CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Wadsworth Lake Drain Outfall
Proposed Implementation Date:	July-August 2024
Proponent:	West Great Falls Flood Control and Drainage District
Location:	T20N R3E Sec. 5
County:	Cascade
Trust:	Public Land Trust-Navigable Rivers

I. TYPE AND PURPOSE OF ACTION

The DNRC received a Navigable Waterway Land Use License Application from West Great Falls Flood Control and Drainage District (WGFFCDD) to make improvements to the outfall pipe infrastructure located in T20N-R3E-Sec. 5 on the north shore of the Sun River (a navigable waterway). This location is part of a levee system operated by WGFCDD and owned by the US Army Corps of Engineers (USACE). The existing structure requires costly annual maintenance and is silted in often. When the pipe is silted in, the structure is not able to serve its primary function of providing an outlet for floodwater.

The purpose of the project is to allow WGFFCDD to remove the old pipe, which is located below the ordinary low watermark, and replace it with new infrastructure. The old pipe location of the river has accumulated so much material since original installation that it is buried in the riverbank. The WGFFCDD needs to annually dig out the site for maintenance and inspection. The new structure includes a concrete box around the outfall pipe with concrete wings supported by a slab and piers. The new structure will also include grates and screens to prevent debris from entering the pipe. A coffer dam would be placed in the Sun River during construction. Construction is anticipated to be July 7-Aug. The new structure will eliminate the need for future coffer dams and excavation for regular inspections. The new structure will be more efficient to clean, maintain, and inspect.

DNRC does not have any surface ownership in the project area.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

Patrick Rennie, Department of Natural Resources and Conservation Archeologist

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and other Water Bodies:
WGFFCDD has obtained the following permits:
Section 404 Permit from Army Corps of Engineers
401 Certification from Montana Department of Environmental Quality

WGFFCDD has applied for a 310 Permit from the Cascade Conservation District, SPA 124 from Montana Department of Fish Wildlife & Parks and a Floodplain Permit from Cascade County.

3. ALTERNATIVES CONSIDERED:

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The area of the proposed project is a recreational park, owned by the City of Great Falls, MT. This section of the Sun River is currently classified as navigable.

Removal of the existing infrastructure and construction of the new structure would require the use of a temporary coffer dam made of steel sheet piles. The coffer dam will dewater the area for construction timeframes only. The coffer dam could cause temporary sedimentation, turbidity, and minor erosion in the work area. Construction time frames are anticipated to be less than 2 months. This project is anticipated to have minimal, long-term impacts to geology and soil quality, stability, and moisture of the riverbed.

No State of Montana Trust Land surface would be impacted.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

Surface water in the project area includes the Sun River and Wadsworth Lake. The purpose of the project is to install a new structure which is primarily used provide relief for drainage from Wadsworth Land and the landside of the levee during a 100-year event. The structure is used periodically to fill Wadsworth Lake during spring runoff when water levels of the Sun River are high. Water quality may temporarily degrade during construction of the new project. Minimal impacts are anticipated to water quality, quantity and distribution.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Air Quality would be temporarily affected by dust from vehicle travel and road reconstruction.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

7. VEGETATION COVER, QUANTITY AND QUALITY:
What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The State of Montana claims ownership of navigable waterways, low watermark to low watermark, including those of the Sun River. Vegetation of these areas is limited to aquatic species. The construction of the structure may have temporary impacts to aquatic vegetation. Short time frame of construction is anticipated to have minimal long-term impacts to aquatic vegetation.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

State owned riverbeds are not habitat to terrestrial or avian wildlife; therefore, this document only addresses aquatic species and habitat. Short time frame of construction is anticipated to have minimal long-term impacts to aquatic species and habitat.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A search of the Montana Natural Heritage Program database indicated that there were eight species of concern with point observations in Township 20 North, Range 3 East Section 5: American Goshawk, American White Pelican, Black Swift, Black Tern, Brown Creeper, Caspian Tern, Clark's Grebe, Common Loon, Common Tern, Ferruginous Hawk, Franklin's Gull, Golden Eagle, Great Blue Heron, Harlequin Duck, Horned Grebe, Long-billed Curlew, and Sharp-tailed Grouse.

Cumulative effects to these species are anticipated to be one-time, short duration during the construction phase of this proposal.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

Patrick Rennie, DNRC Archaeologist stated "A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no cultural or paleontological resources have been identified in the APE, but it should be noted that Class III level inventory work has not been conducted there to date.

Because the APE is the active river channel of the Sun River, there little likelihood of the presence of cultural or palaeontologic resources. Proposed developments will have No Effect to Antiquities. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

11. AESTHETICS:
Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

Aesthetics of the area will be temporarily impacted during construction of the project. The site is a park owned by the City of Great Falls with high recreational use. Impacts are anticipated to be short term with construction projected to be less than two months.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:
Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

No demands for additional environmental resources are required for this project. No cumulative effects to environmental resources should result from this project.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:
List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

No other studies, plans, or projects were identified during the scoping for this project.

Alternative A: No action alternative. The proposed project would not be approved.

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:
Identify any health and safety risks posed by the project.

Health and safety risks are the liability of the WGFCDD.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

If approved, this project is designed to provide improved structure for the outfall pipe with easier maintenance and inspections.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

The project would not create or eliminate permanent jobs in the area.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

No change in tax revenues is expected as a result of this project.

18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

No increased demand for government services is expected as a result of this project.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:
List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

No locally adopted environmental plans would be affected by this project.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

This project would not affect recreational activities in the area.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

No change in population would result by this project.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

No change in social structures and mores are expected as a result of this project.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

This action would not affect cultural uniqueness or diversity.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The return to the Public Buildings Trust would include a land use license to authorize the project with a fee of approximately $150.

EA Checklist Prepared By:	**Name:**	Heidi Crum	**Date:**
	Title:	Helena Unit Manager	

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B: Preferred alternative. To allow the proponent to construct a new concrete drainage pipe outfall into the Sun River.

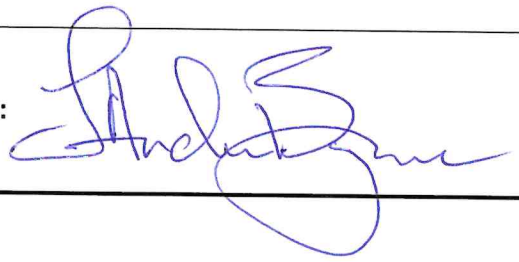
26. SIGNIFICANCE OF POTENTIAL IMPACTS:

This proposal would have some minor disturbance during the construction phase of the project, but no significant long-term effects or cumulative impacts are anticipated.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

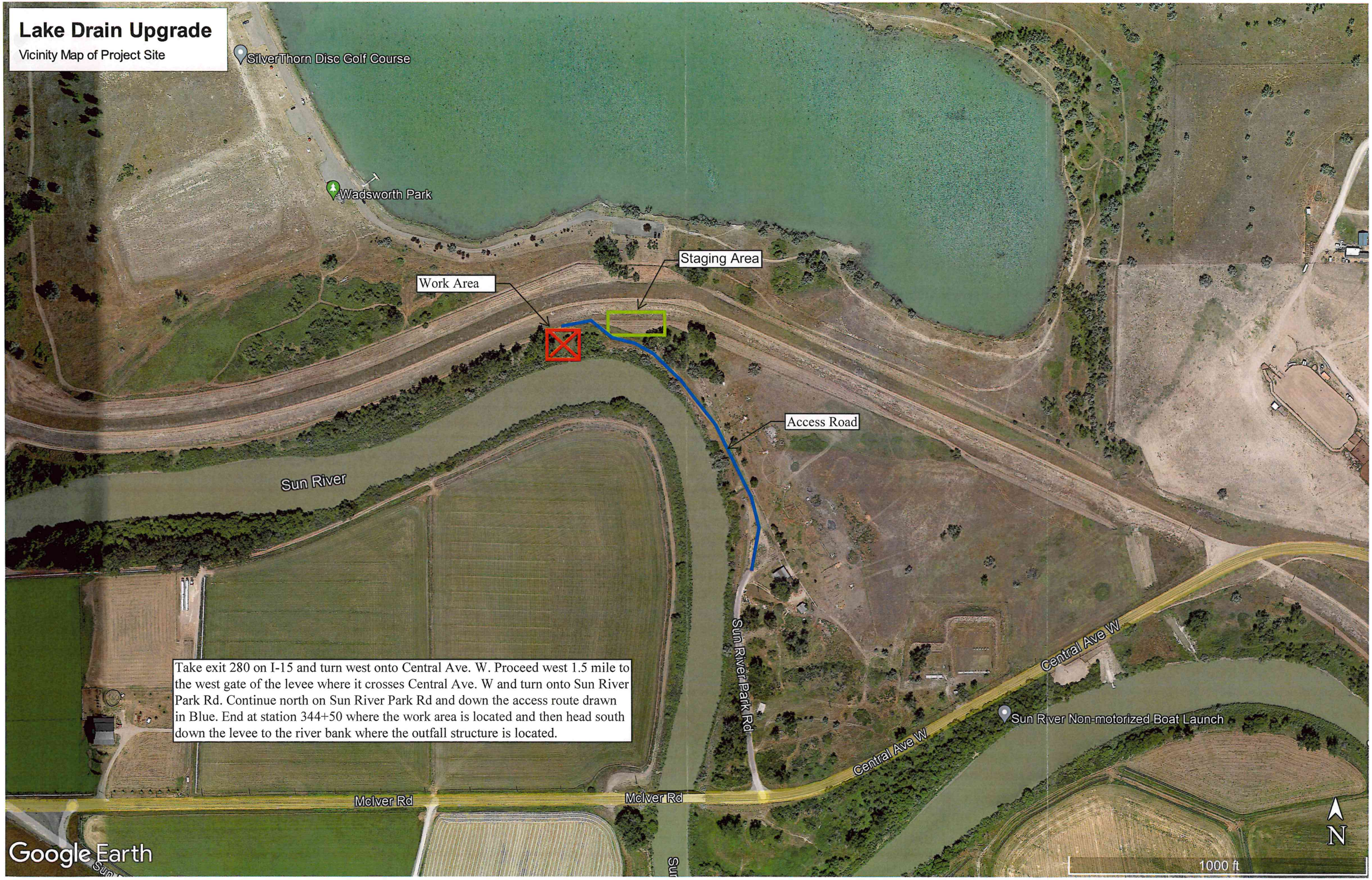
[ ]	EIS	[ ]	More Detailed EA	[x]	No Further Analysis

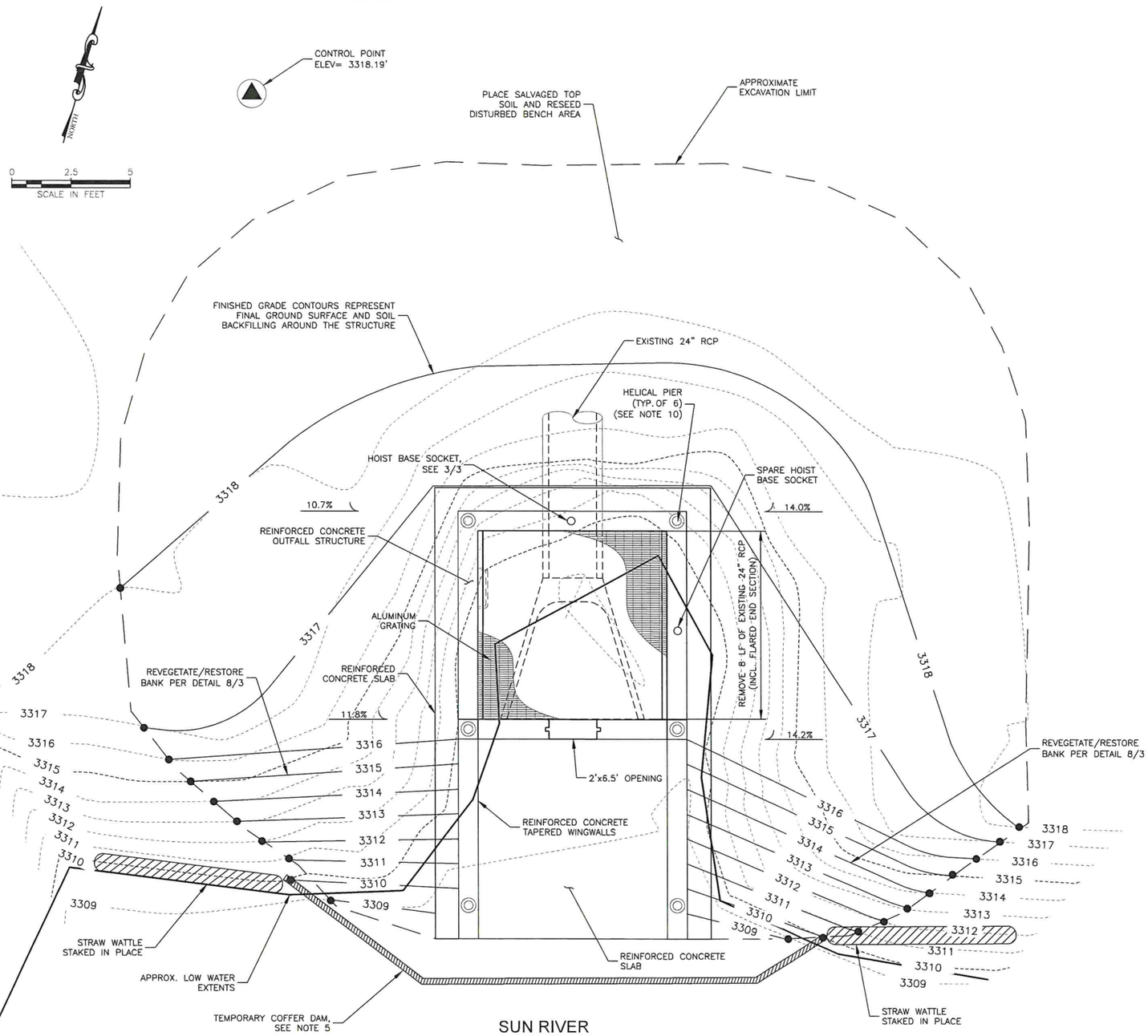
EA Checklist Approved By:	**Name:**	Andy Burgoyne
	Title:	Trust Lands Program Manager, CLO

Signature: 	**Date:** 11/6/23

Lake Drain Upgrade

Vicinity Map of Project Site





GENERAL NOTES.

1. CONTRACTOR WILL VERIFY THAT THERE ARE NO UTILITIES IN THE AREA PRIOR TO STARTING CONSTRUCTION.
2. DISTURBANCE TO EXISTING VEGETATION SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE. ALL AREAS DISTURBED BY THE CONSTRUCTION OPERATIONS, INCLUDING STAGING AREAS, SHALL BE REPAIRED AND RESEEDED IN ACCORDANCE WITH THESE DRAWINGS AND THE SPECIFICATIONS.
3. COMPACT SOIL MATERIAL IN LAYERS NOT MORE THAN 8-INCHES THICK (LOOSE THICKNESS). SEE SPECIFICATION 02230 FOR COMPACTION AND DENSITY REQUIREMENTS.
4. CONTRACTOR SHALL STOCKPILE EXCAVATION MATERIAL AND TOPSOIL MATERIAL FOR USE AS FILL AND TO RE-TOPSOIL THE CONSTRUCTION AREA AFTER REGRADING.
5. TEMPORARY SHEET PILE IS INTENDED TO SERVE AS A COFFER DAM TO RIVER BACKWATER IN ORDER TO ASSIST IN DEWATERING OPERATIONS. OTHER WATER BARRIER METHODS PROPOSED BY THE CONTRACTOR WILL BE CONSIDERED BY THE ENGINEER.
6. THE METHOD AND PERFORMANCE OF DEWATERING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGHOUT THE COURSE OF THE WORK. THE CONTRACTOR SHALL OBTAIN A DEWATERING PERMIT FROM DEQ IF NECESSARY.
7. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND SEQUENCING THE WORK IN ORDER TO ACCOMMODATE STORM DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
8. SAW CUT EXISITING 24" RCP AT A POINT 2.0' BACK FROM THE TOP OF THE EXISTING FLARED END SECTION COLLAR AND REMOVE CUT PIPE AND EXISTING FLARED END SECTION.
9. THE OWNER WILL OBTAIN THE FOLLOWING PERMITS TO ALLOW FOR THE CONSTRUCTION WITHIN THE RIVER. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL CONDITIONS IN THE PERMITS.
   - SECTION 404 PERMIT
   - SECTION 401 CERTIFICATION
   - SPA 124 PERMIT
   - DNRC LAND USE LICENSE
   - SECTION 408 PERMISSION
   - FLOODPLAIN PERMIT
10. HELICAL PIERS HAVE AN ANTICIPATED DRILL DEPTH OF 40 FT OR TO A DEPTH THAT PROVIDES 5,600 FT-LBS OF TORQUE, OR TO REFUSAL, WHICHEVER IS REACHED FIRST. USE TRIPLE HELIX LEADS. VERIFY FINAL CAPACITY OF PIERS WITH MANUFACTURER AND ENGINEER.
11. CONTRACTOR SHALL FURNISH SIX FIBERGLASS STOP LOGS. SEE DETAIL 4/3.
12. MATERIALS
    A. CAST-IN-PLACE CONCRETE:
       (1) HARDROCK CONCRETE (UNIT WT. = 150 PCF).
          (A) F'c = 4500 PSI @ 28 DAYS, ALL CAST-IN-PLACE CONCRETE.
          (B) USE CONCRETE WITH:
             (i) TYPE V CEMENT WITH MINIMUM 5 $\frac{1}{2}$ SACKS PER CUBIC YARD.
             (ii) MAXIMUM AGGREGATE SIZE OF $\frac{3}{4}$".
             (iii) AIR CONTENT 5% - 7%.
             (iv) MAXIMUM WATER-CEMENT RATIO OF 0.45.
             (v) MAXIMUM SLUMP OF 4".
          (C) CONFORM TO ACI 301.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 6-20154
DESIGNED: LMD
DRAWN: LMD
CHECKED: JRS
APPROVED: JRS
DATE: 10/31/2022

MONTANA REGISTERED PROFESSIONAL ENGINEER
LOGAN M. DUNLAP
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WEST GREAT FALLS FLOOD CONTROL AND DRAINAGE DISTRICT
WADSWORTH LAKE DRAIN OUTFALL STRUCTURE
SITE PLAN

SHEET NO.
1
OF 3

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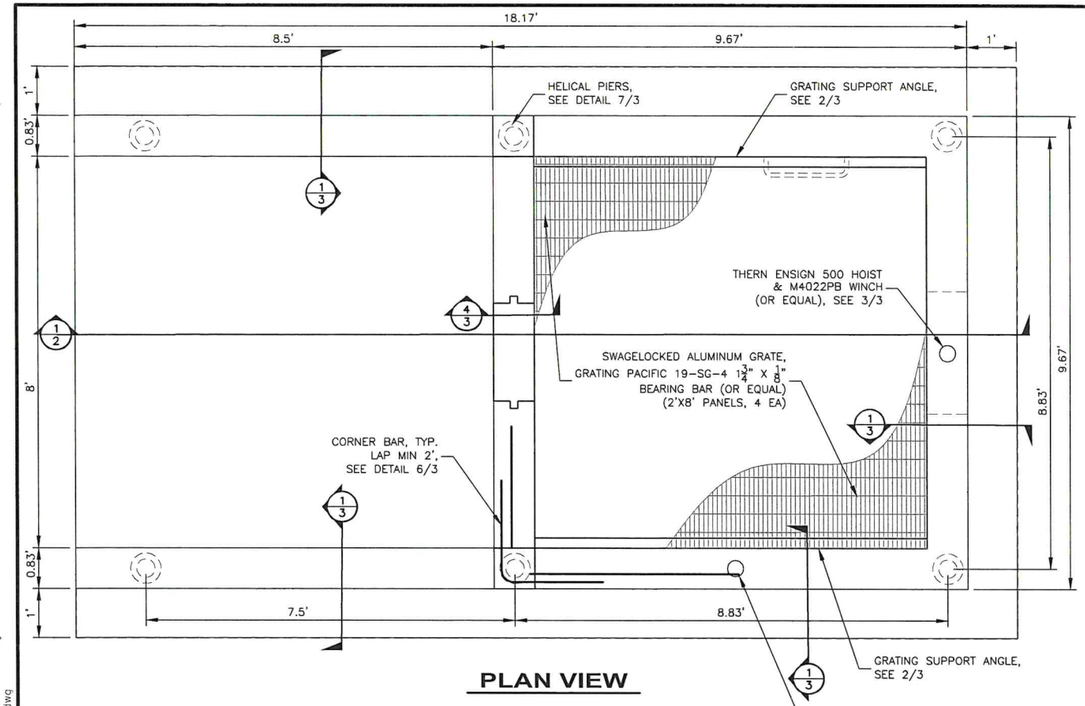
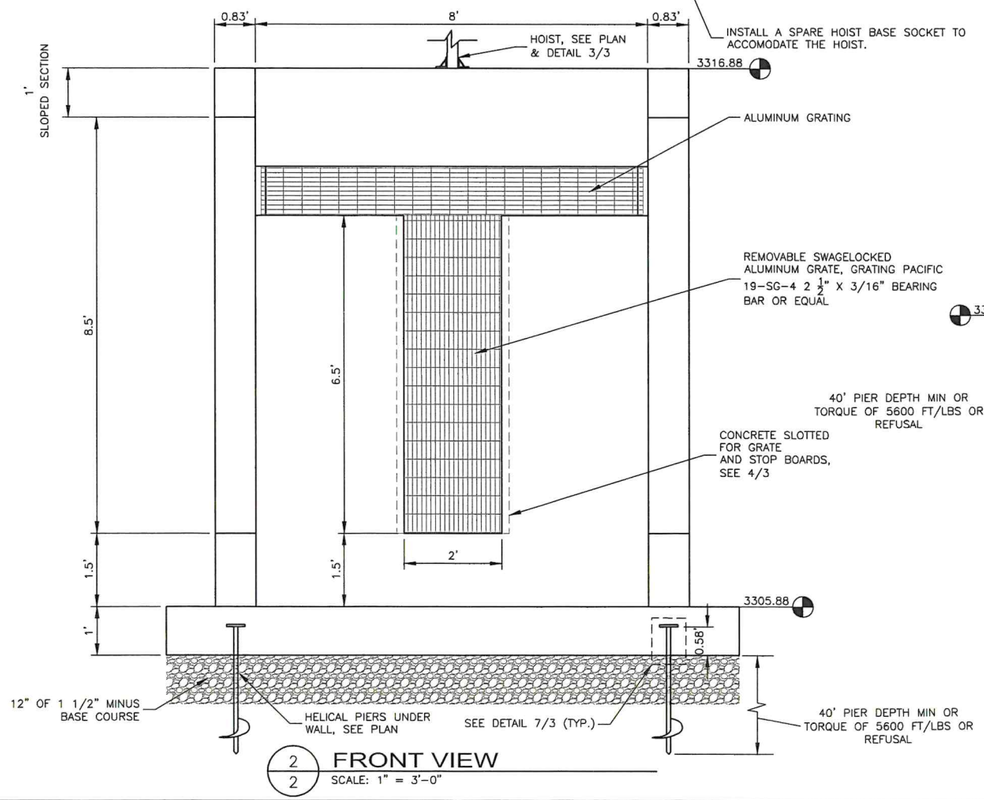
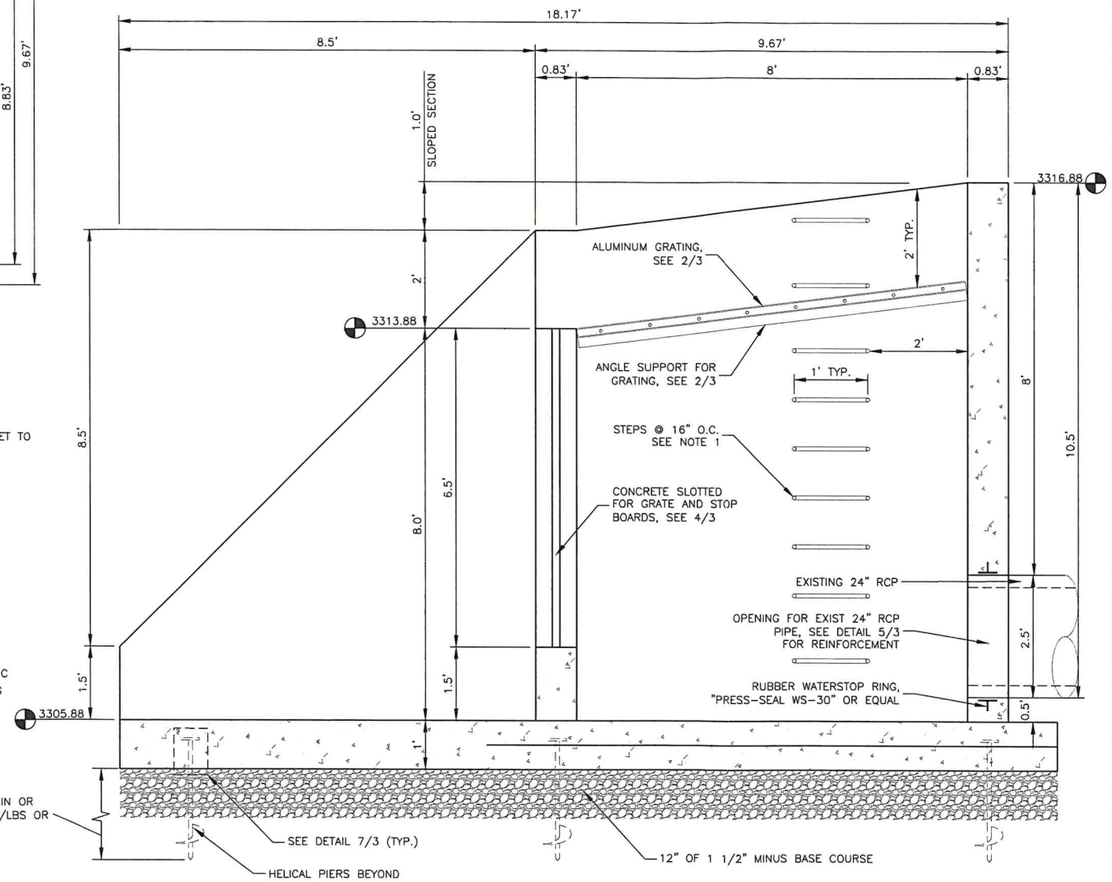


PLAN VIEW



2/2 FRONT VIEW
SCALE: 1" = 3'-0"



1/2 SECTION
SCALE: 1" = 3'-0"

NOTES:

1. STEPS SHALL BE PROTECTED FROM CORROSION AND SHALL CONSIST OF ½" STEEL ROD ENCASED WITH POLYPROPYLENE. STEPS SHALL WITHSTAND 400 LB VERTICAL LOAD AND 1,000 LB PULL-OUT RESISTANCE.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 6-20154
DESIGNED: LMD
DRAWN: LMD
CHECKED: JRS
APPROVED: JRS
DATE: 10/31/2022

MONTANA LICENSED PROFESSIONAL ENGINEER
LOGAN M. DAVIS
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WEST GREAT FALLS FLOOD CONTROL AND DRAINAGE DISTRICT
WADSWORTH LAKE DRAIN OUTFALL STRUCTURE
PLAN & SECTIONS

SHEET NO.
2
OF 3

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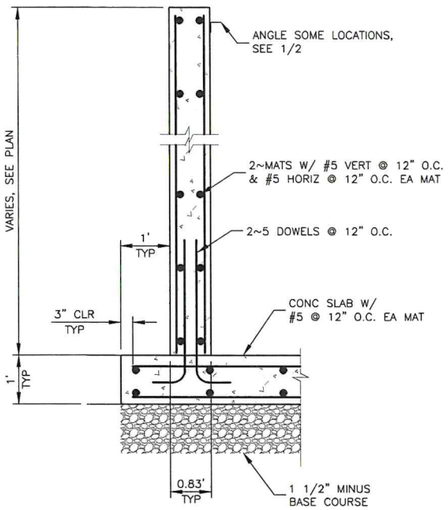
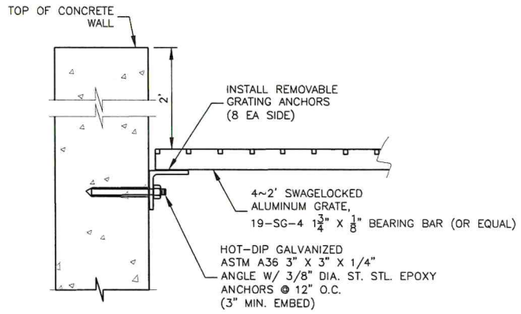
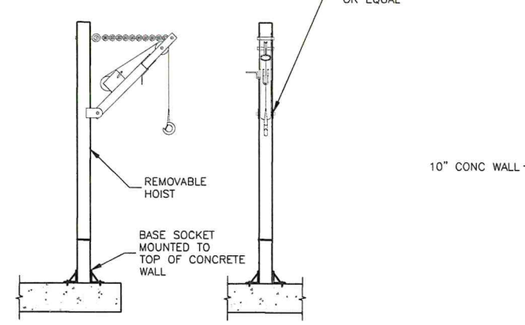


1/3 SECTION
SCALE: 1" = 3'-0"



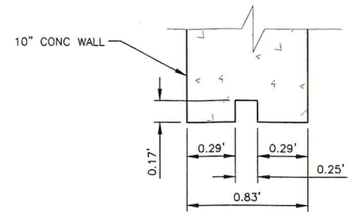
2/3 ANGLE SUPPORT DETAIL
SCALE: 1" = 3'-0"

NOTE: FURNISH AND INSTALL ONE SPARE HOIST SOCKET ON THE EAST SIDE OF THE OUTFALL STRUCTURE AS SHOWN ON SHEET 2.

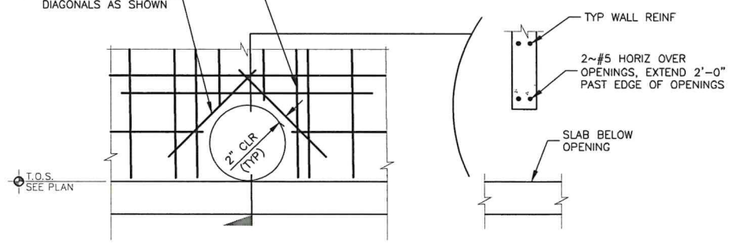


3/3 HOIST DETAIL
SCALE: NOT TO SCALE

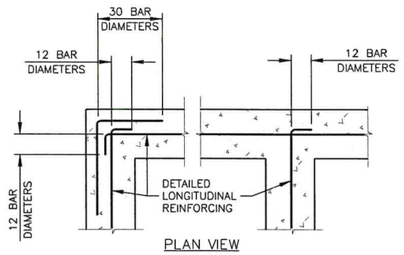
NOTE: CONTRACTOR SHALL FURNISH 6 FIBERGLASS STOP LOGS TO SLIDE INTO THE SLOTS AND SPAN THE 2 FT OPENING WIDTH ON THE SOUTH FACE OF THE STRUCTURE. STOP LOGS SHALL HAVE DIMENSIONS OF 2 ½" THICK x 2'-3" LONG x 1' WIDE. STOP LOGS SHALL BE BY "PLASTI-FAB" OR EQUAL.



4/3 SLOTTED CONC DETAIL
SCALE: NOT TO SCALE



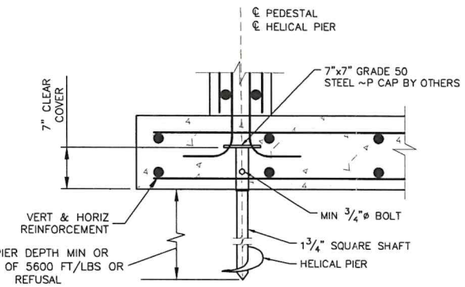
5/3 TYP REINFORCING AROUND OPENINGS
SCALE: 1" = 3'-0"



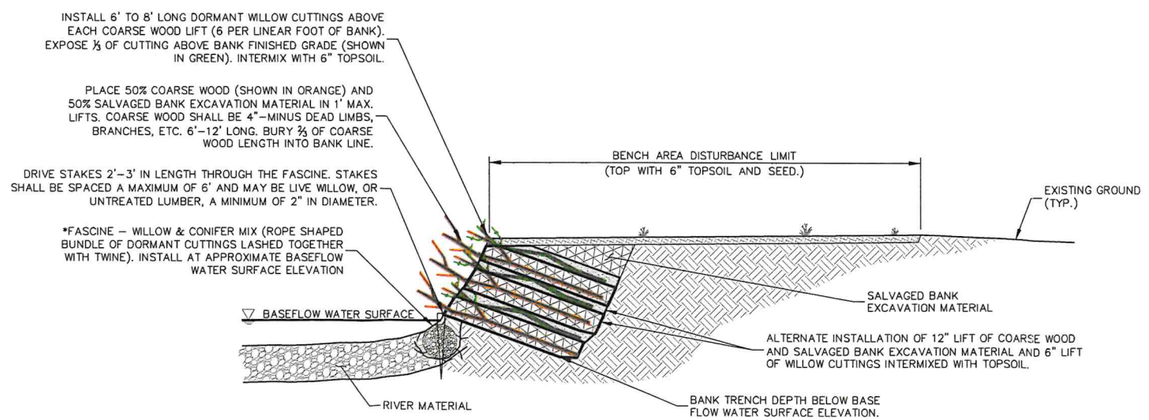
PLAN VIEW

NOTE: CORNER BARS SAME SIZE & SPACING AS LONGITUDINAL BARS

6/3 TYPICAL REINFORCING AROUND CORNERS IN CONCRETE WALLS
SCALE: 1" = 3'-0"



7/3 HELICAL PIER CAP
SCALE: NOT TO SCALE



8/3 BANK RESTORATION DETAIL
SCALE: NOT TO SCALE

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PROJECT: 6-20154
DESIGNED: LMD
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MONTANA LICENSED PROFESSIONAL ENGINEER LOGAN M. DUNLAP No. 66000 PE 10-4-22

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WEST GREAT FALLS FLOOD CONTROL AND DRAINAGE DISTRICT
WADSWORTH LAKE DRAIN OUTFALL STRUCTURE
DETAILS

SHEET NO.
3
OF 3

Y:\Shared\Great Falls Projects\6-20154-GF Flood District Lake Drain Outfall Structure\CADD 6-20154\Sheets\6-20154-Details-New.dwg