

# FULL PROPOSAL FORM

## *Lewis River Aquatic Fund*

### Form Intent:

To provide a venue for an applicant to clearly indicate the technical basis and support for proposed project. Specifically the project's consistency with recovery plans, Settlement Agreement Fund objectives and priorities, technical studies and assessments which support the proposed action and approach.

### Full Proposal format:

Please complete the following form for your Full Proposal. Maps, design drawings and other supporting materials may be attached.

The deadline for a Full Proposal Form submission is **January 29, 2021**. Please submit materials to:

Erik Lesko  
PacifiCorp  
825 NE Multnomah Street, Suite 1800  
Portland, OR 97232  
[Erik.lesko@pacificorp.com](mailto:Erik.lesko@pacificorp.com)

### 1. Project Title

Pepper Creek Culvert Removal and Road Hydro-Stabilization

### 2. Requested Funding Amount \$48,210

### 3. Project Manager (name, address, telephone, email)

Greg Robertson, [greg.robertson2@usda.com](mailto:greg.robertson2@usda.com), (509) 395-3366

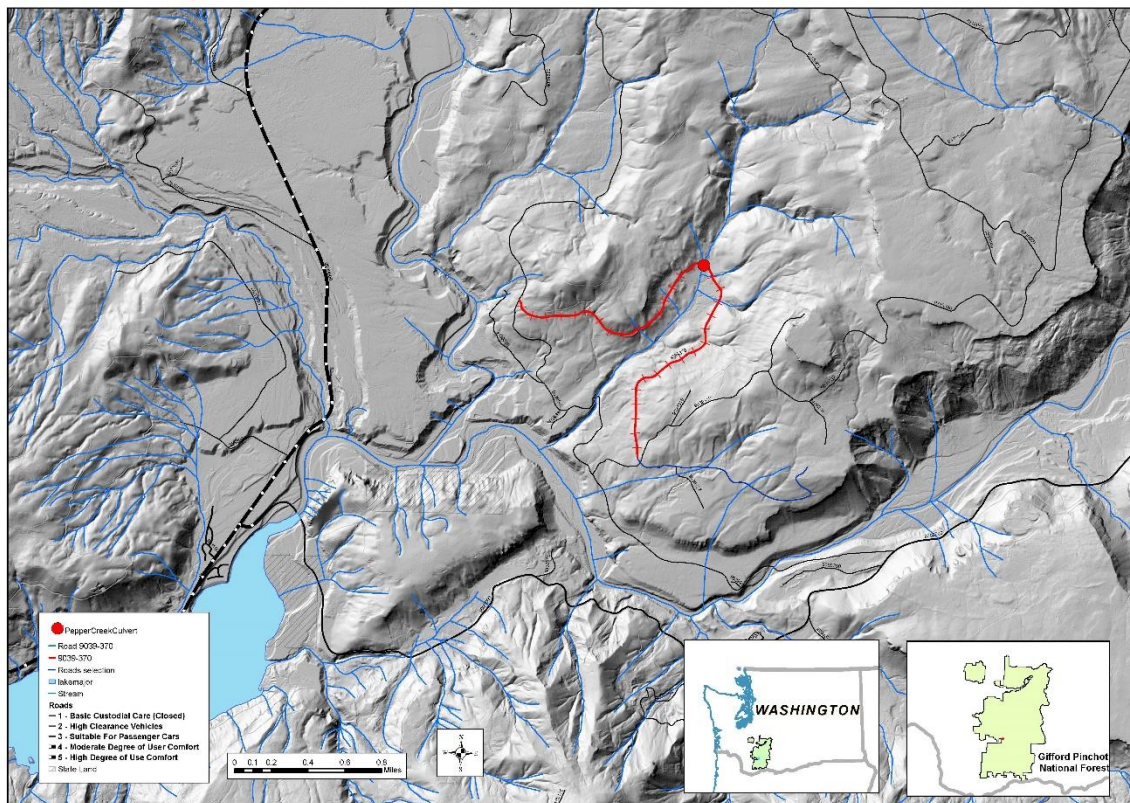
### 4. Identification of problem or opportunity to be addressed

#### **Problem:**

Forest Road 9039-370 parallels and crosses Pepper Creek, and is a chronic source of erosion and sedimentation, with a high risk of failure. One culvert is a barrier to anadromous fish passage, and there are twelve road stream crossings that provide a potential source of sediment; three of which have a potential for significant mass wasting events. The undersized barrier culvert on Pepper Creek has incised and/or scoured the channel and disconnected the creek from its floodplain. The 9039-370 road is currently in a closed status on the forest Motor Vehicle Use Map and is unlikely to receive maintenance from Forest Service staff over the next few decades. The combination of these problems can have a negative impact to the reintroduction of anadromous salmonids within the Upper North Fork Lewis River.

**Opportunity:**

To mitigate current passage, sediment, and future failure risk, The Gifford Pinchot National Forest proposes to hydrologically stabilize 2.6 miles of the 9039-370 Road (Figure 1). Hydrological stabilization is a treatment technique to avoid, minimize, and mitigate adverse effects to water quality, aquatic habitat, and riparian resources on forest roads that are not needed for near-term management, but are necessary for access to future management actions. Hydrologically stabilized roads minimize road erosion and road hydrologic connectivity to the stream system by removal of culverts and fill material that present an unacceptable risk of failure or flow diversion, and suitable measures to ensure the road surface will intercept, collect, and remove water from the road surface in a manner that reduces concentrated flow in ditches, culverts, and over fill slopes and road surfaces without frequent maintenance. Because hydrologically stabilized roads remain on the National Forest System road system, the integrity of the roadway is retained to the extent practicable and measures are implemented to reduce sediment delivery from the road surface and fills and reduce the risk of crossing failure and stream diversion. Removal of the passage barrier culvert on Pepper Creek will restore longitudinal connectivity for over 2 miles of habitat for aquatic species including Coho and Steelhead. In addition, road material will be pulled out of the floodplain of Pepper Creek, restoring lateral connectivity, and reducing potential erosion and sedimentation. The project will create and sustain diverse habitats and allow full migration of aquatic organisms.



**Figure 1. Pepper Creek Culvert Removal and Road Hydro-Stabilization project location.**



## 5. Background

Pepper Creek is ranked as a Tier 3 reach by the Lower Columbia Fish Recovery Board with Contributing designation for Coho and winter Steelhead, Primary designation for spring Chinook, and Stabilizing designation for summer Steelhead. Pepper Creek is not ranked by the EDT analysis or the ACC matrix synthesis.

The Forest Service believes this project is a high priority because recent spawning surveys have documented Coho carcasses approximately 800 feet below the culvert on the 9039-370 road (Shappart, Meridian Environmental, personal communication) and Coho juveniles were observed in 2020 by Forest Service personnel at the culvert outlet (Figure 2).





**Figure 2. Culvert outlet on the 9039-370 road. Note the lack of a jump pool at culvert outlet.**

The current LCFRB SalmonPort GIS layer shows the Tier 3 available habitat available up to the 9039-370 culvert. However, Forest Service habitat data and personal observations indicate approximately two additional miles of habitat above the culvert barrier. Habitat above the culvert barrier is in an old growth stand with intact and desirable habitat conditions (Figure 3.)



**Figure 3. Photo of habitat above the 9039-370.**

Previous Forest Service habitat surveys have been conducted in 2008 and a culvert was removed in 2006 on the 9039 road to allow unobstructed fish passage up to the next culvert on the 9039-370 road which is the last anthropogenic barrier on Pepper Creek to anadromous salmonids.

Table 1 summarizes potential natural barriers identified during the 2008 Pepper Creek Habitat Survey. Of note are the pool depths associated with the jump heights for each waterfall. Two waterfalls of 3 and 4 feet in height are in Reach 1 and are downstream of where Coho have been observed. The third waterfall at river mile 2.81 is above the 9039-370 culvert which is at river mile 1.6.

**Table 1. Listing of waterfalls/barriers in Pepper Creek.**

<b>Reach #</b>	<b>Sequence Order</b>	<b>Channel Unit Type</b>	<b>RM</b>	<b>Length of Structure (ft)</b>	<b>Width (ft)</b>	<b>Percent Gradient</b>	<b>Spill Pool Depth (ft)</b>	<b>Height (ft)</b>	<b>Migration Barrier</b>
1	5	WF1	0.02	2	3.5	160	1.8	3	Potential
1	32	WF2	0.21	1	10	190	2.7	4	Potential
3	190	WF3	2.81	2	8	190	1.3	2.8	Potential

Redd surveys conducted by Meridian Environmental have been taking place on Pepper Creek for many years and can occur until high flows or snow prevent survey. Given the relatively short redd survey window and the late timing of discharge in the Pepper Creek drainage, it is believed that Pepper Creek would well support the late run or “N-type” Coho life history (Shappart, Meridian Environmental, personal communication). Higher spring flows would also benefit migrating Steelhead.

6. Project Objective(s)

The objective of this project proposal is to remove an anadromous fish barrier and reduce the future potential of mass wasting and subsequent sediment delivery into Pepper Creek. Removal of this culvert will open 1.2 miles of juvenile habitat and 2 miles of adult salmon habitat. Hydrologic stabilization of the 9039-370 Road would reduce erosion and sedimentation and reduce the potential for mass wasting through removal of several deep fill culverts. Fill depths range from 45-70 feet and when including the fill at the 9039-370 culvert crossing, a combined +/- 5,000 cubic yards of fill is perched for potential sediment delivery into Pepper Creek. The rationale for hydrologic stabilization versus decommissioning is related to timber stands off the 9039-370 road that will need commercial thinning in the future. If or when the road is opened back up to commercial thinning, it would be returned to the hydro-stabilized condition. There are currently no plans to enter the road for logging purposes within the next 20 years according to the current plan of work.

Other project objectives that coincide with the culvert removal are to add large wood into the channel and floodplain in the area where the road prism fill will be removed from the floodplain. This would accelerate floodplain development where it has been disconnected by the culvert and would provide an opportunity for sediment retention. Retaining sediment behind the large wood would provide in increase in adult spawning opportunities through gravel retention and juvenile rearing by creating forced pools, retention of nutrients, cover, and habitat complexity.

## 7. Tasks

All tasks will be completed by the Forest Service

**Task 1:** Consult with Forest Service botanist and archeologist for potential resources that may be affected by culvert removal for aquatic EA. NEPA previously completed for road closure.

**Task 2:** Contract Preparation.

**Task 3:** Solicit and award contract.

**Task 4:** Project implementation July 16<sup>th</sup>-September 30 2021.

## 8. Methods

The project will hydrologically stabilize the 9039-370 road by removing culvert crossings and fill over twelve streams. Slope outsloping of the road prism, scarification, and water bar to facilitate drainage and prevent erosion would occur along the length of the treated road. At the 9039-370 culvert, the road prism fill will be removed in its entirety and placed within cut areas of the upland road prism to reactivate the historic floodplain. Trees from an immediate young growth stand will be used to roughen the denuded area and reconnect the floodplain by loading wood into the channel where the culvert was located. It is estimated that approximately 20 full length trees will be needed to accomplish that work.

Hydrological stabilization includes scarifying compacted surfaces (>6"), removing cross-drain ditch relief culverts, providing drainage at deep fill crossings to avert culvert failure, placing water bars at natural drainage locations such as swales and gullies, and mulching and seeding exposed soils to provide long term erosion control. These efforts will hydrologically store the closed road, reduce sediment input, and allow the road to be re-used in the future by reducing sheet flow on the road surface and providing natural hydraulic connectivity to existing drainage patterns. Typical engineering plans for the project are in Figures 4, 5, 6, 7, and 8.

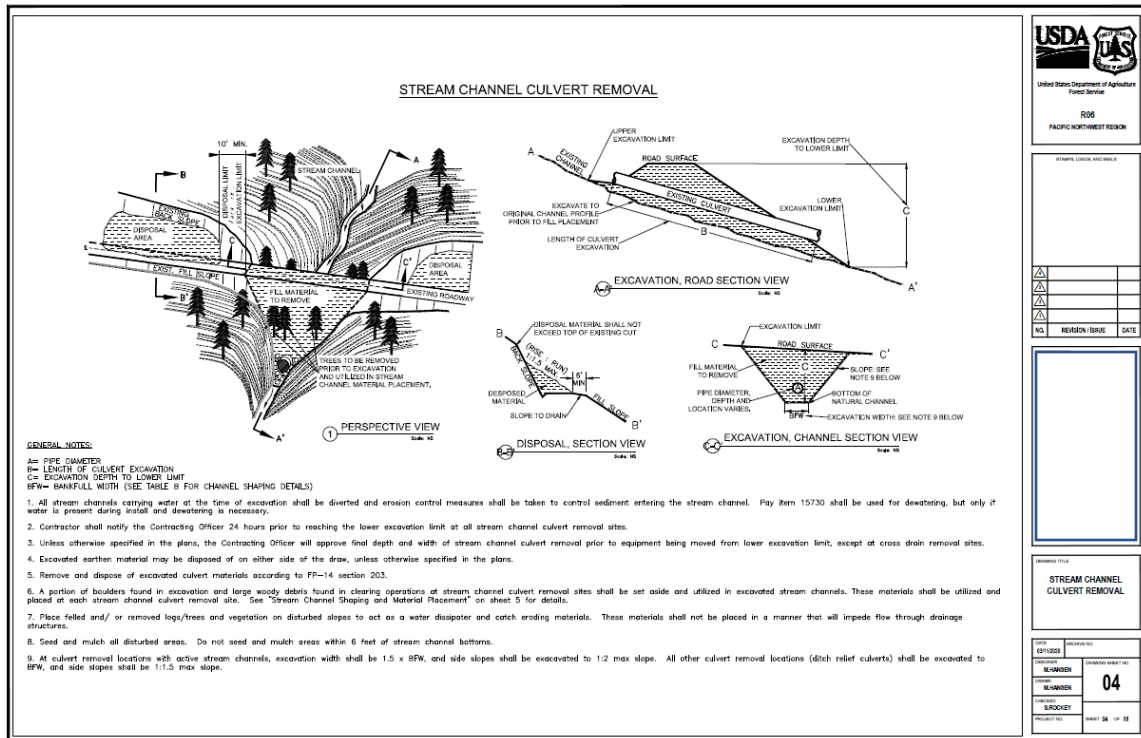


Figure 4. Stream channel culvert removal engineering typical.

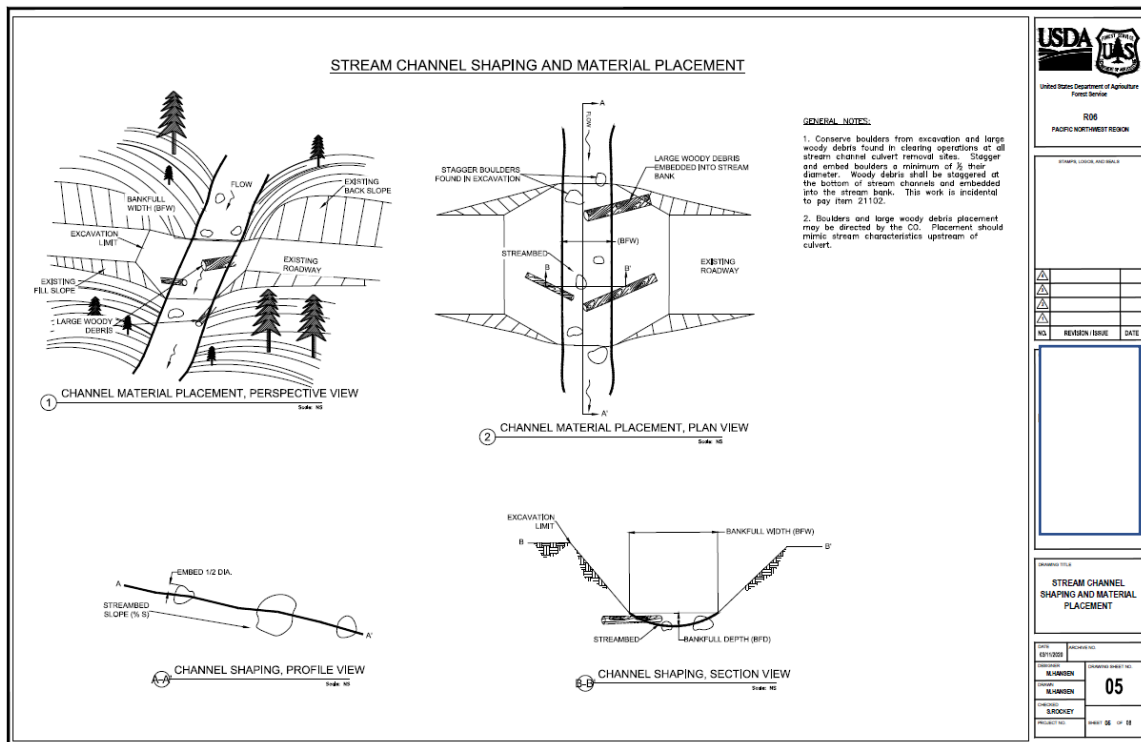


Figure 5. Stream channel shaping and material placement engineering typical.



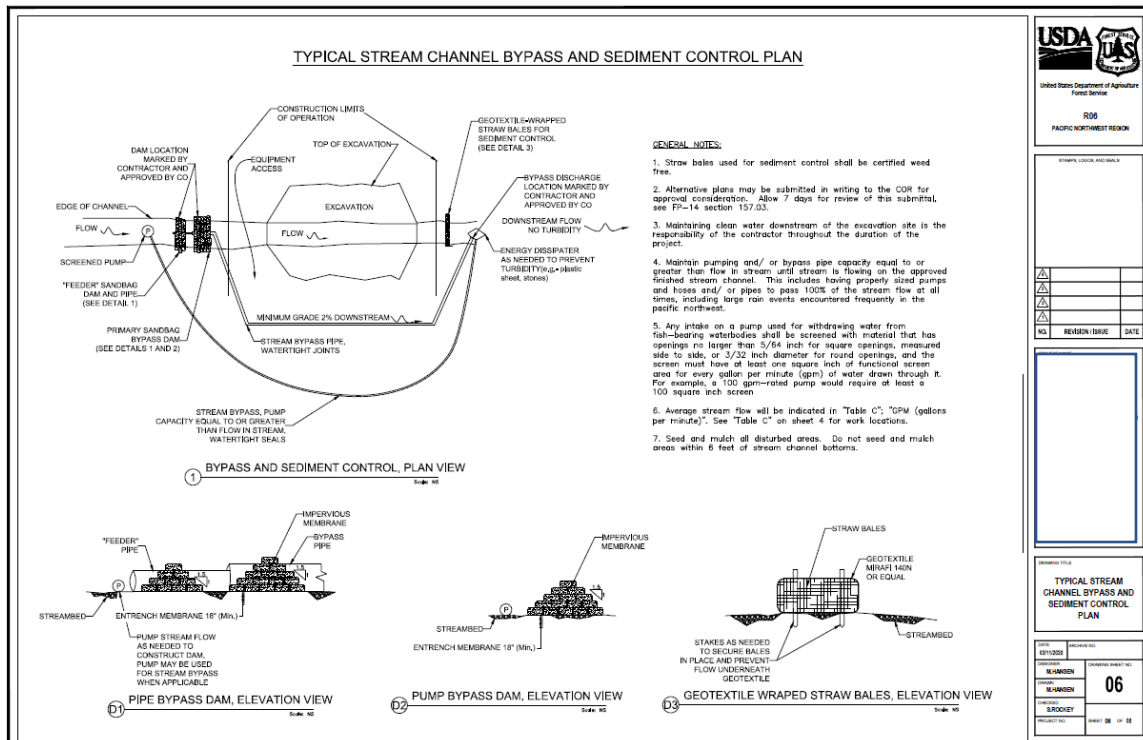


Figure 6. Stream channel bypass and sediment control engineering typical.

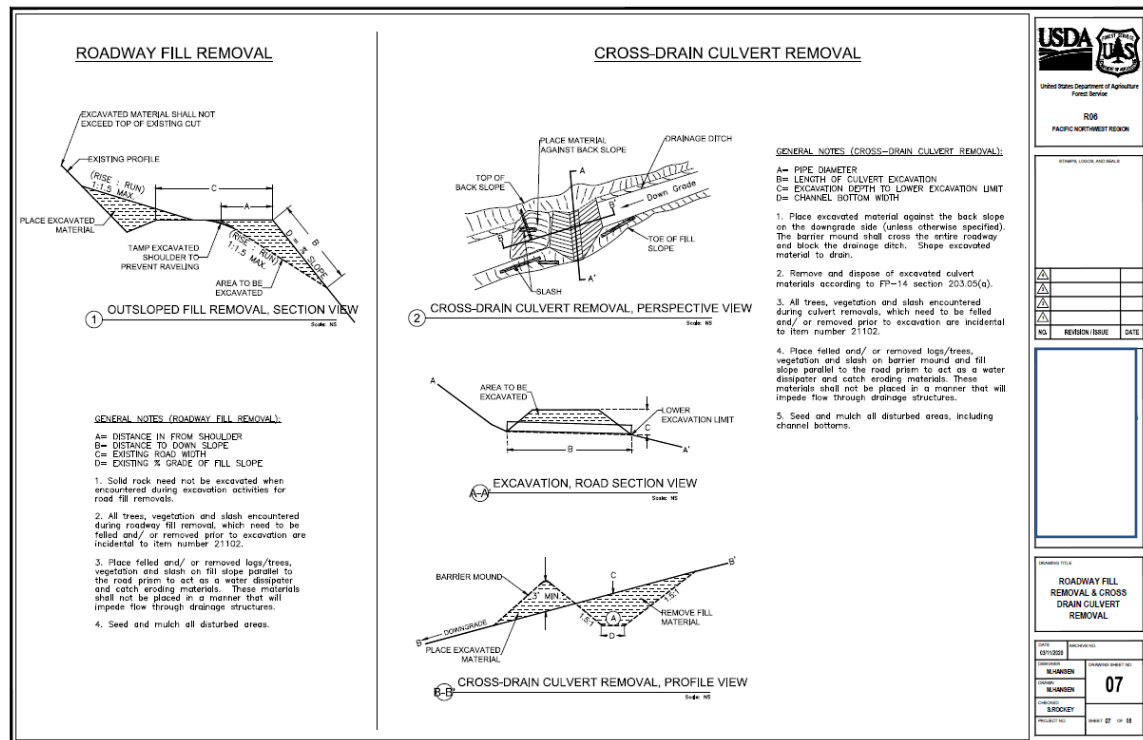


Figure 7. Cross drain culvert removal engineering typical.



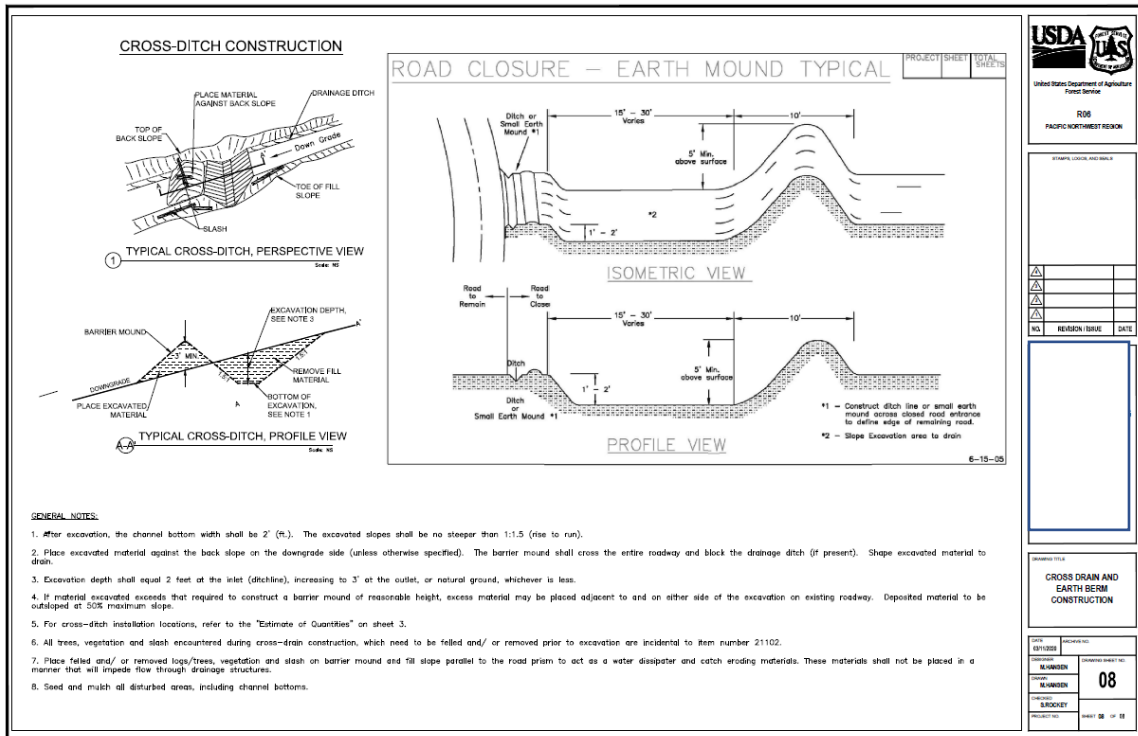


Figure 8. Cross ditch construction engineering typical.

9. Specific Work Products

**See Project Duration**

10. Project Duration

<b>Deliverables</b>	<b>Completion Date</b>
Preparation of plans and design drawings for contracting	Jan. 2021
NEPA compliance and programmatic permit consistency review completion	Feb. 2021
Contract solicitation and award	Mar.-May 2021
Instream implementation; culvert removals and floodplain restoration	July 15-Aug 15, 2021
Road treatments that can be accomplished outside the instream work window	Aug.-Sept. 2021
ACC project site visit	Aug. 2021
Implementation monitoring	Fall 2021
Completion report to ACC	Feb. 2022

Note: Status updates will be provided to ACC as project invoices are processed.

## 11. Permits and Authorizations

Identify any applicable permits and resource surveys required for project. Please include timeline for obtaining and any action taken to-date. Applicant will be responsible for securing all such necessary permits.

Obtain permission of all owners of land used for access to and completion of the project. **Landowner(s) must sign PacifiCorp's Release Agreement prior to finalization of a Funding Agreement with PacifiCorp.**

U.S. Forest Service BMP standards will be incorporated into the implementation of the project to ensure environmental compliance is met through the USFS programmatic consultations and Memorandum of Understandings with regulatory agencies that govern aquatic and terrestrial projects on USFS lands.

## 12. Matching Funds and In-kind Contributions

If applicable, describe any matching funds and/or in-kind contributions that you have secured or have requested through other means. Matching funds are those funds contributed to the project from other funding sources. In-kind contributions may include donated labor, materials, or equipment. Please be specific in your description of contributions and use of volunteers (e.g. ACE construction is donating 8 hours of backhoe operation including operator).

<b>Pepper Creek Culvert and Road Hydro-Stabilization In-kind Items</b>	<b>Quantity</b>	<b>Cost</b>
<b>Contract Administration</b>	30 days @ \$400/day	\$12,000
<b>NEPA (Botany and Archeology)</b>	6 days @ \$400/day	\$2,400
<b>Vehicle Mileage</b>	0.58/mile @ 1200 miles	\$696
<b>Trees</b>	20 trees @ \$50/tree	\$1,000
	<b>Total Cost</b>	<b>\$16,096</b>

## 13. Peer Review of Proposed Project

It is encouraged that the Full Proposal be reviewed by an independent resource professional prior to submission for funding. Focus of such review should be on biological value, site selection and proposed methodology. Please note who completed the review and contact information. This does not have to be a third party review, and can come from someone associated with the sponsoring organization. For large wood projects in the mainstems of the Lewis or Muddy River, a peer review is required.

## 14. Budget

Pay Item	Item Description	Pay Unit	Estimated Quantity	Unit Price	Item Cost
	<b>Base pay items</b>				
15101	Mobilization	Lump Sum	1	\$ 4,628.16	\$3,918
15713	Soil Erosion & Pollution Control	Lump Sum	1	\$ 4,000.00	\$4,000.00
20302a	Removal of stream channel culvert	Each	3	\$ 1,500.00	\$4,500.00
20302b	Removal of ditch relief culvert	Each	12	\$ 500.00	\$6,000.00
20303	Removal of fill material at aquatic organism stream crossing	Each	1	\$ 10,000.00	\$10,000.00
21101	Roadway hydro stabilization	Mile	2.6	\$ 2,000.00	\$5,200.00
	Time and equipment wood placement	Hour	30	\$ 165.00	\$4,950.00
			Subtotal		\$38,568.00
			Contingency	25%	\$9,642.00
			<b>Total</b>		<b>\$48,210.00</b>



15. Photo Documentation (*Per National Marine Fisheries Service's Biological Opinion for Relicensing of the Lewis River Hydroelectric Projects – August 27, 2007*):

Photos will be provided at project status updates July-September, 2020 and in the close out report in February, 2021.

16. Insurance. All qualifying applicants shall comply with PacifiCorp's insurance requirements set forth in Appendix A. The policy limits are deemed sufficient by PacifiCorp for project activities involving significant risk, including placement of large woody debris in navigable waterways, and are presumed to be sufficient for all activities likely to be funded under this Full Proposal Form. Should applicant's insurance program not meet these requirements, bid pricing should include any additional costs applicant would incur to comply with these requirements.

**Appendix A**  
**Insurance Requirements**  
**(Risk Mgmt to evaluate risk by project and report needed insurance**  
**limits to Lewis River Project Coordinator)**

1. INSURANCE

Without limiting any liabilities or any other obligations of [CONTRACTOR], [CONTRACTOR] shall, prior to commencing the Project, secure and continuously carry with insurers having an A.M. Best Insurance Reports rating of A-:VII or better the following insurance coverage:

1.1 Workers' Compensation. [CONTRACTOR] shall comply with all applicable Workers' Compensation Laws and shall furnish proof thereof satisfactory to PacifiCorp prior to commencing the Project.

All Workers' Compensation policies shall contain provisions that the insurance companies will have no right of recovery or subrogation against PacifiCorp, its parent, divisions, affiliates, subsidiary companies, co-lessees, or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the parties that the insurance as effected shall protect all parties.

1.2 Employers' Liability. Insurance with a minimum single limit of \$1,000,000 each accident, \$1,000,000 disease each employee, and \$1,000,000 disease policy limit.

1.3 Commercial General Liability. The most recently approved ISO policy, or its equivalent, written on an occurrence basis, with limits not less than \$1,000,000 per occurrence/ \$2,000,000 general aggregate (on a per location and/or per job basis) bodily injury (with no exclusions applicable to injuries sustained by volunteers working or participating in the Project) and property damage, including the following coverages:

- a. Premises and operations coverage
- b. Independent contractor's coverage
- c. Contractual liability
- d. Products and completed operations coverage
- e. Coverage for explosion, collapse, and underground property damage
- f. Broad form property damage liability
- g. Personal and advertising injury liability, with the contractual exclusion removed
- h. Sudden and accidental pollution liability, if appropriate
- i. Watercraft liability, either included or insured under a separate policy

1.4 Business Automobile Liability. The most recently approved ISO policy, or its equivalent, with a minimum single limit of \$1,000,000 each accident for bodily injury and property damage including sudden and accidental pollution liability, with respect to

[CONTRACTOR]'s vehicles whether owned, hired or non-owned, assigned to or used in the performance of the Project.

1.5 Umbrella Liability. Insurance with a minimum limit of \$4,000,000 each occurrence/aggregate where applicable to be provided on a following form basis in excess of the coverages and limits required in Employers' Liability insurance, Commercial General Liability insurance and Business Automobile Liability insurance above. [CONTRACTOR] shall notify PacifiCorp, if at any time their minimum umbrella limit is not available during the term of this Agreement, and will purchase additional limits, if requested by PacifiCorp.

In addition to the requirements stated above any and all parties providing underground locate, engineering, design, or soil sample testing services including [CONTRACTOR], subcontractor and all other independent contractors shall be required to provide the followings insurance:

Professional Liability: [CONTRACTOR] (or its contractors) shall maintain Professional Liability insurance covering damages arising out of negligent acts, errors or omissions committed by [CONTRACTOR] (or its contractors) in the performance of this Agreement, with a liability limit of not less than \$1,000,000 each claim. [CONTRACTOR] (or its subcontractors of any tier) shall maintain this policy for a minimum of two (2) years after completion of the work or shall arrange for a two (2) year extended discovery (tail) provision if the policy is not renewed. The intent of this policy is to provide coverage for claims arising out of the performance of work or services contracted or permitted under this Agreement and caused by any error, omission for which the [CONTRACTOR] its subcontractor or other independent contractor is held liable.

Except for Workers' Compensation insurance, the policies required herein shall include provisions or endorsements naming PacifiCorp, its affiliates, officers, directors, agents, and employees as additional insureds.

To the extent of [CONTRACTOR]'s negligent acts or omission, all policies required by this Agreement shall include provisions that such insurance is primary insurance with respect to the interests of PacifiCorp and that any other insurance maintained by PacifiCorp is excess and not contributory insurance with the insurance required hereunder, provisions that the policy contain a cross liability or severability of interest clause or endorsement, and that [CONTRACTOR] shall notify PacifiCorp immediately upon receipt of notice of cancellation, and shall provide proof of replacement insurance prior to the effective date of cancellation. No required insurance policies, except Workers' Compensation, shall contain any provisions prohibiting waivers of subrogation. Unless prohibited by applicable law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against PacifiCorp, its parent, affiliates, subsidiary companies, co-lessees, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all parties.

A certificate in a form satisfactory to PacifiCorp certifying to the issuance of such insurance shall be furnished to PacifiCorp prior to commencement of the Project by [CONTRACTOR] or its volunteers or contractors. If requested, [CONTRACTOR] shall



provide a copy of each insurance policy, certified as a true copy by an authorized representative of the issuing insurance company, to PacifiCorp.

[CONTRACTOR] shall require subcontractors who perform work at the Project to carry liability insurance (auto, commercial general liability and excess) workers' compensation/employers' or stop gap liability and professional liability (as required) insurance commensurate with their respective scopes of work. [CONTRACTOR] shall remain responsible for any claims, lawsuits, losses and expenses including defense costs that exceed any of its subcontractors' insurance limits or for uninsured claims or losses.

PacifiCorp does not represent that the insurance coverage's specified herein (whether in scope of coverage or amounts of coverage) are adequate to protect the obligations [CONTRACTOR], and [CONTRACTOR] shall be solely responsible for any deficiencies thereof.

## **Appendix B**

### **Response to ACC Requests for Clarification**

#### **Request: Is project occurring in a mapped floodway, per FEMA?**

The project is in an area where floodways have not been mapped by FEMA. However, the project is located within the floodplain of Pepper Creek. Project activities are designed to restore natural channel and floodplain function and reduce potential threat to Forest infrastructure. The project is located entirely on National Forest System Lands, with no private lands on Pepper Creek downstream of the project area.