

# Planning Application

## PRE-APPLICATION, PRE-APP WAIVER, PRE-APP CRITICAL AREAS (PIR)



### CITY OF VANCOUVER

Submit to: 415 W 6<sup>th</sup> ST ~ Vancouver, WA 98660  
 PO Box 1995 ~ Vancouver, WA 98668  
 Phone (360) 487-7800 Fax (360) 487-7808  
 www.cityofvancouver.us

OCCUPANCY TYPE				COMMERCIAL, INDUSTRIAL & MULTI-FAMILY *ONLY*			
<input type="checkbox"/> Single-Family	<input type="checkbox"/> Commercial	<input type="checkbox"/> Multi-Family		<b>Do you anticipate managing/storing any chemicals, petroleum products or automotive fluids on the site? If yes, please describe:</b>			
<input type="checkbox"/> Industrial	<input type="checkbox"/> Critical Area			Tesoro Savage Petroleum Terminal LLC (applicant) is proposing to construct a			
<b>WORK TYPE</b> <input type="checkbox"/> Pre-Application <input type="checkbox"/> Pre-Application Waiver Request				facility to receive crude oil by rail, store it on site, and ship it by the Columbia			
				River to various consumers and end users primarily on the west coast.			
<b>ADDITIONAL INFORMATION</b> <b>Infill Project:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If yes, tier level:</b> <input type="checkbox"/> Tier I <input type="checkbox"/> Tier II <b>Lot Acreage/sf:</b> 29 acres <b># of lots:</b> N/A <small>(if applicable)</small> <b>Comp Plan:</b> IND <b>Zoning Designation:</b> IH				<b>Will this facility process wastewater to the sanitary sewer system? If yes, please describe:</b>			
				Yes. Water demands are anticipated to be fairly minor. The largest process			
<b>PROJECT SITE INFORMATION AND LOCATION</b> → <b>Project site address:</b> 5501 NW Lower River Rd, Vancouver, WA 98660 Suite/bldg./apt #: Project name: Tesoro Savage Petroleum Terminal LLC Job #: Tax Assessor Serial Number: see attached narrative				<b>Which NAICS classification(s) in VMC 20.440.030 (Table 20.440-2) best describes your proposed use? (Industrial only)</b>			
				The closest listing is Petroleum manufacturing (#3241)			
<b>PROJECT DESCRIPTION</b> <b>Briefly describe the proposed project including the general physical features of the site and current uses.</b> <i>(Provide a more detailed description in the project narrative)</i> The proposed project is designed to receive crude oil by rail from various sources and transfer it to storage tanks where it will be held until it is loaded onto ships or barges for transport to end users. The project will include the construction of administrative and support buildings, rail unloading facility, piping, 6 tanks that can store up to 375,000 barrels each, marine loading facility that will include pipelines, cranes, observation/control platform, and lighting to be installed on the existing dock structure at the site. In addition, a boiler/steam plants will be built on the site and an additional two rail lines will be added to the rail infrastructure at the Terminal 5 loop.				<b>PROJECT QUESTIONS</b>			
				<b>Please list specific questions and/or issues you wish to have answered at the Pre-Application conference:</b>			
				1. See attached narrative for the list of questions.			
				2.			
				3.			
<b>NOTICE</b> <i>I/we understand that per VMC 20.210.090 (Review for Counter Complete Status), if it is determined that the application is not complete, the City shall immediately reject and return the application. I/we agree that City of Vancouver staff may enter upon the subject property at any reasonable time to consider the merits of the application, to take photographs and to post public notices.</i>				4.			
<input checked="" type="checkbox"/> <b>APPLICANT</b> <input type="checkbox"/> <b>CONTACT PERSON</b>				<b>REQUIRED SIGNATURES</b> Applicant Signature:  Print Name: _____ Date: _____  Property Owner Signature:  Print Name: _____ Date: _____			
Business name: Tesoro Savage Petroleum Terminal LLC							
Contact name: Kelly Flint							
Address: 6340 South 3000 East, Suite 600							
City/State/Zip: Salt Lake City, UT 84121							
Phone: _____		Fax: _____					
<b>E-mail (required):</b>							
<input checked="" type="checkbox"/> <b>PROPERTY OWNER</b> <input type="checkbox"/> <b>TENANT</b>							
Name: Port of Vancouver, USA							
Address: 3103 Lower River Road							
City/State/Zip: Vancouver, Washington 98660							
Phone: (360) 693-3611		Fax: (360) 735-1565					

See following page for minimum submittal requirements

**PRE-APPLICATION SUBMITTAL REQUIREMENTS**

**Required application fee per VMC 20.180**

**Applicant must submit twelve (12) folded and collated copies of the following information**

**Completed and signed pre-application conference request form**

**Plan of the proposed development** (drawn to scale), no larger than 24"x36" and clearly marked with the following:

- (a) Project name
- (b) Vicinity map
- (c) Scale
- (d) North arrow
- (e) Date
- (f) Applicant's name and contact information

**Project Description:** Provide a narrative description of the following:

- (a) Uses proposed for the site
- (b) Hours of operation
- (c) Estimated vehicular traffic to and from the site

**Preliminary Site Plan** – Existing and proposed on-site structures and improvements including the following:

- (a) Identify use(s) of all existing and proposed structures
- (b) Location and dimensions and height of all existing and proposed buildings and structures
- (c) Location and dimensions of existing and proposed recreation areas and open space
- (d) Location of existing and proposed driveways, off-street parking and loading areas.
- (e) Location, dimensions and screening of proposed solid waste and recyclables storage areas
- (f) Existing or conceptual plan showing lighting and landscaping. Landscape plan should include location of private driveway(s) and buffering for off-street parking and loading areas
- (g) Location and dimensions of existing and proposed streets, right-of-way and public/private access easements on and adjoining the site
- (h) Location and dimensions of all existing and proposed above ground and below ground utilities

**Preliminary Engineering Information** - Provide a conceptual drawing or sketch showing the following:

- (a) Approximate location of existing fire hydrants within a 100' radius of site
- (b) Proposed method of providing storm-water drainage on site
- (c) Proposed erosion control measures
- (d) Proposed grading activity for the site, indicating areas of proposed cuts and fills

**Preliminary Architectural Information** – Provide a brief narrative description of the following for each structure and outdoor activity to be built or retained on site: *(Commercial, Multi-Family and Industrial applications only)*

- (a) Gross square footage
- (b) Proposed and potential uses and occupancy group
- (c) Number of floors, building height and construction type
- (d) Conceptual plans showing at least the gross square footage
- (e) Conceptual elevation drawing
- (f) Dimensions and area of the project site

**Preliminary Plat Information** – Provide a conceptual drawing or sketch showing the following: *(Short Subdivisions, Subdivisions & Planned Developments and Critical Area applications only)*

- (a) The approximate location and type of all existing vegetation including:
  - a. Individual trees with a diameter of six (6) inches or more measured four (4) feet above grade regardless of whether the trees are proposed for retention or removal as it relates to the proposed development
  - b. The tree plan may show clusters of such trees, rather than individual trees when individual trees are near one another
- (b) Provide proposed plan for compliance with tree conservation ordinance per VMC20.770

**PRE-APPLICATION WAIVER REQUEST SUBMITTAL REQUIREMENTS**

**Completed and signed pre-application waiver request form**

**Required application fee per VMC 20.180**

**A written narrative justifying the request for pre-application waiver**

# **Pre-Application Conference Request**

**Tesoro Savage Petroleum Terminal LLC  
Vancouver, Washington**

## **Submitted to**

**City of Vancouver  
Land Use Planning  
415 West Sixth Street  
Vancouver, Washington 98660**

**June 2013**

## **Submitted by**

**BergerABAM  
1111 Main Street, Suite 300  
Vancouver, Washington 98660**

**Job No. A13.0267.00**



# PRE-APPLICATION CONFERENCE REQUEST

Tesoro Savage Petroleum Terminal LLC  
Vancouver, Washington

## TABLE OF CONTENTS

SECTION	PAGE
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>1.1 Project Site .....</b>	<b>1</b>
<b>1.2 Operator and Employment .....</b>	<b>3</b>
<b>1.3 Request.....</b>	<b>3</b>
<b>1.4 Permits.....</b>	<b>3</b>
<b>1.4.1 Federal .....</b>	<b>3</b>
<b>1.4.2 State .....</b>	<b>3</b>
<b>1.4.3 City.....</b>	<b>4</b>
<b>1.4.4 Other Local Reviews .....</b>	<b>4</b>
<b>1.5 Previous Site Improvements and Approvals .....</b>	<b>4</b>
<b>1.5.1 Wind Turbine Laydown Area Mass Grading.....</b>	<b>4</b>
<b>1.5.2 WVFA Project .....</b>	<b>4</b>
<b>1.5.3 Terminal 4 Improvements .....</b>	<b>4</b>
<b>1.5.4 Bulk Potash Handling Facility.....</b>	<b>5</b>
<b>1.5.5 Parcel 1A NE Laydown Area.....</b>	<b>5</b>
<b>1.6 Construction Schedule.....</b>	<b>5</b>
<b>2.0 PROJECT DESCRIPTION.....</b>	<b>5</b>
<b>2.1 Administrative and Support Buildings .....</b>	<b>5</b>
<b>2.2 Rail Unloading Facility.....</b>	<b>5</b>
<b>2.3 Piping.....</b>	<b>6</b>
<b>2.4 Storage Area.....</b>	<b>7</b>
<b>2.5 Marine Loading .....</b>	<b>8</b>
<b>2.6 Steam Plant(s).....</b>	<b>8</b>
<b>2.7 Rail .....</b>	<b>9</b>
<b>2.8 Fire Suppression.....</b>	<b>9</b>
<b>2.9 Proposed Access .....</b>	<b>9</b>
<b>2.10 Building Occupancy Groups.....</b>	<b>10</b>
<b>3.0 EXISTING CONDITIONS .....</b>	<b>10</b>
<b>3.1 Project Location .....</b>	<b>10</b>
<b>3.2 Comprehensive Plan and Zoning.....</b>	<b>11</b>
<b>3.2.1 Project Site .....</b>	<b>11</b>
<b>3.2.2 Surrounding Properties .....</b>	<b>11</b>
<b>3.3 Topography and Existing Structures .....</b>	<b>11</b>
<b>3.4 Ecology Consent Decree and Restrictive Covenant.....</b>	<b>14</b>
<b>3.4.1 Consent Decree No. 09-2-00247-2, for the Alcoa Inc. Site Located at 5701 NW Lower River Road, Vancouver Washington (January 30, 2009) .....</b>	<b>14</b>

3.4.2	Restrictive Environmental Covenant (December 31, 2008); Grantor: Evergreen Aluminum LLC & Grantor: State of Washington, Department of Ecology .....	15
3.5	Surrounding Uses .....	15
3.6	Natural Conditions .....	16
3.6.1	Geology.....	16
3.6.2	Vegetation.....	16
3.6.3	100-Year Floodplain .....	16
3.6.4	Wetlands .....	16
3.6.5	Archaeology .....	19
3.7	Storm Water/Erosion Control.....	19
3.8	Utilities .....	19
4.0	REGULATORY COMPLIANCE.....	19
4.1	Trip Generation (VMC 11.95).....	19
4.2	State Environmental Policy Act.....	20
4.3	Critical Areas Ordinance (VMC 20.740).....	20
4.3.1	Fish and Wildlife Habitat Conservation Areas (VMC.20.740.110) .....	20
4.3.2	Frequently Flooded Areas (VMC 20.740.120).....	20
4.3.3	Geologic & Seismic Hazards (VMC 20.740.130) .....	20
4.3.4	Wetlands (VMC 20.740.140).....	21
4.4	Shoreline Management Master Program (VMC 20.760) .....	21
4.5	Land Use (VMC 20.440.030) .....	22
4.6	Tree Ordinance (VMC 20.770).....	23
4.7	Landscaping (VMC 20.925).....	23
4.8	Parking and Loading (VMC 20.945).....	23
4.9	Archeological Resources .....	23
4.10	Storm Water/Erosion Control.....	24
4.11	Utilities .....	24
5.0	QUESTIONS/ITEMS FOR PRE-APPLICATION DISCUSSION .....	25

## LIST OF TABLES

Table 1 - Occupancy Groups .....	10
Table 2 - SMMP Policies and Regulations.....	22
Table 3 - Development Standards (VMC Table 20.440.040-1) .....	23

## LIST OF FIGURES

Figure 1 - Vicinity Map .....	2
Figure 2 - Parcels .....	12
Figure 3 - Zoning Map.....	13
Figure 4 - Soils.....	17
Figure 5 - FEMA 100-Year Floodplain Areas.....	18

## **PRE-APPLICATION CONFERENCE REQUEST TESORO SAVAGE PETROLEUM TERMINAL**

### **1.0 INTRODUCTION**

Tesoro Savage Petroleum Terminal LLC (the applicant) is proposing to construct a facility to receive crude oil by rail, store it on site, and ship it by the Columbia River to various consumers and end users primarily on the West Coast (the proposed project). This narrative describes the proposed project and the City of Vancouver (City) standards that are likely to apply to it.

### **1.1 Project Site**

The proposed project is located within the Port of Vancouver (port) and involves three separate locations that will be linked by project elements: Terminal 5, Parcel 1A, and Berths 13 and 14 (Figures 1 and 2).

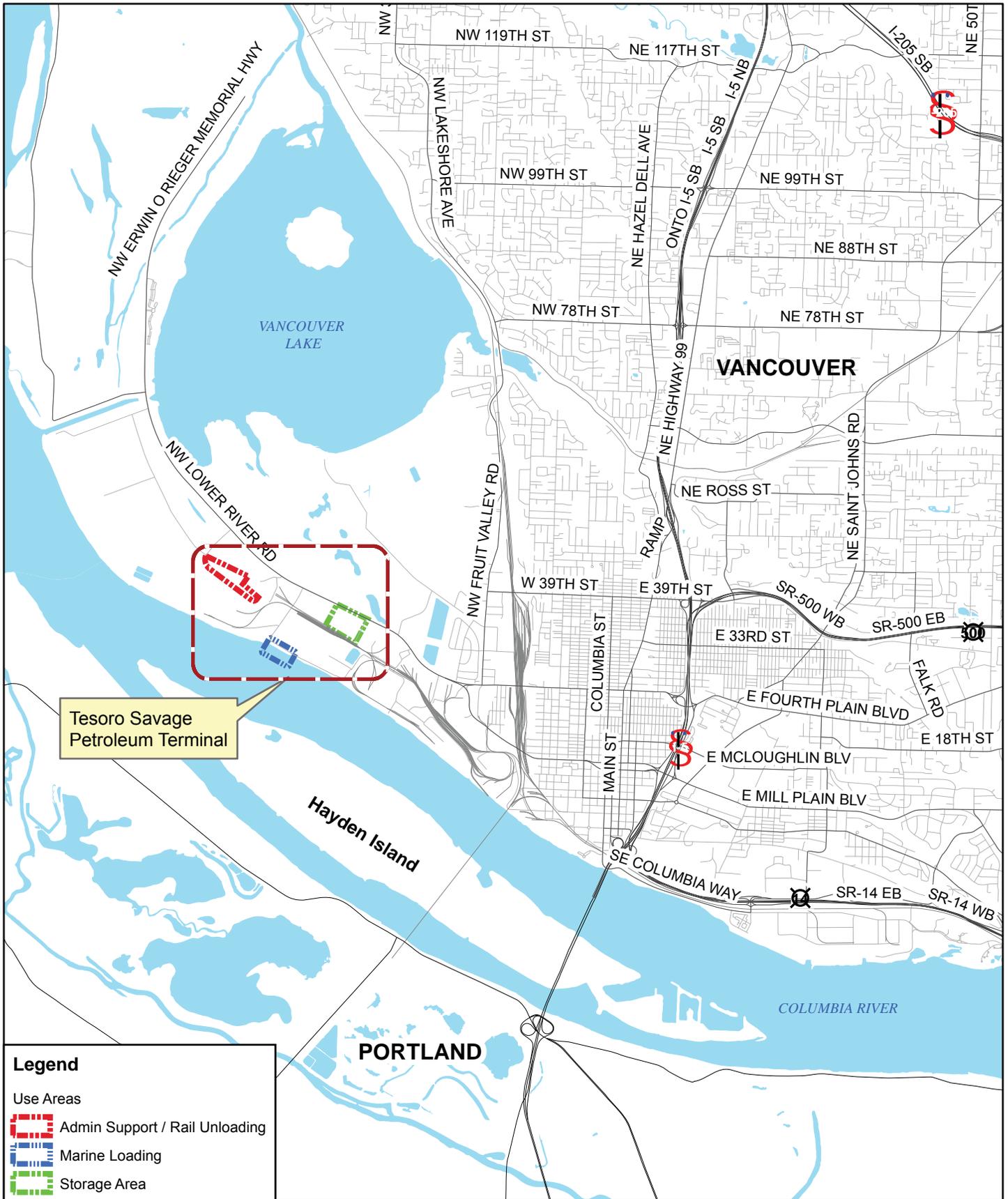
Administrative functions, support services, a boiler/steam plant, additional rail lines and rail unloading will be located at 5701 NW Lower River Road in Vancouver, Washington (see Drawing Sheet 0100-SP-001). This site is the former location of aluminum processing facilities owned and operated by Evergreen Aluminum LLC (Evergreen) and the Aluminum Company of America (Alcoa). This area of the port is generally defined as Terminal 5.

The site has been the location of intensive historic industrial use, dating back to 1940 when Alcoa first developed the site for aluminum smelting operations through the early 2000s when aluminum processing activities on the property ended. The port completed the purchase of the Evergreen and Alcoa properties in 2009 and, with the exception of the on-site water tower and the dock structure in the Columbia River, all structures of the defunct aluminum processing plants have been removed.

The Terminal 5 site is currently developed for the outdoor storage of wind turbine components and other cargoes and contains multiple rail lines for port operations. The rail on the site represents the westernmost segment of the West Vancouver Freight Access (WVFA) project, a rail improvement project that is under construction at the port and will expand and improve rail access.

As part of the proposed project, crude oil storage tanks will be located on the port's Parcel 1A on the south side of NW Lower River Road just east of Farwest Steel (3703 NW Gateway Avenue). This site was developed by the port for general cargo laydown and is currently partially occupied temporarily by a steel scrap storage yard.

Ship or barge loading will occur at existing Berths 13 and 14 on the Columbia River south of the current Subaru facility. These berths were developed by the port and have most recently been used as layberths.



Tesoro Savage Petroleum Terminal

**Legend**

Use Areas

-  Admin Support / Rail Unloading
-  Marine Loading
-  Storage Area



**Figure 1: Vicinity Map  
Tesoro Savage Petroleum Terminal  
Vancouver, Washington**

Location: Clark County, Washington  
Source: Clark County GIS, 2012



## **1.2 Operator and Employment**

Tesoro Savage Petroleum Terminal LLC will own and operate the facility on the site which will be leased from the port.

It is anticipated that at full build-out, the proposed project will result in the full-time employment of approximately 110 operations and administrative personnel and will operate on a continuous basis. The proposed project also includes substantial capital improvements representing a significant investment at the port and in the Portland-Vancouver regional economy.

## **1.3 Request**

The applicant is requesting a pre-application conference with the City to discuss the proposed crude oil terminal. The facility will be designed to receive bulk shipments of crude oil via freight rail, store it temporarily, and pipe it to marine vessels for shipment.

## **1.4 Permits**

The proposed project is designed to receive approximately 360,000 barrels per day of crude oil by rail and ship it via marine waters. Pursuant to the Revised Code of Washington (RCW) 80.50, the proposed project is subject to the jurisdiction of the Washington State Energy Facility Site Evaluation Council (EFSEC) because it involves over 50,000 barrels per day shipped over marine waters. EFSEC is a state agency with jurisdiction over certain of the state's energy facilities and is responsible for considering project compliance with substantive state and local permitting requirements, including the federal regulatory programs that have been delegated to the state. The state and local laws that apply to a project are considered through EFSEC's site certification process. In addition, federal permits may be required for potential work on Berths 13 and 14.

The following permits or environmental reviews may apply to the proposed project and, with the exception of federal requirements, will be considered by EFSEC through its site certification process.

### **1.4.1 Federal<sup>1</sup>**

- U.S. Army Corps of Engineers (USACE) Rivers and Harbor Act Section 10 permit
- Endangered Species Act (ESA) Section 7 consultation
- Section 106 of the National Historic Preservation Act (NHPA) consultation

### **1.4.2 State**

- Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval (HPA)
- Conformance with the Model Toxics Control Act (MTCA) consent decree
- National Pollutant Discharge Elimination System (NPDES) storm water permitting and compliance

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<sup>1</sup> The need for and scope of federal permits and associated environmental review (if any) will be determined based on the final project design.

### **1.4.3 City**

- Critical areas permit (frequently flooded areas, fish and wildlife habitat conservation areas, and geologic hazard area)
- Tree conservation
- Site plan review (SPR)
- Shoreline substantial development permit (SSDP)
- Major grading permit
- Archaeological review
- Building, fire, plumbing, mechanical, and other construction permits
- Industrial wastewater discharge permit

### **1.4.4 Other Local Reviews**

Additional local review will include an air discharge permit and participation in State Environmental Policy Act (SEPA) compliance, for which EFSEC will act as lead agency.

### **1.5 Previous Site Improvements and Approvals**

The project site has been the subject of multiple recent development activities and these are listed below.

#### **1.5.1 Wind Turbine Laydown Area Mass Grading**

Grading permit approvals were received in 2009 for fill on the site for leveling and base rock compaction for the outdoor storage of wind turbine components at Terminal 5. Grading permits for this work were completed in both the City (PRJ2008-01911) and Clark County (County) (GRD2009-00002) because, at the time, portions of the Terminal 5 site remained in the County. They have since been annexed into the City and grading in conjunction with these approvals is now complete. In addition to these approvals, the City approved a grading permit (GRD2009-00030) for a temporary access drive to the wind turbine area.

#### **1.5.2 WVFA Project**

The port completed the installation of a loop track providing direct and expanded rail access to Terminal 5 and a route for rail traffic to circulate and return east to exit the port. All federal, state, and local permits were obtained for that separate rail improvement project. Local permit approvals for the WVFA project were obtained in April of 2008 (PRJ2007-0032) and modified through a post-decision review approval in 2009 (PRJ2007-00322/PST2009-00003). Modifications to the original approval have also been approved.

#### **1.5.3 Terminal 4 Improvements**

On October 1, 2009, the port received SPR, SSDP, and grading permit approvals (PRJ2009-01134/PSR2009-00050/SHL2009-0008/GRD2009-00064) for the expansion of its existing auto storage area at Terminal 4. While most of the newly proposed auto storage was within Terminal 4, proposed grading activities extended to the southeastern extreme of the site of this proposed project on Terminal 5 parcels 152798-000, 152166-000 and 152905-000.

#### **1.5.4 Bulk Potash Handling Facility**

On June 16, 2011, the port received SPR, SSDP, and other approvals (PRJ2010-01305/SHL2010-00001/ARC2011-00005/CAP2011-00008/ENG2011-00008/GRD2011-00010/PSR 2011-00004/TRE2011-000023) to construct a new marine terminal on the south half of Terminal 5.

#### **1.5.5 Parcel 1A NE Laydown Area**

On April 18, 2012 the port received approval to fill an isolated wetland on Parcel 1A (PRJ2011-01308/ARC2012-00004/CAP2012-00006/TRE2012-00043) for use as general cargo laydown. Wetland impacts were mitigated through the purchase of credits from the Columbia River Wetland Mitigation Bank.

#### **1.6 Construction Schedule**

Per its enabling statute (RCW 80.50.100 (1)(a)), the EFSEC is to make a recommendation to the Governor regarding approval of the proposed project within 12 months of receipt of an application. It is anticipated that construction will occur over 9 to 12 months beginning as soon as permits are issued.

### **2.0 PROJECT DESCRIPTION**

The proposed project is designed to receive crude oil by rail from various sources in North America and pipe it to storage tanks where it will be held until it is loaded onto ships or barges for transport to end users, which are expected primarily to be West Coast refineries. It is anticipated that this crude oil will replace a portion of the crude oil shipped to the refineries from existing Alaskan and foreign sources by marine waters. The attached set of drawings identifies the location of the proposed project elements described below.

#### **2.1 Administrative and Support Buildings**

The proposed project will require an approximately 3,400-square-foot office building for administrative functions and two buildings to house lockers, restrooms, and other employee support facilities of approximately 3,400 square feet and 2,500 square feet. These elements will be located on the north side of the Terminal-5 Loop south of Old Lower River Road (see Drawing Sheet 0200-SP-0002). Parking and landscaping will be provided per City standards.

#### **2.2 Rail Unloading Facility**

The rail unloading facility will be located south of the administrative and support facilities and is designed to handle unit trains consisting of approximately 120 double-walled tank cars, each up to 62 feet in length and powered by three locomotives for a total length of approximately 7,661 feet (see Drawing Sheet 0200-SP-0200). At full build-out, approximately four unit trains, carrying up to a total of approximately 360,000 barrels of crude oil per day, will arrive via Class I railroad lines for staging on existing and planned tracks at the port. Trains will arrive at Terminal-5 and travel in a clockwise direction to the unloading building on the north side of the Terminal 5 rail loop. The design will accommodate complete unit trains, eliminating the need to break trains into smaller segments during the unloading process.

The rail cars will be unloaded in a building that will be approximately 1,850 feet by 91 feet in size, with a maximum height of approximately 50 feet. A typical cross section of the unloading building is shown in Drawing Sheet 0200-SP-001. The building is designed to accommodate three parallel tracks. Each track will include 30 unloading stations for a total of 90 stations. Each station will accommodate 1 tank car.

Each unloading station will include the following elements:

- Spill pans between rails that will lead to a common containment trench and holding tanks.
- Concrete containment trenches approximately 5-feet deep to accommodate the collection pipe and conduits for electrical and data lines.
- Walkway gratings for the work platform and mezzanine to access the top of the cars.

Unloading will be accomplished with a closed-loop system that includes dry fit connectors and automatic shut-offs. Hoses will be connected to the valves on the cars using dry fit connectors, and the crude oil will gravity-drain from the cars to the collection pipe and then to pump vaults in the building, from which the crude oil will be pumped to the storage tanks.

Thirty of the unloading stations will be equipped with steam fittings to heat heavier oils to facilitate oil transfer from the tank car. Pre-steaming stations may be included in advance of the unloading building to allow heating to occur prior to reaching the unloading stations. Steam will be provided from natural gas boilers housed in an associated approximately 3,000-square-foot building. Each of the pump vaults will house a series of pumps that will push the crude oil to the storage tanks on Parcel 1A.

Pedestrian bridges at each end of the building will allow workers to pass over the unit trains during operations. Additional pedestrian bridges will allow access to the administrative and support buildings over the existing Terminal 5 rail loops and to the interior of the rail loop.

### **2.3 Piping**

A combination of above- and below-ground steel pipes will convey crude oil from the rail unloading facility to the tanks and from the tanks to Berths 13 and 14. At full build-out the system may include the following (Drawing Sheet 0100-SP-001):

- Up to three approximately 24-inch-diameter, 1,800-foot-long pipes will collect the crude oil unloaded at the rail unloading stations.
- Three approximately 24-inch-diameter, 5,500-foot-long pipes will connect the unloading facility to the storage tanks.
- Two approximately 24-30 inch-diameter, 5,300-foot-long pipe will connect the storage tanks with Berths 13 and 14.

- One approximately 6-inch-diameter, 5,300-foot-long pipe will return crude oil from Berths 13 and 14 to the storage tanks in the event of loading process shutdowns and to prevent over pressure and hammering in the pipe conveyance system.
- One approximately 16- to 22-inch-diameter, 600-foot-long pipe will deliver hydrocarbon vapor generated during loading of vessels to the vapor combustion/recovery unit (described in Section 2.5 Marine Loading, below)

Piping will be supported above ground except where necessary to cross roadways, access points, and similar surface features. Where road or rail crossings occur, the piping will be housed in underground steel casings or raised above ground for standard American Railway Engineering and Maintenance-of-Way Association (AREMA) clearances.

## **2.4 Storage Area**

The crude oil will be stored in up to six double-bottom, above-ground steel tanks located on 22 acres on Parcel 1A, approximately 1,600 feet north of the Columbia River and approximately 5,200 feet southeast of Vancouver Lake (see Drawing Sheet 0300-SP-003). These tanks will be approximately 48 feet in height and 240 feet in diameter, with a shell capacity of 380,000 barrels each. Each tank will have a fixed roof to keep precipitation from reaching the inside of the tank and an internal floating roof to control tank vapor emissions to the atmosphere. The double-bottomed tanks will include a leak detection system between the tank floors. Two of the proposed tanks may include steam heating coils in their bases to maintain temperatures for heavier crude oil grades.

The tanks will be enclosed by a containment berm approximately 6 feet in height. The containment area will be designed with a capacity at least equal to 110 percent of the volume of the largest tank plus precipitation from a 24-hour, 25-year storm event. The entire tank containment area will be lined with an impervious membrane to prevent any spills from leaving the containment area via the ground. A sump will collect storm water from the containment area; the sump will be designed to prevent crude oil-contaminated water from being pumped to the storm water disposal system in the event of a spill.

To convey the stored crude oil to the dock for transfer to a ship or barge, a pump pit containing up to six pumps will be located on the west side of containment area. An approximately 3,000-square-foot building will house natural gas boilers that will provide heat for the two tanks equipped with heating coils. In addition, smaller buildings will be located in the same area for the control equipment, motor control centers, fire suppression equipment, and fire pumps.

Access to the storage area will be from an existing shared driveway from Lower River Road located at the northwest corner of the site. This driveway currently provides access to the site and Farwest Steel. The driveway will extend to the site and lead to a small parking area containing five spaces for maintenance vehicles.

## **2.5 Marine Loading**

As described above, crude oil will be pumped into a 24-30 inch above- and below-ground pipe to existing port Berths 13 and 14 (Sheet 0100-SP-001). Piping, jib cranes, a moveable gangway, an observation and control platform, dock safety unit, pipe trays, and lighting will be installed on the existing dock that serves Berths 13 and 14. The dock will be able to accommodate vessels with a capacity of up to 600,000 barrels and loading rates of up to 40,000 barrels per hour. The loading system will incorporate automatic shutoff valves with a maximum 30-second shutoff time. As described above, a return line will allow oil to return to the storage tanks in case of a shutdown of the ship loading system.

The existing berth layout provides sufficient clearances from existing berth structures and the space that is required for vessel maneuvering during berthing and departure. Minor changes to the existing catwalks and mooring system may be required, but the need for new structural elements is not anticipated. A ramp and float or davit system will be added to accommodate mooring of a 24-foot-long skiff for booming and spill response.

The marine vessels will generally arrive at the berth empty. While they are being loaded, vapors from the vessel tanks will be collected and either recovered or combusted to control the emissions released to the air. Piping from the dock will convey the vapors to an enclosed vapor combustion or recovery unit just west of the CalPortland facility. Depending on the selected method, this unit will consist of a 50- by 50-foot concrete slab housing equipment and up to two 10- to 15-foot-diameter steel stacks approximately 45-50 feet in height.

During loading operations vessels will be partially encircled by booms to contain any accidental releases of crude oil and prevent it from migrating downstream. Temporary floating booms will be placed around the vessel by a small skiff before any loading begins. A fence-type floating boom may be placed between the berth and the shoreline in place of the floating boom. This would remain in place and would not require placement by the skiff during each vessel call.

## **2.6 Steam Plant(s)**

Certain grades of crude oil must be heated to flow freely during the transfer and loading process. The proposed project includes natural gas boilers housed in buildings at the eastern entrance to Terminal 5 and at the storage area. It is anticipated that generating the necessary steam will require a boiler with a peak capacity of 300 Million British thermal units per hour (MMBtu/hr). Steam will be supplied to the rail unloading facility and storage tank area via insulated pipelines. Depending on market conditions, the Applicant may choose to construct the steam plant as a subsequent phase, or during the initial construction phase.

Natural gas will be supplied to the steam plants from the existing pipeline serving the area. There is an existing gas line in Old Lower River Road that will provide service to the site.

The steam plant will generate up to 30 gallons per minute of wastewater from condensate and blow down. This wastewater will be pretreated to meet City discharge limitations prior to discharge into the City sanitary system.

## **2.7 Rail**

Up to two additional lines will be added to the Terminal 5 loop to accommodate the rail unloading facility. The additional lines will form two complete loops inside of the existing rail loops and will begin and end near the Gateway Avenue grade separation. The additional rail facilities may require modifications or relocations to existing surface and below ground features, such as utilities, within the rail alignment.

## **2.8 Fire Suppression**

Several systems will be installed to provide fire suppression to the proposed project elements. The rail unloading area will be served by a closed foam and water system designed to activate as necessary in five segment areas. The storage tanks will also be covered by a fire foam system. Each storage tank will have permanent nozzles installed to allow injection of fire suppression foam inside the top of the tank. Automatic fire sprinklers will be provided for the steam plant buildings. A fire monitor will be installed at the marine loading dock, with a water cannon connected to a hydrant or other available water supply. Fire suppression systems will be designed to National Fire Protection Association and American Petroleum Institute requirements, as well as the more stringent Factory Mutual Global insurance requirements. All fire suppression systems will be designed to activate automatically, and will be equipped with manual trip stations.

## **2.9 Proposed Access**

Primary vehicular access to the proposed project will be to the administration building on Old Lower River Road, a private road owned and maintained by the port. Old Lower River Road connects with Lower River Road approximately 1,000 feet west of the proposed office building. The storage tank area will be accessed from a shared drive with Farwest Steel from NW Lower River Road. The storage tank area is not anticipated to require full-time staffing and parking will be provided for routine maintenance needs. The marine loading area will be accessed by Gateway Avenue and port-maintained access roads. An existing asphalted area at the berths will be used by project personnel during ship loading operations. Although the boiler/steam plant at the rail unloading facility ordinarily will not be occupied full time, parking for maintenance vehicles will be provided.

The extended road network includes NW Lower River Road (State Route 501), which is a state highway and a major truck route with a 50-mile per hour (mph) speed limit. Approximately 1.5 miles east of the site, NW Lower River Road connects to the Mill

Plain Extension (a principal arterial with a 35-mph speed limit) and West Fourth Plain Boulevard (a primary arterial and state route with a 35-mph speed limit). West Mill Plain and West Fourth Plain boulevards connect to I-5, SR 14, and points beyond.

Traffic during operations will consist primarily of privately owned employee vehicles as well as limited deliveries by tractor trailers. Construction traffic will vary during the 9- to 12-month construction period, depending on the work element and number of construction employees on-site and deliveries.

Public transit does not serve the site. C-TRAN (the area’s public transit provider) Route No. 25 is the transit route closest to the site. It travels on West Mill Plain and Fruit Valley Road, approximately 1.5 miles east of the site.

**2.10 Building Occupancy Groups**

It is anticipated that the structures proposed with the proposed project will meet the occupancy groups shown in Table 1.

**Table 1 - Occupancy Groups**

<b>Building</b>	<b>Building Type</b>	<b>Size (approximate square feet)</b>
Train Unloading Building	F-1	163,913
Train Unloading Boiler Building	F-1	6,600
Train Unloading Control/E House	F-1	483
Train Unloading Fire Pump and Foam Building	F-1	737
Office Building	B	3,360
Change Rooms	B	3,360 and 2,520
Tank Farm Boiler Building	F-1	3,000
Tank Farm Control E House	F-1	500
Tank Farm Fire Pump and Foam Building	F-1	737
Control/E Room by Piping Rack	F-1	500
Control/E Room by Piping Rack	F-1	500
Dock Side Control/E Room	F-1	500

**3.0 EXISTING CONDITIONS**

**3.1 Project Location**

The site of the proposed project encompasses approximately 6 acres at the port’s Terminal 5 property, 22 acres at Parcel 1A, and approximately 1 acre at Berths 13 and 14. Final acreages may change based upon the lease agreement with the port. Table 2 identifies the tax parcels and facilities. A Parcel map is shown in Figure 2.

**Table 2 – Proposed Project Parcels**

<b>Parcel Number</b>	<b>Proposed Project Facilities</b>
152799-000, 152903-000 (Terminal 5)	Rail Unloading Facility and Administrative and Support Buildings
152173-000 (Parcel 1A)	Storage Area
152166-000, 503030-000, 503030-003	Marine Loading
152184-000, 152177-000, 152179-000, 986027-146, 986027-027, 50303-001, 152166-000,	Piping

The site address (Terminal 5) is 5501 NW Lower River Road, Vancouver, Washington 98660 and the site is found within the SE ¼ of Section 18, NW ¼ of Section 19, and the NW and NE ¼ of Section 20, Township 2 North, Range 1 East. Berths 13 and 14 are located at approximately Columbia River Mile (RM) 103.5.

### **3.2 Comprehensive Plan and Zoning**

#### **3.2.1 Project Site**

The site is zoned Heavy Industrial (IH) with an Industrial (IND) comprehensive plan designation. The IH zoning allows a variety of industrial uses, including the proposed facility, which would meet the City’s definition of “warehouse/freight movement” as defined in Section 20.160.020 of the VMC. Other project elements, such as the proposed rail spur and utility connections, are also permitted uses. The Vancouver Municipal Code also permits “railroad yards” within the IH zone. In addition “Petroleum and Coal Products Manufacturing” is listed as a permitted use under the NAICS code.

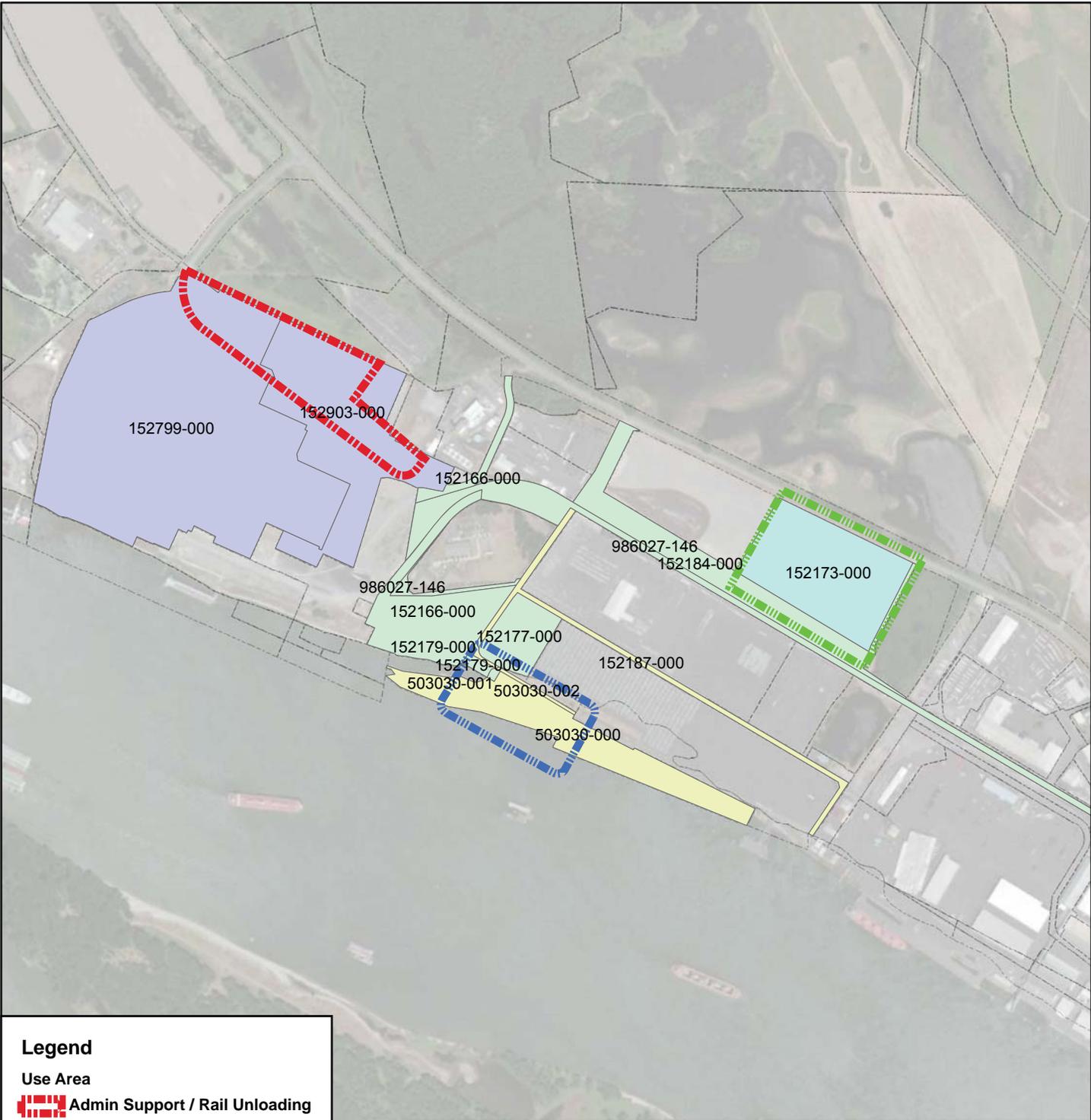
#### **3.2.2 Surrounding Properties**

As shown in Figure 3, zoning of adjacent parcels is IH, with the exception of parcels located on north of the storage area on Parcel 1A. Land north of Lower River Road near Parcel 1A is zoned Greenway (VMC 20.450).

### **3.3 Topography and Existing Structures**

The site of the proposed project is primarily flat, and much of it is covered with impervious surfaces related to the historic development associated with the former aluminum smelting facilities, recent port paving improvements and other port development. The steepest grades are near the shoreline, where steep slopes are present from the top of the bank down to the riprapped shoreline.

The only structures on the site are a water tower owned by the port, located near the center of tax lot 152799-000, and the existing dock at Berths 13 and 14.



**Legend**

**Use Area**

-  Admin Support / Rail Unloading
-  Marine Loading
-  Storage Area
-  Piping Parcels
-  Marine Parcels
-  Storage Area Parcels
-  Rail Unloading/Admin Parcels
-  Clark County Tax Parcels

Parcel Number	Proposed Project Facilities
152799-000, 152903-000 (Terminal 5)	Rail Unloading Facility and Administrative and Support Buildings
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152166-000, 503030-000, 503030-003	Marine Loading
152184-000, 152177-000, 152179-000, 986027-146, 986027-027, 503030-001, 152166-000,	Piping



**Figure 2: Parcel Map**  
**Tesoro Savage Petroleum Terminal**  
**Vancouver, Washington**

Location: Clark County, Washington  
 Source: Clark County GIS, 2012



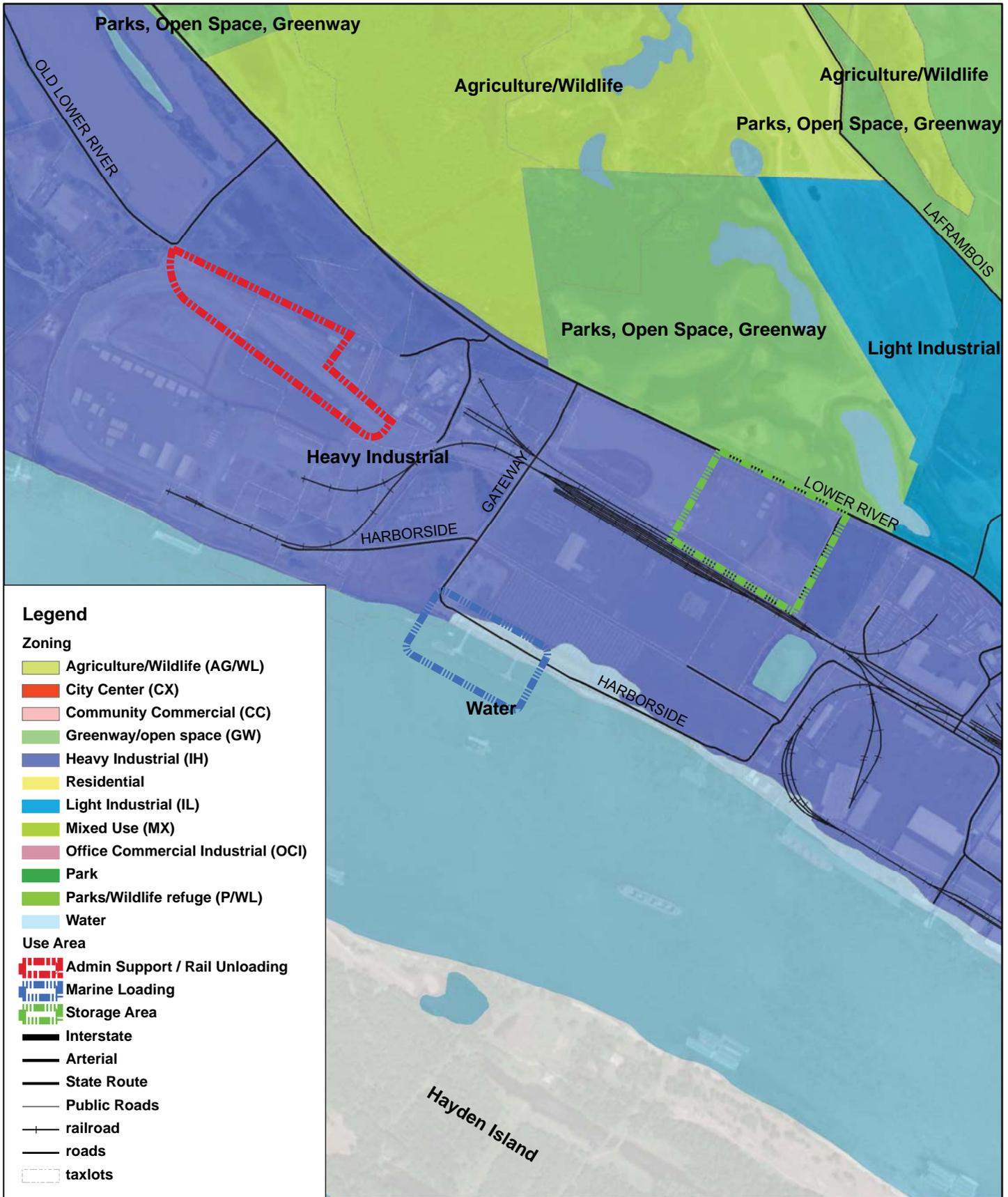


Figure 3: Zoning Map  
 Tesoro Savage Petroleum Terminal  
 Vancouver, Washington

Location: Clark County, Washington  
 Source: Clark County GIS, 2012

0 500 1,000 2,000  
 Feet

### **3.4 Ecology Consent Decree and Restrictive Covenant**

Within the boundary of the proposed project, there are four locations that are the subject of an existing Washington State Department of Ecology (Ecology) consent decree and the environmental restrictive covenants discussed below. In addition the entire former Alcoa/Evergreen site is subject to a restrictive covenant associated with the clean-up of the site. Portions of the project including the rail unloading building, additional rail lines and support elements for the ship loading may be located in these four areas..

#### **3.4.1 Consent Decree No. 09-2-00247-2, for the Alcoa Inc. Site Located at 5701 NW Lower River Road, Vancouver Washington (January 30, 2009)**

**VANEXCO/Rod Mill Site** – The 1995 consent decree (95-2-03268-4) for the Vanexco/Rod Mill building called for the building foundation (flood slabs) to serve as a cap to address PCB contamination beneath the building. Ecology approved an amendment in the 2009 Consent Decree to allow the removal of the building, providing that surface materials placed above the foundation are sloped to provide drainage away from the area. The Vanexco/Rod Mill Site is the location of the administrative and support buildings included in the proposed project.

**East Landfill** – The 2003 agreed order (DE03 TCPIS-5737) required Alcoa to conduct source control and bank stabilization at the East Landfill. The East Landfill is a well-defined area containing material that exceeds MTCA Method A industrial clean-up levels. Work under the agreed order was completed in 2004 and the East Landfill is capped with a RCRA double-lined cover. The East Landfill is the location of the marine vapor recovery/combustion unit included in the proposed project.

**Spent Pot Liner (SPL) Storage Area**—The 1992 consent decree (92-2-00783-9) for the SPL storage area called for cover with either a polyvinyl chloride (PVC) or high density polyethylene (HDPE) membrane or a 2-foot (61 cm) thick clay cover with a hydraulic conductivity of no more than  $1 \times 10^{-6}$  cm/sec. The 1992 consent decree further required that the SPL cap be maintained. The 1992 consent decree was dismissed on January 30, 2009 and no longer has effect; however, the operation and maintenance activities, including institutional controls and cover maintenance, originally contained in the 1992 consent decree are now contained in the 2009 consent decree and continue to be applicable to the site.

The 2009 consent decree (09-2-00247-2) also notes Ecology's certification that all the terms of the construction portion of the 1992 consent decree had been completed on May 3, 1992. Prior to 2009, the SPL area was covered with an HDPE liner to meet this consent decree requirement.

In April 2010, with Ecology approval, as part of its WVFA project, the port placed an asphalt cap over the HDPE liner previously covering the contaminated soil area. The cap consisted of a layer of asphalt overlain by an asphalt-impregnated geotextile (a combination of non-woven polypropylene fabric and asphalt cement tack coat) and geomembrane overlain by a second layer of asphalt. The fabric and tack coat

combination form an asphalt membrane interlayer within the pavement section. This cap remains in complete form today.

**North/North 2 Cap** – On March 26, 2009, former landowner Alcoa, Inc. entered into an environmental restrictive covenant in favour of Ecology pursuant to its consent decree with Ecology effective January 30, 2009 restricting activity in the North and North 2 (NN2) landfills. This restrictive covenant was necessary because of the residual concentration of contaminants on the properties that exceeded cleanup levels for soil and/or groundwater established in the MTCA under Washington Administrative Code (WAC) 173-340-720 and 740. These materials are presently covered by a 1-foot layer of clean sand. Per the restrictive covenant, these materials may be reused on site with Ecology’s permission. This area is located in the rail loop that is proposed with this project.

**3.4.2 Restrictive Environmental Covenant (December 31, 2008); Grantor: Evergreen Aluminum LLC & Grantor: State of Washington, Department of Ecology**

**Ingot Plant Cap** – The previous site of ingot processing on the property has been the subject of remediation and containment and is governed by an existing Ecology restrictive covenant. This site is located immediately south of the southwest corner of Terminal 5 and additional rail construction could occur in this area. The contamination is covered with 12 inches of crushed concrete.

**3.5 Surrounding Uses**

Uses surrounding the proposed project are primarily industrial. Bordering uses of the rail unloading and administration buildings are as follows: the Clark County Jail Work Center is approximately 600 feet to the east, the CPU River Road Generating Plant is approximately 100 feet to the northeast, and the Tidewater Barge Company is approximately 100 feet to the west. The port’s bulk potash handling facility is planned for the area immediately south. The area immediately to the north of the proposed project is used for propane storage and distribution and includes Old Lower River Road.

The storage area is bordered to the south by the port’s rail system and the Subaru facility. The site is bordered to the east by the port’s Parcel 1A wetland, to the west by Farwest Steel and by Lower River Road and open space to the north.

The marine loading area is surrounded by port facilities including Subaru and CalPortland.

The nearest residence is an isolated rural house owned by the port and located at 6818 NW Old Lower River Road approximately 3,100 feet (0.6 mile) northwest of the proposed location of the boiler/steam plant for the rail unloading facility. The nearest residential neighborhood is the Fruit Valley Neighborhood, approximately 3,200 feet (0.6 mile) east of the storage area. In addition, the Clark County Jail Work Center is located off Gateway Avenue between the elements of the proposed project. This facility includes 224 beds in a minimum security setting.

## **3.6 Natural Conditions**

### **3.6.1 Geology**

County Assessor's data identifies the following soil types on the site (as show in Figure 4).

- Water (WAT), for areas mapped below the ordinary high water mark (OHWM)
- Sauvie silty clay loam, 0 to 8 percent slopes (SpB)
- Newberg silt loam, 0 to 3 percent (NbA)
- Fill land (Fn)
- Sauvie silt loam, 0 to 3 percent slopes (SmA)
- Pilchuck fine sand, 0 to 8 percent slopes (PhB)

As noted below, the site has been mapped by the City as being susceptible to soils liquefaction, a geologic hazard area per Section 20.740.130 of the critical areas protection provisions of the VMC (see Figure 4, Soils Map).

### **3.6.2 Vegetation**

Previous development and remediation activities filled, paved, and/or capped the entire site of the proposed project. As a result, vegetation on the site is primarily limited to grasses, non-native weedy herbaceous vegetation, and shrubs located between the top of the bank of the Columbia River and the riprap at the water's edge. Additionally, a number of trees are located along the shoreline at Berths 13 and 14.

### **3.6.3 100-Year Floodplain**

The 100-year floodplain and floodway of the Columbia River are located at 30 feet NAVD 88 and extends generally to the top of the bank along Berths 13 and 14 (FEMA Map #53011C0363D). In addition, there is an isolated floodplain located on Parcel 1A as shown on FEMA Map Number 53011C0364D. The port filled this area as authorized by GRD2012-00025. Figure 5 indicates the mapped floodplain.

### **3.6.4 Wetlands**

There are no mapped wetlands on the site of the proposed project. Parcel 1A previously contained an isolated wetland that was filled (see section 1.5.5).

There are wetland mitigation sites located east of the access road on the east side of the Parcel 1A site and north of Old Lower River Road in the vicinity of the proposed administration building. In addition, the Columbia River Wetland Bank is located north of NW Lower River Road north of the Parcel 1A site.

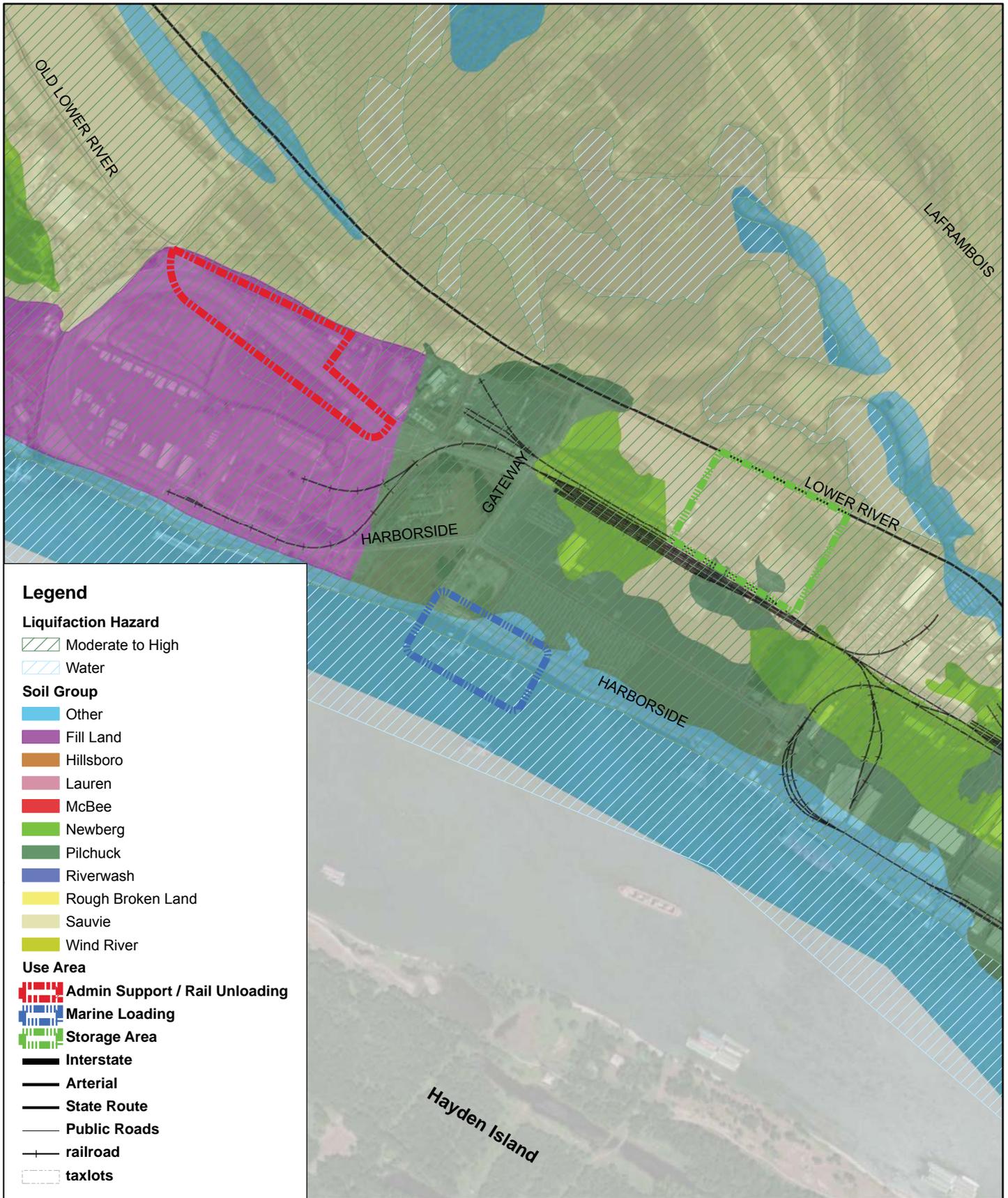
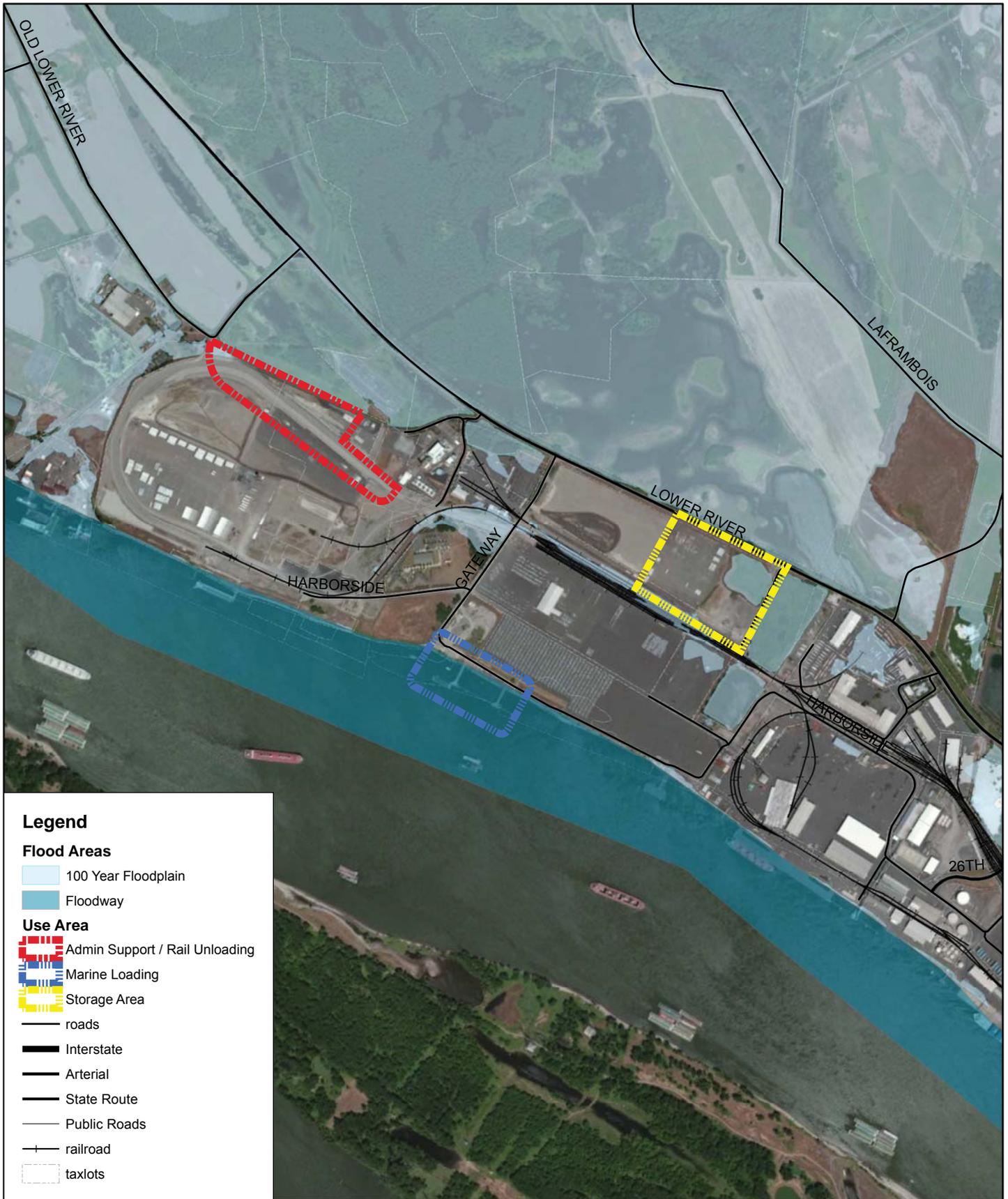


Figure 4: Soils Map  
 Tesoro Savage Petroleum Terminal  
 Vancouver, Washington

Location: Clark County, Washington  
 Source: Clark County GIS, 2012





**Legend**

**Flood Areas**

- 100 Year Floodplain
- Floodway

**Use Area**

- Admin Support / Rail Unloading
- Marine Loading
- Storage Area
- roads
- Interstate
- Arterial
- State Route
- Public Roads
- railroad
- taxlots

**Figure 5: Floodplains  
Tesoro Savage Petroleum Terminal  
Vancouver, Washington**

Location: Clark County, Washington  
Source: Clark County GIS, 2012

0 500 1,000  
Feet

### **3.6.5 Archaeology**

According to the Clark County Archaeological Predictive Model, the site is within Level A and/or high (80-100%) areas. There are no mapping indicators of archaeological site buffers. Most of the area of the proposed project was surveyed previously for various development projects, including the port's WVFA project. An archaeological study was performed by Archaeological Investigations Northwest, Inc. (AINW) in February 2009 for a project area that included portions of the site.<sup>2</sup> Additionally, a cultural resources survey was performed by Jones & Stokes (now IFC International) in December 2007 for a project area that included portions of the site. Neither study found evidence of intact prehistoric or historic-era archaeological sites on the project site or of structures eligible for listing in the National Register of Historic Places (NRHP).

### **3.7 Storm Water/Erosion Control**

The rail unloading facility and administration building are located within the boundaries of the Terminal 5 expansion project, and the storm water contributions were factored into the design and sizing of the existing conveyance system.

The storage area (Parcel 1A) is located within the planning boundaries of the completed Terminal 4 pond improvements.

### **3.8 Utilities**

The port is currently served with City water and sanitary sewer facilities. The port additionally operates a private water system and maintains storm water facilities on site. Potable water and existing fire hydrants are currently available on or adjacent to all of the locations involved in the proposed project. Sanitary sewer service is available along the south side of the storage area, and the nearest connection point westward for the rail unloading facility, offices, boiler/steam plant, and berth is a manhole located just south of the Clark Public Utilities Generating Plant.

Electrical service to the proposed project site is available from the existing Clark County Public Utilities distribution system.

## **4.0 REGULATORY COMPLIANCE**

### **4.1 Trip Generation (VMC 11.95)**

It is estimated that, at full project build-out, the project as proposed will result in approximately 410 average daily trips (ADT), with approximately 60 trips occurring in the AM peak hour and 57 trips occurring in the PM peak hour. Traffic generation is based on the anticipation that approximately 110 full-time staff will be employed by the facility at full build-out. The trip estimates are based on trip rates from *Trip Generation, 9th Edition* published by the Institute of Transportation Engineers using data for General

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<sup>2</sup> The Port of Vancouver's Proposed Alcoa/Evergreen Development Project, Clark County, Washington, Archaeological Study, Archaeological Investigations Northwest, Inc., Report No. 2257, February 19, 2009.

Light Industrial (land use code 110). The facility will operate 24 hours a day, 7 days a week with personnel on weekends and staggered shifts.

The trip estimates identified above are preliminary estimates for pre-application purposes only and additional trip data based on the nature of the use may be included in the traffic impact study that will be prepared for the project.

#### **4.2 State Environmental Policy Act**

Pursuant to WAC 463-47, EFSEC will act as lead agency for SEPA compliance. RCW 80.50.180 provides that all actions undertaken by the City are exempt from compliance with SEPA, RCW 43.21C.030.

#### **4.3 Critical Areas Ordinance (VMC 20.740)**

The critical areas found on the site include frequently flooded areas, geologic hazard areas (seismic hazard), and fish and wildlife habitat conservation areas. Development is proposed, to some extent, in each of these areas and therefore it is anticipated that a critical areas report will be submitted to address project compliance with the applicable provisions of VMC Chapter 20.740, Critical Areas Protection.

##### **4.3.1 Fish and Wildlife Habitat Conservation Areas (VMC.20.740.110)**

Project activities at Berths 13 and 14 are located within the riparian management area (RMA) and riparian buffer (RB) area of the Columbia River. The riparian boundaries are measured landward from the biological OHWM and are limited by existing impervious surfaces. The existing riparian habitat is of lower value due to historical industrial land uses which have functionally isolated the riparian area from the Columbia River. The riparian area within the proposed project site is mostly devoid of vegetation with the exception of scattered trees and vegetation below the top of the bank. Impervious surfaces include existing roadways, material laydown areas, compacted soil, access trestles, and storm water facilities. A critical areas report addressing the issue will be provided during preliminary review to satisfy the requirements of VMC.20.740.110.

##### **4.3.2 Frequently Flooded Areas (VMC 20.740.120)**

Current plans include utilization of the existing dock. Therefore, it is anticipated that the critical areas report will include a review under the frequently flooded area provisions of Section 20.740.120 of the VMC. It is not anticipated that any fill will be placed in the flood fringe or floodway. Further, to ensure any in-water structures included in the proposed project will withstand elevated river levels in flood events, the structures will be approved by a structural engineer licensed in Washington.

A portion of the tank area on Parcel 1A is identified as an isolated floodplain (see section 3.6.3) previously approved for fill.

##### **4.3.3 Geologic & Seismic Hazards (VMC 20.740.130)**

County GIS data indicate moderate-to-high potential for liquefaction or dynamic settlement within the site area of the proposed project. A geotechnical report will be provided to address the liquefaction potential on the site and recommending

construction techniques to address any identified potential soils instability and seismic issues.

#### **4.3.4 Wetlands (VMC 20.740.140)**

As indicated in section 3.6.4, portions of the proposed project site were designated as wetlands but were filled and land to the east is a forested wetland. No activity or impacts are proposed within the Parcel 1A wetland area. According to VMC Table 20.740.140-5, the wetland buffer for a Category 3 wetland with a low habitat function is between 40 and 80 feet based on the land use intensity. However, according to VMC 20.740. (C)(1)(b)(1)(e), areas within buffers that are completely functionally separated from a wetland and do not protect the wetland from adverse impacts may be excluded from the buffer. Because the site of the proposed project is completely developed and an existing access road separates it from the Parcel 1A wetland, the buffer will not affect the project site.

#### **4.4 Shoreline Management Master Program (VMC 20.760)**

Ship loading elements are the only anticipated project elements that will require construction within the jurisdiction of the City's Shoreline Management Master Program (SMMP) (within 200 feet of the OHWM). The SMMP designates the shoreline environment of the upland areas on the site as High Intensity and the areas of the site below the OHWM of the river as Aquatic.

Within the High Intensity and Aquatic designations, water-dependent industrial uses are permitted activities. The SMMP defines a water-dependent use as follows: "a use or a portion of a use which requires direct contact with the water and cannot exist at a non-water location due to the intrinsic nature of its operations." The purpose of the proposed project is to transfer crude oil from railcars to ships. Consequently, the proposed facility activities clearly meet the definition of a water-dependent use. Further, per Policy 4.3.5.1, the purpose of the High Intensity designation is "to provide for high-intensity water-oriented commercial, transportation, and industrial uses...." Table 6-1 lists *Water-dependent* industrial uses as permitted in the High Intensity and Aquatic shoreline designations with no setback or height limits.

It is anticipated that the proposed project would be subject to the SMMP policies and regulations shown in Table 2.

**Table 2 - SMMP Policies and Regulations**

<b>Section</b>	<b>Associated Regulation(s)</b>
5.1	1-2, 4-6, 9, 11, 15
5.2	All
5.3	All
5.4	2
5.6.1	All
5.6.2	1-5
5.6.3	All
5.7	All
5.8.1	All
5.9	1-7
5A	All
Table 6-1	All
6.3.3.5	1, 4-5
6.3.6	1, 5-6

#### **4.5 Land Use (VMC 20.440.030)**

The proposed project is permitted in the IH zone. The proposed project is consistent with the City's definition in VMC 20.160.020 of a warehouse/freight movement use, a permitted use. This definition is as follows:

*Uses involved in the storage and movement of large quantities of materials or products indoors and/or outdoors; associated with significant truck and/or rail traffic. Examples include free-standing warehouses associated with retail furniture or appliance outlets; household moving and general freight storage; cold storage plants/frozen food lockers; weapon and ammunition storage; major wholesale distribution centers; truck, marine and air freight terminals and dispatch centers; bus barns; grain terminals; and stockpiling of sand, gravel, bark dust or other aggregate and landscaping materials.*

Table 3 below shows how the proposal is consistent with the City's development standards for the IH zone.

**Table 3 - Development Standards (VMC Table 20.440.040-1)**

<b>Development Criteria</b>	<b>IH Zone</b>	<b>Proposed</b>
Minimum Lot Size	None	N/A
Maximum Lot Coverage	100%	N/A
Minimum Lot Width	None	N/A
Minimum Lot Depth	None	N/A
Minimum Setbacks	See VMC 20.925	See Section 4.8
Maximum Height	None	Approx. 50 feet (rail unloading)
Minimum Landscaping Requirement (% of total net area)	0%	≤5%

**4.6 Tree Ordinance (VMC 20.770)**

Impervious surfaces from historic development and recent grading dominate the site. Because the City interprets the provisions of VMC Chapter 20.770 to apply only to the area of existing pervious surfaces, the tree density requirements would not apply to the majority of the site area. If existing pervious surfaces will be modified with the proposed project appropriate tree mitigation plantings will be completed.

**4.7 Landscaping (VMC 20.925)**

The City’s policy is that the buffering and screening provisions of VMC 20.925.070 do not apply to industrial sites with adjacent port ownership. All areas of the proposed project are surrounded by existing port industrial sites with the exception of Parcel 1A which is adjacent to the Farwest Steel development to the west and the port-owned open space/wetland bank to the north. According to Table 20.925.030-1, development within the IH zone requires an L1, 0- to 5-foot buffer when adjacent to land zoned IH and an L2, 10-foot buffer when separated from the resource zone by a street. These buffers are applicable to the west and north sides of the storage area. In addition, a minimum of 10 percent landscaping and required perimeter screening will be provided in the parking lot of the administration building as required by VMC 20.945.040.

**4.8 Parking and Loading (VMC 20.945)**

Per Section 20.945.070 of the Vancouver Municipal Code (VMC), industrial services buildings require one parking space per 600 square feet of building area. Parking will be provided at the administrative buildings located on Old Lower River Road. The storage tank area will not be continuously occupied and only parking for maintenance vehicles will be provided. Parking for operation of the ship loading will be located on existing surfaces in the vicinity of the dock.

**4.9 Archeological Resources**

The applicant anticipates conducting a new archaeological survey for areas not previously studied. While findings from previous studies indicate a low likelihood of encountering cultural artifacts during construction, the applicant will develop and implement an Inadvertent Discovery Plan during construction.

#### **4.10 Storm Water/Erosion Control**

Storm water improvements will be analyzed and designed in accordance with City development standards and Ecology's *Stormwater Management Manual for Western Washington*. Storm water from the site will be discharged through manmade conveyances to the Columbia River; therefore, the proposed project is exempt from the flow control minimum requirement. Storm water treatment technologies will be implemented to treat and monitor storm water quality in accordance with the required Industrial NPDES General Storm water Permit.

Storm water from the boiler/steam plant and the area of the administration building north of the existing rail loop will be treated on site in accordance with current regulations and discharged through existing casings underneath the railroad tracks. Flow contributions from the rail unloading facility will be treated through oil/water separators prior to discharge into the existing port storm water system.

Storm water for the storage area (Parcel 1A) will be treated on site using oil/water separators prior to its discharge to the existing storm water system. No pollution generating surfaces will be constructed with the storage area. Accesses in/out of the area are for periodic sampling and maintenance.

There are no modifications to the impervious surfaces at the existing shipping berths and therefore no storm water improvements are proposed at this time.

#### **4.11 Utilities**

Electrical service will be obtained by interconnection to the local distribution system. Potable water demands are anticipated to be fairly minor. The largest process demand is the boiler/steam plant which at build-out may require approximately 30 gallons per minute of process water. Fire flow is the largest water demand and design criteria for the water system. The project team is currently conducting hydrant flow tests to determine system adequacy at the storage area, rail unloading facility, boiler/steam plant, and ship loading berth. Fire protection systems including additional hydrants and chemical suppression systems are proposed at the storage tank area and rail unloading facility.

Based on the present level of design, it is anticipated that water supply for fire suppression at the storage tank area can be obtained either from the port or from the City of Vancouver. All other water needs at the proposed project would be supplied by the City of Vancouver.

The anticipated sanitary sewer discharges include domestic sewerage from the administration and support buildings, and treated boiler blow-down water (wastewater generated from solids left behind during the steam generation process), and interior drains from the rail unloading facility, including rail car drip pans. A water treatment facility is planned in the building housing the steam plant to provide pre-treatment for the boiler blow-down water before discharge to the City sanitary sewer system.

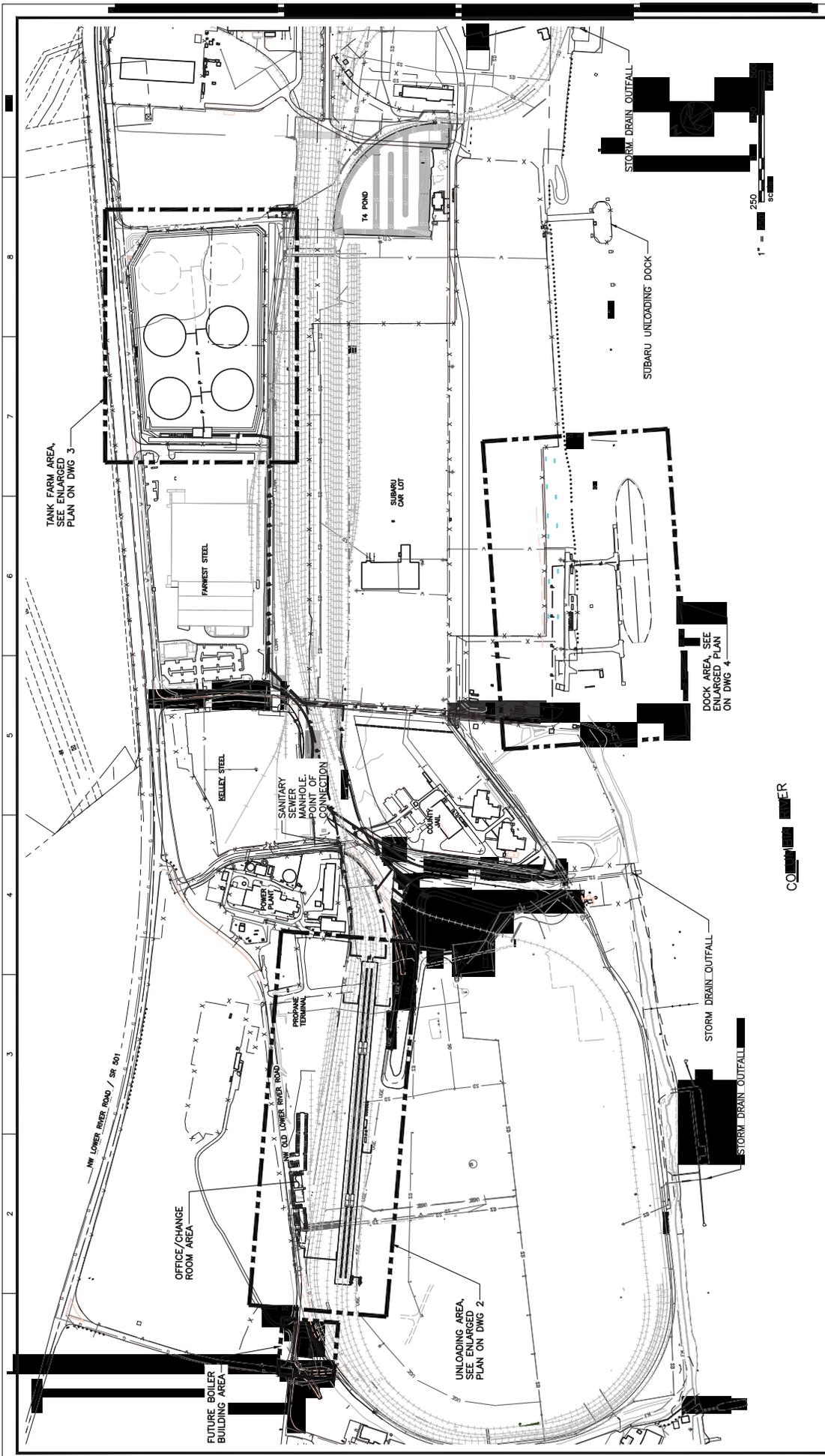
Oil/water separators will be used in all other areas of the site where hydrocarbons could enter into the sanitary sewer drains.

## **5.0 QUESTIONS/ITEMS FOR PRE-APPLICATION DISCUSSION**

- a. VMC 14.010.050, Prohibited Discharge Standards, states that petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, in amounts that will cause Pass Through or Interference are prohibited from sanitary sewer discharges. Section 14.010.080, Local Limits, states a threshold of 50 mg/L. Please confirm the performance criteria for crude oil in wastewater.
- b. VMC 14.010.050 Prohibited Discharge Standards requires that discharges shall not cause the temperature at the treatment plant to exceed 104-degrees. For this proposed site, what is an acceptable maximum discharge temperature at the proposed discharge location? Where is this located?
- c. The previous staff report for PRJ2010-01305 indicates that the downstream sanitary sewer pump station #4516, XB732 may not have sufficient capacity for additional wastewater discharges. Please confirm the existing pump station capacity, requirements for connection, and limits of necessary improvements if any?
- d. Farwest Steel was required to construct frontage improvements with their recent development. Please provide detailed requirements for frontage improvements at the Tank Farm site on NW Lower River Road, SR-501.
- e. The current development plan for the Tank Farm includes sharing the existing access road east of Farwest Steel. This will be for occasional maintenance only. Are there any intersection or access improvements required?
- f. It is our understanding from discussions with City staff the determinations of required fire flow and locations for fire protection equipment will be determined by a 3rd party consultant who specializes in fire protection for flammable/combustible liquid tank farms. Can the City provide an estimate of required fire flows at this time? Please additionally provide a description of how the 3rd party review may impact review schedules and coordination.
- g. Please confirm that frontage improvements along NW Old Lower River Road will not be required in the vicinity of the proposed office building. Other recent development in this area has been exempted from frontage improvements.
- h. To the extent possible, please provide all as-built reference drawings for public utilities located on or adjacent to the project locations.
- i. We understand that the 2012 codes (IFC, IBC, IECC, etc.) will become effective in July and will apply to this project.

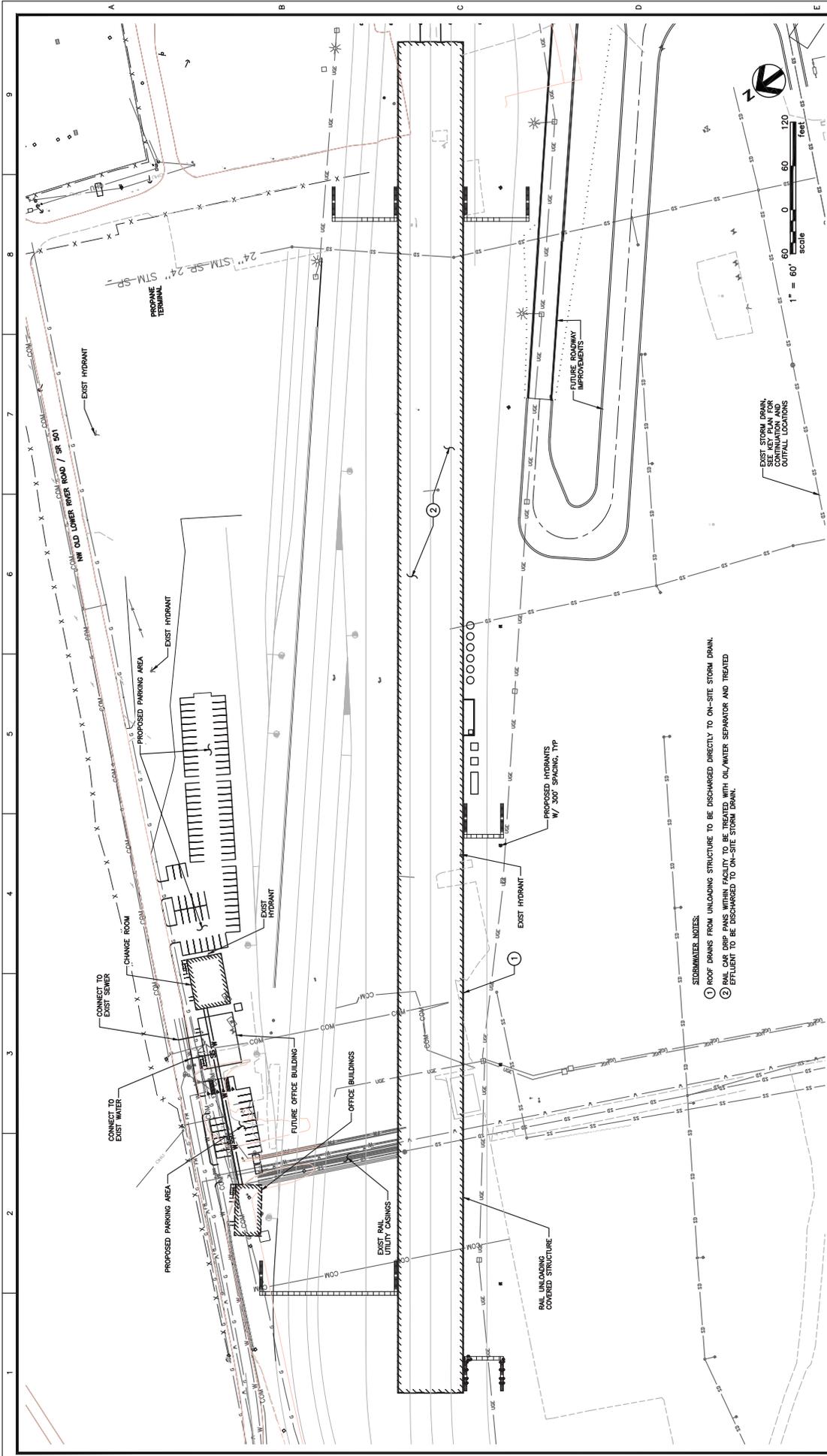
- j. What is the required building separation where no barrier is provided for fire protection?
- k. Would the City identify the study intersections required in the traffic study?
- l. Would the City identify any planned transportation improvements affecting the study intersections?
- m. We request that the City help identify all in-process developments in the study area that need to be accounted for at the study intersections.
- n. The general site lighting design for each area will consist of several 480V, 400 watt, LED type fixtures. The fixture quantities and heights will be designed to provide an average of 3-5 foot-candles near grade or working area. Will this comply with the city's current lighting standards and light pollution criteria? If not, please provide the acceptable site lighting criteria and/or standards.





 700 NE Multnomah Street, Suite 900 Portland, OR 97232 (503) 872-4100 FAX: (503) 872-4101		PROJECT: TESORO SAVAGE TERMINAL LLC PORT OF VANCOUVER, WASHINGTON		SCALE: 1"=250' START DATE: [ ] PRINT DATE: [ ] DRAWING NUMBER: XXXX SIZE: 24x36 APPROVED: [ ] CHECKED: [ ]
CUSTOMER: TESORO SAVAGE PETROLEUM LLC		DESCRIPTION: KEY PLAN		REV. [ ] X DRAWING [ ]

NO.	REV.	DATE	BY	APP.



**STORMWATER NOTES:**

- ① ROOF DRAINS FROM UNLOADING STRUCTURE TO BE DISCHARGED DIRECTLY TO ON-SITE STORM DRAIN.
- ② RAIL GAS BARGE PUMP WITH FACILITY TO BE TREATED WITH OIL/WATER SEPARATOR AND TREATED EFFLUENT TO BE DISCHARGED TO ON-SITE STORM DRAIN.

**TESORO SAVAGE**

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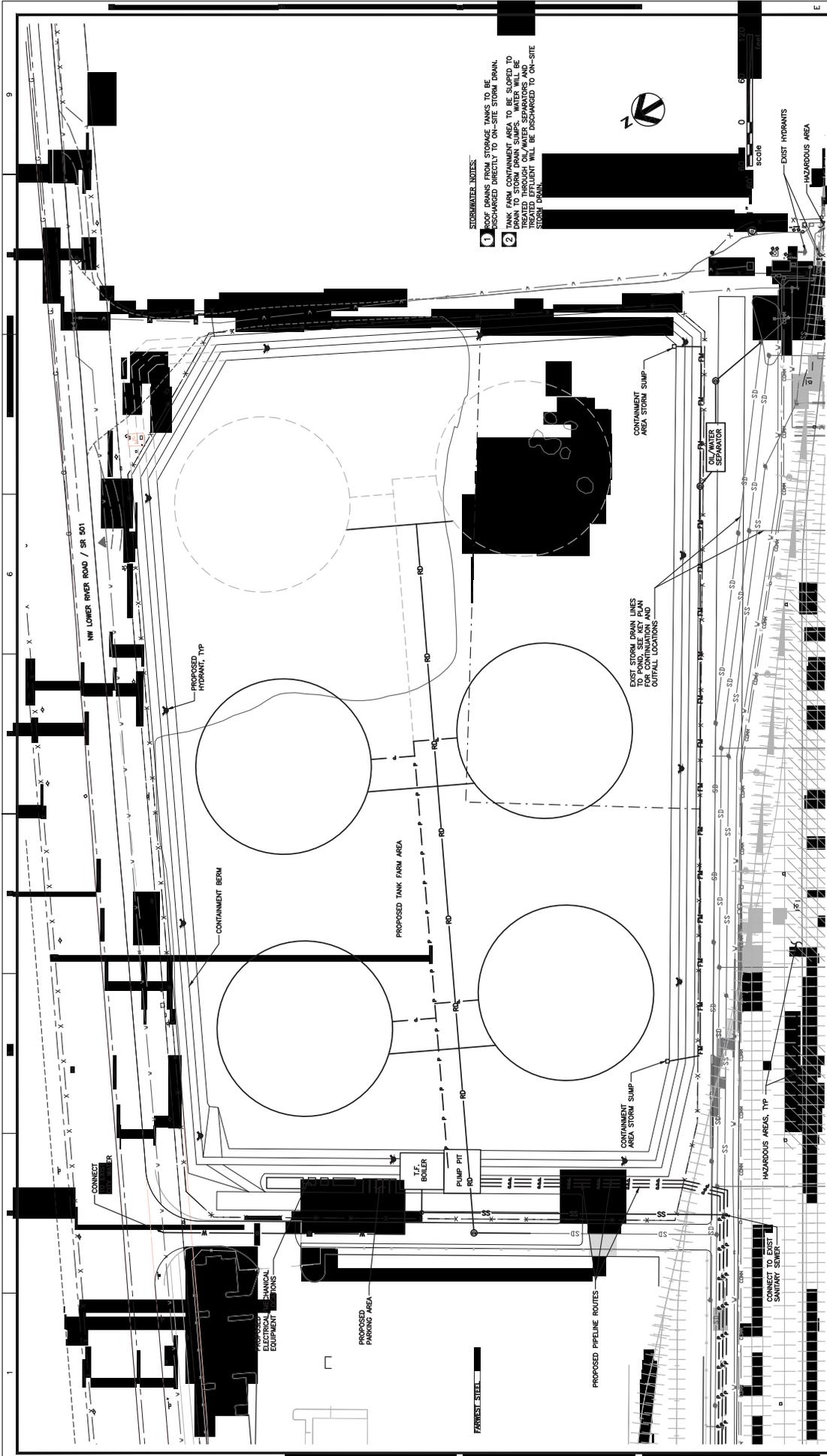
CUSTOMER: **TESORO SAVAGE PETROLEUM LLC**

**BergerABAM**

700 NE Multnomah Street, Suite 900  
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DESIGN: DS	START DATE: 5/22/2013	SCALE: 1"=60'
DRAWN: THP	ISSUE DATE: 6/4/2013	DRAWING NUMBER: XXXX
CHECKED: SA	APPROVED: XXX	SIZE: 24x36
DRAWING NUMBER: UNLOADING AND OFFICE AREA ENLARGEMENT		SHEET REV.:
		2 X

NO.	DATE	REVISION	BY	APP



DESIGNER:	DESIGN NUMBER:	SCALE:
DATE:	6/1/13	1" = 100'
CHECKED:	APPROVED:	DATE:
		6/1/13
DRAWING NUMBER:		
TANK FARM AREA ENLARGEMENT		

PROJECT: TESORO SAVAGE PETROLEUM LLC

DESCRIPTION: TANK FARM AREA ENLARGEMENT

TESORO SAVAGE PORT OF VANCOUVER, WASHINGTON

TESORO SAVAGE

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CUSTOMER: TESORO SAVAGE PETROLEUM LLC

BERGERBAM

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NO.	DATE	REVISION



# ATTACHMENT C