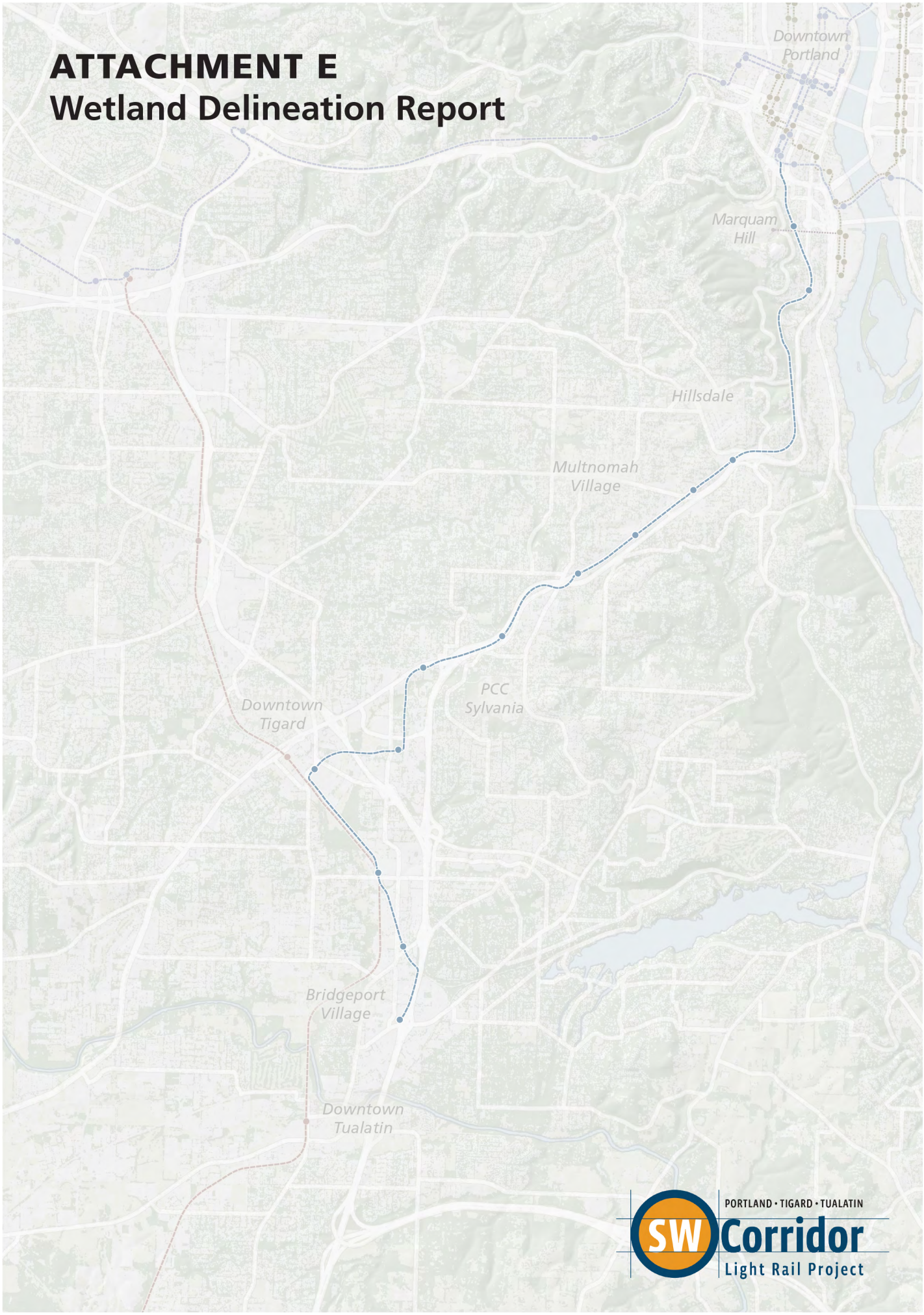
ATTACHMENT E
Wetland Delineation Report



PORTLAND • TIGARD • TUALATIN
SW Corridor
Light Rail Project

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at: https://apps.oregon.gov/DSL/EPS/program?key=4.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.** A single PDF of the completed cover from and report may be e-mailed to: **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information

☒ Applicant ☐ Owner Name, Firm and Address:
TriMet c/o Joe Recker
1800 SW 1st Ave., Ste. 300
Portland, OR 97201

Business phone # (503) 962-2893
Mobile phone # (optional)
E-mail: reckerj@trimet.org

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Joe Recker **Signature:** _____

Date: _____ Special instructions regarding site access: Many private property owners, check with TM before accessing.

Project and Site Information

Project Name: SW Corridor Light Rail Project

Latitude: 45.507/45.403 Longitude: -122.682/-122.745
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
New light rail line, park and rides, pedestrian and bicycle use improvements.

Tax Map # Various - see attached
Tax Lot(s) Various - see attached

Tax Map # Various - see attached
Tax Lot(s) Various - see attached

Project Street Address (or other descriptive location):
Linear project from downtown Portland to Tualatin

Township attached Range see attach Section see attac QQ
Use separate sheet for additional tax and location information

City: Portland, Tigard, Tualatin County: Multnomah/Washir

Waterway: multiple River Mile:

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Ethan Rosenthal
David Evans and Associates, Inc.
2100 S. River Parkway
Portland, OR 97201

Phone # (503) 499-0572
Mobile phone # (if applicable)
E-mail: ethan.rosenthal@deainc.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: Date:

Primary Contact for report review and site access is ☐ Consultant ☒ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No Study Area size: 305.82 Total Wetland Acreage: 4.9100

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Mitigation bank site
☐ EFSC/ODOE Proj. Mgr:
☐ Wetland restoration/enhancement project (not mitigation)
☐ Previous delineation/application on parcel
If known, previous DSL # _____

☐ Fee payment submitted **$** _____
☐ Resubmittal of rejected report ($100)
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # _____ Expiration date_____
☐ LWI shows wetlands or waters on parcel
Wetland ID code _____

For Office Use Only

DSL Reviewer: _____ Fee Paid Date: _____ / _____ / _____ DSL WD # _____

Date Delineation Received: ___/___/___ Scanned: ☐ Electronic: ☐ DSL App.# _____

SW Corridor Project

Wetland Delineation Report

Prepared for:
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Portland, OR 97232

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Prepared by:
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November 2020

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APPENDICES

LIST OF TABLES

1.0 Introduction

Metro and its partners (TriMet, Oregon Department of Transportation, Washington County and the cities of Durham, Portland, Tigard and Tualatin) are conducting the Southwest Corridor Light Rail Project (SWCLRP or Project). The SWCLRP will bring high-capacity transit to one of the most congested travel corridors in the Portland metro region. The project will reduce the strain on roads and trains, getting people to jobs, schools and other destinations more quickly and reliably. The new light rail line will run from Downtown Portland to Tualatin, connecting regional centers including West Portland Town Center, Tigard Triangle, Downtown Tigard and Bridgeport Village.

The purpose of this wetland delineation is to define the boundaries of wetlands and other waters (e.g. streams, ponds) that are regulated by the U.S. Army Corps of Engineers (Corps) and the Oregon Department of State Lands (DSL) in accordance with Section 404 of the Clean Water Act and the Oregon Removal Fill Law, respectively.

1.1 Wetland Delineation Study Area (WSA)

The majority of the Project occurs in highly developed urban and suburban land. As part of the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) process, an area of potential affect (APE) was developed to cover the extents of potential project impacts within the overall project area. A subset of the NEPA APE was used to develop a smaller wetland delineation study area (WSA) to focus on areas where wetlands and other regulated waters (e.g. streams and ponds) might actually occur in the overall APE.

The WSA includes the following types of areas within the greater NEPA APE:

- Public right of way
- Parcels with areas of naturalized vegetation where rights of entry were granted. (Naturalized vegetation refers to both native and non-native plant communities that occur naturally on the landscape, as opposed to areas such as maintained lawns, planter strips, and the like.)

The project study area is shown in Appendix A, Figure 1. The NEPA APE has been broken down into three segments –Segments A, B, and C –from north to south respectively. The WSA follows this same breakdown.

1.2 Report Organization and Nomenclature

This report is organized in accordance with DSL's requirements for wetland delineation reports (Oregon Administrative Rule 141-090) and DSL's guidance for large and linear projects (DSL 2017). In following with the large and linear project guidance, most of the delineation findings are summarized in a series of figures, data sheets, and tables, rather than in detailed report text. These materials are organized into the following appendices, with findings further subdivided by project Segment within each appendix as appropriate.

- Appendix A: Wetland delineation figures
- Appendix B: Data sheets
- Appendix C: Photos
- Appendix D: Delineation results tables
- Appendix E: WETS table

Documentation of delineated features follows the nomenclature provided in Table 1.

Table 1. Mapping and Documentation Terms and Nomenclature

Nomenclature	Meaning
W-##, S-##, D-##	W = wetland, S = stream, D = ditch
	The first # describes the project segment, which was used to divide the study area
	The second # is the consecutive number assigned to each feature. For example, feature W-C3 refers to a wetland in Segment C with an ID number of 3.

2.0 Landscape Setting and Land Use

The Project corridor runs from Portland's urban core and heads southward to the Cities of Tigard and Tualatin, running through a highly developed urban and suburban landscape (Appendix A, Figure 1). A description of each Project segment is provided below.

2.1 Segment A

Segment A starts near the Portland State University Campus in downtown Portland, around the intersections of SW 5th Avenue and SW Lincoln Street. The segment continues to the south and is generally centered on SW Barbur Boulevard. The area around the Ross Island Bridge western ramps and SW Naito Parkway is also included in the WSA. The southern extent of Segment A occurs along SW Barbur Boulevard near the intersection of SW Florida Street and SW 2nd Avenue (note this intersection is just west of the WSA).

Areas east of SW Barbur Boulevard are fully developed with all natural drainages having been piped underground and into Portland's combined storm/sanitary sewer system many years ago. The area west of SW Barbur Boulevard consists of a mix of developed areas and relatively large tracts of park land comprised of second growth forests along steep hillsides. Several drainages flow down these hill sides; however, all flow into pipes prior to entering the WSA, then flow into City of Portland sewer infrastructure. Most roads in the Segment A WSA had curb and gutters, and no roadside drainage ditches were observed. A single wetland was delineated in this segment of the WSA.

2.2 Segment B

Segment B continues from the southern extent of Segment A and continues southwest along SW Barbur Boulevard to roughly the intersection with SW 68th Avenue. This segment is fully developed; however, two short remnant sections of drainageways were observed in the WSA and are described further in the results tables provided in Appendix D. Most roads in the Segment B WSA have curb and gutters; however, a few roadside drainage ditches were observed and are also described in Appendix D.

2.3 Segment C

Segment C continues from the southern end of Segment B to the southwest along the SW Barbur Boulevard and I-5 corridor but then veers southward near the intersection of SW Pacific Highway and SW 68th Parkway. The segment WSA then heads west and crosses I-5 near the Knez Wetlands. It eventually heads southward again to Bridgeport Village and Lower Boones Ferry Road. Segment C is highly developed; however, it contains by far the greatest amount of wetland resources in the WSA. The wetlands are associated with streams such as Red Rock Creek, Ball Creek and Fanno Creek in level areas near Tigard. The Knez Wetlands, managed by The Wetlands Conservancy, occurs in this Segment. Wetland and waterway resources are described further in the results tables provided in Appendix D.

3.0 Site Alterations

As described in Section 2.0, the WSA segments occur in highly developed areas. Many of the historical natural drainageways have been highly altered, realigned, and in many instances piped into local storm sewer systems.

4.0 Precipitation Data and Analysis

Precipitation data is provided for each of the different field date periods. Field work occurred in 2019 on April 25, June 6 and 7, and July 11 and in 2020 on May 15 and June 23. As described below, precipitation during the 2019 field work dates was typically within the range of normal and no change in delineation methods was needed. For the 2020 dates, precipitation ranged from normal to below normal. Despite the below normal conditions changes in methods were not needed since there were typically clear breaks in other wetland indicators (i.e. soils and plant communities) that allowed for easy delineation of wetland and waterway boundaries, and secondary indicators of wetland hydrology were also present.

4.1 Spring 2019 (Field Work for Segments A and B)

Table 2 shows the two-week precipitation total for the closest available station for which daily values were available (Portland, Oregon) prior to the fieldwork which occurred on April 25, 2019. Fieldwork for this period focused on all of the Segment B study area and readily accessible areas of right of way in the Segment A WSA. The precipitation record reveals that precipitation was low and generally below the range of normal for the short and medium term prior to the site

visit. Percent of normal precipitation for the water year for the field date was 79 percent (Table 4). Therefore, it was assumed that hydrologic conditions were relatively normal and no change in methods was needed.

Table 2. Precipitation for Field Investigation and Two Weeks Prior, in Inches

April 12	April 13	April 14	April 15	April 16	April 17	April 18
Trace	0.12	0.04	0.11	0.03	Trace	0.00
April 19	April 20	April 21	April 22	April 23	April 24	April 25*
0.18	0.00	0.00	0.01	Trace	0.00	0.00
Total over 2 weeks						
0.49						

**Day of field investigation. Source: (NWS 2019)*

Table 3. Percent of Normal Precipitation for the 3 Months Preceding the Field Investigation

Month	Observed Precipitation for Month[1] (Inches)	Normal Precipitation for Month[2] (Inches)	Percent Normal Precipitation	WETS Table 30% Range of Normal	Within Normal WETS range?
Jan 2019	2.79	5.07	55%	2.98 – 6.15	No
Feb 2019	4.10	4.18	98%	2.84 – 4.98	Yes
March 2019	1.54	3.71	42%	2.85- 4.31	No

[1] Observed precipitation data from from Portland Airport gage location. Source: (NWS 2019)
[2] Monthly normal values from the Portland Airport NRCS WETS table data. Source: (NRCS 2019)

Table 4. Percent of Normal Precipitation for the Water Year Preceding the Field Investigation

Month	Observed Precipitation (Inches)	Normal Precipitation (Inches)	Departure from Normal (inches)	Within 30% of Normal Precipitation for Water Year?
April 25, 2019	22.77	28.68	-5.91	Yes (79%)

[1] Water year data for Portland, Oregon based on October 1 start date. Source: (NWS 2019)

4.2 Spring 2019 (Field Work for Segment C)

Table 5 shows the two-week precipitation total for the closest available station for which daily values were available (Portland, Oregon) prior to the field work which occurred on June 6 and 7, 2019. Fieldwork for this period focused on the Segment C WSA right of way and properties with rights of entry. The precipitation record reveals that precipitation was low but within the range of normal for the short and medium term prior to the site visit. Although March 2019 was below normal, April and May were at or near normal (Table 6), and percent of normal precipitation for

the water year for the field date was 75 percent (Table 7). Therefore, it was assumed that hydrologic conditions were relatively normal and no change in methods was needed.

Table 5. Precipitation for Field Investigation and Two Weeks Prior, in Inches

May 24	May 25	May 26	May 27	May 28	May 29	May 30
0.05	0.37	0.00	trace	0.00	0.00	0.00
May 31	June 1	June 2	June 3	June 4	June 5	June 6*
trace	0.00	0.00	0.00	0.00	trace	0.01
June 7*	Total over 2 weeks					
0.15	0.58 inches					

**Day of field investigation. Source: (NWS 2019)*

Table 6. Percent of Normal Precipitation for the 3 Months Preceding the Field Investigation

Month	Observed Precipitation for Month[1] (Inches)	Normal Precipitation for Month[2] (Inches)	Percent Normal Precipitation	WETS Table 30% Range of Normal	Within Normal WETS range?
March 2019	1.54	3.71	42%	2.85- 4.31	No
April 2019	2.98	2.64	113%	1.93- 3.10	Yes
May 2019	1.51	2.38	64%	1.44- 2.88	Yes

[1] Observed precipitation data from from Portland Airport gage location. Source: (NWS 2019)
[2] Monthly normal values from the Portland Airport NRCS WETS table data. Source: (NRCS 2019)

Table 7. Percent of Normal Precipitation for the Water Year Preceding the Field Investigation

Date	Observed Precipitation (Inches)	Normal Precipitation (Inches)	Departure from Normal (inches)	Within 30% of Normal Precipitation for Water Year?
June 7, 2019	24.30	32.00	-7.70	Yes (75% of normal)

[1] Water year data for Portland, Oregon based on October 1 start date. Source: (NWS 2019)

4.3 Summer 2019 (Field Work for Segment A)

Table 8 shows the two-week precipitation total for the closest available station for which daily values were available (Portland, Oregon) prior to the field work which occurred on July 11, 2019. Fieldwork for this period focused on the Segment A WSA, particularly properties with rights of entry and more difficult to access portions of the right of way. The precipitation record reveals that precipitation was low but generally within the range of normal for the short and medium term prior to the site visit. Precipitation for the preceding 3 months was within the range of normal for 2 out of 3 months (Table 9). Precipitation for the water year was low, but just within the range of normal at 76 percent (Table 10). Therefore, it was assumed that hydrologic conditions were relatively normal and no change in methods was needed.

Table 8. Precipitation on Day of Field Investigations and Two Weeks Prior in Inches

June 28	June 29	June 30	July 1	July 2	July 3	July 4
0.00	0.00	0.00	0.00	Trace	0.02	0.00
July 5	July 6	July 7	July 8	July 9	July 10	July 11 *
0.03	0.02	0.04	0.01	0.37	0.47	Trace
Total over 2 weeks						
0.96						

**Day of field investigation. Source: (NWS 2019)*

Table 9. Percent of Normal Precipitation for the Three Months Preceding the Field Investigation

Date	Observed Precipitation for Month[1] (Inches)	Normal Precipitation for Month[2] (Inches)	Percent Normal Precipitation	WETS Table 30% Range of Normal	Within Normal WETS range?
April 2019	2.98	2.64	113%	1.93 -- 3.10	Yes
May 2019	1.51	2.38	64%	1.44 -- 2.88	Yes
June 2019	0.45	1.59	28%	0.94 – 1.93	No

[1] Observed precipitation data from Portland International Airport gage location. Source: (NWS 2019)
[2] Monthly normal values from the Portland international Airport NRCS WETS table data. Source: (NRCS 2019)

Table 10. Percent of Normal Precipitation for the Water Year through Day of Field Work

Date	Observed Precipitation (Inches)	Normal Precipitation (Inches)	Departure from Normal (inches)	Within 30% of Normal Precipitation for Water Year?
July 11, 2019	25.52	33.54	-8.02	Yes (76%)

[1] Water year data for Portland, Oregon based on October 1 start date. Source: (NWS 2019)

4.4 Spring 2020 (Field Work for Segment C-Rail ROW)

Table 11 shows the two-week precipitation total for the closest available station for which daily values were available (Portland, Oregon) prior to the field work which occurred on May 15, 2020. Fieldwork for this period focused on the Segment C WSA that occurs along existing rail right of way. The precipitation record reveals that a little over an inch of rain fell in the immediate period leading up to the site visit, but was notably below the range of normal for the medium term prior to the site visit (Table 12). Precipitation for the water year was low, but just below the range of normal at 69 percent (Table 13). Hydrologic conditions were relatively normal to below normal and no change in methods were needed.

Table 11. Precipitation on Day of Field Investigations and Two Weeks Prior in Inches

May 2	May 3	May 4	May 5	May 6	May 7	May 8
0.21	0.23	0.02	trace	0.05	0.00	0.00
May 9	May 10	May 11	May 12	May 13	May 14	May15 *
0.00	0.00	0.13	0.05	0.03	0.20	0.16
Total over 2 weeks						
1.08						

**Day of field investigation. Source: (NWS 2019)*

Table 12. Percent of Normal Precipitation for the Three Months Preceding the Field Investigation

Date	Observed Precipitation for Month[1] (Inches)	Normal Precipitation for Month[2] (Inches)	Percent Normal Precipitation	WETS Table 30% Range of Normal	Within Normal WETS range?
February 2020	1.55	4.18	37%	2.84 – 4.98	No
March 2020	2.43	3.71	65%	2.85 – 4.31	No
April 2020	0.79	2.64	30%	1.93 – 3.10	No

[1] Observed precipitation data from Portland International Airport gage location. Source: (NWS 2020)
[2] Monthly normal values from the Portland international Airport NRCS WETS table data. Source: (NRCS 2019)

Table 13. Percent of Normal Precipitation for the Water Year through Day of Field Work

Date	Observed Precipitation (Inches)	Normal Precipitation (Inches)	Departure from Normal (inches)	Within 30% of Normal Precipitation for Water Year?
May 15, 2020	20.92	30.24	-9.32	No (69%)

[1] Water year data for Portland, Oregon based on October 1 start date. Source: (NWS 2020)

4.5 Spring 2020 (Field Work for Segments B and C—Additional Parcels)

Table 14 shows the two-week precipitation total for the closest available station for which daily values were available (Portland, Oregon) prior to the field work which occurred on June 23, 2020. Fieldwork for this period focused on the Segment C WSA where new right of entry had been granted. The precipitation record reveals that a little over an inch of rain fell in the immediate period leading up to the site visit, but was below to within the range of normal for the medium term prior to the site visit (Table 15). Precipitation for the water year was within the range of normal for the water year (Table 16). Hydrologic conditions were relatively normal to below normal and no change in methods were needed.

Table 14. Precipitation on Day of Field Investigations and Two Weeks Prior in Inches

June 10	June 11	June 12	June 13	June 14	June 15	June 16
Trace	0.03	0.04	0.21	0.01	0.35	0.19
June 17	June 18	June 19	June 20	June 21	June 22	June 23*
0.00	0.00	0.00	0.33	0.00	0.00	0.00
Total over 2 weeks						
1.16						

**Day of field investigation. Source: (NWS 2020)*

Table 15. Percent of Normal Precipitation for the Three Months Preceding the Field Investigation

Date	Observed Precipitation for Month[1] (Inches)	Normal Precipitation for Month[2] (Inches)	Percent Normal Precipitation	WETS Table 30% Range of Normal	Within Normal WETS range?
March 2020	2.43	3.71	65	2.85 – 4.31	No
April 2020	0.79	2.64	30	1.93 – 3.10	No
May 2020	2.21	2.38	93	1.44 – 2.88	Yes

[1] Observed precipitation data from Portland International Airport gage location. Source: (NWS 2020)
[2] Monthly normal values from the Portland international Airport NRCS WETS table data. Source: (NRCS 2019)

Table 16. Percent of Normal Precipitation for the Water Year through Day of Field Work

Date	Observed Precipitation (Inches)	Normal Precipitation (Inches)	Departure from Normal (inches)	Within 30% of Normal Precipitation for Water Year?
June 23, 2020	25.47	32.99	-7.52	Yes (77%)

[1] Water year data for Portland, Oregon based on October 1 start date. Source: (NWS 2020)

5.0 Methods

5.1 Preliminary Resource Review

Reference materials were reviewed prior to the field investigation to provide information regarding the possible presence of wetlands, water features, hydric soils, wetland hydrology, and site topography. The materials reviewed included:

- ESRI. USA Topographic Maps:
    - 1984. Beaverton, Oregon.
    - 1984. Gladstone, Oregon.
    - 1984. Lake Oswego, Oregon.
    - 1990. Linnton, Oregon.
    - 1990. Mount Tabor, Oregon-Washington.
    - 1990. Portland, Oregon-Washington.
- The Metro Data Resource Center Regional Land Information System (RLIS). 2019. Tax Lots.
- US Fish and Wildlife Service. 2019. National Wetlands Inventory (1977 to present). Branch of Habitat Assessment.
- U.S. Geological Survey. 2017. National Hydrography Dataset.
- Natural Resource Conservation Service (NCRS). 2016. Soil Survey Geographic (SSURGO) database for Clackamas, Multnomah, and Washington Counties, Oregon.
- ESRI. 2019. ArcGIS Online, USA area World Imagery, DigitalGlobe.

The topographic maps were examined to determine water features and topography of the site, and adjacent properties that might influence on-site conditions (Appendix A, Figure 1 – Vicinity Map). Tax lots maps are included in Figure 2 of Appendix A. The National Wetlands Inventory (NWI) (Appendix A, Figure 3) was examined to determine if wetlands are mapped on site. The Soil Survey map (Appendix A, Figure 4) was reviewed for hydric soils. Aerial photographs of the project corridor were reviewed and are included in Figure 5 of Appendix A.

5.2 Field Methods

The wetland delineation field work occurred in 2019 on April 25, June 6 and 7, and July 11 and in 2020 on May 15 and June 23. The wetland delineation was conducted using the Level 2 Routine Delineation Method described in the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and further supported by the Regional Supplement (Supplement) to the Corps of Engineers Wetland Delineation Manual, Western Mountains, Valleys, and Coast Region (USACE 2010). This method requires the simultaneous presence of hydrophytic vegetation, hydric soils, and positive wetland hydrology in wetland delineations.

Areas in which wetland hydrology, hydric soils, and hydrophytic vegetation were all present were considered wetlands. Precipitation considerations were discussed in the previous section. Data sheets were completed at each sample plot documenting the vegetation, soils, and

hydrology. Paired sample plots were chosen that represent typical wetland and upland plant communities encountered on the site. Wetland data sheets are included in Appendix C. As required by the Oregon Department of State Lands (DSL), all mapped hydric soil units were sampled, except where no native soil was present within the study area (such as road fill prisms).

Streams and ditches were delineated based on the presence of an ordinary high water mark (OHWM). This included OHWM indicators such as presence/absence of persistent vegetation along the bank, scour, and material sorting.

5.2.1 Use of DSL Guidance for Large or Linear Projects

Due to the size of the project, the delineation was conducted and has been documented following guidance provided in “Delineations for Large or Linear Projects” (DSL 2017). Based on this guidance, delineation findings are described in the tables in Appendix D.

5.2.2 Identification of Stream Flow Regime

The Streamflow Duration Assessment for the Pacific Northwest (Nadeau, 2015) was used as a guide in determining whether each stream would be considered perennial, intermittent, or ephemeral. While scoring sheets were not formally completed , the field crew reviewed several channels following the method in order to recognize characteristics that would define a channel as perennial, intermittent, or ephemeral. This knowledge was then used to assign a flow designation to each mapped stream (Appendix D).

5.2.3 Jurisdictional Determinations

The Corps and DSL regulate wetlands and other non-wetland waters at the federal and state levels, respectively. The Corps administers the compliance with the Section 404 of the Clean Water Act. DSL administers compliance with Oregon’s Removal-Fill law. Jurisdiction to regulate these features between these two agencies is similar in most instances, but different in some instances due to differing laws, regulations, and court rulings. Relevant distinctions are provided below and were used to determine potential jurisdiction of delineated resources by both agencies.

5.2.3.1 Clean Water Act Section 404 Jurisdiction

According to the U.S. Environmental Protection Agency (EPA)(2020), on April 21, 2020, the EPA and the Corps published the Navigable Waters Protection Rule in the Federal Register to finalize a revised definition of “waters of the United States” under the Clean Water Act. For the first time, the agencies have streamlined the definition so that it includes four simple categories of jurisdictional waters, provides clear exclusions for many water features that traditionally have not been regulated, and defines terms in the regulatory text that have never been defined before. Congress, in the Clean Water Act, explicitly directed the Agencies to protect “navigable waters.” The Navigable Waters Protection Rule regulates the nation’s navigable waters and the core tributary systems that provide perennial or intermittent flow into them.

The Navigable Waters Protection Rule is the second step in a two-step process to review and revise the definition of "waters of the United States" consistent with the February 2017 Presidential Executive Order entitled "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the 'Waters of the United States.'" This final rule became effective on June 22, 2020. On June 19, 2020, the District Court for the District of Colorado stayed the effective date of the Rule only in the State of Colorado. The rule is being implemented by EPA and the Army in all other states and jurisdictions.

Under the final Navigable Waters Protection Rule, four clear categories of waters are federally regulated:

- The territorial seas and traditional navigable waters,
- Perennial and intermittent tributaries to those waters,
- Certain lakes, ponds, and impoundments, and
- Wetlands adjacent to jurisdictional waters

The final rule also details 12 categories of exclusions (i.e., features that are not "waters of the United States"), such as features that only contain water in direct response to rainfall (e.g., ephemeral features), groundwater, many ditches, prior converted cropland, and waste treatment systems.

5.2.3.2 Oregon Removal-Fill Law Jurisdiction

Preliminary Jurisdictional determinations for DSL were made based on Oregon Administrative Rules (OAR) 141-085-0515. Review of DSL jurisdiction of roadside ditches followed OAR 141-085-515 (8) Jurisdictional Ditches, which states that ditches "*are jurisdictional if they are: (a) Created in wetlands, estuaries, tidal rivers or other waters of this state; or (b) Created from upland and meet the following conditions: (A) Contain food and game fish; and (B) Have a free and open connection to waters of this state. A "free and open connection" means a connection by any means, including but not limited to culverts, to or between natural waterways and other navigable and non-navigable bodies of water that allows the interchange of surface flow at bankfull stage or ordinary high water, or at or below mean higher high tide between tidal waterways*."

Exemptions are provided for roadside ditches, as specified in OAR 141-085-0515 (10) as follows. "*Non-Jurisdictional Roadside and Railroad Ditches. Roadside and railroad ditches that meet the following tests are not jurisdictional: (a) Ten feet wide or less at the ordinary high water line; (b) Artificially created from upland or from wetlands; (c) Not adjacent and connected or contiguous with other wetlands; and (d) Do not contain food or game fish*."

6.0 Description of All Wetlands and Other Non-Wetland Waters

Following the DSL guidance for "large or linear projects," delineated wetlands and non-wetland waters descriptions are summarized in table format (Appendix D), including the size of the resources mapped in Figure 6 of Appendix A. Types of wetlands found within the WSA included palustrine emergent, scrub-shrub, and forested wetlands, all of which have experienced alteration and degradation to varying degrees as a result of surrounding development. Similarly, natural drainageways have also been considerably altered, with many streams piped through the study area and into storm sewer systems. No WSA streams are mapped by DSL as providing Essential Salmonid Habitat (DSL 2010-2015). A summary of the number of features delineated in each WSA segment is provided in Table 17.

Table 17. Number of Resources Delineated by Segment

	Feature Count			
Feature Type	**Segment A**	**Segment B**	**Segment C**	**Total**
Wetlands	1	1	10	2
Streams	0	2	6	8
Ditches [1]	0	3	8	11

[1] Aside from ditch D-Ca, all mapped ditches assumed to not be in Corps jurisdiction. Aside from ditch D-Ca, all mapped ditches are assumed to be exempt from DSL jurisdiction.

7.0 Deviation from NWI or LWI

All wetlands mapped by the NWI and LWI were found to occur within the project WSA and were delineated as shown in Figure 6. Streams mapped by the NWI and LWI, as well as NHD layer, were often observed in the vicinity; however, as previously noted, many of the streams are now piped through the WSA and enter storm sewer systems. This was particularly the case in Segments A and B.

8.0 Mapping Method

Wetland boundaries, data points, and all other features were mapped using a Trimble R1 resource-grade Global Positioning System (GPS) unit synced to an iPad running ESRI ArcCollector software. GPS data was imported into the project Geographic Information System (GIS). Map accuracy was typically three feet or better.

9.0 Additional Information

Local municipality storm sewer system GIS data was reviewed to aid understanding of alterations to the local stream systems.

10.0 Results and Conclusions

Detailed listings of delineated features are provided in the tables in Appendix D and correspond to the features mapped in Figure 6 of Appendix A. Table 18 provides a summary of overall findings.

Table 18. Summary of Resources Delineated in the Study Area

Feature Type	Quantity
Wetlands (acres)	4.76
Streams (linear feet)	2,707
Ditches (linear feet) [1]	3,903

[1] Aside from ditch D-Ca, all mapped ditches assumed to not be in Corps jurisdiction. Aside from ditch D-Ca, all mapped ditches are assumed to be exempt from DSL jurisdiction.

11.0 Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigator. It is correct and complete to the best of my knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in Accordance with OAR 141-090-0005 through OAR 141-090-0555.

12.0 Preparers and Contributors

DEA Ecologists Ethan Rosenthal and Phil Rickus, and DEA Environmental Specialist Valerie Thompson performed the wetland delineation. Mr. Rosenthal is the primary author of this report, and Bill Hall, DEA Project Manager, provided quality control review. Corie Peters, DEA Project Assistant, provided editing assistance. Melissa Foltz and Sara Gilbert, DEA Graphics Specialist, prepared report graphics.

13.0 Literature Citations

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US Fish and Wildlife Service. 2017. National Wetlands Inventory (1977 to present). Branch of Habitat Assessment.

U.S. Geological Survey. 2017. National Hydrography Dataset. URL: https://nhd.usgs.gov/data.html

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Appendices

APPENDIX A: Figures

- Figure 1: Vicinity Map
- Figure 2: Tax Lots Map
- Figure 3: National Wetlands Inventory
- Figure 4: Soil Survey Map
- Figure 5: Aerial Photographs
- Figure 6: Wetland Delineation

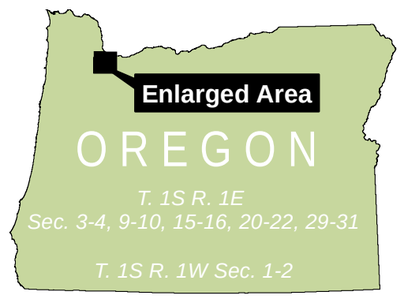
TRIMET

Southwest Corridor Light Project
Figure 1: Vicinity Map

Legend
- Wetland Study Area Segment A
- Wetland Study Area Segment B
- Wetland Study Area Segment C
- City Limit
- County Boundary

ESRI, ArcGIS Online, USA Topographic Maps:
1984. Beaverton, Oregon. 1984. Gladstone, Oregon.
1984. Lake Oswego, Oregon. 1990. Linnton, Oregon.
1990. Mount Tabor, Oregon-Washington.
1990. Portland, Oregon-Washington.

0 0.75 1.5 Miles



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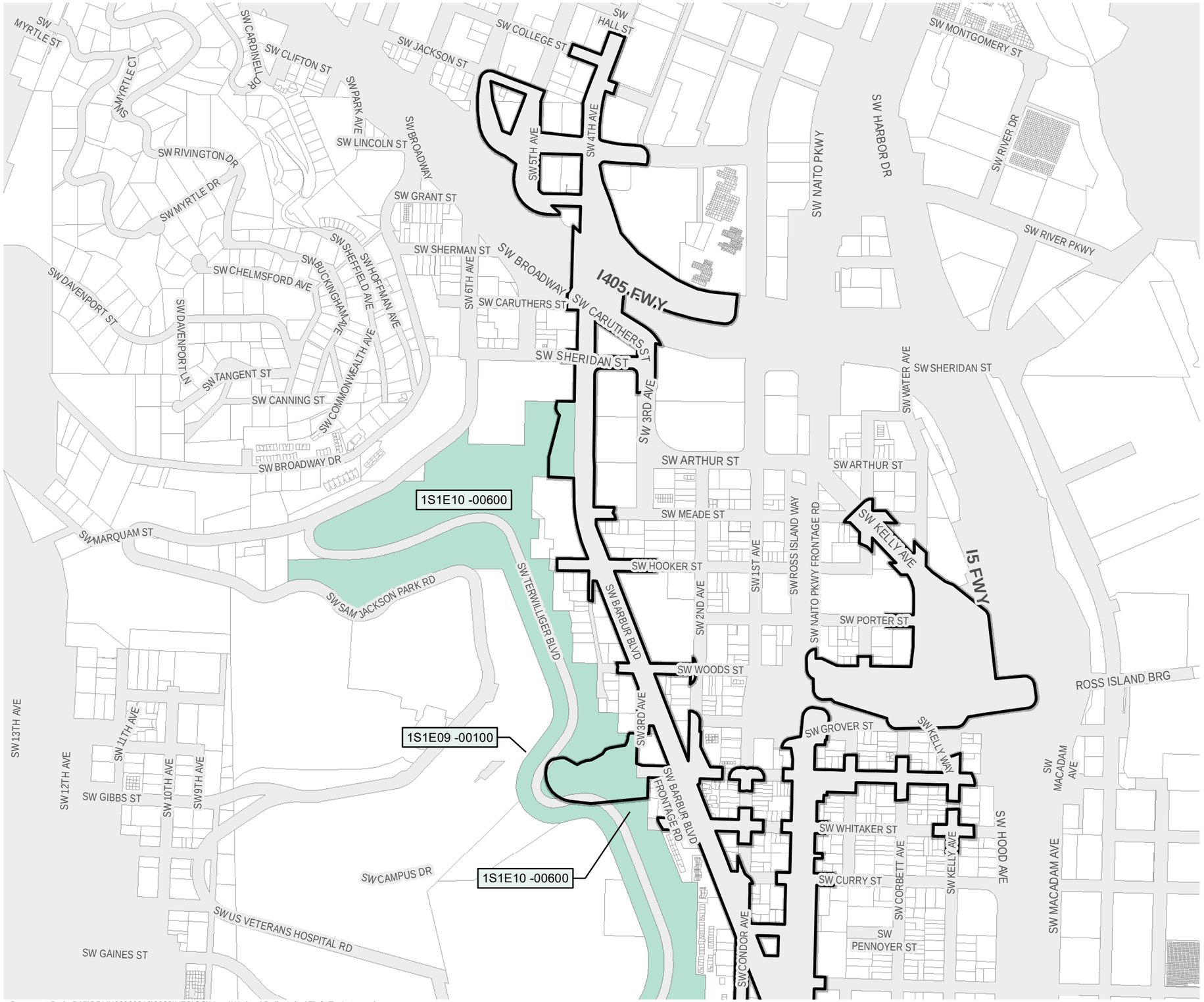


Document Path: P:\P\PRMX00000016\0600INFO\GS\Maps\Wetland Delineation\Fig2_TaxLots.mxd

TRIMET

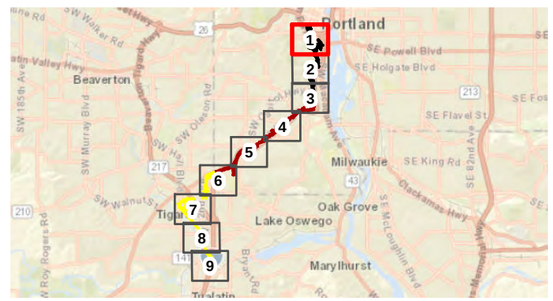
Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 1 of 9

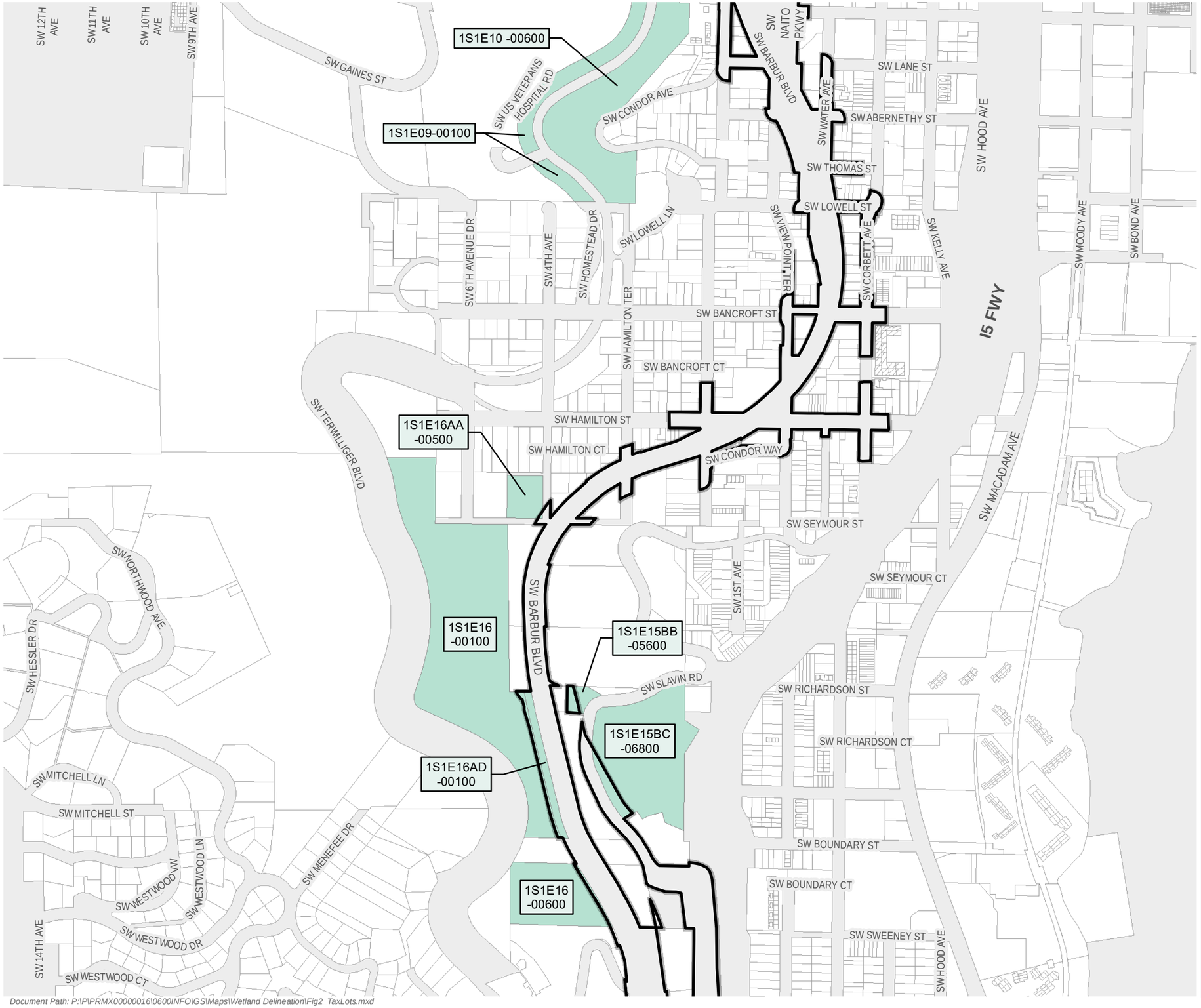
Legend
- Wetland Study Area Segment A
- Metro RLIS Tax Lot
- Tax Lot within Study Area

Metro RLIS GIS Data. 2020.

N

0 500 1,000 Feet





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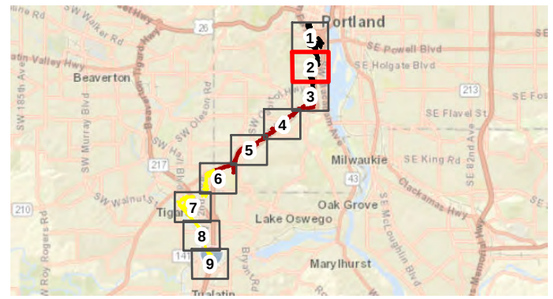
TRIMET

Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 2 of 9

Legend
- Wetland Study Area Segment A
- Metro RLIS Tax Lot
- Tax Lot within Study Area

Metro RLIS GIS Data. 2020.

0 500 1,000 Feet



TRIMET

Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 3 of 9

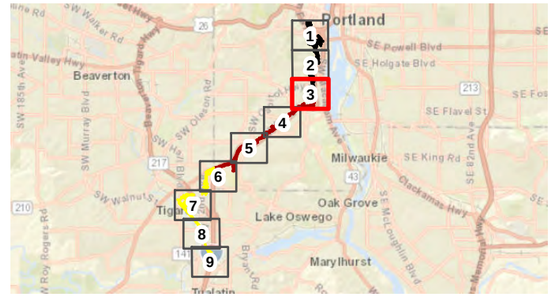
Legend
- Wetland Study Area Segment A
- Wetland Study Area Segment B
- Metro RLIS Tax Lot
- Tax Lot within Study Area

1S1E16 -00800

1S1E22BC -08800

Metro RLIS GIS Data. 2020.

0 500 1,000 Feet



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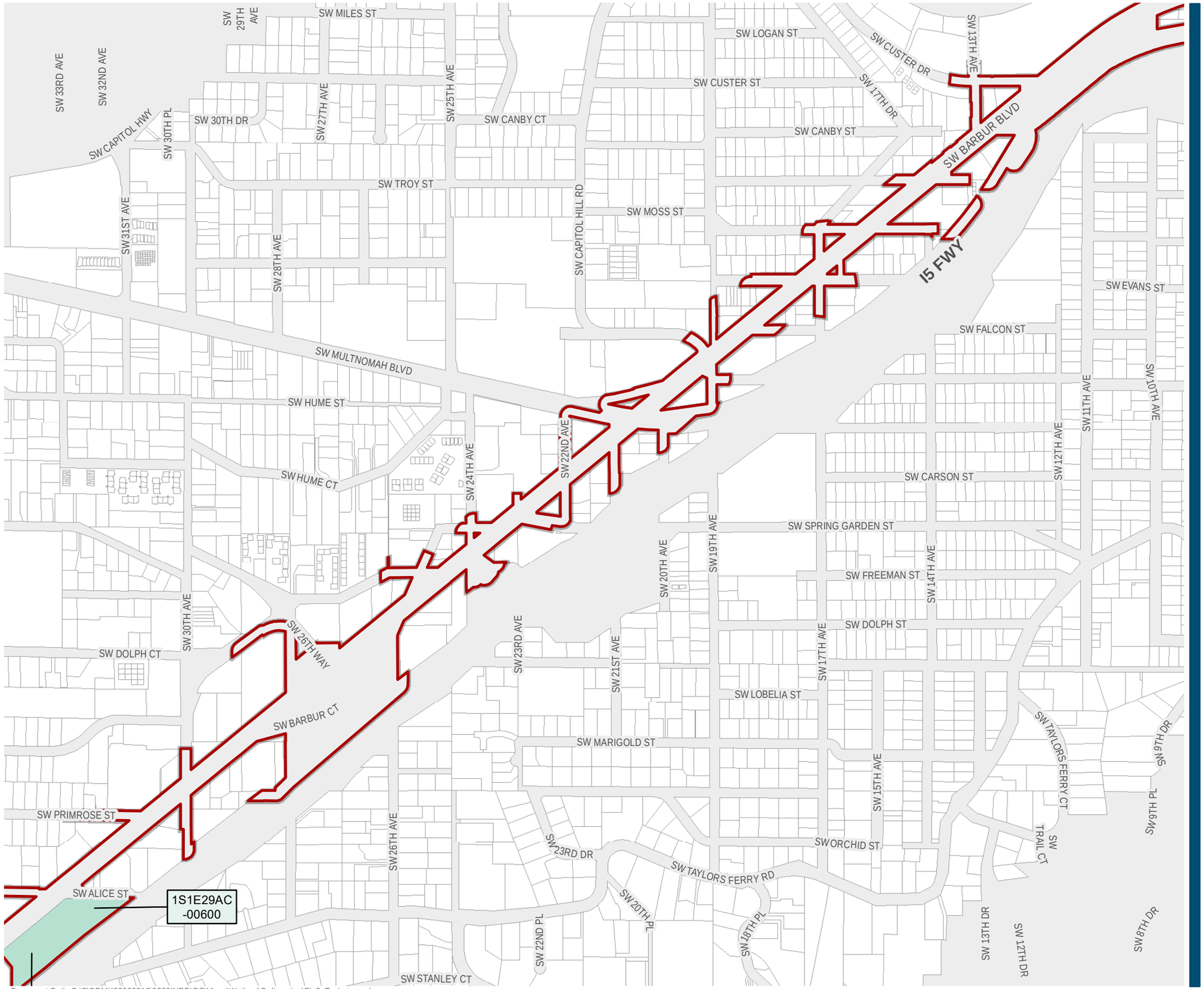

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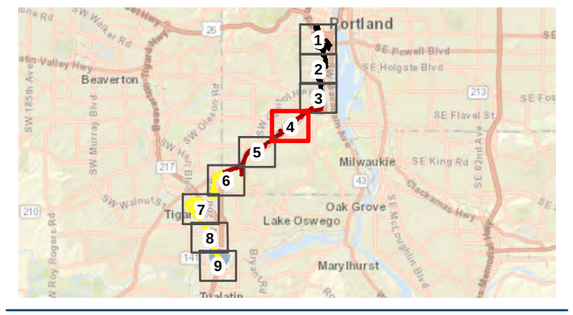
TRIMET

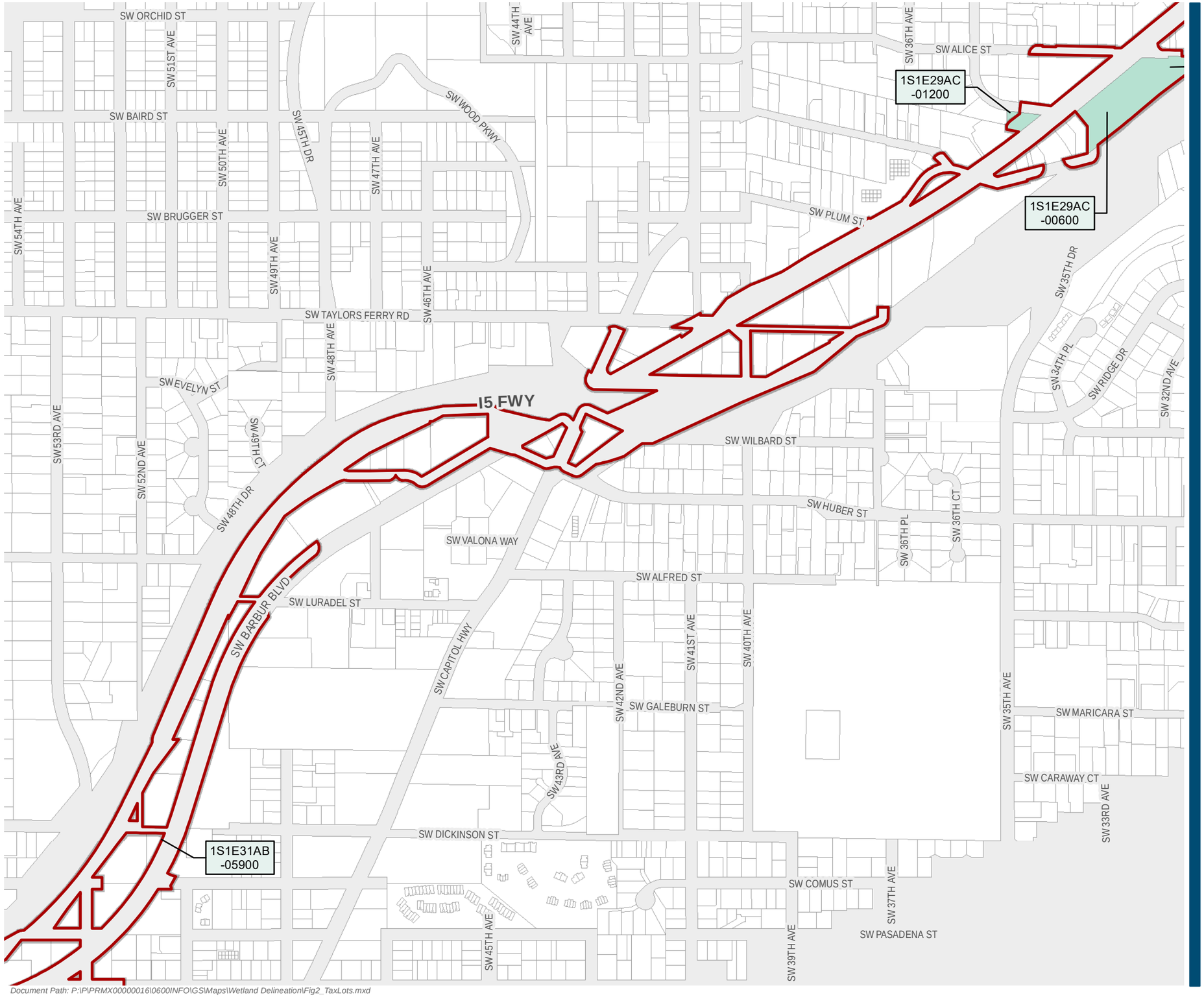
Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 4 of 9

Legend
- Wetland Study Area Segment B
- Metro RLIS Tax Lot
- Tax Lot within Study Area

Metro RLIS GIS Data. 2020.

0 500 1,000 Feet





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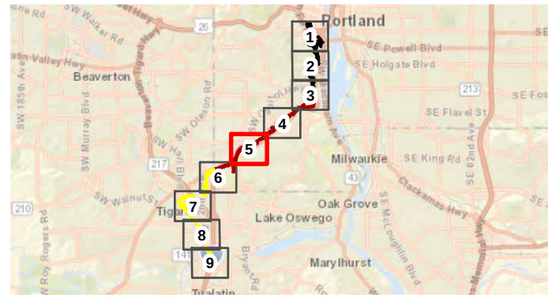
TRIMET

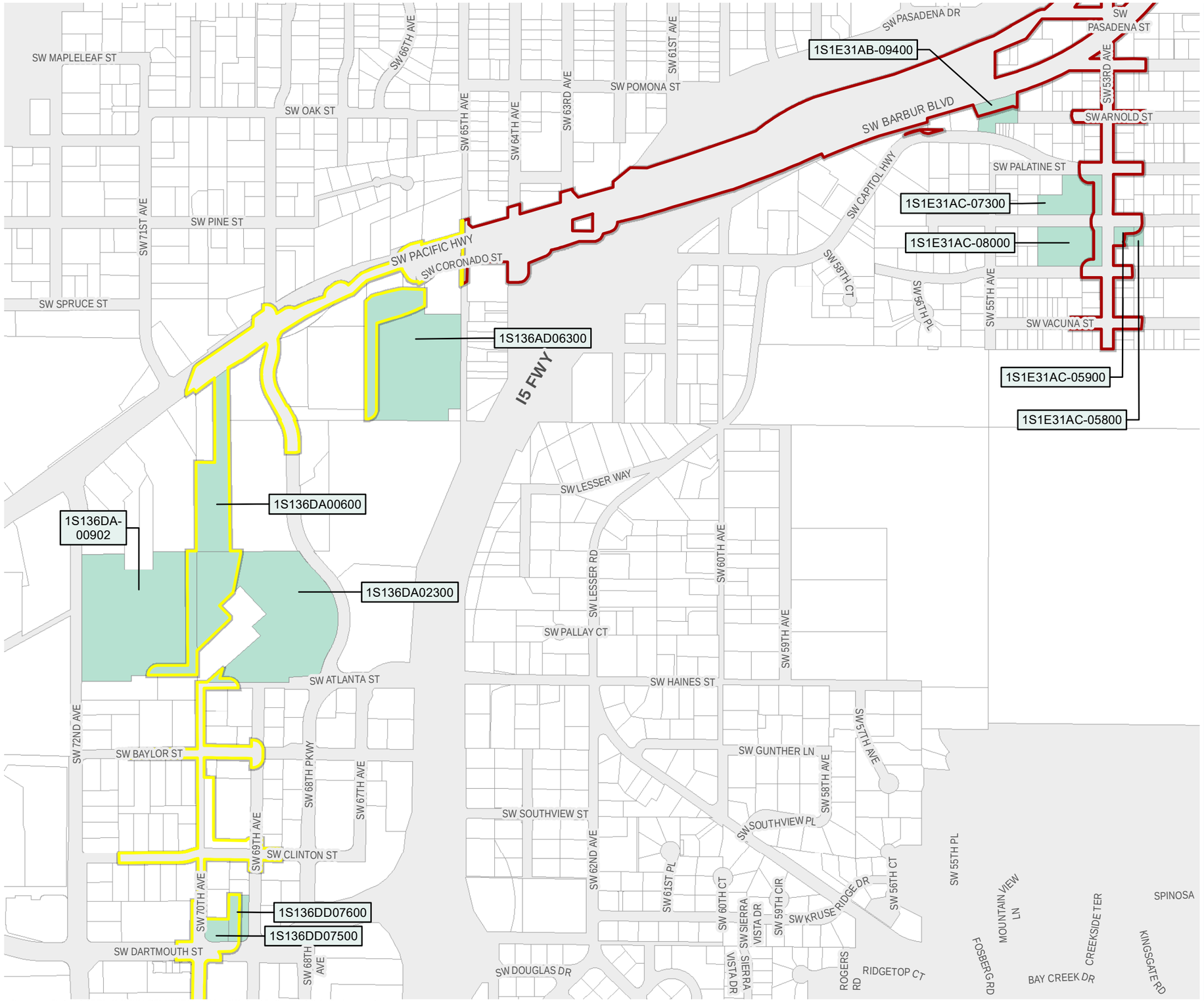
Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 5 of 9

Legend
- Wetland Study Area Segment B
- Metro RLIS Tax Lot
- Tax Lot within Study Area

Metro RLIS GIS Data. 2020.

0 500 1,000 Feet





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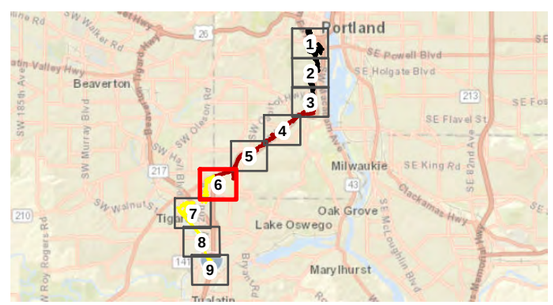
TRIMET

Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 6 of 9

Legend
- Wetland Study Area Segment B
- Wetland Study Area Segment C
- Metro RLIS Tax Lot
- Tax Lot within Study Area

Metro RLIS GIS Data. 2020.

0 500 1,000 Feet



TRIMET

Southwest Corridor Light Project
Figure 2: Tax Lots
Sheet 7 of 9

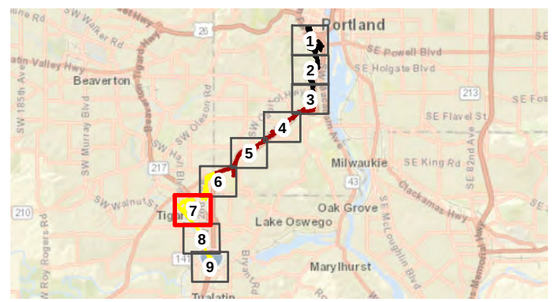
Legend
- Wetland Study Area Segment C
- Metro RLIS Tax Lot
- Tax Lot within Study Area

2S101BA00200
2S101BD00302
2S101BC00101
2S101BC00200
2S101BC00103
2S101BD00301
2S101BC00100
2S101CB00100
2S101CB00200
2S101CA00400
2S101CA00700
2S101CA00600
2S101CB00400
2S101CB00300
2S101CA00200
2S1010001600
2S1010001100

SW MAIN ST
SW GARDEN PL
SW SCOFFINS ST
SW ASH AVE
SW KNOLL DR
SW COMMERCIAL ST
SW BURNHAM ST
SW HUNZIKER RD
HWY 217
SW ELMHURST ST
SW HERMOSO WAY
SW BEVELAND RD
SW GONZAGA ST
SW FRANKLIN ST
SW 69TH AVE
SW 68TH AVE
SW 70TH AVE
SW HAMPTON ST
SW 68TH PKWY
SW HALL BLVD
SW VARNS ST
SW 76TH AVE
SW FIR LOOP
SW FIR ST
SW 74TH AVE
SW 72ND AVE
SW CHERRY DR
SW SANDBURG ST
SW TECH CENTER DR
SW OMARA ST
SW EDGEWOOD ST
SW WALL ST
SW REGINA LN
SW FANNO CREEK DR

Metro RLIS GIS Data. 2020.

0 500 1,000 Feet



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TRIMET

Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 8 of 9

Legend
- Wetland Study Area Segment C
- Metro RLIS Tax Lot
- Tax Lot within Study Area

1S135CB00800

1S135CB00800

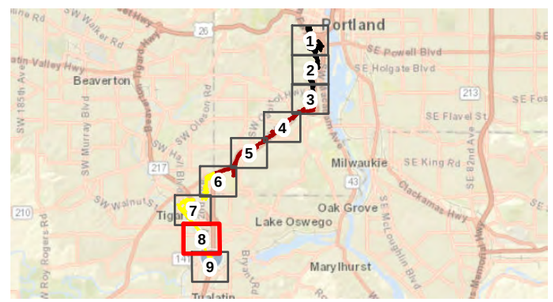
2S112AC01100

SW TECH CENTER DR
SW LANDMARK LN
SW MILTON CT
SW COLONY CREEK CT
SW FANNO CREEK PL
SW FANNO CREEK LOOP
SW 80TH CT
SW FANNO CREEK DR
SW FANNO CREEK CT
SW 80TH PL
SW WATER
PARSLEY LN
SW KROESE LOOP
SW BONITA RD
SW 83RD CT
SW MARA CT
SW LEISER LN
SW 76TH AVE
SW 78TH AVE
SW CAROLE CT
SW MURDOCK ST
SW 80TH AVE
SW 83RD AVE
SW VIOLA ST
SW HANSEN LN
SW MATTHEW PARK ST
SE 83RD AVE
SW 81ST AVE
SW 79TH AVE
SW ROSS ST
SW NORFOLK LN
SW GENTLE WOODS DR
SW GENTLE WOODS CT DR
SW KENTON DR
SW THURSTON LN
SW 82ND PL
SW ASHFORD ST
SW 84TH AVE
SW LANGTREE ST
SW CHURCHILL CT
SW KELSO CT
SW 74TH AVE
SW 72ND AVE
SW CARDINAL LN
SW SEQUOIA PKWY
SW REDWOOD LN
SW KABLE LN
SW UPPER BOONES FERRY RD
I5 FWY
BANGY RD
KRUSE WAY
KRUSE OAKS DR
MEADOWS RD
SW BANGY RD
ALYSSA TER
STEPHANIE CT
SW PARTRIDGE DR
SW BURMA RD
SW SHAKESPEARE ST
SW LAKE FOREST BLVD
SW CARMAN DR
SW ROOSEVELT AVE
SW HARRINGTON AVE
SW CARNEGIE AVE
SW ASTOR AVE

Metro RLIS GIS Data. 2020.

N

0 500 1,000 Feet



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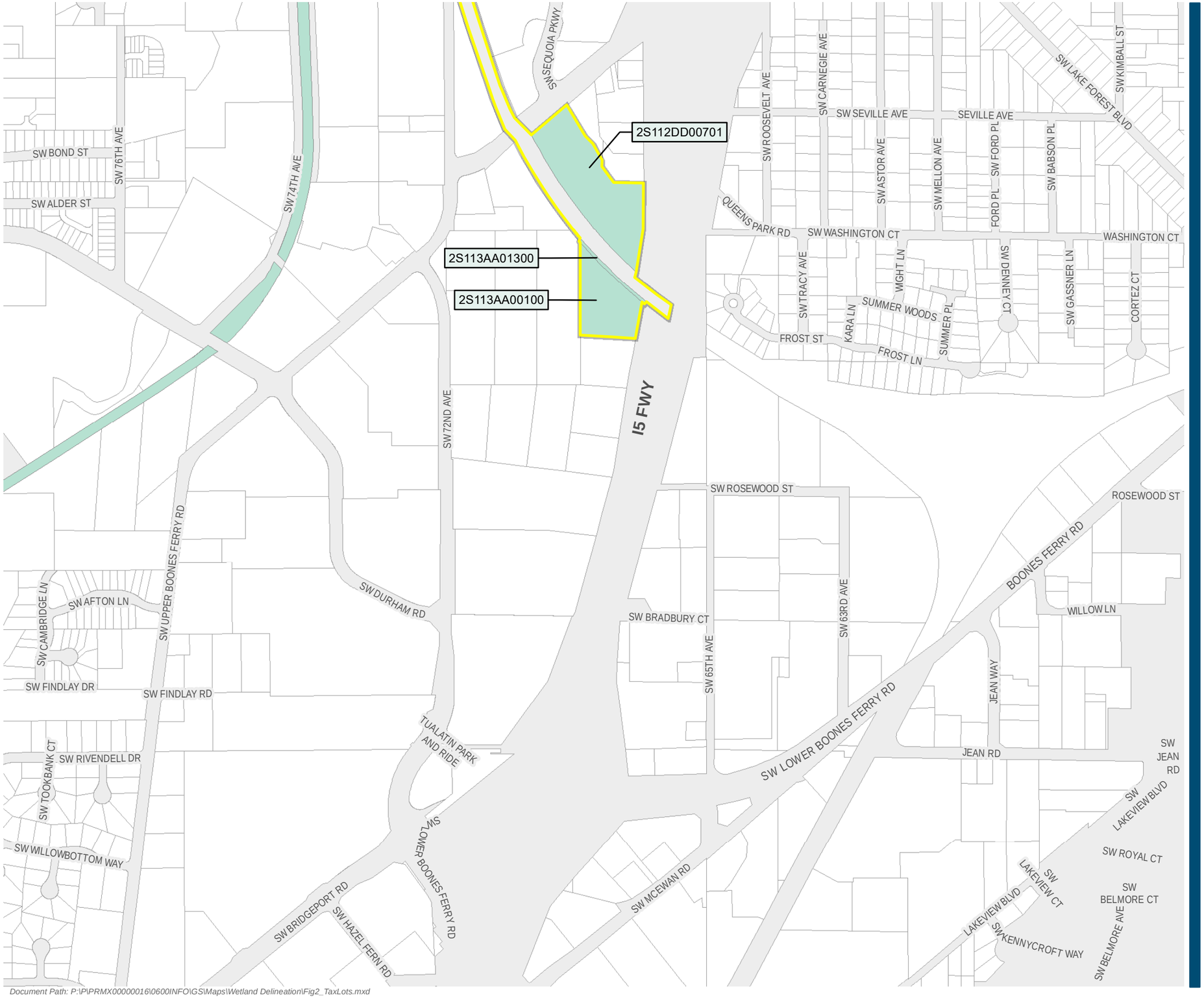

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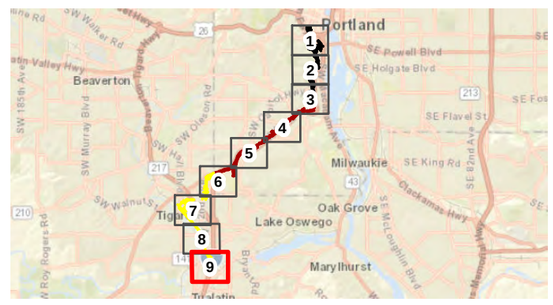
TRIMET

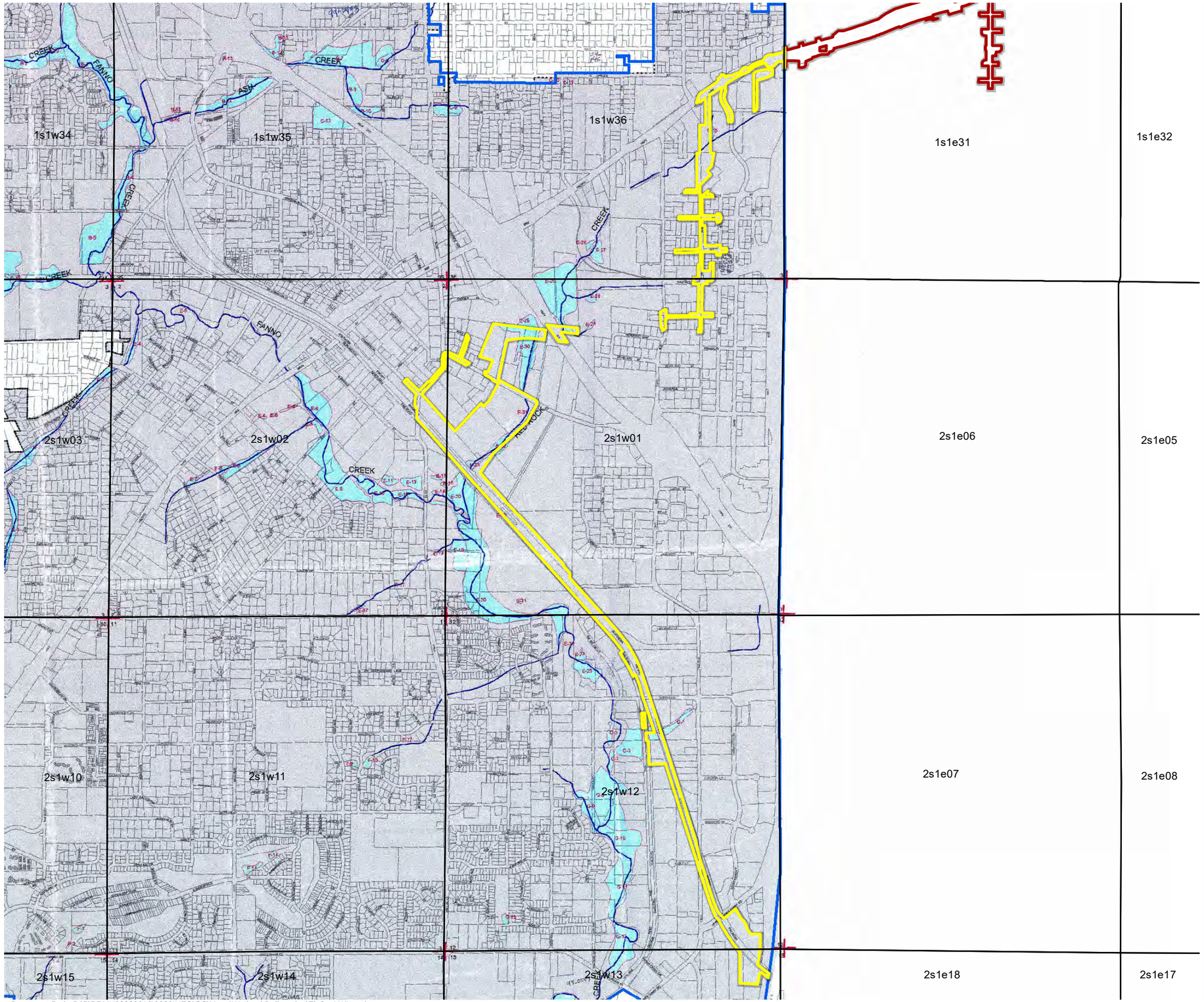
Southwest Corridor Light Rail Project
Figure 2: Tax Lots
Sheet 9 of 9

Legend
- Wetland Study Area Segment C
- Metro RLIS Tax Lot
- Tax Lot within Study Area

Metro RLIS GIS Data. 2020.

0 500 1,000 Feet





TRIMET

Southwest Corridor Light Rail Project

Figure 3a: Local Wetlands Inventory

Legend

- Wetland Study Area Segment B
- Wetland Study Area Segment C

- STREAMS
- SIGINIFICANT WETLANDS (F - 2)
- NON-SIGINIFICANT WETLANDS (F - 2)
- WETLANDS INCLUDED IN THE NATIONAL WETLANDS INVENTORY(NWI) BUT NOT FIELD CHECKED (F - 2)
- AREAS WITHIN THE CITY OF TIGARD
- TIGARD 'S URBAN SERVICES AREAS
- TIGARD'S AREA OF INTEREST

Note: There is no Local Wetlands Inventory data in the vicinity of Segments A or B.

City of Tigard Wetland Inventory. 1997. Oregon. Metro RLIS GIS Data. 2020.

0 0.25 0.5 Miles

Document Path: P:\P\PRMX00000016\0600INFO\GS\Maps\Wetland Delineation\Fig3a_LWI.mxd

TRIMET

Southwest Corridor Light Rail Project
Figure 3b: National Wetlands Inventory
Sheet 1 of 4

Legend
- Wetland Study Area Segment A
- Wetland Study Area Segment B
- NWI Wetlands

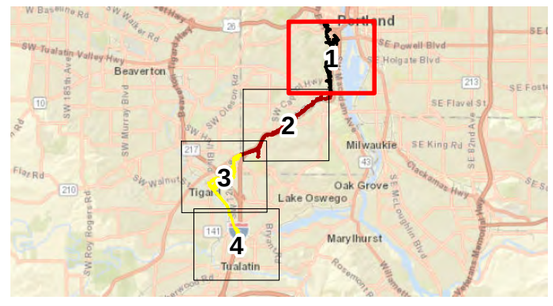
Wetland Types within Study Area

PEM1C	Palustrine, emergent, persistent, seasonally flooded
PFO1C	Palustrine, forested, broad-leaved deciduous, seasonally flooded
PSS/EM1C	Palustrine, scrub-shrub, emergent, persistent, seasonally flooded
PUBHh	Palustrine, unconsolidated bottom, permanently flooded, diked/impounded
PUBK	Palustrine, unconsolidated bottom, artificially flooded
R4SBC	Riverine, intermittent, streambed, seasonally flooded
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded

R5UBH
R4SBC
R4SBC
R4SBC

US Fish and Wildlife Service. 2019. National Wetlands Inventory (1977 to present). Branch of Habitat Assessment.
ESRI, ArcGIS Online, USA Topographic Maps:
1984. Beaverton, Oregon. 1984. Gladstone, Oregon.
1984. Lake Oswego, Oregon. 1990. Linnton, Oregon.
1990. Mount Tabor, Oregon-Washington.
1990. Portland, Oregon-Washington.

0 0.25 0.5 Miles



Document Path: P:\P\PRMX00000016\0600INFO\GS\Maps\Wetland Delineation\Fig3b_NWI.mxd

TRIMET

Southwest Corridor Light Rail Project

Figure 3b: National Wetlands Inventory
Sheet 2 of 4

Legend

- Wetland Study Area Segment B
- NWI Wetlands

Wetland Types within Study Area

PEM1C	Palustrine, emergent, persistent, seasonally flooded
PFO1C	Palustrine, forested, broad-leaved deciduous, seasonally flooded
PSS/EM1C	Palustrine, scrub-shrub, emergent, persistent, seasonally flooded
PUBHh	Palustrine, unconsolidated bottom, permanently flooded, diked/impounded
PUBK	Palustrine, unconsolidated bottom, artificially flooded
R4SBC	Riverine, intermittent, streambed, seasonally flooded
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded

US Fish and Wildlife Service. 2019. National Wetlands Inventory (1977 to present). Branch of Habitat Assessment.
ESRI, ArcGIS Online, USA Topographic Maps:
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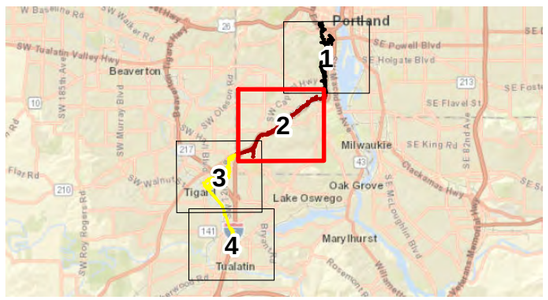
1984. Lake Oswego, Oregon. 1990. Linnton, Oregon.
1990. Mount Tabor, Oregon-Washington.
1990. Portland, Oregon-Washington.

0 0.25 0.5 Miles



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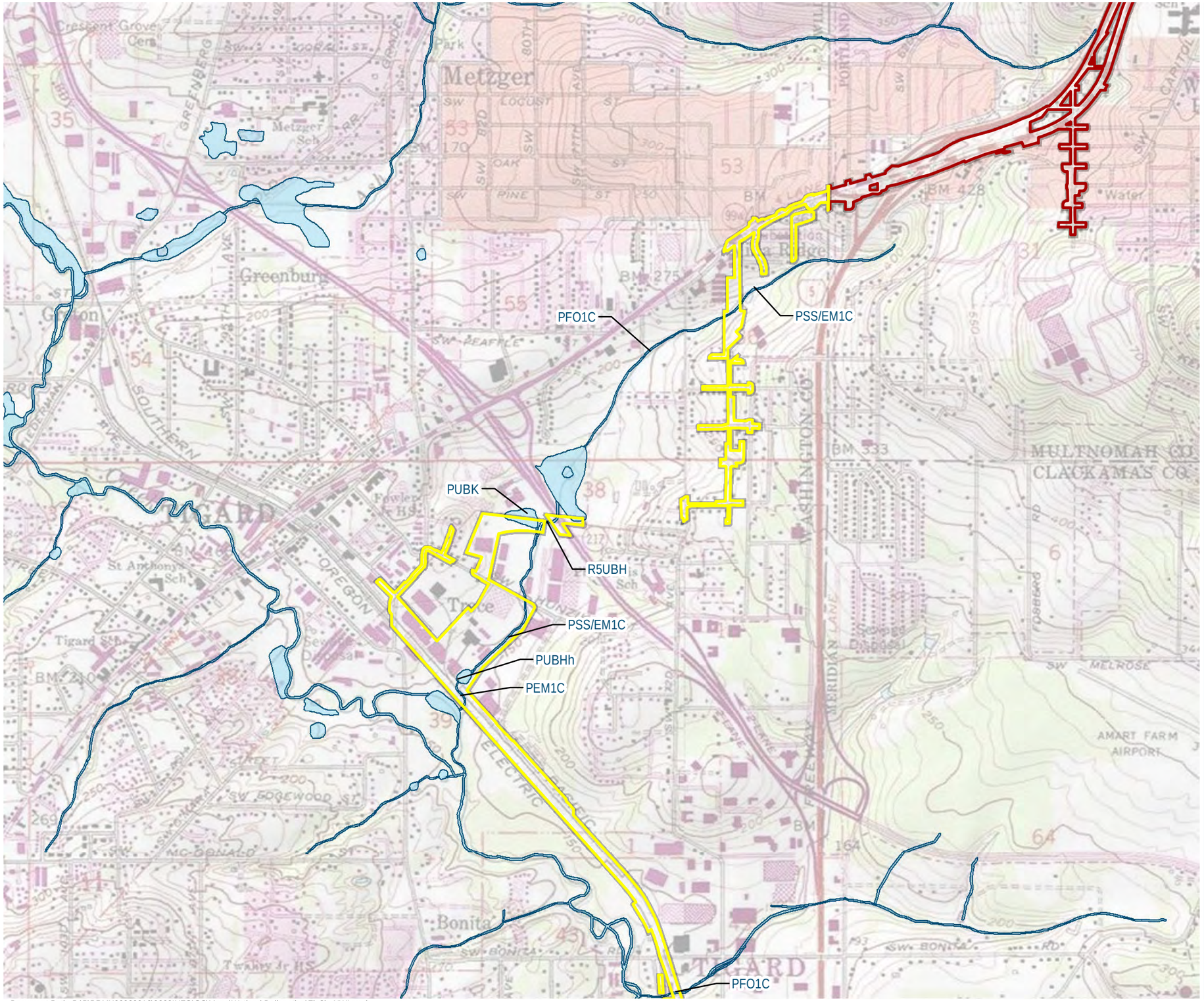

TRIMET

Southwest Corridor Light Rail Project
Figure 3b: National Wetlands Inventory
Sheet 3 of 4

Legend
- Wetland Study Area Segment B
- Wetland Study Area Segment C
- NWI Wetlands

Wetland Types within Study Area

PEM1C	Palustrine, emergent, persistent, seasonally flooded
PFO1C	Palustrine, forested, broad-leaved deciduous, seasonally flooded
PSS/EM1C	Palustrine, scrub-shrub, emergent, persistent, seasonally flooded
PUBHh	Palustrine, unconsolidated bottom, permanently flooded, diked/impounded
PUBK	Palustrine, unconsolidated bottom, artificially flooded
R4SBC	Riverine, intermittent, streambed, seasonally flooded
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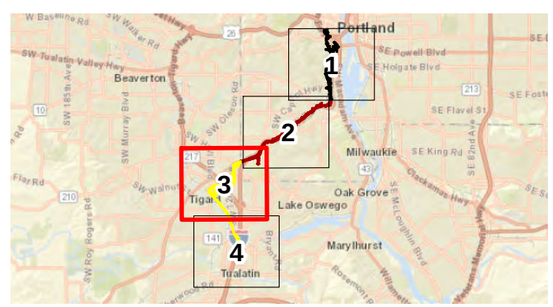
US Fish and Wildlife Service. 2019. National Wetlands Inventory (1977 to present). Branch of Habitat Assessment.
ESRI, ArcGIS Online, USA Topographic Maps:
1984. Beaverton, Oregon. 1984. Gladstone, Oregon.
1984. Lake Oswego, Oregon. 1990. Linnton, Oregon.
1990. Mount Tabor, Oregon-Washington.
1990. Portland, Oregon-Washington.

N

0 0.25 0.5 Miles



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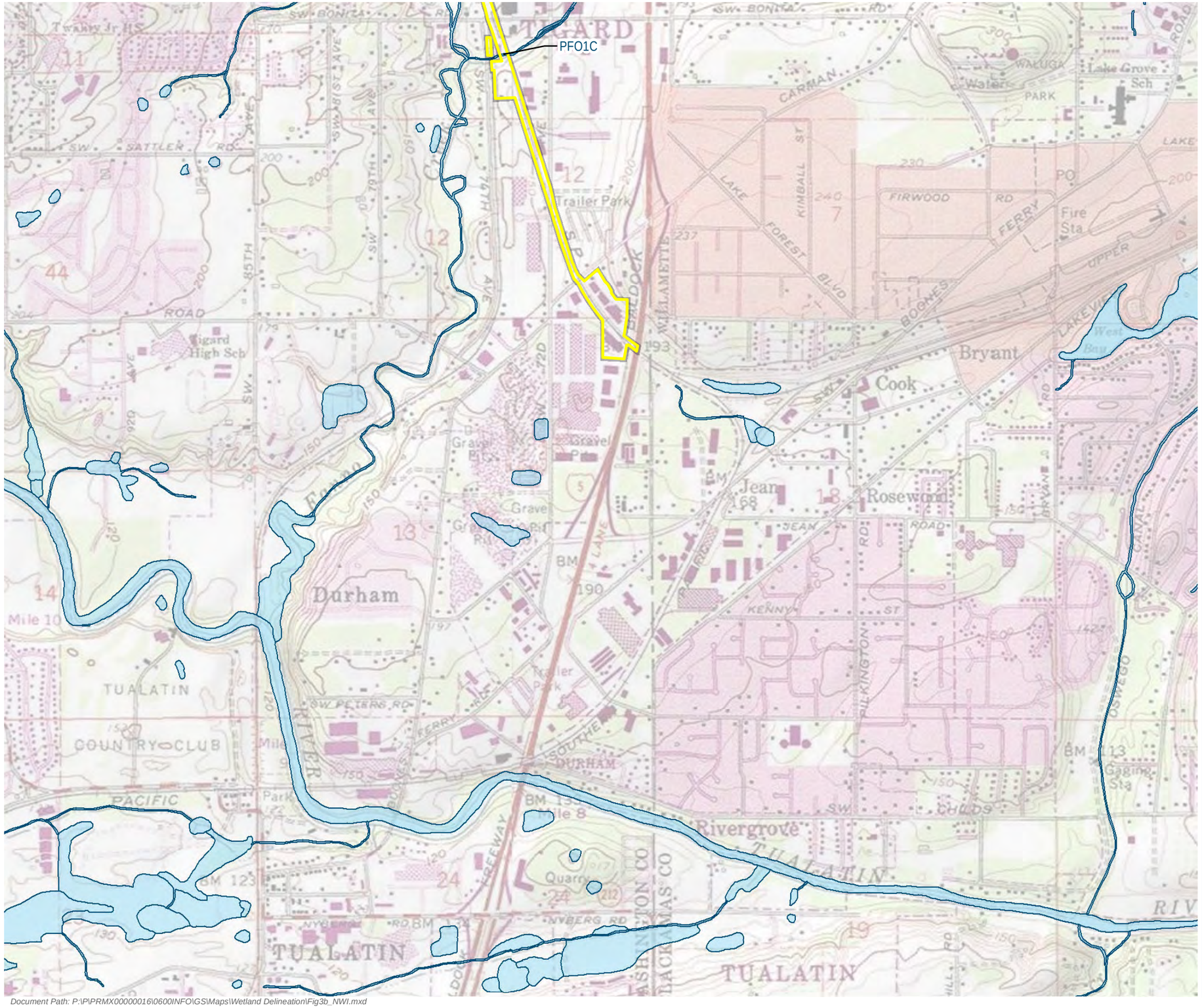

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TRIMET

Southwest Corridor Light Rail Project
Figure 3b: National Wetlands Inventory
Sheet 4 of 4

Legend
- Wetland Study Area Segment C
- NWI Wetlands

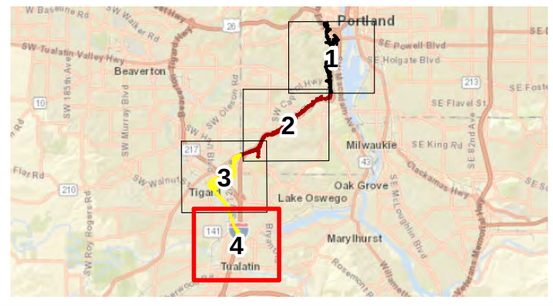
Wetland Types within Study Area

PEM1C	Palustrine, emergent, persistent, seasonally flooded
PFO1C	Palustrine, forested, broad-leaved deciduous, seasonally flooded
PSS/EM1C	Palustrine, scrub-shrub, emergent, persistent, seasonally flooded
PUBHh	Palustrine, unconsolidated bottom, permanently flooded, diked/impounded
PUBK	Palustrine, unconsolidated bottom, artificially flooded
R4SBC	Riverine, intermittent, streambed, seasonally flooded
R5UBH	Riverine, unknown perennial, unconsolidated bottom, permanently flooded

US Fish and Wildlife Service. 2019. National Wetlands Inventory (1977 to present). Branch of Habitat Assessment.
ESRI, ArcGIS Online, USA Topographic Maps:
1984. Beaverton, Oregon. 1984. Gladstone, Oregon.
1984. Lake Oswego, Oregon. 1990. Linnton, Oregon.
1990. Mount Tabor, Oregon-Washington.
1990. Portland, Oregon-Washington.

N

0 0.25 0.5 Miles



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TRIMET

Southwest Corridor Light Rail Project

Figure 4: Soil Survey

Sheet 1 of 4

Legend

- Wetland Study Area Segment A
- Wetland Study Area Segment B
- Soil Unit
- Hydric Soil Unit

Soils Types with Study Area

Multnomah County Soils

7E Cascade silt loam, 30 to 60 percent slopes
8B Cascade-Urban land complex, 0 to 8 percent slopes
8C Cascade-Urban land complex, 8 to 15 percent slopes
8D Cascade-Urban land complex, 15 to 30 percent slopes
17E Goble silt loam, 30 to 60 percent slopes
18D Goble-Urban land complex, 15 to 30 percent slopes
19E Haploxerolls, steep
20F Haplumbrepts, very steep
50A Urban land, 0 to 3 percent slopes
50C Urban land, 3 to 15 percent slopes
53C Urban land-Quafeno complex, 8 to 15 percent slopes

Washington County Soils

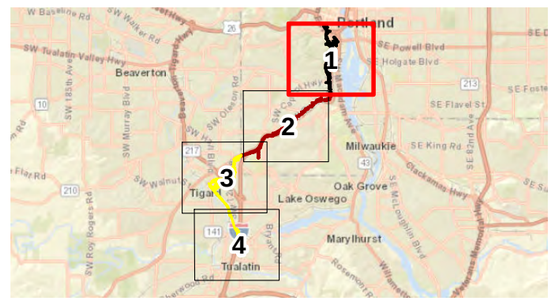
1 Aloha silt loam
5B Briedwell stony silt loam, 0 to 7 percent slopes
5C Briedwell stony silt loam, 7 to 12 percent slopes
7B Cascade silt loam, 3 to 7 percent slopes
7C Cascade silt loam, 7 to 12 percent slopes
13 Cove silty clay loam
19B Helvetia silt loam, 2 to 7 percent slopes
21A Hillsboro loam, 0 to 3 percent slopes
21C Hillsboro loam, 7 to 12 percent slopes
21D Hillsboro loam, 12 to 20 percent slopes
37A Quatama loam, 0 to 3 percent slopes
37B Quatama loam, 3 to 7 percent slopes
37C Quatama loam, 7 to 12 percent slopes
41 Urban land
45A Woodburn silt loam, 0 to 3 percent slopes
45B Woodburn silt loam, 3 to 7 percent slopes
45C Woodburn silt loam, 7 to 12 percent slopes
45D Woodburn silt loam, 12 to 20 percent slopes
2027A Verboort silty clay loam, 0 to 3 percent slopes
2225A Huberly silt loam, 0 to 3 percent slopes
W Water

Natural Resources Conservation Service (NRCS). 2016. Soil Survey Geographic (SSURGO) database for Clackamas, Multnomah, and Washington County Areas, Oregon.

ESRI, ArcGIS Online, World Imagery.

N

0 0.25 0.5 Miles



TRIMET

Southwest Corridor Light Rail Project

Figure 4: Soil Survey
Sheet 2 of 4

Legend

- Wetland Study Area Segment B
- Soil Unit
- Hydric Soil Unit

Soils Types with Study Area

Multnomah County Soils

7E	Cascade silt loam, 30 to 60 percent slopes
8B	Cascade-Urban land complex, 0 to 8 percent slopes
8C	Cascade-Urban land complex, 8 to 15 percent slopes
8D	Cascade-Urban land complex, 15 to 30 percent slopes
17E	Goble silt loam, 30 to 60 percent slopes
18D	Goble-Urban land complex, 15 to 30 percent slopes
19E	Haploxerolls, steep
20F	Haplumbrepts, very steep
50A	Urban land, 0 to 3 percent slopes
50C	Urban land, 3 to 15 percent slopes
53C	Urban land-Quafeno complex, 8 to 15 percent slopes

Washington County Soils

1	Aloha silt loam
5B	Briedwell stony silt loam, 0 to 7 percent slopes
5C	Briedwell stony silt loam, 7 to 12 percent slopes
7B	Cascade silt loam, 3 to 7 percent slopes
7C	Cascade silt loam, 7 to 12 percent slopes
13	Cove silty clay loam
19B	Helvetia silt loam, 2 to 7 percent slopes
21A	Hillsboro loam, 0 to 3 percent slopes
21C	Hillsboro loam, 7 to 12 percent slopes
21D	Hillsboro loam, 12 to 20 percent slopes
37A	Quatama loam, 0 to 3 percent slopes
37B	Quatama loam, 3 to 7 percent slopes
37C	Quatama loam, 7 to 12 percent slopes
41	Urban land
45A	Woodburn silt loam, 0 to 3 percent slopes
45B	Woodburn silt loam, 3 to 7 percent slopes
45C	Woodburn silt loam, 7 to 12 percent slopes
45D	Woodburn silt loam, 12 to 20 percent slopes
2027A	Verboort silty clay loam, 0 to 3 percent slopes
2225A	Huberly silt loam, 0 to 3 percent slopes
W	Water

Natural Resources Conservation Service (NRCS).
2016. Soil Survey Geographic (SSURGO) database for Clackamas, Multnomah, and Washington County Areas, Oregon.
ESRI, ArcGIS Online, World Imagery.

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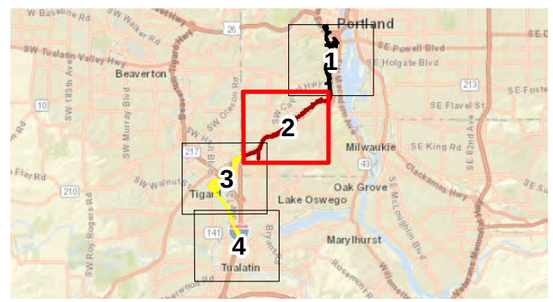
0 0.25 0.5 Miles



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TRIMET

Southwest Corridor Light Rail Project

Figure 4: Soil Survey
Sheet 3 of 4

Legend

- Wetland Study Area Segment B
- Wetland Study Area Segment C
- Soil Unit
- Hydric Soil Unit

Soils Types with Study Area

Multnomah County Soils

7E Cascade silt loam, 30 to 60 percent slopes
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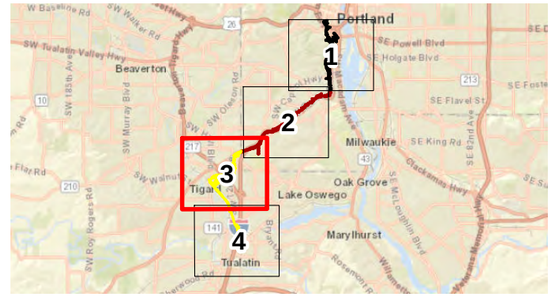

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TRIMET

Southwest Corridor Light Rail Project

Figure 4: Soil Survey
Sheet 4 of 4

Legend

- Wetland Study Area Segment C
- Soil Unit
- Hydric Soil Unit

Soils Types with Study Area

Multnomah County Soils

7E	Cascade silt loam, 30 to 60 percent slopes
8B	Cascade-Urban land complex, 0 to 8 percent slopes
8C	Cascade-Urban land complex, 8 to 15 percent slopes
8D	Cascade-Urban land complex, 15 to 30 percent slopes
17E	Goble silt loam, 30 to 60 percent slopes
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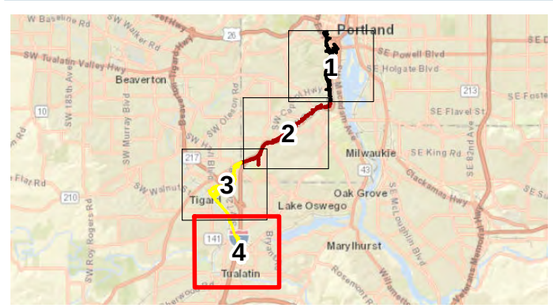
Natural Resources Conservation Service (NRCS).
2016. Soil Survey Geographic (SSURGO) database for Clackamas, Multnomah, and Washington County Areas, Oregon.
ESRI, ArcGIS Online, World Imagery.

N

0 0.25 0.5 Miles



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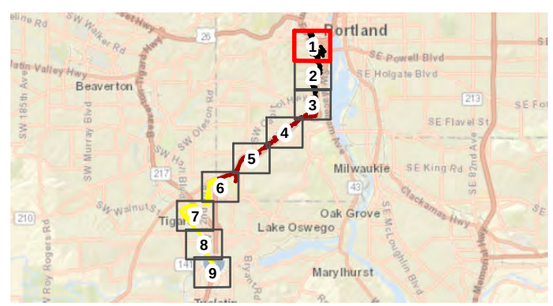
Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 1 of 9

Legend
Wetland Study Area Segment A

Portland Aerial Photos Summer 2017

0 500 1,000 Feet



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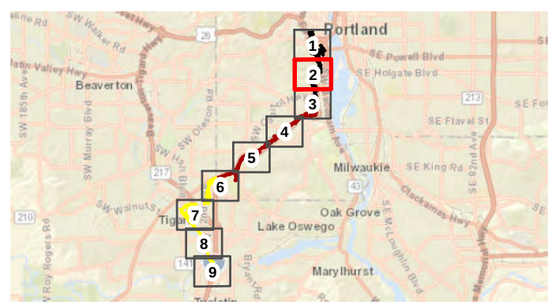
Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 2 of 9

Legend
Wetland Study Area Segment A

Portland Aerial Photos Summer 2017

0 500 1,000 Feet



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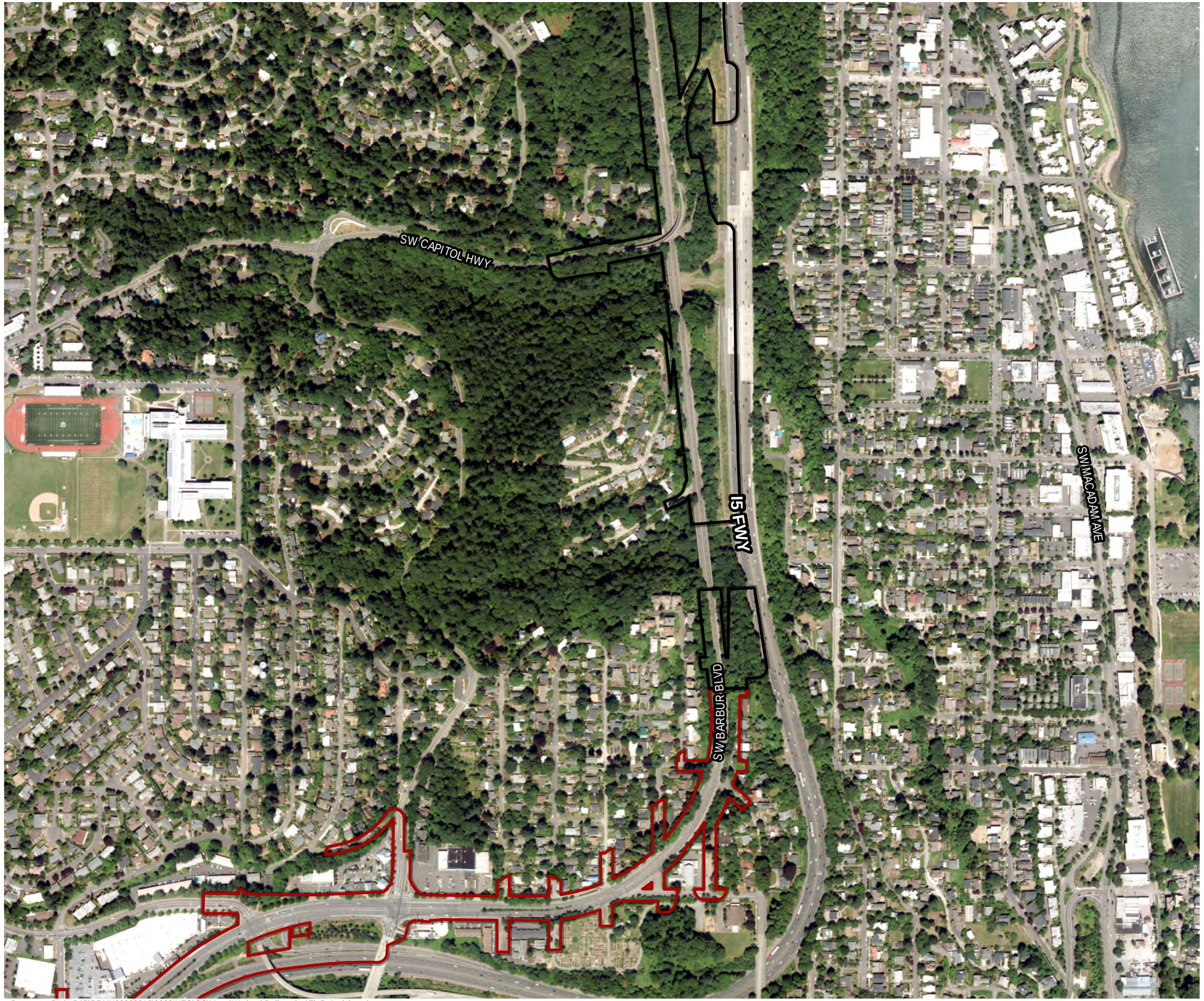

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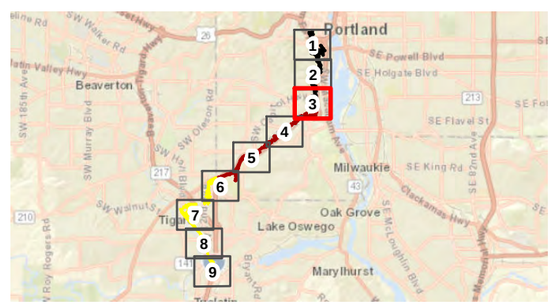
Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 3 of 9

Legend
- Wetland Study Area Segment A
- Wetland Study Area Segment B

Portland Aerial Photos Summer 2017

0 500 1,000 Feet



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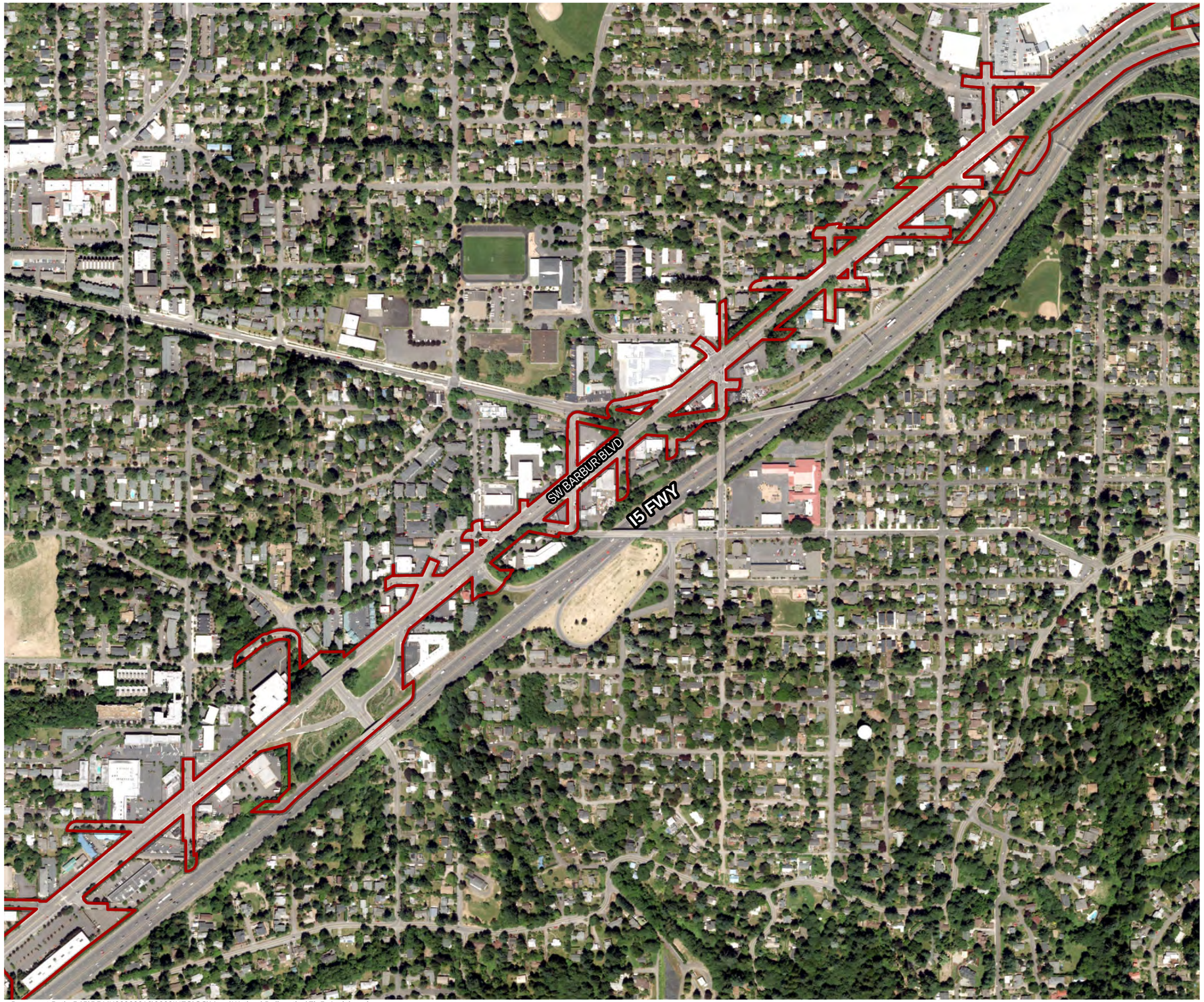

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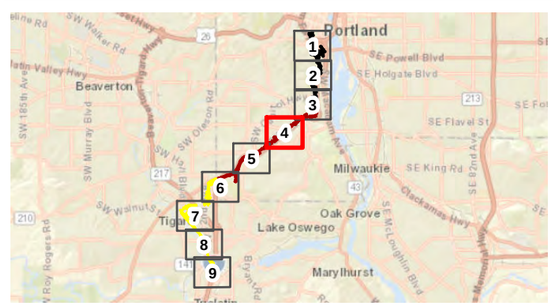
Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 4 of 9

Legend
Wetland Study Area Segment B

Portland Aerial Photos Summer 2017

N

0 500 1,000 Feet



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Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 5 of 9

Legend
Wetland Study Area Segment B

Portland Aerial Photos Summer 2017

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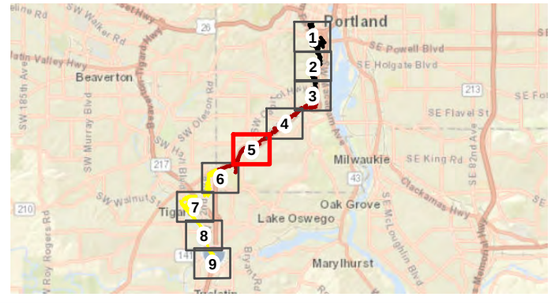

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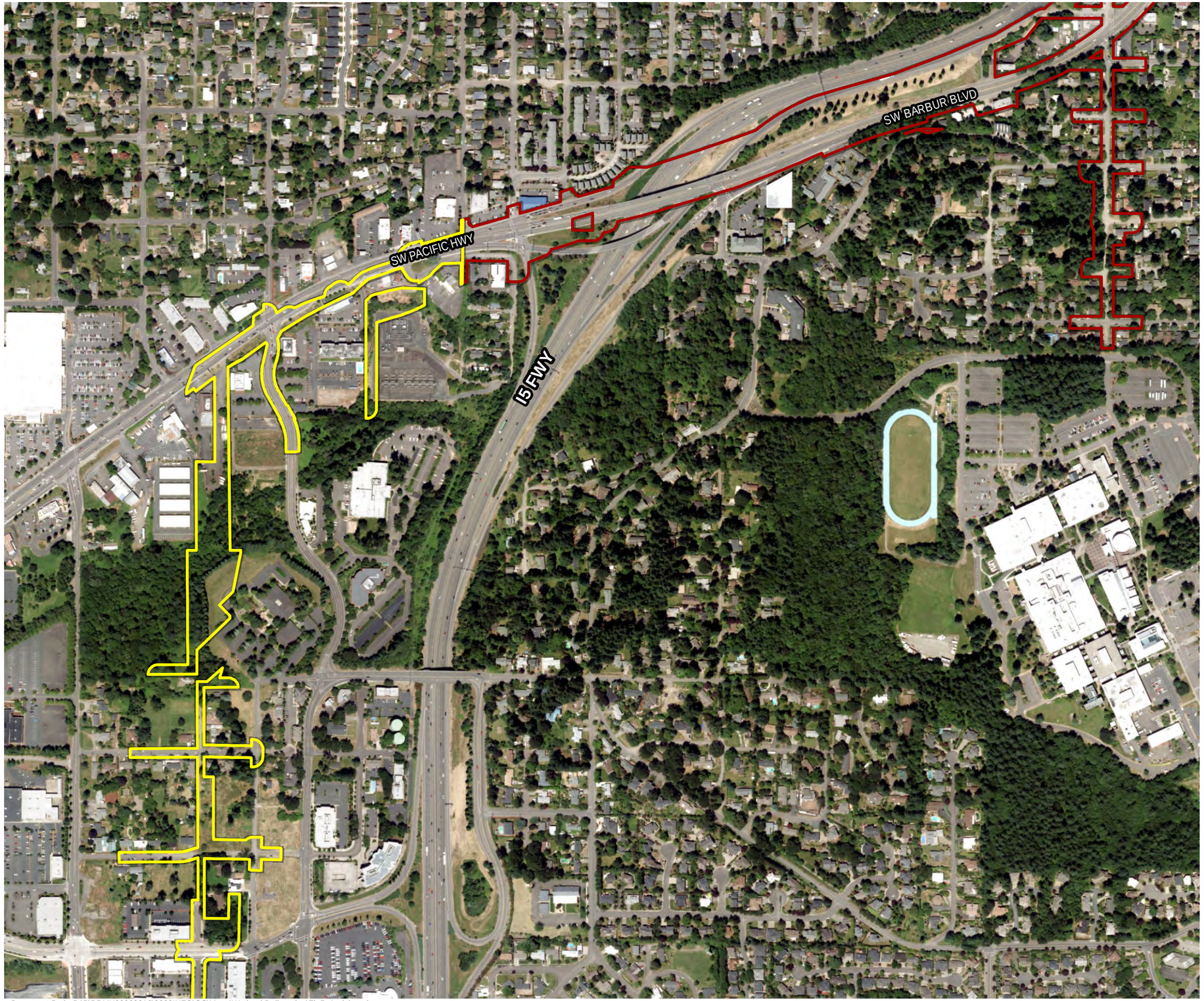

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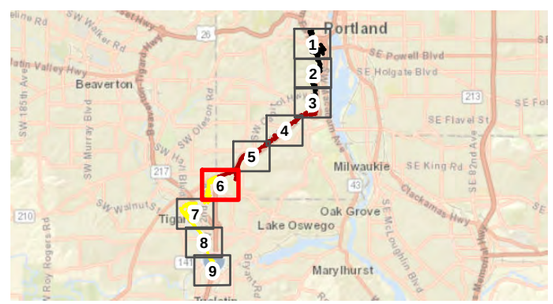
Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 6 of 9

Legend
- Wetland Study Area Segment B
- Wetland Study Area Segment C

Portland Aerial Photos Summer 2017

0 500 1,000 Feet



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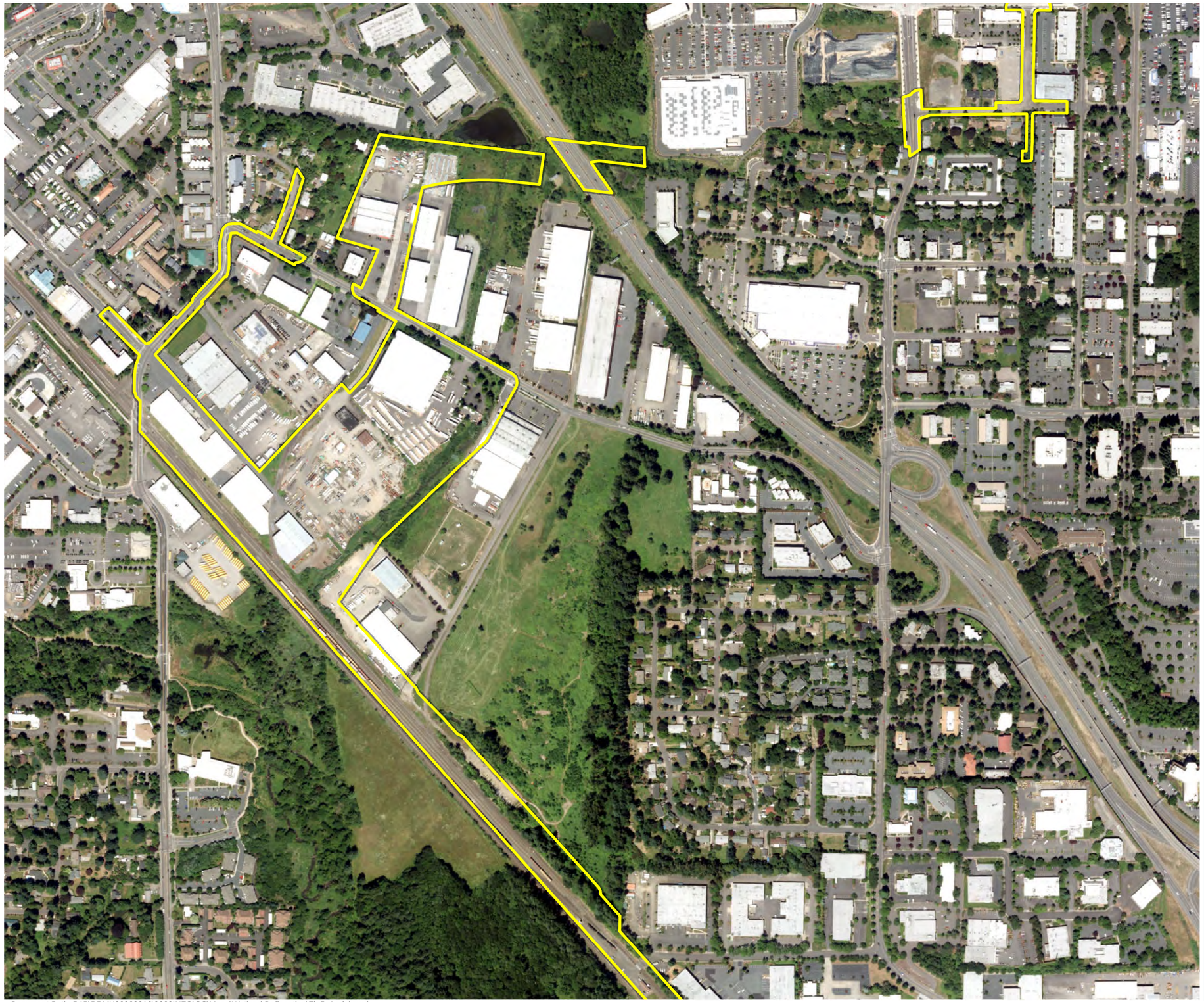

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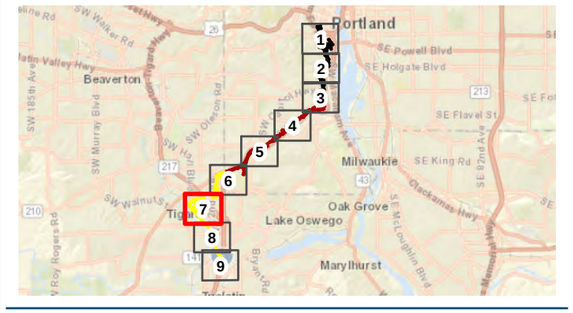
Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 7 of 9

Legend
Wetland Study Area Segment C

Portland Aerial Photos Summer 2017

0 500 1,000 Feet



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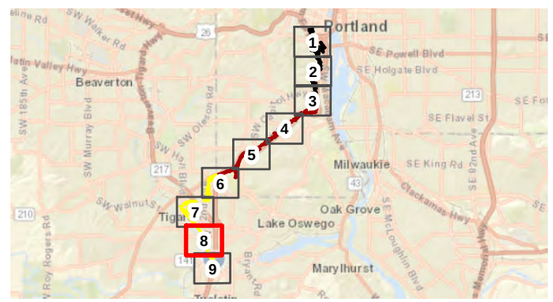
TRIMET

Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 8 of 9

Legend
Wetland Study Area Segment C

Portland Aerial Photos Summer 2017

0 500 1,000 Feet



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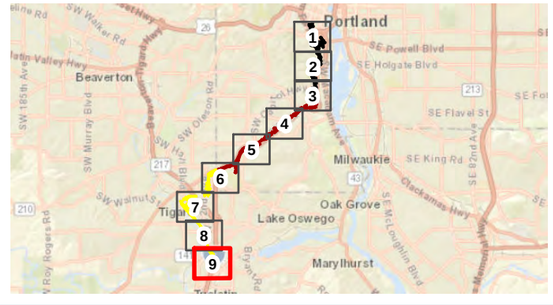
TRIMET

Southwest Corridor Light Rail Project
Figure 5: Aerial Photographs
Sheet 9 of 9

Legend
Wetland Study Area Segment C

Portland Aerial Photos Summer 2017

0 500 1,000 Feet



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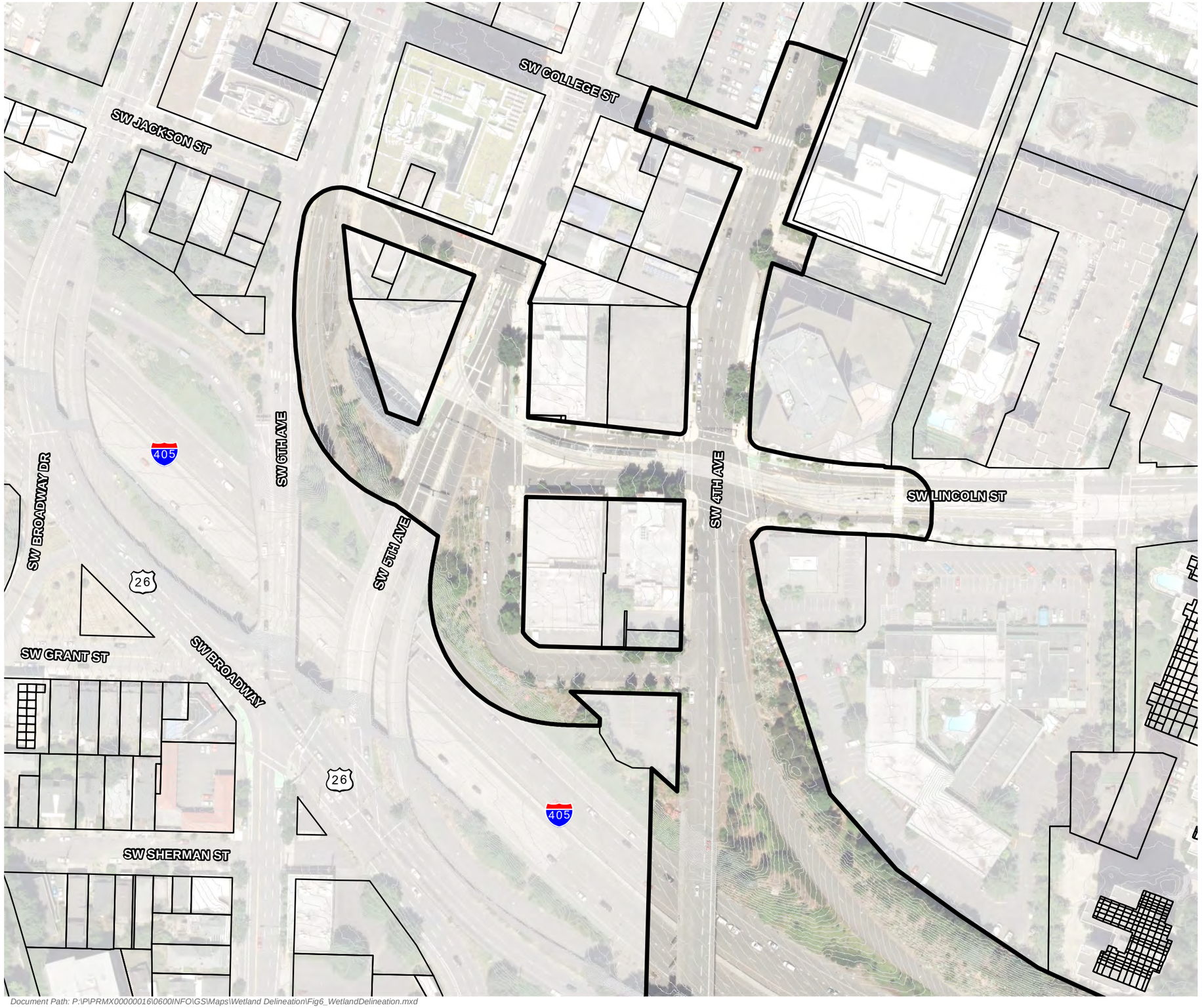


TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 1 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

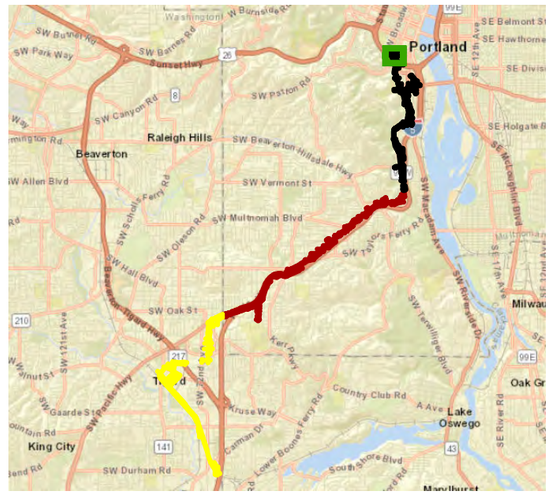
- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

** All ditches are presumed non-jurisdictional unless labeled otherwise.*

On-site features (wetlands, ditches, streams, culverts, catch basins, and data plots) were mapped with a Trimble Pathfinder GEO XH receiver with typical accuracy of 3 feet or better. An asterisk is included where jurisdictional features extend offsite. Imagery: Portland Aerial Photos Summer 2017.

N

0 200 Feet



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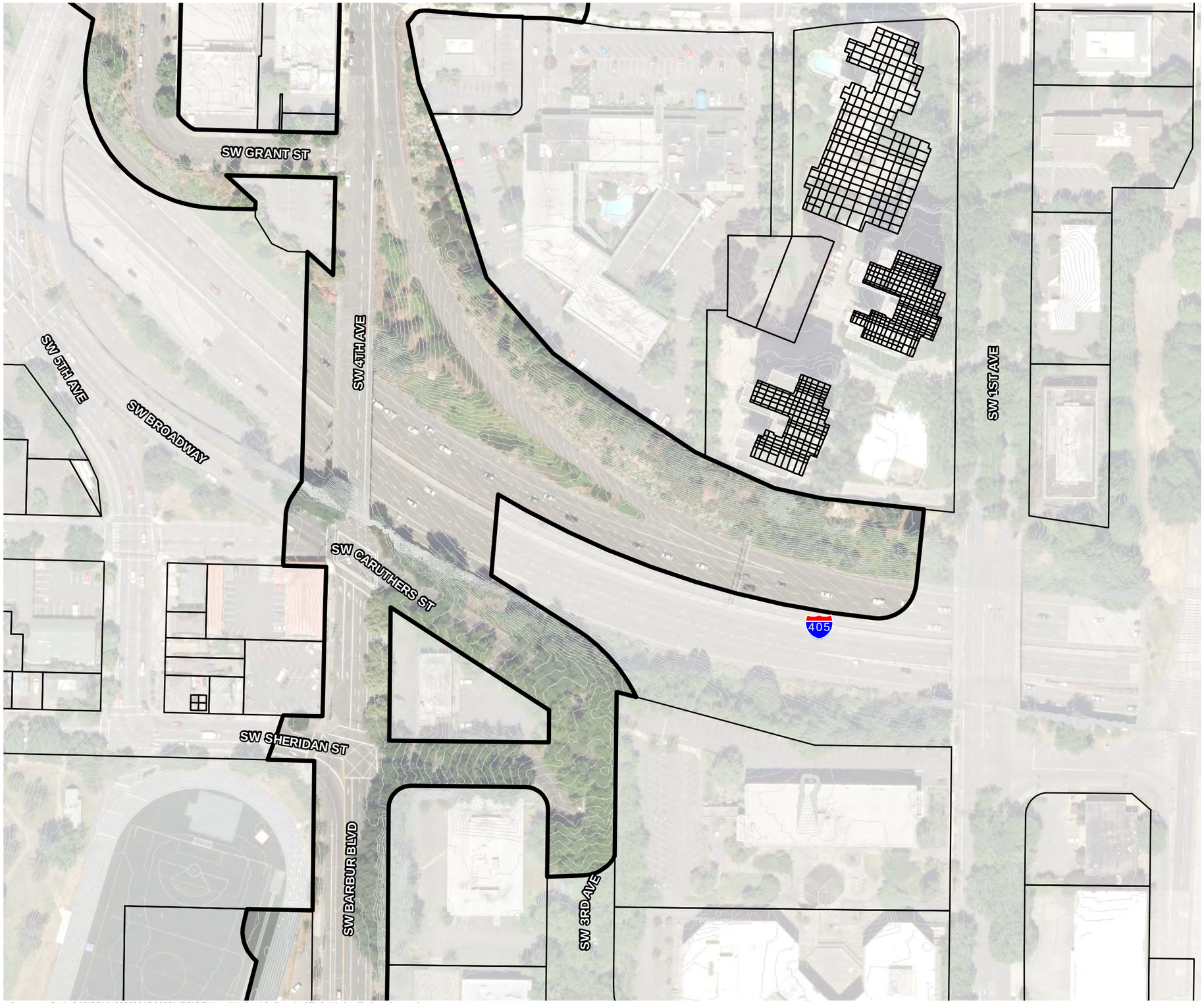

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 2 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
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- Ditch*
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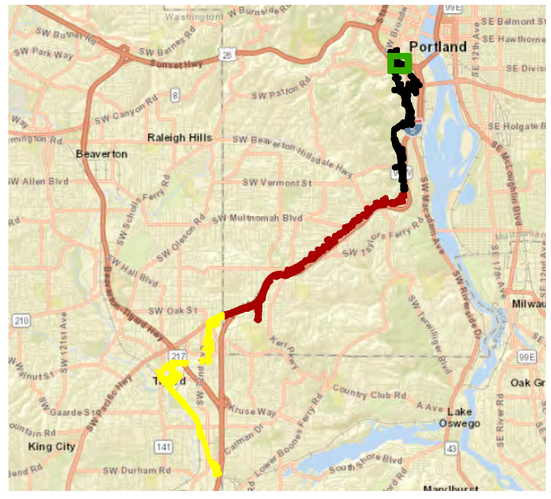
0 200 Feet



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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 3 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
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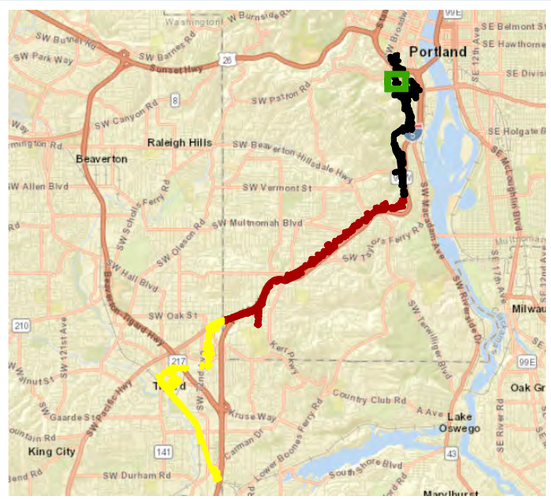

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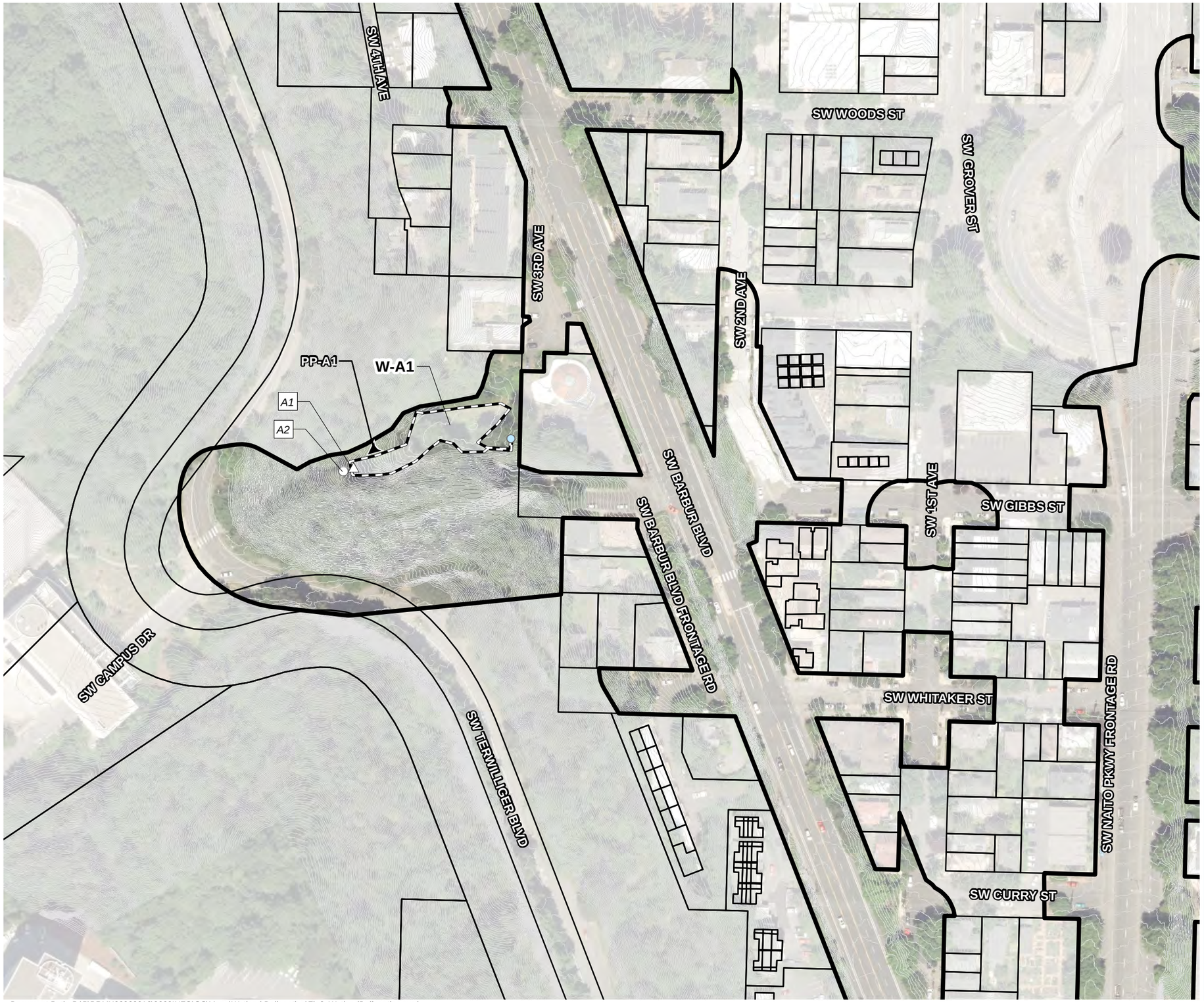

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 4 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
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- Ditch*
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0 200 Feet

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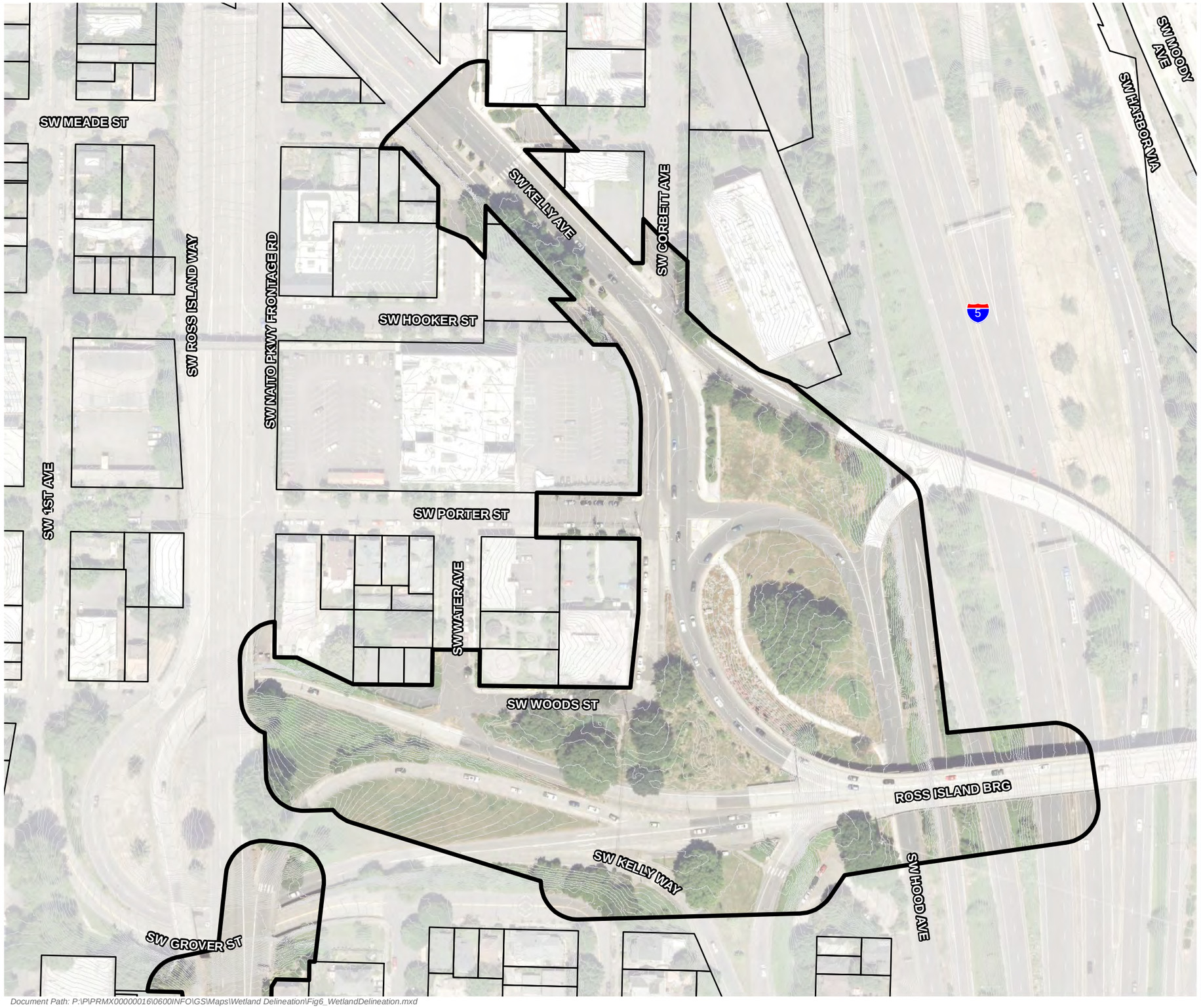

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 5 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

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- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

** All ditches are presumed non-jurisdictional unless labeled otherwise.*

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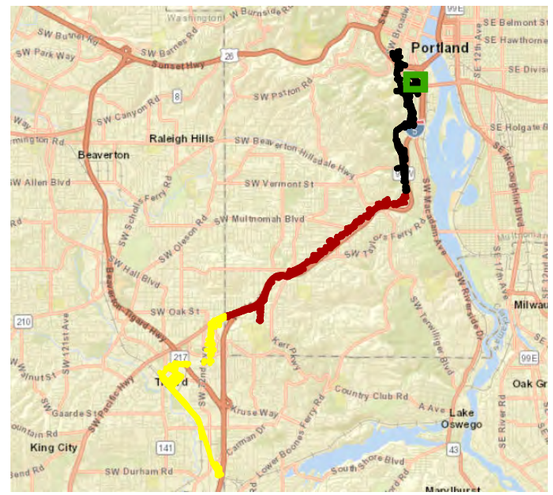
N

0 200 Feet



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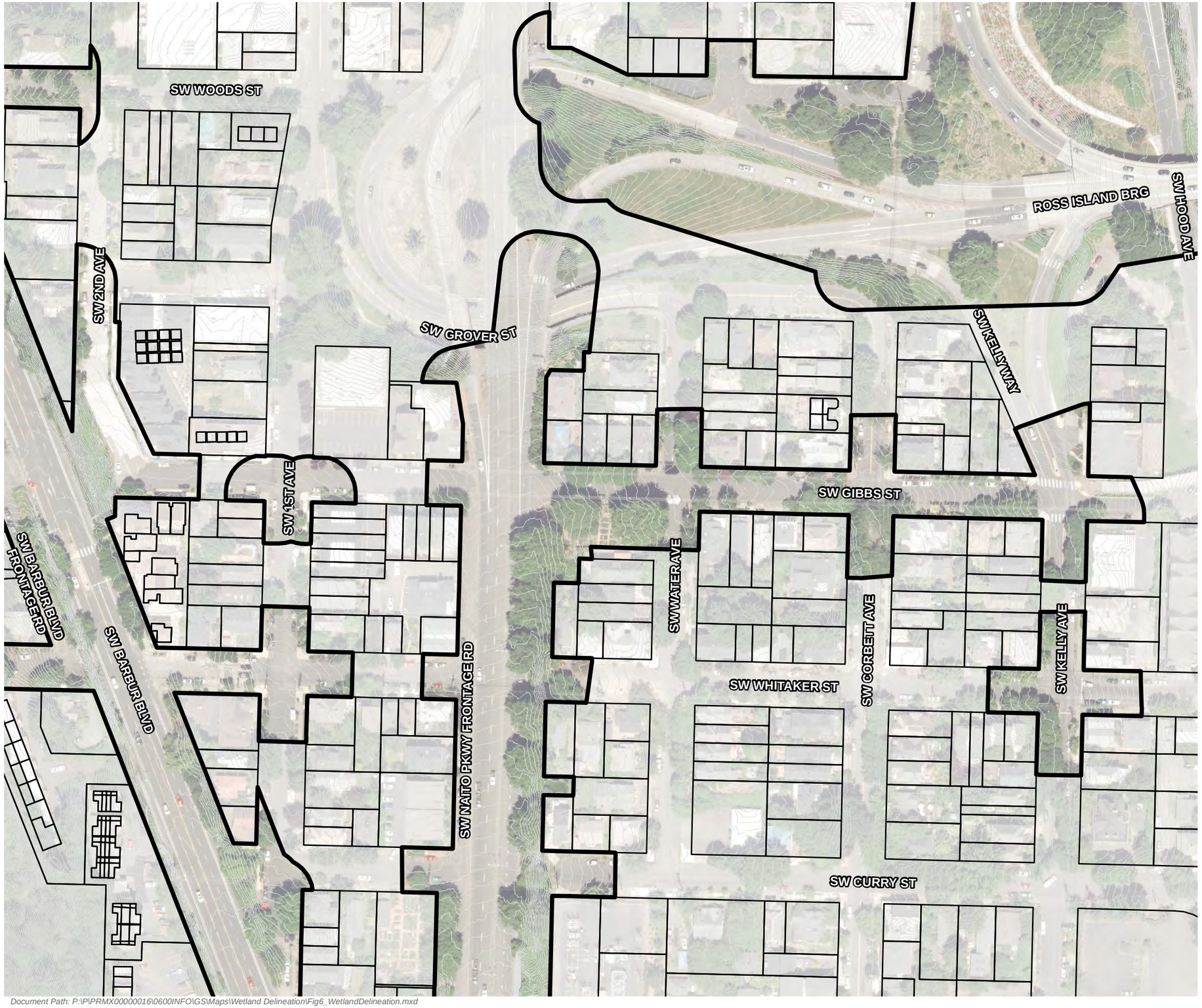

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 6 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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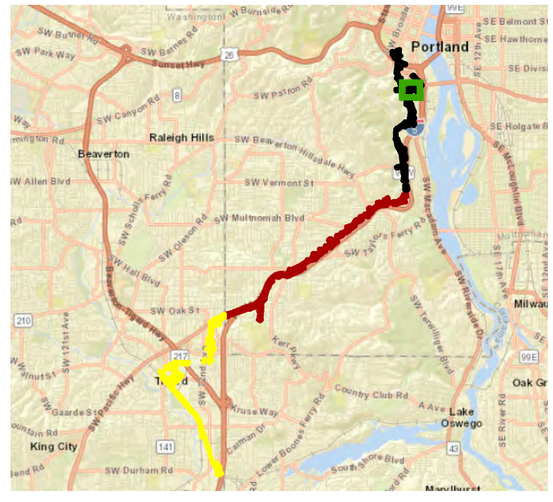

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 7 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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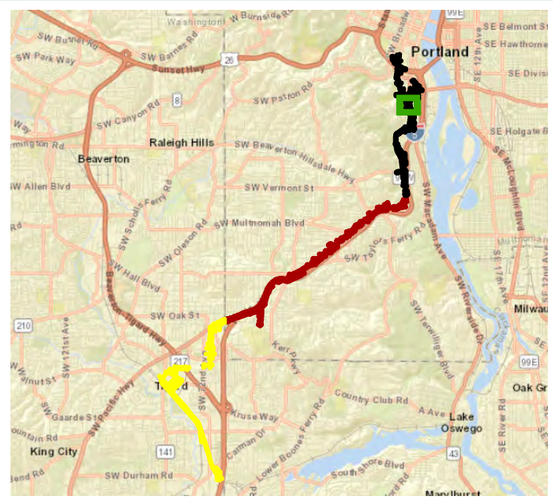

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 8 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
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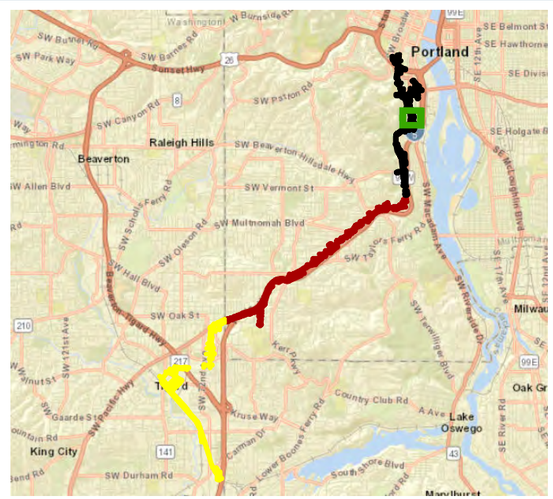

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 9 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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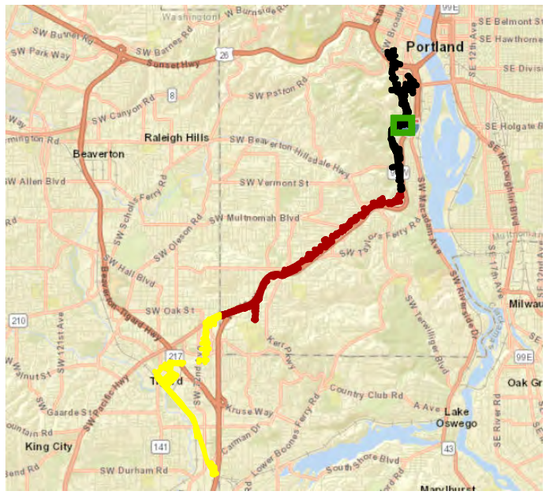

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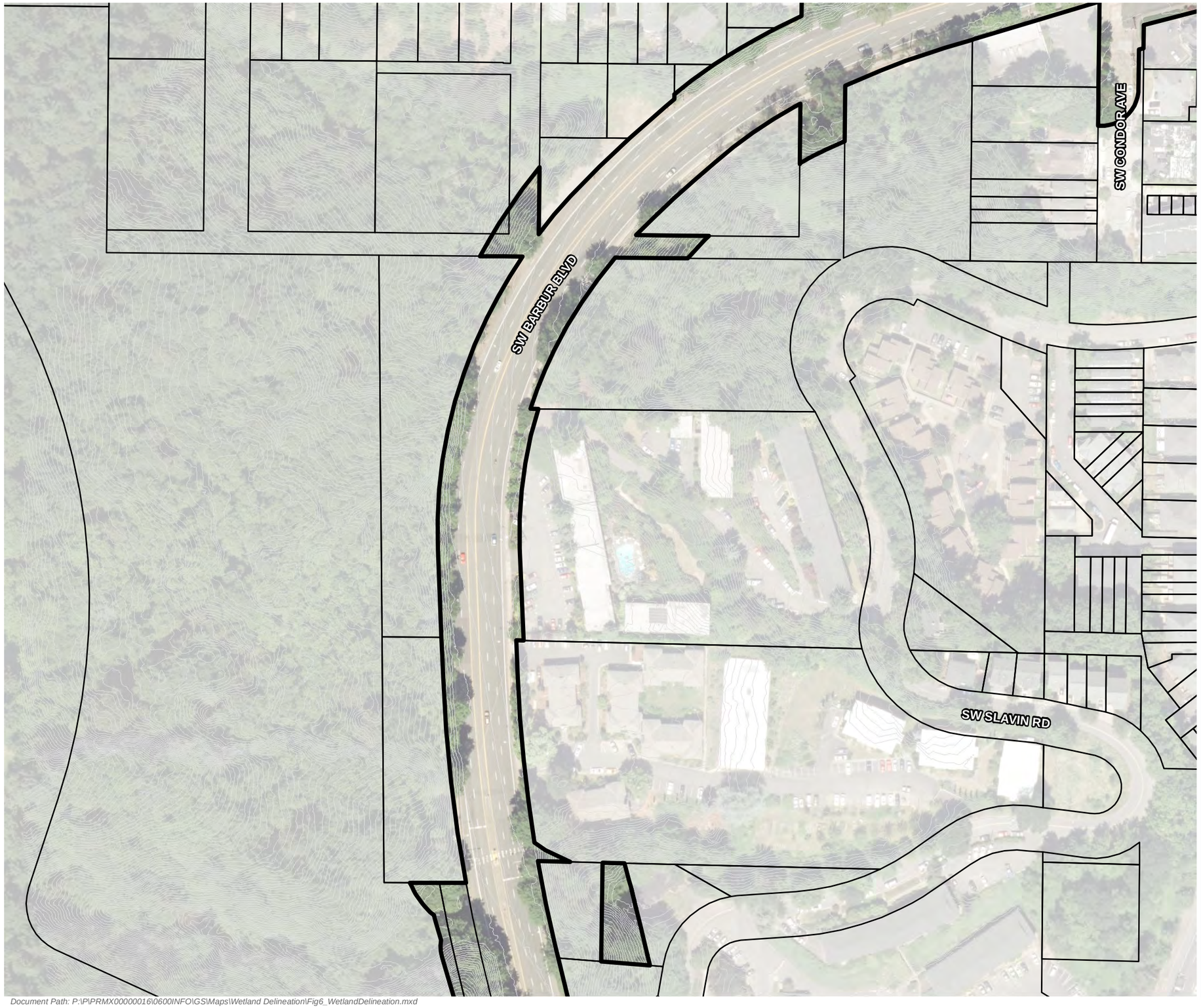

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 10 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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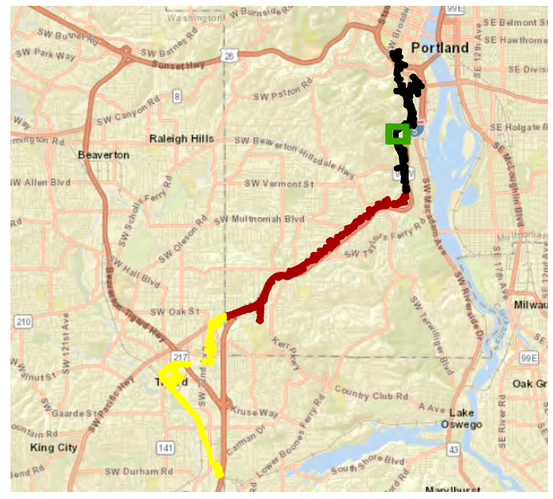

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 11 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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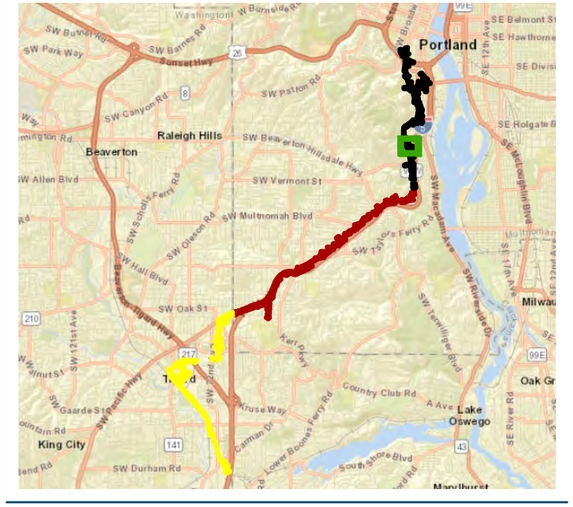

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 12 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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N

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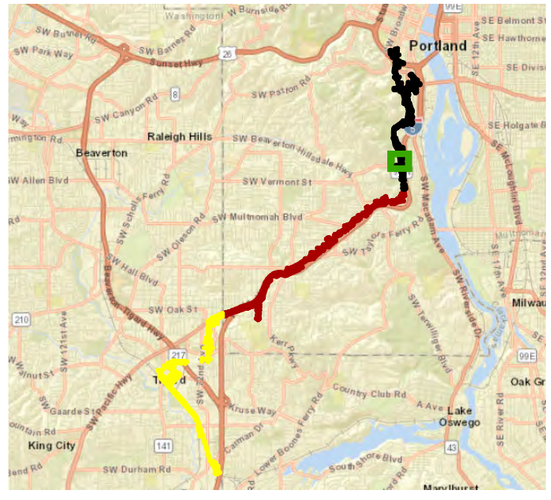

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 13 of 44

Legend

- Wetland Study Area Segment A
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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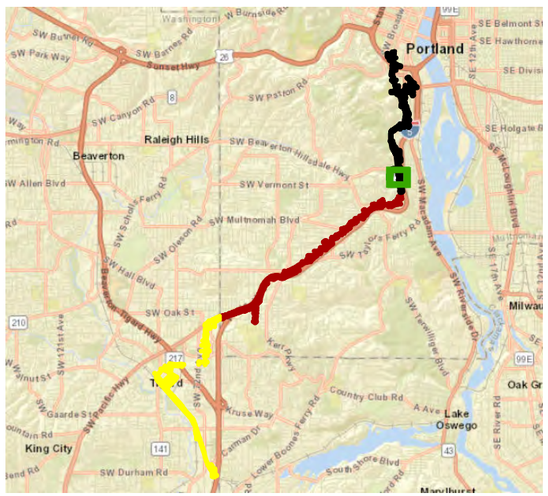

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 14 of 44

Legend

- Wetland Study Area Segment A
- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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N

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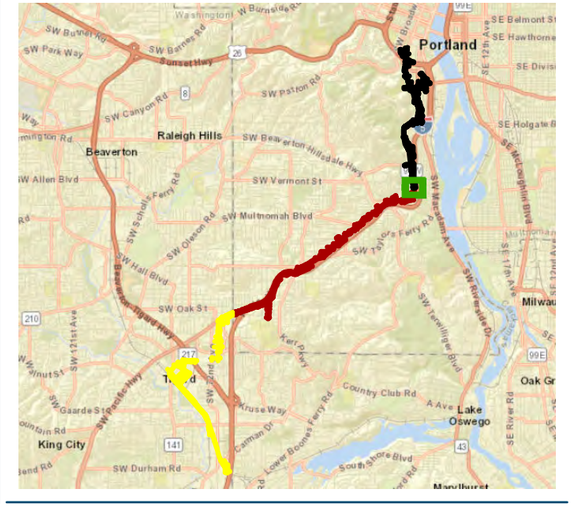

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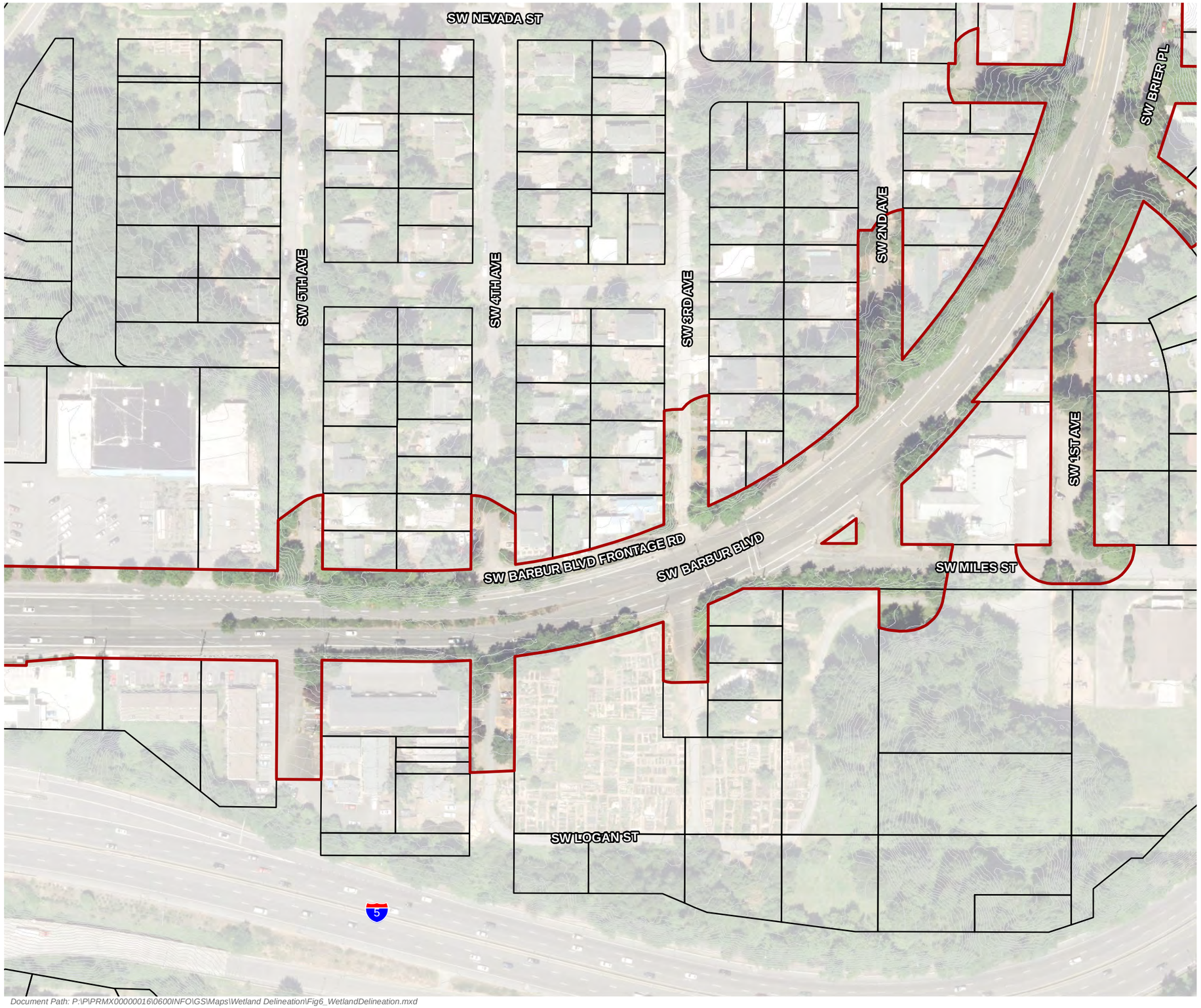

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 15 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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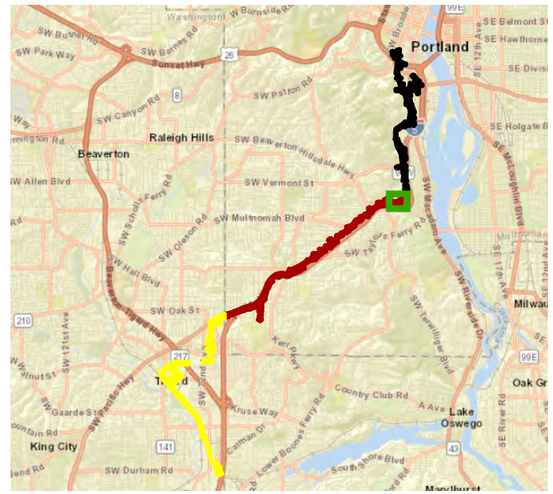

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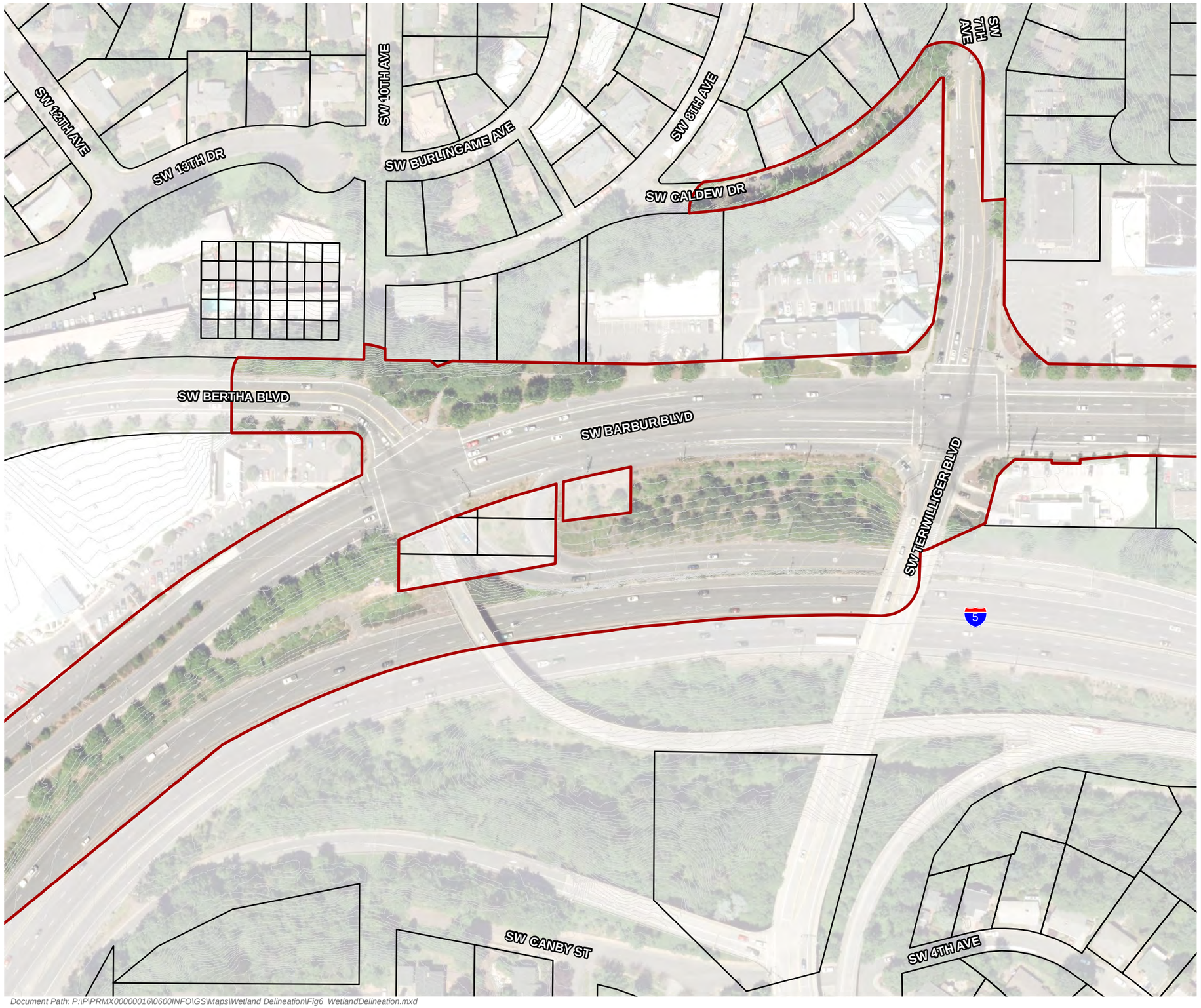

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 16 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
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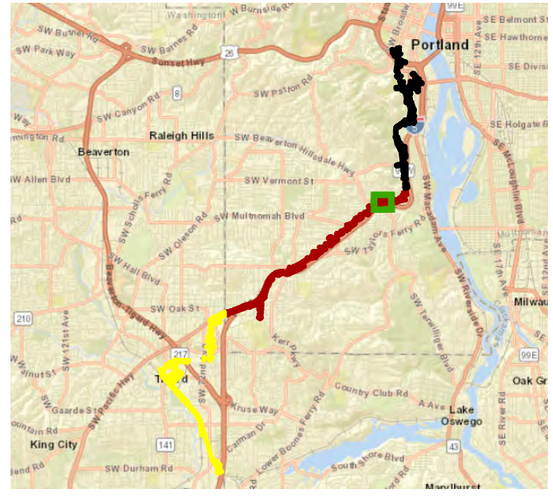

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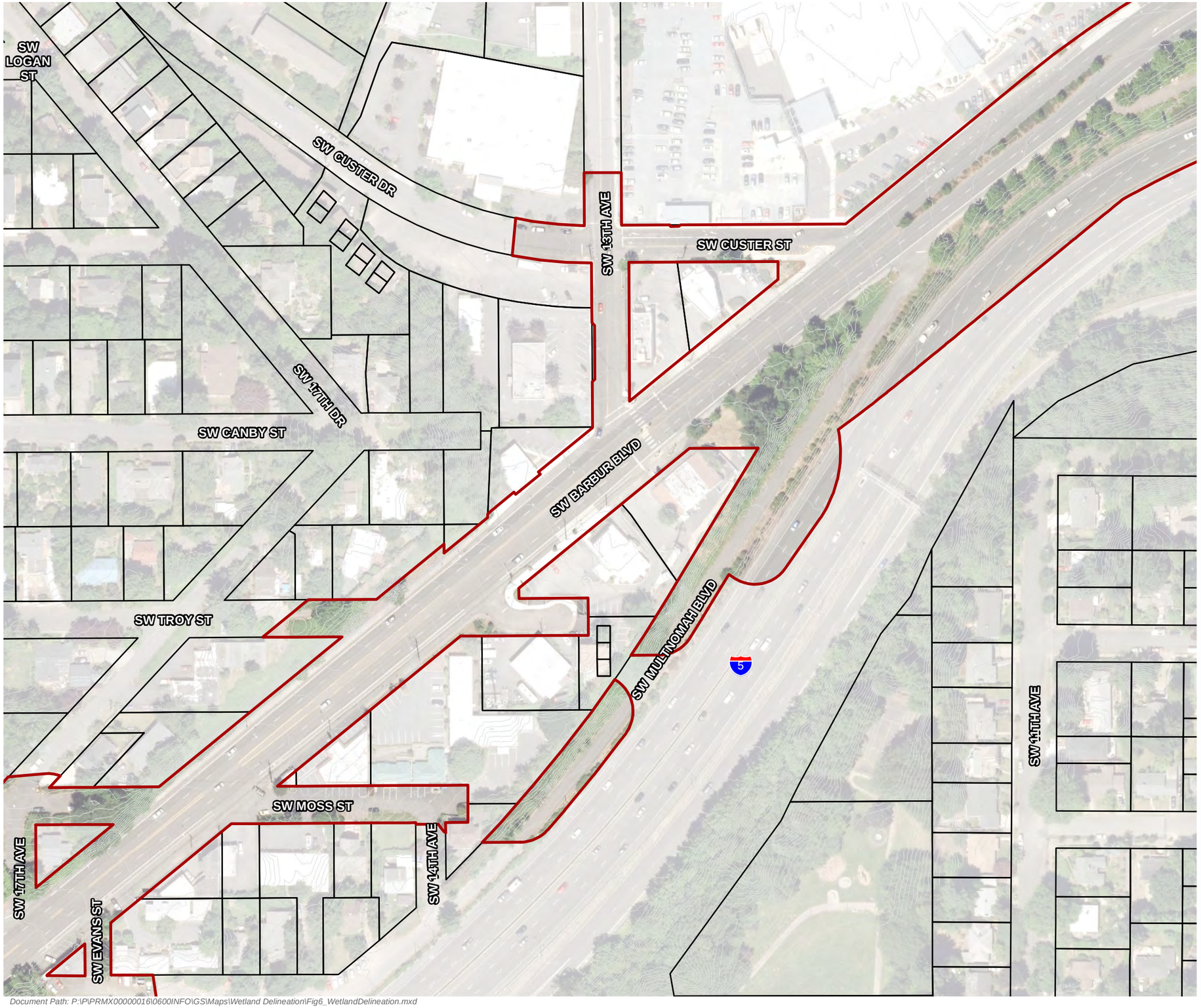

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 17 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
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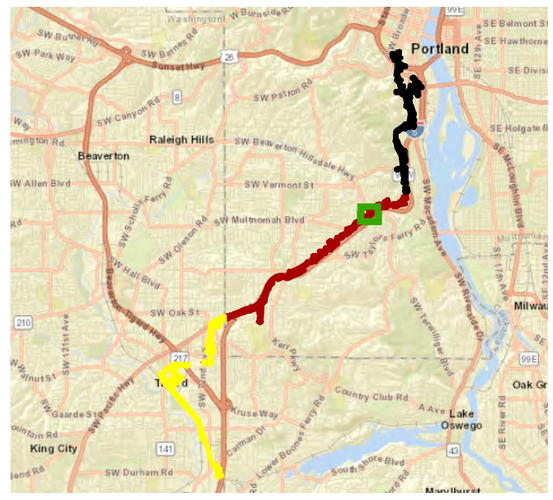

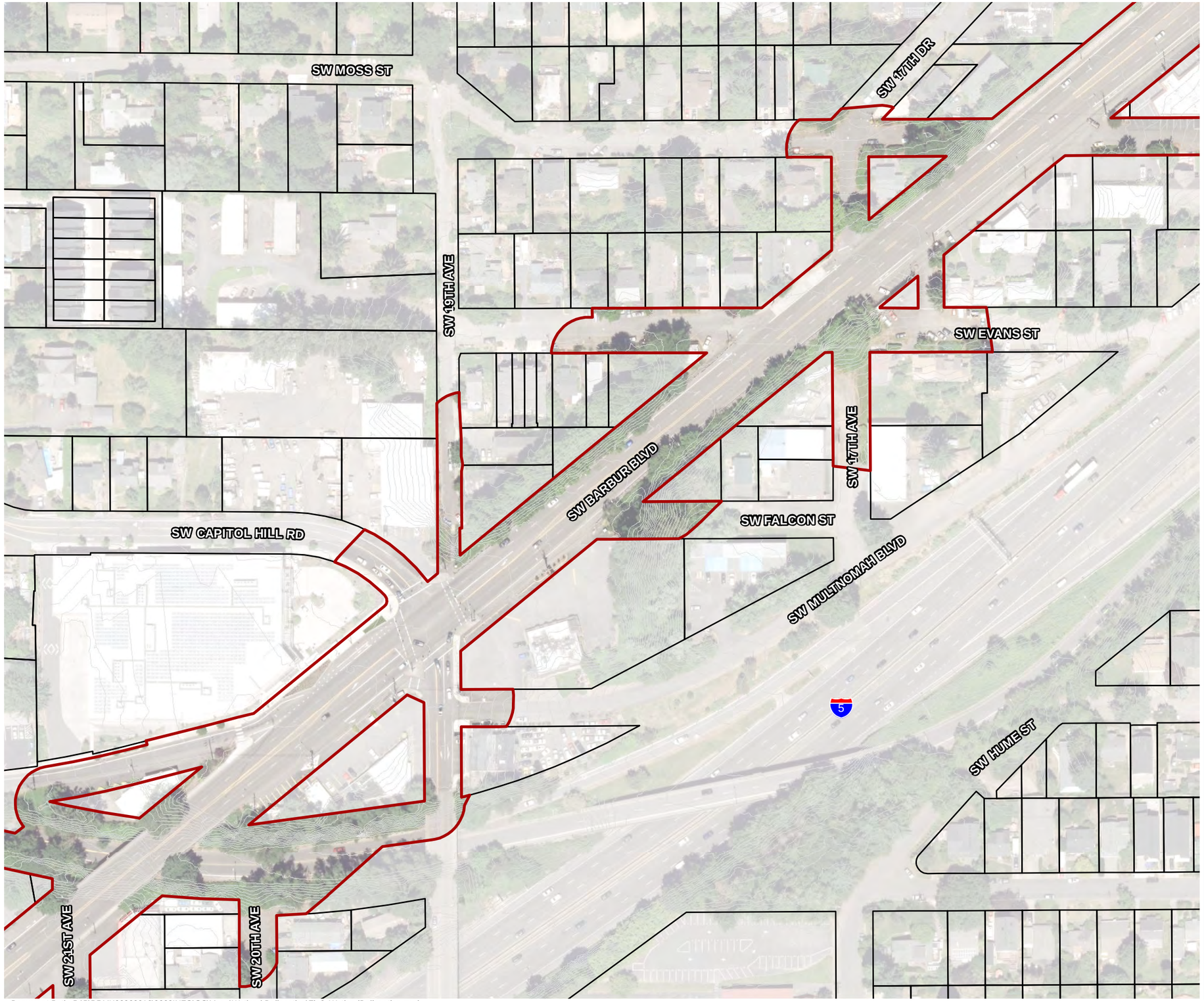

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 18 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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N

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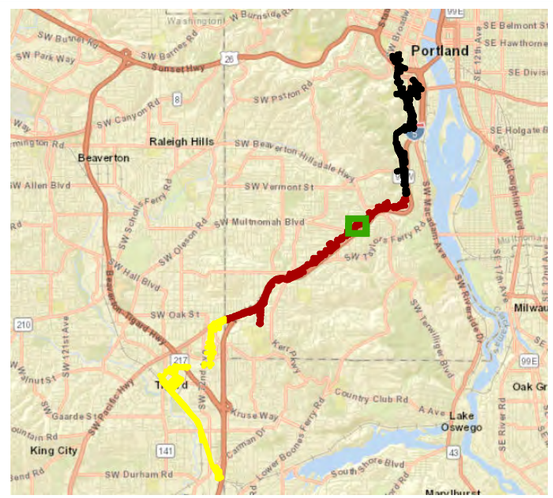

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 19 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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N

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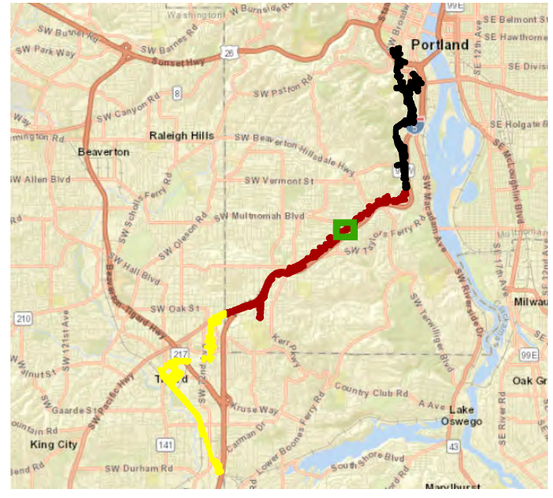

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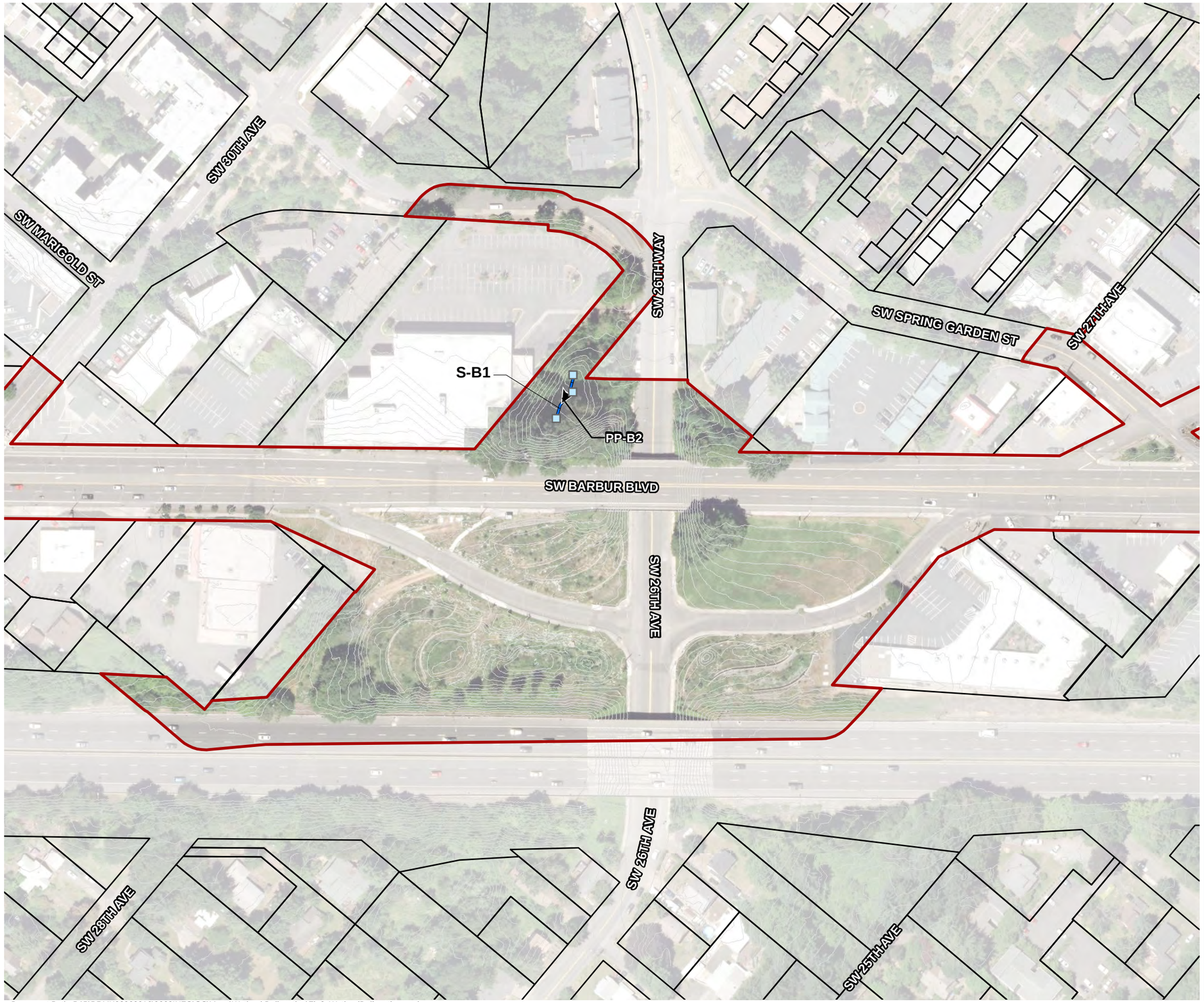

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 20 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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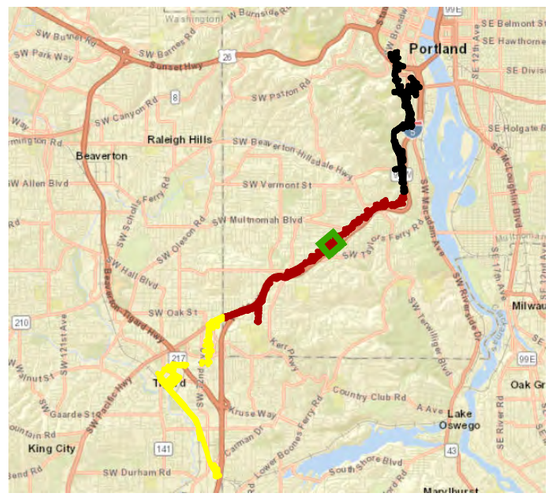

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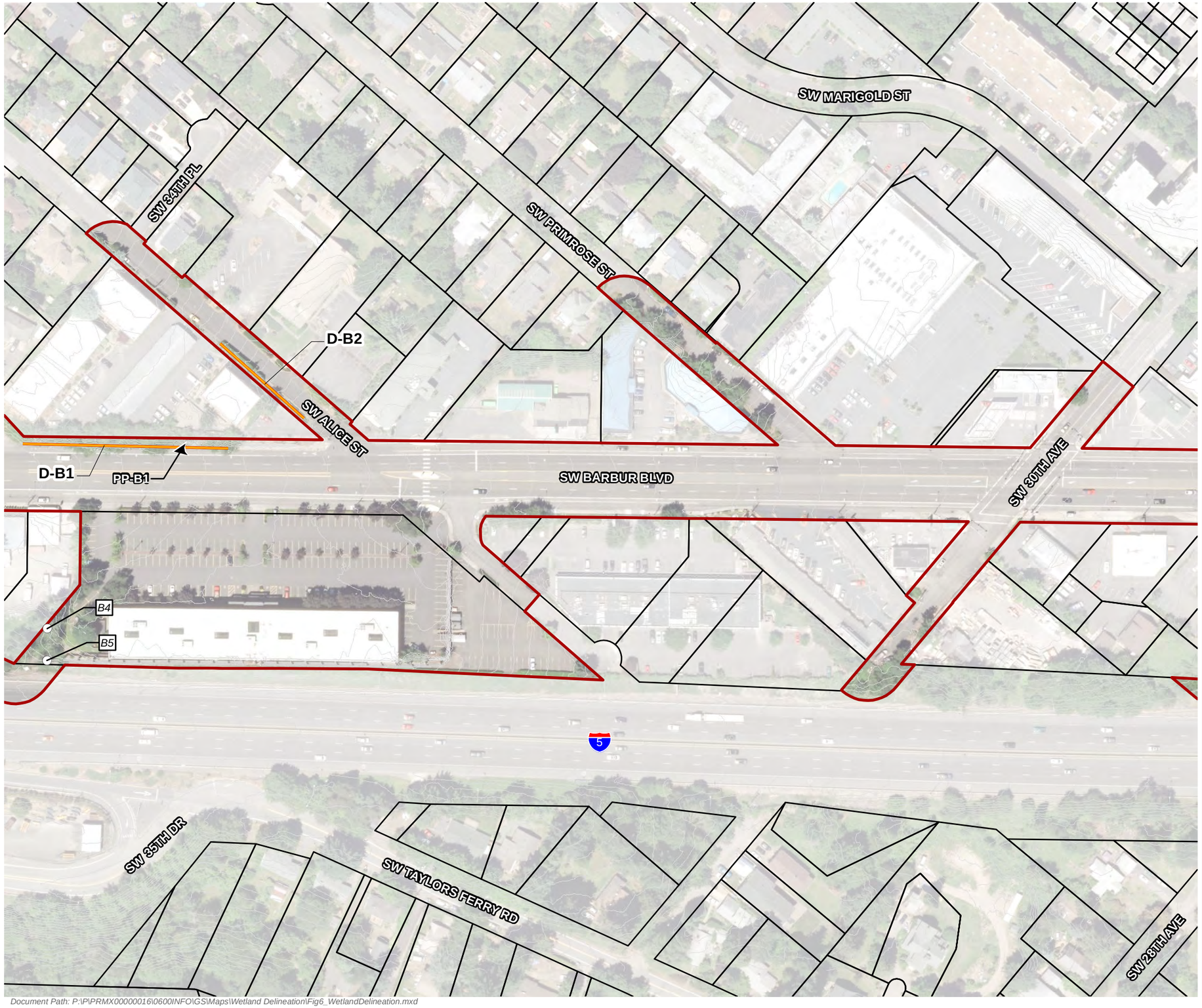

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 21 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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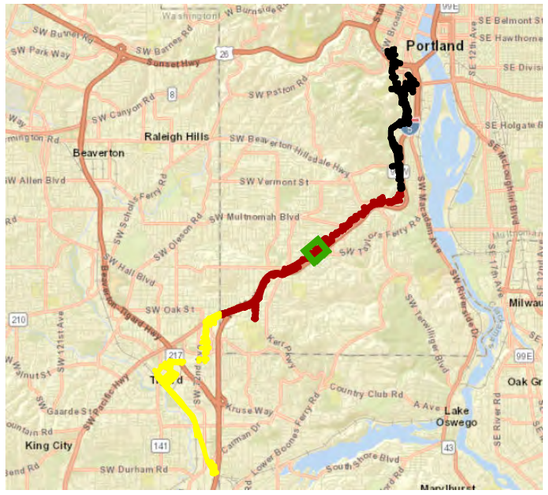

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 22 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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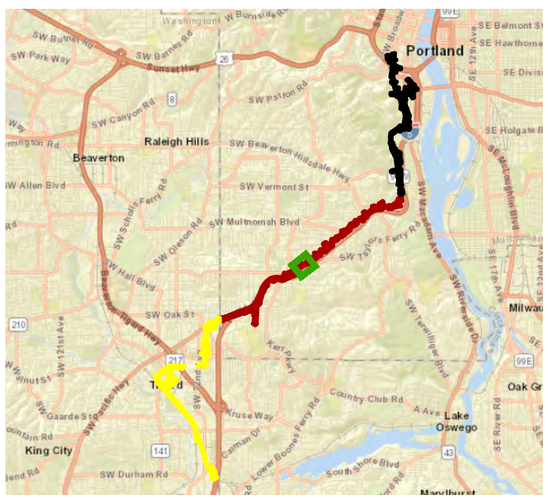
0 200 Feet



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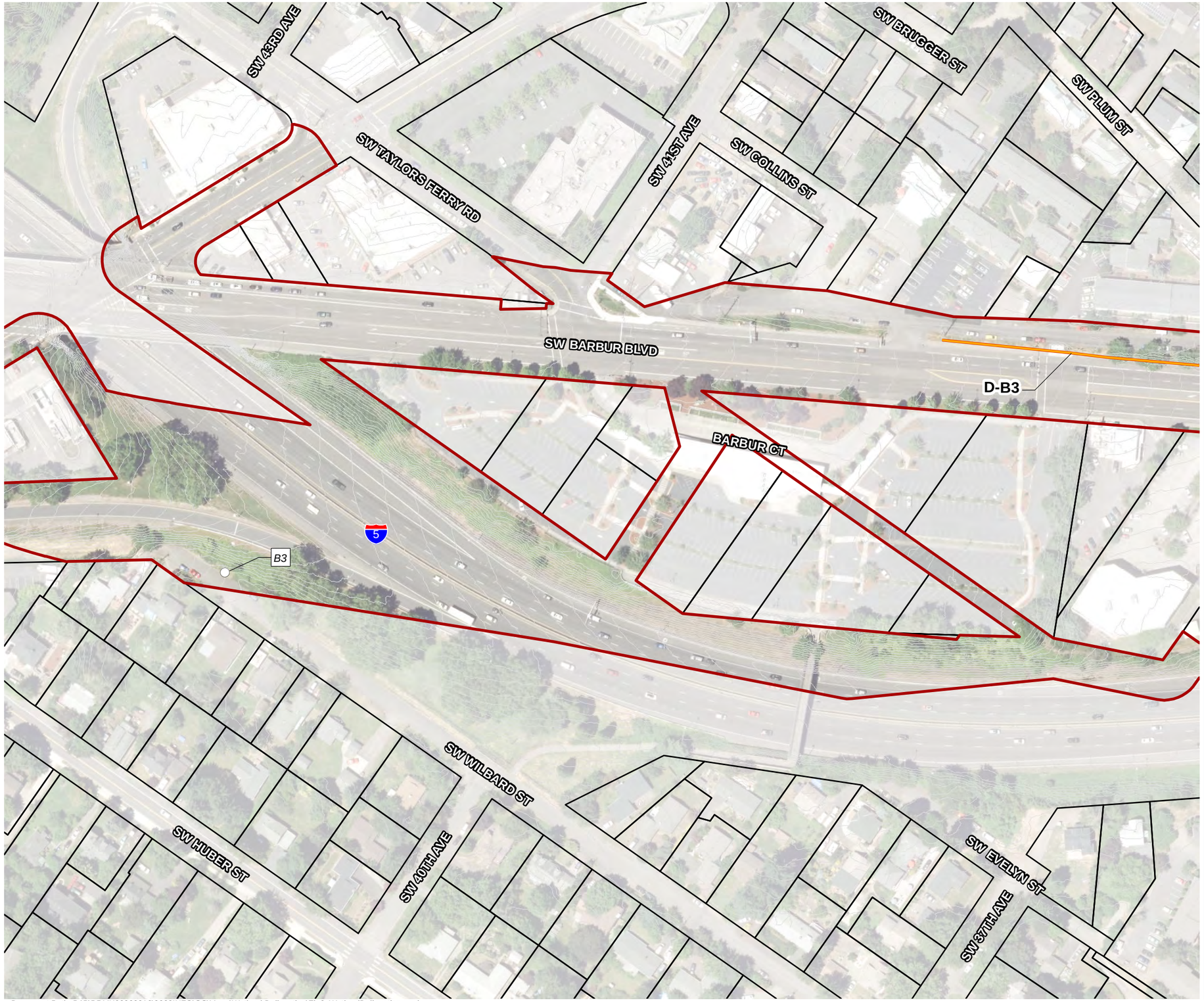

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 23 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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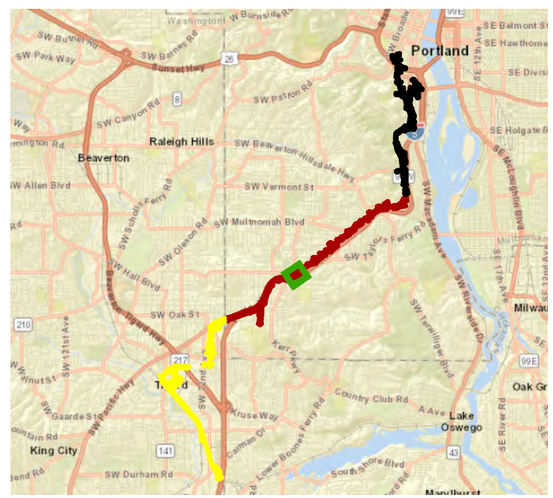

Document Path: P:\P\PRMX00000016\0600INFO\GS\Maps\Wetland Delineation\Fig6_WetlandDelineation.mxd

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 24 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
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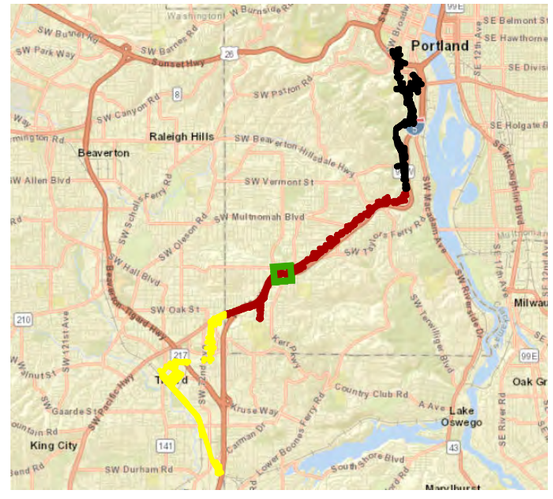
0 200 Feet



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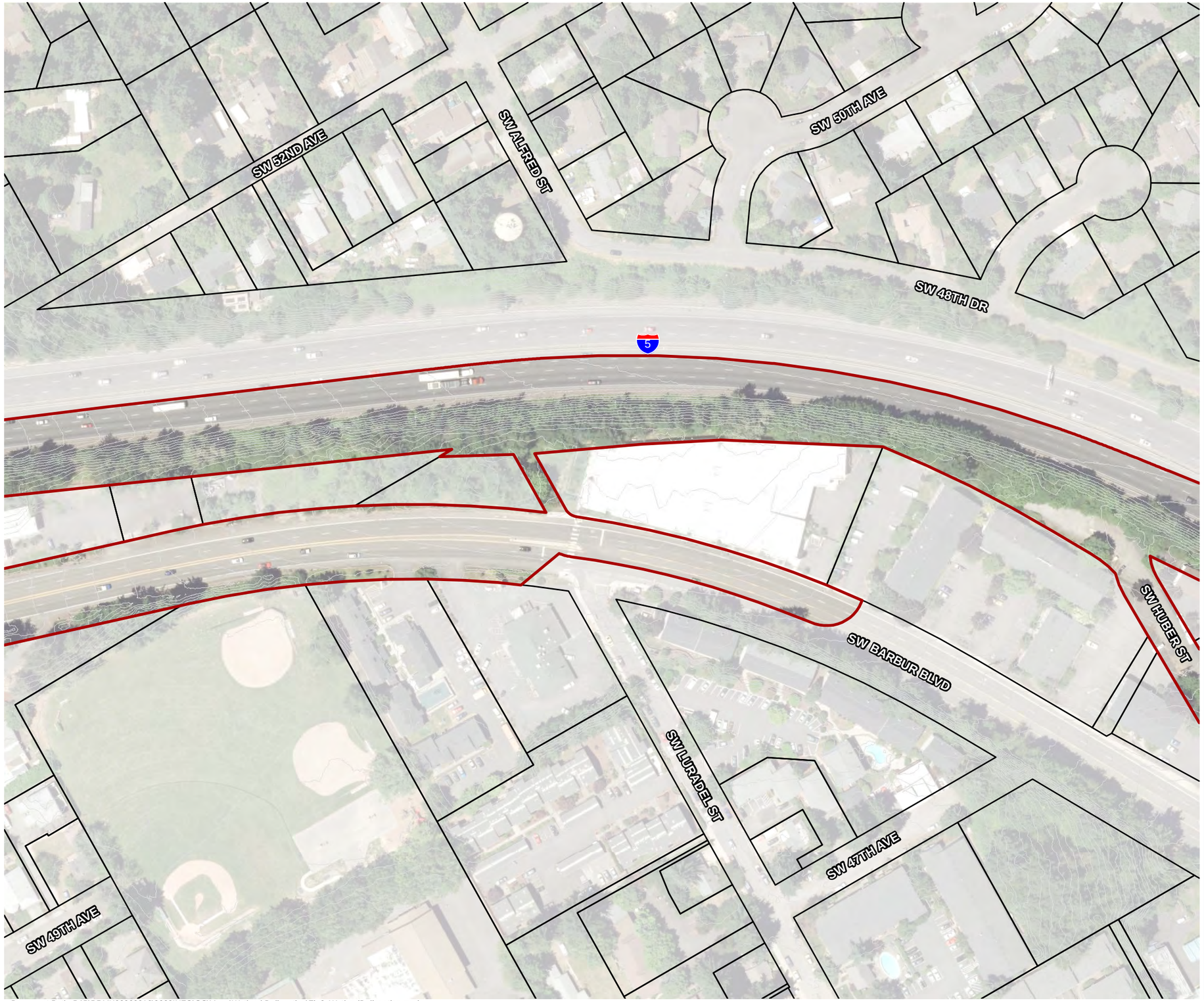

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 25 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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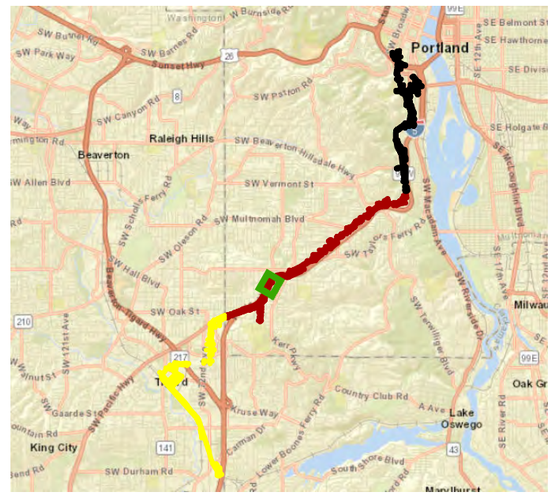

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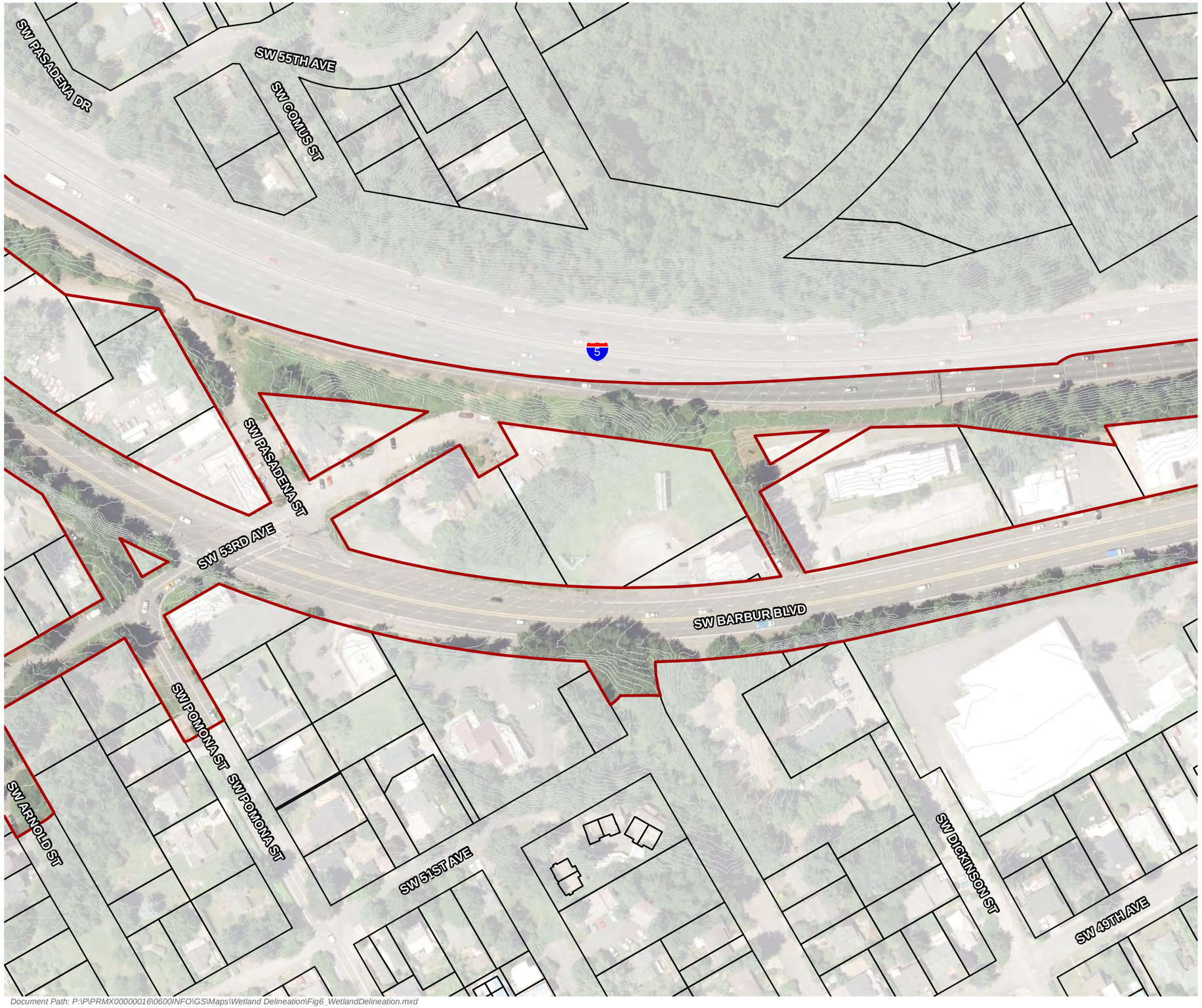

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 26 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
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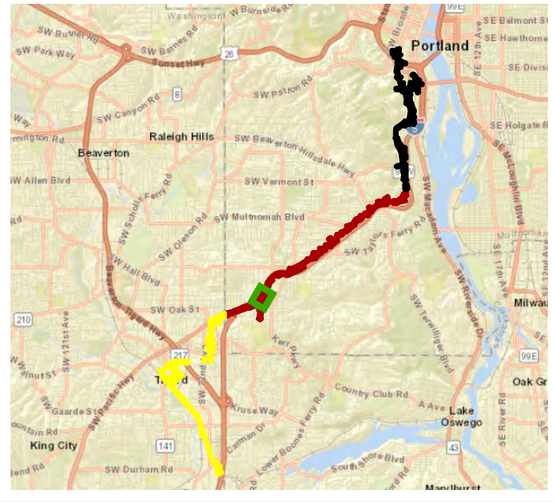

Document Path: P:\P\PRMX00000016\0600\INFO\GS\Maps\Wetland Delineation\Fig6_WetlandDelineation.mxd

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 27 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
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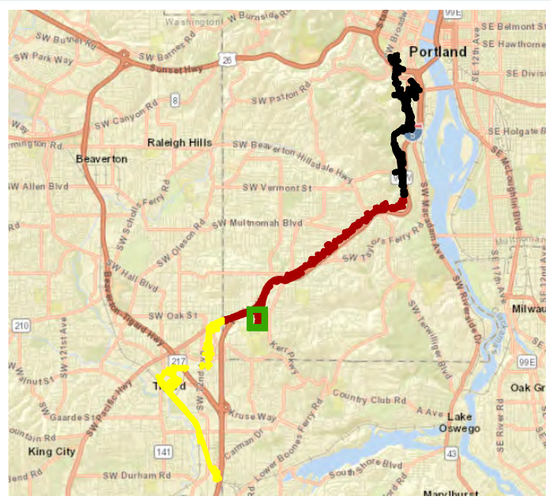
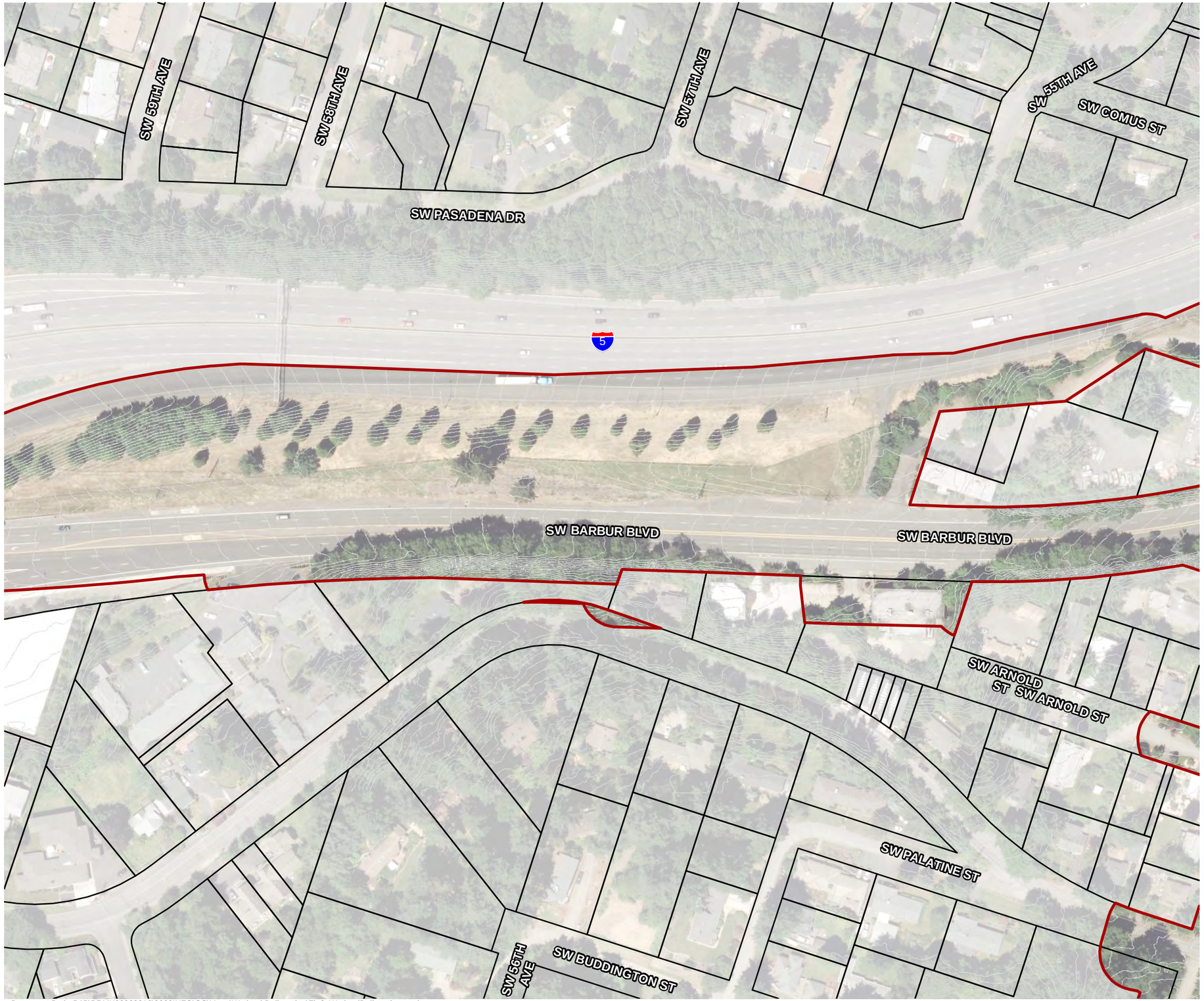


SW 55TH AVE
SW PORTLAND COMMUNITY COLLEGE RD
SW PALATINE ST
SW BARBUR BLVD
SW ARNOLD ST
PP-B4
SW VACUNA ST
SW CORONADO ST
S-B2
SW 53RD AVE
SW BUDDINGTON ST
SW POMONA ST
SW 51ST AVE

Document Path: P:\P\PRMX00000016\0600INFO\GS\Maps\Wetland Delineation\Fig6_WetlandDelineation.mxd



TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 28 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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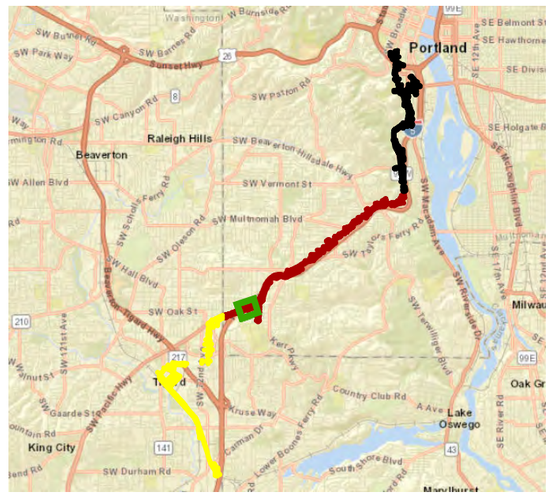
0 200 Feet



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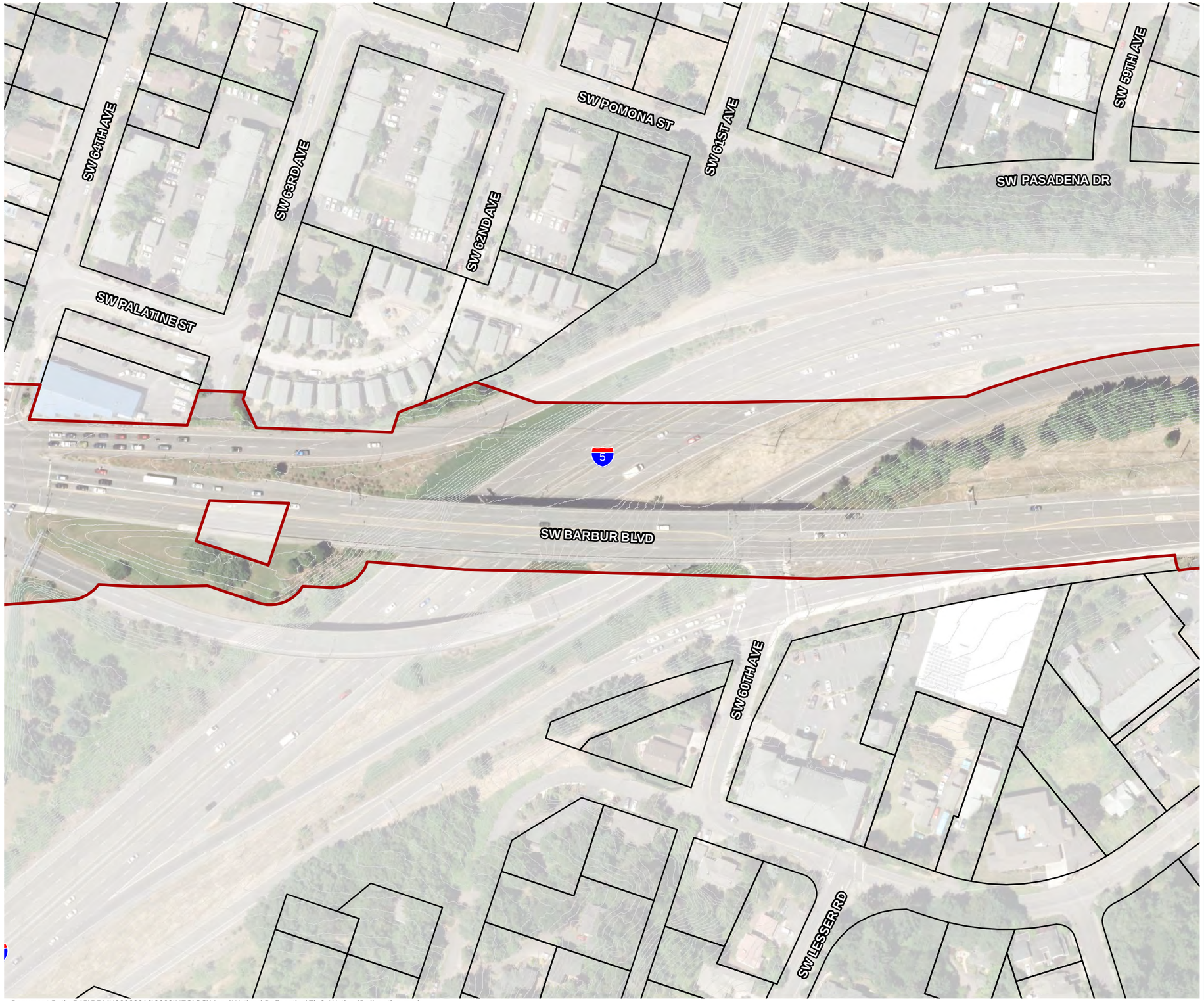

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 29 of 44

Legend

- Wetland Study Area Segment B
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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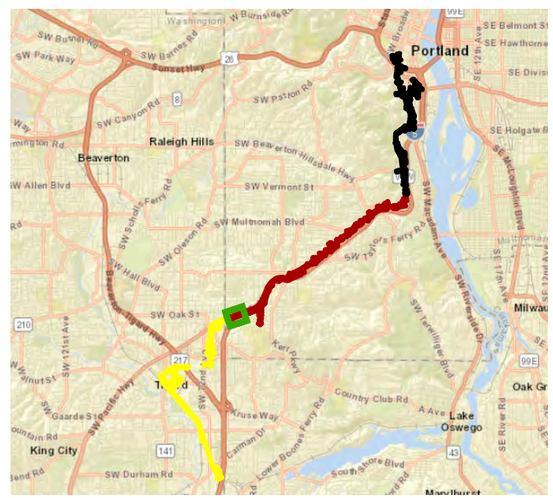
N

0 200 Feet



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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 30 of 44

Legend

- Wetland Study Area Segment B
- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
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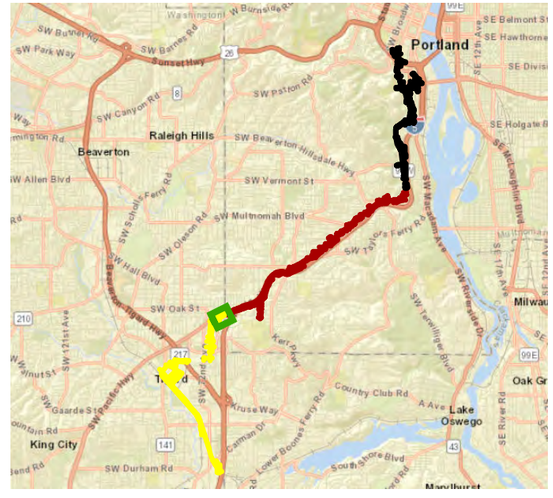

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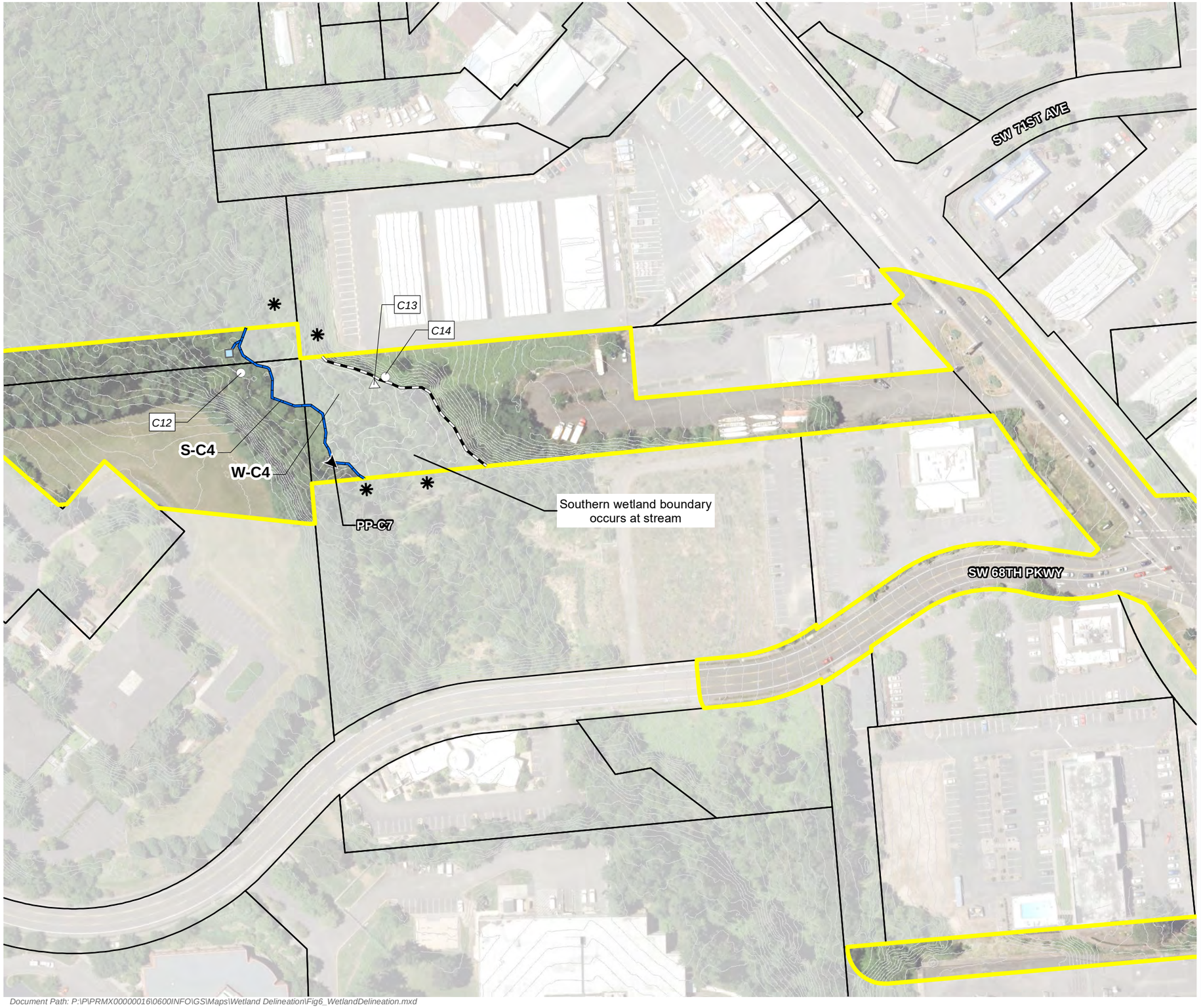

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 31 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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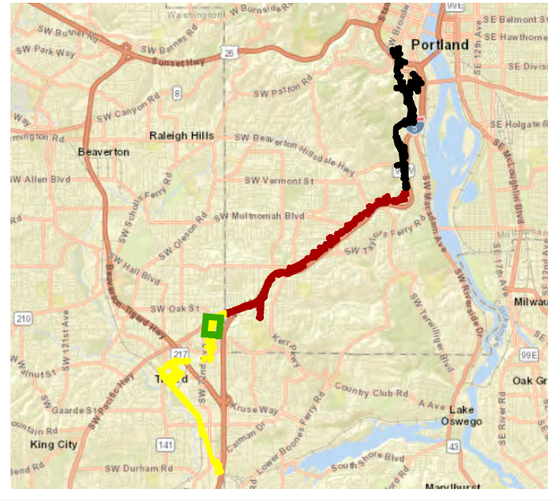

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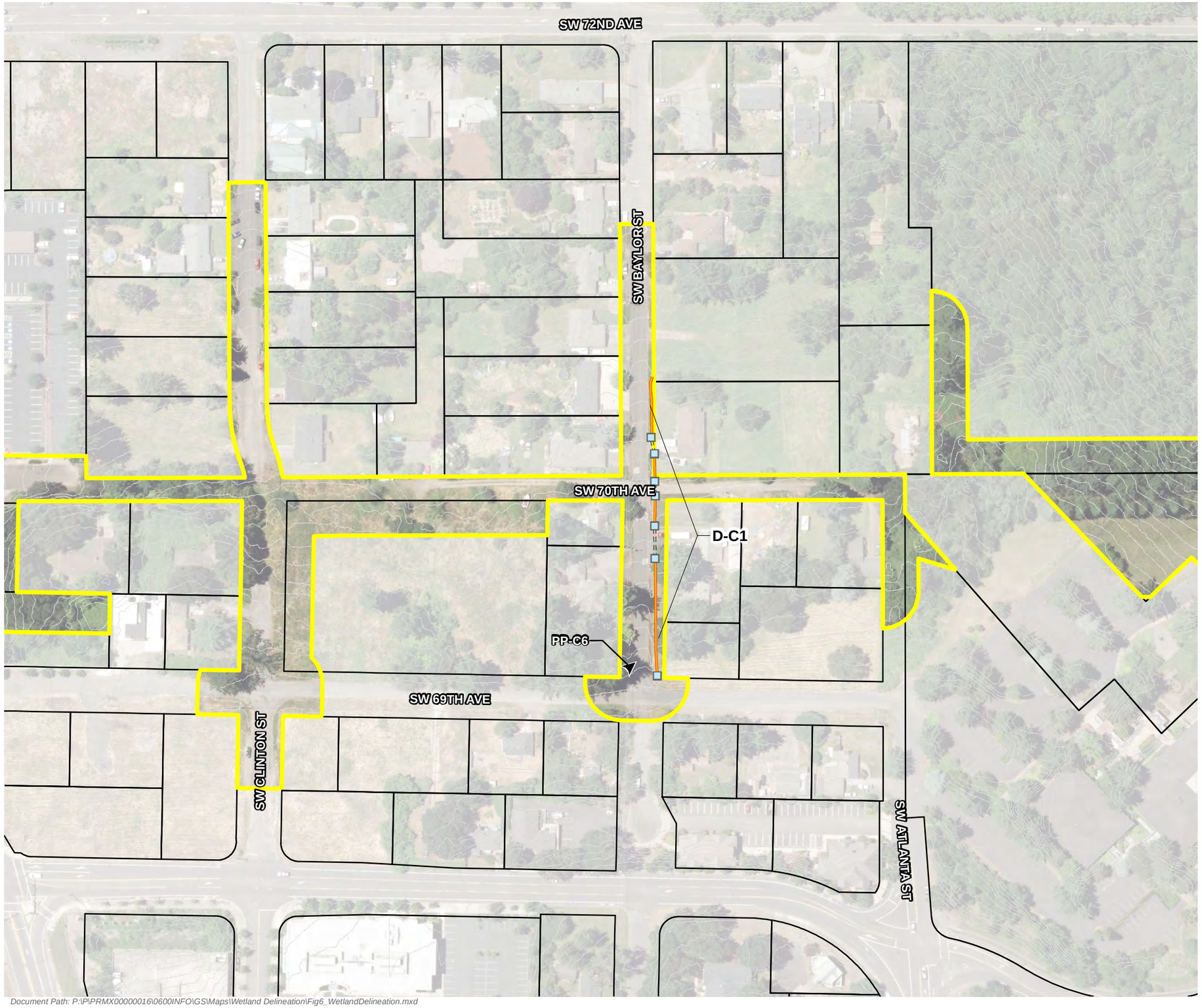

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 32 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
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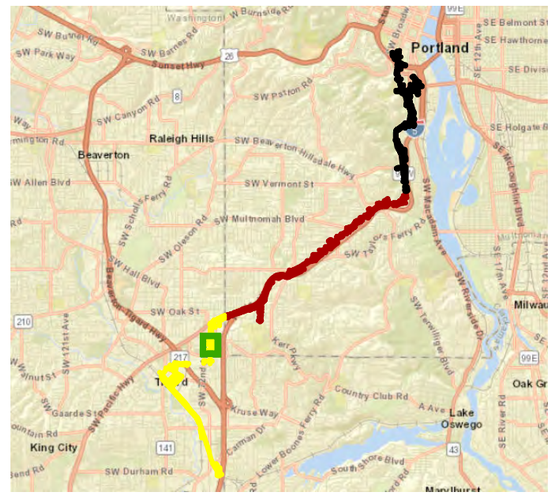

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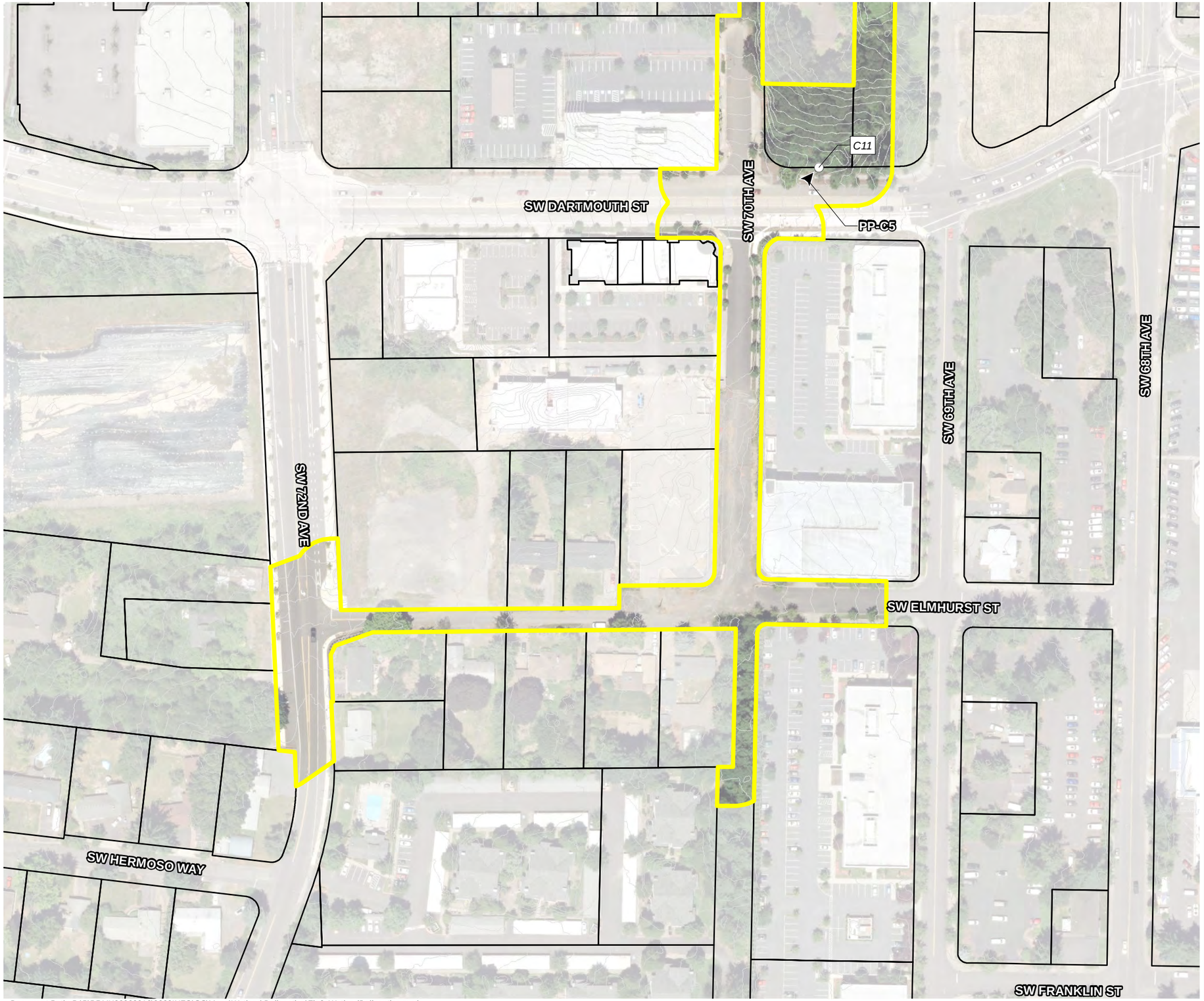

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 33 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
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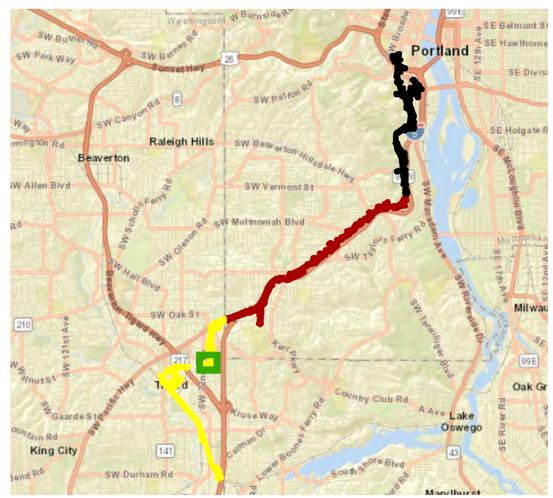
0 200 Feet



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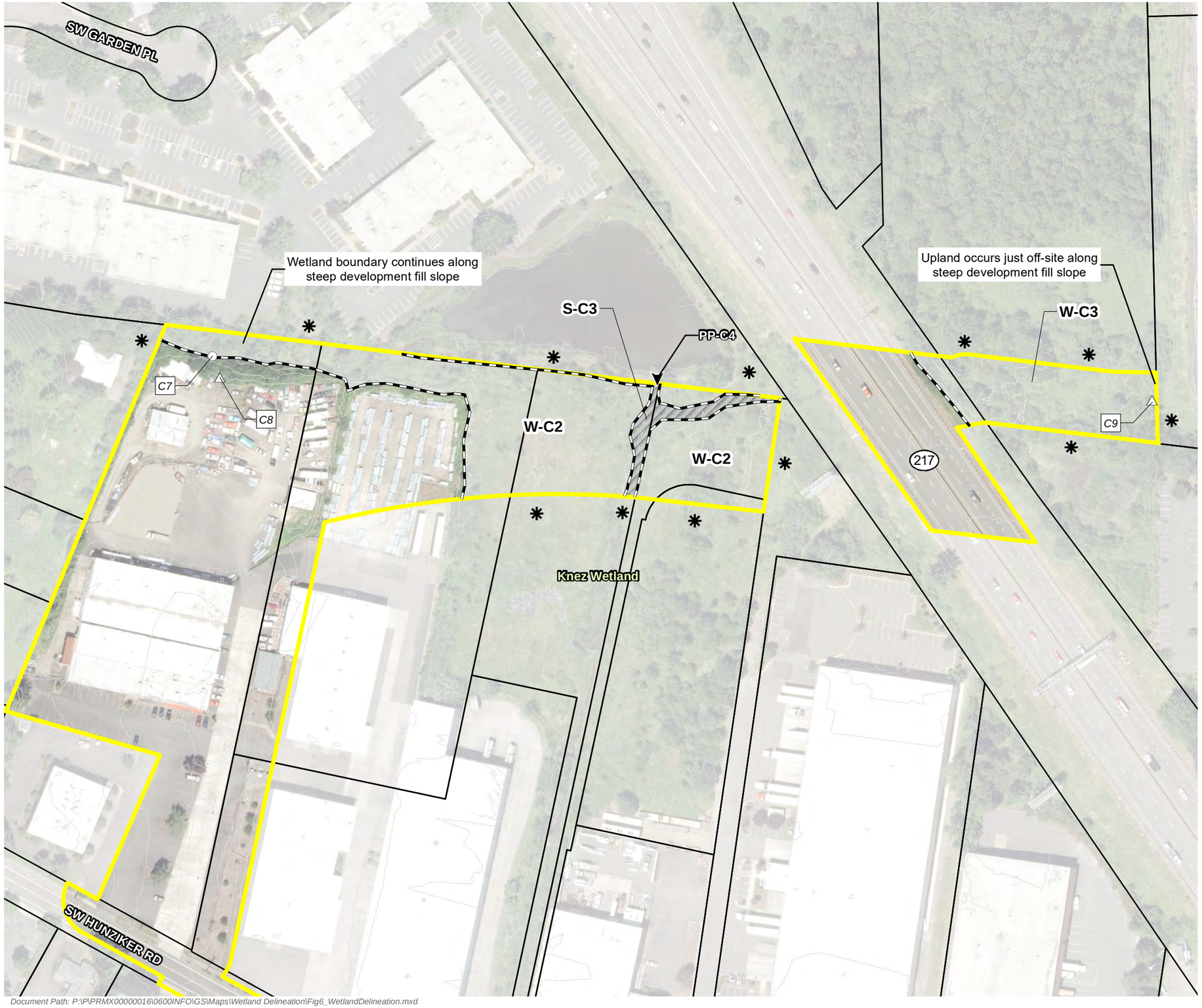

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 34 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
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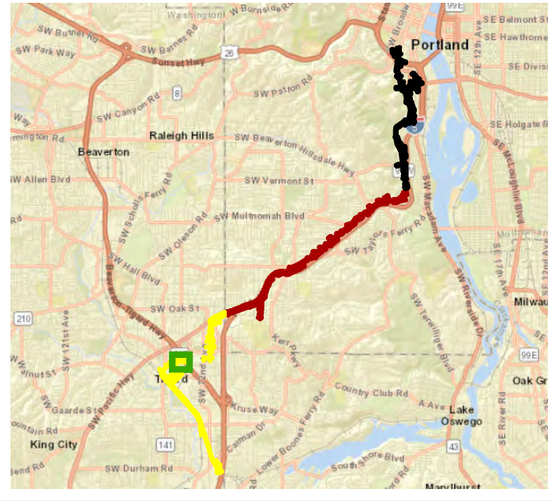

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 35 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
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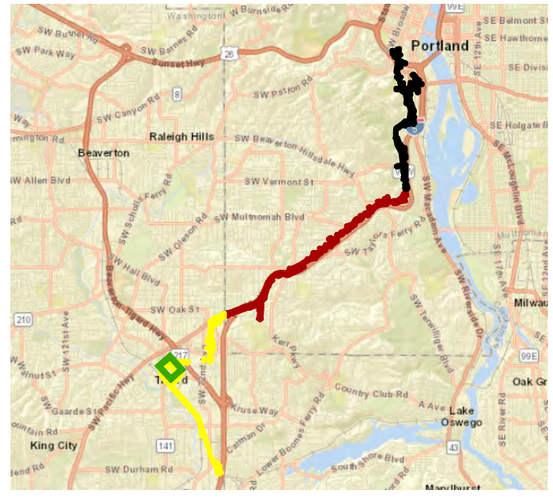

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 36 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
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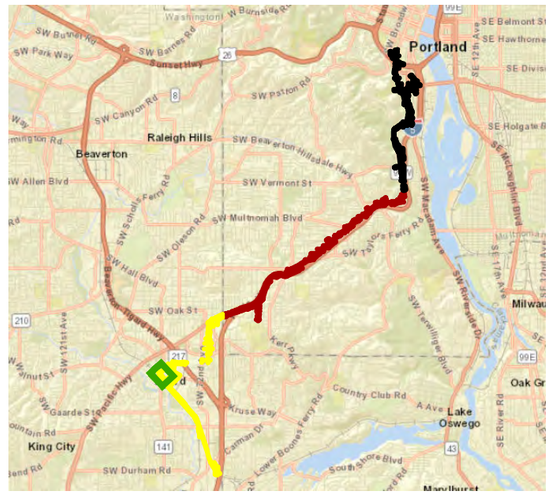

SW SCOFFINS ST
SW HALL BLVD
SW ASH AVE
SW COMMERCIAL ST
SW BURNHAM ST
Wetland boundary continues along steep development fill slopes
PP-C9
W-Ca2
W-Ca1
W-Ca
PP-C8
D-Ca
Jurisdictional Ditch
PP-C10

Document Path: P:\P\PRMX00000016\0600INFO\GS\Maps\Wetland Delineation\Fig6_WetlandDelineation.mxd

TRIMET

Southwest Corridor Light Rail Project

Figure 6: Wetland Delineation

Sheet 37 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
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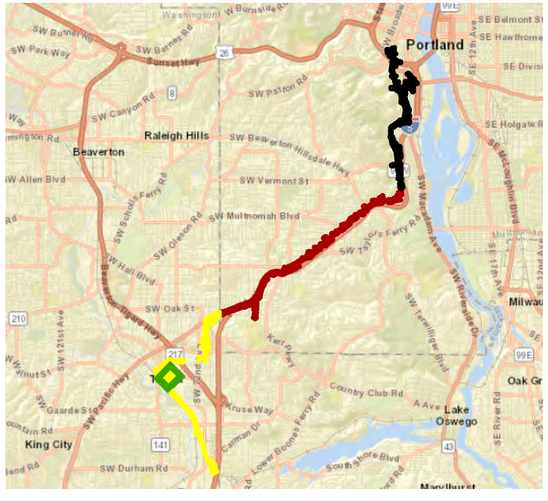

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 38 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
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- Feature extends outside study area

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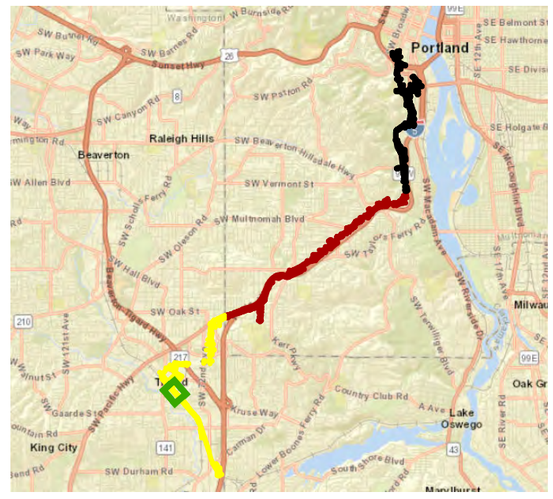
On-site features (wetlands, ditches, streams, culverts, catch basins, and data plots) were mapped with a Trimble Pathfinder GEO XH receiver with typical accuracy of 3 feet or better. An asterisk is included where jurisdictional features extend offsite. Imagery: Portland Aerial Photos Summer 2017.

0 200 Feet



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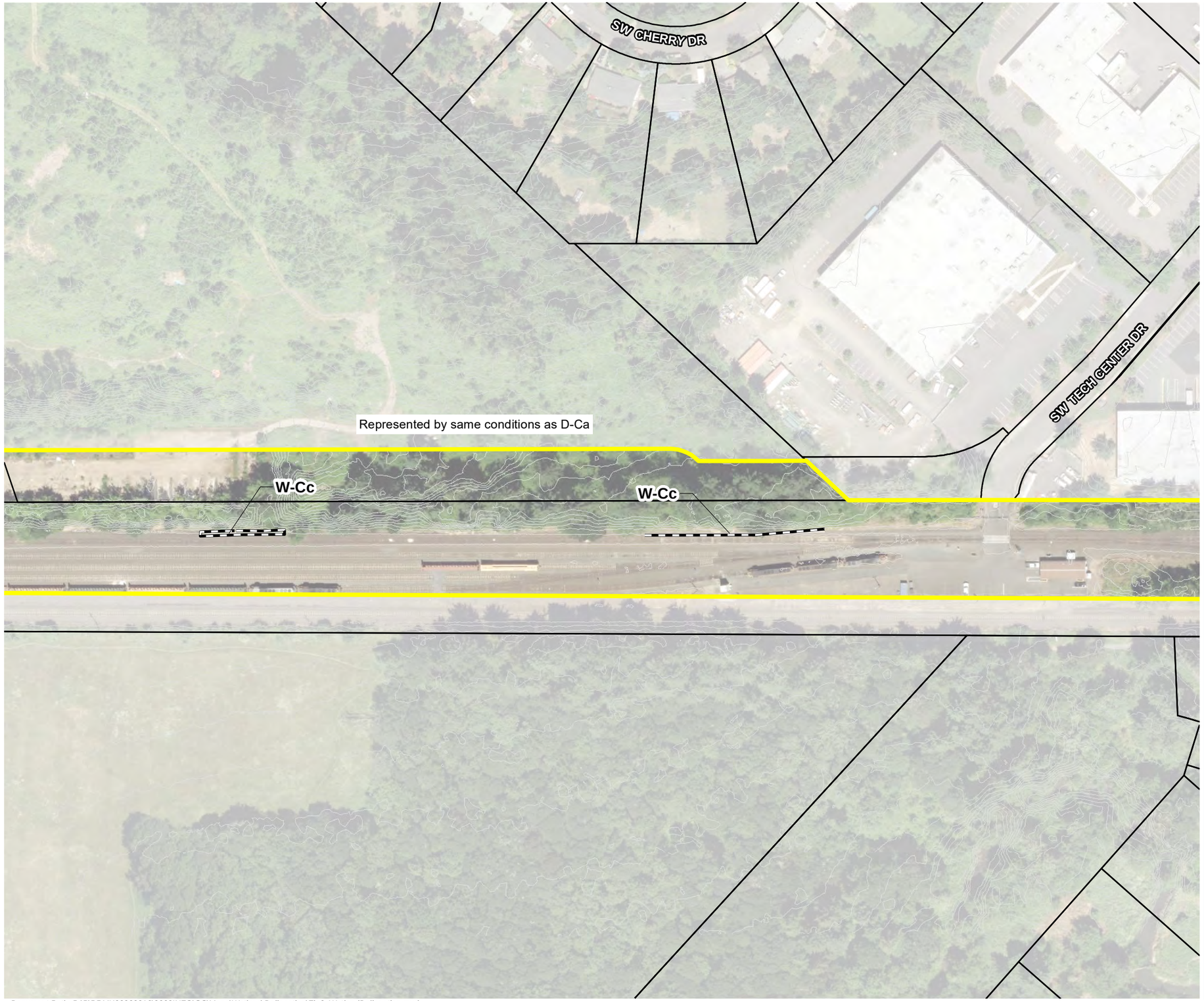

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 39 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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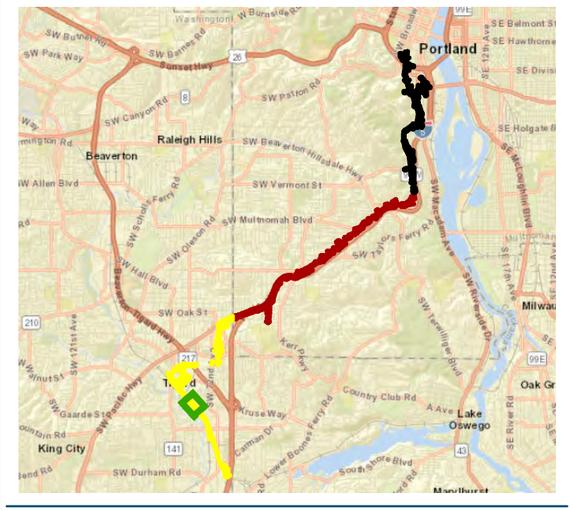
0 200 Feet



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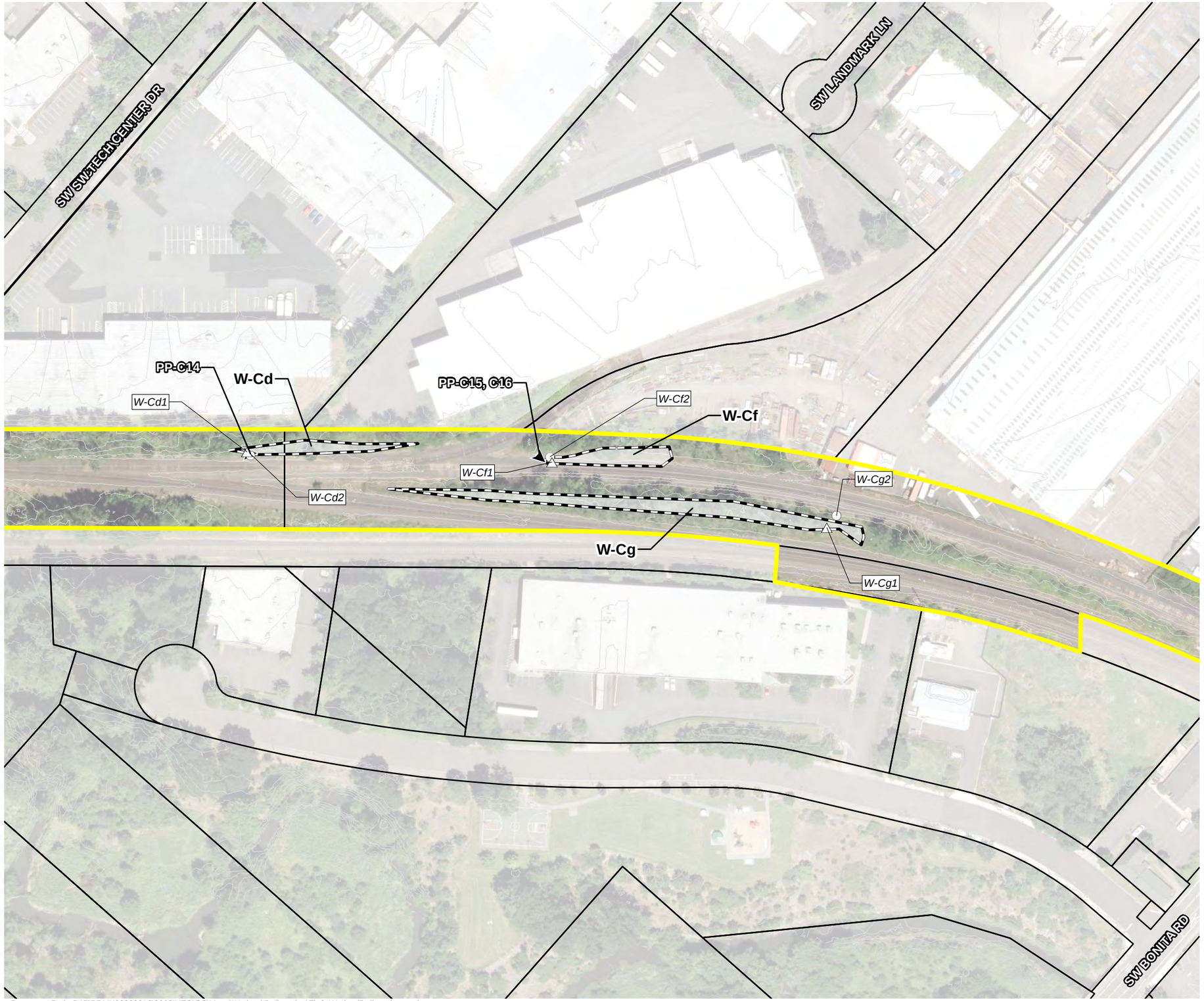

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 40 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
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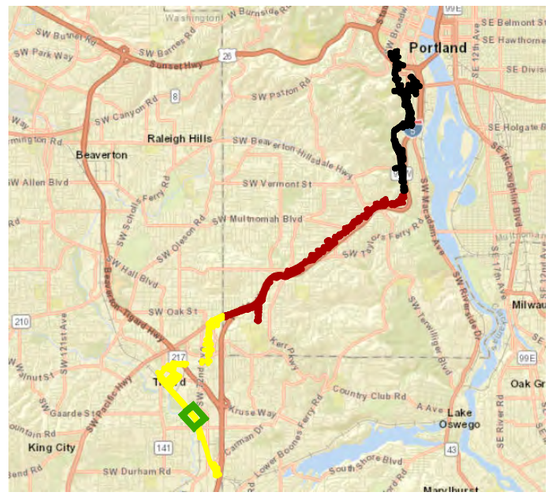

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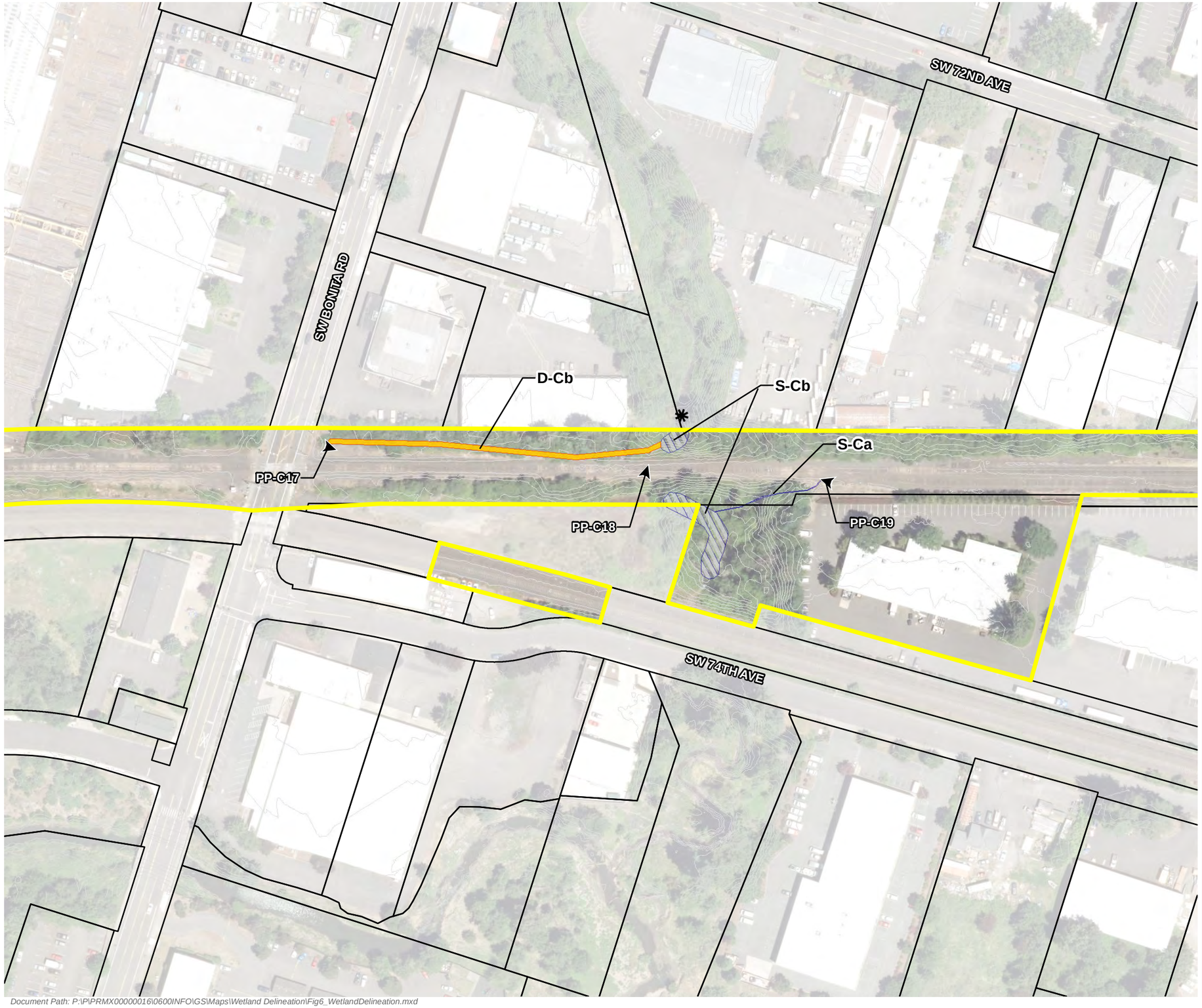

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 41 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert
- Culvert
- Catch Basin
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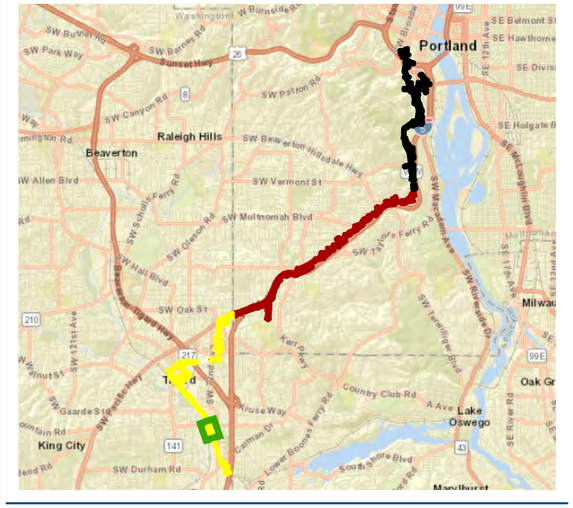

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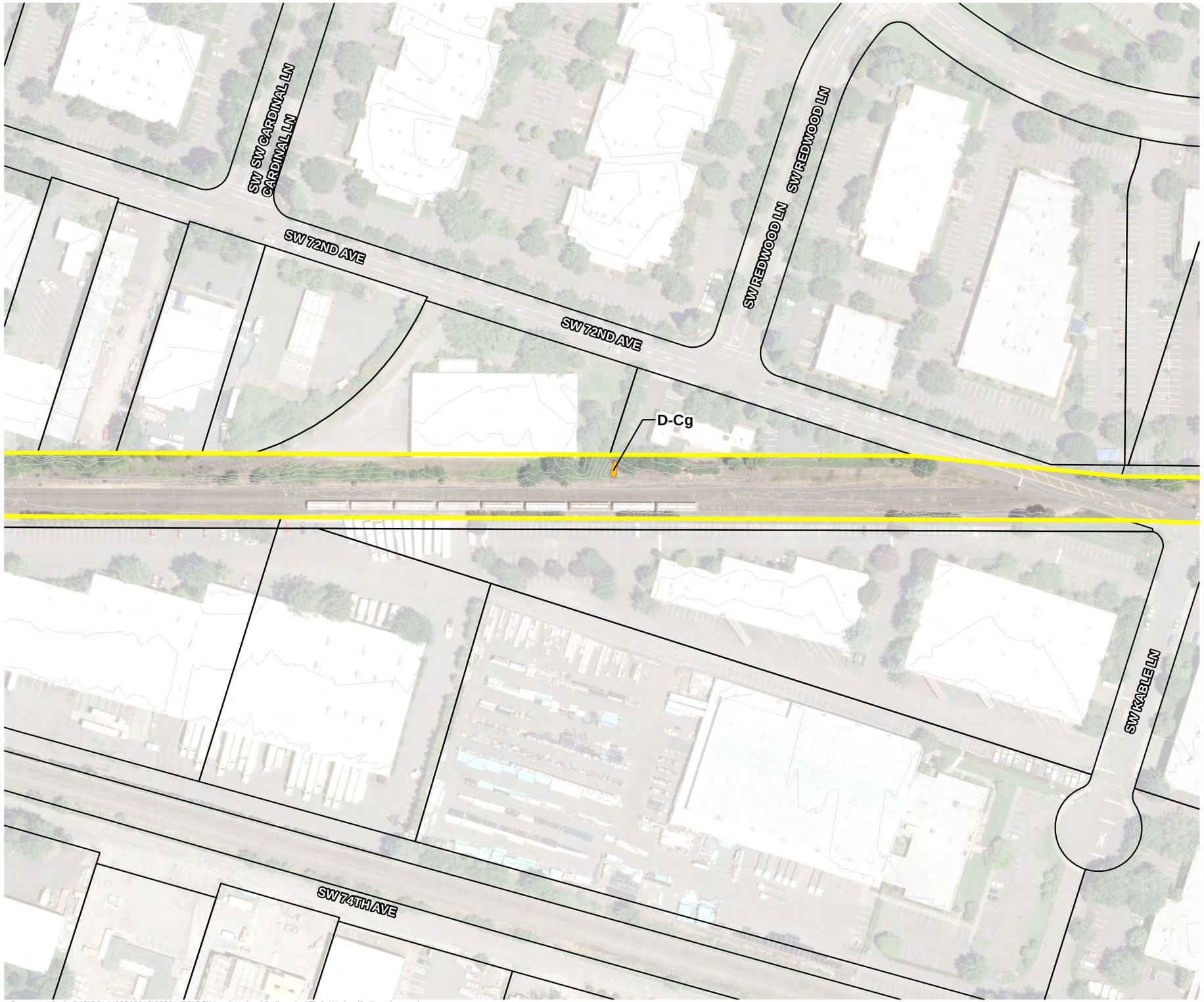

TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 42 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

- Wetland
- Ordinary High Water (OHW)
- Ditch*
- Stream/OHW
- Ditch*
- Culvert

- Culvert
- Catch Basin
- Upland Data Plot
- Wetland Data Plot
- Photo Location and Direction
- Feature extends outside study area

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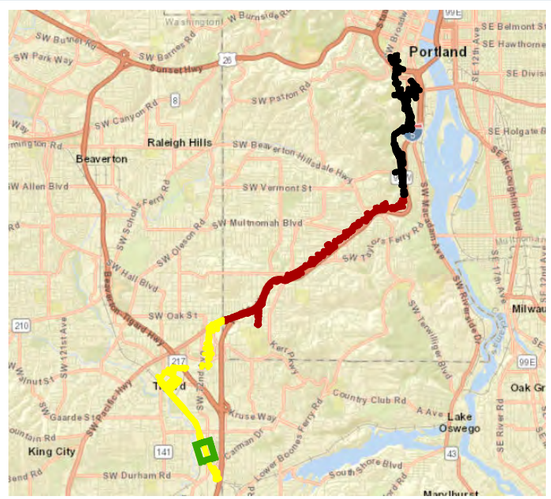

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 43 of 44

Legend

- Wetland Study Area Segment C
- Metro RLIS Taxlot
- Contour (2-ft intervals)

Delineated Features

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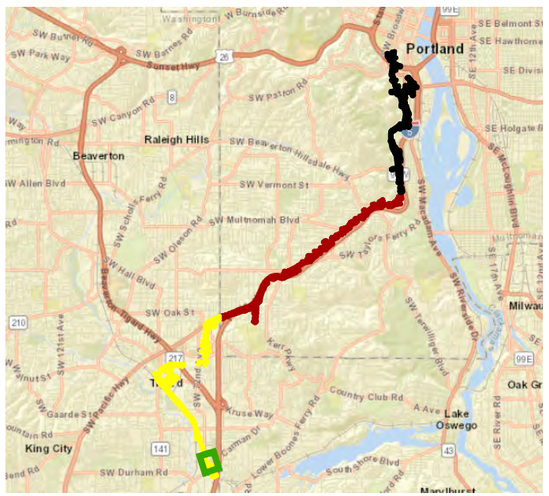

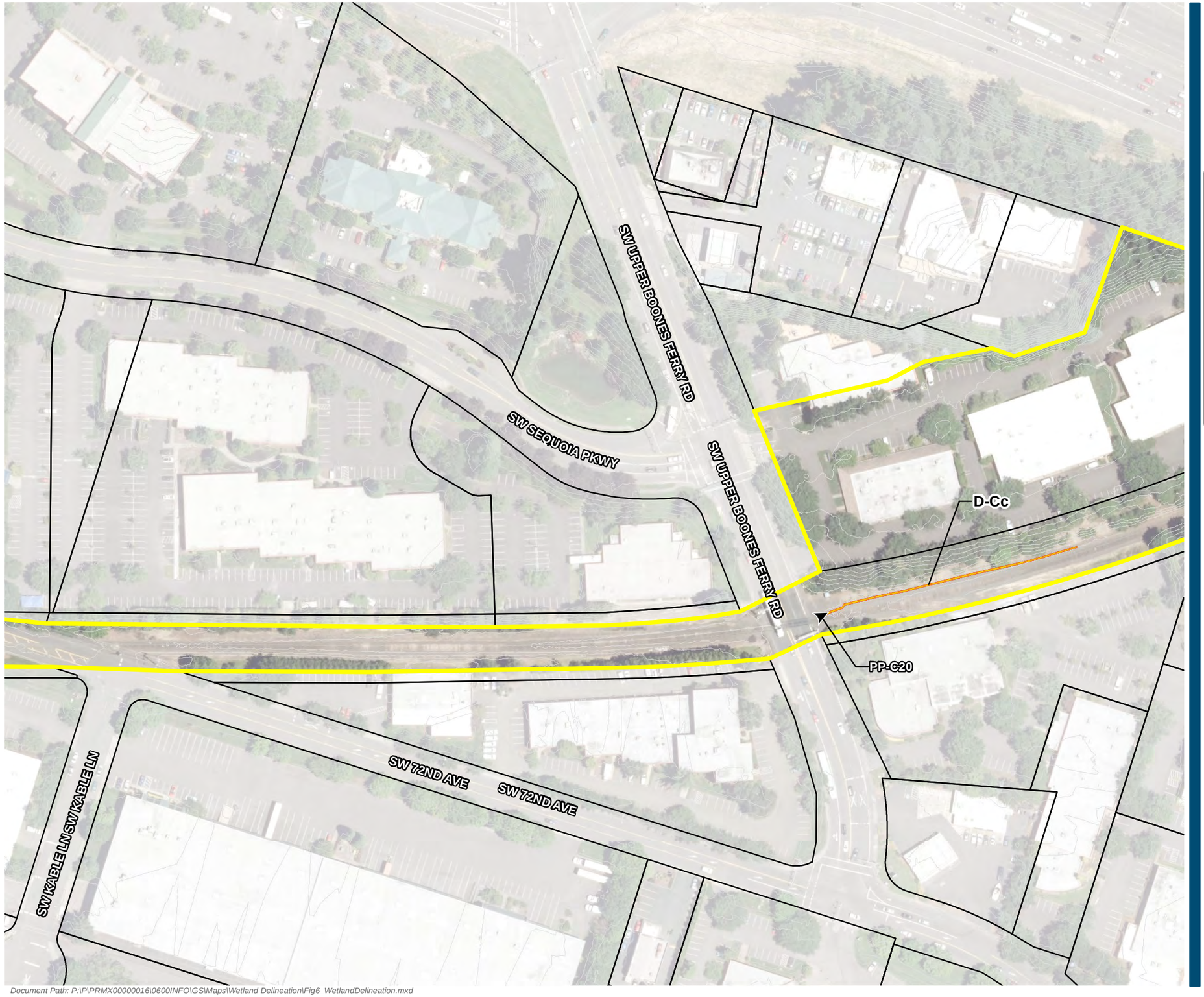

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TRIMET

Southwest Corridor Light Rail Project
Figure 6: Wetland Delineation
Sheet 44 of 44

Legend

- Wetland Study Area Segment C
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Delineated Features

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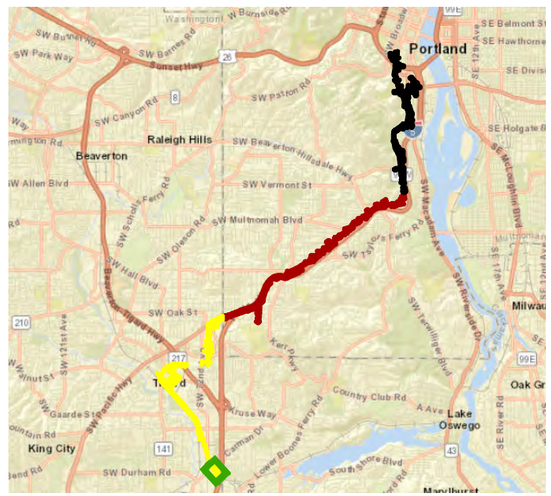

Document Path: P:\P\PRMX00000016\0600INFO\GS\Maps\Wetland Delineation\Fig6_WetlandDelineation.mxd

APPENDIX B: DATA SHEETS

Data Plot #	Lat	Long	Soil ID	Soil Description	PLSS	NWI Wetland
A1	45.499552	-122.681899	53C	Urban land-Quafeno complex, 8 to 15 percent slopes	T1S R1E S10	--
A2	45.499537	-122.681952	53C	Urban land-Quafeno complex, 8 to 15 percent slopes	T1S R1E S10	--
B1	45.457415	-122.712705	8C	Cascade-Urban land complex, 8 to 15 percent slopes	T1S R1E S29	--
B2	45.457468	-122.712676	8C	Cascade-Urban land complex, 8 to 15 percent slopes	T1S R1E S29	--
B3	45.453043	-122.719685	8B	Cascade-Urban land complex, 0 to 8 percent slopes	T1S R1E S29	--
B4	45.457151	-122.711195	8B	Cascade-Urban land complex, 0 to 8 percent slopes	T1S R1E S29	--
B5	45.457060	-122.711089	8B	Cascade-Urban land complex, 0 to 8 percent slopes	T1S R1E S29	--
C1	45.425753	-122.761560	13	Cove silty clay loam	T2S R1W S2	--
C2	45.425711	-122.761584	13	Cove silty clay loam	T2S R1W S2	--
C3	45.427764	-122.759297	2027A	Verboort silty clay loam, 0 to 3 percent slopes	T2S R1W S2	PSS/EM1C
C4	45.427769	-122.759271	2027A	Verboort silty clay loam, 0 to 3 percent slopes	T2S R1W S2	PSS/EM1C
C5	45.425325	-122.762673	13	Cove silty clay loam	T2S R1W S2	PUBHh
C6	45.425327	-122.762664	13	Cove silty clay loam	T2S R1W S2	PUBHh
C7	45.431134	-122.761246	2027A	Verboort silty clay loam, 0 to 3 percent slopes	T2S R1W S2	--
C8	45.431213	-122.761284	2027A	Verboort silty clay loam, 0 to 3 percent slopes	T2S R1W S2	--
C9	45.431051	-122.756377	1	Aloha silt loam	T2S R1W S2	--
C11	45.433309	-122.748437	13	Cove silty clay loam	T1S R1W S36	--
C12	45.438459	-122.748833	37C	Quatama loam, 7 to 12 percent slopes	T1S R1W S36	--
C13	45.438950	-122.748706	2225A	Huberly silt loam, 0 to 3 percent slopes	T1S R1W S36	--
C14	45.438988	-122.748746	2225A	Huberly silt loam, 0 to 3 percent slopes	T1S R1W S36	--
W-Ca1	45.427393	-122.765925	1	Aloha silt loam	T2S R1W S2	--
W-Ca2	45.427415	-122.765913	1	Aloha silt loam	T2S R1W S2	--
W-Cb1	45.425209	-122.763106	13	Cove silty clay loam	T2S R1W S2	--
W-Cb2	45.425208	-122.763146	13	Cove silty clay loam	T2S R1W S2	--
W-Cc1	45.422668	-122.759991	1	Aloha silt loam	T2S R1W S2	--
W-Cc2	45.422676	-122.759969	1	Aloha silt loam	T2S R1W S2	--
W-Cd1	45.418886	-122.755099	37B	Quatama loam, 3 to 7 percent slopes	T2S R1W S1	--
W-Cd2	45.418868	-122.755096	37B	Quatama loam, 3 to 7 percent slopes	T2S R1W S1	--
W-Cf1	45.418027	-122.754075	2225A	Huberly silt loam, 0 to 3 percent slopes	T2S R1W S12	--
W-Cf2	45.418047	-122.754062	2225A	Huberly silt loam, 0 to 3 percent slopes	T2S R1W S12	--
W-Cg1	45.417116	-122.753370	2225A	Huberly silt loam, 0 to 3 percent slopes	T2S R1W S12	--
W-Cg2	45.417120	-122.753290	2225A	Huberly silt loam, 0 to 3 percent slopes	T2S R1W S12	--

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: SW Corridor Project City/County: Washington Sampling Date: July 11, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: A1

Investigator(s): Thompson, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 30

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83 (2011)

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:
Plot is located near toe of slope. Sewer infrastructure runs beneath this drainage, and associated rock fill material is present beneath the surface of the soil, resulting in shovel refusal at 4 inches.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10x20')			
1. Sambucus racemosa	30	Y	FACU
2. Fraxinus latifolia	5	N	FACW
3.			
4.			
5.			
	35 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Equisetum arvense	30	Y	FAC
2. Ranunculus repens	45	Y	FAC
3. Geranium lucidum	15	N	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 10x20')			
1. Rubus armeniacus	5	Y	FAC
2.			
	5 = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100	-	-	-	-	Silty clay loam	
2-4	10YR 4/2	98	10YR 4/6	2	C	M	Silty clay loam	
4+								shovel refusal in rock

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Sewer infrastructure runs beneath this drainage, and associated rock fill material is present beneath the surface of the soil, resulting in shovel refusal at 4 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- ✔ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Since the plot data was collected during a below normal water year, hydrology was assumed because of hydric soil and hydrophytic vegetation. Soil saturation was observed in the body of the wetland.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: SW Corridor Project City/County: Multnomah Sampling Date: July 11, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: A2

Investigator(s): Thompson, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 50

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83 (2011)

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:
Plot is located on towards base of slope, 2 ft above wetland Plot A1.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10x30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer macrophyllum	10	Y	FACU
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10x30')			
1. Oemleria cerasiformis	15	Y	FACU
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Equisetum arvense	25	Y	FAC
2. Schedonorous arundinaceus	10	N	FAC
3. Geranium lucidum	60	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 10x30')			
1. Rubus armeniacus	10	Y	FAC
2. Clematis vitalba	10	Y	FAC
	20	= Total Cover	

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100	-	-	-	-	Silty clay loam	
4+								Rock fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

Rock fill prevented us from seeing the soil profile below 4", so we could not confirm if hydric soil indicators began in a lower horizon.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Because we could not dig below 4" we could not see if primary hydrology indicators existed below that point. It is assumed there is no hydrology in this plot based on the change in topography and plant community from the paired wetland plot.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Multnomah Sampling Date: April 25, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: B1

Investigator(s): Rickus, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 8

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:
Plot lies on the edge of a narrow wetland adjacent to a small unnamed drainage in a deep depression within developed areas.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Salix lasiandra	30	y	FACW
2. Rubus armeniacus	10	n	FAC
3. Cornus sericea	30	y	FACW
4.			
5.			
	70 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Ranunculus repens	10	y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 90 mud

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	90	10YR 4/4	10	C	M	sitly clay loam	
10-20	10YR 3/2	80	10YR 4/6	20	C	M	sitly clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No _____ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): 5

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Multnomah Sampling Date: April 25, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: B2

Investigator(s): Rickus, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 100

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies on a steep slope and above a narrow wetland swale.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	10	y	FAC
2. Crataegus douglasii (planted)	10	y	FAC
3. Ribes sanguineum (planted)	10	y	FACU
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 5')			
1. Hedera helix	10	y	FACU
2.			
	10 = Total Cover		

% Bare Ground in Herb Stratum 90

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: B2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Multnomah Sampling Date: April 25, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: B3

Investigator(s): Rickus, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies in a shallow roadside swale.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	20	y	FAC
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	20	n	FACW
2. Poa pratensis	55	y	FAC
3. Holcus lanatus	25	y	FAC
4. Senecio jacobaea	5	n	FACU
5. Geranium dissectum	5	n	UPL
6.			
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 5')			
1. Hedera helix	30	y	FACU
2.			
	30 = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: B3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

soil dry.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Multnomah Sampling Date: June 23, 2020

Applicant/Owner: Trimet State: Oregon Sampling Point: B4

Investigator(s): Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): ravine bottom Local relief (concave, convex, none): concave Slope (%): 15

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____ No ✔	
Wetland Hydrology Present?	Yes ____ No ✔	

Remarks:
Plot lies at upper end of a ravine.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	100	y	FAC
2.			
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:
Cottonwood and English Hawthorn found on adjacent side slopes but not included in plot which was located on the narrow ravine bottom.

SOIL

Sampling Point: B4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/2	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Multnomah Sampling Date: June 23, 2020

Applicant/Owner: Trimet State: Oregon Sampling Point: B5

Investigator(s): Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ____ No ✔	
Wetland Hydrology Present?	Yes ____ No ✔	

Remarks:
Plot lies in a depression formed in a ravine and I-5 road fill

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	20	y	FAC
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	65	y	FACW
2. Equisetum arvense	25	y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

SOIL

Sampling Point: B5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-20	10YR 3/2	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C1

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 4

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:
Plot lies on the edge of a large wetland which extends to a tributary to Fanno Creek. The only upland areas within the study area consist of historic gravel fill pads.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Salix lasiandra	35	y	FACW
2.			
3.			
4.			
5.			
	35 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	100	y	FACW
2. Juncus effusus	5	n	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum none

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: C1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					Silt loam	
2-20	10YR 4/1	91	7.5YR 4/4	7	C	M	Silty clay loam	
			5Y 4/1	2	D	M	Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Precipitation was at the low end of normal. The time of year and general low level of groundwater indicate that primary indicators of hydrology would be present during the wet season in a normal year.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C2

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): fill pad Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:
Plot lies on the edge of a large wetland. The only upland areas within this side of the study area consist of historic gravel fill pads.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5')			
1. Sonchus arvensis	2	y	FACU
2. Lolium perenne	3	y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 95 gravel

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: C2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0	gravel							gravel fill pad- no soil

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

The only upland areas within this side of the study area consist of historic gravel fill pads- it was not possible to dig through the gravel, so no soil pit dug.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C3

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 10

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Plot lies within a narrow fringe wetland adjacent to a tributary to Fanno Creek.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	30	y	FACW
2. Juncus effusus	10	n	FACW
3. Impatiens capensis	25	y	FACW
4. Lotus corniculatus	25	y	FAC
5. Galium aparine	10	n	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum none

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: C3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4.5	10YR 4/2						Silt loam	
4.5-20	10YR 4/1	92	7.5YR 4/4	5	C	M	Silty clay loam	
			5Y 4/1	2	D	M	Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Precipitation was at the low end of normal. The time of year and general low level of groundwater indicate that primary indicators of hydrology would be present during the wet season in a normal year.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C4

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 30

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies 2 feet above a fringe wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	10	y	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: 5')			
1. Hedera helix	100	y	FACU
2.			
	100 = Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: C4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					silt loam	with gravel
4+								shovel refusal in gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Although shovel refusal occurred at 4 inches in gravel, the slope of the area and location above the adjacent wetland indicated that water would not occur near the surface in a normal precipitation year.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C5

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:
Plot lies on the north side of wetland adjacent to a tributary to Fanno Creek.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Salix lasiandra	55	y	FACW
2.			
3.			
4.			
5.			
	55 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	100	y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum none

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: C5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					Silt loam	
2-20	10YR 4/1	95	10YR 4/4	5	C	M	Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Precipitation was at the low end of normal. The time of year and general low level of groundwater indicate that primary indicators of hydrology would be present during the wet season in a normal year.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C6

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 30

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies on a soil and gravel fill slope 2 feet above a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	30	y	FAC
2.			
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Bromus carinatus	20	y	UPL
2. Sonchus arvensis	10	y	FACU
3. Dipsacus fullonum	10	y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: C6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/2	100					silt loam	with gravel
14+								shovel refusal in gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Although shovel refusal occurred at 14 inches in gravel, the slope of the area and location above the adjacent wetland indicated that water would not occur near the surface in a normal precipitation year.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C7

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:
Plot lies on the edge of a finger of a large wetland which extends to the KNEZ wetlands, which are primarily emergent outside the study area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	35	y	FACW
2.			
3.			
4.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30')			
1. Fraxinus latifolia	10	y	FACW
2. Rubus armeniacus	10	y	FAC
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	90	y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 10 mud

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: C7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/1	90	7.5Y 4/4	10	C	M	clay	
6-20	5Y 5/1	40	10YR 5/4	60	C	M	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No _____ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): 3

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C8

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): fill slope Local relief (concave, convex, none): none Slope (%): 100

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies on a soil fill slope 2 feet above a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus garryana	30	y	FACU
2. Fraxinus latifolia	20	y	FACW
3. Crataegus monogyna	40	y	FAC
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	30	y	FAC
2. Crataegus monogyna	30	y	FAC
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Polystichum munitum	5	y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 5')			
1. Hedera helix	5	y	FACU
2.			
	5	= Total Cover	

% Bare Ground in Herb Stratum 70

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: C8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/2	100					clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C9

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 4

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:
Plot lies on the edge of a large wetland with fill slopes adjacent to a Walmart. (Walmart fill slope located outside study area/no right of entry)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Cornus sericea	20	y	FACW
2. Rubus armeniacus	10	y	FAC
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	20	y	FACW
2. Typha latifolia	70	y	OBL
3. Dipsacus fullonum	10	n	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum none

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: C9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	2.5Y 3/1	90	10YR 4/3	5	C	M	clay loam	
			2.5Y 5/1	5	D	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No _____ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): 3

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 6, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C11

Investigator(s): Rickus, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies in a densely vegetated low area below a fairly steep slope and above a catch basin.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus garryana	5	n	FACU
2. Salix lasiandra	50	y	FACW
3. Crataegus monogyna	5	n	FAC
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	50	y	FAC
2. Toxicodendron diversiloba	10	n	FAC
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 5')			
1. Hedera helix	90	y	FACU
2.			
	90	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: C11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 7, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C12

Investigator(s): Rickus, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 7

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies in a riparian area on a terrace above a small, incised stream.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	30	y	FAC
2. Fraxinus latifolia	50	y	FACW
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	20	y	FAC
2. Corylus cornuta	25	y	FACU
3. Sambucus racemosa	15	y	FACU
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Polystichum munitum	10	y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 5')			
1. Hedera helix	65	y	FACU
2. Rubus ursinus	30	y	FACU
	95	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 38 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: C12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	100					silt loam	
14-20	10YR 3/2	95	10YR 4/6	5	C	M	silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- ___ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 7, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C13

Investigator(s): Rickus, Rosenthal Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 4

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔ No ____	
Wetland Hydrology Present?	Yes ✔ No ____	

Remarks:
Plot lies on the upper edge of a forested wetland at the base of a steep slope.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	50	y	FACW
2.			
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30')			
1. Fraxinus latifolia	35	y	FACW
2. Rubus armeniacus	35	y	FAC
3.			
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	5	y	FACW
2. Impatiens capensis	15	y	FACW
3. Athyrium filix-femina	5	y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 70 mud

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

SOIL

Sampling Point: C13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	95	7.5Y 4/4	5	C	M	silty clay loam	
2-20	Gley1 4/10Y	95	10YR 4/6	5	C	M	clay loam	with 5% sapric muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ✔ Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- ✔ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- ✔ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No _____ Depth (inches): 4

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): surface

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: June 7, 2019

Applicant/Owner: Trimet State: Oregon Sampling Point: C14

Investigator(s): Rickus, Thompson Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 100

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✔	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Plot lies 2 feet above a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	100	y	FAC
2.			
3.			
4.			
5.			
	100 = Total Cover		
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. Hedera helix	10	y	FACU
2.			
	10 = Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: C14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/3	100					silt loam	
10-20	10YR 4/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Ca1

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Soil test pits not permissible. Wetland adjacent to railroad ditch with industrial development to NE.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Agrostis capillaris	30	Yes	FAC
2. Juncus tenuis	20	Yes	FAC
3. Schedonorus arundinaceus	15	No	FAC
4. Phalaris arundinacea	15	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Mowed/managed vegetation.

SOIL

Sampling Point: W-Ca1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): +2

Water Table Present? Yes ✔ No _____ Depth (inches): surface

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Groundwater and stormwater inputs observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Ca2

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): convex Slope (%): 2

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:

Soil test pits not permissible. Approx. 1.25' higher in elevation than paired wetland plot.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Schedonorus arundinaceus	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	1 (A)		3 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Although weedy tall fescue met dominance criteria, it did not meet the prevalence index. Thus it is assumed that the plot does not meet veg criteria.

SOIL

Sampling Point: W-Ca2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (**LRR A**)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (**LRR A**)
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soil very dry within the wet season. No surface hydrology observed and assumed no water table or saturation.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cb1

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Soil test pits not permissible. Adjacent to a perennial tributary to Fanno Creek.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Salix lasiandra	40	Yes	FACW
2.			
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	60	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 40

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: W-Cb1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): +3

Water Table Present? Yes ✔ No _____ Depth (inches): surface

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cb2

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): convex Slope (%): 5

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:
Soil test pits not permissible. Approx. 2' higher in elevation than paired wetland plot on fill-slope for adjacent lot. Upland conditions determined based on dry soil conditions, landscape position, and a predominance of facultative vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	85	Yes	FAC
2.			
3.			
4.			
5.			
	85 = Total Cover		
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 100

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: W-Cb2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (**LRR A**)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (**LRR A**)
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils very dry at surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cc1

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:
Soil test pits not permissible. Representative wetland plot for 3 linear wetland segments along roadside ditch (collectively, Wetland W-Cc) that all had same indicators of hydrology and hydrophytic vegetation. Wetland is confined to depressions between railroad fill and steep hillside.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Juncus tenuis	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 92

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:
Juncus tenuis is sparse and patchy across the wetland.

SOIL

Sampling Point: W-Cc1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- ✔ Algal Mat or Crust (B4)
- Iron Deposits (B5)
- ✔ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): <1

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Water likely ponds in these wet depressions between the railroad fill and hillside. Some groundwater seeps observed from adjacent hillside. Juncus tenuis is generally sparse to unvegetated with patches having 5% cover scattered across the wetland complex. No indicators of flow were observed.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cc2

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): convex Slope (%): 8

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Soil test pits not permissible. Plot taken on hillside upslope of paired wetland plot.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Acer circinatum	20	Yes	FAC
2. Corylus cornuta	20	Yes	FACU
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Holcus lanatus	10	Yes	FAC
2. Bromus carinatus	5	Yes	NOL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	15 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	85 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	1	x 4 =	4
UPL species	1	x 5 =	5
Column Totals:	4 (A)		15 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: W-Cc2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (**LRR A**)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (**LRR A**)
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Very dry at surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cd1

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Soil test pits not permissible. Wetland between railroad fill and fill pad for adjacent building.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	20	Yes	FACW
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Salix lasiandra	20	Yes	FACW
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	70	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: W-Cd1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): +6

Water Table Present? Yes ✔ No _____ Depth (inches): surface

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cd2

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): convex Slope (%): 2

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:
Soil test pits not permissible. Plot 1.25' higher in elevation than paired wetland plot. Site was determined to be upland based on very dry soil conditions and a predominance of facultative nonnative vegetation (lacking FACW or wetter species).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Crataegus monogyna	40	Yes	FAC
2. Rubus armeniacus	40	Yes	FAC
3.			
4.			
5.			
	80 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Agrostis capillaris	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 90

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: W-Cd2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils very dry at surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cf1

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Soil test pits not permissible. Depression between railroad fill and fill of adjacent lot.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	55	Yes	FACW
2.			
3.			
4.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30')			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	45	Yes	FACW
2. Juncus tenuis	45	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: W-Cf1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): +3

Water Table Present? Yes ✔ No _____ Depth (inches): surface

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cf2

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No ✔	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:
Soil test pits not permissible. Upland determination made based on landscape position, dry soils, and a predominance of facultative and upland vegetation. Wetland located between railroad berm and fill of adjacent lot.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Crataegus monogyna	30	Yes	FAC
2. Rubus armeniacus	30	Yes	FAC
3. Cytisus scoparius	15	Yes	NOL
4.			
5.			
	75 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Anthoxanthum odoratum	30	Yes	FACU
2. Vicia americana	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 65

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	9
FAC species	3	x 3 =	9
FACU species	1	x 4 =	4
UPL species	1	x 5 =	5
Column Totals:	4 (A)		18 (B)

Prevalence Index = B/A = 4.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: W-Cf2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- _ Surface Water (A1)
- _ High Water Table (A2)
- _ Saturation (A3)
- _ Water Marks (B1)
- _ Sediment Deposits (B2)
- _ Drift Deposits (B3)
- _ Algal Mat or Crust (B4)
- _ Iron Deposits (B5)
- _ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- _ Salt Crust (B11)
- _ Aquatic Invertebrates (B13)
- _ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- _ Presence of Reduced Iron (C4)
- _ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- _ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- _ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils very dry at surface.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TrimeM State: Oregon Sampling Point: W-Cg1

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ____ No ____	
Wetland Hydrology Present?	Yes ✔ No ____	

Remarks:

Soil test pits not permissible. Wetland located in low depression between two railroad track berms.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	15	Yes	FACW
2.			
3.			
4.			
	15 = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Salix lasiandra	15	Yes	FACW
2. Fraxinus latifolia	15	Yes	FACW
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Phalaris arundinacea	65	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 35

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✔ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

SOIL

Sampling Point: W-Cg1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- _ Histosol (A1)
- _ Histic Epipedon (A2)
- __ Black Histic (A3)
- _ Hydrogen Sulfide (A4)
- _ Depleted Below Dark Surface (A11)
- _ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- _ Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- __ Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (**LRR A**)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- __ Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (**LRR A**)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✔ No _____ Depth (inches): +3

Water Table Present? Yes ✔ No _____ Depth (inches): surface

Saturation Present? (includes capillary fringe) Yes ✔ No _____ Depth (inches): surface

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Southwest Corridor Light Rail City/County: Washington Sampling Date: May 15, 2020

Applicant/Owner: TriMet State: Oregon Sampling Point: W-Cg2

Investigator(s): MacLean, Taya K., MS, PWS Section, Township, Range: see spreadsheet

Landform (hillslope, terrace, etc.): valley bottom Local relief (concave, convex, none): convex Slope (%): 4

Subregion (LRR): A Lat: see spreadsheet Long: see spreadsheet Datum: NAD 83

Soil Map Unit Name: see spreadsheet NWI classification: see spreadsheet

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:
Soil test pits not permissible. On fill-slope for railroad approx. 2.5' higher in elevation than paired wetland plot. Upland conditions determined based on dry soil conditions and a predominance of nonnative facultative plants.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 30')			
1. Rubus armeniacus	60	Yes	FAC
2. Crataegus monogyna	30	Yes	FAC
3.			
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 5')			
1. Holcus lanatus	20	Yes	FAC
2. Schedonorus arundinaceus	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 75

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: W-Cg2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1) (**except MLRA 1**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- 2 cm Muck (A10)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

For safety concerns, not granted permission by landowner (Union Pacific Railroad) to dig soil test pits. Soil indicators were therefore not used to determine wetland status. Refer to vegetation and hydrology information.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Stunted or Stressed Plants (D1) (**LRR A**)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Raised Ant Mounds (D6) (**LRR A**)
- Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils very dry at surface (fill material).

APPENDIX C: Photographs

- Segment A
- Segment B
- Segment C

PHOTOGRAPHS - SEGMENT A

Photo PP-A1: Looking southwest at W-A1, seep wetland at base of steep slope. Situated over a sewer line.

PHOTOGRAPHS - SEGMENT B

Photo PP-B1: Looking southwest at D-B1.

Photo PP-B2: Looking south at S-B1. Culvert inlet at SW Barbur Boulevard.

Photo PP-B3: Looking south at W-B1.

Photo PP-B4: Looking southeast at S-B2, which lies in a city park.

PHOTOGRAPHS - SEGMENT C

Photo PP-C1: Looking east at newly impacted and restored S-C1. Recent adjacent road and sidewalk construction appears to be the cause.

Photo PP-C2: Looking northwest along the boundary of Wetland C-1 at wetland Plot C1.

Photo PP-C3: Looking south along S-C2 and Wetland C-1.

Photo PP-C4: Looking south at Knez wetlands.

Photo PP-C5: Looking north at upland Plot C11. Located in deep depression.

Photo PP-C6: Looking northwest at roadside ditch D-C1.

Photo PP-C7: Looking northeast at S-C4, which has been restored in this reach. The remainder of the stream is highly incised and 4 to 5 feet below the adjacent terraces.

Photo PP-C8: Looking southeast at start of Ditch D-Ca at partially collapsed culvert. Wetland W-Ca in background.

Photo PP-C9: Looking south along the boundary of Wetland W-Ca at Plots W-Ca1 (wetland) and W-Ca2 (upland). Ditch D-Ca in background.

Photo PP-C10: Looking northwest along Ditch D-Ca and Wetland W-Ca.

Photo PP-C11: Looking northeast from railroad berm at Wetland W-Cb (Wetland C1 beyond rail ROW) in vicinity of Plots W-Cb1 (wetland) and W-Cb2 (upland). Stream S-C1 in wetland in center of photo.

Photo PP-C12: Looking northwest from culvert at Ditch D-Cf. Looking towards S-C1. Unvegetated ditch bottom is obscured below steep upland banks dominated by reed canary grass with scattered soft rush along ditch edge.

Photo PP-13: Looking southeast at Wetland W-Cc. Algal matting and soil cracking in foreground and Plots W-Cc1 (wetland) and W-Cc2 (upland) in background.

Photo PP-C14: Looking southeast at Wetland W-Cd, which is located between railroad berm and fill-slope of adjacent lot. Plot W-Cc1 (wetland) in center of photo and Plot W-Cc2 (upland) to east.

Photo PP-C15: Looking southeast at Wetland W-Cf located between railroad berm and fill-slope of adjacent lot. Plot W-Cf1 (wetland) in center of photo and Plot W-Cf2 (upland) to east.

Photo PP-C16: Looking southwest from railroad berm at Wetland W-Cf and Plots W-Cf1 (wetland) and W-Cf2 (upland).

Photo PP-C17: Looking south at Ditch D-Cb. Ditch is excavated with steep 3' tall banks. Not flowing with scattered shallow ponding present during site visit. Banks dominated by dense Himalayan blackberry.

Photo PP-C18: Looking east at Stream S-Cc. Incised channel with adjacent uplands dominated by Himalayan blackberry.

Photo PP-C19: Looking north at Stream S-Cb which is an incised narrow (1.5') channel that conveys upland runoff from railroad area to Stream S-Cc.

Photo PP-C20: Looking southeast at Railroad Ditch D-Cc from culvert. Ditch is located between railroad berm and adjacent upland slope. Some ponding present during the May 2020 site visit and recent indicators of flow including presence of litter and water staining.

Photo PP-C21: Looking southeast at Ditch D-Cd located between railroad berm and adjacent development. Photo taken from start of ditch. Unable to determine connection of ditch to a City-mapped stormwater channel (flowing south along I-5) that is mapped beyond chain link fence.

Photo PP-C22: Looking east where Railroad Ditch D-Ce extends beyond study area under I-5.

APPENDIX D: Delineation Results Tables

- Segment A
- Segment B
- Segment C

DELINEATION RESULTS TABLES - SEGMENT A

- Table 1: Wetlands
- Table 2: Waters (Streams, Ponds, and Ditches)

Table 1: Wetlands, SW Corridor, Segment A

ID[1]	Sheet #(s)	Latitude	Longitude	Size in Study Area[2]	Cowardin Class[3]	HGM Class[4]	Sample Plots	Photo Points	Additional Information for JD
W-A1	**4**	45.499662	-122.681466	0.19	PEM	Slope	A1	PP-A1	Wetland seep at base of steep slope. Lies over the top of a sewer line. Soils saturated during site visit. Wetland boundary determined by distinct break in plant community, soils, and hydrologic indicators.
Total				**0.19**					

1- W = Wetland - and ID#

2- Size in study area is given in acres

3- Cowardin Class: PEM = palustrine emergent, PSS = palustrine scrub-shrub, PFO = palustrine forested

4- HGM Class: DEP = depressional, RFT = riverine flow-through

Table 2: Waters, SW Corridor, Segment A

Name/ ID[1]	Sheet #(s)	Latitude	Longitude	Cowardin Class [2]	ESH (Yes/No)	OHW Width (feet)	Photo Points	Preliminary jurisdiction estimation/ Additional Information for JD
No non-wetland surface waters occur within Segment A. Several drainages are piped through the wetland study area, with approximate locations shown on the Figure 6 of Appendix A.								

1- S = stream, creek, or ditched natural tributary, D = ditch, P = pond. Unnamed unless noted

2- Cowardin Riverine Class: R3 = Upper perennial, R4 = Intermittent, R6 = Ephemeral

Ditches that did not meet wetland criteria or did not have signs of relatively permanent flow were not assumed to be under Corps jurisdiction.

All ditches in study area, except where specifically noted, met DSL exemption criteria for roadside ditches (i.e. <10ft wide, no fish, etc.)

See methods section of report for additional information on assumption of Corps and DSL jurisdictional determination of ditches.

DELINEATION RESULTS TABLES - SEGMENT B

- Table 1: Wetlands
- Table 2: Waters (Streams, Ponds, and Ditches)

Table 1: Wetlands, SW Corridor, Segment B

ID[1]	Sheet #(s)	Latitude	Longitude	Size in Study Area[2]	Cowardin Class[3]	HGM Class[4]	Sample Plots	Photo Points	Additional Information for JD
W-B1	**22**	45.457414	-122.712526	0.08	PEM/ PSSC	Slope	B1	B3	Wetland swale in steep-sided depression, fed by stormwater. Drains into catch basin and thereby toward the Willamette River. Boundary from change in veg, hydrology, and swale topography.
Total									

1- W = Wetland - and ID#
2- Size in study area is given in acres
3- Cowardin Class: PEM = palustrine emergent, PSS = palustrine scrub-shrub, PFO = palustrine forested
4- HGM Class: DEP = depressional, RFT = riverine flow-through

Table 2: Waters, SW Corridor, Segment B

Name/ ID[1]	Sheet #(s)	Latitude	Longitude	Cowardin Class [2]	ESH (Yes/No)	OHW Width (feet)	Photo Points	Preliminary jurisdiction estimation/ Additional Information for JD
D-B1	**21, 22**	45.457849	-122.711495	R6	N	1	B1	Non-jurisdictional roadside ditch. OHW from scour. Carries flow from road runoff into a catch basin and thereby to the storm system. OHW from scour. Not a relatively permanent water. Does not provide a hydrologic connection between two jurisdictional features. Does not provide habitat for food or game fish. Meets DSL roadside ditch exemptions.
D-B2	**21**	45.45835600	-122.711167	R6	N	1	--	same as D-B1
D-B3	**22**	45.455757	-122.715846	R6	N	1	--	same as D-B1
S-B1	**20**	45.461551	-122.705591	R4	N	1.5	B2	Jurisdictional. Ditched natural tributary in a deeply incised channel which drains south into culvert and potentially discharged to Tryon Creek well beyond the study area. OHW from scour. Gravel and silt.
S-B2	**27**	45.44290882	-122.7310275	R4	No	3	B4	Jurisdictional. Remnant incised stream channel that flows through Sylvania Park. Upstream and downstream reaches are piped outside of the study area. OHW from scour, steep banks. Cobble, gravel, and silt bottom.

1- S = stream, creek, or ditched natural tributary, D = ditch, P = pond. Unnamed unless noted

2- Cowardin Riverine Class: R3 = Upper perennial, R4 = Intermittent, R6 = Ephemeral

Ditches that did not meet wetland criteria or did not have signs of relatively permanent flow were not assumed to be under Corps jurisdiction.

All ditches in study area, except where specifically noted, met DSL exemption criteria for roadside ditches (i.e. <10ft wide, no fish, etc.)

See methods section of report for additional information on assumption of Corps and DSL jurisdictional determination of ditches.

DELINEATION RESULTS TABLES - SEGMENT C

- Table 1: Wetlands
- Table 2: Waters (Streams, Ponds, and Ditches)

Table 1: Wetlands, SW Corridor, Segment C

ID[1]	Sheet #(s)	Latitude	Longitude	Size in Study Area[2]	Cowardin Class[3]	HGM Class[4]	Sample Plots	Photo Points	Additional Information for JD
W-C1	**37, 38**	45.426234	-122.761072	1.06	PSS	Slope	1, 3, 5	C2, C3	Wetland in wide swale above OHW of small incised stream (S-C2). Drains west to Fanno Cr. Primarily willow shrubs, with some young trees. Narrows to fringe wetland in places.
W-C2	**34**	45.430964	-122.759512	1.23	PEM/ PSS/ PFO	Slope	7	C4	"Knez Wetlands." Located in a low area that collects groundwater and surface flow from adjacent development. Topography and distinct vegetation change defines boundary. Extends to (and abuts) an incised waterway along the property boundary (S-C3) that drains to the west and thereby to an unnamed tributary to the Tualatin R. Primarily PEM and PSSC, but includes some ash PFO.
W-C3	**34**	45.431067	-122.756922	0.60	PEM/ PSS/ PFO	Slope	9	--	Wetland in wide floodplain above OHW of small incised stream (S-C3). Drains west under I-5. Primarily PSSC, but includes some ash PFO.
W-C4	**31**	45.438883	-122.748586	0.67	PFO	Slope	13	C7	Located in a wide floodplain and riparian area, which contains wetland in places. Drains slowly toward the west and thereby to an unnamed tributary to the Tualatin R. Primarily ash PFO, with an understory of PSS and PEM in places.
W-Ca	**36, 37**	45.425999	-122.764230	0.48	PEM	SLOPE	W-Ca1	C8, C9, C10	Wetland located between railroad and indistrial development in non-hydric soils. Mowed/managed grasses. Hydrology likely from stormwater and seasonally high groundwater. Abuts D-Ca along SW boundary. Not allowed to dig for soil data on UPRR property.
W-Cb	**37, 38**	45.425201	-122.762799	0.06	PEM/PFO	SLOPE	W-Cb1	C11	Portion of Wetland W-C1 located in railroad ROW. In mapped hydric soils. Located in a low area that collects groundwater and surface flow from adjacent development. Topography and distinct vegetation change defines boundary. Extends to (and abuts) S-C2, a tributary of Fanno Creek. Not allowed to dig for soil data on UPRR property.
W-Cc	**38, 39**	45.421902	-122.759079	0.04	PEM	DEP	W-Cc1	C13	Narrow areas that pond occasionally. Not in mapped hydric soils and no surface connection to other waters. 5% cover of Juncus tenuis, soils saturated to the surface, and surface soil cracks observed. Not allowed to dig for soil data on UPRR property.
W-Cd	**40**	45.418701	-122.754845	0.06	PEM/PFO	DEP	W-Cd1	C14	Soils mapped as non-hydric. Located in a low depressional area that collects groundwater and surface flow from adjacent development and railroad. Topography and distinct vegetation change defines boundary. Dominated by Oregon ash; PFO. No outlet identified.
W-Cf	**40**	45.417900	-122.753823	0.07	PFO	DEP	W-Cf1	C15, C16	Soil mapped as partially hydric. Located in a low depressional area that collects groundwater and surface flow from adjacent development and railroad. Topography and distinct vegetation change defines boundary. Dominated by Oregon ash; PFO. No outlet identified.
W-Cg	**40**	45.417599	-122.753859	0.22	PFO	DEP	W-Cg1	--	Soil mapped as partially hydric. Located in a low depressional area that collects groundwater and surface flow from railroad berms along all sides of the wetland. Topography and distinct vegetation change defines boundary. Dominated by Oregon ash; PFO. No outlet identified.
Total				**4.49**					

1- W = Wetland - and ID#
2- Size in study area is given in acres
3- Cowardin Class: PEM = palustrine emergent, PSS = palustrine scrub-shrub, PFO = palustrine forested
4- HGM Class: DEP = depressional, RFT = riverine flow-through

Table 2: Waters, SW Corridor, Segment C

Name/ ID[1]	Sheet #(s)	Latitude	Longitude	Cowardin Class [2]	ESH (Yes/No)	OHW Width (feet)	Photo Points	Preliminary jurisdiction estimation/ Additional Information for JD
S-C1	**38**	45.423306	-122.760312	R4	No	4	C1	Jurisdictional. Within the study area, this feature contains no vegetation within an incised, likely historically excavated, flowing, open water area. Drains to catch basin and thereby likely to Fanno Creek (outside study area). OHW 4' from drift lines, steep banks. Silt bottom.
S-C2	**37**	45.426498	-122.760725	R3	No	9	C2, C3	Jurisdictional. Stream (Red Rock Creek) in an incised channel. Drains to culvert and thereby west to Fanno Creek (outside study area). OHW 8-10' from scour, drift lines, steep banks - lies below the top of bank. Silt bottom.
S-C3	**34**	45.430966	-122.758869	R3	No	10	C4	Jurisdictional. Stream (Red Rock Creek) in an incised channel that runs through Knez wetlands and drains south outside study area. Reenters study area south of SW Hunziker Road, as S-C2. OHW from scour, drift lines, steep banks- lies below the top of bank. Silt bottom.
D-C1	**32**	45.435955	-122.748977	R6	No	1	C6	Non-jurisdictional roadside ditch. Discontinuous signs of scour. Not a relatively permanent water. Does not provide a hydrologic connection between two jurisdictional features. Does not provide habitat for food or game fish. Meets DSL roadside ditch exemptions.
S-C4	**31**	45.438689	-122.731027	R3	No	5	C7	Jurisdictional. Stream (Red Rock Creek) in an incised channel that flows below a wide floodplain and riparian area, which contains wetland in places. Portions of study area contain stream mitigation areas. OHW 8-10' from scour, drift lines, steep banks - lies below the top of bank. Silt bottom.
S-Ca	**41**	45.413502	-122.751000	R6	No	1.5	C19	Non-jurisdictional. Ephemeral erosional channel located along between railroad berm fill and adjacent slope. Drains only uplands along railroad track during rain events directly to Ball Creek (S-Cc). Evidence of flow including wrack accumulation and incised banks. English ivy adjacent to incised channel.
S-Cb	**41**	45.413899	-122.751000	R3	No	24	C18	Jurisdictional to USACE and DSL. Stream (Ball Creek) in an incised channel with steep banks and no adjacent wetlands in study area. Perennial. Banks lined with thick blackberry and reed canary grass. Big leaf maple and Douglas fir on upland banks. Coastal cuthroat trout; no salmonids. OHW determined by change in distinct change in elevation, vegetation, and substrate composition.
D-Ca	**36, 37**	45.426498	-122.764999	R4	No	3	C8, C9	Jurisdictional railroad ditch. Receives stormwater imputs and groundwater from adjacent W-Ca. Non-hydric soils. Flows SE to stormwater system. Adjacent to entire length of and drains W-Ca.
D-Cb	**41**	45.414501	-122.751999	R6	No	10	C17	Non-jurisdictional . Stormwater fed only. Drains SE to Ball Creek, a tributary of Fanno Creek. Entirely in mapped non-hydric soils. Not flowing but scattered shallow ponding observed during May 15, 2020 site visit.
D-Cc	**43**	45.405201	-122.747002	R6	No	3	C20	Non-jurisdictional Railroad Ditch. Ephemeral drainage alongside railroad fill. Drains to culvert under SW Upper Boones Ferry Rd. In mapped non-hydric soils.
D-Cd	**44**	45.403400	-122.745003	R6	No	6	C21	Non-jurisdictional Railroad Ditch. Ephemeral. Dry during May 15, 2020 site visit. No surfacewater connection to City of Tigard-mapped stormwater channel beyond fence along I-5 to south. In mapped non-hydric soils.
D-Ce	**44**	45.403400	-122.745003	R6	No	3	C22	Non-jurisdictional Railroad Ditch. Ephemeral. Dry during May 15, 2020 site visit. In mapped non-hydric soils and no adjacent wetlands identified.
D-Cf	**37, 38**	45.424702	-122.762001	R4	No	12	C12	Jurisdictional. Receives hydrology from stormwater outlet and from seasonally high groundwater. Drains directly to S-Ca (DEA-mapped stream), a tributary to Fanno Creek. Steep upland banks dominated by reed canary grass with scattered soft rush along ditch edges transitioning to blackberry. Ditch bottom unvegetated. In mapped hydric and partially hydric soils.
D-Cg	**42**	45.410099	-122.750000	R4	No	15	--	Non-jurisdictional. Stormwater channel daylighted between stormwater inlet and outlet culverts. Flowing during May 15, 2020 site visit. In mapped non-hydric soil and not a realigned stream channel.

1- S = stream, creek, or ditched natural tributary, D = ditch, P = pond. Unnamed unless noted

2- Cowardin Riverine Class: R3 = Upper perennial, R4 = Intermittent, R6 = Ephemeral

Ditches that did not meet wetland criteria or did not have signs of relatively permanent flow were not assumed to be under Corps jurisdiction.

All ditches in study area, except where specifically noted, met DSL exemption criteria for roadside ditches (i.e. <10ft wide, no fish, etc.)

See methods section of report for additional information on assumption of Corps and DSL jurisdictional determination of ditches.

APPENDIX E: WETS TABLE

WETS Station: PORTLAND INTL AIRPORT, OR

Requested years: 1971 - 2000

Month	Temperature (°F)			Precipitation (inches)				
	Avg daily max	Avg daily min	Avg daily mean	Avg	30% chance will have		Avg number of days with 0.10 inch or more	Average total snowfall
					less than	more than		
Jan	46.0	34.6	40.3	5.07	2.98	6.15	12	1.1
Feb	50.7	36.4	43.6	4.18	2.84	4.98	10	1.3
Mar	56.4	39.3	47.8	3.71	2.85	4.31	10	0.1
Apr	61.4	42.6	52.0	2.64	1.93	3.10	8	0.0
May	67.7	48.1	57.9	2.38	1.44	2.88	7	0.0
Jun	73.6	53.2	63.4	1.59	0.94	1.93	5	0.0
Jul	80.1	57.4	68.7	0.72	0.33	0.86	2	0.0
Aug	80.6	57.7	69.1	0.93	0.35	1.09	2	0.0
Sep	75.6	52.8	64.2	1.65	0.72	1.93	4	0.0
Oct	64.3	45.4	54.8	2.88	1.57	3.52	7	0.0
Nov	52.5	40.0	46.3	5.61	3.72	6.73	13	0.6
Dec	46.0	35.3	40.6	5.71	3.89	6.82	12	1.2
Annual:					32.85	40.58		
Average	62.9	45.2	54.1	-	-	-	-	-
Total	-	-	-	37.07			92	4.3

GROWING SEASON DATES

Requested years of data: 1971 - 2000

Years with missing data: 24 deg = 0 28 deg = 0 32 deg = 0