

**FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION***All sections must be addressed, or the application will be considered invalid***I. APPLICANT INFORMATION**

- A. Applicant Name: Big Blackfoot Chapter of Trout Unlimited
- Mailing Address: PO Box 1
- City: Ovando State: MT Zip: 59854
- Telephone: 4062404824 E-mail: ryen@montanatu.org
- B. Contact Person (if different than applicant): See above
- Address: _____
- City: _____ State: _____ Zip: _____
- Telephone: _____ E-mail: _____
- C. Landowner and/or Lessee Name (if different than applicant): Phil Anderson
- Mailing Address: PO Box
- City: Lincoln State: MT Zip: 59639
- Telephone: 406-220-2160 E-mail: _____

II. PROJECT INFORMATION

- A. Project Name: Willow Creek Fish Passage Project
- River, stream, or lake: Willow Creek
- Location: Township: 13N Range: 9W Section: 10
- Latitude: 46.898216 Longitude: -112.721663 *within project (decimal degrees)*
- County: Lewis & Clark County
- B. Purpose of Project:

The purpose of this project is to restore fish passage, improve floodplain function, and reduce anthropogenic sediment inputs to Willow Creek by replacing an undersized culvert with a bridge. Willow Creek supports genetically pure westslope cutthroat trout populations and is a high priority tributary to the upper Blackfoot River.

C. Brief Project Description (attach additional information to end of application):

Willow Creek is a second-order tributary to the upper Blackfoot River entering near river-mile 102.5 and supports genetically pure westslope cutthroat trout, brown trout and brook trout. The stream flows nine miles through a mixture of USFS and private land before entering the upper Blackfoot River and is considered a high priority tributary based on the Restoration Action Plan metrics outlined by MTFWP. The health of the fishery in the Blackfoot River is directly correlated with tributary health, and this section of the river receives over 6,000 angler days per year. This proposed project will address an existing road crossing near stream mile 6.5 that is undersized and perched, creates a barrier to fish passage during high flow periods and has created impairments to the channel.

Sections of Willow Creek, specifically upstream of the proposed culvert replacement site have ideal habitat conditions that support populations of native westslope cutthroat trout. We anticipate even greater use of this habitat once this project is completed as replacing this undersized culvert will enhance wild fish habitat by restoring connectivity. This crossing is located in between a culvert that was upgraded with Future Fisheries support in 2014 and a USFS stream crossing that was also upgraded to be "fish friendly". Improving connectivity through this reach is an important step in restoring Willow Creek and recent data has indicated that Willow Creek supports fluvial populations of westslope cutthroat trout.

This culvert is proposed to be replaced with an appropriately sized bridge that will result in a stable stream crossing improving the current road drainage problems, eliminate delivery of excessive sediment, provide for fish passage and restore the natural channel morphology to the site. A basic topographic and hydraulic field survey was conducted to locate key physical features within the area of the culvert replacement project site. Long profile, stream cross-sections, bank full widths, and general geomorphologic parameters were collected. The structure opening was sized based on the stream characteristics collected from the reference reach and bank full measurements taken near each existing culvert. Reference reach data collected indicated that bankfull width is close to 15 feet. To meet Stream Simulation guidelines, our new structure width will have a span of 25 feet. Please refer to attached map, photo and design.

D. Length of stream or size of lake that will be treated (project extent): 150 feet of channel
 Length/size of impact, if larger than project extent (e.g. stream miles opened): 2.5 miles

E. Project Budget:

Grant Request (Dollars):	\$ 8,200
Matching Dollars:	\$ 28,185
Matching In-Kind Services:*	\$ 8,913
<i>*salaries of government employees are <u>not</u> considered matching contributions</i>	
Other Contributions (not part of this app)	\$
Total Project Cost:	\$ 45,298

F. **Attach** itemized (line item) budget – see *budget template*

G. **Insert** or **attach** a project location map showing the project area in relation to a major landmark or town. Please indicate if the project location is on public or private property.

Please refer to project design map. The project is on private property.

- H. **Attach** specific project plans (e.g. detailed sketches, plan views [showing location and type of channel modifications], example photographs), current condition photographs, and maps. **If project involves water leasing or water salvage complete and attach a supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).*

- I. **Attach** letters or statements of support. This includes landowner consent, community or public support, and fish biologist support.

- J. The project agreement includes a 20-year maintenance commitment. Please indicate (yes or no) that you will ensure project protection for 20 years. Discuss your ability to meet this commitment.

Yes ☒ No ☐

The landowner will sign a 20-year maintenance commitment and the bridge has a life expectancy of 70 plus years.

- K. **Describe or attach** land management & maintenance plans, including changing to grazing regimes, that will ensure protection of the restored area.

III. PROJECT BENEFITS (attach additional information to end of application):

- A. What species of fish will benefit from this project?

Westslope cutthroat trout, brown trout and brook trout.

- B. How will the project protect or enhance wild fish habitat?

Sections of Willow Creek, specifically upstream of the proposed culvert replacement site have ideal habitat conditions that support populations of native westslope cutthroat trout. We anticipate even greater use of this habitat once this project is completed as replacing this undersized culvert will enhance wild fish habitat by restoring connectivity, eliminating channel impairments and reducing sediment inputs.

- C. Will the project improve fish populations and/or fishing? To what extent?

Yes, by enhancing stream connectivity and ultimately wild trout recruitment to the interconnected river system. The upper Blackfoot River is a popular angling destination with an estimated 6,000 angler days annually.

- D. Will the project increase public fishing opportunity for wild fish and, if so, how?

Yes, improved fish passage will contribute to both the resident trout fishery in Willow Creek and the migratory trout component associated with the mainstem river sections. Willow Creek is accessible via USFS lands and enters a reach of the Blackfoot River popular with anglers.

- E. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?

Undersized culverts restrict upstream fish passage, create sediment/BMP issues and impair natural channel function. The health of wild and native trout fisheries in the Blackfoot River system is tied to tributary health. By restoring fish passage through this portion of Willow Creek, we will improve migration corridors for trout.

- F. What public benefits will be realized from this project?

This project continues and furthers the overall Blackfoot River Restoration program, in this case by benefiting native trout conservation, wild trout fishery enhancement and watershed restoration. Specific public benefits include: 1) expanding suitable habitat and fish passage conditions for westslope cutthroat trout 2) improving water quality and natural stream function through properly designed infrastructure and on-site best management practices, and 3) facilitating improved channel and riparian conditions in the project reach.

- G. Will the project interfere with water or property rights of adjacent landowners? (explain):

NA

- H. Will the project result in the development of commercial recreational use on the site? (explain):

No

- I. Is this project associated with the reclamation of past mining activity?

No

Each approved project applicant must enter into a written agreement with Montana Fish, Wildlife & Parks specifying terms and duration of the project. The applicant must obtain all applicable permits prior to project construction. A competitive bid process must be followed when using State funds.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature:  Date: May 30, 2021

Sponsor (if applicable): _____

Submittal: Applications must be signed and received before December 1 and June 1 of each year to be considered for the subsequent funding period. Late or incomplete applications will be rejected.

Mail to: FWP Future Fisheries Fish Habitat Bureau PO Box 200701 Helena, MT 59620-0701	Email: Future Fisheries Coordinator FWPFFIP@mt.gov (electronic submissions must be signed) For files over 10MB, use https://transfer.mt.gov
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Applications may be rejected if this form is modified.

Willow Creek fish passage
BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

022-2021

Both tables must be completed or the application will be returned

PROJECT COSTS					CONTRIBUTIONS			
WORK ITEMS (Itemize by Category)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	FUTURE FISHERIES REQUEST	MATCH (Cash or Services)**	OTHER (Not part of this application)	TOTAL
Personnel***								
Survey	5	hours	\$100.00	\$ 500.00		\$ 500.00		\$ 500.00
Design	20	hours	\$120.00	\$ 2,400.00		\$ 2,400.00		\$ 2,400.00
Engineering	20	hours	\$120.00	\$ 2,400.00		\$ 2,400.00		\$ 2,400.00
Permitting	5	hours	\$55.00	\$ 275.00		\$ 275.00		\$ 275.00
Oversight	40	hours	\$90.00	\$ 3,600.00		\$ 3,600.00		\$ 3,600.00
Staking	1	Lump sum	\$500.00	\$ 500.00		\$ 500.00		\$ 500.00
			Sub-Total	\$ 9,675.00	\$ -	\$ 9,675.00	\$ -	\$ 9,675.00
Travel								
Mileage	1100	miles	\$0.58	\$ 638.00		638.00		\$ 638.00
Per diem				\$ -				\$ -
			Sub-Total	\$ 638.00	\$ -	\$ 638.00	\$ -	\$ 638.00
Construction Materials****								
Precast Grade Beams	1	Lump sum	\$5,000.00	\$ 5,000.00	2,000.00	3,000.00		\$ 5,000.00
Riprap, Class 3	25	cubic yards	\$85.00	\$ 2,125.00		2,125.00		\$ 2,125.00
Timber stringers	6	each	\$1,000.00	\$ 6,000.00		6,000.00		\$ 6,000.00
Wood Decking	1	Lump sum	\$4,200.00	\$ 5,200.00	2,500.00	2,700.00		\$ 5,200.00
Timber Curb	1	Lump sum	\$500.00	\$ 500.00		500.00		\$ 500.00
			Sub-Total	\$ 18,825.00	\$ 2,000.00	\$ 14,325.00	\$ -	\$ 18,825.00
Equipment, Labor, and Mobilization								
Soil Erosion & Pollution Control	1	Lump sum	\$1,000.00	\$ 1,000.00	500.00	500.00		\$ 1,000.00
Removal of Existing Culvert	1	Lump sum	\$1,000.00	\$ 1,000.00	500.00	500.00		\$ 1,000.00
Install Bridge	1	Lump sum	\$8,000.00	\$ 8,000.00	3,000.00	5,000.00		\$ 8,000.00
Install grade beams	1	Lump sum	\$2,000.00	\$ 2,000.00	500.00	1,500.00		\$ 2,000.00
Hydraulic Excavator	10	hours	\$132.00	\$ 1,320.00	500.00	820.00		\$ 1,320.00
Dump Truck	8	hours	\$105.00	\$ 840.00	200.00	640.00		\$ 840.00
Mobilization	1	Lump sum	\$1,000.00	\$ 2,000.00	1,000.00	1,000.00		\$ 2,000.00
				\$ -				\$ -
			Sub-Total	\$ 16,160.00	\$ 6,200.00	\$ 9,960.00	\$ -	\$ 16,160.00
TOTALS				\$ 45,298.00	\$ 8,200.00	\$ 34,598.00	\$ -	\$ 45,298.00

OTHER REQUIREMENTS:

All of the columns in the budget table and the matching contribution table MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for additional clarification.

*Units = feet, hours, inches, etc. Do not use lump sum unless there is no other way to describe the costs.

**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used). Do not use government salaries as match. Describe here or in text.

***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a justification or minimum of two competitive bids for the cost of undertaking the project.

****The Review Panel recommends a maximum fencing cost of \$1.50 per foot. Additional costs may be the responsibility of the applicant and/or partners.

Additional details:

APPLICATION MATCHING CONTRIBUTIONS

(do not include requested funds or contributions not associated with the application)

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
Landowner	\$ -	\$ 2,125.00	\$ 2,125.00	Yes
USFWS Partners for Fish & Wildlife Program		\$ 5,000.00	\$ 5,000.00	Yes
BBCTU	\$ 2,913.00	\$ 21,060.00	\$ 23,973.00	Yes
MTFWP	\$ 6,000.00	\$ -	\$ 6,000.00	Yes
TOTALS	\$ 8,913.00	\$ 28,185.00	\$ 37,098.00	

OTHER CONTRIBUTIONS

(contributions not associated with the application)

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ -	\$ -	\$ -	

Willow Creek Fish Passage Project-Existing Condition





FWP.MT.GOVTHE **OUTSIDE** IS IN US ALL.

Patrick Uthe
3201 Spurgin Road
Missoula, MT 59804
406-542-5532
patrick.uthe@mt.gov

May 28, 2021

Montana Fish, Wildlife and Parks
Attn: Michelle McGree
1420 East 6th Ave.
Helena, MT 59620

Dear Future Fisheries Panel:

I am writing to express support for the Willow Creek bridge project submitted by the Big Blackfoot Chapter of Trout Unlimited. Willow Creek is a high priority restoration candidate tributary in the upper Blackfoot River because of its sport fishery values and high potential to improve water quality and streamflow in the upper Blackfoot River. This section of the upper Blackfoot River is a popular angling destination for wade-anglers seeking quality westslope cutthroat trout and brown trout fishing opportunities. It received over 6,000 angler days of fishing pressure in 2019 and the fishery is supported by recruitment from several tributaries, including Willow Creek.

A large portion of Willow Creek flows through land encumbered by a Native Fish Habitat Conservation Plan conservation easement, with the primary goal of recovering westslope cutthroat trout. This proposed crossing upgrade is between the previous Future Fisheries-funded bridge project at stream mile 4.8 and a USFS culvert upgrade on West Fork Willow Creek. Fish population surveys in 2020 found the distribution of westslope cutthroat trout expanding in the downstream direction and documented cutthroat trout presence at all survey sites. Furthermore, the density of cutthroat trout near the previous bridge project was similar to reference tributaries in the upper Blackfoot River and similar to trout abundance in the Willow Creek reference site at mile 5.7, suggesting cutthroat trout abundance has increased throughout the Willow Creek system. Although no significant restoration actions have occurred besides the two crossing upgrades, the easement lands have undergone substantial land use and irrigation changes over the last decade. Most notably, irrigation water delivered at the diversion near stream mile 4.0 previously captured all of Willow Creek's discharge and conveyed it into a field below Herrin Lake Road, functionally disconnecting lower and upper Willow Creek. This suggests that the change in water management successfully reconnected Willow Creek, allowing westslope cutthroat trout to fully recolonize the accessible length of stream and support a migratory life history component of the population.

Although this undersized culvert is not a complete fish passage barrier, it is likely a seasonal barrier and deters westslope cutthroat trout migrating upstream during certain flow conditions. Furthermore, the existing alignment of the crossing location is contributing to significant erosion and roadbed sediment input. Funding this project will not only provide immediate local benefits, but will facilitate future opportunities to implement additional projects that are necessary to advance Willow Creek towards its full potential and increase trout recruitment to the extremely popular Blackfoot River. Thank you very much for consideration of this funding request. Please do not hesitate to contact me if you have any questions or would like additional fisheries information from the project area.

Sincerely,



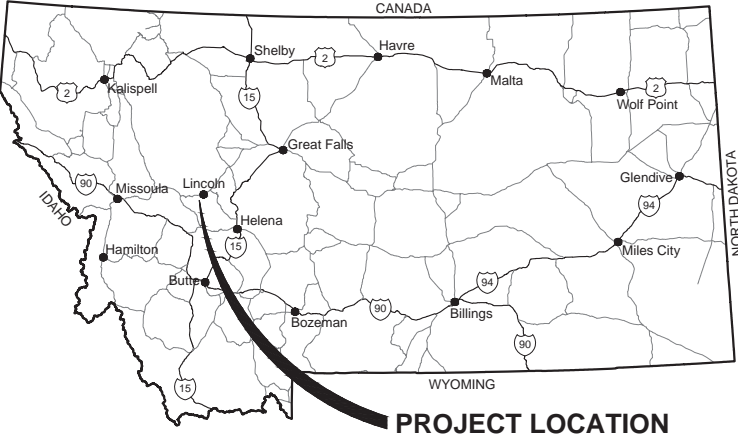
Patrick Uthe
Fisheries Biologist

SHEET INDEX

PROJECT: 1-19182-T05
DATE: MAY 26TH, 2021

SHEET 1
SHEET 2
SHEET 3
SHEET 4

COVER
BRIDGE PLAN & PROFILE
BRIDGE DETAILS
STREAM PLAN & PROFILE

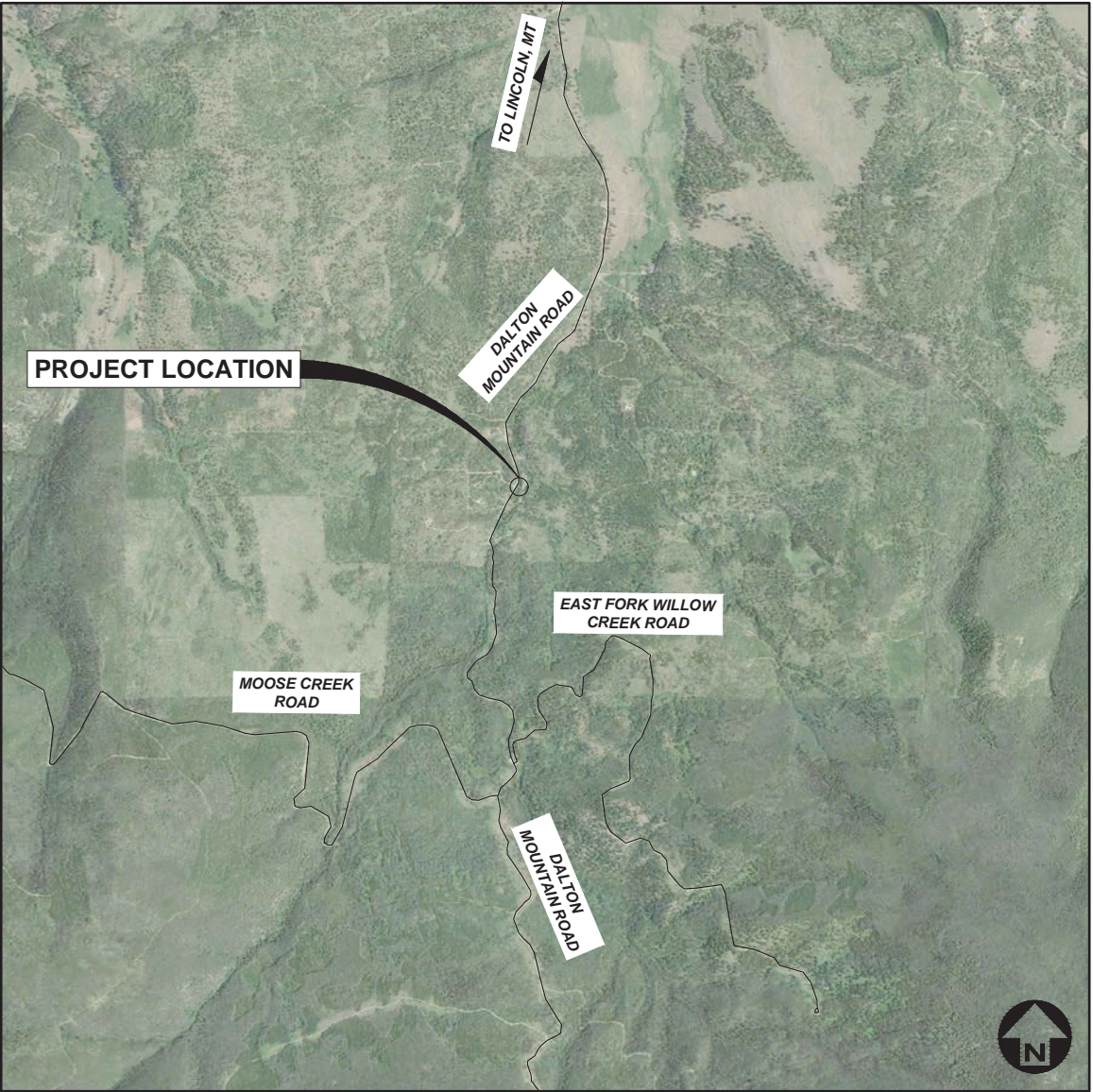


BIG BLACKFOOT CHAPTER OF TROUT UNLIMITED (BBCTU)

WILLOW CREEK BRIDGE (AOP)

FINAL REVIEW

SECTION 10, TOWNSHIP 13 NORTH, AND RANGE 9 WEST
LATITUDE: 46.898216 LONGITUDE: -112.721663



NOT TO SCALE

PLANS PREPARED FOR:

BIG BLACKFOOT CHAPTER OF TROUT UNLIMITED



APPROVED BY:

RYAN ELLIOTT, P.E.
GREAT WEST ENGINEERING

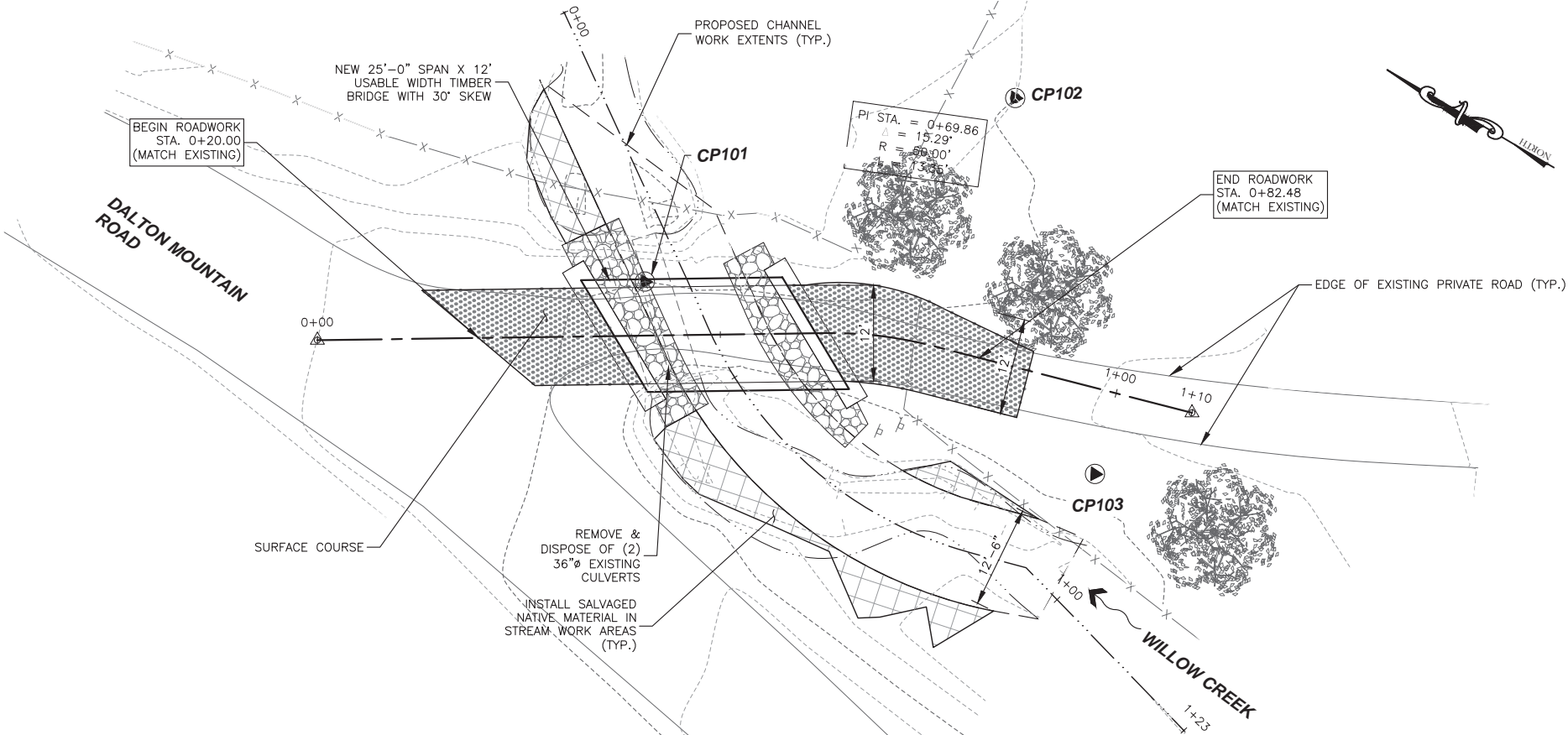


PLANS PREPARED BY:

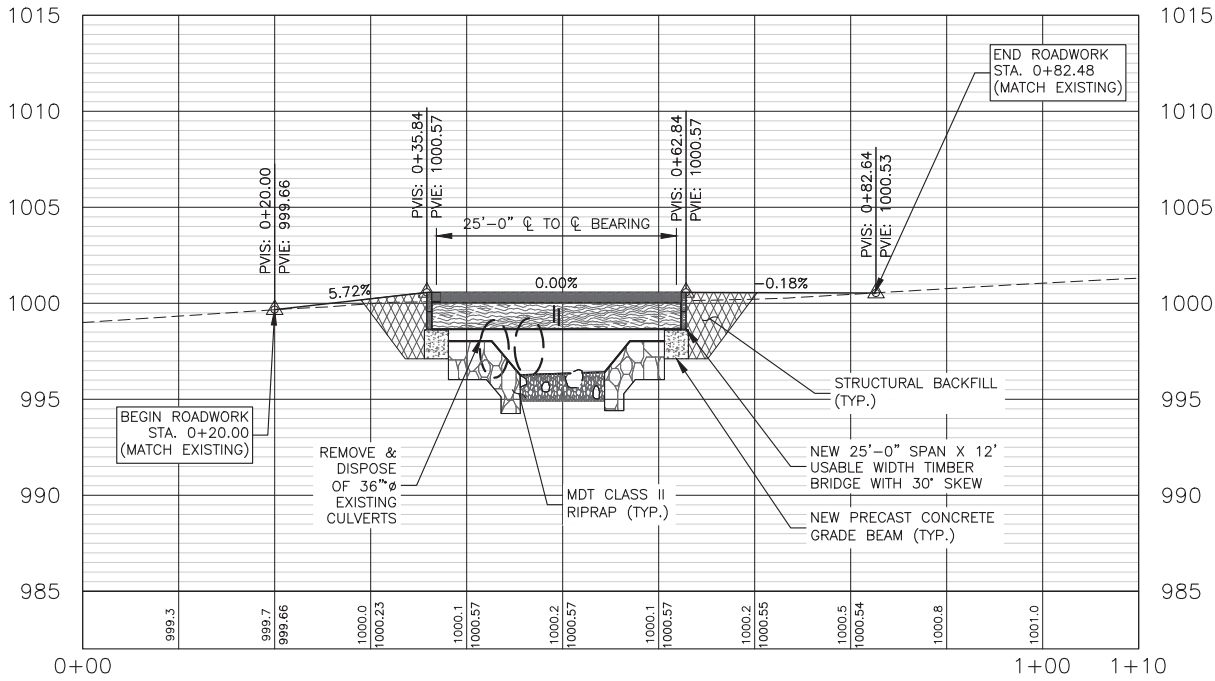
PARKER STENERSEN, EI



NO.	REVISION DESCRIPTION	BY	DATE	SET NO.
△				SHEET NO. 1
△				
△				
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PLAN VIEW OF PRIVATE ROAD STA. 0+00 TO STA. 1+10



PROFILE VIEW OF PRIVATE ROAD - STA. 0+00 TO STA. 1+10

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 10'

CONTROL POINT
COORDINATE TABLE*

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP101	5,000.00	10,000.00	1,000.00	REBAR W/RPC
CP102	4,953.47	10,039.04	1,000.47	REBAR W/RPC
CP103	4,999.58	10,051.29	1,000.26	REBAR W/RPC

*LOCAL COORDINATE SYSTEM UTILIZED.

PROJECT NOTES:

1. SALVAGED SOLID SAWN TIMBER STRINGERS ARE ASSUMED TO BE IN "FAIR" CONDITION AND BE FREE FROM ANY CONSIDERABLE GOUGES, CRACKS, CHECKING, OR OTHER DEFICIENCIES. IF ANY OF THE AFOREMENTIONED DEFICIENCIES ARE OBSERVED IN THE SALVAGED TIMBER STRINGERS, THEY SHOULD NOT BE USED FOR CONSTRUCTION.
2. ALL TIMBER RUNNING PLANKS, CURB COMPONENTS, AND BACKING PLANKS SHALL BE COASTAL REGION DOUGLAS FIR-LARCH ROUGH SAWN, NO. 1 GRADE GRADING RULES AGENCY - WWPA, WCLIB.
3. ALL TIMBER RUNNING PLANKS, CURB COMPONENTS, AND BACKING PLANKS SHALL BE TREATED USING AWPAC C2, (ABOVE GROUND USE, (USE CATEGORY UC3A), PENTACHLOROPHENOL IN LIGHT OIL (TYPE C SOLVENT).
4. ALL ABRASIONS, FIELD CUTS, & DRILLED HOLES SHOULD BE GIVEN THREE BRUSHES OF A 2% COPPER NAPHTHENATE SOLUTION PRIOR TO INSTALLATION.
5. CONTRACTOR TO USE MDT - CLASS STRUCTURE CONCRETE FOR PRECAST CONCRETE GRADE BEAMS. SUITABLE SIMILAR 4000 PSI CONCRETE MIX DESIGN MAY BE UTILIZED.

TABLE OF QUANTITIES

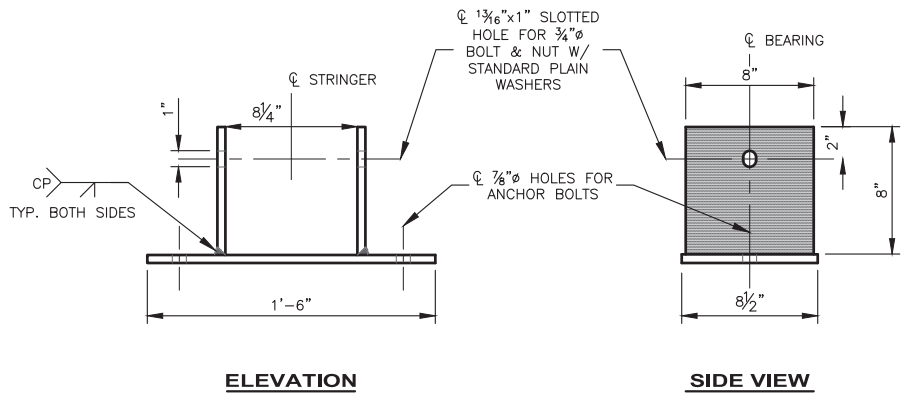
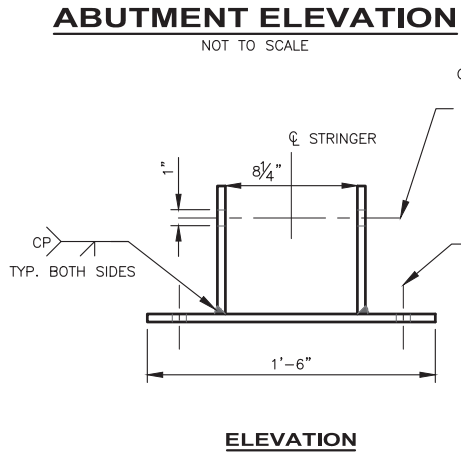
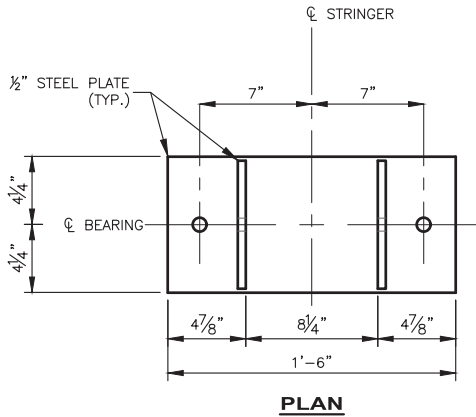
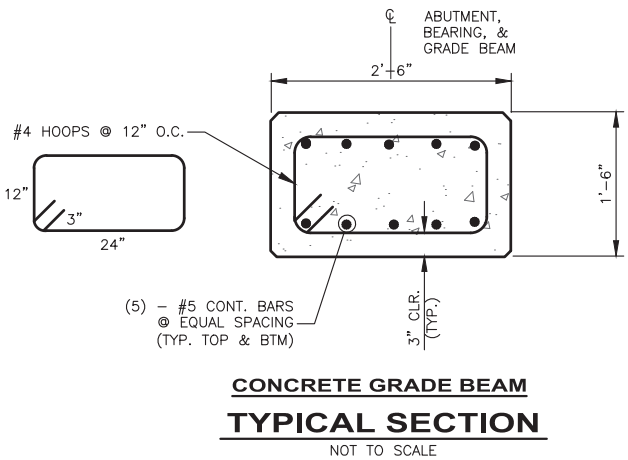
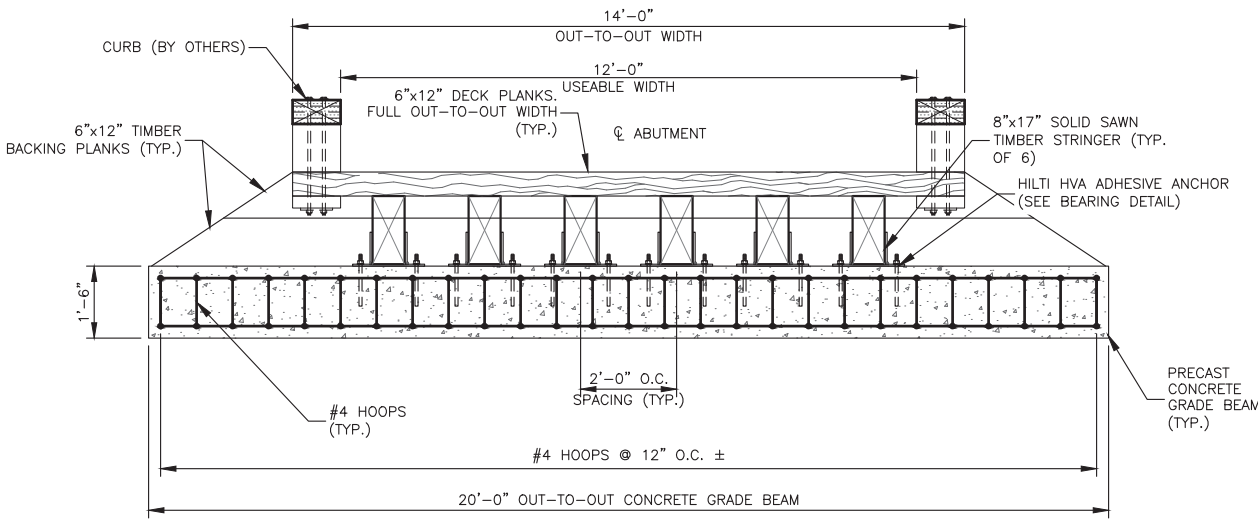
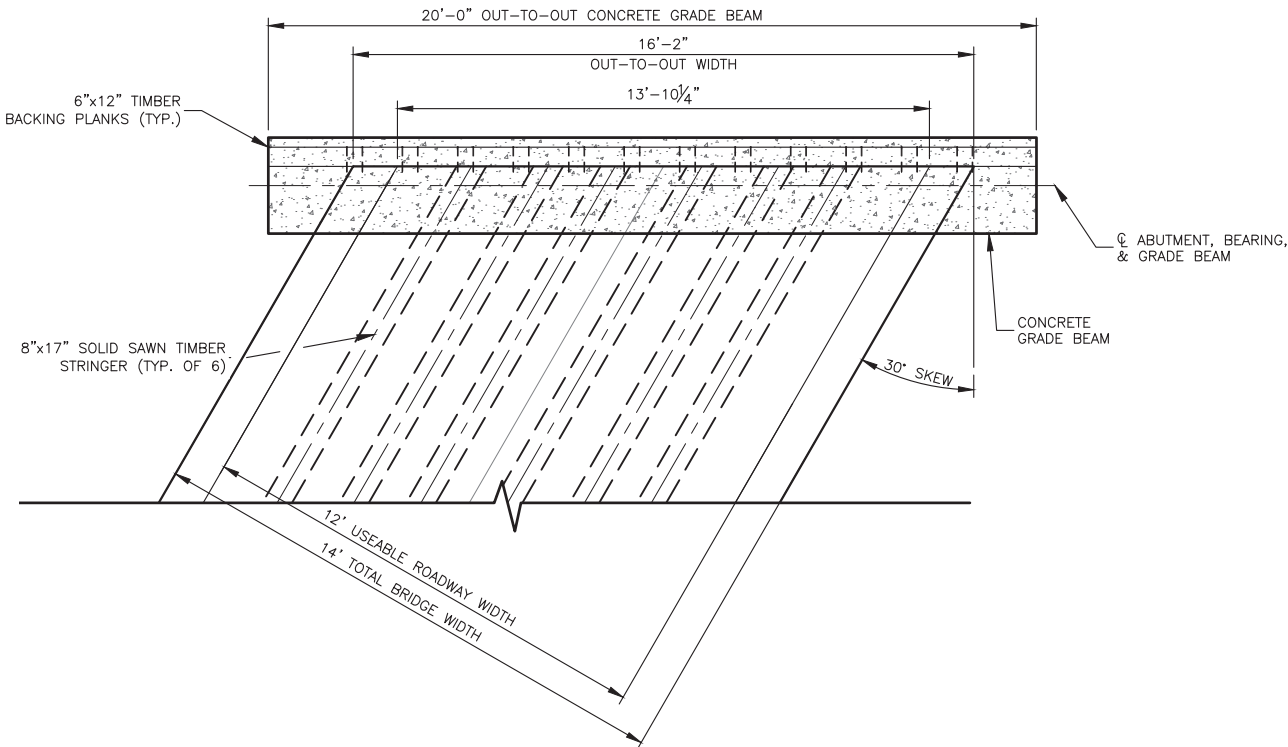
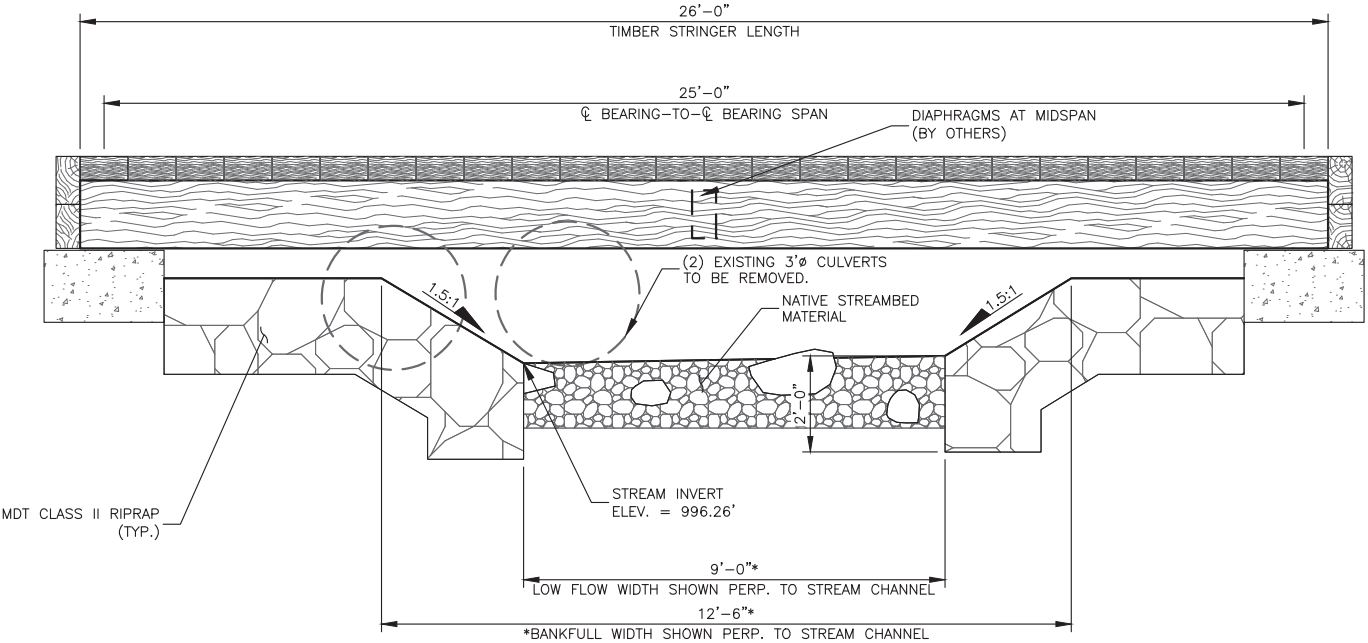
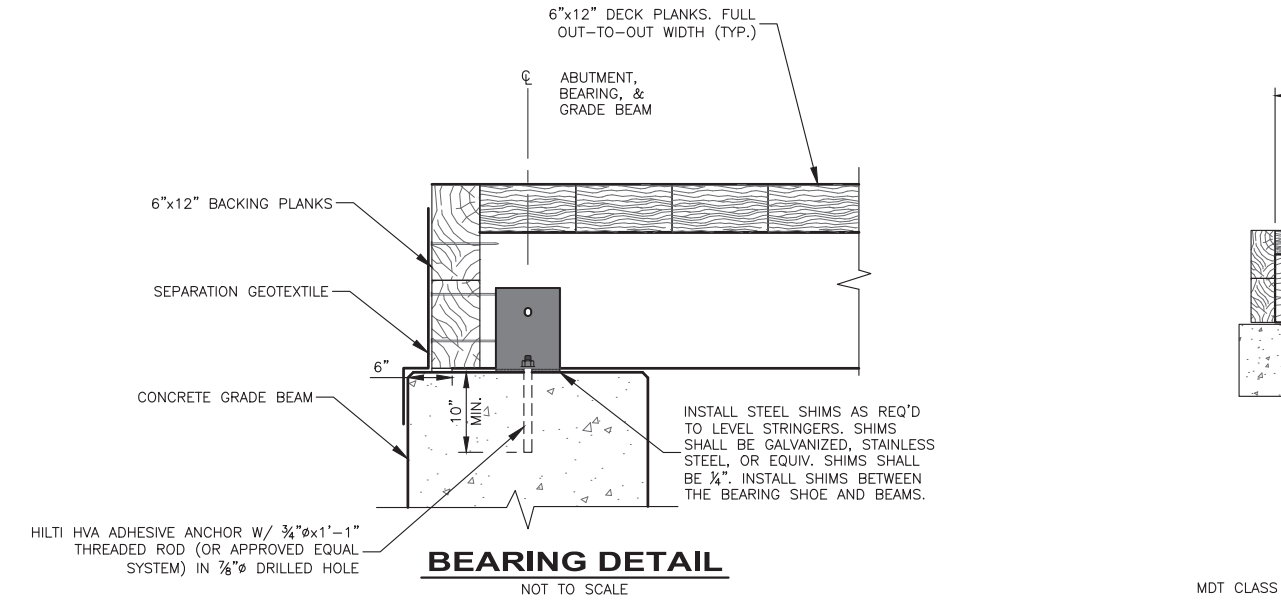
ITEM NAME	UNIT	QUANTITY
TIMBER STRINGERS (6 - 8"X17"X26")	LF	156
DECK (6"X12"X14")	SF	364
CURB (TBD)	LF	52
PRECAST CONCRETE GRADE BEAM	CY	7
RANDOM RIPRAP, MDT CLASS II	CY	25
STRUCTURE EXCAVATION	CY	36
STRUCTURAL BACKFILL	CY	30
STREAM CHANNEL EMBANKMENT	CY	12
STREAM CHANNEL EXCAVATION	CY	65

NO.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			

PROJECT: 1-19182-T05	DESIGNED: PJS	DRAWN: PJS	CHECKED: RME	APPROVED: RME	DATE: MAY 26TH, 2021
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BIG BLACKFOOT CHAPTER OF TROUT
UNLIMITED (BBCTU)
WILLOW CREEK BRIDGE (AOP)
BRIDGE PLAN & PROFILE



BEARING SHOE DETAIL

NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

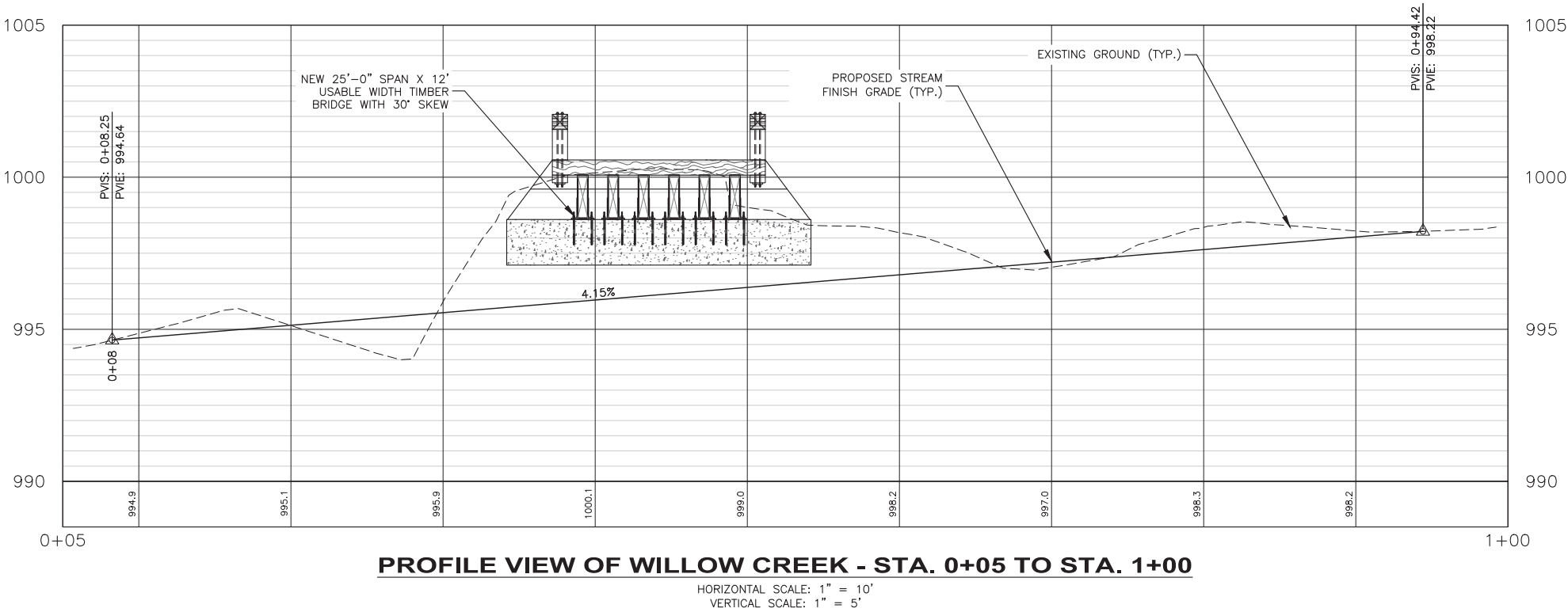
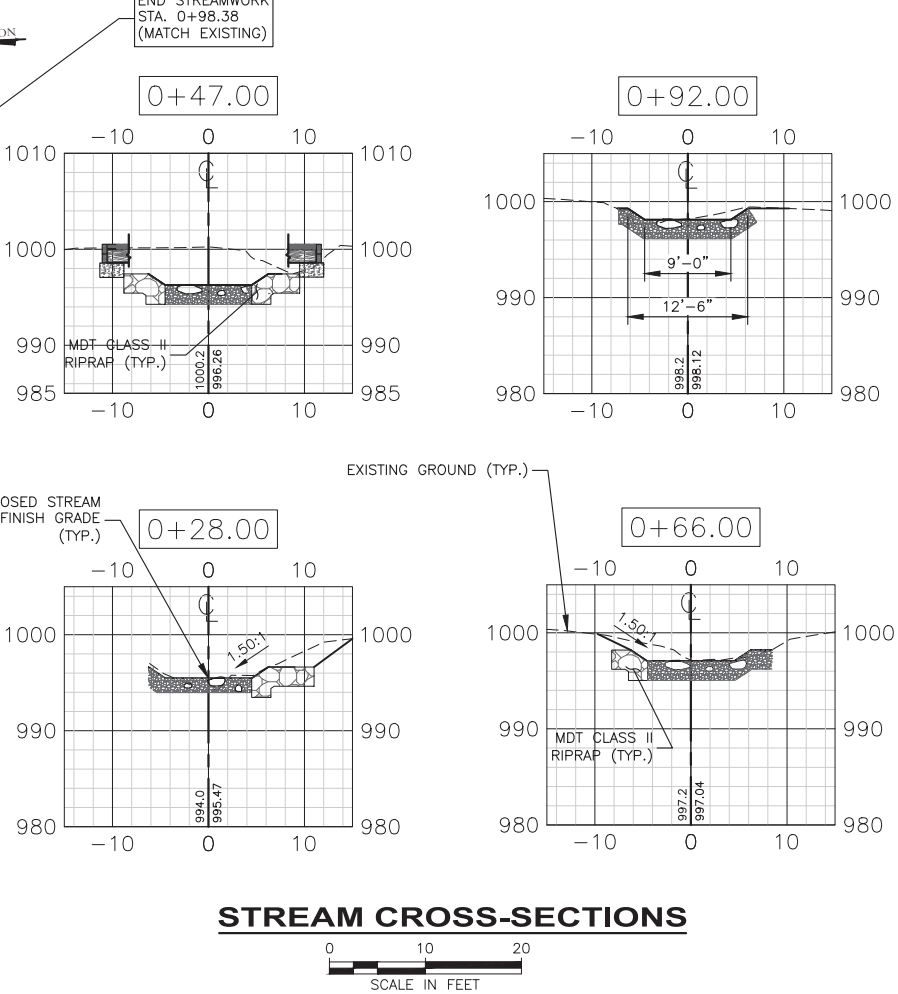
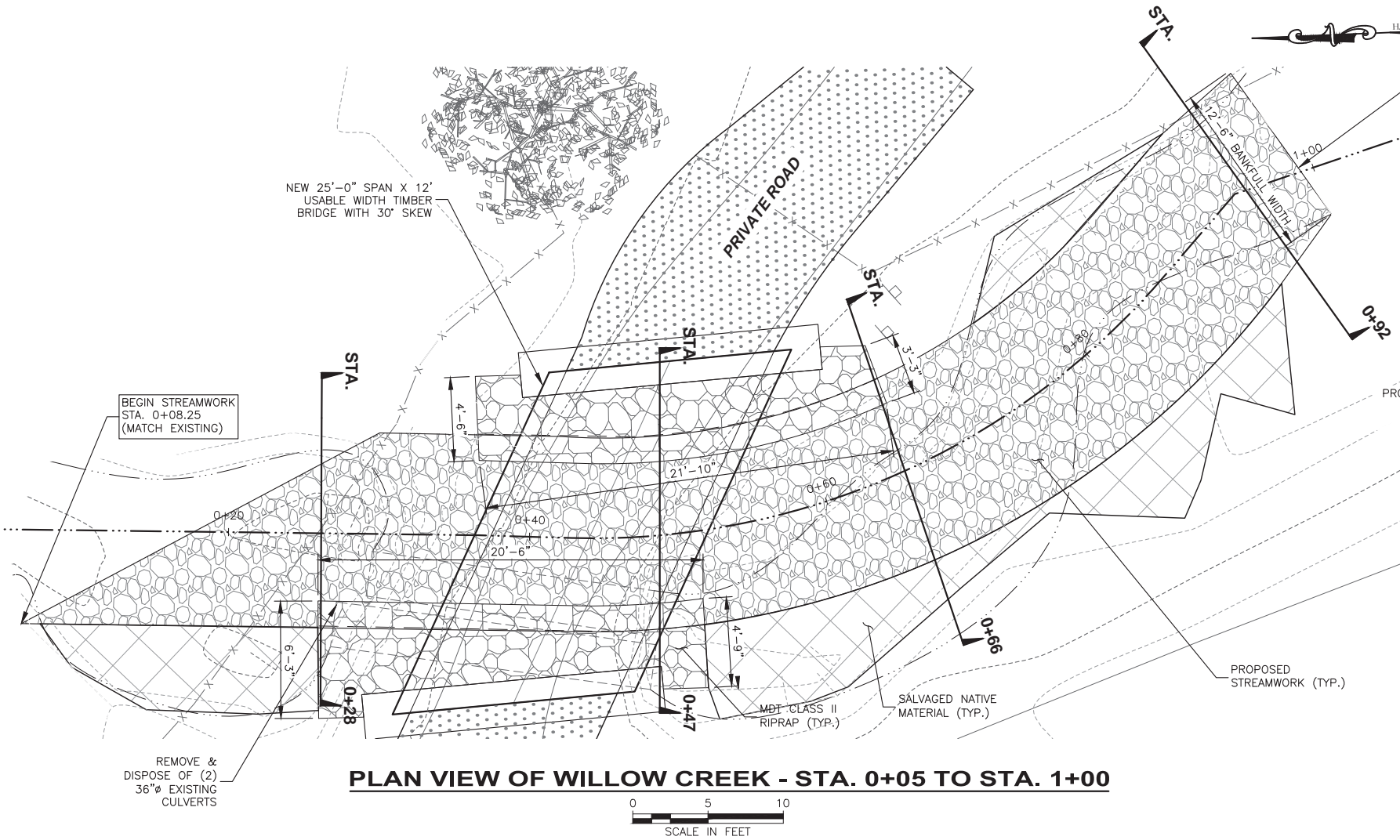
PROJECT: 1-19182-T05
DESIGNED: PJS
DRAWN: PJS
CHECKED: RME
APPROVED: RME
DATE: MAY 26TH, 2021



BIG BLACKFOOT CHAPTER OF TROUT UNLIMITED (BBCTU)

WILLOW CREEK BRIDGE (AOP)

BRIDGE DETAILS



NO.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			

PROJECT: 1-19182-T05	DESIGNED: PJS	DRAWN: PJS	CHECKED: RME	APPROVED: RME	DATE: MAY 26TH, 2021
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BIG BLACKFOOT CHAPTER OF TROUT
UNLIMITED (BBCTU)
WILLOW CREEK BRIDGE (AOP)
STREAM PLAN & PROFILE