



FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

All sections must be addressed, or the application will be considered invalid



I. APPLICANT INFORMATION

A. Applicant Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-mail: _____

B. Contact Person (if different than applicant): _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-mail: _____

C. Landowner and/or Lessee Name (if different than applicant): _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-mail: _____

II. PROJECT INFORMATION

A. Project Name: _____

River, stream, or lake: _____

Location: Township: _____ Range: _____ Section: _____

Latitude: _____ Longitude: _____ *Within project (decimal degrees)*

County: _____

B. Purpose of Project: *(high level, focus on why the project is important)*

- C. Brief Project Description (attach additional information to end of application). Please include the anticipated construction schedule:

- D. What was the cause of habitat degradation and how will the project correct the cause?



E. Length of stream or size of lake that will be treated (project extent): _____
 Length/size of impact, if larger than project extent (e.g., stream miles opened): _____

F. Project Budget Summary:

Grant Request (Dollars): \$ _____

Matching Dollars: \$ _____

Matching In-Kind Services:* \$ _____

**salaries of government employees are not considered matching contributions*

Other Contributions (not used as match) \$ _____

Total Project Cost: \$ _____

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

H. Attach project location map(s) that include:

Extent of the project, including context (relation to major landmark or town)

Indication of public and private property

Riparian buffer locations and widths (if applicable) and grazing locations

I. Attach project plans:

Detailed sketches or plan views with the location and proposed restoration

Pre-project photographs (GPS location strongly recommended)

If water leasing or water salvage is involved, attach a supplemental questionnaire
 (<https://myfwp.mt.gov/getRepositoryFile?objectID=36110>)

J. Attach letters or statements of support (e.g., landowner consent, community or public support). For FWP statement, attach provided template. List any other project partners:

III. MAINTENANCE AND MONITORING (attach additional information to end of application):

A. A 20-year maintenance commitment is required*. Please confirm that you will ensure this protection and describe your approach. Attach any relevant maintenance plans. Yes No

**If it is a water leasing project, describe the length of the agreement.*

B. Will grazing be part of or adjacent to the project? If so, describe or attach land management plans, including short term and long term grazing regimes. If the landowner is not the applicant, please describe their involvement in the project. *If you want assistance with grazing plan development, note your need.*

- C. Will the project be monitored to determine if goals were met? If so, what are the short-term and long-term plans to assess benefits and lessons learned? Were pre-project data collected? Will monitoring information be shared with FWP?

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

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

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

- C. What is the expected improvement to fish populations, both short term and long term? How might the project translate to angler success?

- D. Will the project increase public fishing opportunity for wild fish and, if so, how? Is public fishing allowed onsite? Is it allowed by permission? If not, describe how the public would benefit.

Public fishing is allowed on site.

- E. Aside from angling, what local or large-scale public benefits will be realized from this project?

Forest Road 429 regularly fails at this location during spring runoff, when flows are higher than the existing culvert's capacity. This causes a road closure on a very popular road, until Bitterroot National Forest is able to make repairs. This project will eliminate this nearly-annual road closure. Bitterroot National Forest will pay for the majority of this project, but Future Fisheries funds are needed to supplement the project budget and provide non-federal match.

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

No

- G. Will the project result in the development of commercial recreational use on the site (including paid access)? Explain:

No

- H. 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.

V. 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: Christine Brissette Digitally signed by Christine Brissette
Date: 2024.11.14 10:14:13 -07'00' Date: _____

Submittal: Applications must be signed and received on or before November 15 and May 15 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 and send to mmcgree@mt.gov
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BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for clarification.

PROJECT COSTS					GRANT REQUEST AND FUNDING			
Work Items (Itemize by Category)	Number of Units	Unit Description*	Cost/Unit	Total Cost	FUTURE FISHERIES REQUEST	Matching Contributions (Cash or In- Kind)***	Other Contributions (Funds not used as match)	Total Funding
<i>*Units = feet, hours, cubic yards, etc. Do not use lump sum unless necessary.</i>								
Personnel								
Survey				\$ -				\$ -
Design				\$ -				\$ -
Engineering	1	lump sum	\$60,000.00	\$ 60,000.00	-	-	60,000.00	\$ 60,000.00
Permitting				\$ -				\$ -
Project Management (Trout Unlimited)	100	hours	\$53.00	\$ 5,300.00	2,120.00	2,120.00	1,060.00	\$ 5,300.00
Maintenance**				\$ -				\$ -
Sub-Total				\$ 65,300.00	\$ 2,120.00	\$ 2,120.00	\$ 61,060.00	\$ 65,300.00
Travel								
Mileage				\$ -				\$ -
Per diem				\$ -				\$ -
Sub-Total				\$ -	\$ -	\$ -	\$ -	\$ -
Construction Materials								
Precast concrete member, grade beams	1	lump sum	\$40,000.00	\$ 40,000.00			40,000.00	\$ 40,000.00
Treated structural timber and lumber	2.1	1000 board ft	\$2,000.00	\$ 4,200.00			4,200.00	\$ 4,200.00
Treated structural timber, glued laminated	4.8	1000 board ft	\$4,500.00	\$ 21,600.00			21,600.00	\$ 21,600.00
Posts, wood	40	linear feet	\$25.00	\$ 1,000.00			1,000.00	\$ 1,000.00
Object markers	4	each	\$150.00	\$ 600.00			600.00	\$ 600.00
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
Sub-Total				\$ 67,400.00	\$ -	\$ -	\$ 67,400.00	\$ 67,400.00
Equipment, Labor, and Mobilization								
Mobilization	1	lump sum	\$35,000.00	\$ 35,000.00			35,000.00	\$ 35,000.00
Construction staking	1	lump sum	\$5,000.00	\$ 5,000.00			5,000.00	\$ 5,000.00

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Soil erosion and pollution control, stream diversion	1	lump sum	\$6,000.00	\$	6,000.00			6,000.00	\$	6,000.00
Removal and disposal of existing culvert	1	lump sum	\$5,000.00	\$	5,000.00			5,000.00	\$	5,000.00
Roadway excavation	1	lump sum	\$5,000.00	\$	5,000.00			5,000.00	\$	5,000.00
Structural excavation - rock	6	cubic yards	\$1,500.00	\$	9,000.00			9,000.00	\$	9,000.00
Structure excavation and backfill	1	lump sum	\$15,000.00	\$	15,000.00			15,000.00	\$	15,000.00
Placed riprap, class 7 (Forest furnished)	10	cubic yards	\$200.00	\$	2,000.00			2,000.00	\$	2,000.00
Geocell abutment stabilization	10	square yards	\$150.00	\$	1,500.00			1,500.00	\$	1,500.00
Roadway aggregate compaction (Forest source)	24	cubic yards	\$65.00	\$	1,560.00			1,560.00	\$	1,560.00
Structural steel superstructure, furnished, fabricated and erected	1	lump sum	\$135,000.00	\$	135,000.00	30,000.00	30,000.00	75,000.00	\$	135,000.00
Equipment rental, hydraulic excavator with thumb	24	hours	\$200.00	\$	4,800.00			4,800.00	\$	4,800.00
Equipment rental, large dump truck	24	hours	\$200.00	\$	4,800.00			4,800.00	\$	4,800.00
Equipment rental, excavator with rock hammer	6	hours	\$250.00	\$	1,500.00			1,500.00	\$	1,500.00
Seeding, fertilizing and mulching	1	lump sum	\$2,500.00	\$	2,500.00			2,500.00	\$	2,500.00

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Temporary traffic control	1	lump sum	\$3,500.00	\$ 3,500.00			3,500.00	\$ 3,500.00
			Sub-Total	\$ 237,160.00	\$ 30,000.00	\$ 30,000.00	\$ 177,160.00	\$ 237,160.00
OVERALL TOTALS				\$ 369,860.00	\$ 32,120.00	\$ 32,120.00	\$ 305,620.00	\$ 369,860.00

OTHER REQUIREMENTS:

**For projects that include a maintenance request, it cannot exceed 10% of the total project cost.

***Match can include in-kind materials or labor. Justification for in-kind labor (e.g. hourly rates used) can be noted below. Do not use government salaries as match.

Additional budget detail:

APPLICATION MATCHING CONTRIBUTIONS

Total should equal match listed above; do not include requested funds

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
Bitterroot National Forest	\$ -	\$ 30,000.00	\$ 30,000.00	Y
Trout Unlimited	\$ -	\$ 2,120.00	\$ 2,120.00	Y
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ -	\$ 32,120.00	\$ 32,120.00	

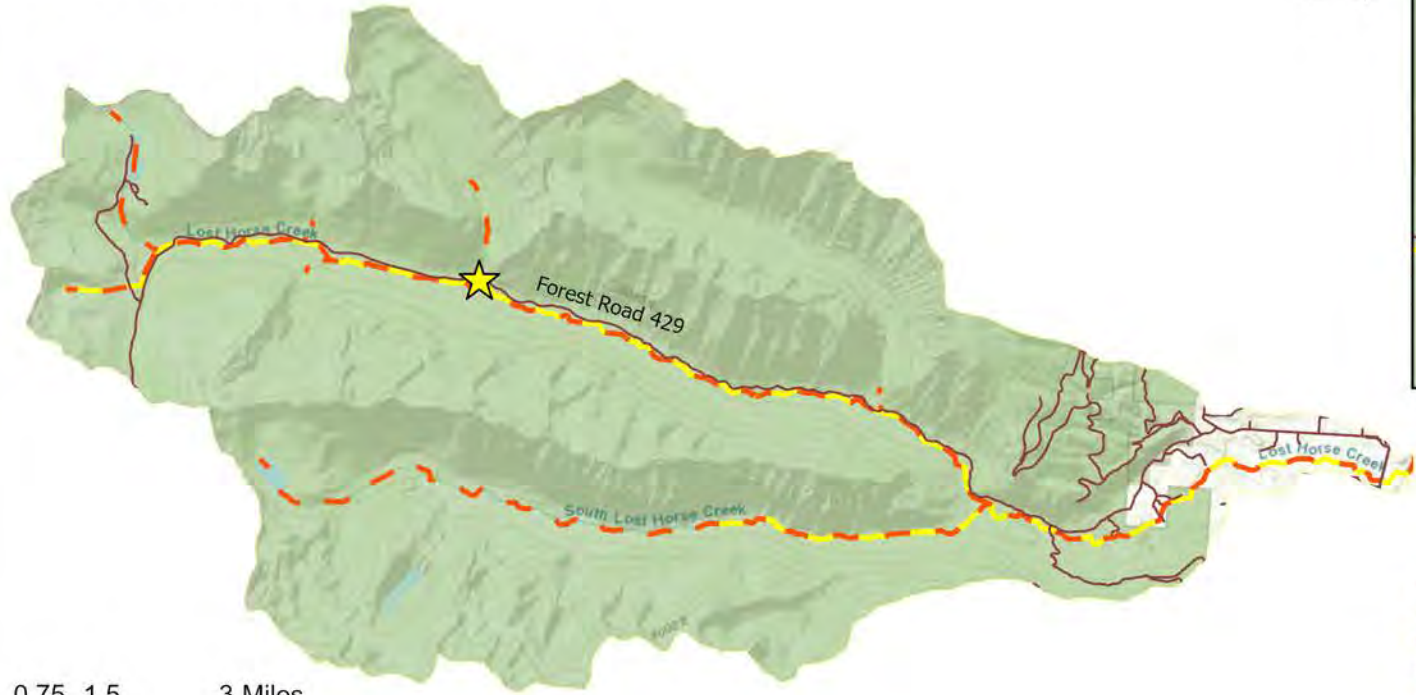
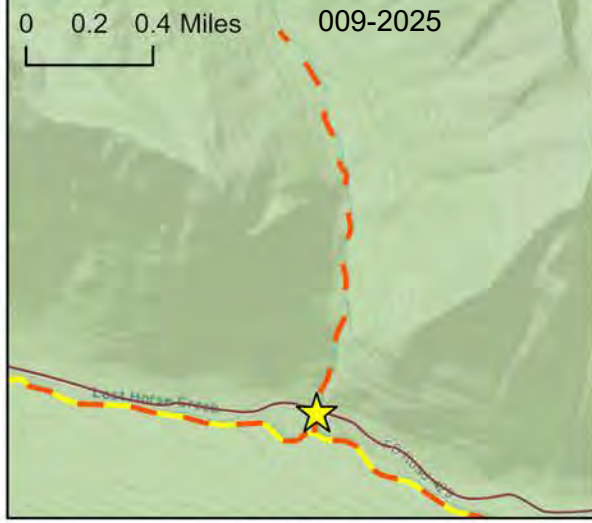
OTHER CONTRIBUTIONS

Total should equal other contributions listed above; these are funds not specically matched to the Future Fisheries application

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
Bitterroot National Forest	\$ -	\$ 220,000.00	\$ 220,000.00	Y
Trout Unlimited	\$ -	\$ 50,000.00	\$ 50,000.00	Y
Clark Fork Coalition	\$ -	\$ 35,620.00	\$ 35,620.00	Y
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ -	\$ 305,620.00	\$ 305,620.00	

Lost Horse Creek Fish Composition & Tenmile Project Location

Tenmile Creek Bridge

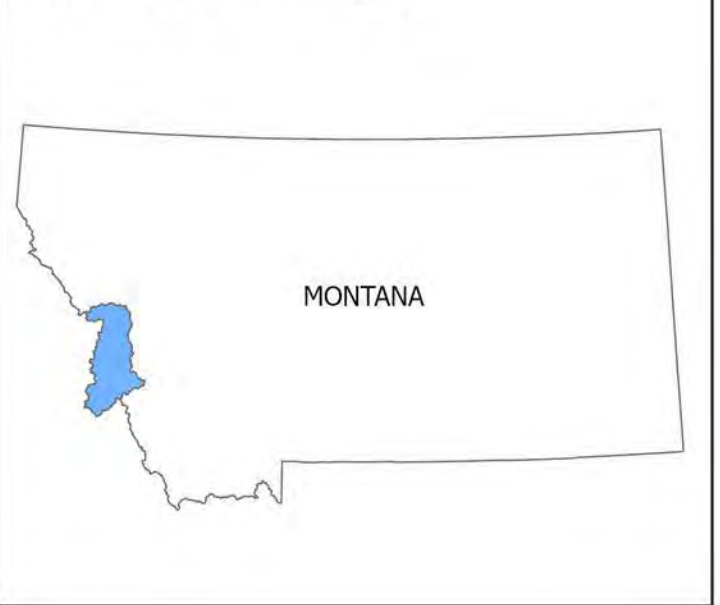


- Legend
- Westslope Cutthroat Trout Streams (Bitterroot National Forest)
 - Bull Trout Streams (Bitterroot National Forest)
 - Roads
 - ★ Tenmile Project

Bitterroot Basin



Bitterroot Watershed, MT



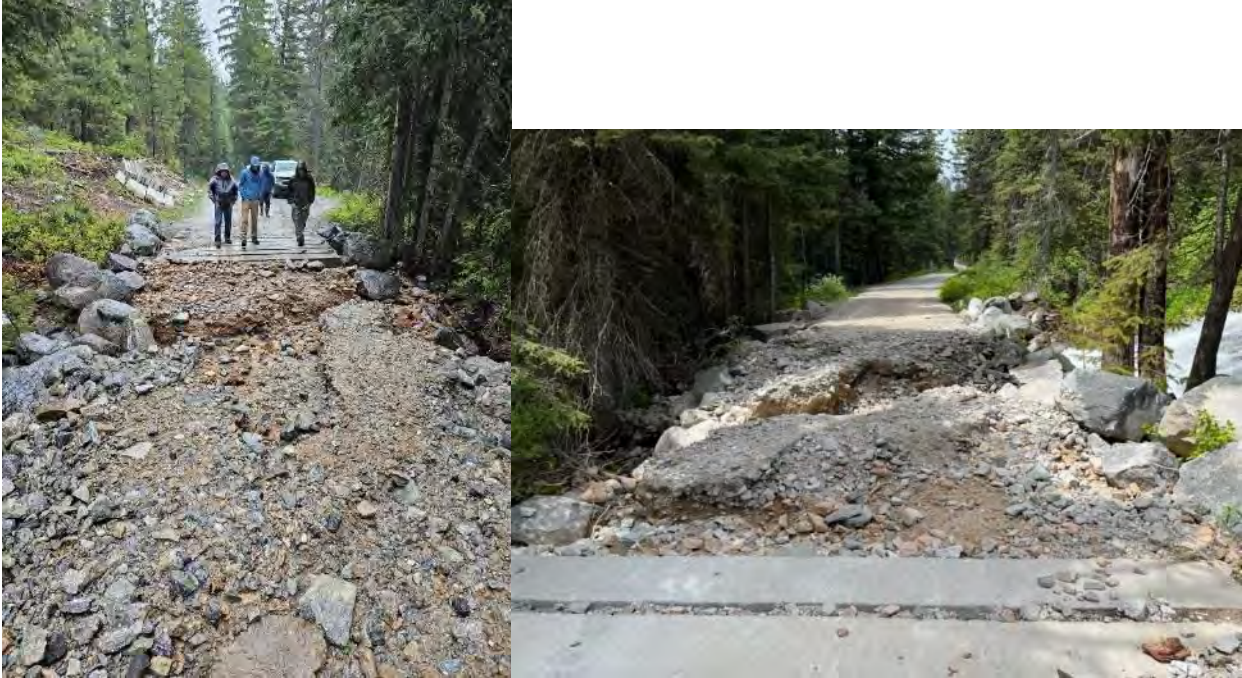
Tenmile Creek Bridge Proposal

Lost Horse Watershed, Bitterroot



Photopoints: Tenmile Creek Bridge Proposal (Lost Horse Watershed, Bitterroot)

All photos collected at the Tenmile Creek-Forest Road 429 crossing (46.13839, -114.40809)



Road failures in 2023 (left) and 2024 (right) at the Tenmile Creek – Forest Road 429 crossing.



Left: The existing culvert, where a replacement bridge is proposed. Right: View from above of the Forest Road 429- Tenmile Creek crossing.

MONTANA FISH, WILDLIFE & PARKS

Future Fisheries Improvement Program

Appendix: FWP Statement

Project Title: _____

Please describe the potential impact of the project, including the priorities of the Fisheries Division and the importance to Montana's anglers.

Name of FWP Biologist _____ Date: _____

Please attach to the FFIP application and materials and submit according to listed deadlines.

11/11/2024

To whom it may concern-

I am writing in support of the project on 10-Mile Creek in the Lost Horse drainage to enhance fish passage and reduce sediment inputs to the creek. The project is implementing one piece of the **Lost Horse Passage and Water Quality Enhancement Plan**, a watershed wide restoration effort to restore native fish habitat in the Lost Horse Creek based on several comprehensive plans created by federal and state agencies.

“The Conservation Strategy for Bull Trout on USFS Lands in Western Montana” was developed to guide Forest Service conservation activities for bull trout in Montana including identification of projects to conserve, restore, and contribute to bull trout recovery. Lost Horse Creek is one of the most important westside tributaries for bull trout in the Bitterroot River core area. Habitat fragmentation, dewatering, high water temperatures, isolation of local populations from other populations and the presence of hybridizing are the main limiting factors to bull trout populations.

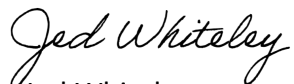
The “USFWS Columbia Headwaters Recovery Unit Implementation Plan for Bull Trout” recognizes the importance of improving passage to restore native fish populations in the Bitterroot core area and the Lost Horse Plan executes Objectives from the MT Westslope Cutthroat MOU and NWPCC Bitterroot Subbasin Plan. In addition The Montana DEQ “Bitterroot Watershed Restoration Plan” identifies Lost Horse Creek as flow impaired.

In implementation of these plans, the Lost Horse Passage and Water Quality Enhancement Plan will reconnect more than 34 miles of ESA listed critical bull trout and Westslope cutthroat trout habitat in the upper Bitterroot River watershed. The Bitterroot National Forest is partnering with the Clark Fork Coalition and a larger coalition of stakeholders including Trout Unlimited, the USFWS, MT FWP, MT DEQ, MT DNRC, CBWTP (BPA), Irrigation Districts, Ravalli county, and private donors. The plan implements cooperative projects to improve irrigation diversion and surface water storage infrastructure and reduce sediment to protect native fish including bull trout and Westslope cutthroat trout at a minimum of 6 project locations over the next 5 years.

Projects that are underway in the Lost Horse drainage besides the 10-Mile Creek AOP upgrade include installing an 150 cfs fish screen on the BRID diversion, two 10 cfs fish screens on the Low and Highline diversions, lining canals to lower irrigation withdrawal amounts, and increasing headwater storage in Twin Lakes to augment instream flow. CFC and TU are also working with the Bitterroot NF to assess and implement BMP’s and passage

projects on 17 miles of road that parallels Lost Horse Creek. All of these projects build on a passage project that CFC completed in 2014 near the confluence of Lost Horse and the Bitterroot River that ended the entrainment of up to 14,000 salmonids a year, reduced sediment and added 10cfs of flow to the creek for 50 years.

Sincerely,

A handwritten signature in black ink that reads "Jed Whiteley". The signature is written in a cursive style with a large, looping initial "J".

Jed Whiteley

Stream Restoration Director

Clark Fork Coalition

File Code: 6270
Date: October 28, 2024

Montana Fish, Wildlife and Parks
Fisheries Division
Attn: Future Fisheries Improvement Program Committee
1420 E. Sixth Ave
P.O. Box 200701
Helena, MT 59620

Dear Future Fisheries Improvement Program Committee,

The Bitterroot National Forest (BRF) is writing in support of Trout Unlimited's (TU) request for funding through the 2025 FWP Future Fisheries Improvement Program Grant.

The Lost Horse watershed offers an excellent opportunity on the Bitterroot National Forest, as it is one of the only drainages with road access to the headwaters. NFSR 429 runs parallel to Lost Horse Creek for most of the drainage, offering easy access for the public to recreate. The watershed offers excellent fishing for native westslope cutthroat trout and is also home to a resident bull trout population and designated critical habitat. Because of the unique stream-side access, sediment from the road is introduced into streams, which can have a detrimental effect on the healthy native fish population and habitat. The BRF is challenged with simultaneously providing access while limiting the detrimental effects of the road.

The stream crossing structures on NFSR 429 at Ten-Mile Creek fail annually due to overtopping flows during runoff. These failures contribute several cubic yards of road fill material into Ten-Mile Creek, which is routed to Lost Horse Creek, less than 400-feet downstream. This road fill material is one of the main sources of sediment into Ten-Mile and Lost Horse Creeks. The main goal of this project is to eliminate this major source of sediment into the watershed by constructing a properly sized bridge in lieu of the current undersized culverts. Additionally, a bridge would improve seasonal connectivity to Ten-Mile Creek for native fishes while also reducing closures and annual disturbance from construction repair.

This project is part of a larger Watershed Restoration Action Plan (WRAP) within the Lost Horse Creek watershed. The BRF has identified ten other projects throughout the watershed that will be completed as part of the WRAP in the coming years. The projects range from additional stream crossing projects to fish screens, to the installation of large wood structures. The BRF has already secured \$250,000 for the Ten-Mile bridge construction, and \$2.8 million for implementation of these additional projects.

The BRF is focused on restoring and maintaining resilient landscapes and watersheds that function properly, and these goals will only be accomplished through collaboration with our partners on projects such as this. We value our partnership with TU as we continue our efforts to improve and protect the landscapes and watersheds in the Bitterroot Valley and I encourage the support of the Future Fisheries Improvement Program Committee to these efforts. Thank you for your consideration.

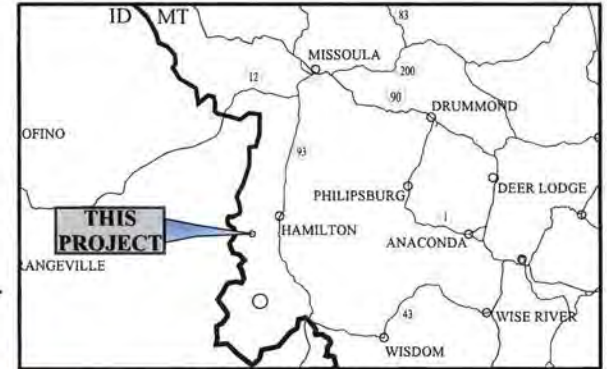
Sincerely,

MATTHEW D. ANDERSON
Forest Supervisor



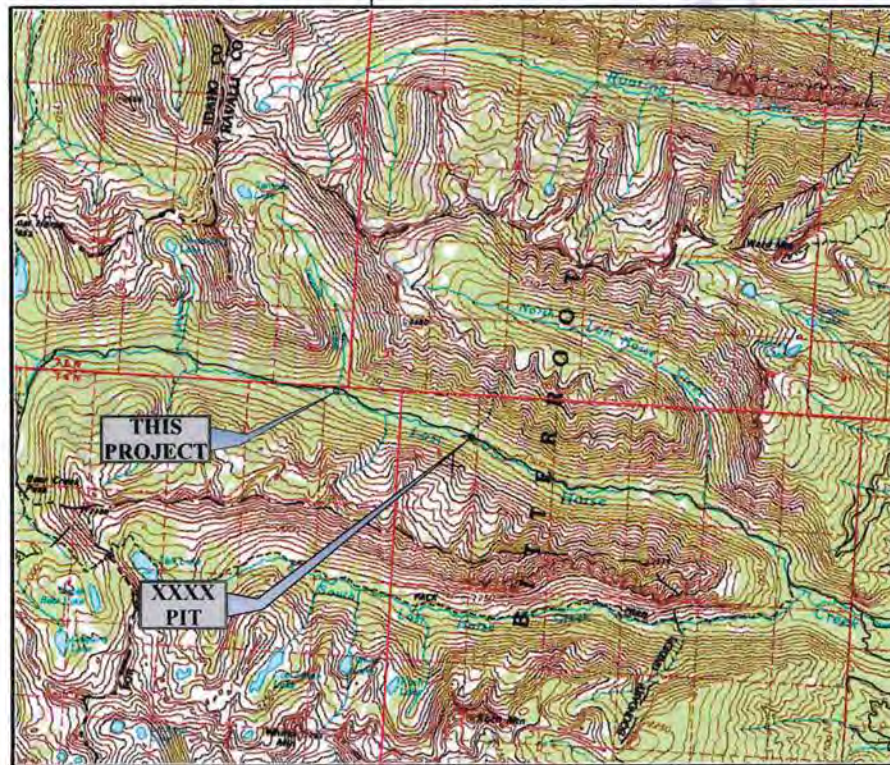
REGION ONE

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE, REGION ONE
PROPOSED PROPOSED REPLACEMENT PLANS FOR:
TENMILE CREEK BRIDGE 2
(NFSR 429-MP 12.96)
 BITTERROOT NATIONAL FOREST
 DARBY RANGER DISTRICT
 RAVALLI COUNTY, MONTANA



WESTERN MONTANA
 SCALE: NO SCALE

INDEX TO SHEETS	
No.	DESCRIPTION
0	COVER
1	GENERAL NOTES & ESTIMATED QTY'S
2	EXISTING SITE CONDITIONS
3	ROAD PLAN AND PROFILE
4	BRIDGE GENERAL LAYOUT
5	FOUNDATION & RIPRAP DETAILS
6	ABUTMENT 2 GRADE BEAM
7	ABUTMENT DETAILS
8	FRAMING PLAN
9	STEEL DETAILS
10	DECK DETAILS
11	CURB DETAILS
12	FIELD SPLICE DETAILS
13	ROAD CROSS SECTIONS



SEC. 01, T. 04 N., R. 23 W.
VICINITY MAP
 SCALE: NO SCALE

APPROVED: _____ DATE _____

DIRECTOR OF ENGINEERING
 NORTHERN REGION

REVIEWED: _____ DATE _____

FOREST ENGINEER
 BITTERROOT NATIONAL FOREST

RECOMMENDED: _____ DATE _____

DARBY DISTRICT RANGER
 BITTERROOT NATIONAL FOREST

APPROVED: _____ DATE _____

FOREST SUPERVISOR
 BITTERROOT NATIONAL FOREST

GOVERNMENT FURNISHED:
 WASTE SITE (AS DIRECTED BY CO)
 XXXX PIT (CRUSHED AGGREGATE)



DRAWING No. X-XXXX

M:\1772 TROUT UNLIMITED\0200 - TENMILE CREEK BRIDGE\CAD\SHEETS\COVER.DWG PLOTTED BY DAVID A. HALLSTEN ON 10/07/2024

PROJECT NAME: TENMILE CREEK BRIDGE 2

SUMMARY OF ESTIMATED QUANTITIES

PAY ITEMS	DESCRIPTION	METHOD OF MEASUREMENT	UNIT	QUANTITY
15101	MOBILIZATION	LSQ	LS	1
15201	CONSTRUCTION SURVEY AND STAKING	LSQ	LS	1
15713	SOIL EROSION & POLLUTION CONTROL, & STREAM DIVERSION	LSQ	LS	1
20301	REMOVAL OF EXISTING CULVERT, DISPOSAL METHOD (a)	LSQ	LS	1
20431	ROADWAY EXCAVATION & EMBANKMENT	LSQ	LS	1
20801	STRUCTURAL EXCAVATION - ROCK	AQ	CY	6
20804	STRUCTURE EXCAVATION AND BACKFILL	LSQ	LS	1
25101	PLACED RIPRAP, CLASS 7 (GOVERNMENT FURNISHED)	CQ	CY	1
27250	GEOCELL ABUTMENT STABILIZATION, 6 INCH DEPTH	CQ	SY	54
30201	ROADWAY AGGREGATE, COMPACTION METHOD 1 (GOVERNMENT SOURCE)	CQ	CY	24
55205	PRECAST CONCRETE MEMBER, GRADE BEAMS	LSQ	LS	1
55502	STRUCTURAL STEEL SUPERSTRUCTURE, FURNISHED, FABRICATED, AND ERECTED	LSQ	LS	1
55701a	TREATED STRUCTURAL TIMBER & LUMBER	CQ	MFBM	2.1
55701b	TREATED STRUCTURAL TIMBER, GLUED LAMINATED	CQ	LS	4.8
62201a	EQUIPMENT RENTAL, HYDRAULIC EXCAVATOR WITH THUMB	AQ	HR	24
62201b	EQUIPMENT RENTAL, LARGE DUMP TRUCK	AQ	HR	24
62201c	EQUIPMENT RENTAL, EXCAVATOR WITH ROCK HAMMER	AQ	HR	6
62512	SEEDING, FERTILIZING, AND MULCHING, DRY METHOD	LSQ	LS	2
63305	POSTS, WOOD	CQ	LF	4
63306	OBJECT MARKERS, TYPE 3 (COMMERCIAL SOURCE)	AQ	EACH	4
63501	TEMPORARY TRAFFIC CONTROL	LSQ	LS	1

EXCAVATION & BACKFILL NOTES:

STRUCTURE EXCAVATION

- SHALL BE COMPLETED IN ACCORDANCE WITH FP-14, SECTION 208.
- MINIMUM EXCAVATION REQUIREMENTS BASED ON OSHA SOIL TYPE C AND OSHA EXCAVATION REQUIREMENTS. ACTUAL SITE CONDITIONS MAY VARY. IF CONTRACTOR ENCOUNTERS A DIFFERENT SOIL TYPE THAN STATED ABOVE, CONTACT CO IMMEDIATELY.
- CONTRACTOR SHALL SUBMIT AN EXCAVATION PLAN TO CO FOR APPROVAL. PLAN SHALL INCLUDE DRAWINGS AND WRITTEN OUTLINE ILLUSTRATING AND DESCRIBING PROPOSED EXCAVATION LIMITS, METHODS, EQUIPMENT, LOCATION OF STOCKPILES, AND ESTIMATED QUANTITIES AND COMPLY WITH OSHA EXCAVATION SOIL TYPING AND REQUIREMENTS. CHANGES TO THE EXCAVATION LIMITS FOR CONTRACTOR'S DEWATERING METHODS OR OTHER CONTRACTOR CONVENIENCE, MUST BE SHOWN ON THE PLAN AND ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE WORK.
- EXCAVATION QUANTITY IS FOR INFORMATION PURPOSES ONLY AND SHALL BE VERIFIED BY CONTRACTOR.
- INCLUDE ALL COSTS ASSOCIATED WITH THE EXCAVATION OF BEDROCK TO THE ELEVATIONS SHOWN ON THE PLANS IN PAY ITEM 20801-STRUCTURAL EXCAVATION - ROCK, AND/OR IN ITEM 62201C - EQUIPMENT RENTAL, EXCAVATOR WITH ROCK HAMMER.

STRUCTURE BACKFILL

- STRUCTURE BACKFILLING IS INCIDENTAL TO PAY ITEM 20804, STRUCTURAL EXCAVATION AND BACKFILL.
- BACKFILL SHALL BE PLACED IN ACCORDANCE WITH FP-14, SECTION 208 AND MEET THE REQUIREMENTS OF FP-14, SECTION 704.04 STRUCTURAL BACKFILL.
- SATURATED SOILS ARE CONSIDERED UNSUITABLE FOR USE AS STRUCTURAL BACKFILL. ALL UNSUITABLE SOILS MUST BE HAULED AND DISPOSED TO THE DESIGNATED WASTE SITE.
- NON-SATURATED STRUCTURE EXCAVATION MATERIAL IS ANTICIPATED TO BE SUITABLE FOR BACKFILL MATERIAL.
 - SOME MIXING AND SORTING MAY BE REQUIRED.
 - MUST HAVE APPROVAL FROM CO PRIOR TO USE.
- BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH FP-14, 208.11 (AASHTO T99, METHOD C AND AASHTO T310).

REINFORCING STEEL: ALL NON-PRESTRESSED REINFORCING SHALL BE OF THE DEFORMED BAR TYPE CONFORMING TO AASHTO M31 (ASTM A615), GRADE 60. CONCRETE CLEAR COVER SHALL BE 2" UNLESS SHOWN OTHERWISE ON THE PLANS. BENDING AND SPLICING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 318.

EROSION CONTROL PLAN: REFER TO SECTION 157 OF THE FSSS.

DIMENSIONS: ALL LONGITUDINAL DIMENSIONS FOR THE STRUCTURE ARE MEASURED HORIZONTALLY AND INCLUDE NO CORRECTION FOR GRADE.

SLASH: ALL VEGETATION REMOVED DURING EXCAVATION SHALL BE STOCKPILED. SPREAD STOCKPILED SLASH ON FINISHED SLOPES AT THE DIRECTION OF THE CO.

SITE SPECIFIC NOTES:

- PAY ITEM 25101, PLACED RIPRAP CLASS 7, QUANTITY INCLUDES RIPRAP USED TO PROTECT BRIDGE ABUTMENTS.
- EXCAVATION OF STREAM CHANNEL OUTSIDE OF STRUCTURE IS INCIDENTAL TO PAY ITEM 20804.
- A WASTE SITE WILL BE IDENTIFIED BY CO WITHIN 5 MILES OF THE PROJECT SITE FOR UNUSED EXCAVATION MATERIAL.
- AREAS FOR EXCAVATION OR DISTURBANCE THAT CONTAIN EXISTING RIPARIAN SOD MATS SHALL HAVE SOD MATS STRIPPED AND STOCKPILED PRIOR TO DISTURBANCE. STRIP EXISTING SOD MATS IN APPROXIMATELY 3' WIDE BY 6' LONG SECTIONS FOR PLACEMENT AS DIRECTED BY CO.
- STRUCTURAL EMBANKMENT IS INCIDENTAL TO STRUCTURAL EXCAVATION PAY ITEM 20804, STRUCTURAL EXCAVATION AND BACKFILL.

METHOD OF MEASUREMENT ACRONYMS:

LSQ - LUMP SUM QUANTITY
CQ - CONTRACT QUANTITY
AQ - ACTUAL QUANTITY

GENERAL NOTES:

SPECIFICATIONS: CONSTRUCT THE PROJECT IN COMPLIANCE WITH FEDERAL HIGHWAY ADMINISTRATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS" (FP-14) AND APPLICABLE FOREST SERVICE SPECIAL SPECIFICATIONS (FSSS).

DESIGN SPECIFICATIONS: THIS STRUCTURE IS DESIGNED FOR HL-93 IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION - 2020 WITH CURRENT INTERIMS.

DESIGN DATA AS FOLLOWS:

- LIVE LOAD = HL-93
- TRUCK IMPACT = 33%
- SUPERIMPOSED DEAD LOAD = 0 PSF

GEOTECHNICAL: A GEOTECHNICAL EVALUATION WAS PERFORMED FOR THIS SITE. A LABORATORY ANALYSIS AND VISUAL EXAMINATION WAS CONDUCTED ON TWO SAMPLES FROM THE SOUTH SIDE OF THE EXISTING BLUE JOINT CREEK. BASED ON THE TESTING RESULTS FROM THE SAMPLES, A BEARING CAPACITY OF 10 KSF (10,000 PSF) IS RECOMMENDED FOR DESIGN.

HYDROLOGY AND HYDRAULICS: THIS STRUCTURE IS DESIGNED TO PASS A 100-YEAR FREQUENCY FLOOD WITH THREE FEET OF MINIMUM FREEBOARD. THE DESIGN VOLUMES ARE AS FOLLOWS:

$$Q_{100} = 404 \text{ CFS}, Q_0 = 158 \text{ CFS}$$

LUMBER: ALL MEMBERS SHALL BE ROUGH SAWN, EXCEPT WHERE NOTED OTHERWISE. ALL TIMBER AND LUMBER SHALL BE COAST REGION DOUGLAS-FIR OR SOUTHERN PINE NO. 1 OR BETTER, EXCEPT RUNNING PLANKS (NO. 2), CONFORMING TO CURRENT WMPA, WCLB OR SPB GRADING RULES. INLAND DOUGLAS-FIR LUMBER SHALL NOT BE USED ON THIS PROJECT.

GLUED-LAMINATES: DECK PANELS, CURBS AND CURB BLOCKS SHALL BE GLUED-LAMINATED MEMBERS OF COAST REGION DOUGLAS-FIR OR SOUTHERN PINE CONFORMING TO THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) 117-04, AND SHALL BE MANUFACTURED FOR WET SERVICE CONDITIONS.

MEMBER	COMBINATION SYMBOL (DOUGLAS FIR)	COMBINATION SYMBOL (SOUTHERN PINE)
DECK PANELS & DIAPHRAGMS	3, 4, Or 5	48, 49 Or 50
CURBS & CURB BLOCKS	3, 4, Or 5	48, 49 Or 50

THE DESIGN, DIMENSIONS, AND ELEVATIONS SHOWN ON THE PLANS ARE BASED ON THE USE OF DOUGLAS-FIR GLUED-LAMINATED MEMBERS, 5-INCH SOUTHERN PINE GLUED-LAMINATED MEMBERS WILL BE ALLOWED FOR USE IN THE DECK PANELS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS IN DIMENSIONS AND ELEVATIONS RESULTING FROM THE USE OF SOUTHERN PINE GLUED-LAMINATED MEMBERS. THE REVISIONS SHALL BE SUBMITTED ON THE SHOP DRAWINGS. GLUED-LAMINATED MEMBERS FABRICATED FROM INLAND DOUGLAS-FIR LUMBER SHALL NOT BE USED ON THIS PROJECT.

TREATMENT: INCISE AND TREAT ALL LUMBER AFTER FABRICATION IN ACCORDANCE WITH AWPA U1 USING PENTACHLOROPHENOL OR COPPER NAPHTHENATE IN HEAVY OIL (TYPE A SOLVENT). TREAT TO USE CATEGORY U4B COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WMPA'S BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS.

FIELD TREATMENT: COPPER NAPHTHENATE (2% SOLUTION) SHALL BE FURNISHED FOR FIELD TREATING OF WOOD. ALL ABRASIONS AND FIELD CUTS APPROVED BY THE C.O. SHALL BE CAREFULLY TRIMMED AND GIVEN THREE BRUSH COATS OF THE FIELD TREATMENT SOLUTION. HOLES DRILLED IN THE FIELD SHALL BE POURED FULL OF PRESERVATIVE PRIOR TO INSERTING FASTENERS, WHEN POSSIBLE. DO NOT FIELD TREAT OVER LIVE STREAM. DO NOT SPILL PRESERVATIVE IN STREAM.

INSPECTION AND CERTIFICATION: THE FOLLOWING COMPLIANCE CERTIFICATES SHALL BE FURNISHED UPON DELIVERY.

- SUPPLIER CERTIFICATION, FROM A WMPA OR WCLB APPROVED SUPPLIER, THAT ALL WOOD MATERIALS MEET REQUIREMENTS AS TO SPECIES AND GRADE.
- CERTIFICATION OF PRESERVATIVE PENETRATION IN INCHES, AND RETENTION IN POUNDS PER CUBIC FOOT (ASSAY METHOD) BY EITHER A QUALIFIED TESTING AND INSPECTION AGENCY OR SUPPLIER CERTIFICATION. SUPPLIER CERTIFICATION REQUIRES EACH SOLID PIECE TO BE STAMPED OR BRANDED WITH THE AISC QUALITY MARK.

C. CERTIFICATION FROM A QUALIFIED INSPECTION AND TESTING AGENCY INDICATING CONFORMANCE OF ALL GLUED-LAMINATED MEMBERS WITH AITC 117-04.

D. SUPPLIER CERTIFICATION THAT ALL TREATED WOOD MATERIALS WERE TREATED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF WMPA'S "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS".

HARDWARE AND STRUCTURAL STEEL: STRUCTURAL STEEL BEAMS SHALL CONFORM TO AASHTO M270 GRADE 50W WEATHERING STEEL. ALL OTHER STEEL PLATES, SHAPES, AND BARS SHALL CONFORM TO AASHTO M270 GRADE 36W WEATHERING STEEL. ALL BOLTS AND NUTS SHALL CONFORM TO ASTM F1554 TYPE 3 EXCEPT AS NOTED. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.5 BRIDGE WELDING CODE. ALL ELECTRODES SHALL BE E 70XX. HARDWARE AND STEEL ELEMENTS ARE TO BE UNCOATED (BLACK). USE MALLEABLE IRON WASHERS AGAINST WOOD EXCEPT WHERE NOTED OTHERWISE.

FABRICATION: SUBMIT SHOP DRAWINGS FOR ALL TREATED TIMBER (EXCEPT RUNNING PLANKS). SHOW ALL DIMENSIONS AND FABRICATION DETAILS FOR ALL CUT OR BORED TIMBER. MARK ALL PIECES ON THE DRAWINGS. FIELD DRILLING OF HOLES SHALL NOT BE ALLOWED UNLESS OTHERWISE NOTED ON THE DRAWINGS.

CONCRETE: ALL CONCRETE SHALL BE CLASS (A)B CONCRETE, $f_c = 4500$ PSI AT 28 DAYS. CONCRETE SHALL BE GIVEN A CLASS 1 "ORDINARY SURFACE FINISH". CONCRETE SHALL BE AIR ENTRAINED 5% ± 1%.

ALL CONCRETE SHALL BE IN ACCORDANCE WITH AN APPROVED MIX DESIGN. CHAMFER ALL EXPOSED EDGES OF CONCRETE AND FILLET ALL RE-ENTRANT ANGLES 3/4" UNLESS NOTED OTHERWISE.

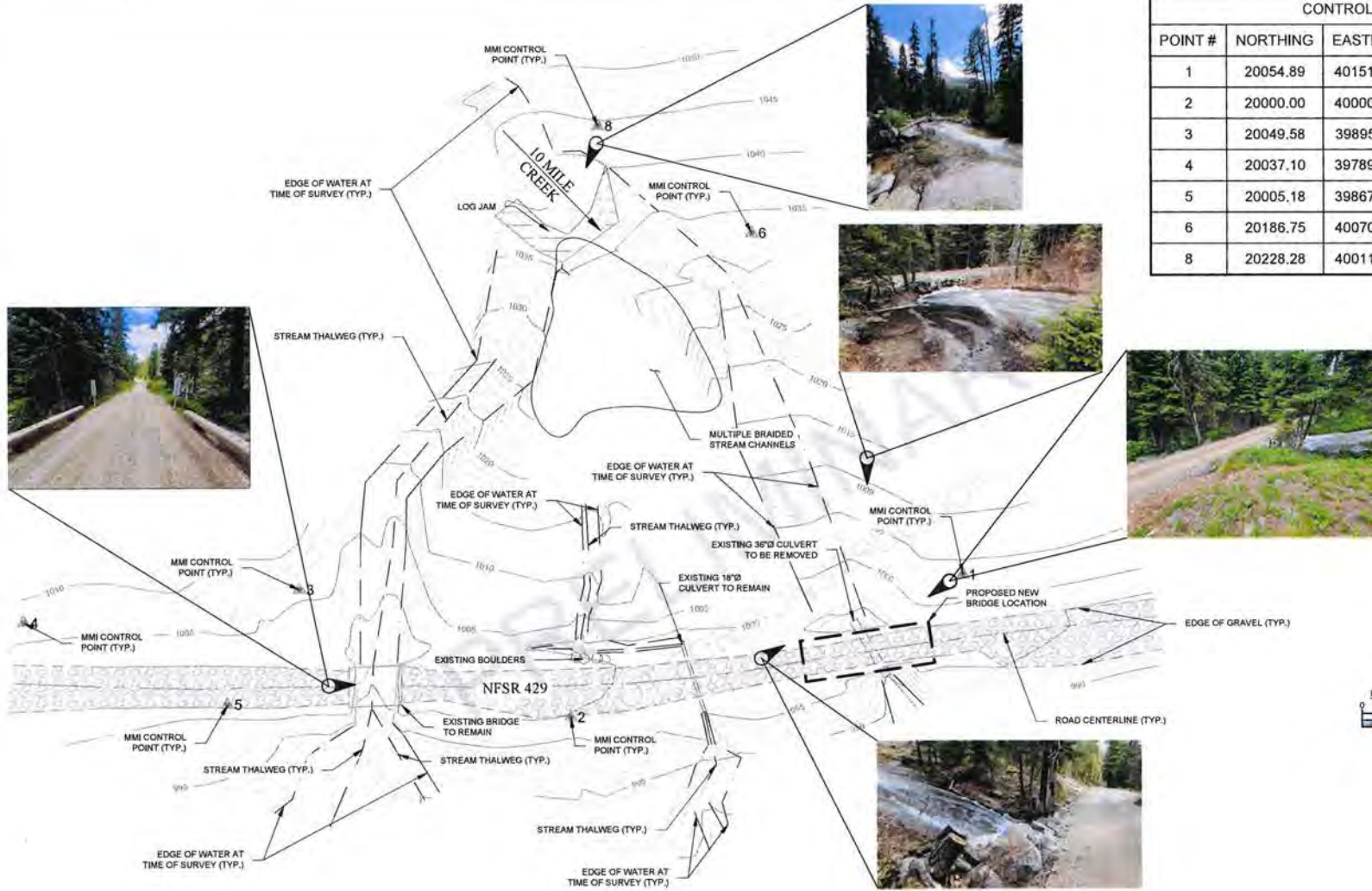


Sec. 01 T. 04 N. R. 23 W.	DRAWING DATE: MM/DD/YYYY
Length 50.0' Width 14.0'	△ Revised _____ Date _____
Slew 0' Clear Height 2.4'	△ Revised _____ Date _____
Grade -3.5% Super N/A	△ Revised _____ Date _____
Loading HL-93 Forest BITTERROOT	△ Revised _____ Date _____

TENMILE CREEK BRIDGE 2
NFSR 429, M.P. 12.96
GENERAL NOTES & ESTIMATED QTY'S
Designed By: RDL Design Checked: RDL
Drawn By: DAH Drawing Checked: RDL
Sheet: 1 of ----

M:\1772\TROUT UNLIMITED\012005\10\MILE CREEK BRIDGE\ACAD\REVISED\GENERAL NOTES.DWG PLOTTED BY: DAVID A. HALLSTEN ON: 04/07/2025

CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	20054.89	40151.29	1003.20	RPC
2	20000.00	40000.00	1000.00	NAIL
3	20049.58	39895.81	1006.17	NAIL
4	20037.10	39789.57	1008.26	NAIL
5	20005.18	39867.90	1002.97	NAIL
6	20186.75	40070.26	1032.91	SCRIBED X
8	20228.28	40011.08	1044.50	SCRIBED X



NOTES:

1. THIS PROJECT UTILIZES AN ASSUMED COORDINATE SYSTEM AND IS NOT REFERENCED TO ANY OTHER COORDINATE SYSTEM.
2. FIELDWORK WAS CONDUCTED ON 07/02/2024.

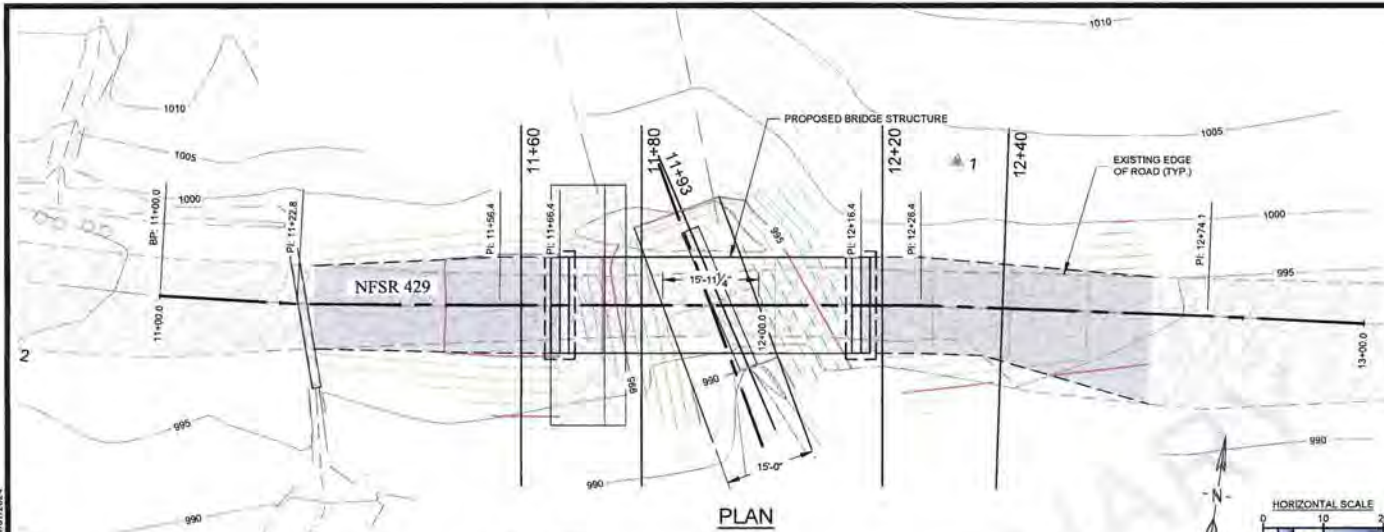


TENMILE CREEK BRIDGE 2
NFSR 429, M.P. 12.96
EXISTING SITE CONDITIONS

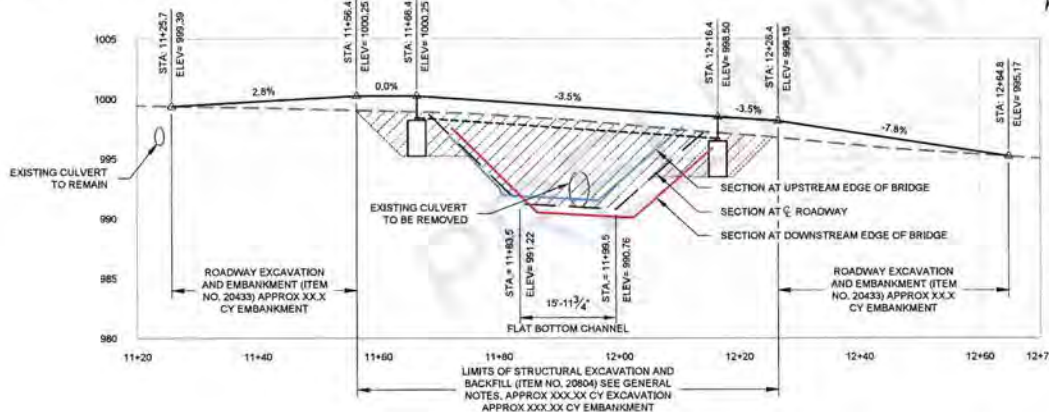
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Drawn By:XX Drawing Checked:XX

Sheet: 2 of ----

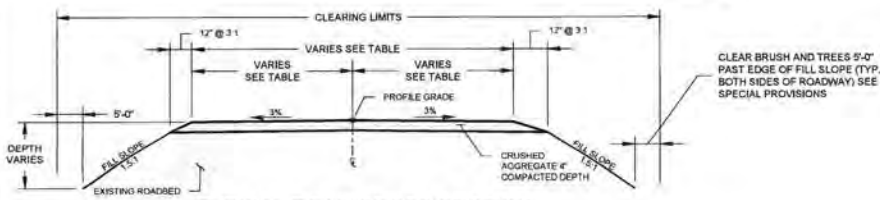
M:\772 TROUT UNLIMITED\200 10-MILE CREEK BRIDGE\CAD\DWG\2025\EXISTING SITE CONDITIONS.DWG PLOTTED BY DAVID A. HALLSTEN ON 07/02/2024



PLAN



PROFILE



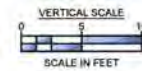
TYPICAL ROAD CROSS SECTION
SCALE N.T.S.

NOTES:

1. ROADWAY AGGREGATE SHALL BE PLACED BETWEEN STATION 11+25.70 AND STATION 12+64.80 (EXCEPT ON BRIDGE DECK) AND SHALL BE COMPACTED TO MEET REQUIREMENTS OF FSSS 302.
2. CLEARING AND GRUBBING SHALL BE INCIDENTAL TO PAY ITEM 20433 ROADWAY EXCAVATION AND EMBANKMENT IN THIS PROJECT. DISPOSE OF CLEARING AND GRUBBING DEBRIS PER FSSS 203.
3. INCLUDE ALL COSTS OF STRUCTURAL EXCAVATION, BACKFILL WASTE, MISCELLANEOUS EXCAVATION, AND CHANNEL WORK IN STRUCTURAL EXCAVATION PAY ITEM 20804.
4. CONTRACTOR SHALL DISPOSE OF EXCESS OR UNSUITABLE STRUCTURAL EXCAVATION MATERIAL AT DESIGNATED WASTE AREA. DESIGNATED WASTE SITES ARE SPECIFIED AS SHOWN IN FSSS 105.
5. ALL MATERIALS DESIGNATED FOR REMOVAL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND DISPOSING OF THE EXISTING BRIDGE FROM NATIONAL FOREST LAND IN ACCORDANCE WITH CURRENT STATE AND FEDERAL REQUIREMENTS.
6. SEED ALL DISTURBED AREAS AFTER CONSTRUCTION PER FSSS 625.

LEGEND

FINISH ROADWAY SURFACE (TYP.)



ROAD CENTERLINE COORDINATE TABLE				
STATION	DESCRIPTION	NORTHING	EASTING	ELEVATION
11+25.7	BEGIN ROAD WORK	20015.52	40049.28	999.39
11+56.4	POINT OF VT TANGENCY	20019.84	40079.64	1000.25
11+65.4	CL BEARING ABUT NO. 1	20021.31	40089.54	1000.25
12+16.4	CL BEARING ABUT NO. 2	20028.66	40139.03	998.50
12+26.4	POINT OF (H&V) TANGENCY	20030.13	40148.92	998.15
12+64.8	END ROAD WORK	20034.40	40187.01	995.17

ROADWAY SURFACE TABLE					
ROAD NO.	FROM STA.	TO STA.	RT LANE WIDTH	LT LANE WIDTH	CROSS SLOPE
16/31 429	11+25.7	11+56.4	M.E. TO 7'-0"	M.E. TO 7'-0"	M.E. TO 3% CROWN
	11+56.4	11+65.65	7'-0"	7'-0"	3% CROWN TO 0%
	11+65.65	12+17.15	7'-0"	7'-0"	0%
	12+17.15	12+37.0	7'-0"	7'-0"	0% TO 3% CROWN
	12+37.0	12+64.8	7'-0" TO M.E.	7'-0" TO M.E.	3% CROWN TO M.E.

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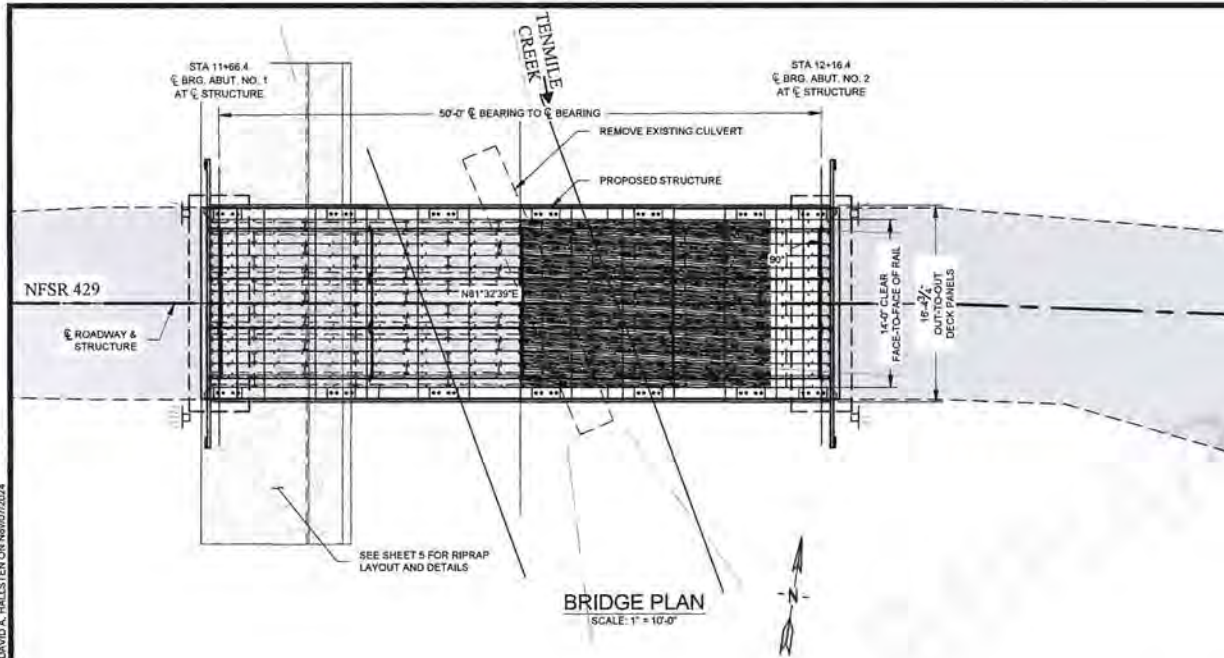


TENMILE CREEK BRIDGE 2
NFSR 429, M.P. 12.96
ROAD PLAN AND PROFILE

Designed By:XX Design Checked:XX
Drawn By:XX Drawing Checked:XX

Sheet: 3 of ----

M:\1772 TROUT UNLIMITED\2005 TENMILE CREEK BRIDGE\ROADSHEETS\ROAD PLAN AND PROFILE.DWG PLOTTED BY DAVID A. HALLETEN ON 10/27/2024

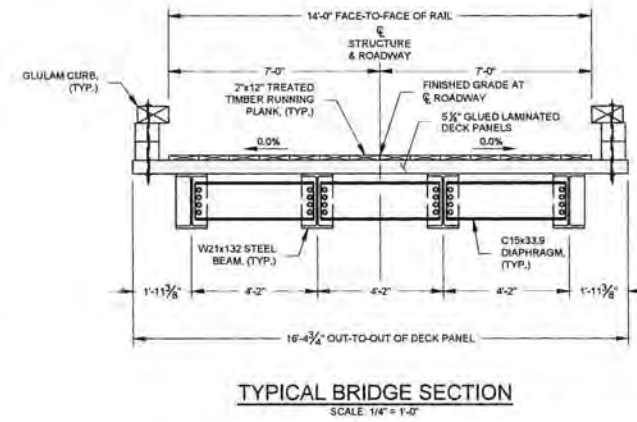
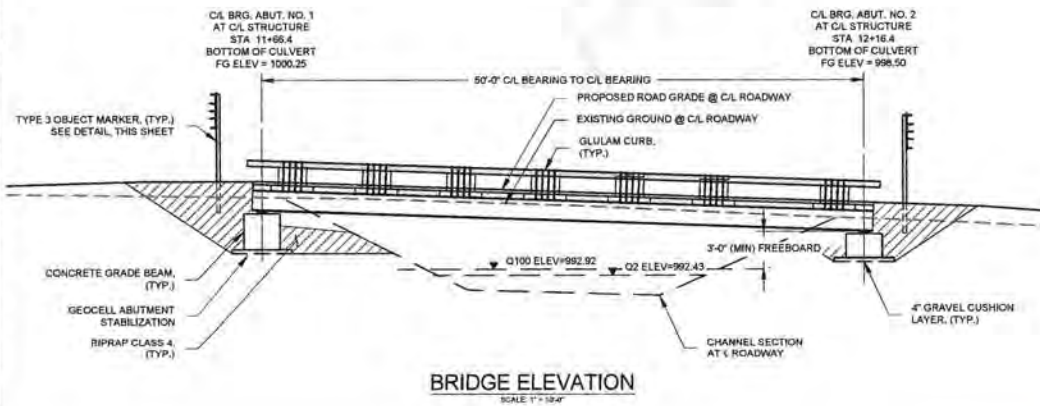
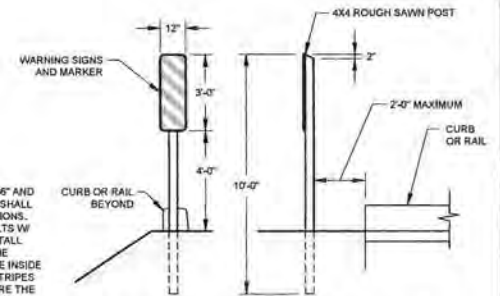


NOTES:

1. FOR RIPRAP, GEOCELL ABUTMENT STABILIZATION, FOUNDATION FILL, AND STRUCTURAL EXCAVATION DETAILS SEE SHEET XX.
2. FOR GENERAL NOTES SEE SHEET XX.
3. ELEVATIONS OF STREAM WATER SURFACE VARY ALONG CREEK PROFILE. ELEVATIONS SHOWN FOR Q2 & Q100 ARE FOR THE UPSTREAM EDGE OF THE BRIDGE.

NOTE:

TYPE 3 OBJECT MARKERS SHALL BE 12" X 36" AND COLORED YELLOW AND BLACK. MATERIAL SHALL MEET MUTCD OM-3L OR OM-3R SPECIFICATIONS. FASTEN TO POST W/ (2)-1/4" MACHINE BOLTS W/ WASHERS. FIELD DRILL BOLT HOLES. INSTALL POSTS SUCH THAT THE INSIDE EDGE OF THE REFLECTORIZED PANEL IS IN LINE WITH THE INSIDE EDGE OF THE CURB OR RAIL. SLOPE THE STRIPES DOWNWARD TOWARD THE ROADWAY WHERE THE VEHICLE IS TO PASS BY THE OBJECT ON BOTH SIDES OF THE ROAD.



M:\K72\TROUT UNLIMITED\250 TO MILE CREEK BRIDGE\AC-AD\SHETS\4 BRIDGE GENERAL LAYOUT.DWG PLOTTED BY DAVID A. HALLSTEN ON Nov/07/2024

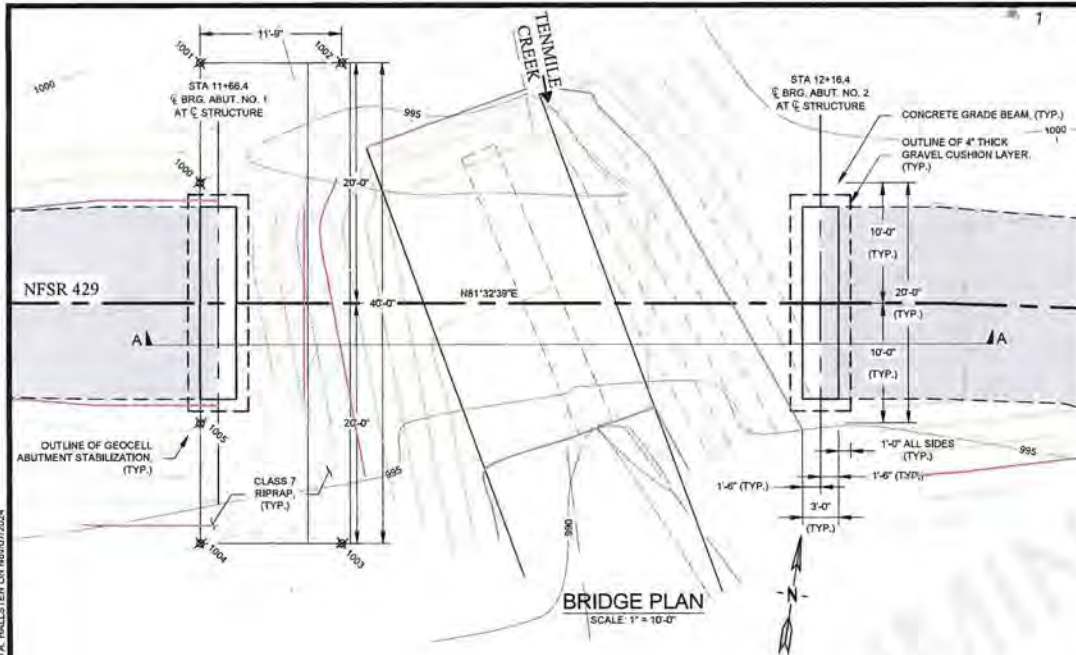
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TENMILE CREEK BRIDGE 2
NFSR 429, M.P. 12.96
BRIDGE GENERAL LAYOUT

Designed By: RDL	Design Checked: RDL
Drawn By: DAH	Drawing Checked: RDL

Sheet: 4 of ----



BRIDGE PLAN
SCALE: 1" = 10'-0"

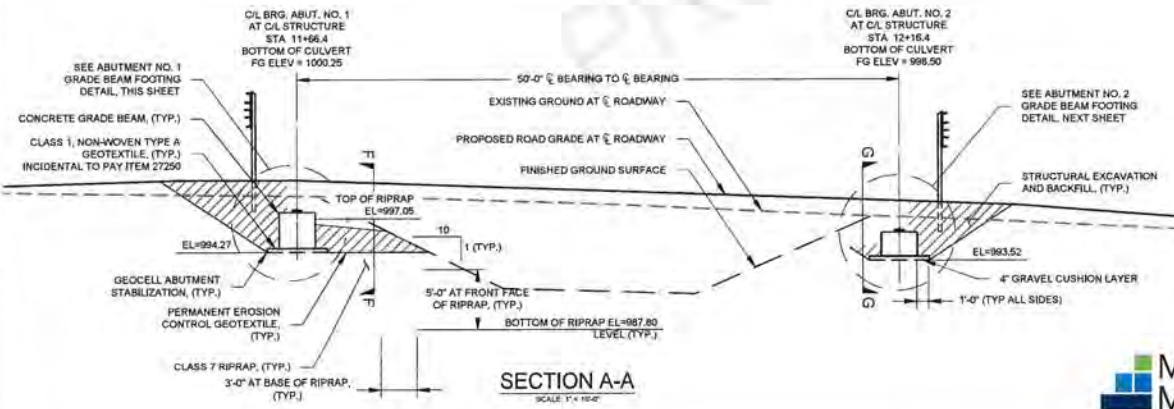
NOTES:

1. GEOCELL ABUTMENT STABILIZATION IS REQUIRED UNDER THE ABUTMENT NO. 1 TO THE DIMENSIONS SHOWN ON THE PLANS. PLACE ON UNDISTURBED SOIL.
2. PLACE CLASS 1, NON-WOVEN, TYPE A GEOTEXTILE UNDER GEOCELL ABUTMENT STABILIZATION AT ABUTMENT NO. 1, AND UNDER THE GRAVEL CUSHION LAYER AT ABUTMENT NO. 2 AND WRAP OVER THE TOP OF THE GEOCELL OR GRAVEL CUSHION AFTER IT IS BACKFILLED WITH GRANULAR BACKFILL PER FSSS 272. CLASS 1, TYPE A NON-WOVEN GEOTEXTILE AND GRANULAR BACKFILL AT BOTH ABUTMENTS SHALL BE INCIDENTAL TO THE CONTRACT PAY ITEM 27250 - GEOCELL ABUTMENT STABILIZATION, 8 INCH DEPTH.
3. ELEVATIONS OF STREAM BOTTOM, RIPRAP, AND WATER SURFACES VARIES ALONG CREEK PROFILE. ELEVATIONS SHOWN IN SECTION A-A ARE AT CENTERLINE OF BRIDGE.
4. RIPRAP LOCATION IS APPROXIMATE. ADJUST FINAL CONFIGURATION AS DIRECTED BY C.O.
5. BURY RIPRAP WHERE NECESSARY TO MATCH RIPRAP TO EXISTING GROUND.
6. PROVIDE A MINIMUM OF 2'-0" OF RIPRAP (AT ABUTMENT #2) OR NATIVE MATERIAL (AT ABUTMENT #1) COVER ON THE FRONT FACE OF THE CONCRETE GRADE BEAM.
7. FILL LARGE VOIDS IN THE RIPRAP WITH SMALLER ROCKS FREE OF CLAYS, SILTS, AND FINE SAND PARTICLES.

RIPRAP COORDINATE TABLE				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1000	20030.98	40086.62	999.25	TOP OF RIPRAP
1001	20040.87	40085.15	0.00	TOP OF RIPRAP
1002	20042.60	40096.78	996.83	TOP OF RIPRAP
1003	20003.04	40102.66	993.15	TOP OF RIPRAP
1004	20001.31	40091.03	994.25	TOP OF RIPRAP
1005	20011.20	40089.56	999.25	TOP OF RIPRAP

DEWATERING AND SOIL EROSION CONTROL

1. PROTECT AGAINST SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION IN ACCORDANCE WITH FP-14, SECTION 157 AND THE PROJECT PERMITS. CONTRACTOR SHALL PREPARE AND SUBMIT A SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE T.O.C. FOR APPROVAL. PLAN SHALL INCLUDE DRAWINGS AND WRITTEN OUTLINE ILLUSTRATING AND DESCRIBING PROPOSED LAYOUT, METHODS AND EQUIPMENT.
2. DEWATER THE EXCAVATION IN ACCORDANCE WITH FP-14, SECTIONS 208 AND 157.
3. CONTRACTOR SHOULD ANTICIPATE WATER INFILTRATING THE EXCAVATIONS.
4. SUBGRADE EXCAVATION, GEOCELL INSTALLATION, FOOTING PLACEMENT, RIPRAP PLACEMENT, AND BACKFILL ARE TO BE COMPLETED PER THE CONTRACT SPECIFICATIONS. STANDING OR RUNNING WATER IN THE WORK AREA DOES NOT RELIEVE THE CONTRACTOR FROM MEETING THE SPECIFICATIONS.
5. DEWATERING IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR SHALL SUBMIT A DEWATERING, EROSION AND SEDIMENT CONTROL PLAN TO THE C.O. FOR APPROVAL. CONTRACTOR SHALL DEVELOP THEIR OWN PROJECT SPECIFIC DEWATERING PLAN AND SHALL INCLUDE DRAWINGS AND WRITTEN OUTLINE ILLUSTRATING AND DESCRIBING PROPOSED LAYOUTS, METHODS, EQUIPMENT AND ANTICIPATED STREAM FLOW VOLUMES. APPROVAL OF THE DEWATERING PLAN BY THE C.O. DOES NOT RELIEVE THE CONTRACTOR FROM COMPLETING THE WORK AS SPECIFIED. IF CONTRACTOR'S IDENTIFIED DEWATERING METHODS ARE NOT PRODUCING DESIRED RESULTS, CONTRACTOR SHALL RE-EVALUATE AND SUBMIT ANOTHER PLAN TO C.O. FOR APPROVAL AND IS INCIDENTAL TO THE WORK.
6. IN-CHANNEL DEWATERING SHALL BE ACCOMPLISHED BY USE OF NON-EROSIVE DEVICES, SUCH AS LARGE BAGS OF GRAVEL OR OTHER MATERIAL. EQUIPMENT SHALL NOT COME INTO CONTACT WITH LIVE STREAM WATER DURING RIPRAP PLACEMENT OR ANY OTHER TIME THROUGHOUT CONSTRUCTION.
7. NO LIVE STREAM CROSSINGS WILL BE ALLOWED FOR THE PURPOSE OF CONSTRUCTION. CONTRACTOR SHALL ANTICIPATE THAT 2 EXCAVATORS WILL BE REQUIRED SO THAT WORK CAN BE CONDUCTED FROM BOTH SIDES OF THE CREEK.



SECTION A-A
SCALE: 1" = 10'-0"

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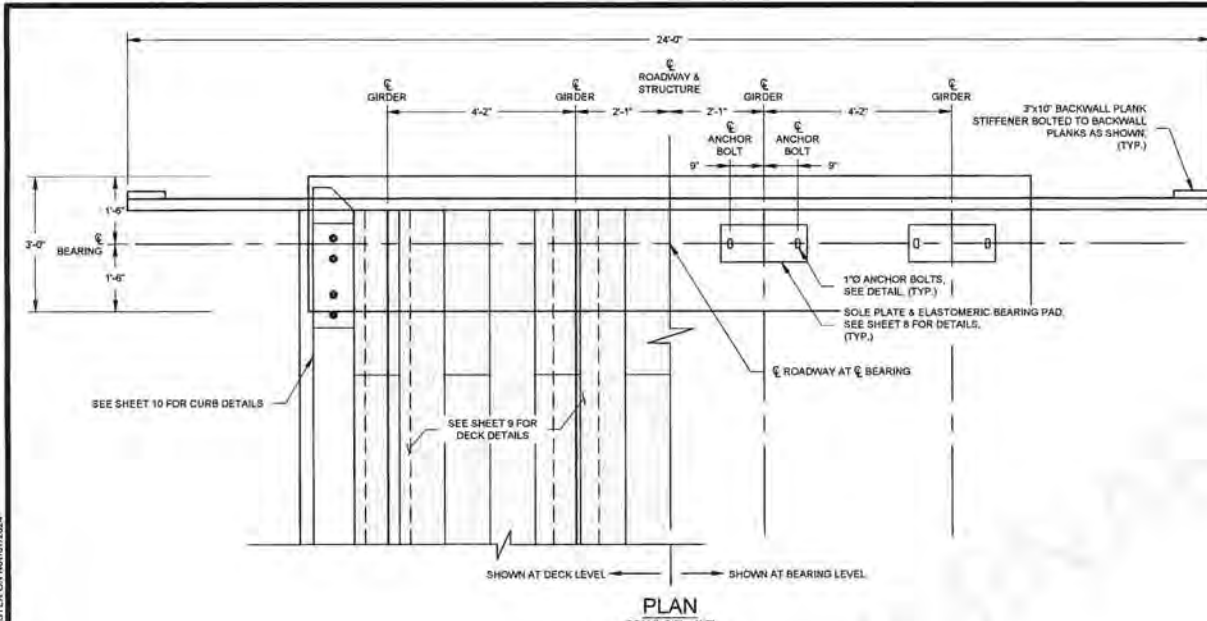


TENMILE CREEK BRIDGE 2
NFSR 429, M.P. 12.96
FOUNDATION DETAILS NO. 1

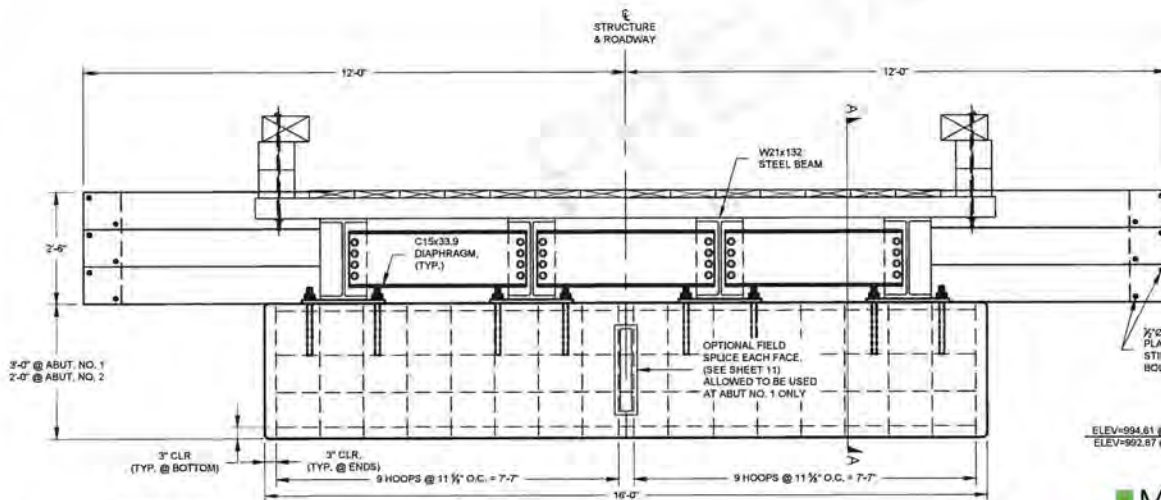
Designed By: RDL Design Checked: RDL
Drawn By: DAH Drawing Checked: RDL

Sheet: 5 of ----

M:\4772\PROJECT\UNLIMITED\2025\10-MILE CREEK BRIDGE\ACAD\SHEETS\FOUNDATION RIPRAP.DWG PLOTTED BY: DAVID A. HALLSTEIN ON: Nov 07 2024



PLAN
SCALE: 3/8" = 1'-0"



NOTE: NO ABUTMENT SPLICE WILL BE ALLOWED AT ABUTMENT NO. 2.

ELEVATION
SCALE: 3/8" = 1'-0"

(LOOKING BACK ON STATION @ ABUT. #1)
(LOOKING AHEAD ON STATION @ ABUT #2)

BILL OF REINFORCING (FOR ONE ABUTMENT ONLY)

LENGTH
TYPE STR

TYPE I

ALL DIMENSIONS ARE OUT-TO-OUT

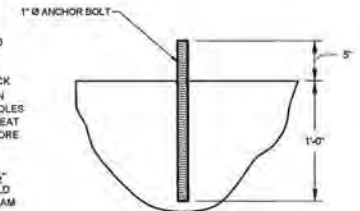
LOCATION	MARK	SIZE	NO.	TYPE	LENGTH	A	B	C	D
ABUTMENT #1 CAP	A1-1	#5	24	1	11'-6"	2'-7"	2'-8"	5 1/2"	
	A1-2	#8	8	STR	19'-8"				
	A1-3	#5	4	STR	19'-8"				
ABUTMENT #2 CAP	A2-1	#5	22	1	9'-5"	1'-7"	2'-8"	5 1/2"	
	A2-2	#8	8	STR	19'-8"				
	A2-3	#5	4	STR	19'-8"				

NOTE: STR DENOTES STRAIGHT BAR.

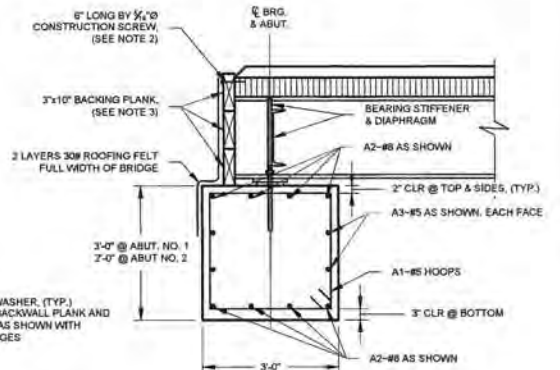
NOTE: ABUTMENT NO. 1 BARS SHOWN. ABUTMENT NO. 2 BARS THE SAME.

NOTES:

- ANCHOR BOLTS SHALL BE EMBEDDED OR FIELD DRILLED AND EPOXIED INTO CONCRETE.
- FASTEN TOP BACKING PLANK TO GLUED LAMINATED DECK PANELS WITH 6" LONG BY 5/16" DIAMETER CONSTRUCTION SCREWS SPACED AT 16" O.C. PREBORE SCREW LEAD HOLES USING A HOLE EQUAL TO 75% OF SCREW DIAMETER. TREAT HOLE WITH COPPER NAPHTHENE (2% SOLUTION) BEFORE PLACING EACH SCREW.
- FASTEN EACH BACKING PLANK TO EACH GIRDER WITH 5/8" DIAMETER BOLTS AND MALLEABLE IRON WASHERS. FIELD DRILL HOLES IN BACKING PLANKS. SEE SHEET 7 FOR BEAM END PLATE DETAIL.
- IF BACKWALL SPLICE IS REQUIRED, SUBMIT SPLICE DETAIL FOR APPROVAL.



ANCHOR BOLT DETAIL
SCALE: N.T.S.



SECTION A-A
SCALE: 3/8" = 1'-0"

ELEV=994.61 @ ABUT. NO. 1
ELEV=992.67 @ ABUT. NO. 2 (LEVEL)

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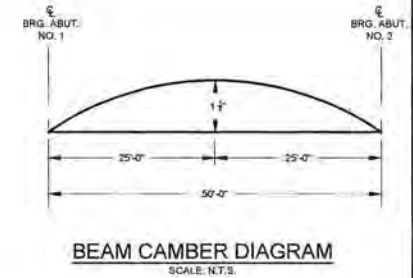
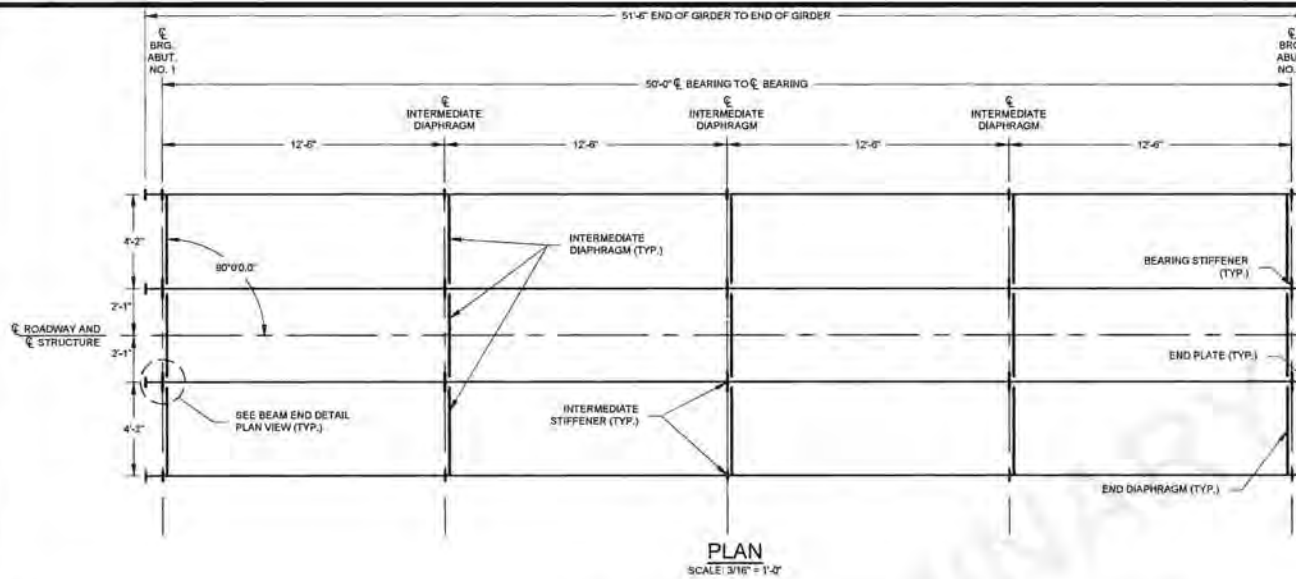


TENMILE CREEK BRIDGE 2
 NFSR 429, M.P. 0.01
ABUTMENT DETAILS

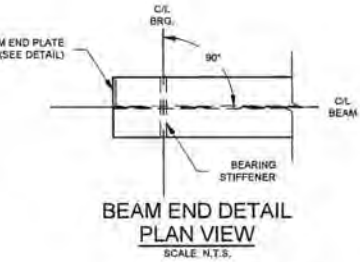
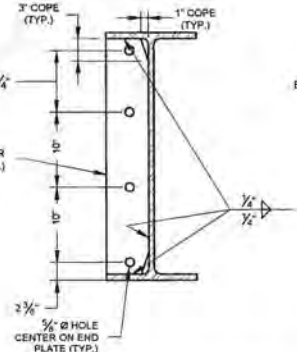
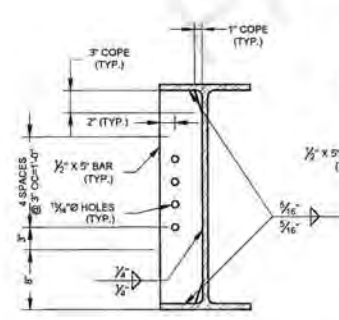
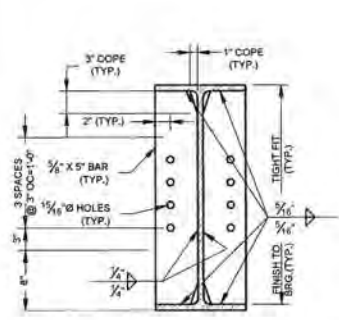
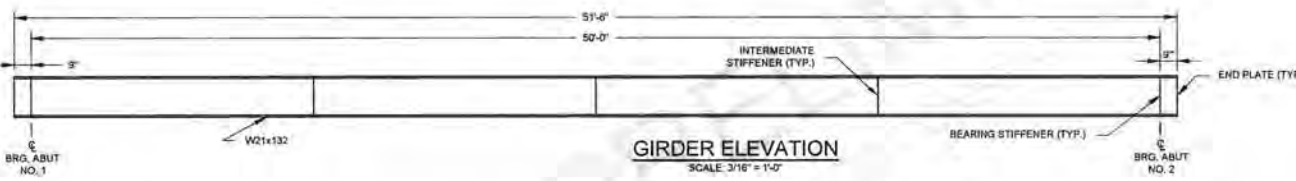
Designed By: RDL Design Checked: RDL
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Sheet: 7 of ----

M:\MT72 TROUT UNLIMITED\2000 TENMILE CREEK BRIDGE\ACAD\SHETS\7 ABUTMENT DETAILS.DWG PLOTTED BY DAVID A. HALLSTEN ON Nov-07-2024



- NOTES:**
1. WIDE FLANGE MEMBERS SHALL MEET THE REQUIREMENTS OF AASHTO M270 GRADE 50W. ALL CHANNELS AND PLATES SHALL MEET THE REQUIREMENTS OF AASHTO M270 GRADE 50W.
 2. ALL DIMENSIONS SHOWN ARE HORIZONTAL. CONTRACTOR SHALL ADJUST ALL VALUES TO ACCOUNT FOR THE EFFECT OF THE GRADE AND CAMBER.
 3. FOR DIAPHRAGM DETAILS AND BEARING DETAILS, SEE SHEET B.
 4. WELDING, WELDER QUALIFICATIONS, PREQUALIFICATION OF WELD DETAILS AND INSPECTIONS WELDS, SHALL CONFORM TO THE REQUIREMENTS OF THE AISC/AASHTO AWS BRIDGE WELD CODE D1.5. INCLUDE ALL COSTS OF TESTING, QUALIFICATIONS, PREQUALIFICATION, AND ANY COST TO PERFORM WORK IN ITEM 55501 - STRUCTURAL STEEL SUPERSTRUCTURE FURNISHED, FABRICATED AND ERECTED.
 5. NO FIELD WELDING WILL BE ALLOWED UNLESS OTHERWISE NOTED. ALL WELDS SHALL BE MINIMUM 1/4".
 6. CHARPY V-NOTCH TOUGHNESS SHALL BE PERFORMED ON THE MAIN W-BEAM MEMBERS. MEET THE REQUIREMENTS FOR ZONE 3. INCLUDE ALL COST IN THE ITEM 55501 STRUCTURAL STEEL SUPERSTRUCTURE, FURNISHED, FABRICATED AND ERECTED.
 7. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE THROUGHOUT CONSTRUCTION.
 8. BEARING STIFFENERS AT CENTERLINE ABUTMENTS SHALL BE BOTH SIDES OF WEB. STIFFENERS AT INTERMEDIATE DIAPHRAGMS SHALL BE BOTH SIDES OF WEB ON INTERIOR GIRDERS AND SHALL NOT BE ON OUTSIDE OF EXTERIOR GIRDERS. ALL BEARING STIFFENERS WILL BE VERTICAL IN FINAL POSITION.
 9. NO WELDS SHALL OCCUR WITHIN 1/4" FROM EDGE OF STIFFENERS.
 10. WELD STIFFENER TO WEB ONE SIDE OF STIFFENER AT A TIME.
 11. WELDING STIFFENERS TO WEBS AND FLANGES USING SAW PROCESS IS NOT PERMITTED.
 12. SUPERIMPOSED DEAD LOAD FROM RUNNING PLANK WEARING SURFACE IS 12.5 PSF FOR DESIGN.



STIFFENER DETAILS - ELEVATION

SCALE: N.T.S.

BEAM END PLATE DETAIL

SCALE: N.T.S.

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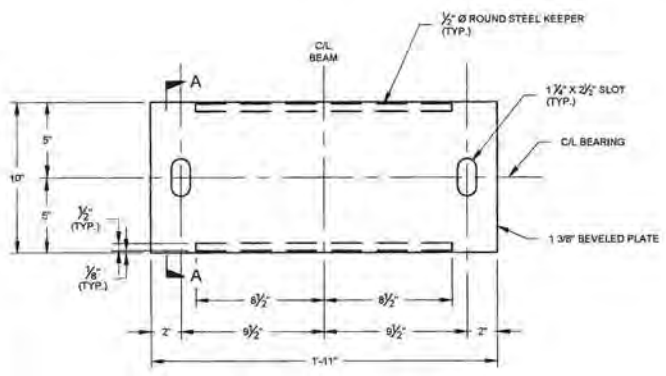


TENMILE CREEK BRIDGE 2
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FRAMING PLAN

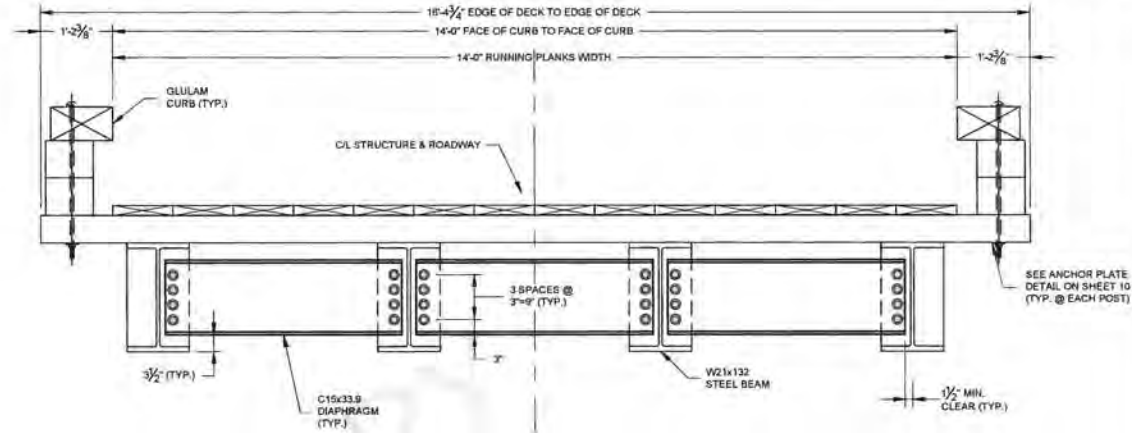
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Drawn By: DAH	Drawing Checked: RDL

Sheet: 8 of ---

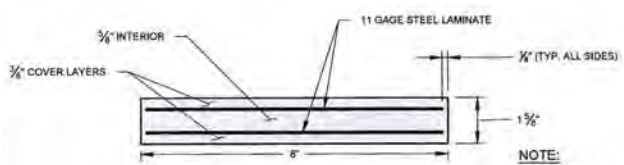
M:\4072 TROUT UNLIMITED\2008 10-MILE CREEK BRIDGE\CAD\DRG SHEETS\FRAMING PLAN.DWG PLOTTED BY: DAVID A. HALLSTEIN ON 11/06/2024



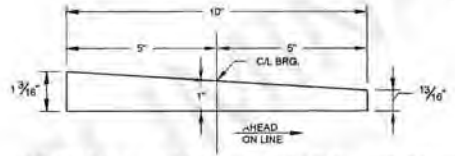
BEARING SOLE PLATE PLAN
SCALE: 1 1/2" = 1'-0"



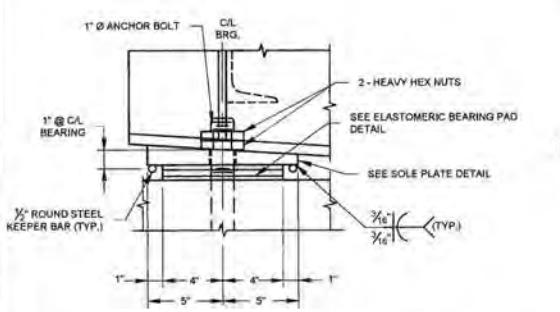
DIAPHRAGM SECTION
SCALE: 1/2" = 1'-0"
(END DIAPHRAGM SHOWN INTERMEDIATE DIAPHRAGM SIMILAR)



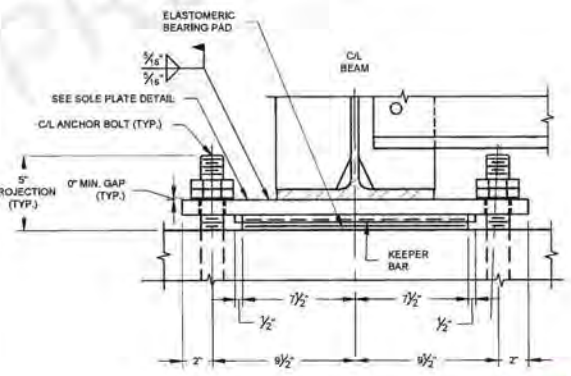
BEARING PAD DETAIL
SCALE: N.T.S.



SECTION A-A (BEARING SOLE PLATE SECTION)
SCALE: N.T.S.



BEARING DETAILS
SCALE: 1 1/2" = 1'-0"
(8 BEARINGS REQUIRED)



NOTES:

1. ALL DIAPHRAGM BOLTS SHALL BE 1/2" DIAMETER ASTM A325 TYPE 3 HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE 13/16" DIAMETER UNLESS OTHERWISE NOTED. TIGHTEN AND INSTALL BOLTS AS SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. PROVIDE 1 1/2" MINIMUM FROM CENTER OF BOLT HOLES TO THE EDGE OF PLATE OR CHANNEL UNLESS OTHERWISE NOTED.
3. USE AASHTO M314, GRADE 55 SWEDGED ANCHOR BOLT. SEE DETAIL, SHEET 6.
4. USE 70 DURETOMETER LOW TEMPERATURE ZONE D ELASTOMER IN ALL BEARING PADS. INCLUDE ALL COSTS ASSOCIATED WITH THE ELASTOMERIC BEARING PADS IN BID ITEM 55501 STRUCTURAL STEEL SUPERSTRUCTURE, FURNISHED, FABRICATED AND ERECTED.
5. SEE SHEET 7 FOR DIAPHRAGM LOCATIONS.

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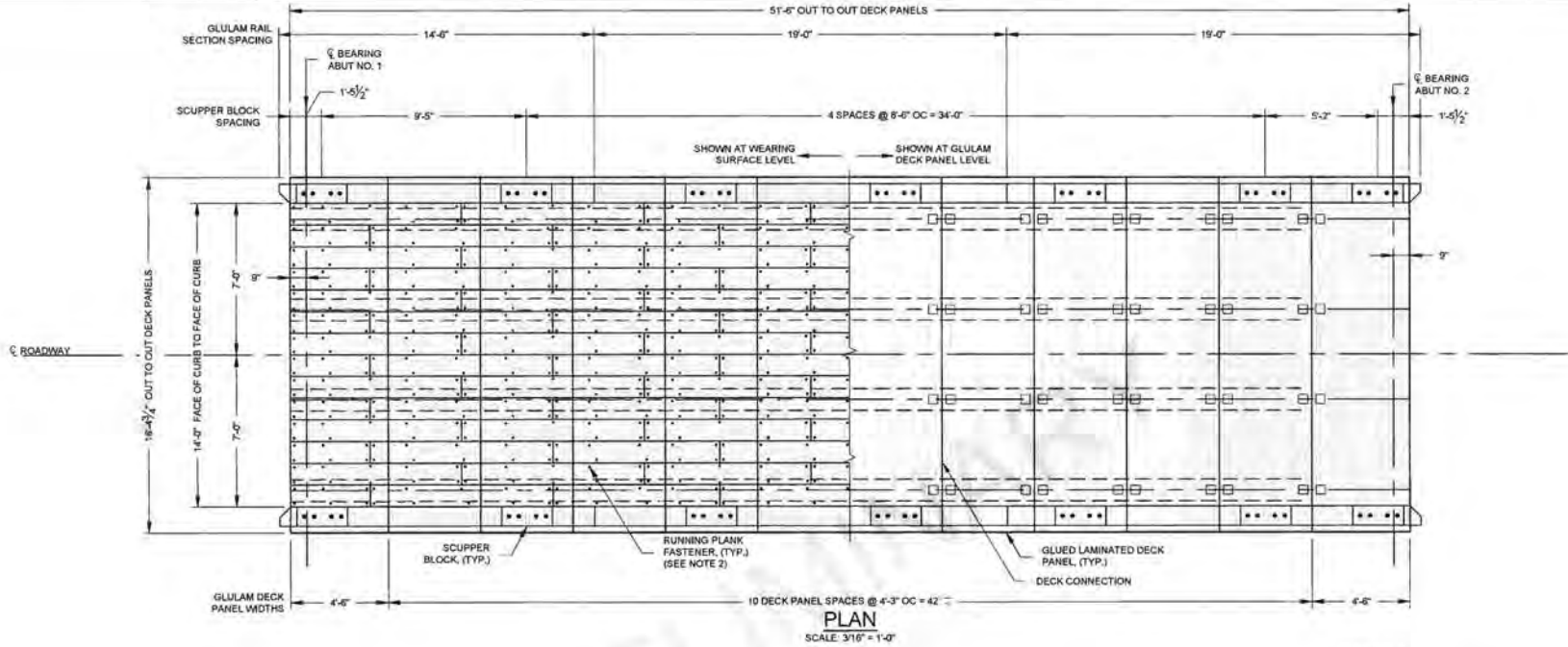
Morrison Maierle
engineers • surveyors • planners • assessors
105 Mount Avenue, Missoula, MT 59801
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TENMILE CREEK BRIDGE 2
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STEEL DETAILS

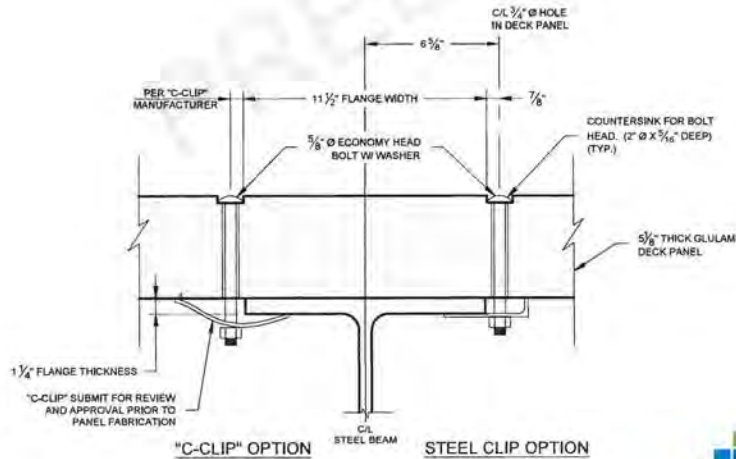
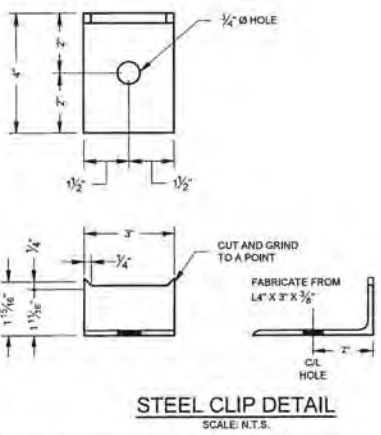
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Drawn By: DAH	Drawing Checked: RDL

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NOTES:

1. FASTEN EACH DECK PANEL TO EACH GIRDER WITH DECK CONNECTION IN FOUR LOCATIONS AS SHOWN.
2. FASTEN RUNNING PLANKS TO DECK PANELS WITH TWO ROWS OF 6 INCH 1/2" DIA. CONSTRUCTION SCREWS PER PLANK AT 24" ALTERNATE CENTERS AND 2 AT EACH END. STAGGER SPLICES BETWEEN RUNS A MINIMUM OF 3 FEET.
3. PRE-BORE RUNNING PLANK SCREW LEAD HOLES USING A HOLE EQUAL TO 75% OF NAIL DIAMETER. TREAT HOLE WITH COPPER NAPHTHENATE (2% SOLUTION) BEFORE PLACING EACH NAIL.
4. GLUED LAMINATE DECK PANEL WIDTHS SHOWN ARE NOMINAL DIMENSIONS. FABRICATE PANELS 1/4" NARROWER THAN THE DIMENSION SHOWN. PLACE PANELS WITH 1/4" ± GAP BETWEEN PANELS. PANEL FABRICATION TOLERANCE IS -1/8" TO +0".
5. FIELD DRILL 1/2" DIAMETER HOLES IN GLUED LAMINATED DECK PANELS USING A STEEL ANCHOR PLATE AS A TEMPLATE (SEE DETAIL ON SHEET 10). TREAT HOLES WITH COPPER NAPHTHENATE (2% SOLUTION) BEFORE PLACING BOLTS.

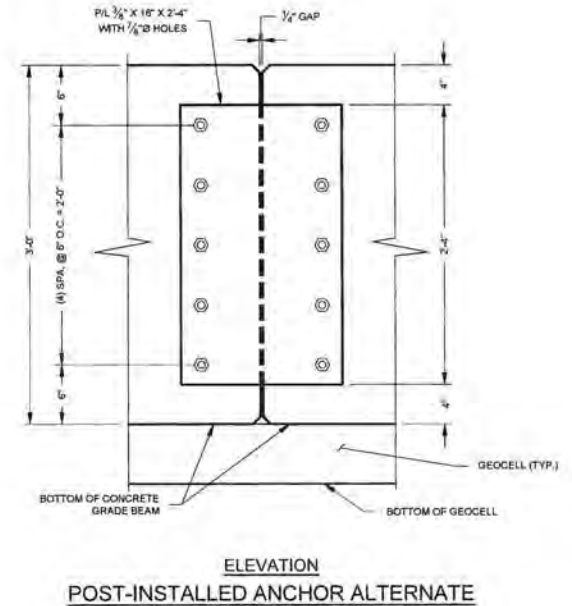
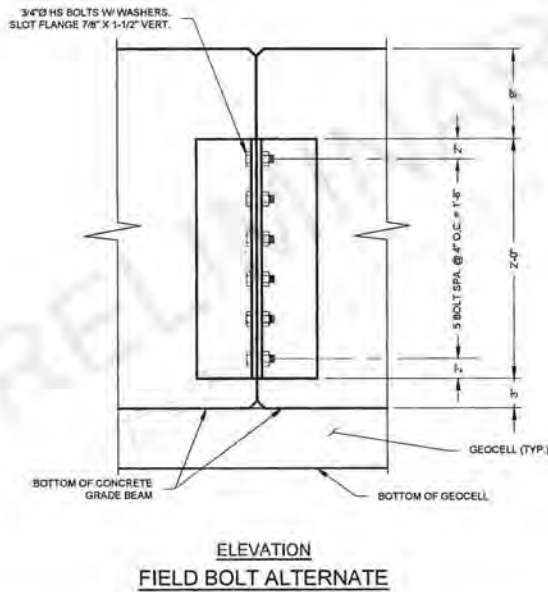
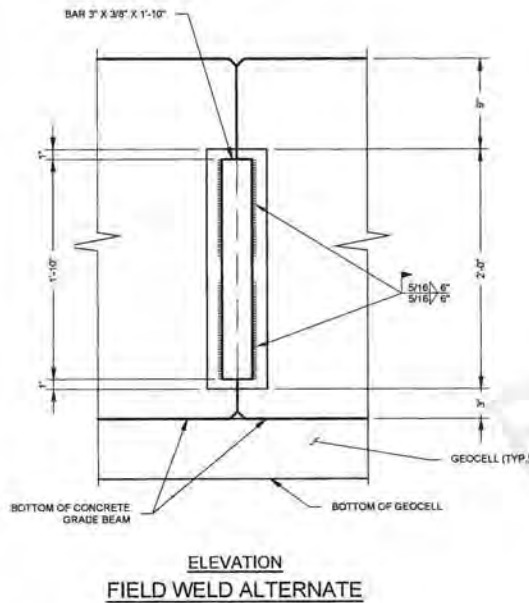
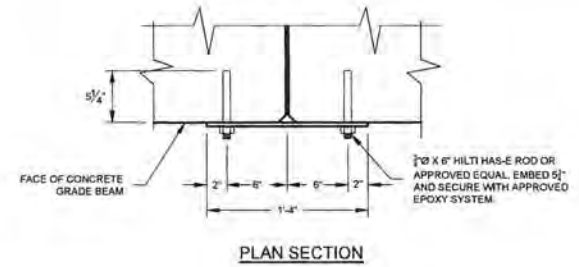
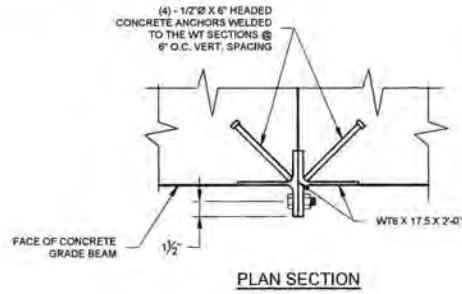
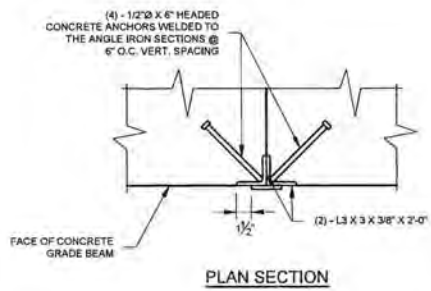


TENMILE CREEK BRIDGE 2
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DECK DETAILS

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141772 TROUT UNLIMITED 2025 TENMILE CREEK BRIDGE 2025 DECK DETAILS.DWG PLOTTED BY DAVID A. HALLSTEIN ON 11/05/2024



OPTIONAL CONCRETE GRADE BEAM FIELD SPLICE DETAILS
SCALE: 1" = 1'-0"

NOTES:

1. PROVIDE SPLICE ON EACH FACE OF PRECAST GRADE BEAM.
2. PROVIDE ADDITIONAL #4 HOOP WITH CLEAR COVER AT SPLICE SIDE OF THE CONCRETE GRADE BEAM. SEE ABUTMENT SHEET FOR BAR DETAIL.
3. LOCATE SPLICE BETWEEN BEAMS AND 6 INCHES AWAY FROM EDGE OF BEARING PAD AS SHOWN ON SHEET 8.
4. NO GRADE BEAM FIELD SPLICE WILL BE ALLOWED AT ABUTMENT NO. 2.



TENMILE CREEK BRIDGE 2
NFSR 429, M.P. 0.01
FIELD SPLICE DETAILS

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M1472.TROUT UNLIMITED 01/200 - 10-MILE CREEK BRIDGE CAD SHEET 1512 FIELD SPLICE DETAILS.DWG PLOTTED BY DAVID A. HALLSTEN ON 10/07/2024

