



2010



Joint Aquatic Resources Permit Application (JARPA) Form¹

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

AGENCY USE ONLY

Date received: 6/19/12

Agency reference #: SX-12-00000

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) [\[help\]](#)²

Lower Swauk Creek Habitat Enhancement Project

Part 2—Applicant

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

2a. Name (Last, First, Middle) and Organization (if applicable)

Smiskin, Harry-Yakama Nation Tribal Chairman

2b. Mailing Address (Street or PO Box)

PO Box 151

2c. City, State, Zip

Toppenish, WA 98948

2d. Phone (1)	2e. Phone (2)	2f. Fax	2g. E-mail
(509) 865-5121	()	()	

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) and Organization (if applicable)

Nicolai, Scott Yakama Nation Fisheries, YKFP

3b. Mailing Address (Street or PO Box)

201 North Pearl Street

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.
- If your project might affect species listed under the Endangered Species Act, you will need to fill out a Specific Project Information Form (SPIF) or prepare a Biological Evaluation. Forms can be found at http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=mainpage_ESA
- If you are applying for an Aquatic Resources Use Authorization you will need to fill out and submit an Application for Authorization to Use State-Owned Aquatic Lands form to DNR, which can be found at http://www.dnr.wa.gov/Publications/aqr_use_auth_app.doc
- Not all cities and counties accept the JARPA for their local Shoreline permits. If you think you will need a Shoreline permit, contact the appropriate city or county government to make sure they will 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 of Regulatory Assistance at 1-800-917-0043 or help@ora.wa.gov.

3c. City, State, Zip			
Ellensburg, WA 98926			
3d. Phone (1)	3e. Phone (2)	3f. Fax	3g. E-mail
(509) 962-6142	(509) 945-3163	()	ykfphabitat@elltel.net

Part 4—Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. [\[help\]](#)

- 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 property owners. Complete the section below and fill out [JARPA Attachment A](#) for each additional property owner.

4a. Name (Last, First, Middle) and Organization (if applicable)			
Cordas, Alex—representing Swauk Valley Ranch LLC			
4b. Mailing Address (Street or PO Box)			
PO Box 24567			
4c. City, State, Zip			
Seattle, WA 98124			
4d. Phone (1)	4e. Phone (2)	4f. Fax	4g. E-mail
()	()	()	Acordas@McKinstry.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 type="checkbox"/> State Owned Aquatic Land (If yes or maybe, contact the Department of Natural Resources (DNR) at (360) 902-1100) <input type="checkbox"/> Federal <input type="checkbox"/> Other publicly owned (state, county, city, special districts like schools, ports, etc.) <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Private
5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.) [help]
18511 Highway 10—Project reach includes the lower 3 miles of Swauk Creek and its floodplain
5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.) [help]
Ellensburg, WA 98926
5d. County [help]
Kittitas

5e. Provide the section, township, and range for the project location. [\[help\]](#)

¼ Section	Section	Township	Range
	20, 17, 8, 5	19	17

5f. Provide the latitude and longitude of the project location. [\[help\]](#)

- Example: 47.03922 N lat. / -122.89142 W long. (NAD 83)

47.1459 N; -120.7392 W

5g. List the tax parcel number(s) for the project location. [\[help\]](#)

- The local county assessor's office can provide this information.

207734, 717734, 267634, 707634

19-17-08000-0003 | 19-17-09000-0005
 19-17-20000-0015 | 19-17-17000-0001

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)
Washington Department of Natural Resources	PO Box 47016	707734
	Olympia, WA 98504-7016	
United States Bureau of Land Management-Bill Schurger	915 Walla Walla	877734, 847734
	Wenatchee, WA 98801	
Horse Canyon Ranch LLC	210 Spruce Street	697634
	San Francisco, CA 94118	

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

There is one identified wetland near the upstream extent of the project area.

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

Swauk Creek and several unnamed intermittent tributaries to Swauk Creek.

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

Yes No Don't know

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

Much of Swauk Creek through this reach is incised and disconnected from its floodplain. Instream habitat complexity is lacking for salmonids and other aquatic species. Reestablishing floodplain connectivity will result in a more robust native plant community than currently exists. Restoring a more natural hydrologic regime will also help native species out-complete invasive plants that currently exist in the project area. The floodplain corridor is protected from future development by a conservation easement. Swauk Creek is an important stream for steelhead and salmon restoration. This project area also provides important lowland overwintering habitat for deer and elk.

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

The floodplain and riparian corridor of Swauk Creek is protected by a conservation easement; surrounding upland areas adjacent to the project area are currently in open space with a cluster of homes and out buildings for weekend and seasonal recreational activities by the landowners. The property is currently managed with the conservation of natural resources as a main goal. There are

irrigated areas within the properties used for lawn and minimal hay production.

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

Adjacent properties are mostly shrub-steppe habitats that are used for open space, livestock grazing, rural homes, and limited forest management activities toward the northern extent of the project area. There are a few rural home sites scattered nearby and downstream.

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

There is a driveway/access road bridge near the downstream extent of the project reach. This bridge allows access to the homes and buildings on the west side of the creek. Overhead transmission lines cross the middle of the project area and private access roads and trails are present throughout the property in various stages of improvement.

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

From Cle Elum, travel southeast on Highway 970 for about 3.5 miles, then continue southeast on Highway 10 (toward Ellensburg) for about 7 miles to a gated private driveway on the north side of the road near the Swauk Creek crossing.

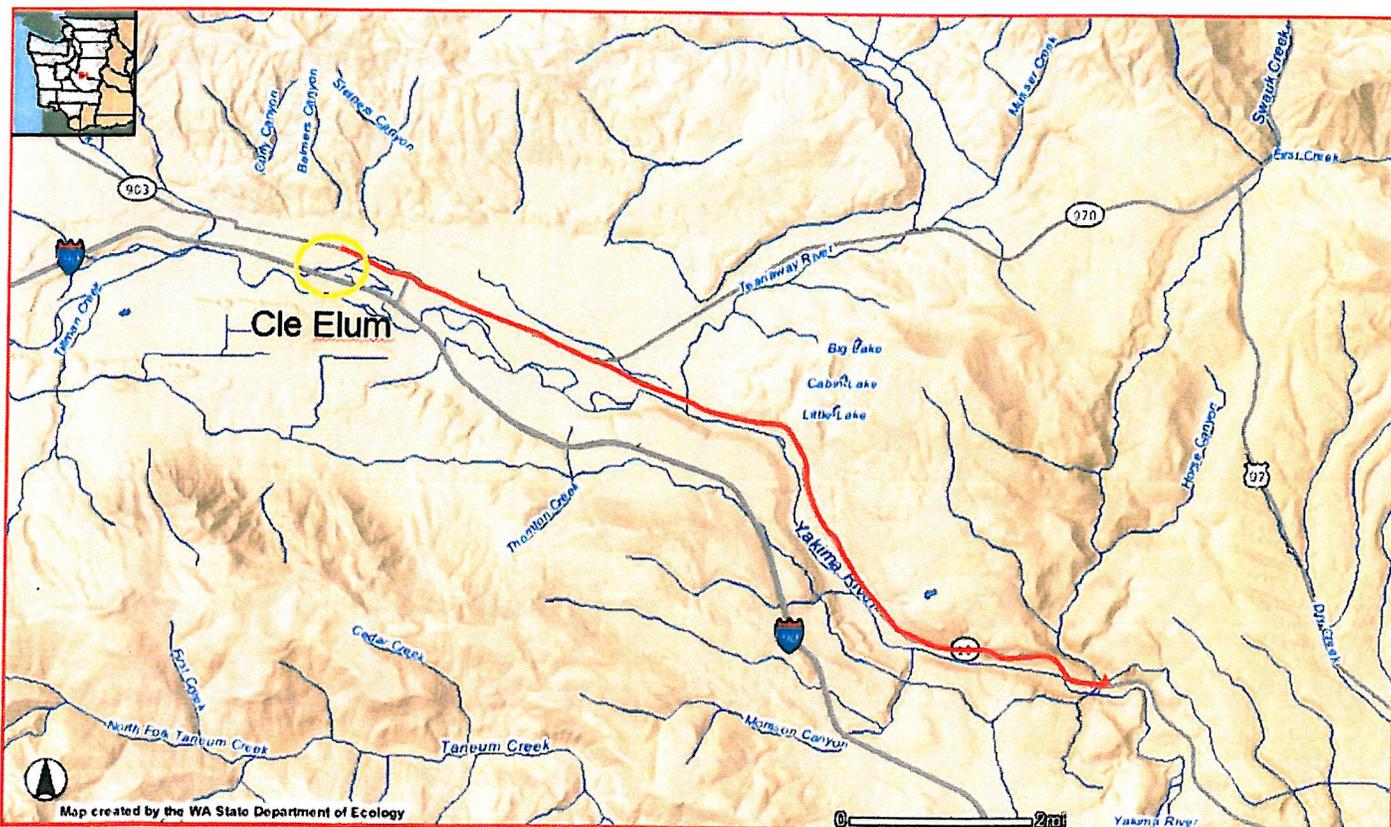


Figure 1. Map to lower project area starting in Cle Elum, Washington.

Part 6—Project Description

6a. Summarize the overall project. You can provide more detail in 6d. [\[help\]](#)

The proposed project is designed to restore instream and riparian habitat such that natural stream processes will continue to facilitate natural habitat creation and maintenance. Bioengineering approaches such as adding between 200 and 300 pieces of large woody material, which will be used to construct four engineered log jams, log jams, four grade control structures, and replenishment at five locations. An aggressive revegetation plan using native species will provide additional mitigation and immediate habitat benefits while encouraging long term habitat creation. A private, undersized bridge that constricts the channel will be raised in elevation to ensure good conveyance of flow, sediment, and woody material while maintaining access to the west side of the property. The restoration approach in this reach is to encourage natural habitat forming processes that improve riparian and floodplain function. Mitigation measures for this project include placement of between 200 and 300 pieces of large woody material, revegetation with native riparian species and construction of in-channel structures that result in improved stream-floodplain connectivity.

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

- Commercial
 Residential
 Institutional
 Transportation
 Recreational
 Maintenance
 Environmental Enhancement

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

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

- Other: Bioengineering approaches will be used to improve instream, riparian, and floodplain habitat benefiting fish and wildlife species.

6d. Describe how you plan to construct each project element checked in 6c. 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 flood plain.

Nearly all actions will occur within the 100 year floodplain and within 200 feet of the banks of Swauk Creek.

The private bridge will be elevated about five feet, and the streambanks will be regraded to enable better flow, sediment and woody material transport through this reach.

Four step-pool grade control structures will be constructed throughout the nearly three mile reach; each will elevate the water surface elevation 1.5 feet to improve floodplain connectivity. Four engineered log jams will be constructed to improve instream complexity and direct flows away from unstable banks while the vegetation becomes reestablished. Large wood replenishment will occur at five locations throughout the project area providing floodplain roughness, instream complexity, and source material for additional log jams to form more naturally. 200 to 300 pieces of large woody material will be added to Lower Swauk Creek and its floodplain.

<p>6e. What are the start and end dates for project construction? (month/year) [help]</p> <ul style="list-style-type: none"> 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: <u>July 15, 2012</u>	End date: <u>November 15, 2015</u> <input type="checkbox"/> See JARPA Attachment D
<p>6f. Describe the purpose of the project and why you want or need to perform it. [help]</p> <p>The Swauk Creek watershed has been identified as an important watershed for steelhead and salmon recovery efforts in the Yakima Basin. Although much of the project area is protected by a conservation easement, the stream channel is still degraded, oversimplified, and disconnected from its floodplain in much of the reach due to past management activities. The proposed project will engineer structures in target areas to expedite stream, riparian and floodplain restoration. Additional large wood will be added in five identified areas to simulate naturally recruited material that will form into jams and provide instream and floodplain habitat with little disturbance. All disturbed areas will be replanted with suitable native vegetation and protected from wildlife browse where appropriate or necessary. In addition to being an important stream for native salmonids, the watershed and this property provides important wintering grounds for ungulates.</p>	
<p>6g. Fair market value of the project, including materials, labor, machine rentals, etc. [help]</p> <p>\$500,000</p>	
<p>6h. Will any portion of the project receive federal funding? [help]</p> <ul style="list-style-type: none"> If yes, list each agency providing funds. <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know</p>	
<p>BPA</p>	

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.) [\[help\]](#)

<p>7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands. [help]</p> <p><input type="checkbox"/> Not applicable</p> <p>Stream adjacent wetlands may be present along Swauk Creek throughout the project area, but have not been officially delineated to our knowledge. At the upstream extent, one wetland has been identified on the National Wetlands Inventory (NWI) (Figure 2). It is located in a mowed field that is perched five to six feet above the average daily flows (Figure 3) and would only be inundated during very high flows. Wetland features are not easily identifiable in this area if they exist. It is possible the boundary identified on NWI is not accurate for this field.</p> <p>During construction, there would be about 34 vehicle and equipment crossings through this field/wetland to gain access to the stream to construct the engineered log jam and place the large wood replenishment logs on the left bank. Crossings will occur during the dry summer months through the driest areas of the field or in the winter when the ground is frozen in order to minimize any wetland disturbance.</p>

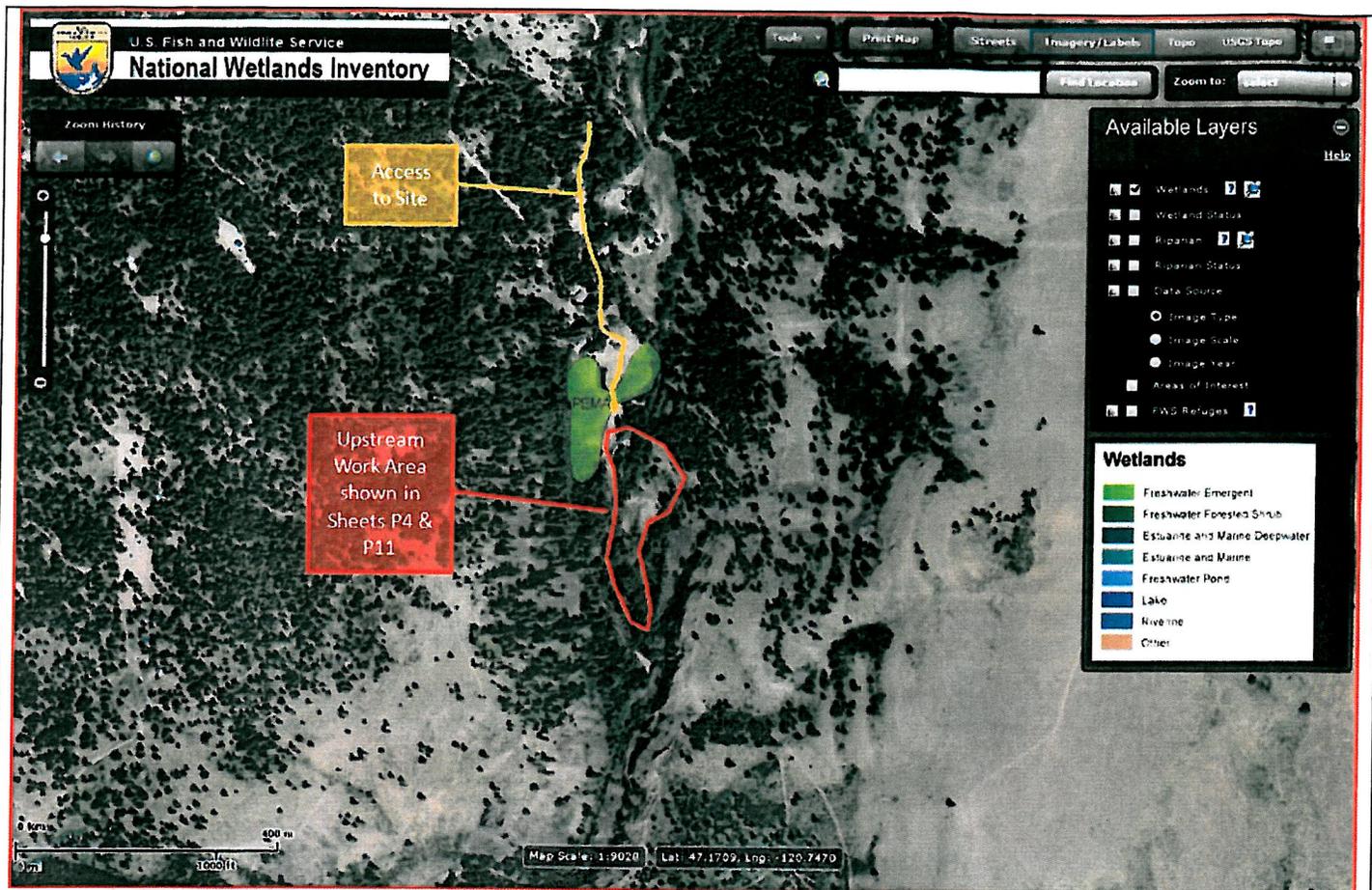


Figure 2. National Wetlands Inventory at upstream most work area.



Figure 3. The stream bank adjacent to National Wetlands Inventory identified wetland.

7b. Will the project impact wetlands? [\[help\]](#)

Yes No Don't know

7c. Will the project impact wetland buffers? [\[help\]](#)

Yes No Don't know

7d. Has a wetland delineation report been prepared? [\[help\]](#)

- If yes, submit the report, including data sheets, with the JARPA package.

Yes No

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System? [\[help\]](#)

- If yes, submit the wetland rating forms and figures with the JARPA package.

Yes No Don't know

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands? [\[help\]](#)

- 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.

Yes No Not applicable

The proposed project will be self mitigating for any short term wetland impacts associated with construction. The proposed project will raise the water surface elevation in four areas such that there is better riparian and floodplain connectivity with the stream channel. Increased floodplain connectivity will likely improve existing wetland function and may create additional wetlands throughout the floodplain. The number of wetland crossings will be minimized to the greatest extent possible and plates or matting will be used to cross any soft areas to minimize soil compaction that could result in long term negative impacts to wetland function.

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

The mitigation measures will include avoiding wetlands and other sensitive areas, working during the approved work windows to minimize disturbance to fish and wildlife, and restoring areas upon project completion. Swauk Creek has been identified in numerous planning efforts as a high priority for salmonid restoration efforts although the stream channel has been degraded through time. Water quantity and temperature have been identified as limiting factors to recovery for Swauk Creek. The proposed project to increase floodplain connectivity should improve water quantity and quality in the long term.

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)
Crossings with vehicles and equipment	Swauk Prairie McNaul	PEMA	1500sq ft	2 weeks	R	Riparian & floodplain plantings in various locations throughout the lower 3 miles of Swauk Creek (see plans)

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: _____

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. [\[help\]](#)

N/A

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. [\[help\]](#)

N/A

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 project has been funded and designed to restore fish and wildlife habitat and to encourage natural habitat forming processes over time. Work will occur in specific areas that need habitat enhancement or restorative structures to improve function and habitat. Construction will occur during the approved in-water and upland work windows to minimize impacts to aquatic and terrestrial species and riparian planting will occur during the late spring and fall; when plants are dormant and have the best chance of survival.

The project proposal has been through the Yakima Tributary Access and Habitat Program's (YTAHP) Technical Work Group process which identified additional minimization measures and best management practices to be applied during construction and restoration. Each work area will be as small as possible to achieve the desired environmental benefits upon completion and minimize impacts during construction.

Timing

Inwater work will occur between July 15-October 15 of each year during the approved instream work window. This minimizes risks to fish life based on known life history information and flows are expected to be low during this time period. Revegetation efforts and upland restoration may occur after October 15 when conditions are ideal for planting live stakes.

Access, Staging, and Equipment

Access roads exist to most project work areas; there will be minimal riparian clearing associated with construction access. When necessary, temporary access roads may be covered with HOG fuel (or similar material) to reduce stormwater runoff into Swauk Creek.

The staging areas are located near each work area in clearings that were previously hay fields or orchards in most cases and away from the ordinary high water mark. Material and equipment will be stored in the identified areas when not in use and a spill containment kit will be onsite at all times.

Service and refueling areas (including those for chainsaws and other hand powered tools) will be located 150 feet away from the stream and wetlands. Any equipment working within the ordinary high water marks shall be maintained in good working conditions such that petroleum products or other harmful chemicals are not leaked into the creek, its banks, or its bed. Hydraulic/oil/fuel leaks will be repaired prior to entering the project area, and equipment will be checked daily for leaks; any necessary repairs shall be completed prior to commencing work activities within the floodplain. Vegetable oil or similar biodegradable fluid will be used in the hydraulic

lines of all heavy equipment working on the banks, wetlands, and/or within the ordinary high water mark of Swauk Creek.

Inwater work shall be accomplished using an excavator equipped with a "thumb", or equivalent piece of equipment. The equipment shall operate from the bank as much as possible and shall be scrubbed so it is free of external petroleum-based products and invasive plant seeds or biomass prior to entering the project area. Travel over and within the creek beds shall be limited to the minimum amount necessary, and to the most direct route which results in the least impact on the streambed and vegetation. Turning of equipment within flowing water shall be avoided to the greatest extent practicable and the operator shall use the boom of the excavator to lift the front of the machine onto the bank.

Worksite Isolation

Wood replenishment sites will not be isolated from flowing water as there will be no bank or streambed disturbance. Many of the logs will be placed outside of the wetted perimeter at the time of construction and those within the wetted perimeter will not require excavation. The engineered log jams do not include channel spanning components so the stream will not be completely bypassed in those areas. Bulk bags or similar materials will be constructed in a semi-circle around the work area and that area will be isolated. For structures with channel spanning components, the creek will be temporarily bypassed around the project area. Sandbags and/or ecology blocks may be used to check up the water such that it can be diverted around the areas of construction, as approved by WDFW and Yakama Nation biologists. An energy dissipater may be constructed at the downstream extent to minimize scour and mobilization of fine sediments. All pumps used to dewater sections will have a WDFW and NOAA Fisheries approved fish screen intake.

Fish salvage in isolated areas will be lead by WDFW biologists and will follow guidelines set by USFWS and NOAA Fisheries in the Corps Restoration Programmatic. Isolated areas will be rewatered slowly to ensure water does not flow subsurface and to minimize turbidity.

Water Crossings

There may be up to 10 round trip crossings through the wetted channel for project implementation. Work will occur from the banks and in dewatered areas as much as possible. Equipment will be clean and in good working order prior to entering the channel and crossing will occur only in riffle or bedrock bottoms to minimize stream impacts. There will be no turning within the channel and the boom will be used to help lift the equipment out of the channel and onto the opposite bank. These crossings will occur at locations approved by biologists on site and/or the oversight engineer such that there will be minimal environmental impacts.

Construction of Structures

There are several different types of large wood structures that will be incorporated into the project to help restore natural stream processes. Each structure will be constructed as detailed in the design drawings and directed by engineer to perform the desired function. Areas of large wood replenishment will be directed by onsite biologists. The area of disturbance for each structure will be minimized to the greatest extent possible and established native vegetation will be avoided as much as possible. Tracked excavators with thumbs will complete the majority of the work for each structure. Skidders, dozers, log trucks, and dump trucks are also likely to be used for hauling material to the project sites on designated routes. A crane may be used when elevating the private bridge.

Site Restoration

A detailed revegetation plan is a major component of the proposed project. Planting zones are specific to the habitat type and consist of native, locally adapted plants as much as possible. Disturbed areas outside of the specific planting zones associated with the engineered design will be planted with native vegetation as well. A suitable seed mix may be spread for short-term erosion control while the woody vegetation becomes established. All temporary access roads will be abandoned and restored. The staging areas will be planted with a suitable seed mix and mulched as necessary to ensure that stormwater runoff is minimized

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 Not applicable

This project will be self mitigating as it will improve instream, riparian, and floodplain habitat and function in the long term. The large wood instream will provide immediate habitat for juvenile salmonids and other aquatic organisms and the structures are designed to promote natural habitat forming processes in the long term. Short term impacts will be mitigated through erosion control BMPs and revegetation efforts with native species throughout the three mile reach.

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. [\[help\]](#)

Please see 7g above.

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 to be placed in or removed from waterbody	Area (sq. ft. or linear ft.) of waterbody directly affected
Excavate for construction of ELJs and Grade Controls	Swauk Creek	Below OHWM	2 months	20200 CY	20000 Square Feet
Rock & Native Spoils Backfilled in Structures	Swauk Creek	Below OHWM	2 months	16720 CY	Same as above
Bulk Bags with clean gravels for Temporary Dewatering	Swauk Creek	Below OHWM	2 Months	90 CY	Included in above
Bank Shaping at Bridge	Swauk Creek	Below OHWM	1 week	100 CY	2000 Square Feet

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.

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. [\[help\]](#)

Some onsite native spoils will be used to backfill in and around the newly constructed log structures. Large boulders for ballast will be obtained from nearby quarries and hauled to the site. Clean streambed gravels and cobbles may be imported from nearby sources for worksite isolation.

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. [\[help\]](#)

A tracked excavator with a thumb will be used for the majority of the excavation and construction of log structures. Most of the native spoils will be backfilled around the log structures, but remaining native spoils (silts, sands, cobbles) will be smoothly distributed throughout the floodplain as directed by onsite engineer and/or biologist. Native material will not be removed from the floodplain, but will be redistributed and planted for erosion control.

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	Jennifer Scott	(509) 457-9307	April 3, 2012
NOAA Fisheries	Sean Gross	(509) 962-8911 x225	March 12, 2012
USFWS	Richard Visser	(509) 575-5848 x257	March 12, 2012
9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 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: http://www.ecy.wa.gov/programs/wq/303d/. 			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Temperature			
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. 			
Upper Yakima Watershed -- 17030001			
9d. What Water Resource Inventory Area Number (WRIA #) is the project in? [help]			
<ul style="list-style-type: none"> Go to http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm to find the WRIA #. 			
39—Upper Yakima			
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 http://www.ecy.wa.gov/programs/wq/swqs/criteria.html 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: http://www.ecy.wa.gov/programs/sea/sma/laws_rules/173-26/211_designations.html. 			
<input checked="" type="checkbox"/> Rural <input type="checkbox"/> Urban <input type="checkbox"/> Natural <input type="checkbox"/> Aquatic <input type="checkbox"/> Conservancy <input type="checkbox"/> Other _____			
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/BusinessPermits/Topics/ForestPracticesApplications/Pages/fp_watertyping.aspx for the Forest Practices Water Typing System. 			
<input checked="" type="checkbox"/> Shoreline <input 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:
9i. If you know what the property was used for in the past, describe below. [help]
This property was historically used as a ranch with open range land.
9j. Has a cultural resource (archaeological) survey been performed on the project area? [help] <ul style="list-style-type: none"> • If yes, attach it to your JARPA package.
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9k. 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]
MCR Steelhead CR Bull Trout Gray Wolf Ute Ladies'-tresses
9l. 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]
Aspen Stands, Biodiversity Areas & Corridors, Oak Woodlands, Shrub-Steppe, Riparian, Freshwater Wetlands, Instream, Lamprey, Bull Trout, Chinook Salmon, Coho Salmon, Rainbow Trout/Steelhead Trout, Westslope Cutthroat Trout, Sharptail Snake, Striped Whipsnake, Cavity nesting ducks, Waterfowl, Bald & Golden Eagles, Ferruginous Hawk, Prairie Falcon, Wild Turkey, Big Brown Bats, Gray Wolf, Elk, Mule Deer

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.ecy.wa.gov/opas/>.
- Governor's Office of Regulatory Assistance at (800) 917-0043 or help@ora.wa.gov.
- For a list of agency addresses to send your application, click on the "where to send your completed JARPA" at <http://www.epermitting.wa.gov>.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.) [help] <ul style="list-style-type: none"> • For more information about SEPA, go to www.ecy.wa.gov/programs/sea/sepa/e-review.html.
<input checked="" type="checkbox"/> A copy of the SEPA determination or letter of exemption is included with this application.
<input type="checkbox"/> A SEPA determination is pending with _____ (lead agency). The expected decision date is _____.
<input type="checkbox"/> I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b.) [help]
<input type="checkbox"/> This project is exempt (choose type of exemption below). <ul style="list-style-type: none"> <input type="checkbox"/> Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt? _____ <input type="checkbox"/> Other: _____
<input type="checkbox"/> SEPA is pre-empted by federal law.

10b. Indicate the permits you are applying for. (Check all that apply.) 2/1/03

LOCAL GOVERNMENT

Local Government Shoreline permits:

- Substantial Development Conditional Use Variance
 Shoreline Exemption Type (explain): Fish and Wildlife Habitat Improvement Project _____

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

Washington Department of Ecology:

- Section 401 Water Quality Certification

Washington Department of Natural Resources:

- Aquatic Resources Use Authorization

FEDERAL GOVERNMENT

United States Department of the Army permits (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 permits:

- General Bridge Act Permit Private Aids to Navigation (for non-bridge projects)

Part 11—Authorizing Signatures

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc. 2/1/03

11a. Applicant Signature (required) 2/1/03

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.

I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. AS (initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. AS (initial)

Harry Smiskin, Chairman
Yakama Nation
Applicant Printed Name

Athena Sanchez
Applicant Signature

Date

11b. Authorized Agent Signature [\[help\]](#)

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Scott Nicolai
Authorized Agent Printed Name

Scott Nicolai
Authorized Agent Signature

6/15/12
Date

11c. Property Owner Signature (if not applicant). [\[help\]](#)

Not required if project is on existing rights-of-way or easements.

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.

Dean C. Allen

Property Owner Printed Name

Dean C. Allen
Property Owner Signature

June 5, 2012

Date

18 U.S.C §1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than 5 years or both.

If you require this document in another format, contact The Governor's Office of Regulatory Assistance (ORA). People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 633-6341. ORA publication number: EKV-019-09



2010



US Army Corps of Engineers
Seattle District

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

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

AGENCY USE ONLY

Date received:

Agency reference #: _____

Tax Parcel #(s): _____

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

Project Name: Lower Swauk Creek
Habitat Enhancement Project

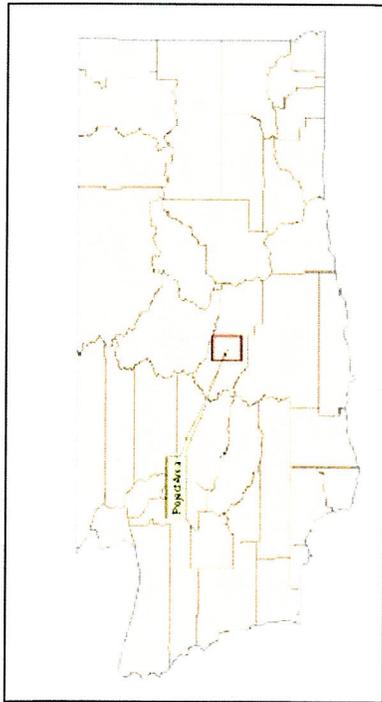
Use this attachment only if you have more than one property owner.
Complete one attachment for each additional property owner impacted by the project.
Signatures of property owners are not needed for repair or maintenance activities on existing rights-of-way or easements.

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

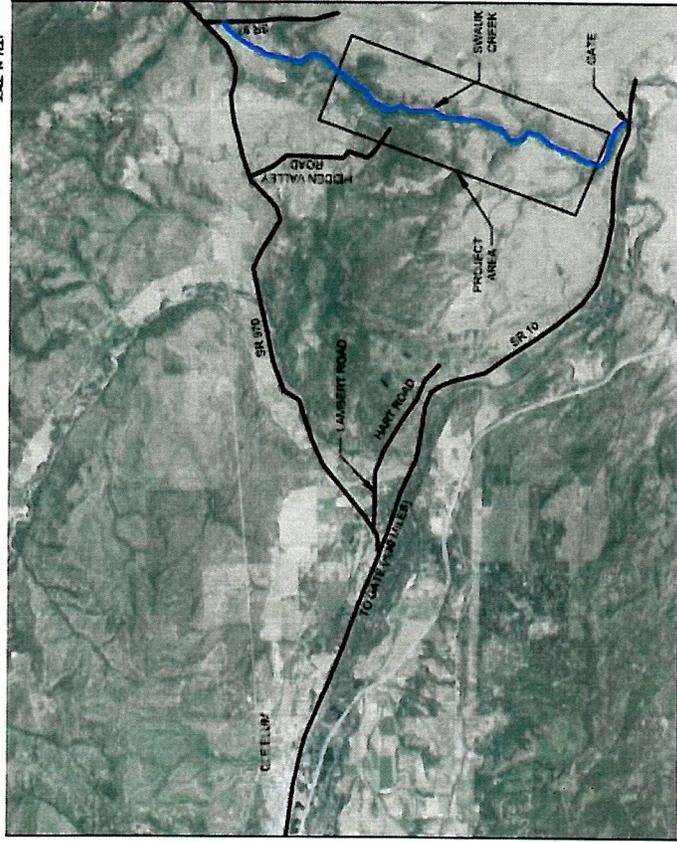
4a. Name (Last, First, Middle) and Organization (if applicable)			
McNaul Family LLC			
4b. Mailing Address (Street or PO Box)			
600 University St #2700			
4c. City, State, Zip			
Seattle, WA 98101			
4d. Phone (1)	4e. Phone (2)	4f. Fax	4g. E-mail
(206) 467-1816	(206) 695-2060	(206) 624-5128	jmcnaul@mcnaul.com
Address or tax parcel number of property you own:			
707634			
Signature of Property Owner			
JERRY R. MCNAUL			
Printed Name		Signature	

If you require this document in another format, contact The Governor's Office of Regulatory Assistance (ORA). People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call (877) 833-6341.
ORA publication number: ENV-020-09

YAKAMA NATION SWAUK CREEK RESTORATION PROJECT YAKAMA NATION, KITTITAS COUNTY, WASHINGTON



VICINITY MAP
N.T.S.



TITLE	SHEET NO.
TITLE SHEET	T1
GENERAL NOTES	G1
ACCESS AND KEY MAP	F
WORKS AND STAGING	F-1, F-2
PLANS SHEETS	F-3, F-4
STEP POOL PLANS, STATIONS, AND DETAILS	D
PI1 PLANS, STATIONS, AND DETAILS	D-1
WATER MANAGEMENT DETAILS	D-2
LARGE WOOD MATERIAL REMOVAL/PLACEMENT DETAILS	D-3
MISC. STRUCTURES DETAILS	D-4
BRIDGE STRUCTURE PLAN	D-5
BRIDGE DELETED PLAN SECTION	D-6

SHEET INDEX:

PROJECT LOCATION MAP
SCALE: 1" = 200'

PROJECT LOCATION: Swauk Creek, Washington
 CLIENT AGENCY: Yakama Nation
 DESIGN CONSULTANT: Cardico ENTERIX
 ENGINEER OF RECORD: Jack Brock, P.E., D.WRE.
 GEOMORPHOLOGIST: Tom Abbe, PH.D., P.E.G., P.H.G.
 PROJECT ENGINEER: George Fowler, E.I.T.

600% SUBMITTAL

NAME: Yakama Nation Fisheries-Harry Smiskin, Chairman

APPLICANT REFERENCE:

SITE LOCATION ADDRESS:
 18511 Highway 10
 Ellensburg, WA 98926

PURPOSE: Floodplain Restoration

DATUM: N/A

ADJACENT PROPERTY OWNERS:

1. WDNR
2. USBLM
3. Horse Canyon Ranch, LLC

PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting

IN: Swauk Creek
 NEAR/AT: Cle Elum
 COUNTY: Kittitas STATE: WA

SHEET 1 OF 20

DATE: June 19, 2012

				TITLE SHEET SWAUK CREEK RESTORATION PROJECT YAKAMA NATION KITTITAS COUNTY, WASHINGTON	T1 SHEET 1 OF 20
--	--	--	--	---	----------------------------

DATE	
DESIGNED BY	
CHECKED BY	
APPROVED BY	
SCALE	



2014 Columbia Energy Services
10000 1st Avenue, Suite 100
Tacoma, WA 98501

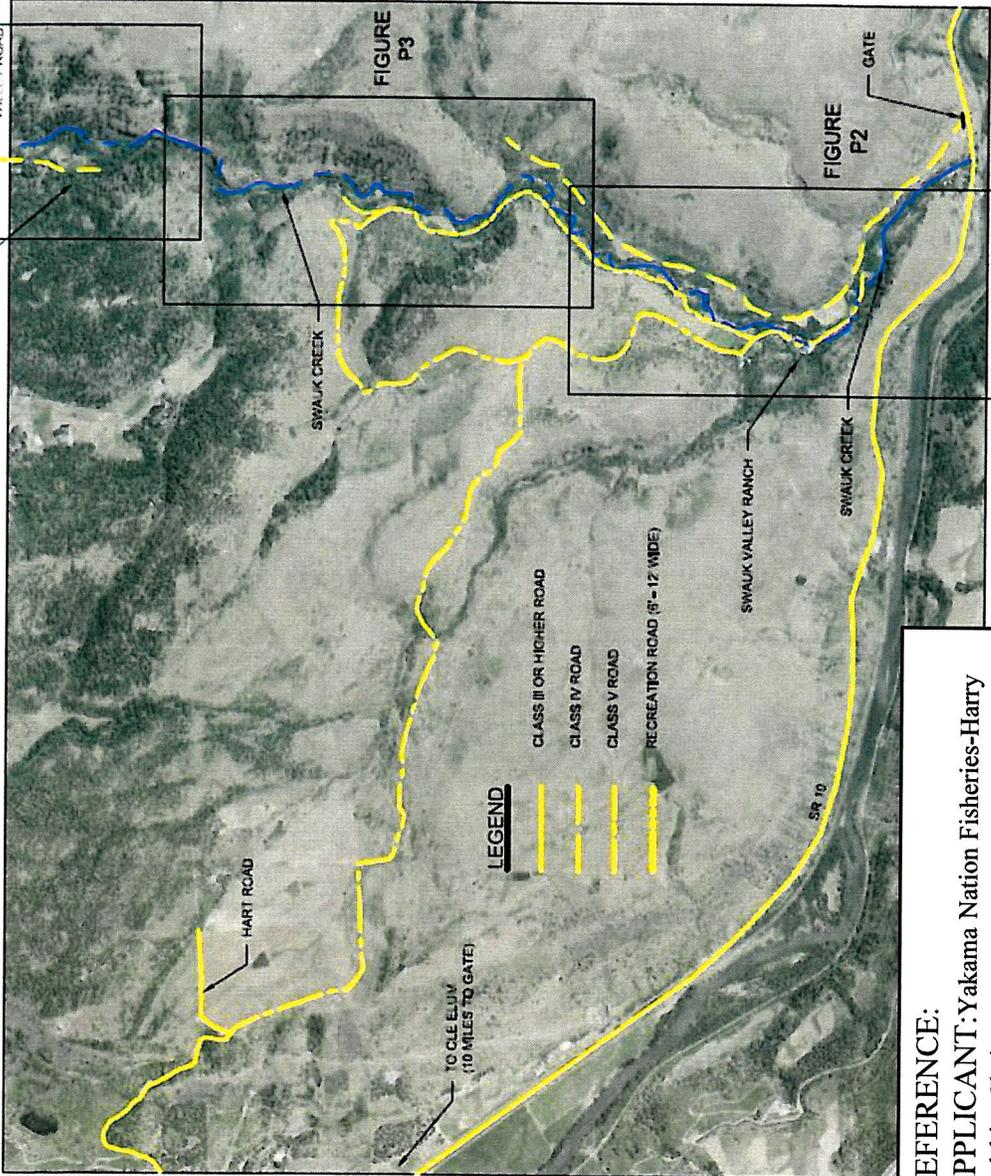


ACCESS AND KEY MAP
SWALK CREEK RESTORATION PROJECT
YAKAMA NATION
KITITAS COUNTY, WASHINGTON

DATE	05/11
DESIGNED BY	A. FOWLER
CHECKED BY	T. BULL
APPROVED BY	J. SMISKIN, CHAIRMAN
SCALE	AS SHOWN
PROJECT NO.	10000
PROJECT NAME	SWALK CREEK RESTORATION PROJECT

P1

FIGURE P4



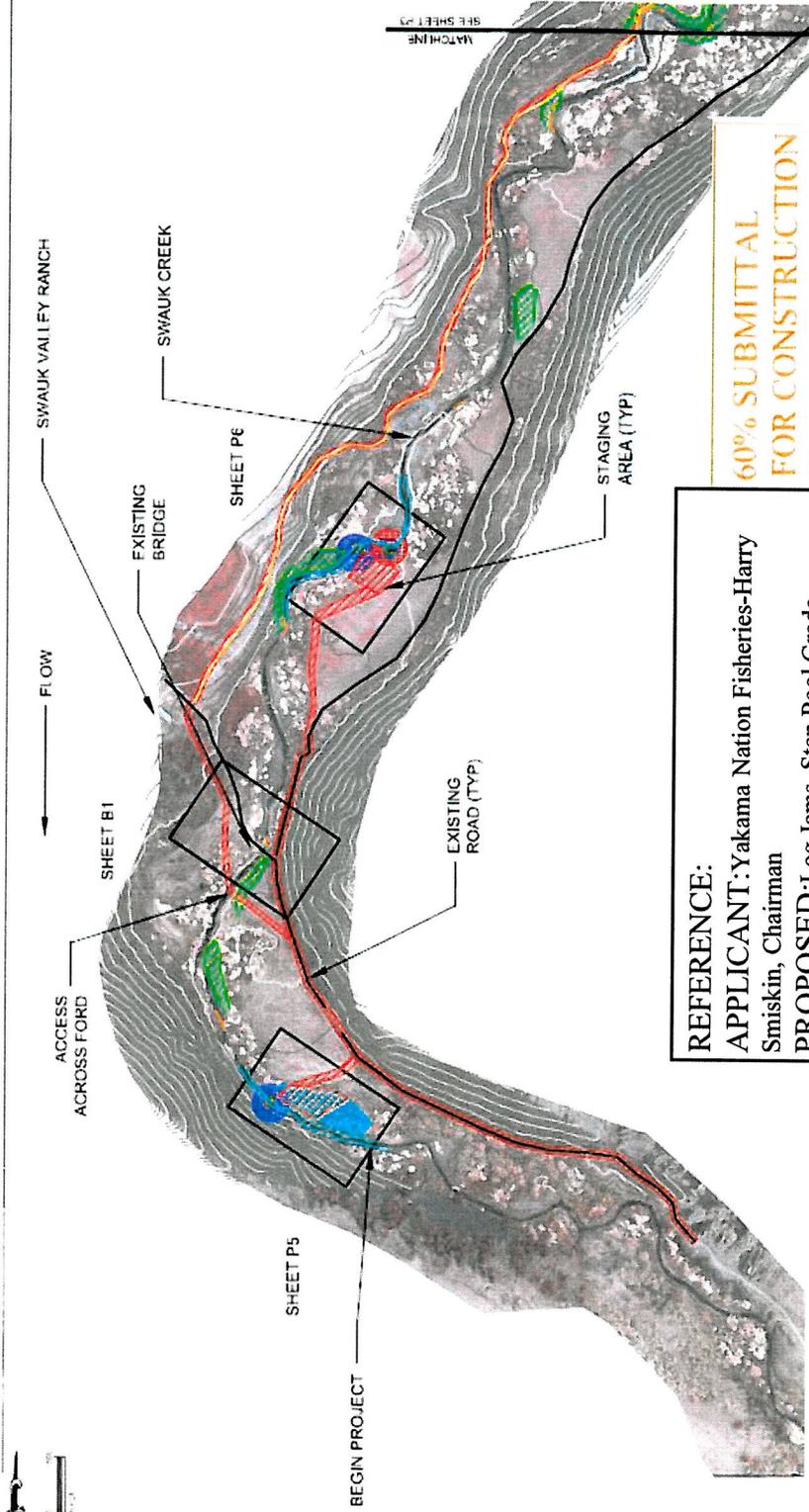
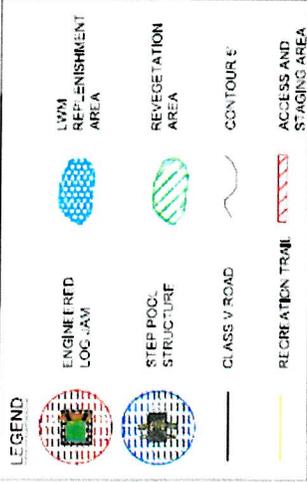
- NOTES**
1. ACCESS TO CONSTRUCTION SITES IN P2 AND P3 FROM SR 10, ACCESS TO SITES IN P3 CAN OCCUR FROM SR 10 OR HART ROAD. ACCESS TO P4 FROM HIDDEN VALLEY ROAD.
 2. IMPROVEMENTS TO ACCESS ROADS MAY BE NEEDED. ALL MATERIALS MUST BE REMOVED UNLESS APPROVED BY ENGINEER AND LANDOWNER.
 3. ROAD IMPROVEMENTS MUST NOT ENCRoACH CREEK UNLESS NOTED IN PLANS.
 4. AS PART OF ROAD IMPROVEMENT ACTIVITIES, CLEARING MAY OCCUR BUT NO GRUBBING. ALL TREES LARGER THAN 3" TO BE CLEARED MUST BE APPROVED BY ENGINEER OR INSPECTOR.
 5. ALL CLEARED AREAS MUST BE RESTORED.
 6. ROAD CLASSIFICATIONS FROM _____ AND BASED ON _____

**60% SUBMITTAL
NOT FOR CONSTRUCTION**

REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington
SHEET 3 of 20 DATE: June 19, 2012

NOTES:

1. ACCESS TO CONSTRUCTION SITES IN P2 IS FROM SR10.
2. EQUIPMENT CAN NOT ENTER ACTIVE FLOW AREA AT FORD. ACTIVE FLOW AREA IS DEFINED AS FOUR FEET ABOVE CHANNEL BED. A CENTER PIER CAN BE CONSTRUCTED FROM LOGS. ECOLOGY BLOCKS OR CLEAN QUARRY SPALLS. THE BASE OF THE PIER CAN NOT EXCEED 7' IN WIDTH. BANK GRADING CAN OCCUR ABOVE ACTIVE FLOW AREA.
3. ALL ACCESS ROADS WILL BE FLAGGED BY CONTRACTOR AND WILL NOT EXCEED 15' WIDTH.
4. BOUNDARIES OF STAGING AREAS TO BE MARKED BY CONTRACTOR AND APPROVED BY ENGINEER OR INSPECTOR.
5. ALL CLEARING MUST BE CONTAINED WITHIN STAGING OR ACCESS AREAS. NO GRUBBING WILL OCCUR WITHIN 25' OF CREEK EDGE OF WATER.
6. ALL CLEARING AREAS WILL BE RESTORED.
7. BOUNDARIES OF LARGE WOODY MATERIAL REPLENISHMENT AREAS WILL BE DELINEATED BY ENGINEER OR INSPECTOR.
8. ALL WORK AREAS MUST BE ISOLATED FROM WATER AND ANY GROUND WATER MUST BE PUMPED TO AN APPROVED UPLAND SITE.



60% SUBMITTAL FOR CONSTRUCTION

REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 4 of 20 DATE: June 19, 2012

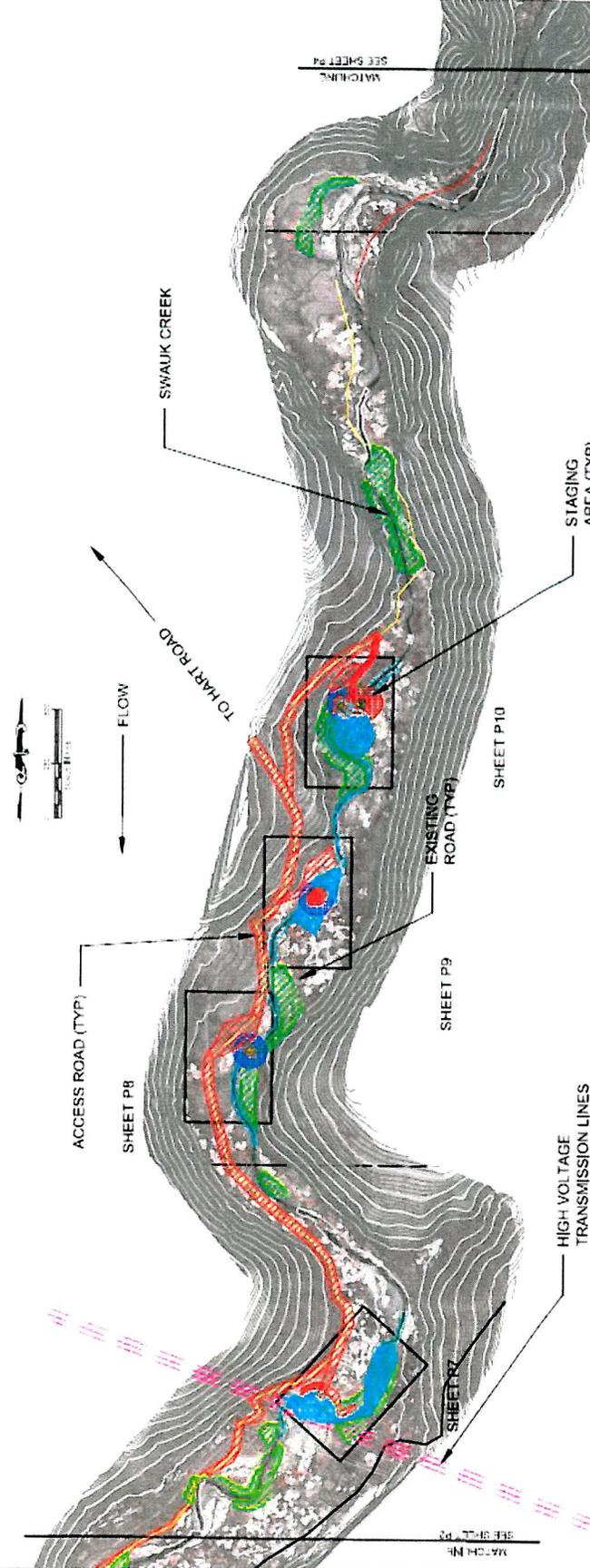


NOTES:

1. ACCESS TO CONSTRUCTION SITES IN P3 CAN OCCUR ALONG EXISTING CLASS IV ROAD FROM HART ROAD OR ALONG RECREATION TRAIL. ACCESS TO THESE CONSTRUCTION SITES CAN ONLY CROSS THE CREEK AT APPROVED LOCATIONS ON PLANS.
2. ALL STREAM CROSSINGS MUST OCCUR WITHIN ISOLATED WORK AREAS.
3. ALL ACCESS ROADS WILL BE FLAGGED BY CONTRACTOR AND WILL NOT EXCEED 15' WIDTH.
4. BOUNDARIES OF STAGING AREAS TO BE MARKED BY CONTRACTOR AND APPROVED BY ENGINEER OR INSPECTOR.
5. ALL CLEARING MUST BE CONTAINED WITHIN STAGING OR ACCESS AREAS. NO GRUBBING WILL OCCUR WITHIN 25' OF CREEK EDGE OF WATER.
6. ALL CLEARING AREAS WILL BE RESTORED.
7. BOUNDARIES OF LARGE WOODY MATERIAL REPLENISHMENT AREAS WILL BE DELINEATED BY ENGINEER OR INSPECTOR, ALL WORK AREAS MUST BE ISOLATED FROM WATER AND ANY GROUND WATER MUST BE PUMPED TO AN APPROVED UPLAND SITE.

LEGEND

	ENGINEERED LOG JAM		LWM REPLENISHMENT AREA
	STEP POOL STRUCTURE		REVEGETATION AREA
	CLASS V ROAD		CONTOUR 5'
	RECREATION TRAIL		ACCESS AND STAGING AREA



REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 5 of 20 DATE: June 19, 2012



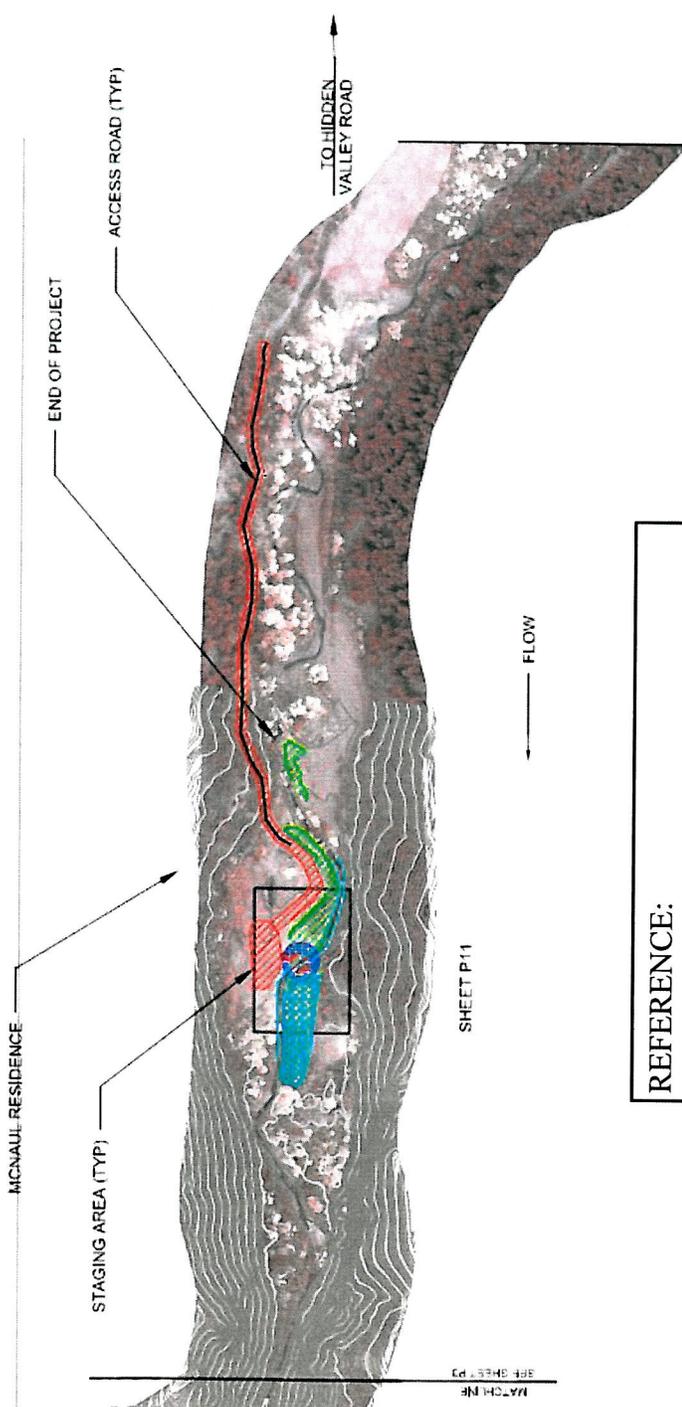
DATE	SHEET
DESIGNED BY	APPROVED BY
DRAWN BY	CHECKED BY
SCALE	PROJECT
DATE	NO.

NOTES:

1. ACCESS TO CONSTRUCTION SITES IN P4 ALONG EXISTING CLASS IV ROAD FROM HIDDEN VALLEY ROAD.
2. EQUIPMENT CAN NOT ENTER ACTIVE FLOW AREA AT FORD. ACTIVE FLOW AREA IS DEFINED AS FOUR FEET ABOVE CHANNEL BED. A CENTER PIER CAN BE CONSTRUCTED FROM LOGS, ECOLOGY BLOCKS OR CLEAN QUARRY SPALLS. THE BASE OF THE PIER CAN NOT EXCEED 7' IN WIDTH. BANK GRADING CAN OCCUR ABOVE ACTIVE FLOW AREA.
3. ALL ACCESS ROADS WILL BE FLAGGED BY CONTRACTOR AND WILL NOT EXCEED 15' WIDTH.
4. BOUNDARIES OF STAGING AREAS TO BE MARKED BY CONTRACTOR AND APPROVED BY ENGINEER OR INSPECTOR.
5. ALL CLEARING MUST BE CONTAINED WITHIN STAGING OR ACCESS AREAS. NO CRUISING WILL OCCUR WITHIN 25' OF CREEK EDGE OF WATER.
6. ALL CLEARING AREAS WILL BE RESTORED.
7. BOUNDARIES OF LARGE WOODY MATERIAL REPLENISHMENT AREAS WILL BE DELINEATED BY ENGINEER OR INSPECTOR.
8. ALL WORK AREAS MUST BE ISOLATED FROM WATER AND ANY GROUND WATER MUST BE PUMPED TO AN APPROVED UPLAND SITE.

LEGEND

	ENGINEERED LOG JAM		LWM REPLENISHMENT AREA
	STEP POOL STRUCTURE		REVEGETATION AREA
	CLASS V ROAD		CONTOUR 5'
	RECREATION TRAIL		ACCESS AND STAGING AREA



REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 6 of 20 DATE: June 19, 2012

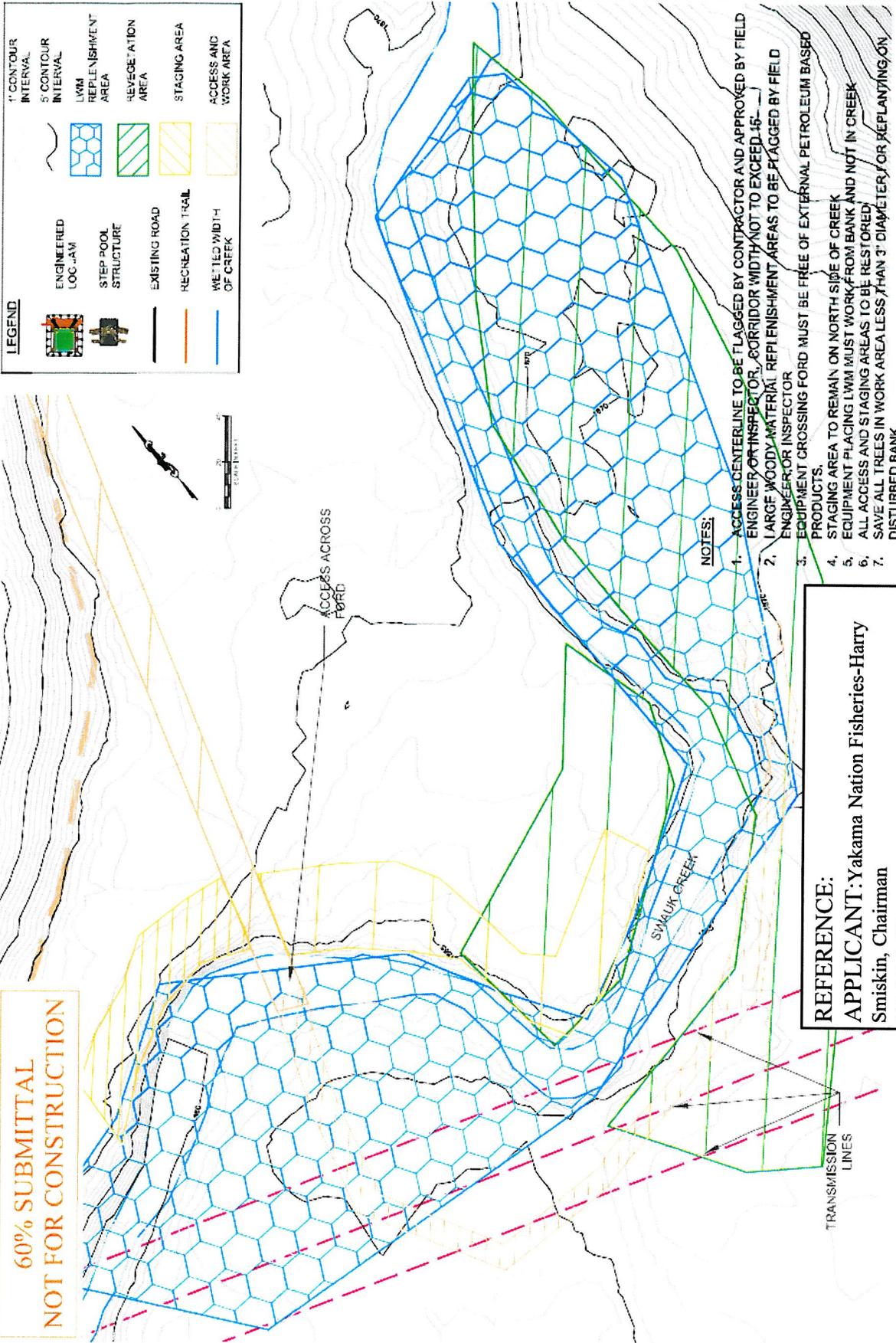
**60% SUBMITTAL
 NOT FOR CONSTRUCTION**

ACCESS AND STAGING
 SWAKM CREEK RESTORATION PROJECT
 YAKAMA NATION
 KITTITAS COUNTY, WASHINGTON



DATE	07/11
DESIGNED BY	ALFONSO
CHECKED BY	JERRY S. BROWN
SCALE	AS SHOWN
PROJECT NO.	200902
DATE PLOTTED	07/11/12
P4	

**60% SUBMITTAL
NOT FOR CONSTRUCTION**



LEGEND

	ENGINEERED LOG JAM		1' CONTOUR INTERVAL
	STEP POOL STRUCTURE		5' CONTOUR INTERVAL
	EXISTING ROAD		LWM REPLENISHMENT AREA
	RECREATION TRAIL		REVEGETATION AREA
	WETTED WIDTH OF CREEK		STAGING AREA
			ACCESS AND WORK AREA

- NOTES:**
1. ACCESS CENTERLINE TO BE FLAGGED BY CONTRACTOR AND APPROVED BY FIELD ENGINEER OR INSPECTOR. CORRIDOR WIDTH NOT TO EXCEED 45'
 2. LARGE WOODY MATERIAL REPLENISHMENT AREAS TO BE FLAGGED BY FIELD ENGINEER OR INSPECTOR
 3. EQUIPMENT CROSSING FORD MUST BE FREE OF EXTERNAL PETROLEUM BASED PRODUCTS.
 4. STAGING AREA TO REMAIN ON NORTH SIDE OF CREEK
 5. EQUIPMENT PLACING LWM MUST WORK FROM BANK AND NOT IN CREEK
 6. ALL ACCESS AND STAGING AREAS TO BE RESTORED
 7. SAVE ALL TREES IN WORK AREA LESS THAN 3" DIAMETER FOR REPLANTING ON DISTURBED BANK.

REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 9 of 20 DATE: June 19, 2012

DATE	



PLAN
 SWALK CREEK RESTORATION PROJECT
 YAKAMA NATION
 KITTITAS COUNTY, WASHINGTON

DATE	06/11
REVISION	01/01/12
DRAWN BY	JANUS
CHECKED BY	JANUS
SCALE	AS SHOWN
PROJECT NO.	120000
SHEET NO.	09
TITLE	P7

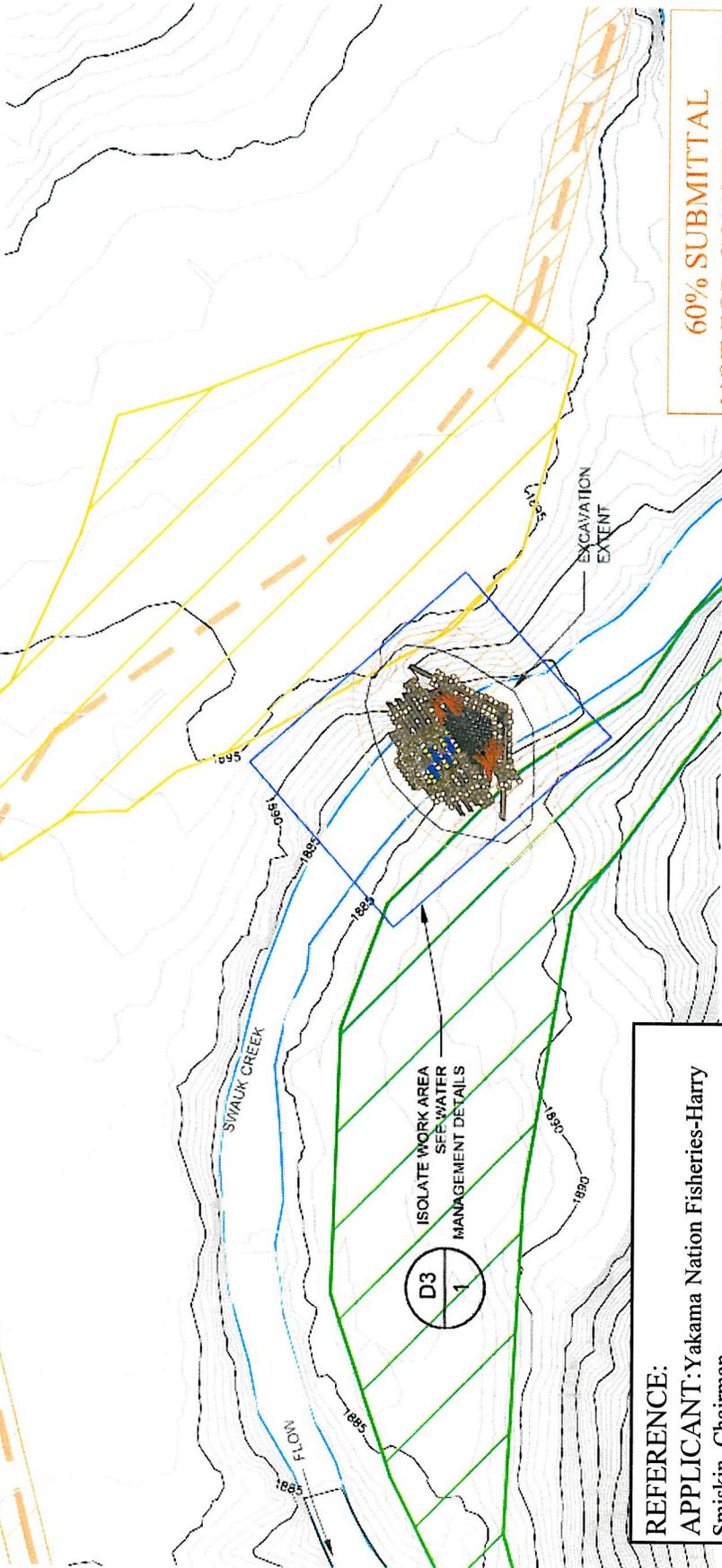
NOTES:

- ENGINEER WILL MARK LOCATION OF STEP POOL STRUCTURE.
- CONSTRUCTION SITE TO BE ISOLATED FROM SURFACE WATER AND GROUNDWATER MUST BE PUMPED TO AN APPROVED UPLAND AREA.
- ACCESS CENTERLINE TO BE FLAGGED BY CONTRACTOR. CORRIDOR WIDTH NOT TO EXCEED 15'.
- ALL ACCESS AREAS WILL BE RESTORED.
- SAVE ALL TREES IN WORK AREA LESS THAN 3" DIAMETER FOR REPLANTING ON DISTURBED BANK.
- ALL STREAM CROSSINGS MUST OCCUR WITHIN ISOLATED WORK AREA.



LEGEND

	ENGINEERED LOG JAM		1' CONTOUR INTERVAL
	STEP POOL STRUCTURE		5' CONTOUR INTERVAL
	EXISTING ROAD		WATER REPLENISHMENT AREA
	RECREATION TRAIL		REVEGETATION AREA
	WETTED WIDTH OF CREEK		STAGING AREA
			ACCESS AND WORK AREA

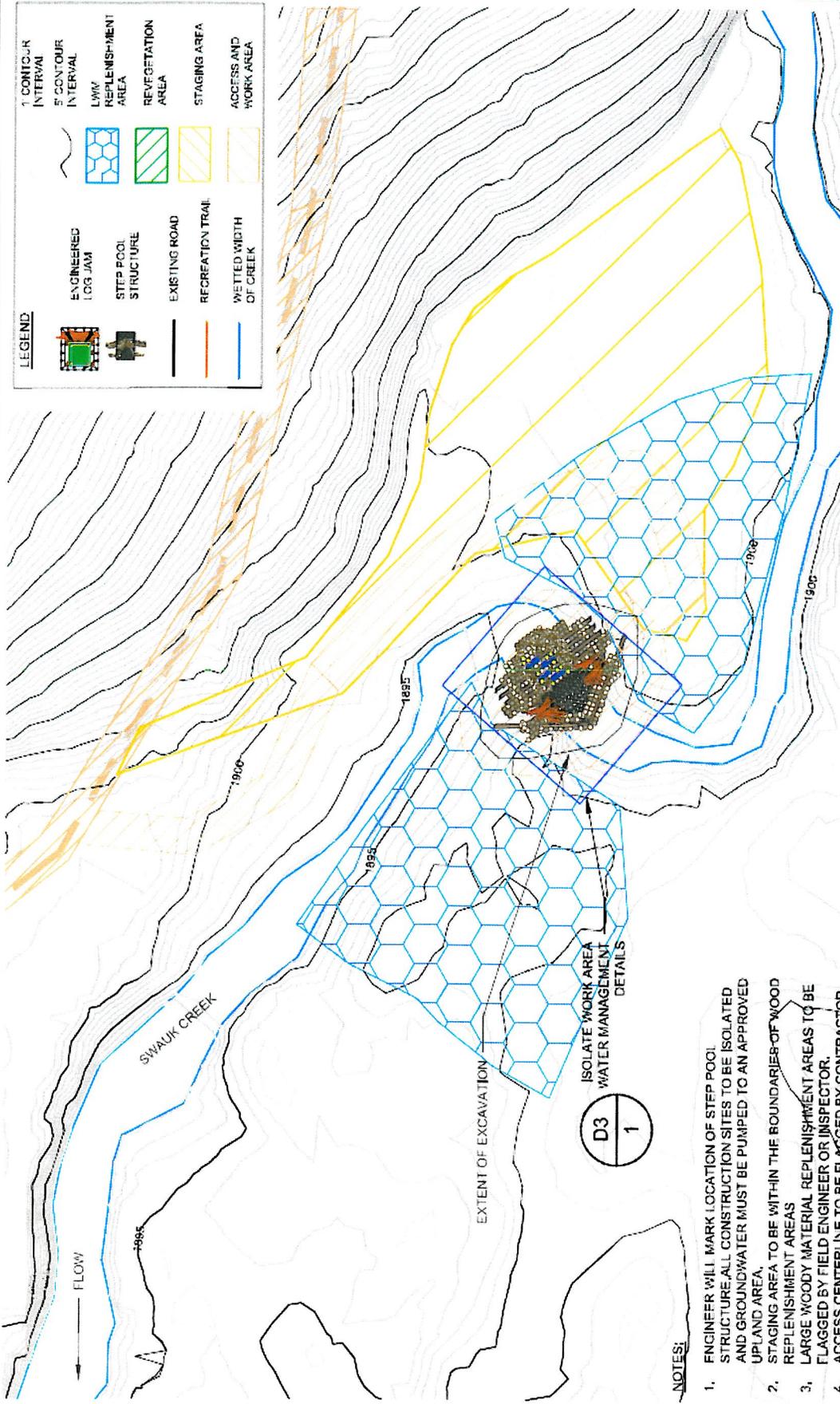


60% SUBMITTAL
NOT FOR CONSTRUCTION

REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 10 of 20 DATE: June 19, 2012

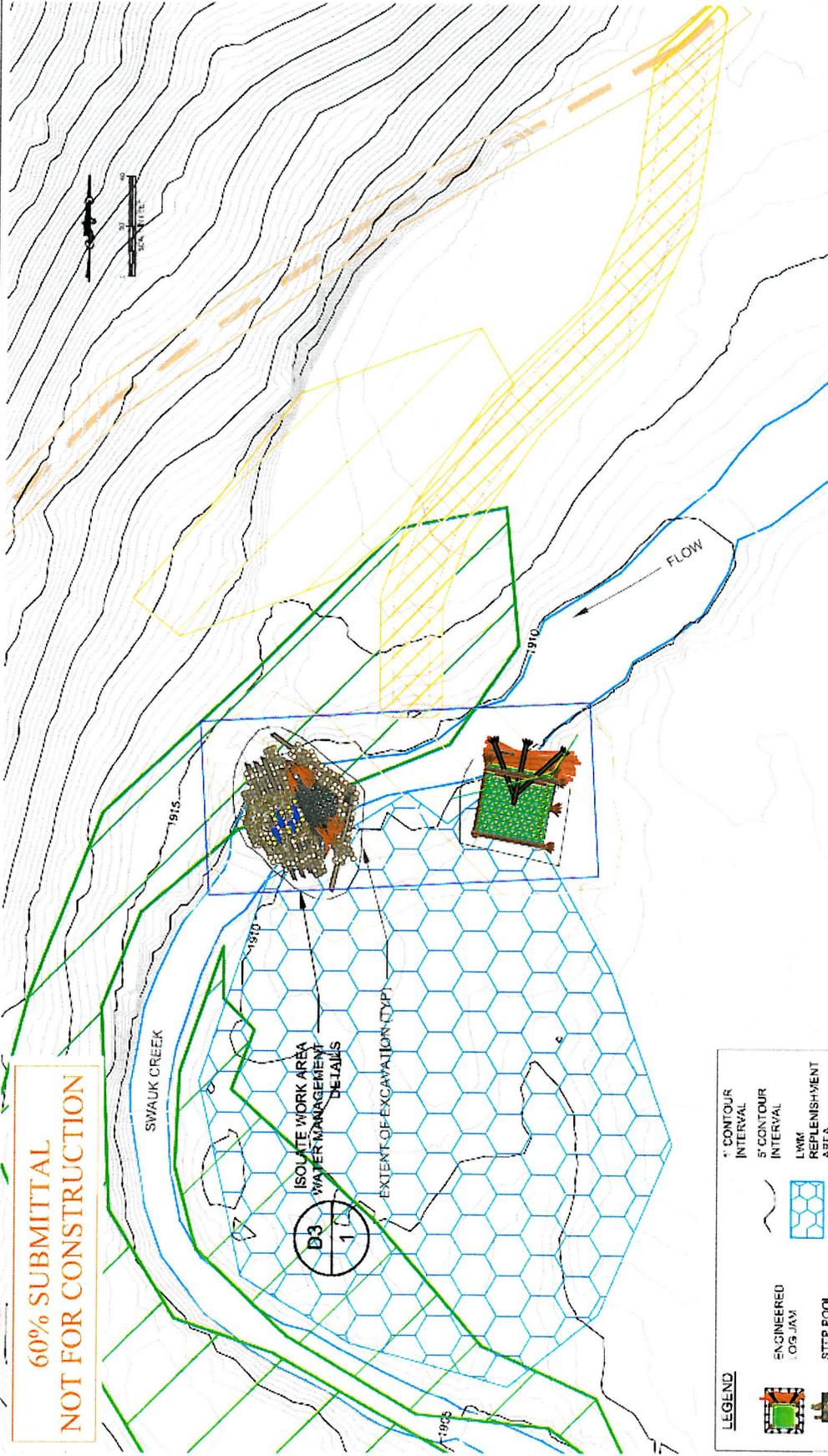




REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

- NOTES:**
- ENGINEER WILL MARK LOCATION OF STEP POOL STRUCTURE. ALL CONSTRUCTION SITES TO BE ISOLATED AND GROUNDWATER MUST BE PUMPED TO AN APPROVED UPLAND AREA.
 - STAGING AREA TO BE WITHIN THE BOUNDARIES OF WOOD REPLENISHMENT AREAS.
 - LARGE WOODY MATERIAL REPLENISHMENT AREAS TO BE FLAGGED BY FIELD ENGINEER OR INSPECTOR.
 - ACCESS CENTERLINE TO BE FLAGGED BY CONTRACTOR. CORRIDOR WIDTH NOT TO EXCEED 15'.
 - ALL ACCESS AREAS WILL BE RESTORED.
 - SAVE ALL TREES IN WORK AREA LESS THAN 3" DIAMETER FOR REPLANTING ON DISTURBED BANK.
 - ALL CREEK CROSSINGS MUST OCCUR WITHIN ISOLATED WORK AREAS.

**60% SUBMITTAL
NOT FOR CONSTRUCTION**



NOTES:

1. ENGINEER WILL STAKE OUT LOCATIONS OF ALL STRUCTURES
2. ALL CONSTRUCTION SITES TO BE ISOLATED FROM SURFACE WATER AND ALL GROUNDWATER MUST BE PUMPED TO AN APPROVED UPLAND AREA.
3. ALL DISTURBED BANKS MUST BE REGRADED TO A 2% SLOPE
4. ALL ACCESS AND STAGING AREAS TO BE RESTORED
5. ALL STREAM CROSSINGS MUST BE WITHIN ISOLATED WORK AREA

REFERENCE:

APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 12 of 20 DATE: June 19, 2012

LEGEND

	ENGINEERED LOG JAM		1' CONTOUR INTERVAL
	STEP POOL STRUCTURE		5' CONTOUR INTERVAL
	EXISTING ROAD		LWM REPLENISHMENT AREA
	RECREATION TRAIL		REVEGETATION AREA
	WETTED WIDTH OF CREEK		STAGING AREA
			ACCESS AND WORK AREA

PLAN

SWAUK CREEK RESTORATION PROJECT
YAKAMA NATION
KITITAS COUNTY, WASHINGTON

DATE	05/21
DESIGNED BY	C. WALKER
DRAWN BY	M. BAKER
CHECKED BY	J. HARRIS
SCALE	1" = 100'
PROJECT NO.	09-000
REVISED	

P10

NOTES:

- ENGINEER WILL MARK LOCATION OF STEP POOL STRUCTURE. ALL CONSTRUCTION SITES TO BE ISOLATED AND GROUNDWATER MUST BE PUMPED TO AN APPROVED UPLAND AREA.
- STAGING AREA TO BE WITHIN THE BOUNDARIES OF WOOD REPLENISHMENT AREAS
- LARGE WOODY MATERIAL REPLENISHMENT AREAS TO BE FLAGGED BY FIELD ENGINEER OR INSPECTOR.
- ACCESS CENTERLINE TO BE FLAGGED BY CONTRACTOR. CORRIDOR WIDTH NOT TO EXCEED 15'.
- ALL ACCESS AREAS WILL BE RESTORED.
- SAVE ALL TREES IN WORK AREA LESS THAN 3" DIAMETER FOR REPLANTING ON DISTURBED BANK.

SWAUK CREEK

D3
1

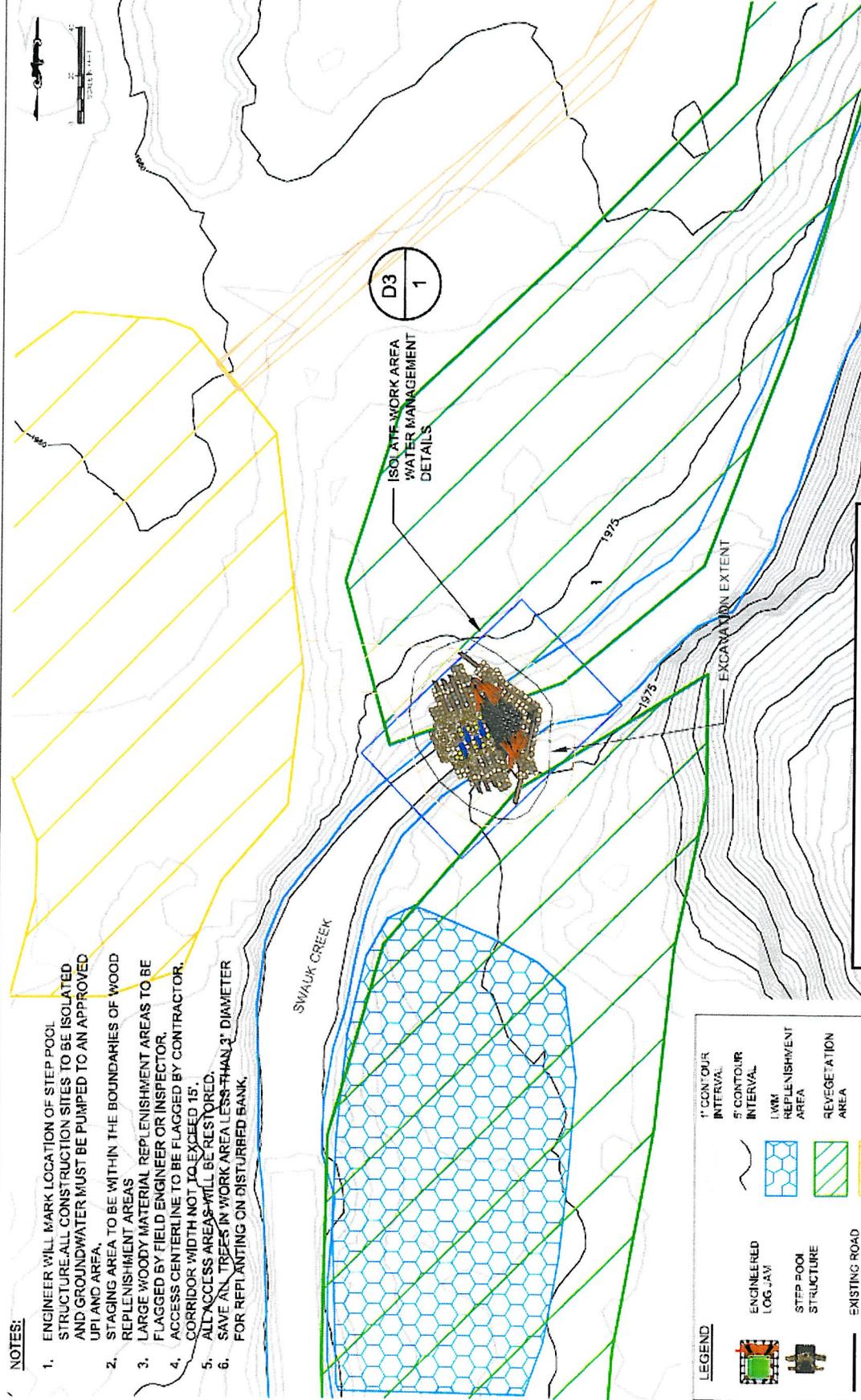
ISOLATE WORK AREA
WATER MANAGEMENT
DETAILS

LEGEND

	ENGINEERED LOG JAM		1' CONTOUR INTERVAL
	STEP POOL STRUCTURE		5' CONTOUR INTERVAL
	EXISTING ROAD		LWM REPLENISHMENT AREA
	RECREATION TRAIL		REVEGETATION AREA
	WETTED WIDTH OF CREEK		STAGING AREA
			ACCESS AND WORK AREA

REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

**60% SUBMITTAL
 NOT FOR CONSTRUCTION**

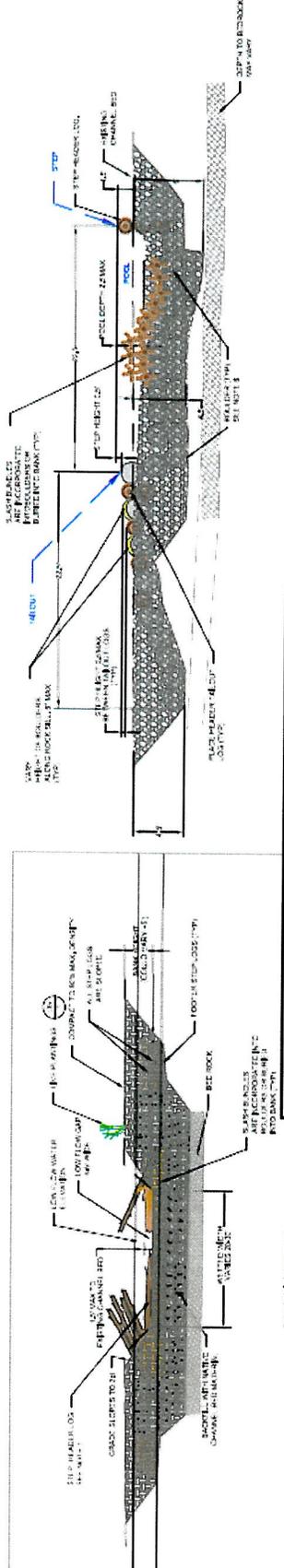
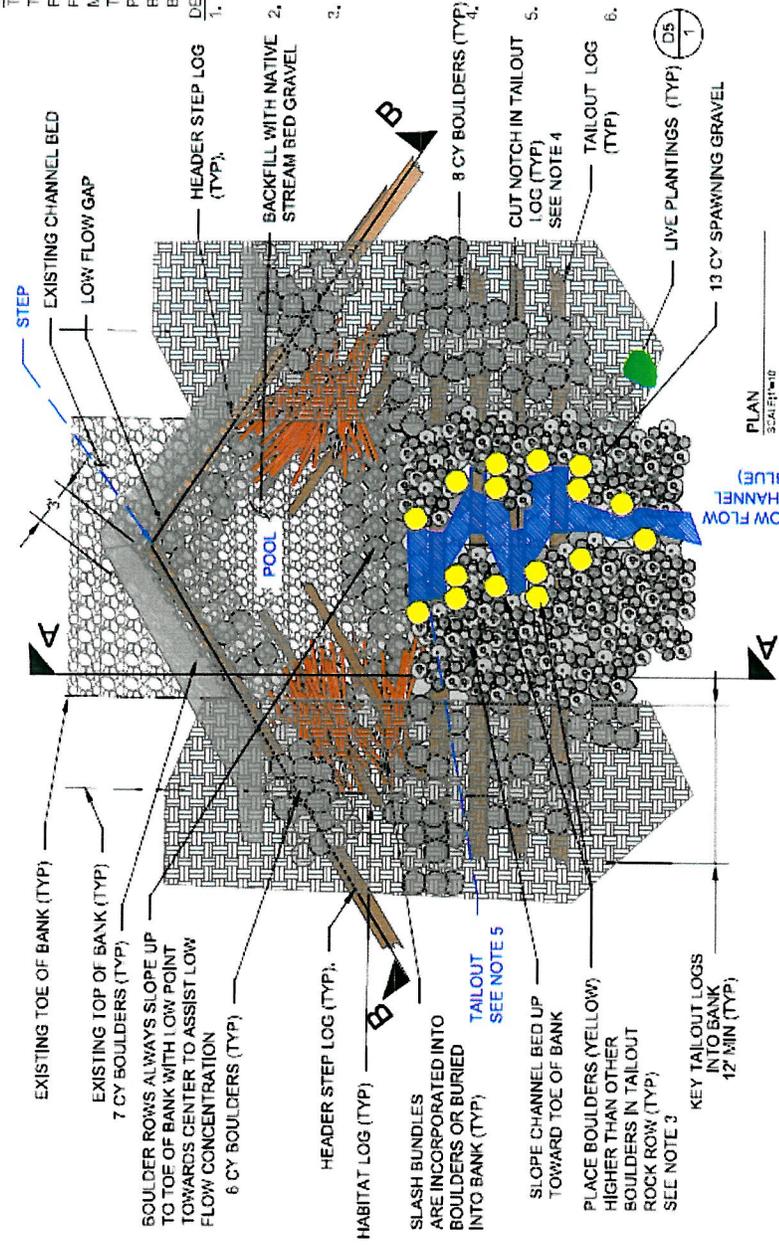


STRUCTURE PURPOSE
 THE OBJECTIVE OF A STEP POOL STRUCTURE IS TO RAISE THE NEARBY WATER SURFACE ELEVATIONS TO ENGAGE LOW LYING FLOODPLAINS MORE FREQUENTLY WHILE MINIMIZING THE LENGTH OF CHANNEL THAT NEEDS TO BE DISTURBED. THE STRUCTURE ALSO PROVIDES IMMEDIATE AND LONG TERM HABITAT BENEFITS WITH THE ADDITIONS OF WOOD AND BANK PLANTINGS.

DESIGN NOTES

1. THE APEX OF THE 40' AND 35' LOGS CAN NOT EXCEED 1.5' ABOVE CHANNEL BED.
2. VOIDS TO BE "CHINKED" SO GAPS BETWEEN SOULDERS ARE SMALLER THAN 1/2" DIAMETER.
3. ANGULAR SOULDERS TO EXTEND NO MORE THAN 0.5' ABOVE SPAWNING GRAVEL. SOULDERS SHOULD BE OFFSET FROM EACH OTHER TO CREATE ZIG-ZAG PATTERN FOR LOW FLOW CHANNEL. ALL OTHER SOULDERS TO BE COVERED WITH 0.5' MIN SPAWNING GRAVEL.
4. 5' BY 0.5' NOTCHES TO BE CUT IN TAILOUT HEADER LOGS TO CREATE A LOW FLOW CHANNEL.
5. TAILOUT ELEVATION TO BE SET 0.5' BELOW APEX OF STEP HEADER LOG TO ENSURE STEP HEIGHT DOES NOT EXCEED 0.5'.
6. SOULDERS SHALL BE 1.75 TO 2.5' DIAMETER

LOG SCHEDULE	STEP POOL	LOCATION	NAME	QUANTITY	DIAMETER	LENGTH	ROOTWARD
					FT	FT	Y/N
STEP			FOOTER	4	1.5	40	N
			HEADER	1	1.5	40	N
POOL			HEADER	1	1.5	35	N
TAILOUT			HABITAT	4	1	20	N
			FOOTER	1	1.5	50	N
			HEADER	4	1.5	50	N



REFERENCE:
 APPLICANT: Yakama Nation Fisheries-Harry Smitskin,
 Chairman
 PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood
 Replenishment, Bridge Replacement, Riparian Planting
 AT/NEAR: Cle Elum, Washington

SHEET 14 of 20 DATE: June 19, 2012

PURPOSE OF STRUCTURE
STRUCTURE OBJECTIVES IS TO
INTRODUCE AND ANCHOR A COMPLEX
LARGE AMOUNT OF WOOD IN A SCOUR
HOLE AND PROVIDE LONG TERM SHADING
WITH A RIPARIAN BENCH.

DESIGN NOTES

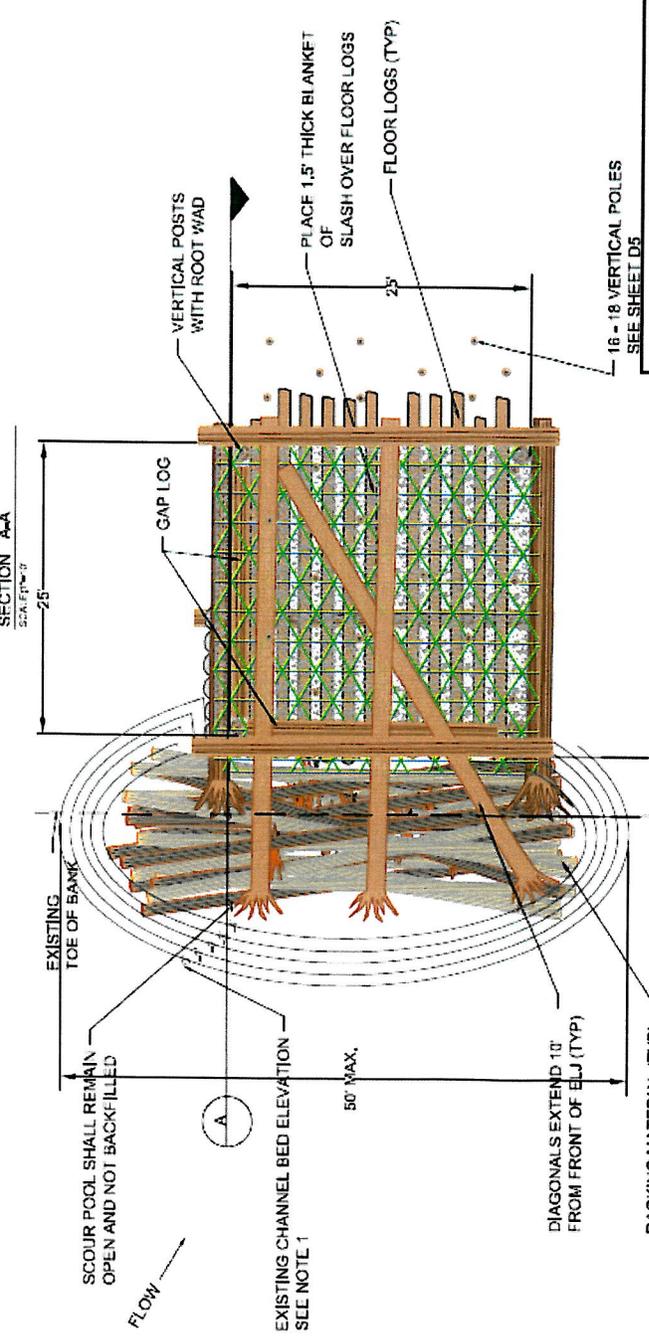
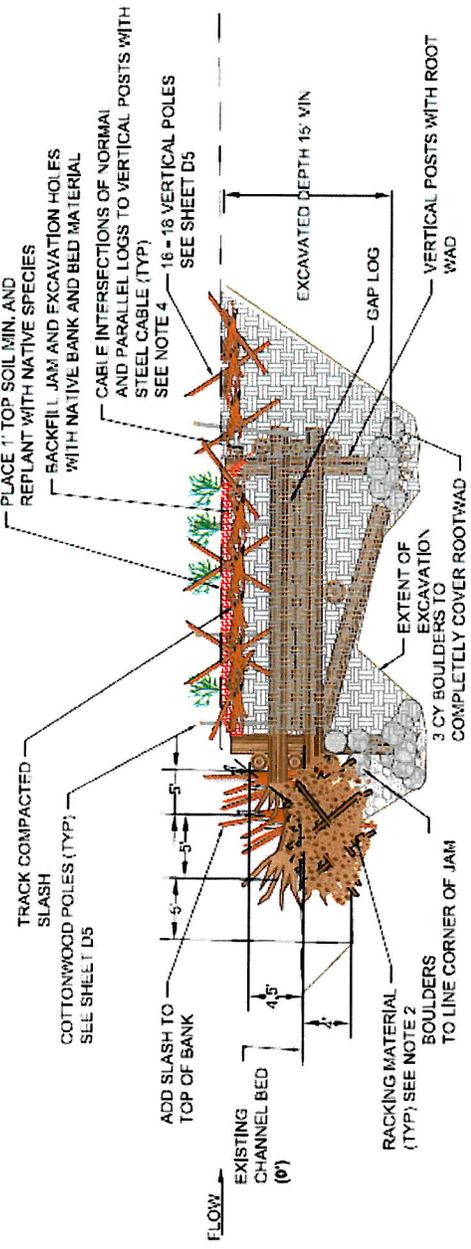
1. FIELD ENGINEER WILL ESTABLISH CHANNEL BED ELEVATION (Ø) FOR EACH SITE. ALL EXCAVATION DEPTHS ARE RELATIVE TO THIS DATUM
2. RACKING MATERIAL SHALL CONSIST OF A DENSE MIXTURE OF BRANCHES RANGING IN DIAMETER FROM 0.25' TO 0.75' AND 10'-8' LONG
3. ROOTWADS OF PARALLEL LOGS SHALL EXTEND FIVE FEET AWAY FROM THE FACE OF THE ELJ
4. BOULDERS SHALL BE RANGE IN SIZE FROM 1 1/4' TO 2 1/2'

LOG SCHEDULE: BJ					
LAYER	NAME	QUANTITY	DIAMETER	LENGTH	ROOTWAD
VERTICAL POSTS	NORMAL	4	1.5	15	Y
	PARALLEL	3	1.5	30	N
FLOOR	PARALLEL	2	1.5	30	Y
	DIAGONAL	1	1	30	N
	GAP LOG	3	1.5	30	Y
LAYER 3	NORMAL	2	1.5	25	N
	PARALLEL	1	1.5	25	N
LAYER 4	PARALLEL	2	1.5	30	N
	NORMAL	2	1.5	30	N

DRAFT
NOT FOR CONSTRUCTION



SCALE: 1" = 10'
SCALE: 1" = 10'
SCALE: 1" = 10'



REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smitskin,
Chairman

PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood
Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 15 of 20 DATE: June 19, 2012

KITITAS COUNTY, WASHINGTON

SWAUK CREEK RESTORATION PROJECT
YAKAMA NATION

FISHERIES-HARRY SMITSKIN

DATE: 06/19/12

DESIGNED BY: J. SMITSKIN

DRAWN BY: J. SMITSKIN

CHECKED BY: J. SMITSKIN

SCALE: AS SHOWN

SHEET NO. 15 OF 20

PROJECT NO. 08-001

PROJECT NAME: SWAUK CREEK RESTORATION PROJECT

PROJECT LOCATION: YAKAMA NATION

PROJECT OWNER: YAKAMA NATION

PROJECT CONTACT: FISHERIES-HARRY SMITSKIN

PROJECT NO. 08-001

PROJECT NAME: SWAUK CREEK RESTORATION PROJECT

PROJECT LOCATION: YAKAMA NATION

PROJECT OWNER: YAKAMA NATION

PROJECT CONTACT: FISHERIES-HARRY SMITSKIN

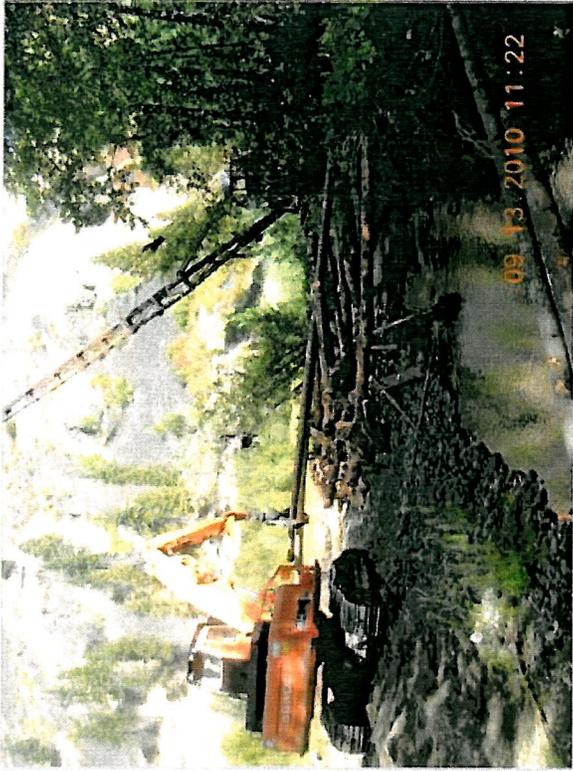
PROJECT NO. 08-001

PROJECT NAME: SWAUK CREEK RESTORATION PROJECT

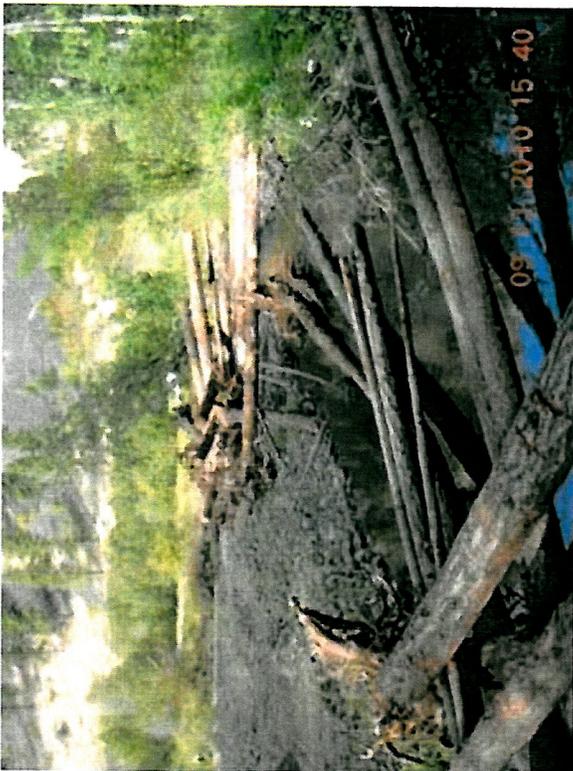
PROJECT LOCATION: YAKAMA NATION

PROJECT OWNER: YAKAMA NATION

PROJECT CONTACT: FISHERIES-HARRY SMITSKIN

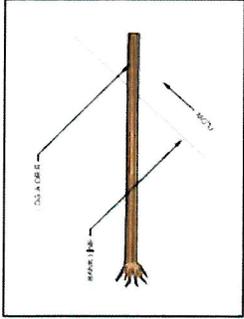


PICTURE OF LWM CONSTRUCTION

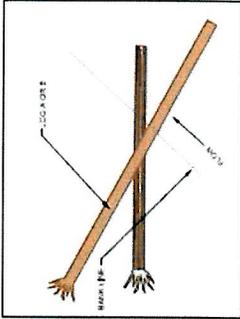


PICTURE OF FINISHED LWM

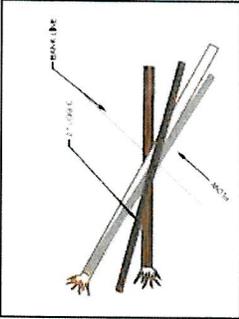
STEP 1



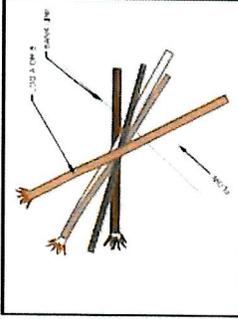
STEP 2



STEP 3



STEP 4



PURPOSE OF STRUCTURE TO INTRODUCE LOOSE LARGE WOOD MATERIAL THAT IS NOT EXCAVATED BUT INTERLOCKED WITH EACH OTHER TO ENCOURAGE RAPID EMBEDDEDNESS.

- DESIGN SPECIFICS
- EQUIPMENT MUST WORK FROM BANK TO PLACE LWM
 - EXTENTS OF LWM REPLACEMENT AREAS TO BE FLAGGED BY ENGINEER OR INSPECTOR
 - ALL EQUIPMENT PLACING LWM MUST BE FREE OF EXTERNAL PETROLEUM PRODUCTS
 - LWM CAN BE WEDGED BETWEEN LIVE TREES
 - LWM CAN BE PLACED IN THE WETTED CHANNEL
 - CONTRACTOR MUST PROVIDE A TYPICAL SEQUENCING PLAN OF LWM REPLACEMENT APPROACH
 - TOTAL LENGTH OF CHANNEL FEET WILL BE 1,750'

Per 60 Channel Feet					
Type	Length ft	Diameter ft	Rootward Y/N	Quantity #	Sub Total #
A	50	1.0-2.0	Yes	2	58
B	50	1.0-2.0	No	1	29
C	50	0.5-1.0	No	2	58
				Grand Total	145



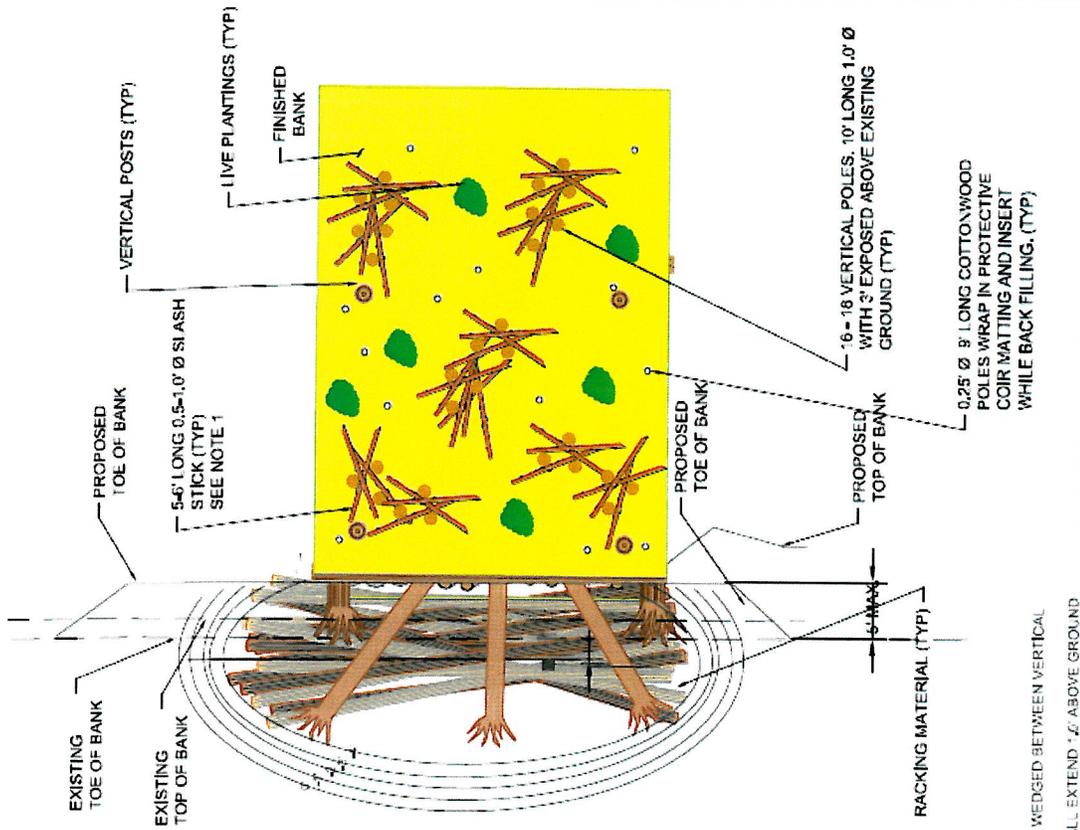
LARGE WOODY MATERIAL REPLACEMENT DETAIL

SWAUK CREEK RESTORATION PROJECT
YAKAMA NATION
KITITAS COUNTY, WASHINGTON

DATE: 07/20/12
DRAWN BY: J. W. B. / J. W. B.
CHECKED BY: J. W. B. / J. W. B.
SCALE: AS SHOWN
EXTN. JOB NO.: 102842
PAGE NO.:
SHEET NO.: 20
D4

REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 17 of 20 DATE: June 19, 2012

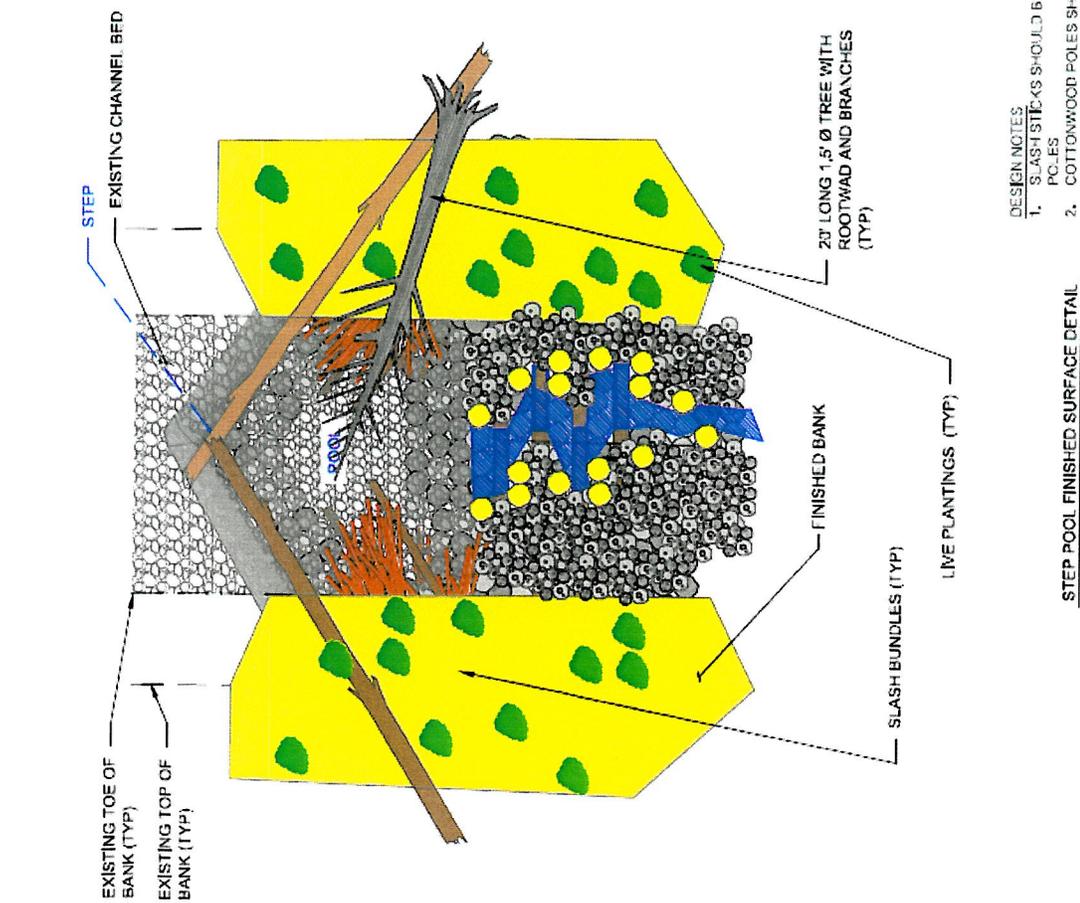


- DESIGN NOTES:
1. SLASH STICKS SHOULD BE WEDGED BETWEEN VERTICAL POLES
 2. COTTONWOOD POLES SHALL EXTEND 1'0" ABOVE GROUND AND BE INSTALLED IN A RANDOM PATTERN
 3. VERTICAL POSTS SHOULD NOT EXCEED 1.0' ABOVE GROUND
 4. LIVE PLANTINGS SHALL CONSIST OF A MIX OF SHRUB AND SMALL TREE SPECIES

STEP POOL FINISHED SURFACE DETAIL
SCALE: 1"=1'-0"

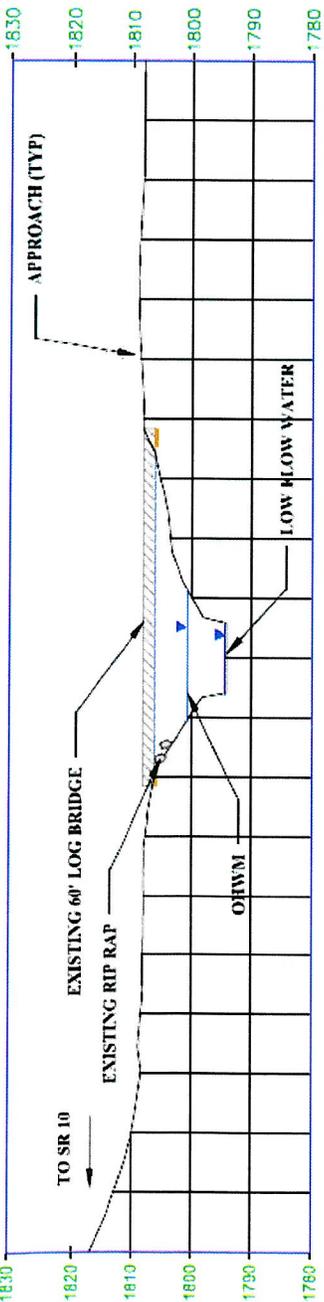
REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 18 of 20 DATE: June 19, 2012

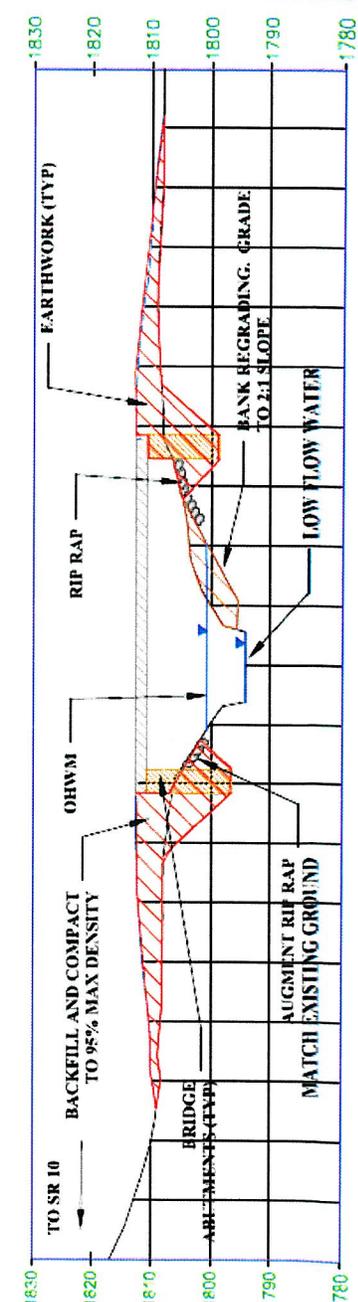
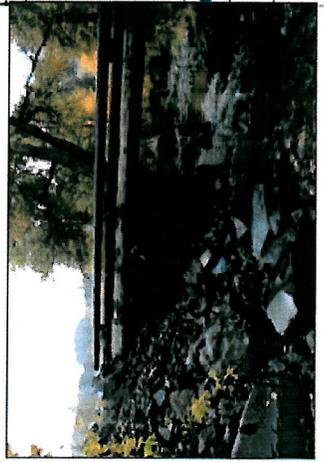


NOTES:

1. BANK GRADING WILL OCCUR ABOVE WETTED CHANNEL DURING CONSTRUCTION.
2. CREEK BANK MATERIAL WILL BE USED AS PART OF FILL FOR BRIDGE APPROACHES
3. BRIDGE ABUTMENTS WILL CONSIST OF PRE CAST CONCRETE STRUCTURES AND AUGMENTATION OF EXISTING RIP RAP
4. RAISE EXISTING BRIDGE AND PLACE ON NEW ABUTMENTS



SECTION B: PROPOSED
NTS



SECTION A: PROPOSED
NTS



REFERENCE:
APPLICANT: Yakama Nation Fisheries-Harry Smiskin, Chairman
PROPOSED: Log Jams, Step Pool Grade Controls, Large Wood Replenishment, Bridge Replacement, Riparian Planting
AT/NEAR: Cle Elum, Washington

SHEET 20 of 20 DATE: June 19, 2012

BRIDGE SECTION AND DETAILS
 SWAUK CREEK RESTORATION PROJECT
 YAKAMA NATION
 KITTITAS COUNTY, WASHINGTON



DATE:	NOV 11
DESIGNED BY:	LAUREN
CHECKED BY:	LAUREN
SCALE:	AS SHOWN
PROJECT NO.:	2012-0018
SHEET NO.:	20

B2