



**US Army Corps
of Engineers®**
Portland District

Oregon International Port of Coos Bay

Proposed Section 204(f)/408 Channel Modification Project

Appendix D

Real Estate Plan

June 2024

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ACRONYMS AND ABBREVIATIONS

AMD	Advanced Maintenance Dredging
ASA(CW)	Assistant Secretary of the Army for Civil Works
ATON	Aids to Navigation
CBEMP	Coos Bay Estuary Management Plan of 1983
CBNBWB	Coos Bay – North Bend Water Board
DSL	(Oregon) Department of State Lands
FNC	Federal Navigation Channel
FY	Fiscal Year
HDPE	High-density Polyethylene
LERRD	Lands, Easements, Rights-Of-Way, Relocations, and Disposals
LNG	Liquefied Natural Gas
mcy	Million cubic yards
MLLW	Mean Lower Low Water
OIPCB or Port	Oregon International Port of Coos Bay
NAVD88	North American Vertical Datum of 1988
NED	National Economic Development
NM	Nautical Mile
ODMDS	Ocean Dredged Material Disposal Site
PA	Proposed Alteration
PSET	Portland Sediment Evaluation Team
REP	Real Estate Plan
RM	River Mile
RFP	Roseburg Forest Products
TSP	Tentatively Selected Project
USACE	U.S. Army Corps of Engineers
USC	United States Code
USCG	U.S. Coast Guard
WIIN	Water Infrastructure Improvements for the Nation
WOP	Without Project
WRDA	Water Resources Development Act
WRRDA	Water Resources Reform and Development Act

1. INTRODUCTION

The Oregon International Port of Coos Bay (OIPCB or Port) is home to the largest deep-draft coastal harbor between San Francisco and the Puget Sound, based on the tonnage of cargo transported through the Port. Port facilities are accessed via the 15.2-nautical mile (NM) Coos Bay Federal Navigation Channel (FNC). The FNC was first dredged in the early 1900s and was last improved in 1998, when the channel was deepened by 2 feet from -35 feet mean lower low water (MLLW) to -37 feet MLLW. Since 1998, vessels calling at the Port have substantially increased in size, and extensive improvements have been made to marine terminals and landside facilities. This continuing increase in vessel sizes requires channel improvements to more effectively and efficiently move cargo in and out of Coos Bay.

This report presents the Real Estate Plan (REP) for the Channel Modification Project. After a comprehensive introduction that describes the proposed project action in detail, the REP identifies and describes the lands, easements, rights-of-way, relocations, and disposals (LERRD) required for the construction, operation, and maintenance of the proposed project, including those required for relocations, borrow material, and dredged or excavated material disposal. Further, the REP describes the estimated LERRD value, together with the estimated administrative and incidental costs attributable to providing LERRD, and the acquisition process. The report follows U.S. Army Corps of Engineers (USACE) guidance and sample documents, and is organized into the following sections:

- Section 1: Introduction
- Section 2: Project Authorization
- Section 3: Navigational Servitude
- Section 4: Non-federal Sponsor-owned Land
- Section 5: Real Estate Requirements
- Section 6: Borrow Material
- Section 7: Induced Flooding
- Section 8: Mitigation
- Section 9: Federally Owned Land and Existing Federal Project
- Section 10: Relocation Assistance Benefits
- Section 11: Statement of Project Proponent Land Acquisition Capabilities
- Section 12: Baseline Cost Estimate
- Section 13: Acquisition Schedule
- Section 14: Mineral Activity
- Section 15: Facility or Utility Relocation
- Section 16: Hazardous, Toxic, and Radioactive Waste or Other Contaminants
- Section 17: Zoning Ordinances Proposed
- Section 18: Landowner Support/Opposition
- Section 19: Sponsor Notification of Risks

1.1 Overview

The OIPCB proposes a Pacific Coast Intermodal Port (PCIP) project at Coos Bay, Oregon. The PCIP consists of integrated elements that would link freight arriving by container ship to the Port

to Class 1 rail networks in Oregon. The in-water component of the project includes the deepening and widening of the existing FNC for deep-draft container vessels. In support of that work, the Port is conducting economic, engineering, and environmental studies preparatory to improving the Federal navigation project. These investigations are being conducted under the authority granted by Section 204 of the Water Resources Development Act (WRDA), 1986, as modified by Section 1014 of the Water Resources Reform and Development Act (WRRDA), 2014. This action will require approval by the U.S. Army Corps of Engineers under Section 14 of the Rivers and Harbors Appropriation Act of 1899, 33 United States Code 408, to modify the Federal navigation project. The Section 204/408 Report and Environmental Impact Statement (EIS) will propose modifications to the Coos Bay Navigation Channel in Coos County, Oregon, to accommodate larger deep draft vessels and provide local, state, and federal economic benefits. The USACE, Portland District is presumed to be the lead federal agency for the EIS in cooperation with the U.S. Department of Transportation's Federal Rail Administration.

1.2 Study Area Description

Coos Bay is located in Coos County, Oregon, on the southern Oregon coast, about 200 miles (mi) south of the mouth of the Columbia River (MCR) and 445 mi north of San Francisco Bay. It is the navigational approach to Charleston, Empire, North Bend, Glasgow, Coos Bay, and Eastside (Figure 1-1 and Figure 1-2). The bay is formed by the junction of Isthmus Slough, Coos River, South Slough, Kentuck Slough, Haynes Slough, and Winchester Creek, and is located at the foot of the Coast Range. Deep-draft navigation is limited to the lower 15 mi of the estuary.

The surface area of the Coos Bay estuary is about 12,000 acres (ac) (about 19 square mi). Tidelands, located from River Mile (RM) 0 through 15, comprise 20 percent to 30 percent of the estuary area. The inlet to the estuary, referred to as the Entrance Channel, is fully exposed to waves.

The Coos Bay estuary drains directly into the Pacific Ocean. The nearshore zone adjacent to the Entrance Channel is composed of fine- to medium-grained sediments and intermittent rock outcroppings. The coastal shelf within 8 mi of the inlet has a roughly 100:1 (Horizontal: Vertical) slope. Cape Arago, a headland that limits sediment transport and marks the southern boundary of the littoral cell, is located 2.5 mi south of the inlet.

The topography of the lower Coos River area is a combination of rugged mountain terrain, extensive sand dunes adjacent to the ocean, and relatively flat pasture land along the river. The terrain of the area is quite rugged, because the mountains are relatively young, denoted by the typical narrow, sinuous valleys and steep side slopes. Relief varies from sea level to just under 3,000 ft; however, most of the land lies between 500 ft and 1,500 ft in elevation.

Geotechnical investigations indicate the subsurface conditions in the channel typically vary from relatively clean sand to siltstone and sandstone sedimentary rock. The sedimentary rock is present near the mudline from about RM 2 to RM 6 and at Guano Rock from about RM 0.7 to RM 0.9.

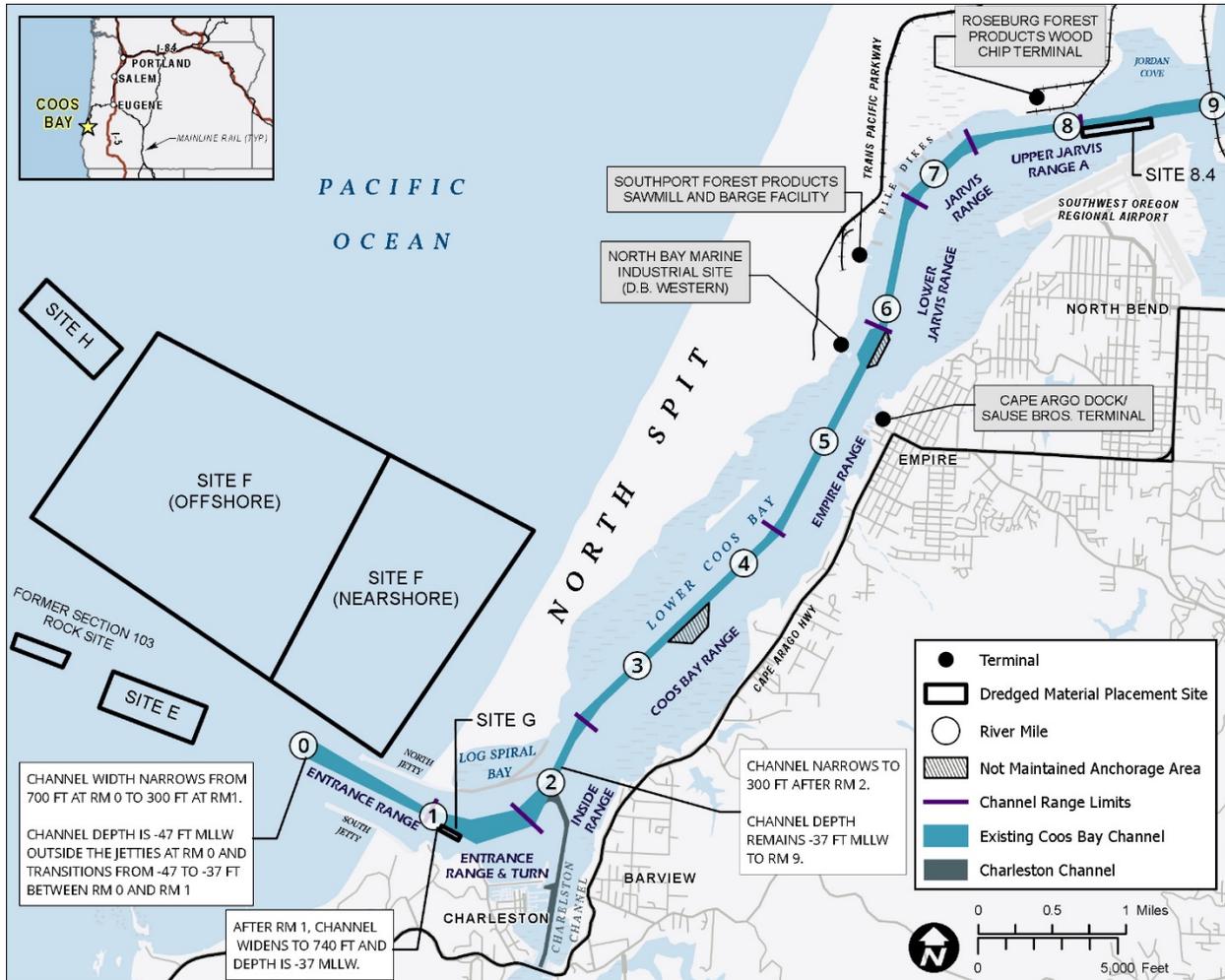


Figure 1-1
Coos Bay Project Vicinity Map, Lower Bay

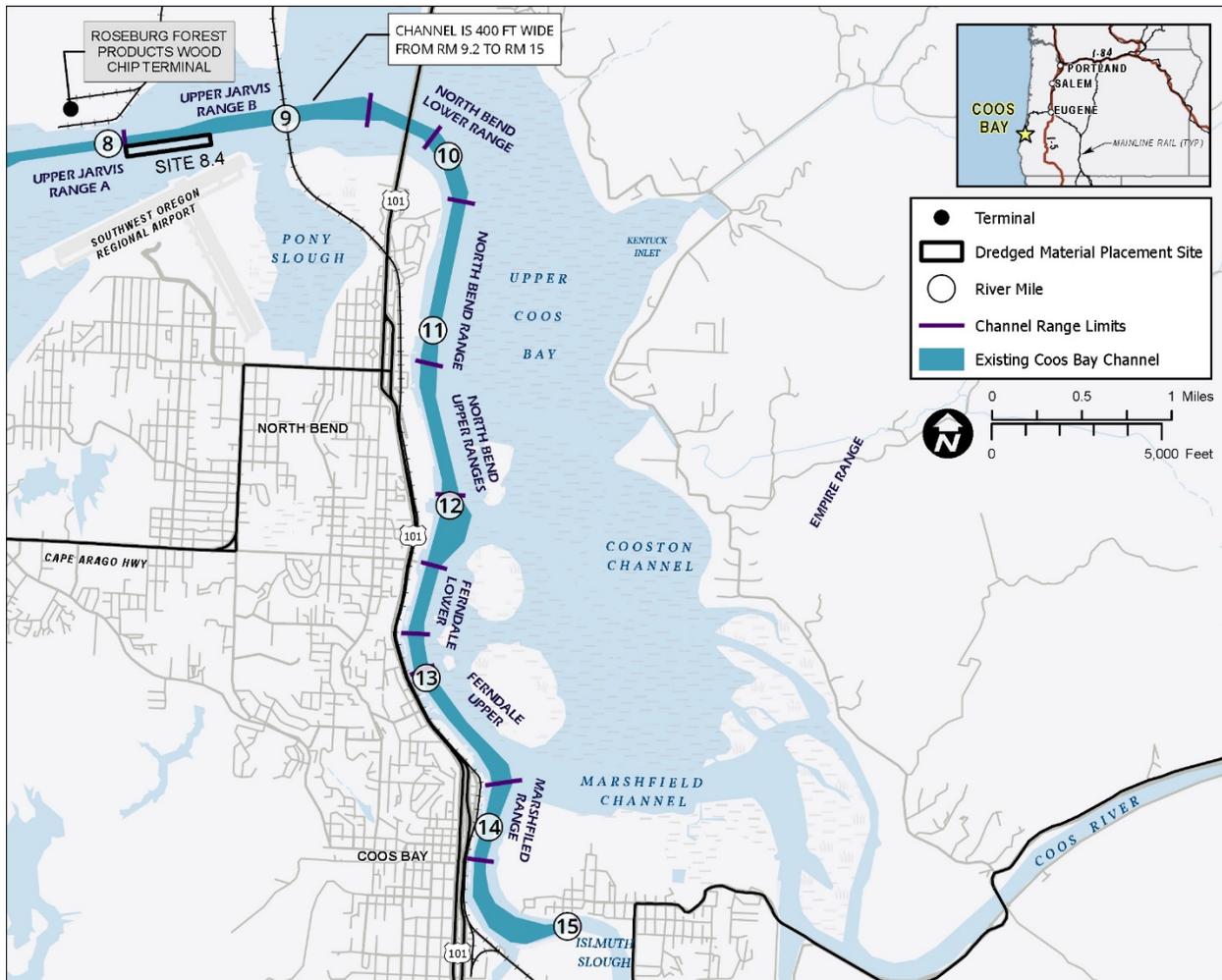


Figure 1-2
Coos Bay Project Vicinity Map, Upper Bay

1.3 Existing Navigation Channel

The Coos Bay Federal Navigation Project was first authorized by the Rivers and Harbors Appropriation Act of March 3, 1899, and has been subsequently modified in 1919, 1937, 1951, 1952, 1979, and 1998. The 1979 project represents the completion of the 1970 authorized which allowed the USACE to deepen and maintain the Entrance Channel at -45 ft Mean Lower Low Water (MLLW) and the inner channel to -35 ft MLLW. The most recent project modification was authorized in the fiscal year (FY) 1996 Energy and Water Development Appropriations Act, Public Law 104-46, which provided for deepening the channel by 2 ft to -47 ft MLLW from the ocean entrance to Guano Rock at RM 1, and to -37 ft MLLW from RM 1 to RM 15. Public Law 104-46 also provided for deepening the turning basin at RM 12 by 2 ft and expanding it by 100 ft, from 800 ft by 1,000 ft to 900 ft by 1,000 ft.

The U.S. Army Corps of Engineers (USACE) Federal Navigation Project consists of the following federally authorized elements:

- North Jetty (9,600 ft long) and South Jetty (3,900 ft long), located on either side of the Entrance Channel, including the two relic structures that extend from the root of the North Jetty, one of which extends into Log-spiral Bay (LSB) and the other of which extends into the estuary.
- An Entrance Channel with an authorized depth of -47 ft MLLW, which decreases from a width of 700 ft at RM 0 to a width of 300 ft at RM 1.
- An inner channel (from RM 1 to RM 15) that has an authorized depth of -37 ft MLLW, a width of 300 ft from RM 1 to RM 9, and a width of 400 ft from RM 9 to RM 15.
- Two (2) turning basins, both of which are 1,000 ft long. The first is located at RM 12, and has a width of 900 ft. The other, located at RM 14, has a width of 730 ft. Both have a depth of -37 ft MLLW, consistent with the channel depth.
- Five (5) pile dikes between RM 6.4 and RM 7.3 in the main channel.
- Continuation of the main channel beyond RM 15 (in the Isthmus Slough) with a width of 150 ft and a depth of -22 ft MLLW.
- A 150-ft-wide Charleston Access Channel that has a depth that varies from -17 to -14 ft MLLW.
- A breakwater and bulkhead at Charleston.
- Charleston Small Boat Basin (10 feet deep) constructed by USACE in 1956 and maintained by the OIPCB.
- Advanced maintenance dredging (AMD) of the channel extends offshore to RM -0.55, where the width of maintenance is 1,060 ft. Authorized AMD is 5 ft of depth in the Entrance Channel (RM 0.55 to RM 1) and 1 ft of depth upstream of RM 1.

The USACE maintains the above elements to provide navigational access to Coos Bay. USACE maintenance of the main navigation channel and jetty features provides ongoing deep-draft navigation access to Coos Bay.

1.4 Description of the 2023 Proposed Alteration (2023 PA)

To accommodate larger deep draft vessels and provide local, state, and federal economic benefits, the Port proposes navigation channel improvements to the Coos Bay Navigation Channel. These proposed channel improvements are hereinafter referred to as the 2023 Proposed Alteration (2023 PA) and they are summarized as follows:

- *Coos Bay Inside Range*: the channel from RM 1.3 to RM 2.8 on the red side of the channel was widened. The range heading of the Coos Bay Inside Range was changed by 1° from 28.0° - 208.0° to 27.0° - 207.0°.
- *Bend Widener at RM 4.0*: a bend widener was included in the 2023 PA to add an additional 50 ft on the green side in the turn from Coos Bay Range to Empire Range.
- *Post Panamax Generation 3 (PPX3) Containership Turning Basin at RM 5.0*: a larger turning basin at the container facility is needed to accommodate the PPX3 containership. Based on the vessel's dimension, the proposed turning basin is 2,000 feet long (parallel to the channel) and 1,600 feet wide. The turning basin's design bottom elevation is -45 ft MLLW, the same as the 2023 PA channel.
- *Capesize Turning Basin at RM 8.0*: a Capesize turning basin was added at RM 8.0 to replace the turning basin that was removed at RM 7.5. Operationally, this turning basin will be used by inbound empty vessels. Therefore, the turning basin's design bottom elevation is -37 ft MLLW. The deeper navigation channel (450-ft wide at -45 ft MLLW) continues through the length of the turning basin.

The above improvements are shown in Table 1-1 and Table 1-2; no dredging is proposed beyond the boundaries in these tables. The project vicinity is represented graphically in Figure 1-3. In this figure, the channel is labeled by RM. Figure 1-3 also shows the location of the adjacent federal infrastructure: the two jetties that run parallel to the channel from RM 0 to RM 1 and the pile dikes located along the north bank of the channel from RM 6.4 to RM 7.5.

**Table 1-1
Channel Footprint for Existing Authorized Project and 2023 PA**

Range(s) and RM	Existing Conditions	2023 PA
Offshore Extent		
Offshore Limit including Advanced Maintenance Dredging	RM -0.55 ¹	RM -1
Offshore Limit of Navigation Channel	RM 0 ¹	RM -0.9
Channel Width (ft)		
Offshore Inlet Offshore Limit of Navigation Channel to RM 0.3	700 narrowing to 550	1,280 narrowing to 600
Entrance Range RM 0.3 to 1.0	550 narrowing to 300	600
Entrance Range RM 1.0 to 2.0 and Turn	Varies up to 740	Varies up to 1,140
Inside Range RM 2.0 to 2.5	300	500
Coos Bay Range RM 2.5 to 4.3	300	450
Empire Range RM 4.3 to 5.9	300	450
Post Panamax Generation 3 Turning Basin RM 4.7 to 5.6	None	2,000 x 1,600
Lower Jarvis Range RM 5.9 to 6.8	300	450
Jarvis Turn RM 6.8 to 7.3	400	500

Range(s) and RM	Existing Conditions	2023 PA
Upper Jarvis Range RM 7.3 to 8.2	300	450
Capesize Turning Basin RM 7.6 to 8.0	None	2,000 × 1,100

Notes:

- The authorized FNC starts at RM 0. However, advanced maintenance dredging (AMD) occurs further offshore, typically from the channel entrance to RM -0.55. The channel width at RM -0.55 is approximately 960 ft.

**Table 1-2
Channel Depth for Existing Authorized Project and 2023 PA**

Range(s) and RM	Navigation Bottom Elevation (ft, MLLW)		Advance Maintenance Dredging ¹ (ft)	
	Existing Conditions	2023 PA	Existing Conditions	2023 PA
Offshore Inlet Offshore Limit of Navigation Channel to RM 0.3	-47	-57	5	6
Entrance Range RM 0.3 to 1.0	-47 decreasing to -37 ²	-57 decreasing to -45 ³	Varies 5 to 1 ⁴	Varies 1 or 6 ⁵
Entrance Range and Turn RM 1.0 to 2.0	-37	-45	1	1
Inside Range RM 2.0 to 2.5	-37	-45	1	1
Coos Bay Range RM 2.5 to 4.3	-37	-45	1	1
Empire Range RM 4.3 to 5.9	-37	-45	1	1
Post Panamax Generation 3 Turning Basin RM 4.7 to 5.6	None	-45	None	1
Lower Jarvis Range RM 5.9 to 6.8	-37	-45	1	1

Jarvis Turn RM 6.8 to 7.3	-37	-45	1	1
Upper Jarvis Range RM 7.3 to 8.2	-37	-45	1	1
Capesize Turning Basin RM 7.6 to 8.0	None ⁶	-37 ⁶	None	1

Notes:

1. Capital dredging consists of the navigation depth plus AMD plus a rock buffer plus a portion of overdepth.
2. For the existing channel, the navigation depth decreases from a depth of -47 to 37 ft MLLW between RM 0.4 and RM 0.7. The channel is dredged farther offshore to obtain AMD depth.
3. For the 2023 PA, the navigation depth decreases by 12 ft between RM 0.3 (a depth of 57 ft MLLW) and RM 1.0 (a depth of 45 ft MLLW).
4. AMD of 5 ft starts at the offshore daylight line, approximately RM -0.6, and continues to RM 0.7.
5. AMD of 6 ft starts at the offshore daylight line. The AMD will be 1 ft in areas where Guano Rock is present (RM 0.7 to RM 1).
6. Under the Existing Conditions, there is no formal turning basin; vessels that visit Roseburg Forest Products turn in existing deeper water at this location. Under the 2023 PA, incoming vessels will enter the channel and turn under ballast load, so it is not necessary to dredge beyond a depth of 37 ft MLLW.

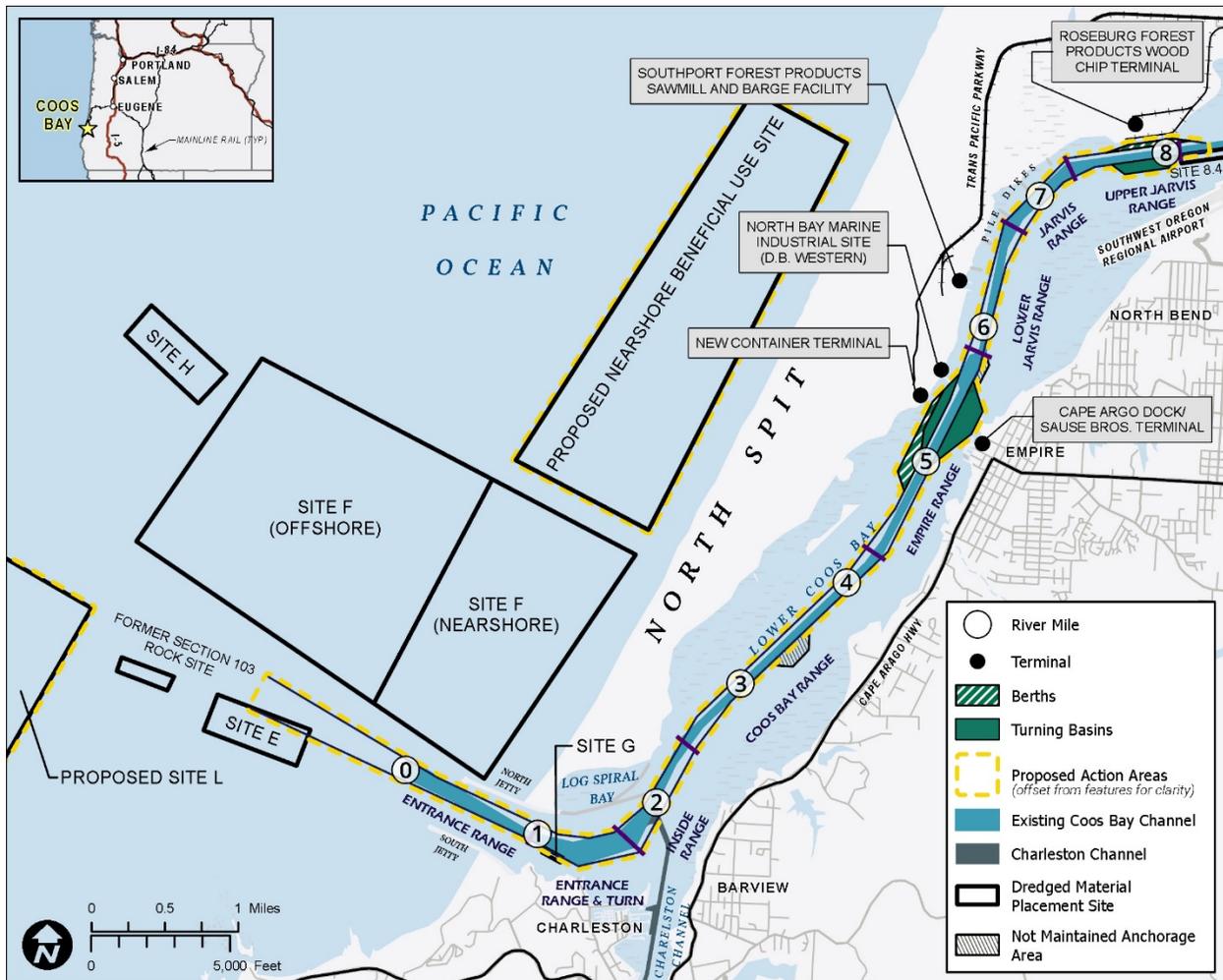


Figure 1-3
Summary of Proposed Alteration

2. PROJECT AUTHORIZATION

This report has been developed by OIPCB under the authority granted by Section 204(f) of the WRDA of 1986, as amended by Section 1014 (b) of the WRRDA of 2014 and Section 1127 of WIIN Act of 2016. Section 204 delegates authority to the ASA(CW) to approve requests by non-federal entities to design and construct non-federal improvements to federal navigation projects, and to assume federal responsibility for maintenance of those improvements after non-federal construction is completed. The proposed action also requires permission to modify the existing Coos Bay Federal Navigation Project under Section 14 of the Rivers and Harbors Appropriation Act of 1899, 33 USC 408 (Section 408).

The Port is currently in the process of obtaining local, state, and federal authorizations for the project, including permits from the USACE Regulatory Program (Section 404/10). The Port is coordinating with USACE Regulatory Branch and the Third Party Contractor Environmental Impact Statement team to provide a complete application and public notice information.

3. NAVIGATIONAL SERVITUDE

The Coos Bay Federal Navigation Project was first authorized by the Rivers and Harbors Appropriation Act of March 3, 1899, and has been subsequently modified in 1910, 1919, 1922, 1927, 1930, 1935, 1948, 1960, 1970, and 1996. The project authorization in 1970 allowed USACE to deepen the Entrance Channel to, and maintain it at, -45 feet MLLW, and to deepen the inner channel to -35 feet MLLW. The most recent project modification was authorized in the FY 1996 Energy and Water Development Appropriations Act, Public Law 104-46, which provided for deepening the channel by 2 feet to -47 feet MLLW from the ocean entrance to Guano Rock at RM 1, and to -37 feet MLLW from RM 1 to RM 15. Public Law 104-46 also provided for deepening the turning basin at RM 12 by 2 feet and expanding it by 100 feet, which changed it from 800 feet by 1,000 feet to 900 feet by 1,000 feet.

4. NON-FEDERAL SPONSOR-OWNED LAND

The Port is the non-federal sponsor for the Channel Modification Project. The revised channel shifts the centerline alignment of every reach from the Entrance Range through the Jarvis Turn, which will require relocating existing range markers and installing new ones. Channel widening will require relocation of the majority of the fixed and floating channel markers and the addition of new markers. Most new and relocated ATON will be constructed or deployed on submerged or submersible land owned by the State of Oregon, and therefore are to be located on property administered by the Oregon Department of State Lands (DSL). The one exception is the range structure that supports the Lower Jarvis Range B Rear Marker and Upper Jarvis Range A Rear Marker. The structure is currently located on the North Spit, approximately 200 feet northwest of the shoreline of Jarvis Turn. This structure will move approximately 200 feet east to the shoreline and will remain on land owned by OIPCB, the non-federal sponsor. The property located on Coos County assessor's map 25S13W00 tax lot 200 is accessible from Trans Pacific Parkway. The real estate maps in Attachment A identify the Port property and the ATON location.

5. REAL ESTATE REQUIREMENTS

The widening of the navigation channel will be on submerged lands of the State of Oregon (administered by the Oregon DSL). Dredged material will be placed within selected disposal sites. As much as 6.6 million cubic yards of dredged sand will be placed in the proposed North Spit Nearshore Littoral Placement Site, and the remainder of the capital dredging material will be placed in a new ODMDS selected by the District Engineer in accordance with Section 103 of the Marine Protection, Research, and Sanctuaries Act. Operations and maintenance dredging material will continue to be placed in ODMDS F. Most new and relocated ATON will be constructed or deployed on submerged or submersible land, and therefore are to be located on property administered by the DSL. Gerry Hutson, Proprietary Coordinator - Aquatic Resource Management, Southwest Counties and Columbia County, DSL, provided feedback on the project, including on construction and on the modifications to the FNC.

The remainder of this section describes real estate requirements associated with different project components and activities.

5.1 Construction Activities

Construction activities will require use of an upland staging area (or areas), anchoring and operation of construction equipment in Coos Bay, and disposal and placement of dredged material offshore.

An upland staging area with access to a waterside bulkhead or pier will be needed during construction. Initial conversations with contractors have indicated that a staging area of approximately 5 acres might be appropriate for a project of this size. The size of the staging area and the size of the berthing area will ultimately be determined by the dredging methodology used by the selected contractors and the amount of equipment required to construct the project. Real estate requirements associated with the staging area will be the responsibility of the contractor.

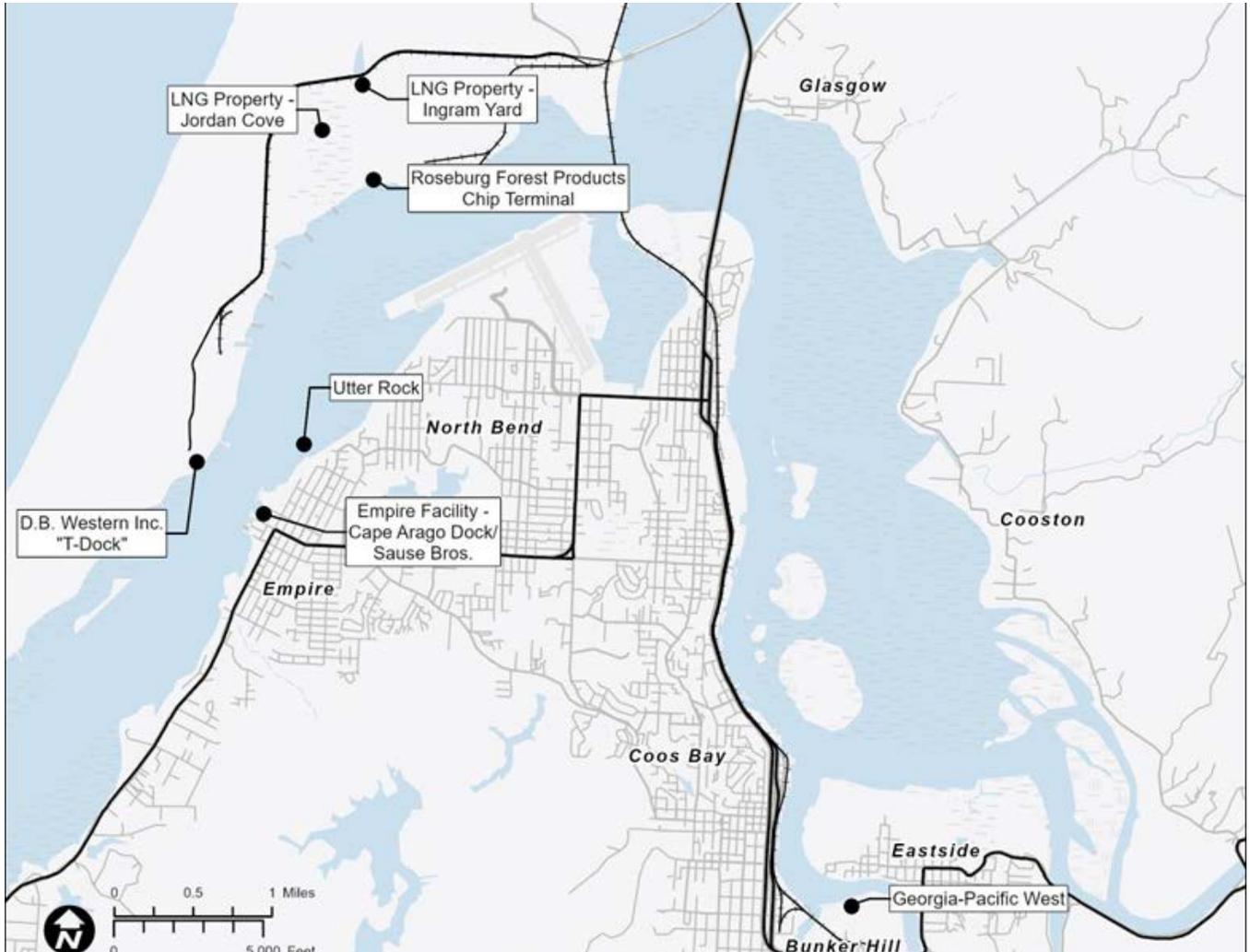
It is preferable to the project to have a single staging area, rather than multiple locations, to allow for operation control and efficiency. The proposed areas used for staging and equipment laydown presented in this section are typically disturbed sites used for industrial or maritime functions. Ideal locations would have low value resources on-site; berths of adequate length (minimum 400 feet) and depth (minimum -30 feet MLLW at zero tide); ample flat acreage for laydown and staging; simple ownership situations to preclude leasing agreements. However, all existing identified marine facilities that could serve as staging areas would require some modification to suit the needs of the Contractor.

Potential staging areas are shown in Figure 1 and are listed below (nearest RM in parentheses):

- D.B. Western Inc. “T-Dock” (RM 5.6)
- Empire Facility – Cape Arago Dock/Sause Bros. (RM 5.4)
- Utter Rock (RM 6)
- Roseburg Forest Products Chip Terminal (RM 7.8)

- LNG Property – Jordan Cove (RM 7.5)
- LNG Property – Ingram Yard (RM 7.5)
- Georgia-Pacific West Inc. (RM 14.9)

**Figure 5-1.
Location of Potential Staging Areas**



All potential staging areas have been or are currently utilized for laydown, staging or industrial use. Minor work to flatten, place a gravel base, and compact the area will be the limits of earthwork for any site selected. No construction or below grade activities will occur during site preparation (e.g., soil mixing, paving). Staging area selection is anticipated to be facilitated between the selected contractor and in negotiation with the current or future property owners.

Marine access will be from the open waters of the Pacific Ocean into the Coos Bay estuary and potentially the Port. The contractor will be required to liaise directly with the appropriate

authorities, such as the U.S. Coast Guard (USCG) and OIPCB, with respect to marine access and mobilization of the various dredges and other floating plant (e.g., dredge material scows, drill barges, etc.) to the site.

A short-term access agreement for construction equipment, when it is in state-owned waters, will be required from the DSL.

For disposal of dredged material, Ms. Hutson indicated: “If the dredge spoils are not contaminated and [are] disposed of offshore [at a USACE-]approved location just off the beach, no Sand & Gravel license will be required. . . .If the dredge spoils are deposited on upland or submersible lands, a Sand & Gravel license will be required, and royalties may be charged.”

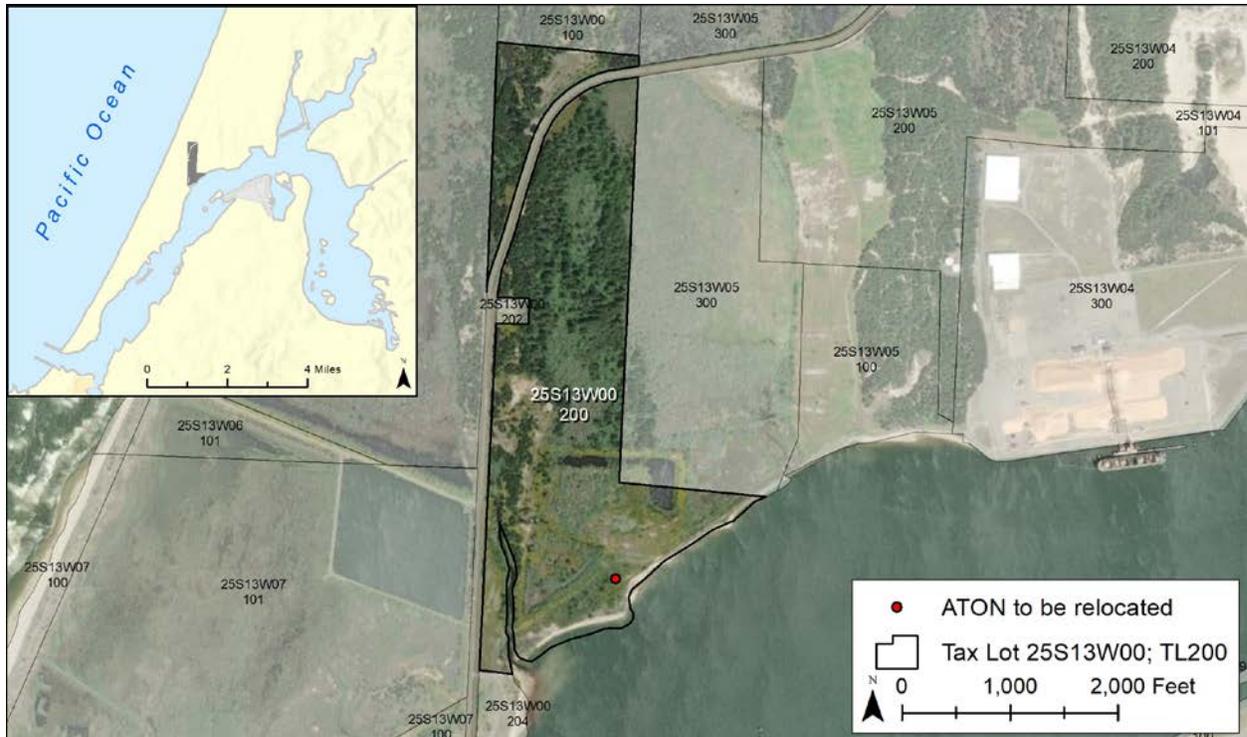
5.2 Modification of the Federally Approved Navigational Channel

A review of the project by the DSL has concluded that no easements will be required from the DSL if the widening becomes part of the FNC, as the project proposes. Regarding the modification to the FNC, Ms. Hutson noted that the USACE does not have an easement for the existing federally approved navigational channel, and none is required. However, if the modified channel does not become part of the federally approved channel, an easement from the DSL would be required.

5.3 Relocation of Aids to Navigation

One land parcel will have a relocated aid to navigation. As previously described, OIPCB owns this parcel. OIPCB will need to negotiate an easement for placement and maintenance of this aid to navigation and will need to transfer the easement to the USCG. This property is shown in Figure 2.

**Figure 5-2.
Location of Tax Lot 25S13W00, TL200**



6. BORROW MATERIAL

The proposed project does not require any borrow material.

7. INDUCED FLOODING

Construction of the project will not cause induced flooding.

8. MITIGATION

Mitigation may be required to compensate for losses to protected species and/or habitat associated with the project if avoidance and minimization measures cannot eliminate unacceptable adverse impacts. The Environmental Impact Statement developed for the project will identify and develop any necessary mitigation, and the mitigation actions will be included in the environmental review and permitting phases of the project.

Information concerning any environmental mitigation that is required to complete the project will be included in this section as needed.

9. FEDERALLY OWNED LAND AND EXISTING FEDERAL PROJECT

USACE owns property adjacent to the proposed project. At the North Jetty, tax lot 100 (Coos County assessor's map 25S14W35), work to install a rock apron as a protective measure will be included in the permitting for the project overall, the Section 408 authorization, and the removal/fill joint permit application with the State of Oregon and USACE. The Environmental Impact Statement will cover the impacts analysis.

The proposed project lies within the footprint of a former cost-shared project, and sponsor-owned land will be utilized for one relocated ATON. OIPCB will not receive LERRD credit for lands made available for the project by USACE or lands previously credited as LERRD for a previous project that had federal funding participation.

10. RELOCATION ASSISTANCE BENEFITS

Under Public Law 91-646, relocation assistance is required when property impacted by a project is occupied and must be vacated for the project. This requirement would apply for a temporary easement, permanent easement, or fee purchase. The relocation can range from moving personal property to another location on the same property to moving a resident or business to a new property if an entire parcel is impacted.

For this project, no residents, farms, or businesses would be displaced or would have their property directly impacted by the project. Therefore, there are no residents or businesses eligible for relocation assistance benefits.

11. STATEMENT OF PROJECT PROPONENT LAND ACQUISITION CAPABILITIES

None required.

12. BASELINE COST ESTIMATE

No real estate cost is anticipated, because no easements or fee purchases are required for the project.

13. ACQUISITION SCHEDULE

No real estate easements or fee purchases are required for the project.

14. MINERAL ACTIVITY

No mineral activity is known to exist in the project vicinity. No timber harvesting is anticipated within the project area.

15. FACILITY OR UTILITY RELOCATION

According to the Utilities Investigation Report, dated July 2018, the utilities in the vicinity of the FNC consist of three utility crossings at RM 5+38 and three outfalls (at RM 4.6, RM 6.6, and RM 7.7). The utility lines associated with the utility crossing are more than 10 feet deeper than the depth of the PA channel, including Advanced Maintenance Dredging and overdepth. Therefore, no impacts to existing utilities are anticipated as a result of dredging activities in Coos Bay. More information on the location of the existing utilities follows. See Attachment A for the utility crossing map.

15.1 NW Natural Gas

A 12-inch high pressure gas line was installed by NW Natural Gas in a joint project with the Coos Bay – North Bend Water Board (CBNBWB) water line at RM 5+38. Research indicates an approximate burial depth of -62 feet MLLW (-63 feet North American Vertical Datum of 1988 [NAVD88]).

Henkels and McCoy, Inc. provided a plan and profile “as-built” map to the CBNBWB to be used for confirming the gas line depth as presented in the Utilities Investigation Report. Shown on the plan portion of both the CBNBWB and the NW Natural Gas maps are two lines parallel within the 40-foot easement. This evidence is in agreement with a joint permit for NW Natural Gas and CBNBWB and their respective easements with DSL.

15.2 City of Coos Bay Public Works – Empire Outfall and North Spit Outfall

The City of Coos Bay Public Works Department, the contact for the Utilities Investigation Report, confirmed that there was no active sewer line crossing Coos Bay, but that the Public Works Department owns a 10-inch high-density polyethylene (HDPE) sewer line that was installed by directional drilling across Coos Bay and is leased to ORCA Communications, Inc. The Public Works Department also owns a 24-inch sewer outfall designated as the Empire Outfall and a 24-inch sewer outfall designated as the North Spit Outfall. The City of Coos Bay Public Works Department reported that there were no other systems, active or abandoned, within the utility study area.

15.2.1 Coos Bay Crossing

According to the Utilities Investigation Report, David Evans and Associates, Inc. (DEA) contacted the City of Coos Bay Public Works Department on December 22, 2016, to inquire about obtaining additional information on the 10-inch HDPE sewer line containing ORCA Communications, Inc. fiber optic inner-ducts. Specifically requested were as-built CAD drawings of the 10-inch HDPE sewer-line, the Oregon DSL easement, and the USACE permit. Jessica Spann, City of Coos Bay Sewer Department Engineering Service Coordinator, provided a PDF copy of the “Bay Crossing HDD Sewer Line Project” contract plans, AutoCAD drawings of the contract plans, and the Oregon DSL easement. The contract plan profile depicts the burial depth at approximately -71.67 feet NAVD88 (-70.67 feet MLLW).

15.3 Coos Bay – North Bend Water Board – water line

The CBNBWB was contacted for the Utilities Investigation Report and identified a 24-inch HDPE directionally drilled water line crossing Coos Bay. The water line was installed without an inductive tracer system, and according to the report it was not locatable in the field. The CBNBWB did provide its as-built plan sheet, which was produced by Henkels & McCoy, Inc. The profile view depicts an approximate burial depth of -90 feet MLLW (-91 feet NAVD88).

CBNBWB also provided the PDF copy of the Oregon DSL easement mentioned in Section 15.1. Further evidence of the easement being a joint one with NW Natural Gas is the as-built plan, which shows the same easement as NW Natural Gas does and highlights two HDPE “conduits” within the 40-foot easement. The located positions of the water line and gas line on the upland portions indicate that the gas line was intended to be along the centerline of the easement, while the water line is drawn 10 feet southerly of and parallel with the easement centerline.

15.4 ORCA Communications, Inc. (Tribal One Broadband Technologies, LLC)

ORCA Communications, Inc. was contacted for the Utilities Investigation Report and at an on-site meeting reported that it has fiber optic inner-ducts crossing Coos Bay inside the 10-inch HDPE sewer line constructed by the City of Coos Bay Public Works Department. The locations of the 10-inch HDPE sewer-line hand holes on the west and east sides of Coos Bay were identified during the meeting. It was also confirmed that the fiber optic inner-ducts do not include an inductive tracer system.

On each side of the crossing, a metal fishtape was inserted into the hand hole and fed through the HDPE pipe as far as possible. The fishtape was then energized, and the utility was traced on the surface. Approximate burial depths were observed and marked on the ground for the land surveying operation. A DEA land surveyor collected horizontal positions, and the depth converted to an approximate burial depth of -90 feet MLLW (-91 feet NAVD88).

15.5 City of North Bend Public Works Department (Airport Outfall)

The City of North Bend Public Works Department was contacted for the Utilities Investigation Report, and its engineering department provided PDF copies of mapping of its utility inventory, including the wastewater treatment plant outfall entering the bay from under the Southwest Oregon Regional Airport – North Bend. This outfall was mapped during the DEA bathymetric survey conducted in December 2016 and was found to be in three disconnected segments.

16. HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE OR OTHER CONTAMINANTS

The Phase I Site History Evaluation Report was revised in August 2023 in support of a Level 1 Site History data request by the Portland Sediment Evaluation Team (PSET). The intent of that report was to provide an update to the April 2019 Level 1 report that provided a basis for assigning a ‘very low’ ranking to proposed sediment dredging associated with the 2017 Proposed Alteration.

A unique factor for this Level 1 Site History Evaluation is that previous subsurface exploration work has consistently documented the presence of predominantly sand and/or Paleogene-age marine sedimentary rock in the area of the 2023 PA. Sand and sedimentary rock do not accumulate contaminants in the marine estuarine environment. In November 2021, the US Army Corps completed a sediment characterization investigation for the Coos Bay Federal Navigation Channel (RM1 to RM 13) and the Charleston Side Channel. The Sampling and Analysis plan for this work designated the channel as ‘very low’ rank and the Charleston Side Channel as ‘low’. Review of regulatory database records did not reveal additional significant landside contamination sources beyond those previously identified in the April 2019 Level 1 report. The information reviewed and analyzed for this 2023 update report did not reveal new contaminant sources since the April 2019 Level 1 report. A new PSET Suitability Determination Memorandum (SDM) was pending completion at the time of writing.

17. ZONING ORDINANCES PROPOSED

The following potential permits and approvals would be needed for the proposed project:

- Coos County major plan amendment to change the designation of the proposed new boundaries of the FNC to DDNC-DA.
- Coos County conditional use permits for project uses and/or activities.
- City of Coos Bay major plan amendment to change the designation of the proposed new boundaries of the FNC to DDNC-DA.
- City of Coos Bay conditional use permit for new and maintenance dredging.

The Coos Bay Estuary Management Plan of 1983 (CBEMP) regulates uses and activities on land and in water within the Coos Bay estuary where project actions would occur, including most of the North Spit and all of Lower Coos Bay, both within and outside of the Coos Bay channel as designated by Congress. The CBEMP guides development, protection, and conservation activities within the Coos Bay estuary based on the general bay-wide policies set forth in the plan. Allowed uses and activities, whether outright or conditional, in zoning districts are subject to compliance with applicable CBEMP policies.

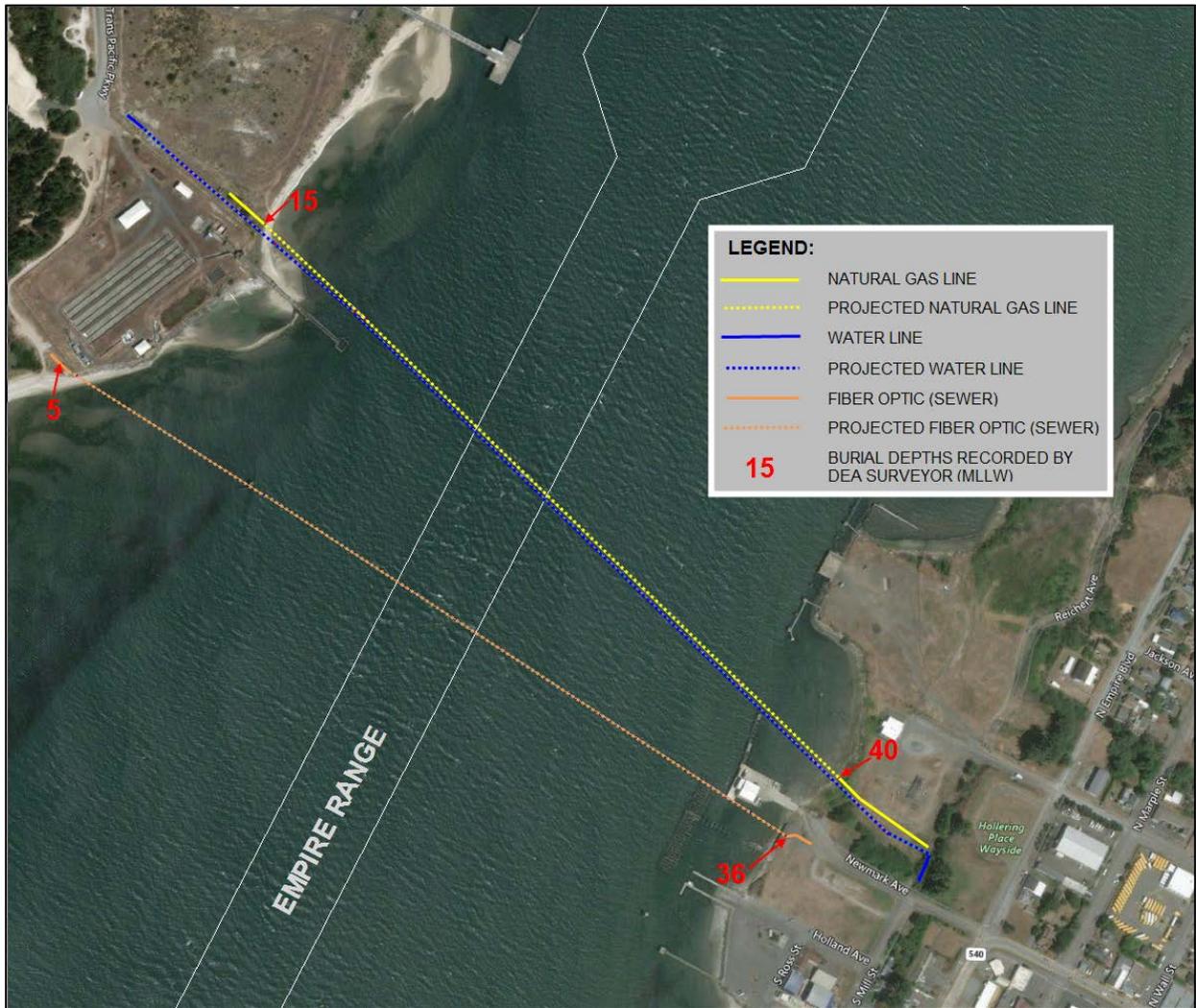
18. LANDOWNER SUPPORT/OPPOSITION

Except for the land parcel owned by OIPCB, there are no landowners with real estate impacts associated with this project. The Port, as the non-federal sponsor, is supportive and in favor of the project. Therefore, no resistance to the project in the context of real estate requirements is expected.

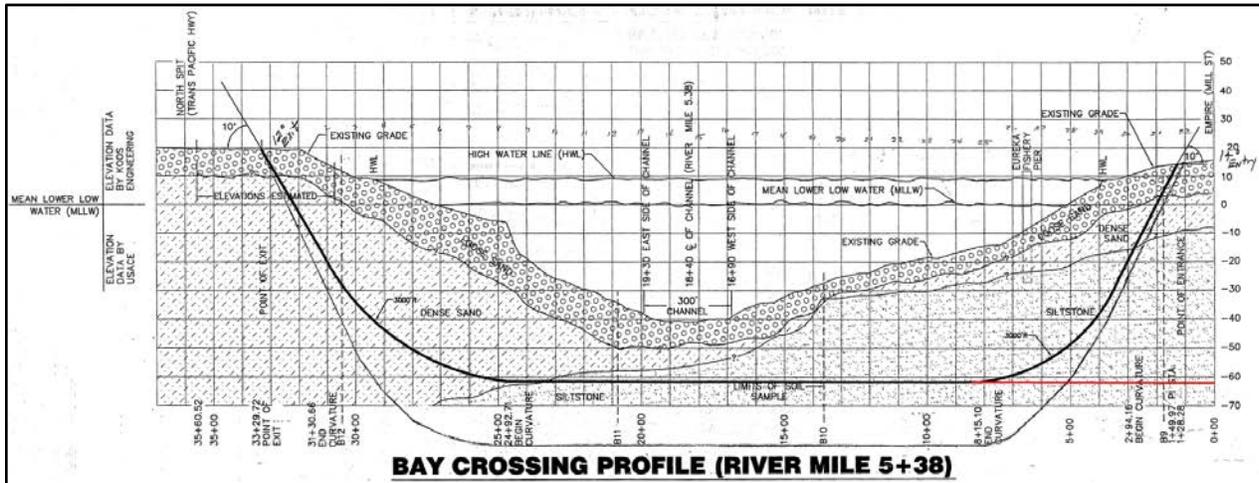
19. SPONSOR NOTIFICATION OF RISKS

Sponsor notification of risks is not applicable, because no real estate costs are anticipated for the project.

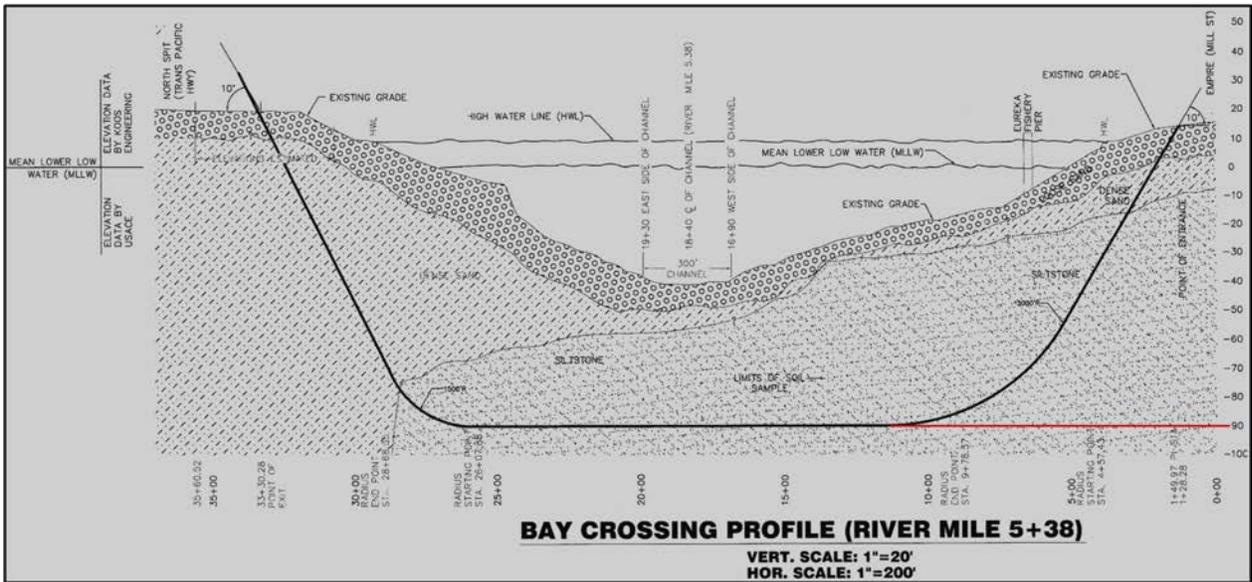
ATTACHMENT A: UTILITY MAPS



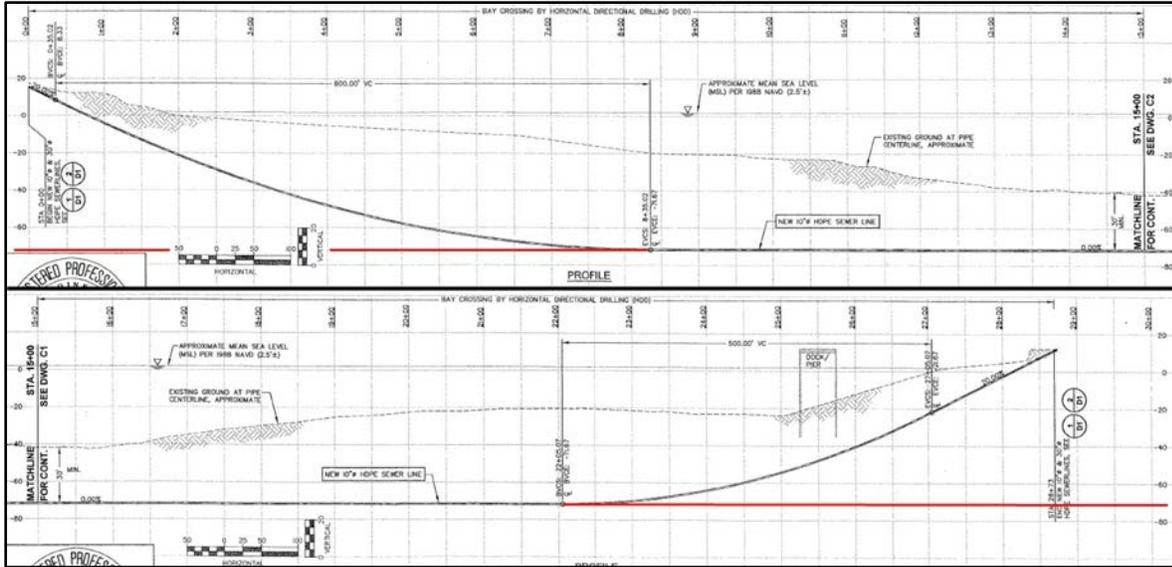
Aerial imagery illustrating utility crossings



Gas-line profile from final design plans



Water-line profile from as-built plans



Sewer-line crossing profiles from contract plans