



Columbia River
Honor. Protect. Restore.

OFFICE
P.O. Box 151
401 Fort Road
Toppenish, WA 98948

PHONE
509-881-1462

EMAIL
johj@yakamafish-nsn.gov

Request for Proposals:

Construction Oversight and Monitoring of the Lower Twisp Large Wood Enhancement Project

January 21, 2016

The Yakama Nation's Upper Columbia Habitat Restoration Project (UCHRP) is requesting proposals from qualified engineering firms for Construction Oversight and Monitoring Services for the Lower Twisp Large Wood Enhancement Project. The project is located between river mile 2.0 and 3.0 on the Twisp River in the Methow Subbasin. Qualified engineering firms should submit proposals following the directions in the online RFP. See the Scope of Work and completed designs in the RFP materials for complete list of tasks and deliverables.

Please include a detailed Statement of Qualifications describing your firm's ability to meet the Baseline Qualifications and a budget for completion of each Task as described in the SOW. **Proposals must be received in Toppenish by**

Close of Business, Wednesday, February 17, 2016. Please specify in writing that all bid prices are valid for 90 days.

Baseline Qualifications

To be considered competitive each firm's proposal must demonstrate the following:

- Field survey capabilities by in-house and local (Washington/Oregon based) design engineers
- Ability to effectively model hydraulics using HEC-RAS
- Have on staff (not subcontracted) a Geologist, Hydrologist, and a Professional Engineer with at least 10 years experience designing instream restoration projects
- Over 10 years of Construction Management experience on with Fish Habitat Restoration Projects.
- Oversight conducted on at least 40 Engineered Large Wood Structures in the last 10 years
- Completed oversight on at least 5 projects using an excavator mounted vibratory pile driver and threaded rod.

Bid Submittal Directions

Each engineering firm seeking to be eligible for award of this contract under this RFP must submit a hard copy of their proposal to:

Yakama Nation Fisheries

Attn: Jackie Olney

PO Box 151

401 Fort Road (shipping service)

Toppenish, WA 98948

Proposals must be received in Toppenish by Close of Business, Wednesday, January 21, 2016.

For additional information contact:

Jarred Johnson (Project Manager)

johj@yakamafish-nsn.gov

509-881-1462

Exhibit A – Scope of Work

Lower Twisp Large Wood Enhancement Project;
Construction Oversight and Monitoring (Phases 5&6)

Objective

The Yakama Nation's Upper Columbia Habitat Restoration Project (UCHRP) is planning to construct the Lower Twisp Large Wood Enhancement Project during the summer 2016. The UCHRP works to restore and enhance habitat for ESA-listed salmon and steelhead in accordance with the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan and the associated Biological Strategy.

The project design was informed by regional guiding documents: the 2014 Biological Strategy, Middle Twisp Reach Assessment and survey data collected in 2015. The design set attached to this scope was completed in December 2015 through a separate contract. This scope of work describes the tasks included in the Construction Oversight and Monitoring Phases of the project as well as deliverable requirements and timeline.

Scope of Work

Contractor Obligations

The Contractor shall furnish all supervision, labor, equipment and tools necessary to complete the work as outlined in the following tasks.

Phase 5 – Construction Management

Task 13 – Assistance during bidding

This task includes assistance to Yakama Nation staff with preparation of the construction bid package and review of contractor bids. The task includes any necessary pre-bid meetings with contractors at the project site or elsewhere.

Task 14 – Engineer's Oversight during Project Construction

This task will complete construction oversight duties for all construction projects related to the restoration designs. Contractor will work closely with selected construction contractors and Yakama Fisheries managers to implement the projects. Inspection and direction of construction activities will occur throughout the project. Any changes or in field adjustments that are required will be under the supervision of the Contractor with the approval of Yakama Nation Fisheries staff. This work includes any pre-construction staking and/or identification of survey control.

A daily observation report will be produced by the Contractor for all days during construction oversight activities.

Phase 6 – Monitoring

Task 15– Produce a Monitoring Plan

Contractor will develop a comprehensive Monitoring Plan for the project which will address each work element under this contract. The Monitoring Plan will document post-construction condition and will outline future monitoring activities that will be completed. Documentation of post-construction conditions will include a description of the completed project, preparation of as-built drawings, and results of initial post-construction monitoring. This information will serve as a baseline for comparison to future monitoring data. The plan will also identify future monitoring activities and schedule; however,

out-year monitoring activities will be conducted under a separate scope of work. Monitoring activities to be described in the Plan may include photos, notes/sketches, measurements, ocular sediment data, and other activities depending on the project type and objectives. The monitoring schedule will describe the plan for regular scheduled monitoring events as well as trigger points for monitoring in response to high water events. The Plan will also include a discussion of site conditions or changes that may intervention or adaptive management. The Monitoring Plan will be submitted to Yakama Fisheries staff for review, comment, and feedback. Revisions will be made as necessary to finalize the plan.

Consistent Satisfactory Progress

Consistent satisfactory progress in execution of this project will be required. Satisfactory progress will be measured by both the quality and quantity of work. If for any reason no work is performed for a period of 10 consecutive regular work days unless authorized by Yakama Nation's Designated Representative, the contractor will be given a notice of contract cancellation. The Yakama Nation's Designated Representative will monitor progress closely.

Location

This contract covers design Phases 5 & 6 for the Lower Twisp Large Wood Enhancement Project. This project is located between RM 2.0 and RM 3.0 on the Twisp River.

Anticipated Schedule

The Yakama Nation is seeking to have this work initiated promptly upon issuance of a Notice to Proceed.

Projected Timeline:

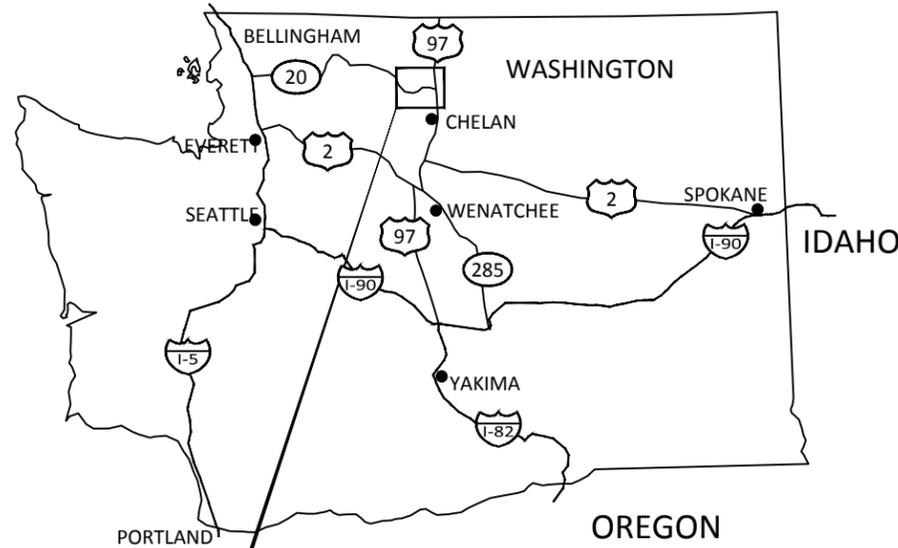
Task 13: February-March 2016

Task 14: July 2016

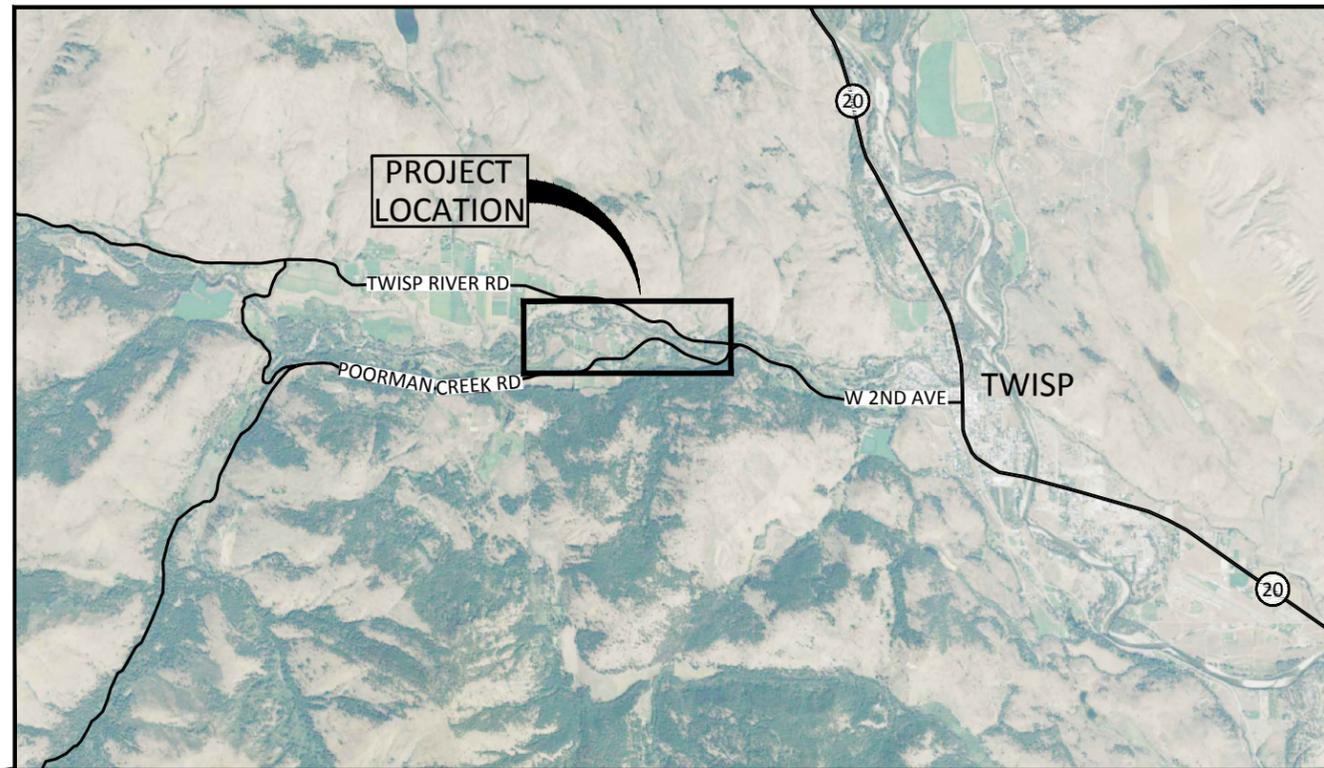
Task 15: October 2016

LOWER TWISP RIVER LARGE WOOD ENHANCEMENT PROJECT

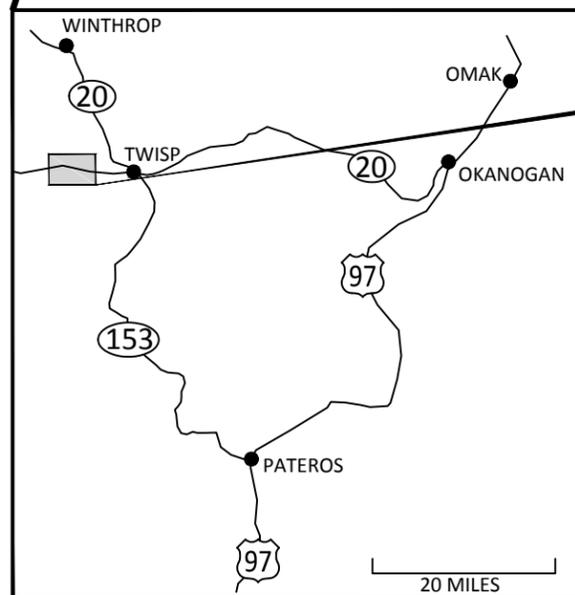
OKANOGAN COUNTY, WASHINGTON



LOCATION MAP
STATE OF WASHINGTON
NOT TO SCALE



SITE MAP



VICINITY MAP



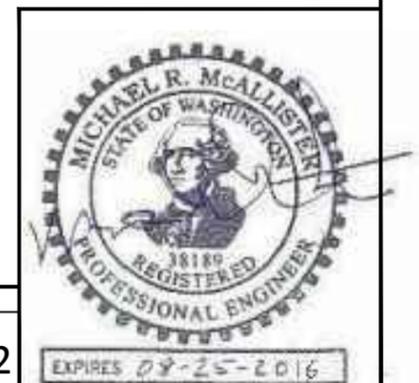
COORDINATES:
LATITUDE 48° 22' 15.75" N
LONGITUDE 120° 9' 44.51" W

SECTIONS 11-12, TOWNSHIP 33N, RANGE 21E

WATERBODY: TWISP RIVER
TRIBUTARY OF: METHOW RIVER

SHEET INDEX

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CONFEDERATED BANDS AND TRIBES OF THE YAKAMA NATION
LOWER TWISP RIVER
LARGE WOOD ENHANCEMENT PROJECT



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COVER, SHEET INDEX AND
VICINITY MAP

SHEET
1 OF 12

EXISTING DATA

GENERAL TOPOGRAPHIC INFORMATION IS PROVIDED FROM LIDAR AND SPECIFIC PROJECT AREA SURVEY PERFORMED BY INTER-FLUVE, INC. THROUGH JULY 2015. SURVEY IS BASED ON NAD27 WASHINGTON STATE PLANES, NORTH ZONE COORDINATE SYSTEM.

SOILS

TWISP RIVER GRAVEL AND ALLUVIAL SOILS.

UTILITIES

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVING UTILITIES LOCATED PRIOR TO CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE AFFECTED UTILITY SERVICE TO REPORT ANY DAMAGED OR DESTROYED UTILITIES. THE CONTRACTOR SHALL PROVIDE EQUIPMENT OR LABOR TO AID THE AFFECTED UTILITY SERVICE IN REPAIRING DAMAGED OR DESTROYED UTILITIES AT NO COST TO THE OWNER.

CONSTRUCTION ACCESS

SITE ACCESS SHALL BE FROM TWISP RIVER ROAD AND POORMAN CREEK ROAD.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ANY REQUIRED TRAFFIC CONTROL OR ACCESS PERMITS.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING ANY REQUIRED TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO, SIGNAGE AND FLAGGERS.

ALL EQUIPMENT, MATERIALS AND PERSONNEL SHALL REMAIN WITHIN THE LIMITS OF DISTURBANCE.

THE CONTRACTOR SHALL KEEP THE WORK AREAS IN A NEAT AND CLEAN CONDITION FREE OF DEBRIS AND LITTER FOR THE DURATION OF THE PROJECT.

FISH RESCUE

DEWATERING AND FISH RESCUE OPERATIONS WILL BE COMPLETED IN ACCORDANCE WITH THE PROTOCOL II- DEWATERING OUTSIDE HIGH LIKELIHOOD LISTED FISH AREA METHODS DETAILED IN THE U.S. ARMY CORPS OF ENGINEERS RESTORATION PROGRAMMATIC PERMIT (NMFS REFERENCE NO. 2008/03598) AND/OR THE REQUIREMENTS OF RECEIVED PERMITS.

ALL FISH RESCUE EFFORTS SHALL BE SUPERVISED BY A QUALIFIED FISHERIES/AQUATIC BIOLOGIST EXPERIENCED WITH THE COLLECTION AND HANDLING OF SALMONID FISHES FROM CONSTRUCTION SITES.

TREE SALVAGE

ALL TREES AND SHRUBS REMOVED WITHIN CLEARING LIMITS SHALL BE REMOVED WHOLE WITH ROOT WAD AND UTILIZED IN THE STREAM CONSTRUCTION AS DIRECTED BY OWNER'S REPRESENTATIVE.

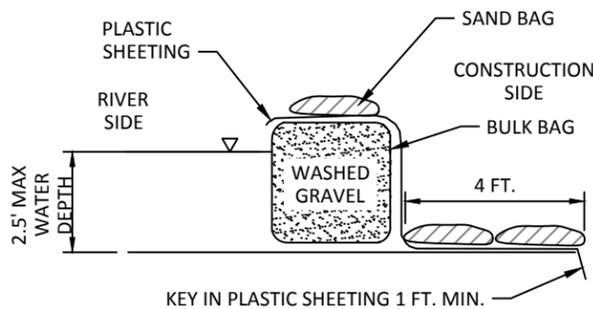
LIVE TREES

ALL TREES NOT MARKED FOR REMOVAL SHALL BE LEFT STANDING UNDISTURBED. LOGGING ACTIVITY SHALL NOT DEBARK OR DAMAGE LIVE TREES.

KEEP OUT OF DRIP LINE OF EXISTING TREES TO REMAIN.

ABBREVIATIONS

CY	CUBIC YARDS
FT	FEET
IN	INCH
LF	LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
NMFS	NATIONAL MARINE FISH SERVICES
SF	SQUARE FEET



TEMPORARY COFFER DAM
(WATER DEPTHS LESS THAN 2.5')

BULK BAG GENERAL NOTES:

BULK BAG COFFERDAM SHALL BE CONSTRUCTED OF SEVERAL UNITS OF BULK BAGS FILLED WITH WASHED GRAVEL, AND ABUTTED SIDE BY SIDE TO CREATE A ROW THAT ISOLATES THE CONSTRUCTION SITE FROM THE RIVER. IF WATER DEPTH EXCEEDS 85% OF THE BULK BAG HEIGHT, AN ADDITIONAL TOP ROW OF BULK BAGS SHALL BE INSTALLED, SUPPORTED BY TWO BOTTOM ROWS OF BULK BAGS. BULK BAG COFFERDAM SHALL BE SEALED BY COVERING THE COFFERDAM WITH PLASTIC SHEETING HELD IN PLACE BY STANDARD SANDBAGS PLACED IN ROWS ON TOP OF COFFERDAM, AND AT TOE OF COFFERDAM. THE PLASTIC SHEETING SHALL BE DRAPED ALONG THE CHANNEL BOTTOM ON THE WORK AREA SIDE OF THE COFFERDAM WITH OUTWARD EDGE OF SHEETING MINIMUM 4- FEET FROM TOE OF COFFERDAM. THE DRAPED PORTION OF PLASTIC SHEETING SHALL BE PINNED TO THE CHANNEL BED BY MINIMUM TWO ROWS OF STANDARD SANDBAGS. THE OUTWARD EDGE OF PLASTIC SHEETING SHALL BE TOED INTO THE CHANNEL BED MINIMUM 1-FT. TOEING IN THE OUTWARD EDGE OF PLASTIC SHEETING SHALL OCCUR AFTER THE COFFERDAM IS CLOSED TO PREVENT TURBIDITY RELEASE TO THE WATERWAY.

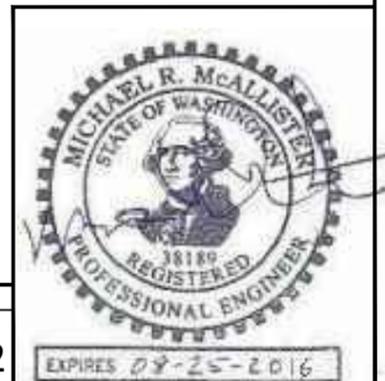
IF POSSIBLE, THE COFFERDAM SHALL BE EXTENDED ONTO A GRAVEL BAR AND OUT OF THE WATER. IF THE END MUST BE TERMINATED AT THE RIVERBANK, THE COFFERDAM SHALL BE TIGHTLY SEALED TO THE GROUND BY PLASTIC SHEETING AND STANDARD SANDBAGS. MULTIPLE LAYERS OF SHEETING AND SANDBAGS MAY BE REQUIRED TO FORM A WATERTIGHT SEAL.

BULK BAGS SHALL BE WATERPROOF CUBE-SHAPED POLYPROPYLENE WOVEN FABRIC BAGS WITH FULLY OPEN TOP, FLAT BOTTOM, FOUR LOOPS, MINIMUM 2-TON WEIGHT CAPACITY, MINIMUM 5:1 SAFETY FACTOR.

PLASTIC SHEETING SHALL BE MINIMUM 6-MIL THICKNESS. ROLL LENGTH SHALL COVER THE ENTIRE LENGTH OF COFFERDAM WITHOUT SEAMS. MINIMUM 12-FT WIDE ROLL SHALL BE USED FOR SINGLE LAYER BULK BAG COFFERDAM. MINIMUM 16-FT ROLL SHALL BE USED FOR 2-LAYER STACKED BULK BAG COFFERDAM.

BULK BAG COFFERDAM SHALL BE COMPLETELY REMOVED AFTER CONSTRUCTION IS COMPLETED AND TURBIDITY HAS BEEN REMOVED.

ALTERNATE COFFERDAM MATERIALS AND CONFIGURATIONS MAY BE ALLOWED BUT SHALL NOT BE IMPLEMENTED WITHOUT REVIEW AND APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND/OR VENDOR CUT SHEETS FOR SUBSTITUTIONS.



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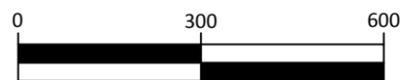
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LOWER TWISP RIVER
LARGE WOOD ENHANCEMENT PROJECT

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GENERAL NOTES, ABBREVIATIONS
AND EROSION CONTROL PLAN

SHEET
2 OF 12

PARCEL I.D. 3321120098
CHRISTAINSON, ROBERT
194 TWISP RIVER RD



SCALE IN FEET



SITE C
SHEET 9

TAX ID: 3321110030
MC DANIEL, DUFF & LINDA
10611 SAMISH ISLAND RD
BOW, WA 98232

STAGING AND STOCKPILE

TEMPORARY ACCESS

TAX ID: 3321110001
CLARK, LARRY J ETUX
945 E BAKERVIEW
BELLINGHAM, WA 98226

PARCEL I.D. 3321120088
PRITCHARD, DOROTHY
PO BOX 1056
TWISP, WA 98856

PARCEL I.D. 3321120089
SCHROCK, LARRY & JAYNE
PO BOX 1283
TWISP, WA 98856

PARCEL I.D. 8811600020
EDSON, SCOTT N & CAROLYN
PO BOX 752
TWISP, WA 98856

COMMON AREA

SITE B
SHEET 7

PARCEL I.D. 8811600040
EDSON, SCOTT N & CAROLYN
PO BOX 752
TWISP, WA 98856

TEMPORARY ACCESS

PARCEL I.D. 8811600010
EDSON, SCOTT N & CAROLYN
PO BOX 752
TWISP, WA 98856

PARCEL I.D. 3321120069
ERICKSON, KRISTOPHER
PO BOX 446
TWISP, WA 98856

PARCEL I.D. 3321120065
KINNEY, GLENN
25 OLD TWISP HWY
TWISP, WA 98856

STAGING AND STOCKPILE

POORMAN CREEK ROAD

TWISP RIVER

TWISP RIVER ROAD

PARCEL I.D. 3321120016
METHOW SALMON
RECOVERY FOUNDATION

TEMPORARY ACCESS

PARCEL I.D. 3321120021
MINER, MICHAEL
141 TWISP RIVER RD

SITE A
SHEET 5

STAGING AND STOCKPILE

LEGEND

- COUNTY GIS PROPERTY LINES
- TEMPORARY ACCESS
- LIMITS OF DISTURBANCE
- STAGING / STOCKPILE AREA

PLAN

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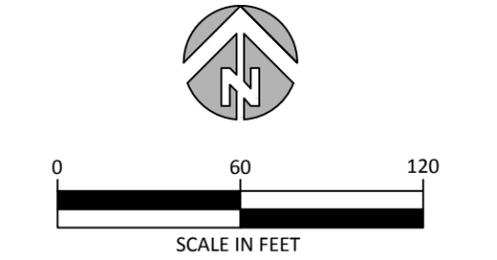
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LARGE WOOD ENHANCEMENT PROJECT



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SITE PLAN SHOWING ACCESS
AND PROPOSED PROJECT
AREAS

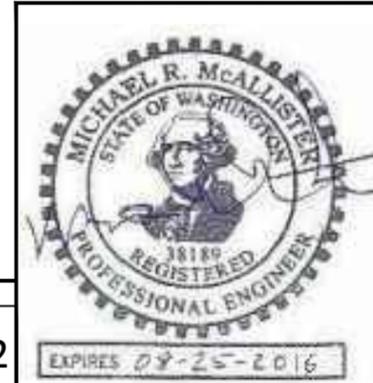
SHEET
3 OF 12



LEGEND

-  TWISP RIVER
-  LIMITS OF DISTURBANCE
-  TEMPORARY ACCESS ROAD
-  STAGING AND STOCKPILE AREA
-  COUNTY GIS PROPERTY LINE
-  TEMPORARY COFFERDAM (SEE SHEET 2)
-  POOL CONTOUR
-  LAYER 1 LOG
-  LAYER 2 LOG
-  LAYER 3 LOG
-  SALVAGED TREE
-  SLASH

PROJECT LOCATION - LOG STRUCTURE A



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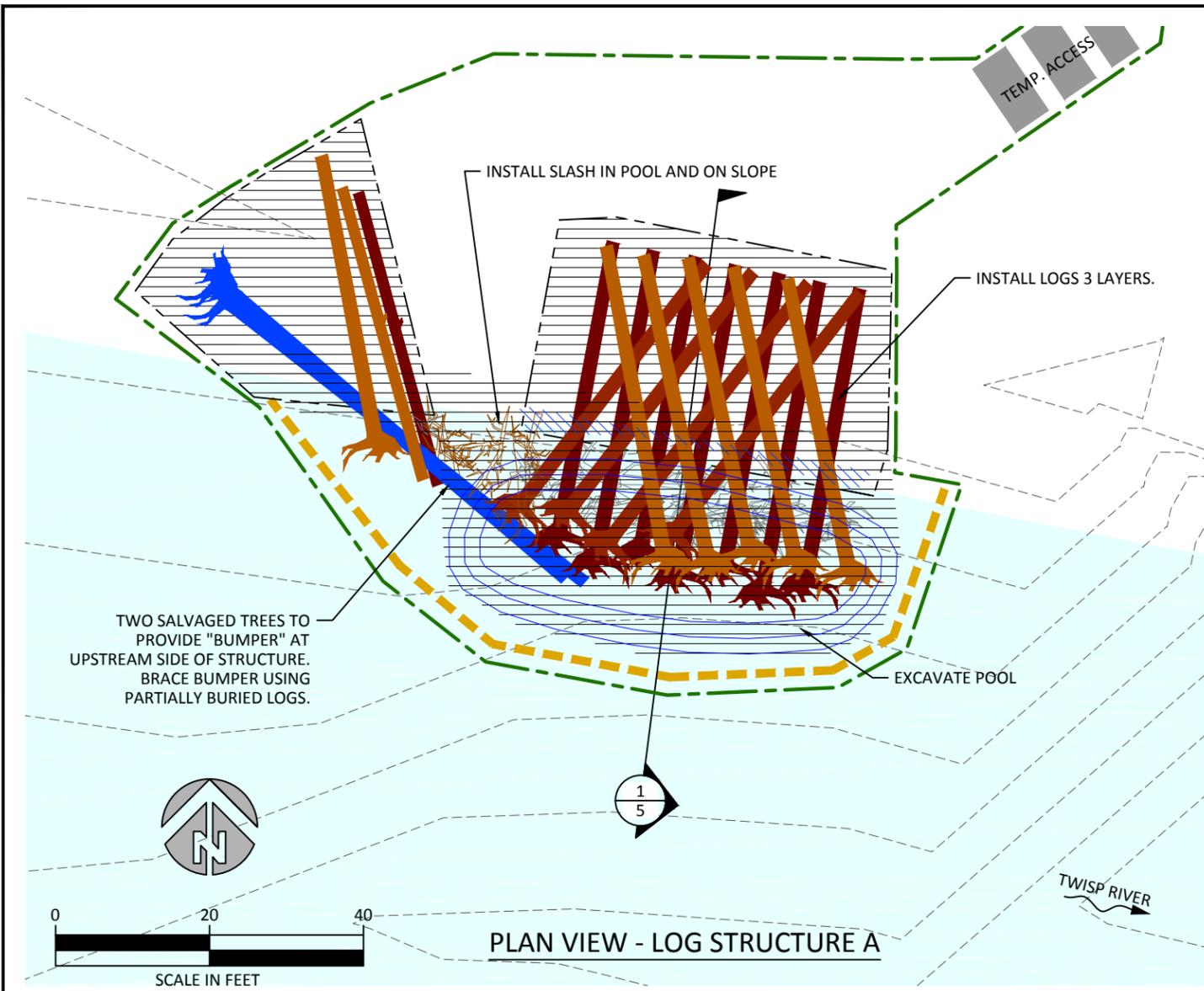
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PROJECT LOCATION -
 LOG STRUCTURE A

SHEET
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PLAN VIEW - LOG STRUCTURE A

LEGEND

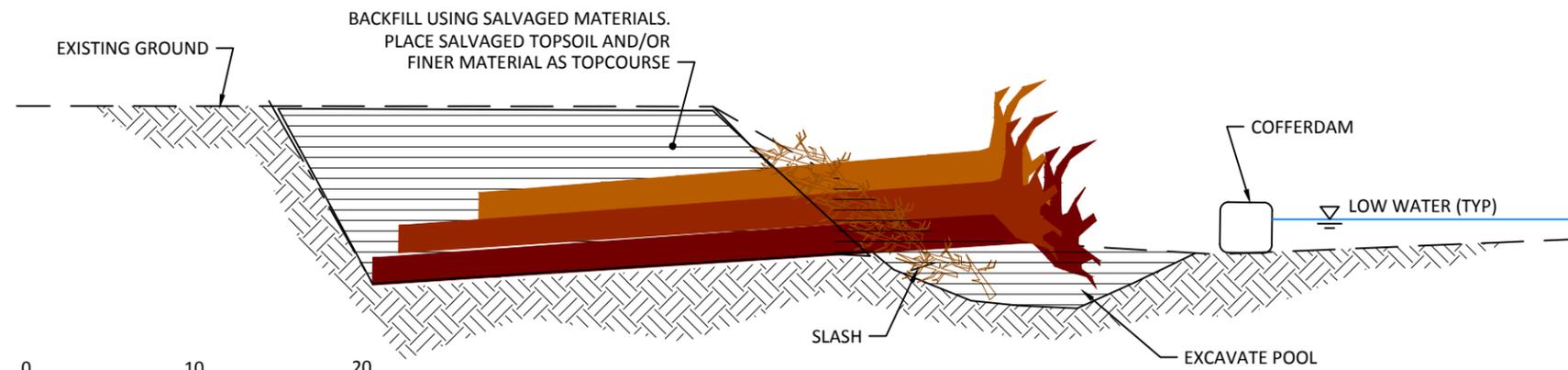
- EXISTING CONTOUR
- - - LIMITS OF DISTURBANCE
- - - TEMPORARY COFFERDAM (SEE SHEET 2)
- ▨ EXCAVATION AND BACKFILL LAYER 1 LOG
- POOL CONTOUR
- LAYER 2 LOG
- LAYER 3 LOG
- TREES (SALVAGED)
- SLASH (SALVAGED)

PARTIAL MATERIALS LIST

ITEM	QUANTITY
COFFERDAM	115 FT
LOGS	2
LOGS WITH ROOTS	17
WHOLE TREE	2
SLASH (SALVAGED)	40 CY
EXCAVATION	650 CY
BACKFILL	490 CY
HAUL OFF SITE	140 CY

SURPLUS FILL SHALL BE HAULED TO AN APPROVED UPLAND DISPOSAL SITE

- EROSION AND SEDIMENT CONTROL NOTES:**
- PUMP CONSTRUCTION WATER FROM TEMPORARY IMPOUNDMENT BEHIND COFFERDAM. DISCHARGE CONSTRUCTION WATER TO UPLAND INFILTRATION AREA. MONITOR AND MAINTAIN DISCHARGE AREA SO THAT FLOW DOES NOT RETURN TO WATERWAY.
 - APPLY MULCH TO ALL DISTURBED GROUND



SECTION - LOG STRUCTURE A

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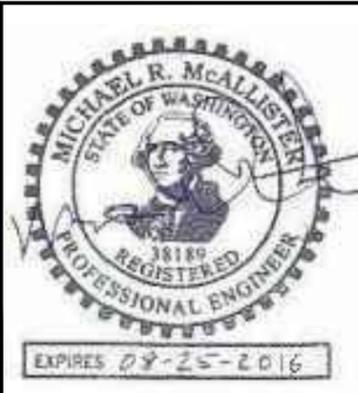
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LOG STRUCTURE A -
 PLAN AND SECTION

SHEET
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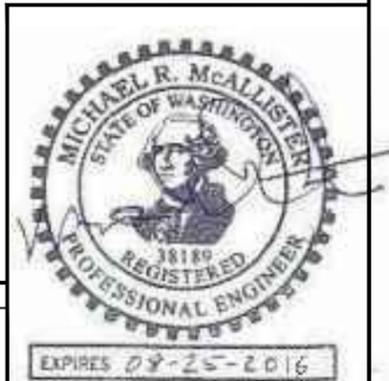


SCALE IN FEET

LEGEND

- TWISP RIVER
- LIMITS OF DISTURBANCE
- TEMPORARY ACCESS ROAD
- STAGING AND STOCKPILE AREA
- COUNTY GIS PROPERTY LINE
- TEMPORARY COFFERDAM (SEE SHEET 2)
- POOL CONTOUR
- LAYER 1 LOG
- LAYER 2 LOG
- LAYER 3 LOG
- SLASH

PROJECT LOCATION - LOG STRUCTURE C



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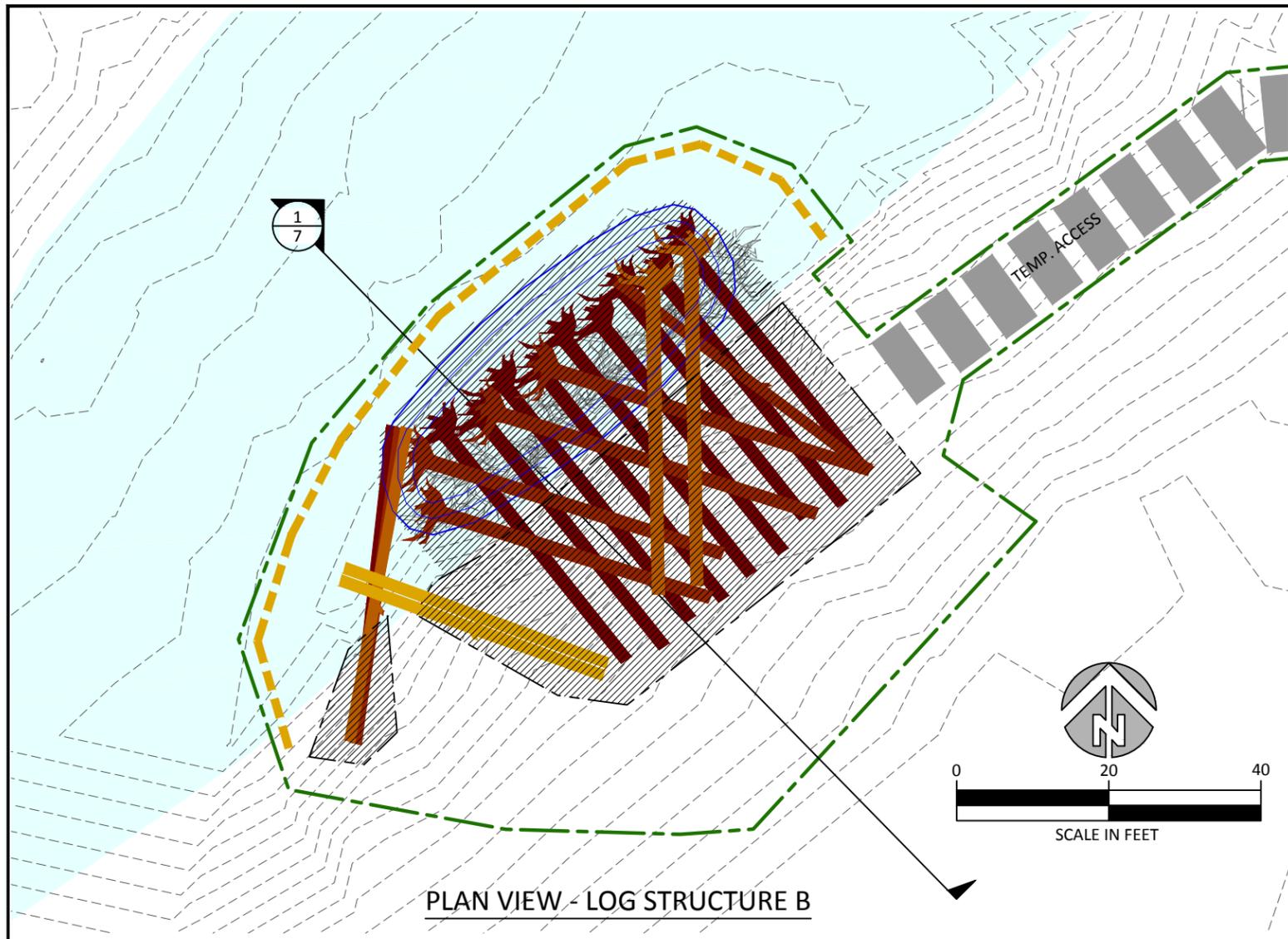
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PROJECT LOCATION -
 LOG STRUCTURE B

SHEET
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LEGEND

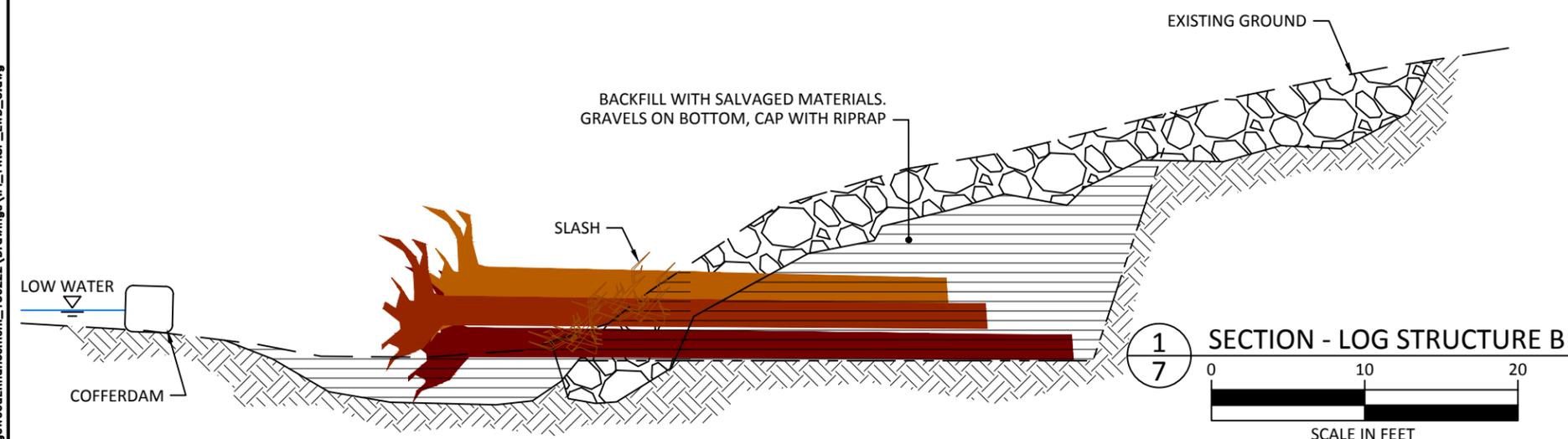
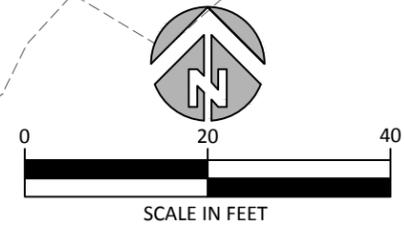
- - - - - EXISTING CONTOUR
- . - . - LIMITS OF DISTURBANCE
- - - - - TEMPORARY COFFERDAM (SEE SHEET 2)
- [Hatched Box] EXCAVATION AND BACKFILL
- [Blue Outline] POOL CONTOUR
- [Dark Brown Line] LAYER 1 LOG
- [Medium Brown Line] LAYER 2 LOG
- [Light Brown Line] LAYER 3 LOG
- [Brown Branches] SLASH (IMPORT)

PARTIAL MATERIALS LIST

ITEM	QUANTITY
COFFERDAM	120 FEET
LOGS WITH ROOTS	16
LOGS	5
SLASH (IMPORT)	30 CY
EXCAVATION	550 CY
BACKFILL	450 CY
HAUL OFF SITE	100 CY

SURPLUS FILL SHALL BE HAULED TO AN APPROVED UPLAND DISPOSAL SITE

- EROSION AND SEDIMENT CONTROL NOTES:**
- PUMP CONSTRUCTION WATER FROM TEMPORARY IMPOUNDMENT BEHIND COFFERDAM. DISCHARGE CONSTRUCTION WATER TO UPLAND INFILTRATION AREA. MONITOR AND MAINTAIN DISCHARGE AREA SO THAT FLOW DOES NOT RETURN TO WATERWAY.
 - APPLY MULCH TO ALL DISTURBED GROUND



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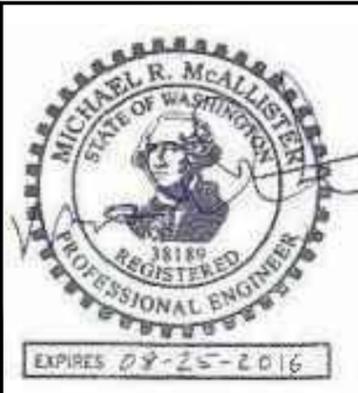
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LOG STRUCTURE B -
 PLAN AND SECTION

SHEET
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LEGEND

-  TWISP RIVER
-  LIMITS OF DISTURBANCE
-  TEMPORARY ACCESS ROAD
-  STAGING AND STOCKPILE AREA
-  COUNTY GIS PROPERTY LINE
-  TEMPORARY COFFERDAM (SEE SHEET 2)
-  POOL CONTOUR
-  LAYER 1 LOG
-  LAYER 2 LOG
-  50 FT LOGS
-  SLASH

PROJECT LOCATION - LOG STRUCTURE C



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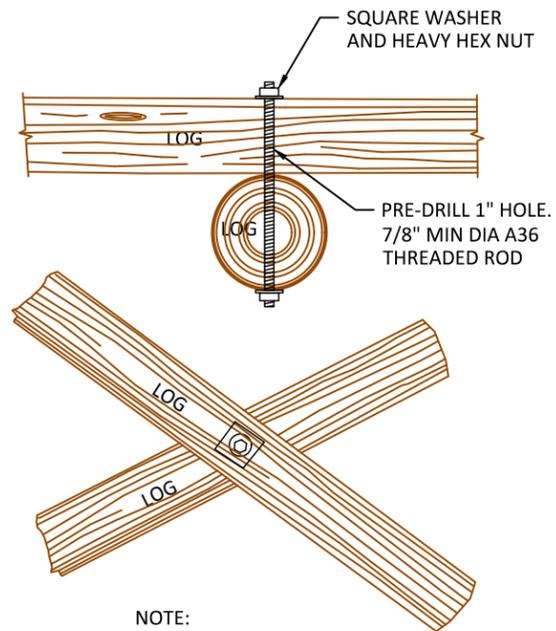
CONFEDERATED BANDS AND TRIBES OF THE YAKAMA NATION
 LOWER TWISP RIVER
 LARGE WOOD ENHANCEMENT PROJECT



501 Portway Ave, Suite 101
 Hood River, OR 97031
 541.386.9003
 www.interfluve.com

PROJECT LOCATION -
 LOG STRUCTURE C

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BOLTED CONNECTION NOTES

1. BOLTS SHALL BE MINIMUM 7/8" DIAMETER THREADED ROD, GRADE A36 STEEL. WASHERS SHALL BE SQUARE PLATE, 3/8" x 4" x 4" MIN. NUTS SHALL BE HEAVY HEX. ALL HARDWARE SHALL BE HOT-DIP GALVANIZED.
2. DRILL 1" HOLE THROUGH LOGS.
3. INSERT 7/8" DIA. ALL-THREAD REBAR.
4. INSTALL SQUARE WASHER AND HEAVY HEX NUTS. SECURE NUTS BY CHISELING THREADS OR MUSHROOMING TOP.
5. FILE OR GRIND OFF SHARP EDGES.

NOTE:
DEFLECTOR LOGS SHALL
BE BOLTED TO BURIED
CROSS-MEMBERS.

1 **DETAIL - TYPICAL BOLTED CONNECTION**
10 NOT TO SCALE

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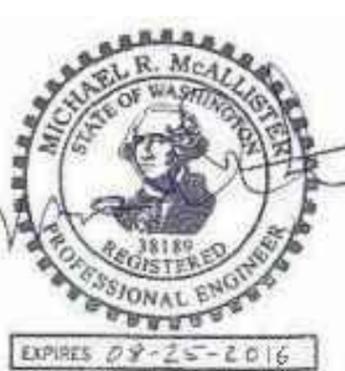
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TYPICAL DETAIL

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Project Specifications

This document contains specifications related to the Lower Twisp River Large Wood Enhancement Plan. Please refer to both the Project Plans and this Supplemental Project Specifications document to account for all project specifications, designs, material standards, and quantities.

001 Mobilization

This item shall consist of preparation work and operations performed by the Contractor in accordance with the provisions of Section 1-09.7 of the Washington Department of Transportation Standard Specifications (Standard Specifications). Mobilization shall also include Demobilization (including site clean up, fence repair, and excess materials hauling), utilities located, dust control, and traffic control in accordance with the pay schedule identified herein. In addition, all costs for acquiring, preparing, and cleaning up the staging area for the project will be considered part of this item.

Measurement and Payment

Payment for Mobilization shall be by the lump sum contract price for, 'Mobilization', partial payments will be made as in accordance with Section 1-09.7 of the Standard Specifications. Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

002 TESC, SPCC, Plan, and Implementation

This work shall provide for preparation, implementation, and removal of a Temporary Erosion Sediment Control (TESC) plan and for the preparation and implementation of a Spill Prevention Control and Countermeasure (SPCC) plan in accordance with Section 1-07.15 of the Standard Specifications, and as amended by these Special Provisions.

1. The Contractor shall submit a TESC plan for the project to the Owner for approval. The TESC must satisfy the requirements of the Washington Department of Ecology NPDES Stormwater General Permit for Construction Activity and all other applicable permits. The TESC included in the Drawings and described herein is intended to provide a baseline for sediment and erosion control and does not ensure that the standards established by any applicable permits will be met. The Contractor may use these measures or alternative measures of his own design to ensure satisfactory performance and that the erosion control requirements of all applicable permits are met. The contractor shall be named as the permit holder. The contractor shall be responsible for implementing, inspecting and filing reports, maintaining, replacing, and removing TESC and SPCC measures. The plan shall include the name, address and 24-hour contact number of the person responsible for erosion prevention and sediment control measures.

2. A Spill Containment Kit shall be on site and crews shall be trained in its use.

3. Biodegradable Hydraulic Fluid shall be installed into each piece of heavy machinery working within 50 feet of the Twisp River.

Measurement and Payment

Payment for TESC & SPCC Plan shall be by the lump sum contract price. Partial payments will be made as in accordance with Section 1-09.9 of the Standard Specifications. Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

003 Temporary Cofferdam

This item consists of providing and installing, maintaining, and removing measures to bypass the surface waters of the stream around in-channel work areas, and to prevent turbidity from entering the river.

Cofferdam shown in the Plans is one acceptable method. The Contractor may use this method or propose a different method that provides equal or better isolation of the work area from the flow. If a different method is proposed, Contractor shall submit drawings showing details of proposed methods for providing temporary isolation of surface water during construction activities. Review and approval of the Cofferdam Plan shall not relieve the Contractor from full responsibility for the adequacy of cofferdam work if the proposed plan is not successful at properly isolating the work area.

Coordination with Fish Rescue

The contractor shall provide minimum 3 days advance notice to the owner before each cofferdam installation date. The contractor shall understand that coffer dam installation requires coordination with the owner and only after the owner has completed fish rescue can the coffer dams be completed.

Cofferdams shall be suitably offset from work area so as to not interfere with log placement or limit pool excavation.

Measurement

Temporary Cofferdam shall be measured per lump sum.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

004 Dewatering

This item includes dewatering work within cofferdam impoundments. In cofferdammed (impoundment) areas, the intent of pumping will not necessarily be to remove all water from the impoundment, but to create a lower-head condition in the impoundment so that if there are any leaks, clean water will flow toward the construction area instead of turbidity flowing away from it.

The Contractor shall specify in advance whether to select Option A or Option B below to provide for project dewatering.

Option A

Provide, install, and operate *two* operable 4" trash pumps to lower the water level inside the impoundment area to prevent the escape of turbidity through or under the cofferdam, or through voids/interstitial space in the riverbed gravel.

Option B

Provide, install, and operate *one* operable 6" trash pump to lower the water level inside the impoundment area to prevent the escape of turbidity through or under the cofferdam, or through voids/interstitial space in the riverbed gravel. (Note - it may be advantageous to use two pumps so that the discharge for each pump can be at a separate location.)

Pumping shall provide a flow rate of at least 1,000 gpm; assume 15' of lift and 200' discharge hose for each pump. Adequate backup pumps should be readily available to the contractor in case of mechanical failure of the primary pumps.

Each water intake shall have a fish screen installed, operated and maintained according to NMFS' fish screen criteria (NMFS 1997; NMFS 2008)

This item shall include monitoring of the discharged water and adding discharge hose or moving of the discharge hose to different locations so that infiltration into the floodplain soils is achieved. Pumped discharge shall not enter the waterway.

Measurement

Measurement for Dewatering shall be lump sum.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

005 Log Structure Excavation, Stockpile and Backfill

This item consists of earthwork at Log Structure installation areas. Work includes:

- excavating streambank and streambed materials to achieve subgrade,
- temporarily stockpiling excavated material,
- if feasible, stockpiling sandy gravel material separated from large cobble
- backfilling the Log Structures.
- within work limits, grubbing, and stockpiling shrubs, trees, and woody debris to be used as slash.
- Falling and placement of two large pines with roots attached (Site A).

Construction

Refer to the Plans for general extents of excavation and backfill. After cofferdam and pumps are in place, excavate streambank and streambed to subgrade, segregating and separately stockpiling fine material (sand and gravel) and coarse material (cobble and boulders). Any existing trees, shrubs, or woody debris that will be removed to gain access to excavation areas shall be stockpiled for use in Log Structures. Only trees and shrubs approved and designated for removal by the Owner may be removed.

Backfill shall be used in conjunction with installing Logs to construct Log Structures. Backfill each completed layer of Logs. Apply coarser material on the waterside and finer material to the backside. Install slash along the waterward edge of backfill.

The quantity of this item has been measured by surface subtraction in AutoCAD and is therefore in-place and not factored for expansion. Dry excavated material may be stockpiled near each work site. Wet excavated material shall be hauled to a stockpile area where turbid water draining from the material cannot enter the waterway.

Measurement

Measurement of Log Structure Excavation, Stockpile, and Backfill shall be lump sum of the quantity measured in ACAD. Additional quantities associated with overcutting or cleaning out slumped materials shall be considered incidental to this item. Also incidental to this item are removal, stockpiling of existing trees, shrubs to be used as slash (installation of slash is incidental to Logs) and tree salvaged slash.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

006 Install Logs

This item consists of on-site movement and installation of Logs (and logs with roots) to construct Log Structures. Logs will be provided by the Owner and will have approximate dimensions of 18-22" diameter at breast height and 35-40' long. This item includes log to log bolted connections.

Bolted connections will be installed for all deflector and habitat logs as directed by owners representative. refer to drawings for installation details. Log to log bolted connections for deflector logs at each jam face.

Construction

Installing Logs shall occur in conjunction Log Structure Excavation, Stockpile, and Backfill to construct Log Structures as shown in the Plans.

Total threaded rod length for each site can be referred to in the construction quantities.

Care should be taken when handling log materials to prevent structural damage and to retain as many roots and branches as possible. The Owner's Representative will be on site to oversee installation of Logs.

Measurement

Payment for construction of log structures shall be by lump sum. Installing imported and salvaged Slash shall be incidental to this item. Bolted connections shall be incidental to this item.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

007 Imported Green Slash

This item includes furnishing and installing Slash into the water and voids of log structures during construction of *Item 006 - Install Logs*.

Slash shall be woody material, such as branches or tops of large trees, or whole small trees. 80 percent of the delivered material shall consist of material that is 3-12 inches diameter, and minimum length of 12 feet.

Slash shall be free of foreign debris such as trash, weeds, dirt, or rocks. All material shall be hauled in from off-site. All material shall be "Green", flexible and/or sound, not rotten, so that handling and compaction in the structure does not significantly pulverize or cause undue breakage of peices.

Construction

Install Slash by intermingling, stacking, and racking the material with Logs to emulate natural accumulations of small woody material.

Measurement

Measurement shall be by cubic yard (CY) of material by truckload. Material shall be packed into the truck box to densify the load to the maximum practical extents without severely damaging the material. The Owner reserves the right to refuse material that does not meet the description provided in this specification.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

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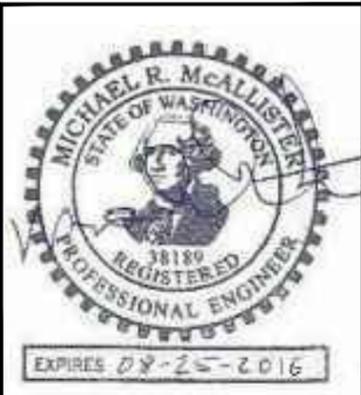
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SPECIFICATIONS

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Project Specifications cont.

008 Mulch

This item includes procurement and transport to the project site mulch that shall be bales of weed-free seedless straw, derived from wheat that meet the requirements of Section 9-14.4 of the Standard Specifications. Mulch application rate shall be approximately 3 tons/acre. Contractor shall submit certification of weed-free and seedless material.

Measurement

Measurement shall be per ton.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

009 Road Repair

Privately owned improved roads will be used to access the project site. Should construction related activities including mobilization and daily transport to and from the project site have adverse effects upon the private roads the contractor will be responsible for adequate rehabilitation back to pre-project conditions. All road repair activities must be pre-approved by the owner and will be reimbursed at the bid price for this item.

Measurement

Measurement for private road repairs will be by the square foot of road surface receiving repair.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

010 Standby Time

Occasionally environmental factors and/or permit regulations require construction projects to temporarily shut down construction activities to avoid adverse impacts to sensitive resources. A declaration of a Level IV Industrial Fire Precaution Level by fire management agencies is one example of an environmental factor that could forcibly interrupt construction work on site for a matter of days to weeks.

Should regulations or restrictions be enforced upon project construction activities resulting from environmental factors beyond the control of the contractor or the owner, the contractor will discuss options with the owner to determine the best course of action for maintaining the project timelines, preserving the good faith cost estimates for implementing the project as designed, and protecting the contractor from being responsible for cost overruns related to the mandatory shut down.

Discharging staff from the project during shut down periods is one way to control payroll costs that could be incurred by the contractor. However, the owner recognizes that leaving heavy construction equipment at the site can be a cost burden to the contractor if that equipment could be temporarily redeployed at other unaffiliated project sites during the shutdown period. For this reason, the owner shall allow the contractor to charge pre-determined standby rates by a unit of time for pre-identified pieces of heavy equipment in order to preserve the opportunity for the equipment to not be mobilized away from the project site. Determination of when standby time shall be assessed by the contractor will be agreed upon by mutual consent between the contractor and the owner in advance when shut down notices are imminent.

As such, it is required that the contractor provide a schedule of rates for standby time by piece of equipment so that all such costs to the project are known in advance.

Measurement

Standby time will be calculated at the daily rate per piece of equipment as per the contractors bid price.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified.

CONSTRUCTION QUANTITIES

ITEM	SITE A	SITE B	SITE C
COFFERDAM	115 FT.	120 FT.	120 FT.
EXCAVATION	650 CY	550 CY	620 CY
BACKFILL	490 CY	450 CY	560 CY
HAUL OFF-SITE	140 CY	100 CY	60 CY
LOGS	2	5	3
LOGS WITH ROOTWADS	17	16	15
LARGE WHOLE TREES	2	NA	NA
50 FT. LOGS	NA	NA	2
SLASH	40 CY. (SALVAGE)	30 CY. (IMPORT)	40 CY. (IMPORT)
THREADED ROD	63 FT.	42 FT.	42 FT.
WASHERS	18	14	14
BOLTS	18	14	14
MULCH	0.5 ACRES	0.3 ACRES	0.3 ACRES

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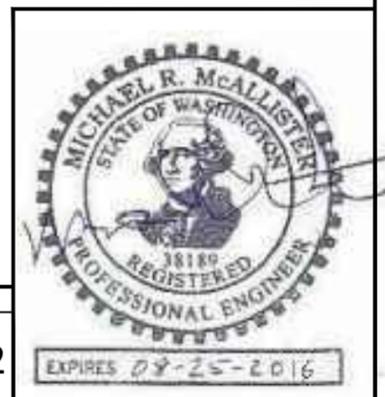


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SPECIFICATIONS AND
CONSTRUCTION QUANTITIES

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BID SHEET

Lower Twisp Large Wood Enhancement Project Phases 5&6

Please provide costs by Project Task as described in the Scope of Work. Use the Cost Assumptions column to further describe the bid price.

Item	Cost	Cost Assumptions
Phase 5: Construction Management		
TASK 13.0— Assistance During Bidding		
TASK 14.0— Engineer’s Oversight during Project Construction		
Phase 6: Monitoring		
Task 15.0—Produce a Monitoring Plan		

CERTIFICATION:

Company Name

Date Prepared

Printed Name and Title

Signature