



US Army Corps
of Engineers
Seattle District



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
Post Office Box 3755
Seattle, WA 98124-3755
Telephone: (206) 764-6901
ATTN: Jacalen Printz,
Project Manager

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

Public Notice Date: March 2, 2017
Expiration Date: March 31, 2017

Reference No.: NWS-2015-807-WRD
**Name: 24th Avenue Northwest Pier
and Outfall Replacement**

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 September 6, 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: Seattle Public Utilities (SPU)
Attention: Mr. Richard Fernandez
P.O. Box 34018
Seattle, Washington 98124-4018
Telephone: (206) 684-0285

AGENT: Environmental Science Associates
Attention: Ms. Karmen Martin
5309 Shilshole Avenue Northwest, Suite 200
Seattle, Washington 98107
Telephone: (206) 789-9658

LOCATION: In the Lake Washington Ship Canal (LWSC), at Seattle, Washington.

WORK: Replace two existing Combined Sewer Outlet (CSO) pipes with one pipe, replace the existing 24th Avenue pier with a smaller grated pier, and construct a temporary pier around the existing to load and off-load materials necessary to support the tunnel construction for the Ship Canal Water Quality Project. The Ship Canal Water Quality Project is an upland project (out of Corps jurisdiction) to convey the excess stormwater flows to a large underground storage tunnel, which will store the flows until they can be conveyed to the wastewater treatment plant.

NWS-2015-807, Seattle Public Utilities (24th Avenue Pier)

The work includes removing the existing 270-foot long by 18-foot wide pier, its associated 84 wood piles, and replacing it with a permanent, grated 255-foot long by 18-foot wide pier, supported by twenty eight 24-inch steel piles. Installation of a temporary pier, supported by fifty 24-inch steel piles and constructed along the eastside and end of the pier, creating a T-shape. In addition, fourteen 18-inch steel pile barge moorage dolphins will be installed. The temporary pier and dolphins will remain in place for approximately 2.5 years during the time of the Ship Canal Water Quality Project construction. The purpose of the temporary pier is to facilitate the loading and unloading of materials necessary for the construction of the Ship Canal Water Quality Project. Tunnel spoils will be loaded onto moored barges at the end of the pier and barged to an upland location to be disposed.

For the CSOs, the existing CSO #151, an 18-inch wood pipe, and CSO #150, a 30-inch HDPE pipe, will be replaced with one 48-inch HDPE pipe. CSO #150 will be decommissioned and removed, requiring excavation of up to 13-cubic yards of material to expose 23-feet of buried pipe, the remainder of the pipe is supported above the mudline via two saddles and associated 8-inch concrete piles, which will also be removed. Up to 17-cubic yards of clean habitat mix material will be placed to cap the excavated areas. CSO #151 will be cut off and plugged at an upland location and will be left in place. The new 48-inch CSO will be installed underneath and attached to the new pier. Up to 59 cubic yards of material will have to be excavated to install the new pipe. After installing the new pipe, up to 26-cubic yards of clean material will be placed to cap the nearshore portion of the pipe.

PURPOSE: The purpose of the pier and temporary pier is to support the Project tunnel construction via loading and unloading of materials. The overall purpose is to reduce the amount of combined sewage discharges into the LWSC.

MITIGATION: To mitigate for the permanent and temporary impacts to the aquatic resource the applicant has proposed to install native shoreline plantings, removal of on-site underwater debris and to monitor the debris removal area via dive surveys. The mitigation plan has not been finalized.

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 U.S. Army Corps of Engineers has evaluated the potential impacts to proposed and/or listed species and their designated critical habitat and is currently in consultation with the NMFS and USFWS.

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.

CULTURAL RESOURCES: The Corps has reviewed the latest published version of the National Register of Historic Places, Washington Information System for Architectural and Archaeological Records Data and other sources of information. The Corps invites responses to this public notice from Native American Tribes or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns regarding historic properties and sites of religious and cultural significance at or near the project area. After receipt of comments from this public notice, the Corps will evaluate potential impacts and consult with the State Historic Preservation Officer and Native American Tribes in accordance with Section 106 of the National Historic Preservation Act, as appropriate.

There are no recorded historic properties within the permit area. The permit area was created in modern times and there is little likelihood that the proposed project will impinge on any historic property.

NWS-2015-807, Seattle Public Utilities (24th Avenue Pier)

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 United States.

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.

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 Jacalen.M.Printz@usace.army.mil. Conventional mail comments should be sent to: U.S. Army Corps of Engineers, Regulatory Branch, Attention: Jacalen Printz, 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.

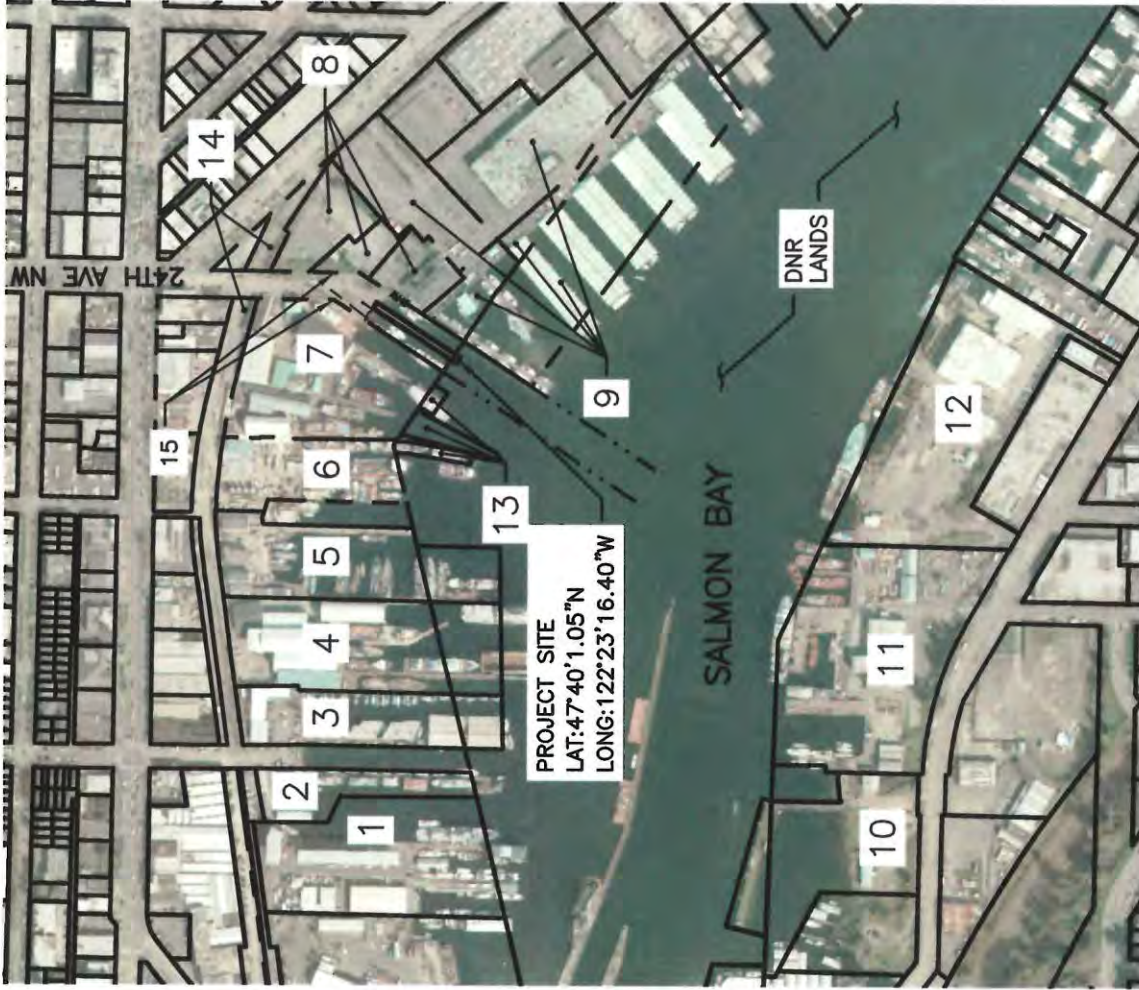
ECOLOGY COMMENTS: Any person desiring to present views on the project pertaining to a request for water quality certification under Section 401 of the CWA and/or Coastal Zone Management consistency concurrence, may do so by submitting written comments to the following address: Washington State Department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

NWS-2015-807, Seattle Public Utilities (24th Avenue Pier)

Attention: Federal Permit Coordinator, Post Office 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: [Seattle Public Utilities; NWS-2015-807-WRD]

Encl: Figures (23)



NOTE:
 1. IMAGE SOURCE: GOOGLE EARTH
 2. PARCEL SOURCE: KING COUNTY GIS

LEGEND

- PROPERTY LINE
- SUBMERGED LAND BOUNDARY LINE
- · — · — OHW
- OHW
- ORDINARY HIGH WATER (OHW)

ADJACENT PROPERTY OWNERS

LABEL ID	PARCEL OWNER	ADDRESS
1	JACOBSON BROTHERS INC	5350 30TH AVE NW SEATTLE, WA 98107
2	SEABORN INC	5355 26TH AVE NW SEATTLE, WA 98107
3	MCGINNIS MARINE	5320 26TH AVE NW SEATTLE, WA 98107
4	STABBERT YACHT & SHIPYARD	2629 NW 54TH ST SEATTLE, WA 98107
5	DDSB LLC	2619 NW 54TH ST SEATTLE, WA 98107
6	BALLARD OIL COMPANY	5300 26TH AVE NW SEATTLE, WA 98107
7	PACIFIC FISHERMAN INC	5300 24TH AVE NW SEATTLE, WA 98107
8	CITY OF SEATTLE -- SPU	5265 SHILSHOLE AVE NW SEATTLE, WA 98107
9	STIMSON CD COMPANY	2750 W COMMODORE WAY SEATTLE, WA 98199
10	GEORGE BROOM'S SONS INC	2700 W COMMODORE WAY SEATTLE, WA 98199
11	PORT OF SEATTLE	2440 W COMMODORE WAY SEATTLE, WA 98199
12	CSR BOAT YARD	SEATTLE, WA 98107
13	DEPT OF NATURAL RESOURCES	SEATTLE, WA 98107
14	CITY OF SEATTLE -- SDOT	SEATTLE, WA 98107
15	CITY OF SEATTLE -- SDOT RIGHT OF WAY	SEATTLE, WA 98107

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

PARCEL PLAN

PROPOSED: A PERMANENT PIER AND TEMPORARY
PIER OUTFALL AND DOLPHINS

IN: SALMON BAY COUNTY: KING
 AT: SEATTLE DATUM: NAVD88

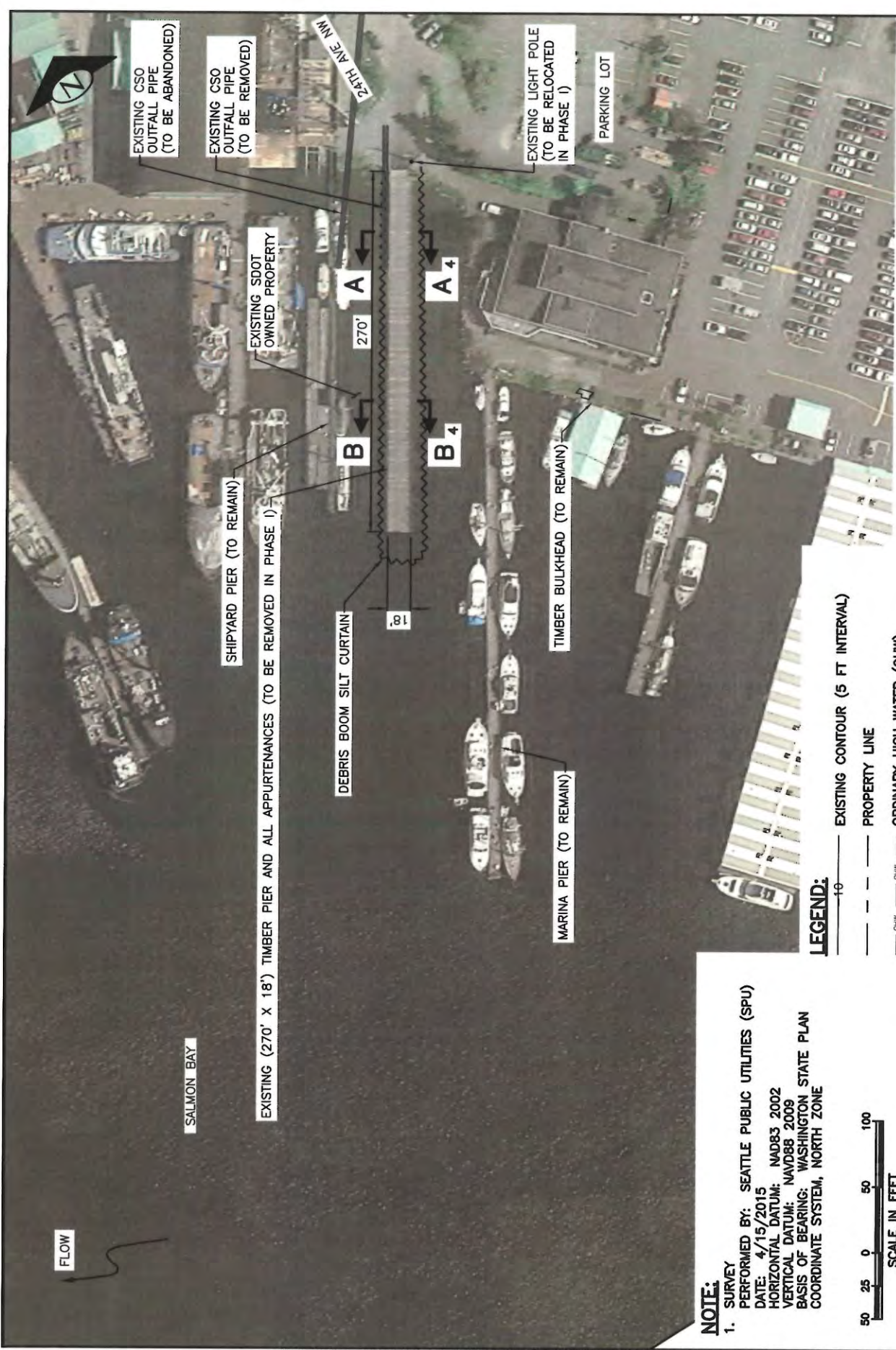
S11 T25N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT
AT THE STREET END OF 24TH AVE
NW.

ADJACENT PROPERTY OWNERS:
 1. DEPT OF NATURAL RESOURCES
 2. PACIFIC FISHERMEN INC
 3. STIMSON C D COMPANY

Seattle Public Utilities
 Protecting Seattle's Waterways

APPLICATION BY: SEATTLE PUBLIC UTILITIES



5/27/2016 SHEET 3 OF 23

24TH AVE NW PIER AND OUTFALL REPLACEMENT

EXISTING SITE PLAN

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN:	SALMON BAY	COUNTY:	KING
ATL:	SEATTLE	DATUM:	NAVD88

S11 T25N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

ADJACENT PROPERTY OWNERS:

1. DEPT OF NATURAL RESOURCES
2. PACIFIC FISHERMEN INC
3. STIMSON C D COMPANY

COAST & HARBOR ENGINEERING
A Division of Hatch Mott MacDonald
 110 JAMES ST, STE 101 EDMONDS, WA 98020
 PH 425-778-2542 • FAX 425-778-8883

APPLICATION BY: SEATTLE PUBLIC UTILITIES

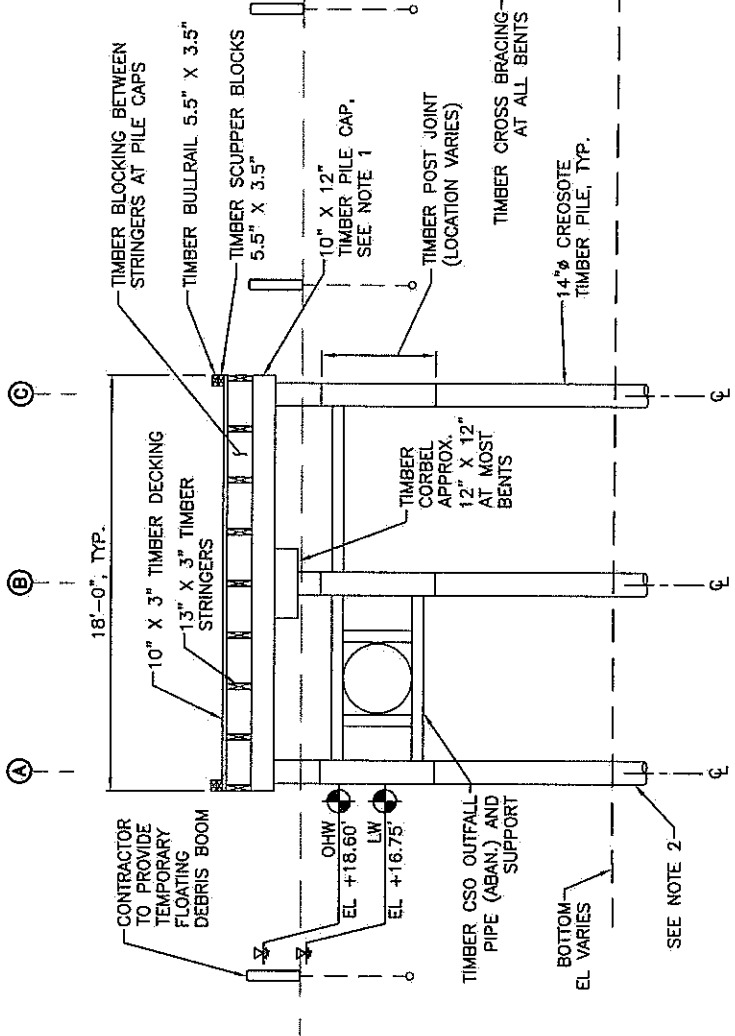
NOTE:

1. SURVEY PERFORMED BY: SEATTLE PUBLIC UTILITIES (SPU)
 DATE: 4/15/2015
 HORIZONTAL DATUM: NAD83 2002
 VERTICAL DATUM: NAVD88 2009
 BASIS OF BEARING: WASHINGTON STATE PLAN COORDINATE SYSTEM, NORTH ZONE

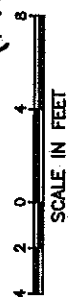


LEGEND:

- +— EXISTING CONTOUR (5 FT INTERVAL)
- - - PROPERTY LINE
- OHW — ORDINARY HIGH WATER (OHW)

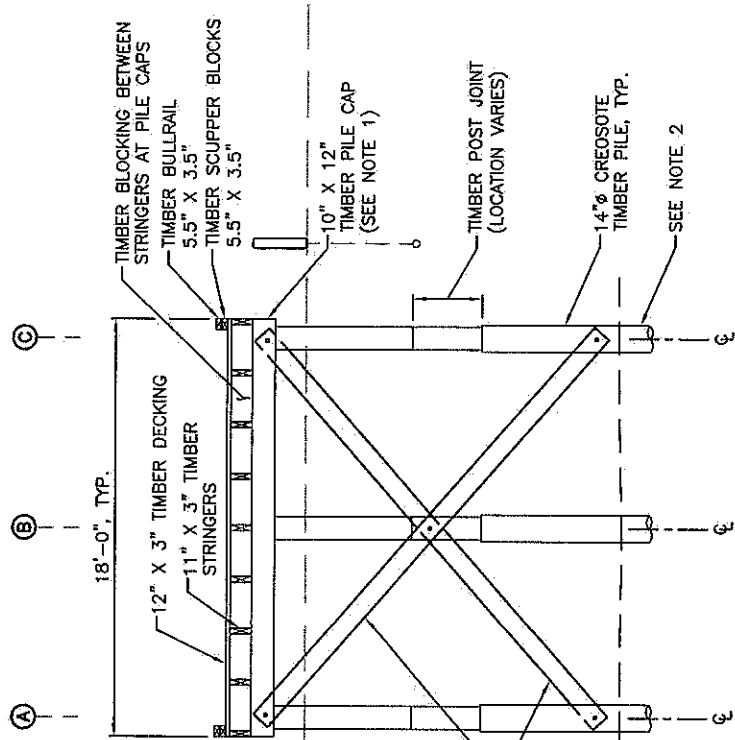


SECTION A-A
TYPICAL DEMOLITION SECTIONS
(PHASE 1)



NOTES:

1. BENT SPACING 10'±, TYPICAL (28 TOTAL).
2. PILES THAT CANNOT BE FULLY REMOVED SHALL BE CUTOFF MIN 2' BELOW THE MUDLINE.
3. VERTICAL DATUM: NAVD88 2009
4. ALL COMPONENTS WITHIN SECTIONS SHOWN TO BE DEMOLISHED.



SECTION B-B
TYPICAL DEMOLITION SECTIONS
(PHASE 1)



COAST & HARBOR
ENGINEERING
 A Division of Hatch Mott MacDonald
 110 JAMES ST. STE 101 ENKENS, WA 98020
 PH 425-778-2542 • FAX 425-778-8883

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

ADJACENT PROPERTY OWNERS:

1. DEPT OF NATURAL RESOURCES
2. PACIFIC FISHERMEN INC
3. STIMSON C D COMPANY

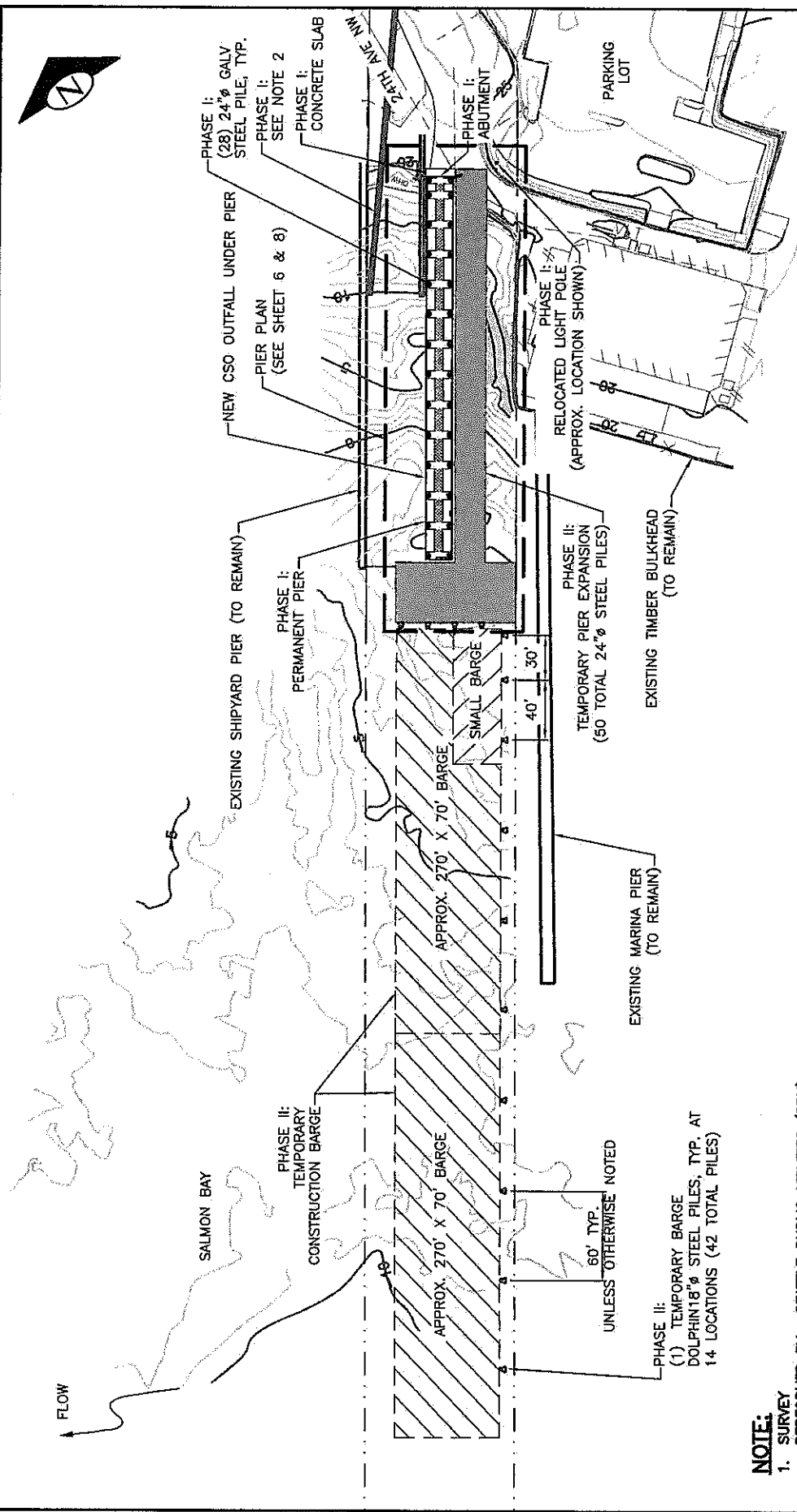
PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

INL: SALMON BAY **COUNTY:** KING

ALT: SEATTLE **DATUM:** NAVD88

24TH AVE NW PIER AND OUTFALL REPLACEMENT

DEMOLITION SECTIONS



PHASING
 PHASE I WORK SHALL CONSIST OF THE DEMOLITION OF THE EXISTING PIER AND CONSTRUCTION OF THE PERMANENT PIER AND OUTFALL. PHASE II WORK CONSISTS OF THE TEMPORARY PIER EXPANSION AND DOLPHINS CONSTRUCTED FOR THE TUNNEL PROJECT.

- LEGEND:**
- TEMPORARY BARGE DOLPHINS
 - TEMPORARY PIER
 - EXISTING CONTOURS (1 FT INTERVAL)
 - PROPERTY LINE
 - SUBMERGED LAND BOUNDARY LINE
 - ORDINARY HIGH WATER (OHW)

NOTE:

- SURVEY PERFORMED BY: SEATTLE PUBLIC UTILITIES (SPU)
 DATE: 4/15/2015
 HORIZONTAL DATUM: NAD83 2002
 VERTICAL DATUM: NAVD88 2008
 BASIS OF BEARING: WASHINGTON STATE PLAN COORDINATE SYSTEM, NORTH ZONE
 EXISTING OUTFALLS (SPU 150 & 151) TO BE REMOVED FROM SERVICE AND REPLACED WITH A SINGLE OUTFALL UNDER PIER.



5/27/2016 SHEET 5 OF 23

24TH AVE NW PIER AND OUTFALL REPLACEMENT
PROPOSED OVERALL SITE PLAN

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

INL: SALMON BAY COUNTY: KING
 A.L: SEATTLE DATUM: NAVD88

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

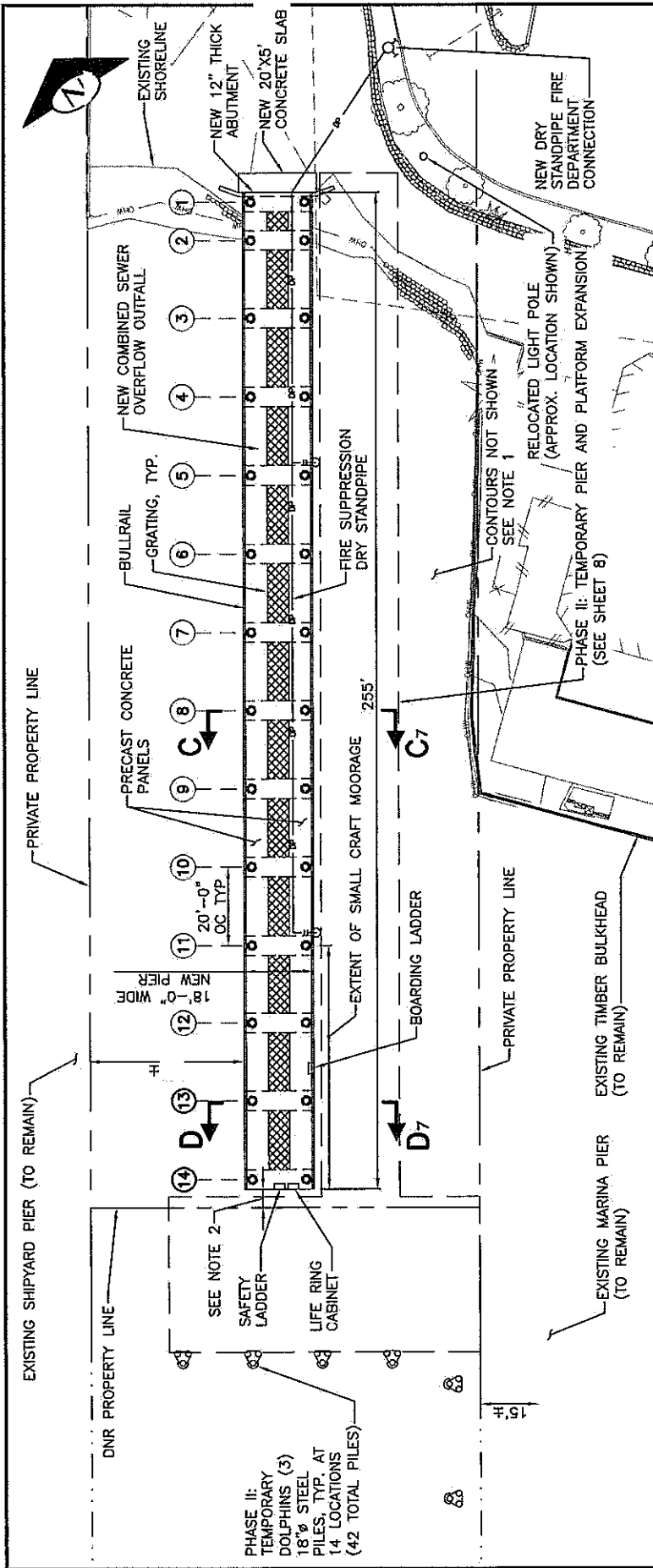
ADJACENT PROPERTY OWNERS:

- DEPT OF NATURAL RESOURCES
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- STIMSON C D COMPANY

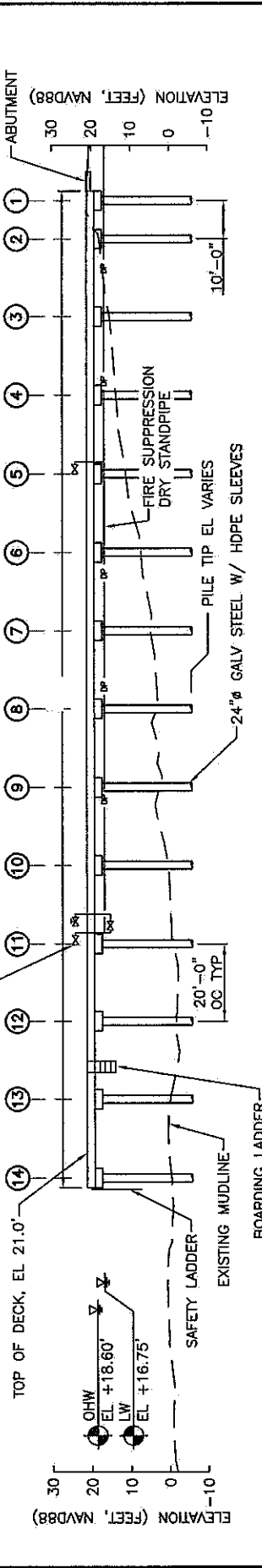
COAST & HARBOR ENGINEERING
 A Division of Hatch Mott MacDonald
 110 JAMES ST, STE 101, EMERYVILLE, WA 98020
 PH 425-778-2546 • FAX 425-778-8883

APPLICATION BY: SEATTLE PUBLIC UTILITIES

SH 125N R03E



PERMANENT PIER PLAN



PERMANENT PIER PROFILE

- NOTES:**
1. IN WATER CONTOURS ARE NOT SHOWN FOR CLARITY, SEE SHEET 5.
 2. 4.6' FROM PERMANENT PIER TO DNR LINE.



5/27/2016 SHEET 6 OF 23

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

PHASE I PIER PLAN

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS.

INL: SALMON BAY **COUNTY:** KING

ATL: SEATTLE **DATUM:** NAVD88

S11 125N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

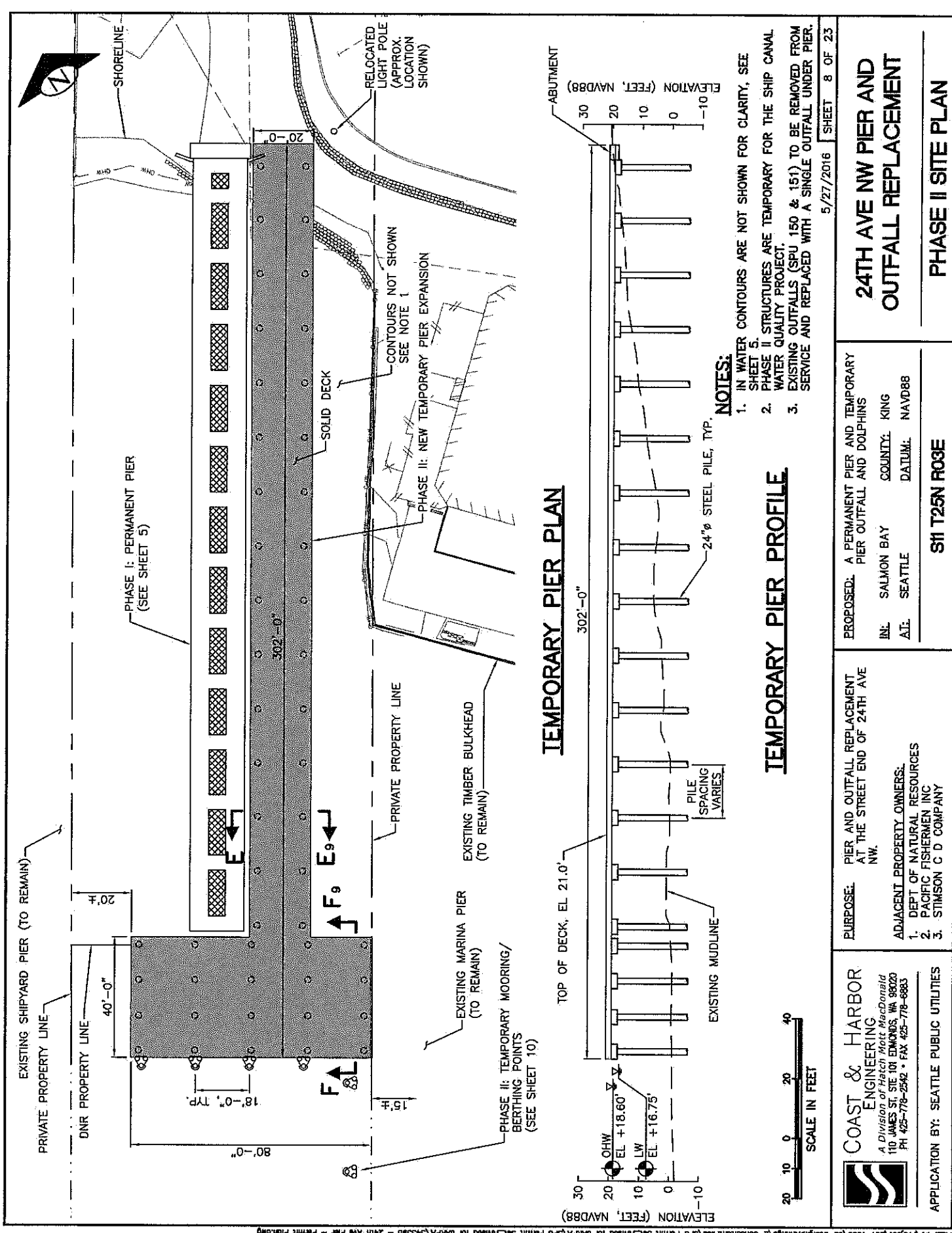
ADJACENT PROPERTY OWNERS:

1. DEPT OF NATURAL RESOURCES
2. PACIFIC FISHERMEN INC
3. STIMSON C D COMPANY

COAST & HARBOR ENGINEERING

4 Division of Hatch Mott MacDonald
110 JAMES ST. STE. 01 EMMAUS, WA 98020
PH 425-778-2542 • FAX 425-778-6883

APPLICATION BY: SEATTLE PUBLIC UTILITIES



5/27/2016 SHEET 8 OF 23

24TH AVE NW PIER AND OUTFALL REPLACEMENT

PHASE II SITE PLAN

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

INL: SALMON BAY **COUNTY:** KING

ATL: SEATTLE **DATUM:** NAVD88

S11 T25N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

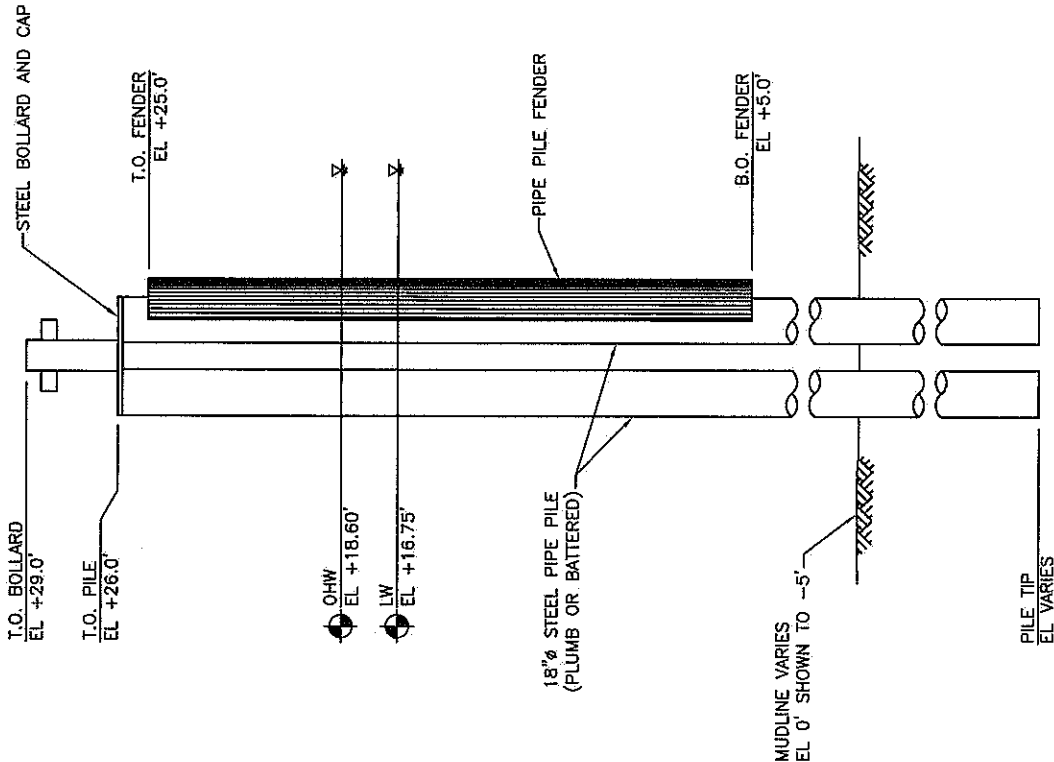
ADJACENT PROPERTY OWNERS:

- DEPT OF NATURAL RESOURCES
- PACIFIC FISHERMEN INC
- STIMSON C D COMPANY

COAST & HARBOR ENGINEERING
A Division of Hatch Mott MacDonald
 110 JAMES ST, STE 101 EDMONDS, WA 98020
 PH 425-778-2592 • FAX 425-778-6883

APPLICATION BY: SEATTLE PUBLIC UTILITIES

File: P:\Project\201-1059\05-Design\Drawings\Consultant\SPU Permit Set\revd for WSP\SPU Permit Set\revd for WSP\343395 - 24th Ave Pier - Permit Planning



TYPICAL DOLPHIN ELEVATION

NOT TO SCALE

- NOTES:**
1. VERTICAL DATUM: NAVD88 2009
 2. PHASE II STRUCTURES ARE TEMPORARY FOR THE SHIP CANAL WATER QUALITY PROJECT.

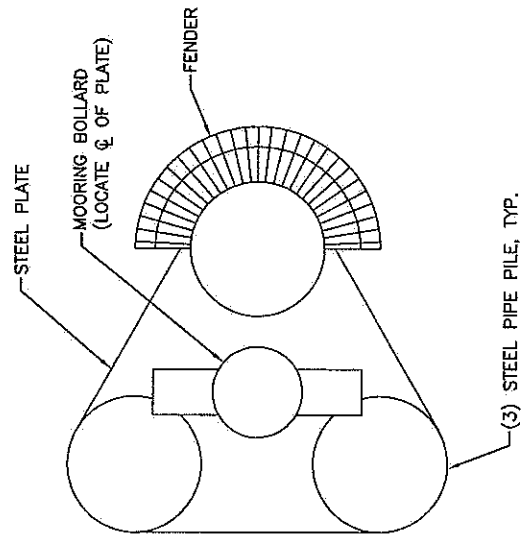
COAST & HARBOR ENGINEERING
A Division of Hatch Mott MacDonald
 110 JAMES ST. STE 101 EDMONDS, WA 98020
 PH 425-778-2542 • FAX 425-778-6883

APPLICATION BY: SEATTLE PUBLIC UTILITIES

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.
ADJACENT PROPERTY OWNERS:
 1. DEPT OF NATURAL RESOURCES
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 3. STIMSON C D COMPANY

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS
IN: SALMON BAY **COUNTY:** KING
ALT: SEATTLE **DATUM:** NAVD88

SH T25N R03E

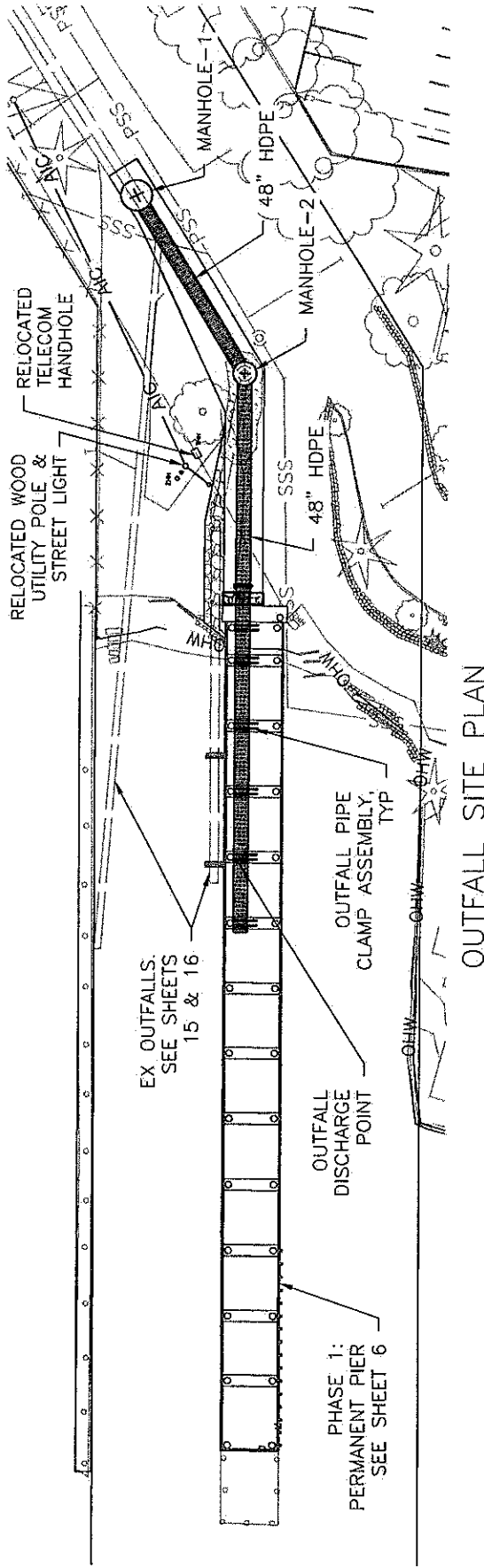
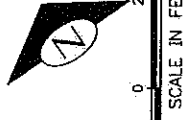


TYPICAL DOLPHIN PLAN

NOT TO SCALE

ABBREVIATIONS:

- AIC AERIAL INTERCONNECT CABLE
- CESCL CERTIFIED EROSION AND SEDIMENT CONTROL LEAD
- CSO COMBINED SEWER OVERFLOW
- DI DUCTILE IRON
- DIA/Ø DIAMETER
- DIP DUCTILE IRON PIPE
- EX/EXST EXISTING
- MH MANHOLE
- OHW ORDINARY HIGH WATER
- PCT/% PERCENT
- REM REMOVE
- REPL REPLACE
- PS PIPE SEWER COMBINED
- PSD PIPE SEWER DRAIN
- PSS PIPE SEWER SANITARY
- SSS SIDE SEWER-SANITARY
- STA STANDARD
- STD STANDARD
- TESC TEMPORARY EROSION AND SEDIMENT CONTROL
- WSP WOOD STAVE PIPE



OUTFALL SITE PLAN

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

OUTFALL SITE PLAN AND ABBREVIATIONS

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN: SALMON BAY **COUNTY:** KING
AT: SEATTLE **DATUM:** NAVD88

S11 T25N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

- ADJACENT PROPERTY OWNERS:**
1. DEPT OF NATURAL RESOURCES
 2. PACIFIC FISHERMEN INC
 3. STIMSON C D COMPANY

15029 Boothell Way, NE
Suite 600
Lake Forest Park, WA 98155

P-206-523-0024
F-206-523-1012
www.dcgengr.com



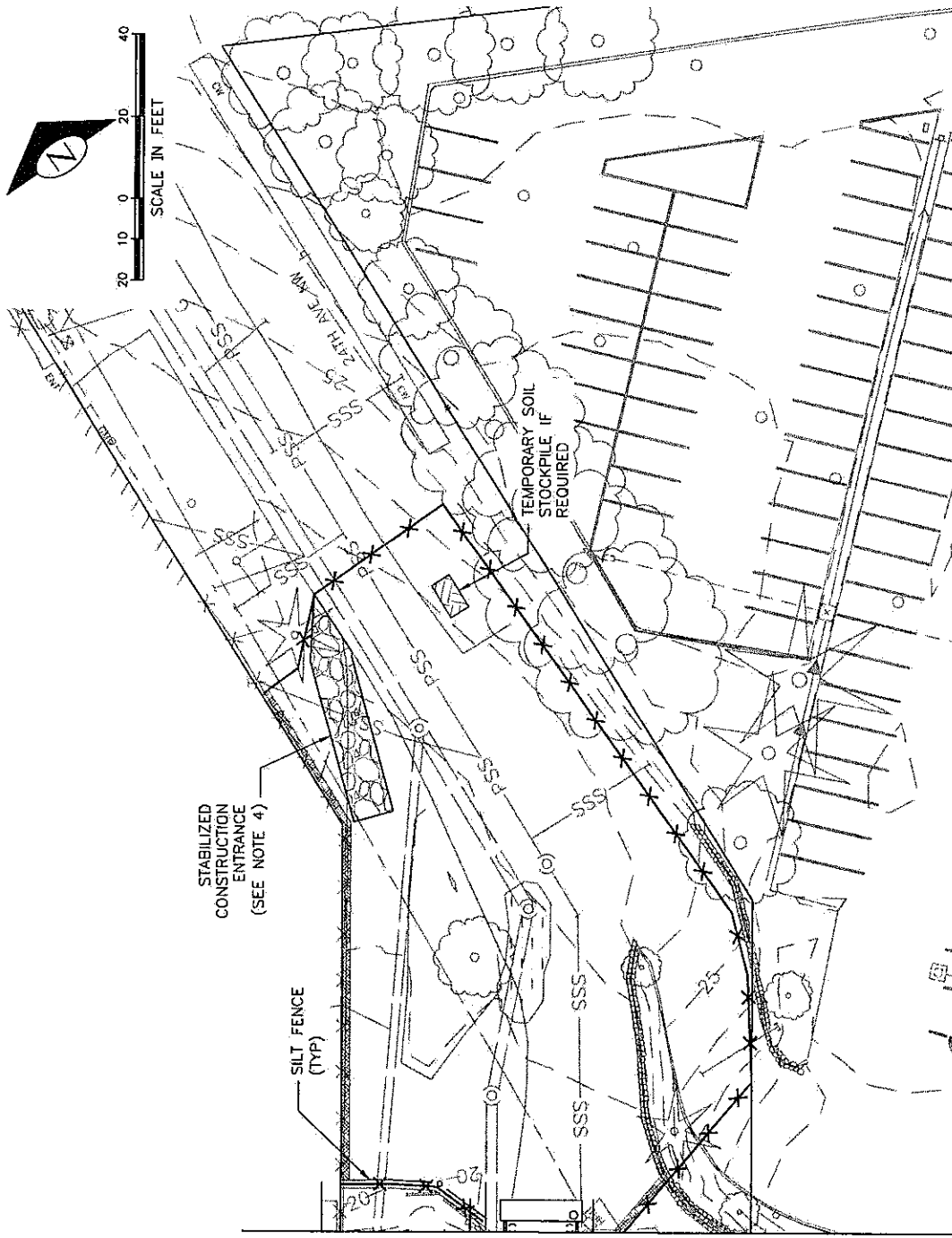
APPLICATION BY: SEATTLE PUBLIC UTILITIES

NOTES:

1. PROTECT EXISTING GRAVEL SURFACES TO EXTENT POSSIBLE.
2. TOTAL DISTURBED AREA 4,133 SQ. FT.
3. CONTRACTOR'S CESCL SHALL MODIFY AND IMPLEMENT TESC BMPS AS NECESSARY THROUGHOUT CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCE SHALL BE 10' WIDE MINIMUM. ALTERNATE LOCATIONS TO BE APPROVED BY ENGINEER.

TESC LEGEND:

- SILT FENCE
- ▨ STRAW WATTLES
- *— CHAIN LINK FENCE
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- ▨ TEMPORARY STOCKPILE



**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

TESC PLAN - UPLAND

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN: SALMON BAY COUNTY: KING
 AT: SEATTLE DATUM: NAVD88

S11 T25N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.




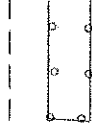
- ADJACENT PROPERTY OWNERS:
1. DEPT OF NATURAL RESOURCES
 2. PACIFIC FISHERMEN INC
 3. STIMSON C D COMPANY

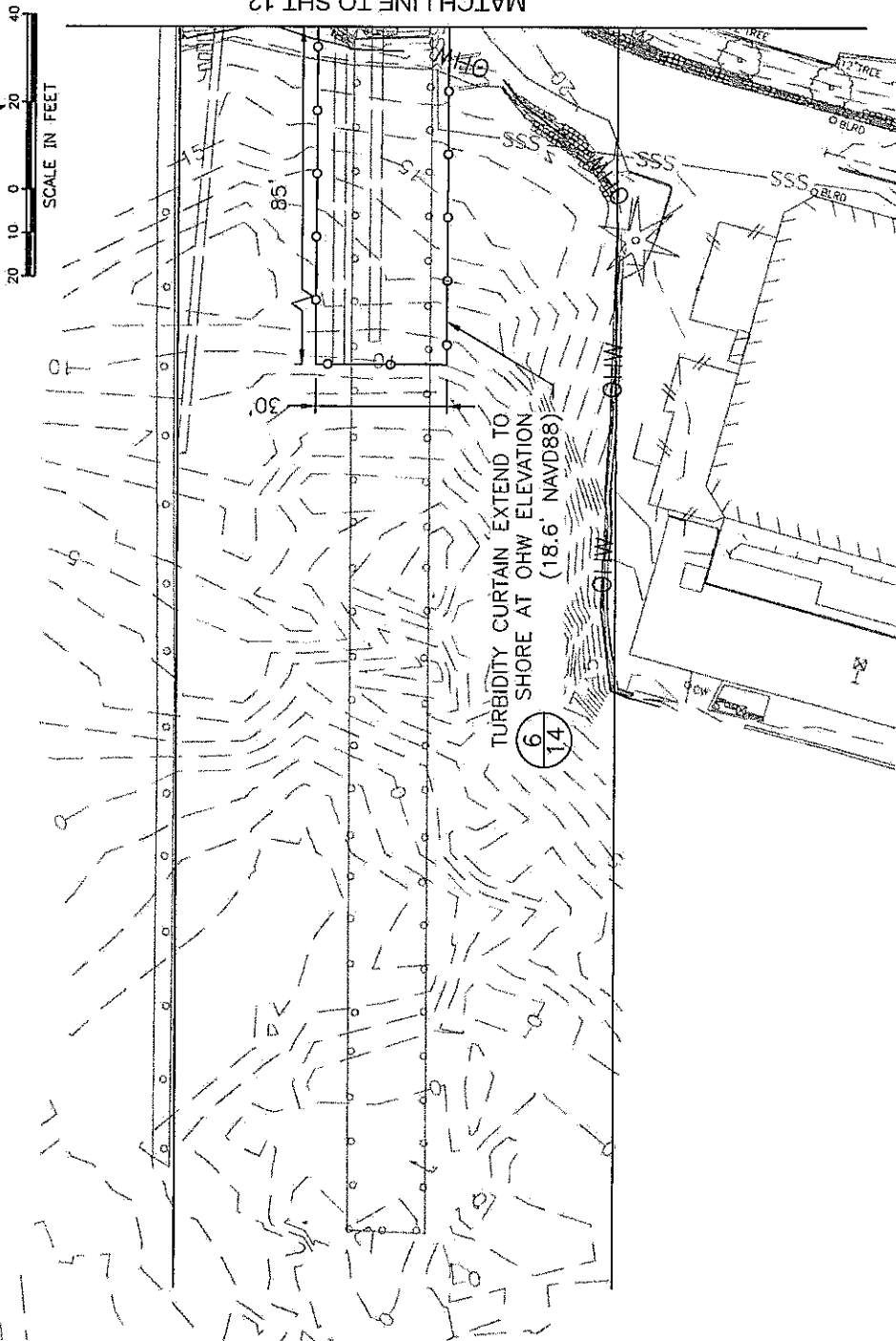
13929 Bolehill Way, NE
 Suite 600
 Lake Forest Park, WA 98155
 P: 206.523.0024
 F: 206.523.1072
 www.dcgengr.com



APPLICATION BY: SEATTLE PUBLIC UTILITIES

TESC LEGEND:

-  TURBIDITY CURTAIN
-  EXISTING MINOR CONTOURS
-  EXISTING MAJOR CONTOURS
-  OUTLINE OF EXISTING PIER STRUCTURE

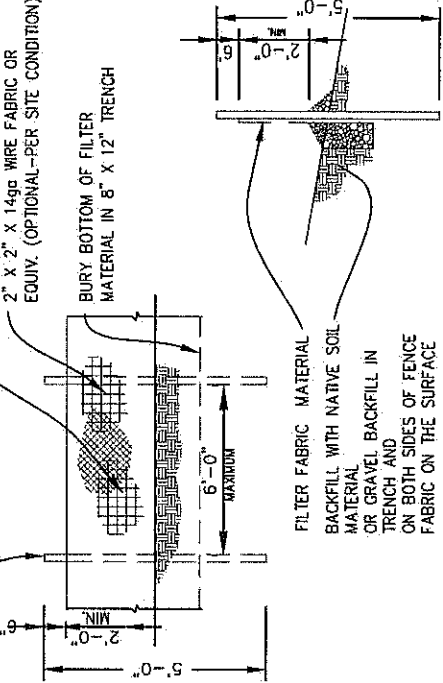


MATCH LINE TO SHT 12

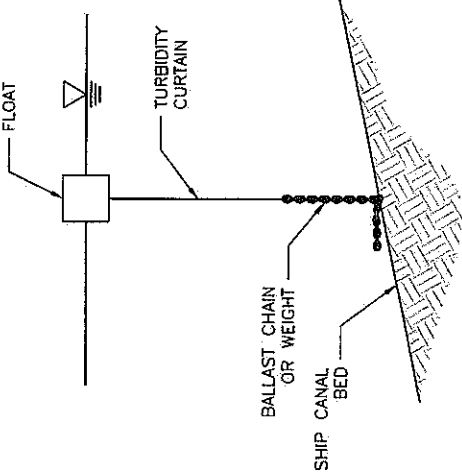
<p>15129 Boothell Way, NE Suite 400 Lake Forest Park, WA 98155 P: 206.523.0024 F: 206.523.1012 www.dcgengr.com</p>	<p>DCG civil structural</p>	<p>APPLICATION BY: SEATTLE PUBLIC UTILITIES</p>	<p>9/6/2016 SHEET 13 OF 23</p>
<p>PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.</p> <p>ADJACENT PROPERTY OWNERS:</p> <ol style="list-style-type: none"> 1. DEPT. OF NATURAL RESOURCES 2. PACIFIC FISHERMEN INC 3. STIMSON C D COMPANY 		<p>PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS</p> <p>LINE: SALMON BAY COUNTY: KING AT: SEATTLE DATUM: NAVD88</p>	
<p>24TH AVE NW PIER AND OUTFALL REPLACEMENT</p>		<p>TESC PLAN - OUTFALL</p>	
<p>S11 T25N R03E</p>		<p>S11 T25N R03E</p>	

FILTER FABRIC MATERIAL 60" WIDE BOLLS. USE STAPLES OR WIRE RINGS TO ATTACH FABRIC TO WIRE MIRAFT 700X OR PRE-APPROVED EQUAL 2" X 2" X 14ga WIRE FABRIC OR EQUIV. (OPTIONAL—PER SITE CONDITION)

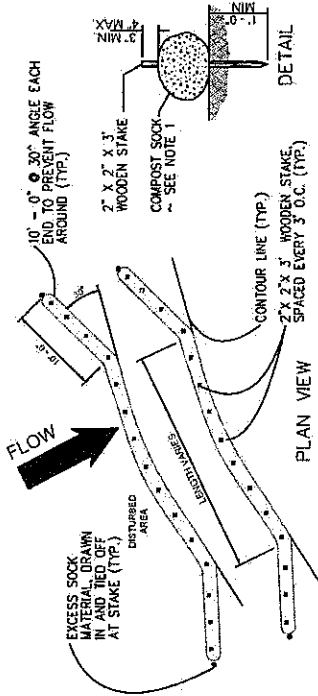
NOTE:
ANGLE SILT FENCE BACK UP THE SLOPE AT THE END OF RUN.



SILT FENCE 1
NTS 12



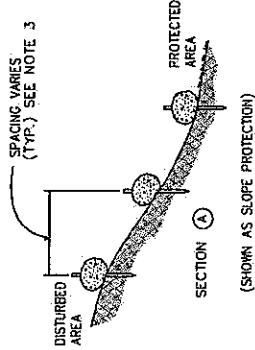
TURBIDITY CURTAIN - DETAIL 6
NTS 13



COMPOST SOCK/STRAW WATTLES 3
NTS 12

WATTLE SPACING TABLE:

SLOPE	MAXIMUM SPACING
1:1	20'-0"
2:1	30'-0"
3:1	40'-0"
4:1	40'-0"



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APPLICATION BY: SEATTLE PUBLIC UTILITIES

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

ADJACENT PROPERTY OWNERS:

1. DEPT OF NATURAL RESOURCES
2. PACIFIC FISHERMEN INC
3. STIMSON C D COMPANY

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS






LINE: SALMON BAY COUNTY: KING
AL: SEATTLE DATUM: NAVD88

9/6/2016 SHEET 14 OF 23

24TH AVE NW PIER AND OUTFALL REPLACEMENT

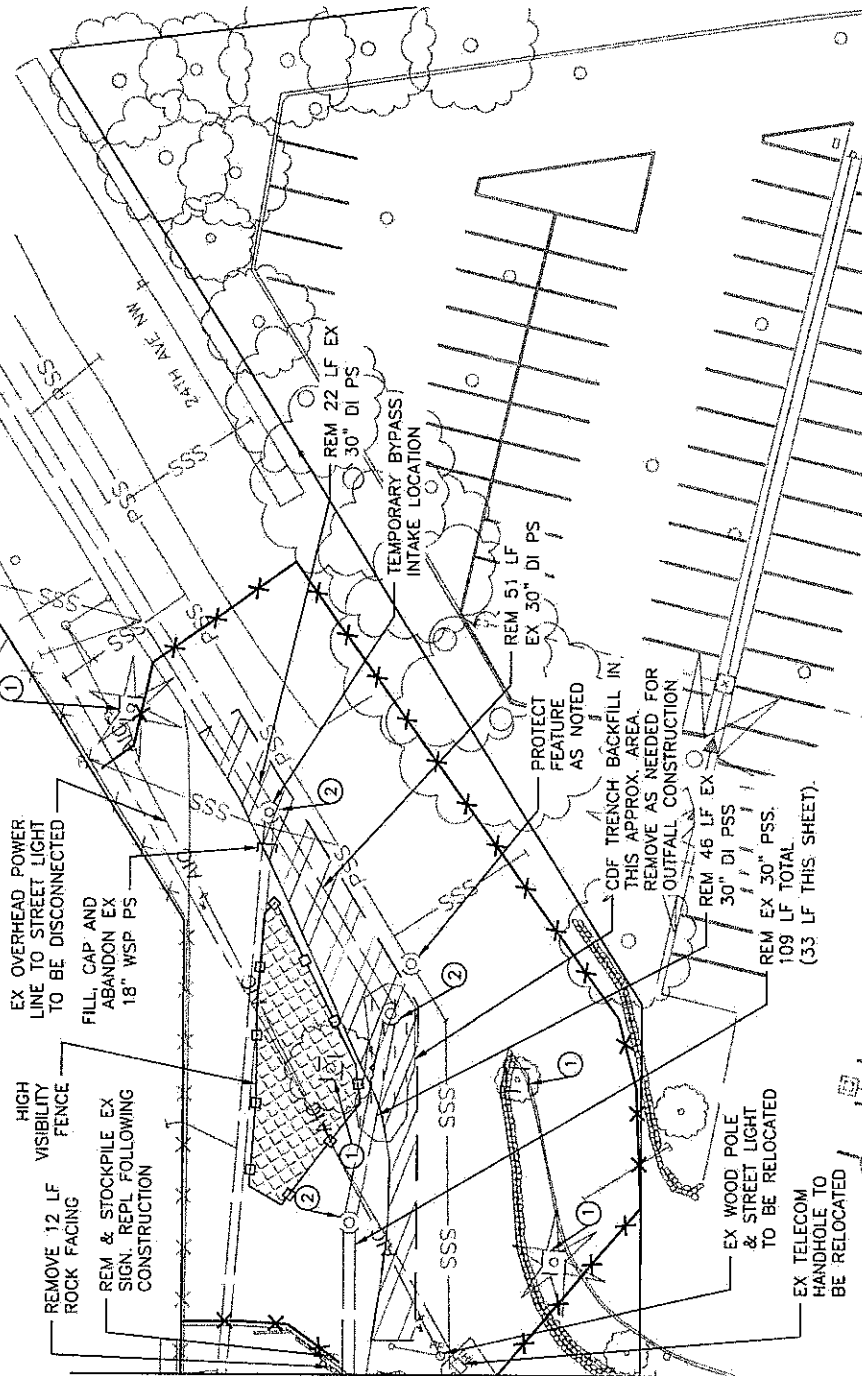
TESC DETAILS

SITE PREPARATION LEGEND:

-  PROTECT AREA
-  REMOVE ASPHALT PAVEMENT
-  TEMPORARY CHAIN LINK FENCE
-  HIGH VISIBILITY FENCE
-  PROTECT TREE

KEYNOTE TABLE

KEY	NOTE
①	PROTECT TREE
②	REMOVE EXISTING MANHOLE



MATCH LINE TO SHT 16

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

OUTFALL DEMOLITION PLAN - UPLAND

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN: SALMON BAY **COUNTY:** KING

AT: SEATTLE **DATUM:** NAVD88

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

ADJACENT PROPERTY OWNERS:

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S11 T25N R03E


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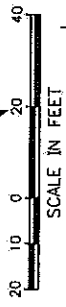
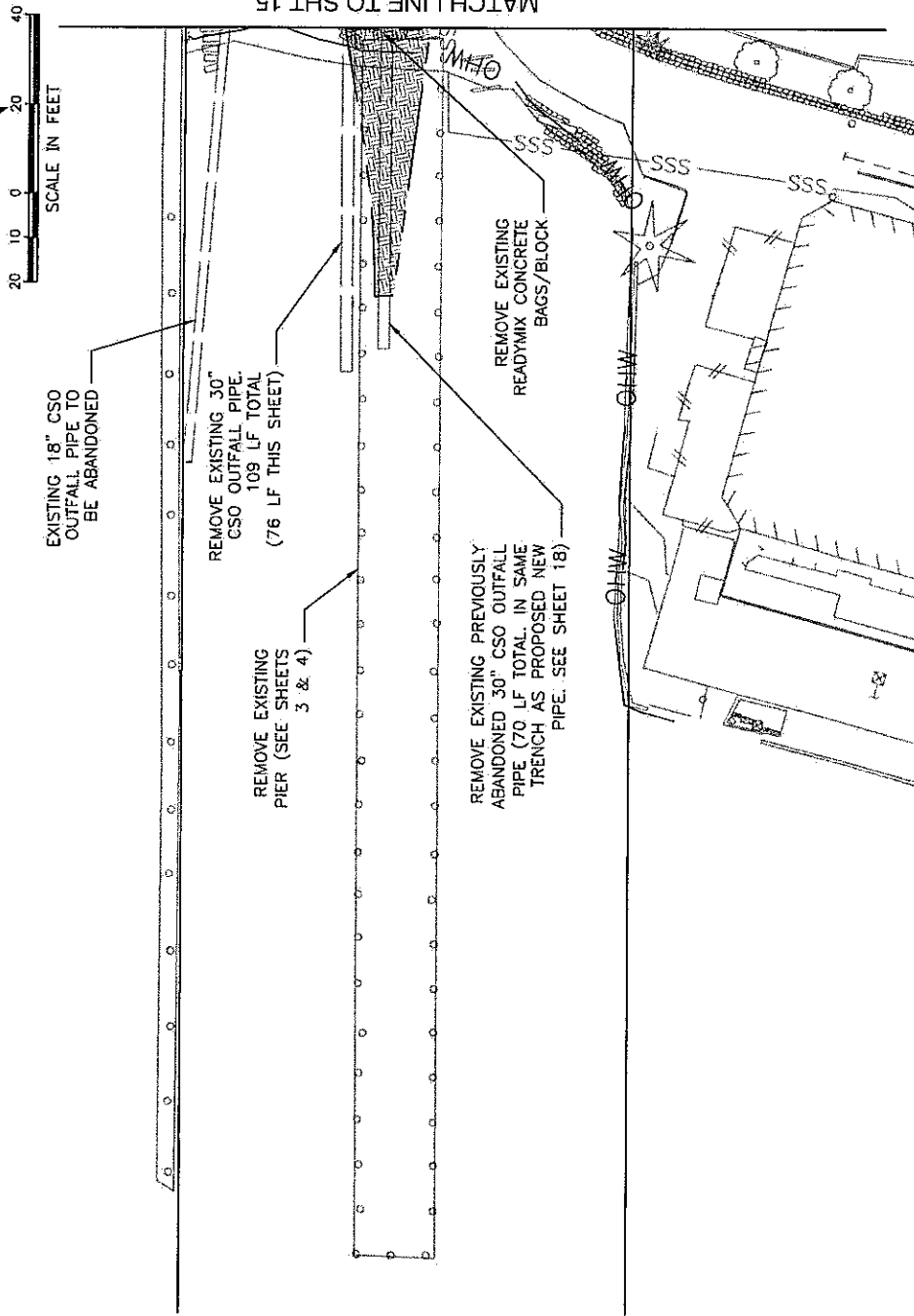
APPLICATION BY: SEATTLE PUBLIC UTILITIES

LEGEND:

 EXCAVATE IN WATER





NOTES:

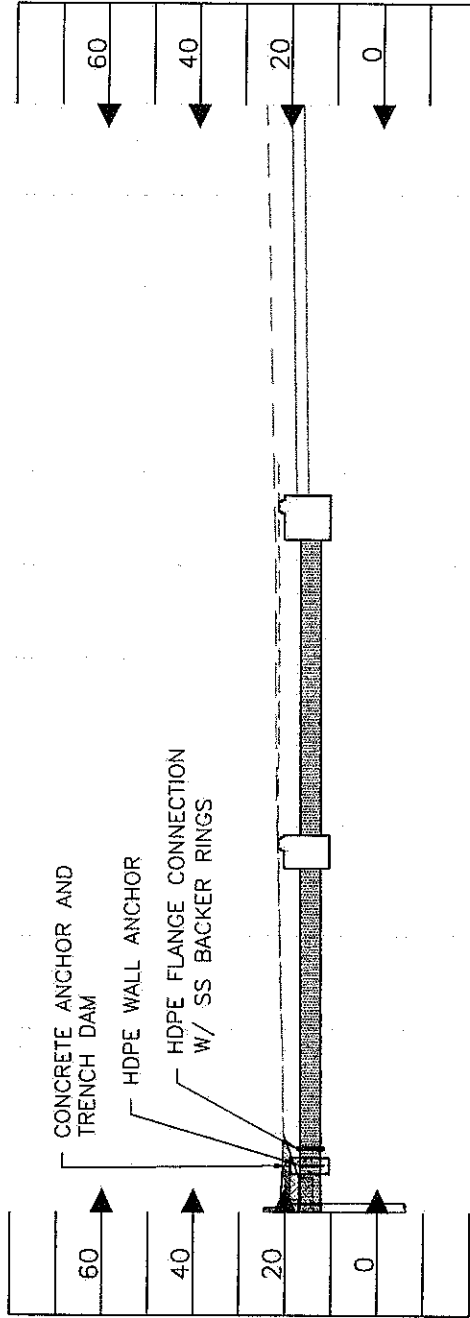
1. EXCAVATE APPROX. 13 CY OF EX SUBSTRATE TO EXPOSE APPROX. 23 LF OF EX PIPE WATERWARD OF OHWM.
2. REMOVE EX SADDLES AND 8" STEEL SUPPORT PILING.
3. FILL DISTURBED AREA WITH APPROX. 17 CY CLEAN APPROVED HABITAT MIX MATERIAL.



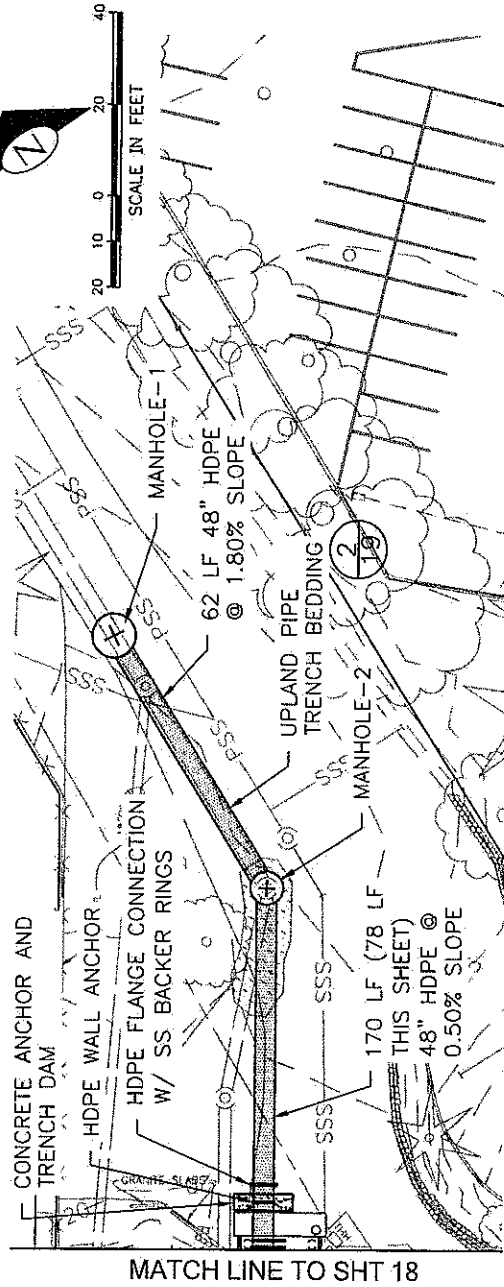
<p>15029 Bothell Way, NE Suite 600 Lake Forest Park, WA 98155 P: 206.523.0024 F: 206.523.0072 www.dcgeng.com</p>	<p>DCG civil structural</p>	<p>APPLICATION BY: SEATTLE PUBLIC UTILITIES</p>	<p>PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.</p> <p>ADJACENT PROPERTY OWNERS:</p> <ol style="list-style-type: none"> 1. DEPT OF NATURAL RESOURCES 2. PACIFIC FISHERMEN INC 3. STIMSON C D COMPANY
<p>PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS</p>		<p>IN: SALMON BAY COUNTY: KING</p> <p>AT: SEATTLE DATUM: NAVD88</p>	
<p>9/6/2016 SHEET 16 OF 23</p>		<p>24TH AVE NW PIER AND OUTFALL REPLACEMENT</p> <p>OUTFALL DEMOLITION PLAN - OUTFALL</p>	

LEGEND:

-  CONCRETE
-  EXCAVATE IN UPLANDS
-  EXISTING MINOR CONTOURS
-  EXISTING MAJOR CONTOURS



OUTFALL PROFILE



OUTFALL PLAN

MATCH LINE TO SHT 18

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

OUTFALL PLAN AND PROFILE - UPLAND

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN: SALMON BAY COUNTY: KING
 AT: SEATTLE DATUM: NAVD88

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

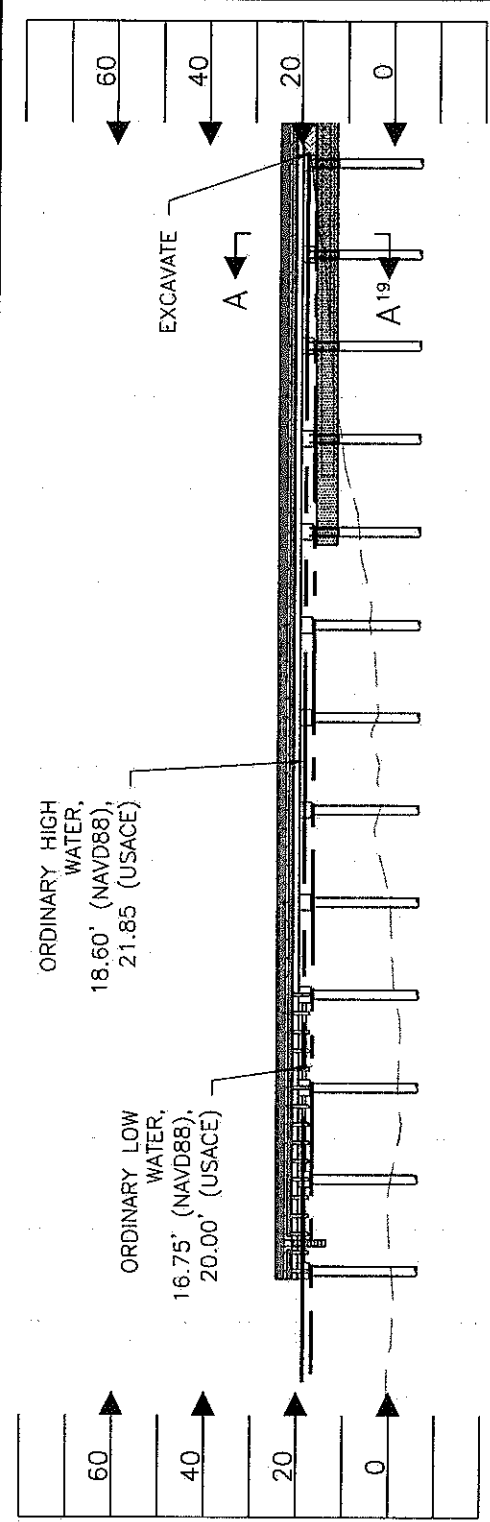
- ADJACENT PROPERTY OWNERS:
1. DEPT OF NATURAL RESOURCES
 2. PACIFIC FISHERMEN INC
 3. STIMSON C D COMPANY

S11 T25N R03E

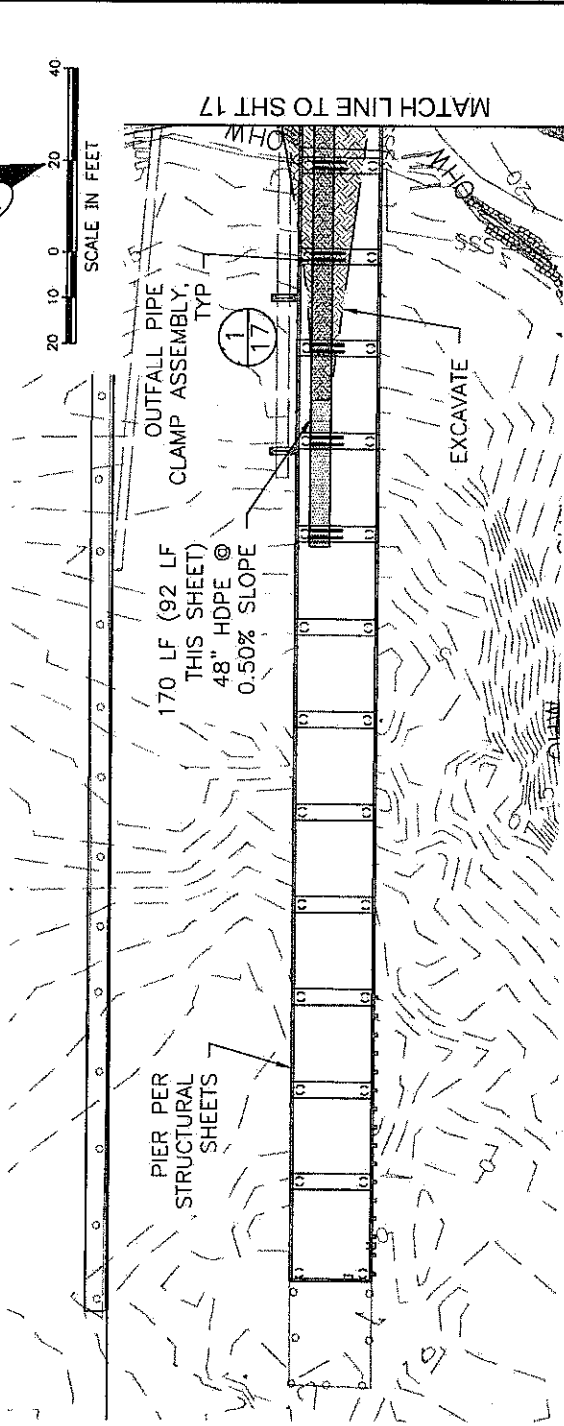
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OUTFALL PROFILE



OUTFALL PLAN

LEGEND:

- EXCAVATE IN WATER
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS

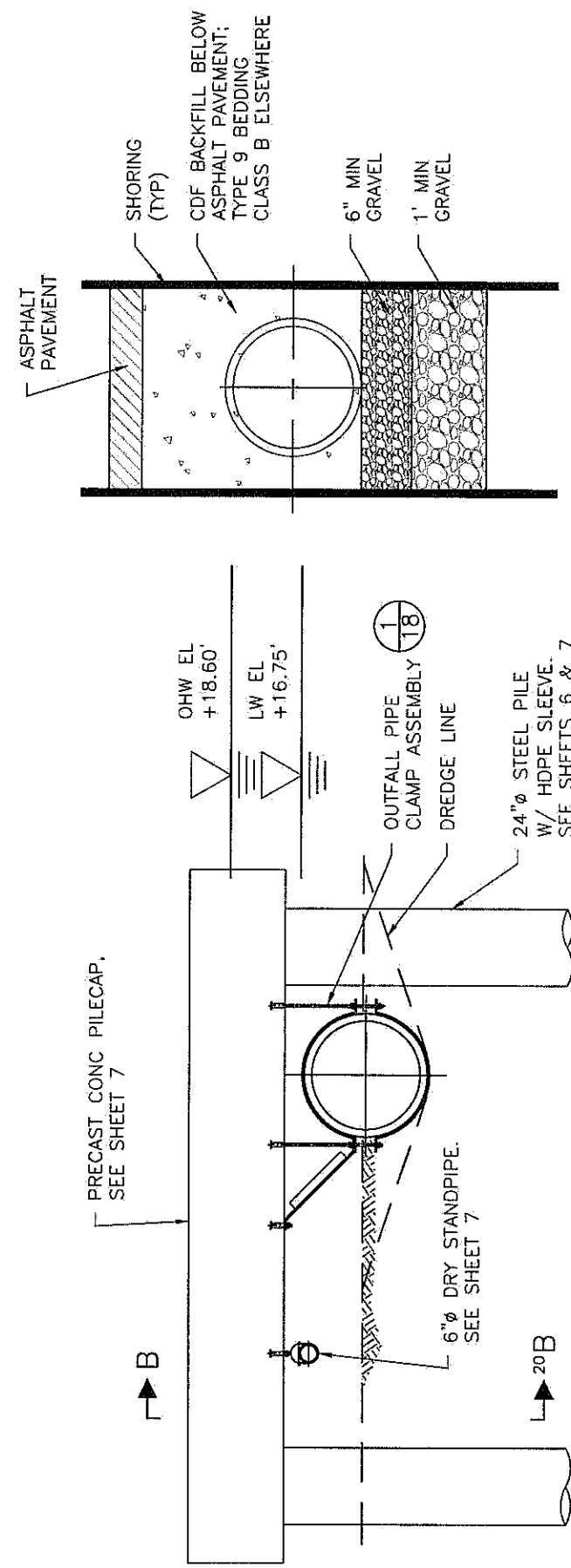
NOTES:

1. EXCAVATE APPROX. 59 CY EX SUBSTRATE WATERWARD OF ORHWM.
2. NO SHORING REQUIRED FOR IN-WATER OUTFALL CONSTRUCTION; SLOPES WILL BE LAID BACK FOR IN-WATER PIPE CONSTRUCTION.
3. PLACE GRAVEL PIPE BEDDING. APPROX. 12 CY.
4. PLACE CLEAN IMPORTED HABITAT MIX TO BACKFILL AROUND/OVER PIPE

	13029 Bobtail Way, NE Suite 600 Lake Forest Park, WA 98155 P: 206.523.0024 F: 206.523.1012 www.dcgengr.com	PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW. ADJACENT PROPERTY OWNERS: 1. DEPT OF NATURAL RESOURCES 2. PACIFIC FISHERMEN INC 3. STIMSON C D COMPANY	9/6/2016 SHEET 18 OF 23 24TH AVE NW PIER AND OUTFALL REPLACEMENT IN: SALMON BAY COUNTY: KING AT: SEATTLE DATUM: NAVD88 S11 T25N R03E
PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS		OUTFALL PLAN AND PROFILE - OUTFALL	

SECTION A-A 19
SCALE: NOT TO SCALE

UPLAND PIPE BEDDING CROSS SECTION 2
NTS 17



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APPLICATION BY: SEATTLE PUBLIC UTILITIES

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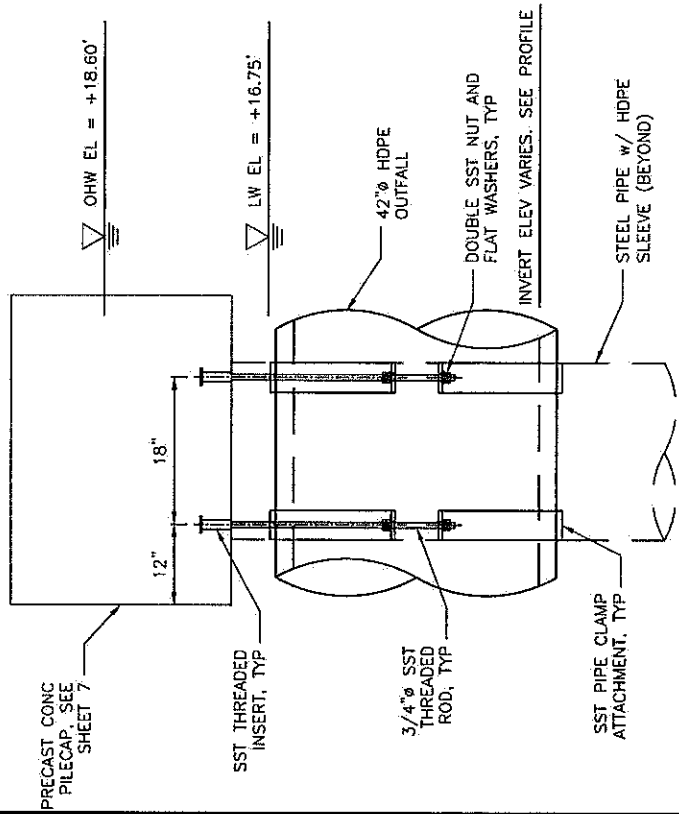
IN: SALMON BAY **COUNTY:** KING
AT: SEATTLE **DATUM:** NAVD88

S11 T25N R03E

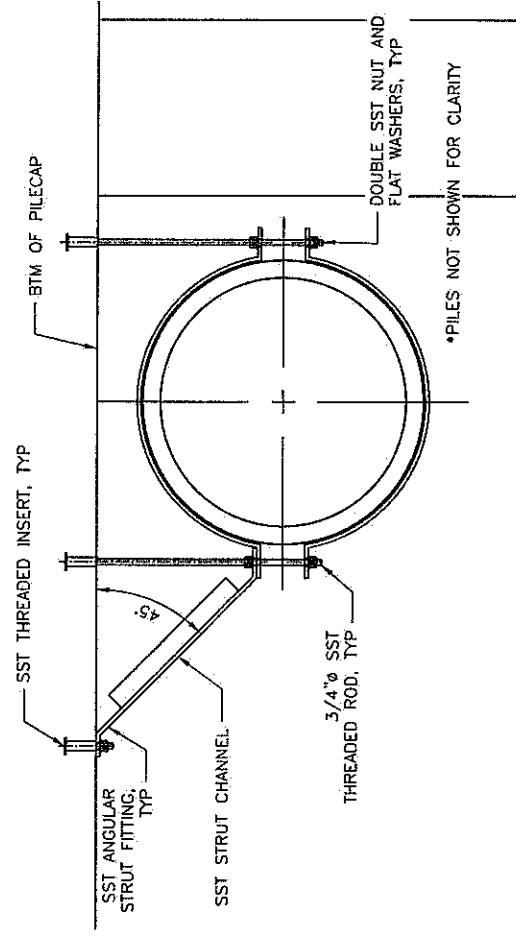
9/6/2016 SHEET 19 OF 23

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

OUTFALL DETAILS



SECTION B-B 19
NTS



OUTFALL PIPE CLAMP ASSEMBLY - DETAIL 1
NTS 18

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

OUTFALL DETAILS

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN: SALMON BAY **COUNTY:** KING
AT: SEATTLE **DATUM:** NAVD88

S11 T25N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

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APPLICATION BY: SEATTLE PUBLIC UTILITIES

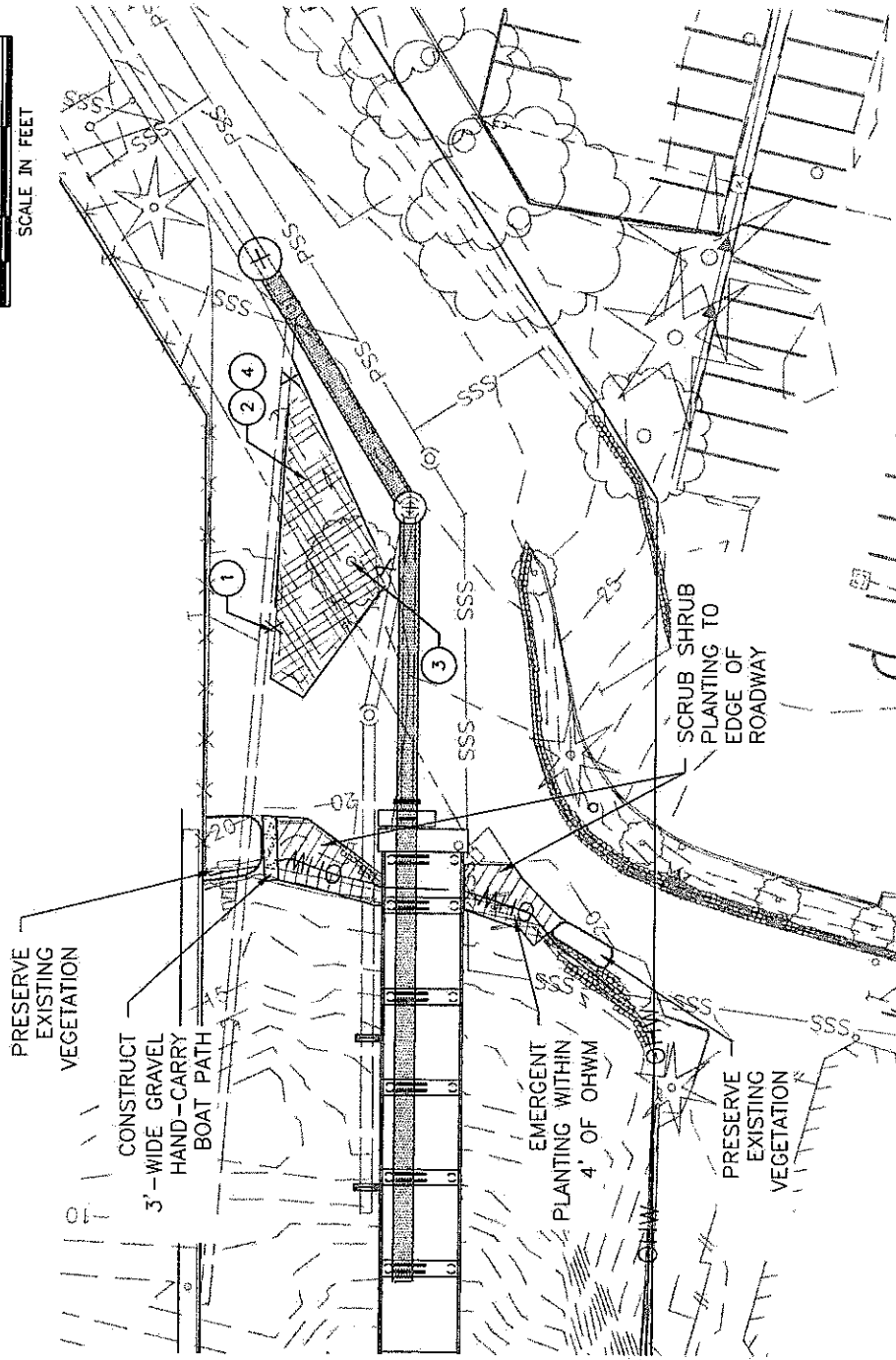
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CONSTRUCTION NOTES:

- 1. INSTALL HIGH-VISIBILITY FENCE AROUND PLANTER BED
- 2. REMOVE GRASS AND WEEDS FROM BED
- 3. PROTECT EXISTING TREE DURING SHORING WORK AND OTHER CONSTRUCTION
- 4. INSTALL A 3" LAYER OF FINE BARK MULCH THROUGHOUT PLANTER

LEGEND:

- GRAVEL
- SHRUB
- EMERGENT PLANTING
- FINE BARK MULCH
- PRESERVE VEGETATION



**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

LANDSCAPE PLAN

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN: SALMON BAY **COUNTY:** KING
AT: SEATTLE **DATUM:** NAVD88

PURPOSE: PIER AND OUTFALL REPLACEMENT AT THE STREET END OF 24TH AVE NW.

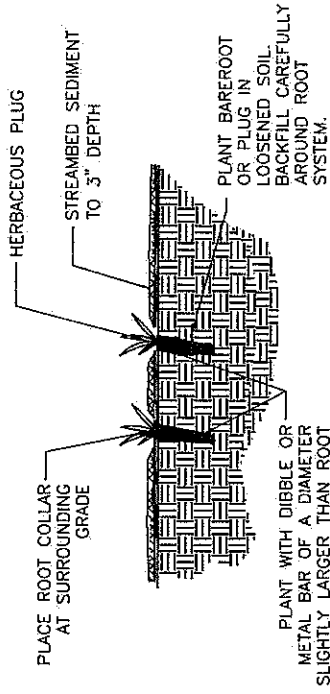
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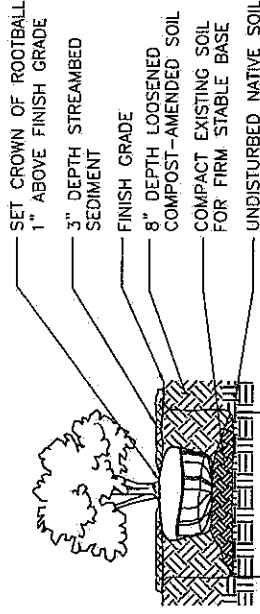


APPLICATION BY: SEATTLE PUBLIC UTILITIES



1 PLUG PLANTING

NTS



NOTE:
KEEP MULCH APPROX. 6"
AWAY FROM PLANT TRUNK
OR STEM

2 CONTAINER SHRUB PLANTING

NTS

24TH AVE NW PIER AND
OUTFALL REPLACEMENT

LANDSCAPE DETAILS

PROPOSED: A PERMANENT PIER AND TEMPORARY
PIER OUTFALL AND DOLPHINS

IN: SALMON BAY COUNTY: KING
AT: SEATTLE DATUM: NAVD88

\$11 T25N R03E

PURPOSE: PIER AND OUTFALL REPLACEMENT
AT THE STREET END OF 24TH AVE
NW.

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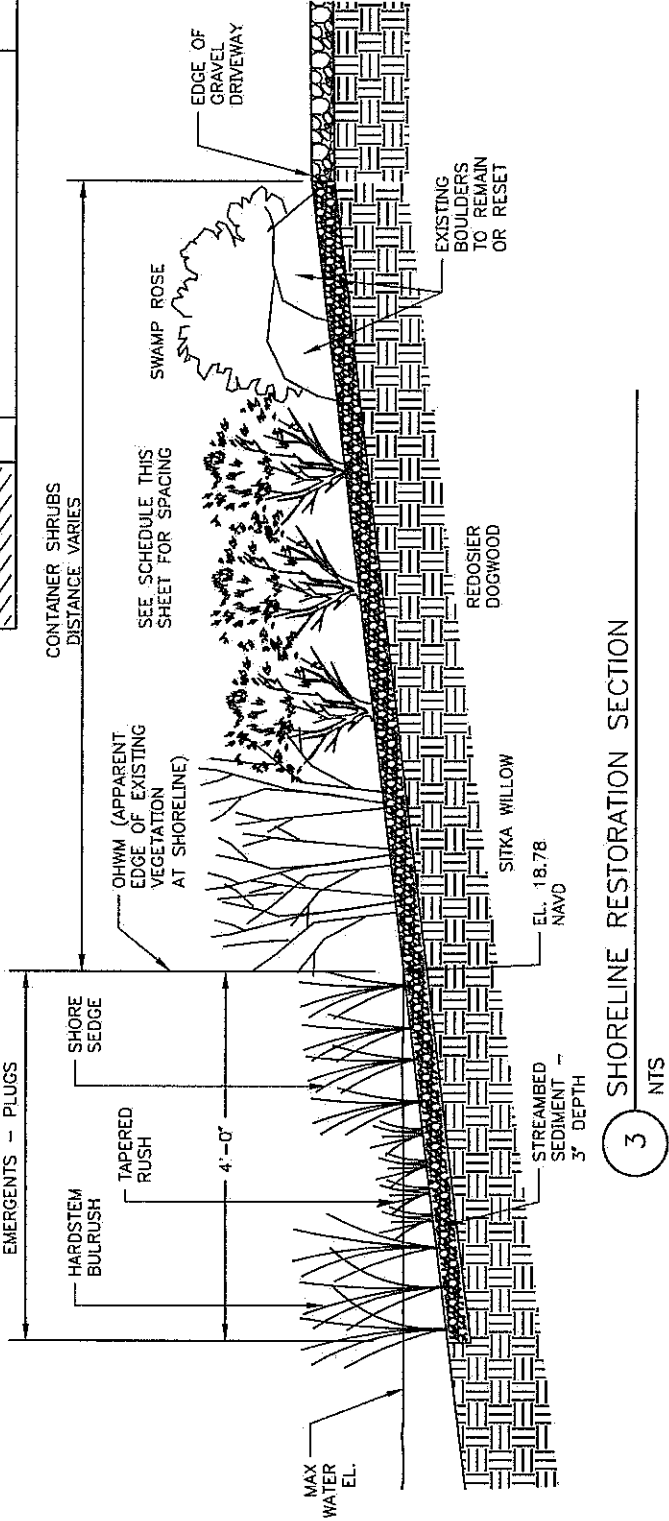
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APPLICATION BY: SEATTLE PUBLIC UTILITIES

PLANT SCHEDULE					
SYMBOL	QTY	BOTANICAL NAME / COMMON NAME	SIZE	CONDITION	SPACING
EMERGENT PLANTING ZONE (BELOW OHWM)					
XX		Corex lenticularis - shore sedge	4" Plug	Plug	12" O.C.
XX		Juncus acuminatus - tapered rush	4" Plug	Plug	12" O.C.
XX		Scirpus acutus - hardstem bulrush	4" Plug	Plug	12" O.C.
SCRUB SHRUB PLANTING ZONE (UPLAND)					
XX		Cornus sericea ssp. sericea - redosier dogwood	1 GAL	Container	36" O.C.
XX		Rosa pisocarpa - swamp rose	1 GAL	Container	36" O.C.
XX		Salix sitchensis - Sitka willow	1 GAL	Container	36" O.C.



9/6/2016 SHEET 23 OF 23

**24TH AVE NW PIER AND
OUTFALL REPLACEMENT**

LANDSCAPE DETAILS

PROPOSED: A PERMANENT PIER AND TEMPORARY PIER OUTFALL AND DOLPHINS

IN: SALMON BAY COUNTY: KING
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S11 T25N R03E

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