



WASHINGTON STATE

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2}

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.



US Army Corps of Engineers®
Seattle District

AGENCY USE ONLY

Date received:

10/12/16

Agency reference

#: _____

Tax Parcel #(s): _____

Part 1—Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [\[help\]](#)

Mouth of the Columbia River (MCR) – North Jetty (NJ) Major Rehabilitation (Rehab)

Part 2—Applicant

The person and/or organization responsible for the project. [\[help\]](#)

2a. Name (Last, First, Middle)

Joyce E. Casey.

2b. Organization (If applicable)

U.S. Army Corps of Engineers (Corps), Portland District Civil Works

2c. Mailing Address (Street or PO Box)

P.O. Box 2946

2d. City, State, Zip

Portland, OR 97208-2946

2e. Phone (1)

(503) 808-4760

2f. Phone (2)

(503-808-4784)

2g. Fax

(503) 808-4375

2h. E-mail

Joyce.E.Casey@usace.army.mil

Part 3—Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [\[help\]](#)

3a. Name (Last, First, Middle)—Not Applicable

¹Additional forms may be required for the following permits:

- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at <http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/EndangeredSpecies.aspx>.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

²To access an online JARPA form with [\[help\]](#) screens, go to

http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@ora.wa.gov.

Same as above

3b. Organization (If applicable)

3c. Mailing Address (Street or PO Box)

3d. City, State, Zip

3e. Phone (1)

3f. Phone (2)

3g. Fax

3h. E-mail

Part 4—Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [\[help\]](#)

- Same as applicant. (Skip to Part 5.)* * The staging area and lay down yard for the project is owned by the United States under control of the US Army Corps of Engineers (Corps) and Leased to Washington State Parks and Recreation. It is operated as Cape Disappointment State Park.
- Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)
- There are multiple upland property owners. Complete the section below and fill out [JARPA Attachment A](#) for each additional property owner.
- Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete [JARPA Attachment E](#) to apply for the Aquatic Use Authorization. – All work to be completed on this project will fall under Navigational Servitude. **A letter to Washington State Department of Natural Resource (DNR) will be sent out informing them of Navigational Servitude claim (JARPA Attachment E—Not Applicable).**

4a. Name (Last, First, Middle)

4b. Organization (If applicable)

4c. Mailing Address (Street or PO Box)

4d. City, State, Zip

4e. Phone (1)

4f. Phone (2)

4g. Fax

4h. E-mail

()

()

()

Part 5—Project Location(s)

Identifying information about the property or properties where the project will occur. [\[help\]](#)

- There are multiple project locations (e.g. linear projects). Complete the section below and use [JARPA Attachment B](#) for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [\[help\]](#)

- Private
- Federal
- Publicly owned (state, county, city, special districts like schools, ports, etc.)
- Tribal
- Department of Natural Resources (DNR) – managed aquatic lands (Complete [JARPA Attachment E](#)) – All work to be completed on this project will fall under Navigational Servitude. A letter to Washington State DNR will be sent out informing them of Navigational Servitude claim (JARPA Attachment E—Not Applicable).

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [\[help\]](#)

North Jetty at the Mouth of the Columbia River in Cape Disappointment State Park

5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [\[help\]](#)

Ilwaco, WA 98624

5d. County [\[help\]](#)

Pacific

5e. Provide the section, township, and range for the project location. [\[help\]](#)

| ¼ Section | Section | Township | Range |
|----------------------------------|----------|----------|-----------|
| SE & SW of Sec 8 NE of Sec 17 | 8 and 17 | 9N | 11W, W.M. |

5f. Provide the latitude and longitude of the project location. [\[help\]](#)

- Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83)

46.2757 N. Lat. / - 124.0675 W. Long.

5g. List the tax parcel number(s) for the project location. [\[help\]](#)

- The local county assessor's office can provide this information.

09110550002

5h. Contact information for all adjoining property owners. (If you need more space, use [JARPA Attachment C.](#)) [\[help\]](#)

| Name | Mailing Address | Tax Parcel # (if known) |
|---|--|-------------------------|
| State of Washington / Parks & Rec. | P.O. Box 42650 Olympia, WA 98504 | |
| Washington State Dept. of Natural Resources | 1111 Washington Street S.E. Olympia, WA 98501 | |

5i. List all wetlands on or adjacent to the project location. [\[help\]](#)

Table 1. Non-tidal wetlands within proximity of project between Jetty Road and lagoon and near culvert

| Wetland ID | Wetland Area (acres) | Buffer Width (feet) (Based on Pacific Co. Codes, which are wider than DOE's) | Category | Classification (Cowardin) |
|------------|----------------------|--|----------|---|
| NJ17 | 0.012 | 50 | III | Palustrine forested broad-leaved deciduous (PFO) |
| NJ20 | 0.003 | 50 | III | Palustrine emergent nonpersistent (PEM) |
| NJ22 | 0.036 | 50 | III | Palustrine forested broad-leaved deciduous (PFO) |
| NJ23 | 0.337 | 50 | III | Palustrine forested broad-leaved deciduous (PFO) |
| NJ27 | 0.062 | 25 | IV | Palustrine forested needle-leaved evergreen (PFO) |
| NJ21 | >2.612 | 75 | II | Palustrine forested broad-leaved deciduous (PFO) |

Table 2. Intertidal wetlands within proximity of project limits

| Wetland ID | Wetland Area (acres) | Buffer Area (feet) | Category | Classification (Cowardin) |
|---------------------------------------|----------------------|--------------------|----------|--|
| NJ24 | 0.018 | 100 | I | Estuarine emergent persistent regularly flooded (E2EM1N) |
| NJ25 | 0.041 | 100 | I | Estuarine emergent persistent regularly flooded (E2EM1N) |
| NJ26 | 0.070 | 100 | I | Estuarine emergent persistent regularly flooded (E2EM1N) |
| New Wetland from Reclaimed Borrow Pit | ~3 | 100 | I | ASSUMED/in establishment phase- Estuarine emergent persistent regularly flooded (E2EM1N) |

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [[help](#)]

MCR, Pacific Ocean, McKenzie Head Lagoon and wetland complex. -- The McKenzie Head Lagoon and wetland complex north of Jetty Road has hydraulic exchange with the Columba River through the jetty. The lagoon intermittently connects to via an intertidal ditch that flows through the culvert under Jetty Road. The Corps is not proposing any work in any of the wetlands on either side of the Jetty Road.

5k. Is any part of the project area within a 100-year floodplain? [\[help\]](#)

Yes No Don't know – Area was NOT included in Federal Emergency Management Agency (FEMA)-issued FIRM Flood Maps; though portions likely are inundated during 100-yr events.

5l. Briefly describe the vegetation and habitat conditions on the property. [\[help\]](#)

Scattered conifers and minor deciduous tree components. Vegetation primarily consists of Scotch Broom and European beach grass. There is a narrow fringe of emergent marsh vegetation between intertidal and upland zones near the intertidal ditch. A few scattered conifers and pockets of deciduous scrubs have established a foothold atop the jetty.

Five non-tidal wetlands remain between Jetty Road and the lagoon. Four of these have been classified as palustrine forested broad-leaved deciduous, containing shrubs, small trees, grass-like groundcover and yellow skunk cabbage. The remaining wetland is classified as palustrine emergent, containing grass-like ground cover.

Four tidal wetlands exist along the channel downstream of the culvert under Jetty Road. These wetlands support sedges, rushes, (species such as *Juncus balticus*, *Carex obnupta*, *Picea sitchensis*, *Lysichiton americanus*) fringing the tidal channel, transitioning to European beachgrass and then to Scot's broom at higher elevations. The reclaimed borrow pit from the Lagoon Fill project was planted with a palette of native species.

5m. Describe how the property is currently used. [\[help\]](#)

The project site is bounded on its south side by the MCR and the 2.5 Mile-long NJ. The upland property north of the jetty is leased to the Washington State Parks and Recreation Commission and is operated as Cape Disappointment State Park. The park includes camping facilities, two lighthouses, an interpretive center and ocean beach access. Jetty Road, an asphalt-surfaced road, roughly parallels the NJ and provides access to two paved parking areas and to Benson Beach, an ocean beach area at the west end of Jetty Road. Drainage from McKenzie Head Lagoon, to the north of Jetty Road, passes under the road through a 48" dia. culvert and then surface drains south to and through the jetty. The area is part of the Cape Disappointment State Park, and is used by beach recreationalists for hiking, bird watching, fishing, and beach access. (See Figure 2: MCR North Jetty and Cape Disappointment State Park.



Figure 2: MCR North Jetty and Cape Disappointment State Park.

5n. Describe how the adjacent properties are currently used. [\[help\]](#)

Adjacent property to the southeast is a U.S. Coast Guard search and rescue station.

Property to the northwest is owned by the Washington State Parks and Recreation Commission and is an extension of Cape Disappointment State Park. Other parcels to the north are classified as forest land or undeveloped land. One parcel to the northeast is formerly undeveloped land which has been divided into building lots and contains some single family residences.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [\[help\]](#)

The park entrance area is serviced by electric power and domestic water, which do not extend to the project area. A paved road from near the park entrance provides access to a campground area in the northwest part of the park. The Jetty Road, asphalt-paved, runs along the north side of the project area and provides access to a paved parking lot near the easterly limit of the project and to another paved parking lot at Benson Beach, the ocean beach near the westerly limit of the project. A 48" dia. culvert carries drainage under Jetty Road from McKenzie Head Lagoon to the north. Structures on the property, but not near the actual project site, include a small store, park entrance and restroom buildings and miscellaneous small park storage buildings and sheds. Other structures appear to be in serviceable condition. There is also an unpaved parking area and access road just north of the Jetty Road between the eastern and westernmost parking lots.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [\[help\]](#)

From the intersection of First Avenue and Spruce Street W. (Hwy 101) in the City of Ilwaco, travel west one block on Spruce Street and turn left (south) on Second Avenue S.W. Second Avenue becomes Robert Gray Drive (Loop 100). Follow Robert Gray Drive to the southwest, entering Cape Disappointment State Park. After approximately 2.7 miles from the Ilwaco starting point, Robert Gray Drive becomes Coast Guard Road. Follow Coast Guard Road to the south for approximately 0.7 miles to an intersection with Jetty Road. Turn right (southwest) onto Jetty Road for approximately 0.4 miles, which will be the easterly limit of the project at Station 16+50.

Part 6—Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [\[help\]](#)

See Appendix A—MCR NJMR JARPA Exhibits (11 Pages)

The Proposed Action consists of scheduled repairs and head stabilization through the addition of stone to fortify the jetty to a base condition such that the jetty would seldom require maintenance over the next 50 years. The Project will also require construction access improvements, the creation of construction staging/stockpiling/laydown areas, delivery of construction materials, and construction of a barge off-loading facility.

Stone delivery to the project staging could begin in fall 2017. It is further anticipated that stone placement on the jetty will begin in April/May of 2018 through October of 2018, followed by a similar schedule in 2019 with site restoration activities possible extending into Spring of 2020.

6b. Describe the purpose of the project and why you want or need to perform it. [\[help\]](#)

The project purpose is to rehabilitate the NJ by conducting schedule repairs (new stone placement) and stabilizing the jetty head to help maintain deep-draft navigation through the Lower Columbia River deep draft navigation channel. This rehabilitation effort is intended to ensure the NJ functions as intended for the next fifty years with only minor maintenance required during that period.

This project is needed to mitigate the ongoing deterioration of the entire MCR jetty system which is jeopardizing the integrity of the commercial deep-draft navigation channel from the Pacific Ocean into the Columbia River.

Additional portions of the NJ have substantially degraded since its construction, and damage has increased in recent years because of increased storm activity and ongoing loss of sand shoal material upon which the jetty is constructed. The jetty was originally 2.0 miles in length and has been reduced by approximately 2,120 feet since its construction. Without action, the NJ is expected to continue to deteriorate at a rate of 20 to 50 feet per year. Sporadic repairs have occurred to address immediate needs, including the CR conducted in 2015, but according to the National Environmental Policy Act (NEPA) final Environmental Assessment (EA) for the MCR project, "Additional modifications and repairs to the jetties are necessary to address important near- and long-term needs to keep the jetties functioning at an acceptable reliability and to reduce the potential for emergency repairs, emergency dredging, and impacts to navigation" (Ref. Major Rehabilitation of the Jetty System at the Mouth of the Columbia River, USACE 2012).

6c. Indicate the project category. (Check all that apply) [\[help\]](#)

- Commercial Residential Institutional(Federal Navigation Structure) Transportation
 Maintenance Recreational
 Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply) [\[help\]](#)

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Aquaculture | <input type="checkbox"/> Culvert | <input type="checkbox"/> Float | <input type="checkbox"/> Retaining Wall (upland) |
| <input type="checkbox"/> Bank Stabilization | <input type="checkbox"/> Dam / Weir | <input type="checkbox"/> Floating Home | <input checked="" type="checkbox"/> Road – ramp and access road on top of jetty |
| <input type="checkbox"/> Boat House | <input checked="" type="checkbox"/> Dike / Levee / Jetty | <input type="checkbox"/> Geotechnical Survey | <input type="checkbox"/> Scientific Measurement Device |
| <input type="checkbox"/> Boat Launch | <input type="checkbox"/> Ditch | <input checked="" type="checkbox"/> Land Clearing | <input type="checkbox"/> Stairs |
| <input type="checkbox"/> Boat Lift | <input type="checkbox"/> Dock / Pier | <input type="checkbox"/> Marina / Moorage | <input type="checkbox"/> Stormwater facility |
| <input type="checkbox"/> Bridge | <input type="checkbox"/> Dredging | <input type="checkbox"/> Mining | <input type="checkbox"/> Swimming Pool |
| <input type="checkbox"/> Bulkhead | <input type="checkbox"/> Fence | <input type="checkbox"/> Outfall Structure | <input type="checkbox"/> Utility Line |
| <input type="checkbox"/> Buoy | <input type="checkbox"/> Ferry Terminal | <input type="checkbox"/> Piling/Dolphin | |
| <input type="checkbox"/> Channel Modification | <input type="checkbox"/> Fishway | <input type="checkbox"/> Raft | |

Other: Large Stone Staging and Stockpiling

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [\[help\]](#)

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

Ref. North American Vertical Datum, 0 ft., NAVD88 = -0.25 ft. (-0.077m.) Mean Low Low Water (MLLW)

Mobilization – including clearing, staging, ramp construction, barge offloading facility and stockpiling

Areas requiring construction will be cleared of vegetation and leveled by mechanical equipment. The contractor will be allocated an approximately 18-acre area for their onsite use during execution of NJMR operations, for which approximately 15 acres is available for stockpiling/storing jetty armor stone. See Figures.

The existing Jetty Road on the north side of the jetty will be used to access two ramps up to the jetty and points of entry to the staging area near the north face of the jetty. It is anticipated that either trucks will be used to transport large jetty armor stone from nearby quarries or barges will deliver directly to the jetty. In the case of utilizing barge transportation a third ramp will be built on the north side of the jetty adjacent to the barge off-loading facility. The access ramps will be constructed on the landward side of the Jetty near STA 16+50 and STA 63+00 utilizing shot rock and quarry waste material that will be removed upon construction completion. The barge offloading facility access ramp would be built between STA 40+00 and STA 43+00. The ramps are likely to be constructed using a combination of dump trucks, front end loaders, excavators and graders.

The barge offloading facility would occupy an area of approximately 100 'x100', with a profile elevation that would range from + 15' to -30'; placed entirely upon the current jetty structure and partially up to 20' seaward on relic jetty foundation materials; and composed entirely of large structural rock with the seaward terminus being constructed as a vertical face. **There will be no new rock placement on undisturbed seabed.** If constructed this feature will be left in-place as a permanent feature of the NJ following completion of construction. (See Appendix A--Exhibits)

Jetty Repairs

The placement of individual jetty stones will be accomplished using a Crane and possibly an Excavator with articulating claw while located on or adjacent to the jetty. Stone will be transported to Crane and Excavators by haul trucks from staging area.

Columbia River/Pacific Ocean

STA 16+50 to STA 99+00-- Repair Transition and Access STA 16+50 to STA 20+00

Jetty Root STA 20+00 to STA 50+50

Jetty Trunk STA 98+50 to STA 99+00

Jetty Head STA 99+00 to STA 102+00

The cross-section template will feature a 30-ft crest width at elevation of approximately 25 ft MLLW. Side-slope aspect for the repair cross-section will be 1v:1.5h along the jetty trunk and root. The jetty head stabilization feature beginning at approximate STA 99+00 will feature a 40 foot crest at approximately 25 ft MLLW with the slope breakpoint beginning at STA 101+20 and slope aspect of 1v:2h. The jetty head will have a toe berm feature that is 18 feet wide and at a top elevation of approximately 6.5 ft MLLW. Prior to placement of the new jetty head toe berm, the existing relic stone will be moderately reworked to ensure adequate contact between the existing and new stone is achieved.

To implement the Major Rehabilitation from the jetty crest~ (25 ft MLLW), crane-type rock placement equipment will need to have a lateral reach capability of 80 to 90ft distance from the jetty centerline in order to re-work existing jetty material and to place new armor stone at -6 ft MLLW. Rock placement rates (for armor stone placed on the jetty) are anticipated to be 600 to 1200 tons/day.

A haul road and two turn-outs on top of the existing jetty prism will be constructed (includes the placement of smaller stone materials in order to fill void spaces between the larger armor stones to create an appropriate road surface.)

Site Restoration

Upon completion of the major rehabilitation, disturbed areas will be restored and stabilized, including those that will be transitioned into staging and storage areas for the future rehabilitation actions. This would involve native interdunal plantings.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [\[help\]](#)

- If the project will be constructed in phases or stages, use [JARPA Attachment D](#) to list the start and end dates of each phase or stage.

Start date: September, 2017 End date: December May, 2020 See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [\[help\]](#)

Approx. \$79.8 million

6h. Will any portion of the project receive federal funding? [\[help\]](#)

- If **yes**, list each agency providing funds.

Yes No Don't know U.S. Army Corps of Engineers, Portland District

Part 7–Wetlands: Impacts and Mitigation

- Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [\[help\]](#)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [\[help\]](#)

Not applicable

Through the use of best management practices such as adequate construction buffers, silt fencing, and/or straw bales, it is not expected that any of the wetlands near the Jetty Road will be impacted. The Corps had designed the North Jetty Lagoon Fill Project in such a manner as to ensure that future projects such as the NJ CR and the NJ MR would avoid wetlands

All wetlands north of Jetty Road, the palustrine wetlands south of the road, and the four intertidal wetlands located along the stream channel downstream of the culvert outlet will remain undisturbed. Wetland buffers for these wetlands will not be impacted. This approach to avoid, minimize and mitigate effects is consistent with the Wetlands policies. The 100 foot wetland buffer for the newly constructed Lagoon Fill tidal wetland will not be impacted as a result of the rehabilitation of the NJ. It should be noted, however, that this wetland is within 50 feet at the closest point of the existing paved park road (construction access), 65 feet at the closest point to the existing paved park east parking lot and directly adjacent to the existing stone access road constructed during the Lagoon Fill project. These existing paved and stone areas will be used but not disturbed.

As a result, the Corps will avoid all impacts to wetlands and their buffers and will implement appropriate storm water controls per its compliance with the Clean Water Act (CWA) Section 402 EPA Construction General Permit. The approach to avoid, minimize and mitigate effects is consistent with the Wetlands policies.

7b. Will the project impact wetlands? [\[help\]](#)

Yes No Don't know

7c. Will the project impact wetland buffers? [\[help\]](#)

Yes No Don't know

7d. Has a wetland delineation report been prepared? [\[help\]](#)

- **If Yes**, submit the report, including data sheets, with the JARPA package.

Yes No Delineation Report and Ratings were previously submitted on February 5, 2014 to WDOE (Rick Mraz), on-file with the agency, and approved by DOE on April 30, 2014. Additional copies are available upon request.

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [\[help\]](#)

- **If Yes**, submit the wetland rating forms and figures with the JARPA package.

Yes No Don't know Delineation Report with ratings was previously submitted to WDOE (Rick Mraz) on February 5, 2014 and approved April 30, 2014. Additional copies are available upon request.

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [\[help\]](#)

- **If Yes**, submit the plan with the JARPA package and answer 7g.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

Yes No Not applicable

The project is avoiding all wetland impacts and therefore the Corps is not proposing mitigation.

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [\[help\]](#)

NA – no compensatory mitigation required. The Corp will implement BMPs during construction, and site restoration upon completion of the project.

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [\[help\]](#)

| Activity (fill, drain, excavate, flood, etc.) | Wetland Name ¹ | Wetland type and rating category ² | Impact area (sq. ft. or Acres) | Duration of impact ³ | Proposed mitigation type ⁴ | Wetland mitigation area (sq. ft. or acres) |
|---|---------------------------|---|--------------------------------|---------------------------------|---------------------------------------|--|
| NA | | | | | | |
| | | | | | | |
| | | | | | | |

If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.

² Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.

³ Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.

⁴ Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available:

[NA](#)

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [\[help\]](#)

NA

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [\[help\]](#)

NA

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, “waterbodies” refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [\[help\]](#)

Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [\[help\]](#)

Not applicable

The NJ is located within waters of the U.S. other than wetland and is a navigation structure at the MCR in the Pacific Ocean.

The project will focus on preserving the rubble-mound structure that comprises the NJ to assure the continued protection of the jetty trunk structure and terminus from wave attack from the Pacific Ocean and the Columbia River. The NJ is particularly critical in maintaining the existing location of the federal navigation channel and the Mouth of the River itself. Recession of the jetty head or terminus also is linked to recession and erosion of Benson Beach/Peacock Spit. By preserving the existing length of the jetty via Scheduled Repairs under the Major Rehabilitation program, it is anticipated that this may also arrest the loss of Benson Beach.

Placement of road material and large jetty armor stone are not anticipated to create turbidity, as armor stone will be large, clean fill. The Corps is requiring the use of equipment equivalent to Wiggins Fast-fuel systems which reduce the risk of a spill or leak when refueling stationary equipment on top of the jetty. The Corps will also require equipment on the jetty to use Environmentally Acceptable Lubricants (EAL), as appropriate. In addition, a Water Quality Protection and Monitoring Plan (WQPPM) and a Storm Water Pollution Prevention Plan (SWPPP) have been prepared for this project to reduce/avoid temporary impacts to the Columbia River (Both documents are components of this submittal.) The Contractor will also be required to prepare and implement a Spill Prevention and Response Plan.

Best Management Practices (BMPs) that will be implemented include requiring equipment working on the jetty to convert to Environmentally Acceptable Lubricants, silt fences, appropriate staging and refueling areas and wetland buffers, and erosion and sediment control practices. The Corps will request use of the Construction General Permit from EPA and comply with the conditions therein. Vehicle staging, cleaning, maintenance, refueling, and fuel storage shall take place in a vehicle staging area placed 150 feet or more from any stream, wetland, and mean higher high water (MHHW). The fueling area will be double lined. Daily monitoring will occur to ensure there are no leaks. Oil absorbing pads, drip pans, or similar devices will be placed beneath the equipment when working in waters or staged overnight to catch any leakage. The Corps also will require the contractor develop and comply with a Spill Prevention and Response Plan, and will make the plan available to WDOE.

8b. Will your project impact a waterbody or the area around a waterbody? [\[help\]](#)

Yes No

8c. Have you prepared a mitigation plan to compensate for the project’s adverse impacts to non-wetland waterbodies? [\[help\]](#)

- If Yes, submit the plan with the JARPA package and answer 8d.
- If No, or Not applicable, explain below why a mitigation plan should not be required.

Yes No Not applicable

The Corps is placing fill on top of the existing jetty prism that comprises the navigation structure. While there may be widened areas of the jetty to serve as turn-outs constructed to accommodate safe passage of equipment transiting on top of the jetty, the Corps is not proposing major fill excursion beyond the existing navigation structure or relic armor stone that has been flattened by wave actions. One exception to the above could be if the construction contractor determines that it will utilize barge transportation for rock material. In that event a barge off-loading facility with a maximum foot print of 100’ x 100’ would be constructed between

STA 40+00 and STA 43+00. The foot print could have up to a maximum impact to an area of 0.23 ac. The McHugh Demonstration Project Bank on the Long Beach Peninsula will be utilized as approved by WDOE. Replaced as 0.33 ac to 1.0 ac impact.

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [\[help\]](#)

The mitigation plan briefly describes the use of the McHugh Demonstration Project credits providing 0.0759 ac replacement for potential losses/effects if the NJ MR barge off-loading facility is constructed.

8e. Summarize impact(s) to each waterbody in the table below. [\[help\]](#)

| Activity (clear, dredge, fill, pile drive, etc.) | Waterbody name ¹ | Impact location ² | Duration of impact ³ | Amount of material (cubic yards) to be placed in or removed from waterbody | Area (sq. ft. or linear ft.) of waterbody directly affected |
|---|--|-------------------------------------|---------------------------------|--|---|
| Repair transition and Access, Jetty Root, Jetty Trunk | Pacific Ocean and Lower Columbia River | STA 16+50 to 99+00 | Permanent | 89,500 Tons 205,402 cy | ~6,500 feet of jetty length, |
| Jetty Head | | 99+00 to 100+00 100+00 to 102+00 | | 11,500 Tons 52,110 cy 22,000 Tons 814.81 CYs | |
| Barge Off-Loading | Columbia River | 100' between STA 40 and STA 43 | | To be determined if required; replacement to utilize approved non-wetland McHugh Demonstration Project Bank (Replacement 0.33 ac to 1.0 ac impact— 1/3 to 1) | |

¹ If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.

² Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.

³ Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [\[help\]](#)

(See Appendix A—MCR NJMR JARPA Exhibits—Page 2).

Fill Material: Individual Jetty Stones, 4 to 28 Tons each, basalt or rock equivalent in density, 170/185 Pound Per Cubic Foot (PCF). Shot rock and Quarry waste for ramps and road on top of jetty. Total Estimated Cubic Yards of new Jetty Stone: 284,209

Barge Off-Loading Facility material 4 to 28 Tones each, basalt or rock equivalent density (170/185 PCF). Shot rock and quarry waste for ramps and road on top of jetty.

Total Estimated Cubic Yards of potential Barge Off-Loading Facility: To Be Determined (Maximum impact are equal to or less than 100' x 100' foot print.)

Stone Placement Operation: Crane and Excavator stone placement while located on or adjacent to the jetty. Stone will be transported to Crane and Excavators haul trucks from staging area.

Locations:

Columbia River/Pacific Ocean - STA 16+50 to STA 102+00, Columbia River – STA 20+00 to STA 50+50, Columbia River-Maximum of 100' between STA 40 and STA 43

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [\[help\]](#)

NA

Part 9—Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [\[help\]](#)

| Agency Name | Contact Name | Phone | Most Recent Date of Contact |
|-------------------|------------------|------------------|-----------------------------|
| WDOE | Rick Mraz | (360) 407-6221 | Spring 2016 |
| WDNR | Rick Shwartz | (360) 740-6834 | Spring 2016 |
| Corps-Portland | Jerry Otto | (503) 808-4983 | September 2016 |
| Corps-Portland | Rob Waldman | (503) 808-4784 | September 2016 |
| Corps-Portland | Patti Clinton | (503) 808-4771 | Spring 2016 |
| Corps-Portland | Michelle Rhodes | (503) 808-4853 | September 2016 |
| Corps-Portland | Chris Humphrey | (503) 808-4982 | September 2016 |
| Corps-Portland | Barbara Cisneros | (503) 808-4784 | Summer 2016 |
| Corps-IRT Seattle | Gail Terzi | (206) 764-6903 | Spring 2016 |
| Corps-Seattle | Ron Wilcox | (206) 316-3893 | Spring 2016 |
| USFWS | Kathy Roberts | (503) 231-6179 | Spring 2016 |
| NMFS | Jeff Fisher | (360) 534-9342 | Spring 2016 |

| | | | |
|-------------------------|-----------------|----------------|----------------|
| NMFS, DC | Benjamin Law | (301) 427-8425 | Spring 2016 |
| NOAA Fisheries, Seattle | Teresa Mongillo | (206) 526-4749 | Spring 2016 |
| NOAA Affiliate | Robert Pauline | (301) 427-8408 | Spring 2016 |
| WDAHP | Robert Whitlam | (360) 586-3080 | Spring 2016 |
| W Parks & Recreation | Evan Roberts | (360) 642-3078 | Spring 2016 |
| WDOE | Lori Kingsbury | (360) 407-6167 | September 2016 |
| WDFW | Amy Spoon | (360) 249-1228 | Spring 2016 |
| WDFW | Chris Conklin | (360) 249-1228 | Spring 2016 |

9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [\[help\]](#)

- If Yes, list the parameter(s) below.
- If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: <http://www.ecy.wa.gov/programs/wq/303d/>.

Yes No

Oregon and Washington have classified the lower Columbia River as water quality limited and placed it on the Clean Water Act Section 303(d) list for the following parameters: River Miles (RM) 0 to 35.2 for temperature and polychlorinated biphenyls (PCBs); RM 35.2 to 98 for arsenic, dichlorodiphenyl trichloroethane (DDT), PCBs, and temperature; and RM 98 to 142 for temperature, arsenic, DDT, PCBs, and polynuclear aromatic hydrocarbons (PAHs). In Washington, the river also is on the Section 303(d) list for dichloro-diphenyl-dichloroethane, Alpha BHC (a pesticide), mercury, dissolved gas, dieldrin, chlordane, aldrin, dichloro-diphenyldichloroethylene, fecal coliform, 4,4'-DDE, PCB, Arsenic, 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, and sediment bioassay. In addition, the entire river is subject to an EPA total maximum daily load (TMDL) for dioxin. The MCR is not 303(d) listed for turbidity.

9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [\[help\]](#)

- Go to <http://cfpub.epa.gov/surf/locate/index.cfm> to help identify the HUC.

17080006 Lower Columbia

9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [\[help\]](#)

- Go to <http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm> to find the WRIA #.

WRIA 24 Willapa

9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [\[help\]](#)

- Go to <http://www.ecy.wa.gov/programs/wq/swqs/criteria.html> for the standards.

Yes No Not applicable A Water Quality Protection and Monitoring Plan has been prepared and is submitted to WDOE with this JARPS application form.

9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [\[help\]](#)

- If you don't know, contact the local planning department.
- For more information, go to: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html.

Rural Urban Natural Aquatic Conservancy Other

9g. What is the Washington Department of Natural Resources Water Type? [\[help\]](#)

- Go to http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System.

Shoreline Fish Non-Fish Perennial Non-Fish Seasonal

9h. Will this project be designed to meet the Washington Department of Ecology's most current storm water manual? [\[help\]](#)

- **If No**, provide the name of the manual your project is designed to meet.

Yes No Name of Manual:

The Corps is not proposing the addition of any impervious surfaces. The Corps will follow all conditions and requirements in the NPDES Construction General Permit issued by the Environmental Protection Agency for federal projects.

9i. Does the project site have known contaminated sediment? [\[help\]](#)

- **If Yes**, please describe below.

Yes No

There is no dredge or removal proposed. The Corps is placing two ramps in the upland shoreline, and will place road fill material and large jetty armor stone. The Corps does not anticipate any contaminated sediment issues.

9j. If you know what the property was used for in the past, describe below. [\[help\]](#)

The property did not exist previous to 1917, since it is formed from sands that accreted as a result of jetty construction. Since that time, the Corps has leased the property to the Washington State Parks and Recreation Commission and uses the project area for jetty maintenance.

9k. Has a cultural resource (archaeological) survey been performed on the project area? [\[help\]](#)

- **If Yes**, attach it to your JARPA package.

Yes No - The Corps coordinated with Washington Department of Archaeology and Historic Preservation (WDAHP) to determine potential coverage of existing surveys. The Corps Archaeologist performed a desktop review and evaluation and received concurrence with a No Adverse Effect Determination on Feb 8, 2016 (041414-13-COE-P). This assures Corps compliance with section 106 of the National Historic Preservation Act.

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [\[help\]](#)

Consultation was undertaken and completed with both the NMFS and the USFWS to address the potential for the rehabilitation/repair of the MCR Jetty System to cause the take of any species listed under the ESA or to affect designated critical habitat.

A Biological Assessment evaluating the MCR Jetty System was submitted to the NMFS in 2010 and modified on February 16, 2011. On March 18, 2011, NMFS issued a Biological Opinion (BO) (reference #2010/06104) concurring with the USACE's assessment that the proposed rehabilitation/repair project may affect, but is not likely to adversely affect the following species: Fin whale (*Balaenoptera physalus*); Southern Resident killer whale (*Orcinus orca*); Sperm whale (*Physeter macrocephalus*); Sei whale (*B. borealis*); Blue whale (*B. musculus*); Leatherback sea turtle (*Dermochelys coriacea*); Lower Columbia River (LCR) Chinook salmon (*O. tshawytscha*); Upper Willamette River (UWR) Chinook salmon (*O. tshawytscha*); Upper Columbia River (UCR) spring-run Chinook salmon (*O. tshawytscha*); Snake River (SR) spring/summer-run Chinook salmon (*O. tshawytscha*); SR fall-run Chinook salmon (*O. tshawytscha*); Columbia River (CR) chum salmon (*O. keta*); LCR coho salmon (*O. kisutch*); Oregon Coast coho salmon (*O. kisutch*); Southern Oregon/Northern California Coasts coho salmon (*O. kisutch*); SR sockeye salmon (*O. nerka*); LCR steelhead (*O. mykiss*); UWR steelhead (*O. mykiss*); Middle Columbia River steelhead (*O. mykiss*); UCR steelhead (*O. mykiss*); SR basin steelhead (*O. mykiss*); and Southern distinct population segment (DPS) green sturgeon (*Acipenser medirostris*)

The NMFS determined that the proposed action is not likely to jeopardize the continued existence of eulachon (*Thaleichthys pacificus*), Steller sea lions (*Eumetopias jubatus*), and humpback whales (*Megaptera novaeangliae*). For proposed critical habitat for eulachon, leatherback turtles and LCR coho salmon the Corps provided a conference report, and subsequent the BiOp, NMFS adopted the not likely to affect determination in the conference report when this habitat became designated.

The Corps (June 2015) has requested the issuance of a Marine Mammal Protection Act (MMPA) Letter of Authorization (LOA) for incidental harassment of marine mammals from activities associated with the major rehabilitation of the jetty system. (Revised Request available upon request.) The specific activity requiring the authorization is related to pile driving and removal – which may occur on North and South Jetties if a barge offloading facility is constructed. On August 25, 2016, NMFS published a notice in the Federal Register regarding the proposed issuance of a five-year MMPA Letter of Authorization (LOA) to the Corps for the harassment of small numbers of several species of marine mammals incidental to construction activities conducted during the major rehabilitation of the jetty system at the mouth of the Columbia River (81 FR 58443). The period of coverage begins May 1, 2017 and ends April 30, 2022. (ITA and LOA available upon request.)

A Biological Assessment (BA) was also submitted to the USFWS in 2011 evaluating potential effects of the jetty system rehabilitation/repair project. The Corps determined and USFWS concurred by letter dated February 23, 2011 (13420-2011-I-0082) that the project may affect but is not likely to adversely affect bull trout (*Salvelinus confluentus*) and its critical habitat, marbled murrelet (*Brachyramphus marmoratus*) and snowy plover (*Charadrius alexandrinus nivosus*). The Corps also made a no-effect determination for: short-tailed albatross (*Phoebastria albatrus*); northern spotted owl (*Strix occidentalis caurina*), Columbian White-tailed deer (*Odocoileus virginianus leucurus*), Oregon silverspot butterfly (*Speyeria zerene hippolyta*), streaked horned lark (*Eremophila alpestris strigata*), and Nelson's checkermallow (*Sidalcea nelsoniana*) and associated critical habitat.

During a March 25, 2016 webinar/conference call, NMFS and the USFWS were updated about the North Jetty rehabilitation to confirm the project remains within the scope of effects evaluated in the two BAs, the BO, and the LOA.

The Corps has developed a draft Hydroacoustic Monitoring Plan (Attached) which supports the ITS and LOA for the humpback whale. Approval by NMFS is expected by January 2017.

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [\[help\]](#)

According to the Washington Department of Fish and Wildlife's Priority Habitats and Species List (accessed on the web 4/24/2014), the following listings are applicable to the project area and could be indirectly or directly affected by the project due to their proximity to the proposed actions:

- Regular concentration of seabirds: brown pelican loafing site. 200 plus birds along end of North Jetty – birds could pass through the project area, which will be under construction for 1 season with work concentrated towards trunk and root;
- Regular concentration of shorebirds: concentration areas along end of north jetty – birds could pass through the project area, which will be under construction for 2 seasons with work concentrated towards trunk, root and head;
- Regular concentration of seabird: Cape Disappointment seabird breeding concentration – birds could pass through the project area; no work is planned for this area during any stage of repairs, or rehabilitation;
- Regular concentration of seabirds: McKenzie Head Seabird Concentration – birds could pass through the project area; no work is planned for this area during any stage of repairs, or rehabilitation;
- Estuarine intertidal aquatic habitat – the Corps increased intertidal habitat in the Lagoon Fill Project and is not proposing to affect wetlands during the Major Rehabilitation; jetty fill will be on top of existing rock fill; no new intertidal aquatic habitat effects/impacts will occur.
- Palustrine aquatic habitat: wetlands – the Corps will implement appropriate buffers and storm water controls and is not proposing to impact any wetlands in the area;
- Marine Intertidal aquatic habitat – the rehabilitation construction of the jetty will occur within the intertidal zone; all new jetty stone will be placed on the existing jetty structure or relic foundation; and the Corps has not planned to effect new sections of sea bed. Once exception could be the construction of a barge off-loading facility that could have a maximum effect on a footprint of 0.23 ac. The exact volume and quantities of this impact would be determined at the time of facility design by the contractor if it is required. The effect of this impact within the intertidal zone is seen as minimal/de minimis.

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at <http://apps.ecy.wa.gov/opas/>.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@ora.wa.gov.
- For a list of addresses to send your JARPA to, click on [agency addresses for completed JARPA](#).

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [\[help\]](#)

- For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.

A copy of the SEPA determination or letter of exemption is included with this application.

A SEPA determination is pending with _____ (lead agency). The expected decision date is _____.

I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [\[help\]](#)

This project is exempt (choose type of exemption below).

Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

Other: This is a federal project on federal land. A 2012 Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) have been prepared and meets SEPA requirements.

SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [\[help\]](#)

LOCAL GOVERNMENT

Local Government Shoreline permits:

Substantial Development Conditional Use Variance

Shoreline Exemption Type (explain): _____

Other City/County permits:

Floodplain Development Permit Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife: NA—Not Applicable for USACE MCR NJ Major Rehabilitation

- Hydraulic Project Approval (HPA) Fish Habitat Enhancement Exemption – [Attach Exemption Form](#)

Effective July 10, 2012, you must submit a check for \$150 to Washington Department of Fish and Wildlife, unless your project qualifies for an exemption or alternative payment method below. **Do not send cash.**

Check the appropriate boxes:

- \$150 check enclosed. Check # _____
Attach check made payable to Washington Department of Fish and Wildlife.
- Charge to billing account under agreement with WDFW. Agreement # _____
- My project is exempt from the application fee. (Check appropriate exemption)
- HPA processing is conducted by applicant-funded WDFW staff.
Agreement # _____
 - Mineral prospecting and mining.
 - Project occurs on farm and agricultural land.
(Attach a copy of current land use classification recorded with the county auditor, or other proof of current land use.)
 - Project is a modification of an existing HPA originally applied for, prior to July 10, 2012.
HPA # _____

Washington Department of Natural Resources: NA—Not Applicable for USACE MCR NJ Major Rehabilitation

- Aquatic Use Authorization
Complete [JARPA Attachment E](#) and submit a check for \$25 payable to the Washington Department of Natural Resources.
Do not send cash.

Washington Department of Ecology:

- Section 401 Water Quality Certification

FEDERAL GOVERNMENT

United States Department of the Army permits (U.S. Army Corps of Engineers): NA

- Section 404 (discharges into waters of the U.S.)--NA Section 10 (work in navigable waters)--NA

United States Coast Guard permits: NA

- Private Aids to Navigation (for non-bridge projects)

Corps Civil Works does not permit itself. Instead, a 404 (b) (1) evaluation (Attached) was prepared to evaluate all components of the major rehabilitation, which encompasses the work proposed at the North Jetty. The Corps has determined the action does not fit under a nationwide category, and is seeking individual Water Quality Certification.

Part 11—Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. [\[help\]](#)

11a. Applicant Signature (required) [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary compliance documents.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. _____ (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. _____ (initial)

Joyce Casey, Environmental Branch Chief, Corps

Applicant Printed Name

Applicant Signature

Date

11b. Authorized Agent Signature [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Authorized Agent Printed Name

Authorized Agent Signature

Date

11c. Property Owner Signature (if not applicant) [\[help\]](#)

Not required if project is on existing rights-of-way or easements.

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

U.S. Army Corps of Engineers, Portland District

Property Owner Printed Name

Property Owner Signature

Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.

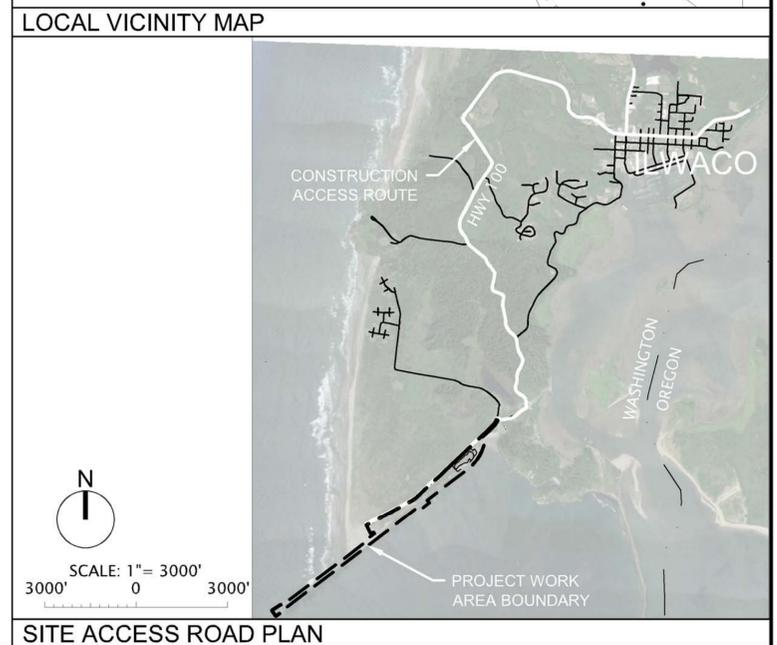
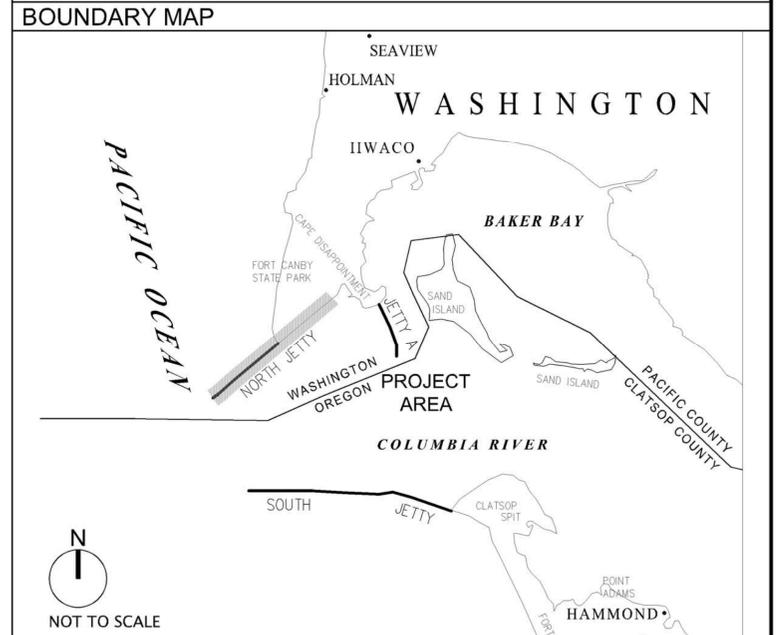
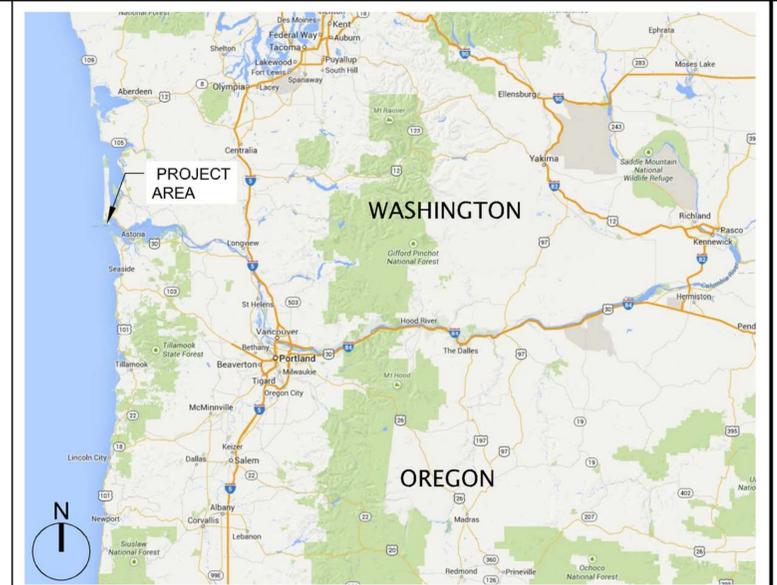
If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ENV-019-09 rev. 08/2013

| SURVEY CONTROL TABLE | | | |
|----------------------|-----------|------------|-----------|
| Description | Northing | Easting | Elevation |
| NJPC1 | 974251.67 | 7302565.78 | 22.43 |
| NJPC2 | 973391.88 | 7302824.75 | 47.32 |
| NJPC3 | 972509.87 | 7301973.50 | 21.71 |
| NJPC4 | 971447.59 | 7300809.55 | 23.34 |
| NJPC5 | 970303.76 | 7298360.59 | 17.08 |
| NJPC6 | 969789.25 | 7298658.35 | 25.54 |
| 0574_D | 973307.10 | 7302858.63 | 24.55 |
| 16-17-06 | 973391.78 | 7302824.69 | 47.35 |
| 0574_C | 971498.69 | 7300461.37 | 15.72 |
| 0574_B | 970538.64 | 7299151.28 | 15.78 |
| 0574_A | 970213.36 | 7298531.96 | 16.28 |

- NOTE:
- ELEVATIONS SHOWN ARE A COMPOSITE OF THE MOST RECENT SURVEY DATA, AND MAY NOT REPRESENT CONDITIONS AT TIME OF CONSTRUCTION.
 - HORIZONTAL DATUM: NORTH AMERICA DATUM OF 1983 (NAD83 CORS96) PROJECTED TO THE OREGON NORTH ZONE STATE PLANE COORDINATE SYSTEM WITH UNITS IN INTERNATIONAL FEET.
 - VERTICAL DATUM: NAVD88 (2012A GEOID MODEL) WITH UNITS IN FEET



SITE MAP



SITE ACCESS ROAD PLAN



| | | | |
|---------------------------|--|------|------|
| P&S REVIEW 90% | | DATE | APPR |
| | | MARK | |

| | |
|---------------------------------------|-------------------|
| DESIGNED BY: RHODES, P.E. | DATE: |
| DRAWN BY: GREGORY, GEECHLO | SOLICITATION NO.: |
| SUBMITTED BY: JEREMY P. BRITTON, P.E. | CONTRACT NO.: |
| PLOT SCALE: 1" = 1' | DRAWING NUMBER: |
| FILE NAME: CLG1.111_G-001VICI.dwg | SIZE: |
| ANSI D | |

COLUMBIA RIVER MOUTH OF THE COLUMBIA RIVER NORTH JETTY REHABILITATION
SITE ACCESS MAPS

SHEET IDENTIFICATION
G-001



PLAN

SCALE: 1" = 300'
300' 0 300'

- NOTE:**
- JETTY ROAD WILL BE CLOSED TO THE PUBLIC DURING WORKING HOURS.
 - JETTY ACCESS RAMPS SHALL BE BLOCKED AND SECURED FROM PUBLIC VEHICULAR ACCESS WHEN THE RAMP IS NOT IN USE BY THE CONTRACTOR.



US Army Corps of Engineers
PORTLAND DISTRICT

| | | | |
|----------------|--|------|-------------|
| P&S REVIEW 90% | | DATE | APPR. |
| | | MARK | DESCRIPTION |

| | |
|---------------------------------------|-------------------------------|
| DESIGNED BY: HOBBS, P.E. | DATE: |
| DRAWN BY: CIECHILLO | CHECKED BY: SOLICITATION NO.: |
| SUBMITTED BY: JEREMY P. BRITTON, P.E. | CONTRACT NO.: |
| FILE NAME: C:\GL1111_C-001\ST.dwg | DRAWING NUMBER: |
| ANSI D | 1:1 |

COLUMBIA RIVER
MOUTH OF THE COLUMBIA RIVER
NORTH JETTY REHABILITATION
NORTH JETTY SITE PLAN

SHEET IDENTIFICATION
C-001



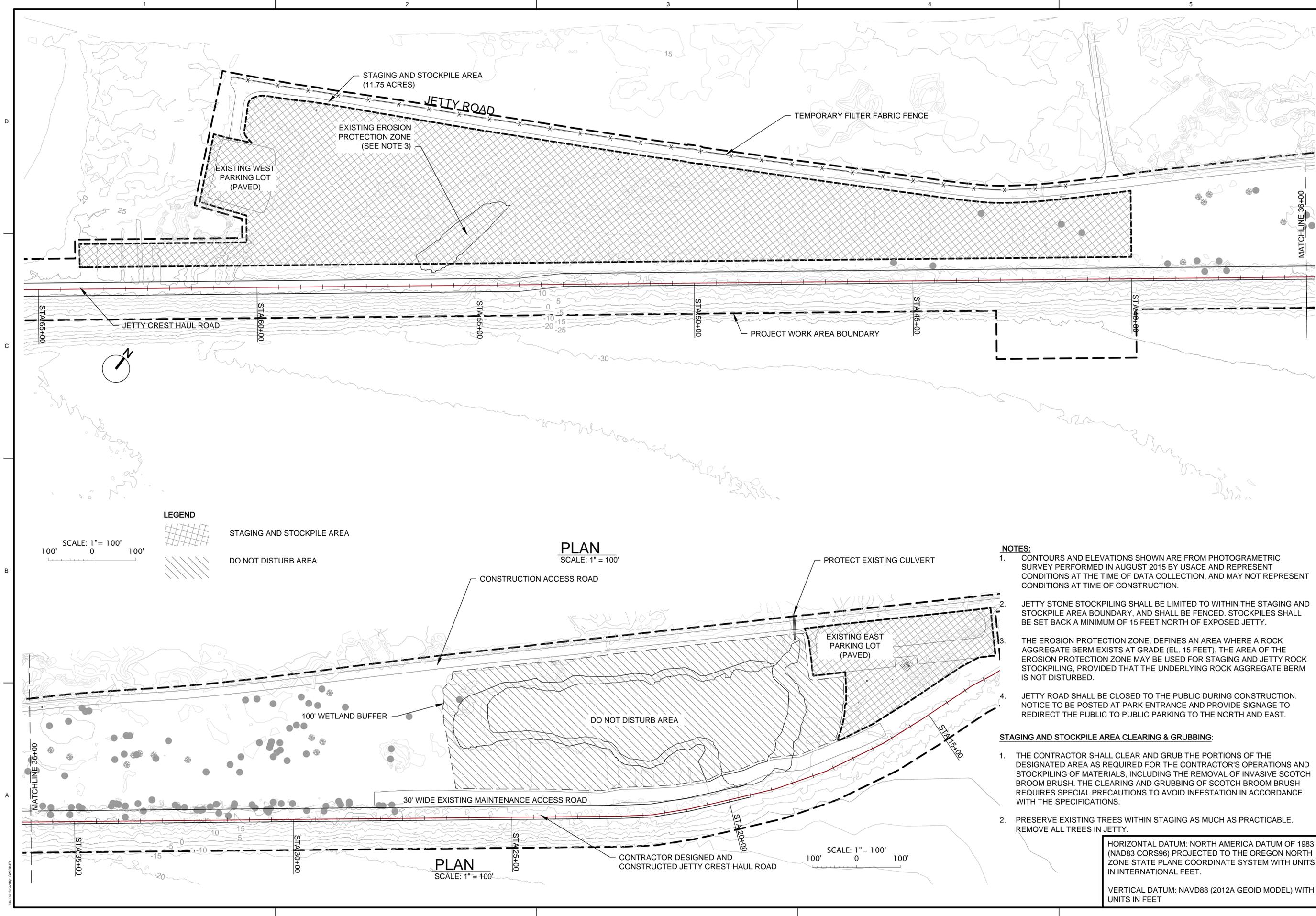
US Army Corps of Engineers
PORTLAND DISTRICT

| | |
|----------------|-------|
| P&S REVIEW 90% | |
| DATE | APPR. |
| DESCRIPTION | MARK |

| | |
|---------------------------------------|-------------------|
| DESIGNED BY: HODGES, P.E. | DATE: |
| PREPARED BY: CHECKVILLE | SOLICITATION NO.: |
| CREATED BY: CHECKVILLE | CONTRACT NO.: |
| SUBMITTED BY: JEREMY P. BRITTON, P.E. | PLOT DATE: |
| FILE NAME: C:\GL1111_C-002STA.dwg | DRAWING NUMBER: |
| ANSI D | SIZE: 11 |

COLUMBIA RIVER
MOUTH OF THE COLUMBIA RIVER
NORTH JETTY REHABILITATION
STAGING AND STOCKPILE AREA PLAN

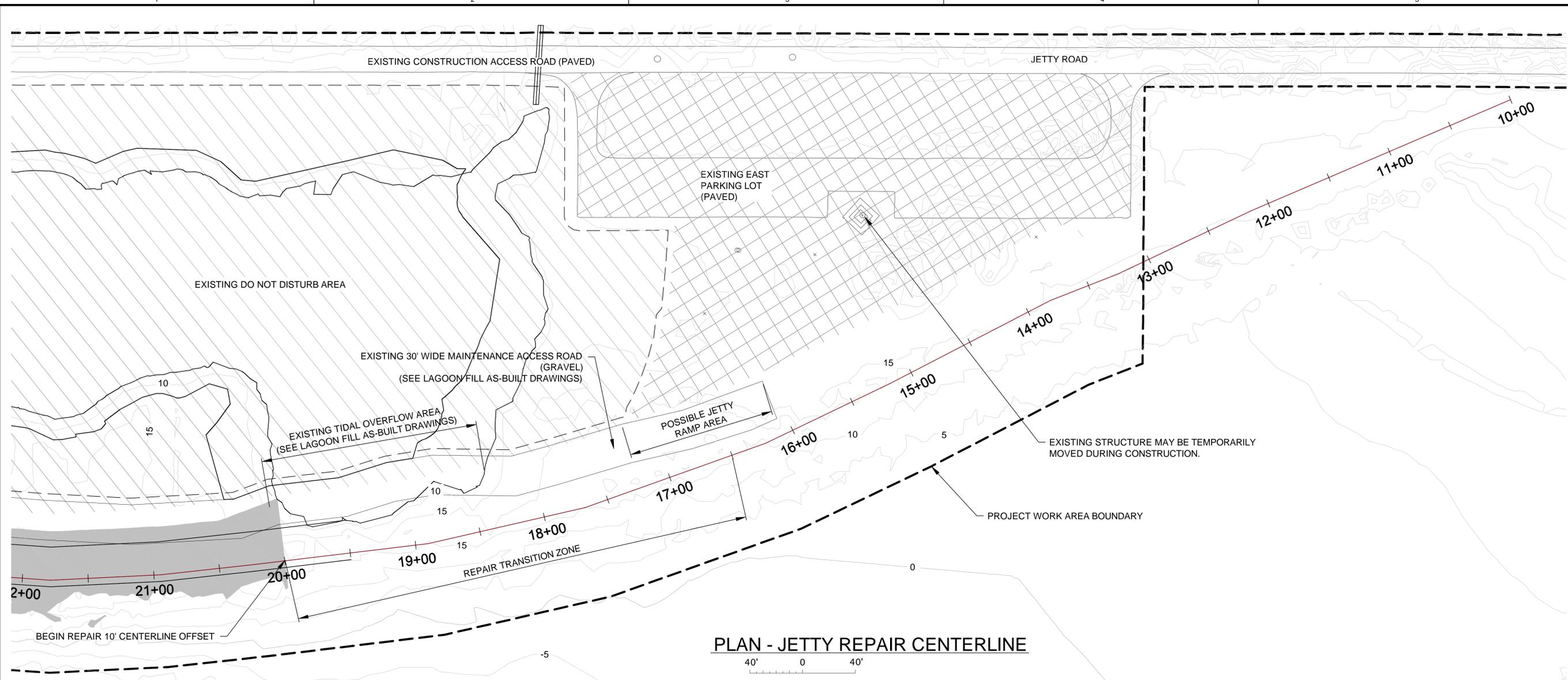
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C-002



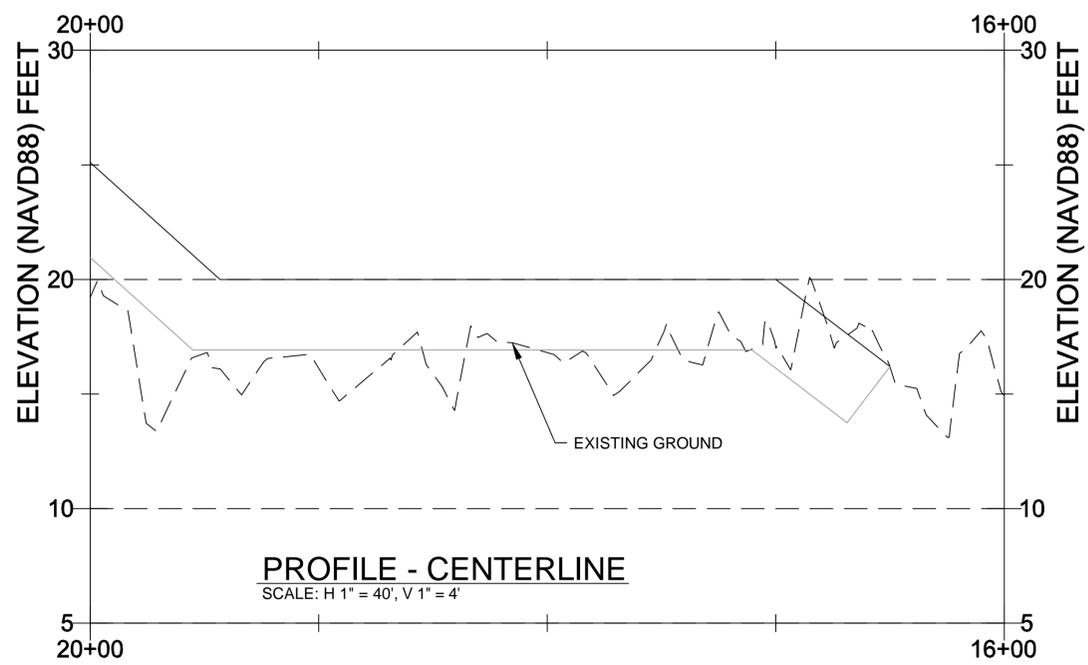
- NOTES:**
- CONTOURS AND ELEVATIONS SHOWN ARE FROM PHOTOGRAMMETRIC SURVEY PERFORMED IN AUGUST 2015 BY USACE AND REPRESENT CONDITIONS AT THE TIME OF DATA COLLECTION, AND MAY NOT REPRESENT CONDITIONS AT TIME OF CONSTRUCTION.
 - JETTY STONE STOCKPILING SHALL BE LIMITED TO WITHIN THE STAGING AND STOCKPILE AREA BOUNDARY, AND SHALL BE FENCED. STOCKPILES SHALL BE SET BACK A MINIMUM OF 15 FEET NORTH OF EXPOSED JETTY.
 - THE EROSION PROTECTION ZONE, DEFINES AN AREA WHERE A ROCK AGGREGATE BERM EXISTS AT GRADE (EL. 15 FEET). THE AREA OF THE EROSION PROTECTION ZONE MAY BE USED FOR STAGING AND JETTY ROCK STOCKPILING, PROVIDED THAT THE UNDERLYING ROCK AGGREGATE BERM IS NOT DISTURBED.
 - JETTY ROAD SHALL BE CLOSED TO THE PUBLIC DURING CONSTRUCTION. NOTICE TO BE POSTED AT PARK ENTRANCE AND PROVIDE SIGNAGE TO REDIRECT THE PUBLIC TO PUBLIC PARKING TO THE NORTH AND EAST.

- STAGING AND STOCKPILE AREA CLEARING & GRUBBING:**
- THE CONTRACTOR SHALL CLEAR AND GRUB THE PORTIONS OF THE DESIGNATED AREA AS REQUIRED FOR THE CONTRACTOR'S OPERATIONS AND STOCKPILING OF MATERIALS, INCLUDING THE REMOVAL OF INVASIVE SCOTCH BROOM BRUSH. THE CLEARING AND GRUBBING OF SCOTCH BROOM BRUSH REQUIRES SPECIAL PRECAUTIONS TO AVOID INFESTATION IN ACCORDANCE WITH THE SPECIFICATIONS.
 - PRESERVE EXISTING TREES WITHIN STAGING AS MUCH AS PRACTICABLE. REMOVE ALL TREES IN JETTY.

HORIZONTAL DATUM: NORTH AMERICA DATUM OF 1983 (NAD83 CORS96) PROJECTED TO THE OREGON NORTH ZONE STATE PLANE COORDINATE SYSTEM WITH UNITS IN INTERNATIONAL FEET.
VERTICAL DATUM: NAVD88 (2012A GEOID MODEL) WITH UNITS IN FEET



PLAN - JETTY REPAIR CENTERLINE
40' 0 40'



PROFILE - CENTERLINE
SCALE: H 1" = 40', V 1" = 4'

- LEGEND**
- APPROXIMATE LIMITS OF JETTY REPAIRS 2' CONTOUR OF ELEVATION CHANGE BETWEEN EXISTING & PROPOSED
 - ARMOR STONE THAT IS TO BE PLACED BELOW 1-LAYER ARMOR LAYER
 - NEW ARMOR STONE PLACEMENT TO OCCUR WITHIN 1-LAYER
 - AREAS THAT ARE NOT EXPECTED TO REQUIRE USING NEW ARMOR STONE, BUT MAY REQUIRE SOME REWORKING TO ACHIEVE INTERLOCKING AND INTERFACE WITH NEW ARMOR STONE PLACEMENT TO ACCOMMODATE JETTY CREST HAUL ROAD CONSTRUCTION

NOTES:

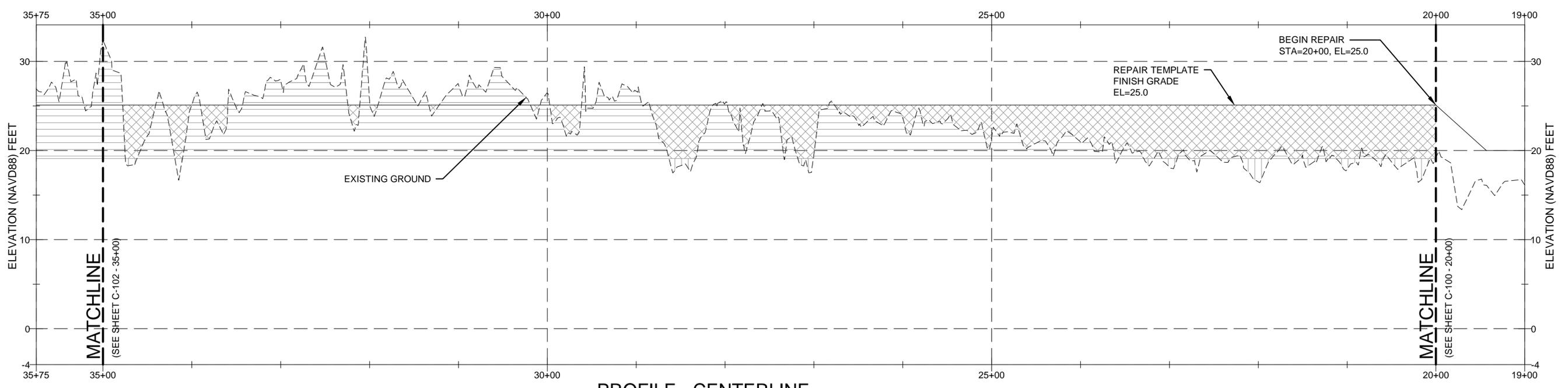
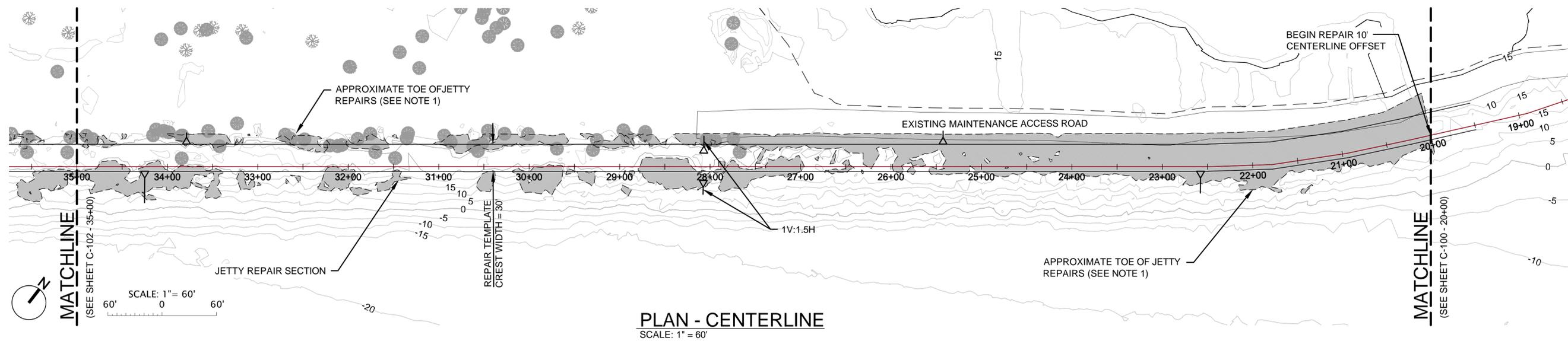
1. CONTOURS AND ELEVATIONS SHOWN ARE FROM PHOTOGRAMMETRIC SURVEY PERFORMED IN AUGUST 2015 BY USACE AND REPRESENT CONDITIONS AT THE TIME OF DATA COLLECTION, AND MAY NOT REPRESENT CONDITIONS AT TIME OF CONSTRUCTION.
2. JETTY STONE STOCKPILING SHALL BE LIMITED TO WITHIN THE STAGING AND STOCKPILE AREA BOUNDARY, AND SHALL BE FENCED. STOCKPILES SHALL BE SET BACK A MINIMUM OF 15 FEET NORTH OF EXPOSED JETTY.
3. JETTY ROAD SHALL BE CLOSED TO THE PUBLIC DURING CONSTRUCTION. NOTICE TO BE POSTED AT PARK ENTRANCE AND PROVIDE SIGNAGE TO REDIRECT THE PUBLIC TO PUBLIC PARKING TO THE NORTH AND EAST.

STAGING AND STOCKPILE AREA CLEARING & GRUBBING:

1. THE CONTRACTOR SHALL CLEAR AND GRUB THE PORTIONS OF THE DESIGNATED AREA AS REQUIRED FOR THE CONTRACTOR'S OPERATIONS AND STOCKPILING OF MATERIALS, INCLUDING THE REMOVAL OF INVASIVE SCOTCH BROOM BRUSH. THE CLEARING AND GRUBBING OF SCOTCH BROOM BRUSH REQUIRES SPECIAL PRECAUTIONS TO AVOID INFESTATION IN ACCORDANCE WITH THE SPECIFICATIONS.
2. PRESERVE EXISTING TREES WITHIN STAGING AS MUCH AS PRACTICABLE. REMOVE ALL TREES IN JETTY.

HORIZONTAL DATUM: NORTH AMERICA DATUM OF 1983 (NAD83 CORS96) PROJECTED TO THE OREGON NORTH ZONE STATE PLANE COORDINATE SYSTEM WITH UNITS IN INTERNATIONAL FEET.
VERTICAL DATUM: NAVD88 (2012A GEOID MODEL) WITH UNITS IN FEET

MATCHLINE 36+00



| Beginning Station | Ending Station | Typical Section for Predominant Repairs |
|-------------------|----------------|---|
| 20+00 | 24+00 | 2 |
| 24+00 | 27+50 | 1 |
| 27+50 | 30+50 | 1 |
| 30+50 | 32+00 | 1 |
| 32+00 | 37+00 | 1 |
| 37+00 | 39+50 | 1 |
| 39+50 | 42+00 | 3 OR 4 |
| 42+00 | 43+50 | 1 |
| 43+50 | 45+50 | 1 |
| 45+50 | 55+50 | 3 OR 4 |
| 55+50 | 98+50 | 1 |
| 98+50 | 100+50 | HEAD TRANSITION |
| 100+50 | 102+50 | HEAD |

1=CREST/OCEAN/ESTUARY
2=OCEAN
3=ESTUARY
4=CREST/OCEAN

LEGEND

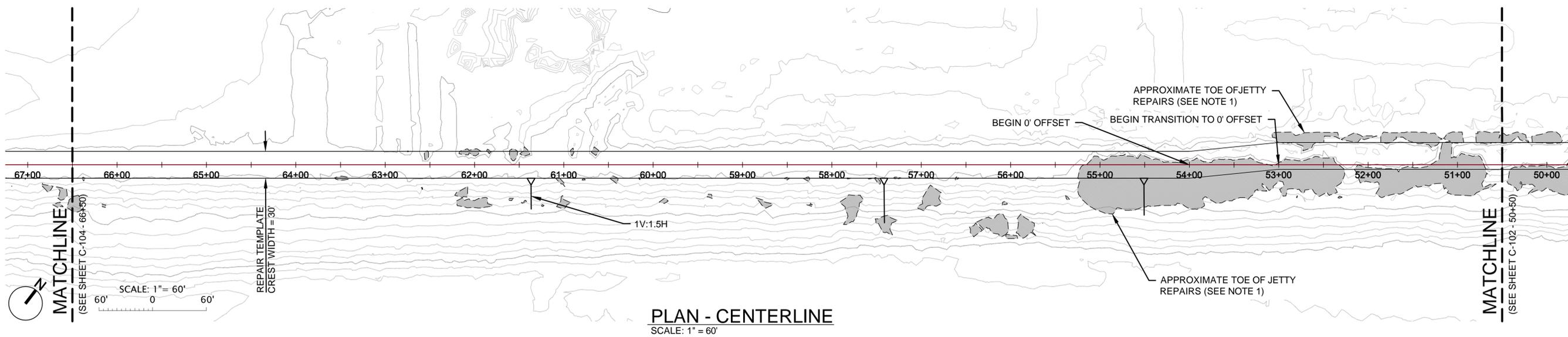
- APPROXIMATE LIMITS OF JETTY REPAIRS
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NOTE:

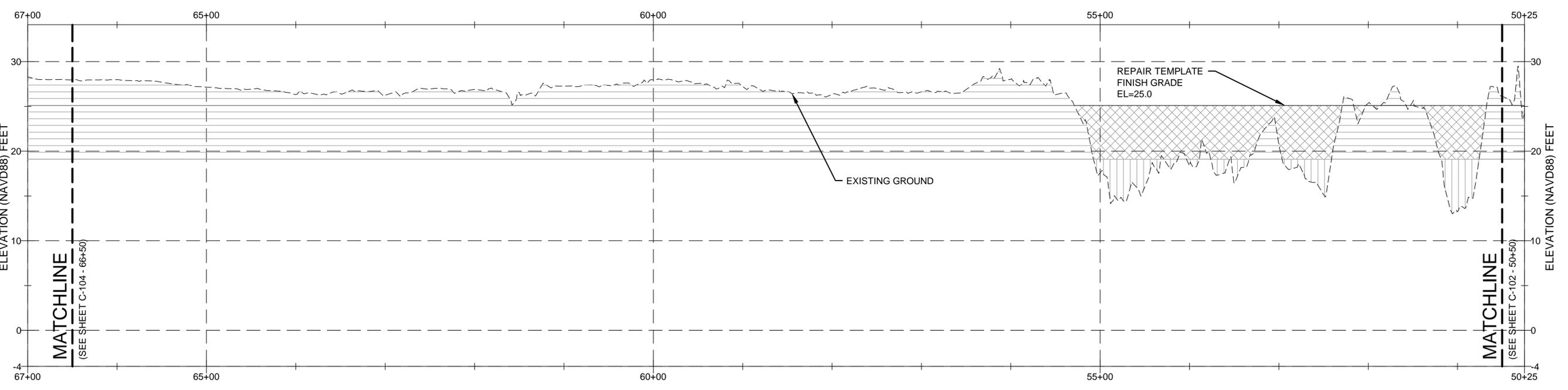
1. LOCATION OF APPROXIMATE TOE OF JETTY REPAIRS, BASED ON INTERPOLATIONS BETWEEN SECTIONS. ACTUAL TOE OF REPAIR SHALL BE BASED ON THE INTERSECTION OF THE REPAIR TEMPLATE WITH THE GROUND SURFACE AT THE TIME OF CONSTRUCTION.
2. CONTOURS AND ELEVATIONS SHOWN ARE A COMPOSITE OF THE MOST RECENT SURVEY DATA, AND MAY NOT REPRESENT CONDITIONS AT TIME OF CONSTRUCTION.

HORIZONTAL DATUM: NORTH AMERICA DATUM OF 1983 (NAD83 CORS96) PROJECTED TO THE OREGON NORTH ZONE STATE PLANE COORDINATE SYSTEM WITH UNITS IN INTERNATIONAL FEET.

VERTICAL DATUM: NAVD88 (2012A GEOID MODEL) WITH UNITS IN FEET



PLAN - CENTERLINE
SCALE: 1" = 60'



PROFILE - CENTERLINE
SCALE: H: 1" = 60', V: 1"=6'

- LEGEND**
- APPROXIMATE LIMITS OF JETTY REPAIRS
 - ARMOR STONE THAT IS TO BE PLACED BELOW 1-LAYER ARMOR LAYER
 - NEW ARMOR STONE PLACEMENT TO OCCUR WITHIN 1-LAYER
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