Final Soil and Groundwater Management Plan
Maritime Industrial Expansion at Norton Terminal
Port of Everett
Everett, Washington

June 22, 2021

Prepared for

Port of Everett

LANDAU ASSOCIATES

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Maritime Industrial Expansion at Norton Terminal
Port of Everett, Washington

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TABLE OF CONTENTS

FIGURES

TABLES

ATTACHMENTS

LIST OF ABBREVIATIONS AND ACRONYMS

AO ..... Agreed Order No. DE 9476
bgs ..... below ground surface
BMP ..... best management practice
City ..... City of Everett
CM ..... crushed material
COC ..... contaminant of concern
cPAH ..... carcinogenic polycyclic aromatic hydrocarbons
CUL ..... cleanup level
DCAP ..... draft cleanup action plan
Ecology ..... Washington State Department of Ecology
EPA ..... US Environmental Protection Agency
FS ..... feasibility study
ft ..... feet, foot
HASP ..... health and safety plan
IAWP ..... interim action work plan
ICP ..... institutional controls plan
K-C ..... Kimberly-Clark Worldwide
LAI ..... Landau Associates, Inc.
MIE ..... Maritime Industrial Expansion
MTCA ..... Model Toxics Control Act
NWTPH-Dx ..... Northwest total petroleum hydrocarbon diesel-range extended
NWTPH-Gx ..... Northwest total petroleum hydrocarbon gasoline-range extended
PAH ..... polycyclic aromatic hydrocarbons
PCB ..... polychlorinated biphenyls
Plan ..... soil and groundwater management plan
PLP ..... potentially liable person
Port ..... Port of Everett
RI ..... remedial investigation
SIM ..... selected ion monitoring
Site ..... K-C MTCA Site
SVOC ..... semivolatile organic compound
SWPPP ..... stormwater pollution prevention plan
TESC ..... temporary erosion and sedimentation control
UST ..... underground storage tank
VOC ..... volatile organic compound
WAC ..... Washington Administrative Code

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1.0 INTRODUCTION

On behalf of the Port of Everett (Port), this document presents a soil and groundwater management plan (Plan) to help guide soil and groundwater management during construction and other intrusive activities during implementation of the 3rd Interim Cleanup Action at the former Kimberly-Clark Worldwide (K-C) mill Model Toxics Control Act (MTCA) site (Site). The Site is located adjacent to and just north of the Port's main Marine Terminal facilities in Everett, Washington, and the interim cleanup action is being conducted in coordination with the Port's Maritime Industrial Expansion (MIE) at Norton Terminal project (collectively referred to in this document as the Project), as illustrated on Figures 1 and 2.

The second amendment to the site Agreed Order (No. DE 9476; AO), dated May 18, 2021, presents a 3rd Interim Cleanup Action to be completed at the Site by the Port. In accordance with the AO, an Interim Action Work Plan (IAWP) will be prepared to present a detailed description of the 3rd Interim Cleanup Action scope, engineering design, and phasing. Because initial engineering design of the 3rd Interim Cleanup Action determined that an area of preload is a necessary element of the interim action, and the extended time period necessary for the preload effects to take place, a Preload Ground Improvement technical memorandum (Landau Associates, Inc [LAI] 2021) was prepared in advance of preparation of the IAWP. Furthermore, as permitting applications for both the Preload Ground Improvement and the remaining elements of the interim action required inclusion of a soil and groundwater management plan, this document was prepared to outline general site conditions and guidelines for managing soil, groundwater, and stormwater during implementation of the interim action. This Plan will be included as an attachment to the IAWP.

A limited portion of the Project will be conducted in Federal Avenue, which is located south of the Site and is included in a separate MTCA cleanup site – the ExxonMobil/ADC Site. The MTCA cleanup process at the ExxonMobil/ADC Site is being conducted separately under an Ecology Agreed Order, and the nature and extent of contamination in the ExxonMobil/ADC Site is distinct from contamination at the K-C Site. Management of soil and groundwater in this area during implementation of the Project will be guided by a separate Soil and Groundwater Management Plan.

1.1 Use of This Plan

This Plan is to be utilized during development within the Site or during other intrusive activities that encounter potential contaminated soil as described in Section 5.1, or encounter Site groundwater as described in Section 6.0.

In addition to the background information provided in the following section, this Plan:

- Reviews the soil and groundwater conditions at the Site and identifies how to recognize potentially contaminated materials.
- Outlines the procedures to be followed in managing existing soil contamination.

- Presents criteria for fill to be imported to the Site.
- Identifies the procedures to be followed in managing potentially contaminated groundwater that underlies the Site.
- Outlines management of stormwater to prevent spreading of potentially hazardous substances encountered during intrusive activities.

2.0 BACKGROUND

The Site is the former location of saw milling and pulp and paper manufacturing and was in operation since the late 1800s. Additionally, bulk petroleum storage operations were conducted on the Site. Manufacturing operations at the K-C facility ceased in 2012. Releases of hazardous substances occurred as a result of wood products manufacturing operations and petroleum bulk storage, and based on these releases, the Washington State Department of Ecology (Ecology) listed the Site under the Model Toxics Control Act (MTCA) and assigned it Cleanup Site ID No. 2569.

In December 2012, K-C entered into the AO to conduct remedial activities at the Site, including conducting a remedial investigation (RI) and feasibility study (FS) and preparing a draft cleanup action plan (DCAP). Additionally, the AO required the implementation of an interim action to remove, as appropriate, contamination encountered during demolition of the mill facility (First Interim Action), and K-C removed contaminated soil and groundwater from a number of locations throughout the Site in 2013 and 2014, in conjunction with demolition of the Site structures.

In November 2019, K-C entered into the first amendment to the AO (AO First Amendment). The AO First Amendment provided for a 2nd Interim Action to remove additional soil and/or groundwater contamination, decommission inactive stormwater outfalls that pose a threat to release and transport of contaminated groundwater or stormwater to the East Waterway, inspect and cleanup active stormwater lines, and monitor the pH in groundwater during the removal of crushed material (CM). The 2nd Interim Action's construction activities were completed in November 2020.

In 2019 the Port purchased most of the K-C property (upland and in-water parcels) while the City of Everett (City) purchased the upland-only parcel housing the mill's former wastewater treatment plant (Site Unit E). In March 2020, Ecology named the Port and the City as potentially liable persons (PLPs) for the Site. While K-C was the lead PLP for completing the 2nd Interim Action, the Port will be the lead PLP for conducting the 3rd Interim Action (described below). The 3rd Interim Action is being conducted in conjunction with initial Site development to put the Site back into productive use to support future marine terminal activities. The Port will also take over as the lead PLP for completing the RI/FS report and DCAP for the upland area of the Site.

3.0 RELATIONSHIP TO INSTITUTIONAL CONTROLS

There are currently no institutional controls for the Site. After completion of the Interim Action, but before implementation of the final cleanup action for the Site, any intrusive activities shall be at a minimum conducted in a way to maintain the integrity of the impermeable cap constructed during the Interim Action, and in accordance with this Soil and Groundwater Management Plan. Following completion of the final Site cleanup action, institutional controls will be placed on the Site (as required in the final cleanup action plan) to ensure that the integrity of cleanup actions conducted at the Site are not compromised by development, other intrusive activities, or poor management/maintenance. An institutional controls plan (ICP) for the Site will be submitted to Ecology following full implementation of the final cleanup action. This Plan will be integrated by reference into the ICP. The institutional controls will also be contained within a restrictive covenant filed on the property deed to the parcels encompassed by the Site to ensure that these institutional controls are retained on the property if property ownership changes.

4.0 GENERAL SITE CONDITIONS

Based on previous environmental investigations, soil and materials present at the Site include native Snohomish River alluvium, hydraulic fill, recent fill, and shoreline riprap. Contaminated soil and groundwater have been identified at the Site, primarily within the hydraulic fill. As presented in the draft RI/FS report, metals, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), polycyclic aromatic hydrocarbons (PAHs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and petroleum hydrocarbons have been detected in Site soils at concentrations above the Site preliminary CULs (Aspect 2016).

Though a significant portion of contaminated soil and groundwater was removed from the Site during the 1st and 2nd Interim Actions, future construction activities could result in discovery of previously unidentified contamination within the Site. As a result, it is important that soil conditions are observed during intrusive activities to identify potential contamination if it is encountered. Field personnel should be familiar with the physical appearance of the common soil types present throughout the Site so that potentially contaminated materials can be recognized.

Common soil types present at the Site are described as follows:

- **Recent Sand Fill:** consisting of mixtures of sand and silt dredged from the Snohomish River and placed at the surface and as backfill in interim action cleanup excavations. Recent fill is located from the surface to the top of the hydraulic fill and was tested to confirm hazardous substances are not present in this material at concentrations above preliminary Site cleanup levels (CULs; Aspect 2021).
- **Hydraulic Fill:** consisting of mixtures of sand and silt, with intermittent shell fragment layers, ranging from tan to dark gray, and located throughout the Site from the surface to approximately 5 feet (ft) below ground surface (bgs), and generally extends to the native tide flat surface. Residual contamination at the site is generally contained within the hydraulic fill.
- **Native Snohomish River Alluvium:** consisting of stratified sand and silty with shell fragments, and first encountered at a depth of about 15–40 ft bgs.
- **Shoreline Riprap:** consisting of large-diameter angular rock placed along the shoreline, including near existing outfalls.
- **Wood Chips/Sawdust:** Areas of wood chips, sawdust, and other wood debris are present at the Site from just below the surface to up to approximately 40 ft bgs.
- **Crushed Rock:** Approximately 75,000 cubic yards of crushed rock will be imported to the site during the Preload Early Action, which will be implemented prior to the 3rd Interim Action. This material will be placed on the top of the existing site surface for construction of a haul road and a preload. This material will be tested to confirm hazardous substances are not present in this material at concentrations above Site CULs; procedures for characterization and approval of this material is documented in the 2021 Preload Ground Improvement technical memorandum (LAI 2021).

4.1 Potential Hazardous Substances

Materials that contain hazardous substances at concentrations exceeding the Site CULs and have previously been encountered at the Site include the following:

- **Crushed Demolition Debris (i.e., CM):** debris described in the July 10, 2018 Plan of Operations for CM Removal generated during demolition and subsequent crushing of former structures on the site (K-C 2018).[1] Sampling of this debris has indicated cPAHs, metals, and PCBs above MTCA cleanup levels. If encountered, this material will be characterized for offsite disposal according to its characteristics; management of potential CM is further discussed below in Section 5.1.3.
- **General Construction Debris:** soil mixtures consisting of greater than 50 percent by volume of general construction debris, including asphalt, brick, wire, wood debris (including creosote pilings), and asbestos-containing material (e.g., asbestos wrapped pipe) is present at the Site in isolated areas within the hydraulic fill.
- **Underground storage tanks (USTs) and Petroleum Hydrocarbons:** undocumented USTs may be present in the vicinity of former buildings and may contain heating oil or other petroleum products, such as gasoline, diesel, and motor oil. Contamination may be present in soil or groundwater and typically exhibits one or more of the following characteristics: iridescent sheen, black and greasy appearance, petroleum odor, or dark staining in soil.

Photographs of these hazardous substances encountered at the Site during previous cleanup activities are included in Attachment 1.

[1] Available on Ecology's website at https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=2569.

5.0 SOIL MANAGEMENT

Any intrusive activities that result in workers coming into contact with potentially contaminated soil need to follow applicable regulations regarding worker health and safety. Additionally, any soil excavated must be properly managed in conformance with this Plan, and future development must also be conducted consistent with any restrictive covenant applied to the property deed.

5.1 General Soil Management Requirements

The requirements that apply to intrusive activities throughout the Site consist of the following:

- All intrusive activities that have the potential to contact contaminated soil will be performed under a health and safety plan (HASP) that addresses all applicable local, state, and federal requirements.
- Information will be submitted to Ecology from the property owner, or in coordination with the property owner if the work was conducted by a third party, documenting the intrusive activities, presenting all environmental data, summarizing post-intrusive activity environmental conditions, and identifying any changes proposed any applicable restrictive covenant as a result of the intrusive activities.
- No excavated soil is to be beneficially reused at locations outside of the Site without adequate testing to confirm that the soil does not exceed any MTCA soil CULs.
- Any soil removed from the Site must also meet all other applicable regulations, including the Solid Waste Handling Standards (Washington Administrative Code [WAC] 173-350).
- Any work conducted along the shoreline (e.g., outfall replacement work) shall be completed in accordance with the JARPA prepared for the project; JARPA drawings are provided as Attachment 2. Requirements presented in the JARPA include that shoreline work will be constructed in the 'dry' during low tide in a single tide cycle, and backfill of any excavated areas will be completed prior to arrival of the incoming tide. Imported materials for shoreline work will only consist of large washed quarry spalls and armor rock; no granular soils/sand or gravel shall be placed within the shoreline portions of this Site under this Plan The work will be scheduled and phased so that each phase of work can reasonably be completed during the planned tide cycle. If the work cannot be completed in a single tide cycle, exposed soils will be temporarily stabilized with rock or other approved measures prior to tidal submersion. Work will continue during the next low-tide period.
- Materials generated during intrusive activities will be managed to prevent potential dispersion of potentially hazardous substances using appropriate temporary erosion and sedimentation control (TESC) measures, as is presented in the IAWP. These measures shall include dust control, stockpile management (containment, covering, and underlayment as applicable), and appropriate construction access measures that are presented in the IAWP. Additionally, temporary stockpiles shall be located where they will not impact general stormwater flow patterns of the Site or the ability of the Site to infiltrate stormwater.

Any soil excavated during intrusive activities that remains onsite (i.e., field-screened soils that do not show signs of contamination—*see* Section 5.1.1) shall ultimately be located beneath the footprint of the low-permeability cap installed during the 3rd Interim Action. The low-permeability cap will reduce

stormwater infiltration through any residual soil contamination that could be leached to groundwater and will prevent wildlife exposure to residual soil contamination.

Excavated soil will be classified and specifically managed per the following sections.

5.1.1 Soil Suitable for Reuse

If determined to be geotechnically suitable by the Port, and environmental field screening does not indicate excavated soil is potentially contaminated (e.g., visual, olfactory, air monitoring, etc.), excavated soil may be utilized onsite as backfill. Site soil used for backfill shall be segregated by the vertical horizon from which the soil was removed during excavation and replaced within the same horizon during backfilling. As described in Section 4.0, anticipated vertical horizons suitable for reuse include recent sand fill, hydraulic fill, Native Snohomish River Alluvium, and crushed rock. Any unanticipated CM associated with the K-C demolition activity is not suitable for backfill and will be characterized for offsite disposal according to its characteristics.

If the volume of excavated soil exceeds the volume needed to backfill the specific excavation the soil was removed from, excess soil may be utilized as backfill elsewhere onsite, assuming the material can be placed within the original soil type horizon it was excavated from, and the location is beneath the low-permeability cap to be installed during the 3rd Interim Action. Shoreline riprap (clean rock, not concrete) may be used anywhere onsite if soil is removed from the surface (and managed separately in accordance with Section 5) of the rock prior to reuse—removal of soil from rock armor surfaces shall be conducted in a manner to prevent potential dispersion of potentially hazardous substances in accordance with this plan and applicable TESC/SWPPP requirements. If not reused onsite, excavated soil will be tested (in accordance with Section 5.2 below) and managed in accordance with all applicable regulations.

5.1.2 Soil Unsuitable for Reuse

If determined to be geotechnically unsuitable for reuse by the Port, or environmental field screening indicates it is potentially contaminated (e.g., visual, olfactory, etc.) or comes from a known area of residual contamination, excavated materials shall be stockpiled separately from unaffected soil and tested to determine appropriate offsite management requirements. Co-mingled materials, such as soils mixed with armor rock generated during excavation along the shoreline, will be separated during the excavation process. Individual materials that are unsuitable for reuse onsite will be segregated into stockpiles dependent on specific characteristics and waste disposal requirements, but are expected to include the following:

- Construction and demolition debris
- Wood waste/wood chips
- Concrete rubble
- Potentially contaminated soil

- Geotechnically unsuitable but does not exhibit indications of potential contamination.

Soil unsuitable for reuse will be characterized for offsite disposal. Laboratory analyses may be required to determine waste designation and disposal requirements, such as whether the soil can be managed as solid waste or requires management as hazardous waste. The planned waste management or disposal facility will be coordinated with during material testing to determine whether testing in addition to identified contaminants of concern (COCs) for the Site will be required for waste designation.

5.1.3 Unanticipated Contaminated Soil or Crushed Material

If development activities encounter materials that may contain significant or unanticipated hazardous substances (including significant free product), or is associated with unanticipated CM (described in the July 10, 2018 Plan of Operations for CM Removal; K-C 2018) not removed during the CM Removal project conducted by K-C in 2020, the discovery will be documented, Ecology will be notified, and the Port and Ecology will determine if additional actions are necessary. The Port will evaluate the environmental conditions to determine if modifications to the planned construction activities are warranted. If soil management procedures presented in Section 5.0 are followed, the potentially contaminated soil or CM can be removed and managed without suspending construction provided; however, timely notification of Ecology is required. Any unanticipated CM associated with the K-C demolition activity is not suitable for backfill and will be characterized for offsite disposal according to its characteristics.

5.2 Upland Import Fill Criteria and Use

Fill imported to upland portions the Site will be tested for hazardous substances to confirm it is not contaminated. Representative samples will be collected for chemical analysis at a rate of five samples for the first 1,000 cubic yards of imported material, and one sample for each additional 1,000 cubic yards. Each sample will be analyzed for the following:

- Gasoline- and diesel-range total petroleum hydrocarbons by Northwest total petroleum hydrocarbon gasoline-range extended (NWTPH-Gx) and Northwest total petroleum hydrocarbon diesel-range extended (NWPTH-Dx)
- PAHs by US Environmental Protection Agency (EPA) Method 8270 selected ion monitoring (SIM)
- Metals (arsenic, copper, lead, mercury, nickel, zinc) by EPA Method 6000/7000
- PCBs by EPA Method 8082.

Analytical results will be screened against appropriate screening levels, as described below, and communicated to Ecology prior to import to the Site.

5.2.1 South Terminal Stockpile Import

Material imported to the Site from an existing stockpile located within the Port's South Terminal will be utilized for haul road construction strictly above the groundwater table and will be screened against preliminary CULs for unsaturated conditions. These preliminary cleanup levels are presented as "Unsaturated Import Fill Criteria" in Table 1.

5.2.2 Additional Import

All material imported to the Site (for preload ground improvement activities and additional import, if needed) from sources other than the South Terminal stockpile discussed above will be screened against preliminary CULs for unsaturated soils and Port-specific total petroleum hydrocarbon criteria to determine if this material meets these criteria and is suitable for use on the Site. These criteria are presented as "Saturated Import Fill Criteria" in Table 1.

6.0 GROUNDWATER MANAGEMENT

Groundwater generated during intrusive activities at the Site may contain hazardous substances above Site cleanup levels and will be managed to prohibit the spread of contamination. Groundwater at the Site is not considered to be a drinking water source, and the highest beneficial use of groundwater at the Site is discharge to marine surface water. Accordingly, groundwater quality at the site has been screened against the most stringent marine surface water quality standards applicable to the Site; the most current draft preliminary groundwater CULs presented are included as Attachment 3 (Aspect 2021). Based on results of previous groundwater monitoring, metals (arsenic, copper, lead, mercury, nickel, and zinc); cPAHs; PCBs; volatile organic compounds (VOCs; vinyl chloride, 1,1-dichloroethene, and xylenes); PAHs (acenaphthene, naphthalene, and 2-methylnapthalene); SVOCs (pentachlorophenol and dibenzofuran); gasoline-, diesel-, and oil-range petroleum hydrocarbons; hydrogen sulfide; and ammonia were detected in one or more groundwater samples at a concentration greater than the preliminary CULs.

Depth to groundwater at the Site ranges from about 1 to 4 ft bgs in the eastern portion of the Site, and 6–12 ft bgs in the western portion of the Site; groundwater elevations near the western shoreline are tidally influenced. Potential options for managing groundwater extracted for dewatering purposes include:

- On-site infiltration.
- Discharge to the City sanitary sewer.
- Containment in temporary aboveground tanks, with offsite management by a waste management and treatment facility.

Groundwater testing during construction, or in advance of construction dewatering, would be required to determine management requirements. If testing demonstrates that groundwater does not exceed a site-specific pH criteria of 8.5, and is greater or equal to a site-specific pH of 6.5 (using a hand-held pH meter), and field screening observations (visual and olfactory) do not indicate the presence of a petroleum sheen or odor, extracted groundwater could be infiltrated onsite if infiltrated upgradient of where it was removed (at a minimum distance of 200 ft from the shoreline). This 200-ft distance was selected to be a conservative interpretation of design assumptions for the K-C 2nd Interim Action—that water entering the groundwater system from an outside source (i.e., leaky stormwater pipes) would adequately attenuate within 75 ft, and thus any existing pipes within 75 ft of the shoreline were plugged. Dewatering water (which is groundwater itself, not stormwater) that is infiltrated in accordance with these guidelines will 1) extend the distance any groundwater travels before discharging to surface water, and 2) exceed guidelines set during previous cleanup work at the Site intended to protect discharges to surface water. If infiltration is utilized for management of groundwater, a summary of pH measurements and field screening observations would be provided to Ecology following completion of the project.

If groundwater is determined to exceed a pH of 8.5 or is below a pH of 6.5, or exhibits visual or olfactory indications of petroleum contamination, it cannot be infiltrated onsite. The groundwater would need to be discharged to the City sanitary sewer, subject to obtaining a temporary discharge permit, or managed by other means that comply with local, state, and federal regulations. Discharge to City sanitary sewer to comply with a temporary discharge permit may require treatment (e.g., oil-water separator) if significant sheen or light non-aqueous phase liquid is encountered.

Regardless of the anticipated method of groundwater management, water quality testing and field screening will be conducted to determine the requirements for proper management. In general, a single groundwater pH measurement is adequate for localized dewatering, such as for a storm catch basin installation. Groundwater testing from multiple locations and consistent field screening may be needed for larger excavations, or for long, linear excavations, depending on the method of groundwater management and the requirements of the receiving facility.

The locations and spacing for groundwater quality characterization for large or long, linear excavations will vary based on the degree to which water quality conditions have been previously characterized in the construction area, the age of available data, and the anticipated radius of influence of the dewatering system. The amount and frequency of testing will largely be dictated by the requirements of the receiving facility and the potential for the acceptance criteria to be exceeded.

7.0 STORMWATER MANAGEMENT

In general, stormwater will be infiltrated onsite. Stormwater at the Site has been successfully infiltrated since former manufacturing structures were demolished in 2012. In addition to infiltration of stormwater on the Site generally, construction stormwater was infiltrated as part of the 1st and 2nd Interim Actions, which involved large-scale excavation of contaminated soils below the water table. During these prior actions, because of the project's success in infiltrating stormwater, there was no discharge to surface waters of the state as indicated in the discharge monitoring reports submitted by K-C.

Stormwater will be managed during intrusive activities in a way that prevents the spread of contamination, and in manner that complies with the Construction Stormwater General Permit and associated Administrative Order. The Project will include a stormwater pollution prevention plan (SWPPP; see the IAWP) prepared specific to the work proposed in this Project. TESC elements presented in project plans and the best management practices (BMPs) presented in the SWPPP will apply to stormwater management during the Project, including when operating in contaminated soils.

Implementation of appropriate BMPs will be used to prevent any discharge of stormwater to surface water. Site stormwater is currently managed by infiltration, and stormwater will continue to infiltrate during implementation of the 3rd Interim Action. TESC elements are presented in TESC sheets of the Norton Terminal—Preload (bid set) and the Norton Terminal Development (90 percent design submittal); these plan sheets are included in Attachment 4 and are summarized as follows:

- Use of a one-way haul road for onsite construction traffic
- Install temporary silt fence, and extend/maintain the existing berm along the shoreline portion of the Site
- Install or protect and maintain storm drain inlet protection
- Utilize appropriate construction access and a wheel wash, if necessary.

Additionally, to comply with soil management guidelines presented in Section 5, excavated soils will be managed such that the material can drain back into the excavation, or is temporarily stockpiled with adequate horizontal contaminant, cover, and underlayment to prevent the spreading of contamination via stormwater. These guidelines will be further detailed in subsequent Project design plans and the SWPPP.

8.0 CONTRACTOR ENVIRONMENTAL MEDIA MANAGEMENT PLANS

Any contractors conducting intrusive activities as part of the Project will prepare environmental media management plans, which are anticipated to include, but are not limited to, a Soil Handling Plan, Dewatering Plan, and SWPPP. These plans shall present project specific means and methods and shall contain enough detail to demonstrate the Project will be conducted consistent with this Soil and Groundwater Management Plan. Ecology and the Port will review these documents and will provide comments as necessary. Ecology will be given 10 business days to review the document and provide comments.

9.0 USE OF THIS PLAN

This Soil and Groundwater Management Plan has been prepared for the exclusive use of the Port of Everett. Reliance on this report by third parties is at their sole risk. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by LAI, shall be at the user's sole risk. LAI warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

10.0 REFERENCES

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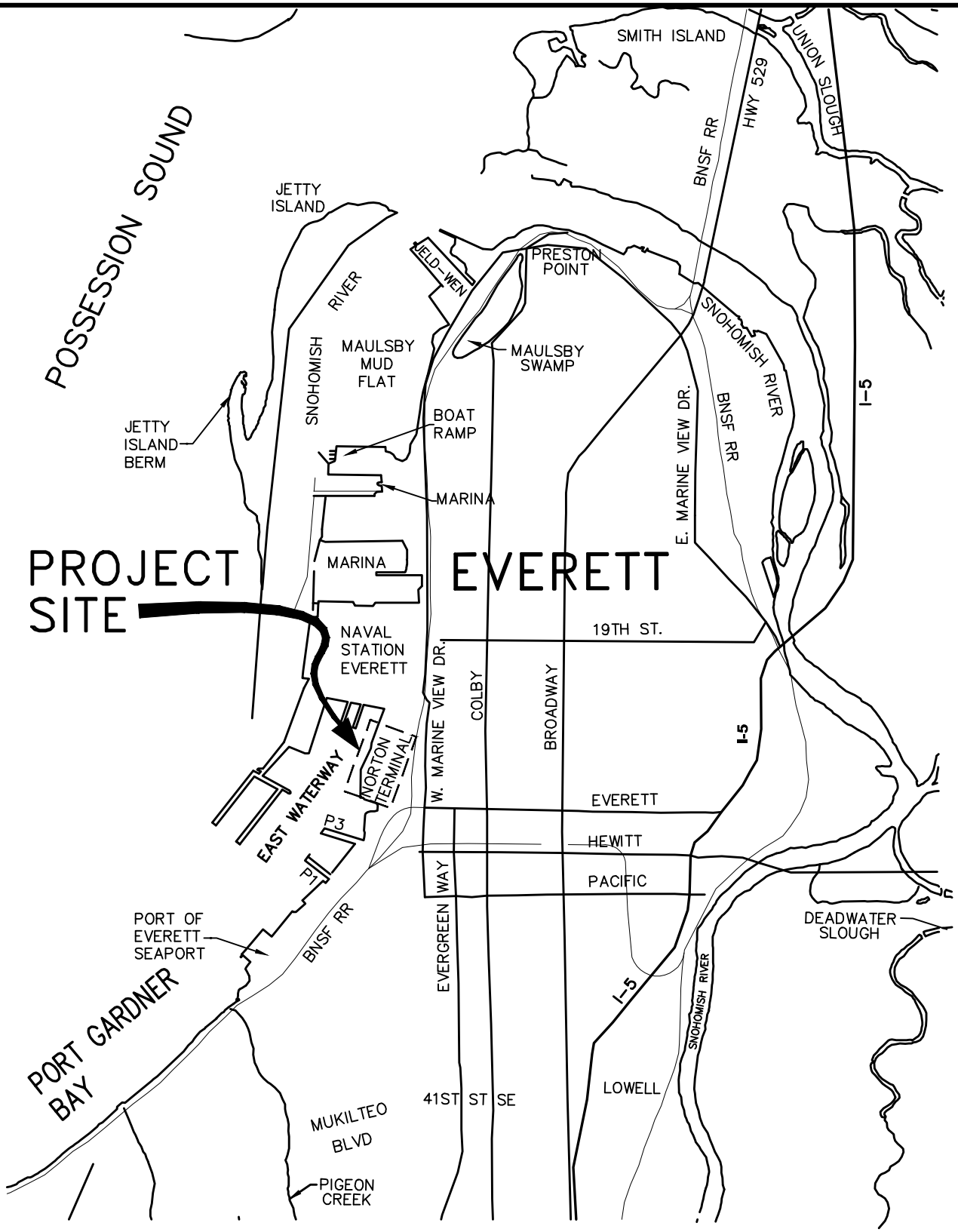


FIGURE 1

VICINITY MAP

SCALE: NTS

11-19-2020

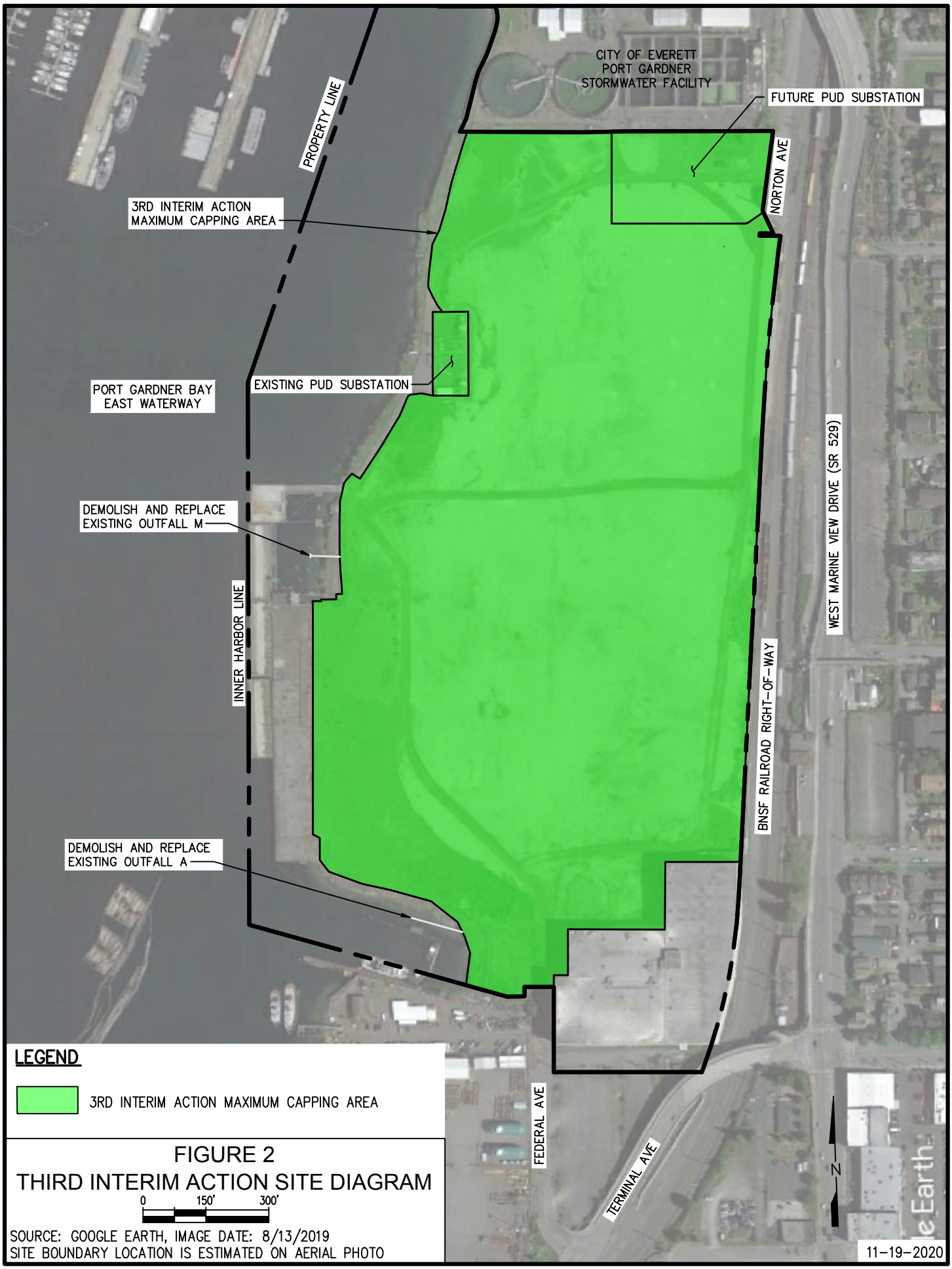


FIGURE 2
THIRD INTERIM ACTION SITE DIAGRAM

SOURCE: GOOGLE EARTH, IMAGE DATE: 8/13/2019
SITE BOUNDARY LOCATION IS ESTIMATED ON AERIAL PHOTO

Table 1
Import Fill Criteria
MIE - Norton Terminal
Port of Everett, Washington

Analyte	Analytical Method	Unsaturated Import Fill Criteria (a)	Saturated Import Fill Criteria (b)
Total Petroleum Hydrocarbons (mg/kg)			
Gasoline-range hydrocarbons	NWTPH-Gx	100	20
Diesel-range total petroleum hydrocarbons	NWTPH-Dx	2,000	200
Oil-range total petroleum hydrocarbons	NWTPH-Dx	2,000	200
Metals (mg/kg)			
Arsenic	EPA 6020B	20	20
Copper	EPA 6020B	36	36
Lead	EPA 6020B	1,000	56/81 (c)
Mercury	EPA 7471	0.1	0.1
Nickel	EPA 6020B	48	48
Zinc	EPA 6020B	100	85
PAHs (mg/kg)			
Acenaphthene	EPA 8270 SIM	23	1.2
Acenaphthylene	EPA 8270 SIM	210,000	210,000
Anthracene	EPA 8270 SIM	1,100,000	1,100,000
Benzo(g,h,i)perylene	EPA 8270 SIM	110,000	110,000
Fluoranthene	EPA 8270 SIM	140,000	140,000
Fluorene	EPA 8270 SIM	140,000	140,000
Phenanthrene	EPA 8270 SIM	1,100,000	1,100,000
Pyrene	EPA 8270 SIM	110,000	110,000
1-Methylnaphthalene	EPA 8270 SIM	4,500	4,500
2-Methylnaphthalene	EPA 8270 SIM	13	0.64
Naphthalene	EPA 8270 SIM	17	0.87
Total cPAH TEQ	EPA 8270 SIM	3.2	0.16
PCBs (mg/kg)			
Total PCBs (sum of aroclors)	EPA 8082	2.5	0.12

Notes:

(a) Unsaturated Preliminary Cleanup Levels as presented in K-C Worldwide Site Upland Area, draft RI/FS preliminary cleanup level tables (Aspect 2021).

(b) lowest of Preliminary Cleanup Levels as presented in K-C Worldwide Site Upland Area, draft RI/FS preliminary cleanup level tables (Aspect 2021) and Port of Everett Standard.

(c) For the import of pre-load material, use 56 unless the material is between 56 and 81, in which case consult with Ecology.

Abbreviations and Acronyms:

cPAH = carcinogenic polycyclic aromatic hydrocarbons
CUL = cleanup level
EPA = US Environmental Protection Agency
mg/kg = milligrams per kilogram
NWTPH-Dx = Northwest total petroleum hydrocarbon diesel-range extended
NWTPH-Gx = Northwest total petroleum hydrocarbon gasoline-range extended
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
SIM = selected ion monitoring
TEQ = toxicity equivalency quotient

ATTACHMENT 1

Photographs of Hazardous Substances Encountered on Site

Crushed Material


11/14/2013


11/14/2013

General Construction Debris

Boiler Baghouse Area excavation: copper wire in east end

CN-B2 excavation: looking southeast showing brick, wood debris, and creosote piling remnants

CN-B2 excavation: concrete foundation monolith and wood debris

CN-B2 excavation: sawdust from deepest point of excavation

Asbestos-containing material insulation on pipes

Excavation showing crushed material and wood debris

Petroleum Contamination

Clark-Nickerson Area Excavation: oily sheen on the water; petroleum contaminated sawdust

Bunker C ASTs excavation: bunker oil product

Bunker C ASTs excavation: creosote pilings for former ASTs, with bunker oil

Naval Reserve South excavation: S-21/S22 area with oil sheen

REC2-MW-5 excavation: looking east with black petroleum contaminated stained soil

One Bunker C fuel pipe encountered within wooden conduit, stained soil with sheen on water, looking north

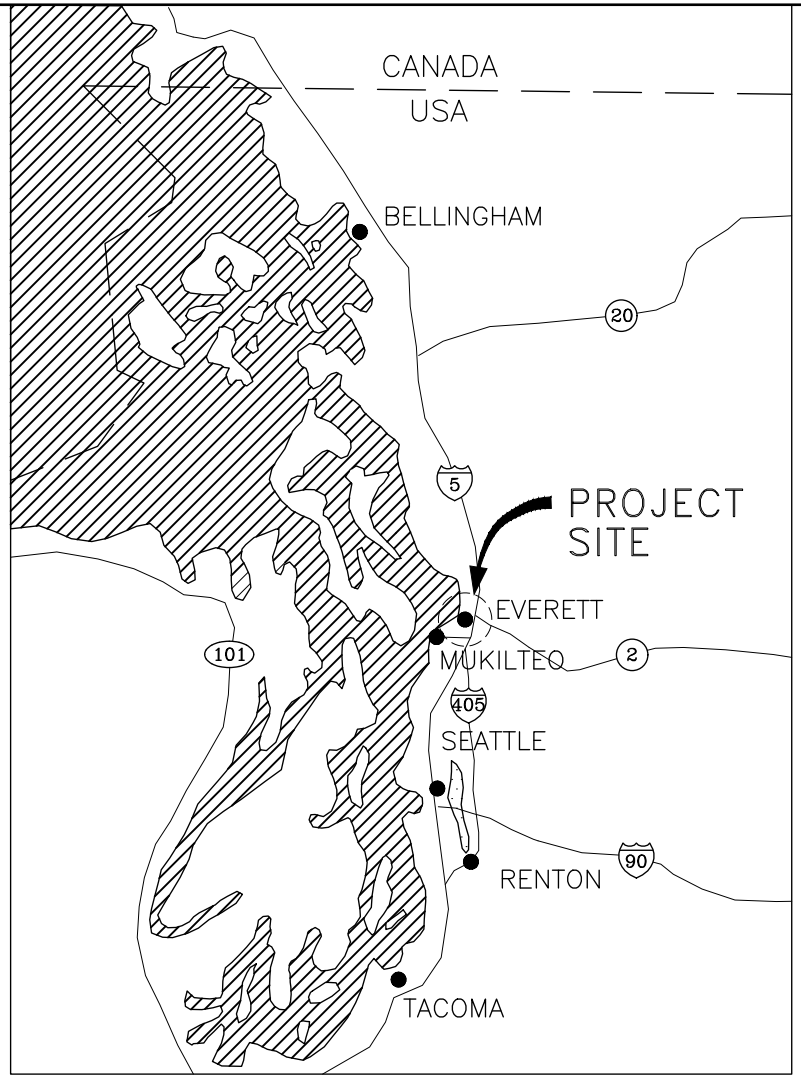
Bunker C ASTs excavation: bunker oil product

Excavation with oily sheen on the water

Digester Trench Area: Black stained petroleum contaminated material

ATTACHMENT 2

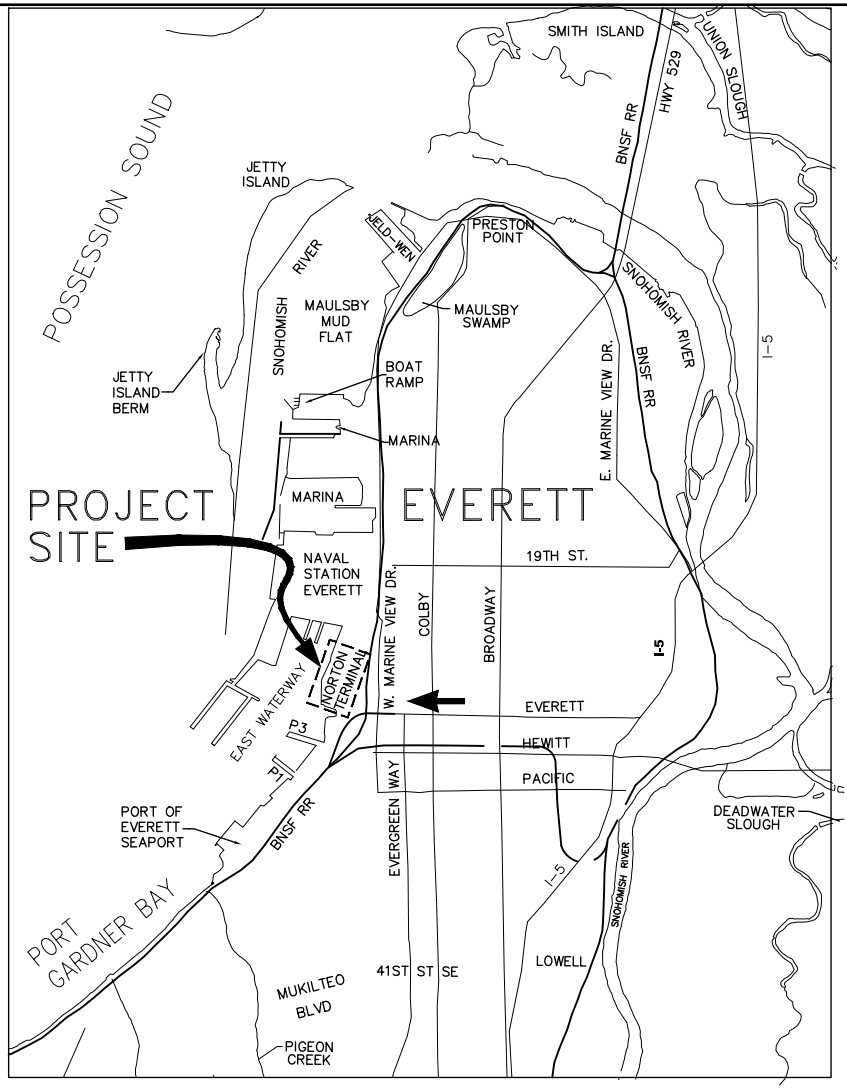
JARPA Drawings



LOCATION MAP

SCALE: NTS

N



VICINITY MAP

SCALE: NTS

N

IN: EAST WATERWAY OF PORT GARDNER BAY

AT: 2600 FEDERAL AVE

CITY: EVERETT **COUNTY:** SNOHOMISH

STATE: WASHINGTON **APPLICATION BY:** PORT OF EVERETT

PARCEL #: 29051900201500, 29051900200900, 29051900201000, 29051900300100, 29051900300200, 29051900300201, 00597761803000, 00597761801000, 00597761800600, 00437461700200, 00597761800102, 00597761803901, 00437455701600, 00437455701302, 00437455701301

PURPOSE: DEMOLISH AND REPLACE EXISTING OUTFALLS A & M TO SUPPORT REDEVELOPMENT OF FORMER KIMBERLY CLARK MILL SITE INTO A SECURE MARINE CARGO TERMINAL.

SECTION: 19 **LAT:** 47°59'9.71"N

TOWNSHIP: 29 NORTH **LONG:** 122°13'0.81"W

RANGE: 05 EAST **DATUM:** MLLW=0.0'

CONVERSION TO NAVD 88=MLLW – 2.03'

REFERENCE No.: NWS-2020-979

PORT OF EVERETT

MARITIME INDUSTRIAL EXPANSION

NORTON TERMINAL

LOCATION AND VICINITY MAP

DATE: 11/17/2020

SHEET: 1 OF 8

Plotted: Nov 16, 2020 – 5:22pm kburns Layout: 1

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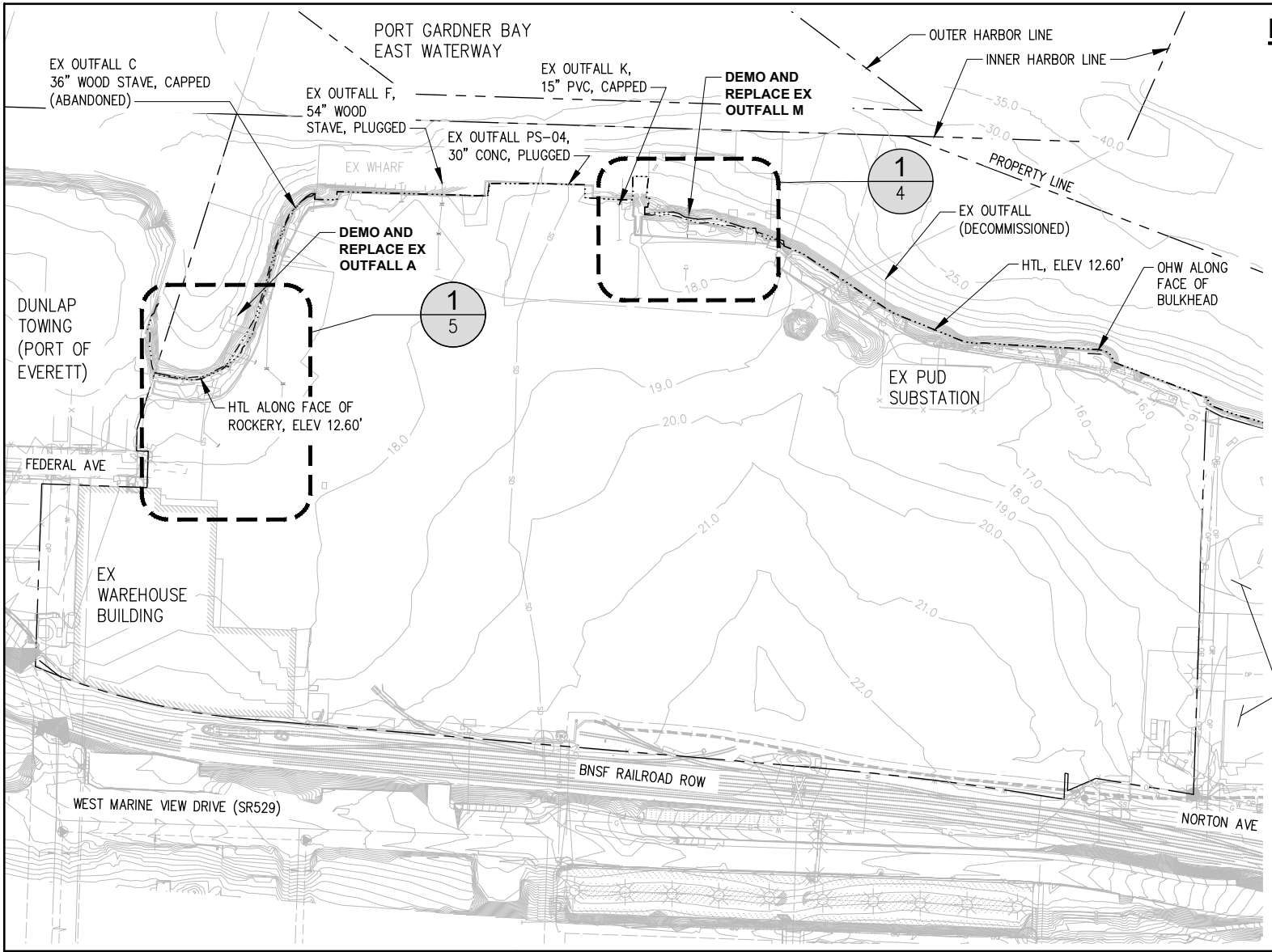

NOTES

1. BOUNDARY AND SURVEY CONTROL IS BASED ON A SURVEY TITLED 'A.L.T.A./N.S.P.S. LAND TITLE SURVEY EVERETT MILL SITE FOR KIMBERLY-CLARKE WORLDWIDE, INC. SNOHOMISH COUNTY, WASHINGTON' PREPARED BY DAVID EVANS AND ASSOCIATES, PROJECT NUMBER KMBY007, DATED 10-31-2019.
2. UTILITIES AND SITE FEATURES ARE BASED ON A SURVEY TITLED 'TOPOGRAPHIC SURVEY PORT OF EVERETT MIE DESIGN SUPPORT', PREPARED BY DAVID EVANS AND ASSOCIATES, PROJECT NUMBER KPFX5074, DATED 06-16-2020.
3. OUTFALL INFORMATION IS BASED ON A MAPPING CAD FILE TITLED 'sv-TP-X-KPFX5075-Exposed-Pipes-2020-10-16.dwg', PREPARED BY DAVID EVANS AND ASSOCIATES, RECEIVED BY EMAIL ON OCTOBER 16, 2020.
4. TOPOGRAPHY AND BATHYMETRY INFORMATION IS BASED ON A CAD FILE TITLED 'Kimberly Clark Site-revised w-bathy.dwg', RECEIVED BY EMAIL FROM DAVID EVANS AND ASSOCIATES ON MAY 15, 2020.
5. REFER TO SHEET 4 FOR TIDAL ELEVATIONS FOR STATION 9447659, EVERETT, WA.

IN: EAST WATERWAY OF PORT GARDNER BAY

AT: 2600 FEDERAL AVE

CITY: EVERETT **COUNTY:** SNOHOMISH

STATE: WASHINGTON **APPLICATION BY:** PORT OF EVERETT

PARCEL #: 29051900201500, 29051900200900, 29051900201000, 29051900300100, 29051900300200, 29051900300201, 00597761803000, 00597761801000, 00597761800600, 00437461700200, 00597761800102, 00597761803901, 00437455701600, 00437455701302, 00437455701301

PURPOSE: DEMOLISH AND REPLACE EXISTING OUTFALLS A & M TO SUPPORT REDEVELOPMENT OF FORMER KIMBERLY CLARK MILL SITE INTO A SECURE MARINE CARGO TERMINAL.

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CONVERSION TO NAVD 88=MLLW - 2.03'

REFERENCE No.: NWS-2020-979

PORT OF EVERETT

MARITIME INDUSTRIAL EXPANSION
NORTON TERMINAL

EXISTING CONDITIONS - OVERALL PLAN

DATE: 11/17/2020

SHEET: 2 OF 8

Plotted: Nov 16, 2020 - 5:32pm kburns Layout: 2 EX COND
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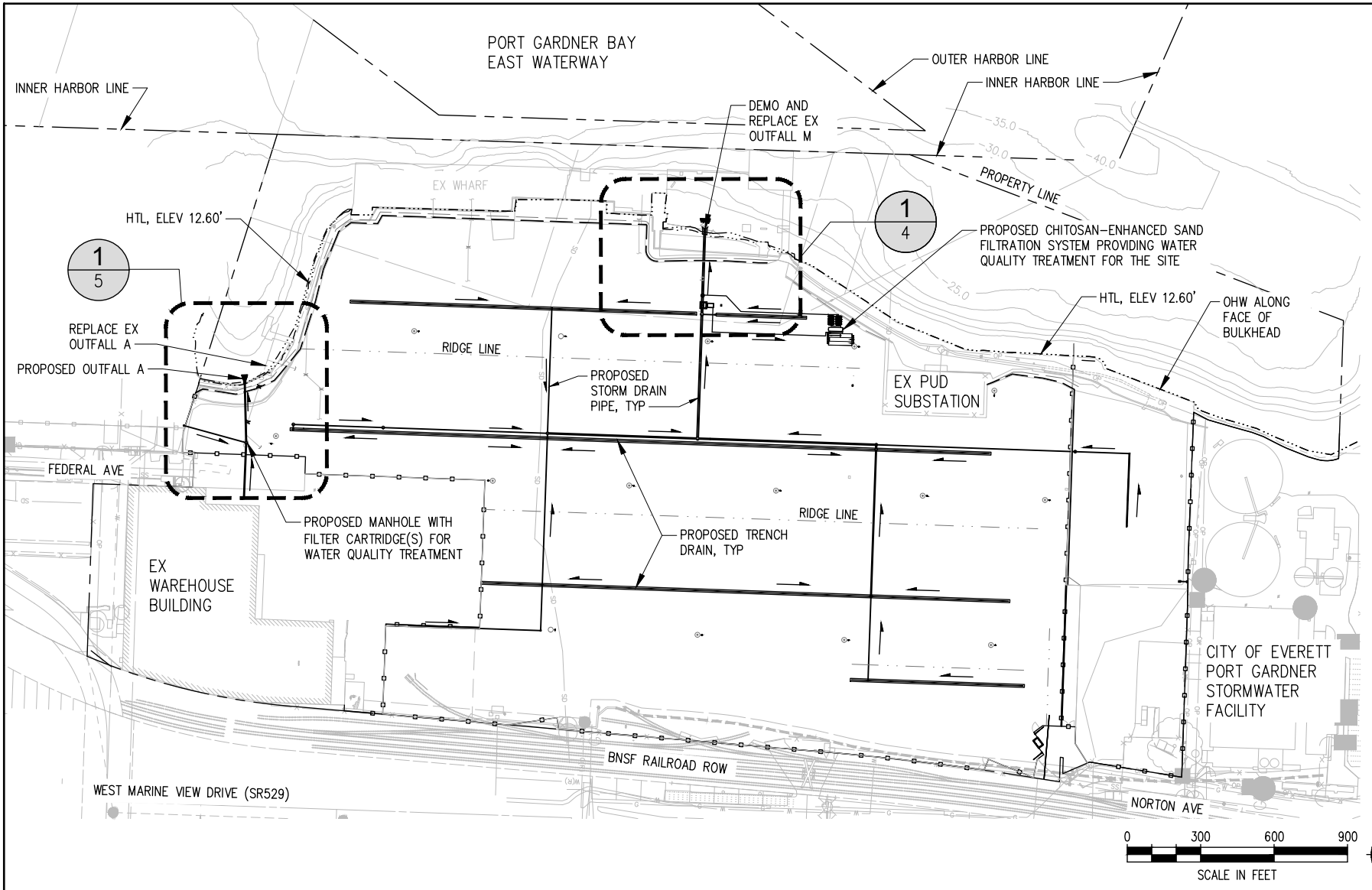

EAST WATERWAY OF PORT GARDNER BAY

T 2600 FEDERAL AVE

CITY EVERETT CO SNOHOMISH

STATE WASHINGTON APPLICANT PORT OF EVERETT

PARCEL 29051900201500, 29051900200900, 29051900201000, 29051900300100, 29051900300200, 29051900300201, 00597761803000, 00597761801000, 00597761800600, 00437461700200, 00597761800102, 00597761803901, 00437455701600, 00437455701302, 00437455701301

PURPOSE DEMOLISH AND REPLACE EXISTING OUTFALLS A & M TO SUPPORT REDEVELOPMENT OF FORMER KIMBERLY CLARK MILL SITE INTO A SECURE MARINE CARGO TERMINAL.

SECTION 19 LAT 47°59'9.71"N

TOWNSHIP 29 NORTH LONG 122°13'0.81"W

RANGE 05 EAST DATUM MLLW=0.0'

CONVERSION TO NAVD 88=MLLW - 2.03'

REFERENCE No.: NWS-2020-979

PORT OF EVERETT

MARITIME INDUSTRIAL EXPANSION

NORTON TERMINAL

PROPOSED CONDITIONS OVERVIEW PLAN

DATE 11/17/2020

SHEET 3 OF 8

Plotted: Nov 17, 2020 - 8:55am jbecker Layout: 3 DEVELOPED COND
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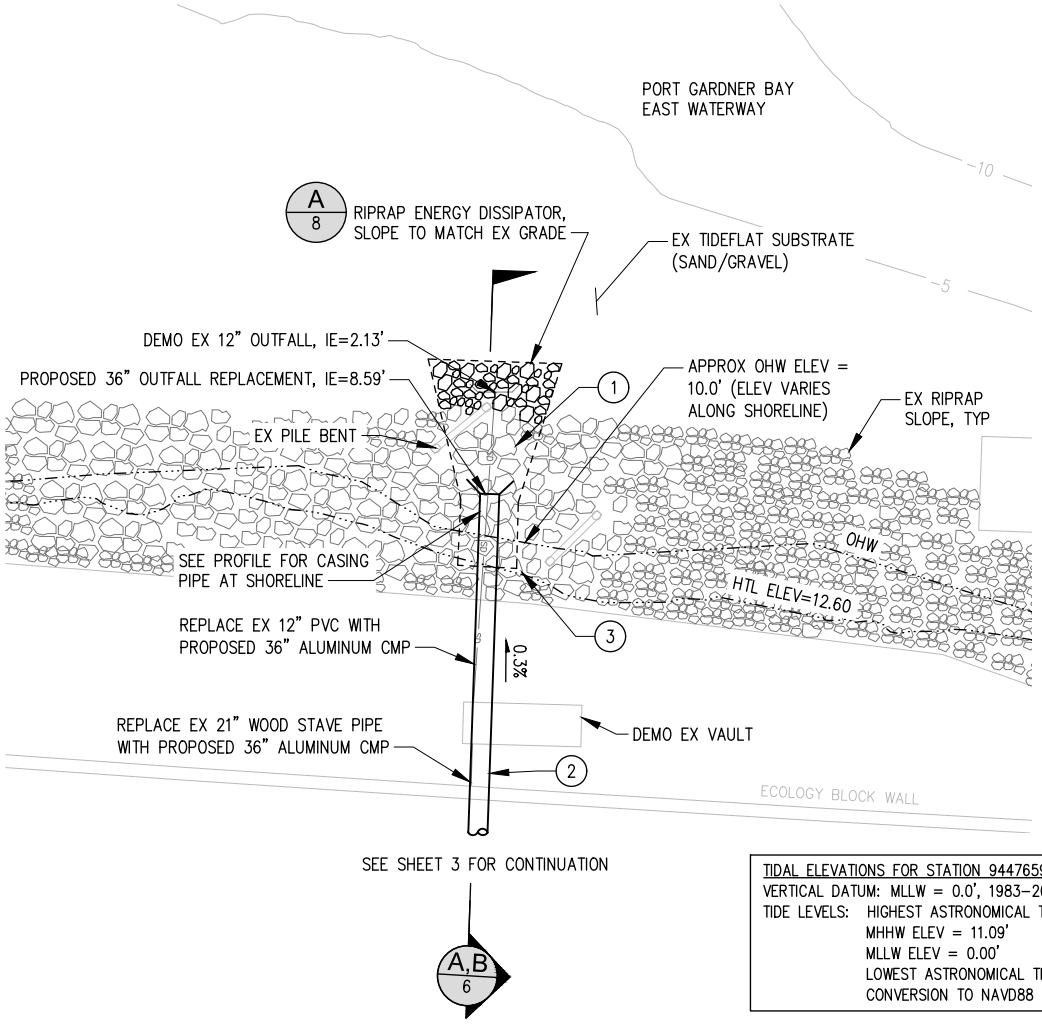

TIDAL ELEVATIONS FOR STATION 9447659, EVERETT, WA
VERTICAL DATUM: MLLW = 0.0', 1983–2001 EPOCH
TIDE LEVELS: HIGHEST ASTRONOMICAL TIDE = 13.22'
MHHW ELEV = 11.09'
MLLW ELEV = 0.00'
LOWEST ASTRONOMICAL TIDE = –4.28'
CONVERSION TO NAVD88 DATUM = MLLW–2.03'

1 / 2, 3 **PROPOSED OUTFALL M - SITE PLAN**
SCALE: 1" = 30'

GENERAL NOTES

1. ALL WORK BELOW HIGH TIDE LINE (HTL) SHALL OCCUR IN THE 'DRY'.
2. EXCAVATION AND PLACEMENT OF ROCK BELOW HTL WILL OCCUR IN THE 'DRY' WITHIN A SINGLE TIDE CYCLE. WORK THAT CANNOT BE COMPLETED IN A SINGLE TIDE CYCLE SHALL TEMPORARILY COVER AND STABILIZE EXPOSED SOILS WITH GRAVEL, GEOTEXTILE OR OTHER APPROVED METHODS PRIOR TO TIDAL SUBMERSION.

CONSTRUCTION KEY NOTES

1. TEMPORARILY RELOCATE EXISTING RIPRAP AND RESTORE TO ORIGINAL ELEVATION, DEPTH, AND LIMITS FOLLOWING OUTFALL REPLACEMENT.
2. PIPE TO UPLAND STORM DRAIN SYSTEM. UPLAND STORM WATER RUNOFF IS TREATED BY A CHITOSAN–ENHANCED SAND FILTRATION SYSTEM BEFORE DISCHARGE TO OUTFALL M.
3. KEY RESTORED RIPRAP INTO EXISTING RIPRAP FOLLOWING OUTFALL REPLACEMENT WORK.

TABLE 1 - OUTFALL M SUMMARY OF EXCAVATION QUANTITIES BELOW HTL

DESCRIPTION	AREA (SF)	CUT VOLUME (CY)	FILL VOLUME (CY)	NET VOLUME CHANGE (CY)
TEMPORARILY RELOCATE & REPLACE EX RIPRAP	260	30	30	0
NEW RIPRAP	160	18 (export tideflat substrate)	18 (import new riprap)	0
NEW QUARRY SPALLS	–	16 (export tideflat substrate)	16 (import quarry spalls)	0
TOTALS	420	64	64	0

NOTES:

1. APPROXIMATELY 260 SF OF EXISTING RIPRAP WILL BE TEMPORARILY RELOCATED FOR REPLACEMENT OF OUTFALL M. EXISTING RIPRAP WILL BE RESTORED TO ITS FORMER FOOTPRINT AND ELEVATION.
2. APPROXIMATELY 160 SF OF EXISTING TIDEFLAT SUBSTRATE (SAND/GRAVEL) WILL BE REPLACED WITH A RIPRAP ENERGY DISSIPATOR PAD.
3. REFER TO APPLICATION FOR SUMMARY OF EXCAVATION QUANTITIES BELOW OHW.

EAST WATERWAY OF PORT GARDNER BAY

2600 FEDERAL AVE

EVERETT — SNOHOMISH

WASHINGTON — PORT OF EVERETT

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DEMOLISH AND REPLACE EXISTING OUTFALLS A & M TO SUPPORT REDEVELOPMENT OF FORMER KIMBERLY CLARK MILL SITE INTO A SECURE MARINE CARGO TERMINAL.

19

29 NORTH

05 EAST

47°59'9.71"N

122°13'0.81"W

MLLW=0.0'

CONVERSION TO NAVD 88=MLLW – 2.03'

REFERENCE No.: NWS-2020-979

PORT OF EVERETT
MARITIME INDUSTRIAL EXPANSION
NORTON TERMINAL

11/17/2020

4 OF 8

Plotted: Nov 17, 2020 – 9:45am jbecker Layout: 4 SITE PLAN–M
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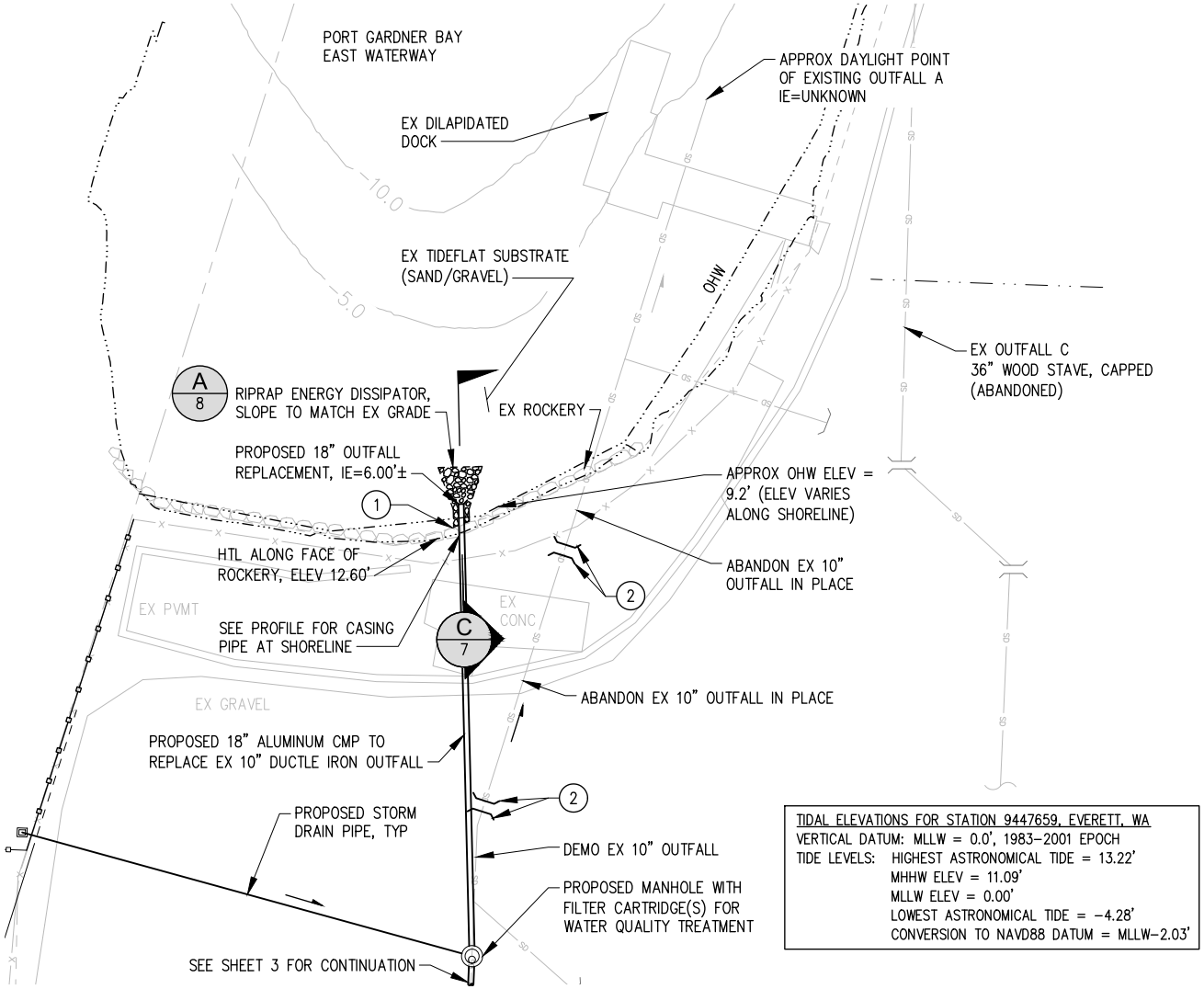

TIDAL ELEVATIONS FOR STATION 9447659, EVERETT, WA
VERTICAL DATUM: MLLW = 0.0', 1983–2001 EPOCH
TIDE LEVELS: HIGHEST ASTRONOMICAL TIDE = 13.22'
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LOWEST ASTRONOMICAL TIDE = −4.28'
CONVERSION TO NAVD88 DATUM = MLLW−2.03'

1
2, 3
PROPOSED OUTFALL A - SITE PLAN
SCALE: 1" = 50'

GENERAL NOTES

1. ALL WORK BELOW HIGH TIDE LINE (HTL) SHALL OCCUR IN THE 'DRY'.
2. EXCAVATION AND PLACEMENT OF ROCK BELOW HTL WILL OCCUR IN THE 'DRY' WITHIN A SINGLE TIDE CYCLE. WORK THAT CANNOT BE COMPLETED IN A SINGLE TIDE CYCLE SHALL TEMPORARILY COVER AND STABILIZE EXPOSED SOILS WITH GRAVEL, GEOTEXTILE OR OTHER APPROVED METHODS PRIOR TO TIDAL SUBMERSION.

CONSTRUCTION KEY NOTES

(1) TEMPORARILY RELOCATE EXISTING ROCKERY AND RESTORE TO ORIGINAL ELEVATION AND LIMITS FOLLOWING OUTFALL REPLACEMENT.

(2) CUT EX 10" OUTFALL & PLUG EACH END WITH CONC CAP

TABLE 2 - OUTFALL A SUMMARY OF EXCAVATION QUANTITIES BELOW HTL

DESCRIPTION	AREA (SF)	CUT VOLUME (CY)	FILL VOLUME (CY)	NET VOLUME CHANGE (CY)
NEW RIPRAP	120	14 (export tideflat substrate)	14 (import new riprap)	0
NEW QUARRY SPALLS	–	5 (export tideflat substrate)	5 (import quarry spalls)	0
TOTALS	120	19	19	0

NOTES:

1. APPROXIMATELY 120 SF OF EXISTING TIDEFLAT SUBSTRATE (COBBLE/GRAVEL/SAND) WILL BE REPLACED WITH A RIPRAP ENERGY DISSIPATOR PAD.
2. REFER TO APPLICATION FOR SUMMARY OF EXCAVATION QUANTITIES BELOW OHW.

EAST WATERWAY OF PORT GARDNER BAY

2600 FEDERAL AVE

EVERETT SNOHOMISH

WASHINGTON PORT OF EVERETT

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DEMOLISH AND REPLACE EXISTING OUTFALLS A & M TO SUPPORT REDEVELOPMENT OF FORMER KIMBERLY CLARK MILL SITE INTO A SECURE MARINE CARGO TERMINAL.

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47°59'9.71"N

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122°13'0.81"W

05 EAST

MLLW=0.0'

CONVERSION TO NAVD 88=MLLW − 2.03'

REFERENCE No.: NWS-2020-979

PORT OF EVERETT
MARITIME INDUSTRIAL EXPANSION
NORTON TERMINAL

11/17/2020

5 OF 8

Plotted: Nov 17, 2020 – 10:38am jbecker Layout: 5 SITE PLAN–A
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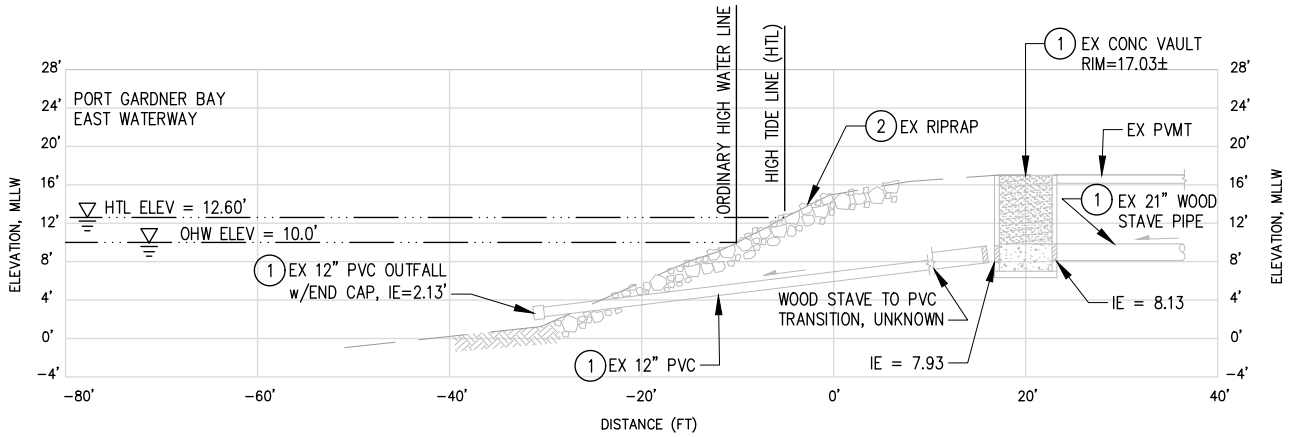
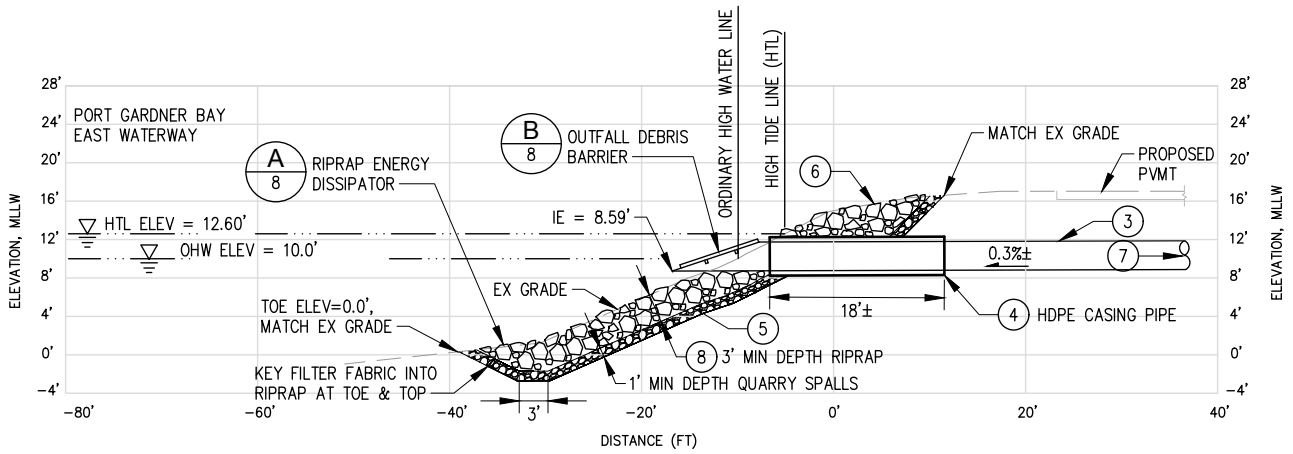


A/4 EXISTING CONDITION & DEMO PROFILE - OUTFALL M

SCALE: 1" = 20'



B/4 PROPOSED CONDITION PROFILE - OUTFALL M

SCALE: 1" = 20'

GENERAL NOTES

1. ALL WORK BELOW HIGH TIDE LINE (HTL) SHALL OCCUR IN THE 'DRY'.
2. EXCAVATION AND PLACEMENT OF ROCK BELOW HTL WILL OCCUR IN THE 'DRY' WITHIN A SINGLE TIDE CYCLE. WORK THAT CANNOT BE COMPLETED IN A SINGLE TIDE CYCLE SHALL TEMPORARILY COVER AND STABILIZE EXPOSED SOILS WITH GRAVEL, GEOTEXTILE OR OTHER APPROVED METHODS PRIOR TO TIDAL SUBMERSION.

CONSTRUCTION KEY NOTES

(1) DEMOLISH AND REMOVE.

(2) TEMPORARILY RELOCATE EXISTING RIPRAP TO ACCOMMODATE OUTFALL REPLACEMENT WORK.

(3) REPLACE EXISTING 12" PVC OUTFALL WITH NEW 36" ALUMINUM CMP.

(4) INSTALL 48" HDPE PIPE TO ENCASE 36" ALUMINUM CMP OUTFALL PIPE. FILL ANNULAR SPACE WITH NON-SHRINK GROUT.

(5) COVER EXCAVATED, EXPOSED SUBGRADE SOILS WITH FILTER FABRIC PRIOR TO QUARRY SPALL PLACEMENT.

(6) RESTORE EXISTING RIPRAP TO ORIGINAL ELEVATION, DEPTH, AND LIMITS FOLLOWING OUTFALL REPLACEMENT.

(7) PIPE TO UPLAND STORM DRAIN SYSTEM. UPLAND STORM WATER RUNOFF IS TREATED BY A CHITOSAN-ENHANCED SAND FILTRATION SYSTEM BEFORE DISCHARGE TO OUTFALL M.

(8) RIPRAP SHALL CONFORM TO WSDOT SPEC 9-13.4 CLASS B ROCK FOR EROSION AND SCOUR PROTECTION:

CLASS B RIRAP	
APPROX SIZE (inch)	PERCENT PASSING (smaller)
30	100
28	80-95
22	50-80
16	15-50
10	15 max

EAST WATERWAY OF PORT GARDNER BAY

2600 FEDERAL AVE

EVERETT SNOHOMISH

WASHINGTON PORT OF EVERETT

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DEMOLISH AND REPLACE EXISTING OUTFALLS A & M TO SUPPORT REDEVELOPMENT OF FORMER KIMBERLY CLARK MILL SITE INTO A SECURE MARINE CARGO TERMINAL.

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122°13'0.81"W

05 EAST

MLLW=0.0'

CONVERSION TO NAVD 88=MLLW - 2.03'

REFERENCE No.: NWS-2020-979

PORT OF EVERETT

MARITIME INDUSTRIAL EXPANSION

NORTON TERMINAL

EMO PROPO E

PROF E FOR O TF M

11/17/2020

6 OF 8

Plotted: Nov 17, 2020 - 10:11am jbecker Layout: 6 PROFILE-M

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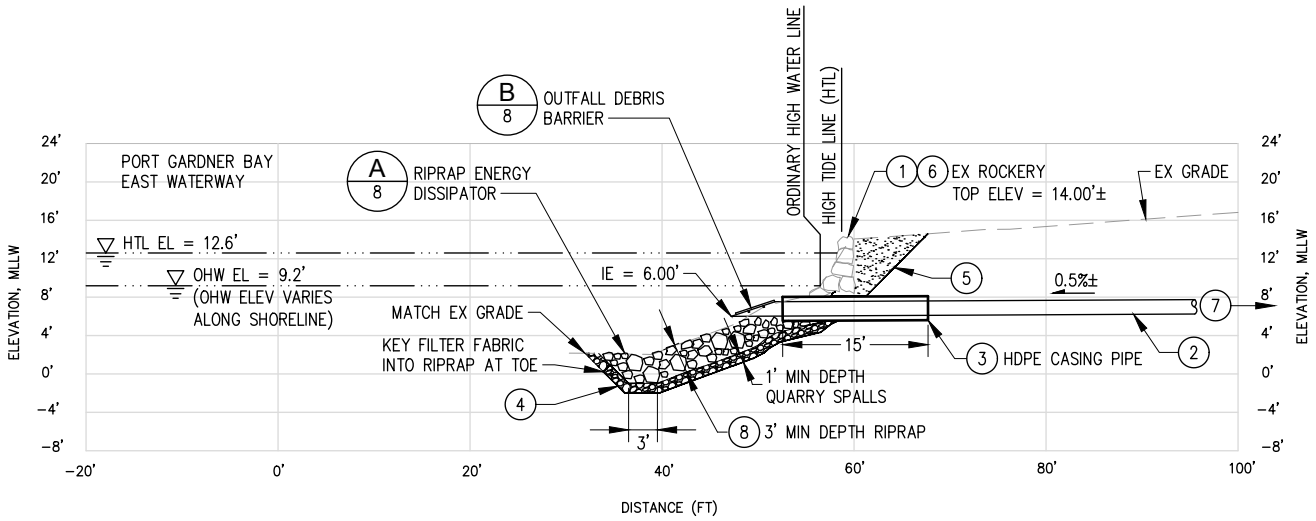

C
5
PROPOSED CONDITION PROFILE - OUTFALL A
SCALE: 1" = 20'

GENERAL NOTES

1. ALL WORK BELOW HIGH TIDE LINE (HTL) SHALL OCCUR IN THE 'DRY'.
2. EXCAVATION AND PLACEMENT OF ROCK BELOW HTL WILL OCCUR IN THE 'DRY' WITHIN A SINGLE TIDE CYCLE. WORK THAT CANNOT BE COMPLETED IN A SINGLE TIDE CYCLE SHALL TEMPORARILY COVER AND STABILIZE EXPOSED SOILS WITH GRAVEL, GEOTEXTILE OR OTHER APPROVED METHODS PRIOR TO TIDAL SUBMERSION.

CONSTRUCTION KEY NOTES

(1) TEMPORARILY RELOCATE EXISTING ROCKERY TO ACCOMMODATE OUTFALL INSTALLATION.

(2) PLUG & ABANDON EXISTING 10" DI OUTFALL AND REPLACE WITH 18" ALUMINUM CMP OUTFALL.

(3) INSTALL 30" HDPE PIPE TO ENCASE 18" ALUMINUM CMP OUTFALL PIPE. FILL ANNULAR SPACE WITH NON-SHRINK GROUT.

(4) COVER EXCAVATED, EXPOSED SUBGRADE SOILS WITH FILTER FABRIC PRIOR TO QUARRY SPALL PLACEMENT.

(5) COVER EXCAVATED, EXPOSED SUBGRADE SOILS WITH FILTER FABRIC PRIOR TO GRAVEL BACKFILL PLACEMENT FOR ROCKERY.

(6) RESTORE EXISTING ROCKERY TO ORIGINAL ELEVATION AND LIMITS FOLLOWING OUTFALL INSTALLATION.

(7) PIPE TO UPLAND STORM DRAIN SYSTEM. UPLAND STORM WATER RUNOFF IS TREATED BY FILTER CARTRIDGE(S) FOR WATER QUALITY TREATMENT BEFORE DISCHARGE TO OUTFALL A.

(8) RIPRAP SHALL CONFORM TO WSDOT SPEC 9-13.4 CLASS B ROCK FOR EROSION AND SCOUR PROTECTION:

CLASS B RIRAP	
APPROX SIZE (inch)	PERCENT PASSING (smaller)
30	100
28	80-95
22	50-80
16	15-50
10	15 max

EAST WATERWAY OF PORT GARDNER BAY

2600 FEDERAL AVE

EVERETT SNOHOMISH

WASHINGTON PORT OF EVERETT

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DEMOLISH AND REPLACE EXISTING OUTFALLS A & M TO SUPPORT REDEVELOPMENT OF FORMER KIMBERLY CLARK MILL SITE INTO A SECURE MARINE CARGO TERMINAL.

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47°59'9.71"N

29 NORTH

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05 EAST

MLLW=0.0'

CONVERSION TO NAVD 88=MLLW - 2.03'

REFERENCE No.: NWS-2020-979

PORT OF EVERETT
MARITIME INDUSTRIAL EXPANSION
NORTON TERMINAL

PROPOSED PROFILE FOR OUTFALL A

11/17/2020

7 OF 8

Plotted: Nov 17, 2020 - 10:10am jbecker Layout: 7 PROFILE-A
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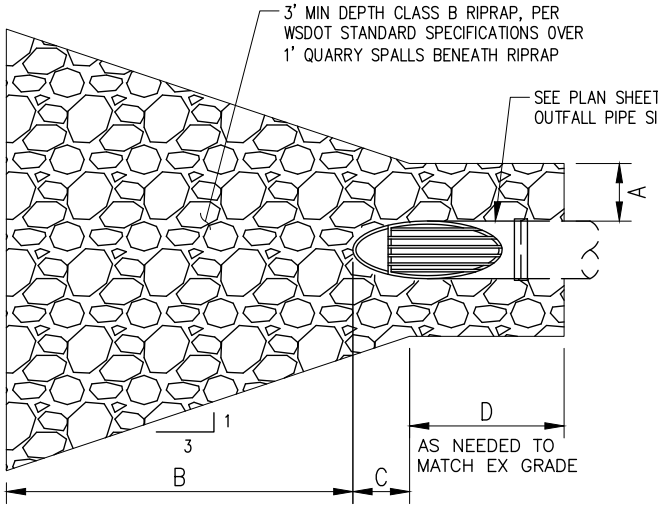
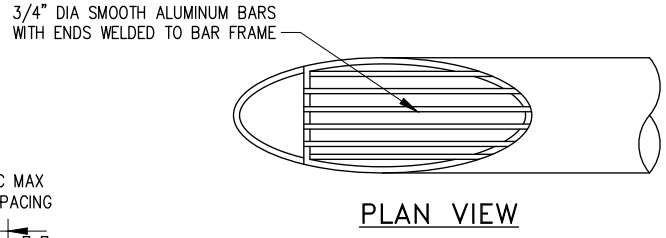
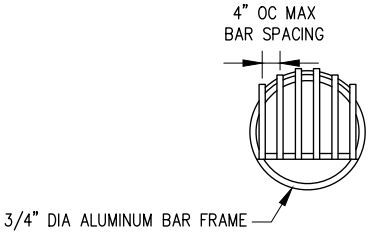
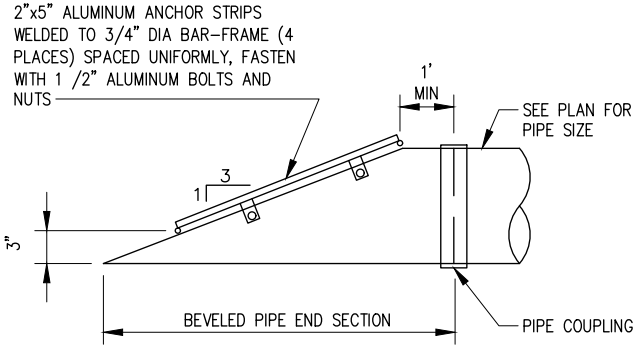




PLAN VIEW



END VIEW



SIDE VIEW

ENERGY DISSIPATOR SCHEDULE

OUTFALL SIZE	A	B	C	D
18"	1.5'	10.5'	1.5'	8'±
36"	3'	18'	3'	10'±

A 4,5 **DETAIL - RIPRAP ENERGY DISSIPATOR**
SCALE: 1" = 10'

B 6,7 **DETAIL - OUTFALL DEBRIS BARRIER**
SCALE: 1" = 5'

EAST WATERWAY OF PORT GARDNER BAY

2600 FEDERAL AVE

EVERETT SNOHOMISH

WASHINGTON PORT OF EVERETT

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19 47°59'9.71"N

29 NORTH 122°13'0.81"W

05 EAST MLLW=0.0'

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PORT OF EVERETT
MARITIME INDUSTRIAL EXPANSION
NORTON TERMINAL

11/17/2020

8 OF 8

Plotted: Nov 17, 2020 – 10:18am jbecker Layout: 8 SECTIONS
M:\2019\1900238 POE Maritime Industrial Expansion Engineering Services\2.18 Drawings\Current\JARPA\20201117_MIE JARPA.dwg

ATTACHMENT 3

Site Preliminary Groundwater Cleanup Levels
(Aspect 2021)

Table 5-1 - Groundwater Preliminary Cleanup Levels

Project No. 190583, K-C Worldwide Site Upland Area, Everett, Washington

ANALYTE (BY GROUP)	APPLICABLE GROUNDWATER CRITERIA: Marine Surface Water Criteria for Establishing Method B Surface Water Cleanup Levels[a] — Aquatic Protection: Surface Water ARAR - Aquatic Life - Ch. 173-201A WAC (ma-wac)	Surface Water ARAR - Aquatic Life - National Recommended WQ Criteria (CWA 304a) (ma-cwa 304a)	Surface Water, Aquatic Life - Predicted Protective Concentrations (IM #23) (draft IM23)	Human Health Protection: Surface Water ARAR - Human Health - National Recommended WQ Criteria (CWA 304a) (hh-cwa 304a)	Surface Water ARAR - Human Health - Ch. 173-201A WAC (hh-wac)	Surface Water ARAR - Human Health - 40 CFR 131.45 (CWA 303c) (hh-cwa 303c)	Surface Water, Method B Human Health, Most Restrictive, Standard Formula (sw-b)	Surface Water, Method B Human Health, Most Restrictive, Adjusted for ARARs[b] (hh)	Surface Water Screening Level for Marine Protection (marine)		Potable Groundwater Screening Level[c] (pot)	Groundwater Screening Level Protective of Vapor Intrusion for Industrial Use (Method C)[a] (vi-c)	Applicable Practical Quantitation Level (PQL)[d] (pql)	Groundwater Preliminary Cleanup Level and Basis	
Total Petroleum Hydrocarbons															
Gasoline Range Hydrocarbons in ug/L			1700						1700	*(draft IM23)*			100	1700	*(marine)*
Diesel Range Hydrocarbons in ug/L			2100						2100	*(draft IM23)*			50	2100	*(marine)*
Oil Range Hydrocarbons in ug/L			2100						2100	*(draft IM23)*			250	2100	*(marine)*
Total TPH in ug/L			2100						2100	*(draft IM23)*			250	2100	*(marine)*
Dissolved Metals															
Antimony in ug/L				640	180	90	1000	90	90	*(hh)*			0.05	90	*(marine)*
Arsenic in ug/L	36	36		0.14	10	0.14	0.098	0.14	5	*footnote e*			0.5	5	*(marine)*
Barium in ug/L											2000		0.5	2000	*(pot)*
Cadmium in ug/L	9.3	7.9					41	41	7.9	*(ma-cwa 304a)*			0.02	7.9	*(marine)*
Chromium (Total) in ug/L							240000	240000	240000	*(hh)*			0.2	240000	*(marine)*
Copper in ug/L	3.1	3.1					2900	2900	3.1	*(ma-wac)*			0.1	3.1	*(marine)*
Lead in ug/L	8.1	5.6							5.6	*(ma-cwa 304a)*			0.02	5.6	*(marine)*
Mercury in ug/L	0.025	0.94							0.025	*(ma-wac)*		1.8	0.0005	0.025	*(marine)*
Nickel in ug/L	8.2	8.2		4600	190	100	1100	100	8.2	*(ma-wac)*			0.2	8.2	*(marine)*
Selenium in ug/L	71	71		4200	480	200	2700	200	71	*(ma-wac)*			1	71	*(marine)*
Silver in ug/L	1.9	1.9					26000	26000	1.9	*(ma-wac)*			0.02	1.9	*(marine)*
Thallium in ug/L				0.47	0.27	6.3	0.22	0.22	0.22	*(hh)*			0.02	0.22	*(marine)*
Zinc in ug/L	81	81		26000	2900	1000	17000	1000	81	*(ma-wac)*			0.5	81	*(marine)*
Conventionals															
Formaldehyde in ug/L									1600	*footnote f*			100	1600	*(marine)*
Un-Ionized Ammonia in mg/L	0.035								0.035	*(ma-wac)*			0.01	0.035	*(marine)*
Free (Hydrogen) Sulfide in mg/L		0.002							0.002	*(ma-cwa 304a)*			0.001	0.002	*(marine)*
Dissolved Sulfide in mg/L		0.002							0.002	*(ma-cwa 304a)*			0.05	0.05	*(pql)*
pH in standard units	7.0 to 8.5	6.5 to 8.5							6.5 to 8.5	*(ma-wac)*				6.5 to 8.5	*(marine)*
Volatile Organic Compounds															
1,1-Dichloroethene in ug/L				20000	4100	4000	23000	4000	4000	*(hh)*		280	0.5	280	*(vi-c)*
1,2,4-Trimethylbenzene in ug/L											80	520	1	80	*(pot)*
1,3,5-Trimethylbenzene in ug/L											80	370	1	80	*(pot)*
1,4-Dichlorobenzene in ug/L				900	580	200	22	200	200	*(hh)*		49	0.05	49	*(vi-c)*
2-Butanone in ug/L											4800	3,700,000	10	4800	*(pot)*
2-Chlorotoluene in ug/L											160		1	160	*(pot)*
4-Chlorotoluene in ug/L													1		
Acetone in ug/L											7200	3.2.E+07	10	7200	*(pot)*
Benzene in ug/L			23	16	1.6		23	1.6	1.6	*(hh)*		24	0.35	1.6	*(marine)*
cis-1,2-Dichloroethene (DCE) in ug/L											16		0.5	16	*(pot)*
Ethylbenzene in ug/L			21	130	270	31	6900	31	21	*(draft IM23)*		6100	0.5	21	*(marine)*
Isopropylbenzene in ug/L											800	2000	2	800	*(pot)*
Methylene chloride in ug/L				1000	250	100	590	100	100	*(hh)*		11000	2	100	*(marine)*
n-Propylbenzene in ug/L											800	4900	1	800	*(pot)*
p-Isopropyltoluene in ug/L											800	2000	1	800	*(pot)*
sec-Butylbenzene in ug/L											800		1	800	*(pot)*
Styrene in ug/L											100	18000	0.5	100	*(pot)*
tert-Butylbenzene in ug/L											800		1	800	*(pot)*
Toluene in ug/L			102	520	410	130	19000	130	102	*(draft IM23)*		34000	0.5	102	*(marine)*
Vinyl chloride in ug/L				1.6	0.26	0.18	3.7	0.18	0.18	*(hh)*		3.4	0.2	0.2	*(pql)*
Xylenes, total			106						106	*(draft IM23)*	1000	710	3	106	*(marine)*

Table 5-1 - Groundwater Preliminary Cleanup Levels

Project No. 190583, K-C Worldwide Site Upland Area, Everett, Washington

ANALYTE (BY GROUP)	APPLICABLE GROUNDWATER CRITERIA: Marine Surface Water Criteria for Establishing Method B Surface Water Cleanup Levels[a] — Aquatic Protection: Surface Water ARAR - Aquatic Life - Ch. 173-201A WAC (ma-wac)	Surface Water ARAR - Aquatic Life - National Recommended WQ Criteria (CWA 304a) (ma-cwa 304a)	Surface Water, Aquatic Life - Predicted Protective Concentrations (IM #23) (draft IM23)	Human Health Protection: Surface Water ARAR - Human Health - National Recommended WQ Criteria (CWA 304a) (hh-cwa 304a)	Surface Water ARAR - Human Health - Ch. 173-201A WAC (hh-wac)	Surface Water ARAR - Human Health - 40 CFR 131.45 (CWA 303c) (hh-cwa 303c)	Surface Water, Method B Human Health, Most Restrictive, Standard Formula (sw-b)	Surface Water, Method B Human Health, Most Restrictive, Adjusted for ARARs[b] (hh)	Surface Water Screening Level for Marine Protection (marine)		Potable Groundwater Screening Level[c] (pot)	Groundwater Screening Level Protective of Vapor Intrusion for Industrial Use (Method C)[a] (vi-c)	Applicable Practical Quantitation Level (PQL)[d] (pql)	Groundwater Preliminary Cleanup Level and Basis	
Polycyclic Aromatic Hydrocarbons (PAHs)															
Acenaphthene in ug/L				90	110	30	640	30	30	*(hh)*			0.012	30	*(marine)*
Acenaphthylene in ug/L				90	110	30	640	30	30	*(hh)*			0.012	30	*(marine)*
Anthracene in ug/L				400	4600	100	26000	100	100	*(hh)*			0.012	100	*(marine)*
Benzo(g,h,i)perylene in ug/L				30	460	8	2600	8	8	*(hh)*			0.012	8	*(marine)*
Fluoranthene in ug/L				20	16	6	90	6	6	*(hh)*			0.012	6	*(marine)*
Fluorene in ug/L				70	610	10	3500	10	10	*(hh)*			0.012	10	*(marine)*
Phenanthrene in ug/L				400	4600	100	26000	100	100	*(hh)*			0.012	100	*(marine)*
Pyrene in ug/L				30	460	8	2600	8	8	*(hh)*			0.012	8	*(marine)*
1-Methylnaphthalene in ug/L											1.5		0.05	1.5	*(pot)*
2-Methylnaphthalene in ug/L											32		0.05	32	*(pot)*
Naphthalene in ug/L							4900	4900	4900	*(hh)*		89	0.012	89	*(vi-c)*
Benz(a)anthracene in ug/L													0.01		
Benzo(a)pyrene in ug/L													0.01		
Benzo(b)fluoranthene in ug/L													0.01		
Benzo(k)fluoranthene in ug/L													0.01		
Chrysene in ug/L													0.01		
Dibenzo(a,h)anthracene in ug/L													0.01		
Indeno(1,2,3-cd)pyrene in ug/L													0.01		
Total cPAHs TEQ in ug/L				0.00013	0.0021	0.000016	0.035	0.000016	0.000016	*(hh)*			0.015	0.015	*(pql)*
Other Semivolatile Organics															
2,4,6-Trichlorophenol in ug/L				2.8	0.28		3.9	0.28	0.28	*(hh)*			0.5	0.5	*(pql)*
2,4-Dimethylphenol in ug/L				3000	97		550	97	97	*(hh)*			0.5	97	*(marine)*
3 & 4 Methylphenol											400		1	400	*(pot)*
Benzoic acid in ug/L											64000		2.5	64000	*(pot)*
Benzyl alcohol in ug/L											800		0.5	800	*(pot)*
Benzyl butyl phthalate in ug/L				0.1	0.58	0.013	8.2	0.013	0.013	*(hh)*			0.5	0.5	*(pql)*
Bis(2-ethylhexyl) phthalate in ug/L				0.37	0.25	0.046	3.6	0.046	0.046	*(hh)*			0.8	0.8	*(pql)*
Carbazole in ug/L													0.5		
Dibenzofuran in ug/L											16		0.05	16	*(pot)*
Diethyl phthalate in ug/L				600	5000	200	28000	200	200	*(hh)*			0.5	200	*(marine)*
Dimethyl phthalate in ug/L				2000	130000	600		600	600	*(hh)*			0.5	600	*(marine)*
Di-n-butyl phthalate in ug/L				30	510	8	2900	8	8	*(hh)*			0.5	8	*(marine)*
Pentachlorophenol in ug/L	7.9	7.9		0.04	0.1	0.002	1.5	0.002	0.002	*(hh)*			0.5	0.5	*(pql)*
Phenol in ug/L				300000	200000	70000	560000	70000	70000	*(hh)*			0.5	70000	*(marine)*

Table 5-1 - Groundwater Preliminary Cleanup Levels

Project No. 190583, K-C Worldwide Site Upland Area, Everett, Washington

ANALYTE (BY GROUP)	APPLICABLE GROUNDWATER CRITERIA: Marine Surface Water Criteria for Establishing Method B Surface Water Cleanup Levels[a] — Aquatic Protection: Surface Water ARAR - Aquatic Life - Ch. 173-201A WAC (ma-wac)	Surface Water ARAR - Aquatic Life - National Recommended WQ Criteria (CWA 304a) (ma-cwa 304a)	Surface Water, Aquatic Life - Predicted Protective Concentrations (IM #23) (draft IM23)	Human Health Protection: Surface Water ARAR - Human Health - National Recommended WQ Criteria (CWA 304a) (hh-cwa 304a)	Surface Water ARAR - Human Health - Ch. 173-201A WAC (hh-wac)	Surface Water ARAR - Human Health - 40 CFR 131.45 (CWA 303c) (hh-cwa 303c)	Surface Water, Method B Human Health, Most Restrictive, Standard Formula (sw-b)	Surface Water, Method B Human Health, Most Restrictive, Adjusted for ARARs[b] (hh)	Surface Water Screening Level for Marine Protection (marine)		Potable Groundwater Screening Level[c] (pot)	Groundwater Screening Level Protective of Vapor Intrusion for Industrial Use (Method C)[a] (vi-c)	Applicable Practical Quantitation Level (PQL)[d] (pql)	Groundwater Preliminary Cleanup Level and Basis	
Polychlorinated Biphenyls (PCBs)														
Total PCBs in ug/L (Sum of Aroclors)	0.03	0.03		6.4E-05	1.7E-04	7.0E-06	1.0E-04	7.0E-06	7.0E-06	*(hh)*			0.05	0.05 *(pql)*
Total PCBs in ug/L (Sum of Congeners)	0.03	0.03		6.4E-05	1.7E-04	7.0E-06	1.0E-04	7.0E-06	7.0E-06	*(hh)*			0.0091	0.0091 *(pql)*
Dioxins/Furans														
Total 2,3,7,8 TCDD (TEQ) in ug/L				5.10E-09	6.4E-08	1.4E-08	1.0E-08	5.10E-09	5.1E-09	*(hh)*			6.3E-05	6.3E-05 *(pql)*

Notes:

Preliminary cleanup levels are presented for compounds that were detected in either soil or groundwater during collection of data used in the RI (2012-present).

a Criteria values obtained from Ecology's CLARC database in May 2021 or Ecology Draft Implmentation Memo #23 (January 2021)

b Surface water Method B human health levels established using the standard Method B formula in MTCA were compared to state and federal human-health-based ARARs. The most stringent ARAR that is sufficiently protective under MTCA (i.e. less than a risk of 10^{-5} and a hazard quotient of 1) is selected as the screening level for human health protection (*hh*). If there are multiple contaminants, then the cumulative risk and HI must not exceed a risk of 10-5 or a hazard index of 1.

c Upland Area groundwater is not a practicable source of potable groundwater, but, for the purposes of the RI, potable groundwater screening levels are applied for those compounds without a marine surface water screening level.

d Analytical method reporting limits. PQLs for total cPAH (TEQ) and total TCDD (TEQ) are adjusted for TEFs.

e Based on background groundwater concentrations in Washington state (WAC 173-340-900, Table 720-1).

f Formaldehyde value based on protection of aquatic life (Anchor Environmental, 2008).

ATTACHMENT 4

Preload and North Terminal Development—90 Percent Design TESC Plans

TESC NOTES

1. CONTRACTOR SHALL MAINTAIN EXISTING ON-SITE INFILTRATION OF RAINFALL THROUGHOUT THE FULL PROJECT DURATION. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING CONSTRUCTION SITE STORMWATER AND SHALL NOT ALLOW A SURFACE WATER DISCHARGE FROM THE SITE.
2. OUTFALL REPLACEMENT WORK. ALL EXCAVATION AND PLACEMENT OF ROCK BELOW OHW WILL OCCUR IN THE 'DRY' DURING LOW TIDE WITHIN A SINGLE TIDE CYCLE. WORK THAT CANNOT BE COMPLETED IN A SINGLE TIDE CYCLE SHALL TEMPORARILY COVER AND STABILIZE EXPOSED SOILS WITH GRAVEL, GEOTEXTILE OR OTHER APPROVED METHODS PRIOR TO TIDAL SUBMERSION.

LEGEND

- GROUND SLOPE DIRECTION
- TEMP INLET PROTECTION PER COE STD DWG 210
- EX TEMP INLET PROTECTION
- TEMP SILT FENCE PER COE STD DWG 214

SCALE: 1"=80'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

VERT DATUM: NAVD 88
CONV TO MLLW = NAVD88+2.03
HORZ DATUM: NAD 83/91

90% SUBMITTAL
IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
P.O. BOX 538
EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION

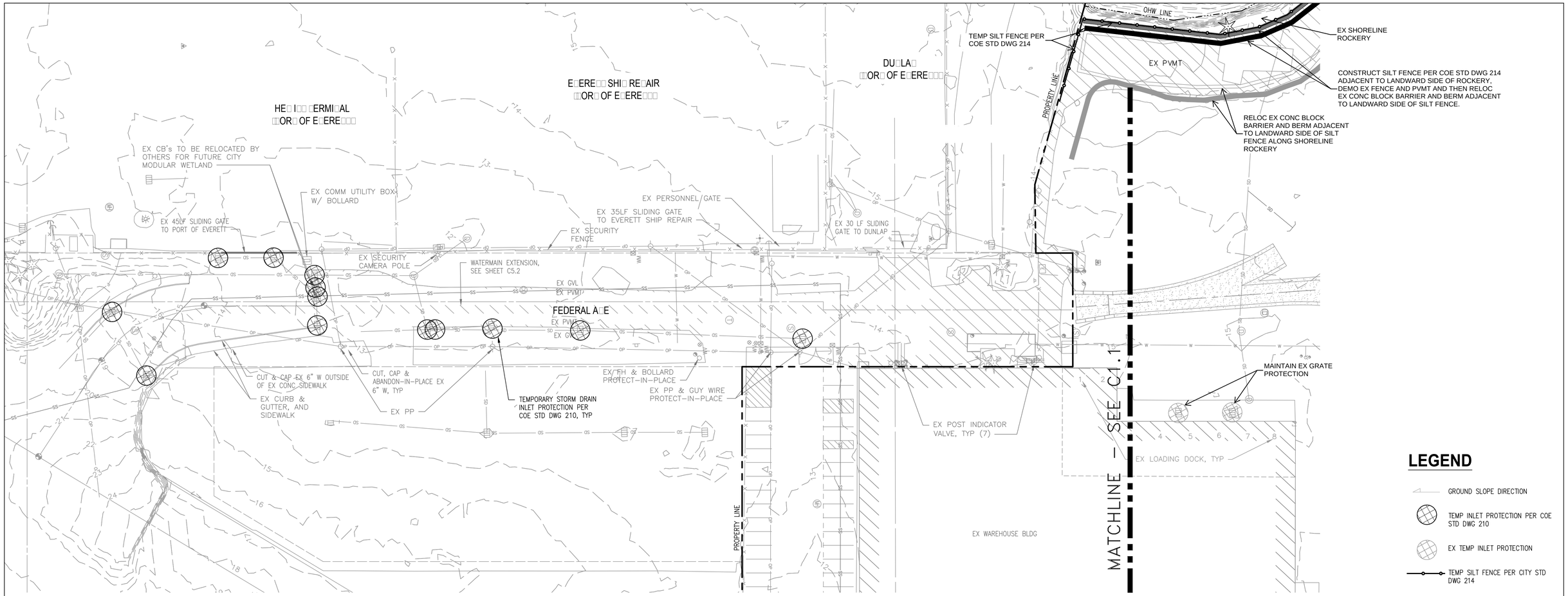
NO.	DATE	BY	REVISION

PROJECT ENGINEER: N. WATSON	SCALE: 1" = 80'
DESIGNED BY: J. BECKER	DATE: 04/16/2021
DRAWN BY: K. EDWARDS, D. YU	CHECKED BY: N. WATSON
APPROVED BY:	

PORT OF EVERETT

NORTON TERMINAL DEVELOPMENT & MTCA 3RD INTERIM ACTION TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

DWG. NO. **C1.1**
CIP NO. 1-8-900-05
PROJECT NO. MT-NT-2021-02.2
SHEET NO. XX OF XX



LEGEND

- GROUND SLOPE DIRECTION
- TEMP INLET PROTECTION PER COE STD DWG 210
- EX TEMP INLET PROTECTION
- TEMP SILT FENCE PER CITY STD DWG 214

N

30' 0 30' 60'
15' 45'

SCALE: 1"=30'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

VERT DATUM: NAVD 88
CONV TO MLLW = NAVD88+2.03
HORZ DATUM: NAD 83/91

90% SUBMITTAL

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

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Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

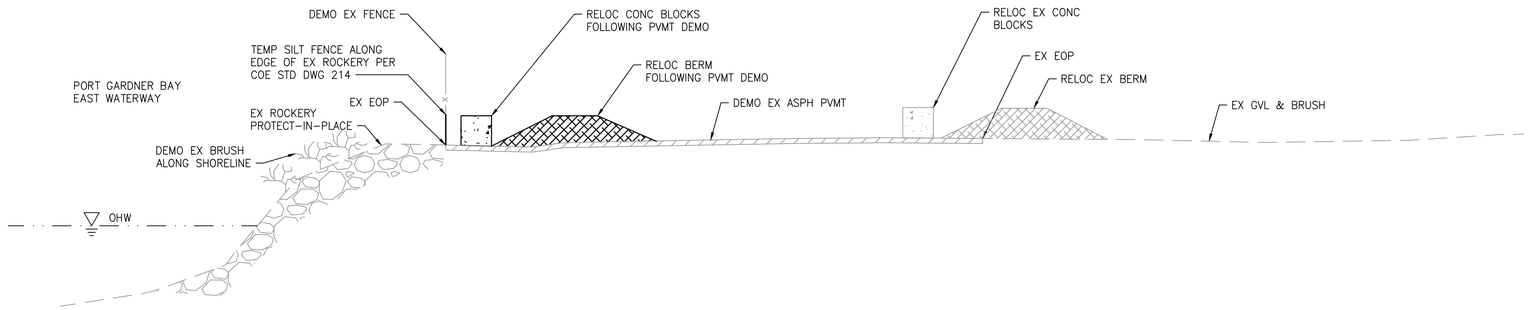
NO.	DATE	BY	REVISION	NO.	DATE	BY	REVISION

PROJECT ENGINEER: N. WATSON	SCALE: 1" = 80'
DESIGNED BY: J. BECKER	DATE: 04/16/2021
DRAWN BY: K. EDWARDS, D. YU	CHECKED BY: N. WATSON
APPROVED BY:	

PORT OF EVERETT

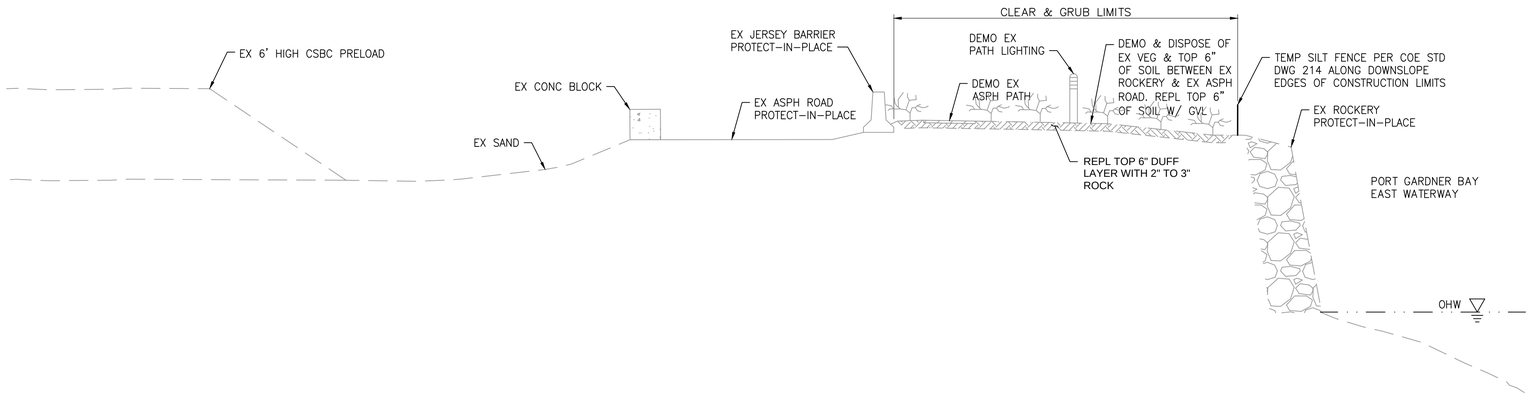
NORTON TERMINAL DEVELOPMENT & MTCA 3RD INTERIM ACTION TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

DWG. NO. C1.□
CIP NO. 1-8-900-05
PROJECT NO. MT-NT-2021-02.2
SHEET NO. XX OF XX



A SECTION

C1.1 C1.3 SCALE: 1" = 5' HORIZ, 1"=5' VERT



B SECTION

C1.1 C1.3 SCALE: 1" = 5' HORIZ, 1"=5' VERT

5' 0 5' 10'
2.5' 7.5'

CALL 48 HOURS BEFORE YOU DIG DIAL 811

VERT DATUM: NAVD 88
CONV TO MLLW = NAVD88+2.03
HORZ DATUM: NAD 83/91

90% SUBMITTAL

IF SHEET IS LESS THAN 22x34
REDUCE SCALE ACCORDINGLY

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(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION

NO.	DATE	BY	REVISION

PROJECT ENGINEER: N. WATSON	SCALE: AS SHOWN
DESIGNED BY: J. BECKER	DATE: 04/16/2021
DRAWN BY: K. EDWARDS, D. YU	CHECKED BY: N. WATSON
APPROVED BY:	

PORT OF EVERETT

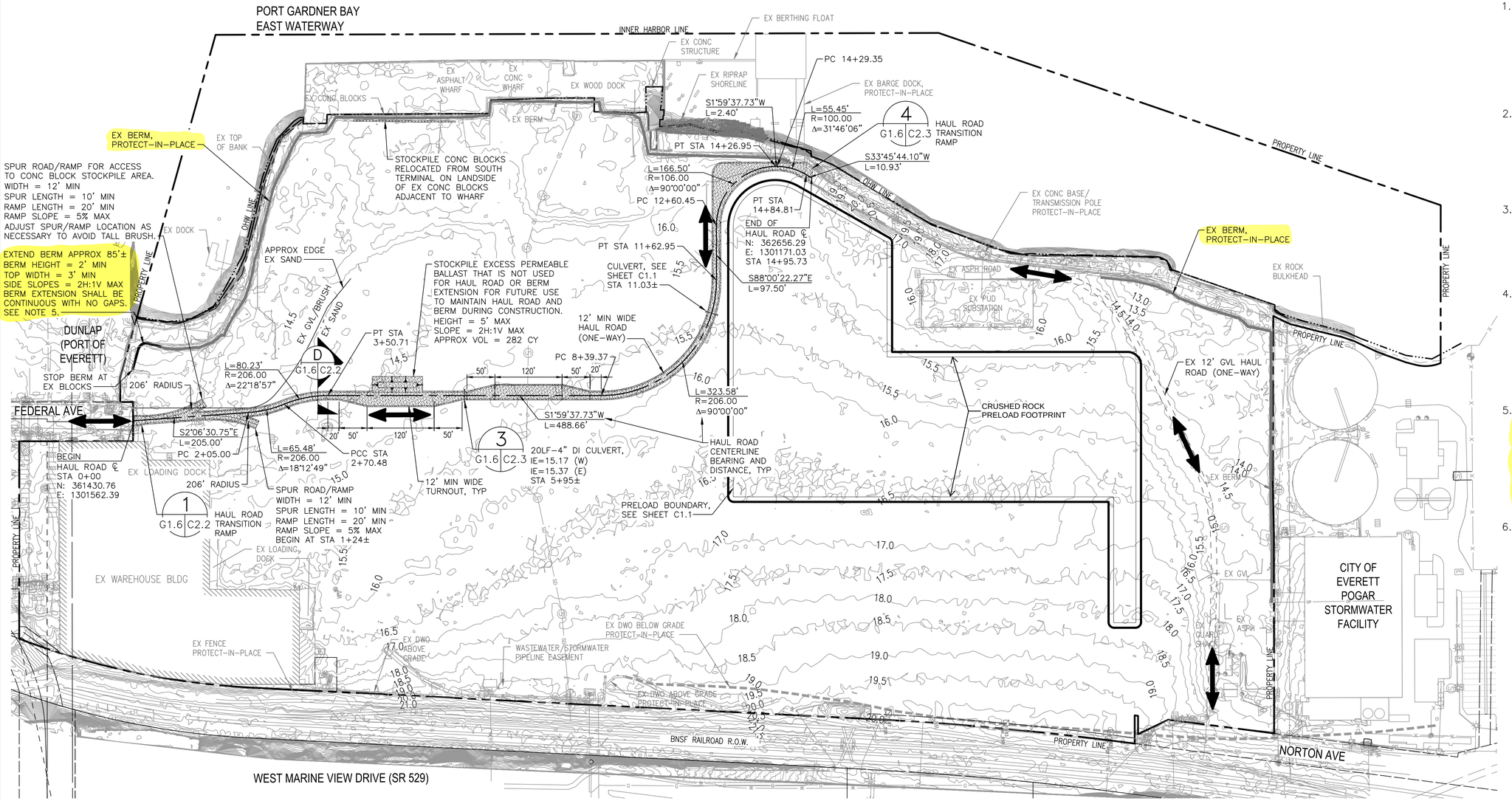
NORTON TERMINAL DEVELOPMENT & MTCA 3RD INTERIM ACTION TEMPORARY EROSION AND SEDIMENT CONTROL SECTIONS

DWG. NO. **C1.3**

CIP NO. 1-8-900-05

PROJECT NO. MT-NT-2021-02.2

SHEET NO. XX OF XX



NOTES

1. BOUNDARY AND SURVEY CONTROL SHOWN ON THESE DRAWINGS ARE BASED ON A SURVEY TITLED 'A.L.T.A./N.S.P.S. LAND TITLE SURVEY EVERETT MILL SITE FOR KIMBERLY-CLARKE WORLDWIDE, INC. SNOHOMISH COUNTY, WASHINGTON' PREPARED BY DAVID EVANS AND ASSOCIATES, PROJECT NUMBER KMBY007, DATED 10-31-2019.
2. OUTFALL AND BURIED FOUNDATION INFORMATION SHOWN ON THESE DRAWINGS ARE BASED ON A MAPPING CAD FILE TITLED 'sv-TP-X-KPFX5075-Exposed-Pipes-2020-10-16.dwg', PREPARED BY DAVID EVANS AND ASSOCIATES, RECEIVED BY EMAIL ON OCTOBER 16, 2020.
3. TOPOGRAPHY, UTILITIES, AND SITE FEATURES SHOWN ON THESE DRAWINGS ARE BASED ON A SURVEY TITLED 'TOPOGRAPHIC SURVEY PORT OF EVERETT MIE DESIGN SUPPORT', PREPARED BY DAVID EVANS AND ASSOCIATES, PROJECT NUMBER KPFX5074, DATED 02-15-2021.
4. THROUGHOUT THE PROJECT DURATION AND AT END OF PROJECT, CONTRACTOR SHALL USE STOCKPILED EXCESS PERMEABLE BALLAST MATERIAL TO RECONDITION HAUL ROAD BY FILLING IN RUTS, GRADING ROAD TO A FINAL SMOOTH CONDITION AND COMPACTING ROAD WITH A ROLLER COMPACTOR. THE HAUL ROAD SHALL REMAIN IN PLACE FOR FUTURE USE BY THE PORT AT COMPLETION OF CONTRACT.
5. THROUGHOUT THE PROJECT DURATION AND AT END OF PROJECT, CONTRACTOR SHALL REVIEW PERIMETER BERM FOR SIGNS OF MATERIAL LOSS AND EROSION. MATERIAL LOSS AND EROSION SHALL BE REPAIRED WITH THE STOCKPILED EXCESS PERMEABLE BALLAST MATERIAL. THE BERM SHALL REMAIN IN PLACE FOR FUTURE USE BY THE PORT AT COMPLETION OF CONTRACT.
6. STOCKPILED PERMEABLE BALLAST THAT REMAINS UNUSED AT END OF PROJECT SHALL REMAIN IN PLACE FOR FUTURE USE BY THE PORT AT COMPLETION OF PROJECT.

N
100' 0 100' 200'
50' 150'
SCALE: 1"=100'

TESC MEASURES FOR THE POE NORTON TERMINAL EARLY ACTION PRELOAD INCLUDE:

- **EXTEND EXISTING BERM AT SITE'S SOUTH END TO FORM A CONTINOUS BARRIER ALONG SHORELINE**
- **MAINTAIN EXISTING BERM ALONG SITE'S WEST & NORTH SIDES**
- **MAINTAIN INFILTRATION OF ALL ON-SITE DRAINAGE AND ALLOW NO SURFACE WATER DISCHARGE FROM SITE**
- **PRELOAD MATERIALS SHALL BE PLACED ON TOP OF EXISTING CLEAN SAND BACKFILL**
- **NO EXCAVATION REQUIRED**

VERT DATUM: NAVD 88
CONV TO MLLW = NAVD88+2.03
HORZ DATUM: NAD 83/91

BID SET

IF SHEET IS LESS THAN 22x34 REDUCE SCALE ACCORDINGLY

Port of EVERETT
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EVERETT, WA 98206
(425) 259-3164

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500
PROJECT NO. 1600120

NO.	DATE	BY	REVISION
2	04/20/21	NW	ISSUED FOR BID
1	03/29/21	NW	ISSUED FOR SUBSTANTIVE REQUIREMENTS REVIEW.

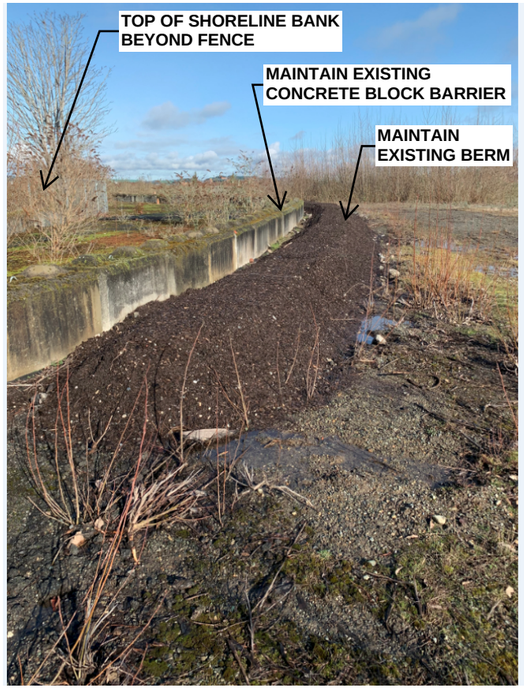
NAPHAN A. WATSON STATE OF WASHINGTON 37014 REGISTERED PROFESSIONAL ENGINEER 3/29/2021

PROJECT ENGINEER: N. WATSON	SCALE: 1" = 100'
DESIGNED BY: J. BECKER	DATE: 3-29-2021
DRAWN BY: F. MENDOZA	CHECKED BY: N. WATSON
APPROVED BY:	

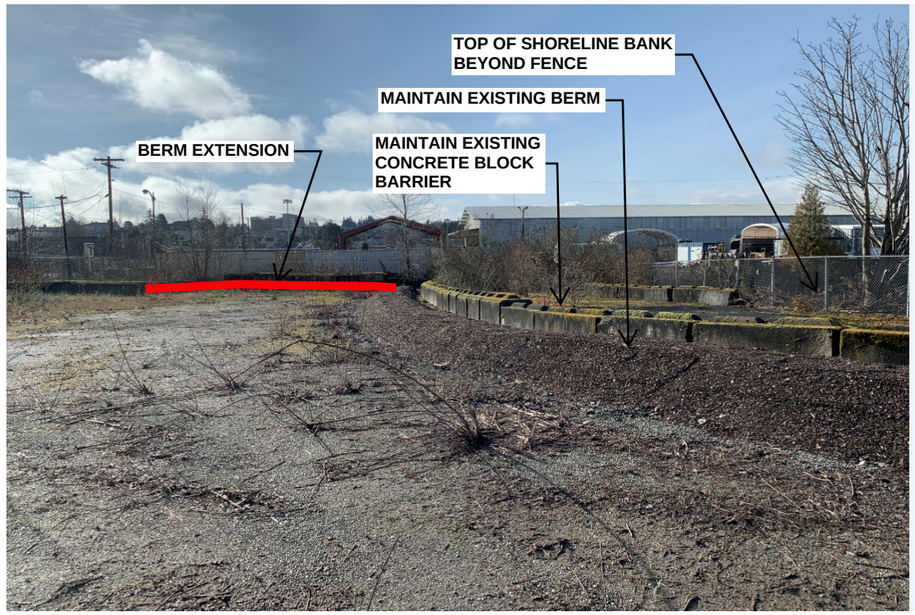
PORT OF EVERETT

NORTON TERMINAL - PRELOAD AND MTCA 3RD INTERIM ACTION
OVERALL SITE PLAN

DWG. NO. **G1.6**
CIP NO. 1-8-900-05
PROJECT NO. MT-NT-2021-02.1
SHEET NO. 6 OF 11



P1 - END OF BERM AT SOUTH END LOOKING NORTH. BERM WILL BE EXTENDED 85-FEET TO FORM A CONTINUOUS BARRIER WITH NO GAPS. BERM WILL TIE TO AN EXISTING CONCRETE BLOCK BARRIER.



P2 - END OF BERM AT SOUTH END LOOKING SOUTH. BERM WILL BE EXTENDED 85-FEET TO FORM A CONTINUOUS BARRIER WITH NO GAPS. BERM WILL TIE TO AN EXISTING CONCRETE BLOCK BARRIER.

P3 - EXISTING CONCRETE BLOCK BARRIER AND BERM ALONG MIDDLE OF SITE'S WEST SIDE. LOOKING NORTH.

P4 - EXISTING CONCRETE BLOCK BARRIER AND BERM ALONG SITE'S WEST SIDE AT NORTH END. LOOKING NORTH.

P5 - EXISTING CONCRETE BLOCK BARRIER AND BERM AT SITE'S NORTHWEST CORNER. LOOKING NORTH.

P6 - EXISTING CONCRETE BLOCK BARRIER AND BERM ALONG SITE'S NORTH SIDE. LOOKING NORTH EAST.

PHOTO'S OF EXISTING PERIMETER BERM PROTECTION TO BE MAINTAINED DURING CONSTRUCTION OF THE PORT OF EVERETT'S NORTON TERMINAL DEVELOPMENT