US Army Corps of Engineers
Seattle District

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Joint Public Notice

Application for a Department of the Army Permit and a Washington Department of Ecology Water Quality Certification and/or Coastal Zone Management Consistency Concurrence

US Army Corps of Engineers
Regulatory Branch
P.O. Box 3755
Seattle, WA 98124-3755
Telephone: (206) 764-6912
ATTN: Rebecca McAndrew,
Senior Scientist

WA Department of Ecology
SEA Program
P.O. Box 47600
Olympia, WA 98504-7600
Telephone: (360) 407-6068
ATTN: SEA Program,
Federal Permit Coordinator

Public Notice Date: June 10, 2016
Expiration Date: July 10, 2016

Reference No.: NWS-2011-242-DOT
Name: Washington State Ferries

Interested parties are hereby notified that the U.S. Army Corps of Engineers (Corps) and the Washington Department of Ecology (Ecology) have received an application to perform work in waters of the U.S. as described below and shown on the enclosed drawings dated March 2016.

The Corps will review the work in accordance with Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Ecology will review the work pursuant to Section 401 of the CWA, with applicable provisions of State water pollution control laws and the Coastal Zone Management Act.

APPLICANT: Washington State Ferries
Attention: Ms. Nicole McIntosh
2901 3rd Avenue, Suite 500
Seattle, Washington 98121-1042
Telephone: (206) 515-3714

LOCATION: In Elliott Bay, Seattle, Washington.

WORK: Washington State Ferries (WSF) proposes to replace and reconfigure Colman Dock. The work would be done in five phases. Project elements include:

- Remove the existing Colman Dock timber trestle and replace it with a concrete trestle
- Remove the bulkhead and excavate fill under the removed timber trestle, which restores 0.32 acre of intertidal area
- Reconfigure the dock layout to the south
- Construct a new terminal building
- Relocate the King County passenger only ferry, which consists of float and gangway
- Replace the vehicle transfer span and overhead loading structures of Slip 3, which includes installing new hydraulic systems
- Remove the existing timber wingwalls and replace with two inner steel dolphins between Slips 2 and 3

NWS-2011-242, Washington State Ferries

- Construct a sediment cap (4.43 acres) to the north and south of the existing sediment cap to contain existing contamination

- Use two temporary mooring buoys installed for the City of Seattle's Elliott Bay Seawall Project (Corps Reference Number NWS-2011-778) during construction for barges

The existing dock has 6.37 acres of overwater coverage and the existing terminal building is 36,750 square feet. The new dock would have 6.83 acres of overwater coverage and the new terminal building would be 23,400 square feet. With the bulkhead removal and dock reconfiguration, the net gain of overwater coverage would be 0.12 acre. The reconfigured terminal adds 30 linear feet to the south end of the site, but reduces the structure length by 180 linear feet at the north end of the site.

A total of 2,685 creosote-treated piles would be removed and 824 piles would be installed. All installed piles are steel unless otherwise noted. The 574 permanent piles include: 2, 18-inch diameter concrete; 20, 30-inch diameter; 549, 36-inch diameter; 2, 84-inch diameter concrete with steel casing; and 1, 108-inch diameter steel shaft with concrete. The permanent impact to substrate would be 0.04 acre. A total of 250 temporary piles would be installed: 243, 24-inch diameter; 2, 30-inch diameter; and 5, 36-inch diameter. Work at Colman Dock would occur between +11.35 mean lower low water (MLLW) and -45 MLLW.

PURPOSE: To provide safe, reliable, and efficient service and connections for general-purpose transportation, transit, high-occupancy vehicles, pedestrians, and cyclists travelling between Kitsap County and the Seattle metropolitan area and beyond.

ADDITIONAL INFORMATION: If issued, this permit would be valid for 6 years.

MITIGATION: To compensate for the increased overwater coverage of 0.12 acre, WSF would remove the equivalent overwater coverage by demolishing a portion of Pier 48, which is located directly to the south.

ENDANGERED SPECIES: The Endangered Species Act (ESA) requires Federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the ESA on all actions that may affect a species listed (or proposed for listing) under the ESA as threatened or endangered or any designated critical habitat. The Federal Highway Administration (FHWA) and the Federal Transit Authority (FTA), as the lead agencies for the ESA consultation, have consulted with the NMFS and the USFWS as required under Section 7 of the ESA. They have determined that the project would likely to adversely affect proposed and/or listed species and their designated critical habitat. The NMFS issued a Biological Opinion (BO) on March 20, 2014, and the USFWS issued a BO on February 18, 2014.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The proposed action would impact EFH in the project area. The FHWA and FTA, as the lead agencies for a determination regarding EFH, have consulted with the NMFS. They have determined that the project would adversely affect EFH species. The NFMS issued a BO with Conservation Recommendations on March 20, 2014.

CULTURAL RESOURCES: The FHWA and FTA, as the lead agencies for determining compliance with Section 106 of the National Historic Preservation Act, will consult with the State Historic Preservation Officer and Native American Tribes as appropriate.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

EVALUATION – CORPS: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The Corps is soliciting comments from the public; Native American Nations or Tribal governments; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for the work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

The described discharge will be evaluated for compliance with guidelines promulgated by the Environmental Protection Agency under authority of Section 404(b)(1) of the CWA. These guidelines require an alternatives analysis for any proposed discharge of dredged or fill material into waters of the U.S.

SOURCE OF FILL MATERIAL: The applicant has not yet identified the source of the fill material. Should a permit be issued, the Corps will evaluate the fill material source prior to the start of construction.

EVALUATION – ECOLOGY: Ecology is soliciting comments from the public; Federal, Native American Nations or Tribal governments, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Ecology will be considering all comments to determine whether to certify or deny certification for the proposed project.

This proposal is the subject of Shorelines Substantial Development Permit application being reviewed by the City of Seattle. The project number will be determined after completeness review.

COMMENT AND REVIEW PERIOD: Conventional mail or e-mail comments on this public notice will be accepted and made part of the record and will be considered in determining whether authorizing the work would not be contrary to the public interest. In order to be accepted, e-mail comments must originate from the author's e-mail account and must include on the subject line of the e-mail message the permit applicant's name and reference number as shown below. Either conventional mail or e-mail comments must include the permit applicant's name and reference number, as shown below, and the commenter's name, address, and phone number. All comments whether conventional mail or e-mail must reach this office, no later than the expiration date of this public notice to ensure consideration.

CORPS COMMENTS: All e-mail comments should be sent to rebecca.e.mcandrew@usace.army.mil. Conventional mail comments should be sent to: U.S. Army Corps of Engineers, Regulatory Branch, Attention: Ms. Rebecca McAndrew, P.O. Box 3755, Seattle, Washington 98124-3755. All comments received will become part of the administrative record and are subject to public release under the Freedom of Information Act including any personally identifiable information such as names, phone numbers, and addresses.

ECOLOGY COMMENTS: Any person desiring to present views on the project pertaining to a request for water quality certification under Section 401 of the CWA and/or Coastal Zone Management consistency concurrence, may do so by submitting written comments to the following address: Washington State Department of Ecology,

NWS-2011-242, Washington State Ferries

Attention: Federal Permit Coordinator, P.O. Box 47600, Olympia, Washington 98504-7600, or e-mail to ecyrefedpermits@ecy.wa.gov.

To ensure proper consideration of all comments, responders must include the following name and reference number in the text of their comments: Washington State Ferries, NWS-2011-242

Encl: Figures (20)

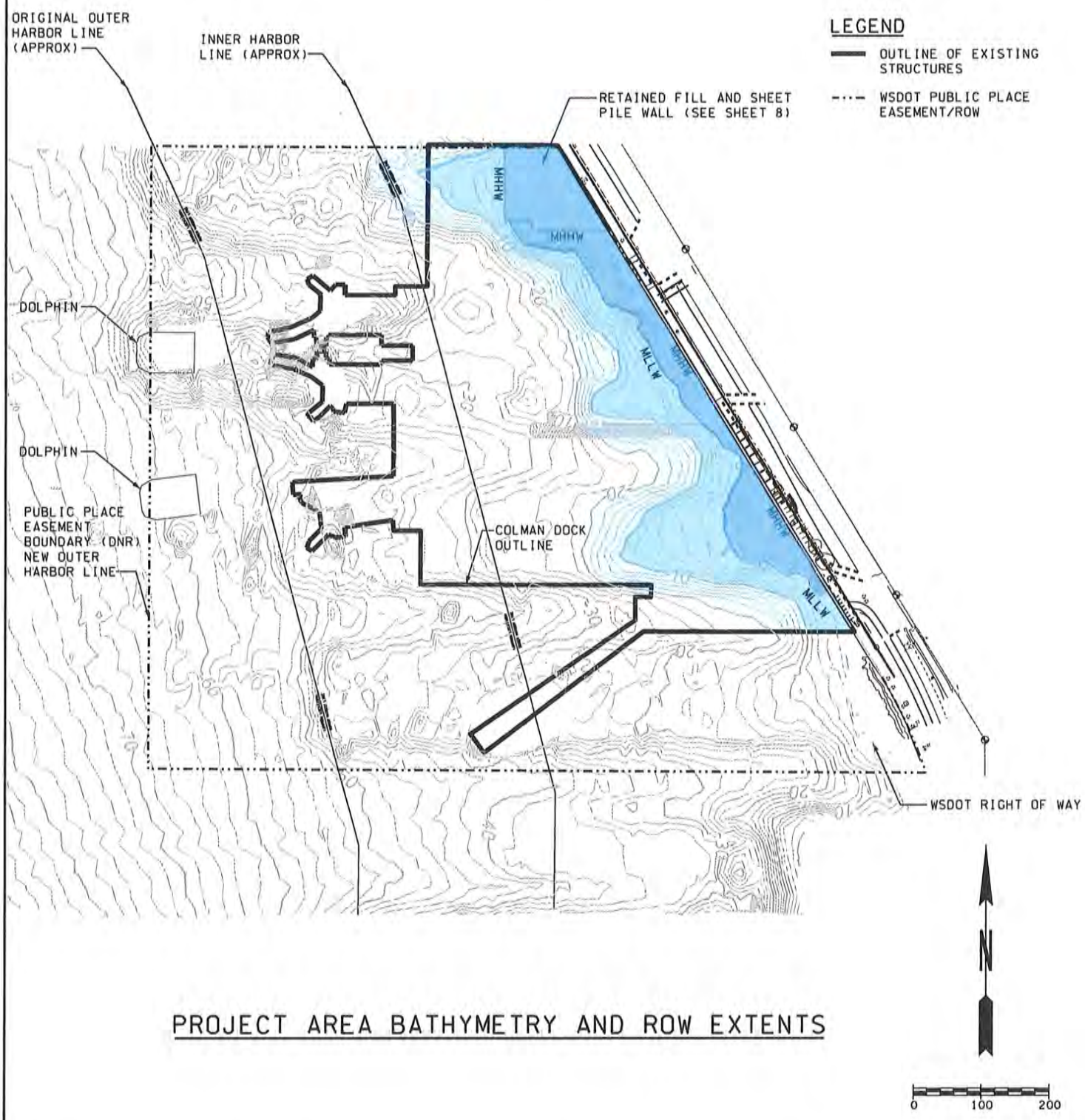
PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**APPLICANT:** WSDOT/FERRIES DIVISION (WSF)
DATUM: MLLW=0.00; MHHW=11.35'	**COUNTY:** KING
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSDOT	**NEAR:** CITY OF SEATTLE
	WATER BODY: ELLIOTT BAY
	DATE: MARCH 2016

Washington State Department of Transportation

EXISTING TRESTLES AND STRUCTURES

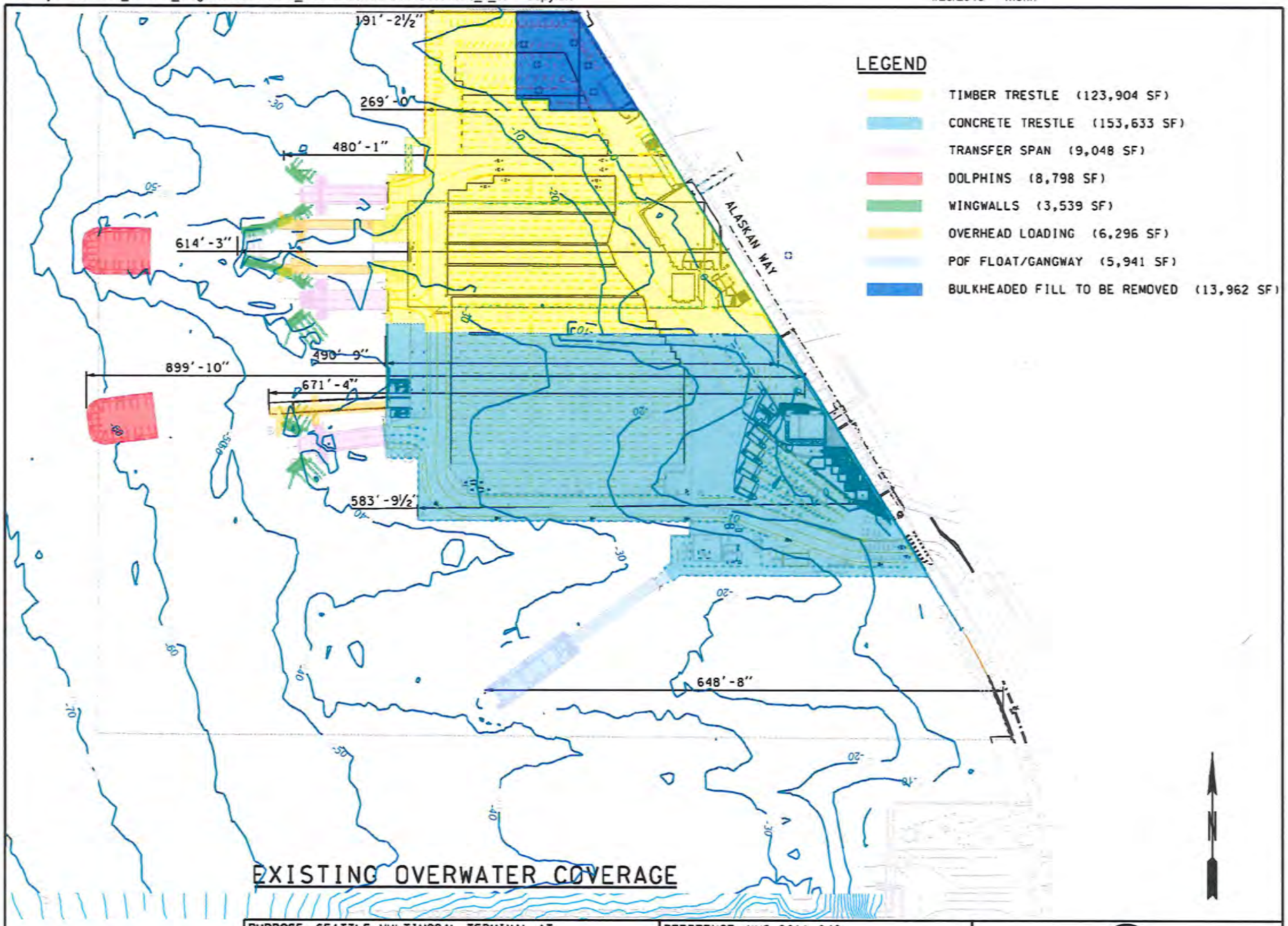
PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	COUNTY: KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	WATER BODY: ELLIOTT BAY, PUGET SOUND
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSDOT	
	DATE: MARCH 2016

Washington State Department of Transportation



PROJECT AREA BATHYMETRY AND ROW EXTENTS

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242	Washington State Department of Transportation
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	APPLICANT: WSDOT/FERRIES DIVISION (WSF)	
DATUM: MLLW=0.00; MHHW=11.35'	COUNTY: KING	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	NEAR: CITY OF SEATTLE	
	WATER BODY: ELLIOTT BAY	
	DATE: MARCH 2016	SHEET: 3 OF: 20

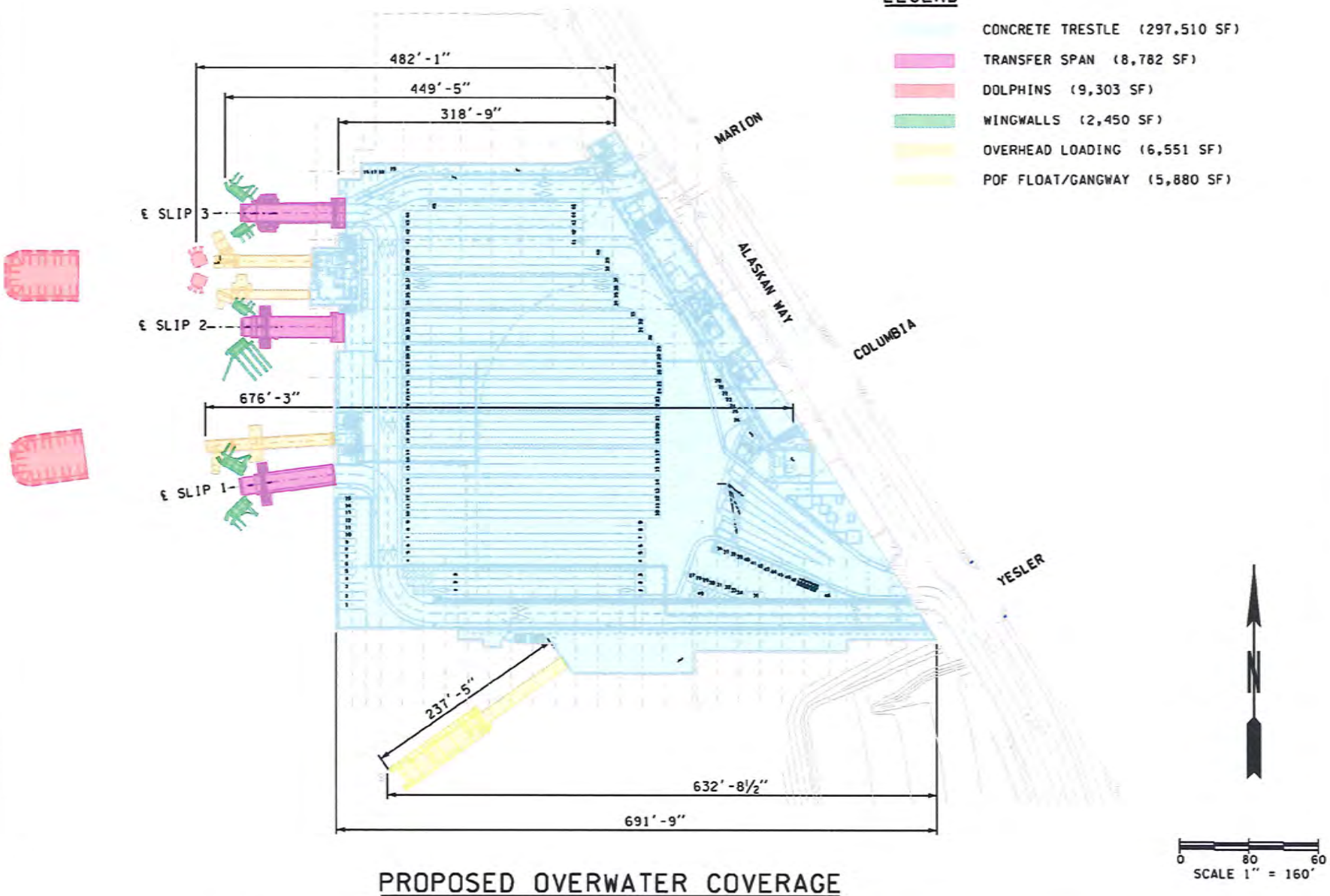


EXISTING OVERWATER COVERAGE

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	COUNTY: KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	WATER BODY: ELLIOTT BAY
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	
	DATE: MARCH 2016

Washington State Department of Transportation

SHEET: 4 OF: 20

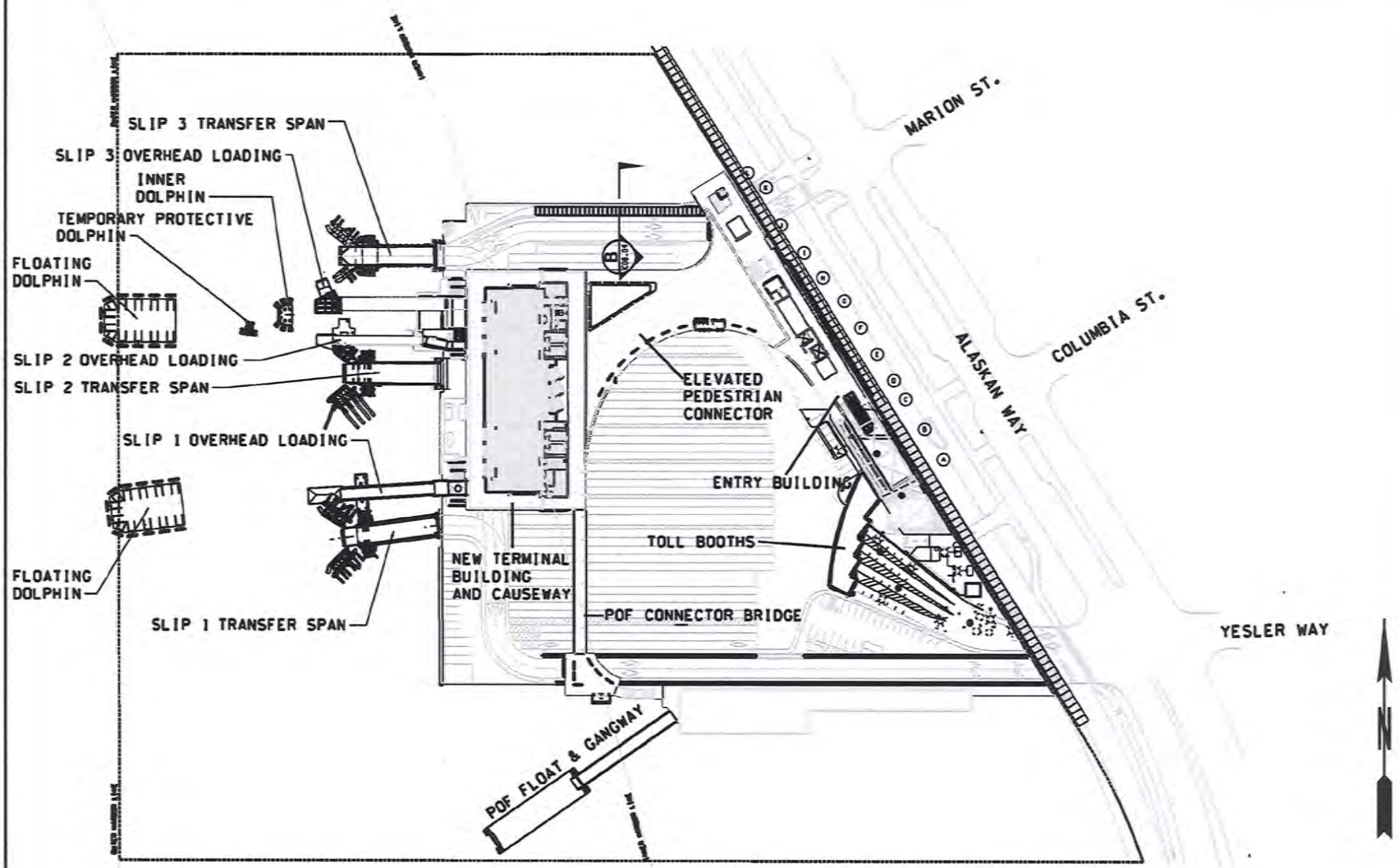


PROPOSED OVERWATER COVERAGE

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	COUNTY: KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	WATER BODY: ELLIOTT BAY
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	
	DATE: MARCH 2016

Washington State Department of Transportation

SHEET: 5 OF: 20

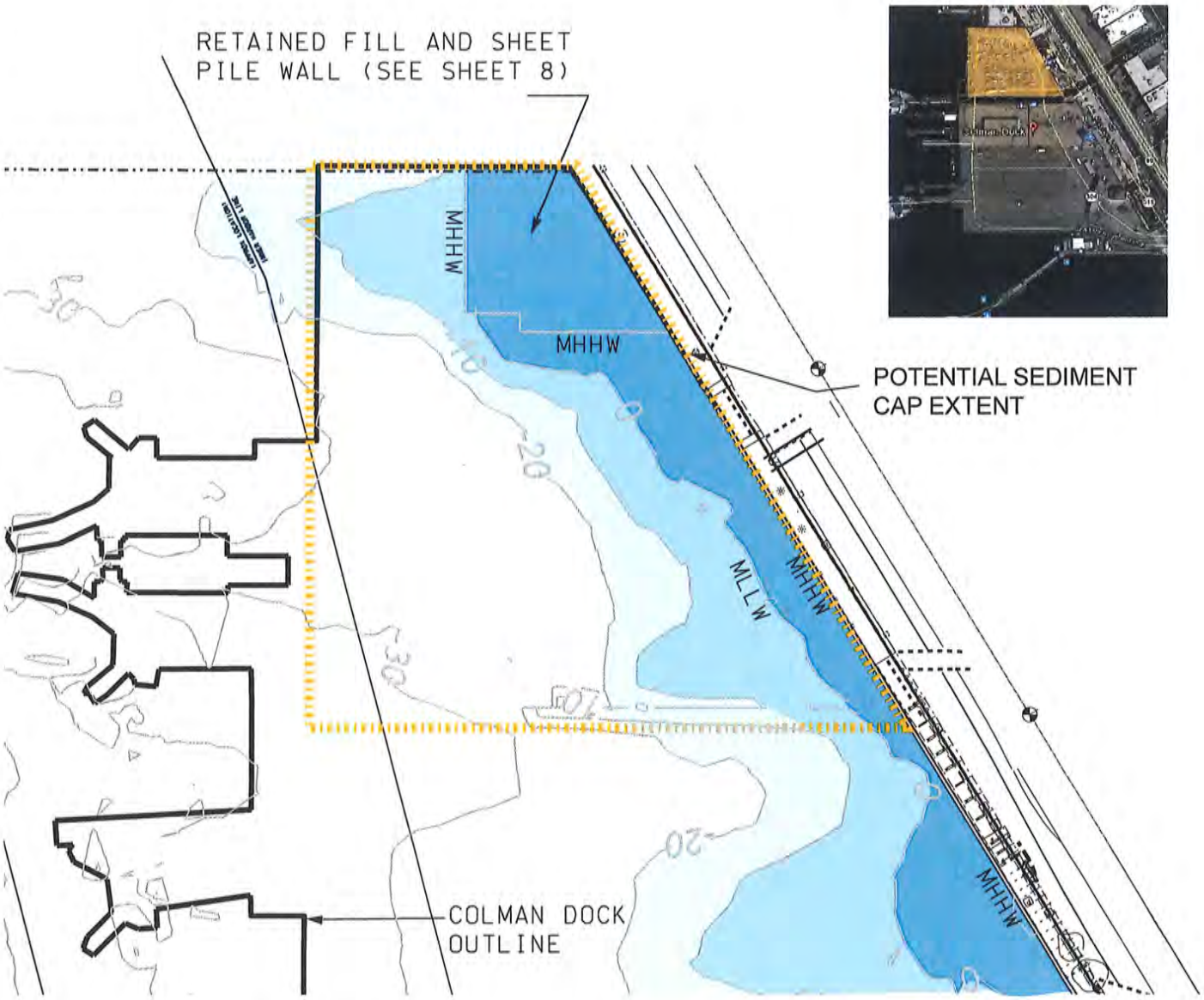


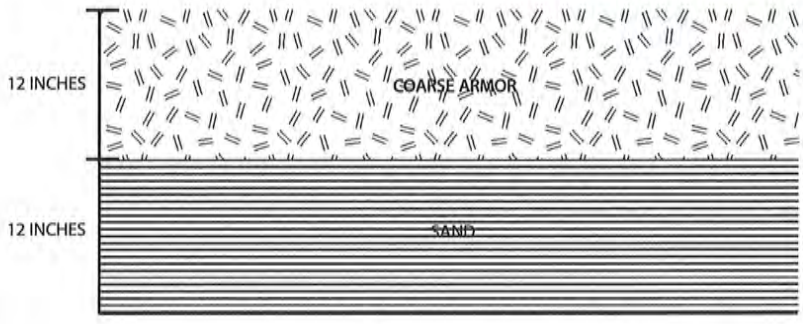
PROPOSED STRUCTURES

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
DATUM: MLLW=0.00; MHHW=11.35'	COUNTY: KING
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	NEAR: CITY OF SEATTLE
	WATER BODY: ELLIOTT BAY
	DATE: MARCH 2016

Washington State Department of Transportation

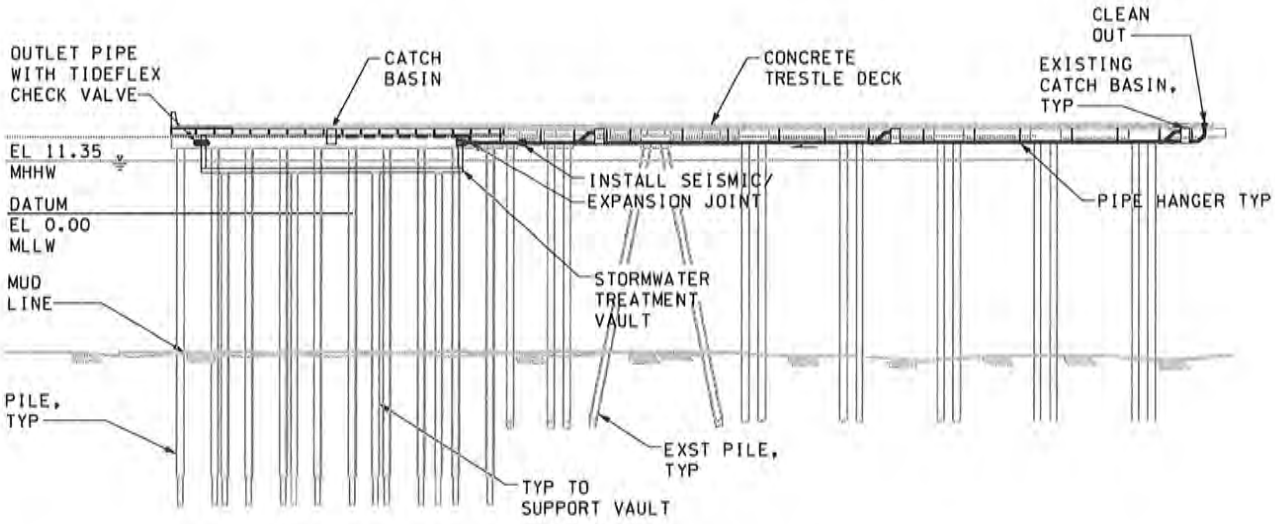
SHEET: 6 OF: 20





SEDIMENT CAP PLAN AND SECTION VIEW (TYPICAL)

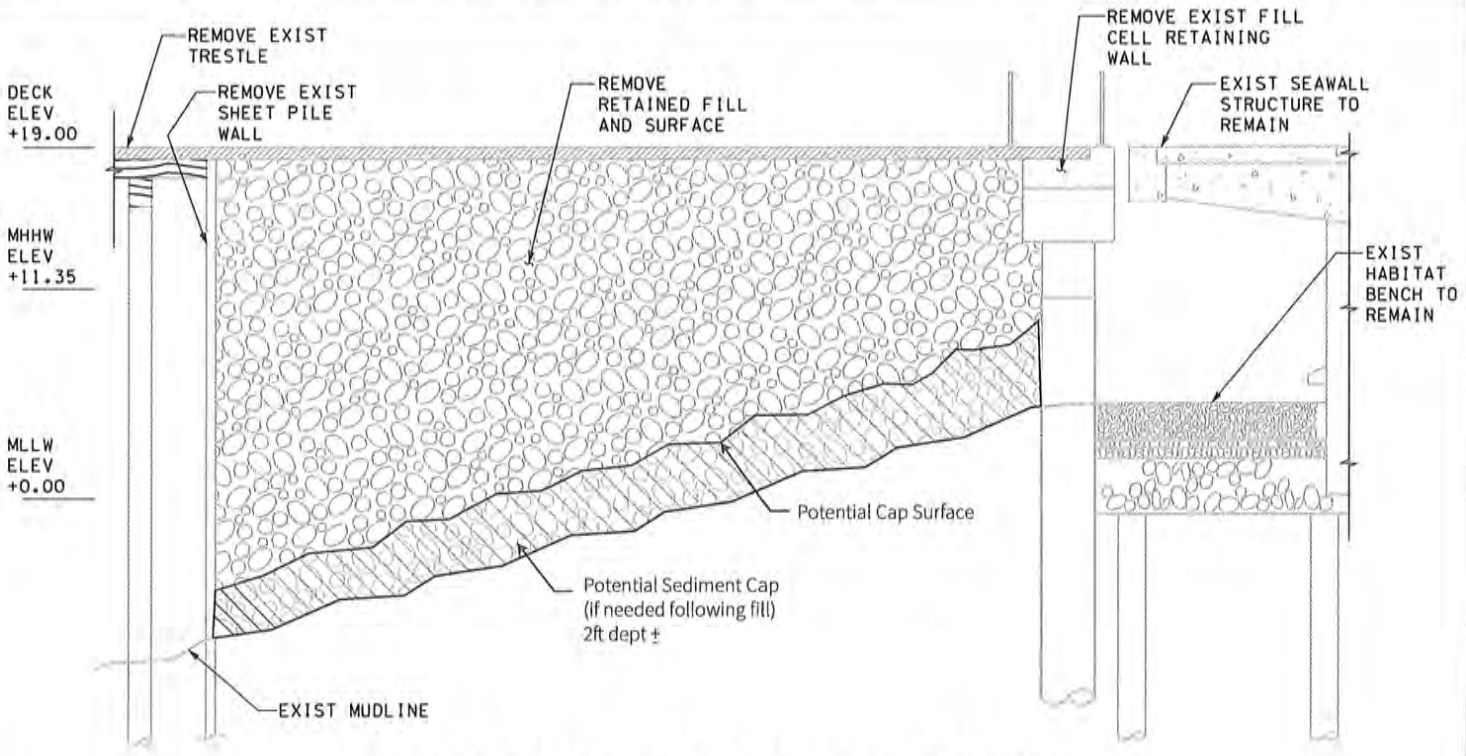
PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242	Washington State Department of Transportation
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)	
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**COUNTY:** KING	
	NEAR: CITY OF SEATTLE	
DATUM: MLLW=0.00; MHHW=11.35'	**WATER BODY:** ELLIOTT BAY	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSDOT		
	DATE: MARCH 2016	**SHEET:** 7 **OF:** 20



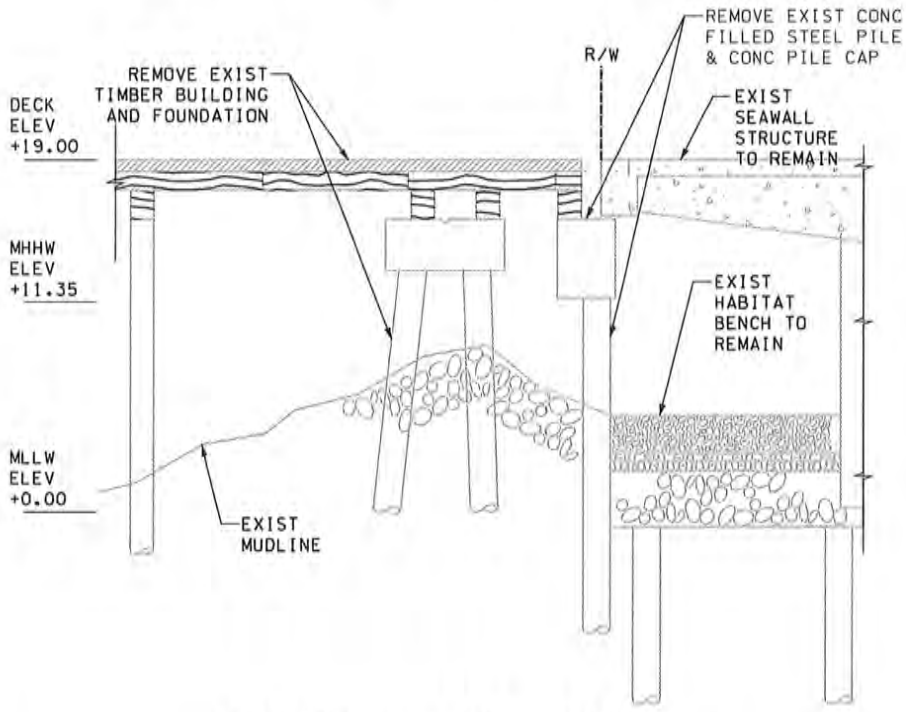
TYPICAL STORM DRAIN PROFILE

0 20 40

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242	Washington State Department of Transportation
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)	
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	COUNTY: KING	
	NEAR: CITY OF SEATTLE	
DATUM: MLLW=0.00; MHHW=11.35'	WATER BODY: ELLIOTT BAY, PUGET SOUND	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF		
	DATE: MARCH 2016	SHEET: 8 OF: 20



RETAINED FILL & SHEET PILE WALL REMOVAL



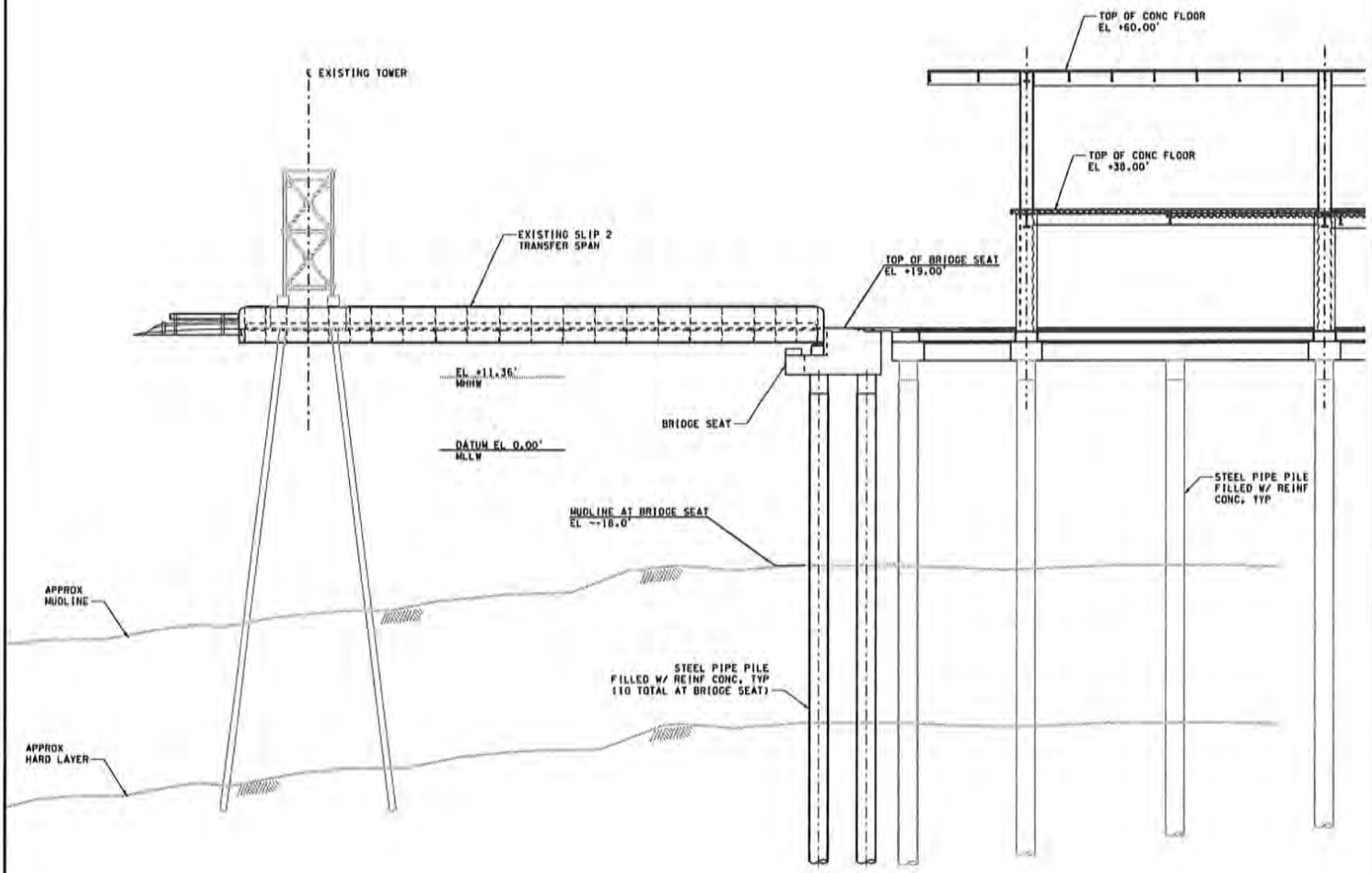
EXISTING TRESTLE REMOVAL

0 10
SCALE 1" = 10'

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	COUNTY: KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	WATER BODY: ELLIOTT BAY, PUGET SOUND
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	
	DATE: MARCH 2016

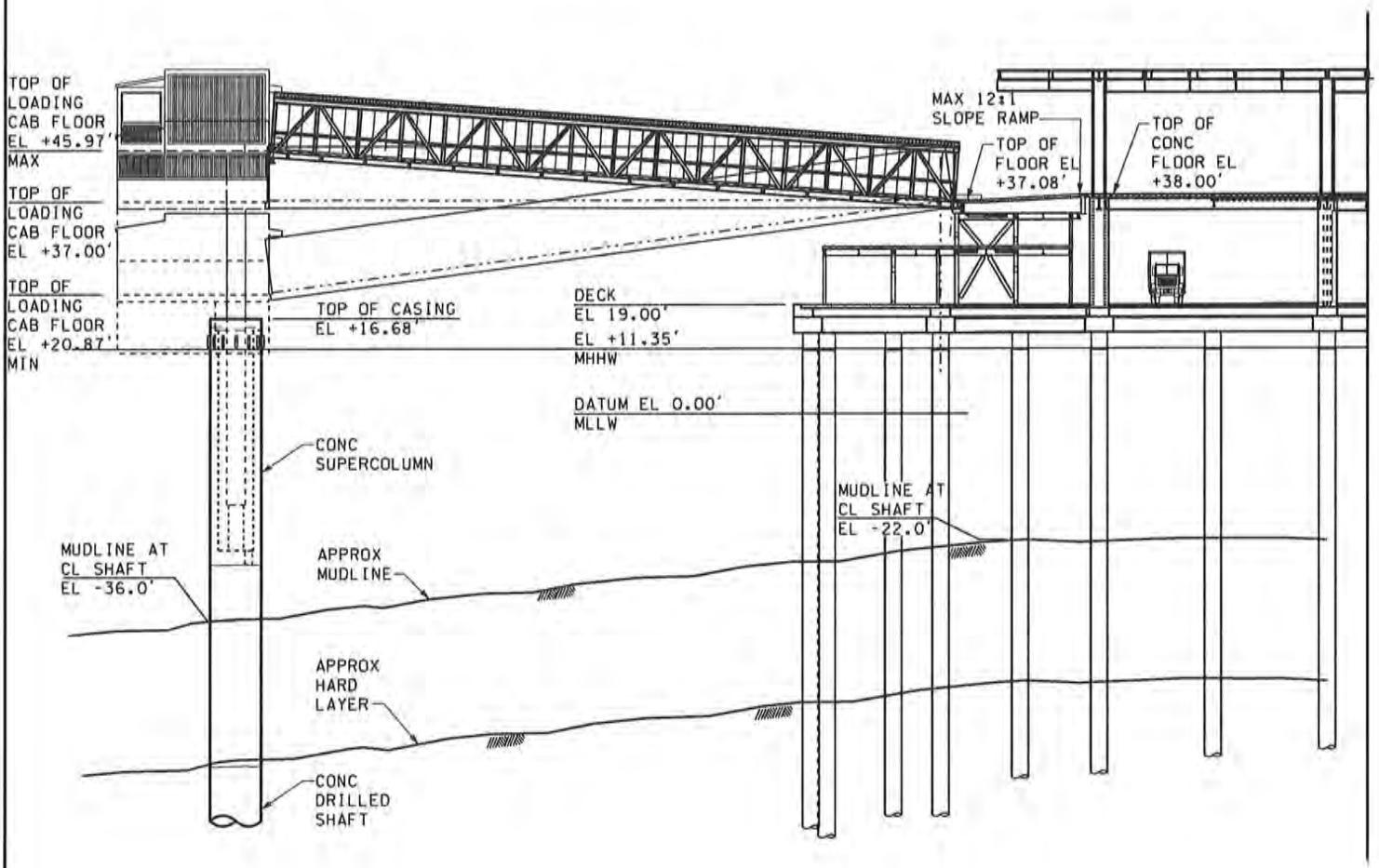
Washington State Department of Transportation

SHEET: 9 OF: 20



SLIP 2 BRIDGE SEAT TYPICAL SECTION

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242	Washington State Department of Transportation
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**APPLICANT:** WSDOT/FERRIES DIVISION (WSF)	
DATUM: MLLW=0.00; MHHW=11.35'	**COUNTY:** KING	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	**NEAR:** CITY OF SEATTLE	
	WATER BODY: ELLIOTT BAY, PUGET SOUND	
	DATE: MARCH 2016	**SHEET:** 10 **OF:** 20

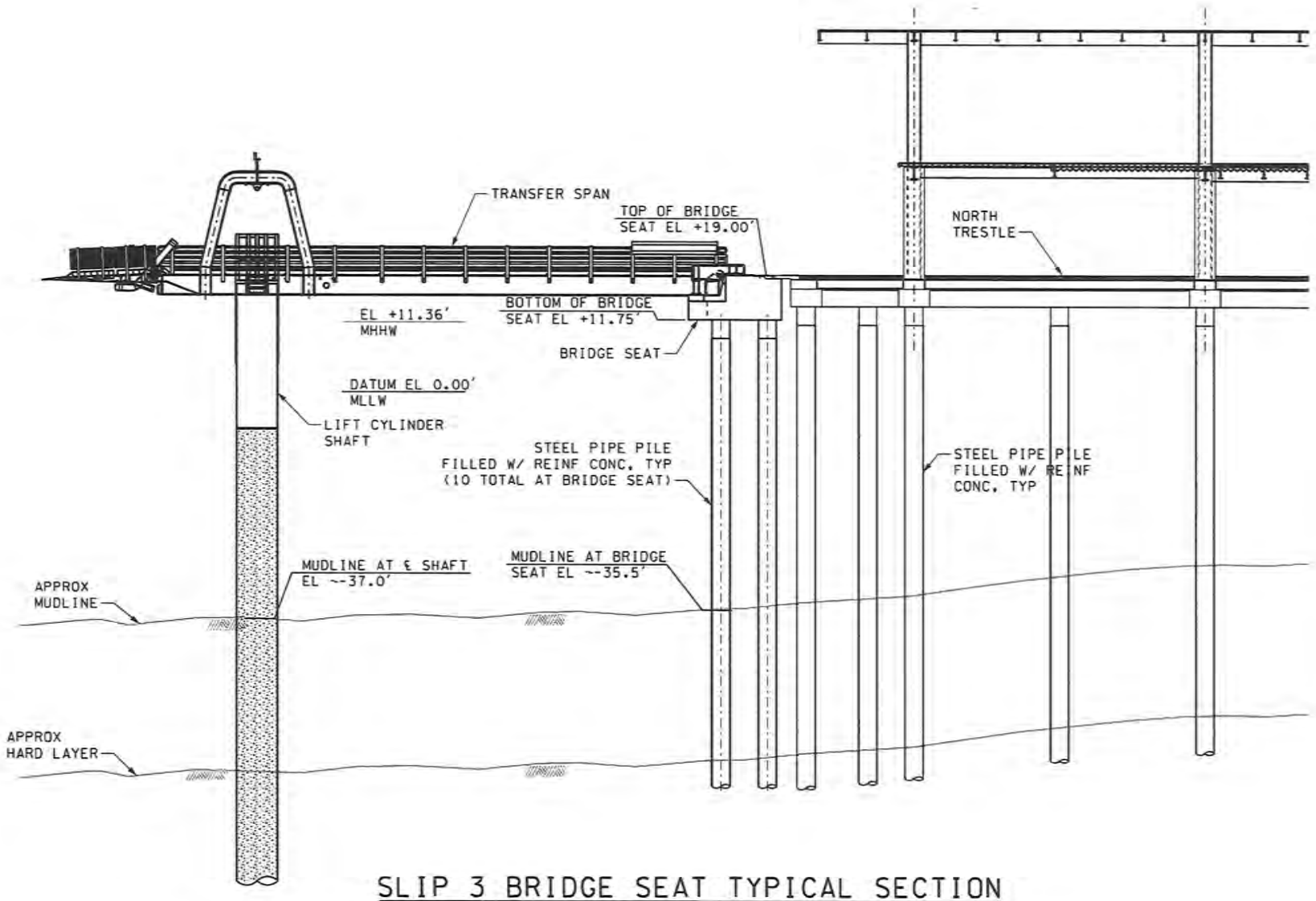


SLIP 3 OVERHEAD LOADING

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	COUNTY: KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	WATER BODY: ELLIOTT BAY, PUGET SOUND
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	
	DATE: MARCH 2016

Washington State Department of Transportation

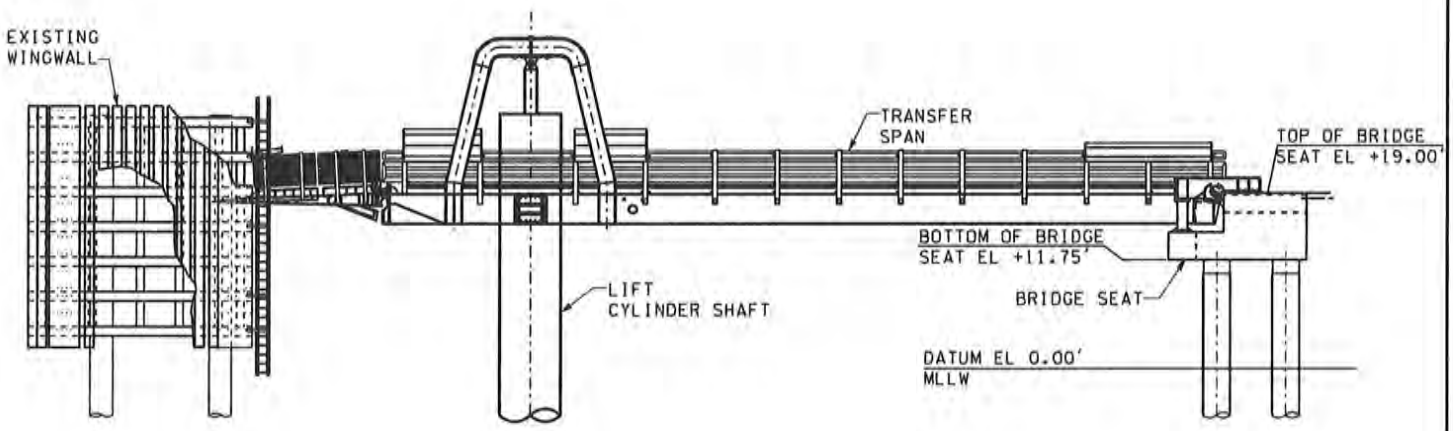
SHEET: 11 OF: 20



SLIP 3 BRIDGE SEAT TYPICAL SECTION

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**COUNTY:** KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	**WATER BODY:** ELLIOTT BAY
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	
	DATE: MARCH 2016

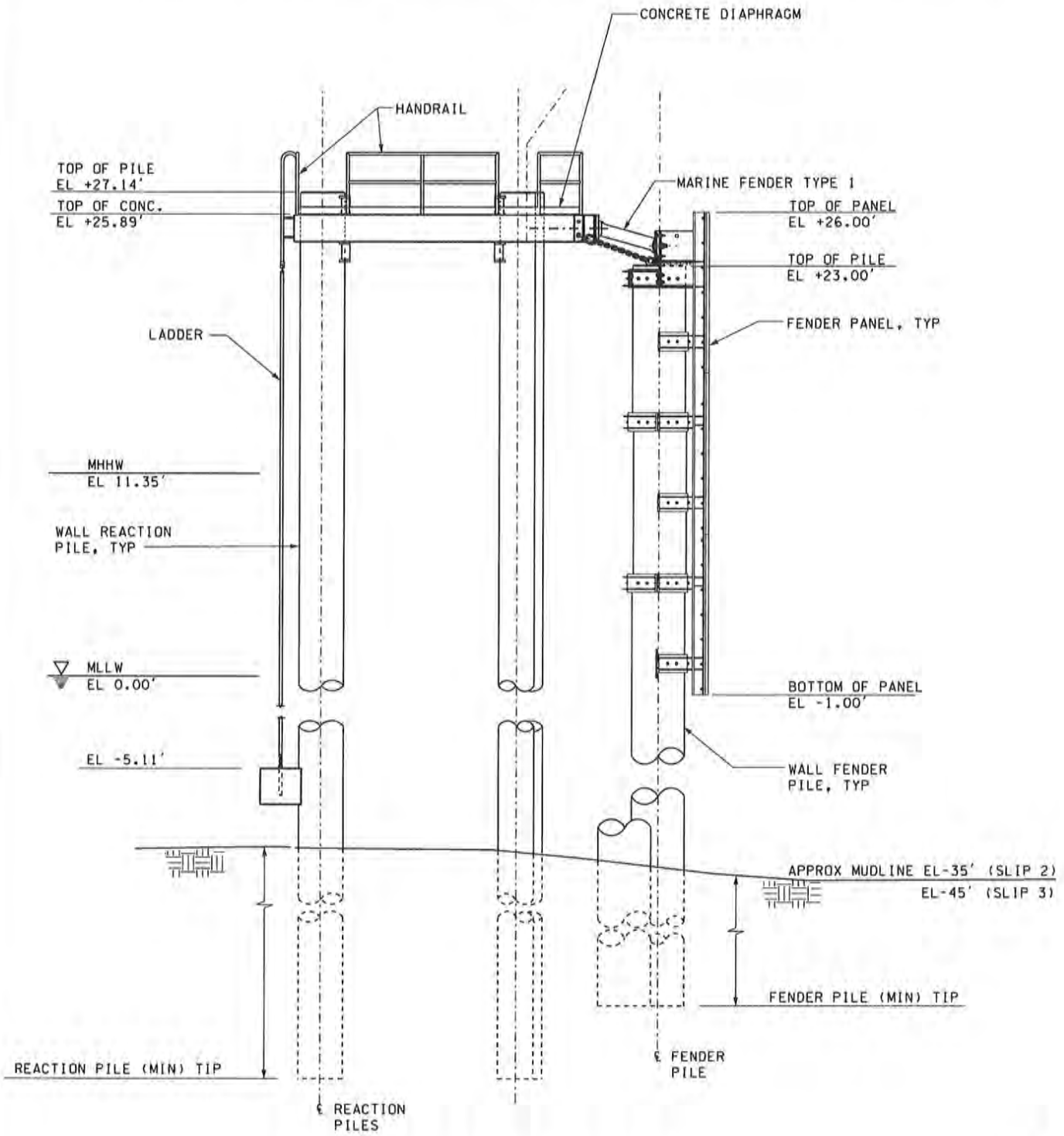
Washington State Department of Transportation



SLIP 3 TRANSFER SPAN ELEVATION

0 10 20
SCALE 1" = 20'

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242	
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)	
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**COUNTY:** KING	
	NEAR: CITY OF SEATTLE	
DATUM: MLLW=0.00; MHHW=11.35'	**WATER BODY:** ELLIOTT BAY, PUGET SOUND	**Washington State Department of Transportation**
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF		
	DATE: MARCH 2016	**SHEET:** 13 **OF:** 20



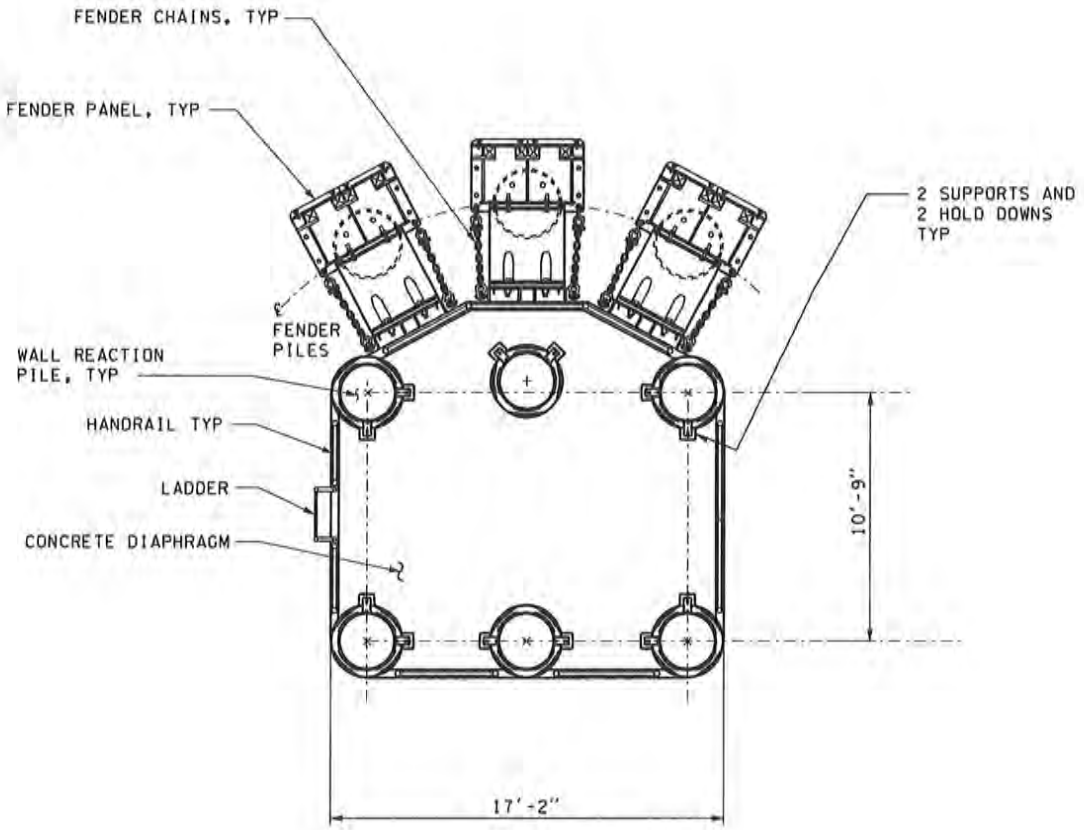
DOLPHIN - SIDE ELEVATION

0 1 5

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**COUNTY:** KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	**WATER BODY:** ELLIOTT BAY, PUGET SOUND
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	
	DATE: MARCH 2016

Washington State Department of Transportation

SHEET: 14 **OF:** 20



DOLPHIN - PLAN VIEW

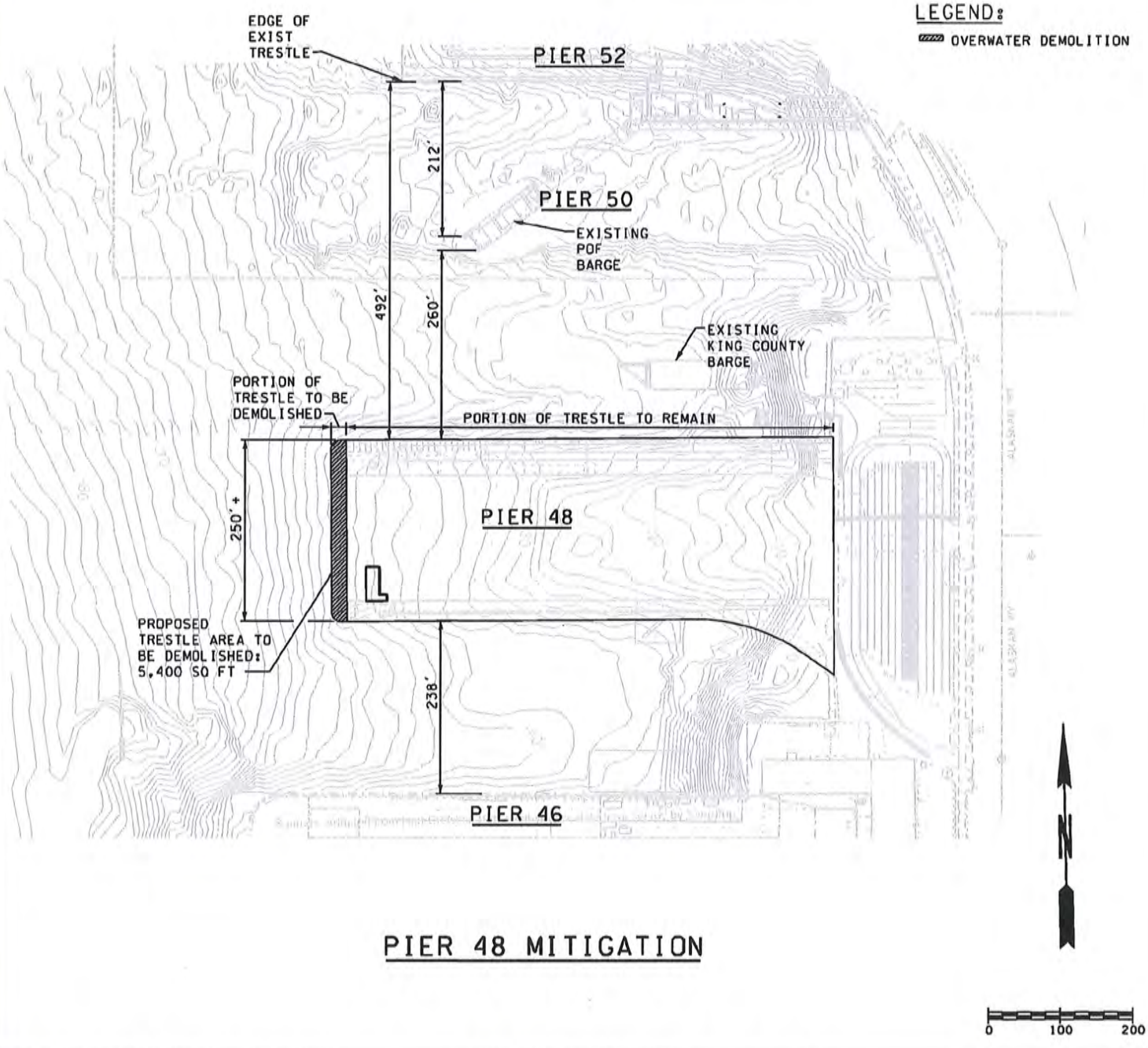
0 5

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242	Washington State Department of Transportation
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**APPLICANT:** WSDOT/FERRIES DIVISION (WSF)	
DATUM: MLLW=0.00; MHHW=11.35'	**COUNTY:** KING	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	**NEAR:** CITY OF SEATTLE	
	WATER BODY: ELLIOTT BAY, PUGET SOUND	
	DATE: MARCH 2016	**SHEET:** 15 **OF:** 20

SE SEC. 31, T.25 N. R.4 E. W.M.

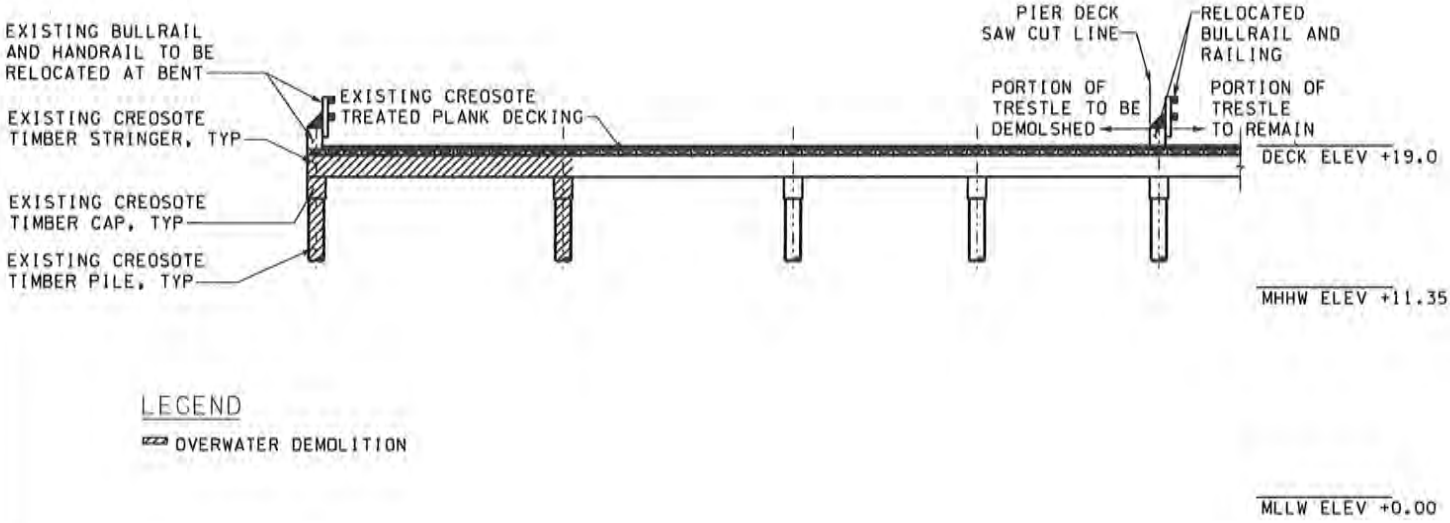
MOORING BUOY LOCATIONS

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242	Washington State Department of Transportation
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**APPLICANT:** WSDOT/FERRIES DIVISION (WSF)	
DATUM: MLLW=0.00; MHHW=11.35'	**COUNTY:** KING	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	**NEAR:** CITY OF SEATTLE	
	WATER BODY: ELLIOTT BAY	
	DATE: MARCH 2016	**SHEET:** 16 **OF:** 20



PIER 48 MITIGATION

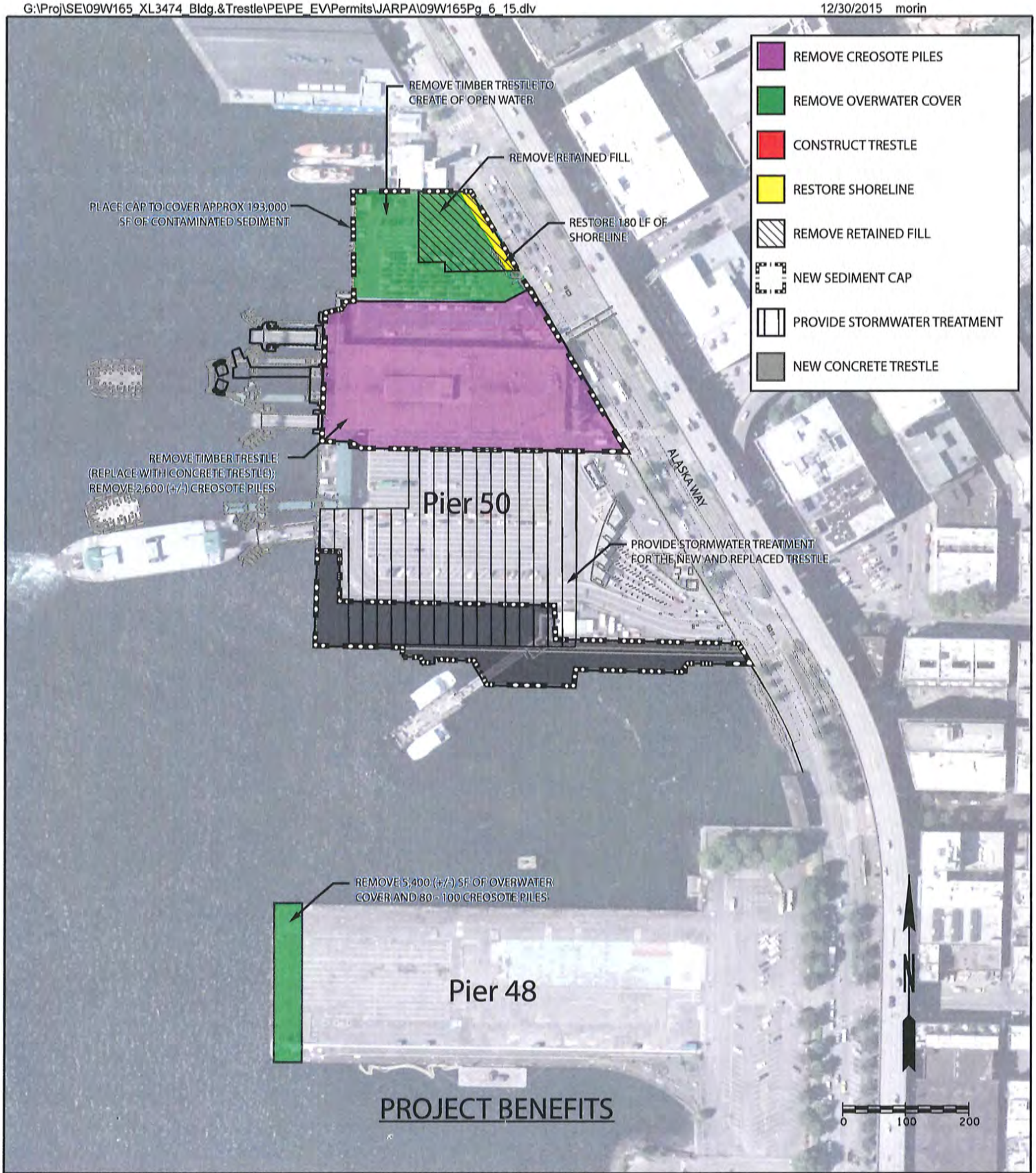
PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242	Washington State Department of Transportation
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)	
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	COUNTY: KING	
	NEAR: CITY OF SEATTLE	
DATUM: MLLW=0.00; MHHW=11.35'	WATER BODY: ELLIOTT BAY	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF		
	DATE: MARCH 2016	SHEET: 17 OF: 20



PIER 48 MITIGATION ELEVATION

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242	Washington State Department of Transportation
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**APPLICANT:** WSDOT/FERRIES DIVISION (WSF)	
DATUM: MLLW=0.00; MHHW=11.35'	**COUNTY:** KING	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	**NEAR:** CITY OF SEATTLE	
	WATER BODY: ELLIOTT BAY, PUGET SOUND	
	DATE: MARCH 2016	**SHEET:** 18 **OF:** 20

G:\Proj\SE\09W165_XL3474_Bldg.&Trestle\PE\PE_EV\Permits\JARPA\09W165Pg_6_15.dlv 12/30/2015 morin



PROJECT BENEFITS

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	**REFERENCE:** NWS-2011-242
	APPLICANT: WSDOT/FERRIES DIVISION (WSF)
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	**COUNTY:** KING
	NEAR: CITY OF SEATTLE
DATUM: MLLW=0.00; MHHW=11.35'	**WATER BODY:** ELLIOTT BAY, PUGET SOUND
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	
	DATE: MARCH 2016

Washington State Department of Transportation

SHEET: 19 **OF:** 20

Summary of Construction Elements and Number of Installed Piles

Construction Element	Pile Description	Number of Piles[1]	Pile Diameter (inches)
North Trestle	Temporary	159	24
	Permanent	2	18
		391[2]	36
South Trestle	Temporary	60	24
	Permanent	8	30
		127[2]	36
POF	Temporary	2	30
		5	36
	Permanent	2	30
		5	36
Slips 2/3	Temporary	10	24
	Permanent	10	30
		6	36
Slip 3	Temporary	4	24
	Permanent	20	36
		2	84
		1	108
Total	**Temporary**	**240**	~
	Permanent	**574**	

[1]In addition, 10 24-inch diameter temporary fender piles will be installed along the south apron on Pier 48. Piles will provide moorage and will remain in place for the duration of the project.

[2]Includes permanent contingency piles.

PURPOSE: SEATTLE MULTIMODAL TERMINAL AT COLMAN DOCK PROJECT	REFERENCE: NWS-2011-242	Washington State Department of Transportation
LOCATION: SEATTLE FERRY TERMINAL AT COLMAN DOCK	APPLICANT: WSDOT/FERRIES DIVISION (WSF)	
DATUM: MLLW=0.00; MHHW=11.35'	COUNTY: KING	
ADJACENT PROPERTY OWNERS: CITY OF SEATTLE AND WSF	NEAR: CITY OF SEATTLE	
	WATER BODY: ELLIOTT BAY	
	DATE: MARCH 2016	SHEET: 20 OF: 20