by the placement of the new bulkhead wall in front of the existing structure. The removal of approximately sixty-four (64) 12-inch creosote-treated timber piles, three (3) 12-inch steel piles, 70 linear feet of creosote treated timber retaining wall, and 40 linear feet of derelict creosote-treated timber pile caps will restore approximately 165 square feet of benthic habitat and remove approximately 34 tons of creosote from the marine environment. Additionally, floating timber debris will be removed from the south portion of the marina as part of the project mitigation. This will remove approximately 2,510 square feet of overwater coverage currently present in that portion of the marina. The proposed compensatory mitigation was identified in consultation with federal and state agencies including additional coordination with the Washington Department of Fish and Wildlife to identify sufficient mitigation to address project impacts. No additional safeguard measures are expected to be needed provided that the mitigation plan is implemented as proposed.

7. The project proposal has been designed to ensure that there is no net loss of shoreline ecological function. The proposed fill placement and excavation activities have been minimized to the extent practicable. The proposal includes removal of creosote and concrete from the aquatic environment, removal of derelict overwater structures, and will include beach nourishment in the form of fish mix on top of the replaced shoreline stabilization at the head of the berth. The fill and excavation have been minimized to the extent practicable and are the minimum size necessary to protect the existing facilities and mitigate the future effects of sea level rise. The Geotechnical Engineering Report prepared by GeoEngineers includes an analysis that concludes that the proposed development actions will not increase the risk of slope failure anywhere along the project area.

8. Any conclusion of law deemed to be a finding of fact is adopted as such. From these findings of fact, the Hearing Examiner makes the following:

CONCLUSIONS OF LAW

1. The Hearing Examiner has jurisdiction over the subject matter of this proceeding.

2. The proposed use in the proposed location will not be detrimental to other uses legally existing or permitted outright in the vicinity of the project nor will the proposed use likely stimulate additional requests for like actions in the area that may produce substantial adverse effects to the shoreline environment.
3. The other performance characteristics of the proposed use are compatible with those of other uses in the vicinity of the project.
4. The requirements of the Ilwaco Municipal Code have been met.
5. The proposed use and design are compatible with the other authorized uses of the Port of Ilwaco marina and any planned uses and with the existing structures.
6. Any finding of fact deemed to be a conclusion of law is adopted as such.

DECISION

The Shoreline Substantial Development Permit and Shoreline Conditional Use Permit are approved, subject to the following conditions:

1. The permit shall not begin and is not authorized until twenty-one (21) days from the date of filing as defined in RCW §90.58.140(6) and WAC §173-27-130, as amended, or until all review proceedings initiated within twenty-one (21) days from such date of filing have been terminated, except as provided in RCW §90.58.140(5)(c) and (d).
2. All development shall adhere to the recommendations included in the Geotechnical Engineering Services Report prepared by GeoEngineers dated October 4, 2023.
3. All local, state, and federal regulations shall be adhered to. Additional permits or authorizations from other agencies will be required, including, but not limited to, Washington Department of Fish and Wildlife, United States Army Corps of Engineers, Washington State Department of Ecology, and Washington State Department of Natural Resources Aquatic Resources Division.
4. Gravel, drain rock, and fish mix fill material shall be obtained from a state-authorized source in compliance with SMP §7.9(5).
5. Documentation shall be provided confirming that the mitigation measures have been implemented as proposed prior to the final inspection of the project.

Dated: January 7, 2024

By: Charles E. Black

Charles E. Black
Hearing Examiner
City of Ilwaco

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
PO Box 47775, Olympia, WA 98504-7775 • 360-407-6300

February 6, 2024

Port of Ilwaco
Tracy Lofstrom
PO Box 307
Ilwaco, WA 98624

Re: City of Ilwaco Substantial Development Permit and Conditional Use Permit No. 2024-002
Ecology Permit No. 2024-SWRO-7840

Dear Tracy Lofstrom:

On January 9, 2024, the Department of Ecology (Ecology) received notice that the City of Ilwaco (City) has approved with conditions your application for a Substantial Development Permit (SDP) and a Conditional Use Permit (CUP) to replace the failing east bulkhead with a sheetpile bulkhead, replace the slope protection to the north and south of the east bulkhead, and pave and regrade the upland wharf area directly landward of the east bulkhead. The project is located at 117 Howerton Avenue SE within a high intensity shoreline environment designation along Baker Bay.

By law, local governments must review all SDPs for compliance with:

- The Shoreline Management Act (Chapter 90.58 RCW),
- The SDP approval criteria (WAC 173-27-150), and
- The Ilwaco Shoreline Master Program.

Local governments, after reviewing SDPs for compliance, are required to submit them to Ecology. We have received your SDP.

By law, Ecology must review CUPs for compliance with:

- The Shoreline Management Act (Chapter 90.58 RCW),
- The CUP approval criteria (WAC 173-27-160), and
- The Ilwaco Shoreline Master Program.

After reviewing CUPs for compliance, Ecology must decide whether to approve, approve with conditions, or disapprove.

Our Decision on Your CUP:
We approve your CUP, provided your project complies with the conditions required by the City.

What Happens Next?
Before you begin activities authorized by these permits, the law provides a 21-day appeal period from February 6, 2024, the "date of filing." This appeal period allows anyone (including you) who disagrees with any aspect of this permit to appeal the decision to the state Shorelines Hearings Board (SHB). You must wait for the conclusion of an appeal before you can begin the activities authorized by this permit.

The SHB will notify you if they receive an appeal. We recommend that you contact the SHB before you begin permit activities to ensure they have not received an appeal. You may reach them at 360-664-9160, eluho@eluho.wa.gov, or Shorelines Hearings Board.

If you want to appeal this decision, you can find appeal instructions at How to File a Petition for Review or on the website of the Washington State Legislature at Chapter 461-08 WAC.

Please note, other federal, state, and local permits may be required in addition to these shoreline permits.

If you have any questions about this letter, please contact Zach Meyer at 360-481-9885 or Zachary.Meyer@ecy.wa.gov.

Sincerely,

Maria Sandercock
Section Manager
Shorelands and Environmental Assistance Program

ec: Victoria England, Moffat & Nichol
Alexandra Plumb, DCG Watershed
Holly Beller, City of Ilwaco
Zach Meyer, Department of Ecology

CITY OF ILWACO

120 First Avenue North
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Fax: 360.642.3155
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www.ilwaco-wa.gov

DATE:	December 14, 2023
TO:	Ilwaco Hearing Examiner
CC:	Tracy Loftstrom, Port Manager, Port of Ilwaco
FROM:	Holly Beller and Alexandra Plumb
SUBJECT:	Shoreline Substantial Development, Shoreline Conditional Use Permit, and SEPA Determination

I. GENERAL INFORMATION

Applicant/Property Owner: Tracy Lofstrom (Port of Ilwaco Manager), PO Box 307, Ilwaco, WA 98624

Contact: Victoria England, Moffatt & Nichol, 600 University Street Suite #610, Seattle, WA 98101

Project Address/Location: 117 Howerton Avenue SE Ilwaco, WA 98624; Port of Ilwaco; Parcel(s) 73048003011, 73048003009 and 73031013000.

Public Notice: Public notice requirements are described below under State Environmental Policy Act (SEPA).

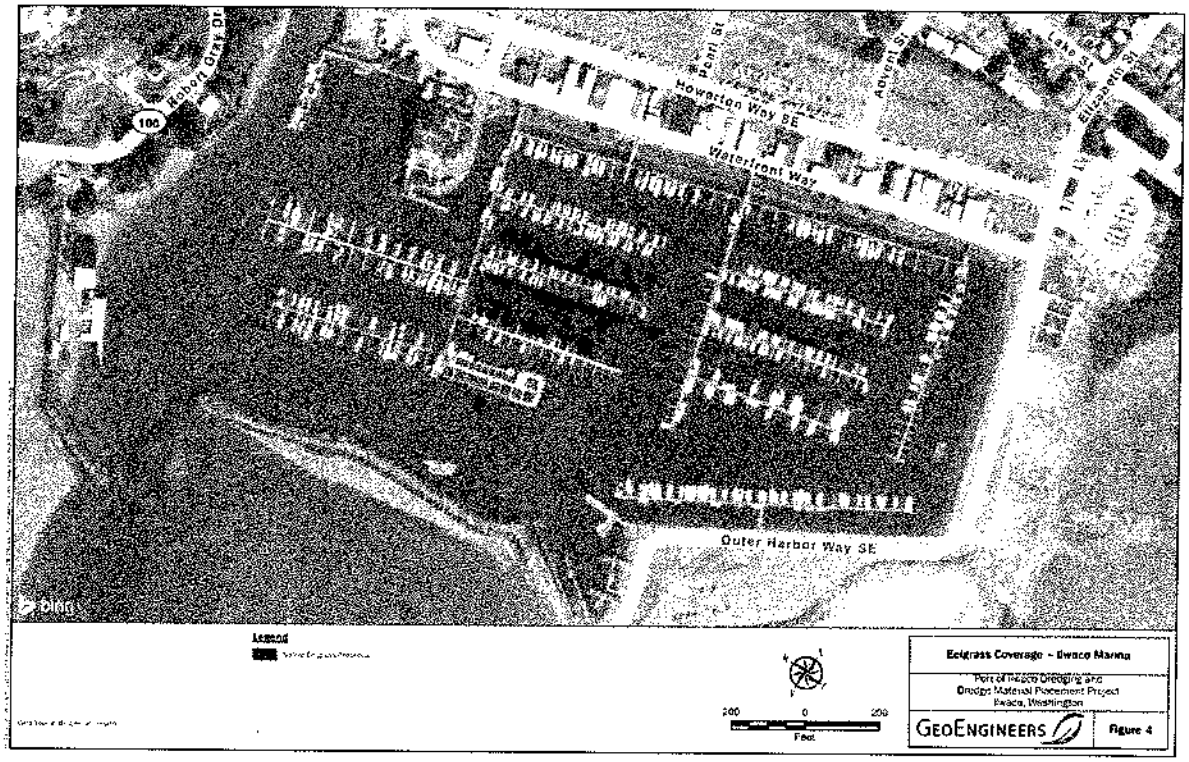
Proposal: The Port of Ilwaco proposes to replace the failing east bulkhead with a sheetpile bulkhead, replace the slope protection to the north and south of the east bulkhead, and pave and regrade the upland wharf area directly landward of the east bulkhead. The replacement bulkhead has been designed to accommodate for future sea level rise projections to mitigate the effects of climate change and future flooding events.

State Environmental Policy Act (SEPA): The proposed project does not meet the threshold for a categorical exemption and therefore requires a SEPA determination pursuant to Washington Administrative Code (WAC) 197-11-800. The applicant submitted a SEPA Checklist with their application. The City published a Notice of Application in the *Chinook Observer* on August 9, 2023. The City issued a Determination of Non-Significance (DNS) and posted the determination to the Department of Ecology SEPA Register on November 6, 2023. The SEPA Checklist and DNS are provided as Attachment B. Public comments received are referenced as Attachment C.

Shoreline Master Program (SMP): The subject properties are located within the High Intensity Shoreline Environmental Designation (SED). Below the Ordinary High Water Mark (OHWM) is designated as the Aquatic SED.

Critical Areas: The site is located within a Fish and Wildlife Habitat Conservation Area and is near mapped aquatic wetlands. An Aquatic Critical Areas Assessment and Macrovegetation/Eelgrass Survey is included as Attachment E. The purpose of this study was to document baseline habitat conditions (wetland, stream and estuarine macrovegetation) that may be affected by proposed project elements in accordance with Ilwaco Municipal Code (IMC) Chapter 15.18 (Critical Areas Ordinance) and according

to the City of Ilwaco's Shoreline Master Program (SMP) (IMC Chapter 15.14). Per WAC 220-110-250(3)(a,b), eelgrass and macroalgae are saltwater habitats of special concern and under Ilwaco Municipal Code (IMC) Chapter 15.14 are considered critical saltwater habitats. Native eelgrass is not expected to be directly impacted by the project proposal, as shown in the survey below.



Zoning: The subject property is zoned Light Industrial (M-1). "Food/seafood processing" is a permitted use in the M-1 district per Table 15.44.020 (Land Use Table) in the Ilwaco Municipal Code (IMC). No changes to the existing use are included with this proposal.

Attachments:

A. Application Forms and Site Plans
B. SEPA Checklist and DNS
C. Public Comments
D. Geotechnical Report
E. Aquatic Critical Areas Assessment and Macrovegetation/Eelgrass Survey
F. JARPA
G. Mitigation and No Net Loss Narrative Memorandum
H. Biological Evaluation
I[1]. Letter from Department of Archaeology and Historic Preservation (DAHP)
J. Updated Letter of Concurrence from USFWS and NOAA Fisheries

[1]A Cultural Resources Assessment was submitted with the application materials but is not included in the attachments due to the confidential nature of the content included the report.

II. PROJECT INFORMATION

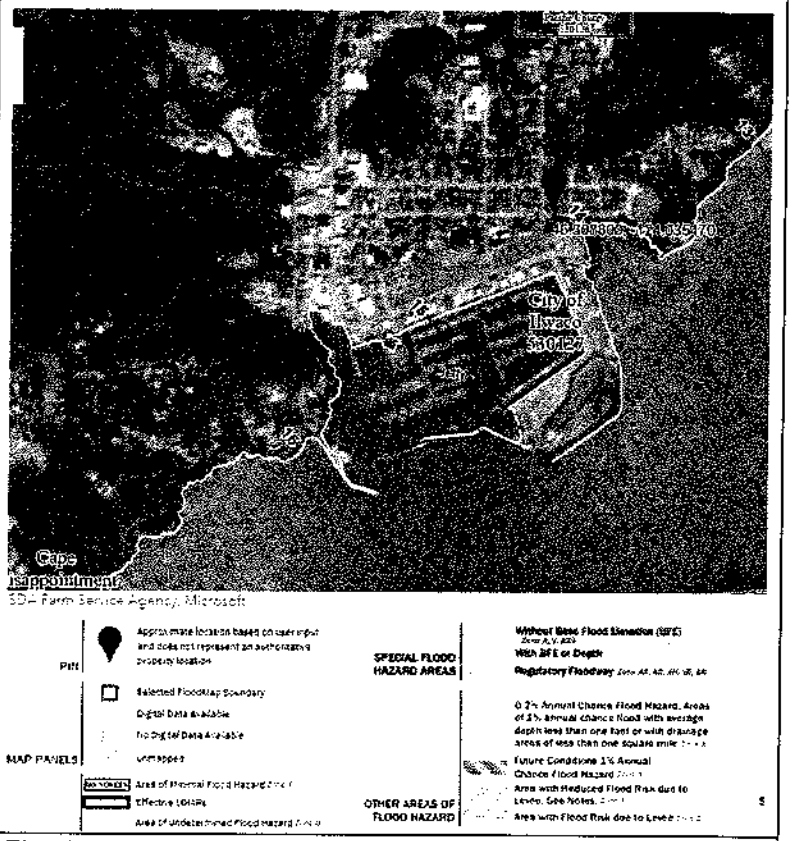
The Port of Ilwaco is requesting approval of a Shoreline Substantial Development Permit and Shoreline Conditional Use Permit to replace the failing east bulkhead with an anchored steel sheetpile bulkhead, repair the slope protection north and south of the bulkhead, and pave and regrade the upland wharf area near Safe Coast Seafoods. The applicant submitted application materials on July 6, 2023. After an initial review of the application materials, the City issued a determination of completeness on August 1, 2023. The City conducted SEPA review and issued a DNS on November 8, 2023. The proposal is subject to the requirements of the IMC 15.18, Critical Areas, and the City of Ilwaco Shoreline Master Program (SMP).

Figure 1: Zoning Area

Figure 2: Area of Proposed Development

III. GENERAL SITE INFORMATION

Zoning District	M-1 Light Industrial
Parcel Number(s) and Size	73048003011 73048003009 73031013000
Adjacent Land Uses	The surrounding land uses include the marina and businesses associated with the Port of Ilwaco.
Access Roads	Existing access to the site is gained from via Waterfront Way from Howerton Way SE. No changes to the location of the access road are proposed with this application. The proposal includes upgrades to the internal access road associated with Safe Coast Seafood facilities. The internal access road will be expanded and repaved to the edge of the new bulkhead and concrete cap. However, no work will occur within the public ROW. All proposed development will be located within the Safe Coast Seafoods property.
Existing Structures	The site currently contains Safe Coast Seafoods facilities and associated structural shoreline stabilization to support their temporary berthing operations and marina users.
Topography	The site is relatively flat with most of the work occurring in-water and along the shoreline. The geotechnical report submitted with the application materials includes more detailed information.
Existing Vegetation	The site is largely devoid of terrestrial vegetation as it is within a developed industrial area. Some upland vegetation may be

	impacted along the rip rap shoreline or behind the existing bulkhead wall.
Fish and Wildlife Habitat Conservation Areas	The 2022 eelgrass survey indicated that there is no eelgrass on or immediately adjacent to the project site. However, there are eelgrass beds within other areas of the marina. No streams were identified within the project site.
Frequently Flooded Areas	According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Panel 530127, the site is located within a Special Flood Hazard Area. 
Geologically Hazardous Areas	The site is located in a seismic hazard area for ground shaking amplification (NEHRP Site Class D) and the risk of liquefaction is high. The geotechnical report indicates that the subject property is potentially underlain by liquefiable soils.
Wetlands	The project area is mapped as estuarine and marine wetlands. However, the Aquatic Critical Areas Assessment and Macrovegetation/Eelgrass Survey did not document any wetlands within the immediate project site.
Shoreline Environmental Designation	Upland: High Intensity In-water: Aquatic
Critical Aquifer Recharge Areas	The site is underlain by *Udorthents* soils and is therefore within a designated CARA.

IV. ILWACO MUNICIPAL CODE FINDINGS

Streets (IMC Chapter 14.04)

IMC 14.04.070(A)

A. Required minimum street right-of-way width is according to construction standards in the Pacific County Road standards.

Finding: The applicant is proposing improvements to the internal access road for the Safe Coast Seafoods facility that connects to Waterfront Way, a public road providing access to the site. However, all improvements will be made outside of the public right-of-way.

State Environmental Policy Act (IMC Chapter 15.12)

IMC 15.12.010 State Environmental Policy Act (SEPA).

A. The city adopts the applicable sections of the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC, including amendments that became effective in November 1997, as the city of Ilwaco's environmental management ordinance.

B. The city planner is named the responsible environmental official for the city, for purposes of administrating this title. (Ord. 627 (part), 1999)

Finding: The applicant submitted a complete SEPA checklist with their application, and the City issued a Determination of Non-Significance (DNS) on November 8, 2023. The public comment period concluded on December 10, 2023. Public comments received are included in Attachment C. The SEPA review for the project is complete. No comments were received during the Notice of Application comment period.

Critical Areas (IMC Chapter 15.18)

IMC 15.18.020 Development in critical areas.

A. Persons proposing development in critical areas must comply with the requirements of the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife service, and the Washington State Department of Ecology, in addition to the regulations of this title.

Finding: On August 28, 2023, the applicant received a Letter of Concurrence from the U.S. Fish and Wildlife Service, as well as updated correspondence on September 6, 2023, documenting that the proposed changes lessen the impact and improve conditions compared to the initial proposal (Attachment J). Similarly, NOAA Fisheries provided a Letter of Concurrence on August 16, 2023, as well as updated correspondence on October 5, 2023, indicating that the proposed revisions do not change the determination in the Biological Evaluation that the proposed action is not likely to adversely affect salmon, steelhead, green sturgeon or eulachon, or critical habitat for these species (Attachment J). As a **condition of approval**, all local, state, and federal regulations must be adhered to. Additional permits or authorizations from other agencies will be required, including, but not limited to, Washington Department of Fish and Wildlife, United States Army Corps of Engineers, Washington State Department of Ecology, and Washington State Department of Natural Resources Aquatic Resources Division.

M-1 Light Industrial District (IMC Chapter 15.36)

IMC 15.36.020 Allowed uses.
Allowed uses in the M-1 district are listed in IMC Chapter 15.44.

Finding: There are no changes in the existing permitted use, a seafood processing facility, with this proposal. The proposal is to protect the existing facility by replacing the failing bulkhead.

Shoreline Master Program

SMP Section 6.3(1) No net loss of ecological functions.
Individual uses and developments shall not result in a net loss of shoreline ecological functions. Individual uses and developments are required to follow the mitigation sequence and mitigate environmental impacts not otherwise avoided or minimized by compliance with the City's Shoreline Master Program or other applicable regulations.

Finding: As described in the *Mitigation Sequencing and No Net Loss Narrative* prepared by Moffatt & Nichol on behalf of the Port of Ilwaco, mitigation sequencing was followed during the design of this project proposal and compensatory mitigation is anticipated to result in no net loss of shoreline ecological functions.

SMP Section 6.3(2) Mitigation sequence analysis, when required.
If a proposed shoreline use or modification is entirely addressed by specific, objective standards (such as setback distances, pier dimensions, or materials requirements) contained in the City's Shoreline Master Program, then the mitigation sequence analysis described in regulation 6.3(3) is not required. In the following circumstances, a project applicant must provide a mitigation sequence analysis as described in regulation 6.3(3):

A. If a proposed shoreline use or modification is addressed in any part by discretionary standards (such as standards requiring a particular action "if feasible" or requiring the minimization of development size) contained in the City's shoreline regulations, then the mitigation sequence analysis is required for the discretionary standard(s).
B. When an action requires a shoreline conditional use permit or shoreline variance permit.
C. When specifically required by a provision in the City's Shoreline Master Program.

Finding: Pursuant to SMP Table 7.1, Shoreline uses, development and modifications, fill below the ordinary high water mark (OHWM) requires a shoreline conditional use permit. Therefore, a mitigation sequence analysis is required under Section 6.3(2)(B).

SMP Section 6.3(3) Mitigation Sequence Analysis
An applicant required to complete a mitigation sequence analysis pursuant to regulation 6.3(2) must describe how the proposal will follow the below mitigation sequence. Application of the mitigation sequence must achieve no net loss of ecological functions for each new development and not have a significant adverse impact on other shoreline functions fostered by the policy of the Shoreline Management Act. Mitigation measures are listed in descending order of priority. Lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable. Mitigation in excess of that necessary to ensure that development will result in no net loss of ecological functions will not be required, but may be voluntarily performed.
A. Avoid the impact altogether by not taking a certain action or parts of an action;

B. *Minimize impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;*
C. *Rectify the impact by repairing, rehabilitating, or restoring the affected environment;*
D. *Reduce or eliminate the impact over time by preservation and maintenance operations;*
E. *Compensate for the impact by replacing, enhancing, or providing substitute resources or environments; and*
F. *Monitor the impact and the compensation projects and taking appropriate corrective measures.*

Finding: As described in the *Mitigation Sequencing and No Net Loss Narrative* prepared by Moffatt & Nichol on behalf of the Port of Ilwaco, mitigation sequencing was followed during the design of this project proposal. Avoidance by taking no action was demonstrated to be not feasible as it was documented in the Geotechnical Engineering Report that the bulkhead is at risk of failure. Additional alternatives were considered but were deemed not feasible or inadequate. The project proposal has been minimized to the extent practicable. Avoidance and minimization measures, including BMPs, will be implemented throughout construction. The applicant has prepared a compensatory mitigation plan that enhances the aquatic environment compared to current conditions. Additional monitoring efforts are not expected to be necessary for this project proposal as outlined in the findings of SMP Section 6.3(4), Compensatory mitigation.

SMP Section 6.3(4) Compensatory mitigation
When compensatory measures are appropriate pursuant to the mitigation sequence analysis described in regulation 6.3(3):

A. *Preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans applicable to the area of impact may be authorized.*
B. *Compensatory mitigation measures must be maintained over the life of the use or development.*
C. *Authorization of compensatory mitigation measures may require appropriate safeguards, terms, or conditions as necessary to ensure no net loss of ecological functions.*

Finding: The proposed mitigation to offset the expected project impacts include piling removal, removal of creosote from the aquatic environment, beach nourishment, and removal of floating timber debris/overwater coverage from the marine environment. Approximately twenty-eight (28) creosote-treated timber piles (12-inch diameter) and three (3) steel piles (12-inch diameter) will be removed adjacent to the existing bulkhead and as part of the north shoreline rehabilitation. In addition, the Port proposes to remove approximately thirty-six (36) 12-inch diameter derelict creosote-treated timber piles and 3 creosote-treated timber pile caps as mitigation for the fill and benthic habitat impacts created by the placement of the new bulkhead wall in front of the existing structure. The removal of approximately sixty-four (64) 12-inch creosote-treated timber piles, three (3) 12-inch steel piles, 70 linear feet of creosote treated timber retaining wall, and 40 linear feet of derelict creosote-treated timber pile caps will restore approximately 165 square feet of benthic habitat and remove approximately 34 tons of creosote from the marine environment. Additionally, floating timber debris will be removed from the south portion of the marina as part of the project mitigation. This will remove approximately 2,510 square feet of overwater coverage currently present in that portion of the marina. The proposed compensatory mitigation was identified in consultation with federal and state agencies including additional coordination with WDFW to identify sufficient mitigation to address project impacts. No additional safeguard measures are expected to be needed provided that the mitigation plan is implemented as proposed. As a condition of approval, documentation must be provided that the mitigation measures have been implemented as proposed prior to the final inspection of the project.

SMP Section 7.9(2) Fill & excavation

When allowed, waterward of the ordinary high water mark. Fills waterward of the ordinary high water mark shall be allowed only when necessary to support:

A. A water-dependent or public access use.

Finding: The Safe Coast Seafoods facility is a permitted water-dependent use as a seafood processing facility in the High Intensity SED. The existing port facilities are protected by structural shoreline stabilization measures that have been documented as failing in the *Geotechnical Engineering Report* prepared by GeoEngineers. The proposed replacement shoreline stabilization along Waterfront Way will protect an existing public road and a temporary berth for the marina. Approximately 1,000 square feet of the fill would encounter the bottom substrate and result in permanent impacts to the existing aquatic soft bottom habitat. These impacts will be mitigated through compensatory mitigation to ensure no net loss of shoreline ecological function. Fill in the aquatic environment (below the ordinary high water mark) is considered a Shoreline Conditional Use pursuant to SMP Section 7.1 (Table 7-1 – Shoreline use, development, and modification matrix).

SMP Section 7.9(3) Protection of shoreline ecological functions

Fills and excavations shall be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration.

Finding: The project proposal has been designed to ensure that there is no net loss of shoreline ecological function. The proposed fill placement and excavation activities have been minimized to the extent practicable. The proposal includes removal of creosote and concrete from the aquatic environment, removal of derelict overwater structures, and will include beach nourishment in the form of fish mix on top of the replaced shoreline stabilization at the head of the berth.

SMP Section 7.9(4) Design.

All fills and excavations, except when for the purpose of shoreline restoration, must be designed:

A. To be the minimum size necessary to implement the allowed use or modification.

B. To fit the topography so that minimum alterations of natural conditions will be necessary.

C. To not adversely affect hydrologic conditions or increase the risk of slope failure, if applicable.

Finding: The fill and excavation have been minimized to the extent practicable and are the minimum size necessary to protect the existing facilities and mitigate the future effects of sea level rise. The *Geotechnical Engineering Report* prepared by GeoEngineers includes an analysis that the proposed development actions will not increase the risk of slope failure anywhere along the project area.

SMP Section 7.9(5) Fill material

Unless site characteristics dictate otherwise, fill material within surface waters or wetlands shall be sand, gravel, rock, or other clean material with a minimum potential to degrade water quality and shall be obtained from a state-authorized source.

Finding: The backfill material behind the east bulkhead will be clean gravel. The material on top of the proposed slope protection along the south side of the berth will be fish mix as recommended by Washington Department of Fish and Wildlife (WDFW). As a **condition of approval,** all material shall be obtained from a state-authorized source to meet this requirement.

SMP Section 7.9(6) Temporary erosion and sediment control plan.
A temporary erosion and sediment control plan, including best management practices, shall be provided for all proposed fill and excavation activities. Disturbed areas shall be immediately protected from erosion using mulches, hydroseed, or similar methods, and revegetated, as applicable.

Finding: The contractor must adhere to the best management practices (BMPs) and the erosion control measures outlined in the JARPA and detailed plan set prepared by Moffat & Nichol. Fill in, over or near water will be required to be conducted within the appropriate in-water construction window and must follow all appropriate BMPs.

SMP Section 7.18 Shoreline stabilization
SMP Section 7.18(3) New or enlarged structural stabilization measures, when allowed.

New or enlarged structural stabilization measures shall not be allowed except as follows.
C. In support of water-dependent development, when all of the conditions below apply.
1. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

Finding: The existing facility is protected by shoreline stabilization to the north, east and south of the project area. As described in the *Mitigation Sequencing and No Net Loss Narrative* prepared by Moffatt & Nichol, if left in its current state, the eastern bulkhead will eventually fail, which will result in a permanent loss of access to the facility (the access driveway adjacent to the bulkhead would be permanently blocked off), potential damage to buildings/building foundations, life/safety issues for Safe Coast Seafoods workers and marina tenants, inability for Safe Coast Seafoods to maintain operations resulting in loss of income and revenue for this small community, and obstruction of a portion of the marina (adjacent slip) making it unusable. The failing bulkhead is not caused by upland conditions.

2. Nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

Finding: Non-structural measures are not feasible for the existing wharf. Drainage improvements have been incorporated into the design of the bulkhead and the paving/regrading portion of the project to improve resiliency of the Safe Coast Seafoods facility.

3. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report prepared in accordance with regulation 7.18(6).

Finding: The *Geotechnical Engineering Report* prepared by GeoEngineers describes that the bulkhead is in serious structural condition and at risk of failing. Recent biweekly and monthly measurements have been completed to monitor ongoing movement of the bulkhead. The monitoring has recorded movement along 13 monitoring points along the face of the bulkhead ranging from approximately 0.06 inch to up to 0.31 inch waterward since monitoring began in November 2022. The monitoring indicates that the bulkhead is the process of active failure. Frequent flooding due to high water levels from "king tides" and severe winter storm surges further threaten the structural capacity of the bulkhead. The majority of the existing timber bulkhead will be abandoned in place behind the replacement bulkhead in order to protect the existing buildings at the Safe Coast Seafoods facility, as complete removal of the existing timber bulkhead will undermine the stability of the soil behind the bulkhead and the adjacent building foundations threatening Safe Coast buildings, infrastructure, and operations. Pavement settlement has been observed on the adjacent landward driveway and bulkhead movement measured during monthly monitoring (late 2022/early 2023) and access is now restricted based on those conditions and the condition of the deteriorating bulkhead.

Figure 3: Damaged East Bulkhead Wall (GeoEngineers Report)

4. *The stabilization measure will not result in a net loss of shoreline ecological functions.*

Finding: As described in the *Mitigation Sequencing and No Net Loss Narrative* prepared by Moffatt & Nichol on behalf of the Port of Ilwaco, mitigation sequencing was followed during the design of this project proposal and compensatory mitigation is anticipated to result in no net loss of shoreline ecological functions.

SMP Section 7.18 (7) Design of structural stabilization measures.

A. *Soft approaches shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses. Hard armoring solutions shall not be authorized except when a geotechnical report prepared in accordance with regulation 7.18(6) confirms that there is a significant possibility that a primary structure will be damaged within three years as a result of shoreline erosion in the absence of such hard armoring measures, or where waiting until the need is that immediate, would foreclose the opportunity to use measures that avoid impacts on ecological functions. Thus, where the geotechnical report confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as the three years, that report may still be used to justify more immediate authorization to protect against erosion using soft measures.*

Finding: The *Geotechnical Engineering Report* prepared by GeoEngineers describes that the bulkhead is in serious structural condition and at risk of failing. Recent biweekly and monthly measurements have been completed to monitor ongoing movement of the bulkhead. The monitoring has recorded movement along 13 monitoring points along the face of the bulkhead ranging from approximately 0.06 inch to up to 0.31 inch waterward since monitoring began in November 2022. The monitoring indicates that the bulkhead is the process of active failure. Frequent flooding due to high water levels from "king tides" and severe winter storm surges further threaten the structural capacity of the bulkhead. Softer alternatives are not feasible to protect the existing wharf and facilities.

B. The size of stabilization measures shall be limited to the minimum necessary.

Finding: The size of the stabilization measures has been determined to be the minimum necessary as demonstrated by the *Mitigation Sequencing and No Net Loss Narrative* prepared by Moffatt & Nichol. Alternatives were evaluated and determined to be insufficient or not feasible. The replaced shoreline stabilization measures will remove concrete debris and creosote from the aquatic environment compared to current conditions. Improvements to the existing northern timber bulkhead are proposed that will include a fish mix layer to act as beach nourishment on top of the hard shoreline stabilization for a "softer" approach than current conditions.

C. Measures shall be used to assure no net loss of shoreline ecological functions.

Finding: As described in the *Mitigation Sequencing and No Net Loss Narrative* prepared by Moffatt & Nichol, on behalf of the Port of Ilwaco, mitigation sequencing was followed during the design of this project proposal and compensatory mitigation is anticipated to result in no net loss of shoreline ecological functions.

D. Soft shoreline stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high water mark.

Finding: No applicable. Soft shoreline stabilization measures are not proposed as a part of this proposal. Improvements to the existing northern timber bulkhead are proposed that will include a fish mix layer to act as beach nourishment on top of the hard shoreline stabilization for a "softer" approach than current conditions.

E. Avoid and, if that is not possible, minimize adverse impacts to sediment conveyance systems. Where sediment conveyance systems cross jurisdictional boundaries, the local governments should coordinate shoreline management efforts.

Finding: Minor, localized, and temporary effects from increased suspended sediment due to construction activities are likely, however, BMPs will be implemented to reduce turbidity and/or any incidental impacts to water quality as the result of leaks or spills. The piles will be removed in a single, slow, and continuous motion in order to minimize sediment disturbance and turbidity in the water column.

F. Publicly financed or subsidized shoreline erosion control measures must not restrict appropriate public access to the shoreline except where such access is determined to be infeasible in accordance with regulation 6.5(5). Where feasible, ecological restoration and public access improvements shall be incorporated into projects.

Finding: The project will not interfere or change public access to the site or existing permitted uses. The proposal will restore the bulkhead's function as a temporary berth for Safe Coast Seafoods and for marina access that cannot currently be used to the deteriorating condition. A portion of the project includes paving and regrading of the currently restricted internal access road due to the condition of the deteriorating bulkhead. The proposed mitigation includes piling removal, removal of creosote from the aquatic environment, beach nourishment, and removal of floating timber debris/overwater coverage from the marine environment.

SMP Section 8.10.2 Review criteria for shoreline substantial development permits

SMP Section 8.10.2(1) Authorization criteria.

A shoreline substantial development permit shall be granted only when the development proposed is consistent with:

A. The policies and procedures of the Shoreline Management Act;
B. The provisions of this regulation; and
C. The City's Shoreline Master Program.

Finding: The proposed development includes replacement of existing shoreline stabilization structures that protect the water-dependent uses associated with the Safe Coast Seafoods facility and the Port of Ilwaco marina. The new bulkhead is intended to replace the existing, failing bulkhead and improve resiliency to sea level rise. The project will not otherwise interfere with or change public access to the site or existing permitted uses. Demonstration of compliance with the applicable regulations in the SMP are outlined above..

SMP Section 8.10.3 Review criteria for shoreline conditional use permits

SMP Section 8.10.3(2) Authorization criteria.
Uses which are classified or set forth in the City's Shoreline Master Program as shoreline conditional uses may be authorized provided that the applicant demonstrates all of the following:

A. That the proposed use is consistent with the policies of RCW 90.58.020 and the City's Shoreline Master Program;

Finding: No changes to the existing permitted use of the site as a seafood processing facility are proposed with this application. The development will be limited to replacement of existing shoreline stabilization structures and regrading/paving of the existing access road. Given that the existing bulkhead cannot be removed as outlined in the *Mitigation Sequencing and No Net Loss Narrative* prepared by Moffatt & Nichol, the replacement sheetpile bulkhead will be constructed waterward of the existing timber shoreline stabilization structure.

B. That the proposed use will not interfere with the normal public use of public shorelines;

Finding: The project will not interfere or change public access to the site or existing permitted uses. The proposal will restore the bulkhead's function as a temporary berth for Safe Coast Seafoods and for marina access that cannot currently be used.

C. That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and the City's Shoreline Master Program;

Finding: The proposed use and design are compatible with the other authorized uses of the Port of Ilwaco marina and any planned uses. The use of the property will be retained as Safe Coast Seafoods, and the bulkhead replacement and related proposed shoreline stabilization measures are compatible with the existing structures.

D. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and

Finding: The project proposal has been designed to include an increase in habitat value and a functional lift by removing creosote and concrete from the aquatic environment. Additional benefit has been added by placing a fish mix over the proposed shoreline stabilization at the head of the slip that will act as beach nourishment.

E. That the public interest suffers no substantial detrimental effect.

Finding: The project proposal has been designed to incorporate sea level rise projections to mitigate the impacts of a changing climate. Failure of the existing bulkhead would cause negative economic impacts for the community and overall Port of Ilwaco marina operations. Increased climate resiliency for the Safe Coast Seafoods facility and Port of Ilwaco marina is expected to preserve the public interest.

SMP Section 8.10.3(3) Consideration of cumulative impacts.
In the granting of all shoreline conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

Finding: Additional requests for like actions in the area are unlikely. The proposal is for the replacement and/or improvement of existing shoreline stabilization structures at a wharf with seafood processing facilities. There is very limited potential for other developments in the area where similar circumstances exist.

V. STAFF RECOMMENDATION AND CONDITIONS OF APPROVAL

The City recommends **APPROVAL** of the site plan review with the following conditions.

1. The permit shall not begin and is not authorized until twenty-one (21) days from the date of filing as defined in RCW 90.58.140(6) and WAC 173-27-130, as amended, or until all review proceedings initiated within twenty-one (21) days from the date of such filings have been terminated, except as provided in RCW 90.58.140(5)(c) and (d).

2. All development must adhere to the recommendations included in the *Geotechnical Engineering Services Report* prepared by GeoEngineers dated October 4, 2023.

3. All local, state, and federal regulations are adhered to. Additional permits or authorizations from other agencies will be required, including, but not limited to, Washington Department of Fish and Wildlife, United States Army Corps of Engineers, Washington State Department of Ecology, and Washington State Department of Natural Resources Aquatic Resources Division.

4. Gravel, drainrock, and fish mix fill material shall be obtained from a shall be obtained from a state-authorized source in compliance with SMP Section 7.9(5).

5. Documentation must be provided that the mitigation measures have been implemented as proposed prior to the final inspection of the project.

VI. HEARINGS EXAMINER CONDITIONS OF APPROVAL

Conditions of Approval

The Hearings Examiner will issue their conditions of approval at the hearing.

VII. APPEALS PROCESS

Appeals

Pursuant to SMP Section 8.14, all appeals of any final permit decisions under RCW 90.58 and WAC 173-27 are governed by the procedures established in RCW 90.58.180 and WAC 461-08.Questions regarding this decision and staff report can be addressed to Holly Beller, via email at treasurer@ilwaco-wa.gov, or by phone at (360) 678-7817.

Holly Beller
City Administrator

Alexandra Plumb
Consultant Planner

CITY OF ILWACO

FOR CITY USE ONLY	
Date Received	
Fee Paid	
Type of Fee	
Receipt #	
Received By	

MASTER PLANNING PERMIT APPLICATION FORM

Application form must be accompanied by the **Master Planning Application Checklist** and all **application fees.**

GENERAL INFORMATION	
Type of Application	Shoreline Substantial Development Permit
Name of Project	Port of Ilwaco East Bulkhead Resilience Project

APPLICANT			
Name/Company	Port of Ilwaco		
Address	PO Box 307	City/State/Zip	Ilwaco, WA 98624
Telephone	360-642-3143	Cell Phone	
Fax	360-642-3148	Email	tlofstrom@portofilwaco.org
If owner is different from applicant, what is the legal relationship of the applicant to the owner that entitles the applicant to make applications?			
Applicant's Signature		Date	4/30/23

REPRESENTATIVE (if different from Applicant)			
Name/Company	Victoria England, Moffatt & Nichol		
Address	600 University St, Suite 610	City/State/Zip	Seattle, WA 98101
Telephone	206-622-0222	Cell Phone	
Fax		Email	vengland@moffattnichol.com

CONTACT PERSON/ENTITY (designate a single person/entity to receive determinations and notices from the city.			
Name	Tracy Lofstrom, Port of Ilwaco		
Address	PO Box 307	City/State/Zip	Ilwaco, WA, 98624
Telephone	360-642-3143	Cell Phone	
Fax	360-642-3148	Email	tlofstrom@portofilwaco.org

OWNER(S) (if different from Applicant)			
Name	WA DNR Aquatic Rivers Lands Lease [& Port of Ilwaco (applicant)]		
Address	601 Bond Road; PO Box 280, C		
City/State/Zip	Castle Rock, WA 98611		
Telephone	360-577-2025	Fax	
Email	aquaticleasing.rivers@dnr.wa.gov		
We, the undersigned, grant the applicant permission to use our property in the manner described in this application.			
Owner's Signature		Date	
Owner's Signature		Date	

PROPERTY INFORMATION	
Property Address/Location	117 Howerton Avenue Southeast, Ilwaco, WA
Assessor Parcel Nos.	73048003011, 73048003009, 73031013000
Current Zoning	High Intensity Shoreline
Current Land Use	Safe Coast Seafood processing facility and Port of Ilwaco Marina slip
Proposed Land Use	Safe Coast Seafood processing facility and Port of Ilwaco Marina slip

LEGAL/FINANCIAL RESPONSIBILITY/AUTHORITY TO ENTER PROPERTY

I/we acknowledge that by signing this application I/we are authorizing employees or agents of the City of Ilwaco to enter onto the property which is the subject of this application during the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, for the sole purpose of making any inspection of the limited area of the property which is necessary to process this application, including follow-up inspections after permit issuance. In the event the City determines that such an inspection is necessary during a different time or day, the applicant(s) further agrees that the City employees or agents may enter the property during such other times and days as necessary for such inspection upon 24 hours' notice to the applicant(s), which notice will be deemed received when given either verbally or in writing.

We, the undersigned, attest under penalty of perjury that the information in this application is true and accurate. We also acknowledge that it is our responsibility to understand and comply with all applicable federal, state and local regulations. Further, we agree that we shall be financially responsible for any and all engineering and planning services or other professional consulting/legal services deemed necessary by the city for the complete permit and plan review. These additional fees, if any, shall be paid in full prior to final signing of any permits, final plats, Mylar's, etc. (IMC 15-08-065).

Signature	Tracy L	Date	4/30/23
Signature		Date	

ATTACHMENT A: MASTER PLANNING APPLICATION CHECKLIST

CITY OF ILWACO	120 First Avenue North PO Box 548 Ilwaco, WA 98624 Phone: 360.624.3145 Fax: 360.642.3155 www.ilwaco-wa.gov	OFFICE USE ONLY

PROJECT / PROPERTY INFORMATION

Tax Parcel ID #: 73048003011, 73048003009, 73031013000

Project / Value: $3.5 Million

OWNER / APPLICANT INFORMATION

Owner: Port of Ilwaco

Applicant: Port of Ilwaco, Manager - Tracy Lofstrom

Contractor:

PROJECT INFORMATION - Failure to provide complete information will lead to a rejection of your permit

1. List of existing improvements, structures, and dimensions: Bulkhead ~160 LF, revetment 70 LF, drive 8,000 SF

2. Site Plan (See Site Plan Requirement Checklist) Attached? YES ☒ NO ☐ Additional design details are included in the 95% design set, expected submittal to the City Mid-July

3. Is the proposed development one phase of a larger project or larger development?: If yes, describe the entire project in detail: NO

4. Is there any surface water body on or within 300 feet of the proposed site, or within the immediate vicinity of the proposed site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands?: YES ☒ NO ☐ Ilwaco Marina in Baker Bay along the north shore of the Columbia River

5. Does the property have an existing driveway?: YES ☒ NO ☐

6. Will fill material be placed near or within a drainage way (ditch, swale, channel, etc.)?: YES ☒ NO ☐ approximately 450 cubic yards of free draining drainage rock backfill will be placed between the existing timber bulkhead and the replacement bulkhead

7. Are activities adjacent to unstable soils or slopes?: YES ☒ NO ☐

8. Will activities alter man-made or natural drainage features?: YES ☒ NO ☐

9. Will a sign be erected as a result of this project?: YES ☐ NO ☒

10. Will the project require working in a public right-of-way?: YES ☐ NO ☒

11. Does the project involve any clearing, filling, grading, paving, surface and/or dredging?: If Yes, answer the following. If No, go to number 13. Yes

A. If activities include clearing and grading greater than 1,000 sq. ft. Indicate SF: 8,000 SF

B. Will activities involve placing of fill materials? YES ☒ NO ☐

C. If fill materials exceed 20 cubic yards. Indicate Cubic Yards: 747 cy (718 cy bellow HTL, 29 cy above HTL)

D. If activities involve earth removal exceeding 2 feet in depth (Excluding foundation excavations). Indicate Maximum Depth FT: -NA-

12. Will the proposed activity require connection to City Water or Sewer?: YES ☐ NO ☒

13. Has the proposed site been flagged/staked? YES ☐ NO ☒ If No, contact the City when flagged/staked.

14. Indicate amount of new impervious area (areas covered by buildings, pavement, concrete, gravel, etc) SF: approximately 1,250 SF of new impervious surfaces including the new bulkhead cap and additional paving

CITY OF ILWACO

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info@ilwaco-wa.gov
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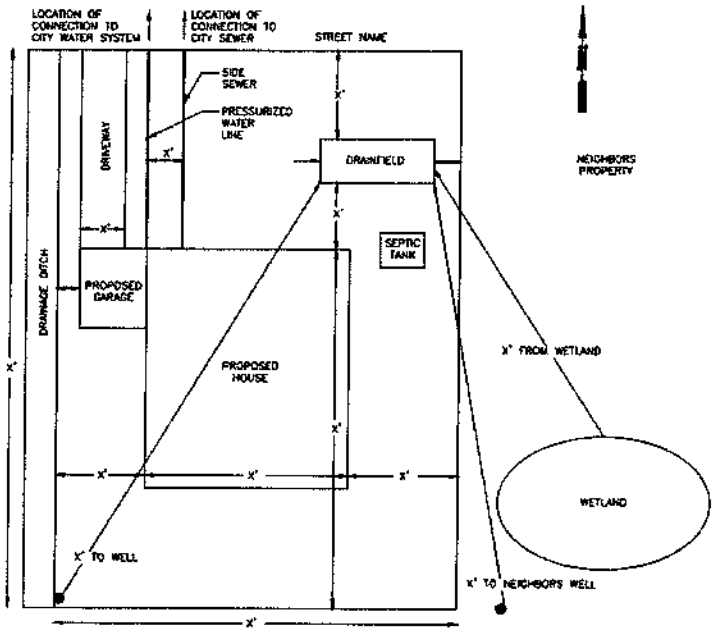
Example Site Plan

Follow Checklist when drawing site plan

Drawn to Scale 1" = 20ft

"X" = Distance

Note: Any changes to your site plan will require re-submittal and a re-submittal fee may be charged.



SITE PLAN REQUIREMENT CHECKLIST

All site plans shall be clearly and accurately drawn to scale on paper no larger than 11" x 17" and must indicate all of the information listed below. For ease of drawing the site plan, use the graph paper provided with your application packet. For each item, mark either "shown" or "N/A" as appropriate for your project.

This checklist must be completed and included with all site plans. Any site plan without this checklist may be rejected and returned to the applicant for correction.

Parcel No.: 73048003011, 73048003009, 73031013000

A. General Property Information

Shown	N/A	
X		Property Lines, including dimensions.
X		North arrow & site plan scale.
X		Marine waters, lakes and ponds, streams, creeks & wetlands.
X		Locations & dimensions of all existing structures on the property.
	X	Location of any existing wells & their 100' well radius.

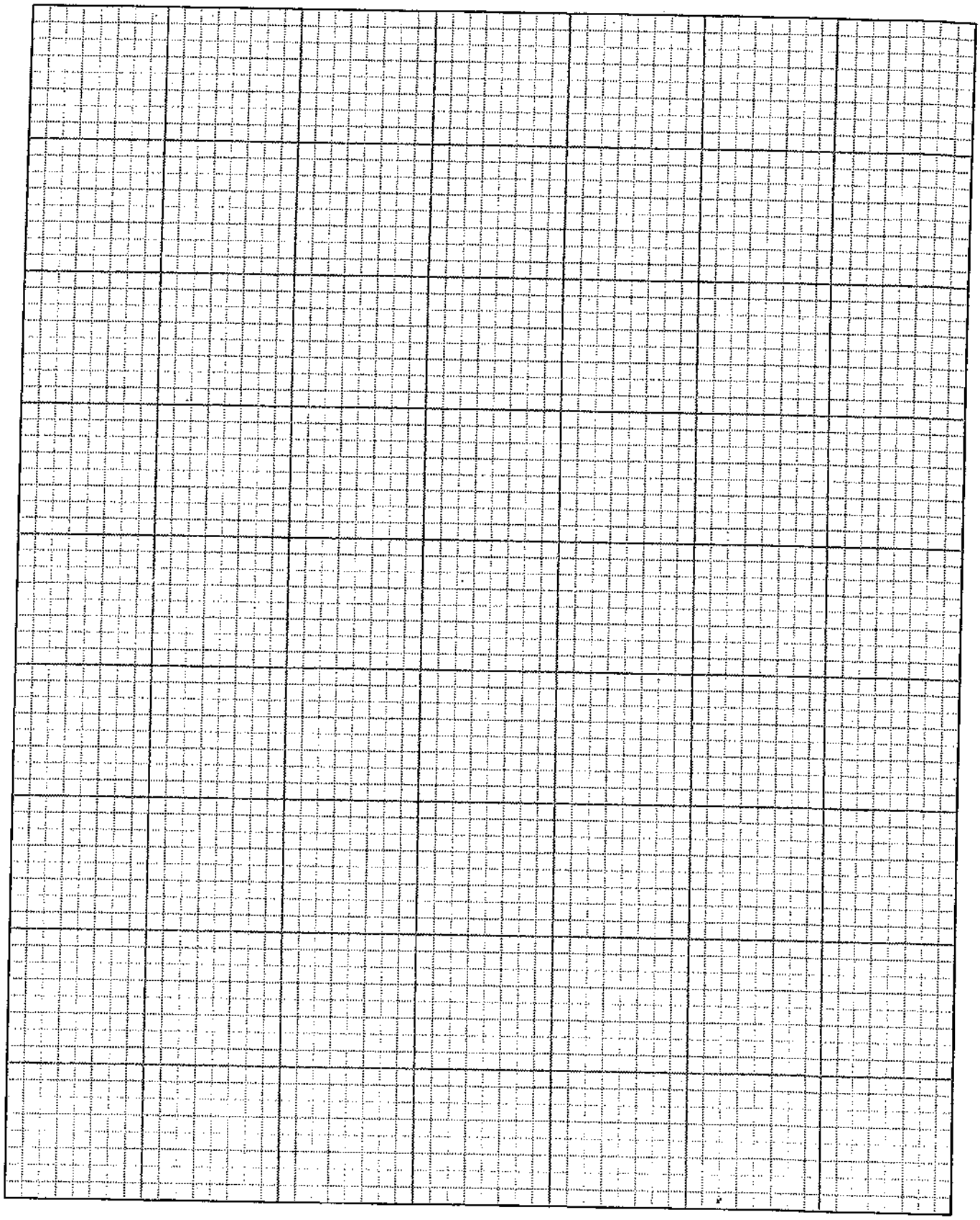
B. Existing Property Improvements

	X	Location of side sewer.
	X	Location of water meter & service lines.
	X	Location of all existing drain fields on the site.
	X	Location of existing drainage systems.
X		Location of all existing roads, driveways, utilities, easements, bridges.
X		Location & dimensions of all proposed structures in relation to property lines, other structures, wetlands, etc.

C. Proposed Property Improvements

	X	Minimum zoning setbacks shown.
	X	Location of proposed water meter & service lines, and connection to city water main.
	X	Location of proposed side sewer and connection to city sewer.
	X	Location & dimensions of all proposed drainage systems.
X		Location & dimensions of all roads, driveways, parking areas, utilities.
X		Location/extent of all clearing, grading, & filling

C ty of Ilwaco



CITY OF ILWACO

120 First Avenue North
PO Box 548 • Ilwaco, WA 98624
Phone: 360.642.3145
Fax: 360.642.3155
www.ilwaco-wa.gov

Shoreline Master Program
Conditional Use Permit Application

PROJECT/PROPERTY INFORMATION	OFFICE USE ONLY
Tax Parcel ID #: 73048003011, 73048003009, 73031013000	
Site Address: 117 Howerton Avenue Southeast, Ilwaco, WA	

OWNER/APPLICANT INFORMATION
Owner: Port of Ilwaco (& DNR Aquatic Lands Lease)
Applicant: Port of Ilwaco

The purpose of a conditional use permit is to provide a system within the shoreline master program that allows flexibility in the application of use regulations in a manner consistent with the policies of RCW 90.58. In authorizing a condition- al use, special conditions may be attached to the permit by the City of Ilwaco to prevent undesirable effects of the pro- posed use and/or to ensure consistency of the project with the Shoreline Management Act and the City of Ilwaco Shore- line Master Program.

DIRECTIONS: This Shoreline Master Program Conditional Use Permit Application shall accompany a completed Master Planning Permit Application, a SEPA Checklist, a JARPA and an accurate to scale Site Plan. Provide all of the requested information and answer the questions as thoroughly as possible. Attach supporting information, as necessary, to support the application. Contact the City Planner with any questions.

Project Description:

The proposed Port of Ilwaco East Bulkhead Resilience Project (herein referred to as the 'Project') would consist of three primary elements;

1.Replacing the failing east bulkhead with an anchored steel sheetpile bulkhead

2.Repairing slope protection north and south of the bulkhead

3.Paving and regrading the upland wharf area (access driveway) directly landward of the bulkhead to mitigate the effects of sea level rise.

Additional detail is provided in the attached project SEPA Checklist

Describe the requested conditional use:

The project will include drain rock backfill that must be placed between the existing bulkhead that will mostly remain in place and the, new replacement bulkhead. The new bulkhead must be placed waterward of the existing bulkhead due to the precarious, deteriorated condition of the existing bulkhead. The existing bulkhead cannot be removed without risking the failure of the slope beneath the wharf and Safe Coast Seafood facilities, potential damaging the building and infrastructure and endangering worker and public safety. The drain rock must be placed in the space between the new and existing bulkheads to prevent the buildup of water pressure behind the new bulkhead which could undermine the new bulkhead's stability. The new bulkhead will be located as close as practicable to the existing bulkhead while still maintaining its function as a temporary berth for vessels un/loading at the Safe Coast Seafood facility. The deteriorated nature of the existing bulkhead, leaning as much as 10° degrees waterward, also dictates the location of the new bulkhead

Describe how the proposed use is consistent with the policies of RCW 90.58 and the City of Ilwaco Shoreline Master Program:

The proposed use is the replacement of an existing structure that maintains the use of both the Safe Coast Seafood facility and the Ilwaco Marina, both of which are water dependent and critical to the Ilwaco economy. Additionally, the new bulkhead will replace the existing, failing bulkhead, providing a more stable shoreline and preliminary steps toward sea level rise resilience for the facility. The project will not interfere or change public access to the shoreline or the existing use of the project site.

Describe how the proposed use will not interfere with the normal public use of public shorelines:

The proposed resilience and maintenance project will return the shoreline to the same use as its current use, which is protecting the Safe Coast Seafood facility wharf and Ilwaco marina slip from the effects of potential slope failure and allowing ongoing operations at both facilities. Additionally, the work on the top of slope of the north end of the slip will maintain the same shoreline access as currently exists with an increased top of slope ' elevation as a first step in future sea level resilience planning. The project mitigation will also remove derelict creosote treated timber piles, revetment, floating timber debris on the south portion of the marina and features located within the slip, making the slip more accessible to marina patrons. A small area of existing concrete debris slope protection will be removed from the south side of the bulkhead to accommodate the new bulkhead. That material will be replaced with riprap. A fish mix layer will be placed as beach nourishment, over the shoreline protection proposed at the head of the adjacent slip.

Describe how the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the Comprehensive Plan and the Shoreline Master Program:

The project will not change the use of the site from its existing use as shore protection and marina access. The project will restore the bulkhead's use as a temporary berth for Safe Coast Seafoods that can not be used currently due to the existing bulkheads deteriorated condition.

Describe how the proposed use will cause no significant adverse affects to the shoreline environment in which it is to be located, and how the public interest suffers no substantial detrimental effect:

The project will provide overall habitat value and function lift by removing creosote and concrete from the aquatic environment and providing added benefit with beach nourishment, fish mix layer over the new shoreline armoring at the head of the slip. The mitigation sequencing and No Net Loss narrative memorandum (attached) describes the avoidance, minimization, and mitigation actions that will be included as part of the project.

Signature:

Print Name: Tracy Lofstrom, Port of Ilwaco Manager

Date: 4/20/23

CITY OF ILWACO

120 First Avenue North
PO Box 548 • Ilwaco, WA 98624
Phone: 360.642.3145
Fax: 360.642.3155
www.ilwaco-wa.gov

The City of Ilwaco is an equal opportunity provider and employer.

May 2, 2023

Port of Ilwaco
PO Box 307
Ilwaco, WA 98624

Subject: Port of Ilwaco East Bulkhead Resilience Project

Thank you for discussing this project at the pre-application meeting on April 12, 2023. As a follow up to the pre-application meeting, this letter provides comments from the City project review team in anticipation of formal application submittal, as well as initial comments from the Washington Department of Fish and Wildlife (WDFW).

The comments in this letter are the result of a preliminary review of materials provided by the applicant/contact. Additional review may disclose additional substantive or procedural requirements.

This letter contains several references to the City's Shoreline Master Program (SMP). The City's SMP can be found here:
https://www.ilwaco-wa.gov/wp-content/uploads/2017/09/Locally-adopted-SMP.pdf

Project Review Process

1. The project is not exempt under the State Environmental Policy Act (SEPA) and will require SEPA review.

2. The project is not eligible for a shoreline exemption under WAC 173-27-040(2).

3. The project will require a shoreline substantial development permit for activities including, but not necessarily limited to, shoreline stabilization (SMP Table 7-1).

4. The project will require a shoreline conditional use permit for fill below the ordinary high water mark in the Aquatic shoreline environment designation (SMP Table 7-1). The City's Hearing Examiner has the authority to grant or deny shoreline conditional use permits (SMP 8.1(3)A). The Washington State Department of Ecology must also approve the shoreline conditional use permit pursuant to WAC 173-27-200.

5. The project will require engineering review by the City.

Project Submittal Requirements

The following submittals are required for formal application review. Please ensure all submittals are consistent with one another. All submittals must be complete and signed and sealed as applicable.

1. Master Planning Permit Form and Checklist. This is available online here: https://cdn.townweb.com/ilwaco-wa.gov/wp-content/uploads/2022/03/Master-Planning-Permit-Application-Packet.pdf

2. SMP Conditional Use Permit Application. This is available online here: https://cdn.townweb.com/ilwaco-wa.gov/wp-content/uploads/2022/06/Shoreline-Master-Program-SMP-Conditional-Use.pdf

3. SEPA Checklist. This is available online here: https://cdn.townweb.com/ilwaco-wa.gov/wp-content/uploads/2022/06/SEPA-Checklist-with-added-help-links-and-instructions.pdf

4. Joint Aquatic Resource Permit Application (JARPA). Include in the JARPA a brief description of the predicted sea level rise scenario that the project is designed to accommodate and supporting methodology.

5. Geotechnical report. Demonstrate compliance with SMP 7.9(4), 7.18(3), (6) and (7). In demonstrating compliance with SMP 7.18(7), provide separate consideration of the area proposed for the sheetpile bulkhead, the adjacent shoreline area to the north, and the adjacent area to the south.

6. A narrative detailing how the proposed project will achieve no net loss of ecological functions prepared by a qualified professional. The narrative must consider aquatic habitat and vegetation. The City project review team, as well as other regulatory agencies with jurisdiction, have concerns about the adequacy of the mitigation currently proposed. Offsetting the aquatic area lost as a result of the proposed development with an equal or greater area of aquatic area gained would be expected to provide substantial support to a demonstration of no net loss of ecological functions. The letter from WDFW (Attachment A) provides several specific suggestions for mitigation measures that might be considered for demonstrating compliance with the requirement for no net loss of ecological functions in SMP 6.3(1).

7. A mitigation sequencing analysis, which is required when an action requires a conditional use permit (SMP 6.3(2)). See SMP 6.3(3) for specific instructions. This analysis may be included as a section in the no net loss narrative, above.

8. Biological Evaluation (referenced in JARPA).

9. Site plans, including the information in SMP 8.5(1)I, as applicable. Show proposed temporary erosion and sediment control (TESC) measures in the site plans.

10. Cultural resource survey (referenced in JARPA).

11. Fees payable to the City of Ilwaco in the amount of $2,250.00. The fee breakdown is as follows:
    - Shoreline Substantial Development Permit (Commercial): $1,000.00;
    - Shoreline Conditional Use Permit: $750.00; and
    - Hearing Examiner: $500.00.

    Further, the applicant shall be financially responsible for any engineering and planning services or other professional consulting/legal services deemed necessary by the City for the complete permit and plan review. These additional fees, if applicable, shall be paid in full prior to final signing of any permits.

Please contact the City with any questions.

Sincerely,

Holly Beller
City Administrator

Mark Daniel, AICP
Consultant Planner

Enclosures:
1. Attachment A, email from L. Bauernschmidt, WDFW, dated May 1, 2023

CC: Victoria England, Moffat & Nichol

From: Bauernschmidt, Lauren N (DFW) <Lauren.Bauernschmidt@dfw.wa.gov>
Sent: Monday, May 1, 2023 2:25 PM
To: Alexandra Plumb <aplumb@dcgwatershed.com>
Cc: Mark Daniel <mdaniel@dcgwatershed.com>; Holly Beller <treasurer@ilwaco-wa.gov>
Subject: RE: Port of Ilwaco Bulkhead Replacement

Hi Alexandra,

A short recap of the discussion we had on Thursday about the adequacy of the proposed mitigation for the Ilwaco Bulkhead Replacement.

The current proposal is not meeting WAC 220-660-080's requirement for no-net loss. The new permanent fill of 2,850 sq ft on the benthic habitat is not being offset by 165 sq ft of benthic habitat restored through piling and creosote removal. The mitigation is inadequate. I suggest the Port of Ilwaco reviews the requirements of compensatory mitigation as outlined in WAC 220-660-080. As the project currently stands, WDFW would not permit the work due to the project having unmitigated impacts.

I think there are additional ways to mitigate for the project, though these are only suggestions and will not necessarily meet the full need:

- Remove the scattered cement and marine debris bulkhead and restore the site.
- Remove any derelict piers or floats from the port.
- Incorporate grating into the project to prevent further shading of the benthic substrate.
- Wrap or remove the "abandoned in place" creosote pilings to prevent further leaching from occurring.
- Look for restoration areas in the flats outside of the marina.

Our preference for mitigation is in-kind, on-site but will consider mitigation that is out-of-kind and/or off-site if the Port can show limitations to meeting in-kind, on-site.

Please let me know if you have any questions, and I'm happy to discuss different options.
Thank you,

Lauren Bauernschmidt (she/her)
Pacific County Habitat Biologist
Washington Dept of Fish & Wildlife
Office: 360-249-1217
Mobile: 360-480-2558
Email: Lauren.Bauernschmidt@dfw.wa.gov
48 Devonshire Rd
Montesano, WA 98563

From: Bauernschmidt, Lauren N (DFW)
To: England, Victoria
Subject: RE: Port of Ilwaco Mitigation Follow-Up
Date: Wednesday, June 14, 2023 5:02:06 PM
Attachments: image001.jpg

Hi Victoria,

Yes, after further discussion we chose to consider the fish mix as part of the mitigation due to the proximity of the placement to the construction footprint. The placement is an on-site habitat benefit and therefore boosts the value of the action. I was also informed by some local restoration proponents that sand lance have been present in the area in the past, so there is a chance this placement could be utilized.

Thank you,
Lauren

From: England, Victoria <vengland@moffattnichol.com>
Sent: Wednesday, June 14, 2023 4:54 PM
To: Bauernschmidt, Lauren N (DFW) <Lauren.Bauernschmidt@dfw.wa.gov>
Subject: RE: Port of Ilwaco Mitigation Follow-Up

External Email

Hi Lauren,
One follow up question – during our recent call you had stated that fish mix would not be considered part of the mitigation based on WDFW's assessment that sand lance and smelt would not be likely to pass through the marina but you mention the fish mix in your email below. Will WDFW consider the fish mix layer as part of the mitigation after all? The Port just wants to make sure that they aren't including anything that won't be considered part of the mitigation if it doesn't serve any other project purpose.
Please let me know.
Thank you!
Victoria

From: Bauernschmidt, Lauren N (DFW) <Lauren.Bauernschmidt@dfw.wa.gov>
Sent: Wednesday, June 14, 2023 4:41 PM
To: England, Victoria <vengland@moffattnichol.com>
Subject: Port of Ilwaco Mitigation Follow-Up

CAUTION: This email originated from outside of the organization.

Good afternoon,

I was able to discuss the proposed mitigation, that you presented of behalf of the Port, with my team yesterday. To recap: the Port is proposing removal of the derelict pier/floats in the south area of the port (estimated to be 2,500 sq ft), creosote pile/timber and steel pile removal (165 sq ft), and fish mix placed on top of the rip-rap replacement (south shoreline). As per the draft JARPA, permanent impacts to waterbodies are 3,250 sq ft with 2,900 sq ft directly impacting benthic habitat.

I believe the proposed mitigation as listed above will collectively offset the permanent benthic habitat impacts from construction of the Ilwaco Port improvements. We still encourage the removal of the cement debris wall, but it is not required. When submitting the HPA application, please outline this mitigation plan in the application form. If you have any questions, please let me know.

Thank you,

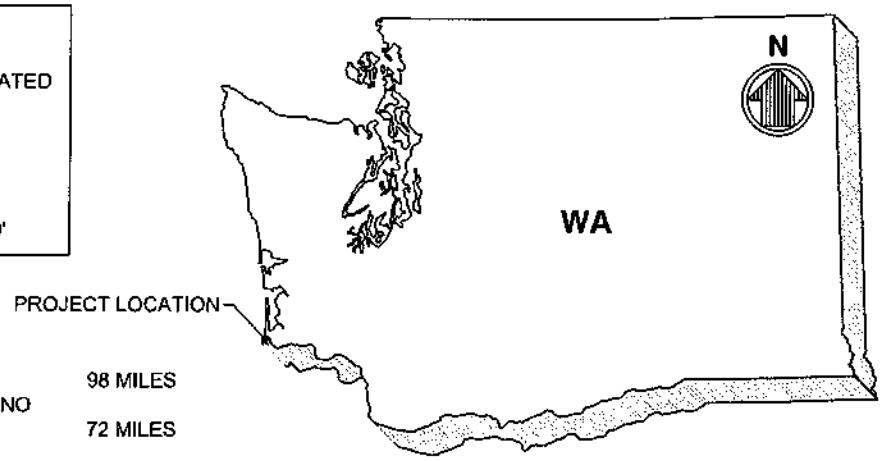
Lauren Bauernschmidt
(she/her/hers)
Pacific County & WIRA 24 Habitat Biologist

Office 360-249-1217
Mobile 360-480-2558
Region 6 – Coastal
48 Devonshire Rd, Montesano WA 98563

TIDAL DATUM:
BASED ON NOAA TIDAL STATION NO. 9440581, IN US FEET. HTL/OHW DELINEATED BY GEOENGINEERS DECEMBER, 2022.

LEVELS:

MHHW: +8.07'	MHW: +7.37'
MLW: 1.35'	MLLW: +0.00'
OHW (DELINEATED):	APPROX. +11.50'

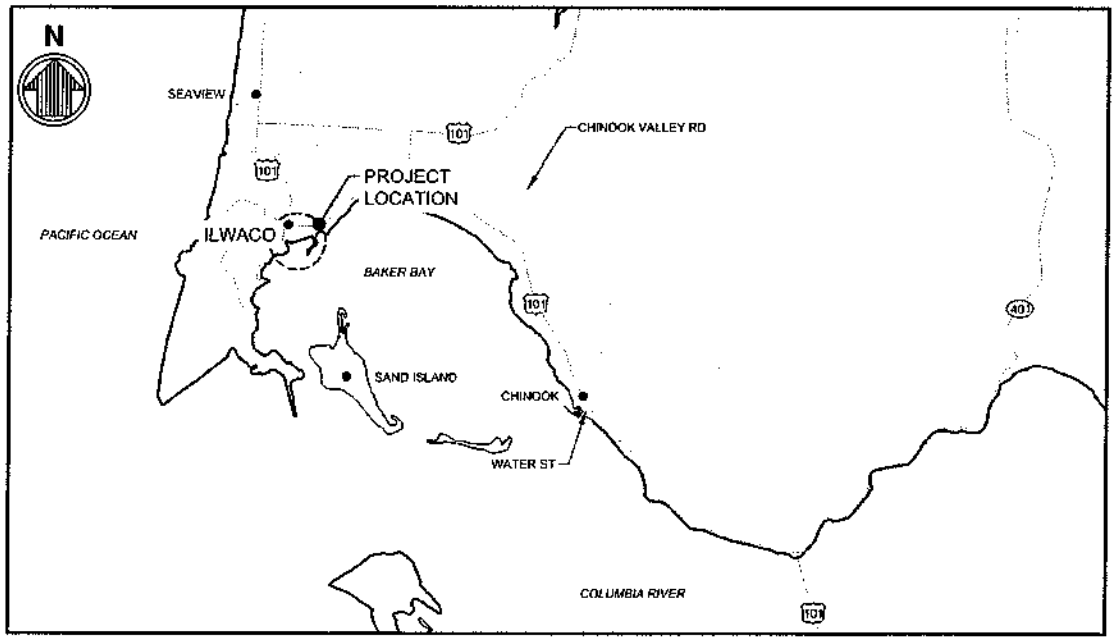


VICINITY MAP
SCALE: NTS

DIRECTIONS TO SITE FROM SEATTLE:

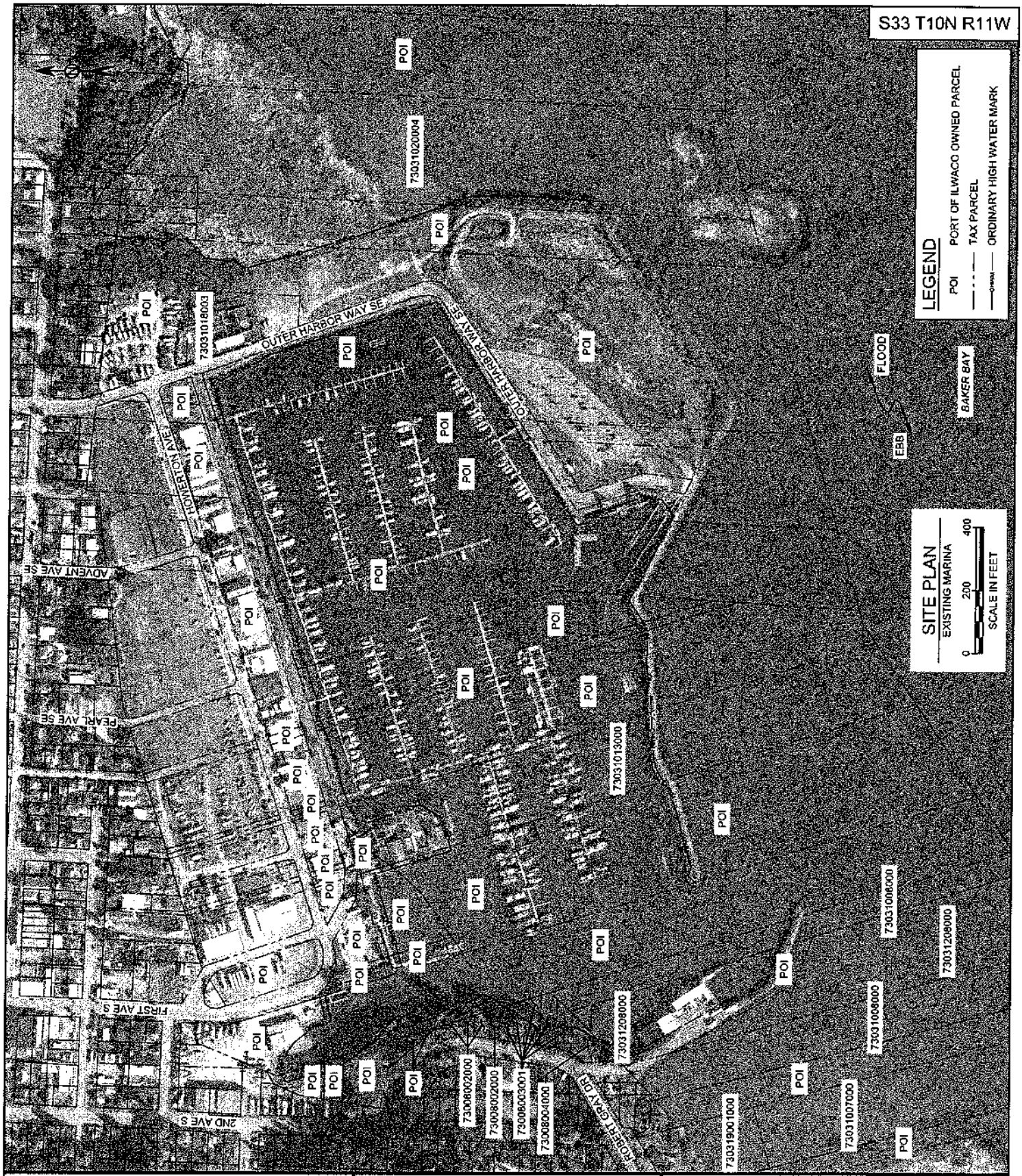
1. I-5 S, US-101, WA-8 AND US-12 TO WA-107 S/S MAIN ST IN MONTESANO — 98 MILES
2. TAKE US-101 TO ILWACO — 72 MILES
3. ARRIVE AT PROJECT SITE

PROJECT ADDRESS:
PORT OF ILWACO
117 HOWERTON AVE SE
ILWACO, WA 98624



LOCATION MAP
SCALE: NTS

APPLICANT: PORT OF ILWACO ADJACENT PROPERTY OWNERS: 1) PORT OF ILWACO	LOCATION: PORT OF ILWACO 117 HOWERTON AVE SE ILWACO, WA 98624 LAT/LONG: 46.30442 N, -124.03852 W DATUM: MLLW SHEET: 1 OF 9 DATE: JUNE 2023	PROPOSED PROJECT: PORT OF ILWACO EAST BULKHEAD RESILIENCE PROJECT IN: BAKER BAY NEAR/AT: ILWACO COUNTY: PACIFIC STATE: WA SEC: 33/34 T: 10 N R: 11 W



PURPOSE: PORT OF ILWACO BULKHEAD REPLACEMENT AND SEA LEVEL RISE RESILIENCE.

DATUM: MLLW

ADJACENT PROPERTY OWNERS:
1. CITY OF ILWACO
2. STATE OF WASHINGTON
3. STARLIGHT ONE LLC.

Port of Ilwaco East Bulkhead Resilience Project

Parcel Map

APPLICATION BY:
Port of Ilwaco

PROPOSED: DERELICT ILWACO E. BULKHEAD REPLACEMENT, DRIVEWAY REGRADING/ REPAVING, & SHORE PROTECTION REPLACEMENT

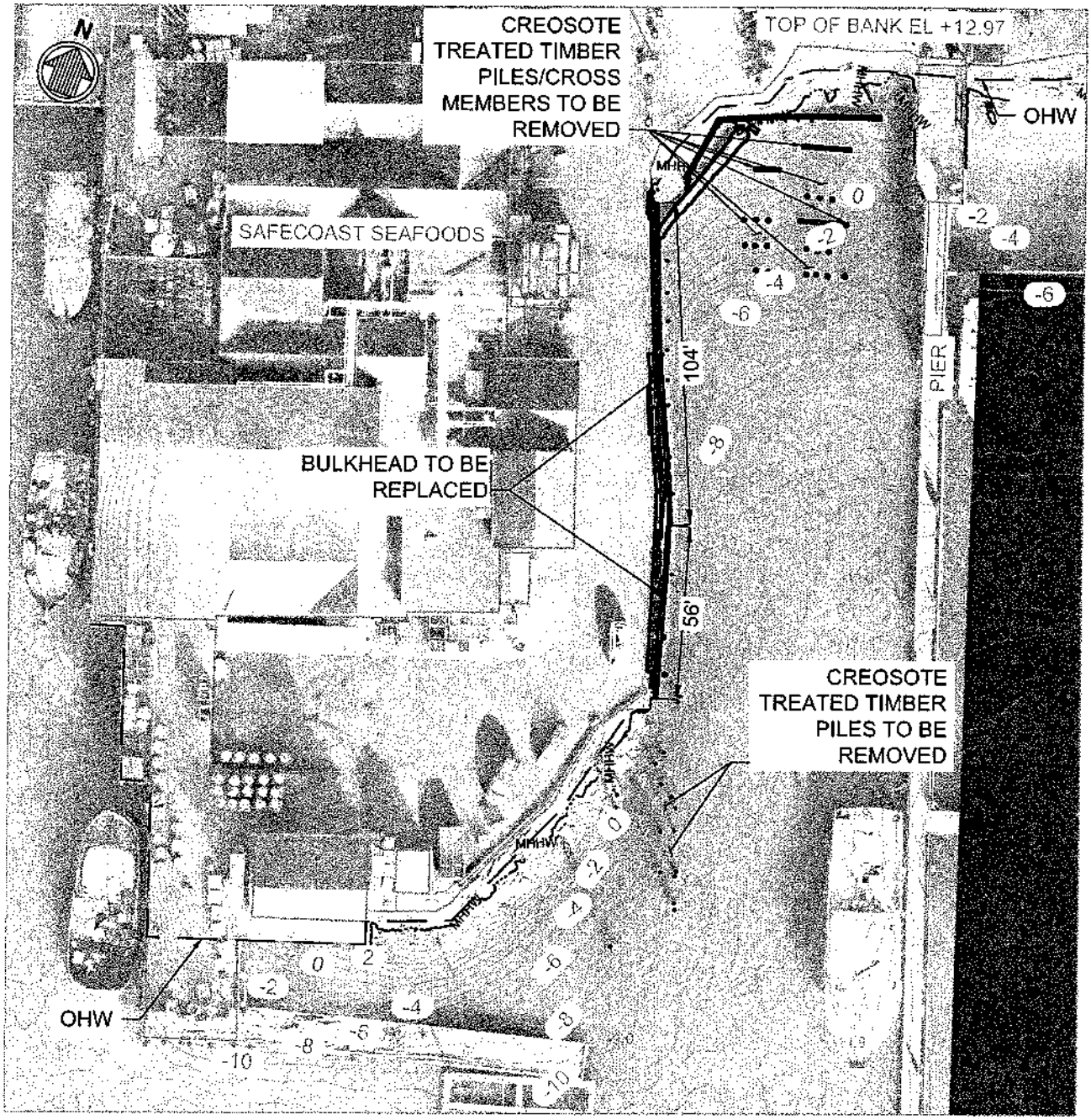
IN: BAKER BAY

AT: ILWACO

COUNTY: PACIFIC

SHEET 2 OF 9

DATE: JUNE 2023



LEGEND

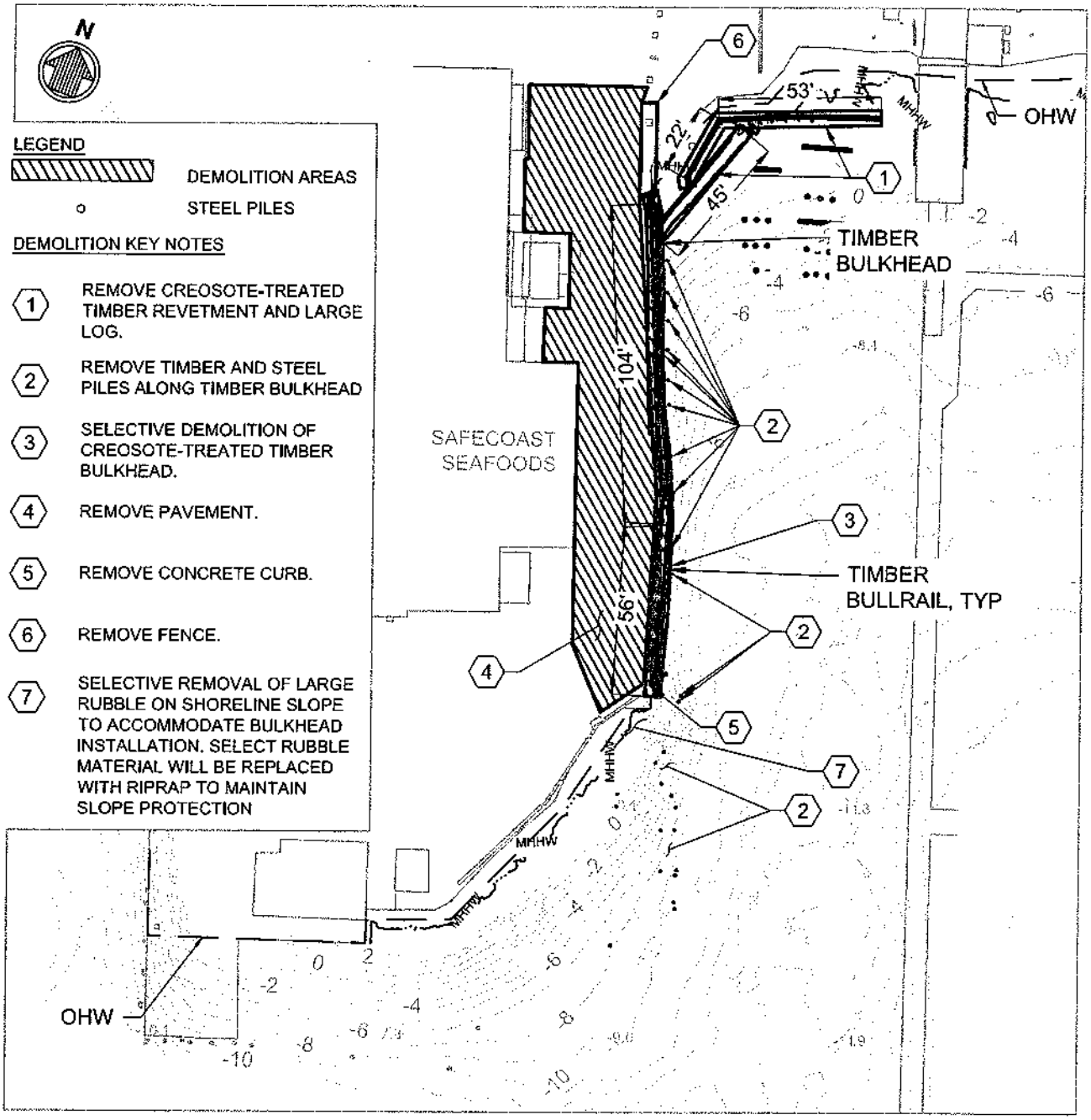
- o — PILES
- CREOSOTE-TREATED REVETMENT (TO BE REMOVED)
- CREOSOTE-TREATED LOG (TO BE REMOVED)
- BULKHEAD (TO BE REMOVED)

A/2 PLAN - EXISTING CONDITIONS
SCALE: 1" = 50'

LEVELS:	
MHHW: +8.07'	MHW: +7.37'
MLW: 1.35'	MLLW: +0.00'
OHW (DELINEATED):	APPROX. +11.50'

50' 0' 50' 100'
SCALE: 1"=50'

APPLICANT: PORT OF ILWACO ADJACENT PROPERTY OWNERS: 1) PORT OF ILWACO	LOCATION: PORT OF ILWACO 117 HOWERTON AVE SE ILWACO, WA 98624 LAT/LONG: 46.30442 N, -124.03852 W DATUM: MLLW SHEET: 3 OF 9 DATE: JUNE 2023	PROPOSED PROJECT: PORT OF ILWACO EAST BULKHEAD RESILIENCE PROJECT IN: BAKER BAY NEAR/AT: ILWACO COUNTY: PACIFIC STATE: WA SEC: 33/34 T: 10 N R: 11 W



A/3 PLAN - DEMOLITION
SCALE: 1" = 50'

LEVELS:	
MHHW: +8.07'	MHW: +7.37'
MLW: 1.35'	MLLW: +0.00'
OHW (DELINEATED):	APPROX. +11.50'

50' 0' 50' 100'
SCALE: 1"=50'

APPLICANT:
PORT OF ILWACO

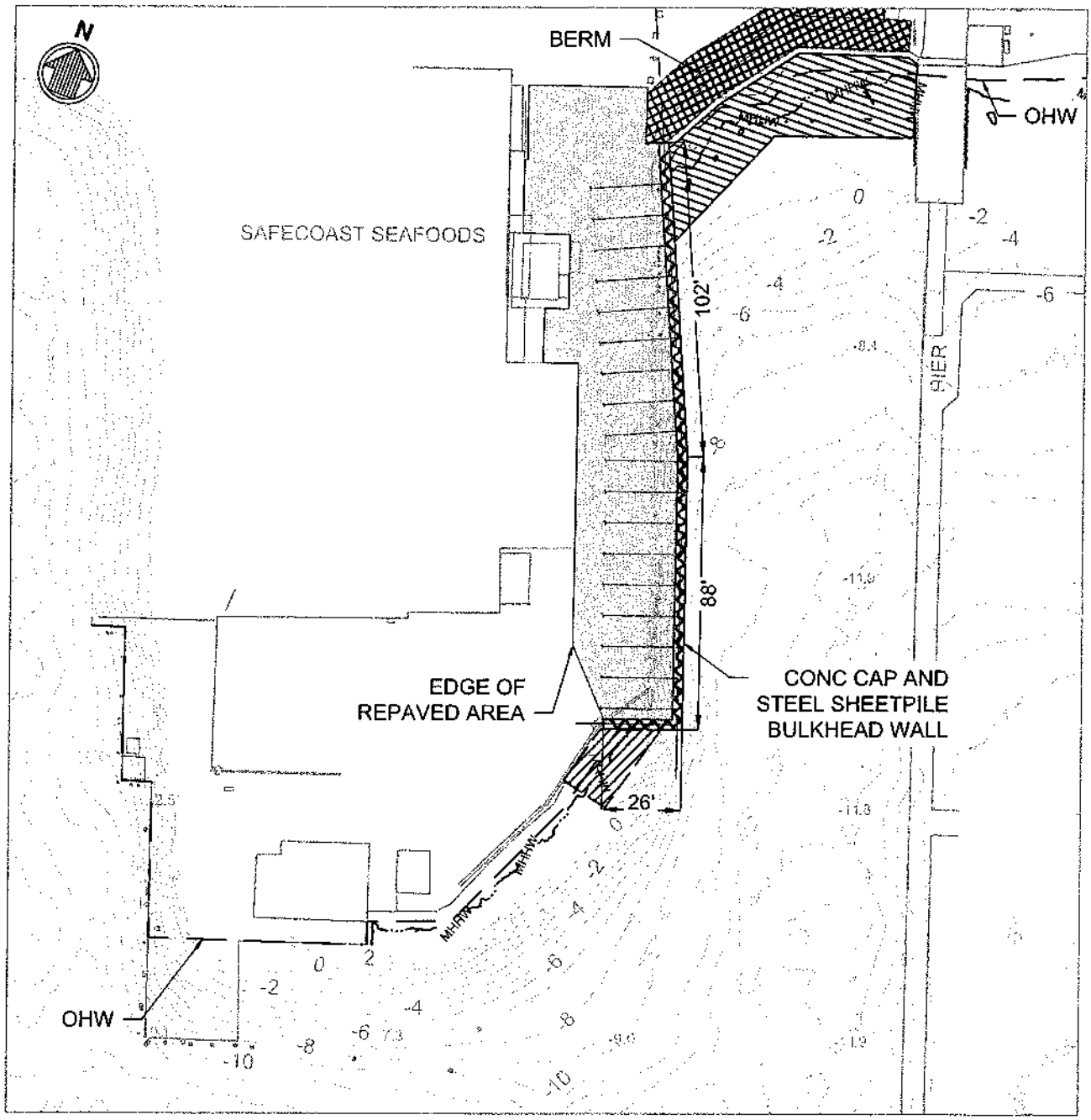
ADJACENT PROPERTY OWNERS:
1) PORT OF ILWACO

LOCATION: PORT OF ILWACO
117 HOWERTON AVE SE
ILWACO, WA 98624
LAT/LONG: 46.30442 N, -124.03852 W

DATUM: MLLW
SHEET: 4 OF 9 DATE: JUNE 2023

PROPOSED PROJECT: PORT OF ILWACO
EAST BULKHEAD RESILIENCE PROJECT

IN: BAKER BAY
NEAR/AT: ILWACO
COUNTY: PACIFIC STATE: WA
SEC: 33/34 T: 10 N R: 11 W



LEGEND

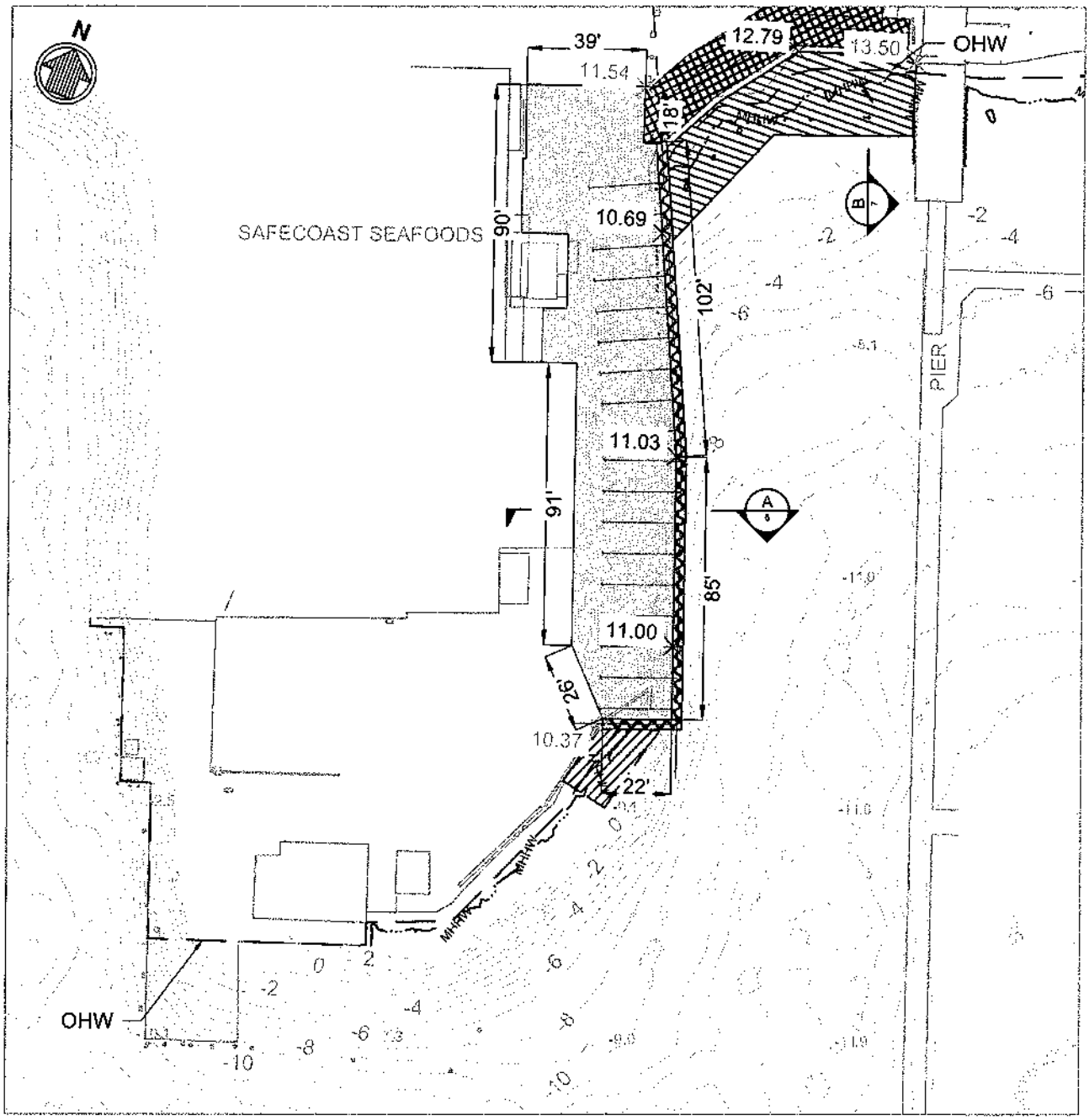
- PAVING AREA LIMITS
- BERM CONSTRUCTION
- SLOPE PROTECTION
- APPROXIMATE AREA OF SLOPE PROTECTION REPLACEMENT
- TIEBACKS
- PROPOSED BULKHEAD
- PILES

A/4 PLAN - PROPOSED
SCALE: 1" = 50'

LEVELS:	
MHHW: +8.07'	MHW: +7.37'
MLW: 1.35'	MLLW: +0.00'
OHW (DELINEATED):	APPROX. +11.50'

50' 0' 50' 100'
SCALE: 1"=50'

APPLICANT: PORT OF ILWACO ADJACENT PROPERTY OWNERS: 1) PORT OF ILWACO	LOCATION: PORT OF ILWACO 117 HOWERTON AVE SE ILWACO, WA 98624 LAT/LONG: 46.30442 N, -124.03852 W DATUM: MLLW SHEET: 5 OF 9 DATE: JUNE 2023	PROPOSED PROJECT: PORT OF ILWACO EAST BULKHEAD RESILIENCE PROJECT IN: BAKER BAY NEAR/AT: ILWACO COUNTY: PACIFIC STATE: WA SEC: 33/34 T: 10 N R: 11 W



LEGEND

- PAVING AREA LIMITS
- BERM CONSTRUCTION
- SLOPE PROTECTION
- APPROXIMATE AREA OF SLOPE PROTECTION REPLACEMENT
- TIEBACKS
- PROPOSED BULKHEAD
- STEEL PILES
- 0.00 EXISTING ELEVATION
- 0.00 PROPOSED ELEVATION

A/5 PLAN - GRADING
SCALE: 1" = 50'

LEVELS:

MHHW: +8.07'	MHW: +7.37'
MLW: 1.35'	MLLW: +0.00'
OHW (DELINEATED):	APPROX. +11.50'

50' 0' 50' 100'
SCALE: 1"=50'

APPLICANT:
PORT OF ILWACO

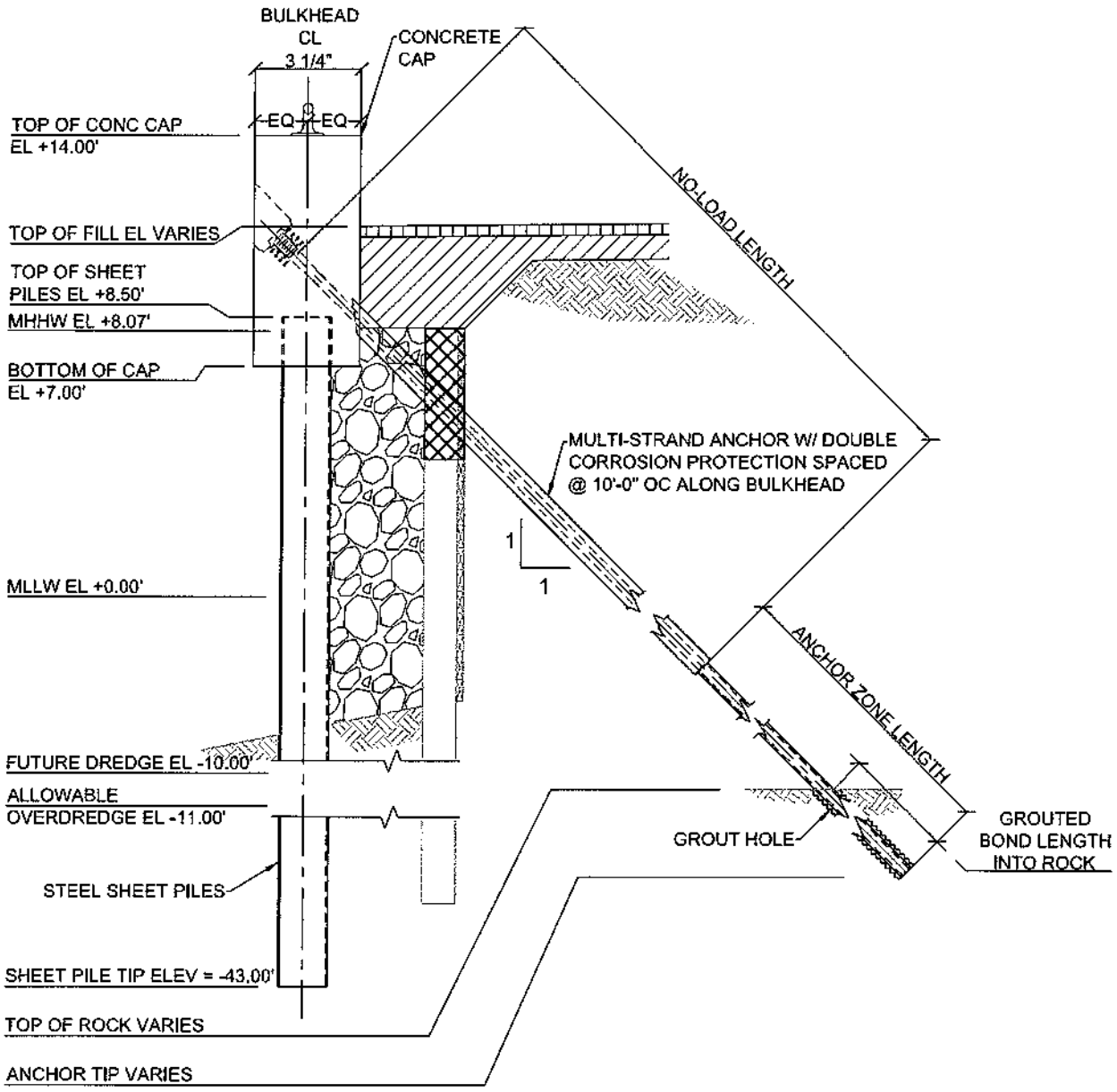
ADJACENT PROPERTY OWNERS:
1) PORT OF ILWACO

LOCATION: PORT OF ILWACO
117 HOWERTON AVE SE
ILWACO, WA 98624
LAT/LONG: 46.30442 N, -124.03852 W

DATUM: MLLW
SHEET: 6 OF 9 DATE: JUNE 2023

PROPOSED PROJECT: PORT OF ILWACO
EAST BULKHEAD RESILIENCE PROJECT

IN: BAKER BAY
NEAR/AT: ILWACO
COUNTY: PACIFIC STATE: WA
SEC: 33/34 T: 10 N R: 11 W

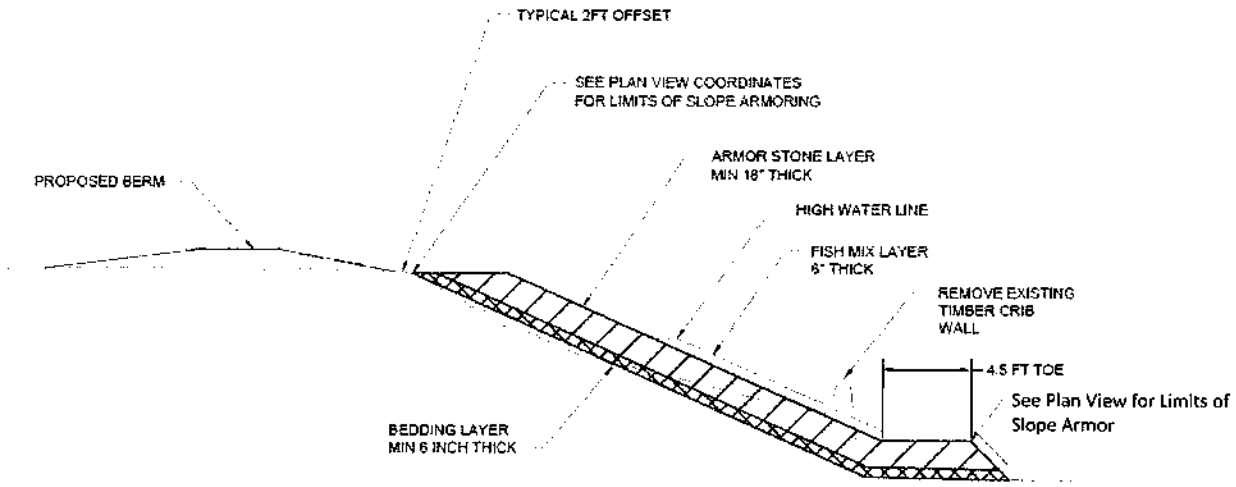


A/6 SECTION - TYP BULKHEAD
SCALE: NTS

LEGEND

- CLEAT
- EXISTING CREOSOTE-TREATED TIMBER BULKHEAD, LAGGING TO REMAIN
- DRAIN ROCK BACKFILL
- ASPHALT PAVING
- STRUCTURAL FILL
- LOCAL DEMOLITION/REMOVAL OF CREOSOTE-TREATED TIMBER BULKHEAD FOR INSTALLATION OF GROUND ANCHORS

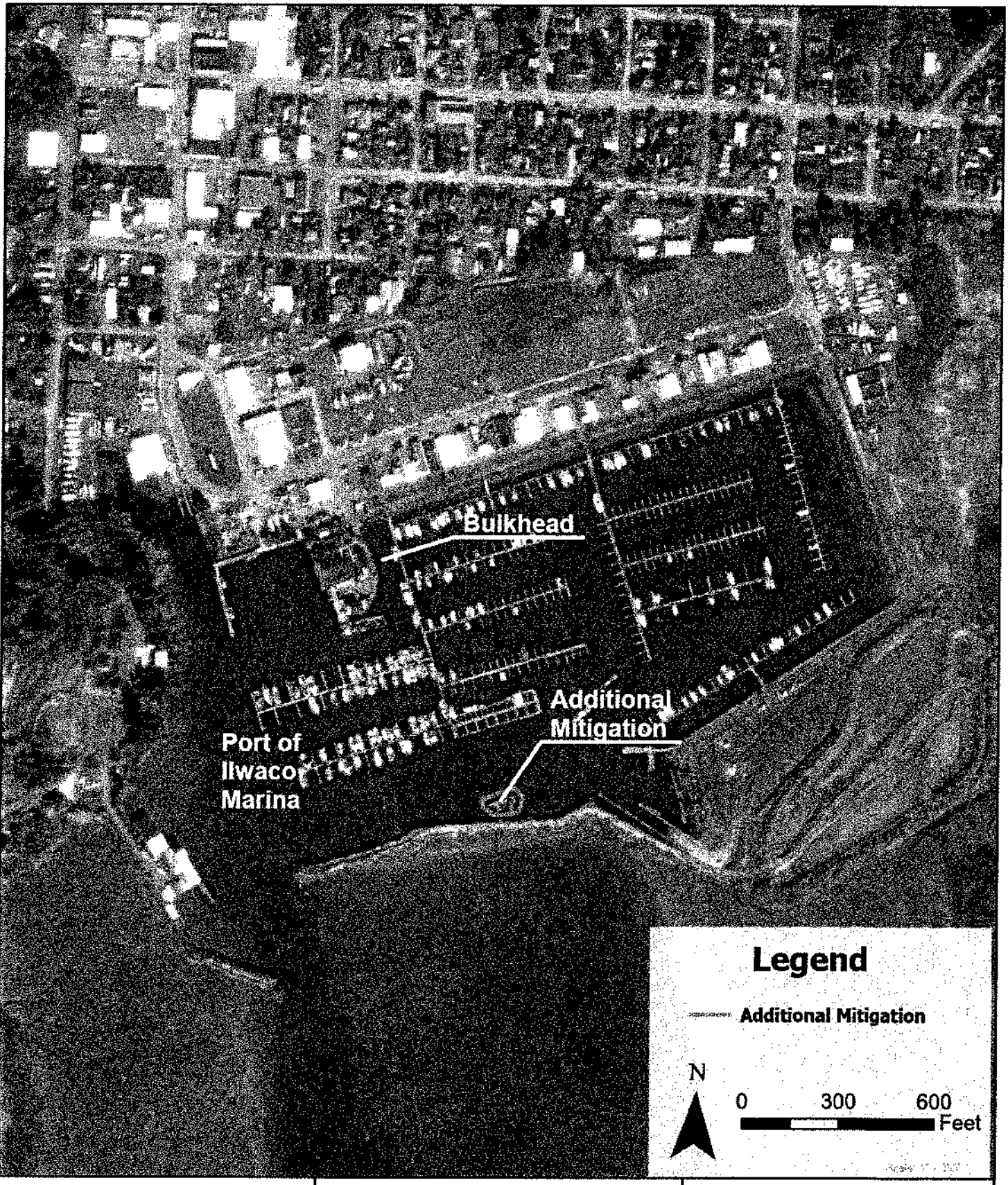
APPLICANT: PORT OF ILWACO ADJACENT PROPERTY OWNERS: 1) PORT OF ILWACO	LOCATION: PORT OF ILWACO 117 HOWERTON AVE SE ILWACO, WA 98624 LAT/LONG: 46.30442 N, -124.03852 W DATUM: MLLW SHEET: 7 OF 9 DATE: JUNE 2023	PROPOSED PROJECT: PORT OF ILWACO EAST BULKHEAD RESILIENCE PROJECT IN: BAKER BAY NEAR/AT: ILWACO COUNTY: PACIFIC STATE: WA SEC: 33/34 T: 10 N R: 11 W



C1 / C-110 SLOPE ARMOR SECTION 2

SCALE:

APPLICANT: PORT OF ILWACO ADJACENT PROPERTY OWNERS: 1) PORT OF ILWACO	LOCATION: PORT OF ILWACO 117 HOWERTON AVE SE ILWACO, WA 98624 LAT/LONG: 46.30442 N, -124.03852 W DATUM: MLLW SHEET: 8 OF 9 DATE: JUNE 2023	PROPOSED PROJECT: PORT OF ILWACO EAST BULKHEAD RESILIENCE PROJECT IN: BAKER BAY NEAR/AT: ILWACO COUNTY: PACIFIC STATE: WA SEC: 33/34 T: 10 N R: 11 W



APPLICANT:
PORT OF ILWACO

ADJACNET PROPERTY OWNERS:
1) PORT OF ILWACO

LOCATION: PORT OF ILWACO
117 HOWERTON AVE SE
ILWACO, WA, 98624

LAT/LONG: 46.20442 N, -124.03852 W

DATUM MLLW

SHEET 9 OF 9 DATE JUNE, 2023

PROPOSED: PORT OF ILWACO EAST BULKHEAD RESILIENCE PROJECT

IN: BAKER BAY

NEAR/AT: PORT OF ILWACO

COUNTY: PACIFIC STATE: WA

SEC 33/34 T. 10 N R. 11 W

PORT OF ILWACO

MARINA STRUCTURES REPLACEMENT

PORT COMMISSIONERS
ALAN BENNETT
BUTCH SMITH

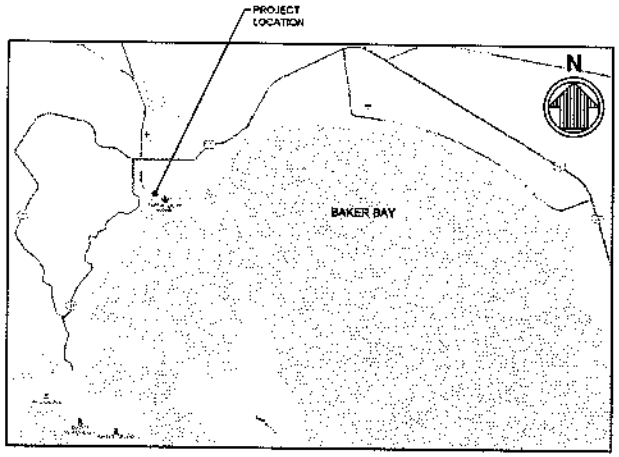
PORT MANAGER
TRACY LOFSTROM

CIVIL/STRUCTURAL ENGINEER
MOFFATT & NICHOL
600 UNIVERSITY STREET
SUITE 610
SEATTLE, WA 98101
(206) 622-0222

GEOTECHNICAL ENGINEER
GEOENGINEERS
1101 SOUTH FAWCETT AVE
SUITE 200
TACOMA, WA 98402
(206) 383-4940

VICINITY MAP
SCALE: NTS

SHEET INDEX		
INDEX NO.	SHEET REF. NO.	SHEET TITLE
1	G-001	COVER SHEET, VICINITY & LOCATION MAPS AND SHEET INDEX
2	G-002	GENERAL NOTES
3	G-003	STRUCTURAL NOTES & DESIGN CRITERIA
4	G-004	STRUCTURAL SPECIAL INSPECTION REQUIREMENTS & DETAILS
5	G-005	ABBREVIATIONS & LEGEND
6	G-100	CONTRACTOR SITE ACCESS & LAYDOWN AREAS
7	V-100	EXISTING SITE PLAN
8	CD-100	DEMOLITION SITE PLAN (1OF 2)
9	CD-101	DEMOLITION SITE PLAN (2 OF 2)
10	CD-901	DEMOLITION PHOTOS (1 OF 2)
11	CD-902	DEMOLITION PHOTOS (2 OF 2)
12	C-100	OVERALL SITE PLAN
13	C-110	GRADING SITE PLAN
14	C-120	GRADING & PAVING DETAILS
15	S-100	BULKHEAD LAYOUT
16	S-201	BULKHEAD PLAN & ELEVATION (1 OF 2)
17	S-202	BULKHEAD PLAN & ELEVATION (2 OF 2)
18	S-301	BULKHEAD TYPICAL SECTIONS
19	S-501	BULKHEAD DETAILS (1 OF 2)
20	S-502	BULKHEAD DETAILS (2 OF 2)
21	S-511	MISCELLANEOUS DETAILS



LOCATION MAP
SCALE: NTS

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF ILWACO
MARINA STRUCTURES REPLACEMENT

COVER SHEET, VICINITY & LOCATION MAPS AND SHEET INDEX

Sheet Reference No.
G-001
INDEX 1 OF 21

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

GENERAL

1. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. VERIFY INFORMATION GIVEN HERE WITH SPECIFICATIONS, REFERENCE DRAWINGS, AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE PORT BEFORE BEGINNING AFFECTED WORK INCLUDING FABRICATION, DEMOLITION, OR CONSTRUCTION. THE PORT WILL RESOLVE ANY SUCH CONFLICT.
2. VERIFY LOCATIONS OF EXISTING UTILITIES AND RELATED FEATURES IN A MANNER SIMILAR TO NOTE 1 ABOVE. USE A LOCATOR SERVICE AND EXCAVATE TO EXPOSE UTILITY LINES. BRING ANY CONFLICTS BETWEEN EXISTING UTILITIES OR RELATED FEATURES AND NEW CONSTRUCTION TO THE ATTENTION OF THE PORT.
3. IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UTILITIES OR RELATED FEATURES BY THE CONTRACTOR TO THE SATISFACTION OF THE PORT AND AT NO EXPENSE TO THE PORT. DRAWING G-003 CONTAIN THE PROJECT STRUCTURAL NOTES ASSOCIATED WITH THE FACILITY. NOTES ON ALL OTHER DRAWINGS ARE SUPPLEMENTAL.
4. AREAS OF THE FACILITY NOT UNDER CONSTRUCTION SHALL REMAIN IN OPERATION DURING THIS PROJECT. KEEP ALL CONSTRUCTION ACTIVITIES AND PERSONNEL CLEAR OF FACILITY OPERATIONS.
5. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW AND APPROVAL BY THE PORT.
6. VERIFY ALL SITE CONDITIONS, FEATURES, DIMENSIONS, AND ELEVATIONS PRIOR TO FABRICATION OF ASSEMBLIES OR CONSTRUCTION. COORDINATE THE SIZE AND LOCATION OPENINGS, AS WELL AS ALL OF ALL OPENINGS. VERIFY SIZE AND LOCATION OF ALL BY OTHER TRADES. THE CONDITIONS SHOWN ON THESE DRAWINGS ATTACHMENTS REQUIRED ARE BASED ON AVAILABLE EXISTING DATA. NOTIFY THE PORT IN WRITING OF ANY DISCREPANCIES BEFORE BEGINNING THE AFFECTED WORK. RESOLVE DISCREPANCIES AS APPROVED BY THE PORT BEGINNING THE AFFECTED WORK. RESOLVE DISCREPANCIES AS APPROVED BY THE PORT BEFORE BEGINNING THE AFFECTED WORK. LINES AND GRADES; ESTABLISH AND MAINTAIN THE DATUM AND CONSTRUCTION BASELINE.
7. SUBMIT SHOP DRAWINGS AND OTHER SUBMITTALS FOR REVIEW TO THE PORT PRIOR TO FABRICATION OF COMPONENTS. INCLUDE DEMOLITION PLANS, CONSTRUCTION JOINT LOCATIONS, AND CONSTRUCTION JOINT DETAILS. THE PORT WILL REVIEW THE SUBMITTALS.
8. SHOP DRAWING AND OTHER SUBMITTAL REVIEWS. REVIEW, VERIFY, AND STAMP BY BOTH THE CONTRACTOR AND THE CONTRACTORS QUALITY CONTROL MANAGER BEFORE SUBMITTING TO THE PORT, VERIFY CONFORMANCE WITH THE MEANS AND METHODS; TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION; AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMIT TO THE PORT FOR REVIEW WHEN COMPLETE.
9. BRING ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND THE DRAWINGS OF OTHER TRADES (ELECTRICAL, MECHANICAL, PLUMBING, FIRE PROTECTION, ETC.) TO THE ATTENTION OF THE PORT BEFORE PROCEEDING WITH ANY WORK INVOLVED.
10. DO NOT SCALE WORKING DIMENSIONS FROM PLANS, SECTIONS OR DETAILS ON THE STRUCTURAL DRAWINGS.
11. SUBMIT CONTRACTOR-INITIATED CHANGES IN WRITING TO THE PORT FOR APPROVAL PRIOR TO SUBMITTAL OF SHOP DRAWINGS.
12. JOBSITE SAFETY; MEANS AND METHODS OF PERFORMING THE WORK; AND TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE PRESENCE OF THE PORT OR ITS REPRESENTATIVE DOES NOT NEGATE THE CONTRACTORS RESPONSIBILITY FOR JOBSITE SAFETY OR THE CONTRACTORS RESPONSIBILITY TO PERFORM ITS WORK IN COMPLIANCE WITH THE CONTRACT.
13. VERIFY THE STRUCTURAL CAPACITY OF EXISTING STRUCTURES FOR THE ANTICIPATED LOADS OF CONSTRUCTION EQUIPMENT AND OPERATIONS TO BE USED.
14. PROVIDE TEMPORARY BRACING TO UNFINISHED PORTIONS OF THE STRUCTURE. REMOVE TEMPORARY BRACING ONLY AFTER STABILITY OF THE FINISHED STRUCTURE IS ACHIEVED.
15. CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL EXISTING STRUCTURES THAT WILL REMAIN.

SURVEY NOTES:

1. EXISTING SITE INFORMATION SHOWN ON THESE DRAWINGS IS BASED ON SURVEY INFORMATION PROVIDED BY SOLMAR HYDRO, DATED 13 APRIL 2022.
2. DATE OF SURVEY. TOPOGRAPHIC AND BATHYMETRIC SURVEYS CONDUCTED BETWEEN 15 FEB, 2022 AND 4 MARCH 2022
3. HORIZONTAL DATUM FOR THIS PROJECT IS NAD83/11 WITH PROJECTION STATE PLANE COORDINATE SYSTEM WASHINGTON SOUTH ZONE.
4. VERTICAL DATUM FOR THIS PROJECT IS MLLW BASED ON PUBLISHED NOAA TIDAL BENCHMARK 944 0581 C
5. UNITS: U.S FEET.
6. CONTOUR INTERVAL: 1 FOOT.
7. ALL UNDERGROUND UTILITY LOCATIONS ARE BASED ON OBSERVED EVIDENCE OF STRUCTURES, NO GUARANTEE IS MADE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED OR THAT THE UNDERGROUND UTILITIES ARE SHOWN IN THEIR EXACT LOCATION. FIELD VERIFY THE LOCATION,SIZE, MATERIAL, AND DEPTH OF UTILITIES.
8. CONTRACTOR IS RESPONSIBLE FOR REQUESTING AND MAINTAINING LOCATES ON ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS.

CONTROL NOTES:

BASED STATION: SWLS ILWACO
NORTHING = 373487.13 FT
EASTING = 745918.05 FT
ELEVATION = 14.23 FT (NAVD88)

DATUM:

ELEVATION DATUM FOR THIS PROJECT IS 0.0' MEAN LOWER LOW WATER (MLLW).

TIDAL DATA:

TIDAL ELEVATIONS BASED ON NOAA TIDES AND CURRENTS DATUM FOR STATION 944 0581 CAPE DISAPPOINTMENT, WA EPOCH 1983 - 2001

ELEV(FT)	DATUM	DESCRIPTION
11.50	HOWL	HIGHEST OBSERVED WATER LEVEL
8.07	MHHW	MEAN HIGHER HIGH WATER
7.37	MHW	MEAN HIGH WATER
4.36	MTL	MEAN TIDAL LEVEL
1.35	MLW	MEAN LOW WATER
0.46	NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
0.00	MLLW	MEAN LOWER LOW WATER
-2.95	LOWL	LOWEST OBSERVED WATER LEVEL

PERMIT REQUIREMENTS, BEST MANAGEMENT PRACTICES (BMPS) AND TEMPORARY EROSION & SEDIMENT CONTROL (TESC):

CONTRACTOR SHALL COMPLY WITH ALL PROJECT PERMIT CONDITIONS AND APPLICABLE BMPS LISTED BELOW AND IDENTIFIED IN THE SPECIFICATIONS. THE PROJECT STORM WATER POLLUTION PREVENTION PLAN, AND WATER QUALITY PROTECTION AND MONITORING PLAN.

1. DURING ANY IN-WATER AND EMBANKMENT WORK, CONTAINMENT BOOMS SHALL BE USED TO SURROUND THE WORK AREAS OR SEPARATE EMBANKMENT WORK FROM SURFACE WATER. THE BOOMS SHALL CONTAIN AND COLLECT ANY OILY OR SIMILAR MATERIALS RELEASED AS WELL AS FLOATING DEBRIS. OIL-ABSORBENT MATERIALS SHALL BE EMPLOYED IMMEDIATELY IF VISIBLE OILY OR SIMILAR MATERIALS ARE OBSERVED. ACCUMULATED DEBRIS SHALL BE COLLECTED DAILY AND DISPOSED OF AT A PERMITTED UPLAND SITE APPROVED BY THE PORT. SEE SPECIFICATION 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.
2. STEEL PILING MUST BE INSTALLED WITH VIBRATORY HAMMER AND IMPACT HAMMERS ACCORDING TO THE PROJECT SPECIFICATIONS. IMPACT HAMMERING SHALL START WITH LIGHT TAPPING, THEN INCREASE TO FULL FORCE GRADUALLY.
3. A BUBBLE CURTAIN AND ONE OR MORE OTHER NOISE ATTENUATION METHODS SHALL BE USED DURING IMPACT INSTALLATION OR PROOFING OF ALL STEEL PILING.
4. HYDRAULIC WATER JETS SHALL NOT BE USED TO INSTALL PILES.
5. WORK BARGES SHALL NOT BE GROUNDED DURING CONSTRUCTION.
6. EXCESS AND/OR WASTE MATERIALS GENERATED DURING CONSTRUCTION SHALL NOT BE DISPOSED OF OR ALLOWED TO ENTER STATE WATERS. EXCESS OR WASTE MATERIALS SHALL BE COLLECTED AND RECYCLED OR DISPOSED OF AT A PERMITTED UPLAND FACILITY APPROVED BY THE PORT DEMOLITION AND CONSTRUCTION MATERIALS SHALL NOT BE STORED WHERE WAVE ACTION OR UPLAND RUONFF CAN CAUSE MATERIALS TO ENTER SURFACE WATERS.
7. WATER QUALITY STANDARDS AND PROCEDURES THAT LIMIT THE IMPACT OF POLLUTANTS SHALL BE OBSERVED (WAC173-201A-210(1)(E)(I)).
8. LAND-BASED STAGING AREAS FOR ACTIVITIES, SUCH AS STORAGE OF MACHINERY, EQUIPMENT MATERIALS, AND STOCKPILED SOILS SHALL BE ESTABLISHED LANDWARD OF THE TOP OF BANK IN ACCORDANCE WITH REQUIREMENTS IN THE SPECIFICATIONS. A SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF THE UPLAND WORK AREAS AND LOCATIONS WHERE MACHINERY, MATERIALS, AND STOCKPILED SOILS ARE SITUATED. ANY TEMPORARY STOCKPILES SHALL BE COVERED AND BERMED WHEN NOT IN USE.
9. WORK AREA TO BE CLEARLY DELINEATED IN THE FIELD WITH CONSTRUCTION FENCING OR OTHER APPROPRIATE MEASURES.
10. TESC BMPS (E.G. SILT FENCE, WATTLES) TO BE IMPLEMENTED AS APPLICABLE. SEE SPECIFICATION 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.
11. CATCH BASIN INLET PROTECTION TO BE INSTALLED WHERE APPLICABLE.

95% DESIGN SUBMITTAL
ISSUED. 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF ILWACO
MARINA STRUCTURES
REPLACEMENT

GENERAL NOTES

moffatt & nichol
600 UNIVERSITY
STREET SUITE 610
SEATTLE, WA 98101
(206) 622-0222

Sheet
Reference No.
G-002
INDEX 2 OF 21

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWINGS

CODES AND STANDARDS

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES AND STANDARDS.

1. AMERICAN CONCRETE INSTITUTE (ACI) 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE & COMMENTARY.
2. ACI 301-20, SPECIFICATIONS FOR CONCRETE CONSTRUCTION.
3. ACI DETAILING MANUAL MNL(66)-20.
4. AISC 360-16, SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
5. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 7-16, MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES.
6. AMERICAN WELDING SOCIETY (AWS), AWS D1.1-2020, STRUCTURAL WELDING CODE - STEEL.
7. AWS D1.4-2018, STRUCTURAL WELDING CODE - REINFORCING STEEL.
8. AWS D1.6-2017, STRUCTURAL WELDING CODE - STAINLESS STEEL.
9. INTERNATIONAL CODE COUNCIL (ICC), INTERNATIONAL BUILDING CODE (IBC), 2018.
10. US ARMY CORPS OF ENGINEERS - DESIGN OF SHEET PILE WALLS, EM 1110-2-2504
11. UFC 4-152-07, DESIGN SMALL CRAFT BERTHING FACILITIES, 1 SEPTEMBER 2012.
12. UFC 4-159-03, DESIGN: MOORINGS, 12 MARCH 2020.
13. WASHINGTON DEPARTMENT OF TRANSPORTATION (WSDOT), STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, 2021.
14. CRSI-MANUAL OF STANDARD PRACTICE 29TH EDITION, 2018

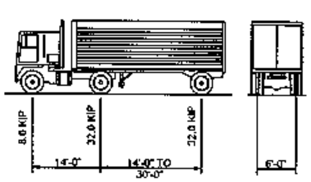
BULKHEAD DESIGN CRITERIA

1. THE BULKHEAD IS DESIGNED FOR STATIC, SEISMIC, AND LIQUEFACTION LATERAL LOADING CONDITIONS AS SPECIFIED IN THE GEOTECHNICAL ENGINEERING REPORT BY GEOENGINEERS INC. AUGUST 2022
2. BULKHEAD DESIGN IS IN ACCORDANCE WITH US ARMY CORPS OF ENGINEERS -DESIGN OF SHEET PILE WALLS (EM 1110-2-2504).
3. SUBMIT GROUTED TIE-BACK ANCHOR DESIGN CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON TO THE PORT FOR REVIEW PRIOR TO THE START OF CONSTRUCTION, AT A MINIMUM PROVIDE: MATERIALS, DESIGN, STRESSING, LOAD TESTING, AND ACCEPTANCE CRITERIA IN ACCORDANCE WITH PTI RECOMMENDATIONS.
4. TIE-BACK ANCHOR ULTIMATE BOND STRENGTH OF 50PSI FOR MINIMUM 6 INCH DIAMETER ANCHOR.

   ASD DESIGN: FACTOR OF SAFETY FOR BOND STRENGTH = 2.0 FOR STATIC CONDITIONS, 1.5 FOR SEISMIC CONDITIONS.
5. BULKHEAD SURCHARGE LIVE LOADING:

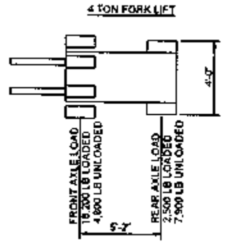
   CONSTRUCTION LOAD CASE = 80 PSF
   STATIC LOAD CASE = 300 PSF
   SEISMIC LOAD CASE = 100 PSF
   POST SEISMIC LOAD CASE = 100 PSF
6. VEHICLE LIVE LOADS, SEE DIAGRAMS BELOW.

HS20 DESIGN TRUCK (AASHTO)



BULKHEAD DESIGN CRITERIA (CONTINUED)

4 TON FORK LIFT



7. WIND (ASCE 7-16)
   BASIC WIND ON STRUCTURE — 95 MPH (3-SECOND GUST)
   EXPOSURE — D
8. MOORING
   TYPE I MILD WEATHER (UFC 4-159-03)
   WIND VELOCITY — 35 KNOTS
   CURRENT VELOCITY — 1.0 KNOTS
   WAVES — NA FOR TYPE I MOORING

   DESIGN VESSEL (FISHING VESSEL)
   DISPLACEMENT — 40 LONG TON
   LENGTH OVER ALL (LOA) — 60 FEET
   BEAM — 22 FEET
   DRAFT — 12 FEET
9. SEISMIC (ASCE 7-16)
   RISK CATEGORY = II
   SHORT PERIOD SPECTRAL RESPONSE, Ss = 1.427g
   ONE-SECOND PERIOD SPECTRAL RESPONSE, S1 = 0.738 g
   SITE CLASS = F
   SPECTRAL RESPONSE COEFFICIENTS
   SHORT PERIOD, SDS = 1.142 g
   ONE-SECOND PERIOD, SD1 = 1.255 g

   MODIFIED PEAK GROUND ACCELERATION, PGAm = 0.798 g
   SEISMIC DESIGN CATEGORY = D

STEEL PILING

1. MATERIAL: SHEET PILES ASTM A572, GRADE 50, FY=50KSI. SEE SPECIFICATION 31 62 00 DRIVEN PILES.
2. DRIVE ALL PILES TO THE REQUIRED TIP ELEVATIONS AS INDICATED.
3. ULTIMATE STEEL PILE CAPACITY IS SPECIFIED BY GEOENGINEERS,INC GEOTECHNICAL ENGINEERING REPORT.
4. COATING DAMAGED DURING HANDLING, DRIVING, OR DUE TO FILED WELDING MUST BE RESTORED AS REQUIRED BY THE SPECIFICATIONS AND AS DIRECTED BY THE PORT. SEE SPECIFICATION 09 96 00 HIGH PERFORMANCE COATINGS.

STRUCTURAL STEEL AND MISCELLANEOUS METAL

1. CONFORM TO THE FOLLOWING, UON:

SHAPE	STANDARD, GRADE
PLATES	ASTM A572, GR 50
CHANNELS	ASTM A572, GR 50
W SECTIONS	ASTM A992, GR 50
ANGLES	ASTM A572, GR50
PIPE	ASTM A53, GR C
HSS RECTANGULAR	ASTM A500, GR C, FY=50 KSI
HSS ROUND	ASTM A500, GR C, FY=46 KSI

2. MACHINE BOLTS MUST CONFORM TO ASTM A307 GRADE A WITH COMPATIBLE ASTM A563 GRADE A NUTS AND ASTM F844 WASHERS.
3. HIGH STRENGTH BOLTS MUST CONFORM TO ASTM F3125, GRADE A325 WITH COMPATIBLE ASTM A563 NUTS AND ASTM F436 WASHERS.
4. ANCHOR BOLTS MUST CONFORM TO ASTM F 1554, GRADE 55, UON
5. WELDING MUST CONFORM TO AWS D1.1

STRUCTURAL STEEL AND MISCELLANEOUS METAL (CONTINUED)

6. WHERE INDICATED, EXPOSED STRUCTURAL STEEL MUST BE HOT-DIP GALVANIZED CONFORMING TO ASTM A123/A123M GRADE 100 FOR SHAPES, PLATES, AND FABRICATIONS, ASTM A153/153M CLASS C FOR HARDWARE, AND ASTM F2329.
7. SET ALL EMBEDDED ANCHOR BOLTS AND ANCHOR RODS USING TEMPLATES THAT ARE VERIFIED WITH CERTIFIED DRAWINGS OF THE EQUIPMENT, FRAMING, OR MOORING HARDWARE PRIOR TO THE CONCRETE POUR. NOTIFY THE PORT OF ANY CHANGES TO ANCHOR BOLT SIZES, SPACING, OR QUANTITIES FROM WHAT IS SHOWN ON THE DRAWINGS. TEMPLATES MUST BE ADEQUATE TO HOLD THE BOLTS ACCURATELY IN PLACE AND IN ALIGNMENT DURING THE CONCRETE POUR.
8. PROVIDE BLEED HOLES IN EMBEDDED PLATES AND SHAPES AT 2'-0" ON CENTER MAXIMUM.
9. STAINLESS STEEL MUST BE OF TYPE 316L, BARS AND SHAPES, BOLTS, NUTS, AND WASHERS MUST CONFORM TO ASTM A276/A276M, F593, F594, AND F844, RESPECTIVELY.

STRUCTURAL CONCRETE REINFORCEMENT

1. MATERIALS:

REINFORCEMENT	STANDARD	GRADE	NOTES
REINFORCING STEEL	ASTM A615	60	DEFORMED, UON
PREINFORCING STEEL TO BE WELDED	ASTM A706	60	DEFORMED
HEADED REINFORCEMENT (T-HEADS)	ASTM A970		CLASS HAS ROUND HEADS ONLY

2. PROVIDE MECHANICAL REINFORCING BAR CONNECTORS (COUPLERS) THAT DEVELOP A MINIMUM OF 1.25 TIMES THE YIELD STRENGTH OF REINFORCING BARS.
3. PLACEMENT
   A. LAP SPLICE REINFORCING STEEL MARKED CONT (CONTINUOUS) WITH A MINIMUM LAP SPLICE ACCORDING TO SHEET G-005 UON.
   B. CONFORM TO ACI 301, ACI MNL(66)-20, AND ACI 318 FOR CONCRETE DETAILS. DO NOT SPLICE ANY REINFORCEMENT LESS THAN 40 FEET IN LENGTH UON.
   C. STAGGER SPLICES OF ADJACENT BARS SO NO MORE THAN 50% OF THE BARS ARE SPLICED AT ANY ONE LOCATION. PROVIDE A MINIMUM STAGGER BETWEEN LAP SPLICES OF 180 BAR DIAMETERS UON.
   E. PROVIDE CORNER BARS AT ALL WALL, CURB, AND CURB WALL CORNERS MATCH THE QUANTITY, SPACING, AND DIAMETER OF ALL HORIZONTAL REINFORCEMENT AT THE CORNER. EXTEND TERMINATED STRAIGHT BARS THE FULL AVAILABLE LENGTH INTO ADJOINING MEMBERS. SPLICE EACH CORNER BAR TO A TERMINATED STRAIGHT BAR WITH A MINIMUM SPLICE LENGTH OF 60 BAR DIAMETERS. IF SPLICE LENGTH IS NOT AVAILABLE, USE MECHANICAL REINFORCING BAR CONNECTORS.
   F. DO NOT WELD REINFORCING STEEL EXCEPT WHERE INDICATED OR BY APPROVAL OF THE PORT IN WRITING PRIOR TO CONSTRUCTION. IF AN ARC IS CREATED BETWEEN REINFORCING STEEL AND A WELDING ELECTRODE, REPLACE THE REINFORCING STEEL.

CAST-IN-PLACE CONCRETE

1. CAST-IN-PLACE CONCRETE MINIMUM 28 DAY COMPRESSIVE STRENGTH: 5000 PSI REFER TO SPECIFICATION 03 30 00 CAST-IN-PLACE CONCRETE.
2. COVER FOR REINFORCING STEEL: 3 INCH, UON.
3. CHAMFER ALL EXPOSED CORNERS 3/4 INCH, UON.
4. PROVIDE CONSTRUCTION JOINTS ONLY AS NOTED ON THE DRAWINGS OR AS SPECIFICALLY PERMITTED BY THE PORT.
5. ROUGHEN CONSTRUCTION JOINTS TO 1/4 IN AMPLITUDE, UON. CLEAN AND REMOVE LAITANCE. THEN CONTINUOUSLY SOAK WITH WATER FOR 12 HOURS PRIOR TO POUR, UON. REMOVE STANDING WATER JUST PRIOR TO PLACING NEW CONCRETE.

TIE BACK ANCHORS

1. TIE BACK ANCHORS INCLUDING STRAND, SHEATHING, AND ASSOCIATED HARDWARE MUST BE DYWIDAG MULTISTRAND, DOUBLE CORROSION PROTECTED OR APPROVED EQUAL MEETING ASTM A416
2. GROUTED STRAND ANCHORS MUST CONFORM TO ASTM A416, GRADE 270, WITH COMPATIBLE HARDWARE AND ANCHORS. SYSTEM AS DESIGN IS PER DYWIDAG-SYSTEMS INTERNATIONAL. SUBMIT ALTERNATE SYSTEMS FOR APPROVAL PRIOR TO CONSTRUCTION.
3. TIE BACK ANCHOR SYSTEM AS SHOWN ON THE DRAWINGS IS FOR BID PURPOSES ONLY. FINAL DESIGN AND METHOD OF INSTALLTION IS TO BE DESIGNED BY THE CONTRACTOR. SEE G-004 FOR MINIMUM SPECIAL INSPECTION REQUIREMENTS.

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF ILWACO
MARINA STRUCTURES REPLACEMENT

STRUCTURAL NOTES & DESIGN CRITERIA

moffatt & nichol
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Sheet Reference No. G-003
INDEX 3 OF 21

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

SPECIAL INSPECTION NOTES

1. THE ITEMS CHECKED WITH AN "X" MUST BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY AN INSPECTOR MEETING THE MINIMUM QUALIFICATIONS OUTLINED IN THE SPECIFICATIONS. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE PROJECT SPECIFICATIONS, THE SPECIFIC GENERAL NOTES SECTIONS, AND THE CODE SECTIONS REFERENCED. SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE PORT. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS MUST IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE PORT. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION IBC SECTION 1702. PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ONSITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING INSPECTION IS IN COMPLIANCE.
3. VISUALLY INSPECT ALL WELDS.
4. ALL COMPLETE PENETRATION WELDS MUST BE TESTED ULTRASONICALLY OR BY USE OF A COMPARABLE APPROVED METHOD.
5. CONTINUOUS SPECIAL INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR FIELD WELDING, CONCRETE STRENGTH, HIGH STRENGTH BOLTING, SPRAYED-ON FIREPROOFING, GROUTING.

TABLE 1705.3 REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1. INSPECT REINFORCEMENT, VERIFY PLACEMENT.	-	X	ACI 318: 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING A. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16", AND B. INSPECT ALL OTHER WELDS.	-	X X	AWS D1.4 ACI 318: 26.6.4	-
3. REINFORCING BAR WELDING	-	X	ACI 318: 17.6.2	-
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	X	 X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	-
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: 19, 26.4.3, 26.4.4	1904.1 1904.2 1908.2 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGHT TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10
7. INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 26.5	1908.6 1908.7 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS.	-	X	ACI 318: 26.11.2	-
10. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	ACI 318: 26.11.1.2(b)	-

TABLE 1705.6 REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER SUPPORTING MATERIAL.	-	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5 PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

TABLE 1705.7 REQUIRED SPECIAL INSPECTIONS AND TESTS OF DRIVEN DEEP FOUNDATION ELEMENTS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY ELEMENT MATERIALS, SIZES, AND LENGTHS COMPLY WITH REQUIREMENTS.	X	-
2. DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED	X	-
3. INSPECT DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X	-
4. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS, AND DOCUMENT ANY DAMAGE TO FOUNDATION ELEMENT.	X	-
5. FOR STEEL ELEMENTS, PERFORM ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.2 SEE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC-360.	-	-
6. FOR CONCRETE ELEMENTS AND CONCRETE-FILLED ELEMENTS, PERFORM TESTS AND ADDITIONAL SPECIAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.3.	-	-
7. FOR SPECIALTY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.	X	-

TIE-BACK ANCHORS TESTING AND INSPECTION

1. SUBMIT GROUTED TIE-BACK ANCHOR TESTING AND SPECIAL INSPECTION PROGRAM. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR TIE-BACK ANCHOR INSTALLATION, GROUTING, AND TESTING. SEE SPECIFICATION 31 51 13 SOIL ANCHORS.
2. AT A MINIMUM, PERFORMANCE TESTING OF GROUTED TIE-BACK ANCHORS MUST OCCUR ON THE FIRST THREE ANCHORS INSTALLED AND THEN ON A MINIMUM OF TWO OF THE REMAINING ANCHORS.
3. PERFORMANCE AND PROOF TESTS MUST BE ACCOMPLISHED IN ACCORDANCE WITH THE POST-TENSIONING INSTITUTE RECOMMENDATIONS (PTI, 2014).
4. A MINIMUM OF THREE PRE-PRODUCTION OR VERIFICATION TESTS SHALL BE PERFORMED TO 200% OF THE DESIGN BOND STRENGTH.

95% DESIGN SUBMITTAL
ISSUED: 10/5/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF BLAINE
MARINA STRUCTURES REPLACEMENT

STRUCTURAL SPECIAL INSPECTION REQUIREMENTS & DETAILS

Sheet Reference No.
G-004

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWINGS

ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTITUTE
ADD	ADDITIONAL
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BLDG	BUILDING
BMPS	BEST MANAGEMENT PRACTICES
C/C	CENTER ON CENTER
CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS or CONTINUE
CSBC	CRUSHED SURFACING BASE COURSE
DACS	DRAWING AREA COORDINATE SYSTEM
E	EAST
EA	EACH
E.G.	FOR EXAMPLE
EG	EXISTING GRADE
ELEV/EL	ELEVATION
EQ	EQUAL
EQUIV	EQUIVALENT
ETC.	ET CETERA
EX, (E)	EXISTING
EXP	EXPANSION
FG	FINISHED GRADE
FT	FOOT or FEET
FY	FORCE TO YIELD
GA	GAGE
GALV	GALVANIZED
GR	GRADE
HOWL	HIGHEST OBSERVED WATER LEVEL
HAS	HEADED ANCHOR STUD
HSS	HOLLOW STRUCTURAL SECTION
HORIZ	HORIZONTAL
IBC	INTERNATIONAL BUILDING CODE
ICC	INTERNATIONAL CODE COUNCIL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN.	INCHES
KSI	KIPS PER SQUARE INCH
L	LENGTH
LOWL	LOWEST OBSERVED WATER LEVEL
LB	POUND
LF	LINEAR or LINEAL FEET
LG	LONG
LLH	LONG LEG HORIZONTAL
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
MTL	MEAN TIDE LINE
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
N/A	NOT APPLICABLE
NE	NORTH EAST
NO.	NUMBER
NOAA	NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PCF	POUND PER CUBIC FOOT
PL	PLATE or PROPERTY LINE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTI	POST - TENSIONING INSTITUTE
REINF	REINFORCEMENT
REQD	REQUIRED
REF	REFERENCE
SCH	SCHEDULE
SE	SOUTH EAST
SEC	SECONDARY
SECT	SECTION
SPA	SPACE(S)
SPEC	SPECIFICATION
SS	STAINLESS STEEL or SANITARY SEWER
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
T&B	TOP AND BOTTOM
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
THRU	THROUGH
TYP	TYPICAL
TY	TOP OF
UFC	UNIFIED FACILITY CRITERIA
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
V/VERT	VERTICAL
WA	WASHINGTON
WP	WORK POINT
WSDOT	WASHINGTON DEPARTMENT OF TRANSPORTATION
W	WIDTH, WIDE
W/	WITH

BAR SIZE	LAP SPLICE LENGTH IN INCHES	
	OTHER BARS	TOP BARS
#3	19	24
#4	25	32
#5	31	40
#6	37	48
#7	54	70
#8	62	80
#9	70	91
#10	79	102
#11	87	113

NOTES:

1. THE ABOVE SPLICE LENGTHS APPLY TO BARS WITH A MINIMUM SPACING OF 3db INCHES ON CENTER.

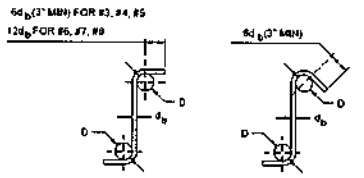
   db = BAR NOMINAL DIAMETER

2. DEVELOPMENT LENGTH OF BARS SHALL EQUAL A MINIMUM OF 77% OF LAP SPLICE LENGTH.

3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

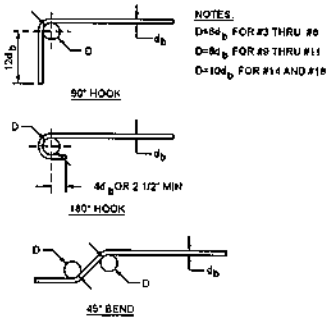
4. VALUES ARE BASED ON CLASS "B" SPLICES (MAX 50% OF BARS SPLICED AT ONE LOCATION).

TYPICAL REINFORCING BAR LAP SPLICE LENGTH
SCALE: NTS



BAR SIZE	#3	#4	#5	#6	#7	#8
D	1 1/2"	2"	2 1/2"	4 1/2"	5 1/4"	6"

TYPICAL STIRRUP & TIE HOOKS
SCALE: NTS



NOTES:
D=$8d_b$ FOR #3 THRU #8
D=$8d_b$ FOR #9 THRU #11
D=$10d_b$ FOR #14 AND #18

TYPICAL REINFORCING HOOKS
SCALE: NTS

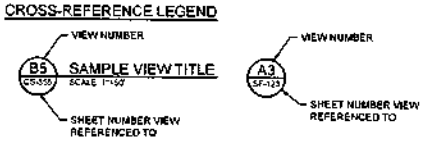
SHEET TYPE DESIGNATORS	
0	GENERAL (COVER SHEET, LEGEND, NOTES)
1	PLANS (HORIZONTAL VIEWS)
2	ELEVATIONS (NOT TYPICALLY USED)
3	SECTIONS (OVERALL VIEWS)
4	LARGE-SCALE VIEWS (PLAN, SECT, OR ELEV. - NOT DETAILS)
5	DETAILS (MAY BE PLAN, SECT, OR ELEV. VIEWS)
6	SCHEDULES
7	USER DEFINED
8	USER DEFINED
9	3D ISOMETRIC / PHOTOS

DISCIPLINE DESIGNATORS	
DISCIPLINE	DESIGNATOR
GENERAL	G
SURVEY/MAPPING	V
GEOTECHNICAL	B
CIVIL WORKS	W
CIVIL	C
STRUCTURAL	S
MECHANICAL	M
ELECTRICAL	E
OTHER DISCIPLINES	X

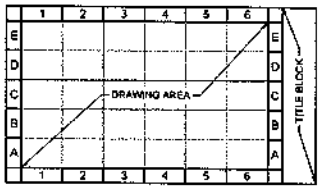
SECONDARY DESIGNATORS	
DEMOLITION	D
GENERAL	G
SUBSTRUCTURE	B
FRAMING	F
COMPONENT	C
SITE	S

REVISION NUMBERING	
000-099	PRE-BID SUBMITTALS
100-199	BID SUBMITTALS
200-299	CONSTRUCTION SUBMITTALS

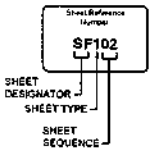
CROSS-REFERENCE LEGEND



* VIEW NUMBER IS BASED ON THE (DACS) LOCATION OF THE LOWER-LEFT EXTENTS OF THE VIEW ON THE REFERENCED SHEET. WHEN REFERENCING DRAWING INFORMATION BETWEEN SHEETS, BOTH THE VIEW AND SHEET NUMBERS MUST BE QUOTED TOGETHER - EITHER IN A CALLOUT FORMAT AS SHOWN ABOVE OR IN THE FORM: "VIEW NO/SHEET NO." (EG A1/CS-5001)



DRAWING AREA COORDINATE SYSTEM (DACS)



SHEET NUMBERING

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF KINGSTON
MARINA STRUCTURES REPLACEMENT

ABBREVIATIONS LEGEND & DETAILS

Sheet Reference No.
G-005

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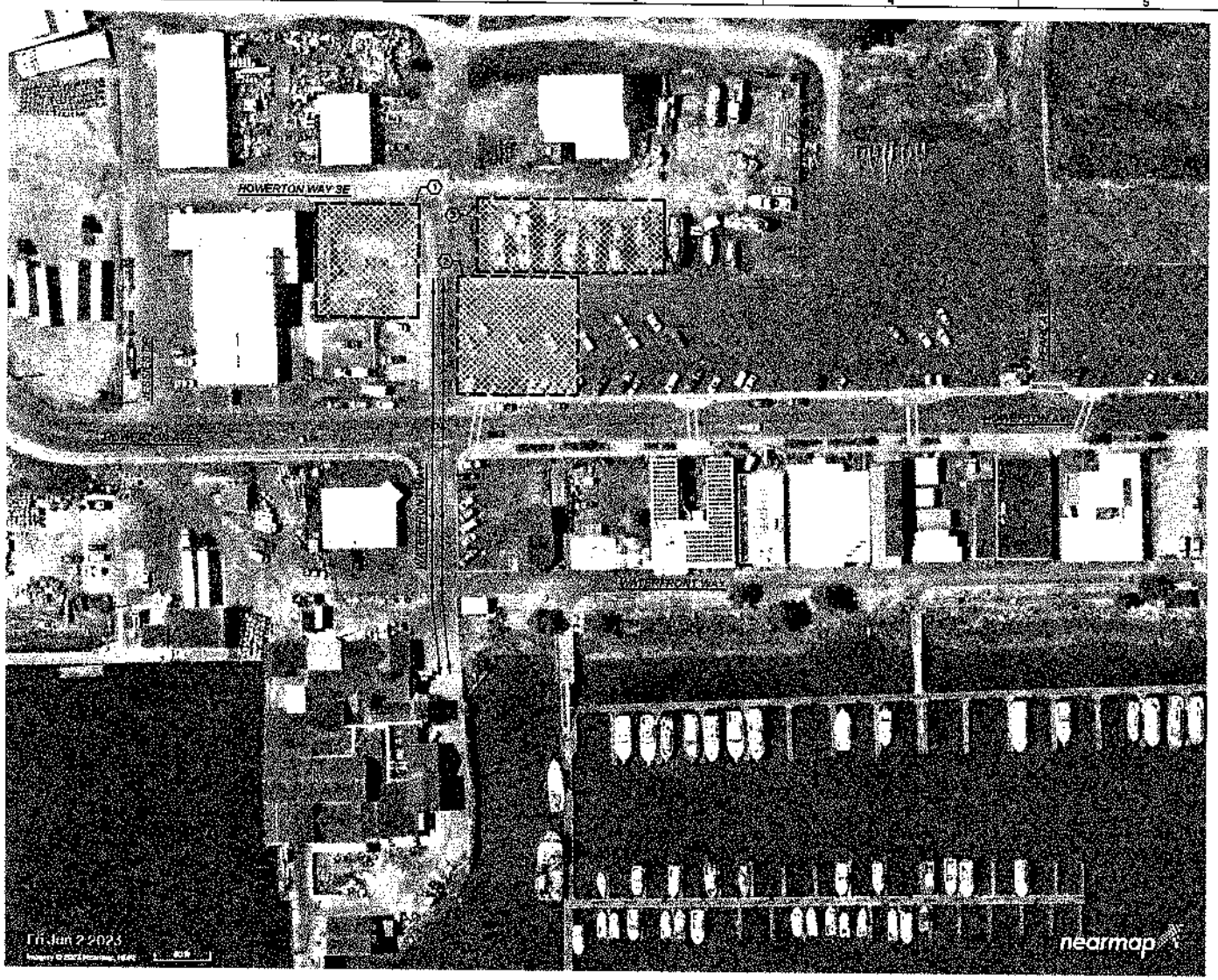
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



A1 PLAN - CONTRACTOR SITE ACCESS & LAYDOWN AREAS
SCALE: NTS

LAYDOWN AREA KEY NOTES

THE FOLLOWING AREAS WILL BE AVAILABLE FOR CONTRACTOR LAYDOWN & STAGING.

1. UNFENCED GRAVEL LOT, APPROXIMATELY 72'x100'
2. UNFENCED PAVED PARKING LOT, APPROXIMATELY 116'x109'
3. FENCED GRAVEL LOT, APPROXIMATELY 154'x64'

LEGEND

CONTRACTOR LAYDOWN AREA

CONSTRUCTION ACCESS ROUTE

N

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

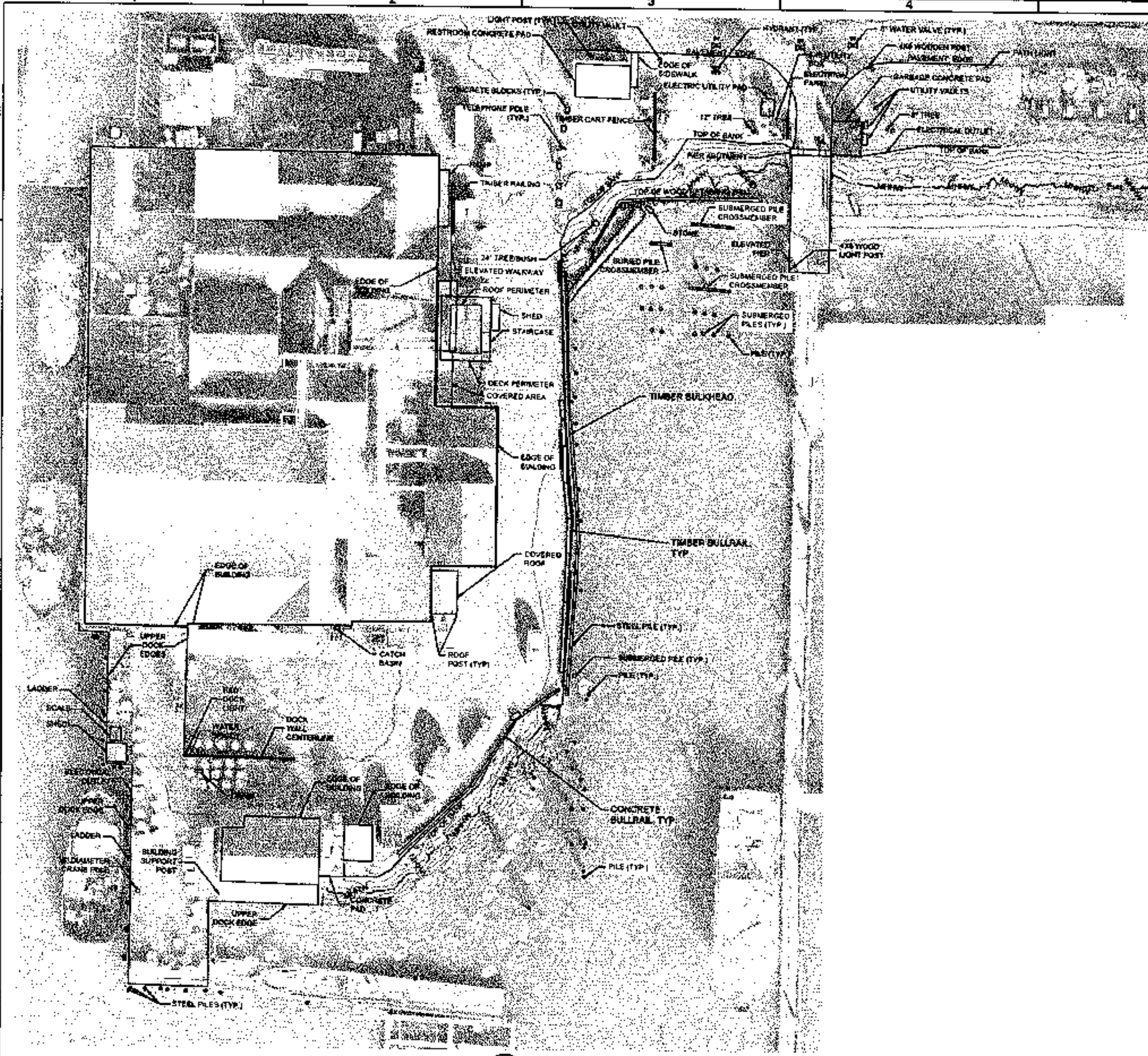
PORT OF KAWAIHAE
HARBOR IMPROVEMENTS
REPLACEMENT

CONTRACTOR SITE ACCESS & LAYDOWN AREAS

Sheet Reference No.
G-100

SHEET 6 OF 21

DRAWING SCALES SHOWN ARE BASED ON 22"x34" DRAWINGS



A1 EXISTING SITE PLAN
SCALE: 1" = 20'

SURVEY LEGEND:

- ● STEEL PILE
- ● PILE
- o SUBMERGED PILE
- UTILITY POLE
- HYDRANT
- WATER VALVE
- o PATH LIGHT
- — MHHW — MEAN HIGHER HIGH WATER (MHHW) (ELEV= +8.07 MLLW)

NOTES:

1. BATHYMETRY AND TOPOGRAPHY BASED ON A SURVEY PERFORMED BT SOLMAR HYDRO ON APRIL 13, 2022.
2. CONTOURS SHOWN ARE IN FEET RELATIVE TO MLLW.

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF KIWADO
MARINA STRUCTURES
REPLACEMENT

EXISTING SITE PLAN

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SEATTLE, WA 98101
(206) 622-0222

Sheet Reference No.
V-100
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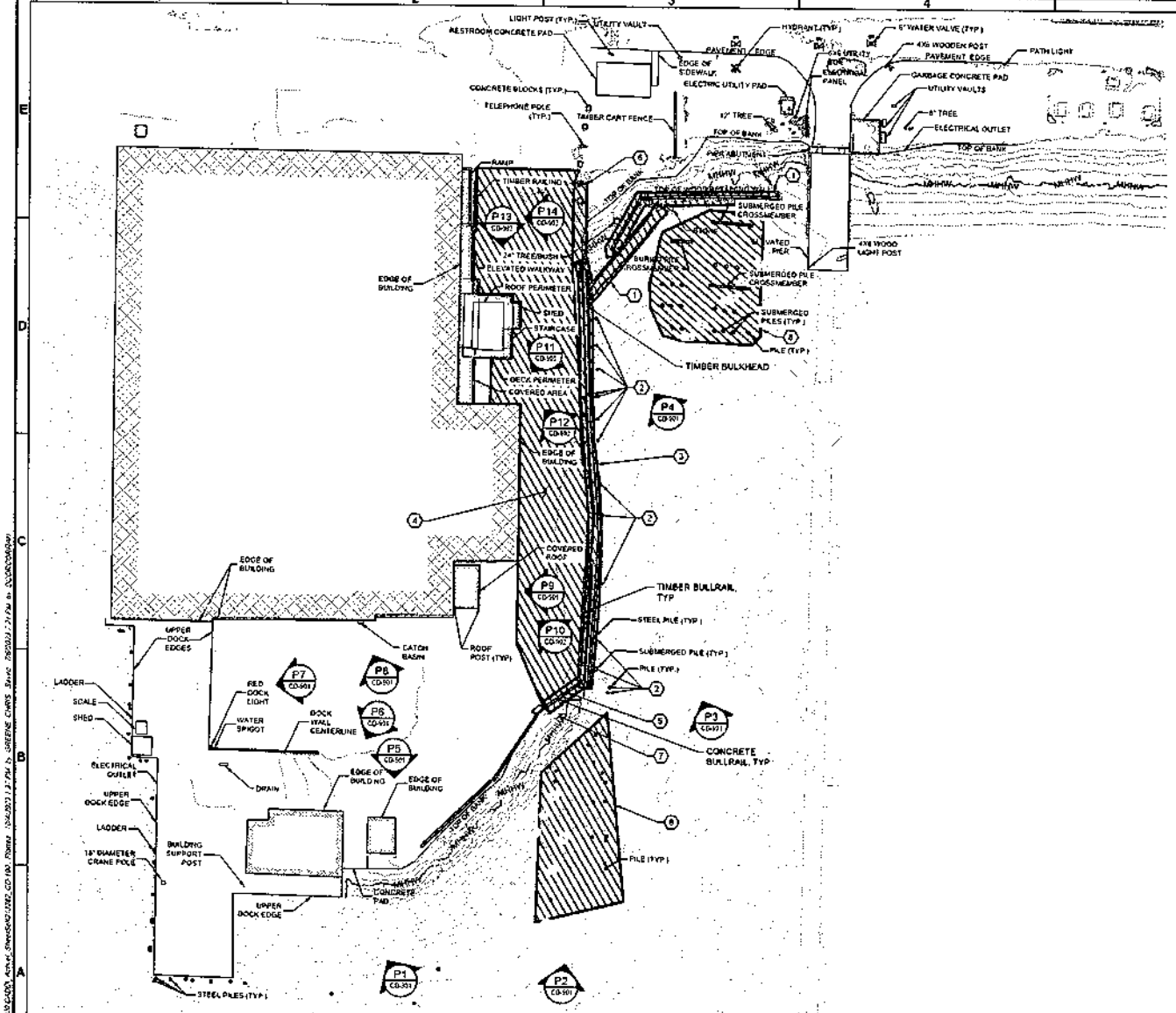
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



A1 DEMOLITION SITE PLAN
SCALE: 1" = 20'

DEMOLITION KEY NOTES

1. REMOVE TIMBER BULKHEAD AND LARGE LOG.
2. REMOVE TIMBER AND STEEL PILES ALONG TIMBER BULKHEAD
3. SELECTIVE DEMOLITION OF TIMBER BULKHEAD, SEE SHEET S-301.
4. REMOVE PAVEMENT.
5. REMOVE CONCRETE CURB.
6. REMOVE FENCE.
7. SELECTIVE REMOVAL OF LARGE RUBBLE ON SHORELINE SLOPE.
8. REMOVE DERELICT PILES AND TIMBERS ALONG SHORELINE.

NOTES

1. COORDINATE DEMOLITION PHASING AND SCHEDULE WITH THE PORT PRIOR TO MOBILIZATION.
2. PROVIDE A DEMOLITION PLAN AS REQUIRED BY THE SPECIFICATIONS.
3. INSTALL DEBRIS BOOMS AND SILT CURTAINS AROUND EACH ACTIVE DEMOLITION AREA PRIOR TO DEMOLITION OF SPECIFIED MARINE STRUCTURES.
4. COMPLETE IN-WATER DEMOLITION ADJACENT TO (E) TIMBER BULKHEAD PRIOR TO INSTALLATION OF (N) SHEET PILE BULKHEAD.
5. DEBRIS TO BE REMOVED AT THE END OF EACH WORK DAY OR IMMEDIATELY IF WATERS ARE ROUGH AND THERE IS A CHANCE THAT DEBRIS MAY ESCAPE FROM THE WORK SITE.
6. WORK SURFACES ON BARGE DECK AND UPLAND STAGING AREAS SHALL INCLUDE CONTAINMENT FOR TEMPORARY STORAGE OF ALL DEMOLITION DEBRIS, TREATED MATERIALS, AND ALL OTHER DEBRIS/ MATERIALS/SPOIL PRIOR TO DISPOSAL AT AN APPROVED OFF-SITE FACILITY.

LEGEND

DEMOLITION AREAS

P# CD-### — PHOTOGRAPH NUMBER / SHEET NUMBER VIEW REFERENCED TO

PHOTOGRAPH CALLOUT

MHHW — MEAN HIGHER HIGH WATER

N

20' 0 20' 40'
SCALE: 1"=20'

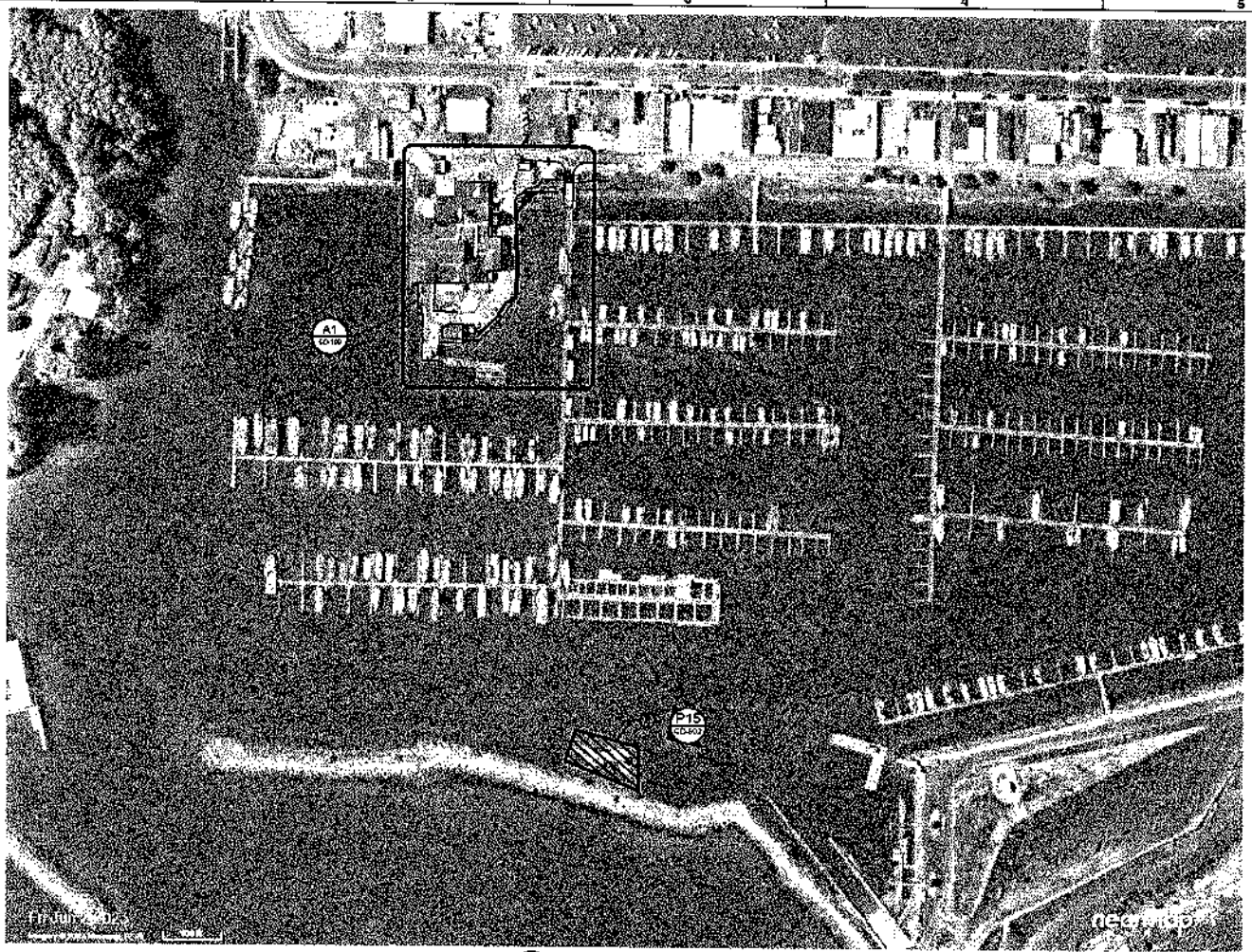
95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF KIVAKO
MARINA STRUCTURES REPLACEMENT

DEMOLITION SITE PLAN (1 OF 2)

Sheet Reference No.
CD-100
INDEX 8 OF 21

DRAWING SCALES SHOWN BASED ON 22"X34" DRAWING



B1 DEMOLITION SITE PLAN
SCALE: 1" = 100'

DEMOLITION KEY NOTES

(9) REMOVE DERELICT TIMBER FLOATS & OTHER DERELICT MATERIAL ALONG SHORELINE. APPROX 30'x100' PLAN AREA. APPROXIMATELY HALF OF TIMBER IS CREOSOTE TREATED. TIMBER PILES TO REMAIN.

NOTE:

1. SEE NOTES ON CD-100.

LEGEND

DEMOLITION AREAS

BATHYMETRY POINTS

PHOTOGRAPH NUMBER

SHEET NUMBER VIEW REFERENCED TO

PHOTOGRAPH CALLOUT

N

100' 0 100' 200'

SCALE: 1"=100'

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF EDMONDS
MARINA BREAKWATER REPLACEMENT

DEMOLITION SITE PLAN
(2 OF 2)

Sheet Reference No.
CD-101

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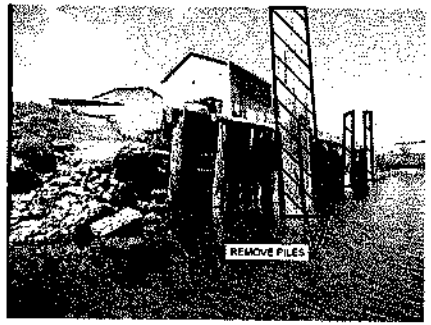
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWINGS

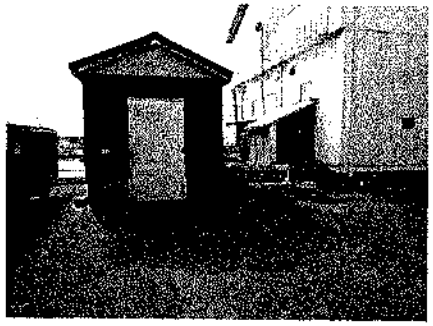
P1 SOUTH SHORLINE
LOOKING NORTHWEST

P2 SOUTH SHORLINE
LOOKING NORTH



P3 SOUTH END OF BULKHEAD
LOOKING NORTHWEST

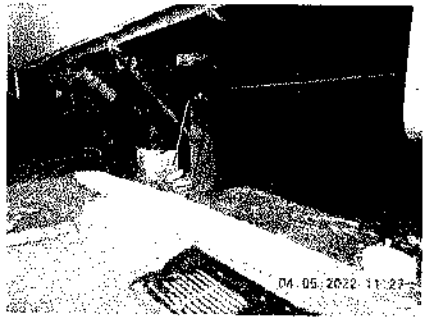
P4 NORTH END OF BULKHEAD
LOOKING NORTHWEST



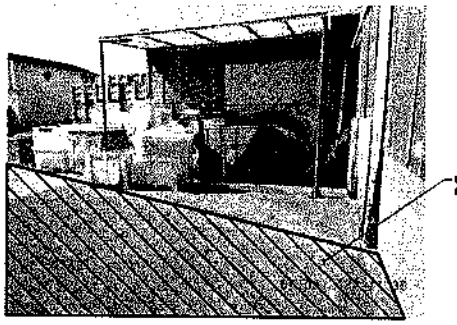
P5 SHED
LOOKING SOUTH

P6 OFFICE BUILDING AND RAMP
LOOKING SOUTH

P7 LOADING DOCK
LOOKING SOUTHWEST



P8 CATCH BASIN
LOOKING NORTHWEST



P9 RECESSED EQUIPMENT
LOOKING WEST

LEGEND

DEMOLITION AREAS

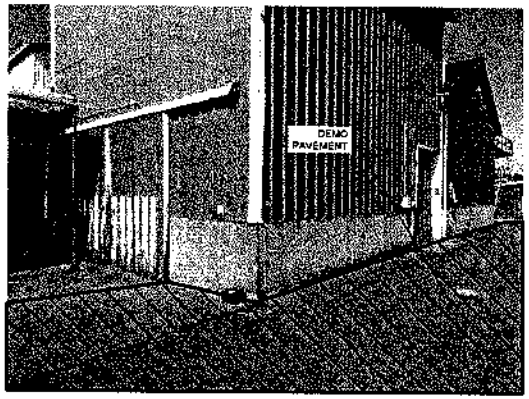
95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

POINT OF ILWACO MARINA STRUCTURES REPLACEMENT

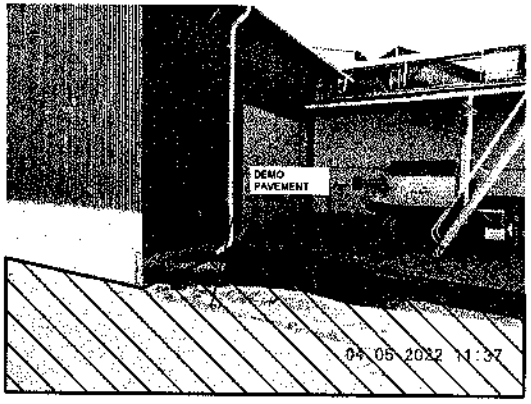
DEMOLITION PHOTOS (1 OF 2)

Sheet Reference No
CD-901
INDEX 10 OF 21

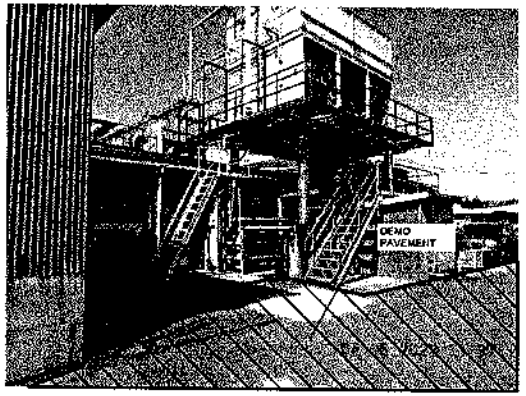
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWINGS



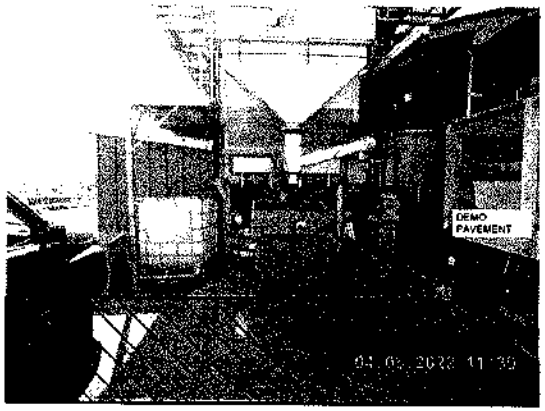
P10 CD-100 SE CORNER OF BLDG
LOOKING NORTHWEST



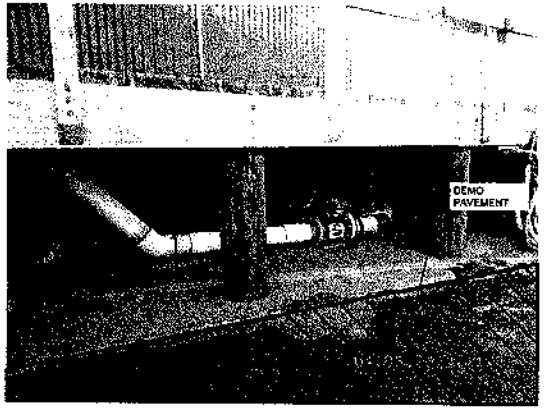
P11 CD-100 NE CORNER OF BLDG
LOOKING SOUTHWEST



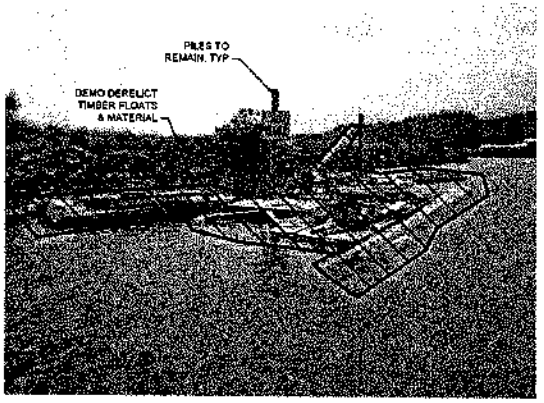
P12 CD-100 EQUIPMENT TOWER AND UTILITIES
LOOKING NORTHWEST



P13 CD-100 EQUIPMENT
LOOKING SOUTHEAST



P14 CD-100 BLDG FOUNDATION AND UTILITIES
LOOKING WEST



P15 CD-100 DERELICT FLOATS
LOOKING SOUTHWEST

LEGEND

DEMOLITION AREAS

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

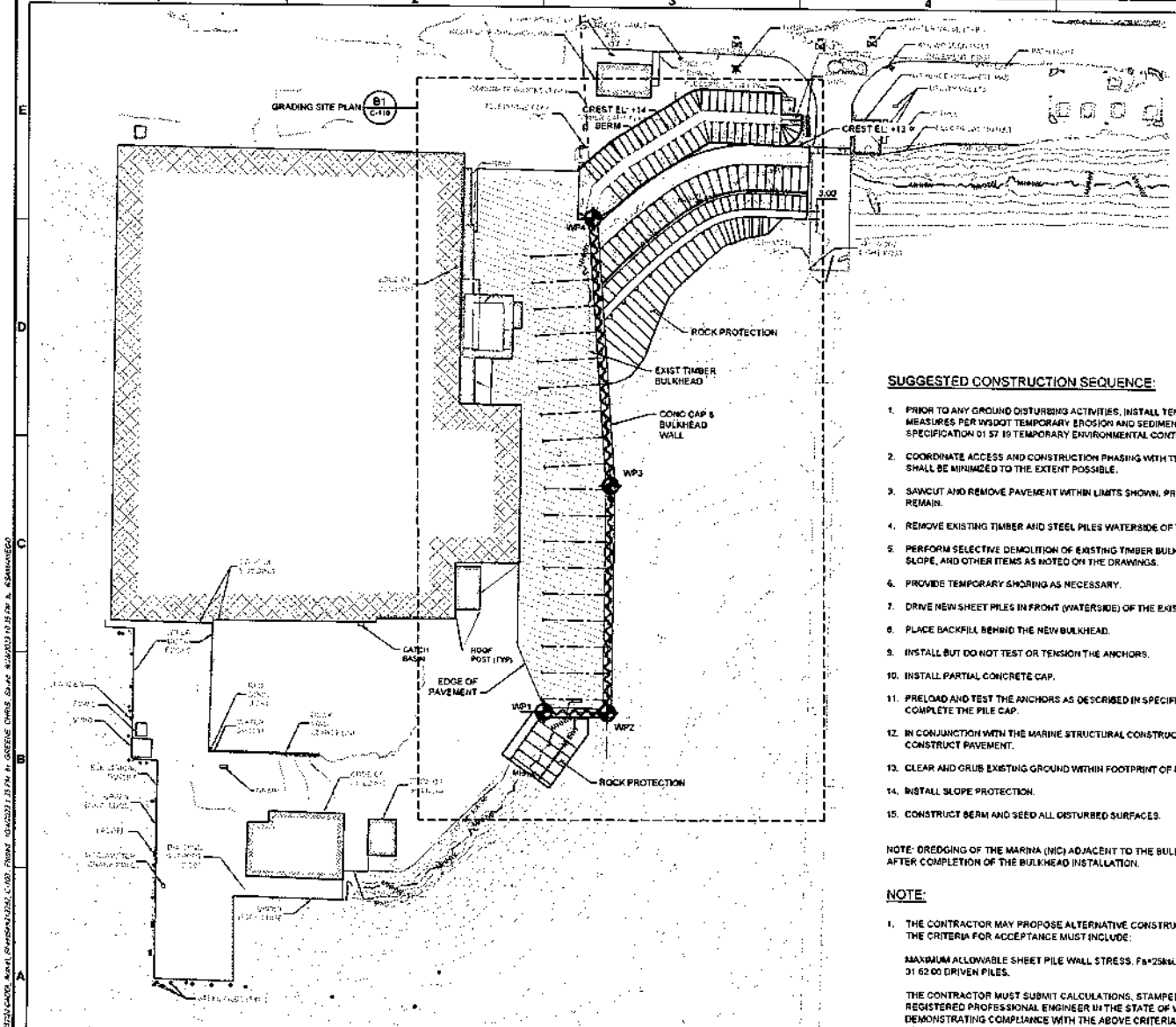
PORT OF SEATTLE
MARINE STRUCTURES
REPLACEMENT

DEMOLITION PHOTOS
(2 OF 2)

Sheet
Reference No.
CD-902

SHEET 11 OF 21

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



A1 OVERALL SITE PLAN
SCALE: 1" = 20'

WORKPOINT TABLE		
WORKPOINT	NORTHING	EASTING
1	374293.76	745869.35
2	374301.30	745912.08
3	374383.34	745884.80
4	374476.95	745845.02

LEGEND

- WORKPOINT, SEE TABLE ABOVE
- MHHW — EXISTING MEAN HIGHER HIGH WATER (MHHW) (ELEV= +8.07' MLLW)
- MHHW — PROPOSED MEAN HIGHER HIGH WATER (MHHW) (ELEV= +8.07' MLLW)
- PAVING AREA LIMITS
- BERM CONSTRUCTION
- ROCK SLOPE PROTECTION

SUGGESTED CONSTRUCTION SEQUENCE:

1. PRIOR TO ANY GROUND DISTURBING ACTIVITIES, INSTALL TEMPORARY EROSION CONTROL MEASURES PER WSDOT TEMPORARY EROSION AND SEDIMENT CONTROL MANUAL, MAY 2018, SEE SPECIFICATION 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.
2. COORDINATE ACCESS AND CONSTRUCTION PHASING WITH TENANT OPERATIONS. INTERRUPTIONS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE.
3. SAWCUT AND REMOVE PAVEMENT WITHIN LIMITS SHOWN. PROTECT ALL SURFACE FEATURES TO REMAIN.
4. REMOVE EXISTING TIMBER AND STEEL PILES WATERSIDE OF THE EXISTING TIMBER BULKHEAD.
5. PERFORM SELECTIVE DEMOLITION OF EXISTING TIMBER BULKHEAD, LARGE RUBBLE ON SHORELINE SLOPE, AND OTHER ITEMS AS NOTED ON THE DRAWINGS.
6. PROVIDE TEMPORARY SHORING AS NECESSARY.
7. DRIVE NEW SHEET PILES IN FRONT (WATERSIDE) OF THE EXISTING BULKHEAD.
8. PLACE BACKFILL BEHIND THE NEW BULKHEAD.
9. INSTALL BUT DO NOT TEST OR TENSION THE ANCHORS.
10. INSTALL PARTIAL CONCRETE CAP.
11. PRELOAD AND TEST THE ANCHORS AS DESCRIBED IN SPECIFICATION 31 51 13 SOIL ANCHORS. COMPLETE THE PILE CAP.
12. IN CONJUNCTION WITH THE MARINE STRUCTURAL CONSTRUCTION, PLACE BACKFILL AND CONSTRUCT PAVEMENT.
13. CLEAR AND GRUB EXISTING GROUND WITHIN FOOTPRINT OF PROPOSED BERM.
14. INSTALL SLOPE PROTECTION.
15. CONSTRUCT BERM AND SEED ALL DISTURBED SURFACES.

NOTE: DREDGING OF THE MARINA (NIC) ADJACENT TO THE BULKHEAD MUST NOT OCCUR UNTIL AFTER COMPLETION OF THE BULKHEAD INSTALLATION.

NOTE:

1. THE CONTRACTOR MAY PROPOSE ALTERNATIVE CONSTRUCTION SEQUENCE. THE CRITERIA FOR ACCEPTANCE MUST INCLUDE:

   MAXIMUM ALLOWABLE SHEET PILE WALL STRESS, Fa=25ksi. SEE SPECIFICATION 31 62 00 DRIVEN PILES.

   THE CONTRACTOR MUST SUBMIT CALCULATIONS, STAMPED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF WASHINGTON DEMONSTRATING COMPLIANCE WITH THE ABOVE CRITERIA FOR ENGINEERS APPROVAL.

N

SCALE: 1" = 20'

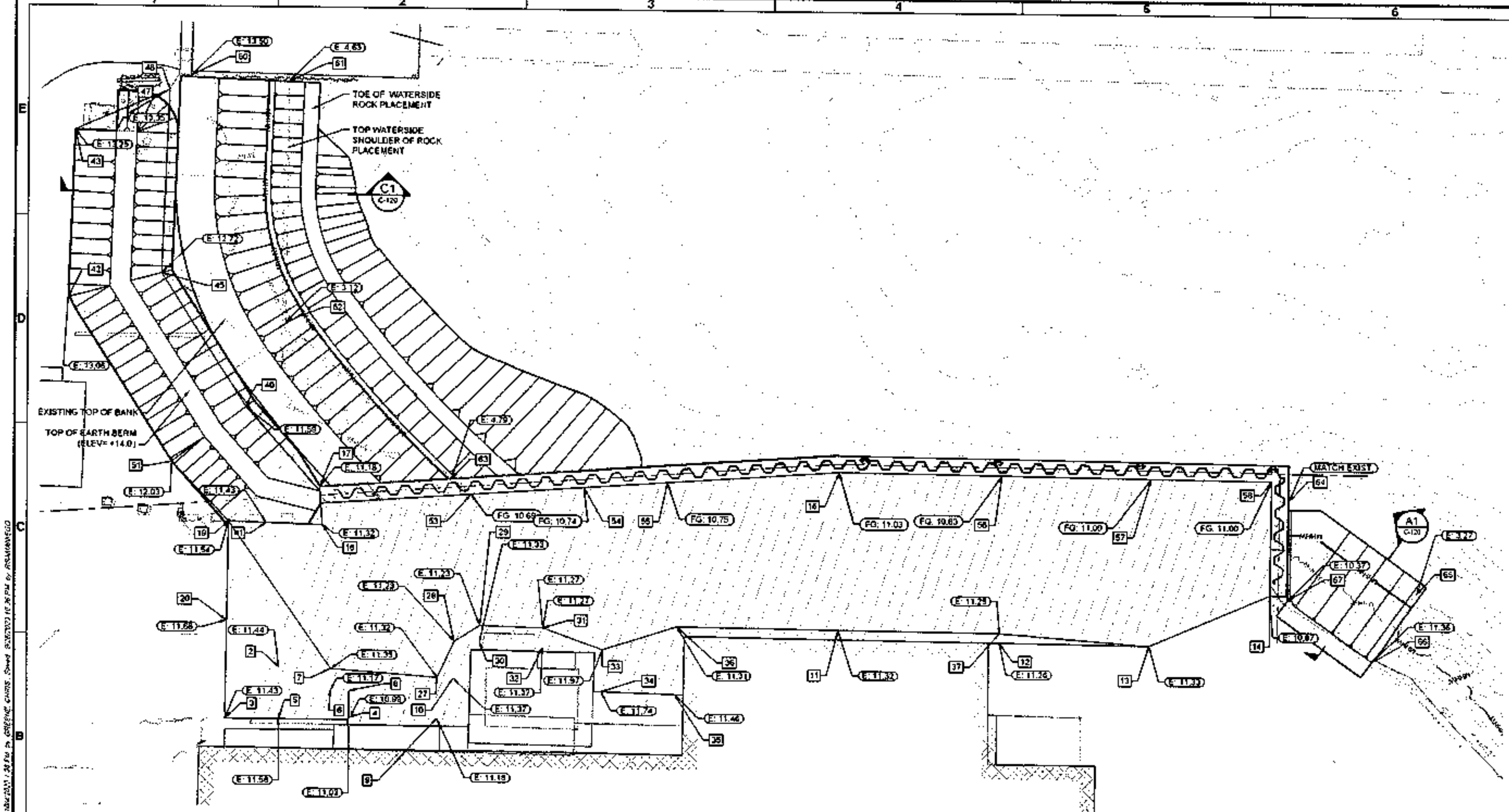
95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF EDMONDS MARINA BULKHEADS REPLACEMENT

OVERALL SITE PLAN

Sheet Reference No.
C-100
INDEX 12 OF 31

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWINGS



B1 GRADING SITE PLAN
SCALE: 1" = 10'

LEGEND

- FG ## — FINISHED GRADE ELEVATION
- E ## — EXISTING GRADE (MATCH NEW PAVEMENT)
- ## — CONSTRUCTION POINT (SEE TABLE ON C-120)
- — MHHW — EXISTING MEAN HIGHER HIGH WATER (MHHW) (ELEV= +8.07' MLLW)
- — MHHW → PROPOSED MEAN HIGHER HIGH WATER (MHHW) (ELEV= +8.07' MLLW)
- PAVING AREA LIMITS
- BERM CONSTRUCTION
- ROCK SLOPE PROTECTION

SCALE: 1"=10'

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

PORT OF ILWACO
MARINA STRUCTURES
REPLACEMENT

GRADING SITE PLAN

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SEATTLE, WA 98101
(206) 622-0222

NOT FOR CONSTRUCTION

Sheet Reference No.
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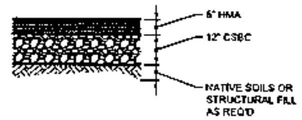
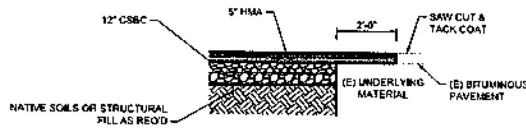
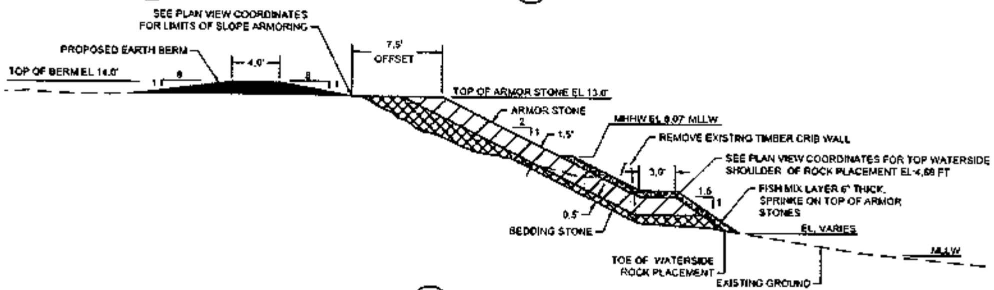


D1 **PAVING DETAIL**
SCALE: 1/2" = 1'-0"



D4 **JUNCTURE OF NEW AND EXIST PAVEMENT**
SCALE: 1/2" = 1'-0"



C1 **ROCK SLOPE PROTECTION - SECTION**
C-110 SCALE: 1" = 5'-0"

POINT #	NORTHING	EASTING
2	374472.81	745810.63
3	374480.10	745797.57
4	374467.07	745806.02
5	374470.20	745800.85
6	374462.44	745809.66
7	374463.82	745813.71
8	374459.04	745810.82
9	374441.09	745811.35
10	374440.68	745815.90
11	374372.28	745854.12
12	374342.14	745862.35
13	374314.36	745871.60
14	374295.29	745888.84
15	374302.33	745910.02
16	374382.76	745883.28
17	374417.58	745846.51
18	374424.48	745839.68
19	374492.13	745834.23
20	374486.12	745815.06
21	374324.67	745902.59
22	374352.46	745897.35
23	374382.76	745883.28
24	374413.79	745870.09
25	374437.87	745859.86

POINT #	NORTHING	EASTING
26	374449.19	745855.05
27	374443.83	745819.02
28	374442.85	745826.66
29	374439.15	745831.43
30	374438.13	745828.34
31	374427.36	745835.12
32	374426.23	745831.52
33	374414.98	745835.05
34	374412.45	745827.11
35	374398.77	745831.41
36	374402.76	745844.13
37	374342.73	745864.11
39	374425.84	745853.60
40	374496.34	745856.54
41	374485.16	745836.61
42	374536.32	745865.13
43	374549.77	745856.84
44	374487.73	745844.76
45	374520.82	745875.61
46	374529.29	745870.03
47	374540.55	745907.65
48	374571.05	745910.29
49	374526.62	745872.38
50	374501.99	745848.23

POINT #	NORTHING	EASTING
51	374506.46	745841.58
52	374409.75	745851.56
53	374449.19	745855.05
54	374428.88	745883.68
55	374411.79	745870.08
56	374352.46	745893.35
57	374324.67	745902.56
58	374302.33	745910.07
59	374299.28	745640.68
60	374528.09	745914.34
61	374809.58	745919.65
62	374494.53	745875.01
63	374453.81	745856.67
64	374297.86	745907.57
65	374268.35	745898.85
66	374272.16	745883.31
67	374291.74	745889.15

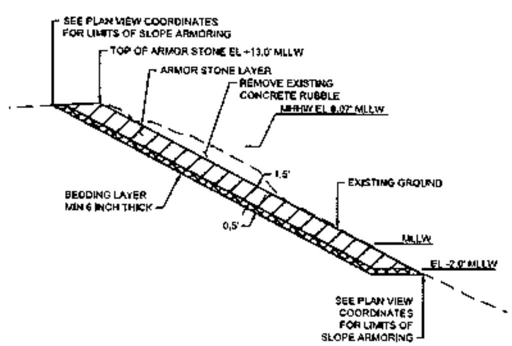
A4 **GRADING POINTS DATA**
C-110

GRADING AND LAYOUT POINTS.

1. SEE SHEET C-110 FOR LOCATION OF POINTS AND FEATURES. ELEVATIONS ARE SHOWN IN PLAN VIEW.
2. WHERE POINTS FOR EXISTING GROUND DO NOT HAVE ELEVATION DATA THE POINTS ARE CONSIDERED DIRECTIVE TO MATCH EXISTING GRADE WHEN CONSTRUCTING PAVEMENT FINISH GRADE.

LEGEND

- EXISTING TIMBER CRIB WALL LIMITS
- BEDDING STONE
- ARMOR STONE
- FISH MIX LAYER
- EARTH BERM



A1 **ROCK SLOPE PROTECTION - SECTION**
C-110 SCALE: 1" = 5'-0"

SCALE: 1"=5'

SCALE: 1/2"=1'-0"

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

PORT OF ILWACO
MARINA STRUCTURES REPLACEMENT

GRADING & PAVING DETAILS

moffatt & nichol
600 UNIVERSITY STREET SUITE 610
SEATTLE, WA 98101
(206) 622-0222

Sheet Reference No.
C-120
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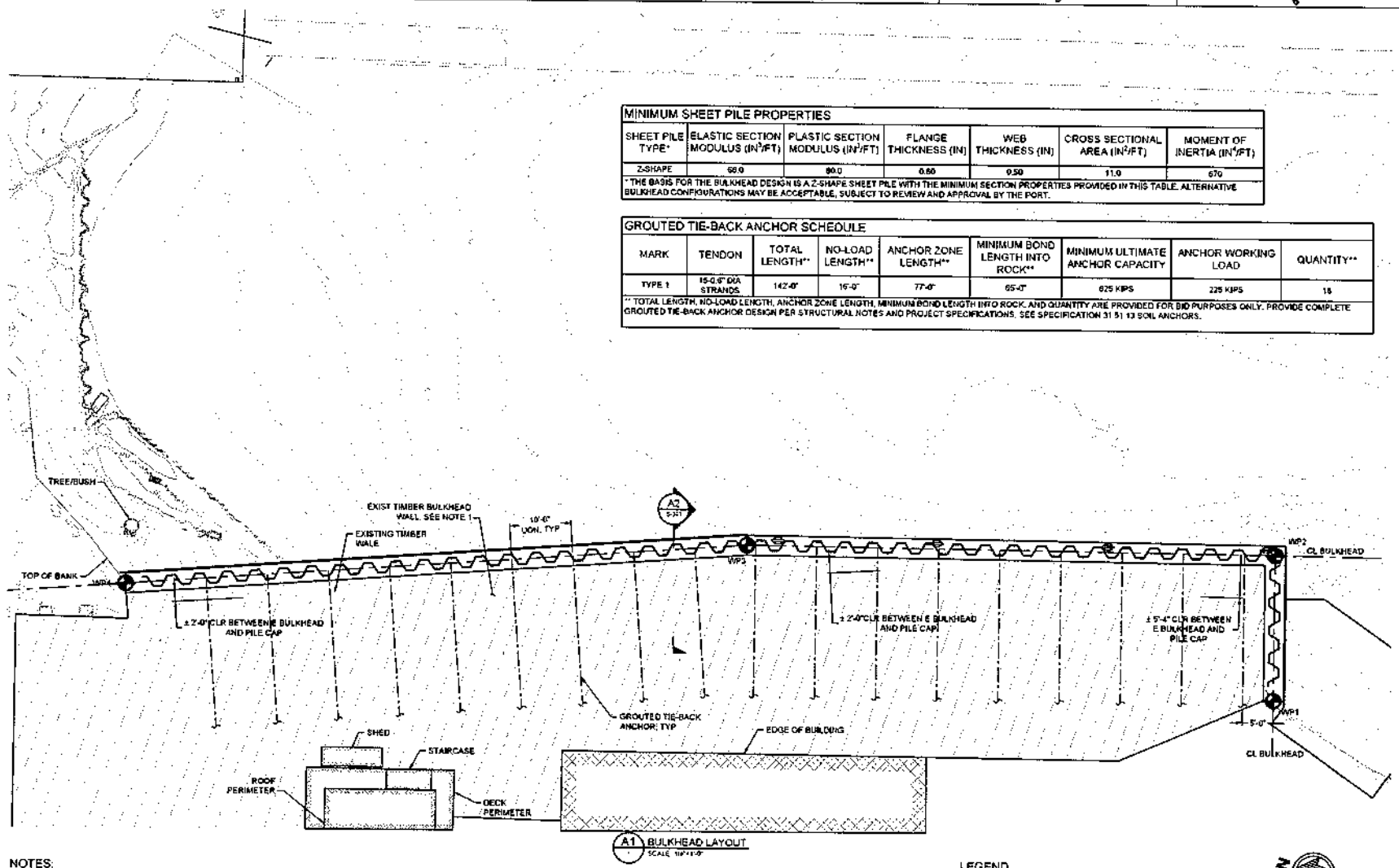
MINIMUM SHEET PILE PROPERTIES						
SHEET PILE TYPE*	ELASTIC SECTION MODULUS (IN^3/FT)	PLASTIC SECTION MODULUS (IN^3/FT)	FLANGE THICKNESS (IN)	WEB THICKNESS (IN)	CROSS SECTIONAL AREA (IN^2/FT)	MOMENT OF INERTIA (IN^4/FT)
Z-SHAPE	66.0	90.0	0.60	0.50	11.0	670

* THE BASIS FOR THE BULKHEAD DESIGN IS A Z-SHAPE SHEET PILE WITH THE MINIMUM SECTION PROPERTIES PROVIDED IN THIS TABLE. ALTERNATIVE BULKHEAD CONFIGURATIONS MAY BE ACCEPTABLE, SUBJECT TO REVIEW AND APPROVAL BY THE PORT.

GROUTED TIE-BACK ANCHOR SCHEDULE								
MARK	TENDON	TOTAL LENGTH**	NO-LOAD LENGTH**	ANCHOR ZONE LENGTH**	MINIMUM BOND LENGTH INTO ROCK**	MINIMUM ULTIMATE ANCHOR CAPACITY	ANCHOR WORKING LOAD	QUANTITY**
TYPE 1	15-0.6" DIA STRANDS	142'-0"	16'-0"	77'-0"	65'-0"	625 KIPS	225 KIPS	18

** TOTAL LENGTH, NO-LOAD LENGTH, ANCHOR ZONE LENGTH, MINIMUM BOND LENGTH INTO ROCK, AND QUANTITY ARE PROVIDED FOR BID PURPOSES ONLY. PROVIDE COMPLETE GROUTED TIE-BACK ANCHOR DESIGN PER STRUCTURAL NOTES AND PROJECT SPECIFICATIONS. SEE SPECIFICATION 31 51 13 SOIL ANCHORS.



A1 BULKHEAD LAYOUT
SCALE: 1/8"=1'-0"

NOTES:

1. EXISTING TIMBER BULKHEAD WALL LOCATION IS APPROXIMATE. THE EXISTING STEEL CABLE TIE-BACK LOCATIONS VARY. THE EXISTING BULKHEAD ANCHOR SYSTEM IS UNKNOWN. PRIOR TO START OF CONSTRUCTION ACTIVITIES, LOCATIONS/ELEVATIONS OF EXISTING BULKHEAD COMPONENTS MUST BE FIELD VERIFIED.
2. PROVIDE FINAL GROUTED TIE-BACK ANCHOR AS-BUILT LOCATIONS, LENGTHS, AND GROUT VOLUMES TO THE PORT AND INDICATE ON THE RECORD DRAWINGS.
3. PROVIDE TIE-BACK INSTALLATION PROCEDURES TO THE PORT FOR APPROVAL PRIOR TO INSTALLATION.
4. COAT BOTH SIDES OF ALL SHEET PILE ELEMENTS PER THE SPECIFICATIONS. EXTEND THE COATING TO A FINAL ELEVATION OF EL -20 MLLW OR DEEPER. SEE SPECIFICATION 09 96 00 HIGH PERFORMANCE COATINGS.
5. THE SHEET PILE SECTION, INTERLOCKS, AND SHEET LAYOUT SHOWN IN THESE DRAWINGS IS SCHEMATIC. CONTRACTOR TO SUBMIT FINAL SHEET LAYOUT WITH THE FURNISHED SHEET SECTION AND INTERLOCKS FOR REVIEW AND APPROVAL BY THE PORT.

LEGEND

- WORKPOINT, SEE SHEET C-100
- PAVING AREA LIMITS
- BERM CONSTRUCTION
- SLOPE PROTECTION

N

SCALE: 1/8"=1'-0"

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF ENGLO
MARINA STRUCTURES REPLACEMENT

BULKHEAD LAYOUT

Sheet Reference No.
S-100

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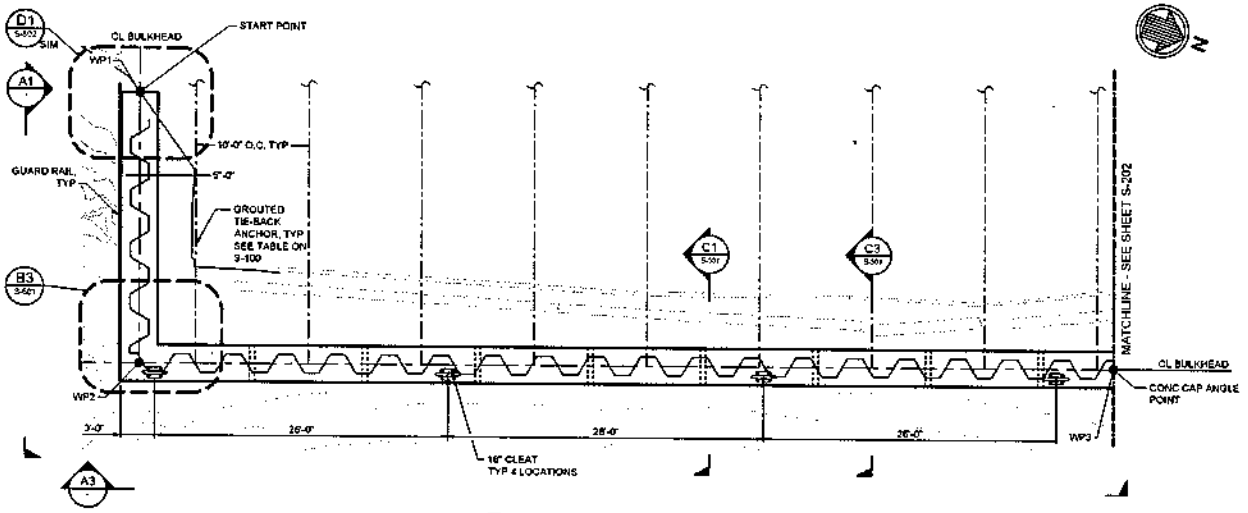
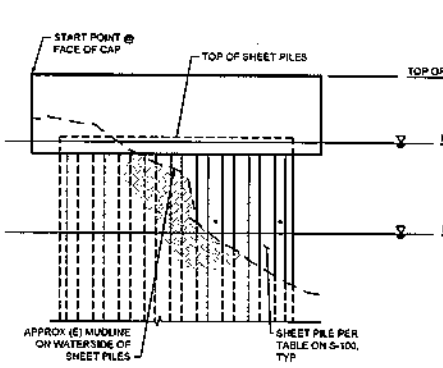
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



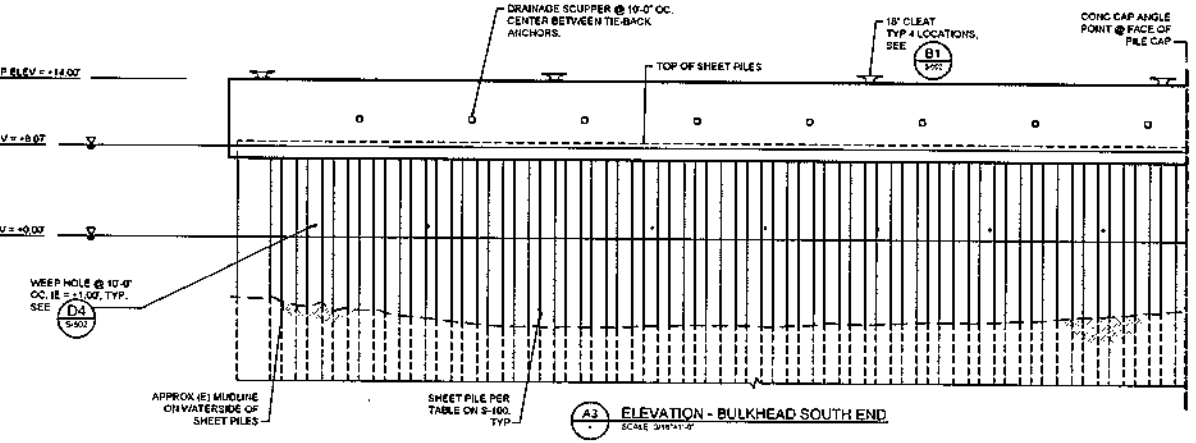
C1 PLAN - BULKHEAD SOUTH END
SCALE: 3/16"=1'-0"

NOTES:

1. BULKHEAD DEVELOPED ELEVATION AS VIEWED FROM THE WATERSIDE.
2. SEE SHEET C-100 FOR WORK POINT COORDINATES.



A1 ELEVATION - BULKHEAD WINGWALL SOUTH END
SCALE: 3/16"=1'-0"



A3 ELEVATION - BULKHEAD SOUTH END
SCALE: 3/16"=1'-0"

SCALE: 3/16"=1'-0"

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF HOWARD MARINE STRUCTURES REPLACEMENT

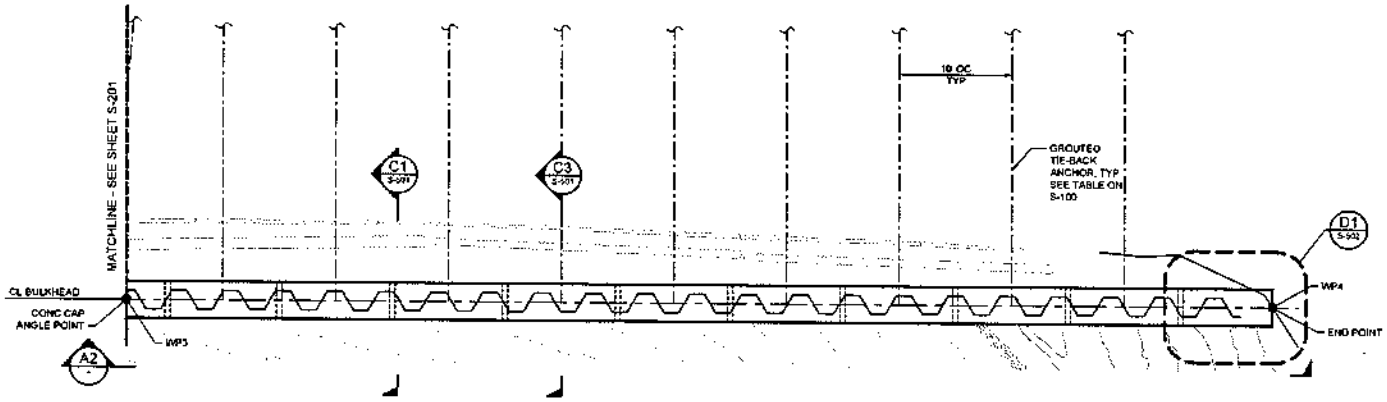
BULKHEAD PLAN & ELEVATION (1 OF 2)

Sheet Reference No.
S-201
INDEX 15 OF 21

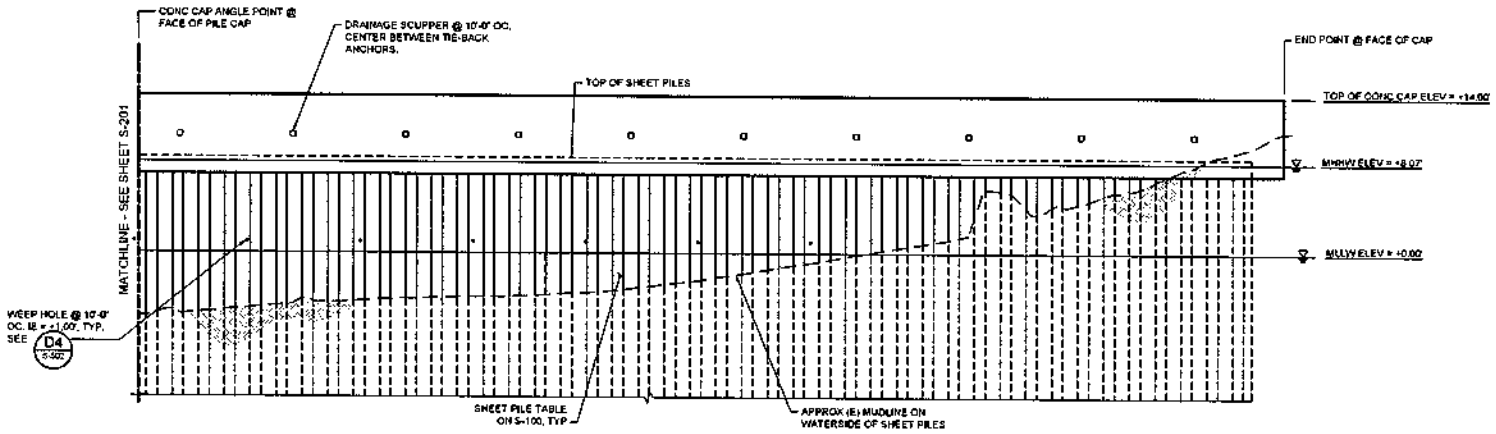
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

NOTE:

1. SEE SHEET S-201 FOR NOTES



C2 PLAN - BULKHEAD NORTH END
SCALE: 3/16"=1'-0"



A2 ELEVATION - BULKHEAD NORTH END
SCALE: 3/16"=1'-0"

SCALE: 3/16"=1'-0"

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF BELLINGHAM
MARINE TRADES BULKHEAD REPLACEMENT

BULKHEAD PLAN & ELEVATION (2 OF 2)

Sheet Reference No.
S-202
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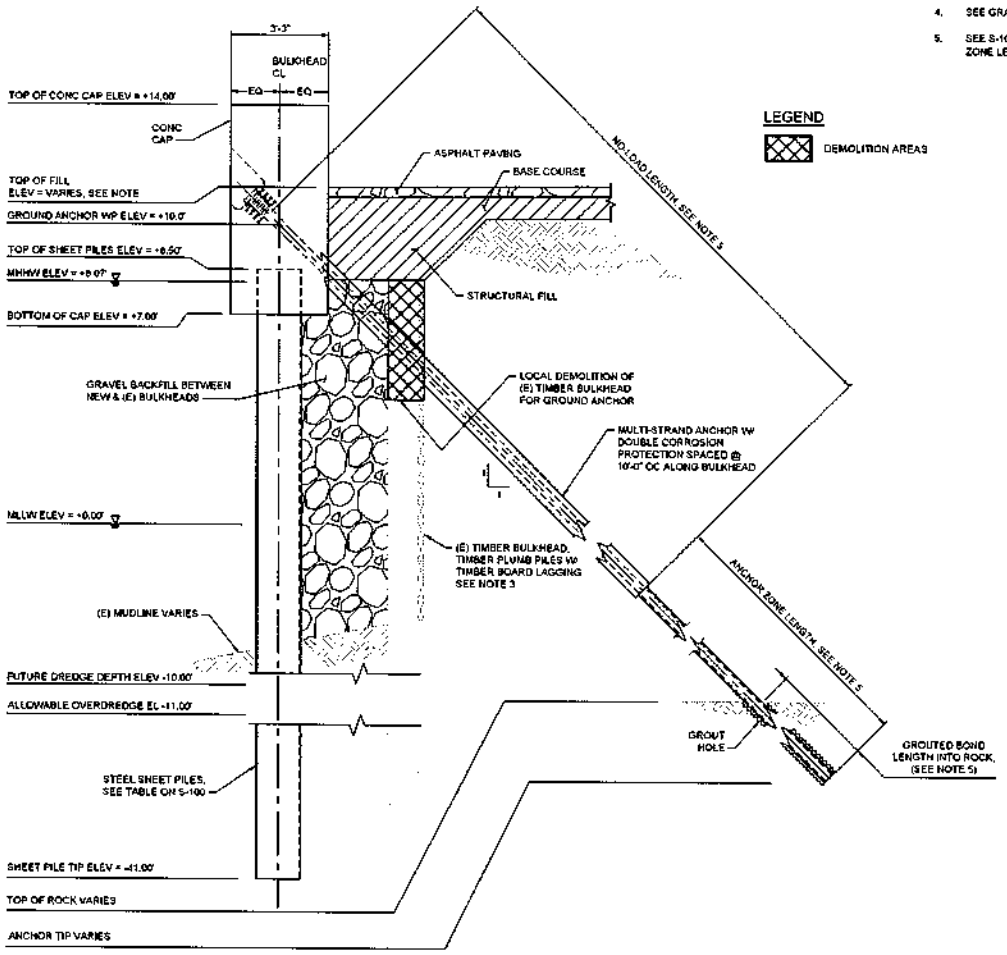
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

NOTES:

1. GROUTED TIE-BACK ANCHOR TIP ELEVATION IS SUBJECT TO CHANGE BASED ON TEST ANCHOR RESULTS.
2. REFER TO THE SPECIFICATIONS FOR ANCHOR TESTING PROCEDURES. SEE SPECIFICATION 31 91 13 SOIL ANCHORS.
3. TIP ELEVATION OF EXIST TIMBER PILES ARE UNKNOWN.
4. SEE GRADING PLAN ON C-110.
5. SEE S-100 FOR GROUTED TIE-BACK ANCHOR SCHEDULE, NO LOAD ZONE, ANCHOR ZONE LENGTH, BOND LENGTH INTO ROCK, AND ULTIMATE ANCHOR TENSION FORCE.



A2 / S-100 SECTION - TYPICAL BULKHEAD
SCALE: 1/2" = 1'-0"

LEGEND

DEMOLITION AREAS

SCALE 1/2"=1'-0"

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

PORT OF SEATTLE
MARINE SERVICES
REPLACEMENT

BULKHEAD TYPICAL SECTIONS

Sheet Reference No.
S-301
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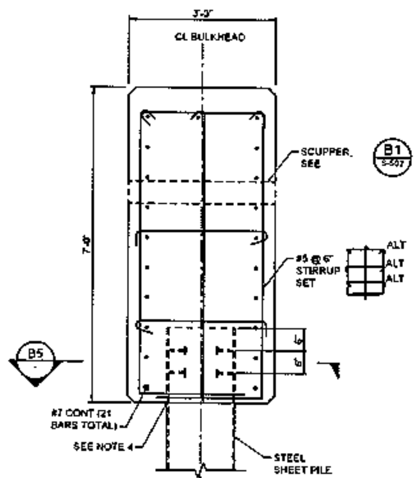
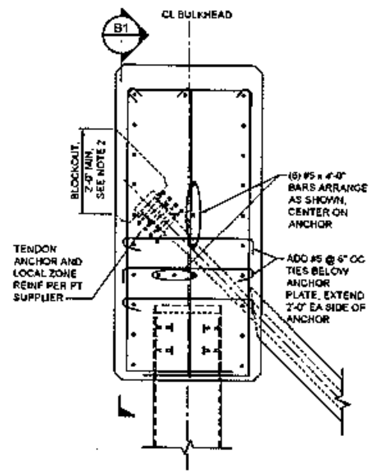
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWINGS



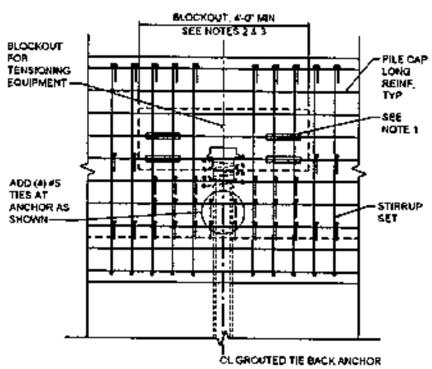
C1 S-201 SECTION - TYPICAL PILE CAP
SCALE 3/4" = 1'-0"



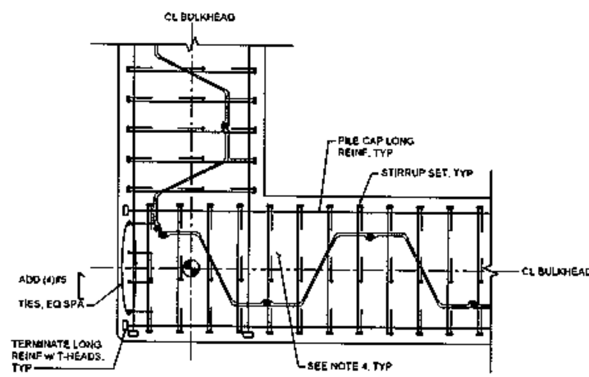
C3 S-201 SECTION - PILE CAP AT ANCHOR
SCALE 3/4" = 1'-0"

NOTES:

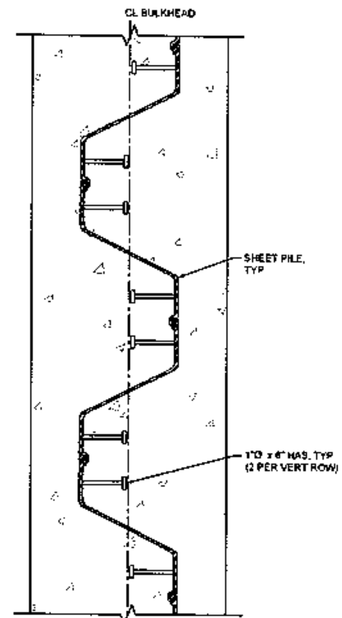
1. USE MECHANICAL COUPLERS TO CONNECT MATCHING REINFORCING BARS.
2. SELECT BLOCKOUT SIZE TO ACCOMMODATE TENSIONING EQUIPMENT. BLOCKOUT MINIMUM DIMENSIONS SHOWN.
3. STIRRUP SPACING MAY BE ADJUSTED AT ANCHOR LOCATIONS TO ALLOW FOR TENSIONING EQUIPMENT.
4. DRILL HOLES IN SHEET PILE FOR PLACEMENT OF BULKHEAD CONCRETE CAP STIRRUPS AND LONG REINF.



B1 SECTION - ANCHOR BLOCKOUT
SCALE 3/4" = 1'-0"



B3 S-201 DETAIL - BULKHEAD CAP CORNER
SCALE 3/4" = 1'-0"



B5 DETAIL - HAS AT SHEET PILE
SCALE 1" = 1'-0"

SCALE: 3/4"=1'-0"

SCALE: 1"=1'-0"

95% DESIGN SUBMITTAL
ISSUED 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

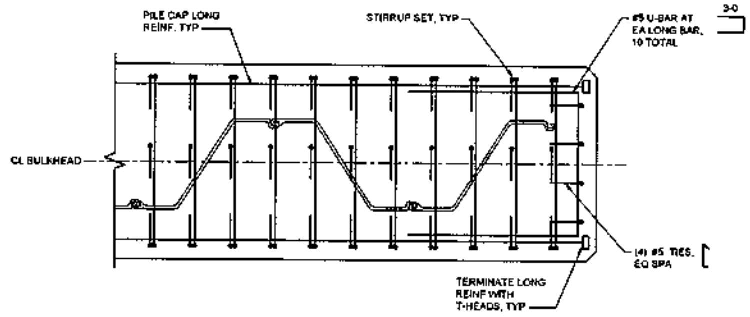
PORT OF ILWACO
MARINA STRUCTURES REPLACEMENT

BULKHEAD DETAILS
(1 OF 2)

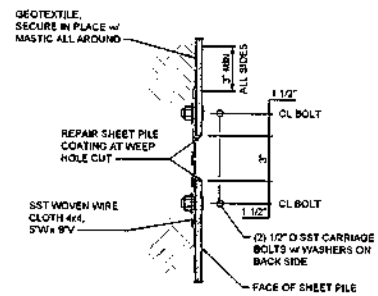
moffatt & nichol
600 UNIVERSITY STREET SUITE 610
SEATTLE, WA 98101
(206) 622-0222

Sheet Reference No.
S-501
INDEX 19 OF 21

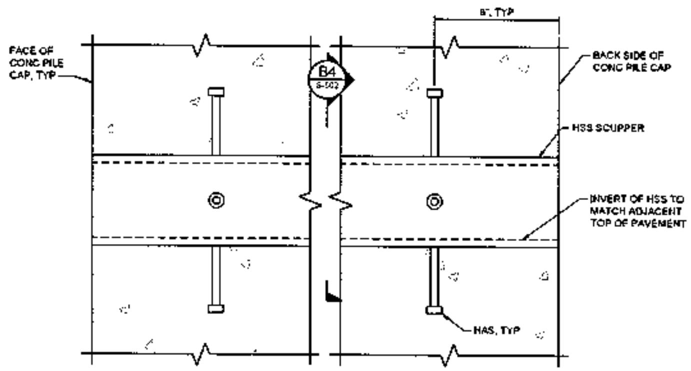
DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING



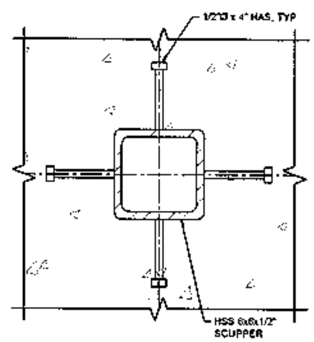
D1 S-202 **DETAIL - BULKHEAD CAP TERMINATION**
SCALE: 1" = 1'-0"



D4 S-301 **DETAIL - WEEP HOLE**
SCALE: 1" = 1'-0"
S-202



B1 S-501 **DETAIL - SCUPPER**
SCALE: 3" = 1'-0"



B4 **SECTION - SCUPPER**
SCALE: 3" = 1'-0"

NOTES:

1. PREFABRICATED WEEP HOLE FILTERS MAY BE SUBSTITUTED FOR THE WEEP HOLE DETAIL SHOWN SUBJECT TO REVIEW AND APPROVAL BY THE PORT.

SCALE: 1"=1'-0"
SCALE: 3"=1'-0"

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

PORT OF ILWACO
MARINA STRUCTURES REPLACEMENT

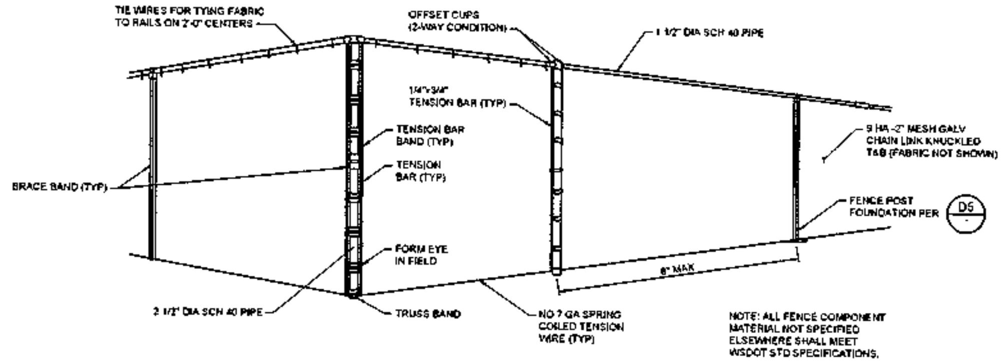
BULKHEAD DETAILS (2 OF 2)

moffatt & nichol
600 UNIVERSITY STREET SUITE 610
SEATTLE, WA 98101
(206) 622-0222

Sheet Reference No.
S-502
INDEX 20 OF 21

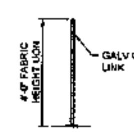
NOTES:

1. CLEAT MUST HAVE A MINIMUM OF 4 ANCHOR BOLTS. ALTERNATE CLEAT CONFIGURATIONS MAY BE ACCEPTABLE, SUBJECT TO REVIEW AND APPROVAL BY THE PORT.
2. 18" CLEAT SHALL HAVE A WORKING LINE LOAD CAPACITY OF 5 TONS.

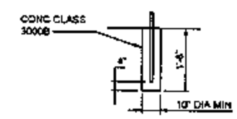


NOTE: ALL FENCE COMPONENT MATERIAL NOT SPECIFIED ELSEWHERE SHALL MEET WSDOT STD SPECIFICATIONS.

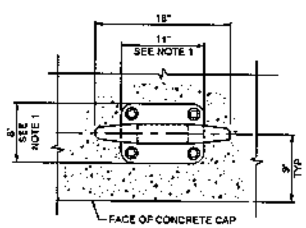
D1 ISOMETRIC - TYPICAL FENCE CONFIGURATION
SCALE: N.T.S



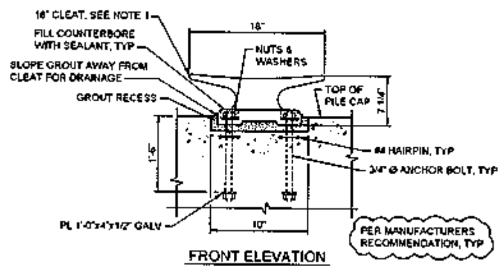
D4 SECTION - TYPICAL FENCE
SCALE: N.T.S



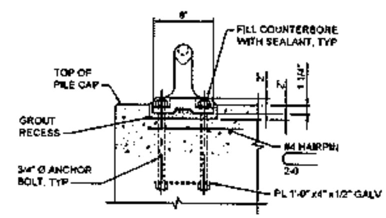
D5 POST FOUNDATION
SCALE: N.T.S



PLAN



FRONT ELEVATION



END ELEVATION

B1 DETAILS - 18" CLEAT
SCALE: 1" = 1'-0"

SCALE: 1"=1'-0"

95% DESIGN SUBMITTAL
ISSUED: 10/6/2023
NOT TO BE USED FOR CONSTRUCTION

DRAWING SCALES SHOWN BASED ON 22"x34" DRAWING

PORT OF ILWACO
MARINA STRUCTURES REPLACEMENT

MISCELLANEOUS DETAILS

moffatt & nichol
600 UNIVERSITY STREET SUITE 610
SEATTLE, WA 98101
(206) 622-0222

Sheet Reference No.
S-511
INDEX 21 OF 23

CITY OF ILWACO

120 First Avenue North
PO Box 548 • Ilwaco, WA 98624
Phone: 360.642.3145
Fax: 360.642.3155
www.ilwaco-wa.gov

The City of Ilwaco is an equal opportunity provider and employer.

CITY OF ILWACO
NOTICE OF PUBLIC HEARING &
STATE ENVIRONMENTAL POLICY ACT (SEPA)
DETERMINATION OF NON-SIGNIFICANCE

NOTICE IS HEREBY GIVEN that the City of Ilwaco will hold a public hearing to consider the Shoreline Substantial Development Permit and Shoreline Conditional Use Permit for the Port of Ilwaco East Bulkhead Resilience Project. The Public Hearing will take place on December 14, 2023, at 11:00 a.m. at the Ilwaco Community Building Meeting Room, 156 N. First Street, Ilwaco, WA 98624. The Public Hearing can also be attended virtually using Zoom Meeting ID 385 864 1217. All public comments on this application must be received by the City no later than December 10, 2023, or citizens may provide written or oral comments at the hearing.

At its commercial fishing wharf, currently occupied by Safe Coast Seafoods, the Port of Ilwaco proposes to replace the failing east bulkhead with a sheetpile bulkhead, replace the slope protection to the north and south of the east bulkhead, and pave and regrade the upland wharf area directly landward of the east bulkhead to mitigate the effects of sea level rise. The proposed project is located at 117 Howerton Avenue SE on the following tax parcels: 73048003011, 73048003009 and 73031013000.

The project requires a Shoreline Substantial Development Permit, Shoreline Conditional Use Permit, and SEPA Determination pursuant to the City's Shoreline Master Program and WAC 197-11-800(2)(a)(i). Additional permits from other agencies with authority are also required, including, but not necessarily limited to: US Army Corps of Engineers Section 10/404 Permit, Washington Department of Fish and Wildlife Hydraulic Project Approval (HPA), Washington Department of Natural Resources Aquatic Use Authorization, and Washington Department of Ecology Coastal Zone Management Consistency determination.

The lead agency has determined that this proposal will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of the completed environmental checklist and other information on file with the lead agency. This Determination of Non-Significance is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date of issuance.

Project information can be found on file at Ilwaco City Hall, 120 First Avenue North, Ilwaco, WA 98624. To receive a copy of the decision, once made, or for information on appeals, contact us at the above address. Staff Contact: Holly Beller; treasurer@ilwaco-wa.gov; (360) 678-7817.

Date of issuance: November 8, 2023

CITY OF ILWACO

120 First Avenue North
PO Box 548 • Ilwaco, WA 98624
Phone: 360.642.3145
Fax: 360.642.3155
www.ilwaco-wa.gov

The City of Ilwaco is an equal opportunity provider and employer.

Determination of Non-Significance

PROJECT NAME: Port of Ilwaco East Bulkhead Resilience Project

APPLICANT NAME: Tracy Lofstrom (Port of Ilwaco Manager)

POINT OF CONTACT: Victoria England, Moffatt & Nichol

LOCATION OF PROPOSAL: 117 Howerton Avenue SE on the following tax parcels: 73048003011, 73048003009 and 73031013000.

DESCRIPTION OF PROPOSAL: At its commercial fishing wharf, currently occupied by Safe Coast Seafoods, the Port of Ilwaco proposes to replace the failing east bulkhead with a sheetpile bulkhead, replace the slope protection to the north and south of the east bulkhead, and pave and regrade the upland wharf area directly landward of the east bulkhead to mitigate the effects of sea level rise.

LEAD AGENCY: City of Ilwaco

THRESHOLD DETERMINATION: The lead agency, City of Ilwaco, has determined that this proposal will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) IS NOT required under RCW 43.21C.030(2)(c). This decision was made after reviewing the proposal and all supporting documents. This information is available to the public for review upon request at the City of Ilwaco Building and Planning Department, 120 First Avenue, Ilwaco, WA 98624 between the hours of 8:00 a.m. and 5:00 p.m. Monday through Friday, excluding holidays.

This Determination of Non-significance is issued using the DNS process in WAC 197-11-340; there is a comment period and an appeal period on the DNS.

( ) There is no comment period for the DNS.

(X) This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 14 days.

Date of Determination and Issuance: November 8, 2023

Deadline for Submitting Comments: 5:00 P.M. on November 22, 2023

Deadline for Submitting Appeals: 5:00 P.M. on November 22, 2023

Responsible Official:
Holly Beller, City Administrator
120 First Avenue
Ilwaco, WA 98624
360-642-3145
treasurer@ilwaco-wa.gov

Signature: _____ Date: November 8, 2023

COMMENT PERIOD: In accordance with WAC 197-11-340, there is a fourteen-calendar day comment period for this Determination of Non-significance. Comments on the DNS addressing environmental issues shall be submitted to the City of Ilwaco Building and Planning Department at the address below.

APPEALS: Appeals to the above Determination of Non-Significance must be filed with the City of Ilwaco Building and Planning Department within fourteen calendar days of the date of issuance above. Appeals must be filed in writing with the City of Ilwaco Building and Planning Department at the address below. In accordance with IMW 15.50.140, Decisions of the hearing examiner may be appealed to the Pacific County Superior Court in accordance with Section 15.08.160 of this title. Appeals shall set forth the specific reason, rationale, and/or basis for the appeal.

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. **Name of proposed project, if applicable:** Port of Ilwaco East Bulkhead Resilience Project

2. **Name of applicant:** Tracy Lofstrom, Port Manager

3. **Address and phone number of applicant and contact person:**

Applicant Address: PO. Box 307
Ilwaco, WA 98624
Applicant Phone Number: (360) 642-3143
Applicant email: tlofstrom@portofilwaco.org

Contact Person: Victoria England (Moffatt & Nichol) 206-622-0222, email vengland@moffattnichol.com

4. Date checklist prepared: June 2023

5. Agency requesting checklist: City of Ilwaco

6. Proposed timing or schedule (including phasing, if applicable):

Start Date: November 2024 End Date: February 2025

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

- Joint Aquatic Resources Permit Application (JARPA) and affiliated JARPA sheets (plans)
- Biological Evaluation (Moffatt & Nichol 2022) Submitted to NMFS December 2022
- 2023 Geotechnical Report – GeoEngineers
- 2022 Eelgrass Survey – GeoEngineers
- Cultural Resources Survey – Willamette CRA
- NEPA EA (in progress)
- Mitigation Sequencing Analysis and No Net Loss Narrative (Moffatt & Nichol 2023)

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No other known applications are pending for governmental approvals of other proposals directly affecting the property covered by this proposal.

10. List any government approvals or permits that will be needed for your proposal, if known.

- US Army Corps of Engineers (USACE) Section 10/404
- NOAA/NMFS: Endangered Species Act/Magnuson Stevenson Act consultation

- USFWS: Endangered Species Act
- City of Ilwaco: SEPA Determination
- City of Ilwaco Shoreline/Critical Areas Conditional Use Permit
- City of Ilwaco Master Planning Permit
- WA Dept. of Fish and Wildlife Hydraulic Project Approval (HPA)
- Dept. of Ecology (DOE) Coastal Zone Management (CZM) consistency
- WA Dept. of Natural Resources (DNR) Project Aquatic Use Authorization

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed Port of Ilwaco East Bulkhead Resilience Project (herein referred to as the 'Project') consists of three primary elements;

1. Replacing the failing creosote treated timber east bulkhead with an anchored steel sheetpile bulkhead;

2. Repairing slope protection north and south of the bulkhead; and,

3. Paving and grading the upland wharf area directly landward of the bulkhead to mitigate the effects of sea level rise.

As part of the above elements, creosote-treated timber that configures the external wall of the existing bulkhead and retaining wall will be removed along with select derelict creosote-treated piles next to the bulkhead. Additional derelict creosote piles and cross members will be removed from the slip adjacent to the bulkhead as mitigation for project impacts resulting from drainage rock fill placement between the existing bulkhead and the new bulkhead necessary to maintain water pressure equilibrium on both sides of the bulkhead. The removal of creosote from the marine environment will also mitigate impacts associated with the riprap shoreline protection that is proposed to replace the derelict creosote treated timber revetment/retaining wall and associated elements. A fish mix gravel layer will be placed between HTL and the toe of the riprap on the surface of the rip rap slope protection at the head of the slip to provide beach nourishment and habitat improvements for fish passing through the marina. Additionally, an approximately 2,510 sf derelict structure and associated floating timber debris will be removed from the south portion of the marina as mitigation for project impacts.

The proposed Project is required for improved the safety, efficiency, and reliable use of the wharf. The Port is a key hub for commercial fishing, seafood and aquaculture processing, and recreation activities that greatly benefit the regional economy. The commercial fishing wharf, operated by Safe Coast Seafoods, is one of the most active in the state, landing roughly $14 million in commercial seafood each year. Repair of the bulkhead wall is critical to ongoing operations at Safe Coast Seafoods. In its current condition, the bulkhead is in serious structural condition and at risk of failing. Recent biweekly

and monthly measurements have been completed to monitor ongoing movement of the bulkhead. The monitoring has recorded movement along 13 monitoring points along the face of the bulkhead ranging from approximately 0.06 inch to up to 0.31 inch waterward i since monitoring began in November 2022. The monitoring indicates that the bulkhead is the process of active failure. Frequent flooding due to high water levels from "king tides" and severe winter storm surges further threaten the structural capacity of the bulkhead.

Bulkhead failure would shut down cargo operations at the Port and negatively impact a wide variety of businesses in maritime and non-maritime sectors including Safe Coast Seafoods. The shutdown of the Safe Coast site due to failure of the bulkhead would lead to a series of economic impacts for many more workers and businesses and the region. Bulkhead failure would also adversely affect the Port of Ilwaco Marina operations, likely fully blocking at least one slip from use and potentially causing damage to adjacent float structures and tenant vessels. Until this project is completed, the facility is capacity-limited and at risk. The main access driveway to Safe Coast Seafoods has been blocked based on recommended load limitations in an effort to minimize vibration and load resulting from vehicles and machinery using the driveway located adjacent to the failing bulkhead. Without the Project, the eventual closure of the wharf will have cascading negative transportation and economic impacts for the region.

The Project would also serve the following purposes and provide the following benefits:

- The replacement bulkhead will serve as the initial phase to increase the facility's climate change/sea level rise resiliency and will help protect wharf facilities from flooding. The bulkhead will be designed to accommodate the planned increase to wharf/Safe Coast facility ground floor elevations in the future.

- The top of the embankment elevation to the north of the bulkhead will be raised to approximately +14 feet (mean lower low water) MLLW and the existing creosote-treated retaining wall will be replaced with rip rap to improve shoreline protection. The increase to top of bank elevation will mitigate sea level rise impacts between the bulkhead and the marina access pier to the east.

- Re-grading and re-paving of the upland area behind the bulkhead wall will facilitate positive drainage away from the Safe Coast Seafoods buildings and help protect the facilities during flood events.

- The bulkhead replacement would prevent the shoreline from failing into a portion of the active Port of Ilwaco Marina, which would impact operations in the marina and potentially damage adjacent float structures and tenant vessels, if any, present at the time of failure.

- The new bulkhead will be designed to accommodate the temporary mooring of fishing vessels which will allow vessels to unload/load equipment and product and improve efficiencies at the Safe Coast Seafoods facility. Under existing conditions, the timber bulkhead is used for temporary mooring but cannot currently be used for loading/unloading of vessels due to its existing poor, unstable, deteriorating condition.

- The Project will allow trucks to drive safely on the bulkhead again, which will improve the efficiency of cargo transfer operations and improve the port's competitiveness. The adjacent

roadway has been closed to vehicle access due to load limitations recommended based on the poor condition of the existing bulkhead, including measurements exhibiting ongoing movement of the failing bulkhead waterward as observed during monitoring episodes from November 2022 to the present.

- The removal of creosote-treated wood (north slip revetment, derelict piles and cross members, and portions of the existing bulkhead as safely able) from the marine environment will provide water quality benefits. Placement of a layer of fish mix gravel over the rip rap shoreline protection to be placed on the slope at the head of the adjacent slip.

The following is a more detailed description of the project elements.

Bulkhead Replacement

Construction sequencing for the proposed bulkhead replacement will likely be as follows:

- Localized demolition of the existing bulkhead wall
- Installation of the new steel sheet pile wall just waterward off the existing bulkhead.
- Placement of drainage rock between the existing bulkhead wall and new bulkhead wall

The majority of the existing timber bulkhead will be abandoned in place behind the replacement bulkhead in order to protect the existing buildings at the Safe Coast Seafoods facility, as complete removal of the existing timber bulkhead will undermine the stability of the soil behind the bulkhead and the adjacent building foundations threatening Safe Coast buildings, infrastructure, and operations. Portions of the existing creosote-treated bulkhead will be removed as feasible. Localized bulkhead demolition will likely consist of removal of the rotten top several feet of the existing creosote-treated timber piles above the timber wale location. This local demolition will take place above mean higher high water (MHHW). In addition, there may be localized notching of the bulkhead wall to accommodate the installation of the new tie-back ground anchors. Approximately twelve (12) 12-inch diameter creosote treated timber piles and three (3) 12-inch diameter steel pipe piles that are located directly waterward of the existing timber bulkhead will be removed. These piles will be removed by either pulling them out directly using a chain or with a vibratory hammer depending on the Contractors preferred means and methods. The piles will be cut at the mudline if complete removal is not possible or the piles break. Upland demolition will consist of removal of the existing pavement and surface features.

Post-localized demolition, a new steel sheet pile bulkhead wall will be installed in front of the existing timber bulkhead. The bulkhead wall will not increase in length. The top elevation of the new bulkhead wall will be approximately three feet (ft) higher than the existing top of bulkhead to accommodate high tides and sea level rise. It is anticipated that the steel sheet piles will be driven using a vibratory hammer. The option for impact proofing will also be included in the event that difficult driving conditions are encountered. The sheet pile wall will be approximately 225 linear feet (lf) and the sheet pile tip elevation will be approximately -40 to -50 feet MLLW. The top of the bulkhead pile cap will be set at an elevation of +14.0 feet MLLW.

The replacement bulkhead will include approximately 20 grouted ground anchors extending from the cast-in-place concrete pile caps down to the bedrock layer below the site. The grouted ground anchors will be either high strength steel strands or steel bars that are connected to the pile caps and driven at an approximately 1:1 angle to elevation -70 to -80 feet MLLW. The anchor tie backs will be grouted for a minimum of 25 feet into the underlying siltstone unit (top elevation approximately -57 feet MLLW). The ground anchors will be installed using either land-based equipment or from a barge depending on the Contractors preferred means and methods. The anchor holes will be drilled with a full-length casing. All drill spoils will be contained and prevented from entering marine waters. The anchor holes will be filled with grout using a tremie tube and then pressure grouted after the anchor tendons are installed. The anchors will be tensioned after all anchors have been installed and have reached the required grout and concrete strengths. The cast-in-place concrete pile cap will then be completed. The pile caps will be cast-in place in the dry and uncured concrete will not be allowed to come in contact with waters of Baker Bay.

The sheet pile placement in front of the existing bulkhead will result in an approximately 2- to 5-foot space between the existing bulkhead and the new bulkhead sheet piles. The area between the existing structure and the new bulkhead will be backfilled with drainage rock to allow for water to flow in and out of the soil supporting the Safe Coast Seafood facility. It is anticipated that approximately 450 cubic yards of free draining drainage rock backfill will be placed between the existing timber bulkhead and the replacement bulkhead (Table 1). The drainage rock will likely be placed using a clamshell operating from a barge. The clean drainage rock will be obtained from a commercial supplier. This placement will minimize the risk of slope failure that removing the existing structure would exacerbate. The drainage rock placement in the space between the existing and replacement bulkhead structures will minimize additional pressure from trapped groundwater behind the new bulkhead.

The new bulkhead (including drain rock installation area),and pile cap, will have a footprint of approximately 1,400 square feet (sf) in marine waters (measured below the high tide line [HTL]) (Table 1). Of the overall footprint in marine waters, 1,000 sf will come into contact with the bottom substrate and have benthic habitat impacts.

Slope Protection

Approximately 350 sf (approximately 14 cubic yards [cy]cy) of concrete debris shore protection from the shoreline to the south of the bulkhead wall will be removed to accommodate the bulkhead wall replacement (Table 1). Approximately sixteen (16) 12-inch diameter creosote timber piles associated with the existing timber retaining wall will be removed from the shoreline along the north end of the bulkhead wall. The existing creosote-treated timber retaining wall to the north of the bulkhead will be completely removed. The associated piles will be removed by either pulling them out using a chain or with a vibratory hammer depending on the Contractors preferred means and methods. The piles will be cut at the mudline if complete removal is not possible or the piles break during removal.

The 350 sf/14 cy of concrete rubble shore protection removed from the south portion of the project to accommodate installation of the new bulkhead will be replaced with approximately 35 cy of riprap in the same 350 sf area to maintain slope stability (Table 1). Of the 35 cy placed along the shoreline, 30 cy occurs below the HTL (Table 1).

One hundred ninety-eight (198) cy (2,200 sf) of riprap, 172 cy (1850 sf) of which occurs below the HTL, will be placed on the embankment to the north of the new bulkhead to replace the existing creosote treated timber retaining wall and provide shore protection (Table 1). The rip rap slope protection will serve as grade transitions from the vertical bulkhead structure to the adjacent sloped shorelines to the north and south. A layer of fish mix rock will be placed over the riprap located below HTL to provide fish habitat. The embankment height will be increased to an elevation of approximately +14.0 feet, MLLW between the bulkhead and the marina access pier to the east. The purpose of the increased embankment height is to mitigate the effects of sea level rise.

Paving and Grading

Upland paving and grading will be completed behind the bulkhead wall to mitigate sea level rise following construction of the new bulkhead. The driveway will be regraded and repaved with structural fill base course and asphalt pavement. This will consist of 8,000 sf of asphalt repaving. The upland area will be re-graded and re-paved to maintain positive drainage away from the Safe Coast Seafoods buildings. The bulkhead will be outfitted with scuppers to allow rainwater to flow into the marina rather than pooling along the driveway or draining toward the Safe Coast facilities.

Fill Impacts and Creosote Removal

Approximately twenty eight (28) creosote-treated timber piles (12-inch diameter) and three (3) steel piles (12-inch diameter) will be removed adjacent to the existing bulkhead and as part of the north shoreline rehabilitation. In addition, the Port proposes to remove approximately thirty-six (36) 12-inch diameter derelict creosote- treated timber piles and 3 creosote-treated timber pile caps as mitigation for the fill and benthic habitat impacts created by the placement of the new bulkhead wall in front of the existing structure. This will result in approximately 64 total creosote-treated timber piles and 3 steel piles being removed along with approximately 70 lf of creosote treated timber retaining wall, and 40 lf of creosote treated timber pile caps.

A derelict timber structure approximately 2,510 sf in area will be removed as part of the mitigation for project impacts. This will result in decreasing overwater coverage in the south portion of the marina at the location of the existing derelict timber structure.

Approximately 1,400 sf of fill below the HTL will result from the placement of the new bulkhead and drainage rock backfill (Table 1). Of the overall footprint, 1,000 sf will come into contact with the bottom substrate and result in benthic habitat impacts.

North shoreline riprap placement will occur in a 2,200 sf area, 1,850 sf of which occurs below the HTL and would result in benthic habitat impacts (Table 1). Approximately 750 sf of this will occur waterward of the existing retaining wall. A 6-inch layer (approximately 34 cy) of fish mix gravel will be placed below HTL to provide beach nourishment and improved habitat for fish passing through the marina.

South shoreline riprap placement will not result in any additional benthic habitat impacts (Table 1). The removal of approximately sixty-four (64) 12-inch creosote-treated timber piles, three (3) 12-inch steel piles, 70 lf of timber retaining wall, and 40 lf of derelict creosote-treated timber pile caps, will restore approximately 165 sf of benthic habitat (Table 1) and remove approximately 34 tons of creosote from the marine environment.

Table 1. Approximate Fill Impacts

Activity	Fill below HTL (sf)	Fill below HTL (cy)	Fill above HTL (sf)	Fill above HTL (cy)
Bulkhead wall and shoreline protection installation				
Sheetpile installation	400 sf	80 cy	0 sf	0 cy
Bulkhead drainage rock placement	1,000 sf	450 cy	0 sf	0 cy
Rip-rap shore protection and Fish Mix placement (north shoreline)	1,850 sf	172 cy	350 sf	26 cy
Concrete rubble removal (south shoreline)	-350 sf	-14 cy	-50 sf	-2 cy
Rip-rap replacement (south shoreline)	350 sf	30 cy	50 sf	5 cy
Subtotal	*3,250 sf*	*718cy*	*350sf*	*29cy*
Structure removal				
Pile removal adjacent to existing bulkhead	-12 sf	-6 cy	0 sf	0 cy
North shoreline- retaining wall removal	-85 sf	-12 cy	0 sf	0 cy
Derelict pile/timber removal	-68 sf	-12 cy	0 sf	0 cy
Derelict Timber structure/debris removal – South Marina	-2,510 sf	-350 cy	0 sf	0 cy
Subtotal	*-2,675 SF*	*-380 cy*	*0 sf*	*0 cy*
Creosote removal from the Environment	*34 tons*			

See the attached JARPA and JARPA sheets for additional Project description information.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Project occurs at the Port of Ilwaco on the southwest coast of Washington State, located just inside the Columbia River bar at the Pacific Ocean. The Port area generally consists of a marina used for year-round moorage of recreational and commercial fishing vessels, upland commercial buildings, and a boatyard. The Project site at the Port of Ilwaco is the bulkhead along the east side of the commercial fishing wharf (herein referred to as 'wharf') occupied by Safe Coast Seafoods. The approximate coordinates of the of the Project site are latitude 46.30498 and longitude -124.0408.

The wharf is an earth filled structure on the east side and pile supported on the west side. The wharf is protected by a timber bulkhead along the eastern limits of the wharf. To the north of the bulkhead wall, the shoreline is protected by a low creosote-treated timber retaining wall and large log. To the south of the bulkhead wall, shoreline protection consists of riprap and concrete rubble. The Safe Coast Seafoods buildings are located on the wharf. The Port and marina area is protected by a rubble breakwater.

B. Environmental Elements [HELP]

1. ***Earth*** [help]

a. General description of the site:

(circle one): **Flat**, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

The Project is located in-water and along the shoreline at an existing bulkhead wall and riprap shoreline. The bulkhead wall is located in a gradually sloping soft bottom habitat.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The Project is located in-water and along the shoreline. The predominant soil types are sandy silt and silt (GeoEngineers 2023).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Pavement settlement has been observed on the adjacent landward driveway and bulkhead movement measured during monthly monitoring (late 2022/early 2023) and access is now restricted based on those conditions and the condition of the deteriorating bulkhead. The 2022 geotechnical investigations (GeoEngineers, 2023) indicate that the project site is underlain by liquefiable soil.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Installation of the bulkhead wall, drainage rock, and riprap will result in approximately 3,250 sf of fill in marine waters (measured below the high tide line [HTL]). Approximately 1,000 sf of the fill would come into contact with the bottom substrate and result in permanent impacts to the existing aquatic soft bottom habitat.

Fill and benthic habitat impacts are anticipated to be offset by the removal of steel piles, and creosote-treated wood (piles, structures, and revetment), and floating debris from the marine environment and placement of a layer of fish mix over the riprap shore protection to be placed at the head of the slip as beach nourishment. The removal of approximately sixty-four (64) 12-inch creosote timber piles, three (3) 12-inch steel piles, 70 lf of timber retaining wall, 2,510 sf of floating timber debris and 40 lf of derelict timber pile caps, will restore approximately 2,675 sf of benthic habitat and remove approximately 890 cy or 34 tons of creosote from the marine environment (Table 8e). The removal of creosote-treated wood is anticipated to provide both water quality and benthic habitat improvements. A layer of fish mix rock/gravel (approximately 34 cy) will be placed over the portion of riprap placed below the HTL at the head of the slip to improve habitat and provide beach nourishment to that portion of shoreline. No additional mitigation is anticipated to be required and a mitigation plan has not been developed. See the attached Biological Evaluation, Section 1.3.4, and JARPA, Table 8e for additional information on fill impacts.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Regrading and repaving the drive behind the bulkhead will be completed as part of the project. Proper best management practices (BMPs), such as silt fence and/or straw wattles will be used to provide a physical barrier to avoid and minimize erosion and prevent construction debris from entering nearby marine surface waters. The completed project will restore existing pavement and ongoing use will not result in erosion potential. The proposed Project will stabilize the wharf and improve shoreline stability to the north and south of the bulkhead.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Upland repaving and regrading will be completed behind the bulkhead wall to mitigate sea level rise. The driveway will be regraded and repaved with structural fill base course and asphalt pavement. This will consist of 8,000 sf of asphalt repaving. The repaving will be completed in an a currently paved area except where the new drain rock will be placed between the new and existing bulkheads. There will be an increase to existing impervious surfaces of approximately 1,250 sf that includes the new bulkhead cap and the paved area surfacing the area between the existing bulkhead and the new bulkhead to accommodate regrading of the access driveway adjacent to the bulkhead.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Not applicable. The Project is not anticipated to contribute to erosion.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

The project will return normal operations along the driveway, bulkhead and marina slip adjacent to the bulkhead. Commercial fishing vessels, recreational vessels, employee vehicles and delivery trucks will continue to access the site.

Construction

Short-term construction-related air quality impacts and emissions could include dust from pavement work, which could cause temporary, localized increases in the ambient concentrations of fugitive dust and suspended particulate matter (PM) during repaving/regrading the adjacent drive. Construction activities will require the use of diesel-powered vessels and trucks, and other equipment such as generators and compressors. This equipment would emit air pollutants that could slightly degrade local air quality in the immediate vicinity of construction activities. These emissions would be temporary and localized. Some construction activities could also cause odors detectable to some people in the vicinity of the activity, especially during pavement repair operations. Such odors would be short-term and localized.

Operations and Maintenance

Maintenance and rehabilitation of the existing infrastructure will reestablish operational efficiency and will allow accommodation of the intended vessel traffic for which the terminal was originally approved and operated. This project does not expand the operational footprint of the seafood facility or marina nor does it result in an increase in vessel traffic relative to previous operations.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no off-site sources of emissions or odors that may affect the Project.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Impacts from elevation emissions are anticipated to be minimal and short-term. Measures to reduce emissions are not proposed.

3. Water [help]

a. **Surface Water:** [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The Project is located at the Port of Ilwaco Marina in Baker Bay near the mouth of the Columbia River.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, the Project occurs in-water and along the shoreline of Baker Bay within the Ilwaco Marina. See the project description in the Question 11 response and the attached JARPA and JARPA sheets.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

See 1e above. Installation of the bulkhead wall, drainage rock and riprap will result in approximately 3,050 sf of fill in marine waters (measured below the HTL). Approximately 1,200 sf of the fill would come into contact with the bottom substrate and result in permanent impacts to the existing aquatic soft bottom habitat.

Derelict creosote piles and structures present in the adjacent slip will be removed, restoring 165 sf of benthic habitat and removing approximately 20 tons of creosote from the marine environment which will improve the habitat conditions of the marina and lift its value from current conditions. The creosote treated timber revetment and debris present at the head of the adjacent slip will be removed and riprap will be placed as shore protection associated with raising the elevation of the top of the slope as part of sea level rise resilience. The north slip riprap area will be surface with fish mix rock to improve the habitat over the area of new riprap placed from the HTL down.

Additionally, floating timber debris will be removed from the south portion of the marina as part of proposed project mitigation. This will remove approximately 2,510 sf of overwater coverage present in that portion of the marina.

Fill and benthic habitat impacts are anticipated to be offset by the removal of steel piles, and creosote-treated wood (piles, structures, and revetment), and floating debris from the marine environment and placement of a layer of fish mix over the riprap shore protection to be placed at the head of the slip as beach nourishment. The removal of approximately sixty-four (64) 12-inch creosote timber piles, three (3) 12-inch steel piles, 70 lf of timber retaining wall, 2,510 sf of floating timber debris and 40 lf of derelict timber pile caps, will restore approximately 2,675 sf of benthic habitat and remove approximately 380 cy or 34 tons of creosote from the marine environment (Table 8e). The removal of creosote-treated wood is anticipated to provide both water quality and benthic habitat improvements. A layer of fish mix rock/gravel (approximately 34 cy) will be placed over the portion of riprap placed below the HTL at the head of the slip to improve habitat and provide beach nourishment to that portion of shoreline. No additional mitigation is anticipated to be required and a mitigation plan has not been developed.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No, the Project will not require surface water withdrawals or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. The Project occurs at the Port of Ilwaco on the north shore of Baker Bay near the mouth of the Columbia River. See the attached JARPA sheets.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

There will be no discharge of waste materials to surface waters. Please see the avoidance and minimization measures (AMMs) and Best Management Practices (BMPs) in the attached Biological Evaluation and JARPA.

b. **Ground Water:** [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No. Groundwater will not be withdrawn for drinking water or other purposes.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Waste material will not be discharged into the ground.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The Project only proposes the replacement of a bulkhead wall, repair of slope protection, and paving and grading the upland wharf area. The driveway will be regraded and repaved with structural fill base course and asphalt pavement. This will consist of 8,000 sf of asphalt repaving. The upland area will be re-graded and re-paved to maintain positive drainage away from the Safe Coast Seafoods buildings. The bulkhead will be outfitted with scuppers to allow rainwater to flow into the marina rather than pooling along the driveway or draining toward the Safe Coast facilities.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No. Waste materials would not enter ground or surface waters. Please see the AMMs and BMPs in the attached JARPA and Biological Evaluation.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

See c.1) above. The upland area will be regraded and repaved to maintain positive drainage away from the Safe Coast Seafoods buildings. Scuppers will be added to the new bulkhead to allow stormwater to drain off of the adjacent drive, away from the Safe Coast buildings. Existing stormwater drains off the drive via sheetflow.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

Please see the AMMs in the attached JARPA and Biological Evaluation.

*4. **Plants*** [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
__X_shrubs (head of the adjacent slip)
__X_grass (head of the adjacent slip)
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
__ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Vegetation and terrestrial habitat conditions are limited within the Project area. The site is in an industrial area and is largely devoid of terrestrial vegetation. The Project would occur on an

existing wharf and associated bulkhead wall, retaining wall, and riprap shoreline. Little to no terrestrial and riparian habitat occurs here. The mudline at the base of the existing bulkhead is largely unvegetated and consists of a silty sand, sandy silt slope with riprap extending on the shore slope to the north and south of the bulkhead.

The upland area adjacent to the bulkhead is a paved driveway servicing the Safe Coast Seafood facility. Existing vegetation that could be removed or impacted by the Project consists of short-statured ruderal species behind the existing bulkhead wall and in viable spaces along the riprap shoreline. Upland vegetation observed along the shoreline during a 2022 site survey included clover species (*Trifolium species*), Japanese knotweed (*Polygonum cuspidatum*), various grasses, dandelion (*Tatxasum officinale*), and creeping buttercup (*Ranunculus repens*) (Geoengineers 2022).

A 2022 eelgrass survey was completed and observed that there is no eelgrass on or adjacent to the project site (GeoEngineers 2022). Eelgrass beds exist within the marina area, but do not occur within the Project footprint (GeoEngineers 2022). The eelgrass bed is not anticipated to be impacted by the proposed Project and is likely ephemeral in nature since the marina is periodically dredged for maintenance dredging under a separate permit. No wetlands or streams were identified within the marina.

c. List threatened and endangered species known to be on or near the site. No threatened and endangered plant species were observed on our near the site. Vegetation and terrestrial habitat conditions are limited within the Project area. The site is in an industrial area within an active marina that serves recreational boating and commercial fishing vessels and is largely devoid of terrestrial vegetation. The Project would occur on an existing wharf and associated bulkhead wall, retaining wall, and rip rap shoreline. Little to no terrestrial and riparian habitat occurs here. The mudline at the base of the existing bulkhead is largely unvegetated and consists of a silty sand, sandy silt slope with rip rap extending on the shore slope to the north and south of the bulkhead. The upland adjacent to the bulkhead is a paved driveway servicing the Safe Coast Seafood facility. Existing vegetation consists of short-statured ruderal species behind the existing bulkhead wall and in viable spaces along the rip rap shoreline. Upland vegetation observed along the shoreline during a 2022 site survey included clover species (Trifolium species), Japanese knotweed (Polygonum cuspidatum), varios grasses, dandelion (tatxasum officinale), and creeping buttercup (Ranunculus repens) (GeoEngineers 2022).

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Little to no terrestrial and riparian habitat occurs here. Vegetation that occurs within the project area and could be impacted during construction mainly consists of invasives. Substantial impacts to vegetation are not anticipated and measures to preserve or enhance vegetation are not proposed.

e. List all noxious weeds and invasive species known to be on or near the site.

Japanese knotweed (*Polygonum cuspidatum*), dandelion (*tatxasum officinale*), and creeping buttercup (*Ranunculus repens*) are known to occur at the site.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include: See bold

birds: hawk, heron, eagle, **songbirds**, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, **salmon**, **trout**, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site.

The species in the table below have the potential to occur within the Project vicinity. See the attached Biological Evaluation for additional information.

ESA-Listed Species with Potential to Occur Within the Project Action Area

Species	ESU/DPS	Scientific Name	Agency	Federal Status	Critical Habitat
Chinook Salmon	Lower Columbia River ESU	*Oncorhynchus tshawytcha*	NMFS	Threatened	Occurs in Project Area
	Snake River fall-run ESU			Threatened	
	Snake River spring/summer-run ESU			Threatened	
	Upper Columbia River spring-run ESU			Endangered	
	Upper Willamette River ESU			Threatened	
Chum Salmon	Columbia River ESU	*O. keta*	NMFS	Threatened	Occurs in Project Area
Coho Salmon	Lower Columbia River ESU	*O. kisutch*	NMFS	Threatened	Occurs in Project Area
Sockeye Salmon	Snake River ESU	*O. nerka*	NMFS	Endangered	Occurs in Project Area
Steelhead	Lower Columbia River DPS	*Onocorhynchus myskiss*	NMFS	Threatened	Occurs in Project Area
	Middle Columbia River DPS			Threatened	
	Snake River Basin DPS			Threatened	
	Upper Columbia River DPS			Threatened	
	Upper Willamette River DPS			Threatened	
Green sturgeon	Southern DPS	*Acipenser medirostris*	NMFS	Threatened	Occurs in Project Area
Eulachon	Southern DPS	*Thaleichthys pacificus*	NMFS	Threatened	Occurs in Project Area
Sea turtles	Leatherback	*Dermochelys coriacea*	NMFS	Endangered	None in Project Area
Killer Whale	Southern Resident	*Orcincus orca*	NMFS	Endangered	None in Project Area

Species	ESU/DPS	Scientific Name	Agency	Federal Status	Critical Habitat
Humpback Whale	Central America DPS	*Megaptera novaeangliae*	NMFS	Endangered	None in Project Area
	Mexico DPS			Threatened	None in Project Area
Bull Trout	N/A	*Salvelinus confluentus*	USFWS	Threatened	None in Project Area
Western Snowy Plover	N/A	*Charadrius nivosus nivosus*	USFWS	Threatened	None in Project Area
Marbled Murrelet	N/A	*Brachyramphus marmoratus*	USFWS	Threatened	None in Project Area
Streaked Horned Lark	N/A	*Eremophila alpestris strigata*	USFWS	Threatened	None in Project Area

The following Washington Department of Fish and Wildlife Priority Habitats and Species could occur in the Project vicinity.

- Coho Salmon (*Oncorhynchus kisutch*)
- Winter Steelhead (*Oncorhynchus mykiss*)
- Fall Chum (*Oncorhynchus keta*)
- Fall Chinook (*Oncorhynchus tshawytscha*)
- Marbled Murrelet (*Brachyramphus marmoratus*)
- Shorebird concentrations
- Waterfowl concentrations
- Wetlands
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Purple martin (*Progne subis*)

See the attached JARPA and Biological Evaluation for additional information.

c. Is the site part of a migration route? If so, explain.

Yes. Salmonids could use the Project vicinity during their migrations. In-water work will comply with the in-water work window for the area to avoid key migration times.

Baker Bay and the lower Columbia River are situated within the Pacific Flyway which supports a variety of migratory birds. The Pacific Flyway includes the entire west coast of North America reaching from northern Alaska and Canada to the southern tip of Mexico.

d. Proposed measures to preserve or enhance wildlife, if any:

Avoidance and minimization measures (AMMs) and BMPs will be implemented during construction to avoid and/or minimize impacts to wildlife. See the attached JARPA and Biological Evaluation for a full list of measures to preserve or enhance wildlife. Key AMMs/BMPs include:

- In-water construction activities will comply with the in-water construction window (anticipated to be November 1 through February 28)

- During any in-water and embankment work, containment booms will be used to surround the work areas or separate embankment work from surface water.
- Steel piling will be installed with a vibratory hammer when possible. Impact hammering will start with light tapping, then increase to full force gradually.
- A bubble curtain and one or more other noise attenuation methods will be used during impact installation or proofing of all steel piling.

e. List any invasive animal species known to be on or near the site.

There are no known invasive animal species that occur at or near the site.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The Project does not propose structures that will use energy into the future, however energy (fuel) will be consumed during demolition to operate equipment.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No. The Project would not affect potential use of solar energy.

c. What kinds of energy conservation features are included in the plans of this proposal?
List other proposed measures to reduce or control energy impacts, if any:

Not applicable. Energy use is anticipated to be minimal and short-term. Energy conservation measures are not proposed.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

A portion of the creosote-treated timber bulkhead, all of the creosote treated timber revetment and associated structures, and other creosote-treated structures (to be removed from the adjacent slip for mitigation) will be removed. While creosote-treated piles are being removed, a containment boom will surround the work area to contain and collect any floating debris and sheen. Debris will be retrieved and disposed of properly. See the full list of AMMs/BMPs in the attached JARPA and Biological Evaluation that would be implemented during creosote structure removal.

1) Describe any known or possible contamination at the site from present or past uses.

Creosote-treated timber structures are present at the site.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Creosote-treated timber exists within the Project area. No other hazardous chemicals or conditions are known to occur.

3) **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**
The Project proposes to remove creosote treated wood from the marine environment. Please see the attached JARPA and Biological Evaluation for a discussion on the minimization measures proposed for creosote treated wood removal.

4) **Describe special emergency services that might be required.**
Special emergency services are not anticipated to be required.

5) **Proposed measures to reduce or control environmental health hazards, if any:**
Measures will be implemented to reduce the risk of creosote exposure during creosote-treated wood removal. Please see the attached JARPA and Biological Evaluation for a discussion on the minimization measures proposed for creosote treated wood removal.

b. Noise

1) **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

In-water construction noise sources include pile driving and the use of barge and boats. Above water construction include the use of a powered hand tools, barge, and tugboat. Please see Section 2.3 of the attached Biological Evaluation for additional information.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indi-cate what hours noise would come from the site.

Project noise will be short-term and limited to daylight hours. In-air pile driving noise could reach up to 105 A-weighted decibels (dBA). In-water pile driving noise could reach up to 170 dB root mean square (rms).

The marina is a seasonally busy commercial fishing and recreation marina. The project will not change the use of the marina and no longterm changes to noise are anticipated.

3) **Proposed measures to reduce or control noise impacts, if any:**

The proposed project will comply with City of Ilwaco noise ordnance 8.18.050.I limiting construction work between 7AM and 630PM Monday through Saturday and between 9AM and 5PM on Sundays.
The following measures would be implemented to reduce potential noise impacts:

- Steel piling will be installed with a vibratory hammer when possible. Impact hammering will start with light tapping, then increase to full force gradually.
- A bubble curtain and one or more other noise attenuation methods will be used during impact installation or proofing of all steel piling.
- Pile-driving will commence with a soft start procedure (ramping up) in order to alert nearby wildlife, allowing them to move out of the area prior to construction activities. For impact pile driving, contractors will be required to provide an initial set of strikes from the hammer at reduced percent energy, each strike followed by no less than a 30-second waiting

period. This procedure will be conducted a total of two times before impact pile driving begins.

- Use of a wood cushion block or other sound-reducing method shall be implemented if impact pile driving is to be employed. The use of wood cushion blocks during construction will result in a reduction in underwater noise.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The Project vicinity generally consists of a marina used for year-round moorage of recreational and commercial fishing vessels, upland commercial buildings, and a boatyard. The Project site is located at a commercial fishing wharf. The Project will return use of the wharf for temporary mooring for offloading and loading of equipment and product for the Safe Coast Seafoods facility. The completed Project will also return access to the adjacent driveway. The adjacent driveway access is currently strictly controlled and limited due to load limitations resulting from the poor condition of the existing bulkhead.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No. The Project site has not been used as working farmlands or working forest lands.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

Not applicable. The Project is not located near a farm or forest.

c. Describe any structures on the site.

The Project vicinity generally consists of a marina used for year-round moorage of recreational and commercial fishing vessels, upland commercial buildings, and a boatyard. The Project site is located at a commercial fishing wharf (herein referred to as 'wharf'). The wharf is an earth filled structure on the east side and pile supported on the west side. The wharf is protected by a timber bulkhead (to be replaced) along the eastern limits of the wharf. The Port of Ilwaco Marina is located waterward of the existing bulkhead. To the north of the bulkhead wall, the shoreline is protected by a low creosote-treated timber retaining wall and large log. To the south of the bulkhead wall, shoreline protection consists of riprap and concrete rubble. The Safe Coast Seafoods buildings are located on the wharf.

d. Will any structures be demolished? If so, what?

The following structures will be removed:

- Portions of existing creosote-treated timber bulkhead
- The creosote-treated timber retaining wall and associated treated timber debris
- Derelict creosote-treated piles and cross-members located in the slip next to the bulkhead

- Concrete rubble to the south of the bulkhead will be removed and replaced with riprap to accommodate construction of the bulkhead
- A floating timber structure will be removed from the south portion of the marina as part of project mitigation.

e. What is the current zoning classification of the site?

The Project is located within an area zoned as light industrial and adjacent to areas zoned as low density commercial (City of Ilwaco 2022).

f. What is the current comprehensive plan designation of the site?

The Project is located within an area zoned as light industrial and adjacent to areas zoned as low density commercial (City of Ilwaco 2022).

g. If applicable, what is the current shoreline master program designation of the site?

The upland areas are designated as 'high intensity'. Areas waterward of the ordinary highwater mark (OHWM) are designated as 'aquatic'.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The Project occurs in an area that is designated as a Fish and Wildlife Conservation area.

i. Approximately how many people would reside or work in the completed project?

Zero. People will not work or reside in the completed Project.

j. Approximately how many people would the completed project displace?

Zero. People would not be displaced by the Project.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None. No displacement impacts would occur.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

No measures are proposed. The Project would be compatible with existing land uses without additional measures.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

No measures are proposed. The Project would not impact agricultural or forest lands.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Zero.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Zero.

c. Proposed measures to reduce or control housing impacts, if any:

No measures are proposed. The Project would not result in housing impacts.

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The replacement bulkhead will be raised approximately 3 feet to accommodate sea level rise. The total height above HTL is 4.3 feet. The top of slope along the head of the adjacent slip will be raised approximately 1.5 feet to +14 feet MLLW.

b. What views in the immediate vicinity would be altered or obstructed?

Views are not anticipated to be impacted. As stated above, the top of the replaced bulkhead wall will be at elevation 14 ft MLLW, 4.3 feet above the HTL. The increase to the top of slope at the head of the slip to 14 feet MLLW is not anticipated to impact any views as the adjacent properties are used by commercial businesses and the increase of approximately 1.5 feet is not anticipated to adversely alter views from the businesses.

c. Proposed measures to reduce or control aesthetic impacts, if any:

No measures are proposed. The Project is not anticipated to result in adverse impacts to aesthetics. The Project could provide aesthetic benefits by removing derelict structures.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Construction will occur during the daylight hours. Changes to longterm wharf lighting is not proposed.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No. Lighting is not proposed.

c. What existing off-site sources of light or glare may affect your proposal?

There are no known off-site sources of light or glare that may affect the Project.

d. Proposed measures to reduce or control light and glare impacts, if any:

No measures are proposed. The Project is not anticipated to result in light or glare impacts.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

The Port of Ilwaco marina is used for recreational activities such as boating, in addition to commercial uses.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The Project could temporarily disturb use of the adjacent Port of Ilwaco Marina during construction. However, impacts are anticipated to be minor, localized to the immediate area around the proposed activities, and the Project would not restrict use of the marina. Additionally, work will be completed Fall and Winter of the 2024/ 2025 season (work window for in-water work is limited to November 1 through February 28) which will avoid disruptions during the busy summer fishing season.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Substantial impacts to recreation are not anticipated and therefore no measures are proposed to reduce impacts. The bulkhead replacement would prevent the shoreline from falling into a portion of the active Port of Ilwaco Marina, which would impact operations and recreation at the marina.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

In 1968, the filling in of the former tidelands made the former Pioneer Packing Company cannery platform into a peninsula at the northwest corner of the mooring basin (USC&GS 1968;USGS 1969). The former Pioneer Packing Company cannery became Jessie's Ilwaco Fish Company in 1961, and the property is now home to Safe Coast Seafoods.
A cultural resources and historic and built environment assessment was completed for the Project and it was determined that there are no known archaeological resources within the Project area (WillametteCRA 2022) and that the adjacent seafood buildings should not be eligible for listing in the National Registry for Historic Places based on a lack of integrity of design, materials and workmanship (processing building)and/or age of the building (south building) (Willamette CRA 2023).

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No. A cultural resource and historic and built environment assessment was completed for the Project (WillametteCRA 2022 and 2023).

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

The following resources were reviewed by WillametteCRA as part of the cultural resource and historic built environment assessment completed for the Project (WillametteCRA 2022 and 2023 [Technical Addendum]):

- Documents on file with the Washington Department of Archaeology and Historic Preservation (DAHP) and the Oregon State Historic Preservation Office (SHPO) to determine if archaeological resources have been recorded in the Project vicinity, and to identify any previous archaeological studies in the area
- Copies of historical maps and records to assess the potential for historic-period archaeological resources in the Project vicinity
- Historic photographs and newspaper articles related to the Port at the Columbia Pacific Heritage Museum in Ilwaco
- A reconnaissance-level assessment of the current study area and archival research on 27 April 2022

- An aboveground resource survey, formally documenting the East Bulkhead on 10 June 2022
- A Historic Property Inventory (HPI) form
- Site survey of upland buildings completed 12 April 2023

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Impacts to historic and cultural resources are not anticipated. If archaeological materials or human remains be observed during Project activities, all work in the immediate vicinity shall stop and DAHP, the County planning office, and the affected Tribe(s) would be contacted.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The Project will mainly be completed from the water. Trucks may occasionally be used to transport materials.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The geographic area is currently served by public transit. The nearest bus stop is approximately 0.1 miles from the Project site.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Zero. The Project does not propose to eliminate or construct parking spaces.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways are not proposed. The existing private driveway will be regraded and repaved with structural fill base course and asphalt pavement. Upland paving and grading will then be completed behind the bulkhead wall to repair damage associated with bulkhead movement and driveway settlement and to mitigate sea level rise.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The maintenance and repair project will be completed on the east side of the Safe Coast Seafoods wharf adjacent to an Ilwaco Marina slip. The seafood facility is a busy seafood processing facility that processes fish products delivered by vessel and trucks. The marina is a seasonally busy small marina serving commercial fishing and recreation vehicles.
Maintenance and rehabilitation of the existing infrastructure will reestablish operational efficiency and will allow accommodation of the intended vessel and vehicle traffic for which bulkhead and adjacent drive were originally approved and operated. The project does not expand the operational footprint of the of the wharf or the marina nor result in

an increase in vessel or vehicular traffic relative to previous operations.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The Project will mainly be completed from the water. There may be occasional vehicular trips associated with construction activities, however these have not been quantified.
The vehicular and vessel traffic to and from the site after project completion will remain the same as existing conditions.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No. The Project will not impact the movement of agricultural and forest products on roads or streets. Transportation impacts have not been identified.

h. Proposed measures to reduce or control transportation impacts, if any:

No measures are proposed. Transportation impacts have not been identified.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No. The Project does not propose the construction of new structures that could require an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No measures are proposed. Public service impacts have not been identified.

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

Utilities do not service the structures that would be affected by this Project.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No utilities are proposed.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee Tracy Lofstrom

Position and Agency/Organization Manager, Port of Ilwaco

Date Submitted: 6/30/23

D. Supplemental sheet for nonproject actions [HELP]

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

   Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

   Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

   Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

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for
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GeoEngineers
Earth Science + Technology

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