

ADDENDUM – No. 1

PROJECT	GRIZZLY GULCH PLACER MINE RECLAMATION PROJECT
BID DATE	BY 4:00 PM ON 12/16/2024
BID LOCATION	Office of the Board of County Commissioners, Room 345, City-County Building, 316 N. Park Avenue, Helena, MT 59623
ISSUE DATE	12/6/2024
NOTICE	Failure to acknowledge all addenda in the BID may cause rejection of the BID. See updated Bid Proposal Worksheet.

SCOPE OF THIS ADDENDUM

This addendum was prepared to address questions and comments discussed during the pre-bid meeting held December 3, 2024. Minutes from the meeting and sign-in sheet are attached to this Addendum.

The following becomes a part of the original project manual and drawings, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgment of the Addendum on his/her bid form, incorporating its provision in their bid.

Additional questions will be accepted until Wednesday December 11th, 2024, 5 p.m. local time.

An additional addendum may be posted shortly thereafter if necessary.

PROJECT MANUAL

The following additions, changes and clarifications have been made to the Project Manual.

Section 00520 – Agreement Form, Article 4 – Contract Times, 4.02 Contract Times: Dates

Insert:

- 4.02.B: In the event that extreme winter weather prevents work from being conducted, the contract period may be extended by the equivalent number of working days lost, subject to the approval of the Engineer.
- 4.02.C: In the event “Bid Alternate 6 - Containerized Plantings” is awarded to the contractor, final payment date will be extended to a mutually agreeable date to accommodate planting. Substantial completion date will not be extended.

Section 00910 - Special Provisions

Insert new Section - Section 17 Containerized Planting Agreement after Section 16:

In the event Bid Alternate 6 - Containerized Plantings is awarded to the contractor, plantings will be installed when they become available for purchase.

Insert new Section – Section 18 Alternate Effort-based Compaction Method:

Where 95% standard proctor compaction is specified in the Construction Drawings, the following Effort-based Compaction Method shall be employed when conditions are not conducive to achieving the 95% standard proctor.

Effort-based Compaction Method: Perform 6 passes with a sheepsfoot roller of at least 10 tons. Ensure the loose lift thickness does not exceed 8 inches.

Section 01275 - Measurement and Payment – Part 3 – Execution – 3.1 List of Bid Items – Base Bid

Delete:

Bid Item 6.b.ii Compacting channel subgrade to 95% standard proctor."

Insert:

Bid Item 6.b.ii Compacting channel subgrade to 95% standard proctor or effort-based method as indicated."

Section 01275 - Measurement and Payment – Part 3 – Execution – 3.1 List of Bid Items – Base Bid

Insert:

Bid Item 8.b.viii Restore driveway to its original condition prior to any disturbance."

Section 01275 - Measurement and Payment – Part 3 – Execution – 3.1 List of Bid Items – Base Bid

Insert:

Bid Item 9.b.viii excavation and backfill for CPP installation."

Section 01275 - Measurement and Payment – Part 3 – Execution – 3.1 List of Bid Items – Base Bid

Insert new section header after Bid Item 15:

3.2 List of Bid Items – Bid Alternates

Section 01275 - Measurement and Payment – Part 3 – Execution – 3.2 List of Bid Items – Bid Alternates

Insert:

Bid Alt. Item 16a.b.v Backfill and compact to 95% standard proctor or effort-based method as indicated."

Section 01275 - Measurement and Payment – Part 3 – Execution – 3.2 List of Bid Items – Bid Alternates

Delete:

Bid Alt. Item 23a.b.ii Compact trail to 95% standard proctor."

Insert:

Bid Alt. Item 23a.b.ii Compact trail to 95% standard proctor or effort-based method as indicated."

Division 06 – Miscellaneous Construction

Insert new Section 06100 – Seeding.

This specification has been attached to provide execution techniques for reseeding the project site.

DRAWINGS

The following additions, changes and clarifications have been made to the Drawings.

Drawing Sheet G-2: General Construction

Replace: Sheet G-2 with Sheet G-2R

This sheet has been replaced with the attached Sheet G-2R to clarify unclassified excavation quantity, add an additional excavation quantity associated with the CPP culvert placement, and to remove the "remove existing fence" quantity as this activity will be handled by the Landowner.



Drawing Sheet C-2: General Construction

Replace: Sheet C-2 with Sheet C-2R

This sheet has been replaced with the attached Sheet C-2R to remove the indication that restoration fence installation and existing fence removal is required for the project. Stationing and elevations of culvert inverts were added to provide additional information about placement.

Drawing Sheet C-9: General Construction

Replace: Sheet C-9 with Sheet C-9R

This sheet has been replaced with the attached Sheet C-2R to reflect updated compaction and material placement methods for 3:1 slopes and flat surfaces.

ATTACHMENTS

1. Prebid Conference - Meeting Minutes and Sign-in Sheet
2. Section 06100 – Seeding Specification
3. Drawing Sheet G-2R
4. Drawing Sheet C-2R
5. Drawing Sheet C-9R

LEWIS AND CLARK COUNTY
Grizzly Gulch Mine Reclamation Project – Pre-Bid Conference
December 3rd, 2024, 10:00 AM

MEETING MINUTES ADDED IN BOLD, ITALIC FONT

1. General discussion of the project:

a. Introduction, background.

- i. Project site is an abandoned gold placer mine pit adjacent to Grizzly Gulch Drive, site is approximately 3 acres, large pits full of water, existing willows on site will be replanted.
- ii. Work items consist of but are not limited to site excavation and grading, installing two culverts, constructing a stream channel with drop structures and a pedestrian trail, installing guardrail, revegetating the site by seeding and containerized plantings, and installing an impermeable HDPE floodplain liner.
- iii. No topsoil will be imported, designated zones will dictate material placement on the site. Loose dump top 36” of material, with minimal passes of low ground pressure equipment to achieve grade. Compact to 95% standard proctor in the stream channel, pedestrian trail, and 36” below finished grade where materials have been disturbed.

QUESTION ON WHETHER FILL MATERIAL WILL BE IMPORTED TO PROJECT SITE. PROJECT IS CUT/FILL, NO IMPORTED FILL MATERIAL WILL BE BROUGHT INTO PROJECT SITE.

- b. Funding – DNRC Reclamation and Development Grants Program (RDGP), match funding provided by landowner and the county. Finite budget, eight bid alternates. All awarded work will be awarded to a single bidder. Bid alternates will be included if available funding allows. Davis Bacon Wages.

QUESTION ON WHY THE COUNTY IS THE OWNER IF THE PROJECT IS ON PRIVATE PROPERTY. SPECIFIED THAT DUE TO DNRC FUNDING, THE COUNTY IS UNDER AGREEMENT WITH DNRC TO COMPLETE THE PROJECT WITH LANDOWNER AS A STAKEHOLDER. THE LAST ACTIVE MINING OPERATION WAS COVERED UNDER A SMALL MINERS EXEMPTION BOND, WHICH IS INSUFFICIENT TO RECLAIM THE SITE.

QUESTION ON IF AN ENGINEER’S ESTIMATE HAS BEEN PREPARED. THE DNRC RDG PROGRAM GRANT HAS GRANT FUNDING LIMITS OF \$300,000 WHICH INCLUDES COUNTY ADMIN TIME AND CONSTRUCTION ENGINEERING EFFORTS. ADDITIONAL PROJECT COSTS CAN INCLUDE MATCH FUNDING PROVIDED BY COUNTY AND LANDOWNER AS MONETARY OR ‘IN-KIND’.

c. Culverts

- i. One 18”- 164’ Corrugated Plastic Pipe Upstream to attach under Grizzly Gulch Drive Bury 1’ below finished grade. Use coupler to attach plastic pipe to metal culvert under Grizzly Gulch Drive.
- ii. One 42”- 88’ Steel Arch Pipe Culvert Downstream, excavate neighboring landowner’s driveway to install.

d. Stream Channel

- i. 1’ wide, 1,026’ long. Compact channel and place stream bed material 4” thick
- ii. 1’ diameter coir logs for stream bank, if coir logs are not included in project form stream bank from existing soil.

QUESTION IF COIR LOGS ARE WRAPPED IN THE EROSION BLANKET. COIR LOGS ARE NOT WRAPPED IN EROSION BLANKET.

- iii. 21 total drop structures, locations and type are shown in the plans.
 - e. Guardrail Installation
 - i. Attach new MGS guardrail to existing guard rail.
 - ii. Install low speed end terminals.
2. Schedule/Contract Time
- a. Sealed bids must be received at the Office of the Board of County Commissioners, Room 345, City-County Building, 316 N. Park Avenue, Helena, MT 59623 no later than 4:00 p.m. local time on **Monday, December 16.**

IF MAILING YOUR BID, INCLUDE BID IN SEPARATE SEALED ENVELOPE LABELED PER INVITATION TO BID. THE OUTER ENVELOPE SHOULD BE LABELED WITH "SEPARATE SEALED BID ENCLOSED". COUNTY MAIL RECIPENT IS REQUIRED TO OPEN ALL MAIL SO THIS AVOIDS PREMATURE BID OPENING AND DISQUALIFICATION.

- b. Bids will be opened and read aloud at the public meeting of the County Commissioners on **Tuesday, December 17** at 9:00 a.m. local time in Room 330 of the City-County Building, 316 N. Park Avenue, Helena, MT.
 - c. Bids Tabulated, Successful bidder verified and Notice of Award shortly thereafter.
- A NOTICE OF INTENT TO AWARD WILL BE POSTED WITH THE BID TABULATIONS ON THE COUNTY BIDS WEBSITE.***

d. Construction to start late winter 2025 and conclude in late April 2025.

CONSTRUCTION TIMELINE IS INTENDED TO SUBSTANTIALLY COMPLETE PROJECT BEFORE SPRING RUNOFF AND EXISTING SALVAGEABLE WILLOW VEGETATION COMING OUT OF DORMANCY TO INCREASE REVEGETATION SUCCESS. SOME FLEXIBILITY DUE TO INCLEMENT WEATHER WILL BE ALLOWED.

ADDENDUM 1 WILL BE POSTED ON FRIDAY 12/6/24. RESPEC WILL ACCEPT QUESTIONS UNTIL WEDNESDAY 12/11/24 AT 5:00 PM LOCAL TIME AND WILL PUBLISH IN A SEPARATE DOCUMENT BY 12/12/24. AN ADDITIONAL ADDENDUM MAY BE POSTED SHORTLY THEREAFTER IF NECESSARY.

3. Bid Items - See Measurement and Payment (Section 01275) for description of work items for each lump sum Bid Item (not all listed here).
- a. Survey And Staking
 - i. Responsibility of contractor.
 - b. Unclassified Excavation and Grading
 - i. Includes all excavation, grading, compaction to stabilize slopes and achieve floodplain profile.

QUESTION ON COMPACTION TEST ON FROZEN SOIL MATERIAL. RESPEC WILL CONSIDER AN EFFORT-BASED COMPACTION SPECIFICATION IN ADDENDUM 1.

- ii. Dewatering.
 - iii. Excavation for culverts will be included under a separate bid item.
 - iv. Excavation for the channel will be included under a separate bid item
 - v. Riprap subgrade preparation.
- THREE MATERIAL ZONES ARE DESIGNATED IN THE PLANS. THE PURPOSE OF***

THESE IS TO RESERVE THE HIGHEST QUALITY SOIL FOR PLACEMENT AS TOPSOIL AT THE FINISHED GRADE. ZONE DELINEATION IS SUBJECT TO CHANGE IF SUBSURFACE CONDITIONS ARE SIGNIFICANTLY DIFFERENT THAN THE INTENDED USE OF THAT ZONE MATERIAL. NO SOIL WILL BE IMPORTED ONTO SITE FOR PROJECT COMPLETION.

- c. HDPE Floodplain Liner
 - i. Excavation.
 - ii. Furnish and Install liner 4' below finished grade.
 - iii. Compact anchor trench.
4. Bid Proposal
- a. See "Bid Submittal Package"
 - i. Complete bid form
 - 1. Acknowledgement of addenda
 - 2. Bid proposal
 - 3. Signature page (notarized)
 - ii. Bid Bond - 10%
 - b. The envelope containing the sealed bid will be labeled with the bidder's name, address, and "Grizzly Gulch Placer Mine Reclamation Project".

QUESTION ON WHAT WILL DETERMINE WINNING BIDDER, WHETHER LOWEST BASE BID OR MOST WORK ACCOMPLISHED FOR SET VALUE. WINNING BIDDER WILL BE THE LOWEST BASE BID AND ALTERNATIVE BID ITEMS WILL BE AWARDED BASED ON BUDGET.

5. Standard Specifications for Road and Bridge Construction (hereafter referred to as the Standard Specifications) and Supplemental Specifications adopted by the Montana Department of Transportation (MDT), specifications developed by the Engineer (Bid Specifications and Technical Specifications), and the American Society for Testing Materials (ASTM) specifications.
6. Special Provisions
- a. Detours, Staging, Easements, Private Property
 - i. Conduct construction operations within the construction limits.
 - ii. Minimal room on project site for staging area.

COORDINATION WITH LANDOWNER(S) FOR LOCATION OF STAGING AREA WILL BE CRITICAL. SEVERAL AREAS WITHIN CONSTRUCTION LIMITS ARE AVAILABLE BUT MAY NEED ADJUSTED AS CONSTRUCTION PROGRESSES.

- iii. At all times during construction, ensure property owners have access to their property to the highest degree.

DOWNSTREAM CULVERT CROSSES NEIGHBORING OWNER'S PRIMARY ACCESS. INSTALLATION OF THIS CULVERT MUST BE COORDINATED AND PUNCTUAL TO ALLOW ACCESS.

- b. Utilities Coordination
 - i. Call 811 before digging.
 - ii. No known utility conflicts in the project site.
- c. Permitting
 - i. 404
 - ii. 124, 318


iii. DEQ Stormwater – contractor responsibility.

1. Transfer permit to County at closeout.

QUESTION ON PLAN FOR OR METHOD OF REROUTING STREAM DURING CONSTRUCTION. LEFT UP TO CONTRACTOR MEANS AND METHODS MAY BE EXISTING, THERE ARE NO PERMITTING REQUIREMENTS FOR STREAM DEWATERING.

7. Payment Procedures MPW Standard Form, submit complete application to Engineer

8. Questions, Comments, and Discussion

SECTION 06100 
SEEDING

PART 1: GENERAL

1.1 DESCRIPTION

- A. Incorporate into the contract by reference the technical and supplemental specifications of Section 610 Roadside Revegetation in its entirety, as published by the Montana Department of Transportation (MDT), Standard Specifications for Road and Bridge Construction, 2020 Edition V5.0.
- B. The specification is separated into three categories, hydroseeding, drill seeding, and broadcast seeding.

1.2 REFERENCES

- A. Montana Department of Transportation Standard Specifications for Road and Bridge Construction, 2020 Edition V5.0:

Section 610 Roadside Revegetation

PART 2: PRODUCTS

2.1 GENERAL

- A. Materials are in accordance with the entirety of Section 610.02 and the additional subsections below, additions supersede all MDT Specifications:

2.2 WEST SLOPE UPLAND SEEDING

- 1. For West Slope Upland areas furnish a seed blend of the following species and hydroseed at a rate of 35.0 lbs pure live seed (PLS)/acre in designated areas shown on design plan. Divide hydroseeding rate in half for drill seeding.

SPECIES	LBS OF PLS PER ACRE
Triticale (cover crop)	5.0
Yarrow	0.10
Thickspike wheatgrass	6.0
Basin wildrye	4.5
Junegrass	0.5
Bluebunch wheatgrass	6.0
Smooth brome	6.4
Big bluegrass	1.0
Western wheatgrass	5.0
Blue flax	0.5

2.3 EAST SLOPE UPLAND SEEDING

1. For East Slope Upland areas furnish a seed blend of the following species and hydroseed at a rate of 25.0 lbs PLS/acre in designated areas as shown on design plan. Divide hydroseeding rate in half for drill seeding.

SPECIES	LBS OF PLS PER ACRE
Triticale (cover crop)	5.0
Yarrow	0.3
Timothy	1.0
Slender wheatgrass	6.0
Intermediate wheatgrass	7.0
Smooth brome	5.7

2.4 STREAM BANK SEEDING

1. For Streambank areas furnish a seed blend of the following species and hydroseed or broadcast at a rate of 34.2 lbs PLS/acre in designated areas as shown on design plan.

SPECIES	LBS OF PLS PER ACRE
Bluejoint reedgrass	0.5
Mountain brome	6.0
Western wheatgrass	4.0
Beardless or creeping wildrye	5.0
Canada wildrye	6.0
Streambank wheatgrass	6.0
Slender wheatgrass	6.5
Baltic rush	0.2

2.5 FLOODPLAIN SEEDING

1. For Floodplain areas furnish a seed blend of the following species and drill seed at a rate of 18.3 lbs PLS/acre of in designated areas as shown on design plan. Drill seeding rate will be doubled for broadcast seeding.

SPECIES	LBS OF PLS PER ACRE
Big bluegrass	0.75
Thickspike wheatgrass	5.0
Slender wheatgrass	4.0
Smooth brome	6.0
Timothy	0.5
Junegrass	0.3
Orchardgrass	1.0
Canby bluegrass	0.8

2.6 WETLAND SEEDING

1. For Wetland areas furnish a seed blend of the following species and broadcast seed at a rate of 20.70 lbs PLS/acre of in designated areas as shown on design plan.

SPECIES	LBS OF PLS PER ACRE
Alkaligrass	1.25
Bluejoint reedgrass	1.25
Tufted hairgrass	1
Canada wildrye	8
Fowl bluegrass	1
Slender wheatgrass	8
Baltic rush	0.2

PART 3: EXECUTION

3.1 GENERAL

- A. Complete all work in accordance with the entirety of Section 610.03 and the additional subsections below, additions supersede all MDT Specifications:

3.2 FOR SLOPES EQUAL TO OR LESS THAN 3:1

Sequence the work in the following order:

1. Seedbed Preparation. Following final grading, condition the seedbed by disking or harrowing to a depth of 2 to 4 inches. Remove all rock and debris greater than 4 inches in diameter.
2. Seed using species blend, rates, and technique specified in Part 2.
 - a. Broadcast Seeding: Within 72 hours of seedbed preparation, seed with species blend and rates specified in Part 2.
 - b. Drill Seeding: Within 72 hours of seedbed preparation, seed with species blend and rates specified in Part 2 using a seeder specifically made for dryland reclamation projects. Standard agricultural grain drills are not acceptable.
 - c. Hydroseeding: Within 24 hours of seedbed preparation, hydroseed with species blend and rates specified in Part 2. Blend a minimum of 200 lbs per acre of wood fiber hydromulch and a guar-based tackifier at a minimum rate of 50 pounds per acre in solution with the seed blend.

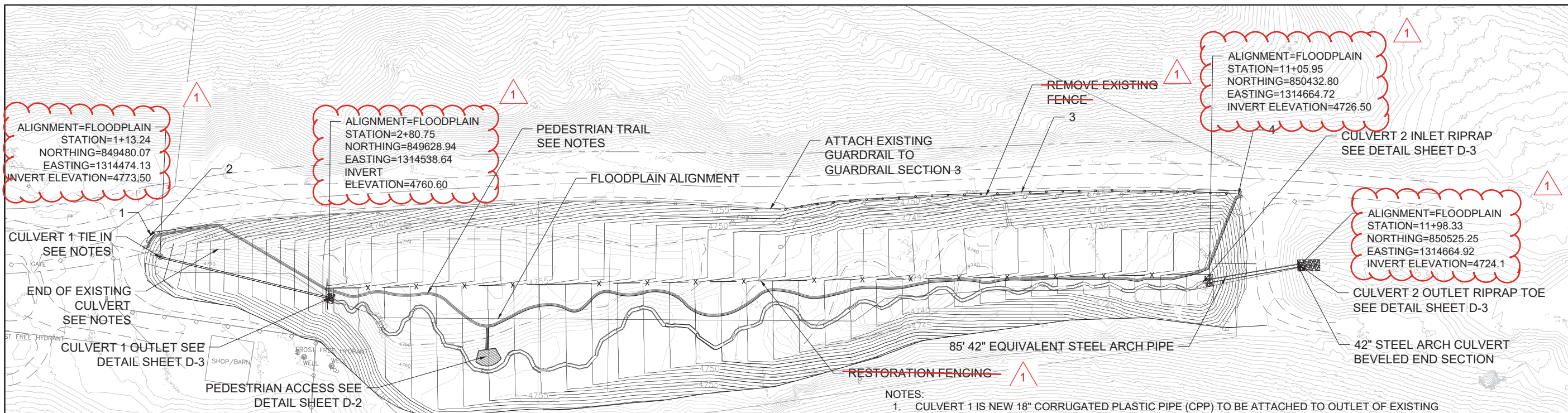
END OF SECTION 06100

ATTACHMENT 3

SUMMARY OF CONSTRUCTION QUANTITIES			
DESCRIPTION	UNIT	QUANTITY	NOTES
UNCLASSIFIED EXCAVATION	CY	13800	NO IMPORTED FILL REQUIRED; QUANTITY REPRESENTS THE VOLUME THAT WILL BE MOVED ONSITE, DOES NOT INCLUDE HDPE FLOODPLAIN LINER EXCAVATION ▲
STEEL CULVERT EXCAVATION	CY	412	EXCAVATION ASSUMES 1:1 SIDE SLOPES WITH A 1' BUFFER ON BOTH SIDES OF CULVERT
PLASTIC CULVERT EXCAVATION	CY	158	EXCAVATION ASSUMES 1:1 SIDE SLOPES WITH A 1' BUFFER ON BOTH SIDES OF CULVERT ▲
CHANNEL EXCAVATION	CY	230	QUANTITY OF EARTHWORK TO DEFINE LIMITS SET BY CHANNEL TYPICAL SECTION ▲
SURFACE AGGREGATE	CY	2	3/4" MINUS FOR ACCESS POINT
42" STEEL ARCH PIPE CULVERT PROCURMENT/PLACEMENT	LF	88	8' LAY LENGTHS INCLUDES INLET AND OUTLET
18" CORRUGATED PLASTIC PIPE PROCURMENT/PLACEMENT	LF	164	
REMOVE EXISTING FENCE	LS	1	▲
STANDARD MGS GUARDRAIL	LF	450	
LOW SPEED TERMINAL GUARDRAIL	LF	50	
RIPRAP (CLASS I)	CY	27	
MDT CLASS C PERMANENT GEOTEXTILE FABRIC	SY	38	DOES NOT INCLUDE OVERLAP FOR ADJOINING PIECES
S150BN EROSION CONTROL MATTING	SY	1830	DOES NOT INCLUDE OVERLAP FOR ADJOINING PIECES
HDPE 100mm LINER	SY	6010	DOES NOT INCLUDE OVERLAP FOR ADJOINING PIECES
LOG DROP STRUCTURES	EA	9	
ROCK DROP STRUCTURES	EA	12	
12" COIR LOG	LF	2060	BOTH SIDES OF CHANNEL FOR CHANNEL EXTENTS
STREAMBED MATERIAL (3" MINUS COBBLE)	CY	13	PLACED 4" THICK ACROSS CHANNEL BOTTOM
REVEGETATION			SEE SHEET C-11, SEED MIX AND CONTAINERIZED PLANTING TABLES FOR REVEGETATION DETAILS
EAST UPLAND SEED MIX	ACRE	0.60	
WEST UPLAND SEED MIX	ACRE	0.82	
WETLAND SEED	ACRE	0.36	
FLOODPLAIN SEED	ACRE	1.15	
STREAMBANK SEED	ACRE	0.07	
DRILL SEEDING - FLOODPLAIN	ACRE	1.15	
BROADCAST SEEDING - WETLAND & STREAMBANK	ACRE	0.36	HAND SEEDING AND RAKING AND/OR BROADCAST SEEDING AND HARROWING
HYDROSEEDING - UPLAND/SLOPE	ACRE	1.42	
WILLOW STAKES (HARVEST WILLOWS, SOAK, AND INSTALL)	EA	220	INCLUDE LABOR TO CUT WILLOWS BOTH ONSITE AND OFFSITE (APPROXIMATELY 220 WILLOW STEMS ROUGHLY 4 TO 5 FEET LONG AND 0.5"-1" DIAMETER)
TRANSPLANTED WILLOW CLUMPS FROM ONSITE SOURCES	EA	9	USE SMALL EXCAVATOR TO DIG ROOT BALL OF ONSITE SANDBAR WILLOWS AND TRANSPORT TO PLANTING AREA - ANTICIPATE SEVERAL PLANTS/STEMS PER HOLE
CONTAINERIZED PLANTINGS	EA	145	

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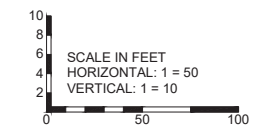
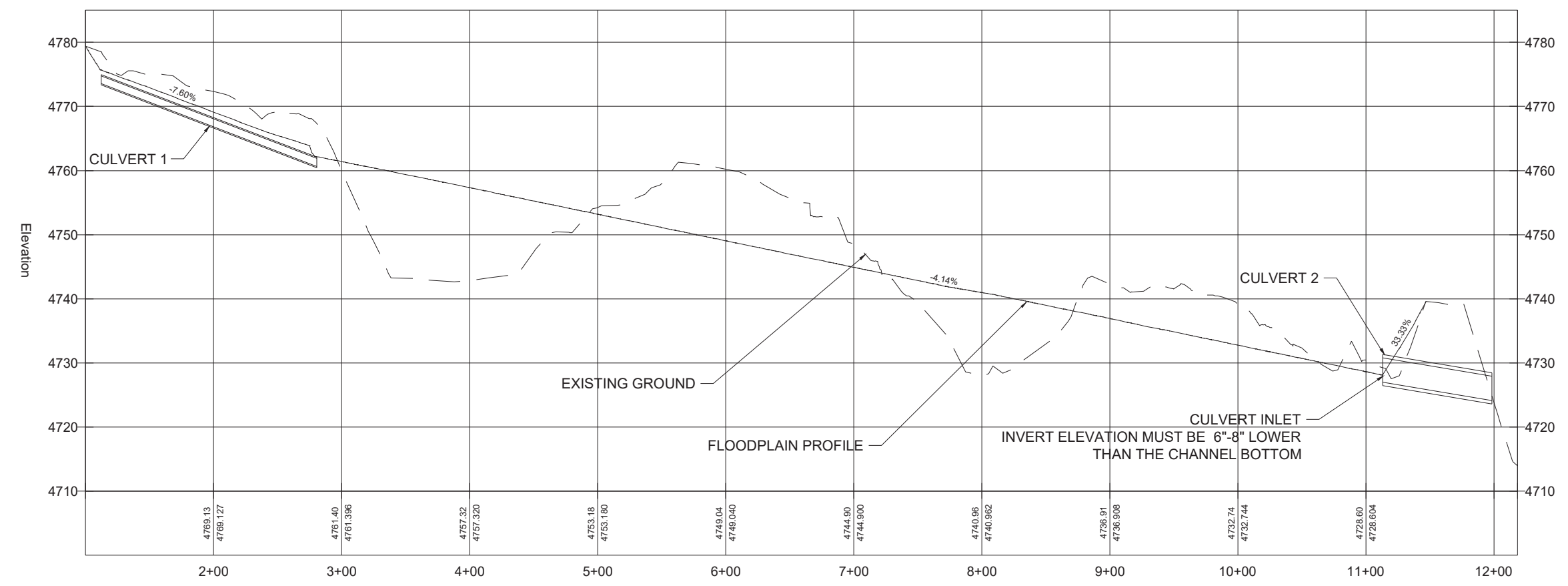
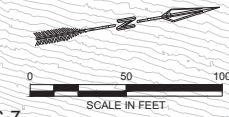
DESIGNED: MJW DRAWN: MDH CHECKED: MJW DATE: 12.05.2024	REVISION
RESPEC 3810 VALLEY COMMONS DRIVE SUITE 4 BOZEMAN, MONTANA 59718 WATER & NATURAL RESOURCES WWW.RESPEC.COM 406.284.2525	
STAMP 	
THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED	
PROJECT NAME: GRIZZLY GULCH PLACER MINE RECLAMATION PROJECT	
SHEET TITLE: CONSTRUCTION QUANTITIES	
Know what's below. Call before you dig.	
SHEET NUMBER: G-2R	



GUARDRAIL TABLE							
GUARDRAIL SECTION	START		END		GUARDRAIL TYPE (SEE FLH STANDARD DRAWING 617-14 FOR LOW SPEED TERMINALS)	RADIUS (FT)	LENGTH (FT)
	NORTHING	EASTING	NORTHING	EASTING			
1	849469.21	1314457.52	849491.50	1314450.28	LOW SPEED TERMINAL	16	25
2	849491.50	1314450.28	849528.67	1314451.20	STANDARD MGS	--	37.5
3	850056.70	1314529.89	850467.14	1314586.09	STANDAR MGS	--	412.5
4	850467.14	1314586.09	850486.35	1314595.85	LOW SPEED TERMINAL	16	25

NOTES:

- CULVERT 1 IS NEW 18" CORRUGATED PLASTIC PIPE (CPP) TO BE ATTACHED TO OUTLET OF EXISTING CPP CROSSING UNDER GRIZZLY GULCH DRIVE.
- EXTEND NEW CPP TO SPECIFIED CULVERT OUTLET LOCATION AND PLACE AT A MINIMUM OF 1' BELOW DESIGN GRADE
- PEDESTRIAN TRAIL SHALL BE 2' WIDE
- PEDESTRIAN TRAIL SHALL BE GRUBBED AND COMPACTED TO 95% STANDARD PROCTOR
- GUARDRAIL SECTIONS ARE ANNOTATED FROM 1-4, REFER TO THE GUARDRAIL TABLE FOR INSTALLATION LOCATIONS
- FOR GRADING SEE CHANNEL PLAN AND PROFILE SHEET C-3, FLOODPLAIN SECTIONS SHEET C-4-C-7, STAKING PLAN SHEET C-8, AND CHANNEL FLOODPLAIN TYPICAL SECTIONS SHEET C-9



DESIGNED: MJW	DRAWN: MJW	CHECKED: MJW	DATE: 12.05.2024
RESPEC 3810 VALLEY COMMONS DRIVE SUITE 4 BOZEMAN, MONTANA 59718 WATER & NATURAL RESOURCES WWW.RESPEC.COM 408.284.2525			
Rev. 1, 12/06/2024, ADDENDUM #1			
STAMP MONTANA MATTHEW WYNN JOHNSON No. 32820PE LICENSED PROFESSIONAL ENGINEER 12/2024			
THIS DRAWING IS INCOMPLETE AND NOT TO BE USED FOR CONSTRUCTION UNLESS IT IS STAMPED, SIGNED AND DATED			
PROJECT NAME: GRIZZLY GULCH PLACER MINE RECLAMATION PROJECT			
SHEET TITLE: GENERAL CONSTRUCTION			
Know what's below. Call before you dig.			
SHEET NUMBER: C-2R			

NAME: N:\Projects\W0138-23005-Grizzly Gulch Implementation\cad\Sheets\0347_S_General Construction.dwg PLOT DATE: Dec 05, 2024 6:04pm

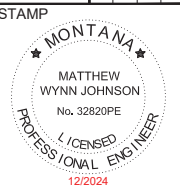
HYDROLOGIC DATA	
FLOOD INTERVAL (YEAR)	PEAK FLOW (CFS)
2	9.7
5	29.0
10	51.5
25	94.1
50	137.0
100	193.0
500	374.0

- NOTES:
 1. CHANNEL DESIGNED FOR 2-YEAR FLOW
 2. FLOODPLAIN DESIGNED FOR 100-YEAR FLOW

DESIGNED		DRAWN		CHECKED		DATE	
DATE	BY	DATE	BY	DATE	BY	DATE	BY
12.05.2024		12.05.2024		12.05.2024		12.05.2024	

3810 VALLEY COMMONS DRIVE SUITE 4
 BOZEMAN, MONTANA 59718
 WATER & NATURAL RESOURCES
 WWW.RESPEC.COM 406.284.2525

Rev. 1. 12/06/2024, ADDENDUM #1



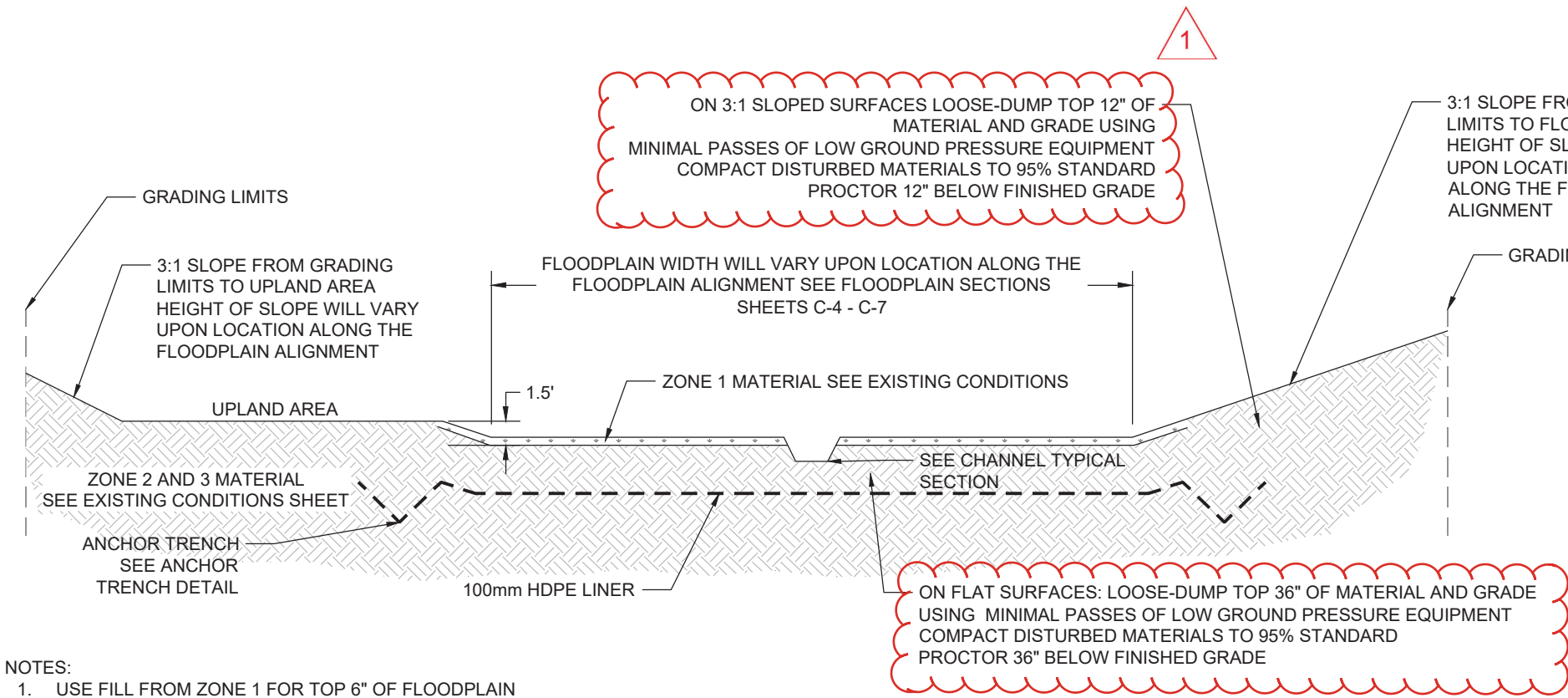
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PROJECT NAME:
GRIZZLY GULCH PLACER MINE RECLAMATION PROJECT

SHEET TITLE:
CHANNEL AND FLOODPLAIN TYPICAL SECTIONS



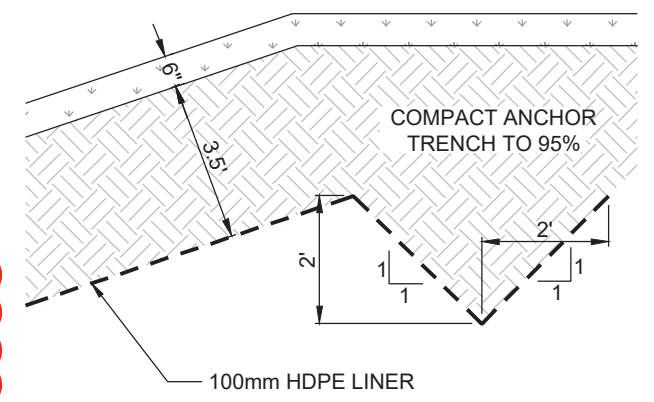
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C-9R



- NOTES:
 1. USE FILL FROM ZONE 1 FOR TOP 6" OF FLOODPLAIN
 2. FILL IN UPLAND AREA AND ON 3:1 SLOPES CAN BE SOURCED FROM EITHER ZONES 2 OR 3

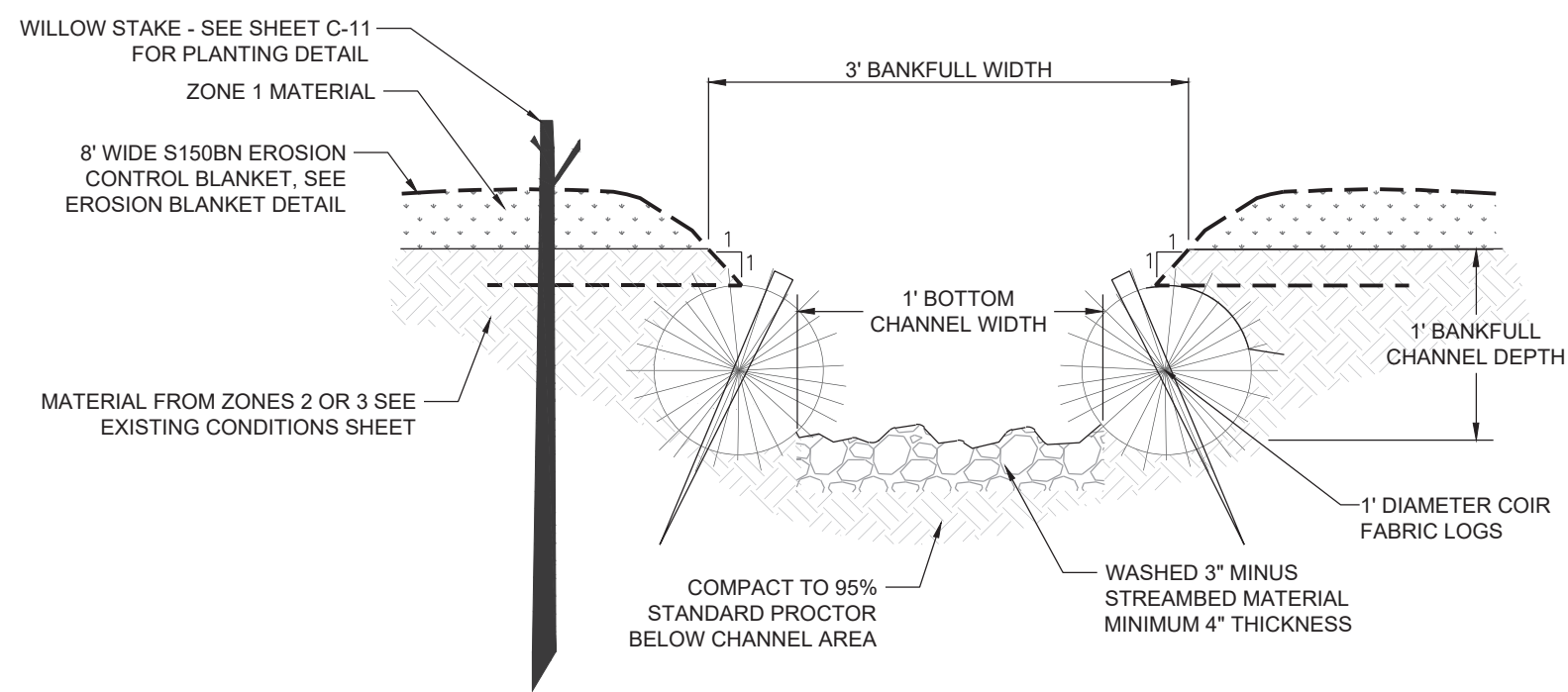
FLOODPLAIN TYPICAL SECTION

DRAWING NOT TO SCALE



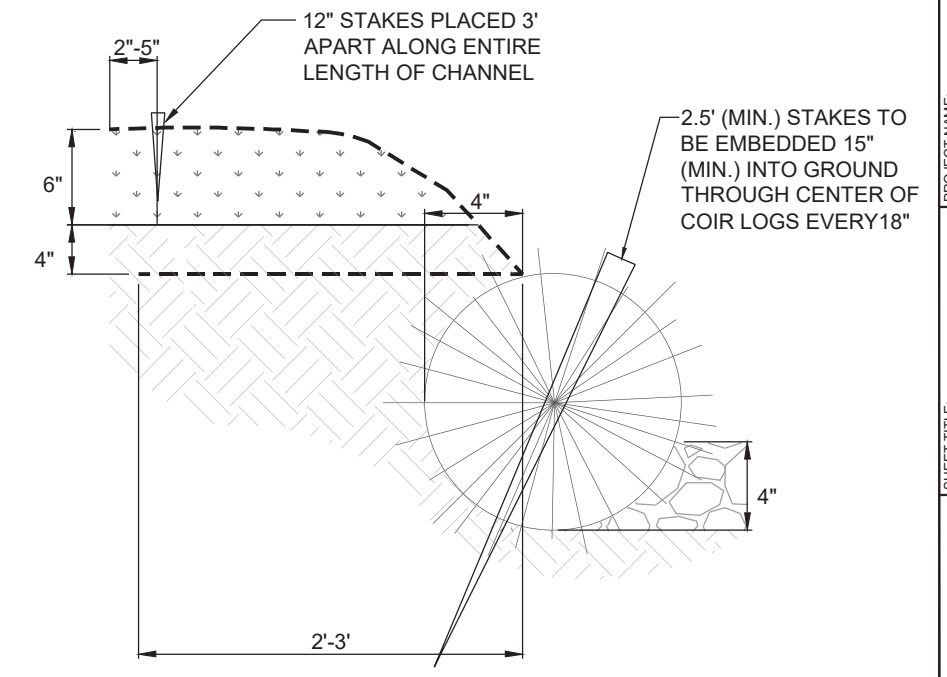
ANCHOR TRENCH DETAIL

DRAWING NOT TO SCALE



CHANNEL TYPICAL SECTION

DRAWING NOT TO SCALE



COIR LOG AND EROSION BLANKET DETAIL

DRAWING NOT TO SCALE

NAME: N:\Projects\W0138-23005-Grizzly Gulch Implementation\cad\Sheets\03470_Final_Details.dwg PLOT DATE: Dec 05, 2024 8:35pm