



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**SEATTLE DISTRICT, CORPS OF ENGINEERS**  
P.O. BOX 3755  
SEATTLE, WASHINGTON 98124-3755

**MAR 07 2014**

Regulatory Branch

Mr. Skip Sahlin  
Pacific International Terminals, Inc.  
1131 Southwest Klickitat Way  
Seattle, Washington 98134

Reference: NWS-2008-260  
Pacific International  
Terminals, Inc.

Dear Mr. Sahlin:

On August 8, 2011, we inspected work performed on the Pacific International Terminals property located near Ferndale, Whatcom County, Washington, in response to a complaint. We observed that you had placed fill in 1.15 acres of wetlands abutting and adjacent to unnamed tributaries of the Strait of Georgia, a navigable water of the United States. By letter dated August 30, 2011, we notified you this work was performed without a valid Department of the Army permit and was in violation of Federal law. To resolve this violation, you requested an after-the-fact authorization for the work already performed and you requested authorization for additional proposed work.

Our regulatory program utilizes a series of Nationwide Permits (NWP) to authorize specific categories of work that have minimal impact on the aquatic environment when conducted in accordance with the permit conditions. NWP 6, *Survey Activities*, NWP 33, *Temporary Construction, Access, and Dewatering*, and NWP 27, *Aquatic Habitat Restoration, Establishment, and Enhancement Activities* (all in Federal Register, February 21, 2012, Vol. 77, No. 34), authorizes the completed and proposed work as depicted on the enclosed drawings dated January 2012. In order for these NWP authorizations to be valid, you must ensure that the work was and will be performed in accordance with the enclosed *NWP 6, NWP 33, and NWP 27, Terms and Conditions* and the following special conditions:

a. You must implement and abide by the provisions of the restoration plan titled, "*Critical Areas Study and Restoration Plan, Geotechnical Investigation Access Clearing*," and dated June 15, 2012. The U. S. Army Corps of Engineers, Seattle District Regulatory Branch must review and approve any contingency measures prior to their implementation.

b. An as-built report on site restoration and revegetation, including photographic documentation, must be submitted to the U. S. Army Corps of Engineers, Seattle District, Regulatory Branch, within 3 months after the completion of survey activities and must prominently display the reference number NWS-2008-260.

c. You must comply with the terms and conditions of the Memorandum of Agreement (MOA), entitled "*Memorandum of Agreement Among the U. S. Army Corps of Engineers, the Washington State Department of Archeology and Historic Preservation, and Pacific International Terminals, Inc.*", executed on February 12, 2014. Failure to comply with terms and agreements of the MOA constitutes non-compliance with your Department of the Army permit.

You are cautioned that any change in project location or plans will require that you submit a copy of the revised plans to this office and obtain our approval before you begin work. Deviating from the approved plans could result in the assessment of criminal or civil penalties.

We are unable to determine whether or not your project requires individual Water Quality Certification (WQC) and/or a Coastal Zone Management (CZM) consistency determination response from the Washington State Department of Ecology (Ecology). Before you may proceed with the work authorized by this NWP, you must contact the following Ecology office regarding these requirements:

Nationwide Permit Coordinator  
Department of Ecology, SEA Program  
Post Office Box 47600  
Olympia, Washington 98504-7600  
Telephone (360) 407-6068

If more than 180 days pass without Ecology responding to your individual WQC and CZM consistency determination concurrence request, your requirement to obtain an individual WQC and CZM consistency determination response becomes waived. You may then proceed to construction.

We have reviewed your project pursuant to the requirements of the Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act in regards to Essential Fish Habitat (EFH). We have determined that this project complies with the requirements of the NWP National General Condition regarding ESA and will not adversely affect EFH.

The U.S. Army Corps of Engineers has also reviewed this project pursuant to the requirements of 33 CFR Part 325, Appendix C and determined that it satisfies the requirements

of NWP National General Condition 18 and Section 106 of the National Historic Preservation Act providing you implement special condition "c" given above.

In the project area, we have determined that the subject wetlands are waters of the U.S. We have completed an approved jurisdictional determination for your project area dated November 12, 2013, which can be found on our website at <http://www.nws.usace.army.mil/> click on Regulatory, Regulatory/Permits, Approved Jurisdictional Determinations. If you object to this determination, you may request an administrative appeal under our regulations (33 CFR 331) as described in the enclosed *Appeal Process Fact Sheet* and the *Notification of Administrative Appeal Options and Process and Request for Appeal* form.

Our verification of these NWP authorizations are valid until March 18, 2017, unless these NWP's are modified, reissued, or revoked prior to that date. If the authorized work has not been completed by that date and you have commenced or are under contract to commence this activity before March 18, 2017, you will have until March 18, 2018, to complete the activity under the enclosed terms and conditions of these NWP's. Failure to comply with all terms and conditions of these NWP verifications will invalidate these authorizations and could result in a violation of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. Permit non-compliance could result in the assessment of civil administrative penalties as described in the enclosure *Clean Water Act Class I Administrative Penalties*. You must also obtain all local and State permits that apply to this project.

Because NWP 6 and NWP 33 authorize the previously completed work, this resolves your Clean Water Act violation. However, please be aware that any future violation of these laws will be considered to be knowing and willful, and subject to referral to the Department of Justice for legal action, which could include appropriate penalties.

A copy of this letter with enclosures will be furnished to Ms. Kristie Duncan of AMEC at 11810 North Creek Parkway North, Bothell, Washington 98011. If you have any questions about this letter, please contact Mr. Randel Perry, Project Manager, at (360) 734-3156 or via email at [randel.j.perry@usace.army.mil](mailto:randel.j.perry@usace.army.mil).

Sincerely,



Michelle Walker  
Chief, Regulatory Branch

Enclosures



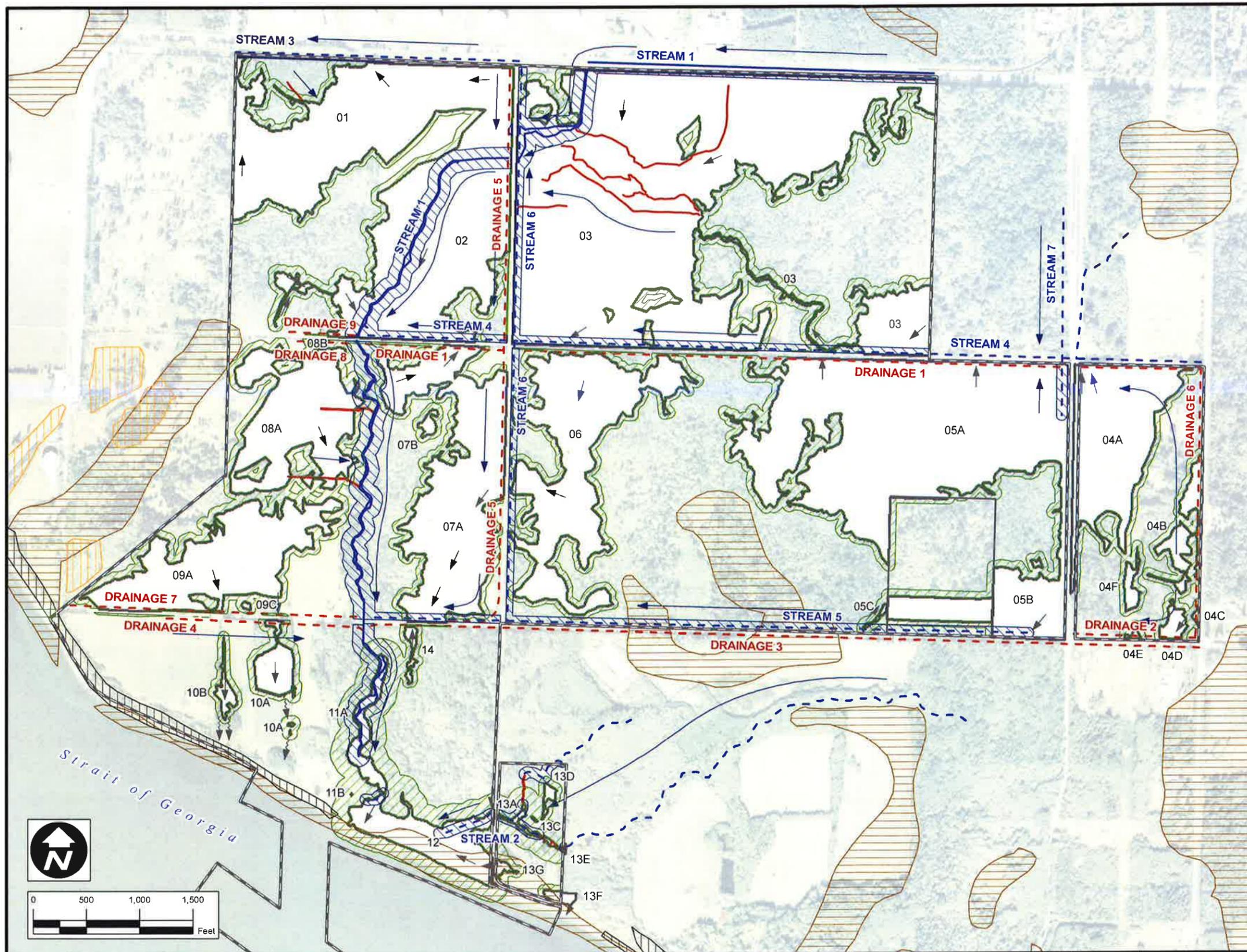
Lat: 48.8704  
 Long: -122.73657



Corps Ref# NWS-2008-260



<b>AMEC Earth &amp; Environmental</b> 11810 North Creek Parkway N Bothell, WA 98011				CLIENT: <b>PACIFIC INTERNATIONAL TERMINALS, INC.</b>	
PROJECT: <b>GATEWAY PACIFIC TERMINAL GEOTECHNICAL INVESTIGATION</b>		DWN BY:	SD	DATUM:	NAD83
TITLE: <b>VICINITY MAP</b>		CHK'D BY:	CS	REV. NO.:	1
		PROJECTION:	WA SP North, Ft.	SCALE:	1 inch=3 miles
				DATE:	Jan. 2012
				PROJECT NO.:	091515338C-07-03
				FIGURE No.:	Sheet 1 of 13



**LEGEND**

- - - APPROXIMATE DRAINAGE
- SURVEYED DRAINAGE
- - - APPROXIMATE STREAM COURSE
- SURVEYED STREAM COURSE
- [Hatched Box] STREAM BUFFER
- STREAM AND DRAINAGE FLOW DIRECTION
- 05A→ WETLAND FLOW DIRECTION
- [White Box] EXISTING WETLAND AREA
- [Green Hatched Box] WETLAND BUFFER \*
- [Orange Hatched Box] SURFICIAL AQUIFER (Mainland Only)

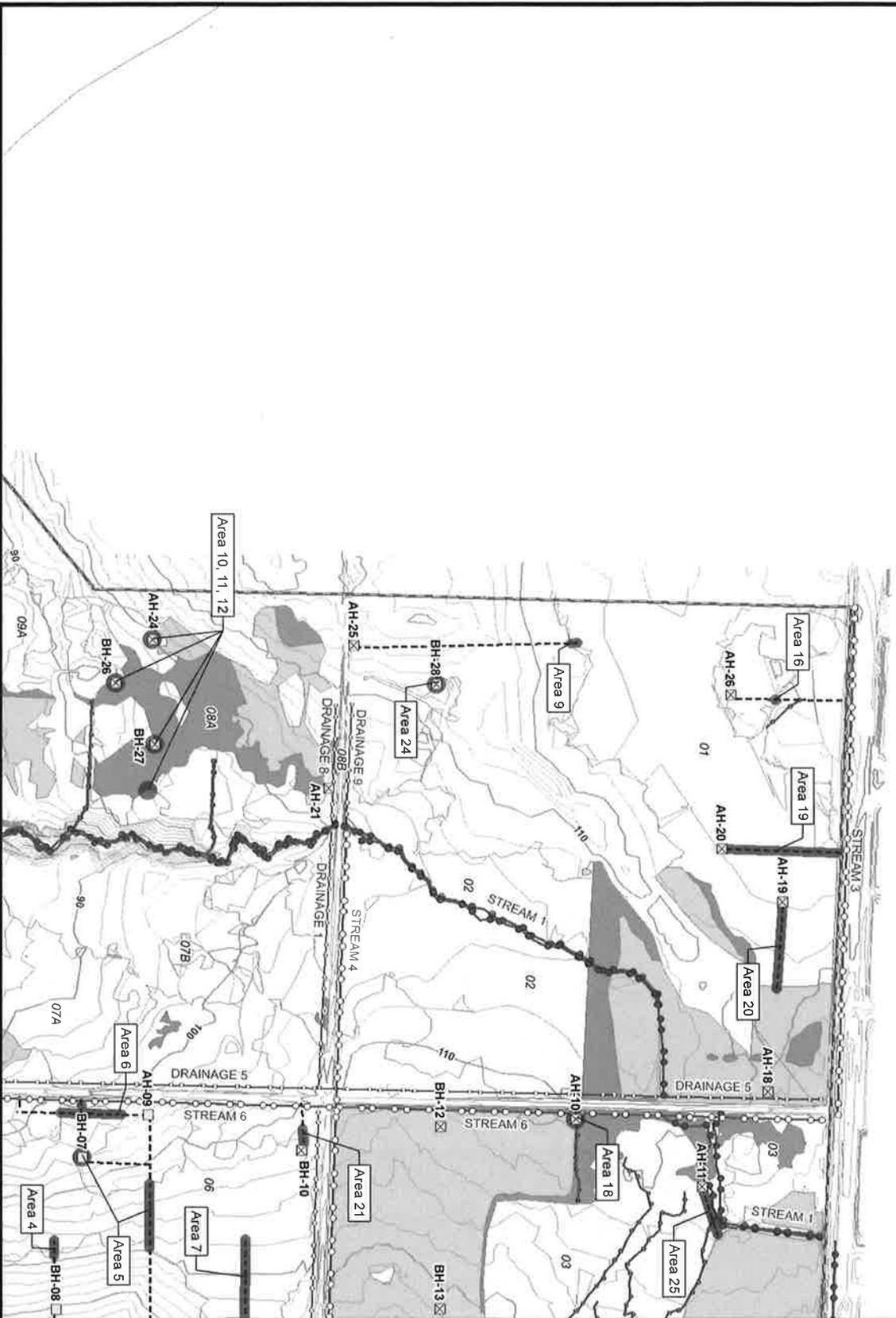
**SHORELINE STABILITY:**

- [Orange Hatched Box] MODIFIED
- [Vertical Line Hatched Box] UNSTABLE SLOPE
- [White Box] PROPERTY BOUNDARY
- [Black Box] PROJECT AREA BOUNDARY

\*THE STANDARD WETLAND BUFFERS SHOWN ARE BASED ON WETLAND FUNCTIONS AND VALUES AND LOW-INTENSITY LAND USE ASSOCIATED WITH GEOTECHNICAL ACTIVITIES (per WCC 16.16.630).

NWS-2008-260

<p>Source: Surficial Aquifer and Shoreline Stability data obtained from Whatcom County Planning &amp; Development Services.</p>	 <p>Pacific International Terminals. A Carbo Enterprise</p>	<p>CLIENT: PACIFIC INTERNATIONAL TERMINALS, INC.</p>	 <p>AMEC Earth &amp; Environmental 11810 North Creek Parkway N Bothell, WA 98011</p>	<p>DWN BY: SD CHK'D BY: MG DATUM: NAD83 PROJECTION: WA SP North, Ft. SCALE: 1 inch = 1,000 feet</p>	<p>PROJECT: GATEWAY PACIFIC TERMINAL GEOTECHNICAL INVESTIGATION</p>	<p>TITLE: CRITICAL AREAS AND BUFFERS</p>	<p>DATE: Jan. 2012 PROJECT NO.: 091515338C-07-03 REV. NO.: 1 FIGURE NO.: Sheet 2 of 13</p>
---	--	--	---	---	---	--	--



PURPOSE: subsurface data collection.

DATUM: NAD83

ADJACENT PROPERTY OWNERS: See JARPA Attachment C

APPLICANT REFERENCE: NWS-2008-260

LOCATION:

In the vicinity of Henry Road, Lonseth Road, Aldergrove Road, Powder Plant Road, and Gulf Road, Whatcom County, Washington

NOTE: Not for construction, for agency review only. No existing structures on site currently

PROJECT AREA:

48° 52' 6.18" N  
122° 43' 41.92" W

PROPOSED: Geotechnical investigation of property.

IN: Eastern Shore of Strait of Georgia

NEAR/AT: Fenndale

COUNTY: Whatcom STATE: WA

APPLICATION BY: Pacific International Terminals, Inc.

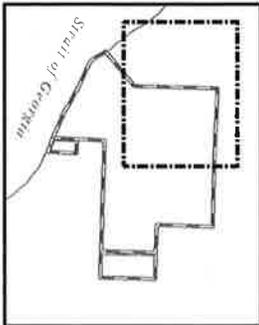
DATE: Jan. 2012

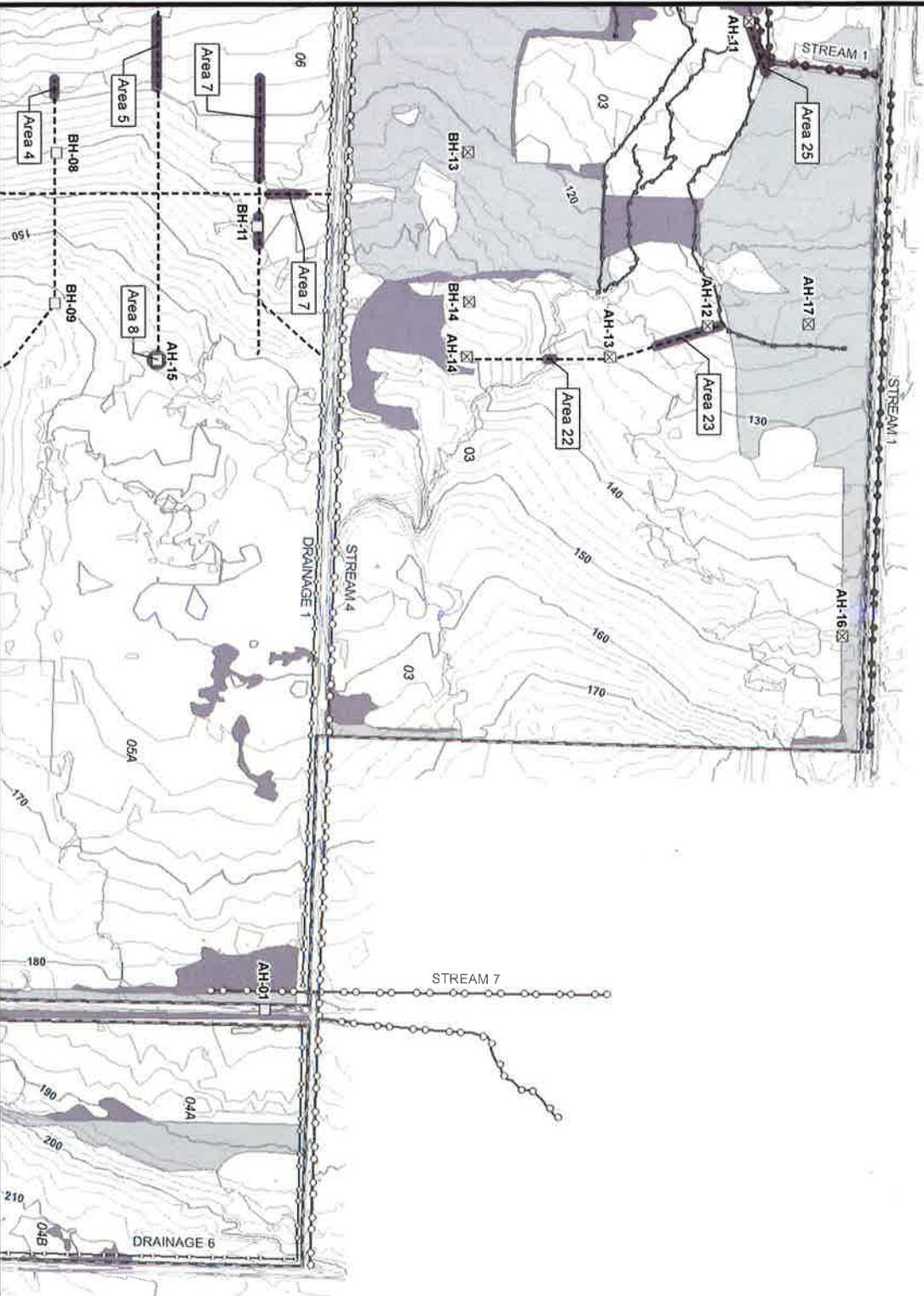
NWS-2008-260

LEGEND:

- ☐ BOREHOLE COMPLETED (20)
- ☒ BOREHOLE NOT COMPLETED (30)
- ☐ BOREHOLE IN PROGRESS (4)
- AS-BUILT BOREHOLE ACCESS\*
- APPROXIMATE DRAINAGE
- SURVEYED DRAINAGE
- APPROXIMATE STREAM COURSE
- SURVEYED STREAM COURSE
- ELEVATION CONTOUR (10 ft. interval)
- FRESHWATER EMERGENT WETLAND (PEM)
- FRESHWATER FORESTED WETLAND (PFO)
- FRESHWATER SHRUB WETLAND (PSS)
- WETLAND IMPACT AREA (see text)
- ▭ PROPERTY BOUNDARY

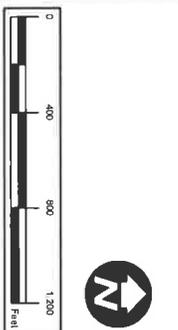
\*THIS LINE DEPICTS LOCATIONS WHERE TREES AND SHRUBS WERE REMOVED TO ALLOW ACCESS FOR GEOTECHNICAL INVESTIGATION. NO ACCESS ROUTE IS SHOWN WHERE ACCESS WAS ACROSS OPEN FIELDS.





- LEGEND:**
- ☐ BOREHOLE COMPLETED (20)
  - ☒ BOREHOLE NOT COMPLETED (30)
  - ☐ BOREHOLE IN PROGRESS (4)
  - AS-BUILT BOREHOLE ACCESS\*
  - APPROXIMATE DRAINAGE
  - SURVEYED DRAINAGE
  - APPROXIMATE STREAM COURSE
  - SURVEYED STREAM COURSE
  - ELEVATION CONTOUR (10 ft interval)
  - FRESHWATER EMERGENT WETLAND (PEM)
  - FRESHWATER FORESTED WETLAND (PFO)
  - FRESHWATER SHRUB WETLAND (PSS)
  - WETLAND IMPACT AREA (see text)
  - PROPERTY BOUNDARY

\*THIS LINE DEPICTS LOCATIONS WHERE TREES AND SHRUBS WERE REMOVED TO ALLOW ACCESS FOR GEOTECHNICAL INVESTIGATION. NO ACCESS ROUTE IS SHOWN WHERE ACCESS WAS ACROSS OPEN FIELDS.



PURPOSE: Subsurface data collection

APPLICANT REFERENCE: NWS-2008-260

PROPOSED: Geotechnical investigation of property

DATUM: NAD83

LOCATION:  
In the vicinity of Henry Road, Lonseth Road, Aldergrove Road, Powder Plant Road, and Gulf Road, Whatcom County, Washington

IN: Eastern Shore of Strait of Georgia

ADJACENT PROPERTY OWNERS: See JARPA Attachment C

NOTE: Not for construction, for agency review only. No existing structures on site currently.

NEARBY: Ferndale

PROJECT AREA:

COUNTY: Whatcom STATE: WA

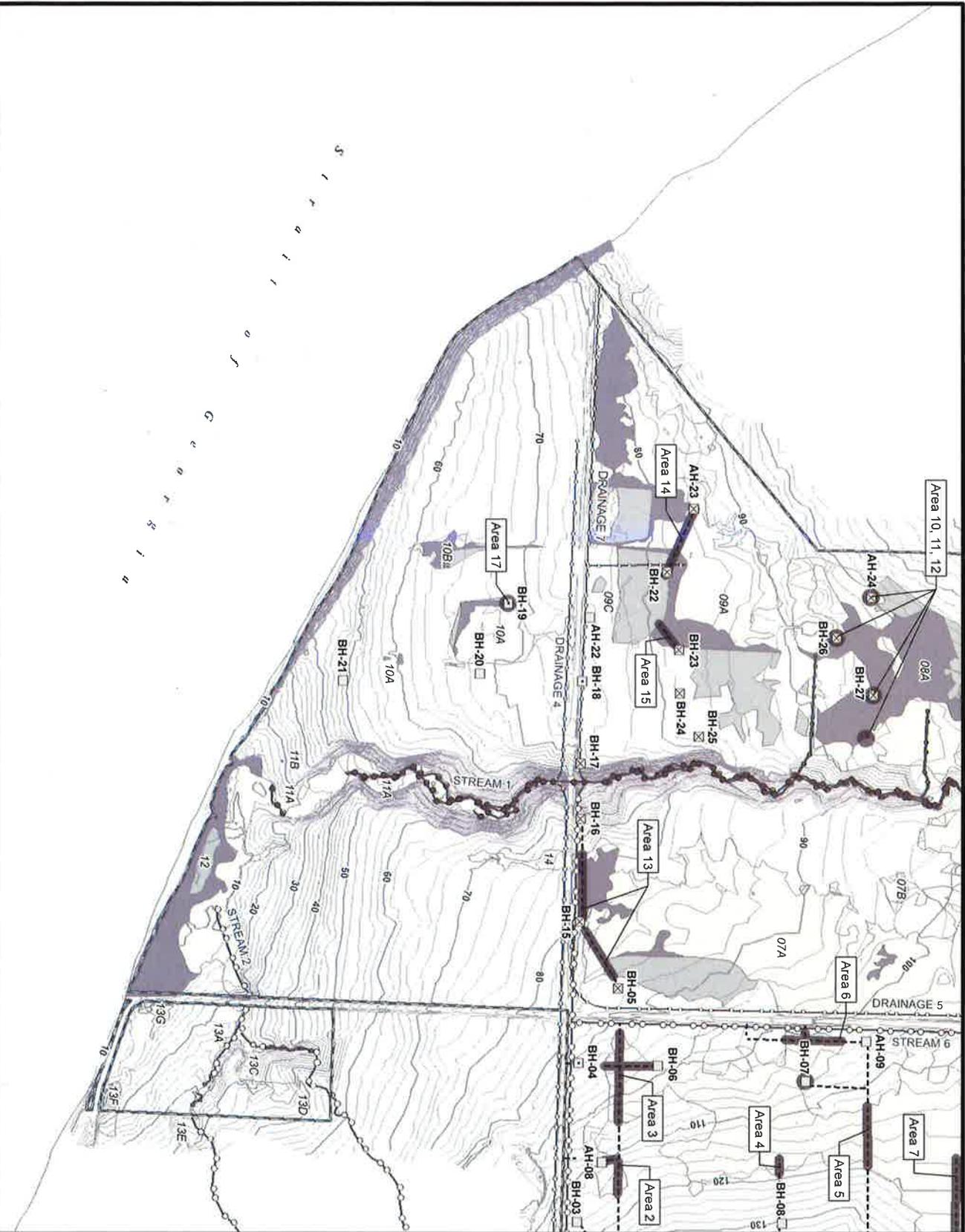
48° 52' 6.18" N  
122° 43' 41.92" W

APPLICATION BY: Pacific International Terminals, Inc.

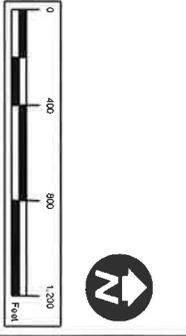
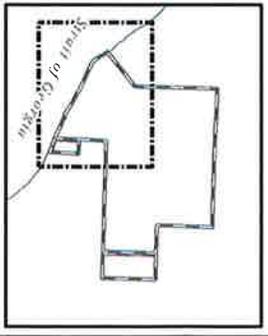
DATE: Jan. 2012

Sheet 4 of 13

NWS-2008-260



- LEGEND:**
- ☐ BOREHOLE COMPLETED (90)
  - ☒ BOREHOLE NOT COMPLETED (20)
  - ☒ BOREHOLE IN PROGRESS (4)
  - ☒ AS-BUILT BOREHOLE ACCESS\*
  - APPROXIMATE DRAINAGE
  - SURVEYED DRAINAGE
  - APPROXIMATE STREAM COURSE
  - SURVEYED STREAM COURSE
  - ELEVATION CONTOUR (10 ft. Interval)
  - FRESHWATER EMERGENT WETLAND (PEM)
  - FRESHWATER FORESTED WETLAND (PFO)
  - FRESHWATER SHRUB WETLAND (PSS)
  - WETLAND IMPACT AREA (see text)
  - PROPERTY BOUNDARY



**PURPOSE:** Subsurface data collection.

**DATUM:** NAD83

**ADJACENT PROPERTY OWNERS:** See JARPA Attachment C

**APPLICANT REFERENCE:** NWS-2008-260

**LOCATION:**  
In the vicinity of Henry Road, Lonseth Road, Aldergrove Road, Powder Plant Road, and Gulf Road, Whatcom County, Washington

**NOTE:** Not for construction, for agency review only. No existing structures on site currently.

**PROJECT AREA:**  
48° 52' 6.18" N  
122° 43' 41.92" W

**PROPOSED:** Geotechnical investigation of property

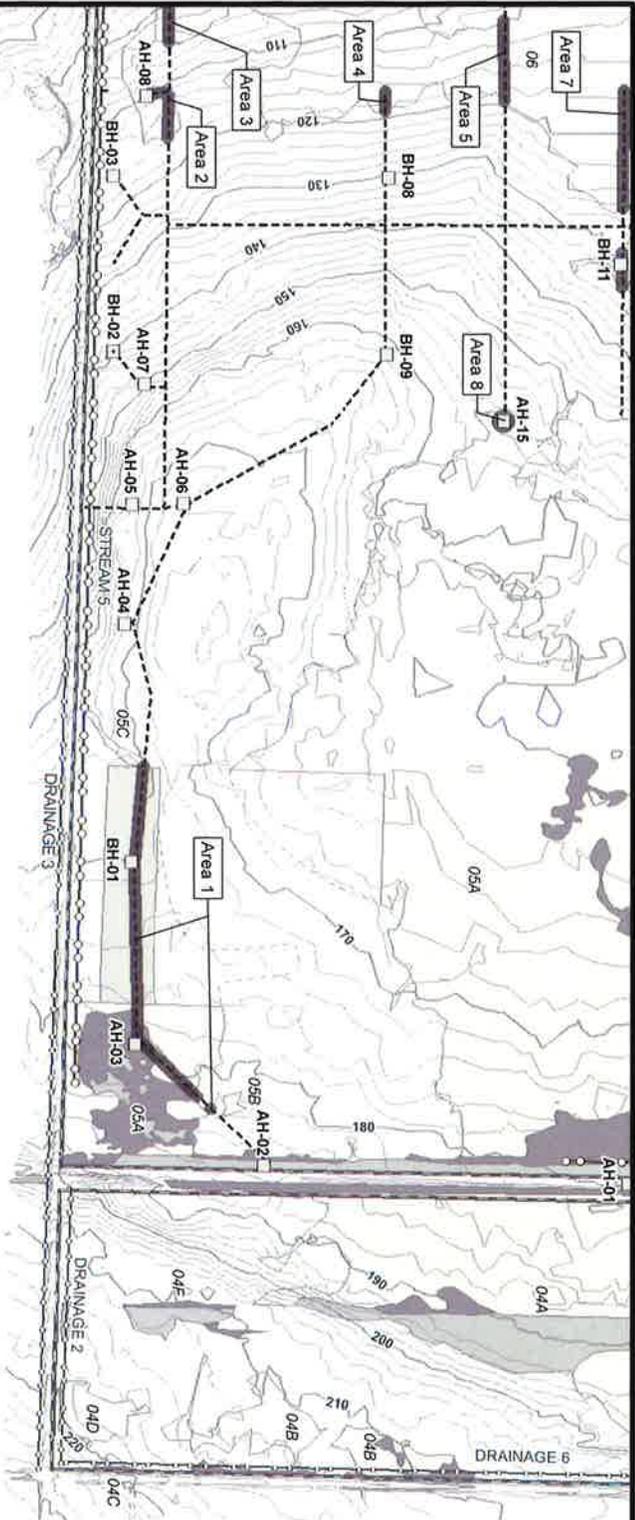
**NWS-2008-260**

**IN:** Eastern Shore of Strait of Georgia  
**NEAR/AT:** Ferndale  
**COUNTY:** Whatcom **STATE:** WA

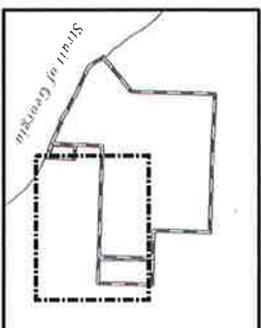
**APPLICATION BY:** Pacific International Terminals, Inc

**DATE:** Jan. 2012

**Sheet 5 of 13**



- LEGEND:**
- BOREHOLE COMPLETED (20)
  - BOREHOLE NOT COMPLETED (30)
  - BOREHOLE IN PROGRESS (4)
  - AS-BUILT BOREHOLE ACCESS\*
  - APPROXIMATE DRAINAGE
  - SURVEYED DRAINAGE
  - APPROXIMATE STREAM COURSE
  - SURVEYED STREAM COURSE
  - ELEVATION CONTOUR (10 ft. interval)
  - FRESHWATER EMERGENT WETLAND (PEM)
  - FRESHWATER FORESTED WETLAND (PFO)
  - FRESHWATER SHRUB WETLAND (PSS)
  - WETLAND IMPACT AREA (see text)
  - PROPERTY BOUNDARY
- \*THIS LINE DEPICTS LOCATIONS WHERE TREES AND SHRUBS WERE REMOVED TO ALLOW ACCESS ROUTES TO SCENIC, RECREATIONAL, OR ACCESS OPEN FIELDS



PURPOSE: Subsurface data collection

APPLICANT REFERENCE: NWS-2008-260

PROPOSED: Geotechnical investigation of property

DATUM: NAD83

LOCATION:  
In the vicinity of Henry Road, Lonseth Road, Aldergrove Road, Powder Plant Road, and Gulf Road, Whatcom County, Washington

IN: Eastern Shore of Strait of Georgia

NWS-2008-260

ADJACENT PROPERTY OWNERS: See JARPA Attachment C

NOTE: Not for construction; for agency review only. No existing structures on site currently.

COUNTY: Whatcom STATE: WA

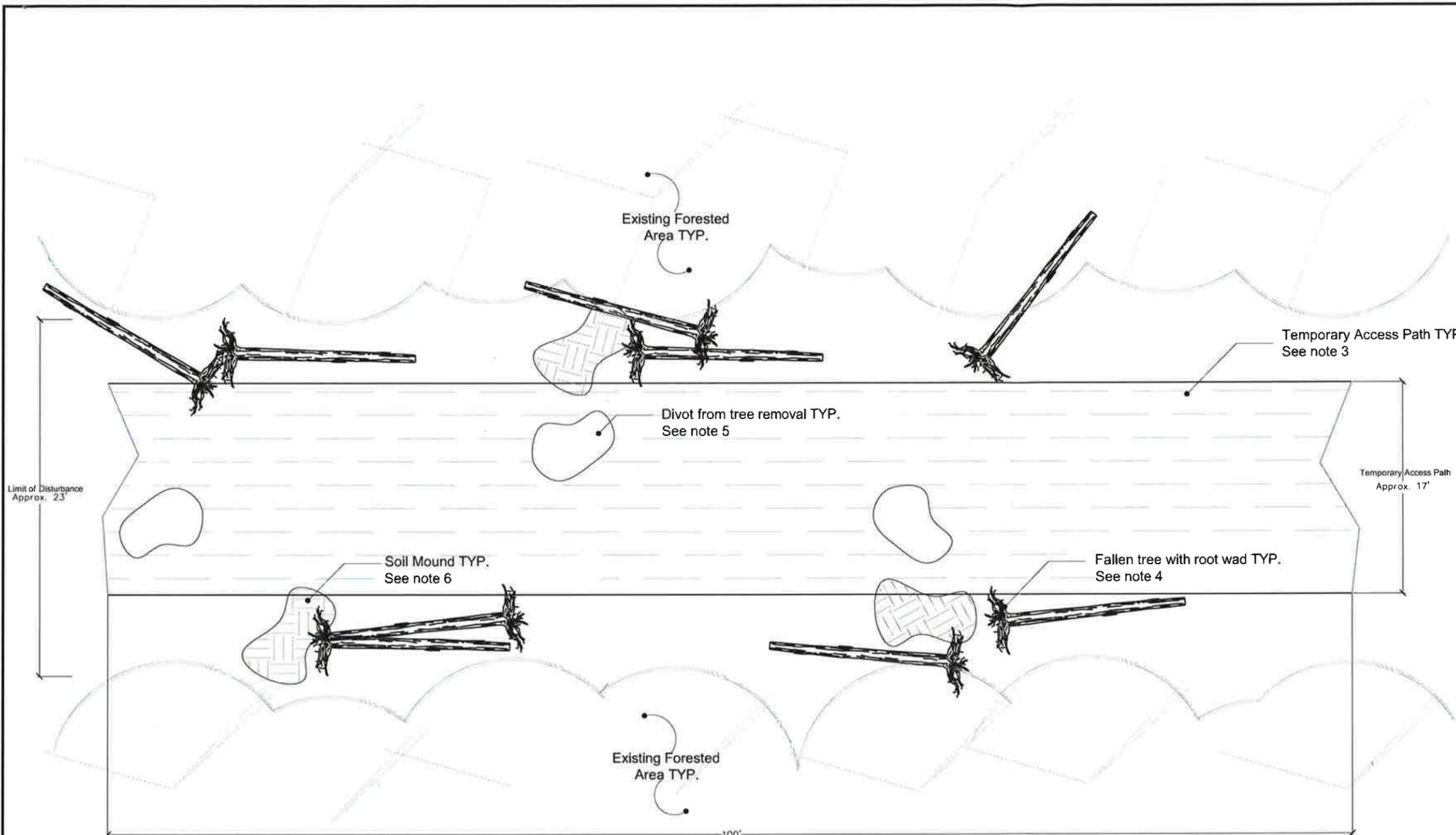
PROJECT AREA:

48° 52' 6.18" N  
122° 43' 41.92" W

APPLICATION BY: Pacific International Terminals, Inc.

DATE:

Jan. 2012



**Legend**

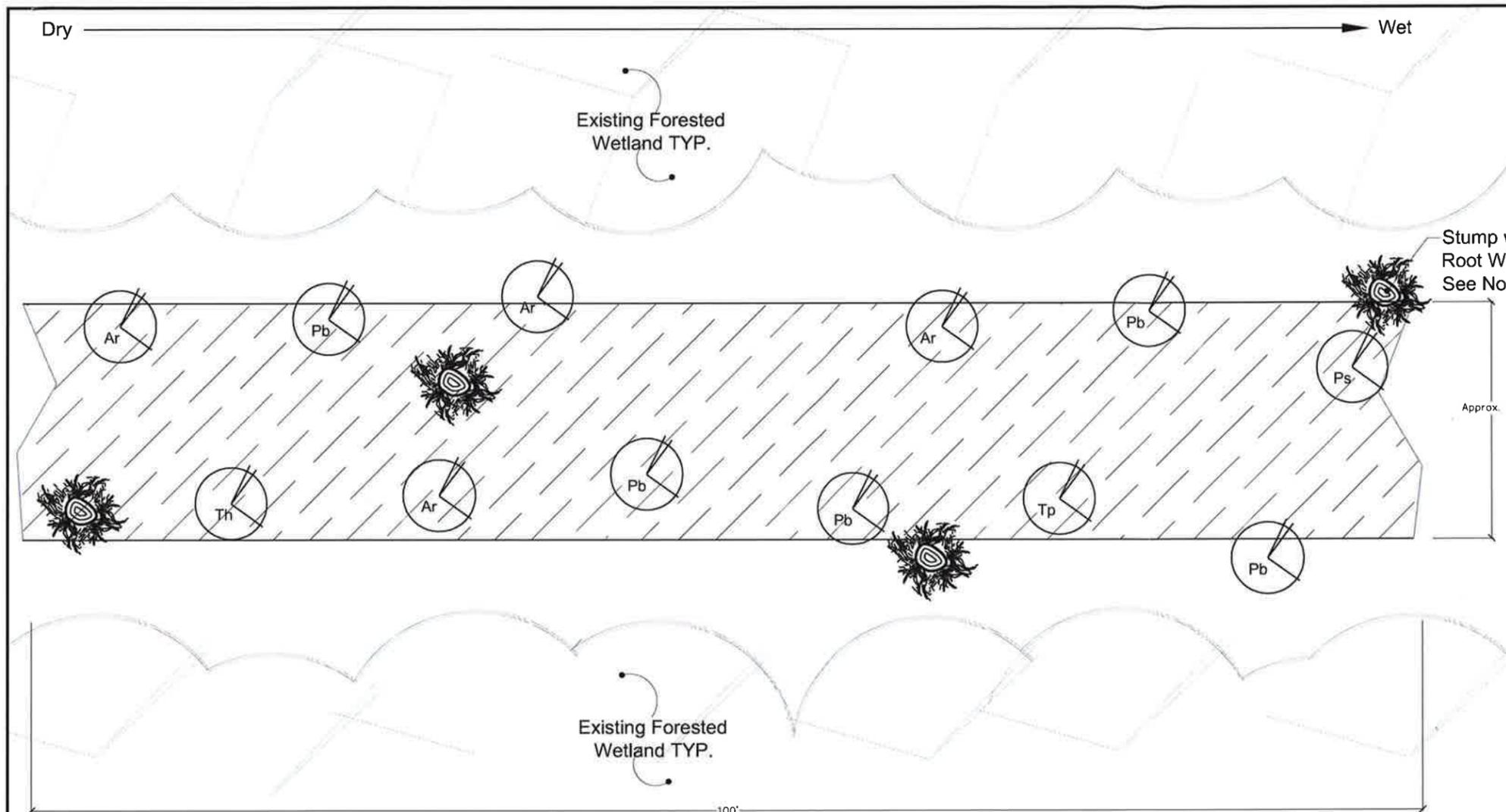
-  Temporary Access Path TYP.
-  Divot TYP.
-  Soil Mound TYP.

**NOTES:**

1. TYP. = Typical
2. Approx. = Approximate
3. Temporary Access Path to be graded, hydro-seeded and planted. Meet and match pre-disturbance grades.
4. Fallen trees to be replaced in temporary access path.
5. Divots to be backfilled with soil and root wads.
6. Soil mounds to be dispersed in temporary access path.
7. Drawing shows typical/representative area of wetland and wetland buffer impacts.

NWS-2008-260

CLIENT LOGO  Pacific International Terminals <small>A Cairn Enterprise</small>	CLIENT: <b>PACIFIC INTERNATIONAL TERMINALS, INC.</b>	DWN BY: DP CHK'D BY: KD DATUM: NONE PROJECTION: NONE SCALE: AS SHOWN	PROJECT <b>GATEWAY PACIFIC TERMINAL          GEOTECHNICAL INVESTIGATION</b>	DATE: Jan. 2012 PROJECT NO: 0-915-15338-C
	<b>AMEC Earth &amp; Environmental</b> 11810 North Creek Parkway North Bothell, WA, U.S.A. 98011-8201 	TITLE <b>EXISTING CONDITIONS          TYPICAL STRETCH OF TEMPORARY          ACCESS PATH</b>	REV. NO.: 1 FIGURE No. Sheet 7 of 13	

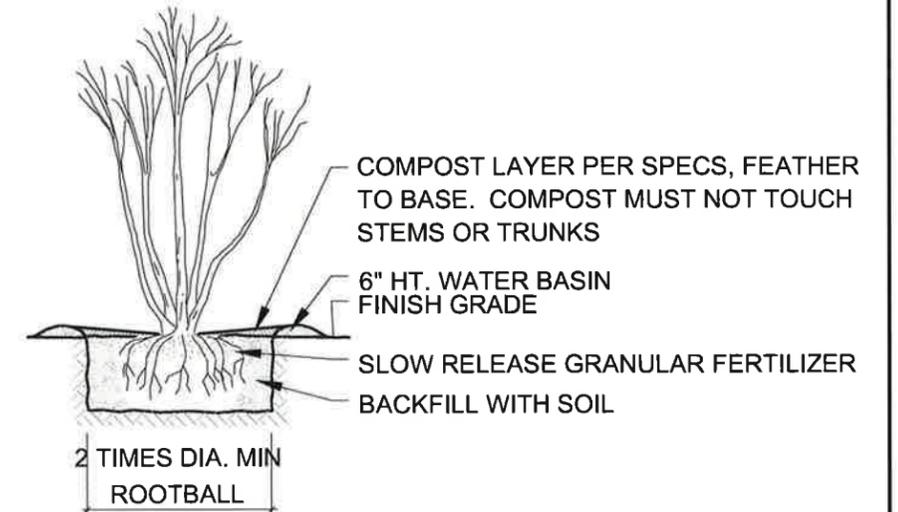


**Qty. per 1,700 square feet**

- |   |                          |                   |
|---|--------------------------|-------------------|
| 4 | Ar - Alnus rubra         | Red Alder         |
| 1 | Ps - Picea sitchensis    | Sitka Spruce      |
| 5 | Pb - Populus balsamifera | Black Cottonwood  |
| 1 | Tp - Thuja plicata       | Western Red Cedar |
| 1 | Th - Tsuga heterophylla  | Western Hemlock   |

**NOTES:**

1. TYP. = Typical
2. Approx. = Approximate
3. Drawing shows typical/representative area of wetland to be planted.



**PLANTING NOTES FOR WETLANDS AND BUFFERS:**

1. PLANTING PIT SIZES WILL BE A MINIMUM OF TWICE THE ROOT BALL WIDTH AND HAVE THEIR TOP TRUE ROOT NO MORE THAN 1 INCH ABOVE THE SOIL SURFACE.
2. PRIOR TO PLANTING, CONTAINERS SHALL BE COMPLETELY REMOVED AND THE ROOTS LOOSENED BY APPROPRIATE PRUNING.
3. PLANTING PITS WILL BE BACKFILLED WITH EXISTING SOILS THAT ARE FREE OF ROCKS OVER 2 INCHES, LUMPS, AND OTHER FOREIGN MATERIALS. BACKFILLING AROUND TRUNKS OR STEMS IS NOT PERMITTED.
4. THE BACKFILL MATERIAL AND ROOT BALL SHALL BE THOROUGHLY WATERED ON THE SAME DAY THAT PLANTING OCCURS REGARDLESS OF SEASON.

**PLANT LIST FOR WETLAND IMPACT AREAS: 2.8 acres**

Type	Scientific Name	Common Name	Size	Spacing	*W1 18,853 sf	W2 408 sf	W3 6,205 sf	5A/ 5B/5C 25,298 sf	W6 47,362 sf	W7A 11,203 sf	W8A 1,632 sf	W9A 9,690 sf	Total:
Tree	Alnus rubra	Red Alder	Seedling	18' o.c.	20		5	26	42	10	2	9	<b>114</b>
Tree	Picea sitchensis	Sitka Spruce	Seedling	18' o.c.	15		5	20	40	10	2	9	<b>101</b>
Tree	Populus balsamifera	Black Cottonwood	Seedling	18' o.c.	20	1	10	26	46	10	2	9	<b>124</b>
Tree	Thuja plicata	Western Red Cedar	Seedling	18' o.c.	15	1	5	23	42	10	2	9	<b>107</b>
Tree	Tsuga heterophylla	Western Hemlock	Seedling	18' o.c.	14		3	20	40	10		9	<b>96</b>
<b>Total:</b>					<b>84</b>	<b>2</b>	<b>28</b>	<b>115</b>	<b>210</b>	<b>50</b>	<b>8</b>	<b>45</b>	<b>542</b>

\*See Figure 1 of Critical Areas Assessment Report & Draft Mitigation Plan for wetland locations.

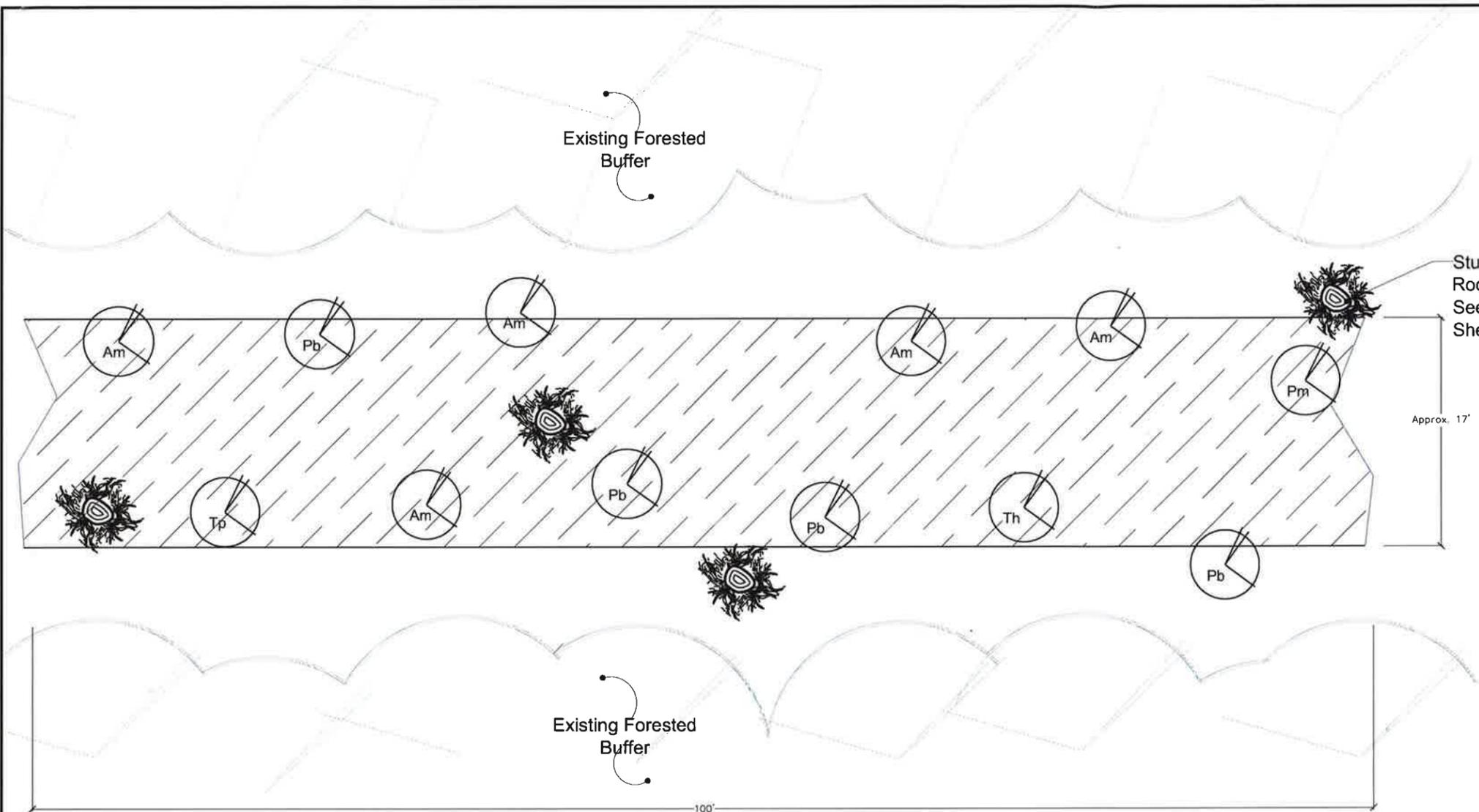
**WETLAND SEED MIX: 2.8 acres**

- |     |                      |                    |
|-----|----------------------|--------------------|
| 67% | Sterile Wheatgrass   |                    |
| 17% | Agrostis stolonifera | Creeping Bentgrass |
| 10% | Alopecurus pratensis | Meadow Foxtail     |
| 6%  | Trifolium hybridum   | Alsike Clover      |



**NWS-2008-260**

CLIENT LOGO 	CLIENT: <b>PACIFIC INTERNATIONAL TERMINALS, INC.</b>	DWN BY: DP	PROJECT <b>GATEWAY PACIFIC TERMINAL GEOTECHNICAL INVESTIGATION</b>	DATE: Jan. 2012
		CHK'D BY: KD		PROJECT NO: 0-915-15338-C
Pacific International Terminals <small>A Carrier Enterprise</small>	AMEC Earth & Environmental 11810 North Creek Parkway North Bothell, WA, U.S.A. 98011-8201	DATUM: NONE	TITLE <b>PROPOSED PLANTING PLAN WETLAND AREA TYP.</b>	REV. NO.: 1
		PROJECTION: NONE		FIGURE No. Sheet 8 of 13
		SCALE: AS SHOWN		



- Qty. per 1,700 square feet**
- 5 Am - Acer macrophyllum      Big Leaf Maple
  - 4 Pb - Populus balsamifera      Black Cottonwood
  - 1 Pm - Psuedotsuga menziesii      Douglas Fir
  - 1 Tp - Thuja plicata      Western Red Cedar
  - 1 Th - Thuja heterophylla      Western Hemlock

- NOTES:**
1. TYP. = Typical
  2. Approx. = Approximate
  3. Drawing shows typical/representative area of wetland buffer to be planted.

**PLANT LIST FOR WETLAND AND STREAM BUFFER IMPACT AREAS: 1.32 acres**

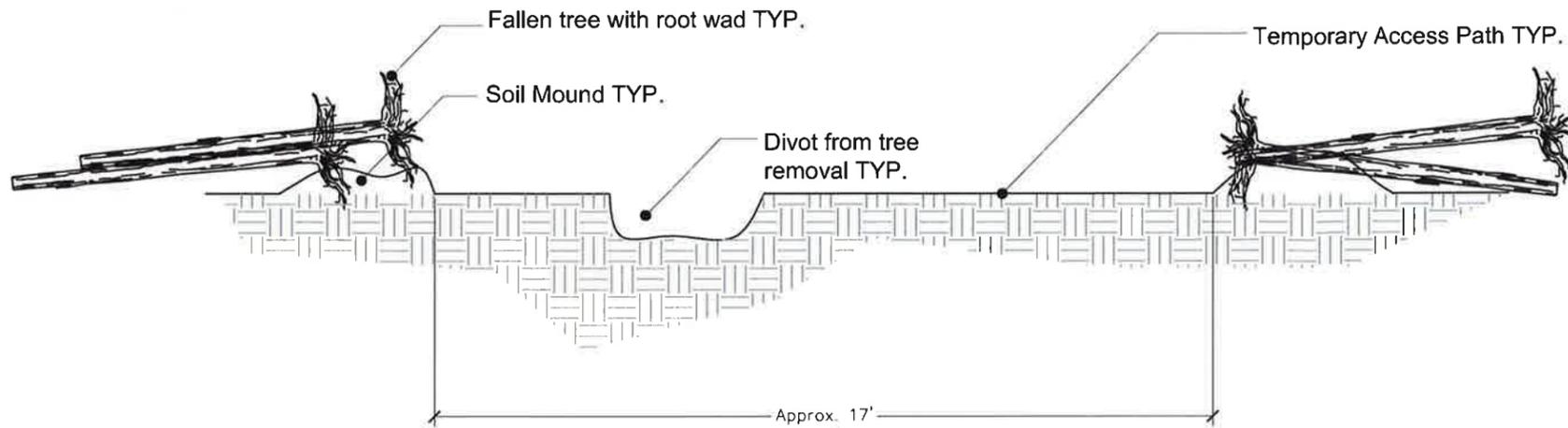
Type	Scientific Name	Common Name	Size	Spacing	* W1 3,698 sf	W2 1,205 sf	W3 4,828 sf	5A/ 5B/5C 7,293 sf	W6 20,529 sf	W7A 3,295 sf	W8A 724 sf	W9A 434 sf	Stream Buffer 15,708 sf	Total:
Tree	Acer macrophyllum	Big Leaf Maple	Seedling	18' o.c.	6	2	5	10	25	5	1	1	20	<b>75</b>
Tree	Populus balsamifera	Black Cottonwood	Seedling	18' o.c.	6	1	5	10	20	3	1		20	<b>66</b>
Tree	Psuedotsuga menziesii	Douglas Fir	Seedling	18' o.c.	4	1	5	5	20	3	1	1	15	<b>55</b>
Tree	Thuja plicata	Western Red Cedar	Seedling	18' o.c.	2	1	5	5	15	2	1		15	<b>46</b>
Tree	Tsuga heterophylla	Western Hemlock	Seedling	18' o.c.	2		5	5	15	2				<b>29</b>
<b>Total:</b>					<b>20</b>	<b>5</b>	<b>25</b>	<b>35</b>	<b>95</b>	<b>15</b>	<b>4</b>	<b>2</b>	<b>70</b>	<b>271</b>

\*See Figure 1 of Critical Areas Assessment Report & Draft Mitigation Plan for wetland buffer locations.

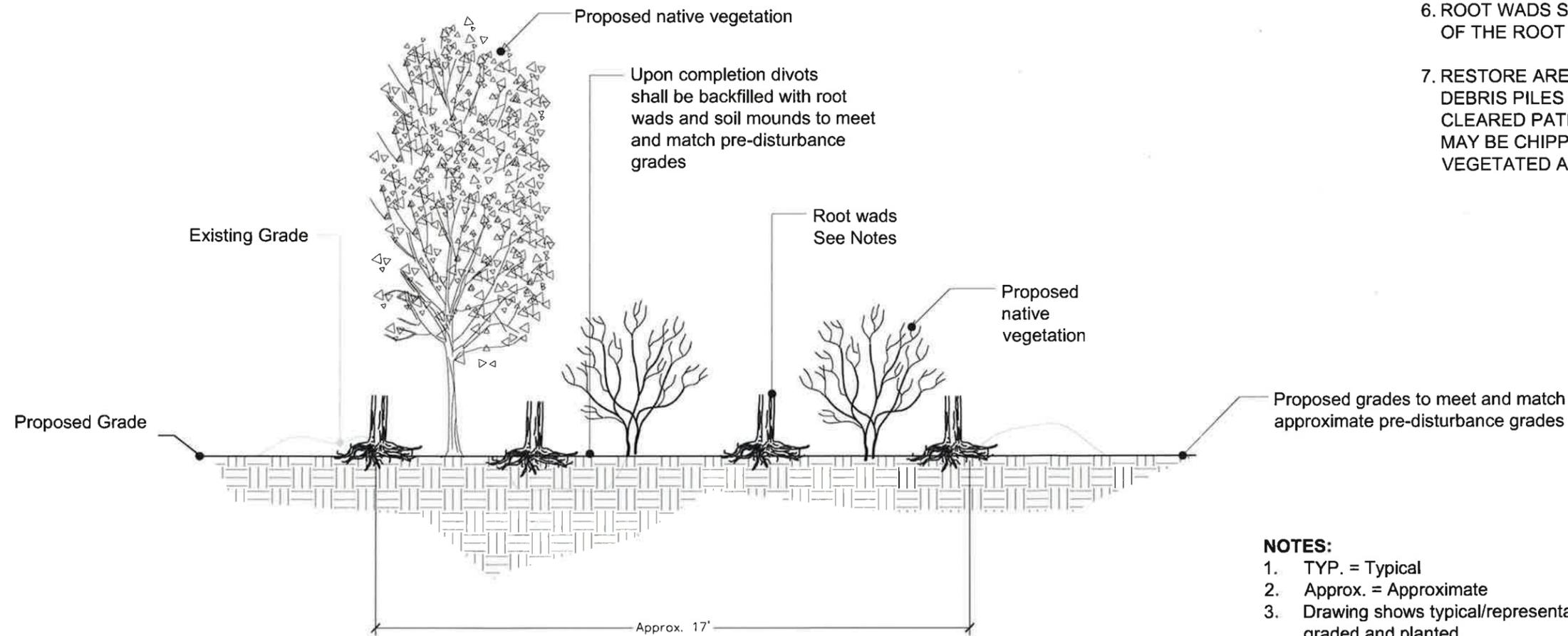
- WETLAND AND STREAM BUFFER SEED MIX: 1.32 acres**
- 60% Elymus glaucus      Blue Wildrye
  - 10% Festuca occidentalis      Western Fescue
  - 30% Festuca rubra      Native Red Fescue

NWS-2008-260

<p>CLIENT LOGO</p>  <p>Pacific International Terminals A Corbis Enterprise</p>	<p>CLIENT:</p> <p style="text-align: center;"><b>PACIFIC INTERNATIONAL TERMINALS, INC.</b></p> <hr/> <p style="text-align: center;"><b>AMEC Earth &amp; Environmental</b> 11810 North Creek Parkway North Bothell, WA, U.S.A. 98011-8201</p>	<p>DWN BY: DP</p> <p>CHK'D BY: KD</p> <p>DATUM: NONE</p> <p>PROJECTION: NONE</p> <p>SCALE: AS SHOWN</p>	<p>PROJECT</p> <p style="text-align: center;"><b>GATEWAY PACIFIC TERMINAL GEOTECHNICAL INVESTIGATION</b></p> <hr/> <p>TITLE</p> <p style="text-align: center;"><b>PROPOSED PLANTING PLAN WETLAND AND STREAM BUFFER TYP.</b></p>	<p>DATE: Jan. 2012</p> <p>PROJECT NO: 0-915-15338-C</p> <p>REV. NO.: 1</p> <p>FIGURE No. Sheet 9 of 13</p>
---	--	---	---	--



**EXISTING CROSS SECTION**



**PROPOSED CROSS SECTION**

**GENERAL NOTES:**

1. MANUALLY BACKFILL AROUND REPLACED ROOT WADS WHEN NECESSARY WITH HAND TOOLS.
2. PLACE VEGETATED SOIL MATS AND ROOT WADS IN CLEARED PATHS.
3. SCARIFY COMPACTED SOILS.
4. FOR EXISTING DOWNED TREES, ROOT WADS SHALL BE CUT 2 FEET ABOVE TRUNK FLARE. REMAINING TREE TRUNKS SHALL BE LEFT IN PLACE. IF TRUNKS ARE CLUMPED TOGETHER THEY SHALL BE EVENLY DISPERSED WITHIN EXISTING VEGETATED AREAS.
5. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT ADDITIONAL DAMAGE TO EXISTING VEGETATION.
6. ROOT WADS SHALL BE PLACED UPRIGHT. AT MINIMUM ONE HALF OF THE ROOT STRUCTURE SHALL BE BURIED.
7. RESTORE AREAS ADJACENT TO CLEARED PATHS BY REMOVING DEBRIS PILES AND DISTRIBUTING MATERIAL WITHIN THE CLEARED PATHS. TREE LIMBS OR OTHER WOODY MATERIALS MAY BE CHIPPED OR MANUALLY PLACED WITHIN EXISTING VEGETATED AREAS.

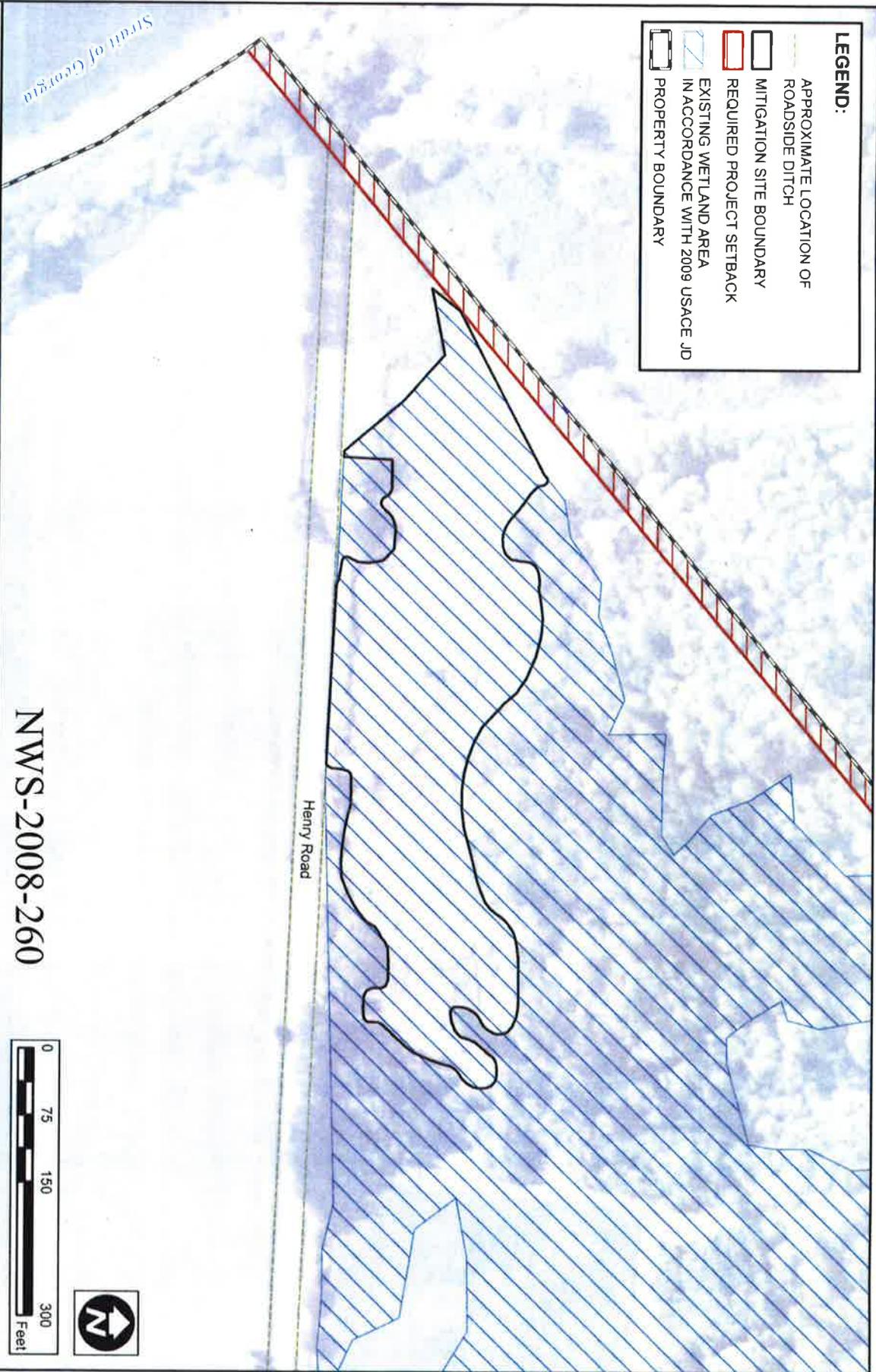
**NOTES:**

1. TYP. = Typical
2. Approx. = Approximate
3. Drawing shows typical/representative area to be graded and planted.

**NWS-2008-260**

CLIENT LOGO  <b>Pacific International Terminals</b> <small>A Corvus Enterprise</small>	CLIENT: <b>PACIFIC INTERNATIONAL TERMINALS, INC.</b>	DWN BY: DP CHK'D BY: KD DATUM: NONE PROJECTION: NONE SCALE: AS SHOWN	PROJECT <b>GATEWAY PACIFIC TERMINAL          GEOTECHNICAL INVESTIGATION</b>	DATE: <b>Jan. 2012</b> PROJECT NO: <b>0-915-15338-C</b>
	<b>AMEC Earth &amp; Environmental</b> <small>11810 North Creek Parkway North          Bothell, WA, U.S.A. 98011-8201</small>		TITLE <b>CROSS SECTIONS TYP.</b>	REV. NO.: <b>1</b> FIGURE No. <b>Sheet 10 of 13</b>

- LEGEND:**
-  APPROXIMATE LOCATION OF ROADSIDE DITCH
  -  MITIGATION SITE BOUNDARY
  -  REQUIRED PROJECT SETBACK
  -  EXISTING WETLAND AREA IN ACCORDANCE WITH 2009 USACE JD
  -  PROPERTY BOUNDARY

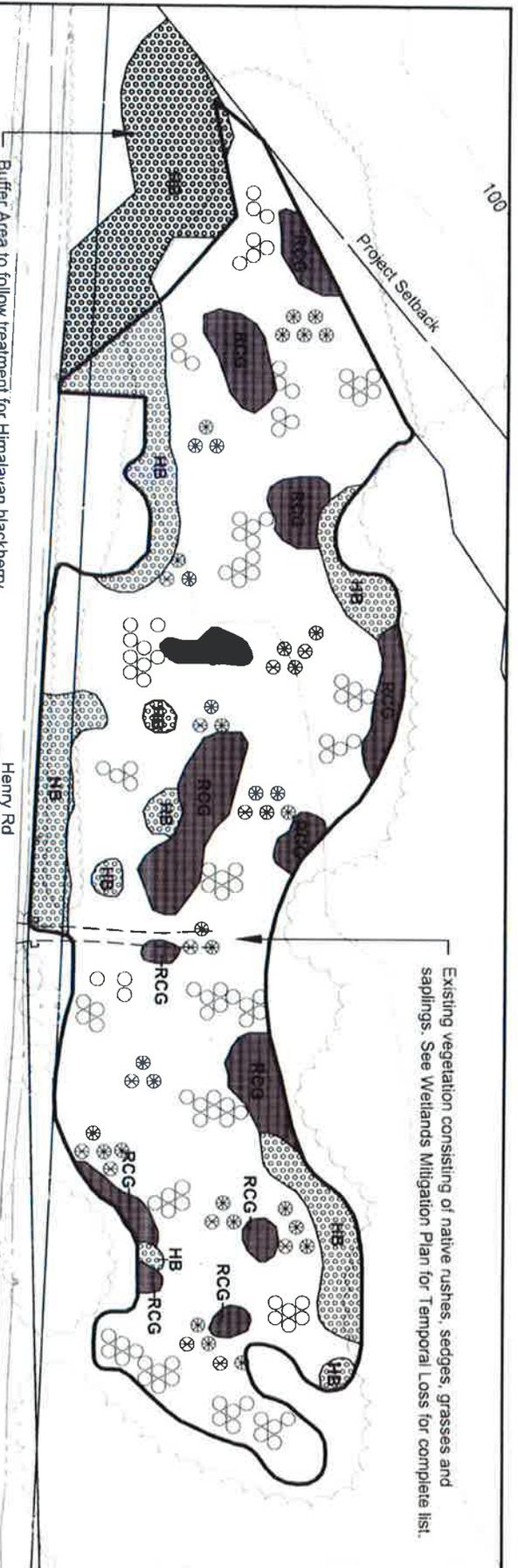


NWS-2008-260



		DRAWN BY <b>PACIFIC INTERNATIONAL TERMINALS, INC</b>		PROJECT <b>WETLAND MITIGATION SITE FOR TEMPORAL LOSS</b>	
AMEC 11810 North Creek Parkway N Bellevue, WA 98001		CHECKED BY J.S.		DATE NAD83	
		PROJECTION NAD 83 North, FT SCALE 1 inch = 150 feet		DATE Jan. 2012	
EXISTING CONDITIONS Sheet 11 of 13		PRODUCT NO. 091515386-01-03		PROJECT NO. 1	

Existing vegetation consisting of native rushes, sedges, grasses and saplings. See Wetlands Mitigation Plan for Temporal Loss for complete list.



80  
 100  
 Buffer Area to follow treatment for Himalayan blackberry.  
 Note: Other buffer areas of the site are surrounded by forest, road, grasses and project setback and are not potential areas for invasive treatment.

- Treatment for RCG areas:**
- Year 1: [Dark Grey Box] Cut and cover reed canarygrass.
  - Year 2: [Medium Grey Box] Cut, spray and re-cover reed canarygrass.
  - Year 3: [Light Grey Box] Plant live willow stakes.\*

- Treatment for HB areas:**
- Year 1: [Dark Grey Box] Clear and grub Himalayan blackberry
  - [Medium Grey Box] Plant native shrubs.\*

- Treatment for total Mitigation area:**
- Year 1: [Circle] Plant native tree seedlings.\*
  - Year 3: [Circle with X] Plant native conifer tree seedlings.\*

\* See next sheet for plant species list. Actual planting density to be determined through evaluation of invasive plant species control

**LEGEND**

- 2' Contours
- 10' Contours
- Mitigation Area (2.9 Acres)
- RCG Reed canary grass areas
- HB Himalayan blackberry areas
- Vegetation Line
- Edge of Pavement
- Roadside Drainage
- Wetland Boundary

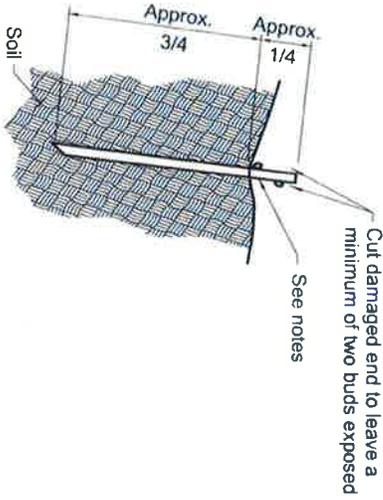
NWS-2008-260

	CLIENT	PACIFIC INTERNATIONAL TERMINALS, INC.	
	DWN BY:	dp	PROJECT
	CHK'D BY:	KD	WETLAND MITIGATION SITE FOR TEMPORAL LOSS
	DATE:	JANUARY 2012	REV. NO.:
AMEC Earth & Environmental 11810 North Creek Parkway North Bohall, WA, U.S.A. 98011-8201		DATUM:	NAD83
PROJECT NO.: 091515338C-07-03 SHEET NO. Sheet 12 of 13		PROJECTION:	WA SP North, FL
SCALE: 1 inch = 100 feet		TITLE	MITIGATION PLAN

**Plant List**

Species	Size	Area	Spacing
<b>Year 1:</b>			
Populus balsamifera	Seedling	Throughout site	10' o.c.
Cornus sericea	Red Twig Dogwood	HB removal sites	4' o.c.
Lonicera involucrata	Twinberry	HB removal sites	4' o.c.
Rosa nutkana	Nootka Rose	HB removal sites	4' o.c.
<b>Year 2:</b>			
Salix lasioandra	Pacific Willow	RCG removal sites	1' o.c.*
<b>Year 3:</b>			
Picea sitchensis	Sitka Spruce	Throughout site	14' o.c.*
Tsuga plicata	Western Red Cedar	Throughout site	14' o.c.*

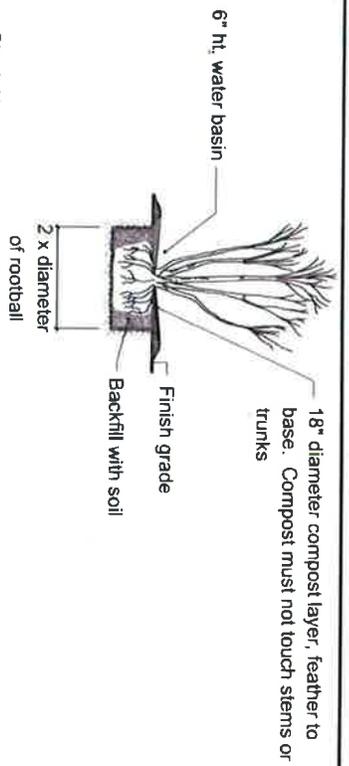
\*Actual planting density to be determined through evaluation of invasive plant species control.  
 HB= Himalayan Blackberry  
 RCG= Reed Canarygrass



- Live Stake Notes:**
1. Do not use axe or sledge, or similar, for driving stakes.
  2. In hard ground, use an iron bar or star drill to prepare the holes for the stake.
  3. Place stakes so they are perpendicular to the slope of the ground surface.
  4. Avoid stripping bark or bruising stakes during installation.
  5. Fill void around cutting with soil so the stake cannot be moved or readily pulled out.
  6. Base of stake may be cut at 45 degree angle to help drive the stake.

**LIVE STAKE PLANTING DETAIL**

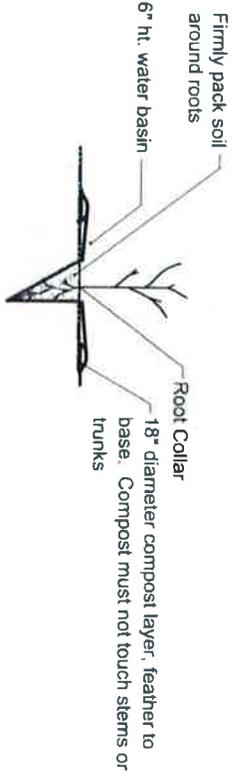
NTS



- Shrub Notes:**
1. Planting pit sizes will be a minimum of twice the root ball width and have their top true root no more than 1 inch above the soil surface.
  2. Prior to planting, containers shall be completely removed and the roots loosened by appropriate pruning.
  3. Planting pits will be backfilled with existing soils that are free of rocks over 2 inches, lumps, and other foreign materials. Backfilling around trunks or stems is not permitted.
  4. The backfill material and root ball shall be thoroughly watered on the same day that planting occurs regardless of season.

**SHRUB PLANTING DETAIL**

NTS



- Seedling Notes:**
1. Planting silt shall be big enough for entire root spread of seedling.
  2. Seedling roots shall be spread out and any twisting or J-shaped bands in the roots shall be avoided.
  3. Root collar shall be at the soil line.
  4. Soil shall be packed firmly around roots, avoiding any air pockets.

**SEEDLING PLANTING DETAIL**

NTS

**NWS-2008-260**

	<b>CLIENT</b> PACIFIC INTERNATIONAL TERMINALS, INC.	<b>CLIENT LOGO</b> Pacific International Terminals
<b>AMEC Earth &amp; Environmental</b> 11810 North Creek Parkway North Bothell, WA, U.S.A. 98011-4201		
<b>DWN BY:</b> dp <b>CHK'D BY:</b> KD <b>DATUM:</b> NAD83 <b>PROJECTION:</b> WA SP North, FL. <b>SCALE:</b> 1 inch = 100 feet	<b>PROJECT</b> WETLAND MITIGATION SITE FOR TEMPORAL LOSS PLANT LIST AND DETAILS	<b>REV. NO.:</b> 2 <b>DATE:</b> JANUARY 2012 <b>PROJECT NO.:</b> 091515338C-07-03 <b>SHEET NO.:</b> Sheet 13 of 13