FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

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

I. APPLICANT INFORMATION

A. Applicant Name: State of Montana Department of Justice, Natural Resource Damage Program

Mailing Address: 1720 9th Ave.

City: Helena State: MT Zip: 59601

Telephone: 406-444-0205 E-mail: nrdp@mt.gov

B. Contact Person (if different than applicant): Jim Ford

Address: 1720 9th Ave.

City: Helena State: MT Zip: 59601

Telephone: 406-439-2108 E-mail: jford@mt.gov

C. Landowner and/or Lessee Name (if different than applicant): Butte Country Club (BCC) and Butte-Silver Bow County (BSB)

Mailing Address: BCC - 3400 Elizabeth Warren Ave, BSB - 155 W Granite St

City: Butte State: MT Zip: 59701

Telephone: BCC-494-2394 BSB-497-6519 E-mail: buttecc@gmail.com, mneary@bsb.mt.gov

II. PROJECT INFORMATION

A. Project Name: Blacktail Creek Restoration Project

River, stream, or lake: Blacktail Creek (Butte, MT)

Location: Township: T3N Range: R7W Section: 10

Latitude: 455837.4100 Longitude: 1122956.9100 *Within project (decimal degrees)*

County: Butte-Silver Bow County

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

The purpose of this project is to improve fish passage, reduce fish entrainment, and improve habitat and geomorphic stability.

This project has two major components: the Butte Country Club (BCC) diversion structure and irrigation improvement component and the Butte-Silver Bow County (BSB) fish passage/sewer line component. These project's parts have the goal of improving fish passage, reducing fish entrainment, and aquatic/floodplain habitat improvement.

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

The restoration actions in Blacktail Creek will restore stream and riparian functions that promote natural processes and address fish passage, fish entrainment, and water quality impairments. Stream and floodplain reconstruction will improve groundwater storage and create ideal conditions for riparian plants to become established. The combination of increased floodplain connection and healthy riparian plant communities will allow for the natural uptake of excess nutrients from the creek.

This section of Blacktail Creek is geomorphically unstable with a severe head-cut and bank erosion at the sewer line. Because of this the creek bed has cut down at least 4 feet exposing approximately 3 feet of the sewer line, which at one time was buried beneath the creek. The combination of these two projects will reconstruct a functioning floodplain, stream banks and bed, and creek geomorphology to address the current conditions. The BCC Irrigation component of the project will also remove a stormwater outfall which currently discharges to the creek and relocate it to discharge to the newly segregated irrigation pond.

This project has two major components: the Butte Country Club (BCC) diversion structure and irrigation improvement component and the Butte-Silver Bow County (BSB) fish passage/sewer line component.

Butte Country Club (BCC) diversion structure and irrigation improvement component - Currently the BCC is permitted to dam Blacktail Creek for irrigation. This project would separate their irrigation from the creek allowing the creek to flow free, reconstruct the creek and floodplain, and construct a diversion and fish screen (minimize fish entrainment) for the newly separated irrigation source. Located on BCC property.

Butte-Silver Bow County (BSB) fish passage/sewer line component - This component consists of constructing two rock weirs and step pools to provide upstream and downstream fish passage; stabilization and revegetation of stream banks. Located on Butte-Silver Bow property just upstream of BCC property line.

Both these project parts have a primary goal of improving: fish passage, fish entrainment, and riparian and aquatic habitat. The projects also improve water quality through reconstruction of the floodplain to produce a geomorphically stable creek. In addition to water quality improvements, the project will increase shading to the stream which will help keep stream temperatures cool and reduce evaporation.

These two project components were combined for permitting efficiency. All permits have been received and two of three necessary access agreements have been executed. Construction is anticipated Fall and Winter 2025-2026. Construction is anticipated to start on the fall of 2025 with completion in early spring 2026.

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

BCC diversion structure and irrigation improvement component - Degradation was caused by both historic channel manipulation and the current irrigation infrastructure. Moving irrigation off the active creek will improve stream form and function through the site. The fish screen will eliminate entrainment of native trout into the BCC irrigation system.
BSB fish passage/sewer line component - Head cutting caused by geomorphic instability. This project will use step pools to bring the stream bed to an elevation that makes the sewer line passable and control grade into the future.

E. Length of stream or size of lake that will be treated (project extent): In total ~700 feet

Length/size of impact, if larger than project extent (e.g., stream miles opened): unclear

F. Project Budget Summary:

Grant Request (Dollars):	**$**	60,695.00
Matching Dollars:	**$**	1,036,668.00
Matching In-Kind Services:*	**$**	15,000.00

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

Other Contributions (not used as match)	**$**	150,000.00
Total Project Cost:	**$**	1,127,363.00

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:

Support letters from project partners including the Watershed Restoration Coalition, Clark Fork Coalition, and Montana Trout Unlimited are attached. Support letters from the landowners, Butte County Club and Butte-Silver Bow are attached. FWP has provided a statement.

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.*

NRDP has access agreements with the Butte Country Club for the irrigation portion and Butte-Silver Bow County for the sewer line portion of the projects. These access agreements have a maintenance provision which required BCC and BSB to maintenance these improvement for at least 20 years.

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.*

No grazing is not allowed for either components of the project.

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?

FWP has identified the two components of this project as a priority for restoration funds. FWP has historically done performed fish population surveys on within the BCC portion of Blacktail Creek and in downstream reaches of Blacktail Creek and Silver Bow Creek. These surveys will continue after the project is completed. FWP also completed a telemetry study of westslope cutthroat trout and brook trout in the drainage in 2023 and 2024 and found the sewer line to be a barrier for migrating cutthroat. We anticipate the project will address this issue; however monitoring could be performed to confirm passage through the site after the project.

Long term project monitoring will be performed in accordance with the Upper Clark Fork River Basin Aquatic Resources Restoration Plan, Monitoring and Maintenance Plan https://dojmt.gov/wp-content/uploads/DRAFT_UCFRB-Monitoring-and-Maintenance-Plan_02.03.2015.pdf

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

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

Westslope cutthroat trout

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

Blacktail Creek will be allowed to flow through the project area without an on-stream irrigation dam and pond. The stream banks and floodplain will be reconstructed for better function. This will benefit both physical fish habitat and water quality (i.e. temperature). The project will also allow migratory cutthroat from Silver Bow Creek to get to and from about 15 miles of spawning habitat in Blacktail Creek that is currently limited at some flow conditions.

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

Fish will have greater access to spawning habitat in the upper reaches of Blacktail Creek. Entrainment of fish into the BCC irrigation system will also be eliminated. The improved access to spawning habitat and eliminated entrainment should improve fisheries in both Blacktail Creek and Silver Bow Creek.

Silver Bow Creek has become a popular local fishery since remediation was completed and trout returned to the creek about a decade ago. Westslope cutthroat trout from Blacktail Creek are one of the main sources of fish for upper Silver Bow Creek. FWP telemetry work completed in 2023 and 2024 suggested that nearly all westslope cutthroat trout in the upper reaches of Silver Bow Creek are using Blacktail Creek to spawn.

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.

The public will benefit by more fish reaching the upper reaches of Blacktail Creek to spawn and therefore more production of trout for Silver Bow Creek. There are numerous access points throughout Blacktail and Silver Bow Creek for fishing. Much of Silver Bow Creek is on public property where fishing access is good.

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

There will be better flood control for the BCC irrigation area and geomorphic stability for the sewer line.

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

There is no conflict with adjacent landowners. All permits, including FEMAs no net rise analysis have been received.

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

The BCC runs a commercial golf course.

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: Brian Bartkowiak Date: 11/15/2024

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

*permits/agreements in file

Blacktail Creek Restoration

001-2025

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

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**	**FUTURE FISHERIES REQUEST**	**MATCH (Cash or Services)****	**OTHER** (Not part of this application)	**TOTAL**
Personnel***								
Survey	1	LS	$ 15,000	$ 15,000		$ 15,000		$ 15,000
Design/Engineering	1	LS	$ 190,000	$ 190,000		$ 190,000		$ 190,000
Permitting	1	LS	$ 175,000	$ 175,000		$ 175,000		$ 175,000
Oversight	1	LS	$ 80,000	$ 80,000		$ 80,000		$ 80,000
NRDP Project Management	1	LS	$ 30,000	$ 30,000			$ 30,000	$ 30,000
			Sub-Total	**$ 490,000**	**$ -**	**$ 460,000**	**$ 30,000**	**$ 490,000**
Travel								
Mileage	site visits/meetings							
Per diem	0	EA	$ -	$ -			$ -	$ -
			Sub-Total	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Construction Materials****								
36" Diameter Boulders	244	EA	$ 200	$ 24,400		$ 24,400		$ 24,400
Riprap	164	CY	$ 75	$ 10,300		$ 10,300		$ 10,300
Cobbles (8" Diameter)	160	CY	$ 50	$ 8,000	$ 4,000	$ 4,000		$ 8,000
Geotextile Separation Fabric	665	YD2	$ 10	$ 6,650		$ 6,650		$ 6,650
Bedding Gravel	35	CY	$ 50	$ 1,750		$ 1,750		$ 1,750
12" HDPE Pipe	14	LF	$ 140	$ 1,960		$ 1,960		$ 1,960
15" PVC Pipe	22	LF	$ 150	$ 3,300		$ 3,300		$ 3,300
18" HDPE Pipe	137	LF	$ 115	$ 15,755		$ 15,755		$ 15,755
24" RCP Pipe	79	LF	$ 125	$ 9,875		$ 9,875		$ 9,875
Golf Course Sod	1,500	FT2	$ 8	$ 12,000		$ 12,000		$ 12,000
Upland Soil Seeding/Planting	2	AC	$ 5,000	$ 9,500		$ 9,500		$ 9,500
Riparian Soil Seeding/Planting	1	AC	$ 5,000	$ 1,350		$ 1,350		$ 1,350
Agridrain	1	LS	$ 10,000	$ 5,000	$ 5,000	$ -		$ 5,000
Coanda Screen, Type A0.25	1	LS	$ 17,500	$ 17,500		$ 17,500		$ 17,500
Cistern and Stilling Vaults	1	LS	$ 10,000	$ 10,000		$ 10,000		$ 10,000
Sediment Vault, Pipe Connections, & Sluice Gate	1	LS	$ 11,500	$ 11,500		$ 11,500		$ 11,500
Granular Fill Material	69	CY	$ 30	$ 2,070		$ 2,070		$ 2,070
Erosion Control Blanket	2,753	YD2	$ 6	$ 8,518	$ 8,000	$ 518		$ 8,518
Willow Stakes	325	EA	$ 5	$ 825		$ 825		$ 825
Junction Structure (4' Diameter)	1	EA	$ 5,700	$ 5,700		$ 5,700		$ 5,700
Concrete Sewer Casing Patch	1	LS	$ 1,500	$ 1,500		$ 1,500		$ 1,500
Flared End Section (18" HDPE)	1	EA	$ 1,000	$ 1,000		$ 1,000		$ 1,000
Flared End Section (24" RCP)	2	EA	$ 1,500	$ 3,000		$ 3,000		$ 3,000
			Sub-Total	**$ 171,453**	**$ 17,000**	**$ 154,453.00**	**$ -**	**$ 171,453**

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Equipment, Labor, and Mobilization								
Mobilization	1	LS	$ 75,000	$ 75,000		$ 75,000		$ 75,000
Taxes Bonds, and Insurance	1	LS	$ 10,000	$ 10,000		$ 10,000		$ 10,000
Utilities Coordination	1	CY	$ 5,000	$ 5,000		$ 5,000		$ 5,000
Erosion Control	1	LS	$ 18,000	$ 18,000		$ 18,000		$ 18,000
Clearing and Grubbing	1	LS	$ 8,500	$ 4,250		$ 4,250		$ 4,250
Dewatering	1	LS	$ 50,000	$ 50,000		$ 50,000		$ 50,000
Topsoil Salvage and Place	1,826	CY	$ 15	$ 13,695	$ 13,695	$ -		$ 13,695
Excavation & Grading	8,152	CY	$ 25	$ 173,800	$ 30,000	$ 143,800		$ 173,800
Fill and Grading	121	CY	$ 30	$ 1,815		$ 1,815		$ 1,815
Excess Fill Placement	2,000	CY	$ 5	$ 5,000		$ 5,000		$ 5,000
Excess Fill Disposal	6,100	CY	$ 15	$ 91,500		$ 91,500		$ 91,500
Remove and Replace Cart Path	510	YD2	$ 35	$ 17,850		$ 17,850		$ 17,850
								$ -
			Sub-Total	**$ 465,910**	**$ 43,695**	**$ 422,215**	**$ -**	**$ 465,910**
				TOTALS	**$ 60,695**	**$ 1,036,668**	**$ 30,000**	**$ 1,127,363**

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 may require a justification or minimum of two competitive bids for the cost of undertaking the project. For projects that include a maintenance request, it must not exceed 10% of the total project cost.

****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)
BCC	$ 10,000	$ -	$ 10,000	Y
BSB	$ 5,000	$ -	$ 5,000	Y
NRDP	$ -	$ 1,036,668	$ 1,036,668	Y
	$ -	$ -	$ -	
TOTALS	$ 15,000	$ 1,036,668	$ 1,051,668.00	

OTHER CONTRIBUTIONS

(contributions not associated with the application)

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
NRDP Staff Time (Project Management)	$ 30,000	$ -	$ 30,000	Y
DEQ 319 Grant (Applied November 1, 2024)	$ -	$ 50,000	$ 50,000	N
Butte Area One Settlement (Pending consideration by Council and approval by Trustee)	$ -	$ 100,000	$ 100,000	N
Bonneville Power Administration Grant (for fish screens)	$ -	$ -	$ -	N
USFWS Partners for Fish and Wildlife	$ -	$ -	$ -	N
	$ -	$ -	$ -	
TOTALS	$ 30,000	$ 150,000	$ 180,000	

MAPS/ DESIGNS


Blacktail Creek Restoration Project
Write a description for your map.
Legend
EADERVILLE
EAST BUTTE
World Museum of Mining
Butte
Butte
115
SILVER BOW PARK
Our Lady of the R
Williamsburg
FLORAL PARK
Best Western Plus Butte Plaza Inn
90
BCC Portion
2
Sewer Line Portion
90
SKONES
Google Earth
Image © 2024 Airbus
N
2 mi


Blacktail Creek Restoration Project
Write a description for your map.
Legend
90
BCC Portion
Earhart Bui
Club Restaurant
Continental Dr
Sewer Line Portion
Google Earth
Image © 2024 Airbus
N
2000 ft

BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT

NATURAL RESOURCE DAMAGE PROGRAM
JUNE 2024
RESPEC PROJECT NO. 03910.0002

SITE MAP
BUTTE COUNTRY CLUB
N.T.S.

VICINITY MAP
BUTTE-SILVERBOW COUNTY, MONTANA
N.T.S.

Sheet Index	
Sheet #	Title
G-01	COVER SHEET
G-02	GENERAL NOTES AND QUANTITIES
C-01	EXISTING CONDITIONS
C-02	PROPOSED PLAN
C-03	PROPOSED PROFILE & SECTIONS
R-01	REVEGETATION PLAN
R-02	REVEGETATION NOTES
D-01	ROCK WEIR DETAILS
D-02	STEP POOL BANK DETAILS
D-03	WILLOW STAKE PLANTING DETAIL

MATTHEW WYNN JOHNSON
REGISTERED PROFESSIONAL ENGINEER
STATE OF MONTANA NO. PEL-PE-LIC-32820

DATE

DESIGNED BRUMSEN
DRAWN MRH
CHECKED MWJ
DATE 03-2023

REVISION

RESPEC
RESPEC
3650 VALLEY COMMONS DR
SUITE 4
BOZEMAN, MT 59718
PHONE (406) 284-2525

STAMP
MONTANA
MATTHEW WYNN JOHNSON
No. 32820PE
LICENSED PROFESSIONAL ENGINEER

811
Know what's below. Call before you dig.

NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT

COVER SHEET

SHEET NUMBER:
G-01
SHEET

GENERAL NOTES:

1. ALL SCALES LISTED ARE ASSOCIATED WITH AN 11"x17" PRINTED PLAN SET SUCH THAT 1 INCH ON PAPER IS EQUAL TO X FEET ON THE GROUND (SCALE FORMAT: 1"=X').
2. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND DETERMINE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK. **CALL 811** (OR ONE CALL UTILITY LOCATE: 1-800-424-5555) A MINIMUM OF 72-HOURS BEFORE WORK IS PLANNED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND PROPERLY REPAIRING ANY AND ALL DAMAGED UTILITIES. THE LOCATE MUST BE CURRENT PRIOR TO PERFORMING EXCAVATION OR OTHER GROUND-PENETRATING ACTIVITIES.
3. ANY UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ALL UTILITY LOCATIONS ARE SUBJECT TO THE ACCURACY OF THE LOCATION METHOD AND SUBJECT TO RELOCATION FROM THE TIME THAT THESE DRAWINGS WERE PREPARED.
4. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB, ON-SITE AT ALL TIMES.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL, ALL SITE VISITORS, AND THE GENERAL PUBLIC WHO MAY BE AFFECTED BY THE CONSTRUCTION INCLUDING SITE SAFETY AND CONTROL.
6. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS FOUND BETWEEN THE CONSTRUCTION PLANS AND CONDITIONS ENCOUNTERED IN THE FIELD.
7. CONTRACTOR SHALL, UNLESS OTHERWISE DIRECTED, REPLACE ALL SIGNS, FENCES, CABLES, APPROACH DELINEATORS, OR OTHER FEATURES THAT MAY BE REMOVED TO ACCESS THE CONSTRUCTION AREA. CONTRACTOR SHALL VERIFY THE NATURE AND EXTENT OF ANY OF THESE FEATURES PRIOR TO BIDDING THE WORK. COST OF THIS WORK SHALL BE INCIDENTAL TO THE PROJECT UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS.
8. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AND RESTRICTIONS FOUND IN REGULATORY PERMITS OBTAINED BY THE ENGINEER OR OWNER.
9. LEGAL LOAD LIMIT REQUIREMENTS SHALL BE ADHERED TO ON ALL STATE HIGHWAYS, COUNTY ROADS, AND CITY STREETS.
10. THE CONTRACTOR IS TO PROVIDE THEIR OWN WATER FOR COMPACTION AND DUST ABATEMENT.
11. CONSTRUCTION SHALL COMPLY WITH THESE PLANS IN ADDITION TO THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT USED ONSITE WILL BE CLEAN AND WASHED PRIOR TO ARRIVAL TO THE PROJECT AREAS. ALL IMPORTED MATERIAL MUST BE CERTIFIED AS WEED FREE.
13. EMERGENCY SPILL KITS WILL BE MAINTAINED ON EACH PIECE OF EQUIPMENT, OR IN AN AREAS THAT CAN RAPIDLY BE REACHED.
14. ALL WORK IN OR ADJACENT TO THE STREAM WILL BE DONE DURING APPROVED TIME WINDOWS, AS SPECIFIED IN THE SPECIAL PROVISIONS.
15. STRUCTURAL BMPS, SUCH AS SILT FENCE, STRAW BALES OR WATTLES SHALL BE USED TO ISOLATE CONSTRUCTION ALONG THE ACTIVE CHANNEL AS NECESSARY.
16. ALL EXPOSED SOILS WILL BE STABILIZED ONCE CONSTRUCTION IS COMPLETED. SOILS WILL BE STABILIZED USING VARIOUS TECHNIQUES AS DESCRIBED IN THIS PLAN INCLUDING EROSION CONTROL FABRIC, SEEDING, SOD TRANSPLANT AND PLANTING. ALL IMPORTED MATERIAL MUST BE CERTIFIED AS WEED FREE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAVING AND PROTECTING ALL EXISTING TREES AND VEGETATION WHERE REMOVAL FOR CONSTRUCTION IS NOT MANDATORY.
18. CONTRACTOR TO COORDINATE DAILY CONSTRUCTION ACTIVITIES WITH THE PROPERTY OWNER'S REPRESENTATIVE (BUTTE COUNTRY CLUB AND BUTTE-SILVER COUNTY) AND THE ENGINEER.
19. MINIMIZE TRAFFICKING AND DISTURBANCE TO FAIRWAYS AND ALL OTHER GOLF COURSE RELATED INFRASTRUCTURE. CONTRACTOR IS RESPONSIBLE FOR REPAIRING/REPLACING ALL DAMAGED INFRASTRUCTURE.
20. ALL ESTIMATES OF QUANTITIES SHALL BE VERIFIED BY THE CONTRACTOR/SUBCONTRACTOR, WHO SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES AND PROVIDING THE WORK AND MATERIALS AS SHOWN ON THE PLANS.

Sewer Crossing Improvement Project Quantities

Item	Unit	Quantity
Topsoil Salvage and Place	CY	50
Excavation and Grading	CY	115
Fill and Grading	CY	0
Concrete Sewer Casing Patch	CY	0.25
Boulders (36")	EA	110
Class I Riprap	CY	40
Bedding Gravel	CY	15
Coir Erosion Control Blanket	SY	150
Geotextile Separation Fabric	SY	460
Riparian Soil Prep/Seeding/Planting	AC	0.04
Willow Stakes	EA	240

DESIGNED BENJAMIN
DRAWN MHH
CHECKED MMJ
DATE 03-2023

REVISION

RESPEC

STAMP

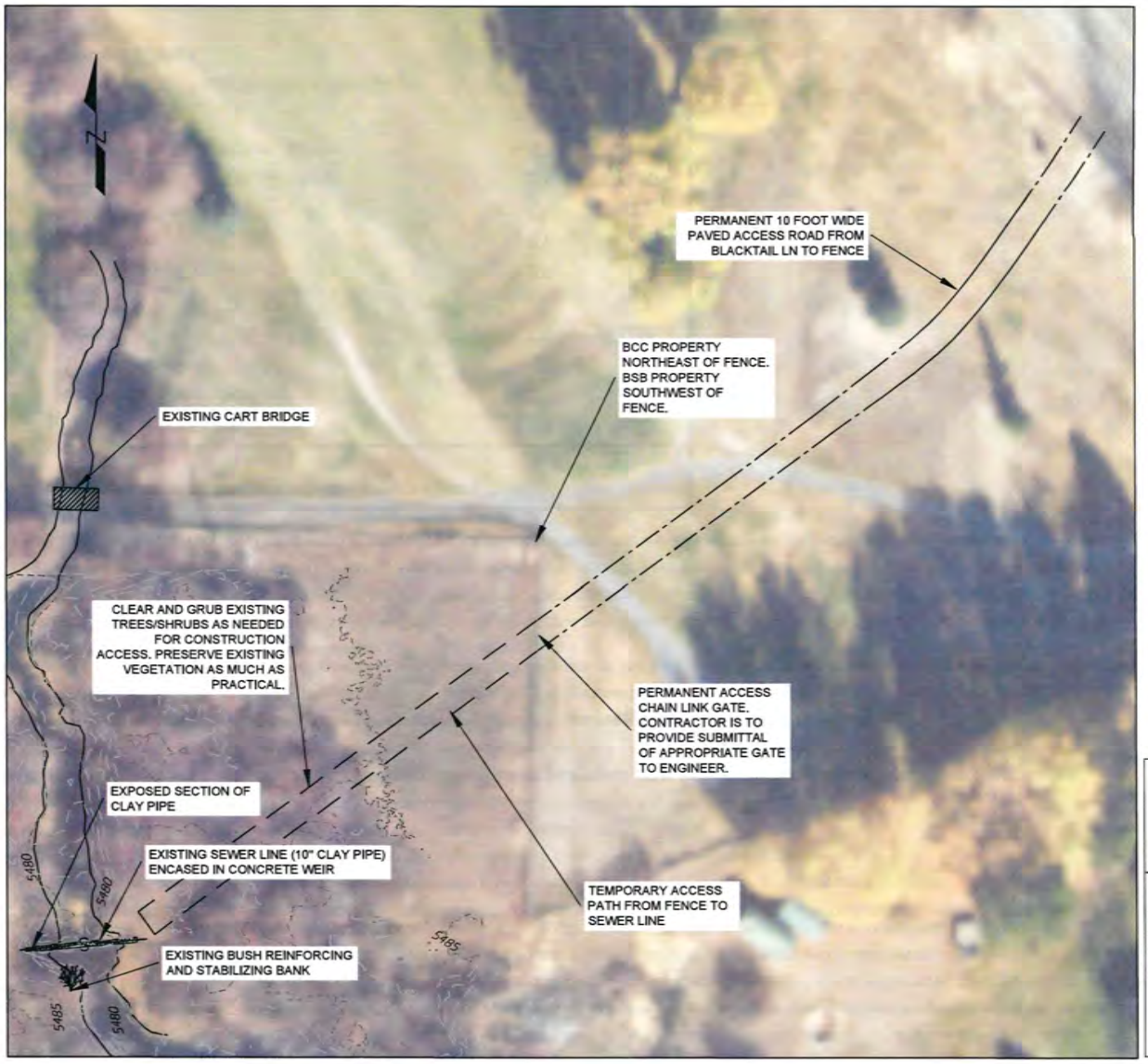
811 Know what's Below. Call before you dig.

NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT

GENERAL NOTES AND QUANTITIES

SHEET NUMBER:
G-02
SHEET



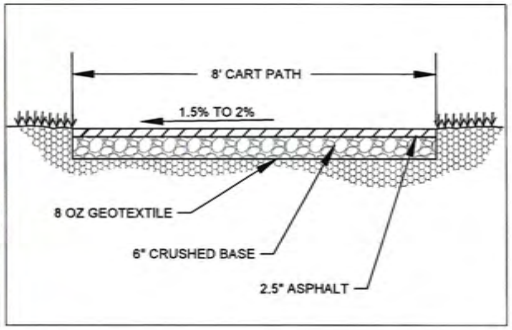
SEWER CROSSING EXISTING CONDITIONS AND ACCESS - PLAN VIEW
SCALE: 1"= 40'

LEGEND (EXISTING)

- 5465 — MAJOR CONTOUR WITH LABEL (5FT)
- MINOR CONTOUR (1FT)
- SEWER LINE
- PATH EDGE
- TEMPORARY ACCESS ROUTE BORDER
- PERMANENT ACCESS ROUTE BORDER
- EDGE WATER (POND AND CREEK)
- GOLF CART BRIDGE
- CONCRETE WEIR
- EXPOSED CLAY PIPE

NOTES:

1. CONTRACTOR TO COORDINATE STAGING AREA AND SITE ACCESS FROM GOLF COURSE OR ADJACENT PROPERTIES.
2. STAGING AND STORING MATERIAL/EQUIPMENT ON BCC PROPERTY (SHOWN ON THIS SHEET) IS PROHIBITED.
3. AREA DISTURBED FOR THE TEMPORARY ACCESS ROAD IS TO BE REVEGETATED WITH SEEDS PER R-02.
4. ANY IRRIGATION COMPONENT DAMAGED BY CONTRACTOR SHALL BE REPLACED BY CONTRACTOR. THIS WORK IS INCIDENTAL. NO ADDITIONAL PAYMENT SHALL BE MADE TO THE CONTRACTOR.
5. CART PATH DAMAGED BY CONTRACTOR SHALL BE REPLACED BY CONTRACTOR. SEE DETAIL BELOW. THIS WORK IS INCIDENTAL. NO ADDITIONAL PAYMENT SHALL BE MADE TO THE CONTRACTOR.



CART PATH DETAIL
N.T.S.

DESIGNED MN/JSBH
DRAWN MHH
CHECKED MWJ
DATE 02-2023

REVISION

RESPEC
3810 VALLEY COMMONS DR
SUITE 4
BOZEMAN, MT 59718
PHONE (406) 284-2929

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MONTANA
MATTHEW WYNN JOHNSON
No. 23520PE
LICENSED PROFESSIONAL ENGINEER

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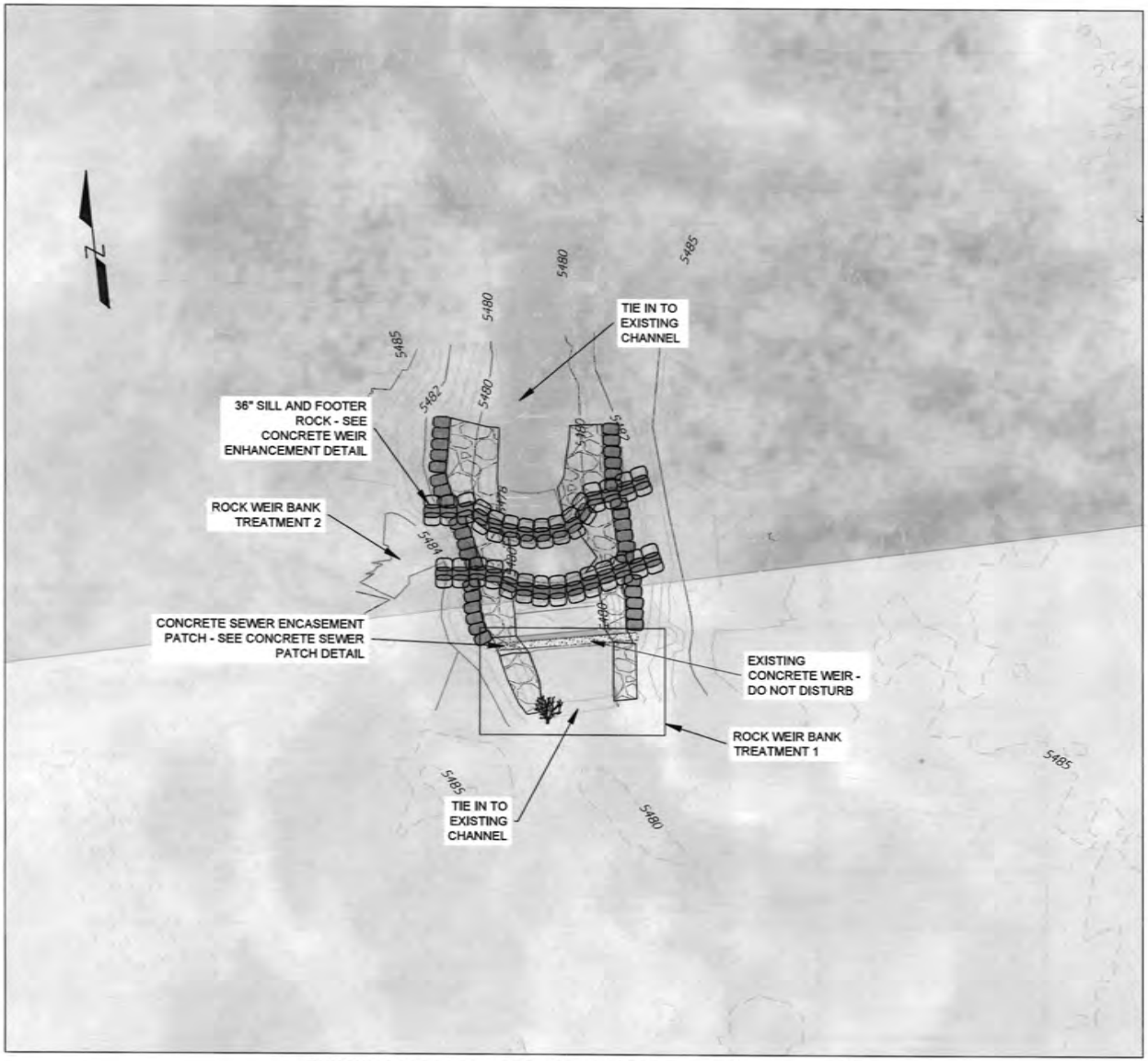
NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT

EXISTING CONDITIONS AND ACCESS

SHEET NUMBER:
C-01
SHEET



SEWER CROSSING PROPOSED IMPROVEMENTS - OVERVIEW
SCALE: 1" = 20'

LEGEND

- 5466 EXISTING MAJOR CONTOUR (5FT)
- EXISTING MINOR CONTOUR (1FT)
- 5466 PROPOSED MAJOR CONTOUR (5FT)
- PROPOSED MINOR CONTOUR (1FT)
- PROPOSED ROCK WEIR
- EXISTING SEWER LINE
- EXISTING PATH EDGE
- EXISTING CONCRETE WEIR
- CLASS I RIPRAP TREATMENT

DESIGNED MWJ/MHH
DRAWN MHH
CHECKED MWJ
DATE 03-2023

REVISION

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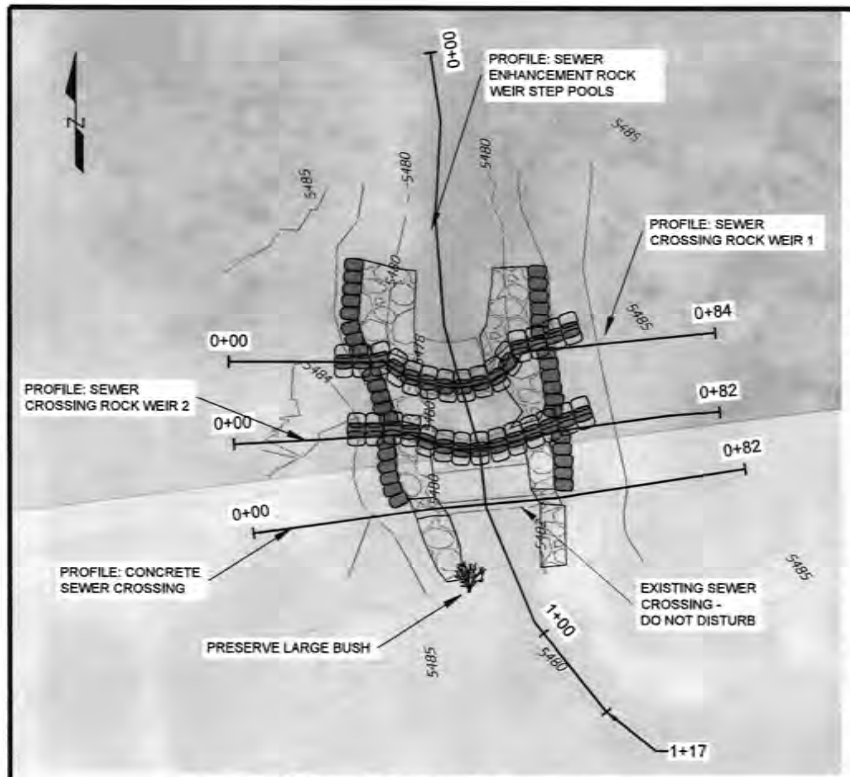
BUTTE, MT 59620

BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT

PROPOSED PLAN

SHEET NUMBER:
C-02
SHEET



SEWER CROSSING GRADING PLAN - PLAN VIEW
SCALE: 1" = 20'

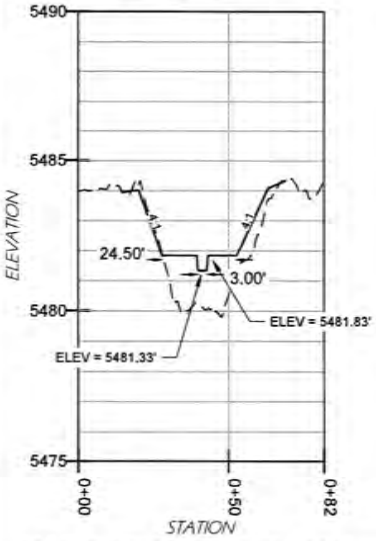
LEGEND (PROFILE/SECTION)

- PROPOSED GRADE
- EXISTING GRADE

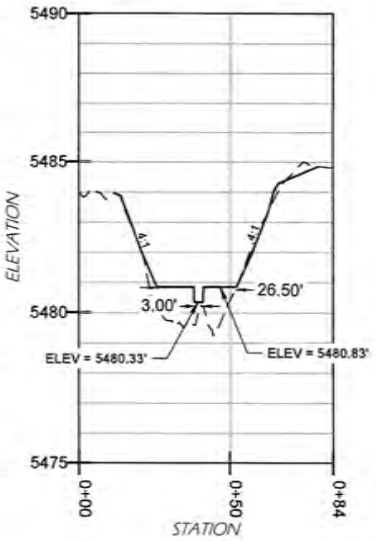
LEGEND

- 5486 — PROPOSED MAJOR CONTOUR, WITH LABEL (2FT)
- PROPOSED MINOR CONTOUR (0.5FT)
- 5486 EXISTING MAJOR CONTOUR (5FT)
- EXISTING MINOR CONTOUR (1FT)
- GRADING LIMITS
- STEP POOL ROCK WEIR
- CLASS I REVEGETATED RIPRAP

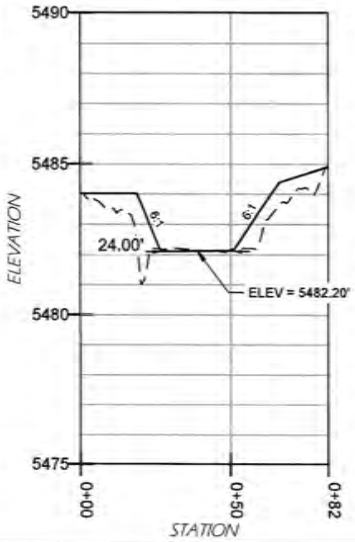
PROFILE: SEWER CROSSING ROCK WEIR 2
HORIZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 4'



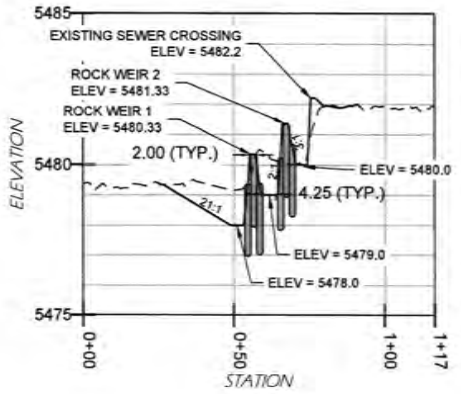
PROFILE: SEWER CROSSING ROCK WEIR 1
HORIZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 4'



PROFILE: CONCRETE SEWER CROSSING
HORIZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 4'



PROFILE: SEWER ENHANCEMENT ROCK WEIR STEP POOLS
HORIZ. SCALE: 1" = 40'
VERT. SCALE: 1" = 4'



DRAFT DESIGNS - NOT FOR CONSTRUCTION

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DESIGNED MWJ/MWH
DRAWN MWH
CHECKED MWJ
DATE 02-2023

REVISION

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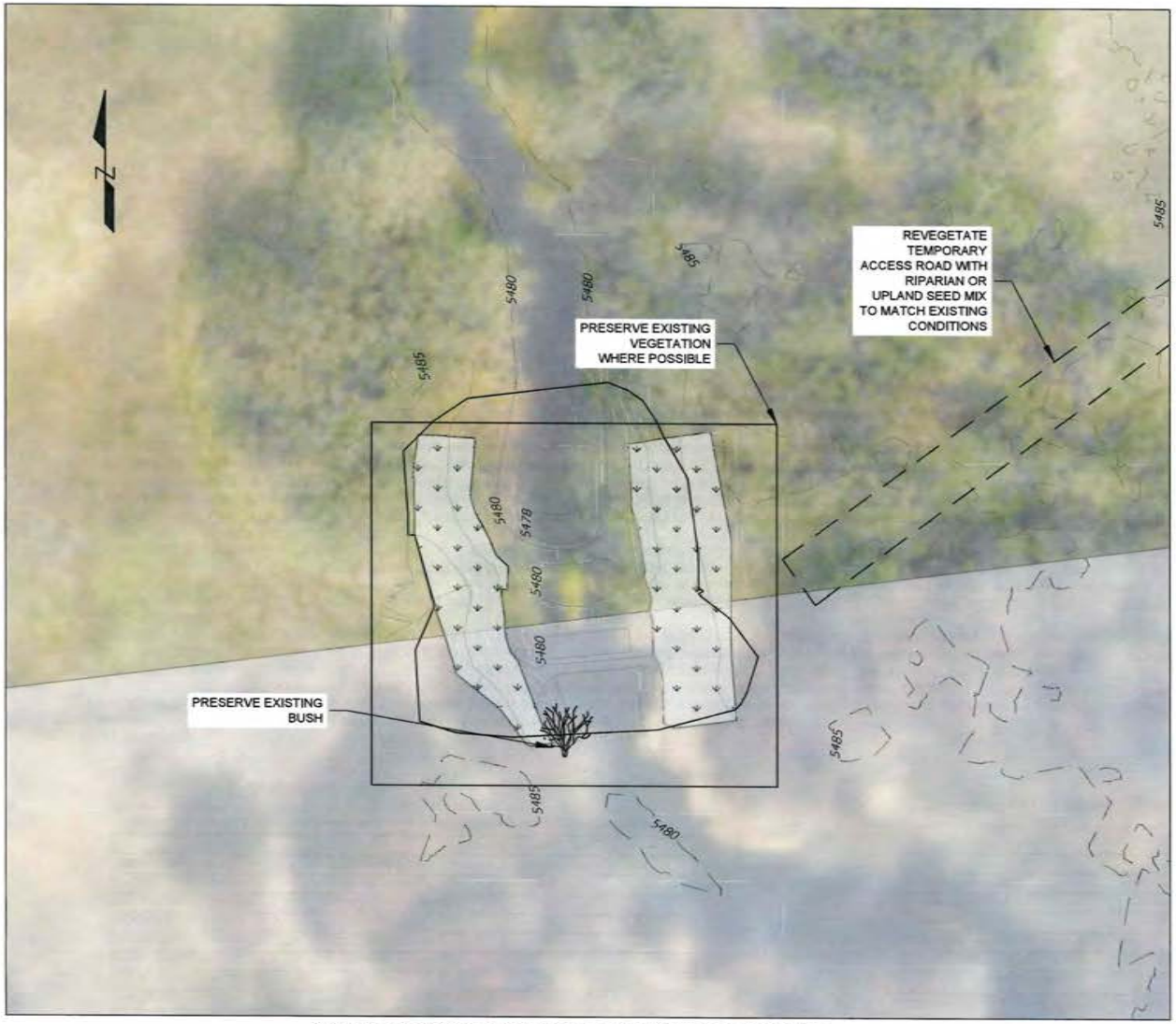
NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK BSB
SEWER CROSSING
IMPROVEMENTS PROJECT

PROPOSED PROFILE & SECTIONS

SHEET NUMBER:
C-03
SHEET



SEWER CROSSING REVEGETATION PLAN - PLAN VIEW
SCALE: 1" = 20'

LEGEND (PROPOSED)

- RIPARIAN SEEDING AND PLANTING
- UPLAND SEEDING
- 5466 PROPOSED MAJOR CONTOUR, WITH LABEL (2FT)
- PROPOSED MINOR CONTOUR (0.5FT)
- 5466 EXISTING MAJOR CONTOUR, WITH LABEL (5FT)
- EXISTING MINOR CONTOUR (1FT)
- TEMPORARY ACCESS ROAD

DESIGNED MWJ/TJW
DRAWN TJW
CHECKED MWJ
DATE 3/30/23

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NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK RESTORATION AT BUTTE COUNTRY CLUB IRRIGATION POND PROJECT

REVEGETATION PLAN

SHEET NUMBER:
R-01
SHEET

REVEGETATION NOTES AND SEED MIXES

Riparian Revegetation Mix

Scientific Name [1]	Common name [1]	% of Mix	Lbs. PLS/Acre [2]
Beckmannia syzigachne (OBL)	American sloughgrass	14	1.5
Calamagrostis canadensis (FACW)	Bluejoint	10	1
Elymus trachycaulus (FAC)	Slender wheatgrass	38	4
Deschampsia cespitosa (FACW)	Tufted hairgrass	5	0.5
Juncus torreyi (FACW)	Torrey's rush	5	0.5
Glyceria grandis (FACW)	American mannagrass	19%	2
Juncus balticus (FACW)	Baltic rush	5%	0.5
Poa palustris (FAC)	Fowl bluegrass	5%	0.5
	TOTAL	100%	10.5

[1] If species are unavailable or cost prohibitive at the time of seed purchase, RESPEC's project manager must approve substitutions.

[2] This revegetation mix is to be broadcast seeded by hand at a rate of 10.5 pounds of pure live seed (PLS) per acre.

Upland Revegetation Mix

(For use on drier areas between the stream and the golf course - lower to medium height species grasses)

Scientific Name [1]	Common name [1]	% of Mix	Lbs. PLS/Acre [2]
Lolium perenne (FACU)	Electra 37 perennial ryegrass	25%	43.4
Lolium perenne (FACU)	Tier 4 perennial ryegrass	25%	43.4
Poa pratensis (FACU)	Midnight Kentucky Bluegrass	17%	29.4
Poa pratensis (FACU)	Rockstar Kentucky Bluegrass	16%	28.7
Poa pratensis (FACU)	Shamrock Kentucky Bluegrass	16%	27.9
	TOTAL	100%	174

[1] Many of these species are native turf grasses used in golf courses, parks, schools and sod farms. If species are unavailable or cost prohibitive at the time of seed purchase, RESPEC's project manager must approve substitutions.

[2] This revegetation mix is to be broadcast seeded by hand at a rate of 174 pounds of pure live seed (PLS) per acre.

REVEGETATION NOTES

1. SUITABLE SURFACE SOIL FILL MATERIAL WILL BE APPROVED BY AND PLACED UNDER THE DIRECTION OF THE ONSITE ENGINEER.
   a. FILL MATERIAL WILL BE PLACED IN A MANNER THAT DOES NOT CAUSE SEGREGATION; THIS SOIL WILL BE FREE OF ANY TRASH, LARGE ROCKS, SOIL CLODS, STUMPS, BRUSH AND NOXIOUS WEEDS. SOILS USED FOR VEGETATIVE COVER SOIL WILL BE HAND TEXTURED TO DETERMINE SOIL TEXTURE. MINOR QUANTITIES OF ORGANIC MATERIALS, ROOTS, ARE ACCEPTABLE IF EVENLY DISTURBED, AS APPROVED BY THE ONSITE PROJECT MANAGER.
   b. FROZEN FILL MATERIAL WILL NOT BE UTILIZED FOR FILL SOIL, NOR WILL FILL MATERIAL BE PLACED ON ICE TO ACCOMMODATE THE INSTALLATION OF THE FILL SOILS.
   c. IN THE TOP 12 INCHES OF FILL, THE ROCK CONTENT (I.E. PARTICLES >2.0 MM) MUST CONSTITUTE < 10% (BY VOLUME) OF THE FILL SOIL AND THE MAXIMUM ALLOWABLE ROCK SIZE IS 1 INCH IN DIAMETER. FILL BELOW 12 INCHES SHALL HAVE A ROCK CONTENT < 20% (BY VOLUME) AND THE MAXIMUM ALLOWABLE ROCK SIZE IS 3 INCHES IN DIAMETER. SOIL WILL BE A FRIABLE MATERIAL AND THE <2.0 MM FRACTION CHARACTERIZED AS LOAM, CLAY LOAM, SILTY CLAY LOAM, SILT LOAM OR A FINE SANDY LOAM OR SANDY CLAY LOAM.
2. BEFORE GRADING ACTIVITIES IN EXISTING FLOODPLAIN AREAS SOD SHALL BE SALVAGED FOR PLACEMENT IN PROPOSED FLOODPLAIN REVEGETATION AREAS. SEE BELOW FOR NOTES REGARDING SOD MAT SALVAGE AND PLACEMENT.
   a. SOD MATS MAY BE TRANSPLANTED SUCCESSFULLY AT ANY TIME PROVIDED SUFFICIENT MOISTURE IS AVAILABLE IN THE RECIPIENT PROJECT AREA TO ALLOW FOR CONTINUED GROWTH, ROOT ESTABLISHMENT AND DEVELOPMENT.
   b. SOD MATS SHALL BE CUT 6" TO 8" THICK USING EXCAVATOR BUCKET WITH SHARP EDGE AND CONTAIN A SUBSTANTIAL AMOUNT OF ROOT MASS. BEST RESULTS ARE ACHIEVED WHEN THE SOILS ARE MOIST BUT WELL DRAINED AT THE TIME OF HARVESTING, AND NEVER WHEN THE GROUND IS FROZEN. THE HARVESTED SOD WILL BE TRANSPORTED TO SPECIFIED REVEGETATION AREAS AND STAGED IN QUANTITIES SPECIFIED IN THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE DESIGNER.
   c. WITHIN SOD BORROW AREAS, NO MORE THAN 50% OF AN EXISTING WETLAND WILL BE HARVESTED IN A 'CHECKERBOARD' FASHION SO THAT ANY RUNOFF OR SURFACE WATER FROM THE HARVESTED AREA WILL FIRST HAVE TO PASS THROUGH VEGETATED AREAS BEFORE ENTERING THE STREAM AND TO INCREASE THE RATE AT WHICH THE HARVESTED AREAS VEGETATE. PREFERRED BORROW AREAS WILL BE WETLANDS WITH A DOMINANCE OF SEDGE SPECIES.
   d. UNDER NORMAL CONDITIONS, SOD MATS MAY BE STORED FOR TWO TO THREE DAYS BY UNLOADING THEM AT THE PROJECT SITE AND STACKING OR PLACING THEM ON THE GROUND (AVOID DUMPING SOD MATS IN A PILE). SOD MATS MAY BE STORED FOR LONGER PERIODS PROVIDED THEY ARE KEPT WET. LONG-TERM STORAGE SHOULD BE CONDUCTED ON IMPENETRABLE SURFACES TO LIMIT ROOT ATTACHMENT.
   e. BEFORE THE SOD IS PLACED, THE CONTRACTOR WILL PERFORM ANY NECESSARY BACKFILLING, STRIPPING OR GRADING AT THE LOCATION WHERE SOD IS TO BE PLACED. AFTER THE SOD HAS BEEN PLACED, SOIL MAY BE USED TO BLEND THE EDGES OF THE SOD INTO THE ADJACENT GRADING.
   f. TO ENSURE VEGETATION HEALTH IN THE BORROW AREAS THE AREAS WHERE SOD WAS SALVAGED FROM SHALL BE SEEDED WITH THE FLOODPLAIN SEED MIX SPECIFIED BY THE ENGINEER.

DESIGNED MM/TAW
DRAWN TAW
CHECKED MMJ
DATE 3/29/23

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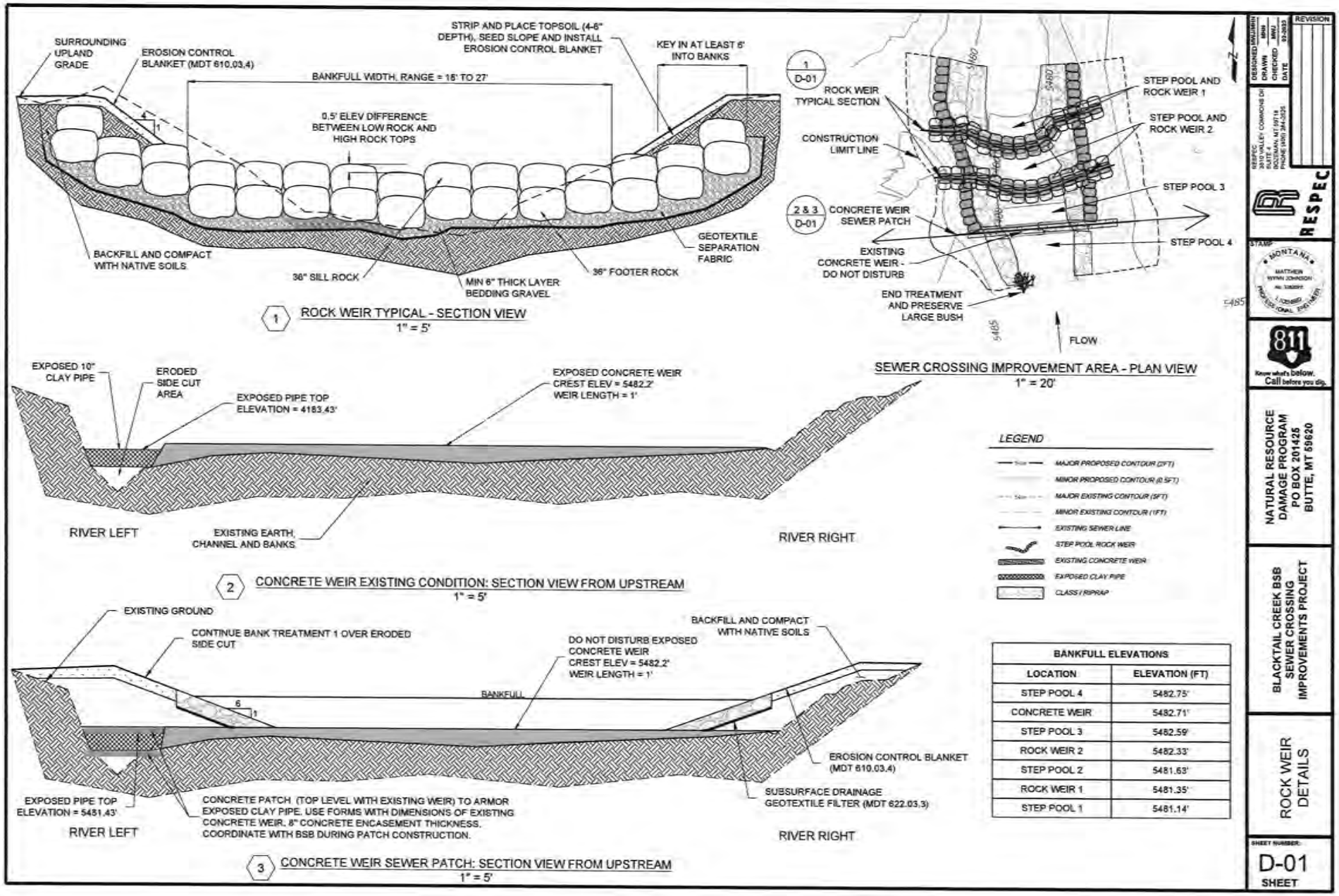
NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK RESTORATION AT BUTTE COUNTRY CLUB IRRIGATION POND PROJECT

REVEGETATION NOTES

SHEET NUMBER:
R-02
SHEET


SURROUNDING UPLAND GRADE
EROSION CONTROL BLANKET (MDT 610.03.4)
STRIP AND PLACE TOPSOIL (4-6" DEPTH), SEED SLOPE AND INSTALL EROSION CONTROL BLANKET
KEY IN AT LEAST 6' INTO BANKS
BANKFULL WIDTH, RANGE = 16' TO 27'
0.5' ELEV DIFFERENCE BETWEEN LOW ROCK AND HIGH ROCK TOPS
BACKFILL AND COMPACT WITH NATIVE SOILS
36" SILL ROCK
MIN 6" THICK LAYER BEDDING GRAVEL
36" FOOTER ROCK
GEOTEXTILE SEPARATION FABRIC
1 ROCK WEIR TYPICAL - SECTION VIEW
1" = 5'
1 D-01 ROCK WEIR TYPICAL SECTION
CONSTRUCTION LIMIT LINE
2 & 3 D-01 CONCRETE WEIR SEWER PATCH
EXISTING CONCRETE WEIR - DO NOT DISTURB
END TREATMENT AND PRESERVE LARGE BUSH
STEP POOL AND ROCK WEIR 1
STEP POOL AND ROCK WEIR 2
STEP POOL 3
STEP POOL 4
FLOW
SEWER CROSSING IMPROVEMENT AREA - PLAN VIEW
1" = 20'
EXPOSED 10" CLAY PIPE
ERODED SIDE CUT AREA
EXPOSED PIPE TOP ELEVATION = 4183.43'
EXPOSED CONCRETE WEIR CREST ELEV = 5482.2' WEIR LENGTH = 1'
RIVER LEFT
EXISTING EARTH CHANNEL AND BANKS
RIVER RIGHT
2 CONCRETE WEIR EXISTING CONDITION: SECTION VIEW FROM UPSTREAM
1" = 5'
EXISTING GROUND
CONTINUE BANK TREATMENT 1 OVER ERODED SIDE CUT
DO NOT DISTURB EXPOSED CONCRETE WEIR CREST ELEV = 5482.2' WEIR LENGTH = 1'
BACKFILL AND COMPACT WITH NATIVE SOILS
BANKFULL
6
1
EROSION CONTROL BLANKET (MDT 610.03.4)
SUBSURFACE DRAINAGE GEOTEXTILE FILTER (MDT 622.03.3)
EXPOSED PIPE TOP ELEVATION = 5481.43'
CONCRETE PATCH (TOP LEVEL WITH EXISTING WEIR) TO ARMOR EXPOSED CLAY PIPE. USE FORMS WITH DIMENSIONS OF EXISTING CONCRETE WEIR. 8" CONCRETE ENCASEMENT THICKNESS. COORDINATE WITH BSB DURING PATCH CONSTRUCTION.
RIVER LEFT
RIVER RIGHT
3 CONCRETE WEIR SEWER PATCH: SECTION VIEW FROM UPSTREAM
1" = 5'
LEGEND
MAJOR PROPOSED CONTOUR (2FT)
MINOR PROPOSED CONTOUR (0.5FT)
MAJOR EXISTING CONTOUR (5FT)
MINOR EXISTING CONTOUR (1FT)
EXISTING SEWER LINE
STEP POOL ROCK WEIR
EXISTING CONCRETE WEIR
EXPOSED CLAY PIPE
CLASS I RIPRAP
BANKFULL ELEVATIONS
LOCATION | ELEVATION (FT)
STEP POOL 4 | 5482.75'
CONCRETE WEIR | 5482.71'
STEP POOL 3 | 5482.59'
ROCK WEIR 2 | 5482.33'
STEP POOL 2 | 5481.63'
ROCK WEIR 1 | 5481.35'
STEP POOL 1 | 5481.14'
DESIGNED
DRAWN
CHECKED
DATE
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RESPEC
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MONTANA
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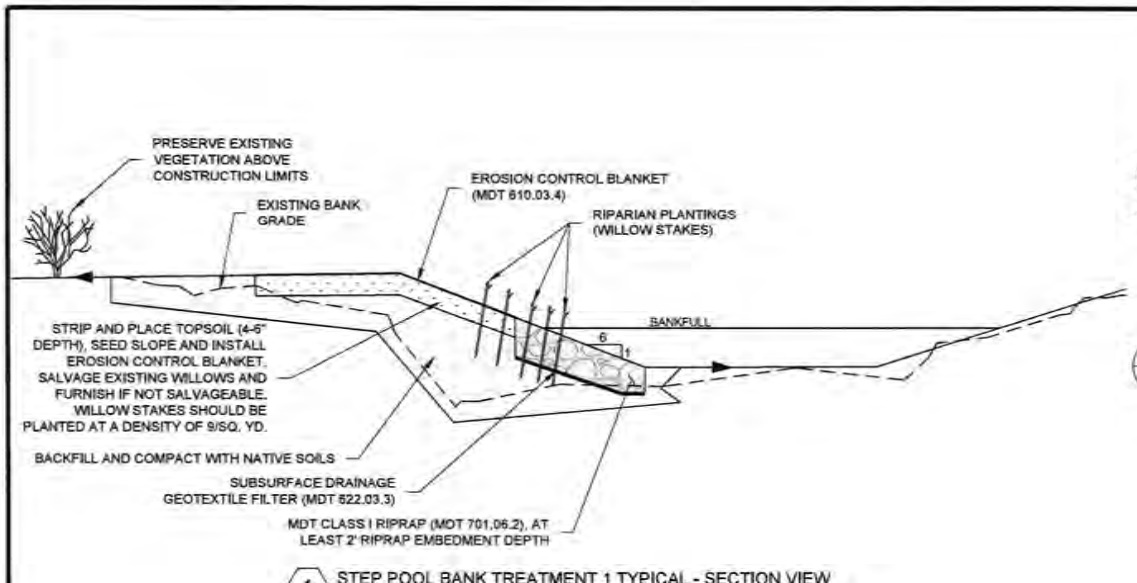
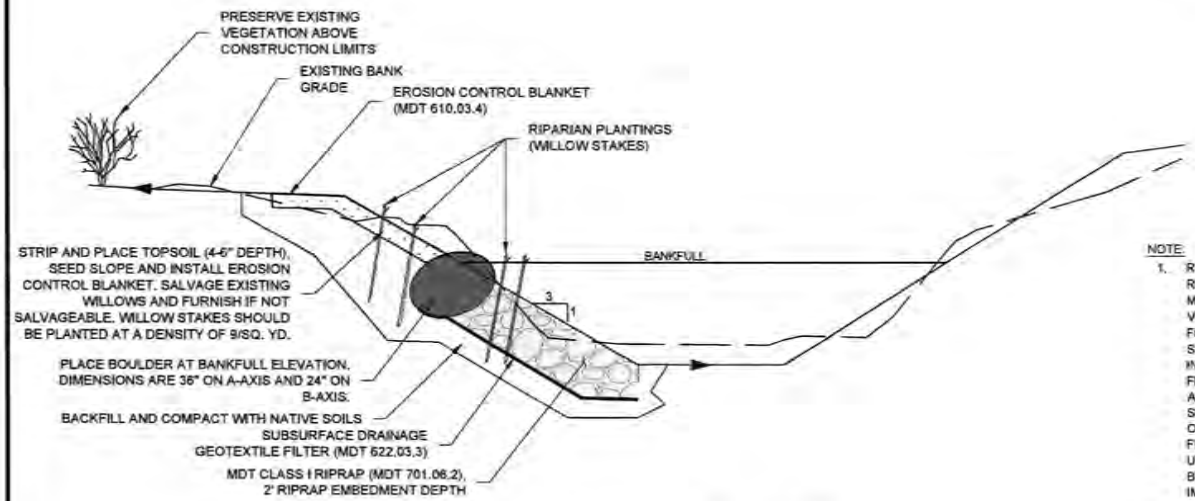
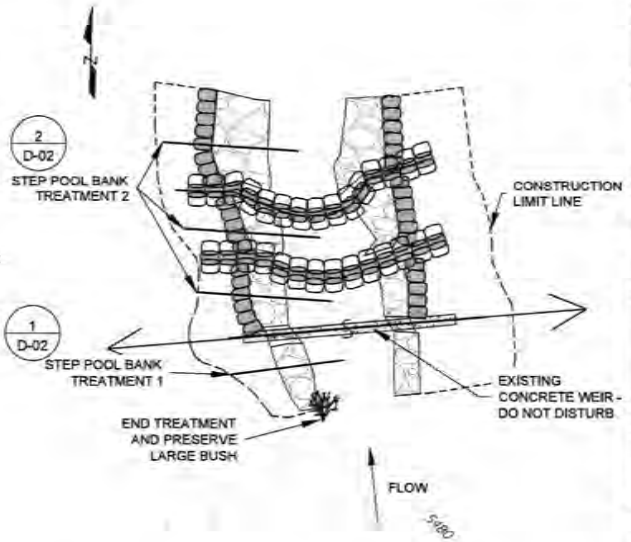
NATURAL RESOURCE DAMAGE PROGRAM PO BOX 201425 BUTTE, MT 59620
BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT
ROCK WEIR DETAILS
SHEET NUMBER:
D-01
SHEET



1 STEP POOL BANK TREATMENT 1 TYPICAL - SECTION VIEW
1" = 5'



2 STEP POOL BANK TREATMENT 2 TYPICAL - SECTION VIEW
1" = 5'



SEWER CROSSING IMPROVEMENT AREA - PLAN VIEW
1" = 20'

LEGEND

- MAJOR PROPOSED CONTOUR (2FT)
- MINOR PROPOSED CONTOUR (0.5FT)
- MAJOR EXISTING CONTOUR (5FT)
- MINOR EXISTING CONTOUR (1FT)
- EXISTING SEWER LINE
- STEP POOL ROCK WEIR
- EXISTING CONCRETE WEIR
- CLASS I RIPRAP

NOTE:

1. RIPRAP REVEGETATION: THIS WORK IS THE CONSTRUCTION REQUIREMENTS FOR REVEGETATION MATERIAL ON RIPRAP SURFACES ABOVE ORDINARY HIGH WATER MARK ELEVATION. CONSTRUCTION REQUIREMENTS ARE TO FILL THE SPACES AND VOIDS BETWEEN THE ROCKS WITH GRANULAR FILTER MATERIAL AND TOPSOIL FOLLOWING PLACEMENT OF RIPRAP, OR AT INTERVALS APPROPRIATE FOR THE SIZE AND CONFIGURATION OF THE INSTALLATION. ACCEPTABLE TOPSOIL INCLUDES LOCALLY OBTAINED TOPSOIL WITH LESS THAN 30% COARSE FRAGMENTS (>0.2 INCH) BY WEIGHT. CONTRACTOR TO PLACE A SUFFICIENT AMOUNT OF GRANULAR FILTER MATERIAL OVER THE RIPRAP, SO THAT AFTER SETTLING, THE LEVEL OF GRANULAR FILTER MATERIAL COMES TO THE VERY TOP OF THE ROCK. PLACE THE TOPSOIL TO A 4 TO 6-INCH DEPTH OVER THE GRANULAR FILTER MATERIAL. PLACE MATERIAL IN A MANNER THAT CREATES A SMOOTH, UNIFORM SURFACE FOR SEEDING AND PLACEMENT OF THE EROSION CONTROL BLANKET/MULCH. CONTRACTOR TO HAND BROADCAST SEED THE SOIL IMMEDIATELY AFTER PLACEMENT, REGARDLESS OF TIME OF YEAR, WITH THE SEED MIXTURE AND RATES SPECIFIED BY THE ENGINEER. SCARIFY THE SOIL IMMEDIATELY PRIOR TO AND FOLLOWING SEEDING TO INCORPORATE SEED TO A DEPTH OF ½ INCH INTO THE SOIL.

DESIGNED
DRAWN
CHECKED
DATE

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MATTHEW WYNN JOHNSON
PROFESSIONAL ENGINEER

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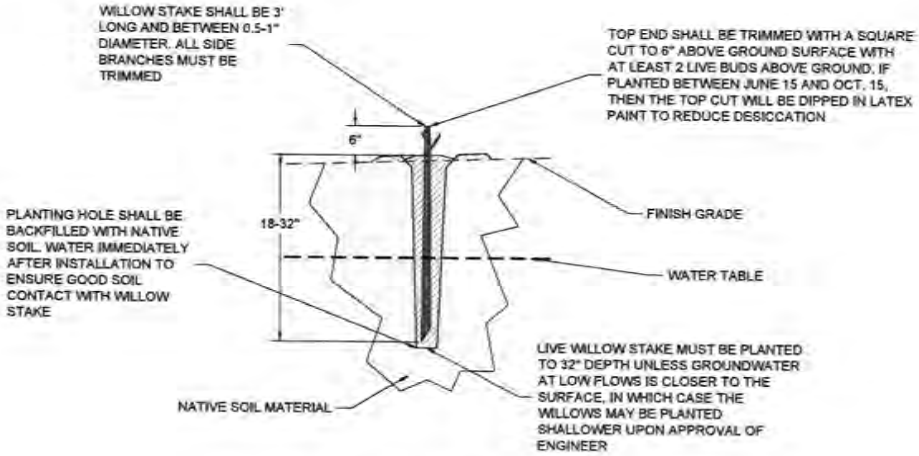
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT

STEP POOL BANK DETAILS

SHEET NUMBER:
D-02
SHEET



1 WILLOW STAKE PLANTING DETAIL
1" = 2.5'

WILLOW STAKE NOTES

1. HARVESTING WILLOW STAKES
   a. CUTTINGS TO BE UTILIZED FOR LIVE PLANTING WILL BE HARVESTED FROM STANDS LOCATED NEAR THE PROJECT SITE THAT ARE HEALTHY STANDS INSPECTED FOR DAMAGE FROM INSECTS OR DISEASE. ONLY CERTAIN SPECIES CAN GENERATE FROM CUTTINGS: SANDBAR WILLOW, BEBB WILLOW, BOOTH WILLOW, DRUMMOND WILLOW AND GEYER WILLOW. NO MORE THAN 1/3 OF ANY INDIVIDUAL PLANT SHALL BE REMOVED. CUTTINGS WILL BE INSPECTED BY THE ENGINEER.
   b. THE CUTTINGS MUST GENERALLY BE ½ TO 1 INCH IN DIAMETER AND LENGTH WILL VARY DEPENDING ON THE DIFFERENT SPECIFIED TREATMENT BUT TYPICALLY 4 TO 6 FEET FOR WILLOW STAKES. PRUNING SHEARS, PRUNING SHEARS, A SMALL WOOD SAW, OR A BRUSH CUTTER CAN BE USED TO HARVEST CUTTINGS.
   c. IMMEDIATELY FOLLOWING HARVESTING, ALL WILLOW CUTTINGS WILL BE BUNDLED IN GROUPS OF 10 OR 20 FOR EASE OF COUNTING AND DISTRIBUTION. ALL CUTTINGS HARVESTED IN THE SPRING WILL BE SOAKED FOR 7 TO 14 DAYS PRIOR TO INSTALLATION. CUTTINGS WILL BE HARVESTED DURING PLANT DORMANCY BEFORE THE SPRING BUD BREAK (TYPICALLY APRIL TO MID-MAY) OR THE FALL (OCTOBER). SOAKING CAN BE ACCOMPLISHED IN A DITCH, STREAM, POND OR OTHER BODY OF FLOWING WATER THAT IS DEEP ENOUGH TO COMPLETELY COVER THE CUTTINGS. IF DORMANT WILLOW CUTTINGS ARE INSTALLED IN THE FALL, THE WILLOW CUTTINGS DO NOT REQUIRE SOAKING PRIOR TO PLANTING ALTHOUGH IT DOES NOT HARM THE STEM IF SOAKED.
2. WILLOW POLE INSTALLATION
   a. WILLOW POLES SHALL BE PLANTED WITH BUDS POINTING UPWARDS (I.E. SAME VERTICAL ORIENTATION AS THE POLE HAD DURING GROWTH). CUTTINGS WILL BE INSERTED DEEP ENOUGH TO REACH THE LOW OR MID-SUMMER WATER TABLE AS FOLLOWS:
   i. AT LEAST 6 INCHES OF THE CUTTING ARE IN THE LOW WATER TABLE.
   ii. 3 TO 4 BUDS ARE ABOVE THE GROUND SURFACE ELEVATION.
   iii. 1 TO 4 CUTTINGS CAN BE PLACED SMALL CLUSTERS IN EACH HOLE.
   b. CUTTINGS CAN BE INSTALLED USING A 5- TO 6-FOOT-LONG EXCAVATOR-MOUNTED DIBBLE BAR, SOIL AUGERS, A WATERJET STINGER, PLANTING BARS, OR BY PUSHING THE CUTTINGS INTO MOIST SOIL BY HAND. THE RECOMMENDED INSTALLATION METHOD IS THE EXCAVATOR MOUNTED DIBBLE BAR DUE TO THE DIFFERENT BANK DEPTHS AND INSERTION THROUGH EROSION CONTROL FABRIC.
   c. IT IS ESSENTIAL TO HAVE GOOD CONTACT BETWEEN CUTTINGS AND SOIL FOR ROOTS TO SPROUT. AIR POCKETS AROUND THE CUTTINGS WILL KILL THE ROOTS. MUD OR "WATER-IN" THE CUTTINGS AFTER THEY ARE PLACED IN THE HOLE. ADDITIONAL SOIL OR SAND MAY BE SEEDED TO ENSURE GOOD SOIL TO STEM CONTACT. PREFERENCE SHOULD BE GIVEN TO NATIVE SOIL NEARBY TO ENCOURAGE MYCORRHIZAL FORMATION AND/OR NODULE FORMATION BY NITROGEN-FIXING ORGANISMS.
   d. FOLLOWING INSTALLATION, VERTICALLY INSTALLED WILLOW WILL LIKELY REQUIRE TRIMMING, I.E. THE TOPS CUT OFF SO THAT ONLY 1/3 OF THE WILLOW CUTTINGS IS ABOVE GROUND. THIS WILL VARY BASED ON THE CUTTING LOCATION AND BANK TREATMENT. THIS CAN EASILY BE DONE BY USING LONG-HANDLED LOPPERS.
   e. CLEAN-UP WOULD REQUIRE EITHER TOSSING THE CUT STEMS INTO THE WATER OR IN BUCKETS OR BAGS FOR REMOVAL OR PLACEMENT AS WOODY DEBRIS WITHIN THE FLOODPLAIN.

DESIGNED MM
DRAWN MM
CHECKED MM
DATE 8/23/23

REVISION

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NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK BSB SEWER CROSSING IMPROVEMENTS PROJECT

WILLOW STAKE PLANTING DETAIL

SHEET NUMBER:
D-03
SHEET

BLACKTAIL CREEK RESTORATION AT BUTTE COUNTRY CLUB IRRIGATION POND PROJECT

NATURAL RESOURCE DAMAGE PROGRAM
JUNE 2024
RESPEC PROJECT NO. 03910.0002

SITE MAP
BUTTE COUNTRY CLUB
N.T.S.

VICINITY MAP
BUTTE-SILVERBOW COUNTY, MONTANA
N.T.S.

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MATTHEW WYNN JOHNSON
REGISTERED PROFESSIONAL ENGINEER
STATE OF MONTANA NO. PEL-PE-LIC-32820

DATE

DESIGNED MWJ/TJW
DRAWN TJW
CHECKED MWJ
DATE 3/29/23

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811 Know what's below. Call before you dig.

NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK RESTORATION AT BUTTE COUNTRY CLUB IRRIGATION POND PROJECT

COVER SHEET

SHEET NUMBER:
G-01
SHEET

GENERAL NOTES:

1. ALL SCALES LISTED ARE ASSOCIATED WITH AN 11"x17" PRINTED PLAN SET SUCH THAT 1 INCH ON PAPER IS EQUAL TO X FEET ON THE GROUND (SCALE FORMAT: 1"=X').
2. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND DETERMINE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK. **CALL 811** (OR ONE CALL UTILITY LOCATE: 1-800-424-5555) A MINIMUM OF 72-HOURS BEFORE WORK IS PLANNED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND PROPERLY REPAIRING ANY AND ALL DAMAGED UTILITIES. THE LOCATE MUST BE CURRENT PRIOR TO PERFORMING EXCAVATION OR OTHER GROUND-PENETRATING ACTIVITIES.
3. ANY UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ALL UTILITY LOCATIONS ARE SUBJECT TO THE ACCURACY OF THE LOCATION METHOD AND SUBJECT TO RELOCATION FROM THE TIME THAT THESE DRAWINGS WERE PREPARED.
4. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB, ON-SITE AT ALL TIMES.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL, ALL SITE VISITORS, AND THE GENERAL PUBLIC WHO MAY BE AFFECTED BY THE CONSTRUCTION INCLUDING SITE SAFETY AND CONTROL.
6. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS FOUND BETWEEN THE CONSTRUCTION PLANS AND CONDITIONS ENCOUNTERED IN THE FIELD.
7. CONTRACTOR SHALL, UNLESS OTHERWISE DIRECTED, REPLACE ALL SIGNS, FENCES, CABLES, APPROACH DELINEATORS, OR OTHER FEATURES THAT MAY BE REMOVED TO ACCESS THE CONSTRUCTION AREA. CONTRACTOR SHALL VERIFY THE NATURE AND EXTENT OF ANY OF THESE FEATURES PRIOR TO BIDDING THE WORK. COST OF THIS WORK SHALL BE INCIDENTAL TO THE PROJECT UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS.
8. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AND RESTRICTIONS FOUND IN REGULATORY PERMITS OBTAINED BY THE ENGINEER OR OWNER.
9. LEGAL LOAD LIMIT REQUIREMENTS SHALL BE ADHERED TO ON ALL STATE HIGHWAYS, COUNTY ROADS, AND CITY STREETS.
10. THE CONTRACTOR IS TO PROVIDE THEIR OWN WATER FOR COMPACTION AND DUST ABATEMENT.
11. CONSTRUCTION SHALL COMPLY WITH THESE PLANS IN ADDITION TO THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT USED ONSITE WILL BE CLEAN AND WASHED PRIOR TO ARRIVAL TO THE PROJECT AREAS. ALL IMPORTED MATERIAL MUST BE CERTIFIED AS WEED FREE.
13. EMERGENCY SPILL KITS WILL BE MAINTAINED ON EACH PIECE OF EQUIPMENT, OR IN AN AREAS THAT CAN RAPIDLY BE REACHED.
14. ALL WORK IN OR ADJACENT TO THE STREAM WILL BE DONE DURING APPROVED TIME WINDOWS, AS SPECIFIED IN THE SPECIAL PROVISIONS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAVING AND PROTECTING ALL EXISTING TREES AND VEGETATION WHERE REMOVAL FOR CONSTRUCTION IS NOT MANDATORY.
16. STRUCTURAL BMPS, SUCH AS SILT FENCE, STRAW BALES OR WATTLES SHALL BE USED TO ISOLATE CONSTRUCTION ALONG THE ACTIVE CHANNEL AS NECESSARY.
17. ALL EXPOSED SOILS WILL BE STABILIZED ONCE CONSTRUCTION IS COMPLETED. SOILS WILL BE STABILIZED USING VARIOUS TECHNIQUES AS DESCRIBED IN THIS PLAN INCLUDING EROSION CONTROL FABRIC, SEEDING, SOD TRANSPLANT AND PLANTING. ALL IMPORTED MATERIAL MUST BE CERTIFIED AS WEED FREE.
18. THERE WILL BE NO DRIVING ON GOLF COURSE GREENS OR TEE BOXES.
19. CONTRACTOR TO COORDINATE DAILY CONSTRUCTION ACTIVITIES WITH THE PROPERTY OWNER'S REPRESENTATIVE (BUTTE COUNTRY CLUB AND BUTTE-SILVERBOW COUNTY) AND THE ENGINEER.
20. MINIMIZE TRAFFICKING AND DISTURBANCE TO FAIRWAYS AND ALL OTHER GOLF COURSE RELATED INFRASTRUCTURE. CONTRACTOR IS RESPONSIBLE FOR REPAIRING/REPLACING ALL DAMAGED INFRASTRUCTURE.
21. ALL ESTIMATES OF QUANTITIES SHALL BE VERIFIED BY THE CONTRACTOR/SUBCONTRACTOR, WHO SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES AND PROVIDING THE WORK AND MATERIALS AS SHOWN ON THE PLANS.
22. STAGING/STORING OF MATERIAL AND EQUIPMENT IS ONLY ALLOWED WITHIN THE LIMITS OF THE STAGING AREA DEFINED ON SHEET C-01.

DESIGNED: MWJ
DRAWN: TJW
CHECKED: MWJ
DATE: 2/26/25

REVISION

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2810 VALLEY COMMONS DR
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MATTHEW WYNN JOHNSON
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LICENSED PROFESSIONAL ENGINEER

811 Know what's below. Call before you dig.

NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK RESTORATION AT BUTTE COUNTRY CLUB IRRIGATION POND PROJECT

GENERAL NOTES

SHEET NUMBER:
G-02
SHEET

Totals: Pond & Diversion Area

Item	Unit	Qnty
Topsoil Salvage and Place	CY	1776
Excavation and Grading	CY	8037
Fill and Grading	CY	121
Boulders (36")	EA	134
Class II Riprap	CY	124
River Cobble (8")	CY	160
Granular Filter Material	CY	69
Geotextile Separation Fabric	SY	205
Bedding Gravel	CY	20
Erosion Control Blanket	SY	2603
Remove and Replace Cart Path	SY	6
Pipe-HDPE 12"	LF	14
Pipe-HDPE 18"	LF	137
Pipe-RCP 24"	LF	79
Pipe-PVC 15"	LF	22
Upland Soil Prep/Seeding/Planting	AC	0.37
Riparian Soil Prep/Seeding/Planting	AC	0.50
Willow Stakes	EA	85
Coanda Screen, Type A0.25	EA	1
Cistern and Stilling Vault	EA	1
Waterman C10F Flow Controller (Sluice Gate)	EA	1
Sediment Vault	EA	1
Tylox Dual Seal II Pipe-to-Manhole Connector	EA	2
Junction Structure (4' Diameter)	EA	1
Flared End Section (18" HDPE)	EA	1
Flared End Section (24" RCP)	EA	2
Agridrain System	EA	1
Anti-Seep Collar	EA	2

Site: Step Pool Structure and Screened Irrigation Diversion

Item	Unit	Qnty
Topsoil Salvage and Place	CY	75
Excavation and Grading	CY	68
Fill and Grading	CY	5
Coanda Screen, Type A0.25	EA	1
Cistern and Stilling Vault	EA	1
Waterman C10F Flow Controller (Sluice Gate)	EA	1
Sediment Vault	EA	1
Tylox Dual Seal II Pipe-to-Manhole Connector	EA	2
Junction Structure (4' Diameter)	EA	1
Pipe-HDPE 12"	LF	14
Pipe-HDPE 18"	LF	137
Flared End Section (18" HDPE)	EA	1
Boulders (36")	EA	134
Class II Riprap	CY	32
Granular Filter Material	CY	6
Bedding Gravel	CY	14
Geotextile Separation Fabric	SY	62
Erosion Control Blanket	SY	225
Riparian Soil Prep/Seeding/Planting	AC	0.05
Willow Stakes	EA	85
Remove and Replace Cart Path	SY	6

Site: Irrigation Conveyance System

Item	Unit	Qnty
Topsoil Salvage and Place	CY	108
Excavation and Grading	CY	410
River Cobble (8")	CY	29
Granular Filter Material	CY	18
Pipe-RCP 24"	LF	79
Flared End Section	EA	2
Upland Soil Prep/Seeding/Planting	AC	0.07

Site: Creek Overflow Swale

Item	Unit	Qnty
Topsoil Salvage and Place	CY	120
Excavation and Grading	CY	25
Class II Riprap	CY	24
Granular Filter Material	CY	5
Upland Soil Prep/Seeding/Planting	AC	0.09

Site: Floodplain Grading Area 1

Item	Unit	Qnty
Topsoil Salvage and Place	CY	180
Excavation and Grading	CY	150
Fill and Grading	CY	2
Erosion Control Blanket	SY	478
Riparian Soil Prep/Seeding/Planting	AC	0.10

Site: Pond Area and Floodplain Grading Area 2

Item	Unit	Qnty
Topsoil Salvage and Place	CY	1158
Excavation and Grading	CY	7282
Fill and Grading	CY	75
Class II Riprap	CY	35
Granular Filter Material	CY	7
Geotextile Separation Fabric	SY	110
Erosion Control Blanket	SY	1900
Agridrain System	EA	1
Anti-Seep Collar	EA	2
Pipe-PVC 15"	LF	22
Upland Soil Prep/Seeding/Planting	AC	0.16
Riparian Soil Prep/Seeding/Planting	AC	0.32

Site: Pond Overflow and Drainage Inflow Swales

Item	Unit	Qnty
Topsoil Salvage and Place	CY	135
Excavation and Grading	CY	102
Fill and Grading	CY	39
Class II Riprap	CY	33
River Cobble (8")	CY	131
Granular Filter Material	CY	33
Bedding Gravel	CY	6
Geotextile Separation Fabric	SY	33
Upland Soil Prep/Seeding/Planting	AC	0.06
Riparian Soil Prep/Seeding/Planting	AC	0.03

DESIGNED MW/TJH
DRAWN TJH
CHECKED MW
DATE 7/19/23

REVISION

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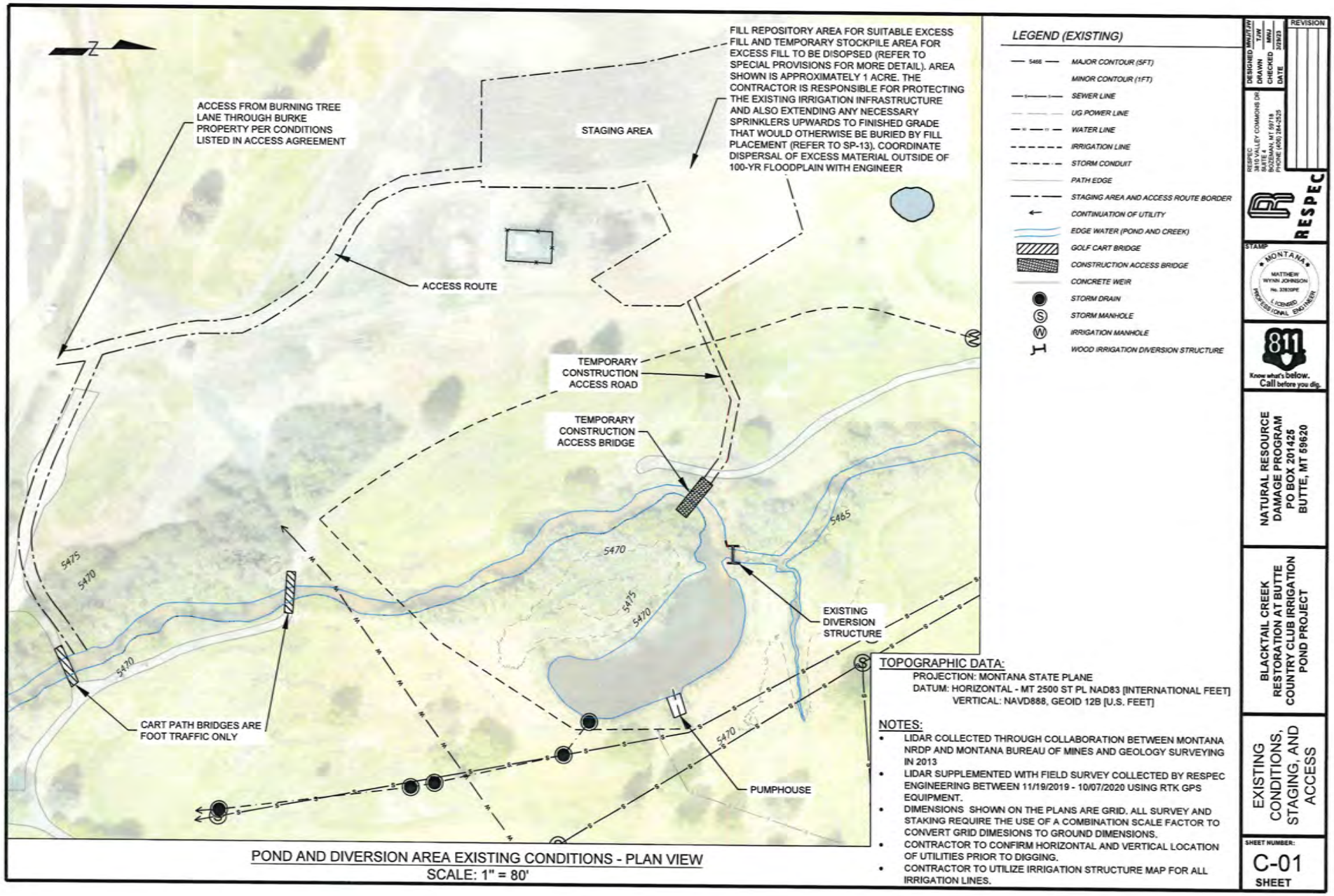
NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK RESTORATION AT BUTTE COUNTRY CLUB IRRIGATION POND PROJECT

QUANTITIES SUMMARY

SHEET NUMBER:
G-03
SHEET



POND AND DIVERSION AREA EXISTING CONDITIONS - PLAN VIEW
SCALE: 1" = 80'

TOPOGRAPHIC DATA:
PROJECTION: MONTANA STATE PLANE
DATUM: HORIZONTAL - MT 2500 ST PL NAD83 [INTERNATIONAL FEET]
VERTICAL: NAVD888, GEOID 12B [U.S. FEET]

NOTES:
- LIDAR COLLECTED THROUGH COLLABORATION BETWEEN MONTANA NRDP AND MONTANA BUREAU OF MINES AND GEOLOGY SURVEYING IN 2013
- LIDAR SUPPLEMENTED WITH FIELD SURVEY COLLECTED BY RESPEC ENGINEERING BETWEEN 11/19/2019 - 10/07/2020 USING RTK GPS EQUIPMENT.
- DIMENSIONS SHOWN ON THE PLANS ARE GRID. ALL SURVEY AND STAKING REQUIRE THE USE OF A COMBINATION SCALE FACTOR TO CONVERT GRID DIMESIONS TO GROUND DIMENSIONS.
- CONTRACTOR TO CONFIRM HORIZONTAL AND VERTICAL LOCATION OF UTILITIES PRIOR TO DIGGING.
- CONTRACTOR TO UTILIZE IRRIGATION STRUCTURE MAP FOR ALL IRRIGATION LINES.

DESIGNED MWJ/TJW
DRAWN TJW
CHECKED MWJ
DATE 2/23/23
REVISION

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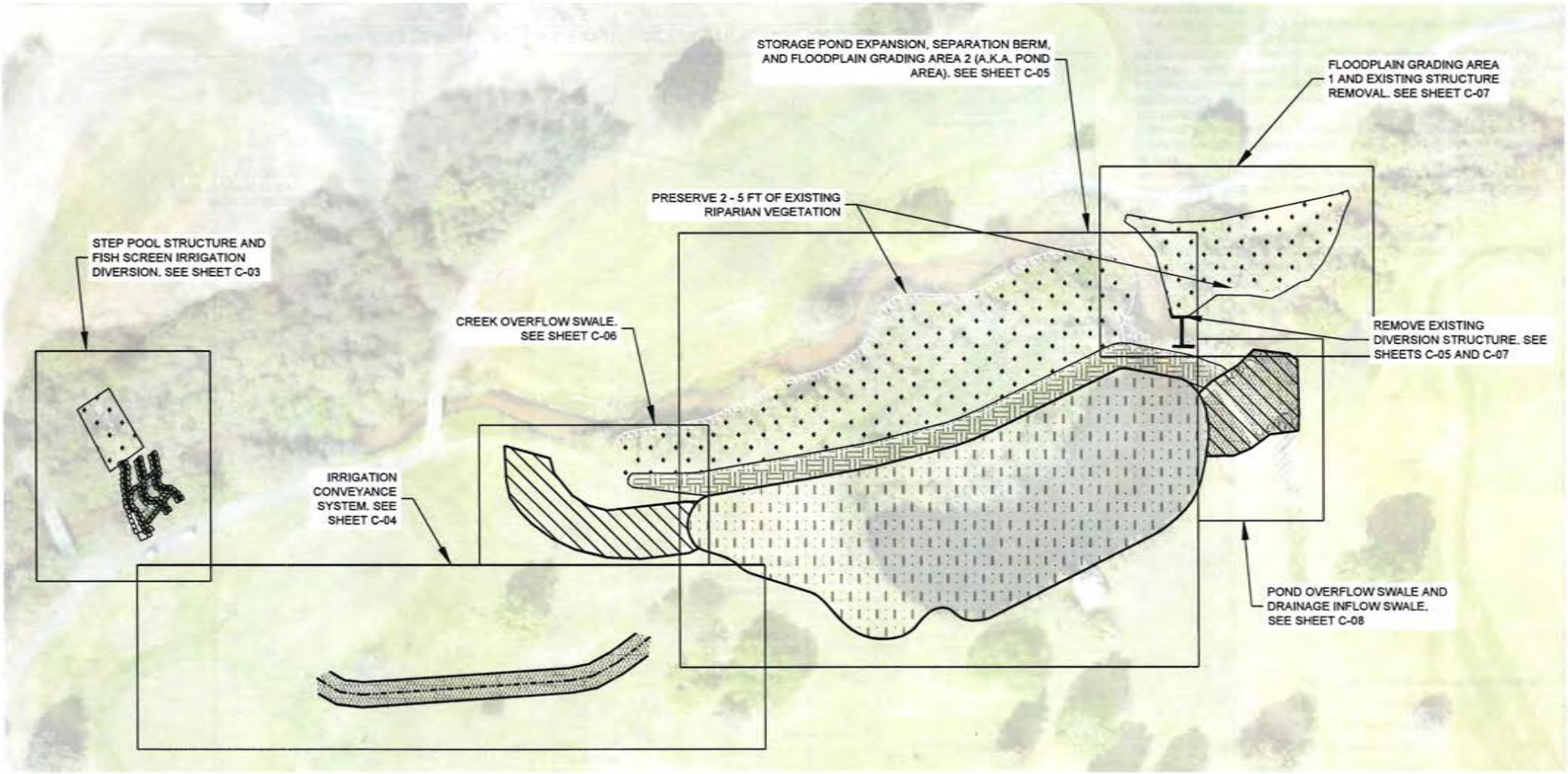
NATURAL RESOURCE DAMAGE PROGRAM
PO BOX 201425
BUTTE, MT 59620

BLACKTAIL CREEK RESTORATION AT BUTTE COUNTRY CLUB IRRIGATION POND PROJECT

EXISTING CONDITIONS, STAGING, AND ACCESS

SHEET NUMBER:
C-01
SHEET


STORAGE POND EXPANSION, SEPARATION BERM, AND FLOODPLAIN GRADING AREA 2 (A.K.A. POND AREA). SEE SHEET C-05
FLOODPLAIN GRADING AREA 1 AND EXISTING STRUCTURE REMOVAL. SEE SHEET C-07
PRESERVE 2 - 5 FT OF EXISTING RIPARIAN VEGETATION
STEP POOL STRUCTURE AND FISH SCREEN IRRIGATION DIVERSION. SEE SHEET C-03
CREEK OVERFLOW SWALE. SEE SHEET C-06
REMOVE EXISTING DIVERSION STRUCTURE. SEE SHEETS C-05 AND C-07
IRRIGATION CONVEYANCE SYSTEM. SEE SHEET C-04
POND OVERFLOW SWALE AND DRAINAGE INFLOW SWALE. SEE SHEET C-08

LETTERS OF SUPPORT

MONTANA FISH, WILDLIFE & PARKS

Future Fisheries Improvement Program

Appendix: FWP Statement

Project Title: Blacktail Creek Restoration Project

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

The Blacktail Creek Restoration Project has been a priority for coordinated restoration efforts between Montana Fish, Wildlife and Parks (FWP) and the Natural Resource Damage Program (NRDP) for over a decade. The project aims to improve upstream and downstream passage for migratory westslope cutthroat trout (WCT) at two locations, reduce entrainment into irrigation infrastructure, and improve stream form and function by removing an irrigation pond that is currently connected to Blacktail Creek.

Blacktail Creek is one of just three tributaries to Silver Bow Creek that maintains a genetically unaltered population of WCT. Recent telemetry work by FWP in the drainage suggests that Blacktail Creek is the primary spawning tributary for a struggling population of WCT in upper Silver Bow Creek. Long-term viability of WCT in Silver Bow Creek will be greatly enhanced by fully connecting populations and habitat in the three major tributaries, including Blacktail Creek, to the main-stem of Silver Bow Creek.

Many of the major fish passage issues in the drainage have been addressed by NRDP restoration funds over the past decade. The two pieces of infrastructure this project aims to address are the last known fish passage issues in the drainage that are yet to be addressed or remain unfunded. Addressing the diversion on the Butte Country Club and the county sewer line crossing will secure passage for migratory WCT migrating from Silver Bow Creek to upper Blacktail Creek to spawn. This project will enhance and protect the WCT fishery in Silver Bow Creek into the future and help ensure it remains robust enough to support the growing interest in this resource from anglers.

With these benefits in mind, I urge you to consider this funding request. The proposed project will help ensure that WCT remain viable in Silver Bow Creek and Blacktail Creek, ultimately adding resiliency to this WCT population. Please feel free to reach out with any questions as you evaluate this project for funding.

Name of FWP Biologist Caleb Uerling Date: 11/15/2024

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

CLARK FORK COALITION

11 November 2024

Montana Fish, Wildlife & Parks
Fisheries Division
Michelle McGree - Future Fisheries Coordinator
1420 E. Sixth Ave.
Helena, MT 59620-0701

RE: Letter of support for *Blacktail Creek Restoration Project*

Dear Future Fisheries Improvement Program Grants Review Panel,

I am writing to express the Clark Fork Coalition's support for NRDP's proposed project, "*Blacktail Creek Restoration Project*."

The Clark Fork Coalition (CFC) is a member-based nonprofit (501c3) river conservation organization founded in 1985 with a mission to protect and restore the 14-million-acre Clark Fork River watershed in western Montana. Our dedicated staff have implemented many restoration projects to reconnect tributaries and improve aquatic habitat in the Upper Clark Fork watershed since we initiated our restoration program in 2009.

Aquatic and riparian resources of Blacktail Creek have been injured by hazardous substances released from mining and mineral-processing operations near Butte and Anaconda. In 1983, the State of Montana (State) filed a lawsuit against the Atlantic Richfield Co. for injuries to the State's natural resources in the Upper Clark Fork River basin. The State settled this lawsuit which established the Upper Clark Fork River Basin (UCFRB) Restoration Fund. The UCFRB Restoration Funds are State of Montana funds administered by the Natural Resource Damage Program (NRDP) and must be used to restore, rehabilitate, replace, and/or acquire the equivalent of the injured natural resources as defined in NRDP's Upper Clark Fork River Basin Aquatic and Terrestrial Resources Restoration Plans.

These Restoration Plans prioritize fish passage, fish entrainment, and water quality, all of which will be addressed with this project. This project will be primarily funded by the UCFRB Restoration Fund; however, we support NRDP and other project partners seeking match for the project. We also support any refinements to the project scope or design that improve the cost-effectiveness or increase the resource benefits to Blacktail Creek.

CFC supports this project, and we look forward to working with NRDP and other project partners on this project and other projects in the Upper Clark Fork River basin.

Regards,

Brian C. Chaffin, Ph.D.
Executive Director

November 5, 2024

Montana Fish, Wildlife & Parks
Fisheries Division
Michelle McGree - Future Fisheries Coordinator
1420 E. Sixth Ave.
Helena, MT 59620-0701

RE: Letter of support for *Blacktail Creek Restoration Project*

Dear Review Panel,

I am writing to express Montana Trout Unlimited's (MTU) support for NRDPs proposed project, "*Blacktail Creek Restoration Project*."

Aquatic and riparian resources of Blacktail Creek have been injured by hazardous substances, released from mining and mineral-processing operations in the Butte and Anaconda areas. In 1983, the State of Montana (State) filed a lawsuit against the Atlantic Richfield Co., for injuries to the State's natural resources in the Upper Clark Fork River Basin (UCFRB). The State settled this lawsuit which established the UCFRB Restoration Fund. The UCFRB Restoration Fund are State funds, administered by the Natural Resource Damage Program (NRDP) and must be used to restore, rehabilitate, replace, or acquire the equivalent of the injured natural resources as defined in our UCFRB Aquatic and Terrestrial Resources Restoration Plans (Restoration Plans).

These Restoration Plans prioritize fish passage, fish entrainment, and water quality all of which will be addressed with this project. This project will be primarily funded by the UCFRB Restoration Fund; however, this fund is limited and in order to address additional priority projects in the UCFRB we are seeking match funding from our project partners. Because of the emphasis on fisheries issues, and that Trout Unlimited has identified this project and project area as a priority for years, MTU fully endorses the use of FFIP funds to complement UCFRB funding to get this important fishery and water quality work done.

Through implementation of this project, fish will have greater access to spawning habitat in the upper reaches of Blacktail Creek. Entrainment of fish into the Butte County Club irrigation system will also be eliminated. The improved access to spawning habitat and eliminated entrainment should improve fisheries in both Blacktail Creek and Silver Bow Creek. Silver Bow Creek has become a popular local fishery since remediation was implemented in the 1990's and trout returned to the creek about a decade ago. Westslope cutthroat trout from Blacktail Creek are one of the main sources of fish for Silver Bow Creek. Montana Fish Wildlife and Parks telemetry work completed in 2023 and 2024 suggested that nearly all westslope cutthroat trout in the upper reaches of Silver Bow Creek are using Blacktail Creek to spawn.

Founded in 1964, Montana Trout Unlimited is the only statewide grassroots organization dedicated solely to conserving, protecting, and restoring Montana's coldwater fisheries and their watersheds. On behalf of MTU's more than 5,000 members and supports in Montana, including local chapters that prize the upper Clark Fork River and its fisheries, we look forward to working with NRDP and other project partners on this project and other

projects in the Upper Clark Fork River Basin.

Sincerely,

David Brooks
Executive Director, Montana Trout Unlimited

P.O. Box 7186 • Missoula, MT 59807 • www.montanatu.org • 406.543.0054

Watershed Restoration Coalition
Preserving the Upper Clark Fork

1109 Main Street
Deer Lodge, MT 59722
406-579-3762
wrcclark3@gmail.com

Montana Fish, Wildlife & Parks
Fisheries Division
Michelle McGree - Future Fisheries Coordinator
1420 E. Sixth Ave.
Helena, MT 59620-0701

November 7, 2024

RE: Letter of support for *Blacktail Creek Restoration Project*

Dear Review Panel,

I am writing to express support for NRDPs proposed project, "*Blacktail Creek Restoration Project.*"

Aquatic and riparian resources of Blacktail Creek have been injured by hazardous substances, released from mining and mineral-processing operations in the Butte and Anaconda areas. In 1983, the State of Montana (State) filed a lawsuit against the Atlantic Richfield Co., for injuries to the State's natural resources in the Upper Clark Fork River Basin (UCFRB). The State settled this lawsuit which established the UCFRB Restoration Fund. The UCFRB Restoration Fund are State funds, administered by the Natural Resource Damage Program (NRDP) and must be used to restore, rehabilitate, replace, or acquire the equivalent of the injured natural resources as defined in our UCFRB Aquatic and Terrestrial Resources Restoration Plans (Restoration Plans).

These Restoration Plans prioritize fish passage, fish entrainment, and water quality all of which will be addressed with this project. This project will be primarily funded by the UCFRB Restoration Fund; however, this fund is limited and in order to address additional priority projects in the UCFRB we are seeking match funding from our project partners.

Through implementation of this project, fish will have greater access to spawning habitat in the upper reaches of Blacktail Creek. Entrainment of fish into the Butte County Club irrigation system will also be eliminated. The improved access to spawning habitat and eliminated entrainment should improve fisheries in both Blacktail Creek and Silver Bow Creek. Silver Bow Creek has become a popular local fishery since remediation was implemented in the 1990's and trout returned to the creek about a decade ago. Westslope cutthroat trout from Blacktail Creek are one of the main sources of fish for Silver Bow Creek. Montana Fish Wildlife and Parks telemetry work completed in 2023 and 2024 suggested that nearly all westslope cutthroat trout in the upper reaches of Silver Bow Creek are using Blacktail Creek to spawn.

The Watershed Restoration Coalition is supportive of this project. The Watershed Restoration Coalition of the Upper Clark Fork Basin is a nonprofit organization serving the irrigators and landowners in the Deer Lodge Valley who rely on the Upper Clark Fork River and its tributaries for agriculture, recreation, and other livelihoods. We look forward to working with NRDP and project partners on this and other projects in the Upper Clark Fork River Basin.

Watershed Restoration Coalition
Conserving the Upper Clark Fork

1109 Main Street
Deer Lodge, MT 59722
406-579-3762
wrcclark3@gmail.com

Ted Dodge

Ted Dodge

Executive Director
Watershed Restoration Coalition

BUTTE COUNTRY CLUB

3400 Elizabeth Warren Road
Butte, Montana 59701
Phone: 406.494.2394 • Fax: 406.494.6116

November 12, 2024

Montana Fish, Wildlife & Parks
Fisheries Division
Michelle McGree - Future Fisheries Coordinator
1420 E. Sixth Ave.
Helena, MT 59620-0701

RE: Letter of support for the *Blacktail Creek Restoration Project*

Dear Review Panel,

On behalf of the Butte Country Club and its Board of Directors, I present this letter to express support for the *Blacktail Creek Restoration Project*, as proposed and submitted by the Montana Natural Resource Damage Program (NRDP).

In 1983, the State of Montana (State) filed a lawsuit against the Atlantic Richfield Co., for injuries to the State's natural resources in the Upper Clark Fork River Basin. The State settled this lawsuit, which established the Upper Clark Fork River Basin Restoration Fund, proceeds from which must be used to restore, rehabilitate, replace, or acquire the equivalent of the injured natural resources.

The aquatic and riparian resources of Blacktail Creek have been significantly injured by hazardous substances, released from mining and mineral-processing operations in the Butte and Anaconda areas. Hence, Blacktail Creek, which runs through the full length of our Butte Country Club property, is one of the highest-ranked, priority tributaries to the Upper Clark Fork River, and where restoration projects can have the greatest impact on improving fisheries and fish habitat. The NRDP's proposed *Project* would address several concerns, including fish passage, fish entrainment, and water quality.

After years of project planning, engineering design and securing necessary permits, including costly floodplain and water right change authorizations, the *Project* bid documents were finally ready in September. However, by 2024, the construction cost estimate now exceeded (primarily due to inflation) the amount of funding NRDP had budgeted from the UCFRB Restoration Fund. Thus, the need to seek matching funds and the NRDP's request for help from the Future Fisheries Fund.

The NRDP has already made significant investments in the *Project*. The Butte Country Club has also invested countless hours to help get through the design and permitting processes, and we remain committed to provide in-kind match for implementation, O&M, and monitoring. Thank you for the opportunity to present our support for this *Project* and Future Fisheries funding. We urge your positive consideration of the NRDP proposal.

Sincerely,

Jeff Briney
General Manager