



**Request for Clean Water Act
Section 401 Water Quality Certification
Washington State Department of Ecology**
Phone: (360) 407-6076 or E-mail: ecyrefedpermits@ecy.wa.gov

AGENCY USE ONLY
Date Received: 11/10/2022
Aquatics ID #: 142079
Team: HQ
Valid Request: 11/22/2022

This Section 401 Water Quality Certification (WQC) Request form identifies information that is typically needed in order to review and process a Section 401 WQC request. Please see Ecology's [webpage](#) for more information about the Section 401 Request process.

Submit this Section 401 WQC Request form along with a [Joint Aquatic Resources Permit Application](#) (JARPA) and supporting information to ecyrefedpermits@ecy.wa.gov and copy the federal permitting agency.

A. Federal Permit or License Reference Number, if known:

Department of Ecology (Ecology) Project ID Number, if known:

Project Name:

County:

B. Project Proponent Name:

C. Documentation showing that the pre-filing meeting request was submitted at least 30-days prior to submitting this Section 401 WQC Request: Attached

D. A completed, signed, and dated JARPA should be submitted with this form.

Did you attach a JARPA? Yes No

E. The following is a list of documents typically needed for Ecology's WQC review, along with a brief explanation. Depending on the project, additional information may be requested.

Please let us know what information you are submitting with your WQC request and this form:

- Final State Environmental Policy Act (SEPA) determination
- Project drawings
 - Vicinity map, plan view, and cross-section
- Best management practices and construction methodology
 - This information is not needed if incorporated into a Water Quality Monitoring and Protection Plan (WQMPP)—see below
 - For in-water work (below ordinary high water mark), including wetlands
 - Describe best management practices to be implemented to protect water quality
 - Describe construction sequencing and methodology
- Water Quality Monitoring Plan (WQMP) or WQMPP
 - This is needed when conducting work in a waterbody (e.g., in creek, ditch, river, lake, pond, marine, estuarine)
 - Include water quality parameters such as turbidity, oil sheen, pH (poured in-place concrete), etc.
 - WQMPP is similar to WQMP, but includes best management practices
 - See [State Water Quality Standards for Surface Waters](#) (Chapter 173-201A-200 or -210 WAC)
 - If needed, templates are available

- Erosion and Sediment Control Plan
 - For upland work (above ordinary high water mark)
 - Addresses stormwater (temporary or long-term)
 - May be included in project drawings or selected pages from a Stormwater Pollution Prevention Plan

- Jurisdictional determination
 - Needed for non-federally regulated waters (state waters that are not “waters of the United States”)
 - Determined by [U.S. Army Corps of Engineers](#) or Environmental Protection Agency
 - Ecology regulates state waters (including wetlands) in Washington, regardless of federal jurisdiction. For more information see [state wetland regulations](#)

- Wetland Report
 - Needed when there is a discharge (excavation or fill) to wetlands
 - Report needs to include both a wetland delineation and rating
 - Include delineation data sheets and rating forms
 - For more information see [wetland delineation resources](#) and [hiring a qualified wetland professional](#)

- Mitigation Plan
 - Needed to offset impacts to wetland, stream, marine, or other aquatic habitat
 - Submit a Wetland Mitigation Bank Use Plan when proposing mitigation bank use, or an In-Lieu Fee (ILF) Use Plan when proposing ILF mitigation
 - For more information, see [wetland compensatory mitigation](#)

- Riparian Planting and Monitoring Plan
 - Needed when riparian vegetation is removed or modified
 - May be included in plan set or mitigation plan

- Suitability Determination
 - Needed when sediments will be dredged for maintenance, navigation, other purposes
 - Covers in-water disposal and sediment anti-degradation
 - For information see [Dredged Material Management Office](#)

- Dredging Plan
 - Needed when sediments will be dredged for maintenance, navigation, other purposes
 - Should include dredge footprint and depth, dredge type, best management practices, disposal plan, off-loading plan for upland disposal, etc.

- Dewatering Plan
 - Needed for complex in-water work or management of excavated/dredged material
 - May also be required for some excavation projects

F. Certification Statements:

The project proponent hereby certifies that all information contained herein is true, accurate, and complete, to the best of my knowledge and belief.

Initial ES

The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Initial ES

Signature: Edward Smith Date: 11-7-2022

Print Name: Edward Smith

To request an ADA accommodation, contact Ecology by phone at (360) 407-6076 or email at ecyrefedpermits@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.

Si necesita este formulario en español, por favor, llámenos a (360) 407-6076 o envíenos un correo electrónico a: ecyrefedpermits@ecy.wa.gov



WASHINGTON STATE

Joint Aquatic Resources Permit Application (JARPA) Form^{1,2} [\[help\]](#)

USE BLACK OR BLUE INK TO ENTER ANSWERS IN THE WHITE SPACES BELOW.



US Army Corps of Engineers®
Seattle District

AGENCY USE ONLY

Date received: 11/10/2022 edoc
Rec'd 401 Request Form

Agency reference #: _____

Tax Parcel #(s): _____

Part 1—Project Identification

1. Project Name (A name for your project that you create. Examples: Smith's Dock or Seabrook Lane Development) [\[help\]](#)

Olympic MP 229.61 Schoolhouse Creek Depth of Cover Restoration Project

Part 2—Applicant

The person and/or organization responsible for the project. [\[help\]](#)

2a. Name (Last, First, Middle)

Smith, Edward J.

2b. Organization (If applicable)

Olympic Pipe Line Company LLC

2c. Mailing Address (Street or PO Box)

600 SW 39th St., Suite 275

2d. City, State, Zip

Renton, Washington 98057

2e. Phone (1)

(425) 981-2520

2f. Phone (2)

2g. Fax

2h. E-mail

Edward.Smith@bp.com

¹Additional forms may be required for the following permits:

- If your project may qualify for Department of the Army authorization through a Regional General Permit (RGP), contact the U.S. Army Corps of Engineers for application information (206) 764-3495.
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you need a Shoreline permit, contact the appropriate city or county government to make sure they accept the JARPA.

²To access an online JARPA form with [\[help\]](#) screens, go to

http://www.epermitting.wa.gov/site/alias_resourcecenter/jarpa_jarpa_form/9984/jarpa_form.aspx.

For other help, contact the Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.

Part 3—Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.) [\[help\]](#)

3a. Name (Last, First, Middle)			
Woodworth, Carla			
3b. Organization (If applicable)			
GeoEngineers, Inc			
3c. Mailing Address (Street or PO Box)			
17425 NE Union Hill Rd, Unit 250			
3d. City, State, Zip			
Redmond, Washington, 98052			
3e. Phone (1)	3f. Phone (2)	3g. Fax	3h. E-mail
(425) 861-6012	(425) 466-6772		cwoodworth@geoengineers.com

Part 4—Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both **upland and aquatic** ownership because the upland owners may not own the adjacent aquatic land. [\[help\]](#)

- Same as applicant. (Skip to Part 5.)
- Repair or maintenance activities on existing rights-of-way or easements. (Skip to Part 5.)
- There are multiple upland property owners. Complete the section below and fill out [JARPA Attachment A](#) for each additional property owner.
- Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete [JARPA Attachment E](#) to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)			
Hunt, W. Fletcher Jr. and Debra L.			
4b. Organization (If applicable)			
4c. Mailing Address (Street or PO Box)			
220 Sauvola Road			
4d. City, State, Zip			
Kalama, WA, 98625			
4e. Phone (1)	4f. Phone (2)	4g. Fax	4h. E-mail
(360) 673-2945	(360) 608-3529	--	handhranch@scattercreek.com

Part 5–Project Location(s)

Identifying information about the property or properties where the project will occur. [\[help\]](#)

- There are multiple project locations (e.g. linear projects). Complete the section below and use [JARPA Attachment B](#) for each additional project location.

5a. Indicate the type of ownership of the property. (Check all that apply.) [help]			
<input checked="" type="checkbox"/> Private <input type="checkbox"/> Federal <input type="checkbox"/> Publicly owned (state, county, city, special districts like schools, ports, etc.) <input type="checkbox"/> Tribal <input type="checkbox"/> Department of Natural Resources (DNR) – managed aquatic lands (Complete JARPA Attachment E)			
5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]			
220 Sauvola Rd. (Parcel Number WC2104001)			
5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]			
Kalama, Washington, 98625			
5d. County [help]			
Cowlitz			
5e. Provide the section, township, and range for the project location. [help]			
¼ Section	Section	Township	Range
SE	21	6N	01W
5f. Provide the latitude and longitude of the project location. [help]			
<ul style="list-style-type: none"> Example: 47.03922 N lat. / -122.89142 W long. (Use decimal degrees - NAD 83) 			
45.988485°N, -122.806382°W (coordinates provided are the approximate location of pipeline crossing at Schoolhouse Creek)			
5g. List the tax parcel number(s) for the project location. [help]			
<ul style="list-style-type: none"> The local county assessor's office can provide this information. 			
WC2104001 (220 Sauvola Road) WC2104006 (383 Sauer Road) WC2104009 (200 Sauvola Road) WC2104002 (425 Sauer Road)			
5h. Contact information for all adjoining property owners. (If you need more space, use JARPA Attachment C.) [help]			
Name	Mailing Address	Tax Parcel # (if known)	
James S. and Elizabeth A. Newman	685 Sauer Road	WC2203004	
	Kalama, WA 98625		
William Langan	321 Sauvola Road	WC2104011	
	Kalama, WA 98625		
Victor B. and Julie A. Leatzow	115 Sauvola Road	WC2104007	
	Kalama, WA 98625		

Jason E. and Irina V. Petrillo	180 Sauvola Road	WC2104010
	Kalama, WA 98625	

5i. List all wetlands on or adjacent to the project location. [\[help\]](#)

The project site includes two wetlands: Wetland A and Wetland B. See attached Wetland and Stream Delineation Report (GeoEngineers 2022) for more details.

5j. List all waterbodies (other than wetlands) on or adjacent to the project location. [\[help\]](#)

Schoolhouse Creek

5k. Is any part of the project area within a 100-year floodplain? [\[help\]](#)

Yes No Don't know

5l. Briefly describe the vegetation and habitat conditions on the property. [\[help\]](#)

The pipeline crossing is located at a meander in Schoolhouse Creek. The gradient is relatively flat over the pipeline and then becomes a steep, step-pool and cascading channel with areas of exposed bedrock immediately downstream of the pipeline. Within this vicinity, the channel is incised and disconnected from adjacent floodplain by 2- to 4-foot banks with near-vertical side slopes. Channel banks are steep (2H:1V to 1H:1V [horizontal to vertical]) and primarily composed of poorly sorted angular cobbles and fines. A portion of the south bank atop the existing pipeline is protected by a wall of angular riprap

The site vicinity is undeveloped forested habitat in all directions for at least 100 feet. Beyond the forested area, the site vicinity is sparsely developed residential areas and agricultural field to the north and south.

5m. Describe how the property is currently used. [\[help\]](#)

The project site is located within Olympic's right-of-way (ROW) that has been cleared and maintained by Olympic since the pipeline was installed in about 1965. The project footprint also includes private land, specifically on Parcel Numbers WC2104001 (220 Sauvola Road), WC2104002 (425 Sauer Road), WC2104006 (383 Sauer Road), and WC2104009 (200 Sauvola Road), near the north of the terminus of Sauvola Road in Section 21 of Township 06 North, Range 01 West of the Willamette Meridian (W.M.), near Kalama, in Cowlitz County, Washington (Figure 1). Olympic maintains a roughly 30- to 50-foot-wide mowed ROW at the site.

5n. Describe how the adjacent properties are currently used. [\[help\]](#)

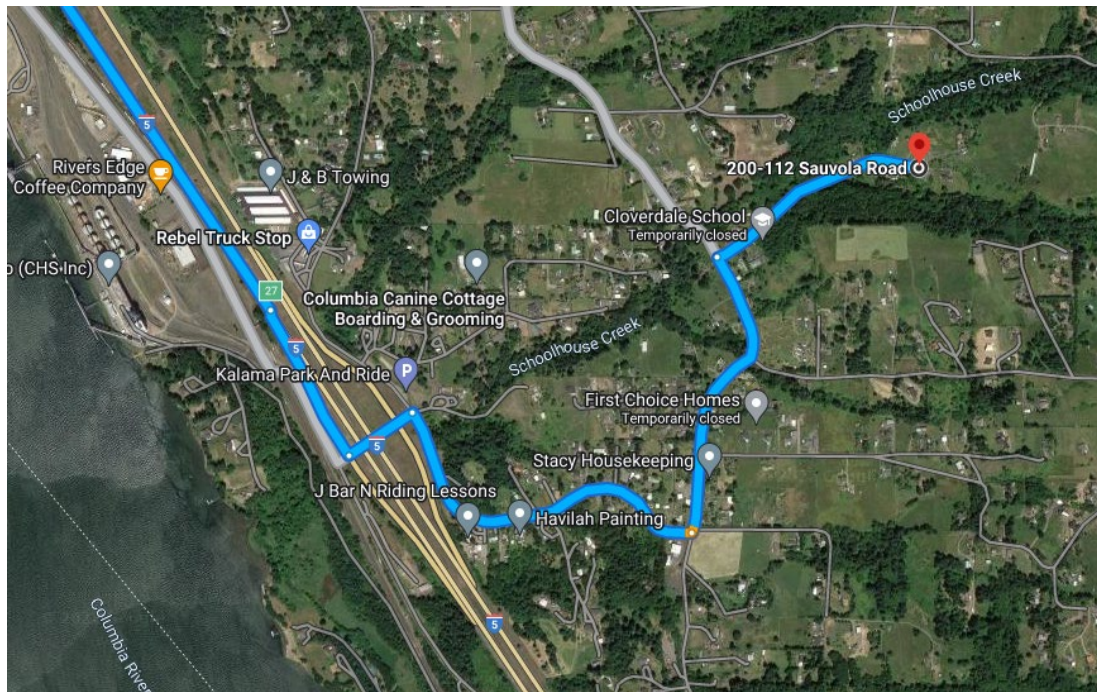
Adjacent properties are residential or pastures for small-scale agriculture.

5o. Describe the structures (above and below ground) on the property, including their purpose(s) and current condition. [\[help\]](#)

Three gates and three sections of fence along the access route will be removed and replaced as part of the project. All existing residences and outbuildings are outside of the project work area.

5p. Provide driving directions from the closest highway to the project location, and attach a map. [\[help\]](#)

From I-5 south take Exit 27 toward Todd Road/Port of Kalama. Take a left on Dupont Road/Robb Road to go over the freeway. Take a right onto Todd Road, take a left onto South Cloverdale Road and take a right onto Sauvola Road. Continue approximately 0.4 mile to the end of Sauvola Road. The destination is on the left (north side of Sauvola Road terminus).



Part 6–Project Description

6a. Briefly summarize the overall project. You can provide more detail in 6b. [\[help\]](#)

Olympic proposes a project to restore cover over the existing 14-inch-diameter petroleum pipeline crossing of Schoolhouse Creek at pipeline Milepost (MP) 229.61. The exposure has resulted from seasonally high stream flows and stream erosion at the crossing. The project also includes removing an existing concrete apron over part of the pipeline crossing and stabilizing the stream banks at the crossing to prevent future erosion of the banks that could re-expose the pipeline. Approximately 32,500 square feet of disturbance will occur on four parcels associated with the project area. The project proposes regrading Schoolhouse Creek approximately 49 feet upstream of the pipeline crossing using a cobble and gravel mix that mimics the existing streambed material gradation. The downstream regrade will extend roughly 70 feet downstream, creating a step-pool morphology composed of large boulders, Large Woody Material (LWM), and streambed gravels and cobbles.

6b. Describe the purpose of the project and why you want or need to perform it. [\[help\]](#)

The purpose of this project is to rebuild and stabilize the creek bank and channel to restore cover over the exposed section of pipeline.

6c. Indicate the project category. (Check all that apply) [\[help\]](#)

- | | | | | |
|---|--|--|---|---------------------------------------|
| <input checked="" type="checkbox"/> Commercial | <input type="checkbox"/> Residential | <input type="checkbox"/> Institutional | <input type="checkbox"/> Transportation | <input type="checkbox"/> Recreational |
| <input checked="" type="checkbox"/> Maintenance | <input type="checkbox"/> Environmental Enhancement | | | |

6d. Indicate the major elements of your project. (Check all that apply) [\[help\]](#)

<input type="checkbox"/> Aquaculture <input checked="" type="checkbox"/> Bank Stabilization <input type="checkbox"/> Boat House <input type="checkbox"/> Boat Launch <input type="checkbox"/> Boat Lift <input type="checkbox"/> Bridge <input type="checkbox"/> Bulkhead <input type="checkbox"/> Buoy <input checked="" type="checkbox"/> Channel Modification	<input type="checkbox"/> Culvert <input type="checkbox"/> Dam / Weir <input type="checkbox"/> Dike / Levee / Jetty <input type="checkbox"/> Ditch <input type="checkbox"/> Dock / Pier <input type="checkbox"/> Dredging <input type="checkbox"/> Fence <input type="checkbox"/> Ferry Terminal <input type="checkbox"/> Fishway	<input type="checkbox"/> Float <input type="checkbox"/> Floating Home <input type="checkbox"/> Geotechnical Survey <input type="checkbox"/> Land Clearing <input type="checkbox"/> Marina / Moorage <input type="checkbox"/> Mining <input type="checkbox"/> Outfall Structure <input type="checkbox"/> Piling/Dolphin <input type="checkbox"/> Raft	<input type="checkbox"/> Retaining Wall (upland) <input type="checkbox"/> Road <input type="checkbox"/> Scientific Measurement Device <input type="checkbox"/> Stairs <input type="checkbox"/> Stormwater facility <input type="checkbox"/> Swimming Pool <input checked="" type="checkbox"/> Utility Line
<input checked="" type="checkbox"/> Other: Stream bypass system			

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used. [\[help\]](#)

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

Below is a general outline of the construction sequence anticipated for the proposed work for the project. Construction sequencing may change based on final designs.

- Mobilize to the construction site.
- Establish site survey control and project layout staking.
- Install Temporary Erosion and Sedimentation Control (TESC) Best Management Practices (BMPs) as needed, such as: construct filter fence or wattle barriers along toes of slopes and around staging and stockpile areas; and construct runoff interception and diversion ditches and check dams, as necessary.
- Clear vegetation and grade the minimum site area required for construction.
- Stage and begin work above OHWM (prior to in-water work window).
- Perform fish exclusion and install a stream bypass system after in-water work window starts.
- Remove the concrete slab over the pipeline.
- Grade bank slopes and streambed by installing LWM, gravel, cobbles and boulders, beginning with downstream end and working upstream.
- Stabilize the bank slopes at the pipeline crossing by adding a short rock revetment on each side of the creek (the existing rock revetment on the south/left bank will be replaced, as it will be disturbed during construction).
- Restore disturbed areas, as recommended in the revegetation plan (Appendix A).
- Remove erosion control features and the stream bypass system.
- Demobilize from the site.

Equipment to be used at the project site likely will include:

- Dump trucks and trailers
- Loader backhoe
- Excavators
- Welding materials
- Pickup and utility trucks
- Pumps
- Compressors
- Generators

6f. What are the anticipated start and end dates for project construction? (Month/Year) [\[help\]](#)

- If the project will be constructed in phases or stages, use [JARPA Attachment D](#) to list the start and end dates of each phase or stage.

Start Date: July 2023 End Date: October 2023 See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc. [\[help\]](#)

\$800,000

6h. Will any portion of the project receive federal funding? [\[help\]](#)

- **If yes**, list each agency providing funds.

Yes No Don't know

Part 7–Wetlands: Impacts and Mitigation

- Check here if there are wetlands or wetland buffers on or adjacent to the project area.
(If there are none, skip to Part 8.) [\[help\]](#)

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]
<input type="checkbox"/> Not applicable
This pipeline maintenance project was considered unavoidable because of the exposed nature of the pipe within the creek. A “handlebar” pipeline replacement was considered to lower the pipeline below the current scour depth of the creek, however this was determined to create a larger impact to the creek and surrounding vicinity than the current design of restoring the streambed and banks. Impacts were minimized by selecting staging and material storage areas lacking woody vegetation, particularly within the managed field atop the creek valley and in a relatively flat area along the pipeline corridor (JARPA Drawings, Figure 2). Unavoidable impacts include approximately 200 square feet of wetland loss caused by conversion from emergent wetland to stream channel/bank where the mowed ROW meets the existing creek bank.
7b. Will the project impact wetlands? [help]
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don’t know
7c. Will the project impact wetland buffers? [help]
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don’t know
7d. Has a wetland delineation report been prepared? [help]
<ul style="list-style-type: none">• If Yes, submit the report, including data sheets, with the JARPA package.
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (see attached GeoEngineers 2022) Reference: GeoEngineers 2022. Wetland and Stream Delineation Report, Schoolhouse Creek MP 229.61 Project. Prepared for Olympic Pipe Line Company LLC.
7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [help]
<ul style="list-style-type: none">• If Yes, submit the wetland rating forms and figures with the JARPA package.
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don’t know
7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [help]
<ul style="list-style-type: none">• If Yes, submit the plan with the JARPA package and answer 7g.• If No, or Not applicable, explain below why a mitigation plan should not be required.
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don’t know
Impacts from construction have largely been limited to the existing, maintained pipeline corridor and the minimum overbank area required to complete the work. However, a 200-square-foot area of Wetland B will be permanently impacted. The wetland area lost as a result of this work is limited to herbaceous vegetation within the mowed ROW and would likely be lost by ongoing channel adjustment in the near future. Although there are impacts to habitat, compensatory mitigation for wetland and stream impacts is not proposed. However, stabilization and restoration of work, access, and staging areas along with the proposed improvements within the channel OHWM will provide a no net loss to the local ecosystem despite the loss of 200 square feet of wetland area. Revegetation plans include a 3:1 ratio for proposed tree clearing, and 2,000 square feet of riparian planting adjacent to the creek near the pipeline crossing. See “Wetland and Stream Delineation Report” (GeoEngineers 2022) and attached JARPA drawings for further details.

Reference: GeoEngineers 2022. Wetland and Stream Delineation Report, Schoolhouse Creek MP 229.61 Project. Prepared for Olympic Pipe Line Company LLC.

7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan. [\[help\]](#)

A mitigation plan was not developed for this project. Impacts to the project area will be minimized where feasible and impacted vegetation will be restored following the completion of pipeline maintenance to avoid any long-term impacts to existing habitat. Refer to “Site Restoration and Wetland Mitigation” Section within the Wetland and Stream Delineation Report for further details (GeoEngineers 2022).

Reference: GeoEngineers 2022. Wetland and Stream Delineation Report, Schoolhouse Creek MP 229.61 Project. Prepared for Olympic Pipe Line Company LLC.

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [\[help\]](#)

Activity (fill, drain, excavate, flood, etc.)	Wetland Name ¹	Wetland type and rating category ²	Impact area (sq. ft. or Acres)	Duration of impact ³	Proposed mitigation type ⁴	Wetland mitigation area (sq. ft. or acres)
Excavate – scrape surface organics to key in rocks	Wetland B	Cat III Slope	200 SF	Temporary	None	NA
Fill	Wetland B	Cat III Slope	200 SF	Permanent	None	NA
Clearing	Wetland A and B Buffers	Cat III Slope	23,546 SF	Temporary	Restoration	23,546 SF

¹ If no official name for the wetland exists, create a unique name (such as “Wetland 1”). The name should be consistent with other project documents, such as a wetland delineation report.

² Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.

³ Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter “permanent” if applicable.

⁴ Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Page number(s) for similar information in the mitigation plan, if available: Page 5

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland. [\[help\]](#)

The fill proposed within Wetland B is a result of the installation of boulders and streambed cobbles along the graded stream bank necessary to complete the repairs to the pipeline. The source of fill is unknown at this time, but a local quarry will be used. See Attached JARPA Drawings, Sheet 4 for further details on fill within the wetland.

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed. [\[help\]](#)

Minor excavation/grading will occur to key in rocks and LWM however the majority of this work will occur in fill placement within the channel and not require excavation in wetlands. Material disturbed will be used as backfill on site.

Part 8–Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, “waterbodies” refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.) [\[help\]](#)

Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment. [\[help\]](#)

Not applicable

This pipeline maintenance project was considered unavoidable because of the exposed nature of the pipe within the creek. Alternatives such as a “handlebar” pipeline replacement were considered to lower the pipeline below the current scour depth of the creek; however this was determined to create a larger impact to the creek and surrounding vicinity than the current design. The selected stream regrading design was determined to have the least impact on the site.

Impacts were minimized by selecting staging and material storage areas lacking woody vegetation, particularly within the managed field atop the creek valley and in a relatively flat area along the pipeline corridor (JARPA Drawings, Sheet 2).

8b. Will your project impact a waterbody or the area around a waterbody? [\[help\]](#)

Yes No

8c. Have you prepared a mitigation plan to compensate for the project’s adverse impacts to non-wetland waterbodies? [\[help\]](#)

- **If Yes**, submit the plan with the JARPA package and answer 8d.
- **If No, or Not applicable**, explain below why a mitigation plan should not be required.

Yes No Don’t know

Compensatory mitigation for wetland and stream impacts is not proposed. However, stabilization and restoration of work, access, and staging areas along with the proposed improvements within the channel OHWM, including removal of an old concrete slab over the pipeline, will be self-mitigating to the local ecosystem. As a result of this project, the active headcut and exposed pipeline within the creek will be repaired by installing a large amount of channel roughness (LWM and boulders) that should increase sediment retention and reduce flow velocities during storm events, limiting downstream erosion.

In addition, revegetation plans include a 3:1 ratio for proposed tree clearing, and approximately 2,000 square feet of riparian planting adjacent to the creek near the pipeline crossing.

See “Wetland and Stream Delineation Report” for further details (GeoEngineers 2022).

Reference: GeoEngineers 2022. Wetland and Stream Delineation Report, Schoolhouse Creek MP 229.61 Project. Prepared for Olympic Pipe Line Company LLC

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

- If you already completed 7g you do not need to restate your answer here. [\[help\]](#)

See response in 7g above for details.

8e. Summarize impact(s) to each waterbody in the table below. [\[help\]](#)

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name ¹	Impact location ²	Duration of impact ³	Amount of material (cubic yards) to be	Area (sq. ft. or linear ft.) of waterbody

				placed in or removed from waterbody	directly affected
Removal of Concrete from Channel	Schoolhouse Creek	Below OHWM	Permanent	1 CY (removed)	50 SF
Over-Excavation to Inspect and Recoat Pipeline	Schoolhouse Creek	Below OHWM	Temporary	24 CY (removed)	210 SF
Excavation in Bedrock for Downstream Boulder Step Placement	Schoolhouse Creek	Below OHWM	Permanent	5 CY (removed)	48 SF
Excavation in Bank for Placement of Log Steps	Schoolhouse Creek	Below OHWM	Temporary	4 CY (removed)	56 SF
Fill – temporary work zone isolation structure (supersacks, gravel bags or similar)	Schoolhouse Creek	Below OHWM	Temporary – 4 weeks	4 CY	48 SF
Placement of Streambed Material – streambed cobbles and gravels	Schoolhouse Creek	Below OHWM	Permanent	70 CY	1,476 SF
Placement of Boulder Steps - 24 to 36-inch Streambed Boulders (Rounded to Sub-Angular)	Schoolhouse Creek	Below OHWM	Permanent	8 CY	72 SF
Placement of Log Steps – 16- to 18-inch Diameter Conifer Log	Schoolhouse Creek	Below OHWM	Permanent	11 CY	144 SF
Placement of Class B Rock Revetment on Banks Adjacent to the Pipeline (Angular)	Schoolhouse Creek	Below OHWM	Permanent	22 CY	240 SF
Placement of Sand Bedding Around Pipeline	Schoolhouse Creek	Below OHWM	Permanent	2 CY	60 SF
Placement of Concrete Half-Round	Schoolhouse Creek	Below OHWM	Permanent	1 CY	50 SF

Placement of Buried Scour Protection Rock – Class B Rock for Erosion and Scour Protection (Angular)	Schoolhouse Creek	Below OHWM	Permanent	14 CY	150 SF
<p>¹ If no official name for the waterbody exists, create a unique name (such as “Stream 1”) The name should be consistent with other documents provided.</p> <p>² Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.</p> <p>³ Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter “permanent” if applicable.</p>					
<p>8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody. [help]</p>					
<p>Approximately 119 CY of material will be permanently installed below the OHWM with 70 CY consisting of streambed material, 8 CY consisting of boulder steps, 11 CY for log steps, 22 CY for rock revetment in the bank around the pipeline, 2 CY of sand material will be placed around the pipeline, 1 CY of pre-formed concrete cap is needed to be installed over the pipeline for additional protection, and then a 14 CY of scour rock will be buried to provide further erosion protection. Materials will be sourced from a local quarry. See above Table 8e and drawings for details on material sizing information. Equipment necessary to complete the work will access the project site from Sauvola Road and the mowed pipeline ROW. Equipment will install material following fish exclusion and installation of a steam bypass system after the in-water work window starts.</p> <p>Temporary fill below the OHWM of approximately 4 CY is proposed for the temporary dam for the stream bypass. The fill will consist of supersacks, gravel bags or similar.</p>					
<p>8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed. [help]</p>					
<p>Excavation proposed within the creek (below OHWM) includes removal of the concrete from the channel (1 CY), over-excavation to inspect and recoat the pipeline (24 CY), excavation in bedrock for downstream boulder step placement (5 CY) and excavation in bank for placement of log steps (4 CY). The total excavation volume is 34 CY. The work will be performed with equipment staged adjacent and within the creek. Prior to any work below OHWM, the work area will be dewatered through establishment of a stream bypass system. All excavated material that will not be reused will be disposed of at a permitted facility.</p>					

Part 9—Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

9a. If you have already worked with any government agencies on this project, list them below. [help]			
Agency Name	Contact Name	Phone	Most Recent Date of Contact
WDFW	George Fornes	360-906-6731	August 19, 2022
9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List? [help]			
<ul style="list-style-type: none"> • If Yes, list the parameter(s) below. • If you don't know, use Washington Department of Ecology's Water Quality Assessment tools at: https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d. 			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in? [help]			
<ul style="list-style-type: none"> • Go to http://cfpub.epa.gov/surf/locate/index.cfm to help identify the HUC. 			
1708000303 (Kalama River-Frontal Columbia River)			
9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]			
<ul style="list-style-type: none"> • Go to https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Watershed-look-up to find the WRIA #. 			
WRIA 27 - Lewis River Watershed			
9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity? [help]			
<ul style="list-style-type: none"> • Go to https://ecology.wa.gov/Water-Shorelines/Water-quality/Freshwater/Surface-water-quality-standards/Criteria for the standards. 			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable			
9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation? [help]			
<ul style="list-style-type: none"> • If you don't know, contact the local planning department. • For more information, go to: https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases. 			
<input type="checkbox"/> Urban <input type="checkbox"/> Natural <input type="checkbox"/> Aquatic <input type="checkbox"/> Conservancy <input type="checkbox"/> Other: <u>N/A</u>			
9g. What is the Washington Department of Natural Resources Water Type? [help]			
<ul style="list-style-type: none"> • Go to http://www.dnr.wa.gov/forest-practices-water-typing for the Forest Practices Water Typing System. 			
<input type="checkbox"/> Shoreline <input checked="" type="checkbox"/> Fish <input type="checkbox"/> Non-Fish Perennial <input type="checkbox"/> Non-Fish Seasonal			
9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual? [help]			
<ul style="list-style-type: none"> • If No, provide the name of the manual your project is designed to meet. 			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Name of manual: _____			

<p>9i. Does the project site have known contaminated sediment? [help]</p> <ul style="list-style-type: none"> If Yes, please describe below. <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>9j. If you know what the property was used for in the past, describe below. [help]</p> <p>The project site is located within an existing pipeline right-of-way that has been historically cleared and maintained for access purposes.</p>
<p>9k. Has a cultural resource (archaeological) survey been performed on the project area? [help]</p> <ul style="list-style-type: none"> If Yes, attach it to your JARPA package. <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>See attached: Tierra 2022. Cultural Resources Assessment for the Olympic Pipeline Schoolhouse Creek Depth of Cover Restoration Project, Cowlitz County, Washington. Prepared by Keith Donald, Ph.D. RPA.</p>
<p>9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work. [help]</p> <p>The following ESA-listed species are mapped within Schoolhouse Creek:</p> <ul style="list-style-type: none"> - Coho salmon (<i>Oncorhynchus kisutch</i>) Lower Columbia River ESU - Winter Steelhead (<i>Oncorhynchus mykiss</i>) Lower Columbia River DPS <p>See attached Biological Evaluation No Effects Letter discussing endangered species presence and potential impacts associated with the project.</p>
<p>9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work. [help]</p> <p>The WDFW PHS web mapper indicates resident rainbow trout (<i>Oncorhynchus mykiss</i>) occurrence and migration within Schoolhouse Creek. No other priority habitats or species are mapped within 300-feet of the project site.</p>

Part 10–SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at <http://apps.oria.wa.gov/opus/>.
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@oria.wa.gov.
- For a list of addresses to send your JARPA to, click on [agency addresses for completed JARPA](#).

<p>10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help]</p> <ul style="list-style-type: none"> For more information about SEPA, go to https://ecology.wa.gov/regulations-permits/SEPA-environmental-review. <p><input type="checkbox"/> A copy of the SEPA determination or letter of exemption is included with this application.</p> <p><input checked="" type="checkbox"/> A SEPA determination is pending with <u>Cowlitz County</u> (lead agency). The expected decision date is <u>unknown</u>.</p> <p><input type="checkbox"/> I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [help]</p>

- This project is exempt (choose type of exemption below).
- Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?

 - Other: _____

SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) [\[help\]](#)

LOCAL GOVERNMENT

Local Government Shoreline permits:

- Substantial Development Conditional Use Variance
- Shoreline Exemption Type (explain): _____

Other City/County permits:

- Floodplain Development Permit Critical Areas Ordinance

STATE GOVERNMENT

Washington Department of Fish and Wildlife:

- Hydraulic Project Approval (HPA) Fish Habitat Enhancement Exemption – [Attach Exemption Form](#)

Washington Department of Natural Resources:

- Aquatic Use Authorization
- Complete [JARPA Attachment E](#) and submit a check for \$25 payable to the Washington Department of Natural Resources.
Do not send cash.

Washington Department of Ecology:

- Section 401 Water Quality Certification
- Authorization to impact waters of the state, including wetlands (Check this box if the proposed impacts are to waters not subject to the federal Clean Water Act)

FEDERAL AND TRIBAL GOVERNMENT

United States Department of the Army (U.S. Army Corps of Engineers):

- Section 404 (discharges into waters of the U.S.) Section 10 (work in navigable waters)

United States Coast Guard:

For projects or bridges over waters of the United States, contact the U.S. Coast Guard at:

- Bridge Permit: D13-SMB-D13-BRIDGES@uscg.mil
- Private Aids to Navigation (or other non-bridge permits): D13-SMB-D13-PATON@uscg.mil

United States Environmental Protection Agency:

- Section 401 Water Quality Certification (discharges into waters of the U.S.) on tribal lands where tribes do not have treatment as a state (TAS)

Tribal Permits: (Check with the tribe to see if there are other tribal permits, e.g., Tribal Environmental Protection Act, Shoreline Permits, Hydraulic Project Permits, or other in addition to CWA Section 401 WQC)

- Section 401 Water Quality Certification (discharges into waters of the U.S.) where the tribe has treatment as a state (TAS).



WASHINGTON STATE
Joint Aquatic Resources Permit
Application (JARPA) [\[help\]](#)



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY

Date received: _____

Agency reference #: _____

Tax Parcel #(s): _____

TO BE COMPLETED BY APPLICANT [\[help\]](#)

Project Name: _____

Location Name (if applicable): _____

Attachment A:
For additional property owner(s) [\[help\]](#)

Use this attachment only if you have more than one property owner. Complete one attachment for each additional property owner impacted by the project.

Signatures of property owners are not needed for repair or maintenance activities on existing rights-of-way or easements.

Use black or blue ink to enter answers in white spaces below.

1. Name (Last, First, Middle) and Organization (if applicable)			
Jackson, Grant L. and Beth A.			
2. Mailing Address (Street or PO Box)			
383 SAUER RD			
3. City, State, Zip			
Kalama, Washington, 98625			
4. Phone (1)	5. Phone (2)	6. Fax	7. E-mail
(360) 355-5251			kalamacountryboy@yahoo.com
Address or tax parcel number of property you own:			
WC2104006			
Signature of Property Owner			
I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.			
A temporary work agreement will be obtained from the landowners before work starts.			
_____		_____	
Printed Name		Signature	

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ORIA-16-012 rev. 10/2016



WASHINGTON STATE
Joint Aquatic Resources Permit
Application (JARPA) [\[help\]](#)



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY

Date received: _____

Agency reference #: _____

Tax Parcel #(s): _____

TO BE COMPLETED BY APPLICANT [\[help\]](#)

Project Name: _____

Location Name (if applicable): _____

Attachment A:
For additional property owner(s) [\[help\]](#)

Use this attachment only if you have more than one property owner. Complete one attachment for each additional property owner impacted by the project.

Signatures of property owners are not needed for repair or maintenance activities on existing rights-of-way or easements.

Use black or blue ink to enter answers in white spaces below.

1. Name (Last, First, Middle) and Organization (if applicable)			
Llywelyn, Robert and Colbie			
2. Mailing Address (Street or PO Box)			
200 Sauvola Rd			
3. City, State, Zip			
Kalama, Washington, 98625-9839			
4. Phone (1)	5. Phone (2)	6. Fax	7. E-mail
(503) 724-9931			
Address or tax parcel number of property you own:			
WC2104009			
Signature of Property Owner			
I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.			
A temporary work agreement will be obtained from the landowners before work starts.			
_____		_____	
Printed Name		Signature	

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at (800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ORIA-16-012 rev. 10/2016



WASHINGTON STATE
Joint Aquatic Resources Permit
Application (JARPA) [\[help\]](#)



US Army Corps
of Engineers®
Seattle District

AGENCY USE ONLY	
Date received:	_____
Agency reference #:	_____
Tax Parcel #(s):	_____

TO BE COMPLETED BY APPLICANT [help]	
Project Name:	_____
Location Name (if applicable):	_____

Attachment A:
For additional property owner(s) [\[help\]](#)

Use this attachment only if you have more than one property owner. Complete one attachment for each additional property owner impacted by the project.

Signatures of property owners are not needed for repair or maintenance activities on existing rights-of-way or easements.

Use black or blue ink to enter answers in white spaces below.

1. Name (Last, First, Middle) and Organization (if applicable)			
Magnuson, Joy Allison			
2. Mailing Address (Street or PO Box)			
Mailing: P.O. Box 158 (Street Address: 425 Sauer Road)			
3. City, State, Zip			
Kalama, Washington, 98625			
4. Phone (1)	5. Phone (2)	6. Fax	7. E-mail
(360) 673-2228	(360) 353-6002		
Address or tax parcel number of property you own:			
WC2104002			
Signature of Property Owner			
I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.			
A temporary work agreement will be obtained from the landowner before work starts.			
_____		_____	
Printed Name		Signature	

If you require this document in another format, contact the Governor's Office for Regulatory Innovation and Assistance (ORIA) at _____

(800) 917-0043. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341. ORIA publication number: ORIA-16-012 rev. 10/2016

RIGHT-OF-WAY GRANT

FOR AND IN CONSIDERATION of the sum of Forty - Four
~~(\$44⁰⁰)~~ Dollars, paid by OLYMPIC PIPELINE
 COMPANY, INC., the receipt of which is hereby acknowledged, and
 the provisions herein contained, DONALD G. FALTER and ALVENA E.
 FALTER, husband and wife, Grantors, do hereby grant and convey to
 OLYMPIC PIPELINE COMPANY, INC., a Delaware corporation, its suc-
 cessors and assigns, hereinafter referred to as Grantee, the rights-
 of-way, easements and privileges to construct, maintain, operate
 repair, replace and remove in whole or in part, a pipeline for the
 transportation of oil and gas and the products thereof, the neces-
 sary underground fittings, fixtures, valves, appurtenances, and
 cathodic protection devices, and the right to maintain the said
 right-of-way clear of trees, underbrush, buildings and other ob-
 structions, subject to limitations and provisions hereinafter
 contained, on, over, across and through the real property situated
 in the County of Cowlitz, Washington, specifically described in
 Exhibit "A", attached hereto and by this reference made a part
 hereof, together with the right of ingress and egress along said
 pipeline right-of-way upon the actual right-of-way herein granted
 only.

The above consideration includes surface damages upon said
 right-of-way referred to in this instrument to be caused by con-
 struction of the pipeline herein.

During the construction and installation of the proposed
 pipeline herein, said right-of-way shall be limited to an area
 fifty (50) feet in width, being twenty-five (25) feet on each
 side of a centerline, which centerline shall be the presently sur-
 veyed and staked route across the property of the Grantors herein.
 Immediately after the construction and installation of the proposed
 pipeline herein, the right-of-way herein granted shall revert to
 a maximum area thirty (30) feet in width, being fifteen (15) feet
 on each side of the said centerline. The Grantee shall furnish
 Grantors a centerline description of said proposed pipeline right-
 of-way prior to the actual construction of the pipeline and said
 centerline shall not deviate from presently surveyed and staked
 route through the property of the Grantors.

Grantors hereby reserve the right to fully use and enjoy the
 above-described right-of-way and specifically reserve the right
 to cross, re-cross, go along, over and under the proposed pipeline
 with roads, water and sewer lines, drainage lines, power lines or
 any other utility line that may be desirable in the future develop-
 ment of the property of the Grantors; provided, that such use does
 not unreasonably interfere with the rights of the Grantee hereunder.
 Grantors specifically reserve the right to construct buildings,
 homes, and any other structures upon the right-of-way herein granted
 up to a point ten (10) feet from the location of the actual pipe-
 line to be constructed hereunder.

Grantee shall be required to, and be responsible for the
 clearing and burning and otherwise disposing of all brush and de-
 bris created by the construction and maintenance of the pipeline
 herein, in a manner suitable to Grantors.

Grantee shall be responsible for and shall save harmless
 Grantors from any and all liability to third parties arising out
 of the construction, maintenance, or operation of the proposed
 pipeline hereunder, and from any and all liability of fire start-
 ing upon the pipeline right-of-way, either from the construction,
 maintenance, operation or from Grantee's agents using the same.

580210

Grantee shall further indemnify Grantors from any and all damage sustained by them to their property adjoining this right-of-way grant that may arise out of the construction, maintenance or future operation of Grantee's pipeline.

Grantee shall be responsible for the spraying and control of tansy rag wort and all other noxious weeds as defined by the laws of the State of Washington, that may from time to time, grow upon the right-of-way herein granted.

Grantee further agrees that after the construction of the pipeline hereunder, it will restore the ground surface to its natural drainage and contour and to maintain it in such condition so as to prevent erosion of the soil and earth along, over and adjacent to said right-of-way after construction. Further, Grantee agrees that it shall sow the ground over the pipeline right-of-way, after construction, with a grass seed suitable to the Grantors.

Grantors reserve the right to build fences across this right-of-way and Grantee agrees to protect and save harmless Grantors from any damages caused to said fences or resulting thereto by the Grantee in the construction, use and maintenance of said pipeline.

Grantee shall further protect and save harmless Grantors from any and all damage to domestic water resources situated upon the above-described property of the Grantors which may be damaged or disrupted by the construction, maintenance or operation of the pipeline herein referenced.

This grant is made to Grantee only for the specific uses and purposes herein stated and only for such period of time as the Grantee actually uses this right-of-way for such uses and purposes. In the event the Grantee fails to make actual use of this right-of-way for the uses and purposes herein mentioned for a period of five (5) years from the date hereof, or the Grantee abandons or discontinues the use of said right-of-way as provided herein for a period of five (5) years, then, and in that event, the rights of the Grantee shall terminate and cease and shall thereupon revert to the Grantors, their heirs, assigns, or successors in interest.

This right-of-way is granted for the installation, use and maintenance of a single pipeline only and said pipeline to be constructed by the Grantee on this right-of-way shall be buried not less than 30 inches from the ground surface so as not to interfere with the reasonable use of this right-of-way by the Grantors.

Grantee shall assume and be responsible for any state or Federal excise tax and revenue stamps that may be required for this grant.

The terms, conditions and provisions of this grant shall extend to and be binding upon the heirs, executors, administrators, personal representatives, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the Grantors have executed this instrument the 30th day of July, 1964.

Edgar B. Henderson Sr.
Edgar B. Henderson Sr.

Donald G. Falter
Donald G. Falter

Alvena E. Falter
Alvena E. Falter

Consideration Less Than \$100.00
No Revenue Stamp Required

590213

EXHIBIT "A"

All of the following described parcel of land which lies Southerly and Southwesterly of the Southerly right of way line of the County Road as now laid out and established over and across said land: Beginning at a point set to mark the quarter corner between Sections 21 and 22, Township 6 North, Range 1 West, Willamette Meridian; thence North 396 feet; thence West 1320 feet; thence South 363 feet; thence West 528 feet; thence South 330 feet; thence East 1848 feet; thence North 330 feet to the point of beginning. EXCEPT: Beginning at the Southwest corner of the Southeast Quarter of the Northeast Quarter (SE 1/4 NE 1/4) of Section 21, Township 6 North, Range 1 West, Willamette Meridian; thence North 82° 51' East 493.07 feet; thence North 8° 23' East 290 feet to the Southerly right of way line of the Sauer Road; thence Westerly and Southwesterly along said Southerly right of way line to its intersection with the West line of the Southeast Quarter of the Northeast Quarter (SE 1/4 NE 1/4) of Section 21, Township 6 North, Range 1 West, Willamette Meridian; thence South on said subdivision line to place of beginning. ALSO EXCEPT: That portion of parcel first described lying Easterly of the following described line: Beginning at the Southwest corner of the Southeast Quarter of the Northeast Quarter (SE 1/4 NE 1/4) of Section 21, Township 6 North, Range 1 West, Willamette Meridian; thence North 82° 51' East 493.07 feet; thence North 8° 23' East 290 feet to the true point of beginning of line description; thence South 8° 23' West to the South line of said first described parcel. ALSO EXCEPT: Any portion thereof in the Southwest Quarter of the Northeast Quarter (SW 1/4 NE 1/4) of Section 21, Township 6 North, Range 1 West of the Willamette Meridian, situate in Cowlitz County, Washington.

NE/A

Filed for Record 8-6-1964, 9:55 AM
 Request of *Olympic Paper Line Co.*
 SARAH IVIE, Cowlitz County Auditor *Handwritten*

MICROFILMED

Return To: Olympic Pipe Line Co.
P. O. Box 733
Bellevue, Wash 98004

5.00

REQUEST OF *Olympic Pipe Line Co.*
FOR *733 P.O. Box*
NOV 6 9 53 AM 1961

SARAH J. ...
BY *G. ...*
Indorsed By *J.R.*
Checked By *J.P.*

65.009- 8 2374 8

596222
587263

VOL 713 P1396
VOL 709 P1253
0-3
(9-63)
CG-121

RIGHT OF WAY



THE STATE OF WASHINGTON
County of COWLITZ

FOR AND IN CONSIDERATION of the sum of Two hundred forty & No/100 Dollars
(\$ 240.00), the receipt of which is hereby acknowledged,

George A. Allison and wife, Dorothy H. Allison, 315 Saurvola Rd.,
P. O. Box # 111, Kalama, Washington

hereinafter referred to as GRANTOR (whether one or more), does hereby grant and convey to OLYMPIC PIPE LINE COMPANY, a Delaware corporation, with a permit to do business in the State of Washington, its successors and assigns, hereinafter referred to as GRANTEE, ~~the right of way, easements and privileges to construct, maintain, operate, repair, replace, change the size of, and remove in whole or in part, a pipe line or pipe lines,~~ ^{an} ~~pipe line or pipe lines,~~ for the transportation of oil and gas, and the products thereof, water, or any other fluid or substance, with the necessary fittings, fixtures, valves, appurtenances, and cathodic protection devices, and the right to maintain ~~the easement,~~ ^{an} ~~clear of trees, underbrush, buildings, and other obstructions, along a route to be selected by~~ ^{one} ~~Grantor,~~ on, over, across and through the following described property situated in the County of _____

Cowlitz, State of Washington:

An easement 50 feet in width being 15 feet on the east and 35 on the west sides of the following described line beginning at a point on the North line of the G. A. Allison property, said property being described as beginning at the Southeast corner of the Northeast quarter of the Southeast quarter of Section 21, Township 6 North, Range 1 West of the W. M. in Cowlitz County, Washington and running thence North 56 rods; thence West 80 rods; thence South 56 rods; thence East 80 rods to the place of beginning, containing 28 acres more or less.

11-11-64
R.P.P.
S.A.A.
Said point of beginning of easement being located ^{261' S.S.O.} ~~1865~~ feet westerly along said North line from the Northeast corner thereof. Thence: In a Southeasterly direction, ^{1117' 10 1/2'} ~~1110~~ feet plus or minus to a point on the ~~South~~ ^{South} line of said property. Said point being located ^{50 feet} ~~50~~ feet westerly along said South line from the Southeast corner of said property, all in Section 21, Township 6 North, Range 1 West of the W.M., Cowlitz County, Washington. It is understood and agreed that said easement and pipe line lies within 80 feet more or less of the spring which presently provides Grantor herein with their water supply, and in the event of any interference of any kind or nature with said spring by reason of the construction, maintenance, or existence of said pipe line, including loss of flow, pressure or contamination of any kind or nature, the Grantee herein shall be responsible for all damage or loss to the Grantors resulting therefrom.

together with the right of ingress and egress to and from said line or lines.

Grantor shall have the right to fully use and enjoy the above described premises, except as to the rights herein granted. Grantee agrees to pay any damages which may arise to crops, timber, or fences of Grantor, resulting from the exercise of the rights herein granted, said damages, if not mutually agreed upon, to be ascertained and determined by three disinterested persons, one thereof to be appointed by Grantor, one by Grantee, and the third by the two so appointed, and the written award of such three persons shall be final and conclusive.

~~Should more than one pipe line be laid under this grant, at any time and from time to time, an additional consideration of _____ shall be paid for each pipe line laid after the first line.~~

It is agreed that any payment due hereunder may be made direct to Grantors or any one of them.

Any pipe line constructed by Grantee, its successors or assigns, across lands under cultivation at the time of construction thereof, shall be buried to such depth as will not interfere with ordinary cultivation.

The rights of way, easements and privileges herein granted ~~are each divisible~~ and are each assignable or transferable, in whole or in part.

The terms, conditions, and provisions of this grant or any contract resulting from the exercise thereof shall extend to and be binding upon the heirs, executors, administrators, personal representatives, successors, and assigns of the parties hereto.

IN WITNESS WHEREOF, the Grantor has executed this instrument this 4th

day of June, 1964.

received 2.40 pursuant to Chap. 11, Laws Ex. 1951.

JUN 17 1964

47290

GERTRUDE RIVERS,
Cowlitz County Treas.

B. McDonald Deputy

George A. Allison
George A. Allison

Dorothy H. Allison
Dorothy H. Allison

MICROFILMED

596221 587263

VOL 713 P1397
VOL 709 P1254

ACKNOWLEDGEMENT OF CORPORATE GRANTOR

STATE OF WASHINGTON

COUNTY OF _____ ss.

On this _____ day of _____, 19____, before me, the undersigned Notary Public, personally appeared _____ and _____ to me known to be the _____ President and _____ Secretary, respectively of _____, the corporation that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal affixed the _____ day and year in this certificate above written.

Notary Public in and for the State of Washington,
residing at _____

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF WASHINGTON

COUNTY OF Gowlitz ss.



On this day personally appeared before me George A. Allison and Dorothy H. Allison, to be known to be the individual(s) described in and who executed the within and foregoing instrument and acknowledged that they signed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 4 day of June, 1964

Notary Public in and for the State of Washington,
residing at Salinas, Wash.

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF WASHINGTON

COUNTY OF _____ ss.

On this day personally appeared before me _____ and _____, to be known to be the individual(s) described in and who executed the within and foregoing instrument and acknowledged that _____ signed the same as _____ free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this _____ day of _____, 19____.

Notary Public in and for the State of Washington,
residing at _____

MICROFILMED

596221

FILED
REQUEST OF Olympic Pipe Line Co.

VOL 713 P1396
NOV 20 10 49 AM 1964

SARAH IVIE, AUDITOR
COWLITZ COUNTY
BY S. Bausher, Dep.

Indexed by LD

Checked By LD Bellevue, Wash. 98004
P. O. Box 733

Return To: Olympic Pipe Line Co.

596221
587263

FILED
REQUEST OF Olympic Pipe Line Co.
VOL 709 P1253

JUN 17 11 15 AM 1964

SARAH IVIE, AUDITOR
COWLITZ COUNTY
BY S. Bausher, Dep.

Indexed By LD
Checked By LD

Project Description:

Olympic proposes to mitigate the low depth of cover and exposure of their existing 14-inch-diameter petroleum pipeline crossing of Schoolhouse Creek at their MP 229.61. The exposure has resulted from seasonal high stream flows and stream erosion at the crossing. The project also includes removing a concrete apron existing over the pipeline at the south bank and stabilizing the stream banks at the crossing to prevent future erosion of the banks that could re-expose the pipeline. Approximately 32,500 square feet of disturbance will occur on four parcels associated with the project site. The project proposes regrading Schoolhouse Creek approximately 49-feet upstream of the crossing using a cobble and gravel mix that mimics the existing streambed material gradation. The downstream regrade will extend roughly 70-feet downstream, creating a step-pool morphology composed of large boulders, Large Woody Material (LWM), and streambed gravels and cobbles.



Legal Descriptions by Parcel Numbers:

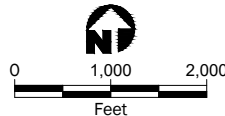
- WC2104001: 21 -6N -1W T-4,4C EXC RDS EXC T-4D FEE 825319 EXC T-4E FEE 960221109 EXC T-4F FEE 960226052 EXC T-4G FEE 960221109 INCL T-4C FEE 970228054.
- WC2104009: 21 -6N -1W T-4C-1,4F AKA TR 4 ROS 15/70.
- WC2104006: 21 -6N -1W T-4A-3.
- WC2104002: 21 -6N -1W T-4A EXC T-4A-1 FEE 466589 EXC T-4A-2 FEE 566542 EXC T-4A-3 FEE 813402.

Sheet List Table	
Sheet	Title
1	Cover & Vicinity Map
2	Site Access and Staging
3	Existing Site Plan
4	Proposed Site Plan
5	Proposed Schoolhouse Creek Profile
6	Typical Channel Sections
7	Typical Pipeline Sections
8	Typical Channel Details
9	Typical Channel Details
10	Restoration Plan
11	Quantities



Data Source: Mapbox Open Street Map, 2016.

Projection: NAD83 Washington State Planes, South Zone, US Foot.



Access Route:

From I-5: take exit 27 from I-5 South. Turn left onto Dupont Road/Robb Road and continue to follow Robb Road (0.1 mi). Turn right onto Todd Road (0.6 mi). Turn left onto S. Cloverdale Road (0.5 mi). Turn right onto Sauvola Road (0.4 mi). Turn left to site.

Cover & Vicinity Map

Applicant: Olympic Pipe Line Company LLC
600 SW 39th St., Suite 275
Renton, Washington 98057

Reference Number:

Adjacent Property Owners:

1. Robert and Colbie Llywelyn
200 Sauvola Rd, Kalama
2. Joy Allison Magnuson
425 Sauer Rd, Kalama
3. Grant L and Beth A Jackson
383 Sauer Rd, Kalama

Owners: W Fletcher Jr. and Debra L Hunt
Location: 220 Sauvola Rd, Near Kalama; Cowlitz County
Parcel No. WC2104001

Lat/Long: 45.98674°N, -122.81045°W
Sect/Town/Range: SE ¼ Sect. 21, T6N, R01W, W.M.

Datum: Horizontal = WA State Plane South, NAD83
Vertical = NAVD 88

Sheet: 1 of 11 **Date:** 11/09/2022

Proposed Project:
Olympic MP 229.61
Schoolhouse Creek Depth of Cover
Restoration Project

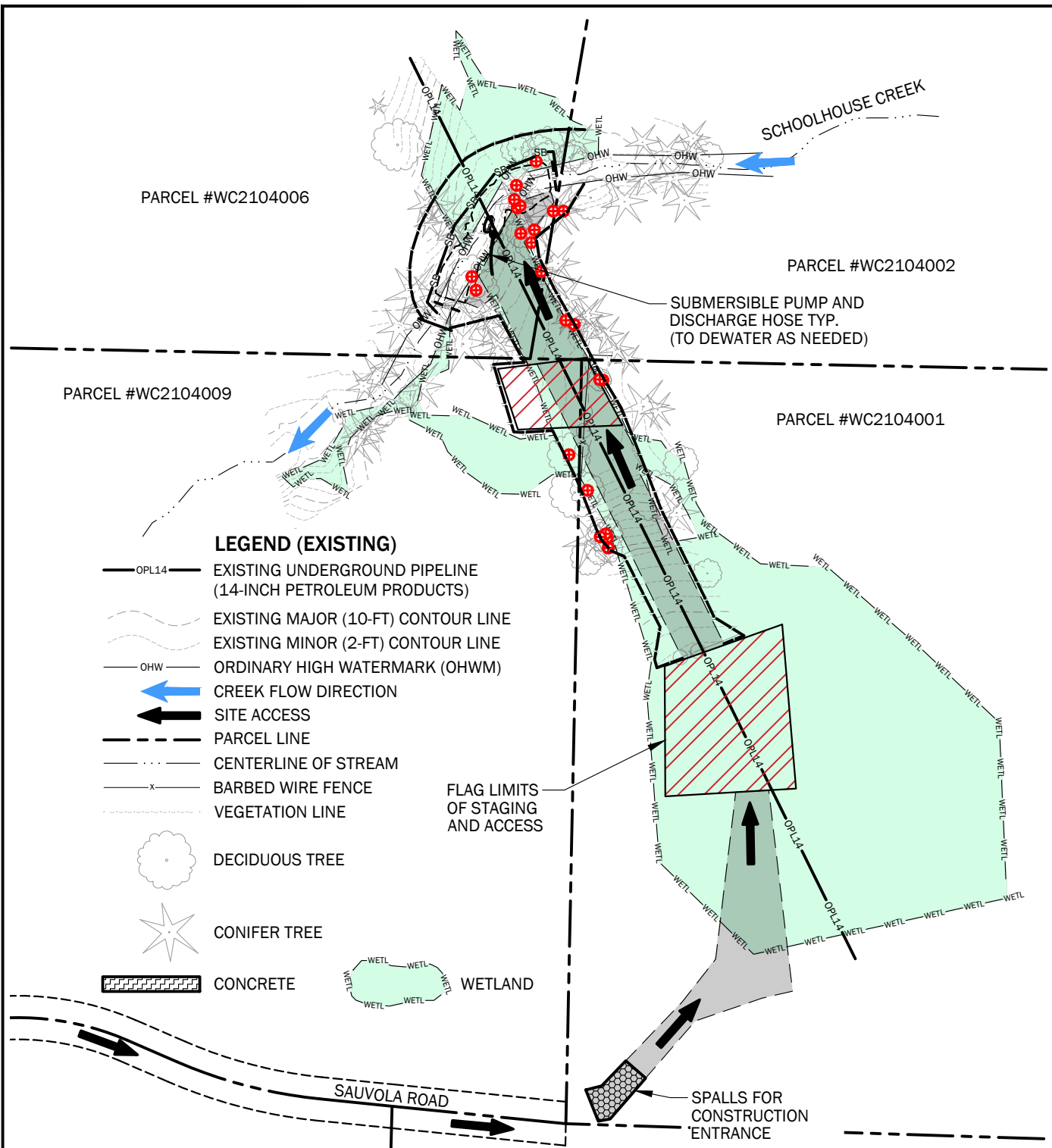
In: Schoolhouse Creek

Near/At: Kalama

County: Cowlitz

State: WA

P:\0_0894228\CAD\01\JARPA_089422801_Sht 02_Site Access and Staging.dwg TAB:Site Access Staging and TESC Date Exported: 11/09/22 - 20:51 by sy

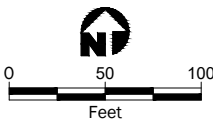


LEGEND (EXISTING)

- OPL14 — EXISTING UNDERGROUND PIPELINE (14-INCH PETROLEUM PRODUCTS)
- EXISTING MAJOR (10-FT) CONTOUR LINE
- EXISTING MINOR (2-FT) CONTOUR LINE
- OHW — ORDINARY HIGH WATERMARK (OHWM)
- ← CREEK FLOW DIRECTION
- ← SITE ACCESS
- - - PARCEL LINE
- CENTERLINE OF STREAM
- x - BARBED WIRE FENCE
- VEGETATION LINE
- ☼ DECIDUOUS TREE
- ★ CONIFER TREE
- ▨ CONCRETE
- WETLAND

LEGEND (PROPOSED)

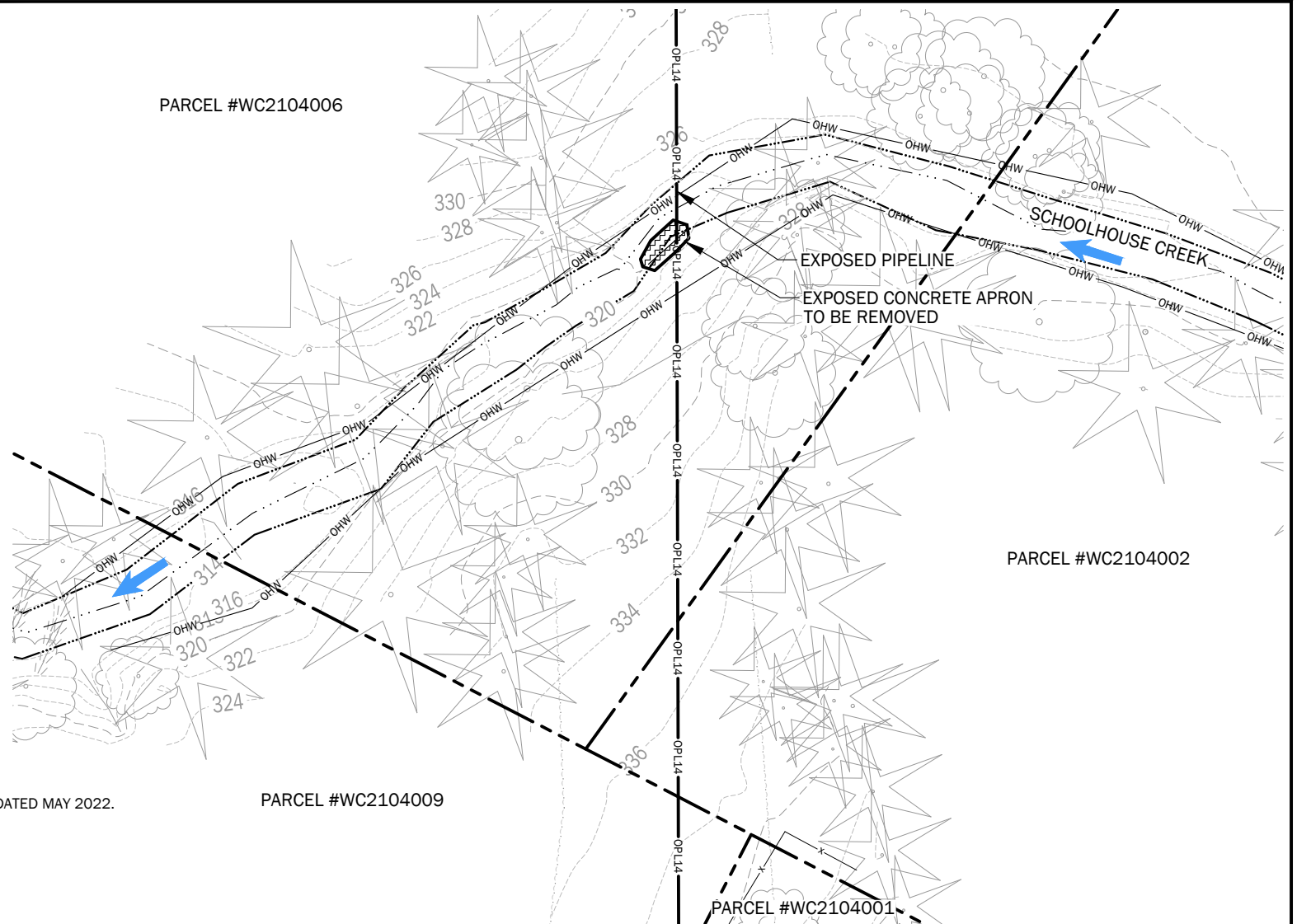
- ▭ EXCAVATION LIMITS
- ▭ TEMPORARY CONSTRUCTION ACCESS
- ▨ TEMPORARY CONSTRUCTION STAGING
- ⊕ TREE REMOVAL
- STRAW WATTLE
- HIGH VISIBILITY PLASTIC FENCE
- ▨ TEMPORARY WORK ZONE ISOLATION STRUCTURE
- SB — SB — TEMPORARY STREAM BYPASS



DATA SOURCE:
SURVEY BASE PROVIDED BY PARAMETRIX, DATED MAY 2022.

Site Access And Staging

Applicant: See Sheet 1
Reference Number:
Proposed Project:
Olympic MP 229.61
Schoolhouse Creek Depth of Cover
Restoration Project
Location: 220 Sauvola Rd, Near Kalama; Cowlitz
 County Parcel No. WC2104001
Sheet: 2 of 11 **Date:** 11/09/2022



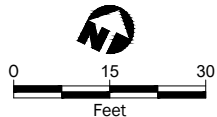
Existing Site Plan




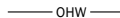







DATA SOURCE:
SURVEY BASE PROVIDED BY PARAMETRIX, DATED MAY 2022.

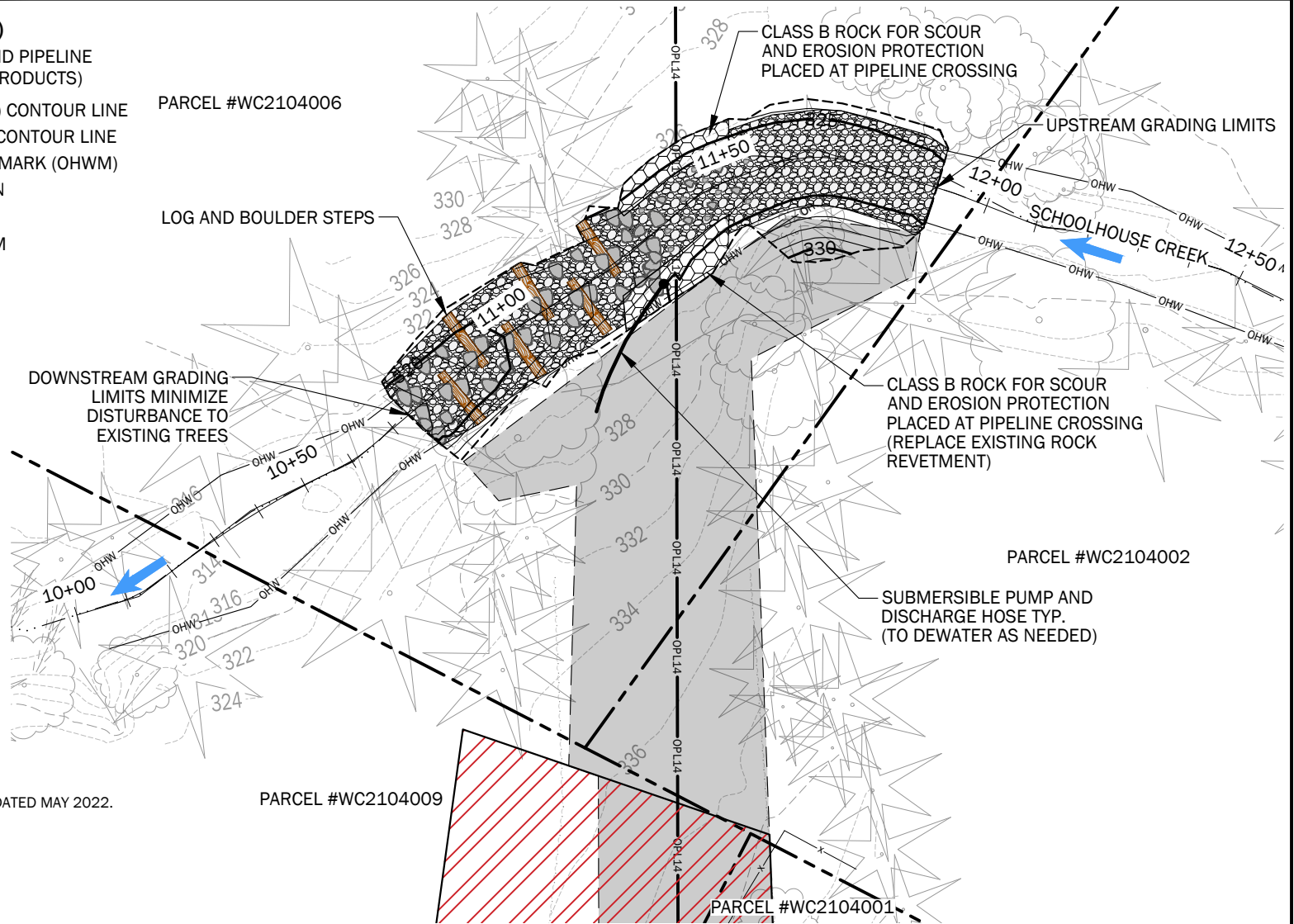
Applicant: See Sheet 1
Reference Number:
Proposed Project:
 Olympic MP 229.61
 Schoolhouse Creek Depth of Cover
 Restoration Project
Location: 220 Sauvola Rd, Near Kalamia, Cowiitz
 County Parcel No. WC2104001
Sheet: 3 of 11 **Date:** 11/09/2022

LEGEND (EXISTING)

- PARCEL LINE
- EOW EDGE OF WATER
- CENTERLINE OF STREAM
- BARBED WIRE FENCE
- VEGETATION LINE
- CONCRETE
- EXISTING UNDERGROUND PIPELINE (14-INCH PETROLEUM PRODUCTS)
- EXISTING MAJOR (10-FT) CONTOUR LINE
- EXISTING MINOR (2-FT) CONTOUR LINE
- ORDINARY HIGH WATERMARK (OHWM)
- CREEK FLOW DIRECTION
- DECIDUOUS TREE
- CONIFER TREE



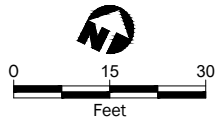
- LEGEND (EXISTING)**
-  EXISTING UNDERGROUND PIPELINE (14-INCH PETROLEUM PRODUCTS)
 -  EXISTING MAJOR (10-FT) CONTOUR LINE
 -  EXISTING MINOR (2-FT) CONTOUR LINE
 -  ORDINARY HIGH WATERMARK (OHWM)
 -  CREEK FLOW DIRECTION
 -  PARCEL LINE
 -  CENTERLINE OF STREAM
 -  BARBED WIRE FENCE
 -  VEGETATION LINE
 -  DECIDUOUS TREE
 -  CONIFER TREE







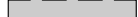





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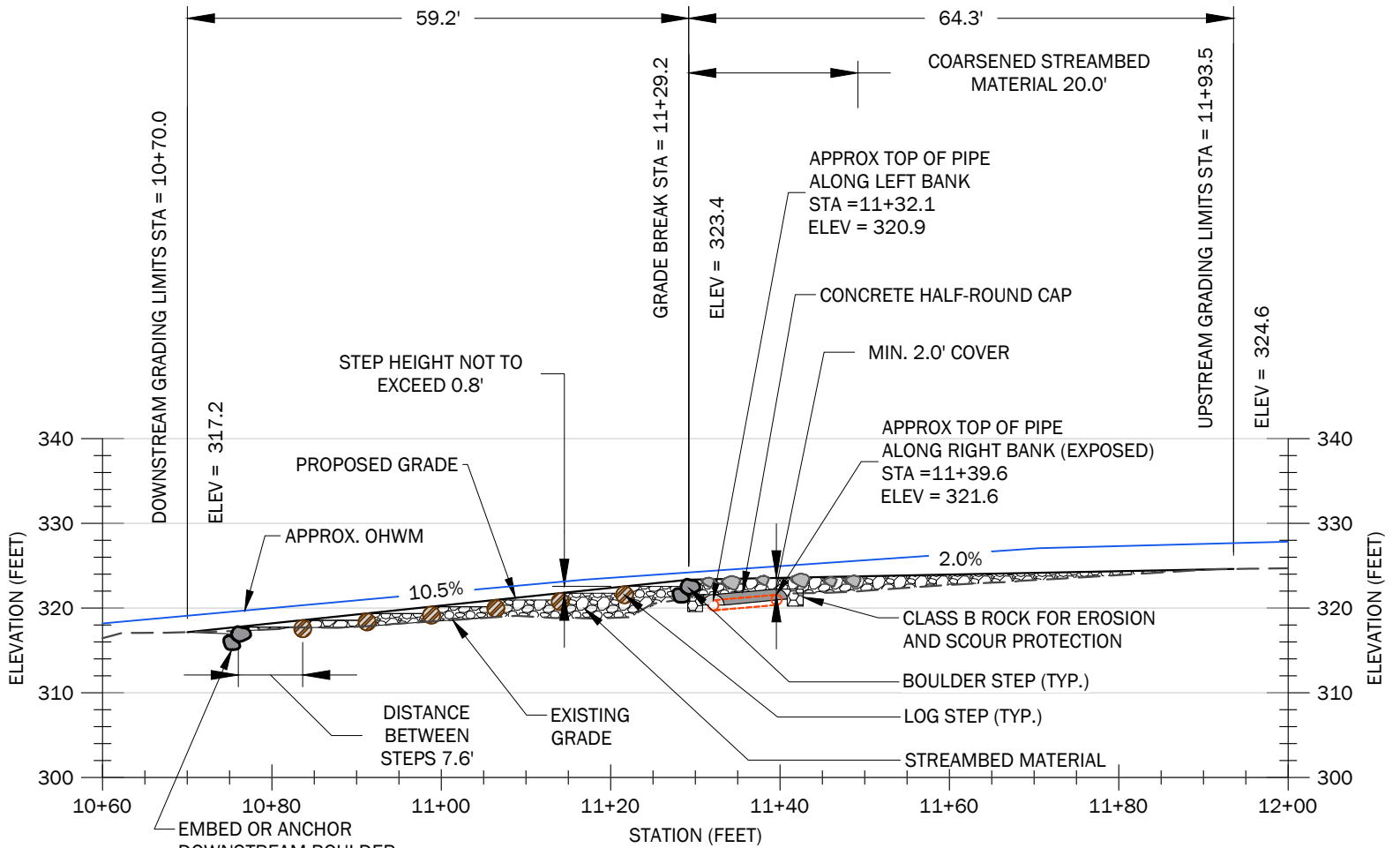
Proposed Site Plan

Applicant: See Sheet 1
Reference Number:
Proposed Project:
Olympic MP 229.61
Schoolhouse Creek Depth of Cover Restoration Project
Location: 220 Sauvola Rd, Near Kalama, Cowlitz County Parcel No. WC2104001
Sheet: 4 of 11 **Date:** 11/09/2022



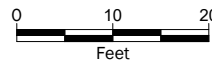
- LEGEND (PROPOSED)**
-  PROPOSED MAJOR (5-FT) CONTOUR LINE
 -  PROPOSED MINOR (1-FT) CONTOUR LINE
 -  EXCAVATION LIMITS
 -  PROPOSED STREAMBED MATERIAL
 -  LOG STEP
 -  STREAMBED BOULDER
 -  TEMPORARY CONSTRUCTION ACCESS
 -  TEMPORARY CONSTRUCTION STAGING
 -  PROJECT DISTURBANCE LIMITS
 -  CLASS B ROCK FOR EROSION AND SCOUR PROTECTION

Proposed Schoolhouse Creek Profile

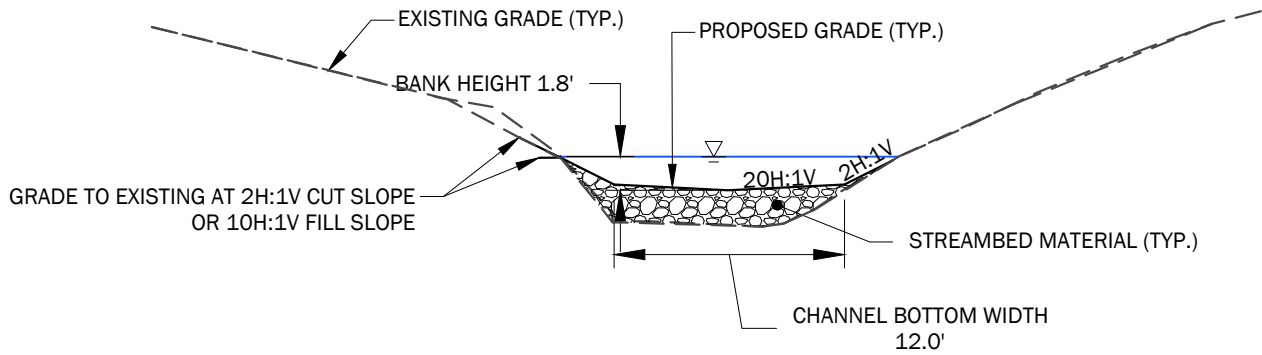


PROFILE

SCALE: 1" = 20'

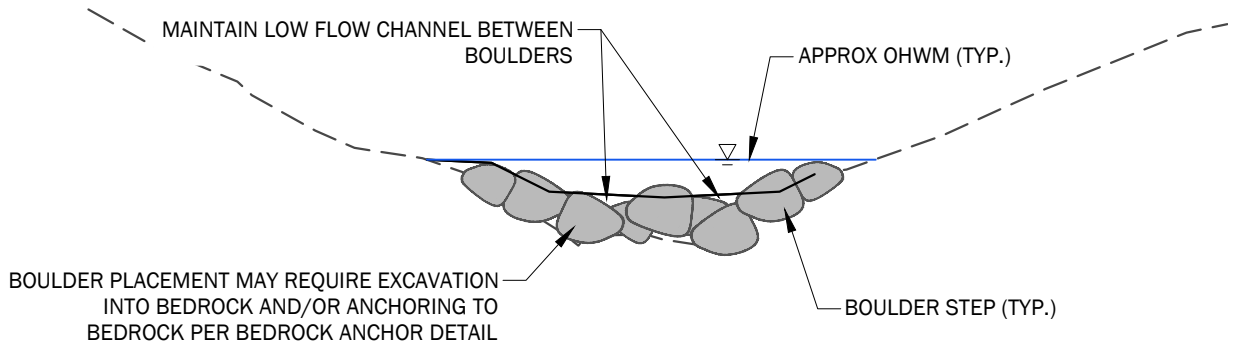


Applicant: See Sheet 1
Reference Number:
Proposed Project:
 Olympic MP 229.61
Schoolhouse Creek Depth of Cover Restoration Project
Location: 220 Sauvola Rd, Near Kalama, Cowlitz County, Parcel No. WC2104001
Sheet: 5 of 11
Date: 11/09/2022



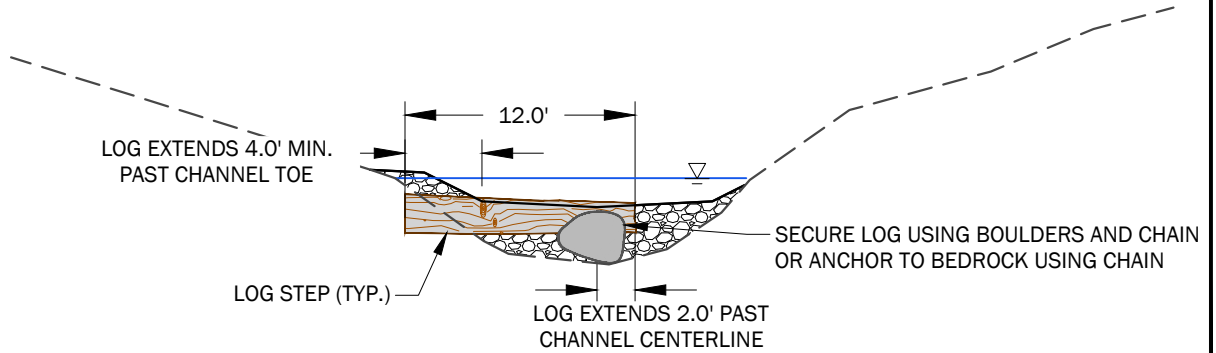
TYPICAL CHANNEL SECTION

SCALE: 1" = 10'



TYPICAL BOULDER STEP SECTION

SCALE: 1" = 10'



TYPICAL LOG STEP SECTION

SCALE: 1" = 10'

NOTES:

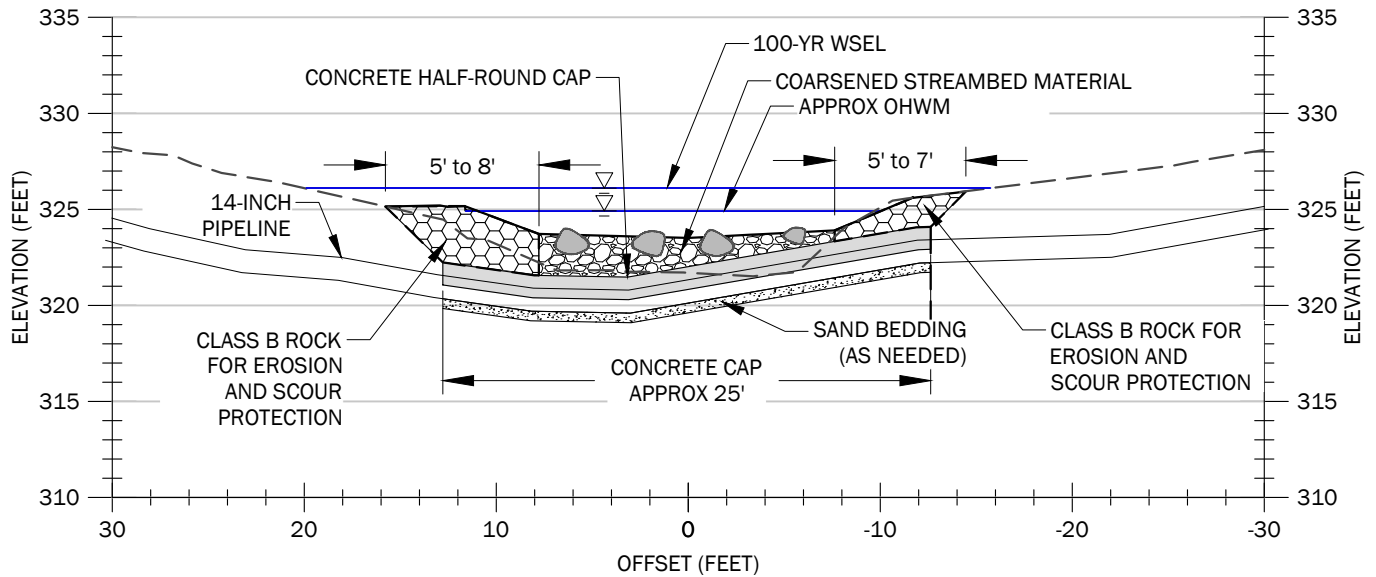
1. CHANNEL SECTIONS FACE DOWNSTREAM.
2. IMPORTED STREAMBED MATERIAL TO MATCH (WITHIN 20 PERCENT) EXISTING GRADATION.
D50 = 2 INCHES
D84 = 6 INCHES
3. IMPORTED STREAMBED BOULDERS ARE ROUNDED TO SUB-ANGULAR.
D30 = 18 INCHES
D50 = 24 INCHES
D84 = 30 INCHES
D100 = 36 INCHES
4. LOGS ARE 16 TO 18 INCHES IN DIAMETER, CONIFER.

TYPICAL CHANNEL SECTIONS

SCALE: 1" = 10'

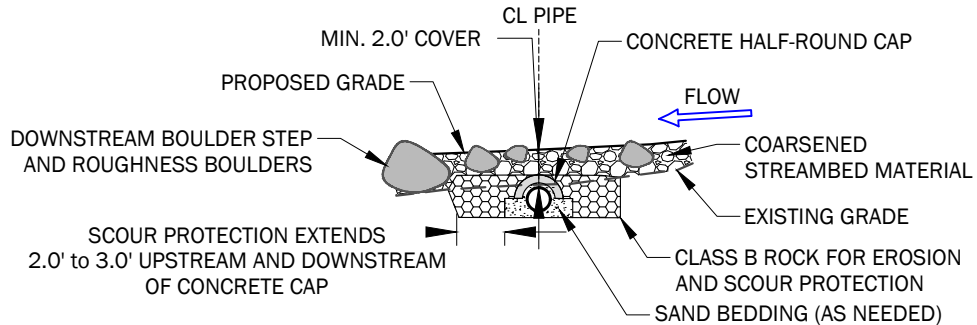


Applicant: See Sheet 1
Reference Number:
Proposed Project:
Olympic MP 229.61
Schoolhouse Creek Depth of Cover Restoration Project
Location: 220 Sauvola Rd, Near Kalama; Cowlitz County Parcel No. WC2104001
Sheet: 6 of 11 **Date:** 11/09/2022



TYPICAL PIPELINE SECTION

SCALE: 1" = 10'



TYPICAL PIPELINE SECTION

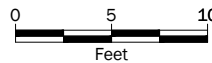
SCALE: 1" = 10'

NOTES:

1. PIPELINE DEPTH IS APPROXIMATE BASED ON 2022 PARAMETRIX SURVEY. TO BE FIELD VERIFIED DURING CONSTRUCTION.
2. MAINTAIN A MINIMUM OF 2 FEET OF COVER OVER PIPELINE.
3. SIZE OF CONCRETE HALF ROUND CAP TO BE DETERMINED IN FUTURE DESIGN PHASE.
4. SCOUR PROTECTION COMPOSED OF CLASS B ROCK FOR EROSION AND SCOUR PROTECTION.
D50 = 24 INCHES
D100 = 30 INCHES
5. CLASS B ROCK FOR EROSION AND SCOUR PROTECTION SHALL BE EMBEDDED BELOW STREAMBED MATERIAL AND NOT EXPOSED IN THE CHANNEL.
6. STREAMBED BOULDERS CAN BE USED IN PLACE OF SCOUR PROTECTION ROCK IF PLACEMENT IS LIMITED BY BEDROCK.

TYPICAL PIPELINE SECTIONS

SCALE: 1" = 10'

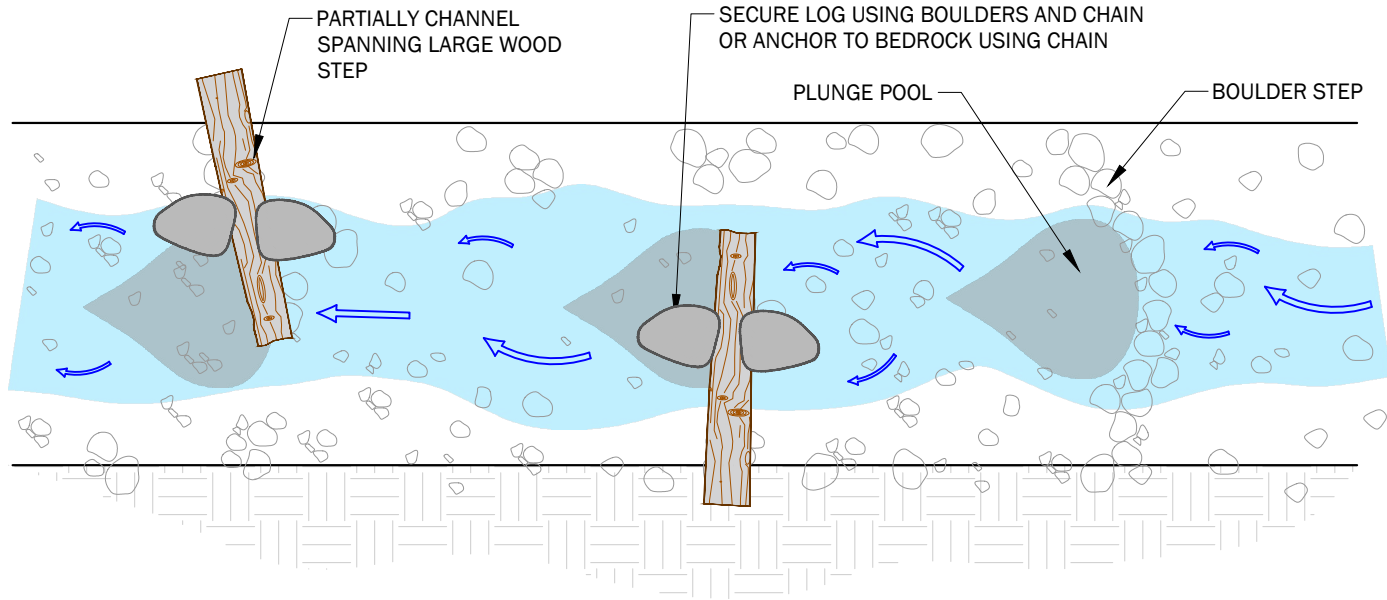


Typical Pipeline Sections

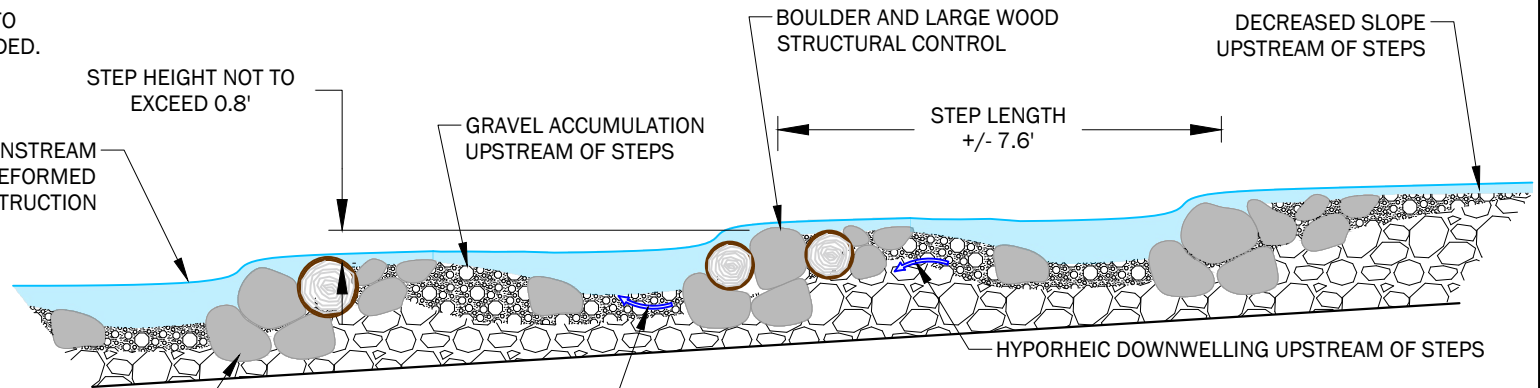
Applicant: See Sheet 1
Reference Number:
Proposed Project:
Olympic MP 229.61
Schoolhouse Creek Depth of Cover
Restoration Project
Location: 220 Sauvola Rd, Near Kalama; Cowlitz
 County Parcel No. WC2104001
Sheet: 7 of 11 **Date:** 11/09/2022

NOTES:

1. KEY LOGS AND BOULDER STEPS 3 FEET INTO THE BANK.
2. LOG STEPS EXTEND 2 FEET PAST CHANNEL CENTERLINE.
4. MAINTAIN LOW FLOW CHANNEL BETWEEN BOULDERS.
5. PLACE FOOTER BOULDERS BELOW HEADER BOULDERS.
6. SECURE LOG STEPS WITH BOULDERS OR ANCHOR TO BEDROCK.
7. BOULDER DIAMETERS RANGE FROM 24 TO 36 INCHES.
8. LOG DIAMETERS RANGE FROM 16 TO 18 INCHES.
9. STEP SPACING AND DEPTH OF STREAMBED MIX MAY BE ADJUSTED BASED ON FIELD CONDITIONS AND DEPTH TO BEDROCK, AS DIRECTED BY THE HYDRAULIC ENGINEER AND APPROVED BY THE OLYMPIC CONSTRUCTION MANAGER OR INSPECTOR.
10. MAX HYDRAULIC DROP BETWEEN STEPS IS 0.8 FOOT.
11. BEDROCK CAN BE CHIPPED TO ALLOW PLACEMENT OF BOULDERS.
12. BEDROCK ANCHORS TO BE USED TO ANCHOR BOULDER STEPS AS NEEDED.



TYPICAL STEP POOLS - PLAN VIEW
SCALE: NTS



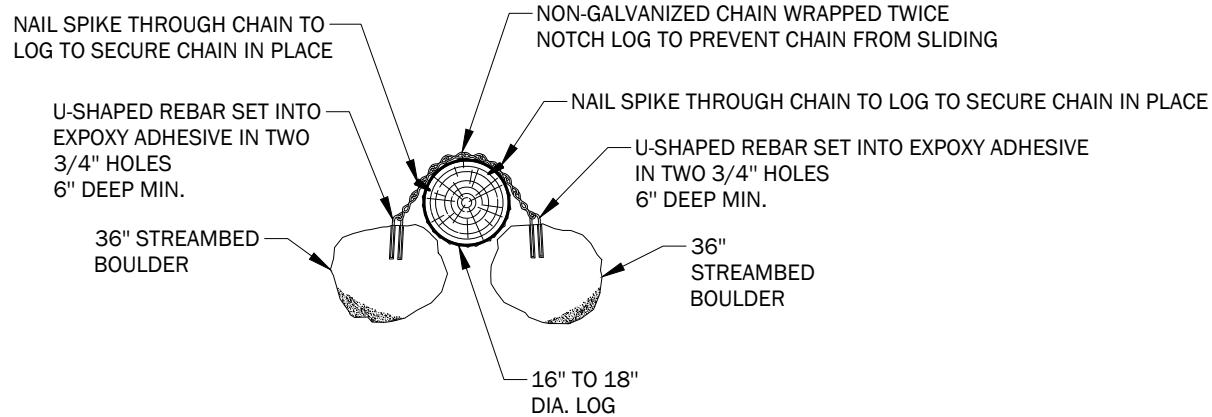
TYPICAL STEP POOLS - PROFILE VIEW
SCALE: NTS

TYPICAL STEP POOLS
SCALE: NTS

BOULDER PLACEMENT MAY REQUIRE EXCAVATION INTO BEDROCK AND/OR ANCHORING TO BEDROCK PER BEDROCK ANCHOR DETAIL

Typical Channel Details

Applicant: See Sheet 1
Reference Number:
Proposed Project: Olympic MP 229.61 Schoolhouse Creek Depth of Cover Restoration Project
Location: 220 Sauvola Rd, Near Kalama, Cowlitz County, Parcel No. WC2104001
Sheet: 8 of 11 **Date:** 11/09/2022

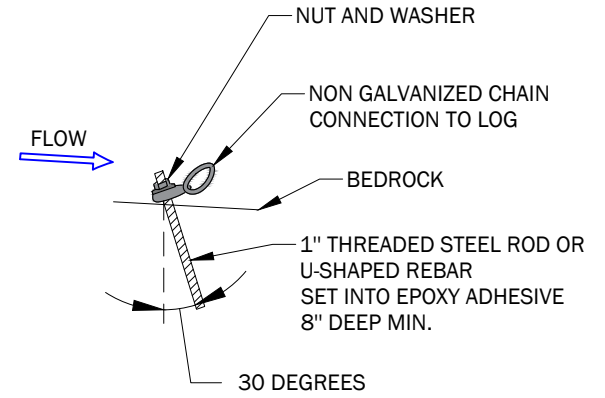


NOTES:

- HOLES DRILLED INTO BOULDER ANCHORS SHALL BE THOROUGHLY CLEANED AND DRY PRIOR TO EPOXY APPLICATION.
- CHAIN SIZE TO BE DETERMINED IN FUTURE DESIGN PHASES.
- MIN. WEIGHT OF EACH BOULDER EQUAL TO 2,300 LB.
- ALL CHAIN AND CONNECTING HARDWARE SHALL BE NON-GALVANIZED
- CHAIN LENGTH VARIES BY LOG.
- SECURE CHAIN TO LOG BY DRIVING NAIL/SPIKE THROUGH CHAIN INTO LOG.
- REMOVE ALL SLACK FROM THE CHAIN WITH A CHAIN BINDER PRIOR TO DRIVING NAIL/SPIKE.
- LOGS MAY BE SECURED TO BEDROCK IN PLACE OF BOULDERS PER BEDROCK ANCHOR DETAIL.

BOULDER COLLAR

SCALE: NTS



NOTES:

- FRACTURED BEDROCK IS NOT SUITABLE FOR ANCHORING.
- HOLES DRILLED INTO BEDROCK ANCHORS SHALL BE THOROUGHLY CLEANED AND DRY PRIOR TO EPOXY APPLICATION.
- REBAR SHALL BE GRADE B7 STEEL.
- PERFORM A PULL TEST ON BEDROCK ANCHOR PRIOR TO ATTACHING TO LOG. ANCHORS SHALL NOT DEFORM UNDER 4,000 LB OF TENSION.
- BEDROCK ANCHORS TO BE USED TO ANCHOR BOULDER STEPS AS NEEDED.

BEDROCK ANCHOR

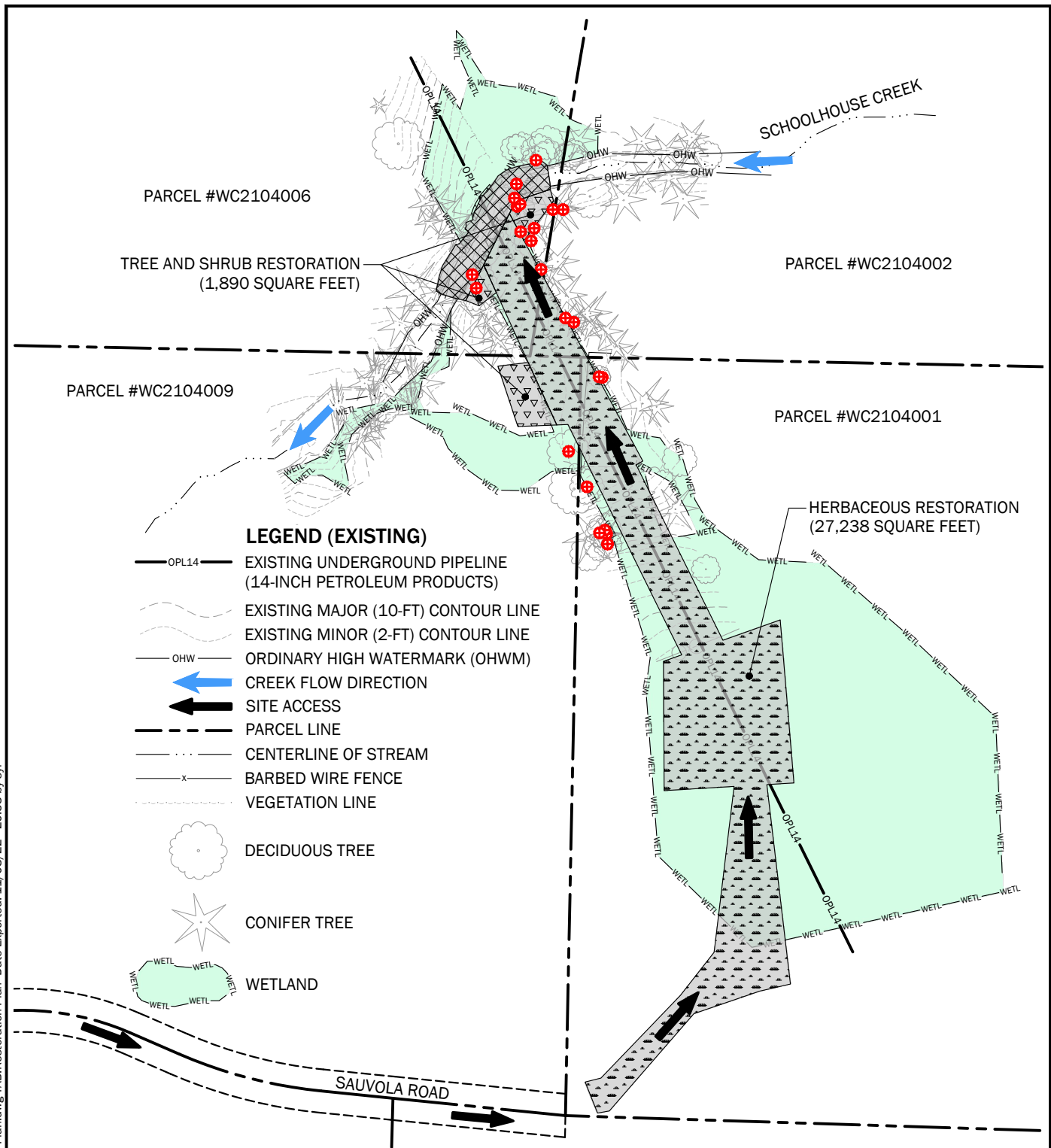
SCALE: NTS



Typical Channel Details

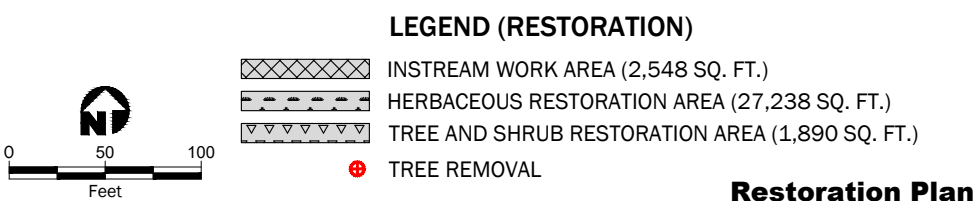
Applicant: See Sheet 1
Reference Number:
Proposed Project: Olympic MP 229.61 Schoolhouse Creek Depth of Cover Restoration Project
Location: 220 Sauvola Rd, Near Kalamazoo, Cowitz County, Parcel No. WC2104001
Sheet: 9 of 11 **Date:** 11/09/2022

P:\0_0894228\CAD\01_VARPA_089422801_Sht 10_Restoration Plan.dwg TAB:Restoration Plan Date Exported: 11/09/22 - 20:53 by syi



Tree and Shrub Restoration (1,890 Sq. Ft.)		Spacing	Quantity
Douglas Fir	<i>Pseudotsuga menziesii</i>	10-foot o.c.	10
Western Redcedar	<i>Thuja plicata</i>	10-foot o.c.	10
Red Alder	<i>Alnus rubra</i>	12-foot o.c.	24
Salmonberry	<i>Rubus Spectabilis</i>	6-foot o.c.	15
Vine Maple	<i>Acer Circinatum</i>	6-foot o.c.	15

DATA SOURCE:
SURVEY BASE PROVIDED BY
PARAMETRIX, DATED MAY 2022.



Applicant: See Sheet 1
Reference Number:
Proposed Project:
Olympic MP 229.61
Schoolhouse Creek Depth of Cover
Restoration Project
Location: 220 Sauvola Rd, Near Kalama; Cowlitz
 County Parcel No. WC2104001
Sheet: 10 of 11 **Date:** 11/09/2022

Restoration Plan

Activity (clear, dredge, fill, pile drive, etc.)	Waterbody name ¹	Impact location ²	Duration of impact ³	Amount of material (cubic yards) to be placed in or removed from waterbody	Area (sq. ft.) of waterbody directly affected
Temporary Work Zone Isolation Structure	Schoolhouse Creek	Below OHWM	4 weeks	4	48
Placement of Streambed Material	Schoolhouse Creek	Below OHWM	Permanent	70	1476
Placement of Boulder Steps	Schoolhouse Creek	Below OHWM	Permanent	8	72
Placement of Log Steps	Schoolhouse Creek	Below OHWM	Permanent	11	144
Rock Revetment	Schoolhouse Creek	Below OHWM	Permanent	22	240
Placement of Sand Bedding Around Pipeline	Schoolhouse Creek	Below OHWM	Permanent	2	60
Placement of Concrete Half-Round Cap	Schoolhouse Creek	Below OHWM	Temporary	1	50
Placement of Buried Scour Protection Rock	Schoolhouse Creek	Below OHWM	Permanent	14	150
Removal of Concrete from Channel	Schoolhouse Creek	Below OHWM	Permanent	< 1 >	50
Over-Excavation to Inspect and Recoat Pipeline, Place Concrete Cap and Scour Protection	Schoolhouse Creek	Below OHWM	Temporary	< 24 >	210
Excavation of Bedrock for Downstream Boulder Step Placement	Schoolhouse Creek	Below OHWM	Permanent	< 5 >	48
Excavation of Bank for Placement of Log Steps	Schoolhouse Creek	Below OHWM	Temporary	< 4 >	56

- 1 If no official name for the waterbody exists, create a unique name (such as "Stream 1") The name should be consistent with other documents provided.
- 2 Indicate whether the impact will occur in or adjacent to the waterbody. If adjacent, provide the distance between the impact and the waterbody and indicate whether the impact will occur within the 100-year flood plain.
- 3 Indicate the days, months or years the waterbody will be measurably impacted by the work. Enter "permanent" if applicable.

Activity (fill, drain, excavate, flood, etc.)	Wetland Name ¹	Wetland type and rating category ²	Impact area (sq. ft. or Acres)	Duration of impact ³	Proposed mitigation type ⁴	Wetland mitigation area (sq. ft. or acres)
Fill	Wetland B	Cat III Slope	200 SF	Permanent	None	NA
Clearing	Wetland A and B Buffers	Cat III Slope	23,546 SF	Temporary	Restoration	23,546 SF

- 1 If no official name for the wetland exists, create a unique name (such as "Wetland 1"). The name should be consistent with other project documents, such as a wetland delineation report.
- 2 Ecology wetland category based on current Western Washington or Eastern Washington Wetland Rating System. Provide the wetland rating forms with the JARPA package.
- 3 Indicate the days, months or years the wetland will be measurably impacted by the activity. Enter "permanent" if applicable.
- 4 Creation (C), Re-establishment/Rehabilitation (R), Enhancement (E), Preservation (P), Mitigation Bank/In-lieu fee (B)

Quantities

Applicant: See Sheet 1
Reference Number:
Proposed Project:
Olympic MP 229.61
Schoolhouse Creek Depth of Cover Restoration Project
Location: 220 Sauvola Rd, Near Kalama, Cowlitz County, Parcel No. WC2104001
Sheet: 11 of 11 **Date:** 11/09/2022