



2017 Twisp River

Twisp Horseshoe Side Channel Project

Columbia River

Honor. Protect.
Restore.

Updated Bid Packet – April 21, 2017

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Toppenish, WA 98948

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Dear Contractor:

The Yakama Nation's Upper Columbia Habitat Restoration Project is requesting bids for construction of a **Salmon Habitat Enhancement Project** to be implemented adjacent to the Twisp River in July – August of 2017. The project will involve all work elements and specifications found in the Project Plans attached to this bid packet.

If you are interested in an award for this contract please attend the only pre-bid site visit scheduled on **Thursday, April 20, 2017, at 10:00 am** at the project location (**929B Twisp River Rd., Twisp, WA 98856**). This site visit will be conducted by Yakama Nation Fisheries Habitat Biologist Madeleine Eckmann, who is the project manager.

By the close of business on **Thursday, May 4, 2017**, each contractor must have completed and submitted a signed copy of the attached Twisp Horseshoe Side Channel Project Bid Sheet. Please specify in writing on the bid sheets that all bid prices will be valid for at least 150 days. All competitive bid materials must be either hand delivered or sent by parcel delivery service or postal mail to:

Yakama Nation
Attn: Jackie Olney
RE: Twisp Horseshoe Side Channel Project
PO Box 151
Toppenish WA, 98948
(Shipping address: 401 Fort Road, Toppenish, WA 98948)

Major portions of the project will be conducted between **July 1 and July 31, 2017**, to coincide with the permitted in-water work windows negotiated with NOAA, USFWS, and WDFW for this project. The full project will occur when ESA-listed juvenile and adult salmon and steelhead may be present in or near the project area so turbidity control via cofferdam systems will be of the utmost importance. The winning contractor will understand the magnitude of this project and be equipped to perform all necessary elements for a project of this type within a critical habitat stream. The winning contractor will have extensive experience in the following: building cofferdams, de-watering following NMFS fish screening protocols, constructing log jams, excavating engineered channels and minimizing local disturbance.

All contractors submitting bids for this project shall provide and/or demonstrate, at a minimum, the following:

- ***A list of experienced equipment operators that will be on-site during project construction. Please provide details of their work on in-stream habitat enhancement structures within the past several years.***
- ***A detailed construction timeline of how you propose to get all project tasks completed within the stated project timeline.***
- ***Experience and preferably examples of the ability to create de-watered work areas through the use of coffering techniques. A cofferdam and surface water diversion plan should be submitted with the bid documents.***
- ***A list of key pieces of heavy equipment that will be used in construction of the project.***

Please note:

- Davis Bacon Wages apply to this contract. The winning contractor will adhere to the Davis Bacon rules and comply and submit all necessary paperwork to the Yakama Nation.
- The Yakama Nation is exempt from state taxes on this project. Please see the attached Treaty Fishery Exempt Cover Letter and Treaty Fishery Exempt Certificate. The winning contractor will receive signed copies for their records.
- This project has adopted by reference in the Engineer's Planset the 2014 Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction. Please download a digital copy of the WSDOT 2014 Standard Specifications from <http://www.wsdot.wa.gov/publications/manuals/fulltext/M41-10/SS2014.pdf> .
- This project will occur on private properties and no one is allowed on the property prior to the site visit without specific consent of the property owner.
- Awarded contractor must provide “san-i-can” service.

The attached template Construction Services Agreement provides an overview of the scope of work likely to be incorporated into the awarded contract. Please make note of specific provisions provided in this Construction Services Agreement, including the detailed Exhibits, that may be in addition to the specifications and directions found in the Project Planset.

Also, please note that this project is pending on permitting and final landowner permission. The Yakama Nation reserves the right to accept or reject any and all of the proposals received as a result of this request, or to cancel in part or entirely this request if it is in the best interest of the Yakama Nation to do so. This request does not commit the Yakama Nation to pay any costs incurred in the preparation of a proposal.

For questions regarding the site visit, please contact me at the numbers provided below.

Sincerely,

A handwritten signature in blue ink that reads "M. Eckmann".

Madeleine Eckmann
Yakama Nation Fisheries
2 Johnson Lane
Winthrop, WA 98862
(509) 449-2091 (cell)
eckm@yakamafish-nsn.gov

BID PROPOSAL for Twisp Horseshoe Side Channel Project
Please use the Engineer's Stamped Project Plans and the bid packet
to produce your competitive bids.

No.	Item	Quantity	Unit	Unit Price	Extended Price
1	TESC, SPCC Plan and Implementation	1	LS		
2	Mobilization	1	LS		
3	Clearing and Grubbing	1	LS		
4	Channel Excavation Incl. Haul	3,200	CY		
5	Culvert	1	LS		
6	Riffle Material	130	CY		
7	Logs (Side Channel Site)	1	LS		
8	Cofferdam	1	LS		
9	Pumping	1	LS		
10	Log Structure	1	LS		
11	Road Repair: Crushed Surfacing	450	CY		
12	Streambed Boulders (Side Channel Site)	45	CY		
13	Large Boulders (Side Channel Site)	60	CY		
				TOTAL (do not include tax)	\$ -

Company Name:

Date Prepared:

Certification

Printed Name and Title

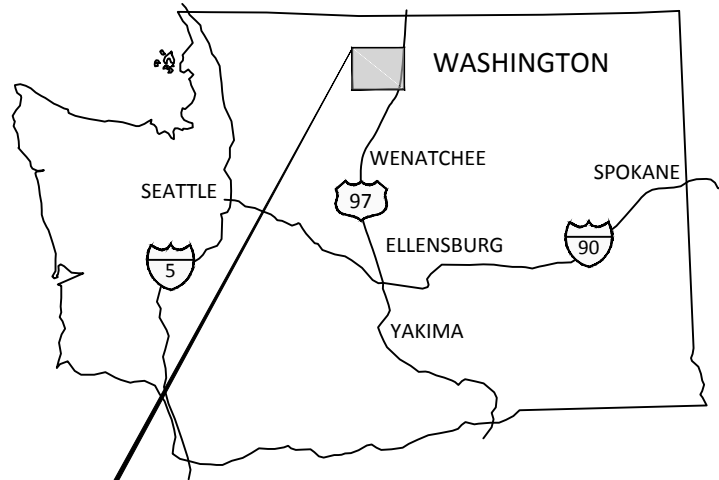
Signature

By signing and submitting this form you are agreeing to honor the completed competitive bid for a period of up to 150 days from the date this form was prepared.

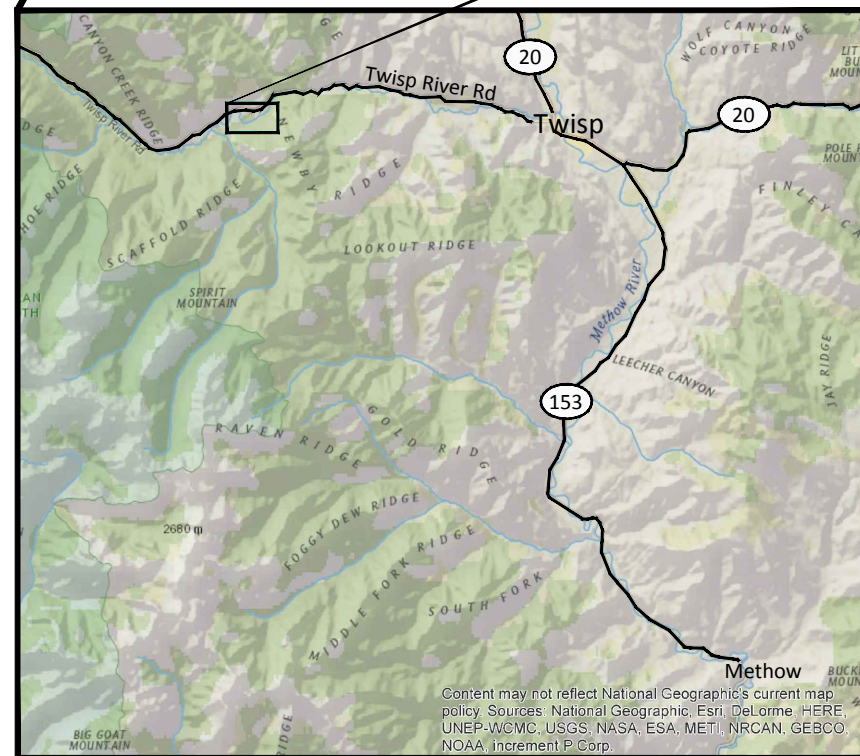
TWISP RIVER, HORSESHOE BEND

SIDE CHANNEL PROJECT

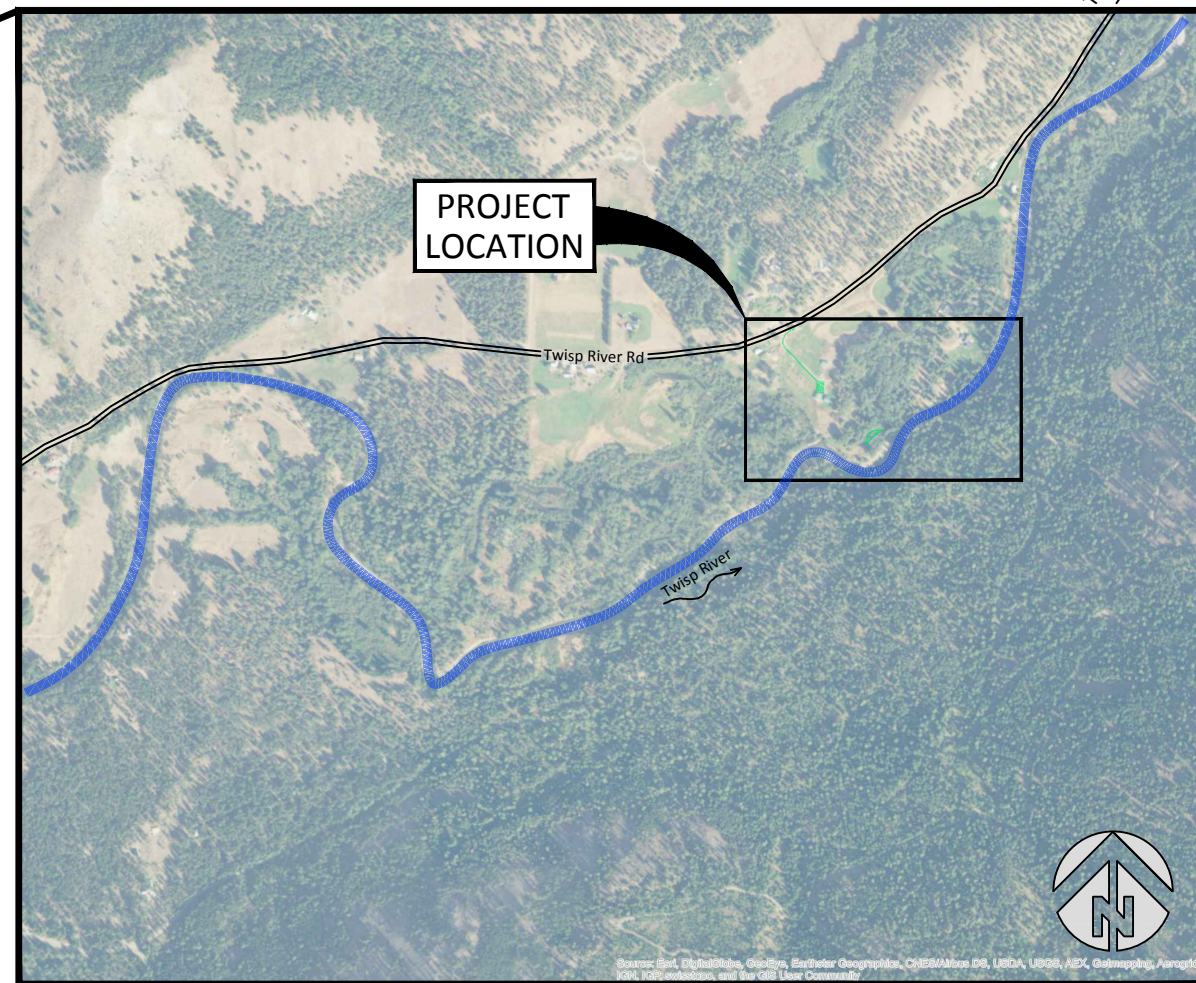
Final Design



YAKAMA NATION FISHERIES
2 JOHNSON LANE
WINTHROP WA, 98862



VICINITY MAP
SCALE: 1" = 4 MILES



SITE MAP
SCALE: 1" = 1/4 MILE

COORDINATES:
LATITUDE N 48.369176°
LONGITUDE W 120.307181°

SECTION 11, TOWNSHIP 33N, RANGE 20E

WATERBODY: TWISP RIVER
TRIBUTARY OF: METHOW RIVER

SHEET LIST

- 1 Cover, Sheet List and Location Maps
- 2 General Notes
- 3 Erosion Control Notes
- 4 Erosion Control Notes (Cofferdam)
- 5 Existing Conditions and Land Ownership
- 6 Proposed Conditions, Staging, Access and Sheet Index
- 7 Side Channel Plan and Profile
- 8 Side Channel Cross Sections
- 9 Side Channel Typical Details
- 10 Culvert Plan and Sections
- 11 Riverbank Log Structure
- 12 Specifications
- 13 Specifications
- 14 Specifications



04/15/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM 10/23/2018 10:00 AM

NO.	BY	DATE	REVISION DESCRIPTION

DF	LH,MM	LH,MM
DRAWN	DESIGNED	CHECKED
MM	4/11/17	15-02-23
APPROVED	DATE	PROJECT

**TWISP RIVER HORSESHOE BEND
SIDE CHANNEL PROJECT
TWISP, WASHINGTON**



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

**COVER, SHEET LIST AND
LOCATION MAPS**

SHEET
1 OF 14

IT IS STRONGLY SUGGESTED THAT THE CONTRACTOR ATTEND A PRE-BID SITE MEETING.

THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE OWNER AND OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

ALL WORK SHALL CONFORM TO THE 2014 EDITIONS OF STANDARD PLANS AND SPECIFICATIONS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), AND LOCAL STANDARDS UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT WILL PREVAIL.

IN CASE OF DISCREPANCY, BETWEEN NOTES, LOCAL REGULATIONS, OR OTHER CONTRACT DOCUMENTATION, CONTRACTOR SHALL OBTAIN CLARIFICATION/DIRECTION FROM OWNER.

EXISTING DATA

TOPOGRAPHIC SURVEY COLLECTED BY INTER-FLUVE, INC. BY RTK GPS AND TOTAL STATION IN OCTOBER AND DECEMBER 2013 AND JULY 2015. REFERENCED TO NAD83 WASHINGTON STATE PLANE, NORTH ZONE US FEET NAVD 88.

PROPERTY BOUNDARIES PROVIDED BY OKANOGAN COUNTY, 2015.

WETLAND BOUNDARIES DISPLAYED IN THIS SET ARE THE RESULT OF A WETLAND ASSESSMENT PERFORMED BY INTER-FLUVE, INC. IN OCTOBER 2013.

THE ORDINARY HIGH WATER (OHW) AND APPROXIMATE LOW WATER LINES DISPLAYED IN THE DESIGN PACKAGE WERE DELINEATED BY INTER-FLUVE STAFF IN 2014 AND 2015, AND ARE BASED UPON ANALYSIS, MODELING AND BEST PROFESSIONAL JUDGEMENT.

HYDRAULIC MODELING BY INTER-FLUVE USING USACE HEC-RAS (5.0). MODEL CALIBRATED USING SURVEYED WATER SURFACE ELEVATIONS AND EXISTING HIGH WATER MARKS.

SOILS

TWISP RIVER GRAVEL AND FLOODPLAIN SOILS.

PRESENCE OF CONTAMINANTS ON THIS SITE HAS BEEN EVALUATED THROUGH THE EXCAVATION OF TEST PITS IN THE PROJECT AREA, SITE VISITS, ANALYSIS OF THE HISTORICAL PHOTO RECORD, AND CONVERSATIONS WITH LANDOWNERS. THESE ANALYSES SUGGEST THAT IT IS UNLIKELY THAT CONTAMINANTS WILL BE ENCOUNTERED ON THIS SITE.

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.

WDFW IN-WATER WORK PERIODS

WORK SHALL OCCUR DURING THE PERMITTED IN-WATER WORK PERIOD STATED IN THE HYDRAULIC PROJECT APPROVAL. ALL APPLICABLE REGULATORY PERMITS AND AUTHORIZATIONS WILL BE OBTAINED PRIOR TO CONSTRUCTION.

FISH RESCUE

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. METHODS USED SHALL COMPLY WITH THOSE LISTED IN BPA HIPIII CONSERVATION MEASURES.

ALL FISH TRAPPED IN RESIDUAL POOLS WITHIN THE PROJECT AREA WILL BE CAREFULLY COLLECTED BY SEINE AND/OR DIP NETS AND PLACED IN CLEAN TRANSFER CONTAINERS WITH ADEQUATE VOLUME OF WATER AND HELD WITHIN NO LONGER THAN 10 MINUTES.

CAPTURED FISHES SHALL BE IMMEDIATELY RELEASED INTO THE RIVER.

CULTURAL RESOURCES

IF ANY ARCHAEOLOGICAL RESOURCES AND/OR ARTIFACTS ARE ENCOUNTERED DURING CONSTRUCTION ALL CONSTRUCTION ACTIVITY SHALL IMMEDIATELY CEASE AND THE OWNER SHALL BE CONTACTED.

TREE SALVAGE

ALL SAPLING AND TREES TO BE REMOVED FOR ACCESS WILL BE APPROVED AND CLEARLY MARKED BY THE OWNER'S REPRESENTATIVE.

ALL REMOVED VEGETATION SHALL BE INCORPORATED INTO LOG JAM STRUCTURES AS DIRECTED BY THE OWNER'S REPRESENTATIVE. IF EXCESS MATERIAL NEEDS DISPOSAL OUTSIDE OF CHANNEL WORK, IT SHALL BE DISTRIBUTED ON THE FLOODPLAIN AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

ALL TREES REMOVED WITHIN CLEARING LIMITS SHALL BE REMOVED WHOLE WITH ROOTS INTACT AND UTILIZED IN THE CHANNEL CONSTRUCTION AS DIRECTED BY OWNER'S REPRESENTATIVE.

LIVE TREES

ALL TREES NOT MARKED FOR REMOVAL SHALL BE PRESERVED AND UNDISTURBED. CONSTRUCTION ACTIVITY SHALL NOT DEBARK OR DAMAGE LIVE TREES.

KEEP OUT OF DRIP LINE OF ALL PRESERVED EXISTING TREES.

IMPORTED LOGS

WOOD WILL BE PROVIDED BY THE OWNER, AND HAS BEEN INSPECTED BY THE ENGINEER PRIOR TO PROJECT DESIGN. KEY PIECES OF LARGE WOOD WILL BE HARD, INTACT, AND NOT DECAYING.

CONSTRUCTION ACCESS

THE CONTRACTOR IS ADVISED THAT ACCESS TO THE SITE WILL BE BY RURAL ROADS OF LIMITED WIDTH.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ANY REQUIRED TRAFFIC CONTROL OR ACCESS PERMITS, AND PROVIDING REQUIRED TRAFFIC CONTROL MEASURES 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.

ALL TEMPORARY ACCESS ROUTES SHALL BE DECOMMISSIONED BY OBLITERATION AND DECOMPACTION. STABILIZE SOIL AND REVEGETATE PER PLANTING PLAN. TEMPORARY ACCESS ROUTES IN AREAS PRONE TO INUNDATION DURING THE IN-WATER WORK WINDOW SHALL BE DECOMMISSIONED BEFORE THE END OF THE IN-WATER WORK WINDOW.

WHEN TEMPORARY VEGETATION REMOVAL IS REQUIRED, VEGETATION WILL BE CUT TO GROUND LEVEL (NOT GRUBBED).

CONSTRUCTION STAKING

THE OWNER WILL INSTALL STAKES AND OR FLAGGING TO DELINEATE WETLANDS, EQUIPMENT ENTRY AND AXIT POINTS, STAGING AND STOCKPILE AREAS, AND PROJECT LIMIT. THE OWNER WILL INSTALL GRADE STAKES, AND ELEVATION CONTROL POINTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING DAMAGED OR MISSING STAKES.

CONTRACTOR SHALL MEET WITH THE OWNER AND OWNER'S REPRESENTATIVE TO DEFINE AND MARK LIMITS OF DISTURBANCE PRIOR TO MOBILIZATION OF EQUIPMENT OR MATERIALS ONTO THE SITE.

SOME FIELD ADJUSTMENTS TO THE LINES AND GRADES ARE TO BE EXPECTED. LOCATION, ALIGNMENT, AND ELEVATION OF LOGS AND LOGS WITH ROOTWADS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD CONDITIONS, AND MATERIAL SIZE.

STAGING, STORAGE, AND STOCKPILE AREAS

STAGING AREAS (USED FOR CONSTRUCTION EQUIPMENT STORAGE, VEHICLE STORAGE, FUELING, SERVICING, AND HAZARDOUS MATERIAL STORAGE) SHALL BE 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND, OR ON AN ADJACENT, ESTABLISHED ROAD AREA IN A LOCATION AND MANNER THAT PRECLUDES EROSION INTO OR CONTAMINATION OF THE STREAM OR FLOODPLAIN.

EXCAVATED MATERIALS SHALL BE STOCKPILED NEATLY IN AN APPROVED LOCATION WITHIN THE STOCKPILE AND STAGING AREA. AT COMPLETION OF WORK, THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY PERMITS AND FEES REQUIRED FOR LEGAL DISPOSAL.

NATURAL MATERIALS USED FOR IMPLEMENTATION OF AQUATIC RESTORATION, SUCH AS LARGE WOOD, GRAVEL, AND BOULDERS, MAY BE STAGED WITHIN THE 100-YEAR FLOODPLAIN.

ANY LARGE WOOD, TOPSOIL, AND NATIVE CHANNEL MATERIAL DISPLACED BY CONSTRUCTION WILL BE STOCKPILED FOR USE DURING SITE RESTORATION AT A SPECIFICALLY IDENTIFIED AND FLAGGED AREA.

ANY MATERIAL NOT USED IN RESTORATION, AND NOT NATIVE TO THE FLOODPLAIN, WILL BE REMOVED TO A LOCATION OUTSIDE OF THE 100-YEAR FLOODPLAIN FOR DISPOSAL.

EQUIPMENT

MECHANIZED EQUIPMENT AND VEHICLES WILL BE SELECTED, OPERATED, AND MAINTAINED IN A MANNER THAT MINIMIZES ADVERSE EFFECTS ON THE ENVIRONMENT (E.G., MINIMALLY-SIZED, LOW PRESSURE TIRES; MINIMAL HARD-TURN PATHS FOR TRACKED VEHICLES; TEMPORARY MATS OR PLATES WITHIN WET AREAS OR ON SENSITIVE SOILS). ALL VEHICLES AND OTHER MECHANIZED EQUIPMENT WILL BE:

STORED, FUELED, AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND OR ON AN ADJACENT, ESTABLISHED ROAD AREA;

REFUELED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM A NATURAL WATERBODY OR WETLAND, OR IN AN ISOLATED HARD ZONE, SUCH AS A PAVED PARKING LOT OR ADJACENT, ESTABLISHED ROAD (THIS MEASURE APPLIES ONLY TO GAS-POWERED EQUIPMENT WITH TANKS LARGER THAN 5 GALLONS);

BIODEGRADABLE LUBRICANTS AND FLUIDS SHOULD BE USED, IF POSSIBLE, ON EQUIPMENT OPERATING IN AND ADJACENT TO THE STREAM CHANNEL AND LIVE WATER.

INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 150 FEET OF ANY NATURAL WATER BODY OR WETLAND; AND

THOROUGHLY CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION, TO REMAIN GREASE FREE.

ABBREVIATIONS

APPROX	APPROXIMATE	INV	INVERT
CY	CUBIC YARDS	LWM	LARGE WOODY MATERIAL
°	DEGREES	MAX	MAXIMUM
DIA or Ø	DIAMETER	MIN	MINIMUM
DBH	DIAMETER AT BREAST HEIGHT	OHW	ORDINARY HIGH WATER
EA	EACH	%	PERCENT
EL or ELEV	ELEVATION	RMx	RIVER MILE x
ESC	EROSION AND SEDIMENT CONTROL	STA	STATION
EXIST	EXISTING	TBD	TO BE DETERMINED
FT or '	FEET	TYP	TYPICAL
FTR	FULLY THREADED ROD	VERT	VERTICAL
HORIZ	HORIZONTAL	WSE	WATER SURFACE ELEVATION
IN or "	INCH	YR	YEAR



04/11/2017 10:00 AM - 10:00 AM - 10/17/17

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DRAWN	DESIGNED	CHECKED
MM	4/11/17	15-02-23
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**TWISP RIVER HORSESHOE BEND
SIDE CHANNEL PROJECT
TWISP, WASHINGTON**



501 Portway Avenue, Suite 101
Hood River, OR 97031
541.386.9003
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GENERAL NOTES

EROSION CONTROL

CONTRACTOR SHALL BE SOLELY RESPONSIBLE AT OWN EXPENSE FOR PROVIDING AND MAINTAINING ALL NECESSARY EROSION CONTROL FACILITIES TO COMPLY WITH APPLICABLE EROSION CONTROL REGULATIONS AND TO MAINTAIN CLEAN ACCESS ROUTES.

EROSION/SEDIMENTATION CONTROL (ESC) PLAN

THE EROSION AND SEDIMENT CONTROL (ESC) PLAN PROVIDED IS FOR INFORMATIONAL PURPOSES ONLY, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING EROSION CONTROL MEASURES TO COMPLY WITH APPLICABLE REGULATIONS. EROSION CONTROL MEASURES IN THE ESC PLAN SHALL BE COMPATIBLE WITH BPA HIP3 CONSERVATION MEASURES FOR EROSION CONTROL.

THE RECOMMENDATIONS FOR AN ESC PLAN INCLUDED HEREIN WILL PROVIDE A GUIDELINE FOR THE CONTRACTOR TO DEVELOP AND IMPLEMENT AN ESC PLAN.

A. THE IMPLEMENTATION OF AN ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

B. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

ESC FACILITIES AS APPROXIMATELY SHOWN ON THIS PLAN ARE TO BE CONSTRUCTED PRIOR TO CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM.

STABILIZE SOILS AND PROTECT SLOPES

FROM MAY 1 THROUGH SEPTEMBER 30, ALL EXPOSED SOILS SHALL BE PROTECTED FROM EROSION BY MULCHING, PLASTIC SHEETING, HYDROSEED COVERING, OR OTHER APPROVED MEASURES WITHIN THREE DAYS OF GRADING. FROM OCTOBER 1 THROUGH APRIL 30, ALL EXPOSED SOILS MUST BE PROTECTED WITHIN 2 DAYS OF GRADING. SOILS SHALL BE STABILIZED BEFORE A WORK SHUTDOWN, HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES. MULCH AS SOON AS PRACTICAL ALL DISTURBED AREAS NOT INDICATED IN THE CONTRACT DOCUMENTS FOR OTHER PERMANENT STABILIZATION MEASURES. HAY, STRAW, AND MULCH USED ON SITE MUST BE 99.9% WEED-FREE.

DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. REDUCE SLOPE VELOCITIES ON DISTURBED SLOPES BY PROVIDING TEMPORARY BARRIERS. STORMWATER FROM OFF SITE SHOULD BE HANDLED SEPARATELY FROM STORMWATER GENERATED ON SITE.

AFTER FINAL SITE STABILIZATION

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED FROM THE SITE OR INCORPORATED INTO FINISHED GRADING. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

DUST CONTROL

THE CONTRACTOR SHALL CONTROL DUST FOR THE DURATION OF THE PROJECT. CONTROL MEASURES SHALL BE IN ACCORDANCE WITH APPLICABLE REGULATIONS, AND IN ACCORDANCE WITH BPA HIP-III CONSERVATION MEASURES PERTAINING TO DUST ABATEMENT.

INVASIVE SPECIES CONTROL

THE FOLLOWING MEASURES WILL BE FOLLOWED TO AVOID INTRODUCTION OF INVASIVE PLANTS AND NOXIOUS WEEDS INTO PROJECT AREAS:

PRIOR TO ENTERING THE SITE, ALL VEHICLES AND EQUIPMENT WILL BE POWER WASHED, ALLOWED TO FULLY DRY, AND INSPECTED TO MAKE SURE NO PLANTS, SOIL, OR OTHER ORGANIC MATERIAL ADHERES TO THE SURFACE.

WATERCRAFT, WADERS, BOOTS, AND ANY OTHER GEAR TO BE USED IN OR NEAR WATER WILL BE INSPECTED FOR AQUATIC INVASIVE SPECIES.

WADING BOOTS WITH FELT SOLES ARE NOT TO BE USED DUE TO THEIR PROPENSITY FOR AIDING IN THE TRANSFER OF INVASIVE SPECIES.

CONSTRUCTION DEWATERING

CONTRACTOR SHALL PERFORM CONSTRUCTION DEWATERING IN SUCH A MANNER AS TO AVOID THE RELEASE OF TURBID OR SEDIMENT-LADEN WATER IN ORDER TO PREVENT CONTAMINATION OR INCREASE TURBIDITY OF SURFACE WATERS. EXCAVATION OF DEWATERING SUMPS BEYOND LIMITS SHOWN SHALL BE AT NO ADDITIONAL COST. SEDIMENT LADEN WATER MAY BE PUMPED TO AN UPLAND DISCHARGE LOCATION AND ALLOWED TO SHEET FLOW THROUGH EXISTING VEGETATION BEFORE INFILTRATING INTO THE GROUND. IF THIS METHOD IS NOT SUFFICIENT TO PREVENT RETURN OF TURBID WATER TO SURFACE WATERS OR SENSITIVE FLOODPLAIN AREAS, A 'DIRT-BAG' OR SEDIMENT RETENTION STRUCTURE MAY BE REQUIRED AS NECESSARY TO COMPLY WITH LAWS AND PERMIT REQUIREMENTS AT NO ADDITIONAL COST.

CONTRACTOR SHALL PROVIDE, OPERATE, AND MAINTAIN NUMBER AND SIZE OF PUMPS AS NECESSARY TO ACHIEVE DEWATERING NEEDS. AT A MINIMUM, CONTRACTOR SHALL PROVIDE A 600 GPM RATED PUMP AND A PORTABLE 10 GPM RATED PUMP. ADDITIONAL PUMPS AND OF DIFFERENT CAPACITIES MAY BE REQUIRED AT CONTRACTOR'S EXPENSE.

OWNER OR OWNER'S REPRESENTATIVE SHALL APPROVE DEWATERING DISCHARGE LOCATION PRIOR TO IMPLEMENTATION.

A. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED AT NO ADDITIONAL COST FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.

B. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

C. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.

D. STABILIZED CONSTRUCTION ENTRANCES AND ADDITIONAL MEASURES MAY BE REQUIRED AND SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT.

SPILL PREVENTION, CONTROL, AND COUNTER MEASURES

THE USE OF MECHANIZED MACHINERY INCREASES THE RISK FOR ACCIDENTAL SPILLS OF FUEL, LUBRICANTS, HYDRAULIC FLUID, OR OTHER CONTAMINANTS INTO THE RIPARIAN ZONE OR DIRECTLY INTO THE WATER. ADDITIONALLY, UNCURED CONCRETE AND FORM MATERIALS ADJACENT TO THE ACTIVE STREAM CHANNEL MAY RESULT IN ACCIDENTAL DISCHARGE INTO THE WATER. THESE CONTAMINANTS CAN DEGRADE HABITAT, AND INJURE OR KILL AQUATIC FOOD ORGANISMS AND ESA-LISTED SPECIES. THE PROJECT SPONSOR WILL ADHERE TO THE FOLLOWING MEASURES:

A DESCRIPTION OF HAZARDOUS MATERIALS THAT WILL BE USED, INCLUDING INVENTORY, STORAGE, AND HANDLING PROCEDURES WILL BE AVAILABLE ON-SITE.

WRITTEN PROCEDURES FOR NOTIFYING ENVIRONMENTAL RESPONSE AGENCIES WILL BE POSTED AT THE WORK SITE.

SPILL CONTAINMENT KITS (INCLUDING INSTRUCTIONS FOR CLEANUP AND DISPOSAL) ADEQUATE FOR THE TYPES AND QUANTITY OF HAZARDOUS MATERIALS USED AT THE SITE WILL BE AVAILABLE AT THE WORK SITE.

WORKERS WILL BE TRAINED IN SPILL CONTAINMENT PROCEDURES AND WILL BE INFORMED OF THE LOCATION OF SPILL CONTAINMENT KITS.

ANY WASTE LIQUIDS GENERATED AT THE STAGING AREAS WILL BE TEMPORARILY STORED UNDER AN IMPERVIOUS COVER, SUCH AS A TARPULIN, UNTIL THEY CAN BE PROPERLY TRANSPORTED TO AND DISPOSED OF AT A FACILITY THAT IS APPROVED FOR RECEIPT OF HAZARDOUS MATERIALS.

VEGETABLE BASED HYDRAULIC FLUIDS (BIODEGRADABLE OIL) WILL BE USED IN ANY VEHICLE THAT WILL BE OPERATED NEAR THE WATER.

INSPECTION AND MAINTENANCE

ALL ESC FACILITIES SHALL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ESC FACILITIES SHALL BE INSPECTED DAILY AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD AND AFTER EVENTS EXCEEDING 2 HOURS DURATION.

CONTRACTOR'S ESC RECORD

WEEKLY REPORTS SUMMARIZING THE SCOPE OF INSPECTIONS, THE PERSONNEL CONDUCTING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN, AND ACTIONS TAKEN AS A RESULT OF THESE INSPECTIONS SHALL BE PREPARED AND RETAINED ON SITE BY THE CONTRACTOR. IN ADDITION, A RECORD OF THE FOLLOWING DATES SHALL BE INCLUDED IN THE REPORTS:

1. WHEN MAJOR GRADING ACTIVITIES OCCUR,
2. DATES OF RAINFALL EVENTS EITHER EXCEEDING 2 HOURS DURATION OR MORE THAN 0.5 INCHES/24 HOURS,
3. WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON SITE, OR ON A PORTION OF THE SITE,
4. WHEN STABILIZATION MEASURES ARE INITIATED FOR PORTIONS OF THE SITE.

ESC RECORDS SHALL BE MADE AVAILABLE TO THE OWNER AND OWNER'S REPRESENTATIVE ON REQUEST AND SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO APPLICATION FOR PAYMENT.

STAGED REWATERING PLAN.

THIS PLAN SHALL BE USED AS A GUIDE TO RE-WATER THE CONSTRUCTED SIDE CHANNEL. COFFERDAMS SHALL BE USED TO ISOLATE THE CONSTRUCTED CHANNEL FROM THE MAINSTEM TWISP RIVER UNTIL DIRECTED IN THIS REWATERING PLAN.

1) PRE-WASH THE NEWLY-EXCAVATED CHANNEL BEFORE REWATERING. TURBID WASH WATER WILL BE DETAINED AND PUMPED TO THE FLOODPLAIN, RATHER THAN DISCHARGING TO FISH-BEARING WATERS. IF CHANNEL RE-WATERS NATURALLY THROUGH GROUNDWATER, THE CHANNEL SHALL BE PUMPED INTO AN UPLAND DISCHARGE LOCATION UNTIL TURBIDITY REACHES LESS THAN 10% HIGHER THAN TWISP RIVER WATER. USING GROUNDWATER TO RE-WATER THE CHANNEL WILL ALLOW THE CONTRACTOR TO SKIP STEPS 2 THROUGH 5 BELOW AND PROCEED TO STEP 6.

2) PREPARE NEW CHANNEL FOR WATER BY INSTALLING SEINE AT UPSTREAM END TO PREVENT FISH FROM MOVING DOWNSTREAM INTO NEW CHANNEL UNTIL 2/3 OF TOTAL STREAMFLOW IS AVAILABLE IN THAT CHANNEL. STARTING IN THE EARLY MORNING, INTRODUCE 1/3 OF THE FLOW INTO THE NEW CHANNEL WHILE MONITORING TURBIDITY TO ENSURE IT DOES NOT EXCEED 10% OF BACKGROUND (UTILIZING HIP III TURBIDITY MONITORING PROTOCOL).

A) IF TURBIDITY EXCEEDS 10% OF BACKGROUND, MODIFY THE ACTIVITY TO REDUCE TURBIDITY. IN THIS CASE, THIS MAY MEAN DECREASING THE AMOUNT OF FLOW ENTERING THE NEW CHANNEL AND/OR CORRECTING ANY OTHER ISSUES CAUSING TURBIDITY (E.G., CORRECT A BANK THAT IS SLOUGHING, INSTALL OR CORRECT A BMP, ETC.).

B) MONITOR AS LONG AS THE INSTREAM ACTIVITY IS OCCURRING.

C) IF EXCEEDANCES OCCUR FOR MORE THAN 2 MONITORING INTERVALS IN A ROW (4 HOURS), THEN THE ACTIVITY MUST STOP UNTIL TURBIDITY REACHES BACKGROUND LEVELS. THIS MEANS THAT THE CONTRACTOR MAY HAVE TO PLUG OFF WATER SUPPLY TO THE SIDE CHANNEL UNTIL TURBIDITY IS WITHIN ACCEPTABLE LEVELS.

D) ONCE TURBIDITY IS WITHIN 10% OF BACKGROUND LEVELS, MOVE ON TO THE NEXT RE-WATERING STAGE.

4) INTRODUCE THE SECOND 1/3 OF THE FLOW FROM THE UPSTREAM END WITH THE SEINE IN PLACE. PERFORM MONITORING AS IN #2 ABOVE.

5) AFTER THE SECOND 1/3 OF FLOW IS INTRODUCED AND TURBIDITY IS WITHIN 10% OF THE BACKGROUND LEVEL, REMOVE SEINE NETS FROM THE UPSTREAM END.

6) INTRODUCE THE FINAL 1/3 OF FLOW. ONCE 100% OF THE FLOW IS IN THE NEW CHANNEL AND TURBIDITY IS WITHIN 10% OF THAT IN THE TWISP RIVER, REMOVE THE DOWNSTREAM COFFERDAM, FOLLOWED BY THE UPSTREAM COFFERDAM.



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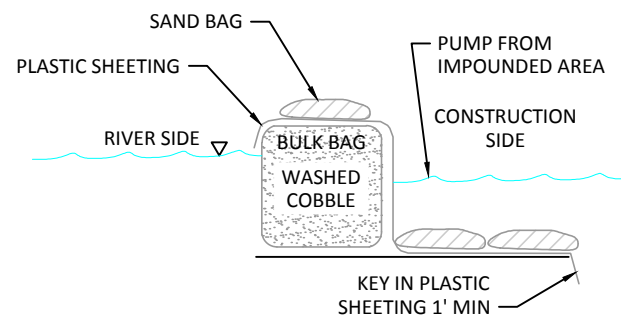
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DRAWN	DESIGNED	CHECKED
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APPROVED	DATE	PROJECT

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SIDE CHANNEL PROJECT
TWISP, WASHINGTON**

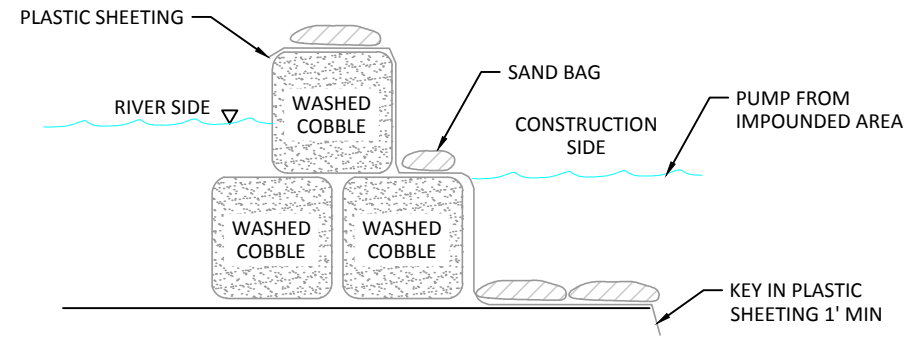


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EROSION CONTROL NOTES	SHEET 3 OF 14
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SECTION - WATER DEPTHS LESS THAN 2.5'



SECTION - WATER DEPTHS GREATER THAN 2.5'

BULK BAG NOTES:

1. BULK BAG COFFERDAM SHALL BE CONSTRUCTED OF SEVERAL UNITS OF BULK BAGS FILLED WITH WASHED COBBLE, AND ABUTTED SIDE BY SIDE TO CREATE A ROW THAT ISOLATES THE CONSTRUCTION SITE.
2. 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.
3. THE PLASTIC SHEETING SHALL BE DRAPED ALONG THE CHANNEL BOTTOM ON BOTH SIDES 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. ALL SANDBAGS SHALL BE FILLED WITH WASHED PEA GRAVEL.
4. THE CONSTRUCTION SIDE 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.
5. IF POSSIBLE, THE COFFERDAM SHALL BE EXTENDED ONTO A GRAVEL BAR AND OUT OF THE WATER. IF THE COFFERDAM MUST BE TERMINATED AT THE RIVER BANK, THE TERMINAL END OF THE COFFERDAM, WHERE IT CONNECTS TO CHANNEL BANK OR HIGH GROUND, SHALL BE SEALED TO THE GROUND WITH PLASTIC SHEETING AND STANDARD SANDBAGS. MULTIPLE LAYERS OF PLASTIC SHEETING AND SANDBAGS MAY BE REQUIRED TO FORM A WATERTIGHT SEAL.
6. BULK BAGS SHALL BE CUBE-SHAPED POLYPROPYLENE WOVEN FABRIC BAGS WITH FULLY OPEN TOP, FLAT BOTTOM, FOUR LOOPS, MINIMUM 2-TON WEIGHT CAPACITY, MINIMUM 5:1 SAFETY FACTOR.
7. PLASTIC SHEETING SHALL BE MINIMUM 6-MIL THICKNESS. ROLL LENGTH SHALL BE LONG ENOUGH TO ENSURE THAT ENTIRE LENGTH OF COFFERDAM WILL BE COVERED WITHOUT A SEAM. MINIMUM 12-FT WIDE ROLL SHALL BE USED FOR SINGLE LAYER BULK BAG COFFERDAM. MINIMUM 16-FT WIDE ROLL SHALL BE USED FOR 2-LAYER STACKED BULK BAG COFFERDAM.
8. CONTRACTOR SHALL PROVIDE PUMPING SUFFICIENT FOR A NET INFLOW OF WATER TO THE AREA ENCLOSED BY THE COFFERDAM, AND DISCHARGE TURBID WATER TO UPLAND FLOODPLAIN.
9. BULK BAG COFFERDAM SHALL BE COMPLETELY REMOVED AFTER CONSTRUCTION IS COMPLETED AND TURBIDITY HAS BEEN REMOVED. BULK BAG FILL (WASHED COBBLE) AND SANDBAG FILL (WASHED PEA GRAVEL) SHALL BE DISPOSED OF ON SITE. BAGS SHALL BE REMOVED FROM THE SITE ONCE CONSTRUCTION IS COMPLETED.
10. ALTERNATE COFFERDAM MATERIALS AND CONFIGURATIONS MAY BE ALLOWED BUT SHALL NOT BE IMPLEMENTED WITHOUT REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND/OR VENDOR CUT SHEETS FOR SUBSTITUTIONS.



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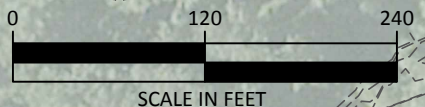
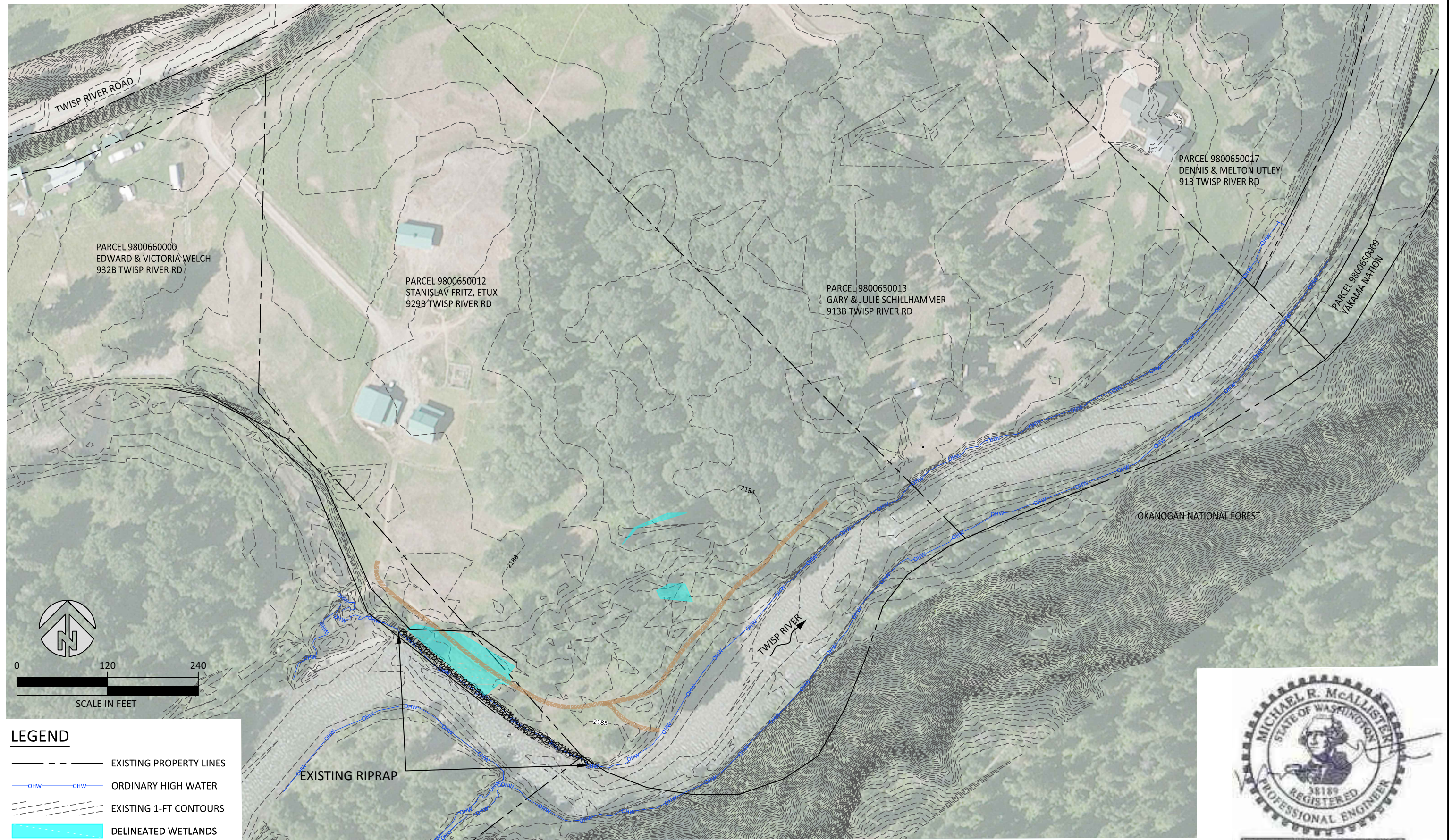
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TWISP, WASHINGTON**



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**EROSION CONTROL NOTES
(COFFERDAM)**



LEGEND

- EXISTING PROPERTY LINES
- ORDINARY HIGH WATER
- EXISTING 1-FT CONTOURS
- DELINEATED WETLANDS
- FOOT PATH / SKI TRAIL

PLAN



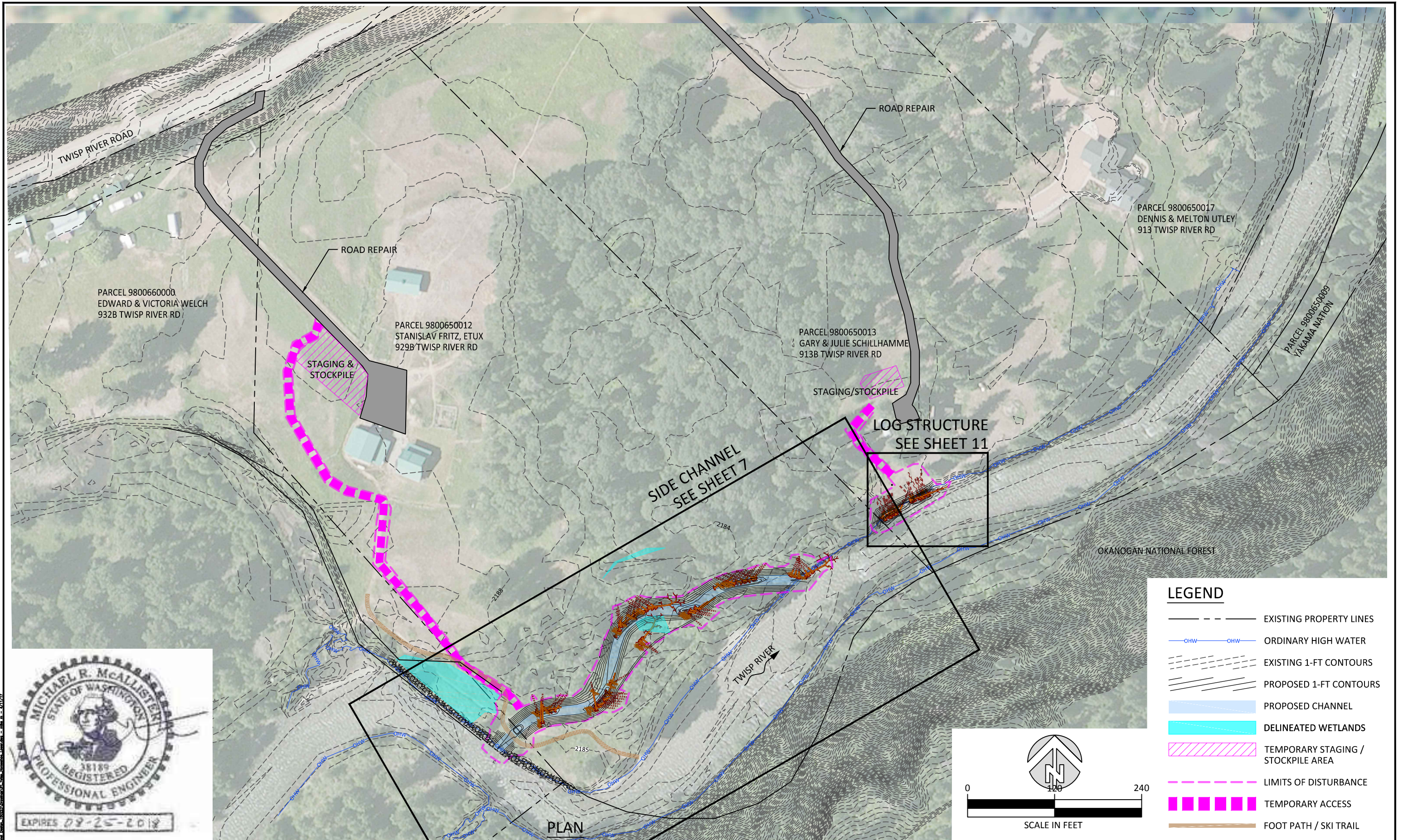
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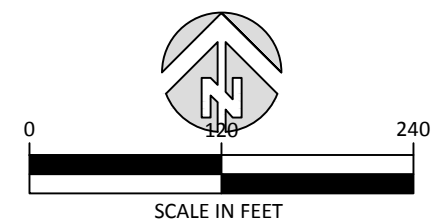
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**EXISTING CONDITIONS
AND LAND OWNERSHIP**



LEGEND	
	EXISTING PROPERTY LINES
	ORDINARY HIGH WATER
	EXISTING 1-FT CONTOURS
	PROPOSED 1-FT CONTOURS
	PROPOSED CHANNEL
	DELINEATED WETLANDS
	TEMPORARY STAGING / STOCKPILE AREA
	LIMITS OF DISTURBANCE
	TEMPORARY ACCESS
	FOOT PATH / SKI TRAIL



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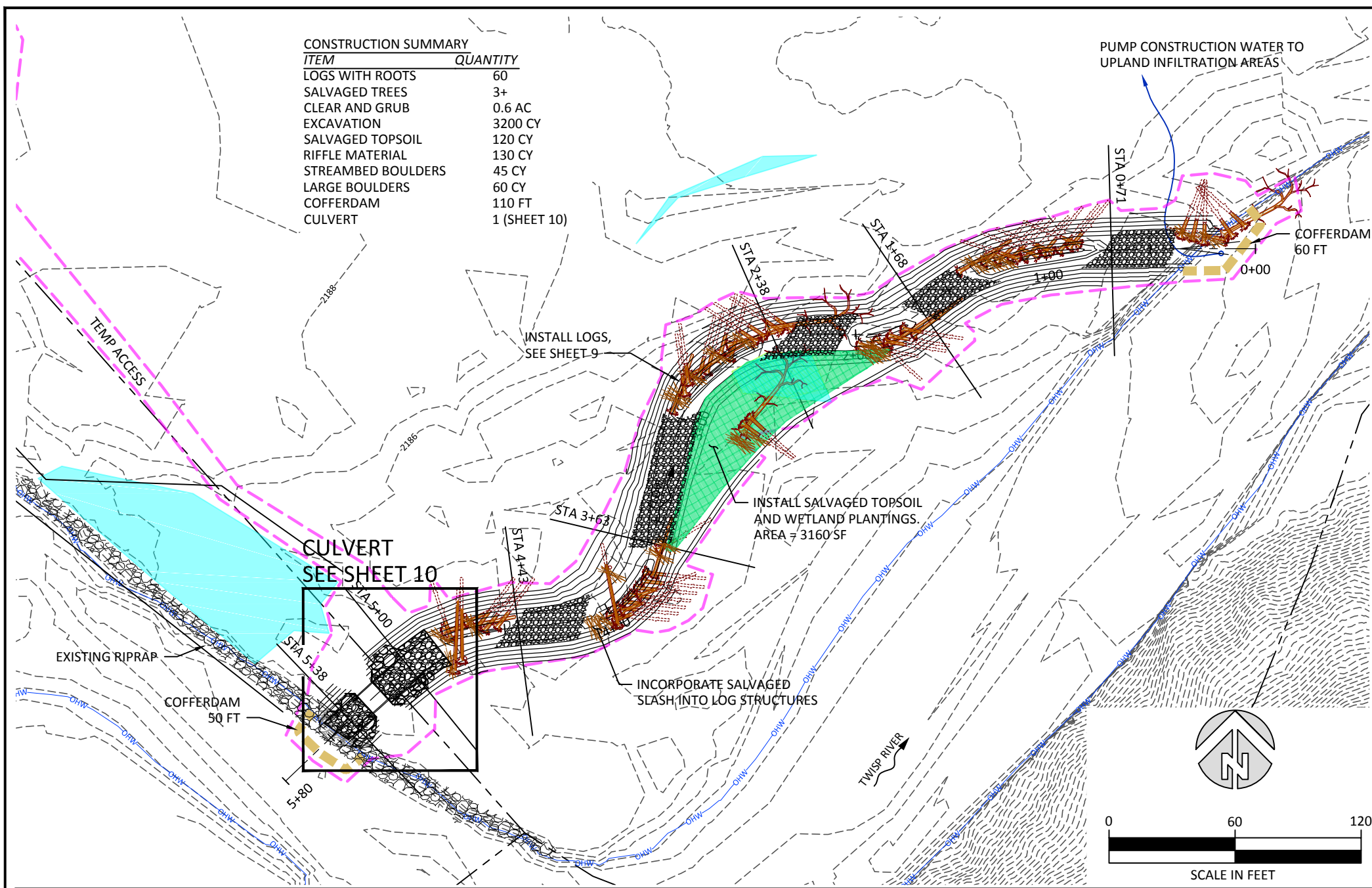
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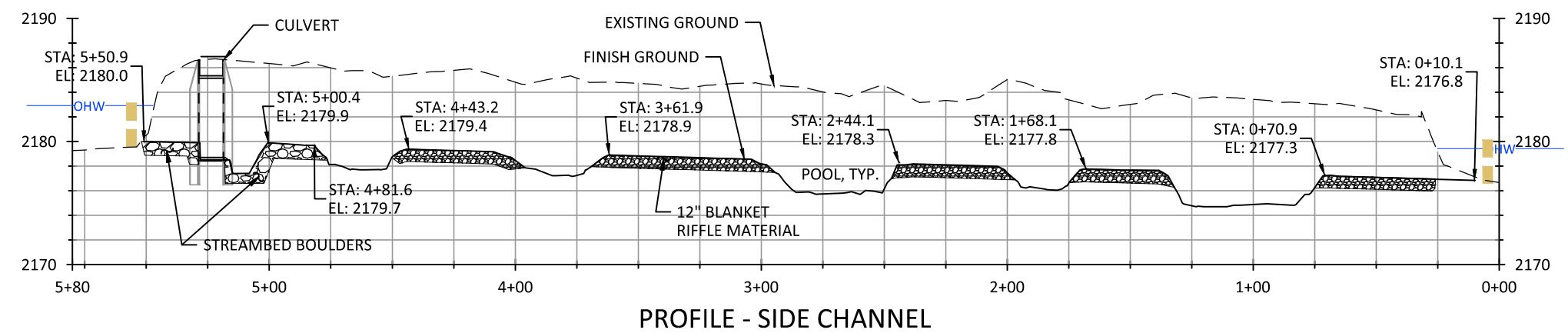
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**PROPOSED CONDITIONS,
STAGING, ACCESS AND
SHEET INDEX**

CONSTRUCTION SUMMARY	
ITEM	QUANTITY
LOGS WITH ROOTS	60
SALVAGED TREES	3+
CLEAR AND GRUB	0.6 AC
EXCAVATION	3200 CY
SALVAGED TOPSOIL	120 CY
RIFFLE MATERIAL	130 CY
STREAMBED BOULDERS	45 CY
LARGE BOULDERS	60 CY
COFFERDAM	110 FT
CULVERT	1 (SHEET 10)



PLAN - SIDE CHANNEL



PROFILE - SIDE CHANNEL

LEGEND

- EXISTING PROPERTY LINES
- ORDINARY HIGH WATER
- EXISTING 1-FT CONTOURS
- PROPOSED 1-FT CONTOURS
- DELINEATED WETLANDS
- WETLAND IMPACT
- RIFFLE ROCK
- STREAMBED BOULDERS
- LIMITS OF DISTURBANCE
- TEMPORARY COFFERDAM
- PROPOSED CHANNEL
- SIDE CHANNEL CENTERLINE
- WETLAND MITIGATION AREA PLANTINGS

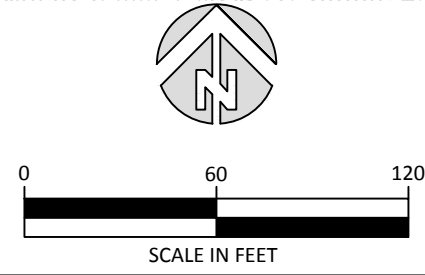
RECOMMENDED CONSTRUCTION SEQUENCE

1. CLEAR AND GRUB. SALVAGE TREES & SHRUBS. SALVAGE TOPSOIL.
2. INSTALL COFFERDAMS.
3. PERFORM FISH SALVAGE.
4. CONSTRUCT CHANNEL WORKING FROM DOWNSTREAM TO UPSTREAM.
5. PUMP FROM POOL AS NEEDED TO REDUCE WATER AT DOWNSTREAM COFFERDAM.
6. SCREEN EXCAVATED MATERIAL TO PRODUCE RIFFLE MATERIAL (>4" COBBLES AND BOULDERS).
7. INSTALL LWD AS CHANNEL IS CONSTRUCTED. INCORPORATE SALVAGED TREES AND SLASH AS DIRECTED BY OWNER.
8. INSTALL CULVERT.
9. GRADUALLY INTRODUCE FLOW WHILE PUMPING FROM DOWNSTREAM COFFERDAM. FOLLOW INSTRUCTIONS IN "STAGED REWATERING PLAN, SHEET 3.
10. APPLY STRAW MULCH TO ALL DISTURBED GROUND.
11. HAUL FILL TO DISPOSAL SITE. SCARIFY, SEED, AND MULCH TO RECLAIM STOCKPILE AREA AND ACCESS ROAD.

CONSTRUCTED STREAMBED NOTES:

1. "RIFFLES" SHALL BE A 12" THICK BLANKET OF 4" AND LARGER.
2. COBBLE OVER STREAMBED AND EXTENDING UP BANKS 12" ABOVE STREAMBED.
3. DEVELOP RIFFLE MATERIAL BY SCREENING EXCAVATED MATERIAL.
4. COMPACT RIFFLE MATERIAL USING EXCAVATOR BUCKET.
5. INSTALL 18" THICK BLANKET OF IMPORTED STREAMBED BOULDERS WHERE SHOWN NEAR THE CULVERT.
6. SALVAGE REMOVED RIPRAP FOR REUSE AS BANK ARMOR NEAR CULVERT. IMPORT ADDITIONAL LARGE BOULDERS AS NEEDED.

- LOG NOTES:
1. ALL TREES AND SHRUBS REMOVED FROM SITE ACCESS AND CLEARED AREAS SHALL BE SALVAGED AND INCORPORATED INTO THE LOG STRUCTURES AS SLASH. INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.
 2. LOG LOCATIONS, SIZES, AND ALIGNMENTS DEPICTED HERE ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR BASED ON ACTUAL MATERIALS.
 3. SEE SHEET 9 FOR TYPICAL CONFIGURATIONS AND BURIAL INFORMATION.



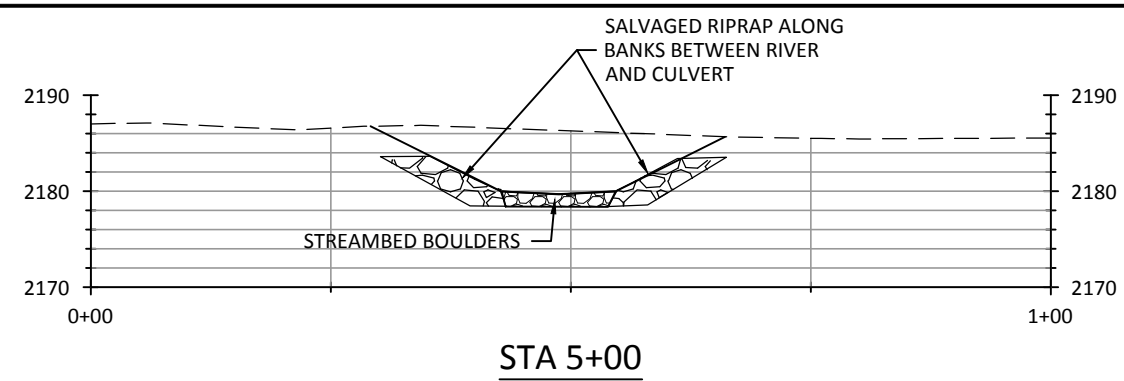
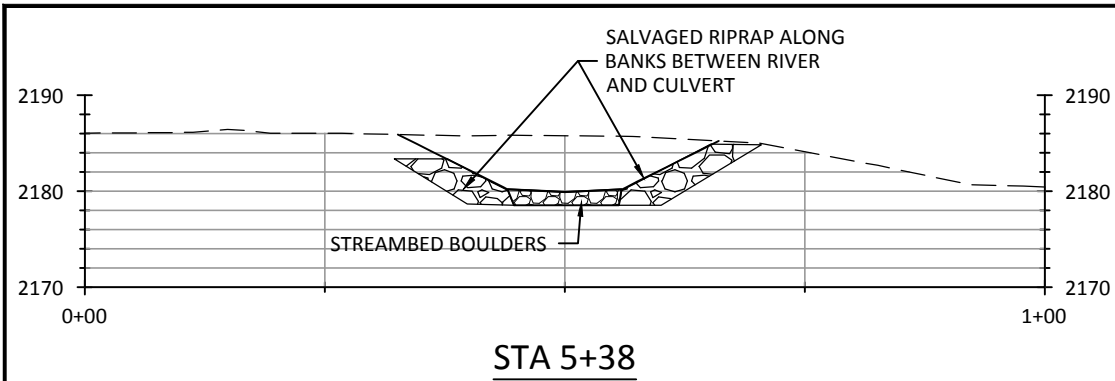
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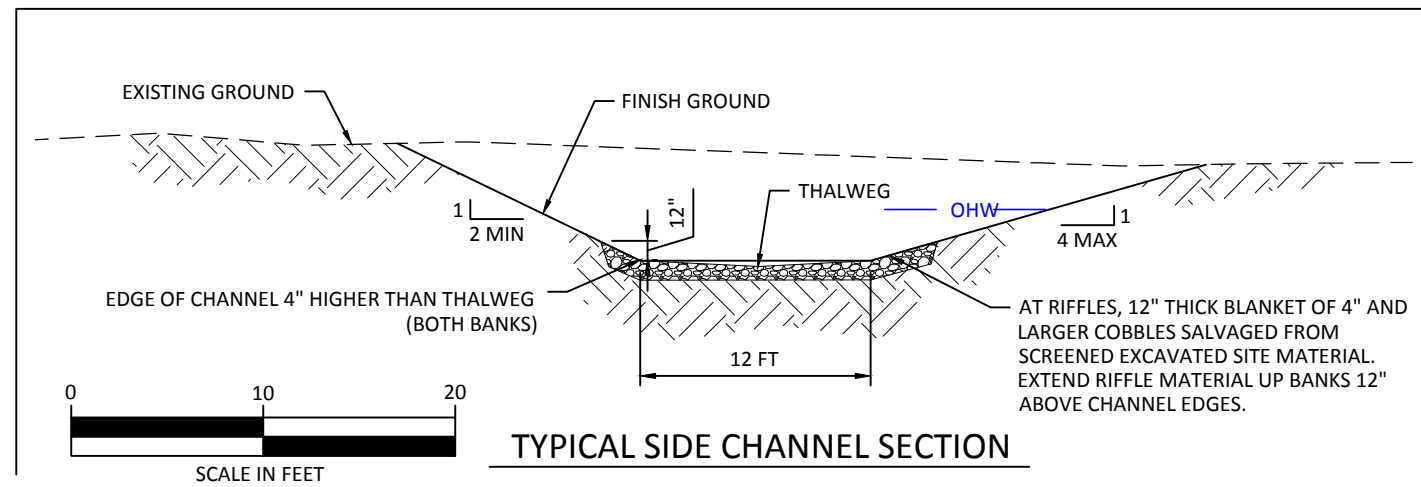
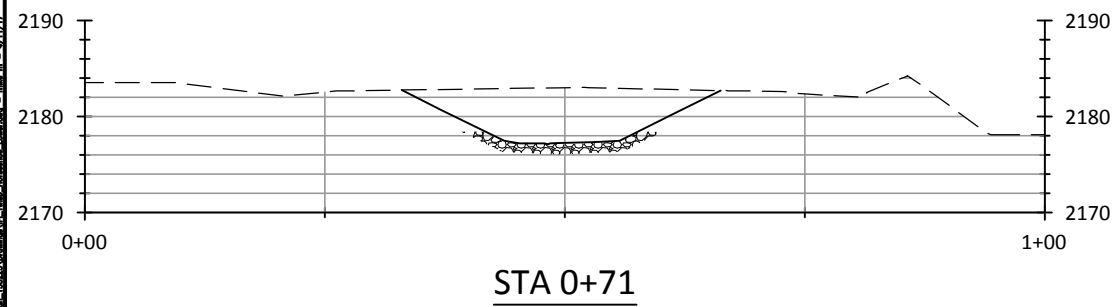
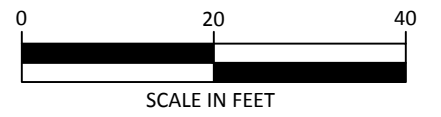
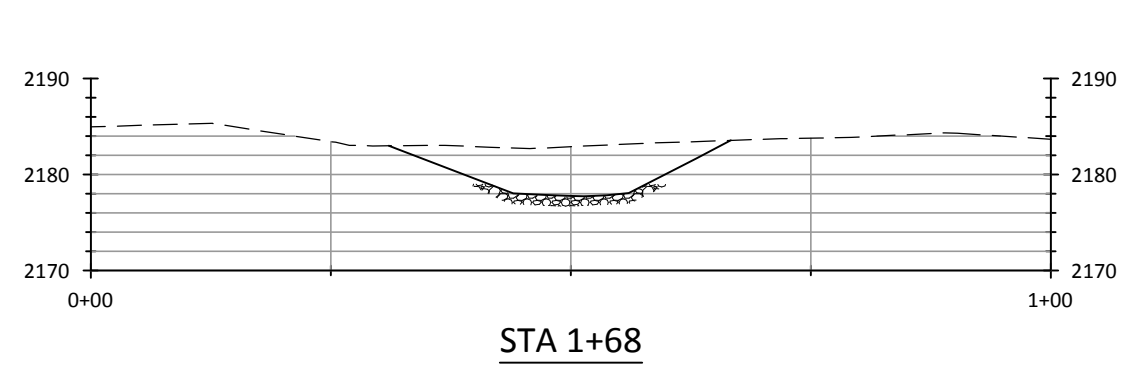
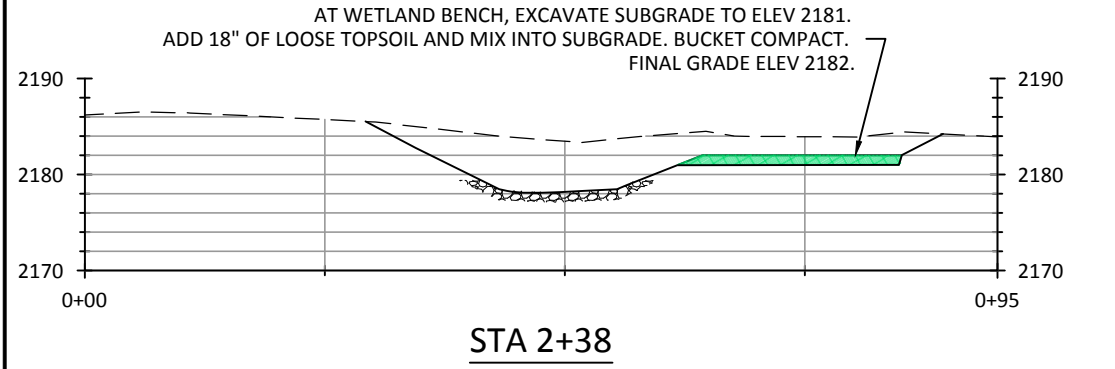
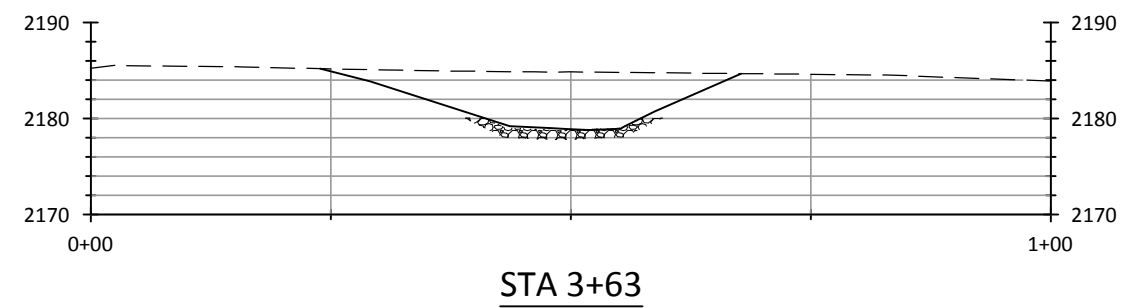
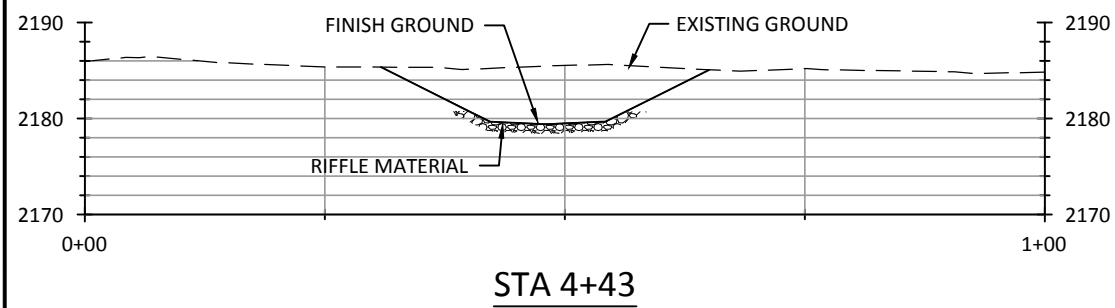
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SIDE CHANNEL PLAN AND
PROFILE



- SECTION NOTES:**
1. SECTION VIEWS ARE LOOKING DOWNSTREAM.
 2. SIDE SLOPES OF CHANNEL VARY 2:1 TO 4:1
 3. TOP OF SLOPE LINES WILL BE STAKED IN THE FIELD BY THE OWNER.
 4. LOW-FLOW CHANNEL TO BE CREATED BY THALWEG 4" DEEPER THAN TOE OF SLOPE. THALWEG WILL SHIFT ACROSS RIFFLE TO CONNECT LOW-FLOW TO OUTSIDE OF EACH CHANNEL BEND.



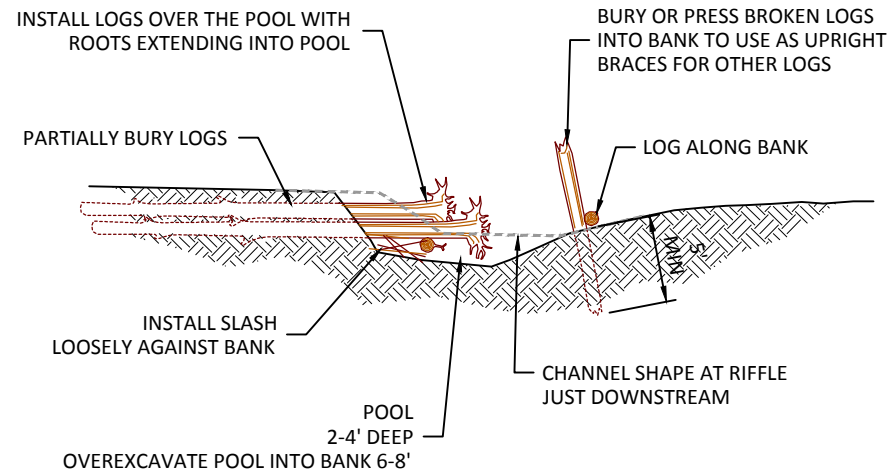
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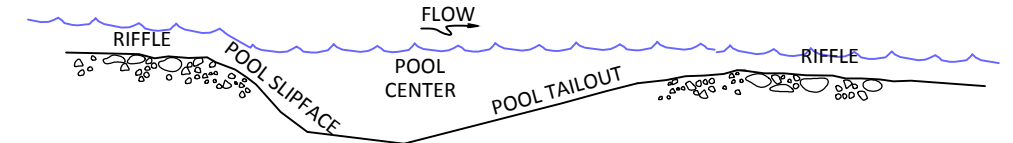
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**SIDE CHANNEL CROSS
SECTIONS**



2
9 SECTION VIEW - TYPICAL POOL AND LOGS
NOT TO SCALE



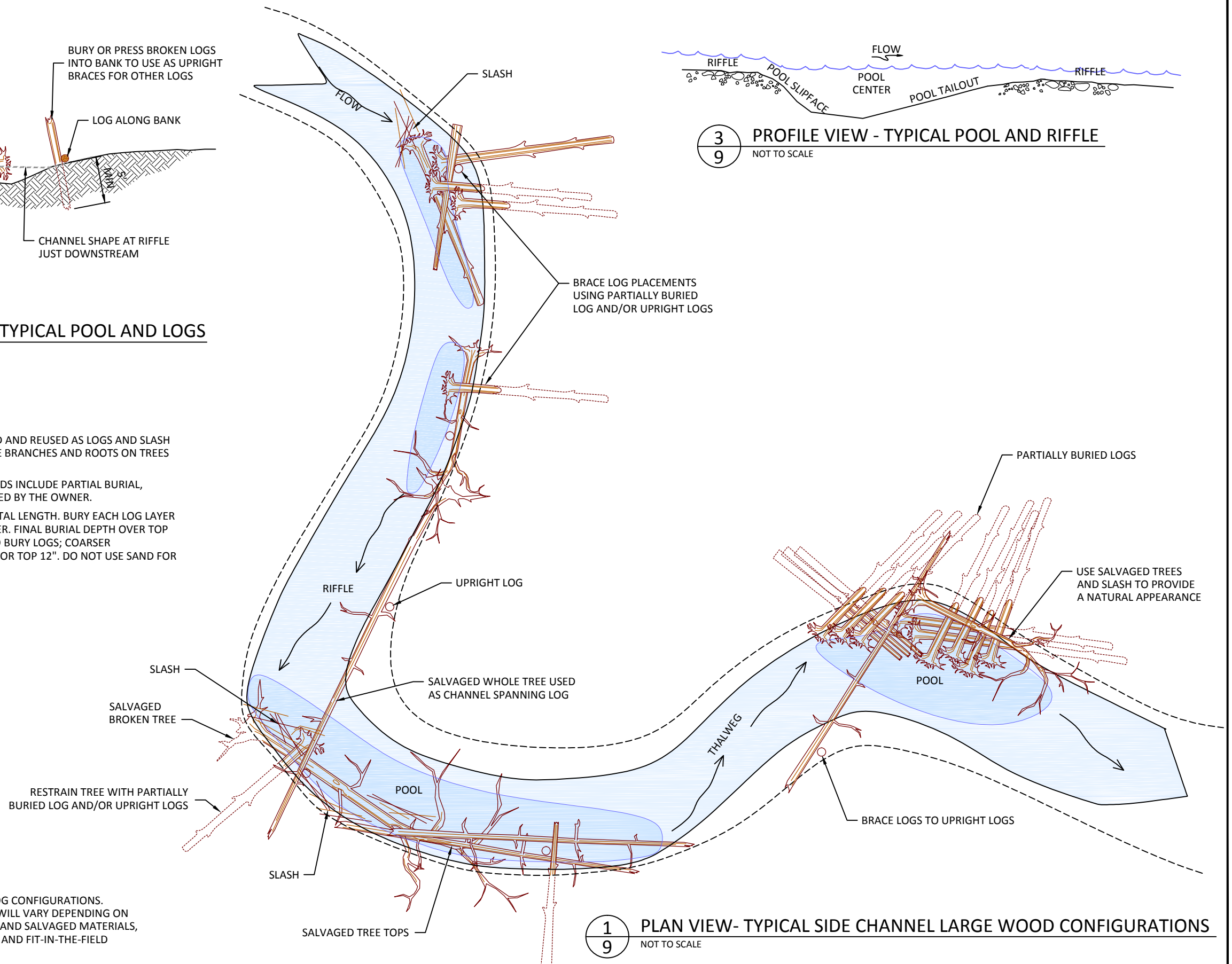
3
9 PROFILE VIEW - TYPICAL POOL AND RIFFLE
NOT TO SCALE

LOG STRUCTURE NOTES:

1. TREES AND SHRUBS WITHIN CLEARING LIMITS SHALL BE SALVAGED AND REUSED AS LOGS AND SLASH IN HABITAT STRUCTURES. TO THE EXTENT PRACTICABLE, PRESERVE BRANCHES AND ROOTS ON TREES REMOVED DURING CLEARING AND GRUBBING.
2. WOOD STRUCTURES SHALL BE STABILIZED. STABILIZATION METHODS INCLUDE PARTIAL BURIAL, BRACING AGAINST STANDING TREES, OR TIMBER PILES, AS DIRECTED BY THE OWNER.
3. PARTIALLY BURIED LOGS SHALL HAVE BURIED LENGTH >2/3 OF TOTAL LENGTH. BURY EACH LOG LAYER AND COMPACT SOIL WITH BUCKET BEFORE INSTALLING NEXT LAYER. FINAL BURIAL DEPTH OVER TOP LAYER OF LOGS SHALL BE 24" MINIMUM. USE SALVAGED SOILS TO BURY LOGS; COARSER COBBLE/GRAVEL FOR BOTTOM LAYERS, AND SALVAGED TOPSOIL FOR TOP 12". DO NOT USE SAND FOR BACKFILL.



THIS SHEET DEPICTS TYPICAL LOG CONFIGURATIONS. ACTUAL SITE CONFIGURATION WILL VARY DEPENDING ON SIZE AND SHAPE OF DELIVERED AND SALVAGED MATERIALS, PROXIMITY TO EXISTING TREES, AND FIT-IN-THE-FIELD DIRECTION BY THE OWNER.



1
9 PLAN VIEW- TYPICAL SIDE CHANNEL LARGE WOOD CONFIGURATIONS
NOT TO SCALE

NO.	BY	DATE	REVISION DESCRIPTION

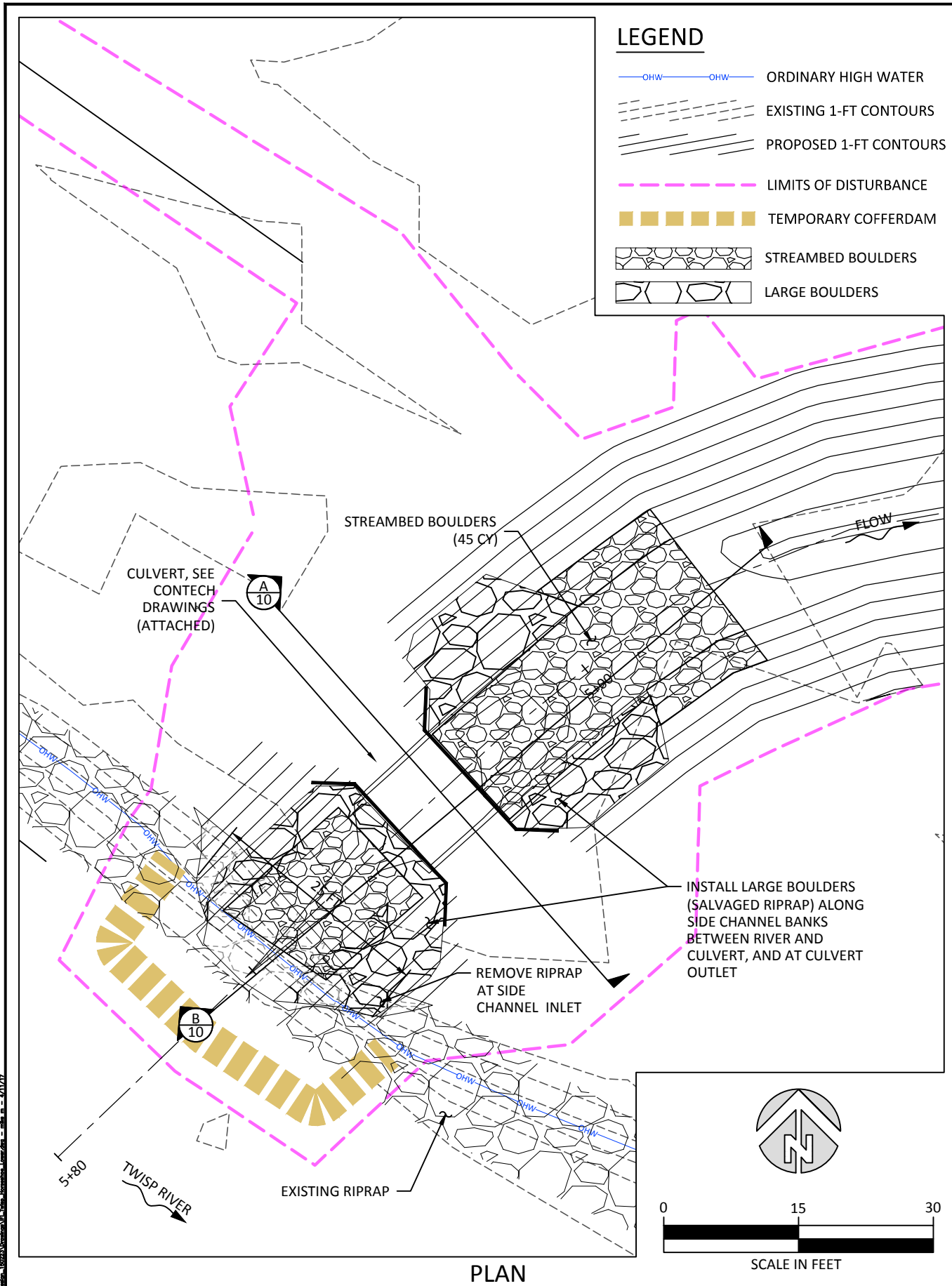
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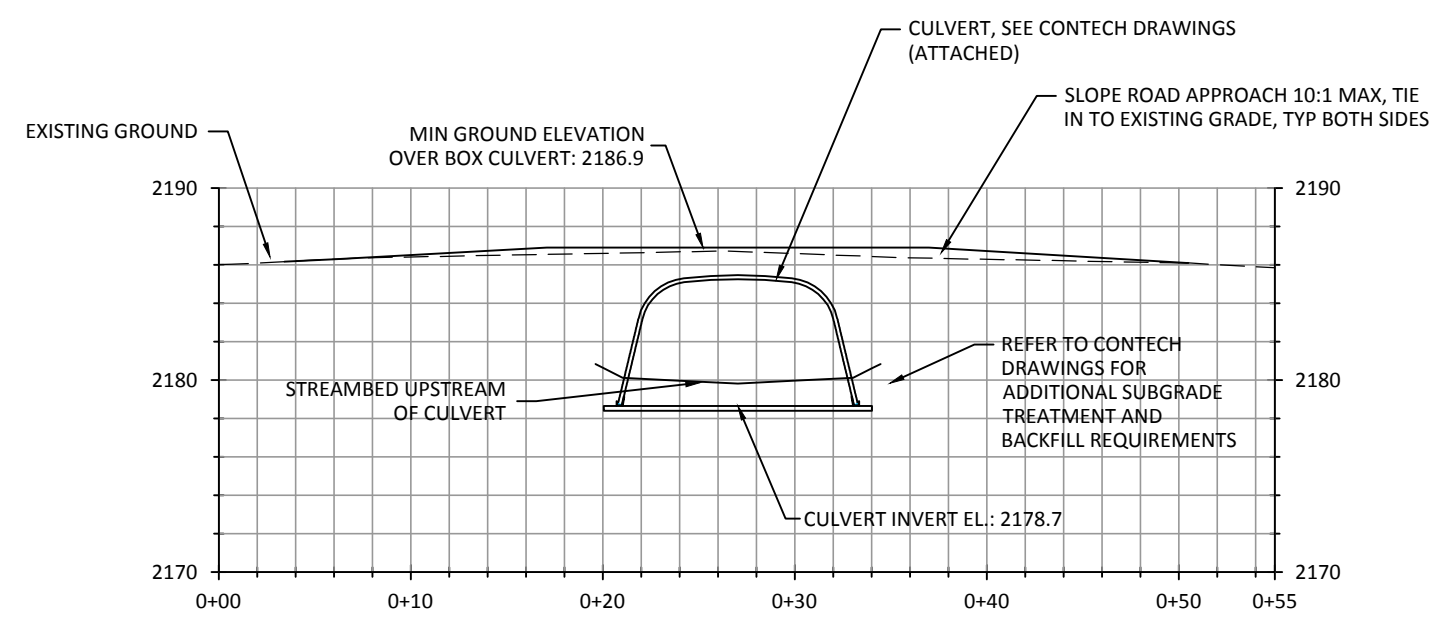
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**SIDE CHANNEL
TYPICAL DETAILS**

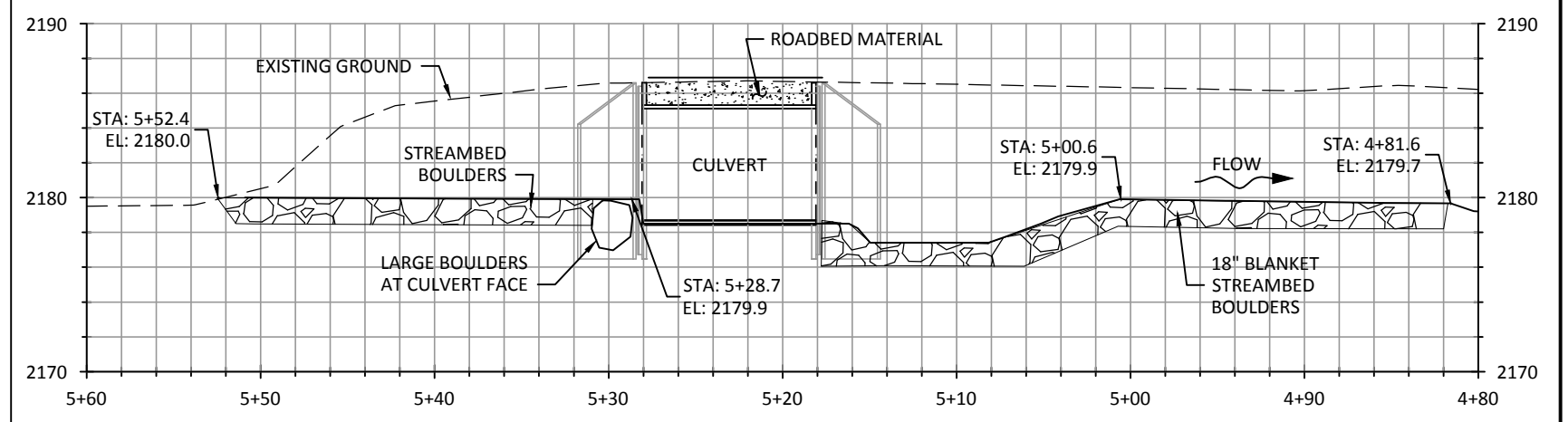


- LEGEND**
- ORDINARY HIGH WATER
 - EXISTING 1-FT CONTOURS
 - PROPOSED 1-FT CONTOURS
 - LIMITS OF DISTURBANCE
 - TEMPORARY COFFERDAM
 - STREAMBED BOULDERS
 - LARGE BOULDERS

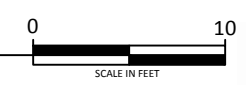
PLAN



A SECTION - CULVERT



B PROFILE - CULVERT



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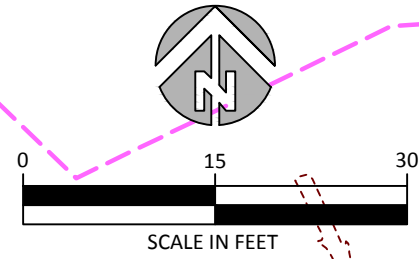
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CULVERT PLAN AND SECTIONS

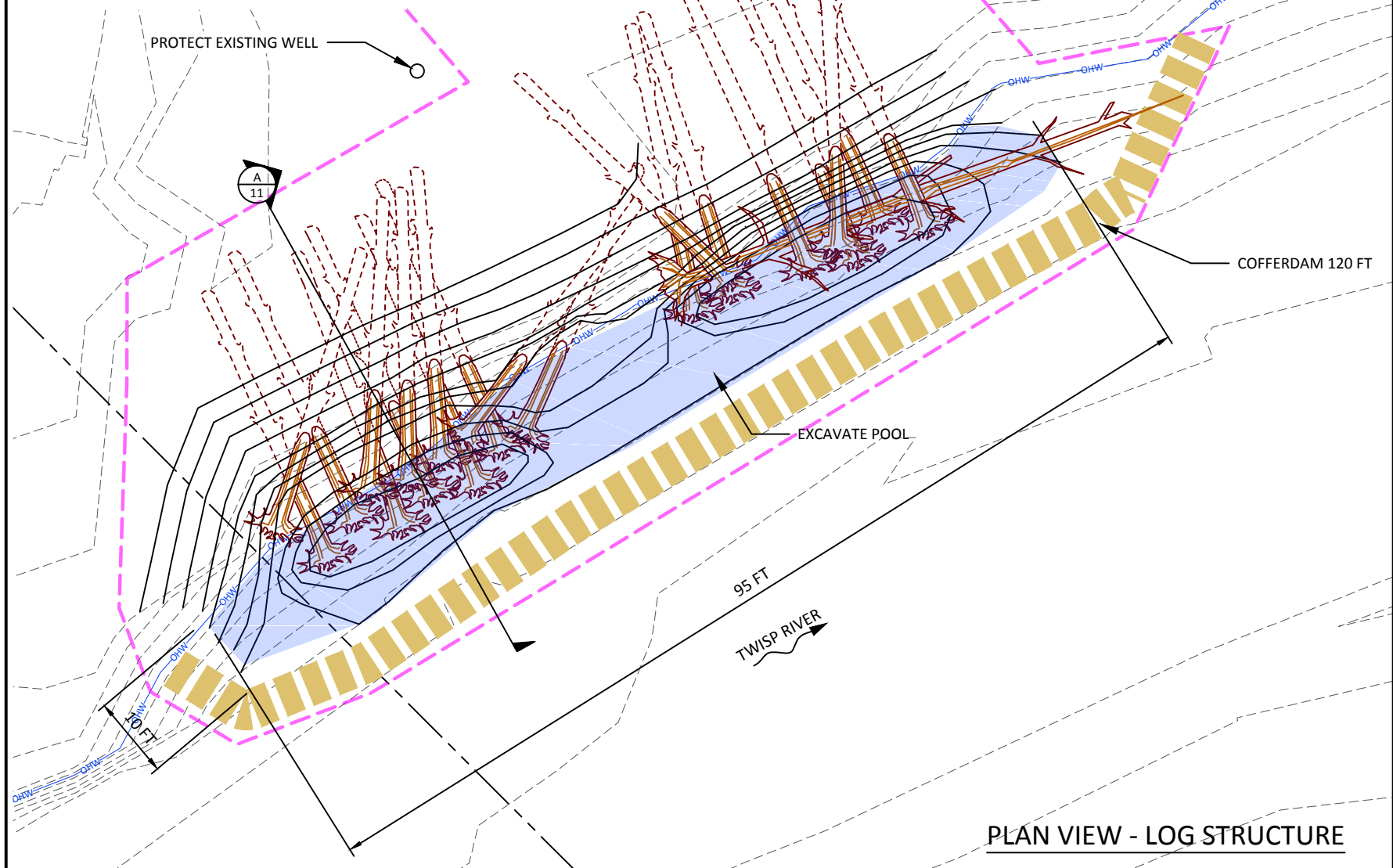
LEGEND

- EXISTING PROPERTY LINES
- OHW — OHW — ORDINARY HIGH WATER
- - - - - EXISTING 1-FT CONTOURS
- - - - - LIMITS OF DISTURBANCE
- ■ ■ ■ ■ TEMPORARY COFFERDAM



CONSTRUCTION SUMMARY

ITEM	QUANTITY
COFFERDAM	120 FT
LOGS WITH ROOTS	20
WHOLE TREE	1
EXCAVATION	740 CY
BACKFILL	530 CY
HAUL AND DISPOSE FILL	210 CY



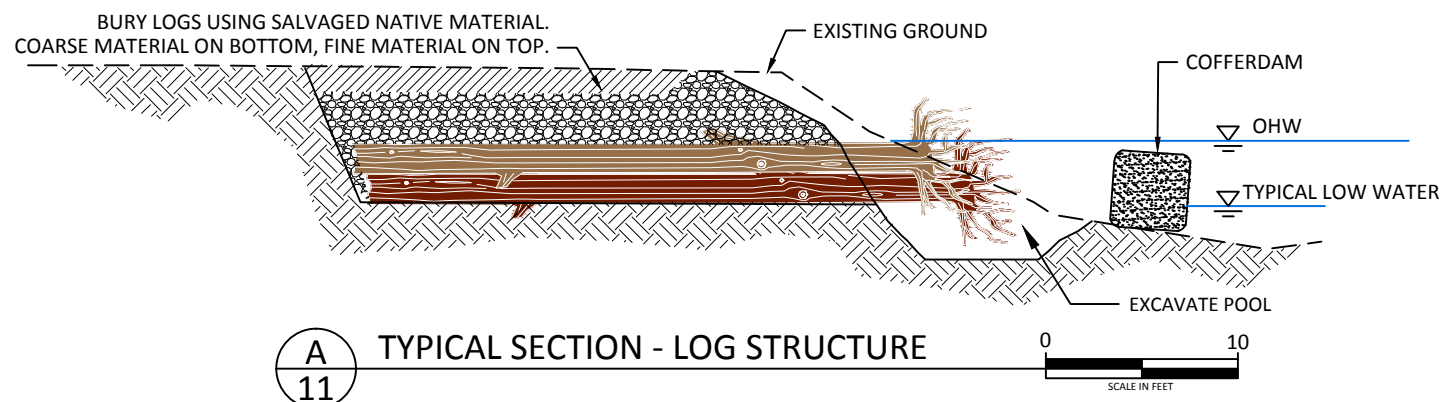
PLAN VIEW - LOG STRUCTURE



AERIAL VIEW - LOG STRUCTURE SITE

RECOMMENDED CONSTRUCTION SEQUENCE

1. INSTALL COFFERDAM TO ISOLATE EXCAVATION WORK AREA.
2. PERFORM FISH SALVAGE.
3. EXCAVATE POOL (STOCKPILE RIVER GRAVEL ON SITE).
4. EXCAVATE LOG BURIAL AREA. STOCKPILE TOPSOIL SEPARATE FROM GRAVEL.
5. INSTALL LOGS.
6. BURY LOGS USING STOCKPILED MATERIALS. USE COARSEST MATERIALS ON LOWER LAYERS AND ALONG WATERWARD EDGE OF BURIAL AREA. CAP BURIAL AREA WITH SALVAGED TOPSOIL. BUCKET COMPACT EACH LAYER. TOP LAYER OF LOGS SHALL HAVE MIN 24" BURIAL.
7. HAUL EXCESS FILL TO OFF-SITE DISPOSAL SITE.
8. REMOVE COFFERDAM.
9. INSTALL WHOLE TREES.
10. APPLY STRAW MULCH TO DISTURBED GROUND.



TYPICAL SECTION - LOG STRUCTURE



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Provisions

INTRODUCTION

The Washington State Department of Transportation's Standard Specifications for Road, Bridge and Municipal Construction 2014 (WSDOT Standard Specifications) shall apply unless otherwise noted in the following Special Provisions. The "Contracting Agency" or "Owner" shall be the Confederated Tribes and Bands of the Yakama Nation. Additional specifications in the following contract sections are included for items not covered by the WSDOT Standard Specifications.

Sections 1-02, 1-03, and 1-08 (except 1-08.6, 1-08.7, 1-08.8) of the Standard Specifications do not apply.

ITEM 001- TESC, SPCC PLAN AND IMPLEMENTATION

Description

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.

- The Contractor shall submit a TESC 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.
- A spill Containment Kit shall be on site and crews shall be trained in its use.
- Biodegradable Hydraulic Fluid shall be installed into each piece of heavy machinery working within 50 feet of the river.
- Silt Fence shall be used to protect sensitive areas sediment and impacts from equipment. See areas designated for silt fence on the side channel grading plan.
- Stabilized Construction Entrance and Tire Wash. This work shall provide for the installation, maintenance, and removal of a stabilized construction exit in accordance with the Standard Plans and Section 8-01.3(7). Tire washing shall be included in conjunction with the stabilized entrance.
- This item includes erosion control measures for treating tire wash water such as dewatering bag, ditch checks, silt fence, or other suitable measures for treating wash water before it enters the stream or roadway, including the maintenance or replacement of spent erosion control measures.

Measurement

"TESC, SPCC Plan and Implementation," including the above amendments to the item will be measured by lump sum.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section 1-04.1 for the following bid items: "TESC, SPCC Plan and Implementation" per lump sum.

ITEM 002 - 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) and amended as described below.

Temporary site access shall be along alignments shown in the plans. Minor deviations to the alignments may occur as directed by the Owner to preserve sensitive areas or trees, or to avoid damage to fence posts or other features identified in the field. Deviations from the alignments shown in the plans shall be approved by Owner prior to use. If fence is removed to facilitate access or construction, the Contractor shall replace or repair fence at no additional cost to the Owner. Site access routes shall be maintained and restored to original or better condition.

This item includes Traffic Control measures. Temporary traffic control requirements shall include barricades and construction signage at the entrance to the project site and any other measures per Section 1-10 and local regulations.

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 1-09.9 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.

ITEM 003 - CLEARING AND GRUBBING (Side Channel Site)

This item consists of clearing and grubbing for construction as shown on the plans including those areas required for Temporary Access Routes and in accordance with Section 2-01 of the Standard Specifications, and as amended by these Special Provisions.

- Areas for Clearing and Grubbing are shown in the Plans. Adjustments to alignments and extents may be adjusted by the Owner to reduce damage to the environment. The final areas will be flagged in the field by the Owner prior to Clearing and Grubbing work. Clearing and Grubbing shall not occur outside of the designated limits.
- Included in this item are the salvage and stockpile of all trees and shrubs removed from within the clearing limits. Salvaged Trees shall be used as woody debris during construction of the Side Channel Site. To the maximum practical extent, the Contractor shall excavate the root wads and then push over the trees in order to salvage logs with intact attached roots. Salvaged Trees may be temporarily stockpiled outside of the clearing limits but within reach of the excavator during side channel construction.
- All shrubs removed during clearing and grubbing shall be left on site, placed outside of limits of disturbance to be used as slash during installation of Logs. Excess slash may remain on site.
- Topsoil stripping shall occur in borrow areas designated by the owner as Salvaged Topsoil.
- Vegetation protection and restoration per Section 1-07.16(2) shall be incidental to Clearing and Grubbing.

Measurement

Removal and Salvage of trees and shrubs shall be considered incidental to Clearing and Grubbing bid item. For description of work, measurement, and compensation for installation of salvaged trees, see provision for "Logs".

On site movement and stockpiling of Salvaged Topsoil shall be incidental to Clearing and Grubbing. For description of work, measurement, and compensation for the installation of the topsoil, see provision for "Channel Excavation, incl Haul".

"Clearing and Grubbing," including the above amendments to the item will be measured by lump sum. No additional compensation will be allowed.

Payment

Payment will be made in accordance with Section 1-09.9 for the following bid items: "Clearing and Grubbing" per lump sum.

ITEM 004 - CHANNEL EXCAVATION INCL. HAUL (Side Channel Site)

This item consists of excavating, loading, hauling, placing, and embankment compacting, or otherwise disposing of the material in accordance with Section 2-03 of the Standard Specifications, and as amended by these Special Provisions.

- Portions of work will be in water. The Contractor is advised that groundwater will likely be encountered throughout the excavation area.
- This item includes hauling of excavated material to a disposal site provided by the Contractor. The unit contract price per cubic yard shall include "Haul".
- This item includes detail grading to shape the channel, including creating pools within the channel, as shown in the Plans. Pools shall be overexcavated into the banks to provide room to install logs.
- Where Riffle Material will be installed in the Side Channel, 12 inches of overexcavation of soils shall be required to create subgrade.
- Where Salvaged Topsoil will be placed, a 12 inch layer of topsoil shall be placed and mixed into the top 6" of the underlying subgrade.
- No work shall occur outside of the limits of disturbance shown in the Plans unless authorized by the Owner.
- The Contractor shall be responsible for procurement of a fill repository location that complies with all State and local laws applicable to fill disposal.

Measurement

"Channel Excavation Incl. Haul" will be measured by cubic yard. All excavated material will be measured in the position it occupied before the excavation was performed. An original ground measurement was taken using digital terrain modeling survey techniques. The original ground will be compared with the planned finished section shown in the Plans. Slope/ground intercept points defining the limits of the measurement will be as staked by the Owner. No additional compensation will be made for excavated material that is stockpiled, re-excavated, and moved again.

Payment

Payment shall be considered full compensation for all equipment, labor, tools, materials, and incidentals necessary to complete this work as specified. Payment will be made in accordance with Section 1-04.1 for the following bid items: "Channel Excavation Incl. Haul" per cubic yard.



ITEM 005 - CULVERT (Side channel site)

A Culvert shall be installed near the inlet of the side channel and constructed in accordance with Section 7-02, as amended by these special provisions. Contractor shall submit product data and installation plan for Engineer's approval prior to construction. Review and approval of the Culvert shall not relieve the Contractor from full responsibility for the product installation as it meets the requirements of the Culvert Supplier, including necessary earthwork, backfill and embedment material, and assembly.

- Culvert shall meet minimum cover requirements as shown on the drawings or as otherwise required by manufacturer, and shall match specified elevations shown on the drawings.
- Rise shall be no more than 7' and no less than 6'.
- Span shall be no more than 13' and no less than 12'.
- Salvaged material from levee removal shall be sorted and placed in location depicted on drawings and as directed by engineer.
- Culvert shall be Contech ALCB #13, or approved equal.
- Submit shop drawings for approval.

Measurement

Culvert procurement, delivery to site, and installation including associated items such as wingwalls, earthwork depicted on drawings, and sediment and water controls shall be included in this item.

Payment

Payment for "Culvert" will be made per lump sum.

ITEM 006 - RIFFLE MATERIAL (Side Channel Site)

This item includes salvaging stone material from on-site excavations and installing it as Riffles at locations designated in the Plans. The following actions shall be included:

- Produce Riffle Material by screening 4" and larger river stones from excavated material.
- Stockpile Riffle Material on site. Temporary stockpiling of Riffle Material shall not occur outside of the limits of disturbance shown in the Plans unless authorized by the Owner.
- Mix stockpiled material as needed to produce an well graded mixture.
- Place Riffle Material to a depth of 12-inches over subgrade achieved by "Channel Excavation Incl. Haul". Top surface of Riffle Material shall be at final ground elevations as shown in the Plans.

Measurement

Onsite movement, stockpiling, placement, and mixing of Riffle Material are included in this item. The volume of excess material to be disposed is included in the "Channel Excavation Incl. Haul" item.

Riffle Material" will be measured by the cubic yard of installed material.

Payment

Payment will be made in accordance with Section 1-09.9 for the following bid items: "Riffle Material" per cubic yard.

ITEM 007 - LOGS (Side Channel Site)

Description

Logs includes all work associated with onsite movement and installation of logs, logs with roots, upright logs, salvaged trees, and slash as shown in the Plans for the Side Channel Site. This item includes movement from stockpiles to installation areas, excavation and backfill to partially bury Logs.

Materials

1. Logs:

Logs and Logs with roots will be supplied by the Owner to the site staging areas. Quantities for each site are shown in the Plans. Owner supplied Logs will have the following characteristics:

Logs with Roots: 28-32' long and 18-24" dbh.

Logs: 40' long and 12-18" diameter at scaled end.

The Contractor shall make up to 20 Upright Logs by breaking 10-15 feet off of the cut end of imported Logs with Roots.

2. Salvaged Trees: Salvaged Trees are whole trees including roots salvaged from within the limits of disturbance of side channel. Tree species may include deciduous and coniferous varieties.

3. Slash: Slash includes shrubs and small trees removed within the clearing limits, or provided by the Owner at stockpiles near the sites.

Construction Requirements

Logs: Locations of Logs and Logs with Roots shall generally be as indicated on the Plans. However, final location will depend upon the size, shape and quantity of material delivered or salvaged. Installation of Logs shall be understood to require a "fit in the field" approach as directed by the Owner's Representative. Logs shall be stabilized by partial burial and/or bracing provided by Upright Logs.

Salvaged Trees: Salvaged trees shall be installed as directed by the Owner. Care shall be taken when moving and installing salvaged trees so that branches and roots remain attached to the tree. Salvaged Trees shall be stabilized by partial burial, bracing to Upright Logs or standing trees, or held down by other partially buried logs.

Slash: Slash cleared from within the clearing shall be incorporated into log structures as directed by the Owner.

Intermingle, stack, and rack slash material to the installed logs and piles to emulate natural accumulations of wood material.

Earthwork: Where partial burial of logs is required, excavate trench or pit as directed by the Owner. Stockpile the fill within the designated disturbance area. Backfill the logs as each layer is installed.

Measurement

"Logs" will be measured by lump sum.

Payment

Payment will be made in accordance with Section 1-09.9 for the following bid items: "Logs" as lump sum.

The contract price for "Logs" shall be full compensation for all costs incurred for equipment, materials and labor for installing and securing logs, upright logs, and salvaged trees as outlined in the plans. Excavation and backfill and installing slash shall be incidental to Logs.

04-03-2018 10:00 AM - 10:00 AM - 10/17/18

NO.	BY	DATE	REVISION DESCRIPTION

DF	LH,MM	LH,MM
DRAWN	DESIGNED	CHECKED
MM	4/11/17	15-02-23
APPROVED	DATE	PROJECT

**TWISP RIVER HORSESHOE BEND
SIDE CHANNEL PROJECT
TWISP, WASHINGTON**



501 Portway Avenue, Suite 101
Hood River, OR 97031
541.386.9003
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SPECIFICATIONS

ITEM 008 - COFFERDAM {Each Site}

Description

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.

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

The work includes coordinating with the Owner for fish salvage relocation activities.

Materials

The Contractor shall provide all required materials for the project. If Bulk Bag Cofferdam is the method to be used, see details for Bulk Bag Cofferdams on the Plans.

Sandbags filled with pea gravel or stream gravel. Using sand will not be allowed.

Construction Requirements

The contractor shall isolate the work area from the waterway by installing cofferdam per the plans. No turbidity from construction activities shall enter the waterway. Cofferdams shown on the plans are a suggested method. If Contractor elects to use alternate method(s) for temporary cofferdams, Contractor shall provide to the Owner shop drawings and/or vendor cut sheets for substitutions and submit cofferdam/diversion plan for review prior to implementation.

1. Cofferdam
 - a. Construction methods for Bulk Bag Cofferdams are described in the project plans.
 - b. A sandbag cofferdam shall be installed at the side channel outlet as shown in the Plans. This sandbag cofferdam shall remain in place until site construction is completed. Removal of sandbags shall be by hand. No equipment access will be provided.
2. Coordination with Fish Rescue
 - a. The Contractor shall provide minimum 2 days advance notice to the Owner before each cofferdam installation date. The Contractor shall understand that cofferdam installation requires coordination with the Owner and only after the Owner has completed fish rescue can the cofferdams be completed.

Measurement

Measurement will be based on the item from the bid list installed and the work for that portion completed.

“Cofferdams” will be measured by lump sum.

Payment

Payment will be made in accordance with Section 1-09.9 for the following bid items: “Cofferdams” per lump sum.

ITEM 009 - PUMPING {Each Site}

This item includes dewatering and controlling turbidity within construction areas isolated from the river by Cofferdams.

Description

The work consists of furnishing, monitoring, operating, maintaining, and removing pumps, coordinating with the Owner for fish salvage relocation activities, and installation of control of water BMPs.

Materials

1. Two 6” trash pumps, each with pumping capacity greater than 600 gpm, assuming 12 feet of vertical lift and 300 feet of discharge hose. To prevent turbidity from entering the river, pumps may need to run 24 hrs or until water is clear. Pumps shall have soundproofing. Electric pumps with generators and quiet packs are a preferred and approved method.
2. Each water intake shall have a fish screen installed, operated and maintained according to NMFS' fish screen criteria (NMFS 1997; NMFS 2008).
3. Environmental Protection Measures such as straw bales, perforated pipe for discharge flow distributors, geotextiles, filter bags, or other means of controlling water and turbidity. No turbidity shall be allowed to enter the river or wetlands.

Construction Requirements

1. Pumps

Groundwater will be encountered during excavations. Two pumping schemes shall be required: one to prevent groundwater that has mixed with construction water from entering the river; and one to dewater construction areas.

 1. To help prevent turbidity from leaking through cofferdams, the contractor shall provide and operate 6” trash pump(s) to lower the water surface within the isolated area and discharge to an infiltration area.
 2. During side-channel construction, construction water shall be pumped away from work areas and be infiltrated into the ground and without entering the waterway.

Environmental Protection Measures

If infiltration becomes an ineffective means to control turbidity, additional and alternative methods, such as pumping into stilling basins or filtration geotextile fabric shall be required at the Contractor's expense.

Measurement and Payment

Measurement will be based on the item from the bid list installed and the work for that portion completed. The unit contract prices for “Pumping” shall be full compensation for all costs incurred for equipment, materials and labor for furnishing, installing, securing, maintaining and removal of pumping equipment as outlined in the plans. If additional environmental protection measures are required to control turbidity, they shall be considered incidental to pumping and no additional compensation will be made.

ITEM 010 - LOG STRUCTURE {Log Structure Site}

Description

Log Structure includes all work associated with onsite movement and installation of logs with roots where designated in the Plans. This item includes movement from stockpiles to installation areas, excavation and backfill to partially bury Log Structures, hauling and disposal of excess fill.

Materials

1. **Logs with Roots:** Logs and Logs with roots will be supplied by the Owner to the site staging areas. Quantities for each site are shown in the Plans. Owner supplied Logs will have the following characteristics:

Logs with Roots: 28-32' long and 18-24” dbh.
2. **Whole Tree:** One or more whole trees including roots salvaged from within the limits of disturbance of side channel, or provided by the Owner to a stockpile near the site. Tree species may include deciduous or coniferous varieties.
3. **Slash:** Slash includes shrubs and small trees removed within the clearing limits, or provided by the Owner at stockpiles near the sites.
4. **Live Stakes:** The Owner will provide live Cottonwood poles to be installed as live stakes in Log Structure during backfill operations.

Construction Requirements

Logs with Roots: Locations of Logs with Roots shall generally be as indicated on the Plans. However, final location will depend upon the size, shape and quantity of material delivered or salvaged. Installation of Logs with Roots shall be understood to require a “fit in the field” approach as directed by the Owner's Representative. Logs with Roots shall be stabilized by partial burial.

Whole Tree: One or more whole trees shall be installed as directed by the Owner. Care shall be taken when moving and installing whole trees so that branches and roots remain attached to the tree. Whole Trees shall be stabilized by bracing from other partially buried logs.

Slash: Slash cleared from within the clearing shall be incorporated into log structures as directed by the Owner.

Intermingle, stack, and rack slash material to the installed logs and piles to emulate natural accumulations of wood material.

Live Stakes: Live stakes shall be installed during log structure construction. The Owner shall be present to supervise the installation of live stakes. Live stakes will be installed in conjunction with log structure backfill. Care shall be taken to ensure that live stakes are not damaged during backfill.

Earthwork: Excavate pools as shown in the Plans. Where partial burial of logs is required, excavate to subgrade. Stockpile the fill within the designated disturbance area. Backfill the logs as each layer is installed. Load and haul excess fill to approved disposal site.

Install threaded rod where shown in the Plans or as directed by Owner.

Measurement

Measurement will be based on the portion of work completed, measured as each completed site.

“Log Structure” will be measured by lump sum per Site

Payment

Payment will be made in accordance with Section 1-09.9 for the following bid items: “Log Structure” as lump sum per Site.

The contract price for “Log Structure” shall be full compensation for all costs incurred for equipment, materials and labor for installing and securing logs with roots as outlined in the plans. Earthwork and installing slash shall be incidental to Log Structure.



NO.	BY	DATE	REVISION DESCRIPTION

DF	LH,MM	LH,MM
DRAWN	DESIGNED	CHECKED
MM	4/11/17	15-02-23
APPROVED	DATE	PROJECT

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SPECIFICATIONS

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ITEM 011 - ROAD REPAIR: CRUSHED SURFACING

This work consists of constructing one gravel base course layer upon a prepared subgrade in accordance with Section 4.04 of the Standard Specifications and the following supplements:

The work area is the existing driveways and parking areas servicing the dwellings where the habitat restoration elements are taking place This work shall be conducted after completion of all other parts of the project.

Materials

Materials shall meet the requirements of Crushed Surfacing Base Course 9-03.9(3).

Construction Requirements

Mixing, placement and spreading of crushed surfacing shall be done using the Road Mix Method. Crushed Surfacing shall be shaped and compacted per 4-04.3(5) and 4-04.3(7). The compacted depth of Crushed Surfacing shall be greater than 0.3 feet.

Measurement

Road Repair: Crushed Surfacing will be measured by the cubic yard.

Payment

Payment will be made in accordance with Section 4-04.5, for "Crushed Surfacing Base Course" per cubic yard. Water used in placing and compacting surfacing materials on the Roadway will be incidental to this item.

ITEM 012 - STREAMBED BOULDERS {Side Channel Site}

This item includes furnishing and installing Streambed Boulders at locations designated in the Plans.

Materials

Streambed Boulders shall be One Man (12-18") rock meeting WSDOT 9-03.11(3). The Contractor may elect to obtain all or part of the required volume of streambed boulders by selecting suitably sized river rock from excavated materials. Salvaged riprap will not be allowed for use as streambed boulders.

Measurement

"Streambed Boulders" will be measured by the cubic yard of installed material. Onsite movement and stockpiling are incidental to this item.

Payment

Payment will be made in accordance with Section 1-09.9 for the following bid items: "Streambed Boulders" per cubic yard.

ITEM 013 - LARGE BOULDERS {Side Channel Site}

This item includes furnishing and installing Two Man and Three Man (24-36") rocks at locations designated in the Plans.

Materials

Large Boulders shall be 24-36" angular boulders meeting WSDOT 9-137(1). This material shall be furnished and installed by the Contractor as needed if in the event that boulders salvaged from riprap removal provide insufficient quantity to complete installation at areas shown in plans.

Measurement

"Large Boulders" will be measured by the ton of installed material. Onsite movement and stockpiling are incidental to this item.

Payment

Payment will be made in accordance with Section 1-09.9 for the following bid items: "Large Boulders" per ton.



04/11/2017 10:00 AM - 4/11/17

NO.	BY	DATE	REVISION DESCRIPTION

DF	LH,MM	LH,MM
DRAWN	DESIGNED	CHECKED
MM	4/11/17	15-02-23
APPROVED	DATE	PROJECT

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SPECIFICATIONS

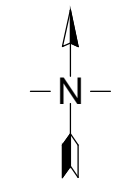
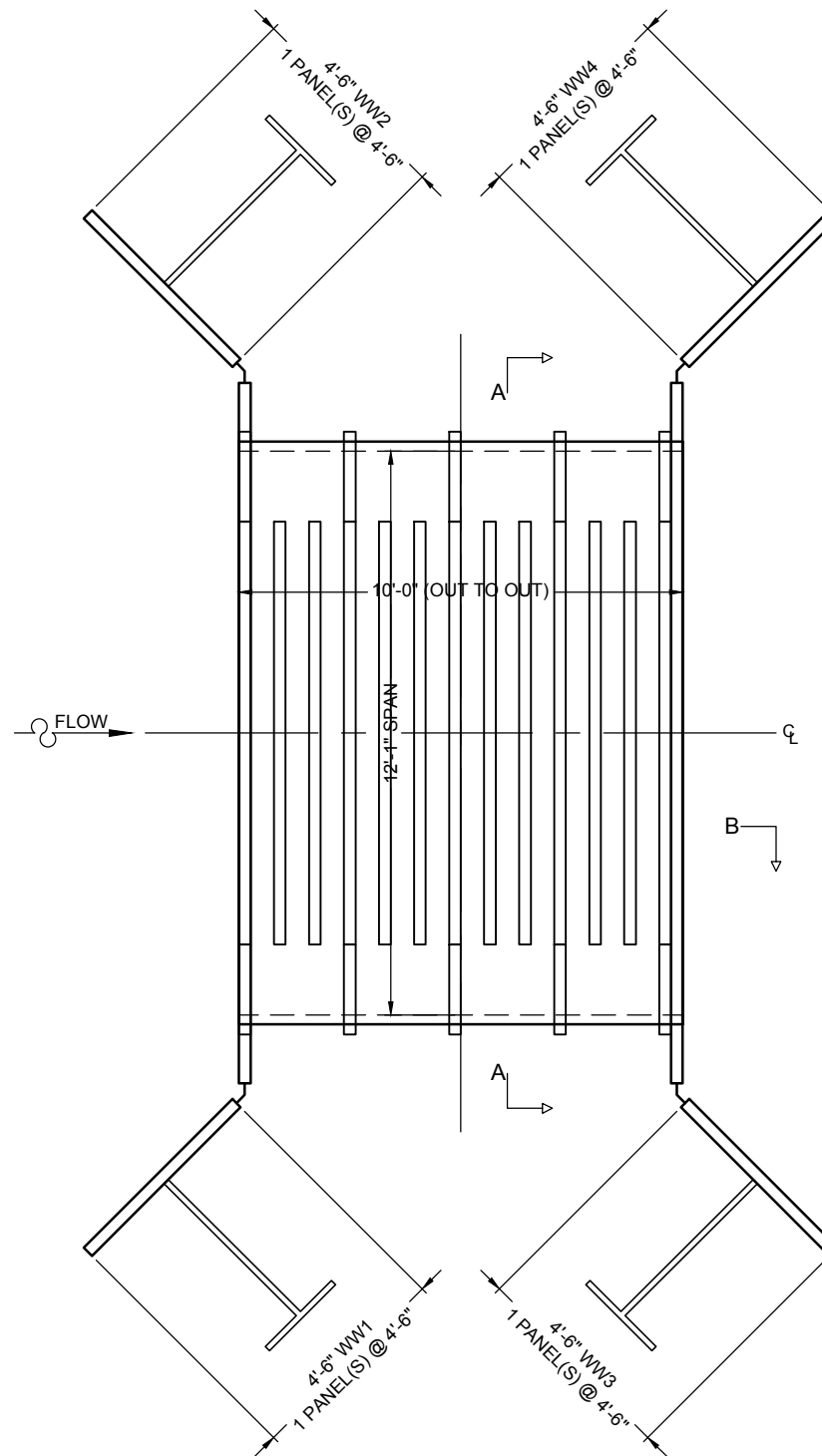
I - GENERAL

1.0 STANDARDS AND DEFINITIONS

- 1.1 STANDARDS - ALL STANDARDS REFER TO LATEST EDITION UNLESS OTHERWISE NOTED.
 - 1.1.1 ASTM B-864 "STANDARD SPECIFICATION FOR CORRUGATED ALUMINUM BOX CULVERTS" (AASHTO DESIGNATION M-219).
 - 1.1.2 AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES - SECTION 12 DIVISION I - DESIGN.
 - 1.1.3 AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES - SECTION 26 DIVISION II - CONSTRUCTION.
- 1.2 DEFINITIONS
 - 1.2.1 OWNER - IN THESE SPECIFICATIONS THE WORD "OWNER" SHALL MEAN Yakama Nation Fisheries.
 - 1.2.2 ENGINEER - IN THESE SPECIFICATIONS THE WORD "ENGINEER" SHALL MEAN THE ENGINEER OF RECORD OR OWNER'S DESIGNATED ENGINEERING REPRESENTATIVE.
 - 1.2.3 MANUFACTURER - IN THESE SPECIFICATIONS THE WORD "MANUFACTURER" SHALL MEAN CONTECH ENGINEERED SOLUTIONS, LLC 800-338-1122.
 - 1.2.4 CONTRACTOR - IN THESE SPECIFICATIONS THE WORD "CONTRACTOR" SHALL MEAN THE FIRM OR CORPORATION UNDERTAKING THE EXECUTION OF ANY INSTALLATION WORK UNDER THE TERMS OF THESE SPECIFICATIONS.
 - 1.2.5 APPROVED - IN THESE SPECIFICATIONS THE WORD "APPROVED" SHALL REFER TO THE APPROVAL OF THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE.
 - 1.2.6 AS DIRECTED - IN THESE SPECIFICATIONS THE WORDS "AS DIRECTED" SHALL REFER TO THE DIRECTIONS TO THE CONTRACTOR FROM THE OWNER OR HIS DESIGNATED REPRESENTATIVE.

2.0 GENERAL CONDITIONS

- 2.1 THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT AND PERFORM ALL WORK AND SERVICES EXCEPT THOSE SET OUT AND FURNISHED BY THE OWNER, NECESSARY TO COMPLETE IN A SATISFACTORY MANNER THE SITE PREPARATION, EXCAVATION, FILLING, COMPACTION, GRADING AS SHOWN ON THE PLANS AND AS DESCRIBED THEREIN. THIS WORK SHALL CONSIST OF ALL MOBILIZATION CLEARING AND GRADING, GRUBBING, STRIPPING, REMOVAL OF EXISTING MATERIAL UNLESS OTHERWISE STATED, PREPARATION OF THE LAND TO BE FILLED, FILLING OF THE LAND, SPREADING AND COMPACTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES, SLOPES, AND SPECIFICATIONS. THIS WORK IS TO BE ACCOMPLISHED UNDER THE OBSERVATION OF THE OWNER OR HIS DESIGNATED REPRESENTATIVE.
 - 2.2 PRIOR TO BIDDING THE WORK, THE CONTRACTOR SHALL EXAMINE, INVESTIGATE AND INSPECT THE CONSTRUCTION SITE AS TO THE NATURE AND LOCATION OF THE WORK, AND THE GENERAL AND LOCAL CONDITIONS AT THE CONSTRUCTION SITE, INCLUDING WITHOUT LIMITATION, THE CHARACTER OF SURFACE OR SUBSURFACE CONDITIONS AND OBSTACLES TO BE ENCOUNTERED ON AND AROUND THE CONSTRUCTION SITE AND SHALL MAKE SUCH ADDITIONAL INVESTIGATION AS HE MAY DEEM NECESSARY FOR THE PLANNING AND PROPER EXECUTION OF THE WORK.
 - IF CONDITIONS OTHER THAN THOSE INDICATED ARE DISCOVERED BY THE CONTRACTOR, THE OWNER SHALL BE NOTIFIED IMMEDIATELY. THE MATERIAL WHICH THE CONTRACTOR BELIEVES TO BE A CHANGED CONDITION SHALL NOT BE DISTURBED SO THAT THE OWNER CAN INVESTIGATE THE CONDITION.
 - 2.3 THE CONSTRUCTION SHALL BE PERFORMED UNDER THE DIRECTION OF THE ENGINEER.
 - 2.4 ALL ASPECTS OF THE STRUCTURE DESIGN AND SITE LAYOUT INCLUDING FOUNDATIONS, BACKFILL, END TREATMENTS AND NECESSARY SCOUR CONSIDERATION SHALL BE PERFORMED BY THE ENGINEER.
- ANY INSTALLATION GUIDANCE PROVIDED HEREIN SHALL BE ENDORSED BY THE ENGINEER OR SUPERSEDED BY THE ENGINEER'S PLANS AND SPECIFICATIONS.



BRIDGE PLAN

TYPE IV CROWN RIBS (TYP.) @ 9" O.C.
 TYPE II HAUNCH RIBS (TYP.) @ 27" O.C.

C:\USERS\HALLAPP\DATA\LOCAL\MICROSOFT\WINDOWSTEMPORARY\INTERNET FILES\CONTENT\OUTLOOK\WLBGHMM\12 FT SPAN TWISP HORSHOE CANAL CULVERT PROPOSAL SKETCH.DWG 4/20/2017 2:59 PM

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If discrepancies between the supplied information upon which the drawing is based and actual field conditions are encountered as site work progresses, these discrepancies must be reported to Contech immediately for re-evaluation of the design. Contech accepts no liability for designs based on missing, incomplete or inaccurate information supplied by others.

MARK	DATE	REVISION DESCRIPTION	BY
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CONTECH
ENGINEERED SOLUTIONS LLC
www.ContechES.com

9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
 800-338-1122 513-645-7000 513-645-7993 FAX



CONTECH
STRUCTURAL PLATE

PROPOSAL
DRAWING

ALBC #13 - 12'-1" X 6'-7"
 TWISP HORSESHOE CANAL CULVERT
 INTER-FLUVE
 TWISP, WA

PROJECT No.: 551153	SEQ. No.: 010	DATE: 1/3/2017
DESIGNED:	DRAWN:	
CHECKED:	APPROVED:	
SHEET NO.: 1 OF 7		

II - ALUMINUM BOX CULVERT

1.0 GENERAL

1.1 Manufacturer shall fabricate the aluminum box culvert as shown on the plans. Fabrication shall conform to the requirements of ASTM B-864 and shall consist of plates, ribs, and appurtenant items.

Plate thickness, rib spacing, end treatment and type of invert and foundation shall be as indicated on the plans. All manufacturing processes including corrugating, punching, curving and required galvanizing shall be performed within the United States of America.

1.2 The contractor shall verify all field dimensions and conditions prior to ordering materials.

2.0 DIMENSIONS

Span: 12'-1"
 Rise: 6'-7"
 Min. Cover: 1' - 4 3/4"
 Max. Cover: 4' - 0"
 Loading: HL-93

2.1 The proposed structure shall be an ALUMINUM BOX CULVERT with the following dimensions:

2.2 All plan dimensions on the contract drawings are measured in a true horizontal plan unless otherwise noted.

3.0 ASSEMBLY AND INSTALLATION

3.1 Bolts and nuts shall conform to the requirements of ASTM A-307 or ASTM A-449. The box culvert shall be assembled in accordance with the plate layout drawings provided by the manufacturer and per the manufacturer's recommendations.

Bolts shall be tightened using an applied torque of between 100 and 150 ft.-lbs.

3.2 The box culvert shall be installed in accordance with the plans and specifications, the manufacturer's recommendations, and AASHTO Standard Specification for Highway Bridges - Section 26 Division II - Construction.

3.3 Trench excavation shall be made in embankment material that is structurally adequate. The trench width shall be shown on the plans. Poor quality in situ embankment material must be removed and replaced with suitable backfill as directed by the Engineer.

3.4 Bedding preparation is critical to both structure performance and service life. The bed should be constructed to uniform line and grade to avoid distortions that may create undesirable stresses in the structure and/or rapid deterioration of the roadway. The bed should be free of rock formations, protruding stones, frozen lumps, roots, and other foreign matter that may cause unequal settlement.

3.5 Bedding shall provide a minimum of 4,000 psf bearing capacity. Foundation details for bearing capacity less than 4,000 psf shall be approved by the Engineer.

3.6 The structure shall be assembled in accordance with the Manufacturer's instructions. All plates shall be unloading and handled with reasonable care. Plates shall not be rolled or dragged over gravel rock and shall be prevented from striking rock or other hard objects during placement in trench or on bedding.

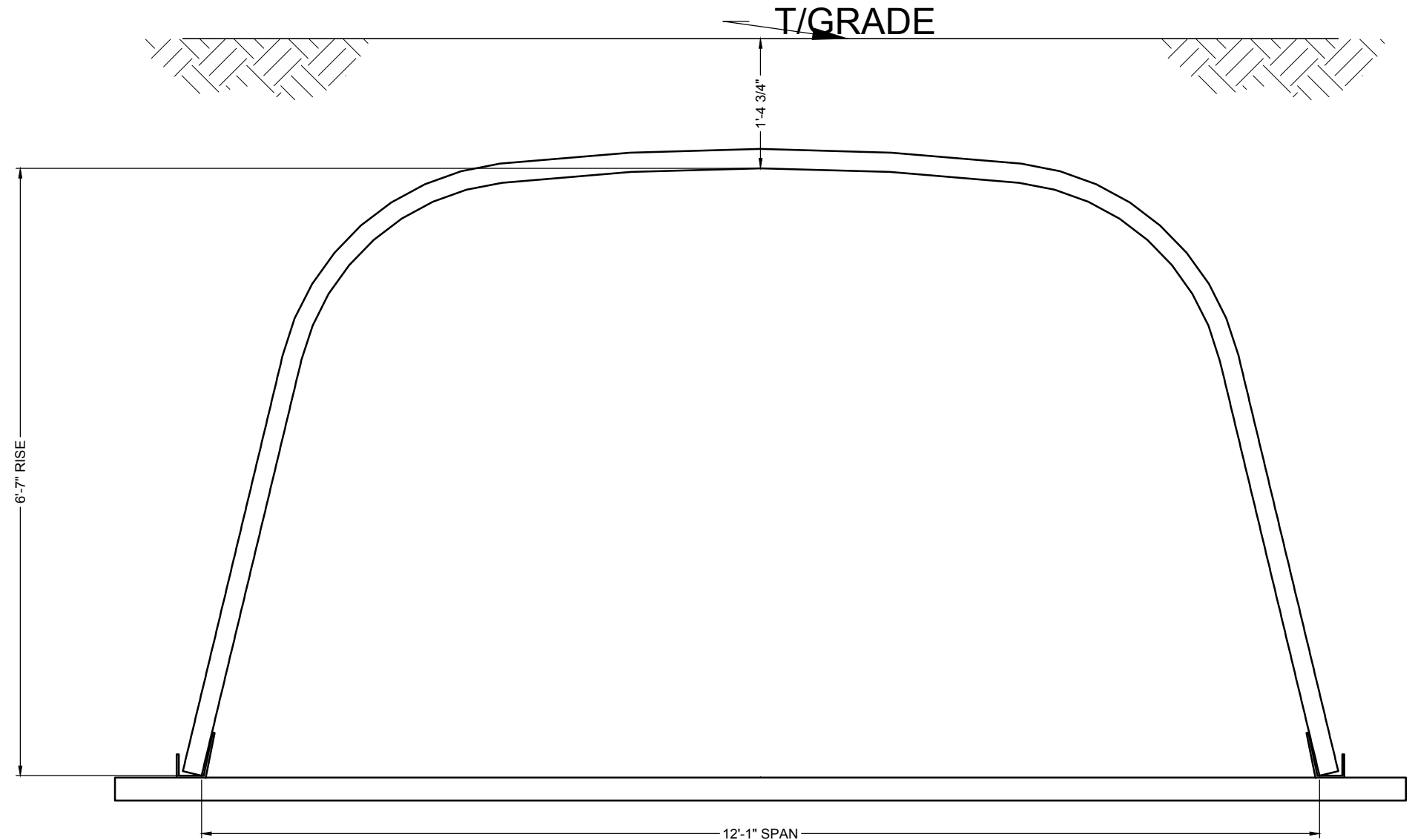
When installed on a full invert or on flexible footing pads, assembly of the invert or footing pads shall start at the downstream end. Circumferential seam laps shall shingle over the top of the downstream plates as assembly progresses upstream. Whether the box culvert is installed on a concrete footing, full metal invert, or flexible footing pad, assembly of the structure shell shall start at the upstream end. Downstream rings of plates shall be assembled outside of the upstream rings. (Circumferential seams are shingled downstream when viewed from the inside of the shell).

3.7 The structure shall be backfilled using clean well graded granular material that meets the requirements for soil classifications A-1, A-2-4, A-2-5 or A-3 modified to be more select than AASHTO M-145. See the information at the right of this sheet.

Backfill must be placed symmetrically on each side of the structure in 6 to 8 inch loose lifts. Each lift shall be compacted to a minimum of 90 percent density per AASHTO T-180

3.8 Construction loads that exceed highway load limits are not allowed to cross the structure without approval from the Engineer.

Normal highway traffic is not allowed to cross the structure until the structure has been backfilled and paved. If the road is unpaved, cover allowance to accommodate rutting shall be as directed by the Engineer.



CROSS SECTION A-A

NOTES

- MEASUREMENTS ARE TO THE INSIDE CRESTS OF THE CORRUGATION
- DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES

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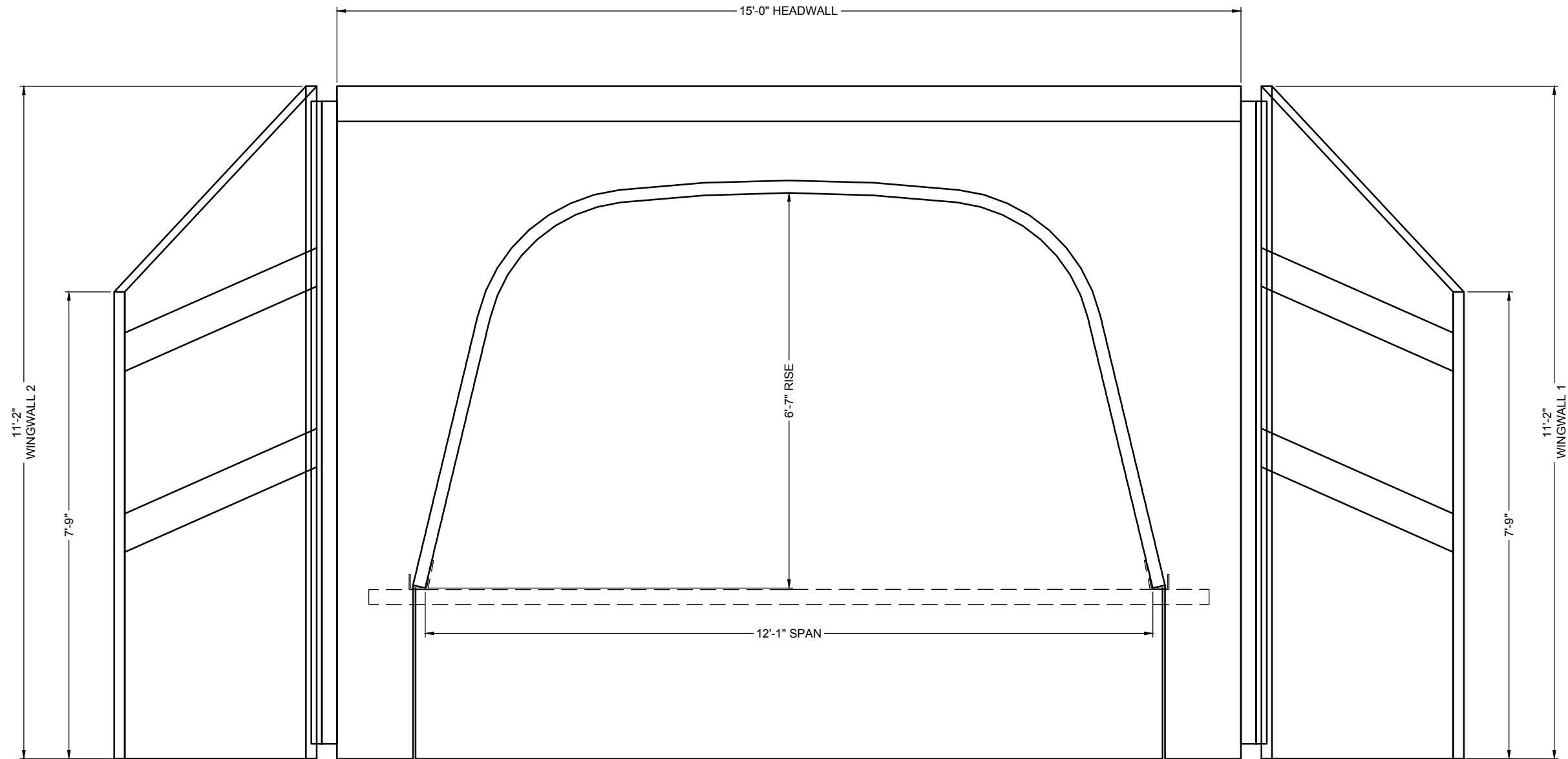
CONTECH
 STRUCTURAL PLATE

PROPOSAL
 DRAWING

ALBC #13 - 12'-1" X 6'-7"
 TWISP HORSESHOE CANAL CULVERT
 INTER-FLUVE
 TWISP, WA

PROJECT No.: 551153	SEQ. No.: 010	DATE: 1/3/2017
DESIGNED:	DRAWN:	
CHECKED:	APPROVED:	
SHEET NO.: 2 OF 7		

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INLET END ELEVATION

ALUMINUM HEADWALL TO BE FIELD CUT AT TIME OF INSTALLATION (BY OTHERS)

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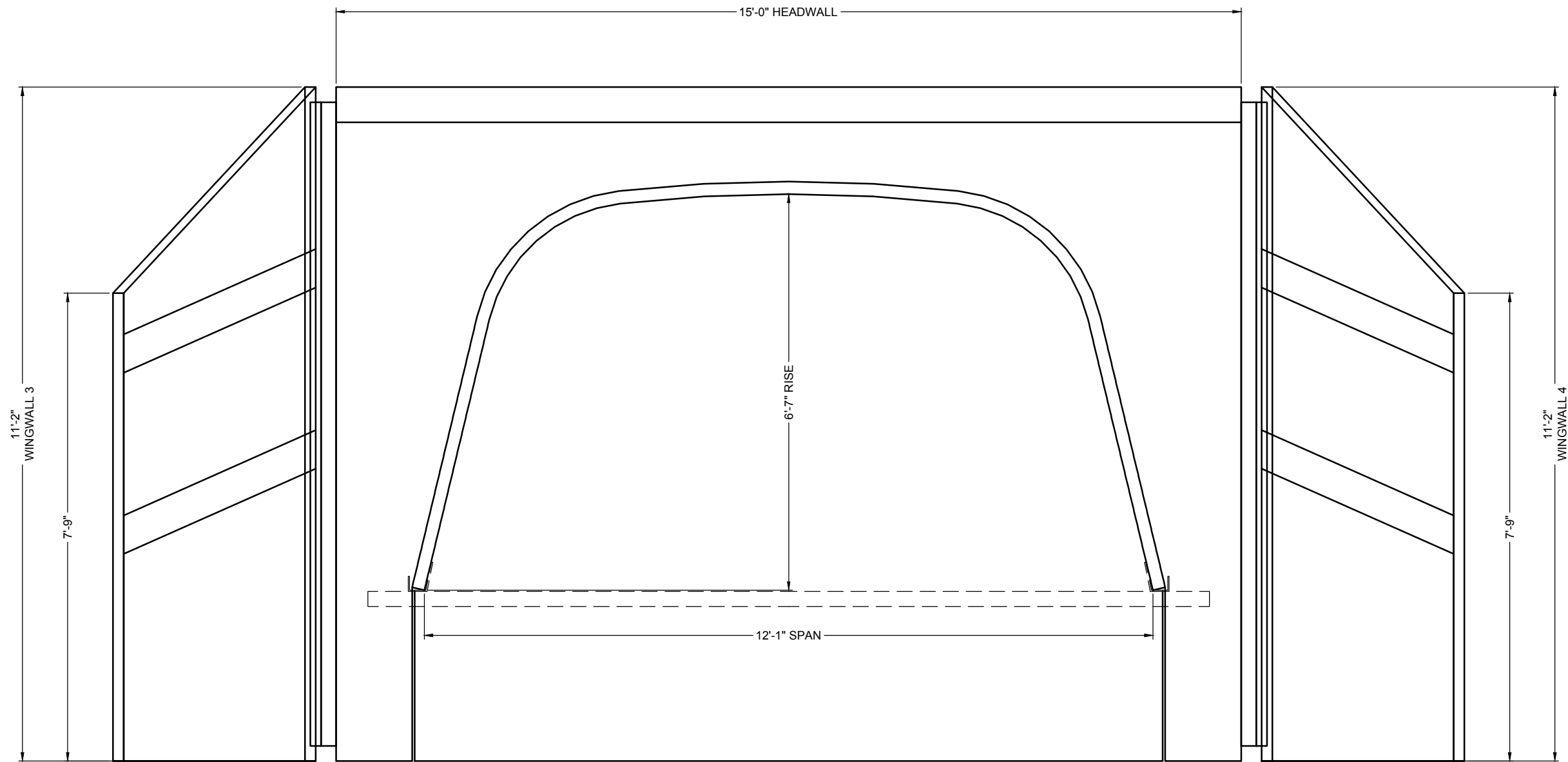


PROPOSAL
DRAWING

ALBC #13 - 12'-1" X 6'-7"
 TWISP HORSESHOE CANAL CULVERT
 INTER-FLUVE
 TWISP, WA

PROJECT No.: 551153	SEQ. No.: 010	DATE: 1/3/2017
DESIGNED:	DRAWN:	
CHECKED:	APPROVED:	
SHEET NO.: 3 OF 7		

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OUTLET END ELEVATION

ALUMINUM HEADWALL TO BE FIELD CUT AT TIME OF INSTALLATION (BY OTHERS)

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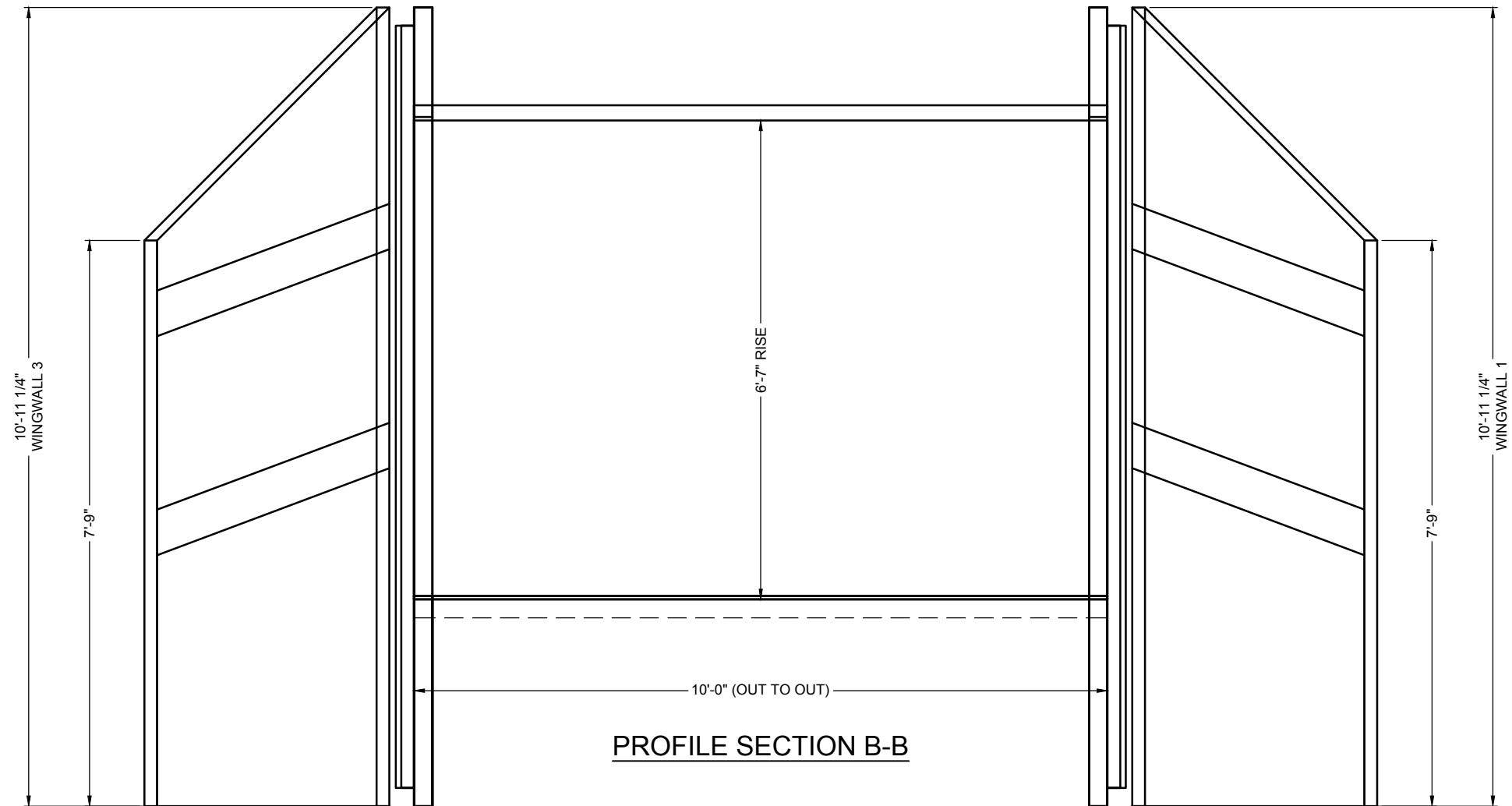
CONTECH
STRUCTURAL PLATE

PROPOSAL
DRAWING

ALBC #13 - 12'-1" X 6'-7"
TWISP HORSESHOE CANAL CULVERT
INTER-FLUVE
TWISP, WA

PROJECT No.: 551153	SEQ. No.: 010	DATE: 1/3/2017
DESIGNED:	DRAWN:	
CHECKED:	APPROVED:	
SHEET NO.: 4 OF 7		

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PROFILE SECTION B-B

OUTLET END ELEVATION

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CONTECH
STRUCTURAL PLATE

PROPOSAL
DRAWING

ALBC #13 - 12'-1" X 6'-7"
TWISP HORSESHOE CANAL CULVERT
INTER-FLUVE
TWISP, WA

PROJECT No.: 551153	SEQ. No.: 010	DATE: 1/3/2017
DESIGNED:	DRAWN:	
CHECKED:	APPROVED:	
SHEET NO.: 5 OF 7		

SPECIFICATIONS FOR MANUFACTURE AND INSTALLATION OF CONTECH® ALUMINUM BOX CULVERT #1-87

I - GENERAL

1.0 STANDARDS AND DEFINITIONS

1.1 STANDARDS - All standards refer to latest edition unless otherwise noted.

- 1.1.1 ASTM B-864 "Standard Specification for Corrugated Aluminum Box Culverts" (AASHTO Designation M-219).
- 1.1.2 AASHTO Standard Specification for Highway Bridges - Section 12 Division I - Design.
- 1.1.3 AASHTO Standard Specification for Highway Bridges - Section 26 Division II - Construction.

1.2 DEFINITIONS

- 1.2.1 Owner - In these specifications the word "Owner" shall mean Yakama Nation Fisheries.
- 1.2.2 Engineer - In these specifications the word "Engineer" shall mean the Engineer of Record or Owner's designated engineering representative.
- 1.2.3 Manufacturer - In these specifications the word "Manufacturer" shall mean CONTECH ENGINEERED SOLUTIONS 800-338-1122.
- 1.2.4 Contractor - In these specifications the word "Contractor" shall mean the firm or corporation undertaking the execution of any installation work under the terms of these specifications.
- 1.2.5 Approved - In these specifications the word "approved" shall refer to the approval of the Engineer or his designated representative.
- 1.2.6 As Directed - In these specifications the words "as directed" shall refer to the directions to the Contractor from the Owner or his designated representative.

2.0 GENERAL CONDITIONS

- 2.1 The Contractor shall furnish all labor, material and equipment and perform all work and services except those set out and furnished by the Owner, necessary to complete in a satisfactory manner the site preparation, excavation, filling, compaction, grading as shown on the plans and as described therein. This work shall consist of all mobilization clearing and grading, grubbing, stripping, removal of existing material unless otherwise stated, preparation of the land to be filled, filling of the land, spreading and compaction of the fill, and all subsidiary work necessary to complete the grading of the cut and fill areas to conform with the lines, grades, slopes, and specifications. This work is to be accomplished under the observation of the Owner or his designated representative.
- 2.2 Prior to bidding the work, the Contractor shall examine, investigate and inspect the construction site as to the nature and location of the work, and the general and local conditions at the construction site, including without limitation, the character of surface or subsurface conditions and obstacles to be encountered on and around the construction site and shall make such additional investigation as he may deem necessary for the planning and proper execution of the work.

If conditions other than those indicated are discovered by the Contractor, the Owner shall be notified immediately. The material which the Contractor believes to be a changed condition shall not be disturbed so that the owner can investigate the condition.
- 2.3 The construction shall be performed under the direction of the Engineer.
- 2.4 All aspects of the structure design and site layout including foundations, backfill, end treatments and necessary scour consideration shall be performed by the Engineer.

Any installation guidance provided herein shall be endorsed by the Engineer or superseded by the Engineer's plans and specifications.

II - ALUMINUM BOX CULVERT

1.0 GENERAL

- 1.1 Manufacturer shall fabricate the aluminum box culvert as shown on the plans. Fabrication shall conform to the requirements of ASTM B-864 and shall consist of plates, ribs, and appurtenant items.

Plate thickness, rib spacing, end treatment and type of invert and foundation shall be as indicated on the plans. All manufacturing processes including corrugating, punching, curving and required galvanizing shall be performed within the United States of America.

- 1.2 The contractor shall verify all field dimensions and conditions prior to ordering materials.

2.0 DIMENSIONS

- 2.1 The proposed structure shall be an ALUMINUM BOX CULVERT with the following dimensions:

Span: 12'-1"	Rise: 6'-7"	Loading: HL-93
Haunch Gage: 0.125	Crown Gage: 0.125	Min. Cover: 1' - 4 3/4"
Haunch Rib Type: TYPE IV	Crown Rib Type: TYPE II	Max. Cover: 4' - 0"
Haunch Rib Spacing: 27"	Crown Rib Spacing: 9"	

- 2.2 All plan dimensions on the contract drawings are measured in a true horizontal plan unless otherwise noted.

3.0 ASSEMBLY AND INSTALLATION

- 3.1 Bolts and nuts shall conform to the requirements of ASTM A-307 or ASTM A-449. The box culvert shall be assembled in accordance with the plate layout drawings provided by the manufacturer and per the manufacturer's recommendations.

Bolts shall be tightened using an applied torque of between 100 and 150 ft.-lbs.

- 3.2 The box culvert shall be installed in accordance with the plans and specifications, the manufacturer's recommendations, and AASHTO Standard Specification for Highway Bridges - Section 26 Division II - Construction.

- 3.3 Trench excavation shall be made in embankment material that is structurally adequate. The trench width shall be shown on the plans. Poor quality in situ embankment material must be removed and replaced with suitable backfill as directed by the Engineer.

- 3.4 Bedding preparation is critical to both structure performance and service life. The bed should be constructed to uniform line and grade to avoid distortions that may create undesirable stresses in the structure and/or rapid deterioration of the roadway. The bed should be free of rock formations, protruding stones, frozen lumps, roots, and other foreign matter that may cause unequal settlement.

- 3.5 Bedding shall provide a minimum of 4,000 psf bearing capacity. Foundation details for bearing capacity less than 4,000 psf shall be approved by the Engineer.

- 3.6 The structure shall be assembled in accordance with the Manufacturer's instructions. All plates shall be unloading and handled with reasonable care. Plates shall not be rolled or dragged over gravel rock and shall be prevented from striking rock or other hard objects during placement in trench or on bedding.

When installed on a full invert or on flexible footing pads, assembly of the invert or footing pads shall start at the downstream end. Circumferential seam laps shall shingle over the top of the downstream plates as assembly progresses upstream. Whether the box culvert is installed on a concrete footing, full metal invert, or flexible footing pad, assembly of the structure shell shall start at the upstream end. Downstream rings of plates shall be assembled outside of the upstream rings. (Circumferential seams are shingled downstream when viewed from the inside of the shell).

- 3.7 The structure shall be backfilled using clean well graded granular material that meets the requirements for soil classifications A-1, A-2-4, A-2-5 or A-3 modified to be more select than AASHTO M-145. See the information at the right of this sheet.

Backfill must be placed symmetrically on each side of the structure in 6 to 8 inch loose lifts. Each lift shall be compacted to a minimum of 90 percent density per AASHTO T-180

- 3.8 Construction loads that exceed highway load limits are not allowed to cross the structure without approval from the Engineer.

Normal highway traffic is not allowed to cross the structure until the structure has been backfilled and paved. If the road is unpaved, cover allowance to accommodate rutting shall be as directed by the Engineer.

GROUP CLASSIFICATION	A-1	A-3	A-2-4	A-2-5
Sieve Analysis Percent Passing				
No. 10 (2.000 mm)		---	---	---
No. 40 (0.425 mm)	50 max.	51 max.	---	---
No. 100 (0.150 mm)	---	---	50 max.	50 max.
No. 200 (0.075 mm)	25 max.	10 max.	20 max.	20 max.
Atterberg Limits for Fraction Passing No., 40 (0.425 mm)				
Liquid Limits	---	---	40 max.	41 max.
Plasticity Index	6 max.	Non Plastic	10 max.	10 max.
Usual Materials	Stone Fragment, Gravel and Sand	Sand	Silty or Clayey Gravel and Sand	

NOTE: Atterberg Limits are modified to provide material that are primarily granular

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CONTECH
STRUCTURAL PLATE

PROPOSAL
DRAWING

ALBC #13 - 12'-1" X 6'-7"

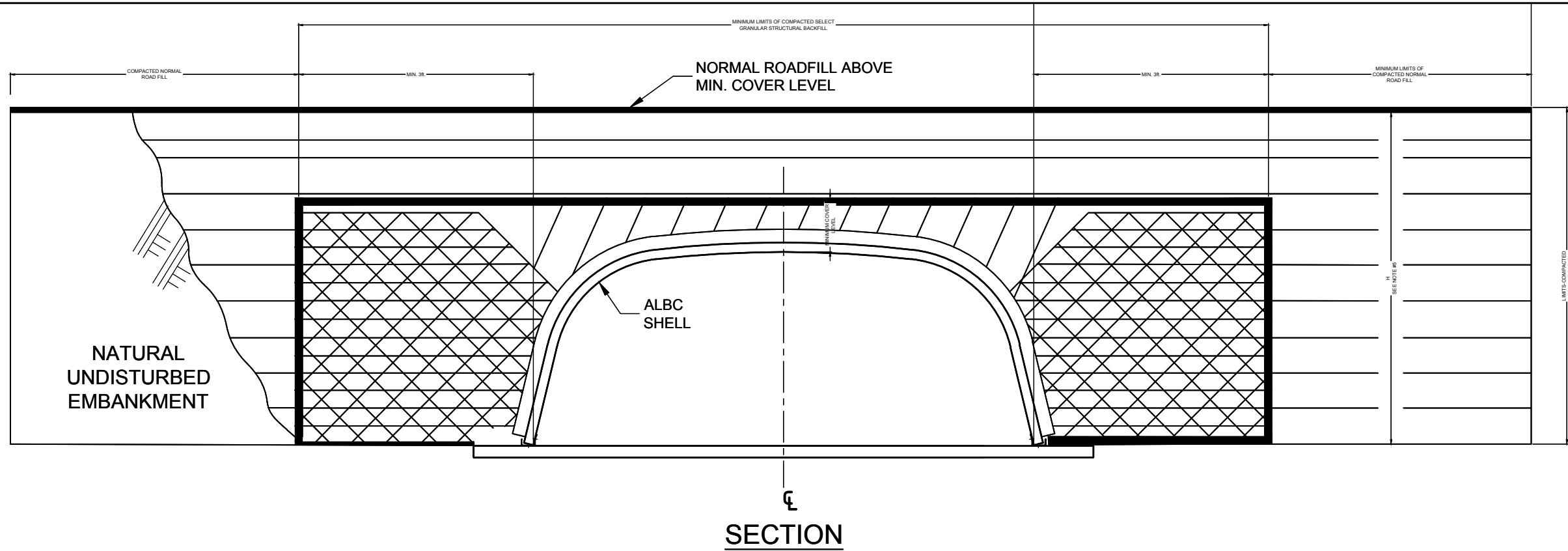
TWISP HORSESHOE CANAL CULVERT




INTER-FLUVE

TWISP, WA

PROJECT No.:	SEQ. No.:	DATE:
551153	010	1/3/2017
DESIGNED:	DRAWN:	
CHECKED:	APPROVED:	
SHEET NO.:		
6 OF 7		

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-  CRITICAL BACKFILL ZONE, PRESSURE ON SOIL GREATEST HERE.
-  INITIAL LIFTS OVER CROWN OF STRUCTURE AS INDICATED BY SHADED AREA TO BE COMPACTED TO REQUIRED DENSITY WITH HAND OPERATED EQUIPMENT OR WITH SMALL TRACTOR (D-4 OR SMALLER) DRAWN EQUIPMENT.
-  SELECT GRANULAR STRUCTURAL BACKFILL LIMITS.

- NOTES:**
- ALL SELECT GRANULAR BACKFILL TO BE PLACED IN A BALANCED FASHION IN THIN LIFTS (6"-8" LOOSE TYPICALLY) AND COMPACTED TO 90 PERCENT DENSITY PER AASHTO T-180.
 - COMPLETE AND REGULAR MONITORING OF THE ALUMINUM BOX CULVERT SHAPE IS NECESSARY DURING ALL BACKFILLING OF THE STRUCTURE.
 - PREVENT EXCESSIVE DISTORTION OF SHAPE AS NECESSARY BY VARYING COMPACTION METHODS AND EQUIPMENT.
 - TRENCH WIDTH OTHER THAN 3ft. SHALL BE BY DIRECTION OF THE ENGINEER OF RECORD.
 - "H" = STRUCTURE RISE + MAXIMUM ALLOWABLE COVER FOR SHAPE DESIGN SPECIFIED.

ADDITIONAL BACKFILL NOTES:

SATISFACTORY BACKFILL MATERIAL, PROPER PLACEMENT, AND COMPACTION ARE KEY FACTORS IN OBTAINING MAXIMUM STRENGTH AND STABILITY.

THE BACKFILL MATERIAL SHOULD BE FREE OF ROCKS, FROZEN LUMPS, AND FOREIGN MATERIAL THAT COULD CAUSE HARD SPOTS OR DECOMPOSE TO CREATE VOIDS. BACKFILL MATERIAL SHOULD BE WELL GRADED GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF AASHTO M-145 FOR SOIL CLASSIFICATIONS A-1, A-2, A-3. BACKFILL MUST BE REPLACED SYMMETRICALLY ON EACH SIDE OF THE STRUCTURE IN 6" LOOSE LIFTS. EACH LIFT IS TO BE COMPACTED TO A MINIMUM OF 90% DENSITY PER AASHTO T-180.

A HIGH PERCENTAGE OF SILT OR FINE SAND IN THE NATIVE SOILS SUGGESTS THE NEED FOR A WELL GRADED GRANULAR BACKFILL MATERIAL TO PREVENT SOIL MIGRATION.

DURING BACKFILL, ONLY SMALL TRACKED VEHICLES (D-4 OR SMALLER) SHOULD BE NEAR THE STRUCTURE AS FILL PROGRESSES ABOVE THE CROWN AND TO THE FINISHED GRADE.

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CONTECH
STRUCTURAL PLATE

PROPOSAL
DRAWING

ALBC #13 - 12'-1" X 6'-7"
TWISP HORSESHOE CANAL CULVERT
INTER-FLUVE
TWISP, WA

PROJECT No.: 551153	SEQ. No.: 010	DATE: 1/3/2017
DESIGNED:	DRAWN:	
CHECKED:	APPROVED:	
SHEET NO.: 7 OF 7		

CONSTRUCTION SERVICES AGREEMENT

BETWEEN:

THE CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION

on behalf of its _____ program or department

P.O. Box 151 / 401 Fort Road

Toppenish, WA 98948

General Phone: (509) 865-5121

Program Phone:

(HEREAFTER "YAKAMA NATION")

AND

[CONTRACTOR NAME]

Address Line 1

Address Line 1

Phone:

(HEREAFTER "CONTRACTOR")

This Construction Services Agreement ("Agreement") is executed by and between Contractor and Yakama Nation, a federally recognized sovereign Nation pursuant to the Treaty with the Yakamas of 1855 (12 Stat. 951). Contractor and Yakama Nation may be collectively referred to herein as the "Parties," and each may be referred to as a "Party."

1. TERM

The effective term of this Agreement shall be from _____, through _____, absent a valid termination action in accordance with the express terms of this Agreement.

2. PERFORMANCE

Contractor agrees to perform the services set forth in the attached scope of work, Exhibit "A" (collectively, the "Services"), which is incorporated by reference in this Agreement.

3. COMPENSATION

A. *Maximum Compensation.* The **total compensation amount** approved by Yakama Nation for this Agreement is limited to, and **shall not exceed** _____ (\$_____); which amount shall include any and all compensation for the Services as described herein and set forth in detail in the budget attached as Exhibit "B". If Exhibit "B" describes separate and specific maximum compensation amounts for services and expenses, then at the end of the term of this Agreement, any remaining balance in the amount allocated for expenses may be used by Yakama Nation, at its sole discretion, to cover fees for authorized services, so long as the total compensation amount set forth above is not exceeded.

B. *Invoicing, Progress Reports and Payment of Compensation.* Yakama Nation shall compensate Contractor according to the billing rate(s) and/or fee schedule(s) set forth in Exhibit “C” in an amount not to exceed that stated above. Contractor shall submit monthly invoices and appropriate supporting documentation to Yakama Nation, including a progress report that provides of brief summary of daily activities associated with services performed and completed by Contractor. Unless the Parties agree in writing to different terms, invoice periods shall begin on the first day of each month and end on the last day of each month. Invoices shall be submitted by Contractor to Yakama Nation’s designated staff contact within fifteen (15) days after the end of the month in which the services were provided and/or expenses were incurred. Contractor waives the right to receive full payment on invoices submitted more than sixty (60) days following the end of the proper invoice period. If a question or concern arises regarding an item on an invoice, Yakama Nation shall notify Contractor of the question or concern. Within five (5) business days following such notification, Contractor shall take action to sufficiently explain or correct the item, or Contractor shall be deemed to have waived their right to demand payment for the item.

C. *Availability of Funds.* Notwithstanding any other provisions of this Agreement, Contractor understands and agrees that compensation for services and expenses under the terms of this Agreement shall be contingent upon the availability of funds (a) placed to the credit of Yakama Nation in the Treasury of the United States, (b) appropriated by Congress, or (c) from local funds maintained in the name of Yakama Nation.

D. *Federal & Grant Funds.* Contractor understands and agrees that agreements and contracts funded by federal funds or other grant funds may be subject to certain legal requirements. These may include, but are not limited to, those requirements set forth in the United States Office of Budget Management’s Uniform Guidance, 2 C.F.R. Part 200, and/or the terms of an applicable source grant. Contractor agrees to comply with and utilize funds in accordance with all applicable laws, regulations, and guidelines, and with any applicable grant or contract terms, and further understands and agrees that the use of such funds may be subject to audit by the grantor agency. Contractor shall reimburse Yakama Nation for any costs of Contractor that are disallowed by a grantor.

4. PROPERTY DEVELOPED BY CONTRACTOR

Contractor agrees that it will retain no interest in the information, data, proposals, papers, copyrights, patents, or any other material or property developed, discovered, invented, and/or accumulated by Contractor in connection with the performance of this Agreement. Subject to applicable law, Contractor shall turn over such information, data, proposals, papers, copyrights, patents, discoveries, inventions, and other material or property to Yakama Nation upon the expiration or termination of this Agreement or upon request.

5. PUBLICATION OF INFORMATION

The dissemination or publication of documents, information material or other property developed or generated by Contractor during the course of this Agreement shall require the written approval of Yakama Nation.

6. RECORDS

A. *Access.* Subject to applicable law, Yakama Nation will provide Contractor with reasonable access to its personnel, facilities, and records necessary to the performance of this Agreement.

B. *Maintenance & Retention of Records; Financial Management for Accounting and Audits.* Contractor shall maintain and retain auditable records during the term of this Agreement and for a period of at least three (3) years following the expiration or termination of this Agreement. Contractor shall maintain its records to comply with the Audit Act of 1984, P.L. 98-502 (31 U.S.C. § 7501 et. seq., as amended) and the Office of Management and Budget's Uniform Guidance requirements set forth at, 2 C.F.R. part 200, Subpart F, as amended. Contractor shall adhere to a systematic accounting method that assures timely and appropriate resolution of audit findings and recommendations in compliance with the Uniform Guidance. Subject to applicable law, Contractor agrees that Yakama Nation, the grantor agency (if applicable), the Comptroller General of the United States, or any of their duly authorized representatives, shall have timely access to Contractor's records which are pertinent to the subject matter of this Agreement and the performance of obligations contained herein, for the purpose of conducting an audit and/or examination, and/or creating excerpts and/or transcriptions.

7. INDEPENDENT CONTRACTORS

Contractor shall employ, at its own expense, all personnel and equipment reasonably necessary to perform the Services called for by this Agreement. Such personnel shall not be considered Yakama Nation employees. Contractor shall be responsible to ensure that all personnel engaged in performing Services are fully qualified to undertake the work in accordance with applicable tribal, federal, state, and local laws. Contractor shall at all times in performance of this Agreement operate as, and have the status of, an independent contractor, and will not be an agent or employee of Yakama Nation; nor will Contractor or its personnel be entitled to any employee benefits provided by Yakama Nation. The Parties are not engaged in a joint venture or partnership. Neither party can represent or bind the other. Unless otherwise expressly agreed, Contractor shall be solely responsible to secure and pay for any necessary or appropriate permits, fees, licenses, inspections, or other prerequisites necessary for proper performance of the Services called for by this Agreement.

8. SUBCONTRACTING

A. Contractor shall not be permitted to hire a subcontractor to perform the Services called for by this Agreement without express prior written consent. Any unauthorized attempt by Contractor to subcontract for such Services shall be null and void, and Contractor shall be responsible for all expenses, fees, and costs associated with any such unauthorized subcontract.

B. An award of this Agreement based on a bid or proposal naming specific subcontractors and identifying the portions of the work to be performed by the subcontractors shall constitute prior written consent to the hiring of the named subcontractor(s). Subcontractor selection and subcontractor employment shall be subject to applicable TERO and Indian Preference

requirements described above. Contractor shall be responsible to ensure their subcontractors are in compliance with Yakama Nation TERO and Indian Preference requirements.

9. ASSIGNMENT OF INTEREST

Contractor shall not assign its interest in this Agreement, or any part thereof, including its right to receive payment for services performed, to another party. Any attempt by Contractor to assign any obligations, rights, or fees under this Agreement will be null and void, and Contractor shall be responsible for all expenses, fees, and or costs associated with any unauthorized assignment.

10. INDEMNIFICATION

Contractor shall, at its sole expense, hold harmless, indemnify, and defend Yakama Nation and its officers, agents, employees, and assigns against any and all losses, costs, damages, expenses or other liabilities whatsoever, including reasonable attorney's fees and expenses, that arise out of or are connected with, directly or indirectly, Contractor's actions or omissions, or Contractor's agents' acts or omissions related to this Agreement, including, but not limited to, accidents or injuries to persons or property.

11. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

A. Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to:

- (1) Conditions bearing upon transportation, disposal, handling, and storage of materials;
- (2) The availability of labor, water, electric power, and roads;
- (3) Uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- (4) The conformation and conditions of the ground; and
- (5) The character of equipment and facilities needed preliminary to and during work performance.

Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by Yakama Nation and information available to the public from local government agencies, as well as from the drawings and specifications made a part of this Agreement. Any failure of Contractor to take the actions described and acknowledged in this paragraph will not relieve Contractor from responsibility for properly estimating the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to Yakama Nation.

B. Yakama Nation assumes no responsibility for any conclusions or interpretations made by Contractor based on the information made available by Yakama Nation. Nor does Yakama Nation assume responsibility for any understanding reached or representation made concerning

conditions that can affect the work by any of its officers or agents before the execution of this Agreement, unless that understanding or representation is expressly stated in this Agreement.

12. PHYSICAL DATA

Data and information furnished or referred to below or in the attached exhibits is for Contractor's information. Yakama Nation shall not be responsible for any interpretation of or conclusion drawn from the data or information made available to Contractor. Further, Yakama Nation specifically does not warrant construction methodology that may be included in such documents.

- (a) The indications of physical conditions on any drawings or specifications that have been provided are the result of general inspection of the site.

13. SCHEDULE FOR CONSTRUCTION

A. *Construction Schedule.* Unless the construction schedule is specifically addressed elsewhere in this Agreement, Contractor shall, within five (5) days after the work commences on the Agreement or another period of time determined by Yakama Nation, prepare and submit to Yakama Nation three (3) copies of a practicable schedule showing the order in which Contractor proposes to perform the work, and the dates on which Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion each week during the Agreement period. If Contractor fails to submit a schedule within the time prescribed, Yakama Nation may withhold approval of progress payments until Contractor submits the required schedule. Should Contractor fall behind its schedule, a revised schedule shall be forwarded with the next Contractor's request for progress payment. Additional schedules shall be furnished to Yakama Nation as soon as practicable if so requested.

B. *Rate of Progress.* With any and each partial payment request, Contractor shall submit a copy of the last submitted schedule annotated to indicate actual progress made to date. If at any time, in the opinion of Yakama Nation, Contractor has fallen behind the schedule to an extent which would jeopardize timely completion, Contractor shall take the steps necessary to improve its progress, including those that may be required, to enable timely completion without additional cost to Yakama Nation. Such steps may include, but are not limited to, increasing the number of shifts, the amount of overtime, days of work per week, and/or the amount of construction plant being utilized. Contractor shall submit any supplementary schedules Yakama Nation deems necessary to demonstrate how the rate of progress necessary for timely completion will be regained.

C. *Breach.* Failure of Contractor to comply with the requirements of this section shall be considered a material breach and grounds for a determination by Yakama Nation that Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Agreement. Upon making this determination, Yakama Nation may terminate Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this Agreement.

14. DIFFERING SITE CONDITIONS

Contractor shall promptly, and before the conditions are disturbed, give a written notice to Yakama Nation of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this Agreement, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent to the type of work provided for in the Agreement. Unless specifically identified in the Agreement, discoveries of archaeological or historical remains such as graves, fossils, skeletal materials and artifacts protected by the Archaeological Resources Protection Act (36 CFR 1214) are considered type 2 conditions.

15. LAYOUT OF WORK

Contractor shall lay out its work from Yakama Nation established base lines and bench marks indicated on the drawings or any other manner furnished by Yakama Nation. Contractor shall be responsible for all measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. Contractor shall be responsible for the execution of the work to the lines and grades that may be established or indicated by Yakama Nation. Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by Yakama Nation until authorized to remove them. If such marks are destroyed by Contractor or through its negligence before their removal is authorized, Yakama Nation may replace them and deduct the expense of the replacement from any amounts due or to become due to Contractor.

16. SPECIFICATIONS, DRAWINGS AND MATERIAL SUBMITTALS

A. Omissions from any drawings and specifications that have been provided, or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve Contractor from performing such omitted or misdescribed details of the work. Work shall be performed as if fully and correctly set forth and described in the drawings and specifications.

B. Contractor shall check all drawings furnished by Yakama Nation prior to starting work and shall promptly notify Yakama Nation of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large-scale drawings shall in general govern small-scale drawings. Contractor shall compare all drawings and verify the figures before laying out the work, and will be responsible for any errors which might have been avoided thereby.

17. MATERIAL & WORKMANSHIP

A. *Materials.* All equipment, material, and articles incorporated into the work covered by this Agreement shall be new and of the most suitable grade for the purpose intended, unless

otherwise specifically provided in this Agreement. Use of recycled materials for the manufacture of such products is encouraged. Equipment, material, or articles specified by trade name, make, or catalog number, shall be provided. Equivalent items are not acceptable unless specifically authorized in the specification.

B. *Professional Work.* All work under this Agreement shall be performed in a professional, thorough, skillful, and safe manner, and shall be consistent with relevant professional standards. Yakama Nation may require, in writing, that Contractor remove from the work any employee Yakama Nation deems incompetent, unsafe, or otherwise objectionable.

C. *Legally Compliant Work.* In performing its obligations under this Agreement, Contractor shall comply with all applicable tribal, federal, state and local laws, regulations, guidelines and policies in performance of services under this Agreement. Such laws may include, but are not limited to, the Davis Bacon Act and related federal labor law requirements associated with federally funded construction projects. Contractor represents that it has reviewed, and is familiar with, all laws relevant to the performance of services under this Agreement.

18. SUPERINTENDENCE BY THE CONTRACTOR

At all times during performance of this Agreement, and until the work is completed and accepted, Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to Yakama Nation and has authority to act for Contractor.

19. PERMITS AND RESPONSIBILITIES

Unless otherwise provided in this Agreement, Contractor shall, without additional expense to Yakama Nation, be responsible for obtaining any and all necessary licenses and permits, and for complying with any tribal, federal, state, and municipal laws, codes, and regulations applicable to the performance of the work. Contractor shall also be responsible for all damages to persons or property that occur as a result of Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of Yakama Nation and others. Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under this Agreement.

20. OTHER CONTRACTS

Yakama Nation may undertake or award other contracts for additional work, or may utilize in-house construction forces, at or near the site of the work. Contractor shall fully cooperate with such other contractors and Yakama Nation employees, and carefully adapt scheduling and performance of the work under this Agreement to accommodate simultaneous performance, heeding any direction that may be provided by Yakama Nation. Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractors or by Yakama Nation employees.

21. USE AND POSSESSION PRIOR TO COMPLETION

Yakama Nation shall have the right to take possession of or use any completed or partially completed part of the work call for by this Agreement. Before taking possession of or using any work, Yakama Nation shall furnish Contractor a list of items of work remaining to be performed or corrected on those portions of the work that Yakama Nation intends to take possession of or use. However, failure of Yakama Nation to list any item of work shall not relieve Contractor of responsibility for complying with the terms of this Agreement. Yakama Nation's possession or use shall not be deemed an acceptance of any work under this Agreement.

22. CLEANING UP

A. Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the owner of the underlying real property. Upon completing the work, Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to Yakama Nation.

B. Unless specifically set forth in the Agreement, Contractor shall not burn any material on site, on the right-of-way or on the access roads to the sites. All material and debris shall be hauled to an appropriate disposal site.

23. ROAD MAINTENANCE

Contractor shall maintain all roads used by it, and upon completion of the job shall leave them in as good a condition as when first used. A road-grading machine (not a bulldozer) shall be used for maintenance and final grading. In no event shall Contractor interfere with the property owner's use of roads existing prior to Contractor's entry.

24. STOP WORK ORDER

A. Yakama Nation may order Contractor to suspend all or any part of the work call for by this Agreement for the period of time that Yakama Nation determines appropriate for the convenience of Yakama Nation.

B. Contractor shall immediately comply with Yakama Nation's order and take all reasonable steps to minimize the incurring of costs allocable to the work covered by the order.

25. PROTECTION OF EXISTING VEGETATION, STRUCTURES, AND IMPROVEMENTS

A. Contractor shall preserve and protect all structures, equipment, utilities, other improvements, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this Agreement. Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during performance of this Agreement, or by the careless operation of equipment, or by workers, Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by Yakama Nation's representative.

B. If Contractor fails or refuses to repair the damage promptly, Yakama Nation may have the necessary work performed and charge the cost to Contractor.

26. INSURANCE

A. The following minimum kinds and amounts of insurance are applicable in the performance of the work under this Agreement. Contractor shall (subject to applicable law) maintain such insurance, naming Yakama Nation as an additional insured:

(1) *Workers' compensation and employer's liability.* Contractor is required to comply with applicable Federal and State workers compensation and occupational disease statutes. Employer's liability coverage of at least \$100,000 shall be required.

(2) *General liability.* Contractor shall provide general liability insurance of at least \$1,000,000 per occurrence. Any policy aggregate limits which apply, shall be modified to apply to each location and project. The policy shall name Yakama Nation, its officials, officers, employees and agents, as insureds with respect to Contractor's performance of services.

(3) *Automobile liability.* Contractor shall provide automobile liability insurance covering the operation of all automobiles used in the performance of this Agreement. Policies shall provide limits of at least \$1,000,000 per accident and include coverage for all owned, non-owned and hired automobiles. Contractor's policy shall be primary to any insurance of Yakama Nation.

(4) *Environmental impairment liability.* Contractor shall provide environmental impairment liability insurance of at least \$1,000,000 per occurrence. Such insurance will include coverage for the clean up, removal, storage, disposal, transportation and/or use of pollutants. The insurance policy shall name Yakama Nation, its officials, officers, employees and agents as insured. Contractor's policy shall be primary to any insurance of Yakama Nation.

B. Contractor may, with the approval of Yakama Nation, maintain a self-insurance program; provided that, with respect to workers' compensation, Contractor is qualified pursuant to statutory authority.

C. Before commencing work under this Agreement, Contractor shall provide to Yakama Nation certificates of insurance from the insurance company stating the insurance required has been obtained and is in force. The certificate(s) shall identify Contractor and the contract(s) for which coverage is provided, and shall contain a statement that the insurer will give notice of cancellation or any material change to Yakama Nation at least thirty (30) days before the effective date. In addition, Contractor shall provide certificates as the policies are renewed throughout the period of this Agreement. If Contractor's insurance does not cover the subcontractors involved in the work, Contractor shall provide certificates stating that the required insurance has been obtained by the subcontractors.

27. INSPECTION - SERVICES AND CONSTRUCTION

A. Yakama Nation may inspect the work called for by this Agreement at any time and place. Where possible and practicable, Yakama Nation will perform inspections in a manner that will not unduly delay the work.

B. If any of the services do not conform with the requirements of this Agreement, or with applicable laws, regulations or governmental policies, Yakama Nation may require the Contractor to perform the services again in conformity at no cost to Yakama Nation. When the defects in services cannot be corrected by re-performance, Yakama Nation may deduct from the Agreement payments an amount which reflects the reduced value of the services performed.

C. Neither inspection, lack of inspection, acceptance, nor payment shall relieve the Contractor of any of its obligations under this Agreement. Contractor's duty to re-perform non-conforming work is intended to survive the expiration of this Agreement's term, and shall apply even where non-conformance is discovered following its expiration.

D. If Contractor does not promptly replace or correct rejected work, Yakama Nation may (without limiting any other legal or equitable remedies available to it) (1) by contract or otherwise, replace or correct the work and charge the cost to Contractor, and may (2) terminate this Agreement for default.

E. Unless otherwise specified in the Agreement, acceptance by Yakama Nation will be in writing and shall be made as promptly as practicable after completion and inspection of all work called by this Agreement or that portion of the work Yakama Nation determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, non-compliance with applicable law, or Yakama Nation's rights under any warranty or guarantee.

28. WARRANTY - CONSTRUCTION

A. In addition to any other warranties in this Agreement, Contractor warrants, except as provided in paragraph (H)(1) of this clause, that work performed by it and/or its subcontractors under this Agreement conforms to applicable law and to the contract requirements, and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor or any subcontractor or supplier at any tier.

B. This warranty shall continue for a period of three (3) years from the date of final acceptance of the work. If Yakama Nation takes possession of any part of the work before final acceptance, this warranty shall continue for a period of three (3) years from the date Yakama Nation takes possession.

C. Contractor shall remedy at Contractor's expense any failure to conform, or any defect. In addition, Contractor shall remedy at Contractor's expense any damage to Yakama Nation-owned or controlled real or personal property, when that damage is the result of:

- (1) Contractor's failure to conform to applicable law or contract requirements; or
- (2) Any defect of equipment, material, workmanship, or design furnished by Contractor.

D. Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. Contractor's warranty with respect to work repaired or replaced will run for three (3) years from the date of repair or replacement.

E. Yakama Nation shall notify Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

F. If Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, Yakama Nation shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at Contractor's expense.

G. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Agreement, Contractor shall:

- (1) Obtain all warranties that would be given in normal commercial practice;
- (2) Require all warranties to be executed, in writing, for the benefit of Yakama Nation, if directed by Yakama Nation; and
- (3) Enforce all warranties for the benefit of Yakama Nation, if directed by Yakama Nation.

H. Unless a defect is caused by the negligence of Contractor or subcontractor or supplier at any tier, Contractor shall not be liable for the repair of any defects of material or design

furnished by Yakama Nation nor for the repair of any damage that results from any defect in Yakama Nation-furnished material or design.

- (1) This warranty shall not limit Yakama Nation's rights under the Inspection and Acceptance clause of this Agreement with respect to latent defects, gross mistakes, or fraud.

29. TAXES

The compensation for Services performed under this Agreement shall include all applicable Tribal, Federal, State, and local taxes and duties. Depending on the location and nature of the Services provided, when applicable, Yakama Nation shall provide Contractor a single use Tax Exemption Certificate.

30. TERMINATION

A. *Notice.* Yakama Nation may terminate all or any part of this Agreement, at any time, with or without cause, upon written notice to Contractor. Upon receipt of the termination notice, Contractor shall promptly stop work on the terminated portion of the Agreement. Contractor obligations shall be consistent with those set forth above in the Stop Work Order clause of this Agreement.

B. *Breach.* In the event of termination for breach or violation of the terms and provisions of this Agreement, Yakama Nation, to the extent permitted by applicable law, shall be entitled to enforce its rights under this Agreement, and recover its court costs and reasonable attorney's fees, as determined by the court. The foregoing shall not in any way limit or restrict any right or remedy at law or equity which would otherwise be available to Yakama Nation, including, but not limited to, the right to contract with other qualified persons to complete the performance of services identified in or called for by this Agreement.

C. *Termination By Tribal Council Executive Committee.* Notwithstanding anything herein to the contrary, Contractor understands and agrees that the Yakama Nation Tribal Council Executive Committee may immediately terminate this Agreement by written notice.

D. *Effect of Complete Termination.* Upon the complete termination of this Agreement, the liability of the Parties for the further performance of this Agreement shall cease, but the Parties shall not be relieved of the duty to perform their obligations up to the date of termination.

E. *Effect of Partial Termination.* The compensation amount shall be revised as a result of a partial termination under this section. On fixed-price contracts the revised amount shall not exceed the pre-termination contract price plus reasonable termination expenses. On cost-reimbursement contracts the revised amount shall not exceed the total of allowable and allocable costs of performance prior to termination plus termination expenses plus an adjustment of the fee on the terminated portion of the Agreement. No payment will be made for anticipated profits on the terminated portion, or consequential damages, of this Agreement. Contractor shall submit a settlement proposal within thirty (30) days of the notice of termination.

31. FORCE MAJEURE

This Agreement is subject to force majeure, and is contingent on strikes, accidents, acts of God, weather conditions, fire regulations, the actions of any government, including funding and/or budgetary decisions, and other circumstances which are beyond the control of the parties. If the terms and conditions of this Agreement are unable to be performed as a result of any cause of force majeure, then this Agreement shall be void, without penalty to any party for such non-performance.

32. NOTICE

Notice to Contractor shall consist of a letter, delivered postage prepaid, addressed to:

[Contractor’s Legal Agent’s Name]
[Contractor Name]
[Address No. 1]
[Address No. 2]

Notice to Yakama Nation shall consist of a letter, delivered postage prepaid, addressed to:

JoDe L. Goudy, Chairman
Yakama Tribal Council
PO Box 151 / 401 Fort Road
Toppenish, WA 98948

With courtesy copies to Yakama Nation’s Designated Representative detailed below, and the Lead Attorney of Yakama Nation’s Office of Legal Counsel at P.O. Box 150, Toppenish, WA 98948.

Either party may from time to time change its designated address for notice, or designated contact(s) for notice, by giving the other party reasonable notice of such change.

33. SUPERVISION OF CONTRACTOR/DESIGNATED REPRESENTATIVE

Contractor shall act under the supervision of the following Designated Representative of Yakama Nation in performing services under this Agreement:

Name:	[First] [Last], [Job Title]
Address:	
Phone:	
Email:	

The Designated Representative is designated for project management purposes only, and does not have authority to authorize any changes, modifications or addendums to this Agreement, nor does the Designated Representative have signing authority on behalf of Yakama Nation.

Yakama Nation shall provide Contractor reasonable notice if there is a change in the Designated Representative.

34. COMPLIANCE PROVISIONS

A. *Discrimination.* Contractor shall not discriminate against any employee or applicant for employment because of handicap, race, age, religion, or sex. Contractor will take affirmative steps to ensure that applicants are employed, and that employees are treated fairly during employment, without regard to their handicap, race, age, religion, or sex.

B. *Indian Preference.* Notwithstanding the above, Contractor shall, for all work performed on or near the Yakama Reservation pursuant to this Agreement, and consistent with Section 703(i) of the 1964 Civil Rights Act, give preference in employment (including any authorized subcontracts) to equally qualified Indians regardless of their handicap, age, religion or sex. To the extent feasible and consistent with the efficient performance of this Agreement, Contractor shall provide employment and training opportunities to Indians that are not fully qualified to perform under this Agreement, regardless of their handicap, age, religion or sex. Further, Contractor shall comply with any and all applicable Indian preference laws and requirements established by Yakama Nation, including those set forth in the Yakama Nation Tribal Employment Rights Ordinance (“TERO”), as amended (Yakama Revised Law & Order Codes, Title 71).

35. JURISDICTION & VENUE

The validity, interpretation, and performance of this Agreement, and any and all written instruments, agreements, specifications and other writings of whatever nature which relate to or are part of this Agreement, shall be governed by and construed in accordance with the laws of Yakama Nation. Both Parties understand and agree that this Agreement establishes a consensual business relationship between the Parties for purposes of Yakama Tribal Court jurisdiction. Venue of any court action filed to enforce or interpret the provisions of this Agreement shall be exclusively in Yakama Nation Tribal Court(s). In the event of litigation to enforce the provisions of this Agreement, the prevailing party shall be entitled to reasonable legal fees and expenses in addition to any other relief allowed.

36. DISPUTE RESOLUTION

A. *Meet and Confer Meeting.* In the event that a dispute arises between the Parties over the performance, interpretation, or enforcement of this Agreement, the Parties in the first instance shall attempt in good faith to resolve the dispute informally by mutual Agreement in a face-to-face meet and confer meeting. All offers, promises, conduct and statements, whether oral or written, made in the course of the meet and confer meeting by any of the Parties, their agents, employees, experts and attorneys shall be considered confidential, privileged and inadmissible for any purpose, including impeachment, in any other proceeding involving the Parties, provided that evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of its use in the meet and confer meeting.

B. *By Tribal Council Chairman.* If the Parties are unable to resolve the dispute during the meet and confer meeting, the aggrieved party shall submit the matter, in writing, to the Chairman of the Yakama Nation Tribal Council. A copy of the aggrieved party's submission shall be served upon the other party in accordance with the notice provisions of this Agreement. The Chairman shall promptly convene a meeting of the Parties, which shall be held in Toppenish, Washington, to resolve the matter. The decision of the Chairman shall be final and binding upon both Parties. Provided, however, that nothing shall operate to limit or prohibit Yakama Nation from otherwise enforcing its rights under this Agreement. In the event that the Chairman has a conflict of interest that would prevent her/him from hearing the dispute, s/he may, at her/his sole discretion, either decline to hear the dispute, or appoint an alternate Tribal Leader or Elder to serve in his/her place.

C. Nothing in this section shall operate to prohibit Yakama Nation from enforcing its rights under this Agreement in a court of appropriate jurisdiction. Yakama Nation may at its own election seek recovery of monetary damages from Contractor's breach of any terms in this Agreement.

37. GENERAL TERMS

A. *Headings.* Headings are provided for convenience and do not affect the meaning of the provisions to which they are affixed.

B. *Severability.* If any term of this Agreement is to any extent illegal, otherwise invalid, or incapable of being enforced, such term shall be excluded to the extent of such invalidity or unenforceability; all other terms hereof shall remain in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term.

C. *Changes to the Agreement.* No change, amendment, modification, or addendum to this Agreement shall be valid unless it is in writing and executed by authorized representatives of both Parties.

D. *Additional Services.* Except as otherwise provided in this Agreement, no payment for additional services shall be made unless such services and the price therefore have been requested and authorized in advance in writing by Yakama Nation.

E. *Survival.* The requirements of Section 4 (Property Developed by Contractor), Section 6 (Maintenance & Retention of Records; Financial Management for Accounting & Audits), Section 10 (Indemnification), Section 28 (Warranty-Construction) and Section 36 (Dispute Resolution) of this Agreement shall survive termination of this Agreement.

F. *No General Waiver.* Any waiver or failure of the Parties to enforce or insist upon any term in this Agreement does not constitute a general waiver or relinquishment of that term.

G. *No Construction Against Drafter.* Each party has participated in negotiating and drafting this Agreement. If any ambiguity or question of intent or interpretation arises, this Agreement is

to be construed as if the Parties had drafted it jointly, as opposed to being construed against one party because it was responsible for drafting one or more provisions.

H. *Execution.* This Agreement may be executed in counterparts, electronically, or by facsimile.

38. ENTIRE AGREEMENT

This Agreement incorporates all the agreements, covenants and understandings between the Parties. No agreement or understanding, verbal or otherwise, of the Parties regarding their responsibilities under this Agreement shall be valid or enforceable unless embodied in this Agreement.

The following Exhibits are incorporated by reference into this Agreement:

- Exhibit "A" – Project Overview & Scope of Work
- Exhibit "B" – Budget
- Exhibit "C" – Payment
- Exhibit "D" – Project Planset
-

39. SOVEREIGN IMMUNITY

Notwithstanding any other terms or provisions of this Agreement, Contractor understands and agrees that Yakama Nation, by entering into this Agreement, does not waive its sovereign immunity from suit, nor does it waive, alter, or otherwise diminish its rights, privileges, remedies or services guaranteed by the Treaty with the Yakamas of 1855 (12 Stat. 951).

40. SPECIAL PROVISIONS

In addition to the forgoing terms and conditions, the following requirements are agreed to and shall apply to this Agreement:

A. [Mark as n/a, or insert special provision text.]

IN WITNESS WHEREOF, we set our hands and seals:

[Signature page(s) to follow.]

CONFEDERATED TRIBES & BANDS OF THE YAKAMA NATION:

By: _____

Date: _____

Name: JoDe Goudy (or authorized designee)

Title: Yakama Nation Tribal Council Chairman

CONTRACTOR NAME:

EIN #

By: _____

Date: _____

Name:

Title:

EXHIBIT A

Project Overview and Scope of Work

1. Background:

Yakama Nation Fisheries (Owner) is conducting a salmon habitat restoration project along the Twisp River known as the Twisp Horseshoe Side Channel Project. This project is funded through the Columbia River Fish Accords, which provides dedicated funding from Bonneville Power Administration to Yakama Nation Fisheries for the purposes of protecting and improving salmon habitat in the natal tributaries of the Upper Columbia Basin. This project has been developed under the 2007 Salmon Recovery Plan framework, in coordination with the Methow Restoration Council and the Upper Columbia Salmon Recovery Board Regional Technical Team.

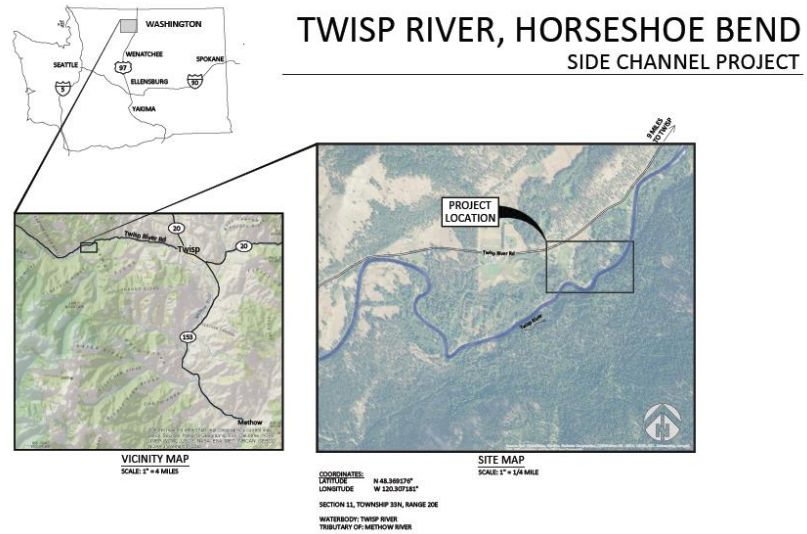
The project has been developed by professional engineers. A stamped Engineer’s Construction Plan Set has been produced to describe the work being performed under this contract. Taken together, multiple accompanying Exhibits to this Exhibit A provide the full Scope of Work to be executed per the terms of this contract.

The attached **Exhibit B** provides the contract Line Item Budget which is referenced to the work tasks described in this Scope of Work, and **Exhibit C** provides a payment schedule and requirements. **Exhibit D** provides the Engineer’s Construction Plan Set and special provisions by which the work tasks are based.

2. Location

The project will take place on private lands at the following address:

929B Twisp River Rd.
Twisp, WA 98854



3. **Project Tasks:**

All tasks will be completed as per **Exhibit D**. Major project elements include but are not limited to the following:

- TESC, SPCC Plan and Implementation
- Mobilization
- Clearing and Grubbing
- Channel Excavation Incl. Haul
- Culvert
- Riffle Material
- Logs (Side Channel Site)
- Cofferdam
- Pumping
- Log Structure
- Road Repair: Crushed Surfacing
- Streambed Boulders (Side Channel Site)
- Large Boulders (Side Channel Site)

4. **Project Schedule and Key Deliverables:**

This project will occur adjacent to private lands containing inhabited residences. Construction noise disturbances outside of normal work hours will not be allowed. Work producing construction noise should only be conducted between 6:30 am and 6:30 pm.

Environmental permits for this project require some work be performed during the normal in-water work window for the Twisp River to avoid adverse impacts to spawning salmonids and fertilized redds. Environmental permits will dictate the implementation timeline for portions of the project that could affect aquatic habitats. The typical in-water work window for this portion of the Twisp River is July 1 to July 31.

5. **Contractor Obligations:**

The Contractor shall furnish all supervision, labor, equipment and tools necessary to complete the project as described in **Exhibit D**.

6. **Consistent Satisfactory Progress**

Consistent satisfactory progress in 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, the Contractor may be given a notice of contract cancellation. Consistent satisfactory progress will also be determined by the Contractor's demonstrated ability to perform all work tasks described in **Exhibit D**. If it appears that the Contractor is unable to complete the project tasks within the permitting work window, the Contractor may be given a notice of contract cancellation. The Yakama Nation's designated representative will monitor progress closely.

7. Fish Removal

In-water construction activities will require fish removal of all isolated in-water work sites. Fish removal will be conducted in a timely manner by the Owner's Designated Representatives and the time taken to implement proper fish removal protocols will be considered incidental to the contractor's work tasks.

8. Fire Suppression

The contractor will be familiar with and prepared for the requirements associated with IFPL Levels II & III and the restrictions associated with those. The contractor may seek to acquire IFPL shut down exemptions to allow work to continue on schedule.

9. Road Signage

The Contractor will observe all road signage regulations regardless of the project location and as per Exhibit D if applicable.

10. Utilities Location

The Contractor will locate all utilities prior to any excavation.

11. Communication with Landowners

The Contractor expressly agrees that Contractor and his staff will not communicate with the Landowner in any manner, whether it be in regard to the project or otherwise, without express permission from, or the presence of the Designated Representative.

12. Exclusivity

During the term of this Agreement, including time taken for mobilization and demobilization of construction equipment, Contractor shall not conduct any work on the property designated in this Agreement unless so directed by the Designated Representative. Contractor shall require in all contracts with subcontractors that subcontractors not conduct any work on the property designated in this Agreement unless so directed by the Designated Representative. Any additional work conducted on the property designated in this Agreement by Contractor without the express consent of the Designated Representative shall constitute a material breach of this Agreement, thereby relieving the Yakama Nation from all payment obligations to the Contractor.

EXHIBIT B

Budget

[Attach the budget for the work to be performed. The total compensation amount shown in this budget must be consistent with the total compensation amount listed in Section 3 of the Agreement.]

[If there are separate subtotal amounts allocated for services and expenses, make sure to note these, along with any applicable hourly rate expectations, or item/activity cost expectations.]

EXHIBIT C

Payment

1. Payment Schedule

- Progress:** The Contractor shall submit a separate bill for each major project task element after the work has been completed, reviewed and accepted by Yakama Nation's Designated Representative. The Contractor is encouraged to invoice monthly when payment is necessary.
- Percentage:** The Contractor shall invoice monthly and will be allowed to submit a bill for percentage of work completed after the work has been reviewed and accepted by Yakama Nation's Designated Representative.
- Actual Work Completed:** The Contractor shall invoice monthly and will be allowed to submit a bill for actual work completed.
- Alternative Schedule:** The Contractor shall invoice and be allowed to submit a bill as follow: [alternate payment plan description, e.g., 30% deposit with balance due after work has been reviewed and accepted by Yakama Nation's Designated Representative]

2. Tax Exempt Certificate

Due to the location and nature of the Services being provided by Contractor:

The Contractor **has not** been given a Tax Exemption Certificate

The Contractor **has** been given a single use Tax Exemption Certificate. Due to the nature of this Agreement, as a fisheries enhancement project being undertaken by a federally recognized Treaty Tribe, the Contractor should be allowed to use the tax-exempt certificate that is included with this document.

3. Davis Bacon Wages

Davis Bacon Wages Apply to this contract. The contractor will adhere to the Davis Bacon rules and comply and submit all necessary paperwork and certified payroll to the Yakama Nation with each invoice submitted.