

WATER PERMIT NO. 2899-2

Name of Applicant: City of Custer

Address: 622 Crook Street, Custer SD 57730

Phone: 605-673-4824

Amount of Water Claimed: 100 AF

Total Acres: N/A

Source of Water Supply: Surface

Water to be used for: Rec/Fish&Wildlife/Fire

County: Custer

Type of Waste Disposal System:

Location: Southwest area of Custer

PRIORITY Date Received: 08-22-25

Application/License Fee: \$500.00

Corrected Application Received:

Period of Annual Use: January 1 – December 31

Remarks: See RESPEC report

Diversion Point: NE 1/4 SE 1/4 Sec 27-T3S-R4E

Land to be Irrigated: N/A

Depth of Well:

Well Driller:

Remarks:

Type of Map: aerial

			27		

Reviewed and the Number Assigned on: 08-26-25

By: Rachel Rodriguez

Notice of Hearing - date to intervene: _____

SOUTH DAKOTA
WATER PERMIT NO. 2899-2

Date of first receipt of application August 22, 2025.

Date of receipt of corrected application August 26, 2025.

The Acting Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2899-2 to the City of Custer, 622 Crook Street, Custer SD 57730, authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2899-2 authorizes impoundment of an additional 22.5 acre-feet of water, in Custer West Dam, located on French Creek, to what is currently authorized by Water Right No. 298-2 & Water Permit No. 2878-2. Water Right No. 298-2 authorizes the impoundment of 30 acre-feet of water by the dam, and Water Permit No. 2878-2 authorizes the impoundment of 47.5 additional acre-feet of water and authorized reconstruction of the dam, located in the NE 1/4 SE 1/4 Section 27, with water to be impounded in the N 1/2 SE 1/4 Section 27; all in T3S-R4E. This Permit, Water Right No. 298-2, and Permit No. 2878-2, authorize the impoundment of sufficient water annually to maintain water to the primary outlet elevation of 5,348.0 feet mean sea level. The normal pool storage capacity at the primary spillway elevation will be 100 acre-feet of water, with water to be used for recreation, fish & wildlife propagation, and public safety purposes. This site is located in the southwest part of the City of Custer, SD.
2. The water appropriated shall be used for the purpose of recreation, fish and wildlife use, and public safety and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 2899-2 is November 24, 2025.
5. The date from which applicant may claim right is August 22, 2025.
6. One-fifth of the construction is to be completed on or before May 24, 2028.
7. All construction is to be completed on or before November 24, 2030.
8. Water is to be put to beneficial use on or before November 24, 2034.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Right No. 298-2, Water Permit No. 2878-2, and this Permit, combined, authorize an impoundment with a storage capacity of 100 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 5,348.0 feet mean sea level (NAVD 88).
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

(continued)

3. Plans and specifications for reconstruction of Custer West Dam were reviewed and approved by the Chief Engineer on October 14, 2025. Any changes the Chief Engineer considers to be significant changes to the 2025 reconstruction plans must be submitted to the Chief Engineer for review and approval for compliance with the Safety of Dams Rules (ARSD 74:02:08).
4. The Emergency Preparedness Plan must be reviewed annually and updated, as needed, to reflect current contact information for emergency services and emergency notification contacts with the updates provided to all plan holders.

WATER MANAGEMENT BOARD

By: Mark Mayer
Mark Mayer, PE
Director of Office of Water
Department of Agriculture and Natural Resources

11/6/26
date



FORM 2: Application for uses other than irrigation
(type or print)

Mail to: SD DANR, Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2899-2</u> Hydrologic Unit <u>10120109</u> Basin <u>Middle Cheyenne Spring</u> Newspaper <u>Custer County Chronicle</u> <u>Rapid City</u> (office use only)
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AUG 22 2025

Water Rights
Program

Application for Permit to Appropriate Water in South Dakota

Check use(s) of water:

☐ Municipal	☐ Water Distribution System	☒ Recreational	☐ Institutional
☐ Rural Water System	☐ Commercial	☒ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☒ Other: Public safety (flood mitigation), grassland, forest, and structure fire protection, and water quality	

Type of Application: (check one)
☒ New ☐ Vested Right (Use predates Mar 2 1955) ☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

Request for an additional 22.5 ac-ft to Permit No. 2878-2 (total of 100 ac-ft), due to the U.S. Army Corp having determined to not allow fill placement in the fringe wetland area, and expansion of the reservoir near the golf course. Both the original and future uses remain consistent with item #7 below.

- Name to Appear on Water Permit City of Custer
Mailing Address 622 Crook Street Custer SD 57730
(Address) (City) (State) (Zip Code)
Phone 605-673-4824 Mobile _____ Email Mayor (mayor@cityofcuster.com)
supersedes Permit No. 2878-2
- Amount of water claimed _____ *CFS or 18 **GPM and 100 22.5 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use)
- Source of water supply Little French Creek Drainage
- Location of point of diversion NE 1/4 SE 1/4 Section 27 Twp. 3S Rg. 4E B.H. Meridian County Custer
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☐ No
If "Yes," where will water be used? _____
(example - NW 1/4 section 12-T104N-R53W)
- County or counties where water will be used Custer County
- Annual period during which water is to be used January 1 - December 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Remove and replace Custer West Dam to develop and maintain an impoundment for recreational activities, public safety (flood attenuation), propagation of fish and wildlife, fire suppression, and improved water quality of French Creek below the dam. Historically, the water impounded has been used for emergency fire fighting purposes and used both by emergency pumper truck(s) and helicopters for wildfire suppression. New construction of entire dam, spillway and outlet works is proposed to comply with State Standards. A Design Report and 100% Plans will be submitted for review and approval when available.

I, Stephen Bareis, PE (RESPEC) Engineer of Record, the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

2021-08

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

Supplemental Information

(type or print)

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AUG 22 2025

Water Rights
Program

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many _____ Have test holes been drilled? ☐ Yes ☐ No Drilled by _____
(if yes, please provide copies of logs)

b) If existing wells, how many _____ Provide copy of log(s), if available. Drilled by _____

For either existing or proposed wells:

c) Well Depth (required) _____ Depth to Top of Water Bearing Material _____ Depth to Water from Surface _____

d) Distance to nearest domestic well on applicant's property _____ Property owned by others _____

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) _____

b) System Capacity (gallons) _____ Year Constructed _____

c) Connected to the City of _____ Sanitary System

3. Dugout Information

a) Surface Dimensions _____ Depth _____

b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

RESPEC
3824 Jet Drive
Rapid City, SD
57703

b) Freeboard 0.6' @ 50% PMF

c) Crest Width 12'

Crest Length 570' +/-

d) Height 19.5'

e) Primary Outlet Capacity 165 cfs @ 2yr Event

If pipe, diameter 48"

f) Secondary Spillway Capacity 1837 cfs @ 100yr Event

Spillway Width 100'

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

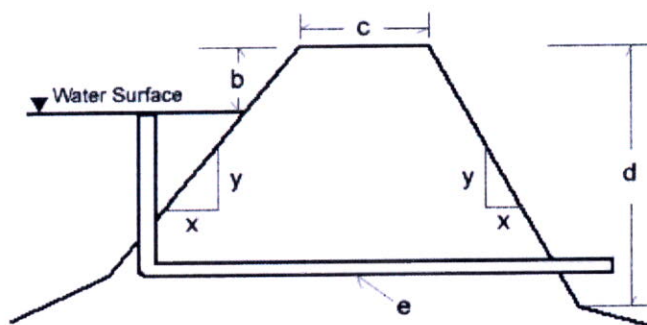
Upstream 3:1

Downstream 3:1

h) Area of Impoundment 9.0 acres

i) Storage 100 Acre Feet

j) Drainage Area Above Dam 23,300 Acres



Wetland Delineation
Custer West Dam
T-35, R-4E, Sect 27
City of Custer
Custer County, South Dakota

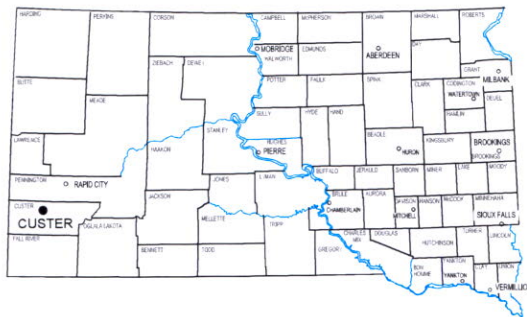




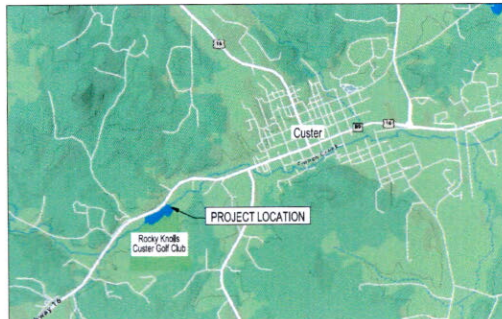
PHASE 3 - CUSTER WEST DAM CONSTRUCTION

AUGUST 2025
CUSTER COUNTY, SOUTH DAKOTA

95% REVIEW PLANS



CUSTER, SOUTH DAKOTA



PROJECT LOCATION MAP
Not To Scale

SHEET INDEX	
SHEET NUM	SHEET TITLE
G1.0	COVER SHEET
G1.1	GENERAL NOTES
G1.2	EXISTING TOPO AND SURVEY CONTROL
G1.3	TABLES AND RATINGS CURVES
G1.4	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
G1.5	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
G1.6	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
G1.7	EROSION SEDIMENT AND CONTROL DETAILS
G1.8	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
G1.9	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
C2.1	FINISHED GRADING PLAN
C2.2	ENLARGED GRADING PLAN - DAM SITE
C2.3	EROSION SEDIMENT CONTROL PLAN
C2.4	RIGHT ABUTMENT GRADING PLAN
C2.5	DAM CENTERLINE PROFILE
C2.6	EMBANKMENT AND AUXILIARY SPILLWAY SECTIONS
C2.7	TYPICAL SECTIONS
S3.1	STRUCTURAL NOTES AND DETAILS
S3.2	STRUCTURAL DETAILS
S3.3	SPILLWAY AND STILLING BASIN PLANS
S3.4	SPILLWAY AND STILLING BASIN SUBDRAINAGE PLAN
S3.5	SPILLWAY CONTROL POINTS
S3.6	SPILLWAY ELEVATION - RIGHT TRAINING WALL
S3.7	SPILLWAY WALL SECTIONS
S3.8	STILLING BASIN SECTION AND DETAILS
S3.9	SPILLWAY RIGHT WALL SECTIONS
S4.1	PRIMARY SPILLWAY PLAN AND PROFILE
S4.2	PRIMARY SPILLWAY INLET SECTIONS & DETAILS
S4.3	PRIMARY SPILLWAY DETAILS
S4.4	PRIMARY OUTLET FOUNDATION SECTIONS
S4.5	MAINTENANCE WALKWAY DETAIL
C5.1	ARMORING PLAN
C5.2	RIPRAP PLAN AND SECTIONS, SUB-DRAIN MANHOLE DETAIL
C5.3	OVERTOPPING SYSTEM - SECTION AND DETAILS
C6.1	DETAILS AND NOTES



RESPEC
3825 JET DR
RAPID CITY, SD 57703
PHONE (605) 394-6400

No.	Date	Rev	Revisions
2	07/02/2025		95% REVIEW PLANS
1	06/25/2025		95% REVIEW PLANS



CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SWB
Drawn By: SWB
Design Date: 08/2025
Print Date: 08/2025
Internal Job No: W0565-004
Surveyed By: SWB
Survey Date: SWB

Revisions:

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UTILITY CONTACTS :

LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS WAS TAKEN FROM THE BEST AVAILABLE RECORDS AND DOES NOT INCLUDE ALL UNDERGROUND UTILITIES SUCH AS ELECTRICAL, FUEL, UNDERGROUND CABLE TV. PRIOR TO EXCAVATION THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF ALL UTILITIES WHETHER OR NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL COORDINATE ALL RELOCATION EFFORTS OF UTILITIES DUE TO INTERFERENCE. CONTRACTOR SHALL PROTECT ALL UTILITIES DURING CONSTRUCTION. ANY DISTURBANCE OR REPLACEMENT OF EXISTING UTILITIES SHALL BE INCIDENTAL TO THE PROJECT.

SOUTH DAKOTA ONE CALL CONTACT INFORMATION:

PHONE: 1-800-781-7474 OR 811
WEBSITE: HTTP://ONECALL.SD.GOV/

PROJECT LOCATION:
CUSTER COUNTY

NE 1/4 SECTION 27 - T3S - R4E - BLACK HILLS MERIDIAN

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTACTS WITH SOUTH DAKOTA ONE CALL.

UTILITY CONTACTS:
AS PER SOUTH DAKOTA ONE CALL

ADDITIONAL CONTACTS:

BLACK HILLS POWER INC
447 MT RUSHMORE RD
CUSTER SD 57730
605-742-8948

GOLDEN WEST
1570 NATIONAL AVE
HOT SPRINGS SD 57747
855-888-7777

BLACK HILLS ELECTRIC CO-OP
25191 COOPERATIVE HWY
CUSTER SD 57730
605-673-4461

CENTURY LINK
888-665-5193

MONTANA DAKOTA UTILITIES
RAPID CITY SD 57701
605-342-0160

GENERAL CONSTRUCTION NOTES :

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A QUALITY CONTROL SYSTEM THAT DETAILS THE METHODS AND PROCEDURES THAT WILL BE TAKEN TO ASSURE THAT ALL MATERIALS AND COMPLETED CONSTRUCTION REQUIRED BY THIS CONTRACT CONFORM TO DRAWINGS, SPECIFICATIONS AND OTHER REQUIREMENTS, WHETHER MANUFACTURED BY THE CONTRACTOR, OR PROCURED FROM SUBCONTRACTORS OR VENDORS.
2. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR HAS CONSIDERED IN THE BID THE PERMANENT AND TEMPORARY UTILITY APPURTENANCES IN THEIR PRESENT OR RELOCATED POSITIONS AS SHOWN ON THE PLANS. ADDITIONAL COMPENSATION WILL NOT BE ALLOWED FOR DELAYS, INCONVENIENCES OR DAMAGE SUSTAINED DUE TO INTERFERENCE FROM THE UTILITY APPURTENANCES OR THE OPERATION OF MOVING THEM.
3. SITE DAMAGE AND TEMPORARY EROSION CONTROL SHALL BE REPAIRED AND MAINTAINED AS AN ONGOING PROCESS THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL TAKE ANY ADDITIONAL MEASURES NEEDED IN ORDER TO COMPLY WITH THE REQUIREMENTS OF ALL PERMITS. REFER TO SPECIFICATIONS FOR SITE DRAINAGE, STORM WATER POLLUTION PREVENTION, DEWATERING AND TEMPORARY EROSION CONTROL.
4. DE-WATERING OPERATIONS AND STREAM DIVERSIONS ARE REQUIRED TO THE EXTENT THAT ALL CONSTRUCTION IS COMPLETED ON DRY FOUNDATIONS.
5. CONTRACTOR SHALL MAINTAIN CONSTRUCTION WORK WITHIN THE LIMITS AS SHOWN ON THE DRAWINGS. EXCEPT AS APPROVED BY THE ENGINEER IN WRITING. ANY DAMAGE OUTSIDE THE CONSTRUCTION LIMITS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
6. SEQUENCE OF OPERATIONS
CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR ITS TIMELY REVIEW. A PRELIMINARY PROGRESS SCHEDULE INDICATING THE TIMES (NUMBERS OF DAYS OR DATES) FOR STARTING AND COMPLETING THE VARIOUS STAGES OF THE WORK, INCLUDING ANY MILESTONES SPECIFIED IN THE CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL KEEP ONE SET OF PLANS AND SPECIFICATIONS ON THE JOB LABELED AS "RECORD COPY". PRIOR TO CONTRACT CLOSEOUT AND FINAL PAYMENT THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL MEASUREMENTS, CHANGES AND DEVIATIONS ON THE RECORD COPY AND UPON COMPLETION OF THE WORK SHALL CERTIFY AND FORWARD RECORD COPY TO THE ENGINEER AS "AS CONSTRUCTED DOCUMENTS." THE REVISIONS SHALL BE SHOWN WITH NECESSARY DIMENSIONS AND OFFSETS SO ALL UTILITY ALIGNMENT, CAN BE REESTABLISHED IN THE FUTURE.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY FENCING, MAINTENANCE, AND COORDINATION, TO PROTECT THE SITE FROM UNAUTHORIZED PERSONAL.
9. GEOTECHNICAL REPORT BY AMERICAN ENGINEERING TESTING, INC (AET), REPORT #17-02228, DATED JUNE 2, 2015; AET REPORT #17-02228, DATED MARCH 25, 2016; AET LETTER DATED MARCH 25, 2016, AND SOIL BEARING RECOMMENDATION LETTER DATED MAY 19TH, 2025, ARE INCLUDED IN THE PROJECT MANUAL.
10. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO, STORM WATER DISCHARGE PERMIT, HAUL ROAD PERMITS/AGREEMENT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAULING/PLACING ALL BORROW MATERIAL NECESSARY TO CONSTRUCT THE SITE TO THE PLAN GRADES.
12. PRIOR TO PERFORMING EXCAVATION AND EMBANKMENT OPERATIONS THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL.
13. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS ARE TO FINISHED GRADE, INCLUDING 6-INCHES OF TOPSOIL WHERE APPLICABLE.
14. WORKMANSHIP AND MATERIALS
WHERE NOT SPECIFICALLY STATED IN THE PLANS AND SPECIFICATIONS, INSTALLATIONS AND MATERIALS USED SHALL CONFORM TO SD DOT STANDARD SPECIFICATIONS FOR ROADS & BRIDGES, 2015 ED., RAPID CITY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2022 ED., AND MANUFACTURER'S RECOMMENDATIONS.

ABBREVIATIONS:

SHORT FORM	DESCRIPTION
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
ASPRS	AMERICAN SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING
SD SPC S	SOUTH DAKOTA STATE PLANE COORDINATES SOUTH ZONE
SD DENR	SOUTH DAKOTA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES
SD GF&P	SOUTH DAKOTA GAME FISH AND PARKS
SDDOT	SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION
FHWA	FEDERAL HIGHWAY ADMINISTRATION
NPT	NATIONAL PIPE THREADS
NCHRP	NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM
CO	CLEAN OUT
APPROX	APPROXIMATE
DIA	DIAMETER
HYD	FIRE HYDRANT
EL	ELEVATION
INV EL	INVERT ELEVATION
LT	LEFT
MIN	MINIMUM
No	NUMBER
PI	POINT OF INTERSECTION
VPI	VERTICAL POINT OF INTERSECTION
PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON
RCP	REINFORCED CONCRETE PIPE
CVT	CULVERT
RT	RIGHT
STA	STATION
TYP	TYPICAL
ROW	RIGHT OF WAY
NIC	NOT IN CONTRACT
AI	AREA INLET
FLG	FLANGED
PC	PRESSURE CLASS
OFL	OVERFLOW
SS	STORM SEWER
ACM	ARTICULATED CONCRETE MATTRESS
PMB	PRECAST MODULAR BLOCK
GC	ROCKY KNOLLS GOLF COURSE
PW	CUSTER PUBLIC WORKS DEPARTMENT
EOR	ENGINEER OF RECORD
EG	EXISTING GRADE
FG	FINISH GRADE

SYMBOLS LEGEND:

SYMBOL	DESCRIPTION
	EDGE OF PAVEMENT OR ROADWAY
	HIGHWAY RIGHT-OF-WAY OR PROPERTY BOUNDARY
	FENCE LINE
	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING GAS LINE
	EXISTING OVERHEAD POWER LINES
	EXISTING UNDERGROUND POWER LINES
	EXISTING TELEPHONE LINES
	SANITARY SEWER
	WATER
	POWER POLE
	ELECTRICAL OUTLET/METER
	SOIL BORINGS
	SIGN (1 AND 2 POLE)
	CONTROL POINT
	CLEAN OUT
	AREA INLET
	ANCHOR

Prepared By



Prepared For

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By SWB	Drawn By J.W. 10/10/25
Design Date 08/2025	Print Date 08/2025
Internal Job No. W0605.064	Surveyed By
	Survey Date

Revisions

Note



95% REVIEW
PLANS



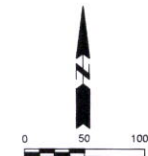
Sheet Title

GENERAL
NOTES

Sheet

G1.1

BOREHOLE LOCATIONS		
NUMBER	CONSULTANT	DATE
B-1	TERRACON	MARCH 2014
B-2	TERRACON	MARCH 2014
B-3	TERRACON	MARCH 2014
B-4	TERRACON	MARCH 2014
TP-A	AET, INC	JANUARY 2015
TP-B	AET, INC	JANUARY 2015
TP-C	AET, INC	JANUARY 2015
TP-A	AET, INC	JANUARY 2015
B-1A	AET, INC	MAY 2015
B-2A	AET, INC	MAY 2015
B-3A	AET, INC	MAY 2015

[illegible]

Prepared By



Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SWB	Drawn By: 014 24158 00
Design Date: 08/2025	Print Date: 08/2025
Internal Job No: W0605.004	
Surveyed By: -	Survey Date: -
Revisions:	

Revisions:	
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95% REVIEW
PLANS



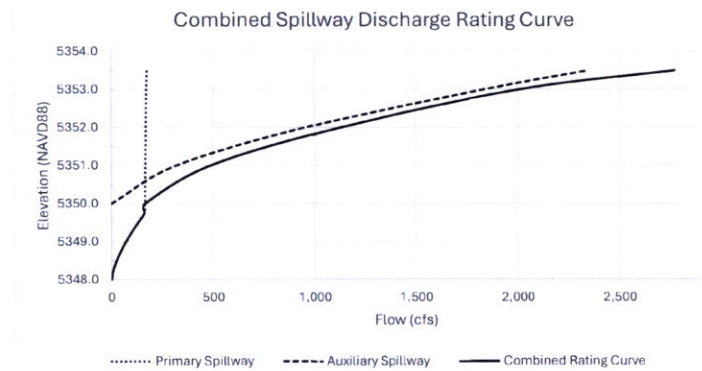
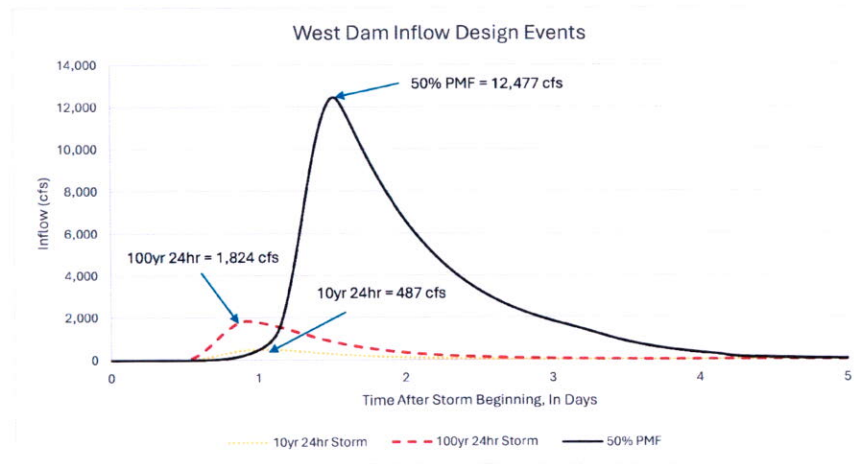
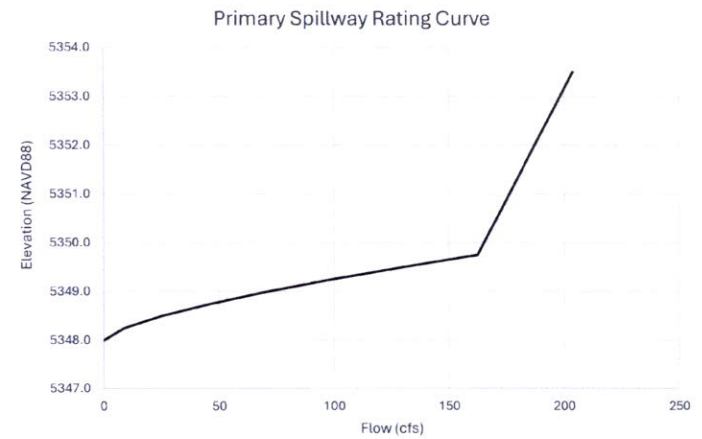
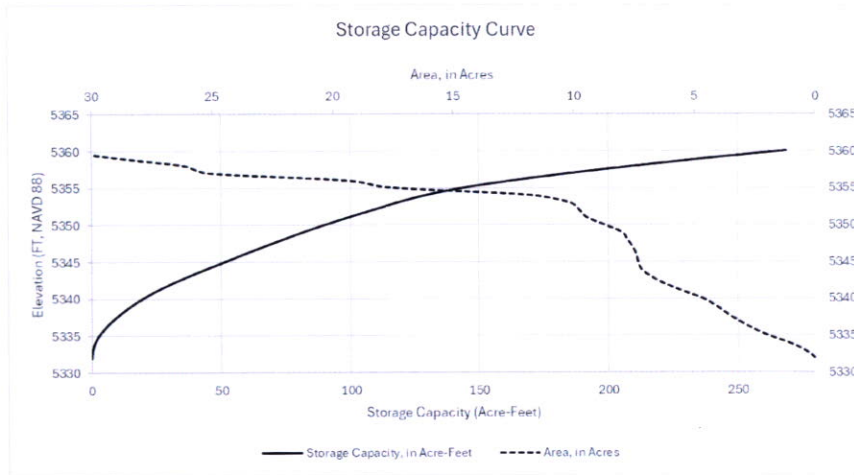
Sheet Title

EXISTING TOPO
AND SURVEY
CONTROL

Sheet

G1.2

N:\Projects\w0605-custer west dam\20-phase 2 sediment removal and embankment excavation\20250107_banner_cad transfer post 60% onedrive_2025-01-07\Max edited\CUSTER DESIGN FINAL DETAILS.dwg 05/20/25



Prepared By:



Rapid City, South Dakota

Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By:	Drawn By:
SWB	R.A. (4/11/25)
Design Date:	Print Date:
08/20/25	08/20/25
Internal Job No:	Survey Date:
W0605.004	
Surveyed By:	

Revisions:

Note:



95% REVIEW
PLANS



Sheet Title:

TABLES AND
RATINGS
CURVES

Sheet:

G1.3

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STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

OWNERS

CUSTER CITY
622 CROOK STREET
CUSTER, SD 57730
CITY ADMINISTRATOR: LAURIE WOODWARD
PHONE NUMBER: 605-673-4824

CUSTER COUNTY

426 MOUNT RUSHMORE ROAD
CUSTER, SD 57730-1934

DOT HIGHWAY SUPERINTENDENT: BRUCE SCHNEIDER
PHONE NUMBER: 605-673-4876

PRIME CONTRACTOR

CONTRACTOR
ADDRESS
CITY STATE
PHONE NUMBER:

DESIGN ENGINEER

RESPEC COMPANY LLC
3834 JET DRIVE
RAPID CITY, SD 57703
LICENSED ENGINEER: STEPHEN BAREIS
EMAIL ADDRESS: STEVE.BAREIS@RESPEC.COM
PHONE NUMBER: 1-605-381-0387

SDAAR CONTACT FOR SPILL REPORTING

- BUSINESS HOURS MONDAY-FRIDAY (805) 773-3296
- NIGHTS AND WEEKENDS (805) 773-3231

SDAAR CONTACT FOR HAZARDOUS MATERIALS

- (805) 773-3153

NATIONAL RESPONSE CENTER HOTLINE

- (800) 424-6802

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF REMOVAL AND REPLACEMENT OF DAM EMBANKMENT.

MAJOR SOIL DISTURBING ACTIVITIES (CHECK ALL THAT APPLY)

- ☒ CLEARING AND GRUBBING
- ☐ EXCAVATION/BORROW
- ☒ GRADING AND SHAPING
- ☐ FILLING
- ☒ CUTTING AND FILLING
- ☐ OTHER (DESCRIBE)

EXISTING SITE CONDITIONS AND DESCRIPTION OF RECEIVING WATERS

THE EXISTING SITE IS AN EXISTING DAM THAT HAS OUTLET WORKS OFTEN NOT HOLDING ANY WATER ON THE LOWEST SIDE OF THE CITY OF CUSTER NEAR THE COMMUNITY GOLF COURSE.

ADJACENT AREAS

THE ADJACENT AREAS CONSIST OF CITY OWNED PARCELS INCLUDING THE GOLF COURSE AND HIGHWAY 1416.

SOILS, SLOPE, AND VEGETATION

THE SOILS THROUGHOUT THE PROJECT GENERALLY CONSIST OF CLAY, SILT, GRAVEL, AND SAND.

AREA AND VOLUME DISTURBED

TOTAL SURFACE AREA OF THE SITE IS APPROXIMATELY 13.6: ACRES (AREA DISTURBED). CONTRACTOR SHALL CONTROL DUST USING WATER OR VEGETATION.

NOTICE OF INTENT

A NOTICE OF INTENT (NOI) FOR COVERAGE UNDER THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES HAS BEEN SUBMITTED TO THE SDOENR. PERMIT NUMBER IS SD06XXXXXX.

METHODS OF ENSURING SURFACE WATER QUALITY

THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE NO SEDIMENT LADEN WATERS LEAVE THE PROJECT WITHOUT EXPOSURE TO AN EROSION OR SEDIMENT CONTROL DEVICE.

THE ONLY NON STORM WATER DISCHARGE ALLOWED BY THE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES IS UNCONTAMINATED GROUND WATER OR WATERS, USED AS A BEST MANAGEMENT PRACTICE, TO WASH VEHICLES AND CONTROL DUST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A GENERAL PERMIT TO DISCHARGE UNDER THE SOUTH DAKOTA SURFACE WATER DISCHARGE SYSTEM FOR TEMPORARY DISCHARGE ACTIVITIES IN SOUTH DAKOTA (DEWATERING PERMIT) FOR ALL OTHER NON STORM WATER DISCHARGES. ALL MONITORING, TESTING, AND OTHER REQUIREMENTS OF THE DEWATERING PERMIT ARE THE RESPONSIBILITY OF THE CONTRACTOR.

PUMPING (MECHANICALLY DISCHARGING) SEDIMENT LADEN WATER INCLUDING PONDED STORM WATER OR CONTAMINATED TRENCH DEWATERING INTO THE STORM SEWER OR OFF THE PROJECT SITE IS NOT COVERED UNDER THE GENERAL PERMIT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AND COMPLY WITH A DEWATERING PERMIT FOR THESE ACTIVITIES. THE ENGINEER MAY NOTIFY THE SDOENR IF THE CONTRACTOR IS OBSERVED PUMPING SEDIMENT LADEN WATER INTO THE STORM SEWER OR OFF SITE. PUMPING SEDIMENT LADEN WATER THROUGH INLET PROTECTION IS NOT ALLOWED AS A BMP.

IN LIEU OF PUMPING SEDIMENT LADEN WATER THE FOLLOWING ARE SOME METHODS THE CONTRACTOR MAY USE TO CONTROL SEDIMENT LADEN WATER.

- THE BEST METHOD IS FOR THE CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE DURING ALL PHASES OF THE PROJECT TO PREVENT WATER FROM PONDING ON THE PROJECT.
- TREAT THE SEDIMENT LADEN WATER ON-SITE THROUGH THE USE OF FILTER BAGS, DEFLOCCULATING CHEMICALS, SEDIMENT BASINS, OR A PORTABLE CONTAINMENT SYSTEM.
- PUMP OR DISCHARGE THE WATER TO OTHER PORTIONS OF THE SITE. THIS IS ALLOWED IF THE WATERS DO NOT LEAVE THE PROJECT LIMITS.

EROSION/SEDIMENT CONTROL SEQUENCE AND TIME SCHEDULE

THE FOLLOWING PARAGRAPH(S) ARE INTENDED TO PROVIDE A GUIDELINE TO THE CONTRACTOR FOR THE INSTALLATION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES AND IMPLEMENTATION OF THE EROSION CONTROL PLAN DURING CONSTRUCTION. THE TIMELINE AND SEQUENCE ARE FOR REFERENCE ONLY AND MAY CHANGE DEPENDING ON THE CONTRACTOR'S SEQUENCE OF OPERATIONS AND MUST BE APPROVED BY THE ENGINEER PRIOR TO MAKING CHANGES.

TIME SCHEDULE

- ANTICIPATED START DATE OF CONSTRUCTION IS _____
- INSTALL PRELIMINARY EROSION CONTROL MEASURES SUCH AS SILT FENCE, PRIOR TO BEGINNING GRADING ACTIVITIES IN EACH PHASE.
- THE TEMPORARY VEHICLE TRACKING CONTROL STATION SHALL BE INSTALLED PRIOR TO ANY EXCAVATION.
- ANTICIPATED COMPLETION DATE OF _____
- UPON COMPLETION OF CONSTRUCTION, INSTALL PERMANENT EROSION CONTROL AND RE-VEGETATION MEASURES.
- PLACE SEED MIX NO MORE THAN 14 DAYS AFTER FINAL GRADING WORK IS COMPLETE.

EROSION CONTROL REMOVALS

- VEHICLE TRACKING CONTROL STATIONS SHALL BE REMOVED UPON COMPLETION OF SEEDING OPERATIONS. TEMPORARY SILT FENCE SHALL BE REMOVED AFTER ALL HARD SURFACING IS COMPLETE AND FINAL STABILIZATION HAS BEEN ACHIEVED ON SITE.

IN THE EVENT THAT MORE THAN ONE-HALF INCH OF RAIN FALLS ON THE SITE, THE STORM WATER MANAGEMENT SYSTEM WILL BE INSPECTED FOR EROSION, BUILD-UP OF SEDIMENT, OR ANY POSSIBLE LEAK FROM THE SITE WITHIN 24 HOURS. IF ANY OF THESE PROBLEMS ARE DETECTED, THE PROPER PERSONNEL SHALL BE CONTACTED, EVENT RECORDED, AND PROPER MEASURES TAKEN. INSPECTION AND MAINTENANCE FORMS ARE ATTACHED THAT PROVIDE A SCHEDULE TO BE FOLLOWED TO SATISFY THIS POLLUTION PREVENTION PLAN (THAT CAN BE CHANGED AS TIME GOES ON).

SOIL SURFACE STABILIZATION PRACTICES

AFTER CONSTRUCTION BEGINS, SOIL SURFACE STABILIZATION SHALL BE APPLIED WITHIN 14 DAYS TO ALL DISTURBED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR PERIODS LONGER THAN 21 CALENDAR DAYS. WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE, PERMANENT OR TEMPORARY SOIL SURFACE STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS AND SOIL STOCKPILES.

STABILIZATION PRACTICES (CHECK ALL THAT APPLY)

- ☒ TEMPORARY SEEDING (COVER CROP SEEDING)
- ☒ PERMANENT SEEDING
- ☒ SOODING
- ☐ PLANTING (WOODY VEGETATION FOR SOIL STABILIZATION)
- ☒ MULCHING (GRASS HAY OR STRAW)
- ☒ HYDRAULIC MULCH (WOOD FIBER MULCH)
- ☒ SOIL STABILIZER
- ☒ BONDED FIBER MATRIX
- ☒ EROSION CONTROL BLANKETS OR MATS
- ☒ VEGETATION BUFFER STRIPS
- ☒ ROUGHENED SURFACE (E.G. TRACKING)
- ☐ DUST CONTROL
- ☐ OTHER:

STRUCTURAL EROSION AND SEDIMENT CONTROLS (CHECK ALL THAT APPLY)

- ☐ SILT FENCE
- ☐ FLOATING SILT CURTAIN
- ☐ STRAW BALE CHECK
- ☒ TEMPORARY BERM
- ☒ TEMPORARY SLOPE DRAIN
- ☒ STRAW WATTLÉS OR ROLLS
- ☒ TURF REINFORCEMENT MAT
- ☒ RIP RAP
- ☒ GABIONS
- ☒ ROCK CHECK DAMS
- ☒ SEDIMENT TRAP/BASINS
- ☒ INLET PROTECTION
- ☒ OUTLET PROTECTION
- ☒ SURFACE INLET PROTECTION (AREA DRAIN)
- ☒ CURB INLET PROTECTION
- ☒ TEMPORARY VEHICLE TRACKING CONTROL STATION
- ☒ ENTRANCE/EXIT EQUIPMENT TIRE WASH
- ☒ INTERCEPTOR DITCH
- ☒ CONCRETE WASHOUT AREA
- ☒ TEMPORARY DIVERSION CHANNEL
- ☐ WORK PLATFORM
- ☐ TEMPORARY WATER BARRIER
- ☐ TEMPORARY WATER CROSSING
- ☐ OTHER:

TEMPORARY STABILIZATION MEASURES

TOP SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS WILL BE STABILIZED WITH BEST MANAGEMENT PRACTICES NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA.

PERMANENT STABILIZATION MEASURES

SEED WILL BE USED FOR PERMANENT STABILIZATION OF ALL DISTURBED AREAS NOT PAVED THROUGHOUT THE PROJECT LIMITS. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT AND SILT FENCE WILL BE REMOVED. CONTRACTOR SHALL FILL OUT "WORKSHEET #1- SCHEDULE OF GRADING AND CONSTRUCTION ACTIVITIES" TO RECORD WHEN TEMPORARY AND PERMANENT GRADING ACTIVITIES STARTED AND ENDED AND WHEN STABILIZATION BMPS FOLLOWED.

STORMWATER MANAGEMENT CONSIDERATIONS

PROVIDE SEDIMENT BASINS/TRAPS AND GRASS SWALES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE. AT NO TIME SHALL WATERS FROM THIS PROJECT LEAVE THE SITE WITHOUT EXPOSURE TO A SEDIMENT FILTRATION DEVICE. THIS MAY NECESSITATE MULTIPLE INSTALLATIONS OF SEDIMENT CONTROL DEVICES AT THE SAME LOCATION.

SILT FENCE WILL BE INSTALLED ALONG DRAINAGEWAYS TO PREVENT EXCESSIVE SEDIMENT FROM ENTERING OR DISCHARGING FROM THE SITE.

THE AREAS WHICH ARE NOT DEVELOPED WILL BE GRADED AT LESS THAN 1% AND HAVE PERMANENT SEEDING OR PLANTINGS.

TEMPORARY VEHICLE TRACKING CONTROL STATION SHOULD BE USED TO PREVENT TRACKING OF SEDIMENT OFF-SITE.

EROSION CONTROL BLANKETS SHALL BE PLACED ON ALL UNPROTECTED/DISTURBED SLOPES GREATER THAN 5 PERCENT.

Prepared By:



Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

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SWB

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Survey Date:

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PLANS



Sheet Title:

STORM WATER
POLLUTION
PREVENTION
PLAN (SWPPP)

Sheet:

G1.4

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NON-STORM WATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

1. UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION)
2. WATER USED TO CONTROL DUST
3. WATERS USED TO WASH VEHICLES WITHOUT DETERGENT

NOTICE OF TERMINATION

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SWPPP UNTIL A NOTICE OF TERMINATION (NOT) OF COVERAGE UNDER THE GENERAL PERMIT HAS BEEN ISSUED. CONTRACTOR SHALL NOTIFY OWNER WHEN THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE SWPPP. THE NOT WILL BE PREPARED BY THE OWNER FOR SUBMITTAL TO THE SDOENR WHEN ALL STORM WATER DISCHARGES COVERED BY THE PERMIT ARE ELIMINATED AND FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE. FINAL STABILIZATION MEANS EITHER OR A COMBINATION OF:

1. ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE NATIVE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN ESTABLISHED, OR EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIPRAP, GABIONS, OR GEOTEXTILES) HAVE BEEN EMPLOYED; OR
2. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES, FINAL STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO ITS PRE-CONSTRUCTION AGRICULTURAL USE. AREAS DISTURBED THAT WERE NOT PREVIOUSLY USED FOR AGRICULTURAL ACTIVITIES, SUCH AS BUFFER STRIPS IMMEDIATELY ADJACENT TO "WATERS OF THE STATE" AND AREAS WHICH ARE NOT BEING RETURNED TO THEIR PRE-CONSTRUCTION AGRICULTURAL USE MUST MEET THE FINAL STABILIZATION CRITERIA IN (1) ABOVE.

RECORD KEEPING

THE CONTRACTOR SHALL FILL OUT THE FOLLOWING FORMS TO MAINTAIN PROPER RECORDS AND TRAINING. ALTERNATE FORMS MAY BE USED BY THE CONTRACTOR IF APPROVED BY THE OWNER OR ENGINEER.

1. THE CONTRACTOR SHALL KEEP COPIES OF ALL INSPECTION REPORTS WITH THE SWPPP ON SITE.
2. CONTRACTOR SHALL FILL OUT "WORKSHEET #1- SCHEDULE OF GRADING AND CONSTRUCTION ACTIVITIES" TO RECORD WHEN TEMPORARY AND PERMANENT GRADING ACTIVITIES STARTED AND ENDED AND WHEN STABILIZATION BMPs FOLLOWED.
3. CORRECTIVE ACTION LOGS (WORKSHEET #2) SHALL BE MAINTAINED TO DESCRIBE REPAIR, REPLACEMENT, AND MAINTENANCE OF BMPs AS NOTED IN THE MAINTENANCE INSPECTION REPORTS.
4. CONTRACTOR SHALL USE "WORKSHEET #3- RECORD OF SPILLS AND LEAKS" TO RECORD DATE, MATERIAL, AND QUANTITY OF MATERIAL SPILLED AS WELL AS EFFORTS TO CLEAN UP AND REMOVE WASTE AND PREVENT FUTURE SPILLS.
5. THE CONTRACTOR SHALL USE "WORKSHEET #4- SWPPP AMENDMENT LOG" TO RECORD ALL CHANGES MADE TO THE SWPPP DUE TO WEATHER CONDITIONS, CHANGING SITE CONDITIONS, AND AS DIRECTED BY THE STATE, ENGINEER, OR OWNER IN THE BEST INTERESTS OF STORM WATER AND POLLUTION MANAGEMENT. CONTRACTOR SHALL LOG UPDATES TO THE SWPPP, INCLUDING ADDITIONS OF NEW BMPs, REPLACEMENT OF FAILED BMPs, SIGNIFICANT CHANGES IN THE ACTIVITIES OR THEIR TIMING ON THE PROJECT, CHANGES IN PERSONNEL, CHANGES IN INSPECTION AND MAINTENANCE PROCEDURES, UPDATES TO SITE MAPS, ETC.

MODIFICATIONS TO THE SWPPP

THE ENGINEER MAY ORDER CHANGES TO THE SWPPP AND/OR THE CONTRACTOR IS RESPONSIBLE TO REQUEST CHANGES TO THE SWPPP IF UNFORESEEN CHANGES OCCUR, OR THE SWPPP DOES NOT PERFORM AS INTENDED, OR TO IMPROVE THE EFFECTIVENESS OF THE SWPPP, OR TO COMPLY WITH THE SDOENR PERMIT. THE ENGINEER WILL EVALUATE AND DETERMINE IF ANY CONTRACTOR REQUESTED CHANGES TO THE SWPPP SHOULD BE MADE. THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT THESE CHANGES AS SOON AS PRACTICAL. ALL APPROVED CHANGES TO THE SWPPP MUST BE DOCUMENTED BY THE CONTRACTOR.

KEEPING THE SWPPP CURRENT

THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN AN ORIGINAL COPY OF THE SWPPP. ANY MODIFICATIONS TO THE SWPPP MUST BE DOCUMENTED AND MADE PART OF THE SWPPP. ANY MODIFICATIONS MUST BE RECORDED ON WORKSHEET #4. THE SWPPP MUST BE SUBMITTED AT THE END OF THE PROJECT.

OWNER SIGNATURE

THIS SWPPP APPEARS TO FULFILL THE TECHNICAL CRITERIA FOR EROSION CONTROL AND THE REQUIREMENTS OF BROOKINGS COUNTY AND THE CITY OF BROOKINGS. I UNDERSTAND THAT ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE NEEDED IF UNFORESEEN EROSION PROBLEMS OCCUR OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE **PRIMARY RESPONSIBLE PARTY** UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

NAME _____
PRINTED NAME

NAME _____
OWNER DATE

NAME _____
PRINTED NAME

SIGNED _____
OWNER DATE

PRIME CONTRACTOR SIGNATURE

THE "DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES - CONTRACTOR CERTIFICATION FORM" (SD FORM 2110.0) IS TO BE EXECUTED BY THE PRIME CONTRACTOR OR HIS REPRESENTATIVE. WORK MAY NOT BEGIN ON THE PROJECT UNTIL THIS SECTION IS SIGNED.

THE FORM CERTIFIES UNDER PENALTY OF LAW THAT THE CONTRACTOR UNDERSTANDS AND WILL COMPLY WITH THE TERMS AND CONDITIONS OF THE SURFACE WATER DISCHARGE GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FOR THE PROJECT.

I AM ACKNOWLEDGING THE REVIEW AND ACCEPTANCE OF RESPONSIBILITY AS THE **PRIMARY RESPONSIBLE PARTY** FOR THE INSTALLATION, MAINTENANCE, AND PROPER FUNCTION OF THIS SWPPP.

NAME _____
PRINTED NAME

SIGNED _____
CONTRACTOR DATE

TEMPORARY EROSION CONTROL MEASURES

INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES

THE CONTRACTOR SHALL NOT BEGIN THE REMOVAL OF SURFACING OR TOPSOIL WITHIN THE APPLICABLE WORK AREA UNTIL ALL APPLICABLE TEMPORARY EROSION CONTROL MEASURES ARE PLACED. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY AS CONSTRUCTION PROGRESSES AND THESE TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN 24 HOURS AT LOCATIONS IDENTIFIED ON THE SWPPP.

SEDIMENT CONTROL MEASURES

INSTALLATION OF SEDIMENT CONTROL MEASURES

THE CONTRACTOR SHALL NOT BEGIN THE REMOVAL OF SURFACING OR TOPSOIL WITHIN THE APPLICABLE WORK AREA UNTIL ALL APPLICABLE SEDIMENT CONTROL MEASURES ARE PLACED. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS NECESSARY AS CONSTRUCTION PROGRESSES AND THESE SEDIMENT CONTROL DEVICES SHALL BE INSTALLED WITHIN 24 HOURS AT LOCATIONS IDENTIFIED ON THE SWPPP.

TEMPORARY VEHICLE TRACKING CONTROL STATION

MAINTENANCE REQUIREMENTS: TEMPORARY VEHICLE TRACKING CONTROL STATION SHOULD BE INSPECTED FREQUENTLY TO ENSURE THAT MUD AND DIRT OR NOT BEING TRACKED ONTO THE ROADWAY. TEMPORARY VEHICLE TRACKING CONTROL MATERIAL MUST BE CLEANED OR REPLACED WHEN THE EFFECTIVENESS OF DIRT REMOVAL IS REDUCED.

IN LIEU OF INSTALLING TEMPORARY VEHICLE TRACKING CONTROL STATION THE CONTRACTOR MAY INSTALL A 16' X 45' AGES (APPLIED GEO-ENVIRONMENTAL SOLUTION) MUD MAT OR APPROVED EQUAL KNOWN LOCAL SUPPLIER OF MUD MAT IS BROCK WHITE. MUD MAT MUST BE INSTALLED AND MAINTAINED AS PER MANUFACTURER'S INSTRUCTIONS. MANUFACTURER'S INSTRUCTIONS MUST BE SUBMITTED TO THE ENGINEER PRIOR TO THE INSTALLATION. IF IT IS DETERMINED BY THE ENGINEER THAT THE MUD-MAT IS NOT OPERATING EFFECTIVELY, THE CONTRACTOR SHALL BE REQUIRED TO INSTALL TEMPORARY VEHICLE TRACKING CONTROL STATION AS SHOWN ON THE PLANS NO EXTRA EXPENSE TO THE OWNER.

SILT FENCE

MAINTENANCE REQUIREMENTS: AREAS OF DAMAGE INCLUDING WATER DAMAGE, FABRIC TEARS, AND FAILURES SHALL BE REPAIRED. WHEN ACCUMULATED SEDIMENT REACHES ONE HALF OF THE HEIGHT OF THE FENCE, NEW SILT FENCE SHALL BE INSTALLED. WHEN SITE CONDITIONS REQUIRE THAT SILT FENCE BE CLEANED AND MUCKED OUT, RATHER THAN REPLACED, CARE MUST BE TAKEN TO ENSURE THE EXISTING SILT FENCE IS NOT DAMAGED.

MUCKING SILT FENCE IS THE REMOVAL OF MUCK TRAPPED BY THE SILT FENCE AS DESCRIBED ABOVE. REMOVED MUCK SHOULD BE SPREAD OUT AND STABILIZED WITHIN THE PROJECTS LIMITS OR AT AN ALTERNATE LOCATION APPROVED BY THE ENGINEER.

REPAIR SILT FENCE SHALL CONSIST OF REPAIRING SILT FENCE TO MEET INSTALLATION REQUIREMENTS SPECIFIED IN THE PROJECT MANUAL.

PERMANENT EROSION CONTROL MEASURES

INSTALLATION OF PERMANENT EROSION CONTROL MEASURES

THIS WORK SHALL BE DONE AS SOON AS POSSIBLE AFTER FINISH GRADING AND TOPSOIL PLACEMENT IS COMPLETED, AND IF PRACTICAL, PRIOR TO SEEDING, FERTILIZING, AND MULCHING OF ADJACENT AREAS. AT A MINIMUM, THE WORK MUST BE COMPLETED WITHIN THE TIMEFRAMES LISTED WITHIN THE SOIL SURFACE STABILIZATION PRACTICES NOTES.

TOPSOIL

THE FOLLOWING INFORMATION IS TO PROVIDE AN INFORMATIONAL GUIDELINE TO THE CONTRACTOR REGARDING TOPSOIL PLACEMENT AND THE SWPPP. DETAILED TOPSOIL PLACEMENT NOTES ARE FOUND IN THE PLANS AND SPECIFICATIONS. GENERALLY, TOPSOIL WILL BE PLACED OVER ALL DISTURBED AREAS TO A DEPTH OF 6 INCHES. THE PLACEMENT OF THE TOPSOIL SHALL BE AS SOON AS POSSIBLE UPON COMPLETION OF THE GRADING OPERATIONS.

SEEDING AND FERTILIZING

CONSTRUCTION REQUIREMENTS: SEE PROJECT MANUAL.

Prepared By:



Rapid City, South Dakota

Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SWB	Drawn By: S.W. 10/10/25
Design Date: 08/20/25	Print Date: 08/20/25
Internal Job No: W0605.004	
Turned In By:	Survey Date:
Revisions:	

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95% REVIEW
PLANS

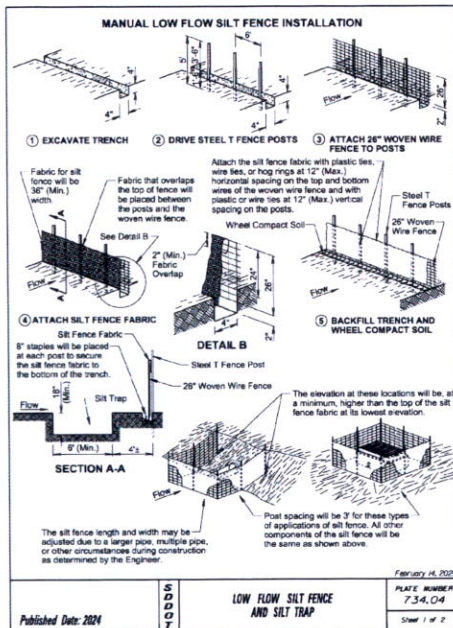


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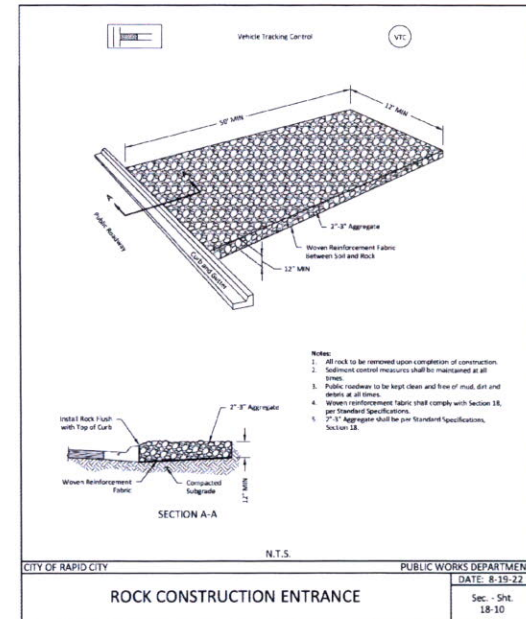
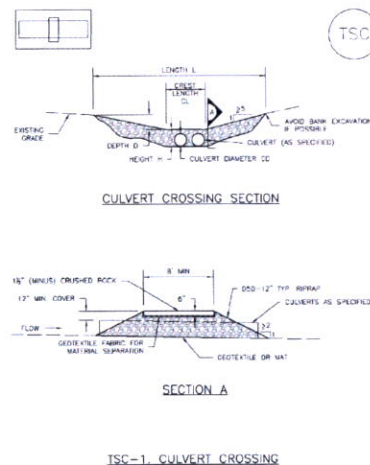
STORM WATER
POLLUTION
PREVENTION
PLAN (SWPPP)

Sheet:

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Temporary Stream Crossing (TSC) SM-10



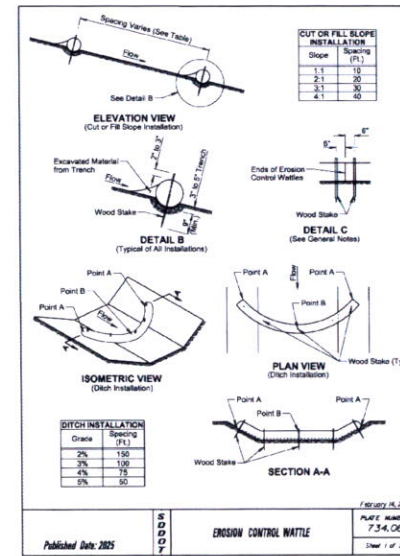
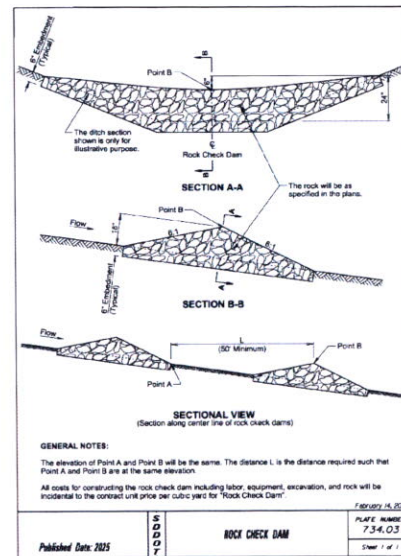
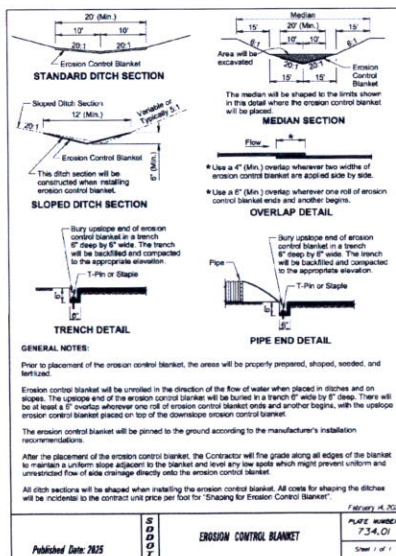
Prepared For
CUSTER WEST DAM CONSTRUCTION

CUSTER SOUTH DAKOTA

Reviewed By: SWB
Design Date: 08/2025
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Survey Date:

Note:

Sec. - SH
18-10



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Sheet Title:
EROSION SEDIMENT AND CONTROL DETAILS
Sheet:
G1.7

N:\Projects\w0605-custer west dam\20-phase 2 sediment removal and embankment excavation\30250107_banner_cad transfer post 60%conedrive_2025-01-07\files edited\CLUSTER DESIGN FINAL DETAILS.dwg 08/2025

WORKSHEET #1 - SCHEDULE OF GRADING & CONSTRUCTION ACTIVITIES

INSTRUCTIONS: DESCRIBE THE GRADING & CONSTRUCTION ACTIVITIES THAT TOOK PLACE ON SITE, INCLUDING THE DATES STARTED AND ENDED AND THE DATE STABILIZATION BMP WAS COMPLETED.
DEADLINE TO COMPLETE TEMPORARY STABILIZATION - AS SOON AS PRACTICABLE, BUT NO LATER THAN 14 CALENDAR DAYS AFTER INITIATING SOIL STABILIZATION MEASURES, AS STATED IN THE GENERAL PERMIT SECTION 3.18.

DATE ACTIVITY STARTED	DESCRIPTION OF GRADING ACTIVITY	LOCATION	GRADING ACTIVITY CEASED DATE	DATE STABILIZATION INITIATED	DESCRIPTION OF STABILIZATION BMP & LOCATION

WORKSHEET #2 - INSPECTION AND CORRECTIVE ACTION LOG

INSTRUCTIONS: NOTE THE DATE OF EACH INSPECTION, ANY DEFICIENCIES IN BMPs, AND THE CORRECTIVE ACTIONS TAKEN TO RESTORE BMPs FUNCTION. A SUMMARY OF YOUR INSPECTION FINDINGS, COVERING, AT A MINIMUM, THE OBSERVATIONS YOU MADE AS REQUIRED IN SECTIONS 4.4, AND 4.5 OF THE GENERAL PERMIT. IF AN INSPECTION DOES NOT IDENTIFY ANY INCIDENTS OF NONCOMPLIANCE, INCLUDE A STATEMENT IN THE REPORT THAT THE SITE IS IN COMPLIANCE WITH THE SWPPP AND THE GENERAL PERMIT.

INSPECTION DATE & TIME	RAIN FALL AMOUNT	INSPECTOR NAME	DESCRIPTION OF BMP DEFICIENCY	LOCATION	CORRECTIVE ACTION REQUIRED	ACTION CORRECTED	
						DATE	INITIALS

NOTE: CONTRACTOR SHALL MAKE ADDITIONAL COPIES OF THIS SHEET AS NEEDED FOR RECORD KEEPING, OR MAINTAIN YOUR OWN RECORDS TO MEET THE GENERAL PERMIT.

Prepared By:



Rapid City, South Dakota

Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By:

Drawn By:

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Print Date:

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Survey Date:

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Prepared By:



Rapid City, South Dakota

Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

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Rapid City, South Dakota

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CUSTER
WEST DAM
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CUSTER
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Rapid City, South Dakota

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CUSTER
WEST DAM
CONSTRUCTION

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SOUTH DAKOTA

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WORKSHEET #3 - RECORD OF SPILLS AND LEAKS

INSTRUCTIONS: RECORD BELOW ALL SPILLS AND SIGNIFICANT LEAKS OF TOXIC OR HAZARDOUS POLLUTANTS THAT HAVE OCCURRED ON SITE. SIGNIFICANT SPILLS INCLUDE, BUT ARE NOT LIMITED TO, RELEASES OF OIL OR HAZARDOUS SUBSTANCES IN EXCESS OF REPORTABLE QUANTITIES

DATE	LEAK/SPILL	LOCATION	TYPE OF LIQUID	APPROXIMATE AMOUNT	SOURCE & CAUSE	RESPONSE PROCEDURE	PREVENTATIVE MEASURES TAKEN

TO REPORT A RELEASE OR SPILL, CALL SDDANR AT 605-773-3296 DURING REGULAR OFFICE HOURS (8 A.M. TO 5 P.M. CENTRAL STANDARD TIME). TO REPORT THE RELEASE AFTER HOURS, ON WEEKENDS OR HOLIDAYS, CALL SOUTH DAKOTA EMERGENCY MANAGEMENT AT 605-773-3231. REPORTING THE RELEASE TO SDDANR DOES NOT MEET ANY OBLIGATION FOR REPORTING TO OTHER STATE, LOCAL, OR FEDERAL AGENCIES. THEREFORE, YOU MUST ALSO CONTACT LOCAL AUTHORITIES TO DETERMINE THE LOCAL REPORTING REQUIREMENTS FOR RELEASES. A WRITTEN REPORT OF THE UNAUTHORIZED RELEASE OF ANY REGULATED SUBSTANCE, INCLUDING QUANTITY DISCHARGED AND THE LOCATION OF THE DISCHARGE SHALL BE SENT TO SDDANR WITHIN 14 DAYS OF THE DISCHARGE.

SPILLS ARE SUBJECT TO THE FEDERAL REPORTING REQUIREMENTS OF 40 CFR PART 110, PART 117, AND PART 302 RELATING TO SPILLS OR OTHER RELEASES OF OILS OR HAZARDOUS SUBSTANCES. YOU MUST REPORT SPILLS IN EXCESS OF THE REPORTABLE QUANTITIES AS REQUIRED IN SECTION 7.1.

WORKSHEET #4 - SWPPP AMENDMENT LOG

INSTRUCTIONS: DESCRIBE CHANGES TO THE SWPPP

AMENDMENT NUMBER	DESCRIPTION	REASON	DATE	AUTHORIZED BY
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

NOTE: CONTRACTOR SHALL MAKE ADDITIONAL COPIES OF THIS SHEET AS NEEDED FOR RECORD KEEPING, OR MAINTAIN YOUR OWN RECORDS TO MEET THE GENERAL PERMIT.

Prepared By:



Rapid City, South Dakota

Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SWB	Drawn By: S-D (2/11/25)
Design Date: 08/2025	Print Date: 08/2025
Internal job No: W0605-004	Survey Date:
Surveyed By:	

Revisions:

Note:



95% REVIEW
PLANS



Sheet Title:

STORM WATER
POLLUTION
PREVENTION
PLAN (SWPPP)

Sheet:

G1.9

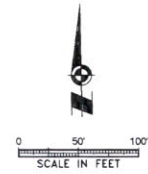
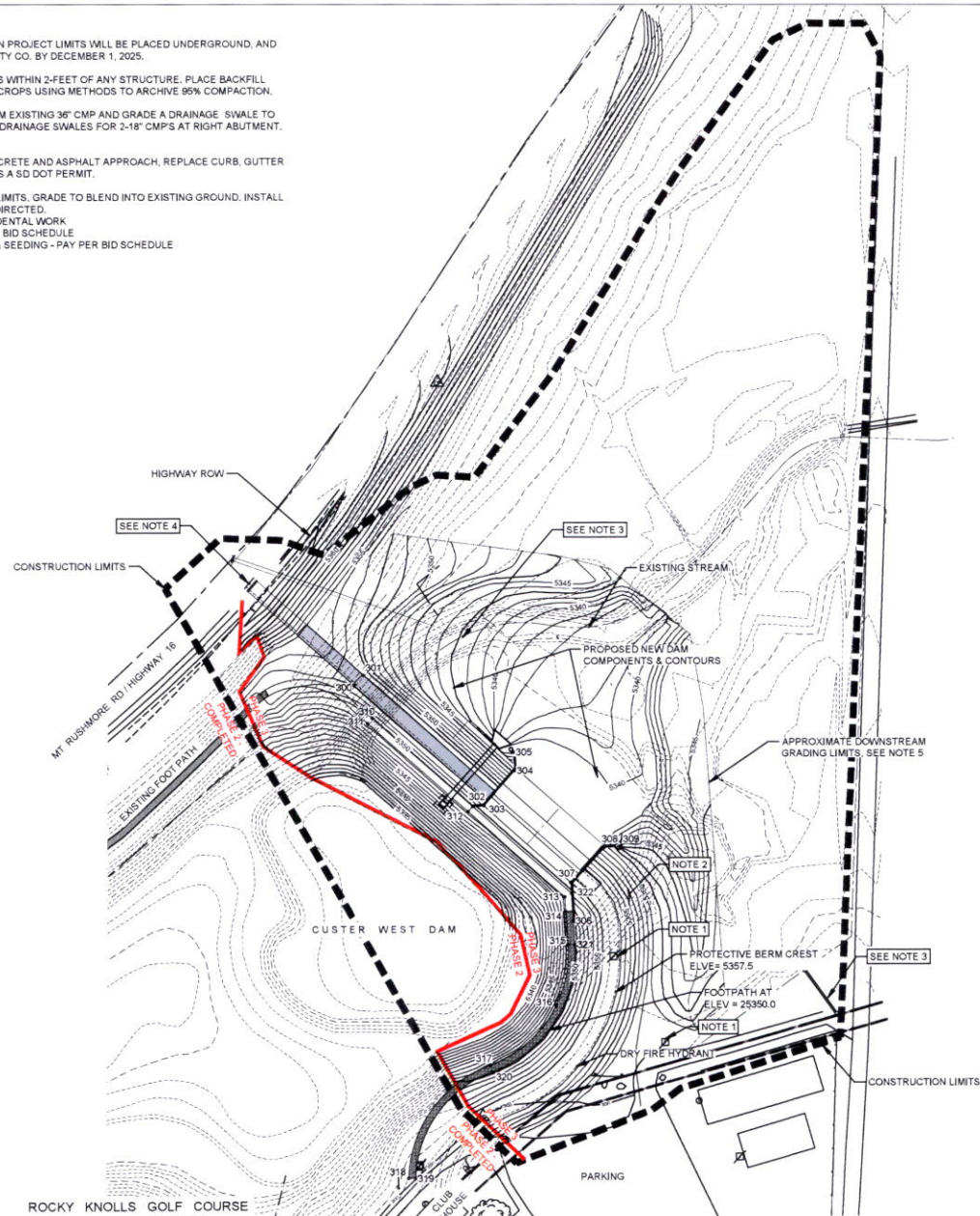
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PHASE 3 GRADING POINT TABLE

POINT #	ELEVATION	NORTHING	EASTING	DESCRIPTION
300	5353.00	537146.05	1099953.40	DAM CREST
301	5353.00	537154.90	1099951.41	DAM CREST
302	5349.50	537041.45	1100054.66	AUXILIARY SPILLWAY
303	5348.00	537042.02	1100054.31	AUXILIARY SPILLWAY
304	5341.00	537072.31	1100091.27	AUXILIARY SPILLWAY
305	5340.60	537088.29	1100090.33	AUXILIARY SPILLWAY
306	5349.50	536842.46	1100140.95	AUXILIARY SPILLWAY
307	5348.00	536975.55	1100139.02	AUXILIARY SPILLWAY
308	5341.00	537005.84	1100165.98	AUXILIARY SPILLWAY
309	5345.00	537006.78	1100181.95	AUXILIARY SPILLWAY
310	5349.50	537117.76	1099968.90	PATHWAY
311	5349.50	537113.28	1099964.90	PATHWAY
312	5349.50	537036.97	1100050.67	PATHWAY
313	5349.50	536963.07	1100133.74	PATHWAY
314	5349.50	536950.57	1100134.48	BEGIN PMB
315	5349.50	536921.72	1100136.15	PATHWAY
316	5349.50	536870.47	1100125.70	END BLOCK WALL
317	5349.50	536819.50	1100068.09	PATHWAY
318	5356.00	536723.02	1099997.24	PATHWAY
319	5356.00	536722.82	1100003.23	PATHWAY
320	5349.50	536813.83	1100070.06	PATHWAY
321	5349.50	536922.07	1100142.14	PATHWAY
322	5349.50	536965.90	1100139.58	PATHWAY

NOTES:

- OVERHEAD POWER WITHIN PROJECT LIMITS WILL BE PLACED UNDERGROUND, AND POLES REMOVED BY UTILITY CO. BY DECEMBER 1, 2025.
- REMOVE ROCK OUTCROPS WITHIN 2-FEET OF ANY STRUCTURE, PLACE BACKFILL AROUND REMAINING OUTCROPS USING METHODS TO ARCHIVE 95% COMPACTION.
- REMOVE SEDIMENTS FROM EXISTING 36" CMP AND GRADE A DRAINAGE SWALE TO CREEK CHANNEL, GRADE DRAINAGE SWALES FOR 2-18" CMP'S AT RIGHT ABUTMENT. (INCIDENTAL WORK).
- DEMOLISH EXISTING CONCRETE AND ASPHALT APPROACH, REPLACE CURB, GUTTER AND SIDEWALK. REQUIRES A SD DOT PERMIT.
- APPROXIMATE GRADING LIMITS. GRADE TO BLEND INTO EXISTING GROUND. INSTALL EROSION CONTROLS AS DIRECTED.
 - GRADING - INCIDENTAL WORK
 - ESC'S - PAY PER BID SCHEDULE
 - RECLAMATION & SEEDING - PAY PER BID SCHEDULE



Prepared By:



Rapid City, South Dakota

Prepared For:

CUSTER WEST DAM CONSTRUCTION

CUSTER SOUTH DAKOTA

Reviewed By: BWS

Drawn By: BWS

Design Date: 08/20/25

Print Date: 08/20/25

Internal Job No: W0605_004

Submitted By: Survey Date:

Revisions:

Note:



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Sheet Title:

FINISHED GRADING PLAN

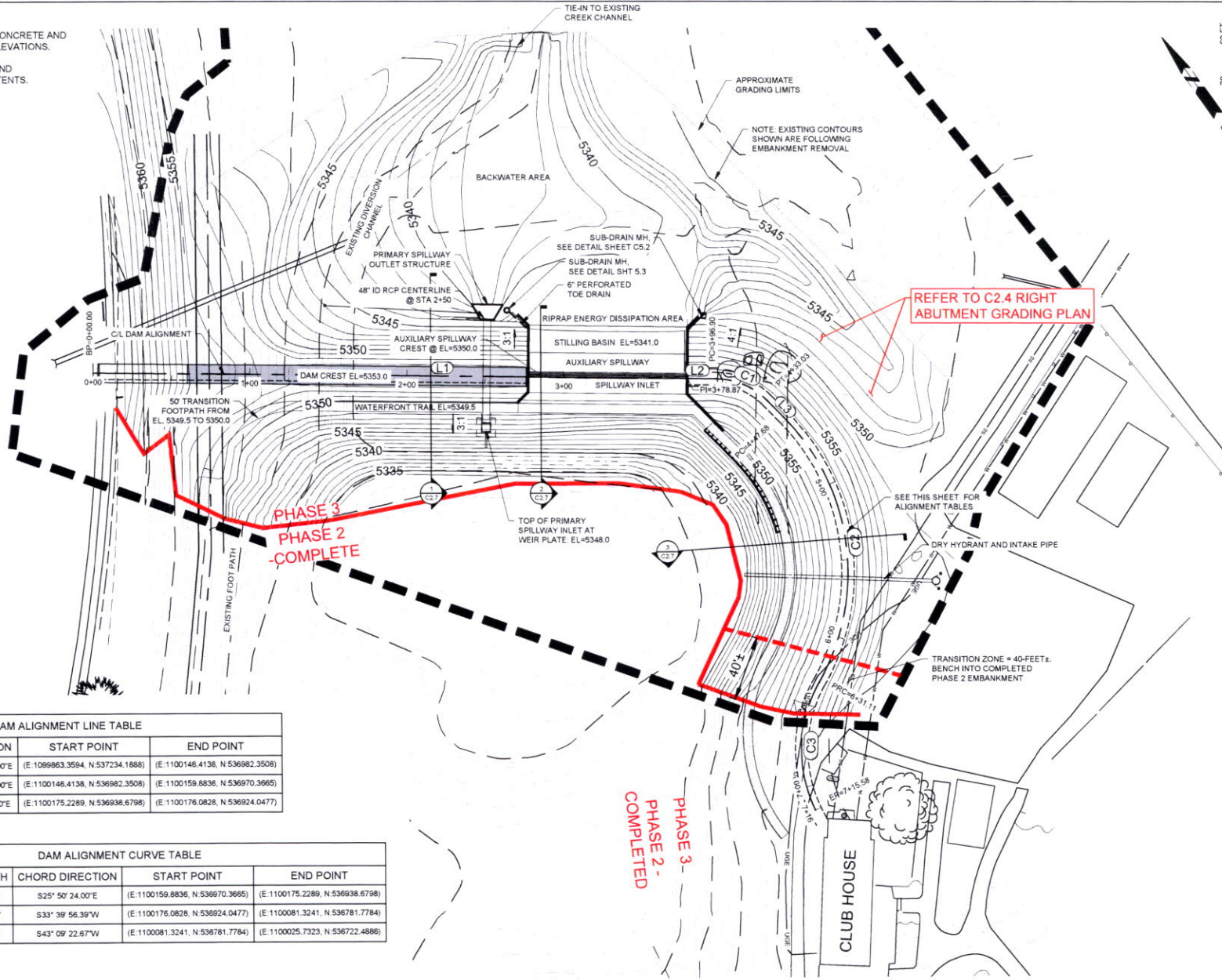
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C2.1

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NOTES:

- SEE SHEET 5.1 FOR TOP OF CONCRETE AND ARMORING FINISHED PLAN ELEVATIONS.
- SEE SHEET 5.1 FOR RIPRAP AND OVERTOPPING SYSTEM EXTENTS.



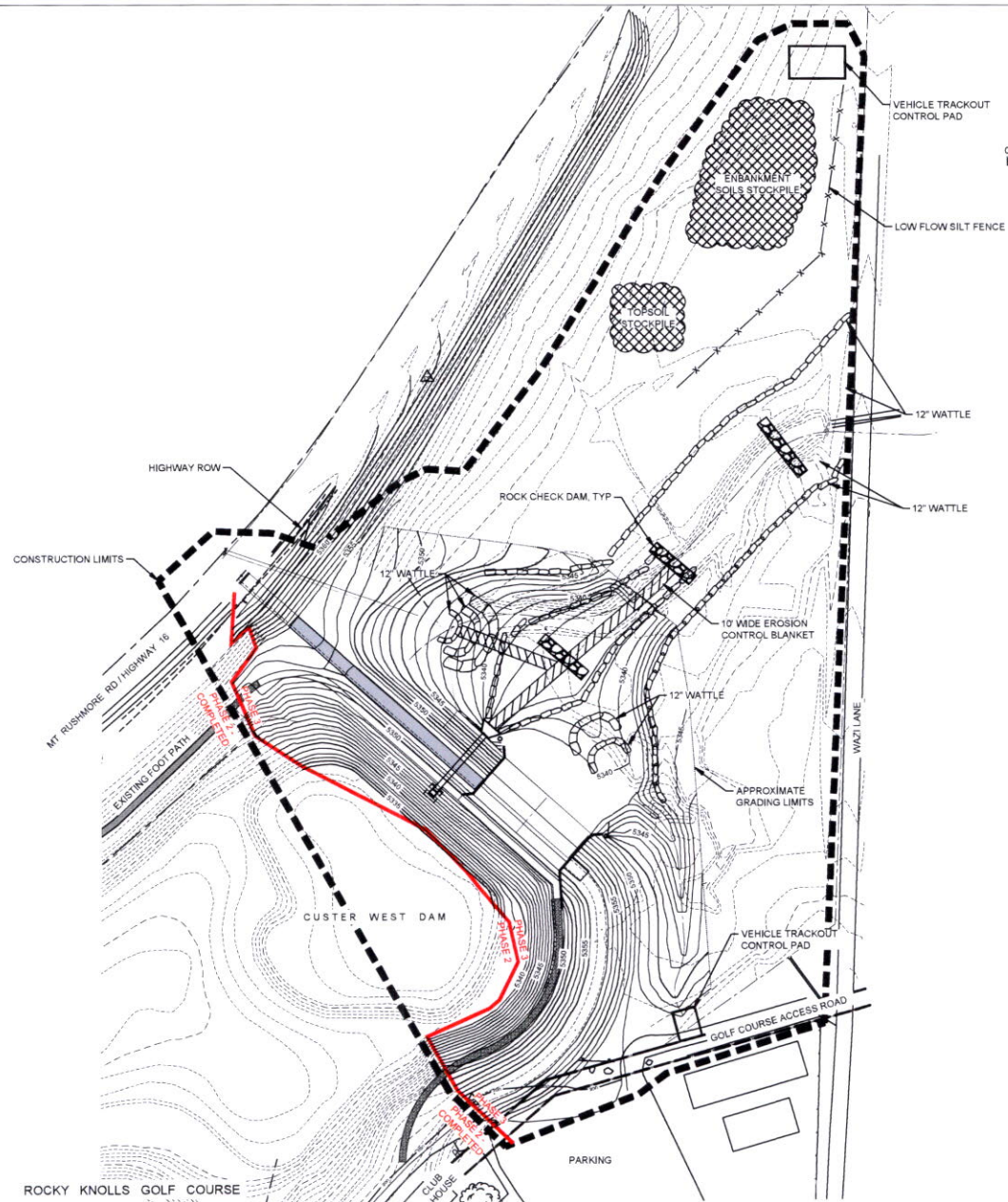
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NOTES:

1. MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. INSPECT EROSION CONTROL DEVICES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAINTENANCE AND REPAIR OF THE EROSION CONTROL DEVICES SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE APPROPRIATE BID ITEM.
2. AS CONSTRUCTION MAY DEVIATE FROM THE DESIGN PLAN, ADDITIONAL EROSION AND SEDIMENT CONTROL SHALL BE USED TO PREVENT SEDIMENT FROM BEING TRANSPORTED FROM THE DISTURBED CONSTRUCTION AREAS. THE CONTRACTOR SHALL HAVE PERSONNEL ON-SITE DURING RAIN EVENTS TO MONITOR THE EFFECTIVENESS OF THE PROJECT BEST MANAGEMENT PRACTICES (BMPs).
3. ALL SEDIMENT FROM CONSTRUCTION ACTIVITIES SHALL BE REMOVED FROM THE SURROUNDING ROADS AND CULVERTS WITHIN 24 HOURS OF DEPOSIT.
4. EROSION & SEDIMENT CONTROL DEVICES SHALL BE SUBMITTED TO THE PROJECT MANAGER AS SHOP DRAWINGS FOR APPROVAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EROSION CONTROL DEVICES WHEN DIRECTED BY THE ENGINEER.
6. EXTRA CARE SHALL BE GIVEN TO NOT ALLOWING SEDIMENT FROM ENTERING THE CREEK DURING CONSTRUCTION ACTIVITIES.
7. TEMPORARY STREAM CROSSING AND EXISTING ROCK CHECK DAMS NOT SHOWN.
8. RE-ESTABLISH VEGETATION IN ALL DISTURBED AREAS.
9. SEE SHEET G1.7 FOR EROSION SEDIMENT DETAILS.

LEGEND

-  SEDIMENT CONTROL WATTLE (SCW)
-  EROSION CONTROL BLANKET (ECB)
-  ROCK CHECK DAM
-  STOCKPILE LOCATION
-  LOW FLOW SILT FENCE



Prepared By


Rapid City, South Dakota

Prepared For

CUSTER WEST DAM CONSTRUCTION

CUSTER SOUTH DAKOTA

Reviewed By

Drawn By

Design Date

Plot Date

Internal Job No

Survey Date

Reviewed By

Survey Date

Revisions

Notes

811

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Call before you dig.

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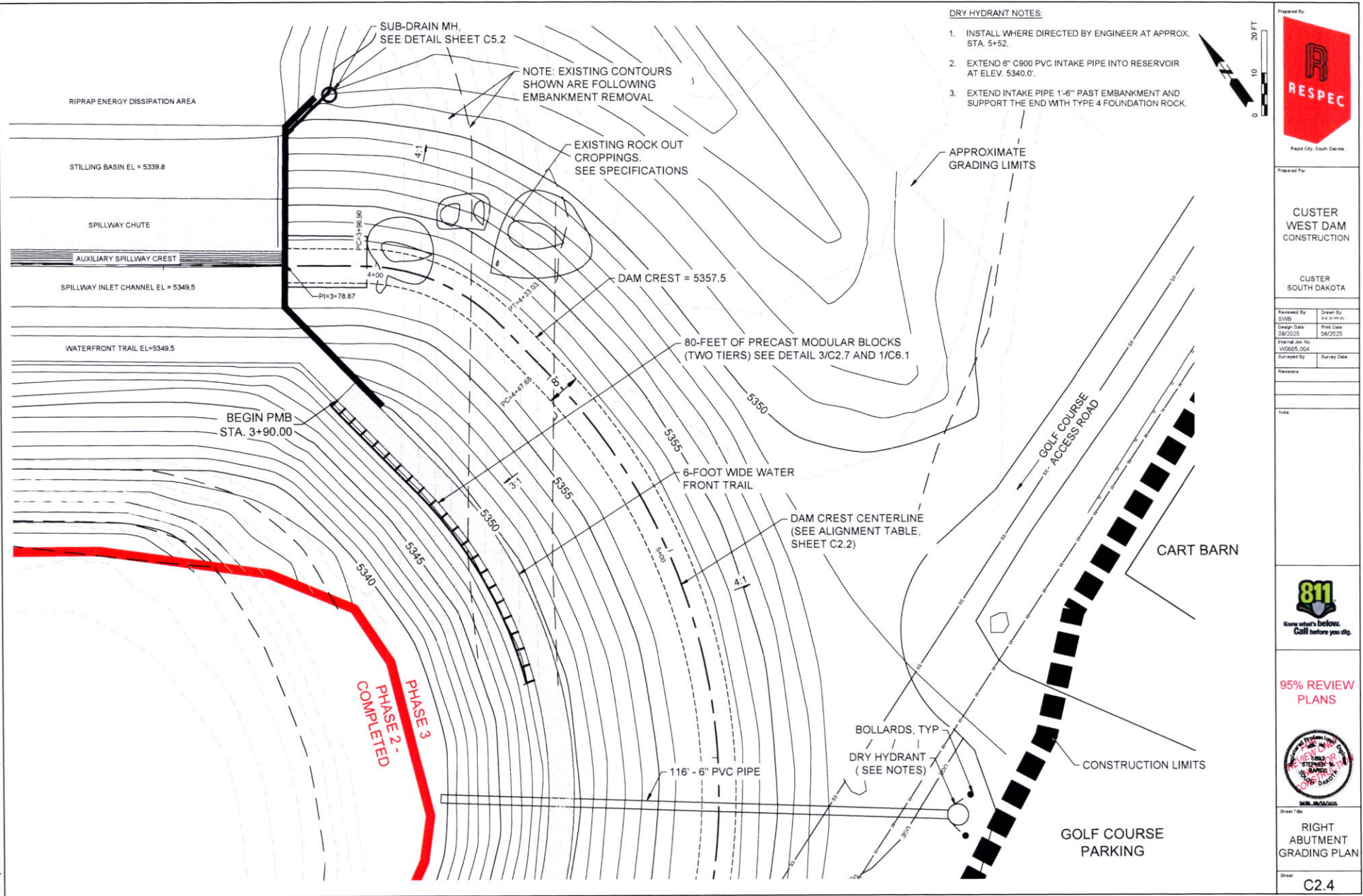
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EROSION SEDIMENT CONTROL PLAN

Sheet

C2.3

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Prepared By:



Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By:	Drawn By:
SVS	SVS
Design Date:	Print Date:
08/2025	08/2025
Internal Job No:	Survey Date:
W0605-004	
Reviewed By:	Survey Date:

Revisions:

Note:



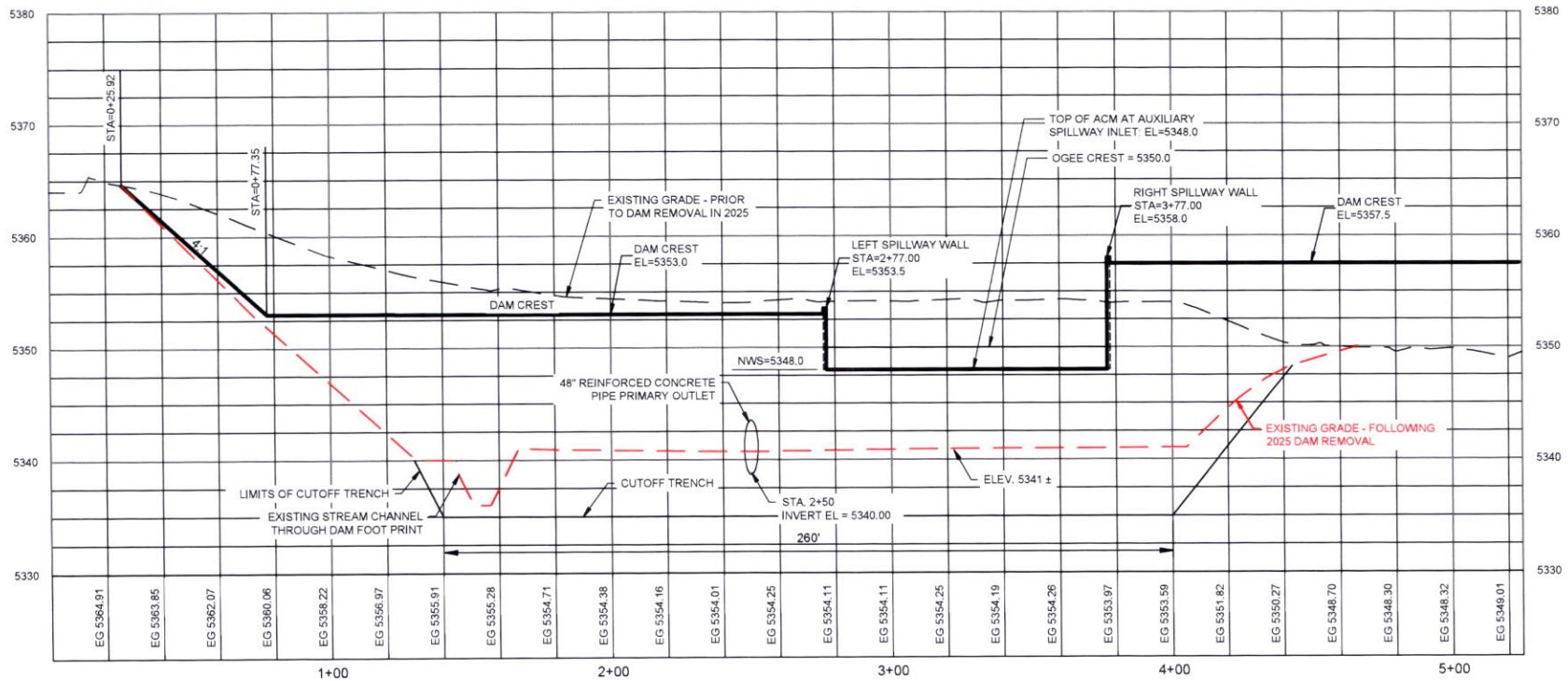
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PLANS



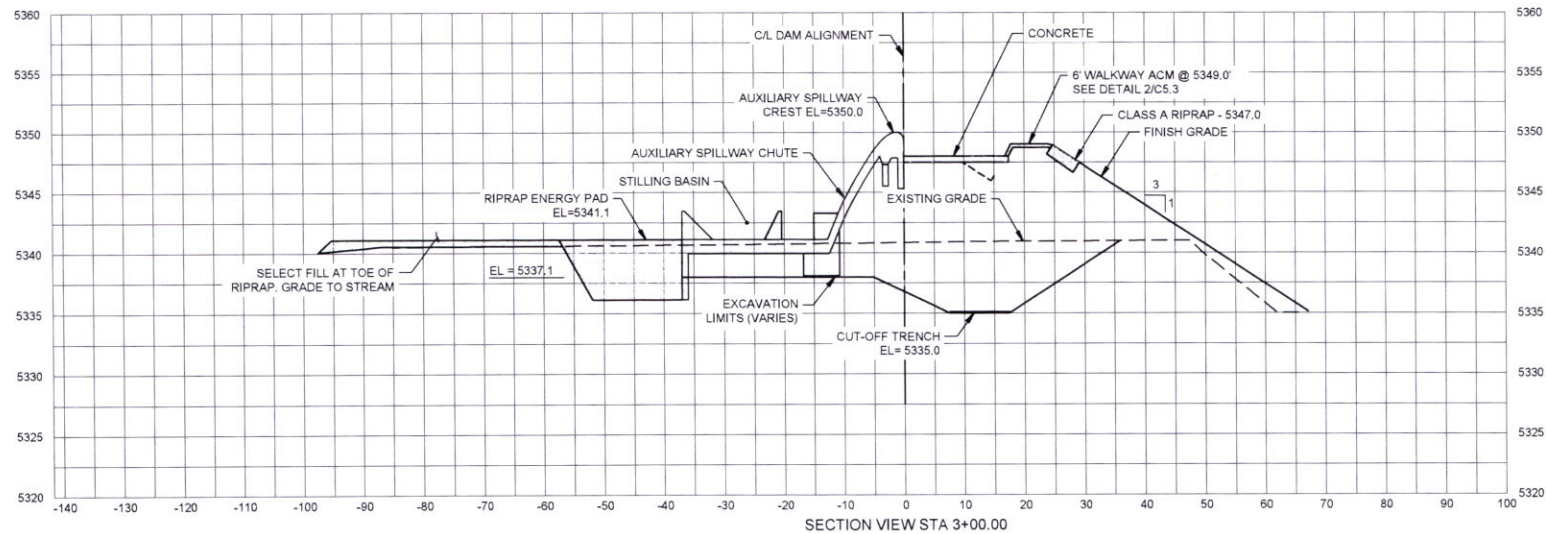
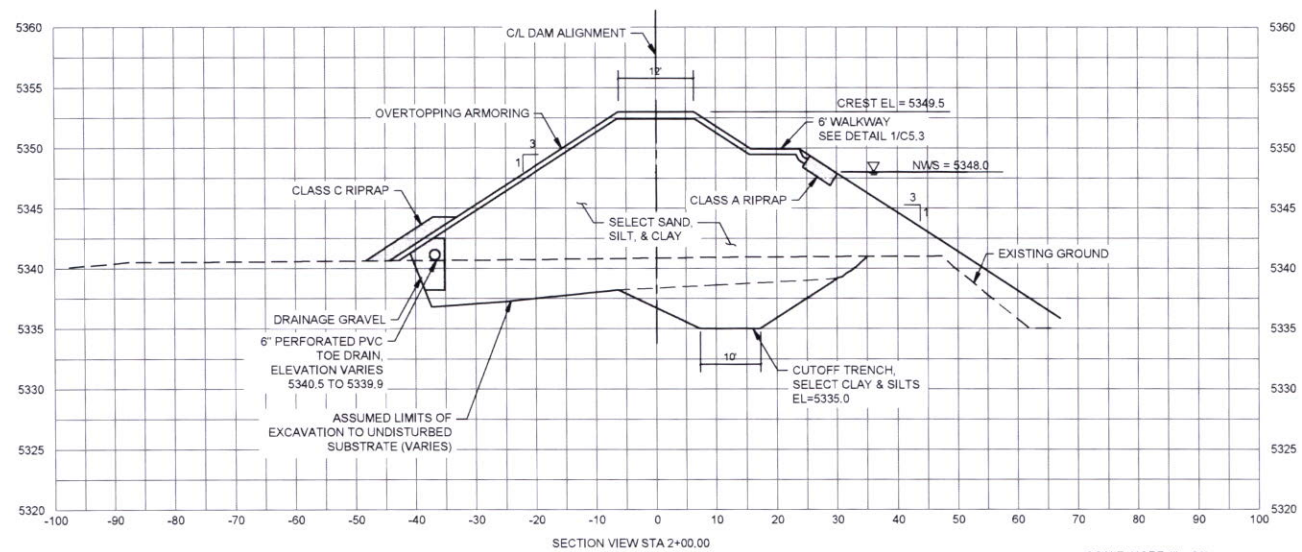
Sheet Title:
DAM
CENTERLINE
PROFILE

Sheet:
C2.5

SCALE: HORZ 1" = 40'
VERT 1" = 10'



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Prepared By:



Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SWS	Drawn By: SWS
Design Date: 08/2025	Print Date: 08/2025
Internal Job No: W065-004	Survey Date:
Reviewed By:	Survey Date:

Revisions:

Note:



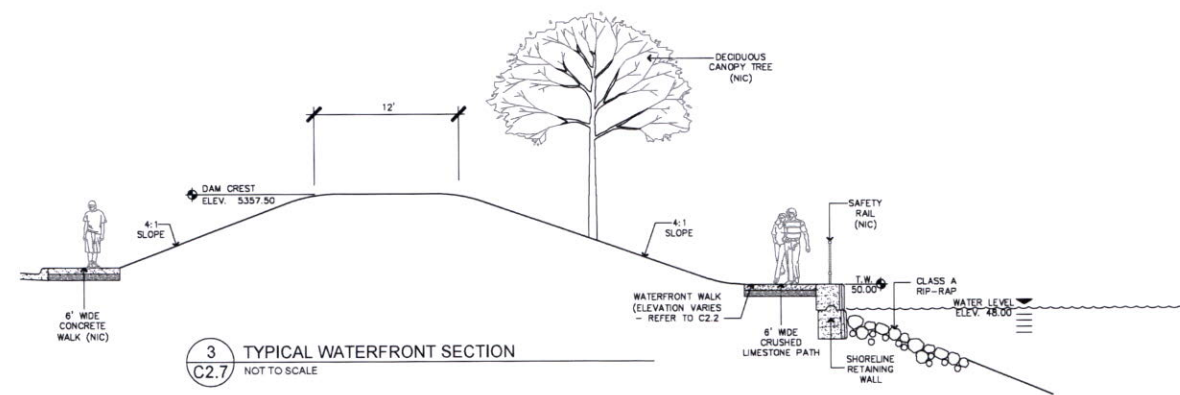
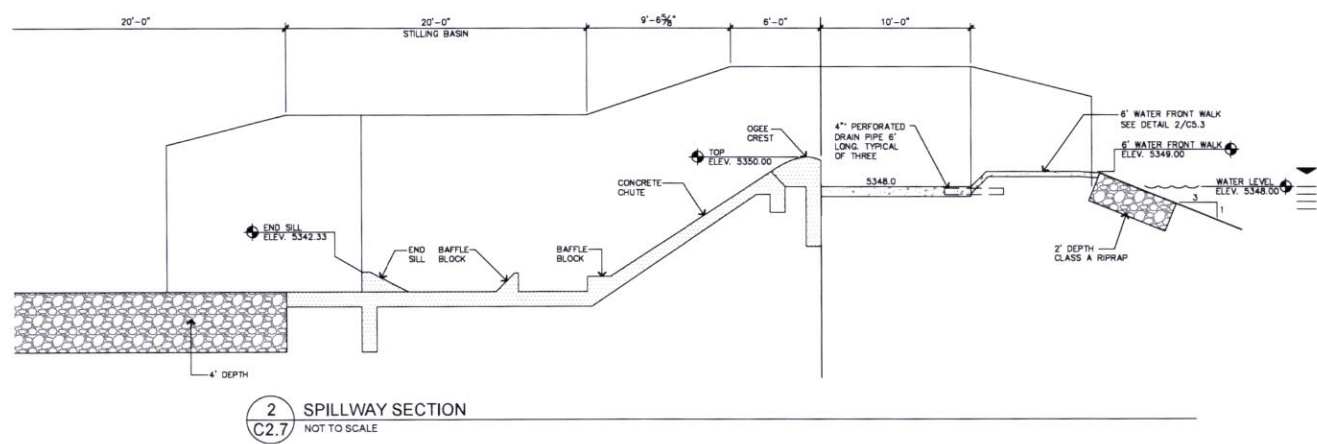
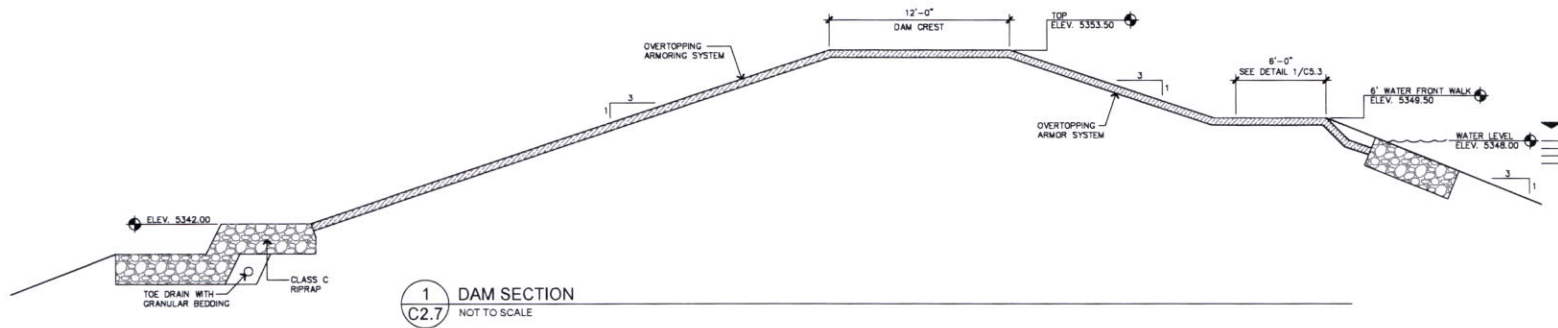
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PLANS



Sheet Title:
EMBANKMENT
& AUXILIARY
SPILLWAY
SECTIONS

Sheet:
C2.6

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Prepared By: **RESPEC**
 Respec City, South Dakota

Prepared For: **CUSTER WEST DAM CONSTRUCTION**
 CUSTER SOUTH DAKOTA

Reviewed By: SVB	Drawn By: SVB
Design Date: 08/20/25	Print Date: 08/20/25
Internal Job No: W0605-006	Survey Date:
Reviewed By: 	Survey Date:
Remarks: 	
Notes: 	

811
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Seal of the State of South Dakota
 State Engineer
 JAMES J. HARRIS
 2025

Sheet Title: **TYPICAL SECTIONS**

Sheet: **C2.7**

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STRUCTURAL GENERAL NOTES:

1. APPLICABLE SPECIFICATIONS AND CODES:
 - a. CONSTRUCTION AND DESIGN SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC) 2021 EDITION, AND WITH THE LATEST EDITION OF THE APPLICABLE SPECIFICATIONS AND THE REQUIREMENTS NOTED AS FOLLOWS.
2. DESIGN LOADS:
 - a. DESIGN LOADS AND LOAD APPLICATIONS ARE IN ACCORDANCE WITH IBC.
3. CONSTRUCTION LOADS:
 - a. PROVIDE TEMPORARY BRACING, SHORING, OR OTHER SUPPLEMENTAL SUPPORT DURING CONSTRUCTION AS NECESSARY TO PROTECT THE STRUCTURES FROM EXCESSIVE CONSTRUCTION LOADS.
 - b. DURING ERECTION OF THE STRUCTURE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY BRACING TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING LATERAL LOADS, STOCKPILES OF MATERIALS, AND EQUIPMENT. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY AND TO PROTECT COMPLETED STRUCTURES.
4. FOUNDATIONS:
 - a. FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH SOIL INVESTIGATION MADE BY AMERICAN ENGINEERING TESTING INC. PROJECT REPORT NUMBER 17-02228, DATED JUNE 2, 2015 AND MARCH 17, 2016, AND BEARING RECOMMENDATIONS LETTER DATED MAY 19, 2025.
 - b. FOUNDATION DESIGN CRITERIA
 - i. MAXIMUM ALLOWABLE SOIL BEARING PRESSURE ----- 2000 PSF
 - ii. LATERAL SOIL PRESSURES (PRESSURES NOTED BELOW ARE AT-REST):
UPSTREAM OF OGEE CREST (SATURATED): 40 PSF/FT EQUIVALENT FLUID PRESSURE+HYDROSTATIC PRESSURE
DOWNSTREAM OF OGEE CREST (DRAINED): 55 PSF/FT
 - iii. WHERE APPLICABLE, FOUNDATIONS DESIGNED FOR HYDRODYNAMIC THRUST LOADING.
 - c. FOOTINGS TO BEAR ON COMPACTED ENGINEERED FILL.
 - d. ALL TOPSOIL, FILL, AND OTHER UNSUITABLE MATERIAL SHALL BE REMOVED. THE OWNER WILL PROVIDE GEOTECHNICAL SERVICE TO INSPECT THE EXCAVATED AREA TO ENSURE ALL MATERIALS REQUIRING REMOVAL HAVE BEEN REMOVED AND BACKFILL HAS BEEN COMPACTED TO ACHIEVE DESIGN BEARING PRESSURE.
 - e. AVOID EXCESSIVE WETTING OR DRYING OF THE FOUNDATION EXCAVATIONS DURING CONSTRUCTION.
 - f. BACKFILL ON WALLS WITH FILL ON BOTH SIDES SHALL BE COMPACTED IN EQUAL LIFTS EACH SIDE OF WALL. WALLS BACKFILLED FROM ONE SIDE ONLY SHALL HAVE ALL SUPPORTING SLABS, PERMANENT FRAMING, OR TEMPORARY BRACING IN PLACE PRIOR TO PLACEMENT OF BACKFILL.
 - g. CONTRACTOR SHALL NOT USE HEAVY EQUIPMENT BEHIND RETAINING WALLS TO BE BACKFILLED UNTIL 28-DAY COMPRESSIVE STRENGTH IS ACHIEVED.
5. CONCRETE
 - a. CONCRETE CONSTRUCTION SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318), COLD WEATHER CONCRETE (ACI-308), AND ACI 350-20 CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES.
 - b. DETAILING, FABRICATION AND PLACEMENT OF REINFORCEMENT SHALL CONFORM TO DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI 315).
 - c. MATERIALS
 - i. CONCRETE
 - (a) STRUCTURAL CAST-IN-PLACE----- $f_c = 4,500$ PSI
 - (b) MAX. WATER-TO-CEMENT RATIO = 0.45
 - (c) AIR ENTRAINMENT 4% TO 7%
 - (d) NORMAL WEIGHT (150 PCF) CONCRETE
 - ii. REINFORCING MATERIALS
 - (a) REINFORCING BARS ----- ASTM A615, GRADE 60
 - (b) WELDED WIRE FABRIC ----- ASTM A165, FURNISH IN SHEETS ONLY

- d. ALL BENT REINFORCING BARS SHALL BE SHOP FABRICATED ONLY. REBENDING OR WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS AUTHORIZED BY ENGINEER.
- e. END HOOKS IN REINFORCING BARS, SHOWN ON THE DRAWINGS BUT NOT DIMENSIONED, SHALL CONFORM TO ACI 318.
- f. CONCRETE COVER OVER REINFORCEMENT SHALL BE 2" CLEAR EXCEPT FOR THE FOLLOWING UNLESS OTHERWISE NOTED.
 - i. CONCRETE PLACED AGAINST AND PERMANENTLY IN CONTACT WITH EARTH ----- 3" CLEAR
- g. REINFORCEMENT SPLICES NOT PERMITTED EXCEPT AS DETAILED OR AUTHORIZED BY ENGINEER. LAP REINFORCING BARS THE FOLLOWING MINIMUMS AT ALL SPLICES, CORNERS, AND INTERSECTIONS UNLESS OTHERWISE INDICATED.

REQUIRED REINFORCING BAR TENSION LAP SPLICE LENGTHS (INCHES)						
FOR CONCRETE STRENGTHS OF 4000 PSI TO 4500 PSI	REINFORCEMENT WITH MORE THAN 12 INCH CONCRETE CAST BELOW SPLICE			ALL OTHER REINFORCEMENT		
	CONCRETE COVER			CONCRETE COVER		
	1"	1 1/2"	2"	1"	1 1/2"	2"
#3	21	21	21	16	16	16
#4	25	21	21	20	16	16
#5	39	26	26	30	20	20
#6	56	38	31	43	29	24
#7	93	63	48	72	49	37
#8		82	61		63	47
#9		104	78		80	60
#10		130	98		101	76

NOTE: LAP SPLICE LENGTHS SHOWN ABOVE ARE FOR UN-COATED REINFORCING BAR. IF REINFORCING BARS ARE EPOXY-COATED, INCREASE ALL LENGTHS BY 30%.

- h. LAP WELDED WIRE FABRIC ONE FULL MESH AT SPLICES.
 - i. STAGGER ADJACENT REINFORCEMENT LAP SPLICES IN WALLS 18" MINIMUM.
 - j. BEAM AND CONTINUOUS SLAB REINFORCEMENT
 - i. SPLICE TOP REINFORCEMENT AT CENTER OF SPAN BETWEEN SUPPORTS.
 - ii. SPLICE BOTTOM REINFORCEMENT AT SUPPORTS.
 - iii. TERMINATE BEAMS TOP REINFORCEMENT WITH STANDARD HOOK AT END OF CANTILEVER OR DISCONTINUOUS BEAMS.
 - k. PROVIDE BAR SUPPORTS TO PROPERLY SECURE AND SUPPORT REINFORCING BARS. IN ADDITION TO NORMAL ACCESSORIES, PROVIDE # 3 STANDEES AT 48" O.C. TO SUPPORT TOP REINFORCEMENT IN BASE SLABS, AND # 3 "U" OR "Z" SHAPE SPACERS AT 72" O.C. EACH WAY IN WALLS WITH TWO CURTAINS OF REINFORCEMENT.
 - l. DOWELS, PIPES, AND OTHER INSTALLED MATERIALS AND ACCESSORIES SHALL BE HELD SECURELY IN POSITION DURING CONCRETE PLACEMENT. ALL REINFORCEMENT IS TO BE PLACED AND SECURED PRIOR TO PLACEMENT OF CONCRETE, UNLESS OTHERWISE STATED. DOWELS SHALL BE IN PLACE, NOT INSERTED, WHILE CONCRETE IS IN A PLASTIC STATE.
 - m. REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY PIPE, PIPE FLANGE, OR METAL PART EMBEDDED IN CONCRETE. PROVIDE 2" CLEARANCE IN ALL CASES UNLESS OTHERWISE INDICATED. NO EMBEDDED ITEM SHALL BE SUSPENDED FROM, SUPPORTED BY, OR BRACED IN PLACE FROM THE STRUCTURAL REINFORCEMENT.
 - n. LOCATE CONSTRUCTION JOINTS WHERE SHOWN ON THE DRAWINGS OR AS AUTHORIZED BY ENGINEER. SLABS, JOISTS, AND BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE EXCEPT WHERE DETAILED ON DRAWINGS.
 - o. THOROUGHLY CLEAN ALL KEYWAYS AND CONSTRUCTION JOINTS PRIOR TO PLACING CONCRETE IN ADJACENT PLACEMENT.
 - p. PROTECT ALL PROJECTING WATERSTOPS FROM DAMAGE AND EXPOSURE DURING CONSTRUCTION. FIRMLY TIE ALL ENDS AND EDGES OF WATERSTOPS AT 18" MAXIMUM TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT.
 - q. BEGIN SPACING OF BARS WHICH PARALLEL CONSTRUCTION AND EXPANSION JOINTS 2" CLEAR EACH SIDE OF JOINT.
 - r. UNLESS OTHERWISE SHOWN, PLACE 2-# 5 (1 EACH FACE) WITH 2-0" PROJECTIONS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLABS.
 - s. PROVIDE AN ADDITIONAL 500 LINEAL FEET EACH OF #4 AND # 5 REINFORCING BARS FOR USE AS DIRECTED DURING CONSTRUCTION.
 - t. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE INDICATED.
 - u. CONTRACTOR SHALL SUBMIT, FOR APPROVAL, A DETAILED SEQUENCING PLAN FOR AUXILIARY SPILLWAY PLACEMENTS. THE PLAN SHALL INCLUDE JOINT LOCATIONS WHERE THEY DIFFER FROM THE PLANS.
 - v. MAINTAIN GROUNDWATER AT THE BOTTOM OF FOOTINGS UNTIL 28-DAY COMPRESSIVE STRENGTH IS ACHIEVED.
6. MISCELLANEOUS MATERIALS
 - a. TRASHRACKS SHALL BE MADE OF ASTM A36 STEEL OR EQUAL.
 - b. TRASHRACKS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.
 - c. WATERSTOP AROUND RCP SHALL BE A POLYMER BASED SEALANT TAPE SUCH AS SIKAFLEX SWELLSTOP OR APPROVED EQUAL.
 - d. PVC WATERSTOPS SHALL CONSIST OF SIKAFLEX GREENSTREAK OR APPROVED PRODUCT.
 - e. ALL POST-INSTALLED CONCRETE ANCHORS AND HARDWARE SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.
 - f. ELASTOMERIC JOINT SEALANT - SIKAFLEX NON-SAG OR APPROVED EQUAL.
 - g. REFER TO SPECIFICATIONS FOR REQUIRED SALIENT CHARACTERISTICS.

Prepared By:



Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By:	Drawn By:
EWB	6-2-2025
Design Date:	Print Date:
08/20/25	08/20/25
Internal Job No:	
W0905-004	
Surveyed By:	Survey Date:
Revisions:	

Title:



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PLANS



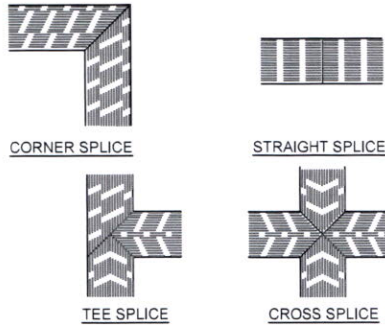
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STRUCTURAL
NOTES AND
DETAILS

Sheet:

S3.1

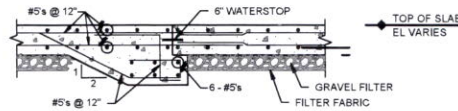
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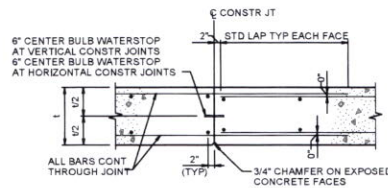
HEAT SPlicing WATERSTOP JOINTS

1. CUT CLEAN STRAIGHT EDGES.
2. HOLD THE TWO EDGES TO BE JOINED IN CONTACT WITH A THERMOSTATICALLY CONTROLLED ELECTRIC HEATING IRON (300° - 425° F) UNTIL THEY BECOME MOLTEN (15 TO 50 SECONDS).
3. IMMEDIATELY JOIN THE MOLTEN ENDS, BEING CERTAIN TO MAINTAIN THE CONTINUITY OF THE CENTER BULB AND RIBS.
4. ALLOW THE WATERSTOP TO COOL BEFORE STRESSING.

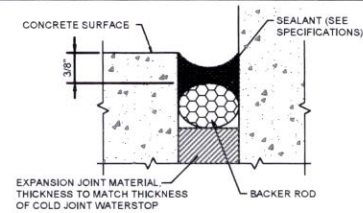
1 HEAT SPlicing WATERSTOP JOINTS
S3.2 NO SCALE



2 SPILLWAY CONSTRUCTION JOINT
S3.2 NO SCALE

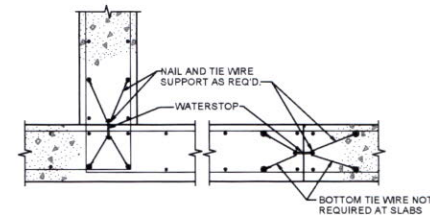


4 DETAIL - WALL CONSTRUCTION JOINT
S3.2 NO SCALE

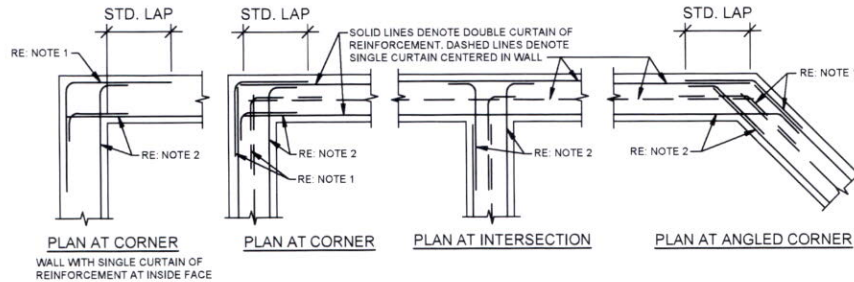


3 SECTION - SEALANT GROOVE
S3.2 NO SCALE

NOTE:
WHERE FACE OF JOINT IS TO BE COATED WITH BOND BREAKER, AVOID COATING SEALANT GROOVE.



5 DETAIL - WATERSTOP SUPPORT
S3.2 NO SCALE



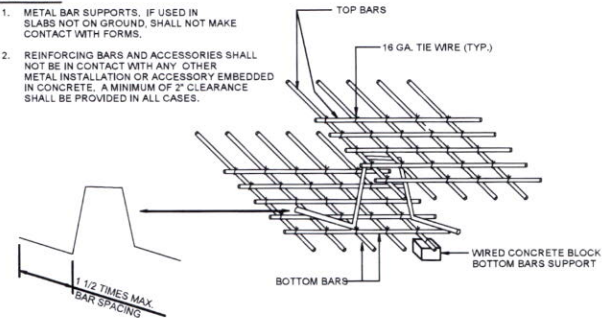
6 HORIZONTAL REINFORCEMENT AT CONCRETE WALL CORNERS AND INTERSECTIONS
S3.2 NO SCALE

NOTES:

1. PROVIDE CORNER BARS WITH STANDARD LAP AS INDICATED.
2. PROVIDE MAIN WALL REINFORCEMENT WITH STANDARD HOOK AT END, OR PROVIDE SEPARATE CORNER BARS WITH END HOOK AND LAP WITH MAIN WALL REINFORCEMENT.
3. CORNER BARS SHALL MATCH HORIZONTAL WALL REINFORCEMENT.
4. RE: GENERAL NOTES FOR STANDARD LAP LENGTHS.

NOTES:

1. METAL BAR SUPPORTS, IF USED IN SLABS NOT ON GROUND, SHALL NOT MAKE CONTACT WITH FORMS.
2. REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY OTHER METAL INSTALLATION OR ACCESSORY EMBEDDED IN CONCRETE. A MINIMUM OF 2" CLEARANCE SHALL BE PROVIDED IN ALL CASES.



7 DETAIL - BAR CHAIR REINF. SUPPORT
S3.2 NO SCALE



Prepared For:

CUSTER WEST DAM
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SOUTH DAKOTA

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Submitted By: Survey Date:

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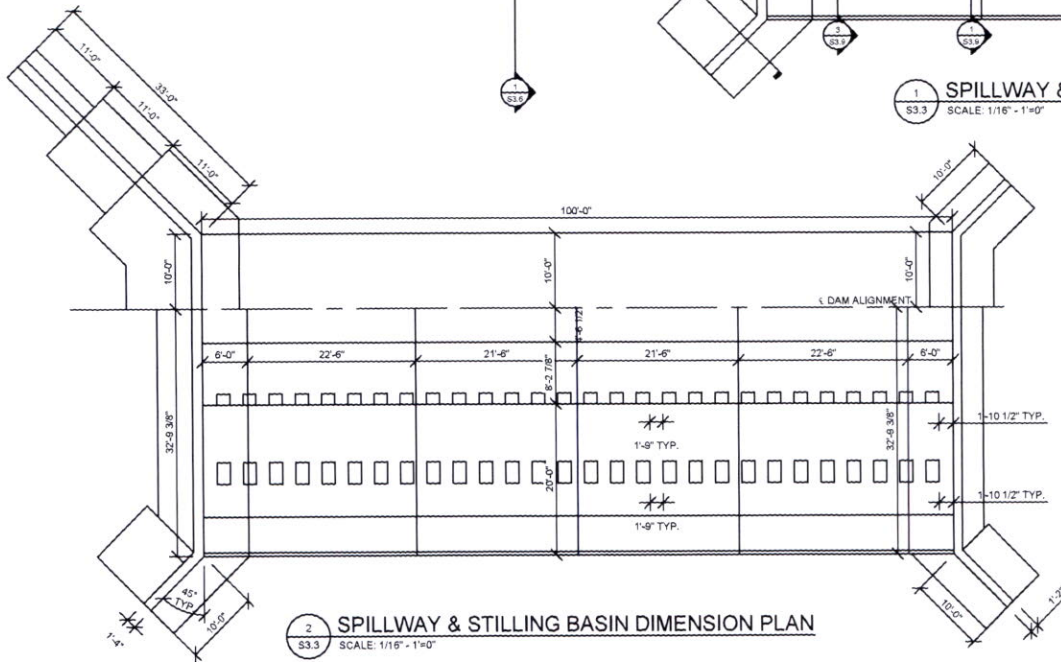
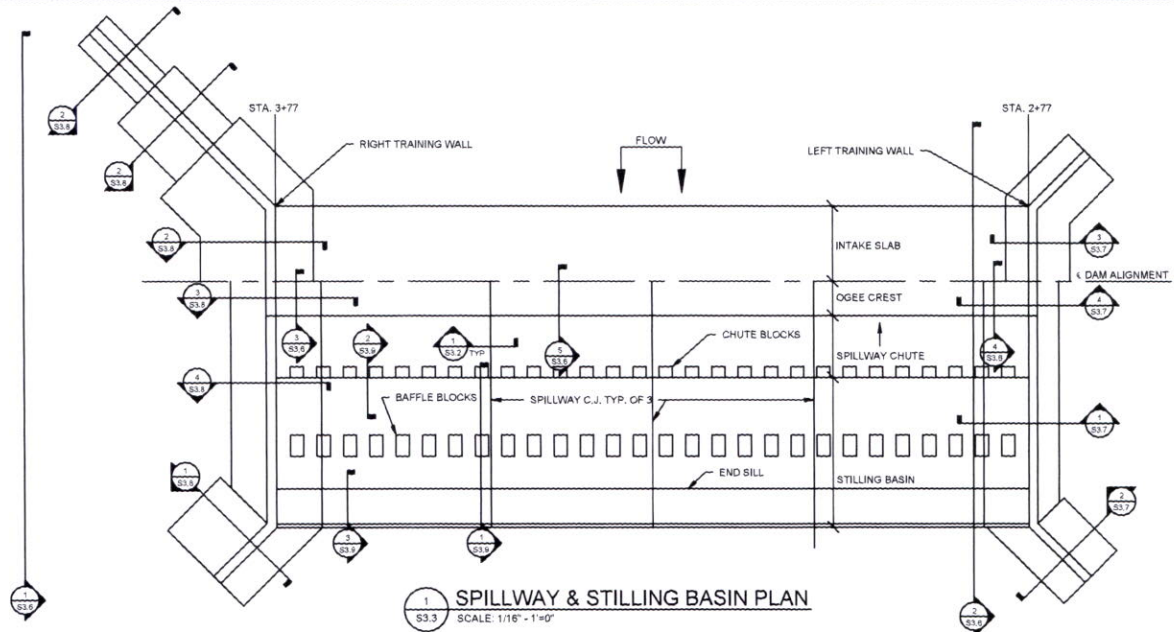


Sheet Title:
STRUCTURAL
DETAILS

Sheet:
S3.2

NOTES:

1. SPILLWAY CHUTE & STILLING BASIN SLAB TO BE 12" THICK W/ #5 @ 12" O.C. T. & B. EA. WAY UNLESS OTHERWISE NOTED ON DETAILS. SEE C3.1 FOR REBAR CLEAR COVER NOTES.
2. INTAKE SLAB TO BE 8" THICK W/ ONE LAYER #5 @ 12" O.C. AT BOTTOM OF SLAB. SEE C3.1 FOR REBAR CLEAR COVER NOTES.
3. CONTRACTOR TO SUBMIT CONSTRUCTION JOINT LOCATIONS FOR ALL WALLS & SLABS PRIOR TO CONSTRUCTION TO BE APPROVED BY E.O.R.
4. PIPE RAILING NOT SHOWN. SEE CONTROL POINT TABLE.



Prepared By



Rapid City, South Dakota

Prepared For

CUSTER
WEST DAM
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CUSTER
SOUTH DAKOTA

Reviewed By	Drawn By
SWB	SWB
Design Date	Print Date
08/2025	08/2025
Interim Job No.	Survey Date
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Revised By	Survey Date

Revisions

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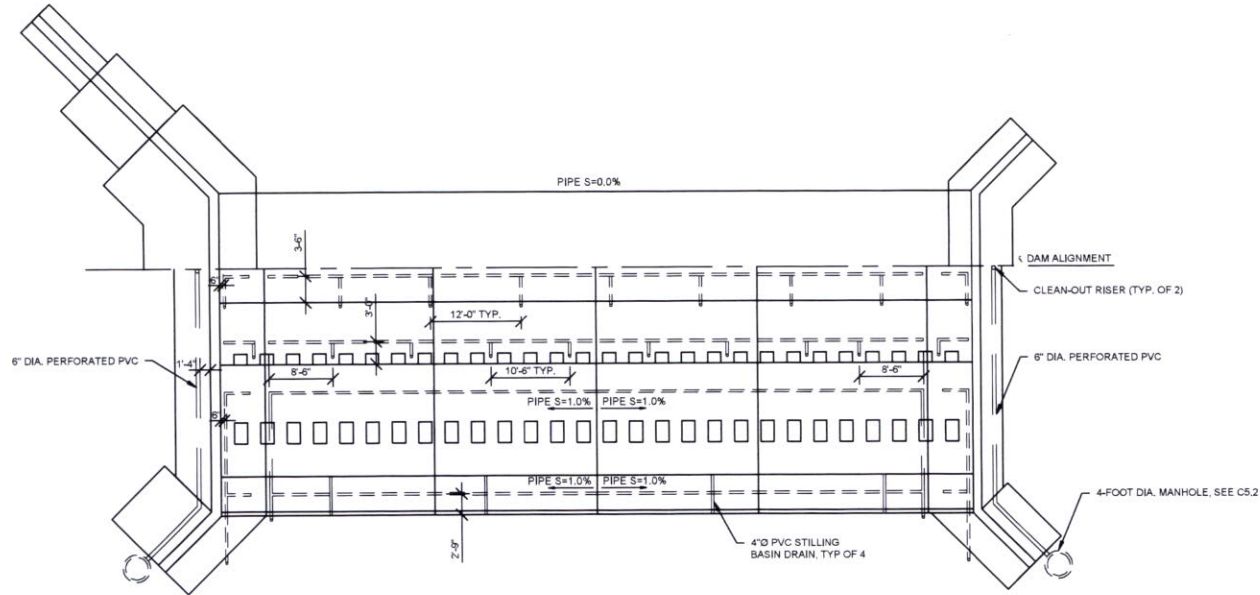
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SPILLWAY AND
STILLING BASIN
PLANS

Sheet

S3.3

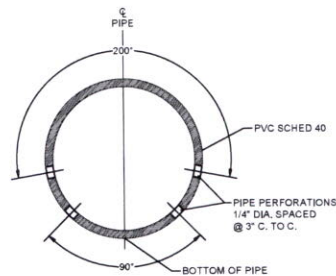
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1 SUB-DRAINAGE PLAN
S3.4 SCALE: 1/16" = 1'-0"

GRAVEL SUB-DRAIN MATERIAL GRADATION TABLE	
U.S. SIEVE SIZE	% PASSING
1"	100
3/4"	85-100
1/2"	45-80
3/8"	30-60
No. 4	0-2

2 GRAVEL SUB-DRAIN GRADATION TABLE
S3.4 NO SCALE



3 LOCATION OF PIPE PERFORATIONS FOR INSTALLATION - DETAIL
S3.4 SCALE: NONE

NOTES

- PIPE IS 4" DIAMETER UNLESS OTHERWISE NOTED ON PLAN.
- ALL PVC PIPE IS PERFORATED (SEE DETAIL 3/S3.4).



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SOUTH DAKOTA

Reviewed By SVS	Drawn By S.A. 20/11/20
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Internal Job No. W0605-004	
Surveyed By	Survey Date
Reviewed	

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Sheet Title

SPILLWAY
ELEVATION
AND LEFT
TRAINING WALL

Sheet
S3.4

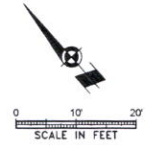
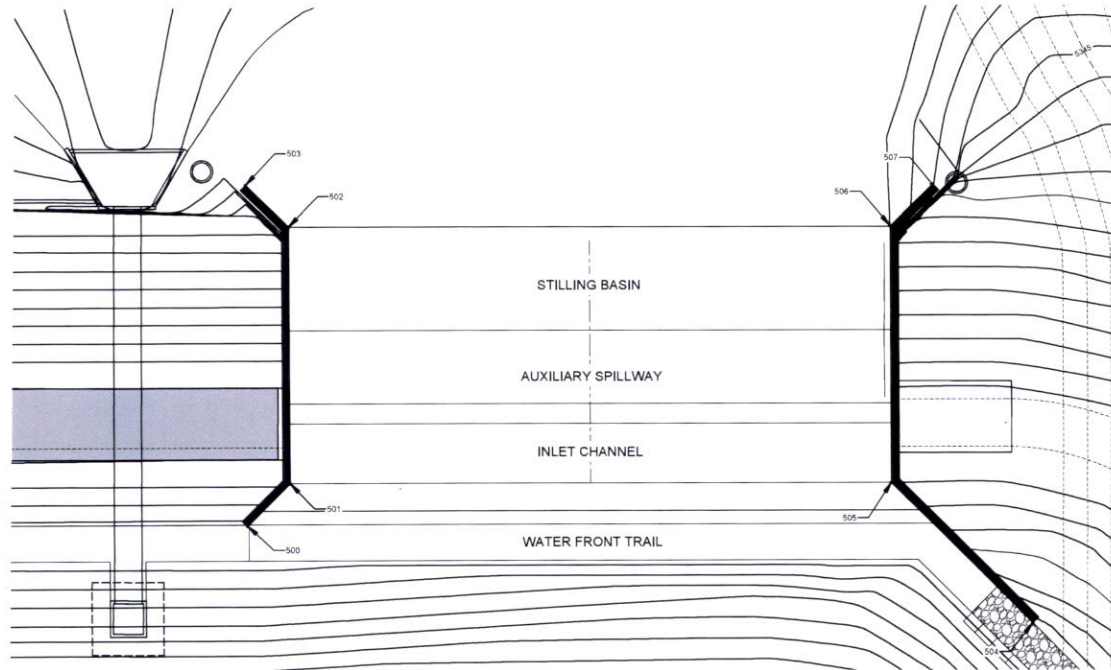
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SPILLWAY POINT TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
500	537041.43	1100054.33	INSIDE OF LEFT WALL
501	537042.02	1100064.31	INSIDE OF LEFT WALL
502	537073.98	1100092.75	INSIDE OF LEFT WALL
503	537083.96	1100092.16	INSIDE OF LEFT WALL
504	536942.80	1100140.94	INSIDE OF RIGHT WALL
505	536975.55	1100139.02	INSIDE OF RIGHT WALL
506	537007.64	1100187.47	INSIDE OF RIGHT WALL
507	537008.09	1100177.44	INSIDE OF RIGHT WALL

NOTES:

1. SEE SHEETS S3.3 - S3.6 FOR DIMENSIONS AND ELEVATIONS OF THE TRAINING WALLS.



Prepared By



Rapid City, South Dakota

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SOUTH DAKOTA

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Internal Job No: V02605.004	Survey Date:
Surveyed By:	Survey Date:
Revisions:	

Note



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PLANS



Sheet Title

SPILLWAY
CONTROL
POINTS

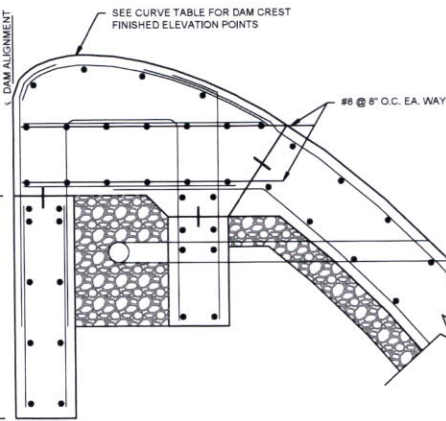
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S3.5

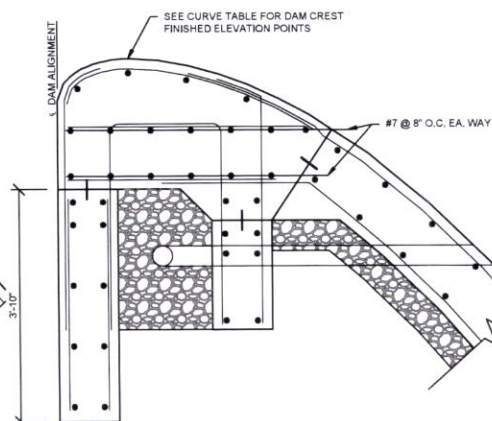
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1 SPILLWAY ELEVATION - LEFT TRAINING WALL
SCALE: 1/8" = 1'-0"

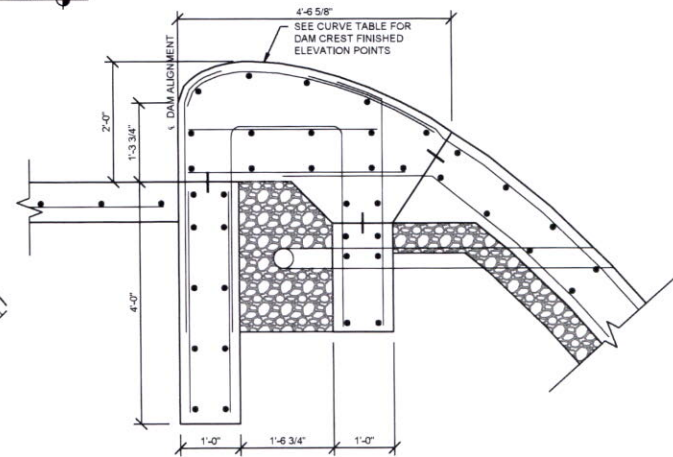
2 SPILLWAY ELEVATION - RIGHT TRAINING WALL
SCALE: 1/8" = 1'-0"



3 OGEE CREST AT RIGHT WALL
SCALE: 1/2" = 1'-0"



4 OGEE CREST AT LEFT WALL
SCALE: 1/2" = 1'-0"



5 OGEE CREST TYPICAL
SCALE: 1/2" = 1'-0"

CURVE TABLE			
OFFSET	ELEVATION	OFFSET	ELEVATION
0.00	5349.31	-2.68	5349.74
-0.10	5349.59	-3.18	5349.56
-0.20	5349.69	-3.68	5349.33
-0.30	5349.77	-4.18	5349.06
-0.40	5349.83	-5.18	5348.40
-0.50	5349.87	-6.18	5347.58
-0.60	5349.91	-7.18	5346.62
-0.70	5349.94	-8.18	5345.50
-0.80	5349.96	-8.59	5345.00
-0.90	5349.98	-9.18	5344.26
-1.00	5349.99	-10.18	5343.02
-1.10	5350.00	-11.18	5341.77
-1.18	5350.00	-12.18	5340.52
-1.68	5349.97	-12.76	5339.80
-2.18	5349.88		

NOTES:

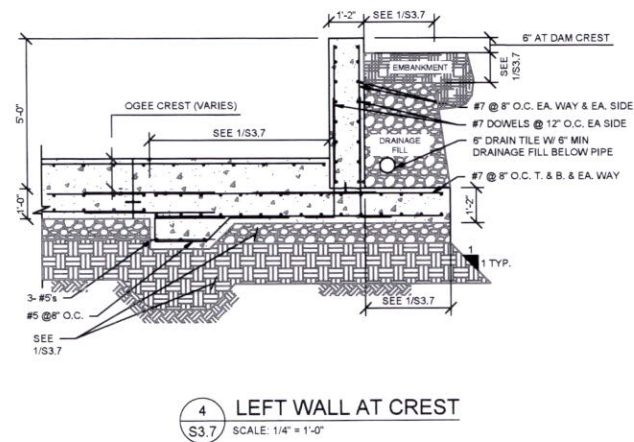
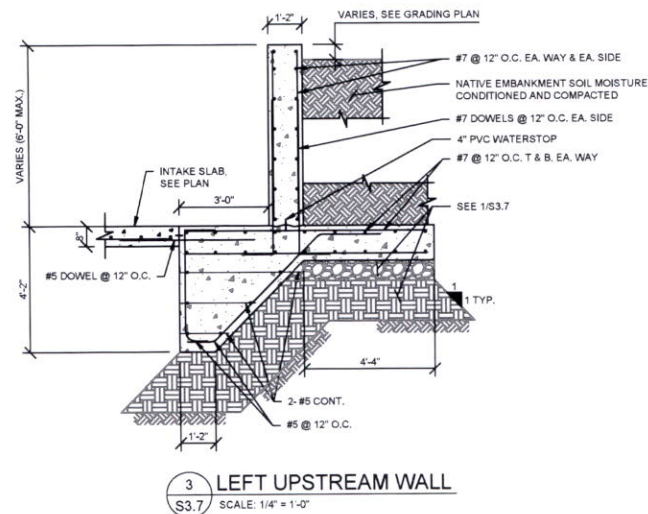
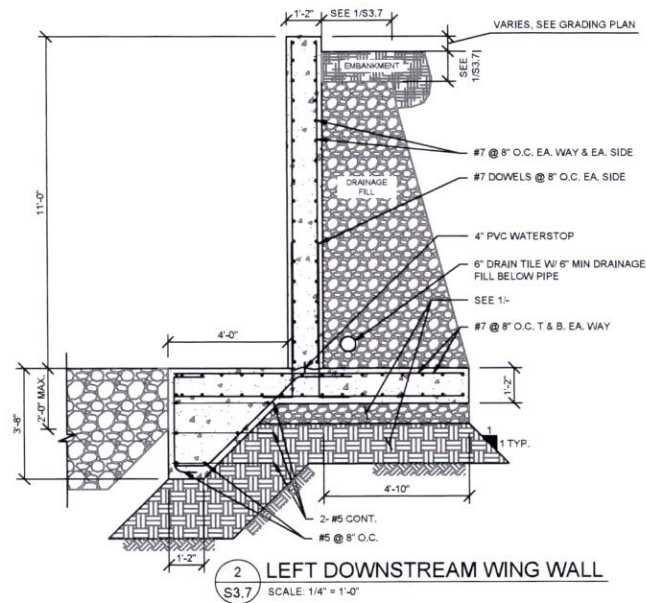
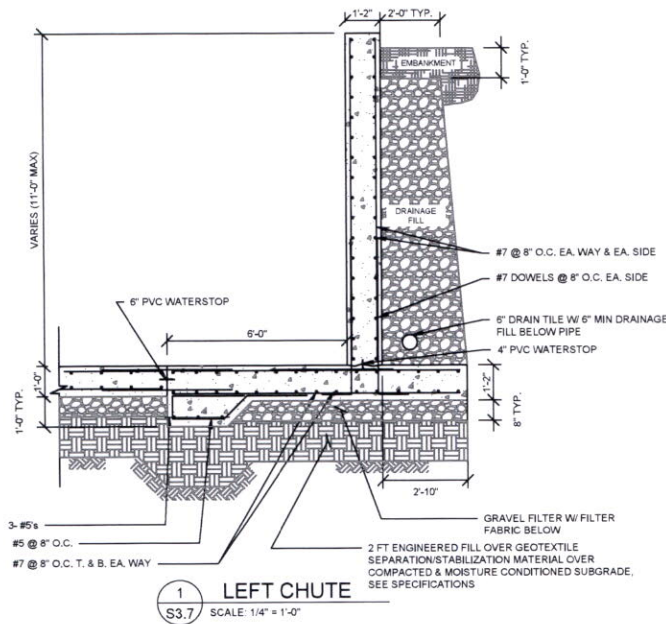
1. CONTINUOUS REINFORCING BARS, DOWELS, AND TIES ARE #5 @ 12" O.C. UNLESS OTHERWISE NOTED.

Prepared By: 
Rapid City, South Dakota

Prepared For: CUSTER WEST DAM CONSTRUCTION
CUSTER SOUTH DAKOTA

Reviewed By: SWB
Design Date: 08/2025
Internal Job No: W0905-004
Surveyed By:
Survey Date:
Revisions:
Title:
811
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Sheet Title: SPILLWAY ELEVATION AND RIGHT TRAINING WALL
Sheet: S3.6



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Rapid City, South Dakota

Prepared For:

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WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SWB	Drawn By: SWB
Design Date: 08/2025	Plot Date: 08/2025
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Surveyed By:	Survey Date:
Revisions:	

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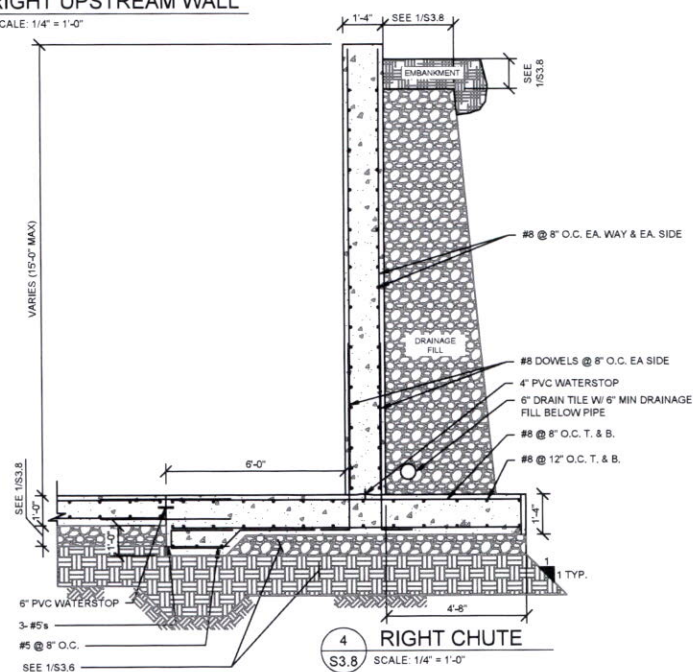
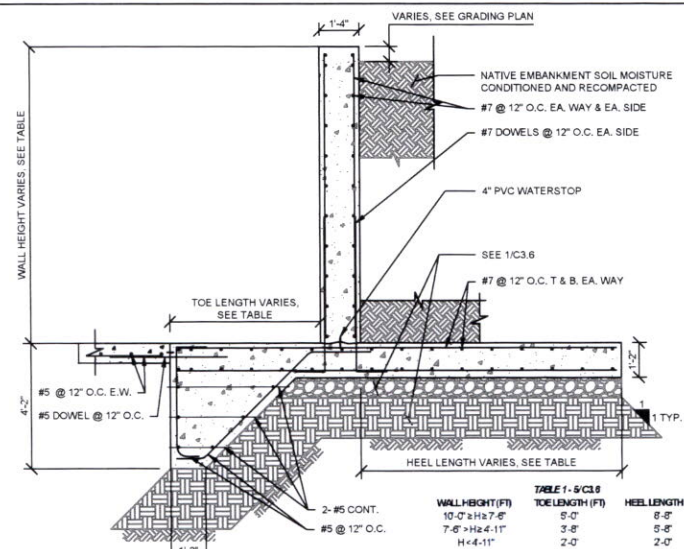
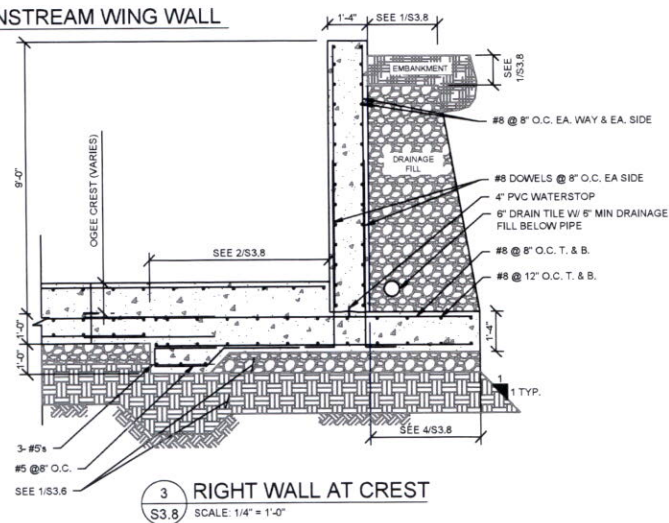
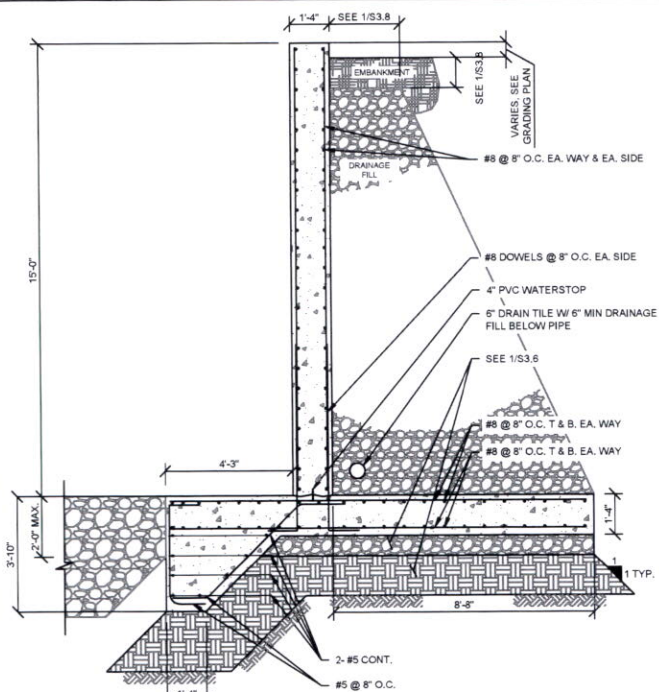


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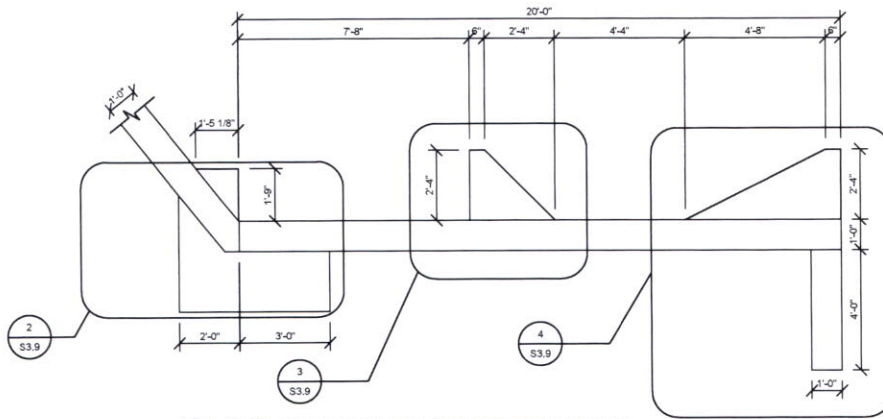
Sheet Title
SPILLWAY WALL
SECTIONS

Sheet
S3.7

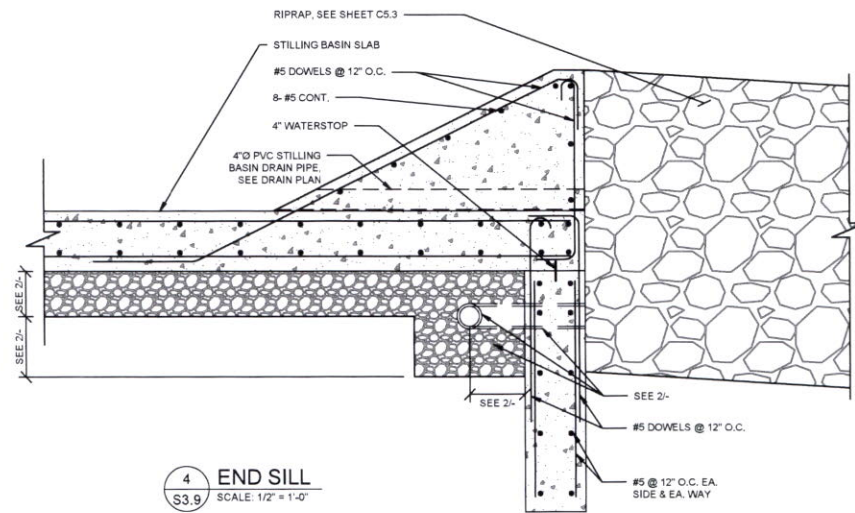


WALL HEIGHT (FT)	TOE LENGTH (FT)	HEEL LENGTH (FT)
10'-0" $\geq$ H $\geq$ 7'-6"	5'-0"	8'-8"
7'-6" $>$ H $\geq$ 4'-11"	3'-8"	5'-8"
H $<$ 4'-11"	2'-0"	2'-0"

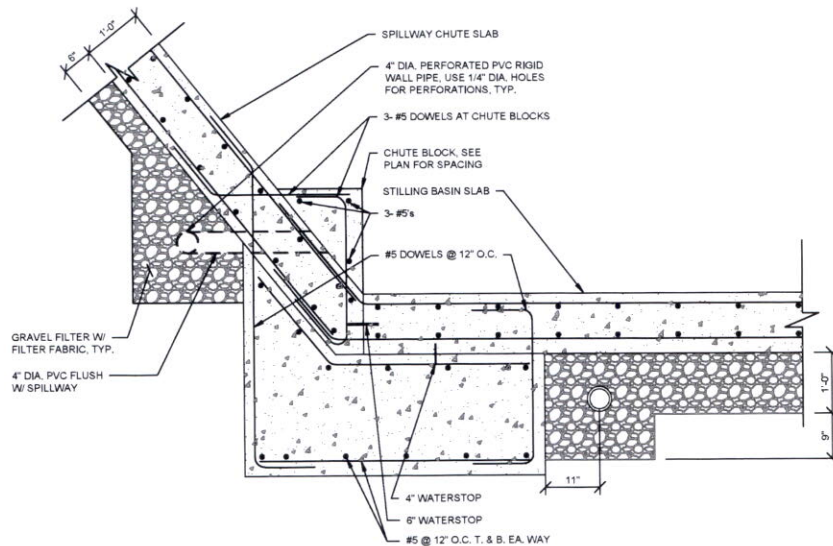
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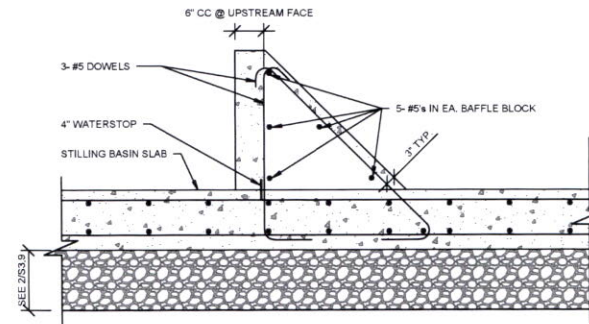
1 STILLING BASIN ENLARGED ELEVATION
SCALE: 1/2" = 1'-0"



4 END SILL
SCALE: 1/2" = 1'-0"



2 CHUTE BLOCK
SCALE: 1/2" = 1'-0"



3 BAFFLE BLOCK
SCALE: 1/2" = 1'-0"

UNDERSLAB DRAINAGE NOTES

* NOTE: UNDERSLAB DRAINAGE INVERT
ELEVATION VARIES @ 1.0% SLOPE.
CENTER OF SLAB (4'-0") = 5339.5 PIPE INVERT
NORTH & SOUTH
EDGES OF SLAB (4'-0") = 5338.5 PIPE INVERT

Prepared By:



Prepared For:

**CUSTER
WEST DAM
CONSTRUCTION**

**CUSTER
SOUTH DAKOTA**

Reviewed By: SWB	Drawn By: S.S. 24-10-20
Design Date: 08/20/25	Print Date: 08/20/25
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Surveyed By:	Survey Date:

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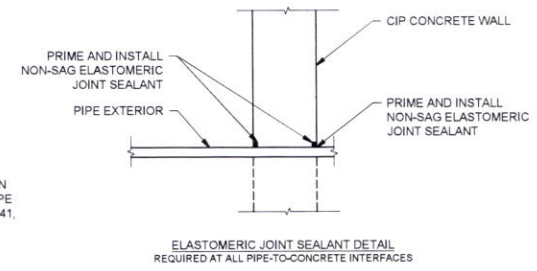
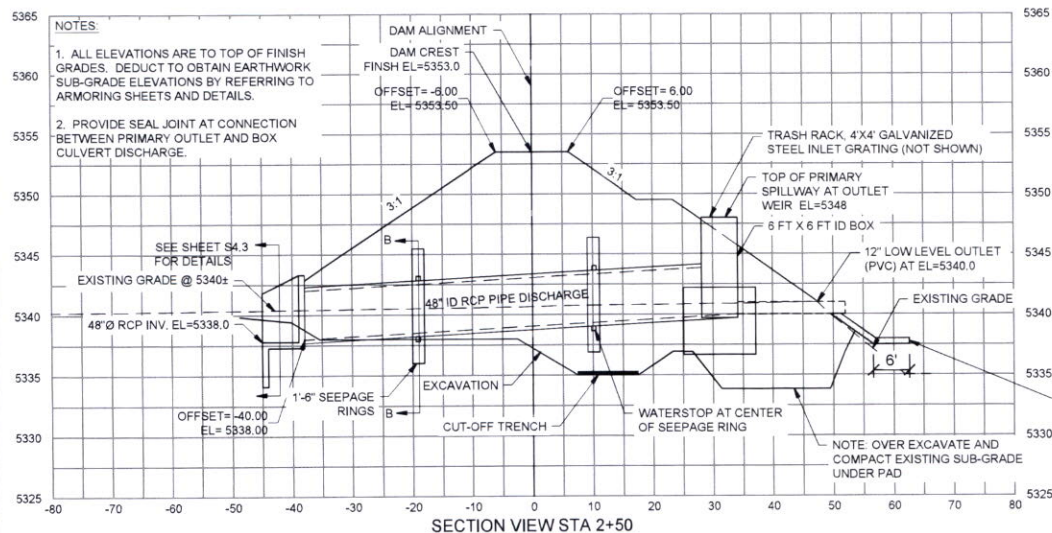
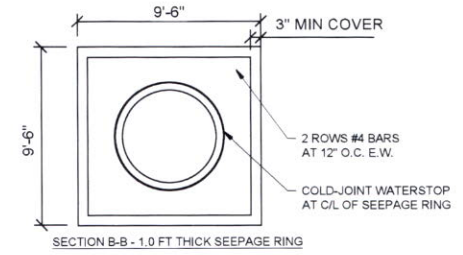
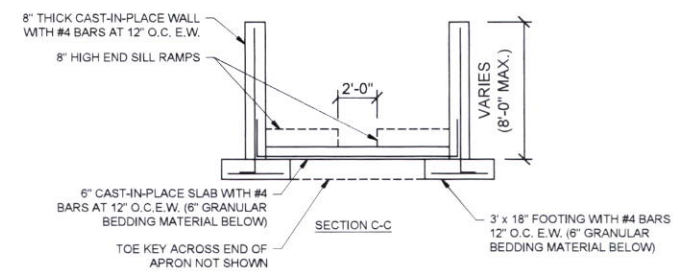
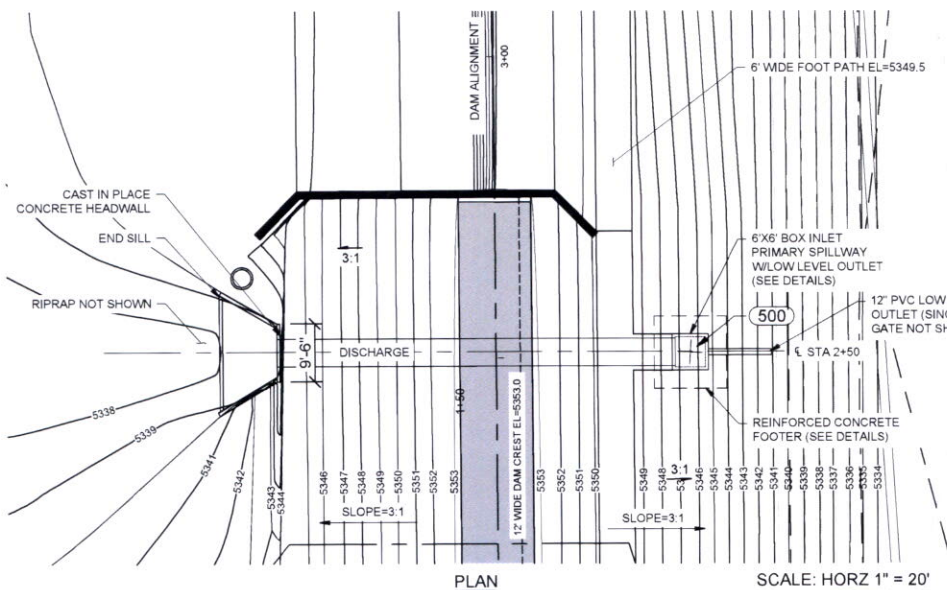
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**SPILLWAY RIGHT
WALL SECTIONS**

Sheet:

S3.9

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Prepared By: **RESPEC**
Rapid City, South Dakota

Prepared For: **CUSTER WEST DAM CONSTRUCTION**
CUSTER SOUTH DAKOTA

Reviewed By: SWB	Drawn By: SWB
Design Date: 08/20/25	Print Date: 08/20/25
Internal Job No: W605-0204	Survey Date:
Reviewed By:	Survey Date:

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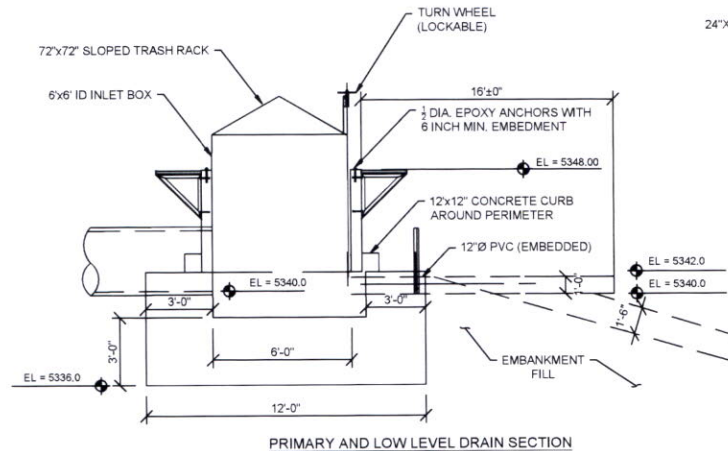
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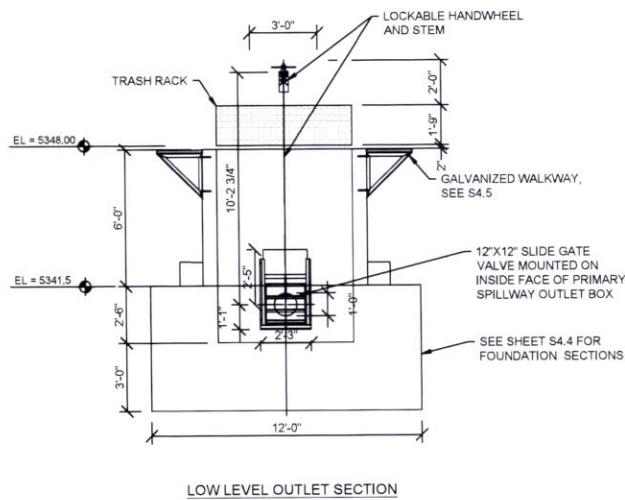
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Sheet: **S4.1**

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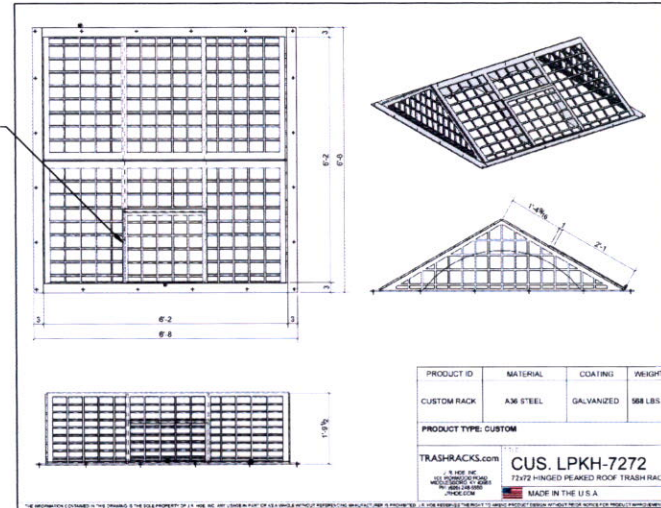


PRIMARY AND LOW LEVEL DRAIN SECTION

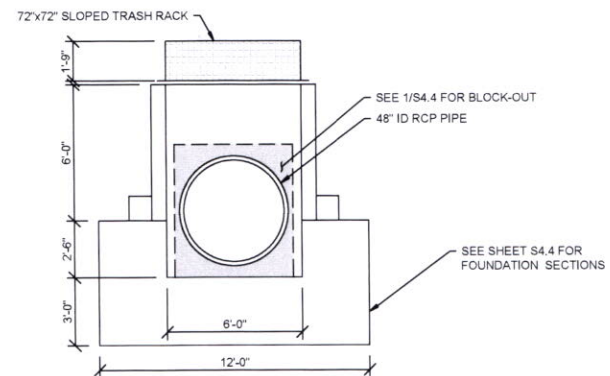


LOW LEVEL OUTLET SECTION

24"x24" (MIN.) ACCESS DOOR
HINGED & LOCKABLE



GALVANIZED TRASHRACK
(EXAMPLE ONLY. SUBMIT ABOVE
OR EQUIVALENT FOR APPROVAL)



PRIMARY OUTLET SECTION

Prepared By:



Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SVB
Design Date: 08/20/25
Internal Job No: W0655.004
Surveyed By: Survey Date:

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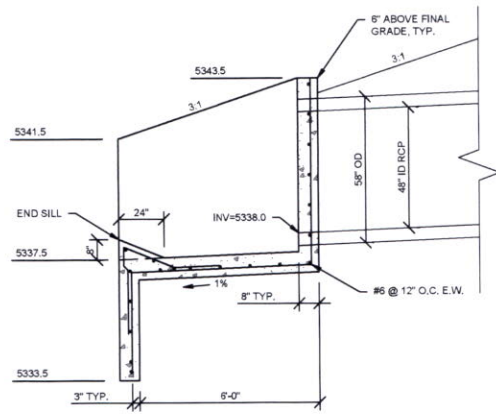


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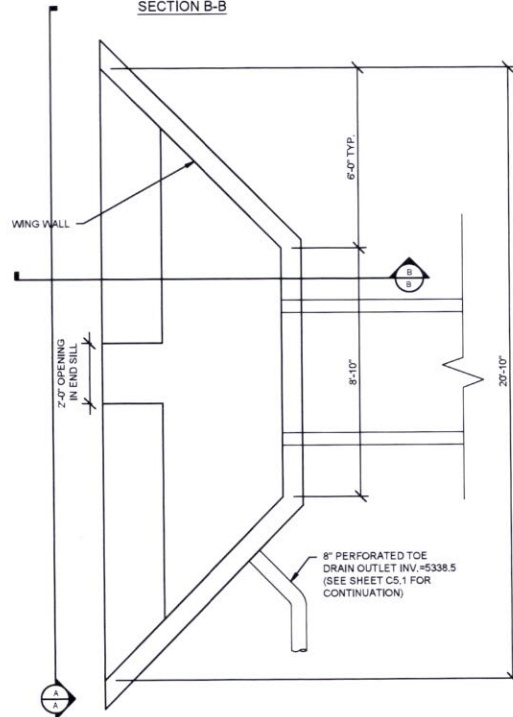


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PRIMARY
SPILLWAY INLET
SECTIONS &
DETAILS

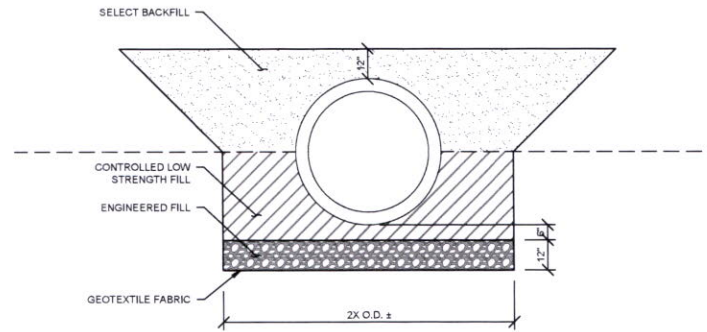
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S4.2



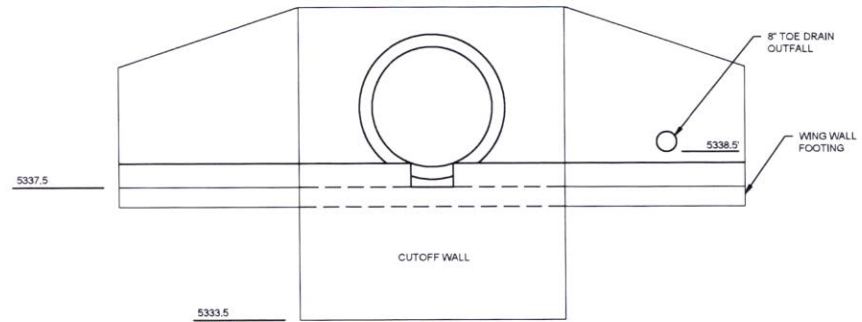
SECTION B-B



2 WING WALL OUTLET
S4.4 N.T.S.



1 TRENCH DETAIL - 48" RCO & 12" PVC
S4.3 SCALE: N.T.S.



SECTION A-A



Prepared For:
CUSTER WEST DAM CONSTRUCTION

CUSTER SOUTH DAKOTA

Reviewed By: SWB	Drawn By: B.A. 201910
Design Date: 08/20/25	Print Date: 08/20/25
Internal App No: W0605-004	
Surveyed By:	Survey Date:
Revisions:	

Note:



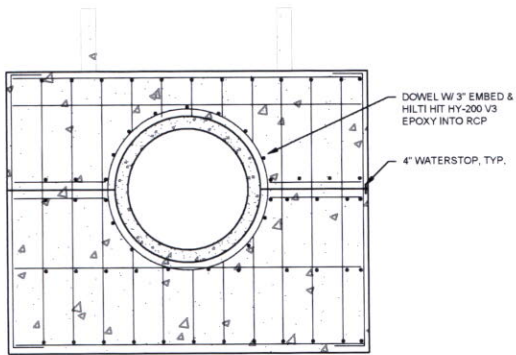
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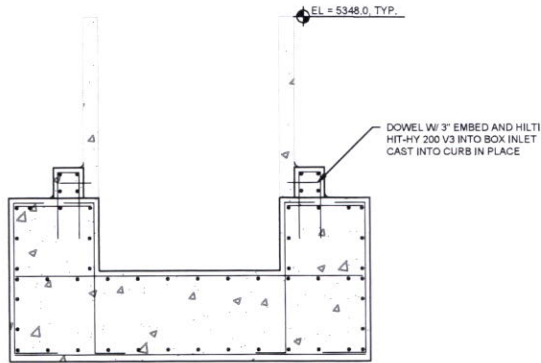
Sheet Title:
PRIMARY SPILLWAY DETAILS

Sheet:
S4.3

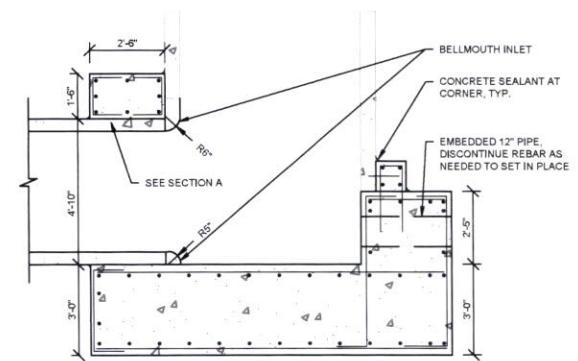
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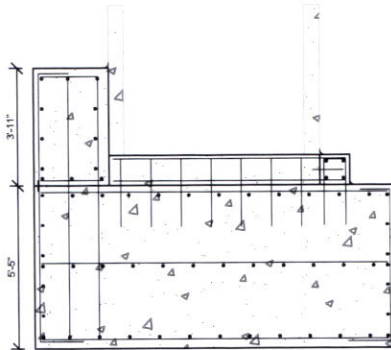
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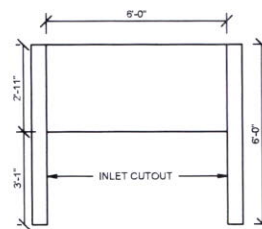
SECTION B



SECTION C

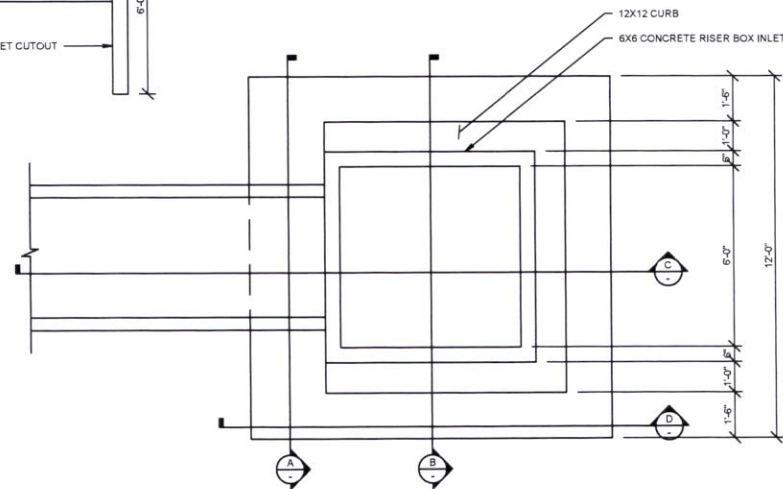


SECTION D



NOTES:

- 1) CONTINUOUS REINFORCING BARS, DOWELS, AND TIES ARE #5 @ 12" O.C. UNLESS OTHERWISE NOTED.
- 2) ADJUST REBAR CLEAR COVER AS NEEDED TO INSTALL WATERSTOPS WHERE SHOWN.



1
S4.4 FOUNDATION SECTIONS - PRIMARY OUTLET STRUCTURE
SCALE: 1/4" = 1'-0"

Prepared By:



Prepared For:

**CUSTER
WEST DAM
CONSTRUCTION**

**CUSTER
SOUTH DAKOTA**

Reviewed By: SWS	Drawn By: SWS
Design Date: 08/2025	Print Date: 08/2025
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Surveyed By:	Survey Date:

Revisions:

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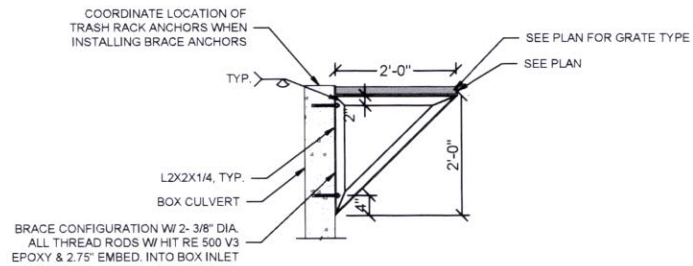
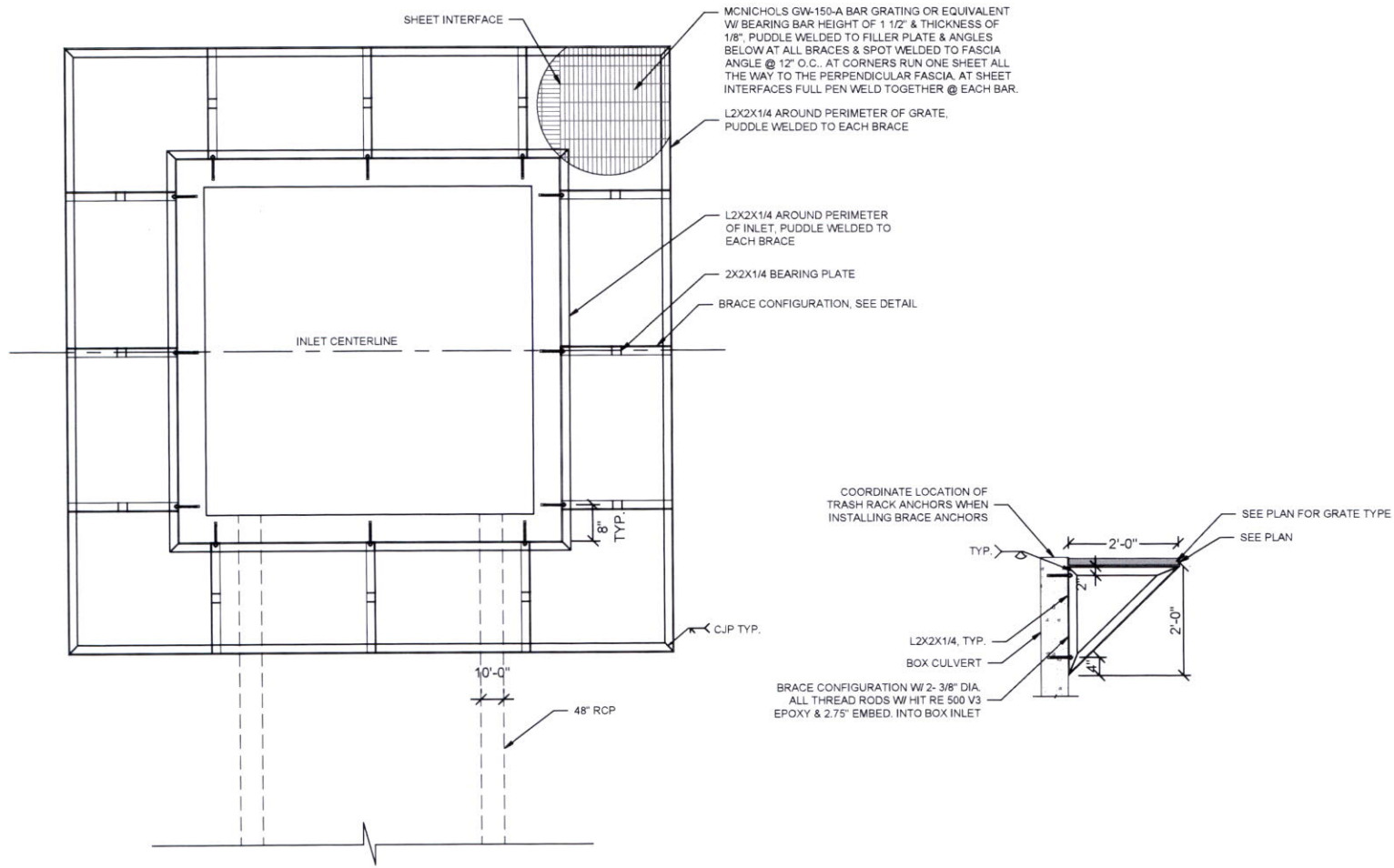
Sheet Title:

**PRIMARY OUTLET
FOUNDATION
SECTIONS**

Sheet:

S4.4

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1
S4.5 MAINTENANCE WALKWAY DETAIL
SCALE = 1/2" = 1'-0"

Prepared By:



Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SVB	Drawn By: DRI 12/15/22
Design Date: 08/20/25	Print Date: 08/20/25
Internal Job No: W0655-024	Survey Date:
Reviewed By:	Survey Date:

Revisions:

Note:



95% REVIEW
PLANS

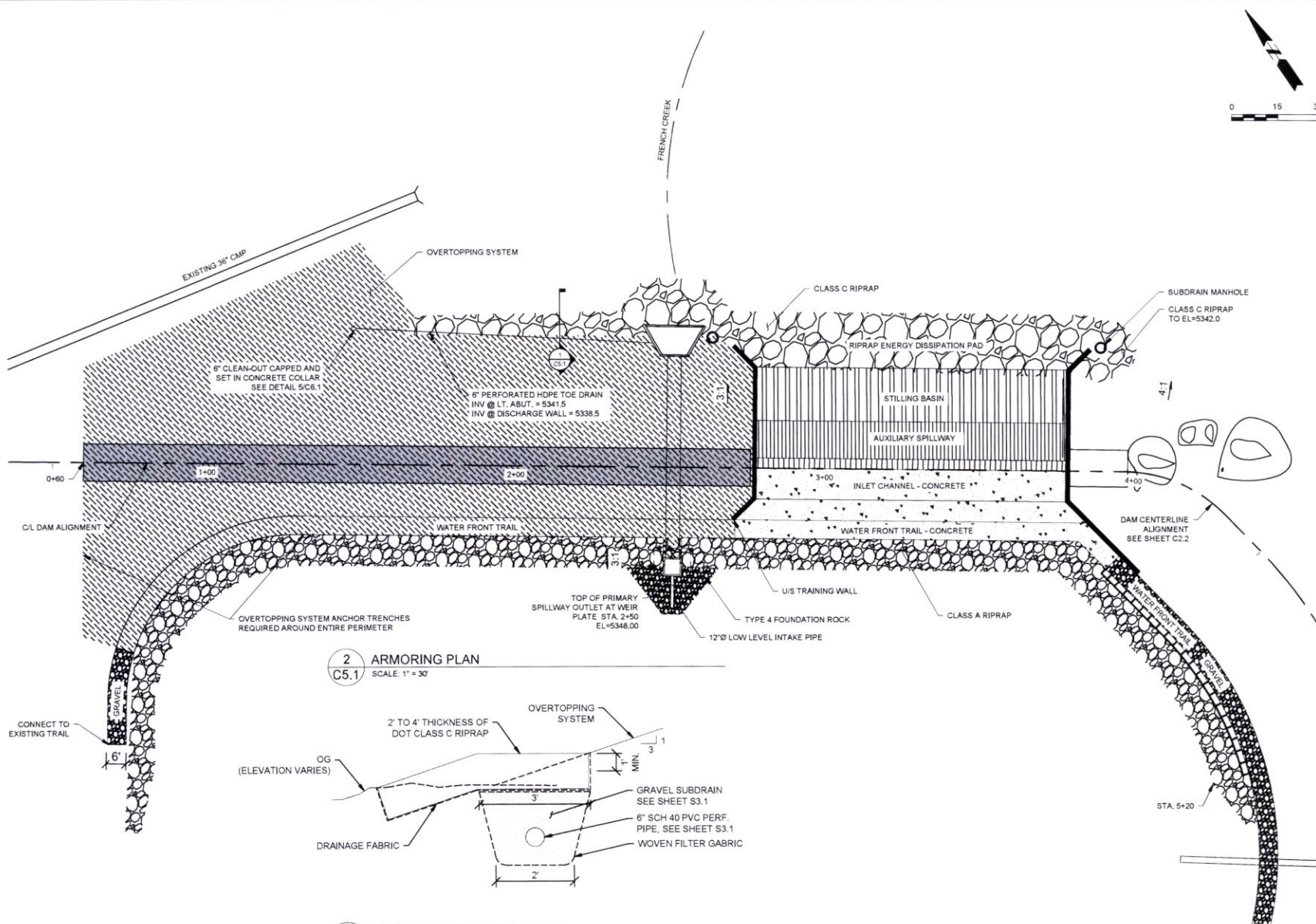


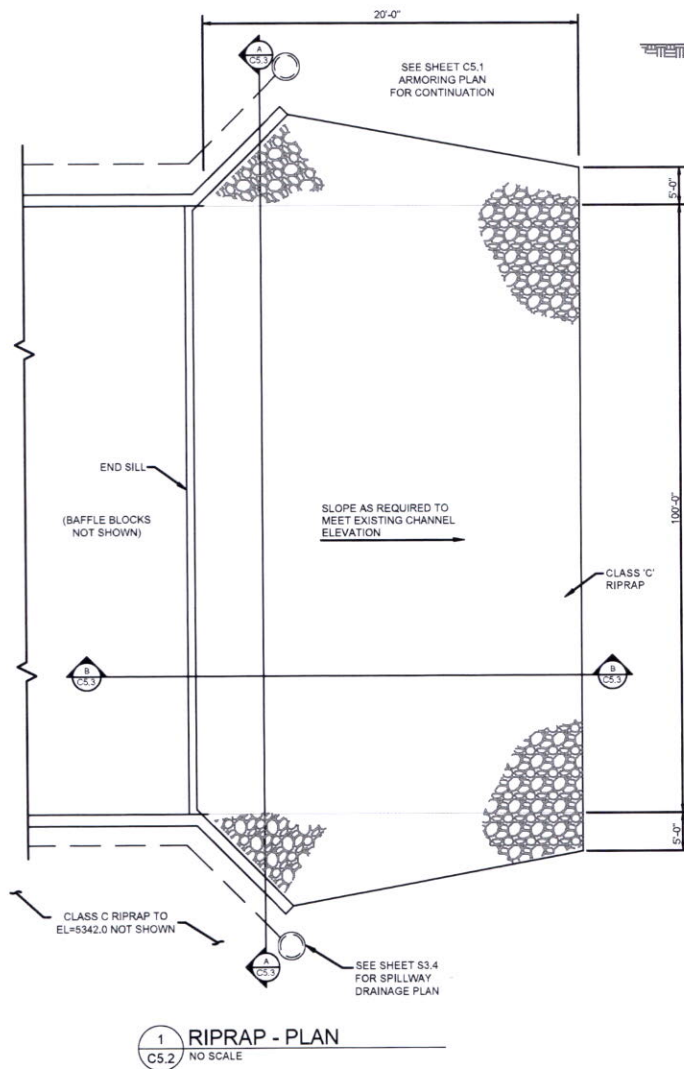
Sheet Title:

MAINTENANCE
WALKWAY DETAIL

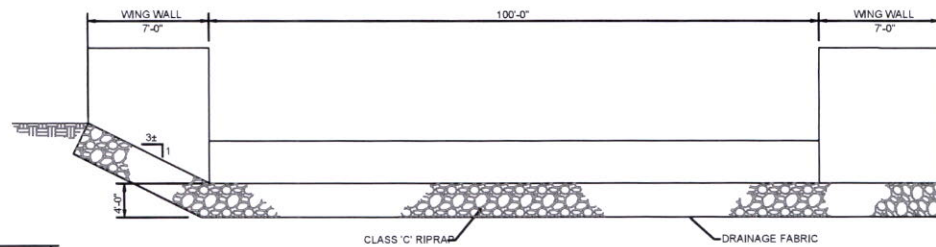
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S4.5

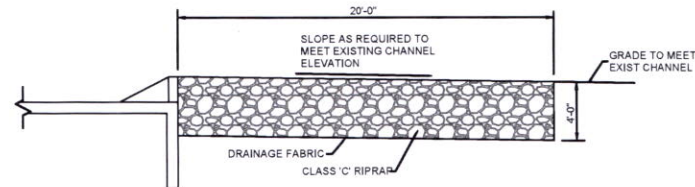




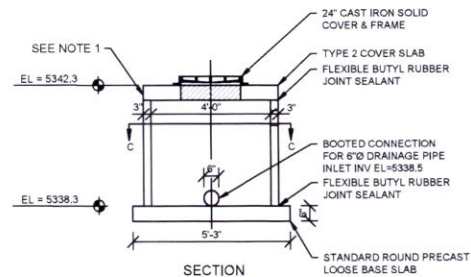
1 RIPRAP - PLAN
C5.2 NO SCALE



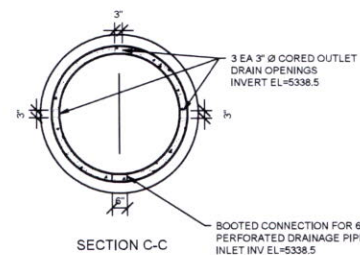
RIPRAP - SECTION
A
C5.2 NO SCALE



RIPRAP - SECTION
NO SCALE



2 PRECAST SUB-DRAIN MANHOLE DETAIL
C5.2 SCALE: 1/4" = 1'-0"



- NOTE:**
1. ANCHOR COVER SLAB TO MANHOLE WITH REMOVABLE GALVANIZED STRAPS AND ANCHOR BOLTS - 1 STRAP PER MANHOLE.
 2. BACKFILL WITH GRAVEL DRAIN ROCK 1' ABOVE DRAIN OPENINGS AND EXTEND TO DAYLIGHT.



CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By: SWB	Drawn By: B-4 24158.00
Design Date: 08/2025	Print Date: 08/2025
Internal Job No: W0605.004	
Surveyed By:	Survey Date:
Revisions:	

Revisions:

Note:



Know what's below.
Call before you dig.

95% REVIEW
PLANS



Sheet Title:

RIPRAP PLAN AND
SECTIONS,
SUB-DRAIN
MANHOLE DETAIL

Sheet: C5.2

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Prepared By:



Rapid City, South Dakota

Prepared For:

CUSTER
WEST DAM
CONSTRUCTION

CUSTER
SOUTH DAKOTA

Reviewed By:

Drawn By:

Design Date:

Print Date:

Internal Job No:

Surveyed By:

Survey Date:

Revisions:

Title:



Know what's below.
Call before you dig.

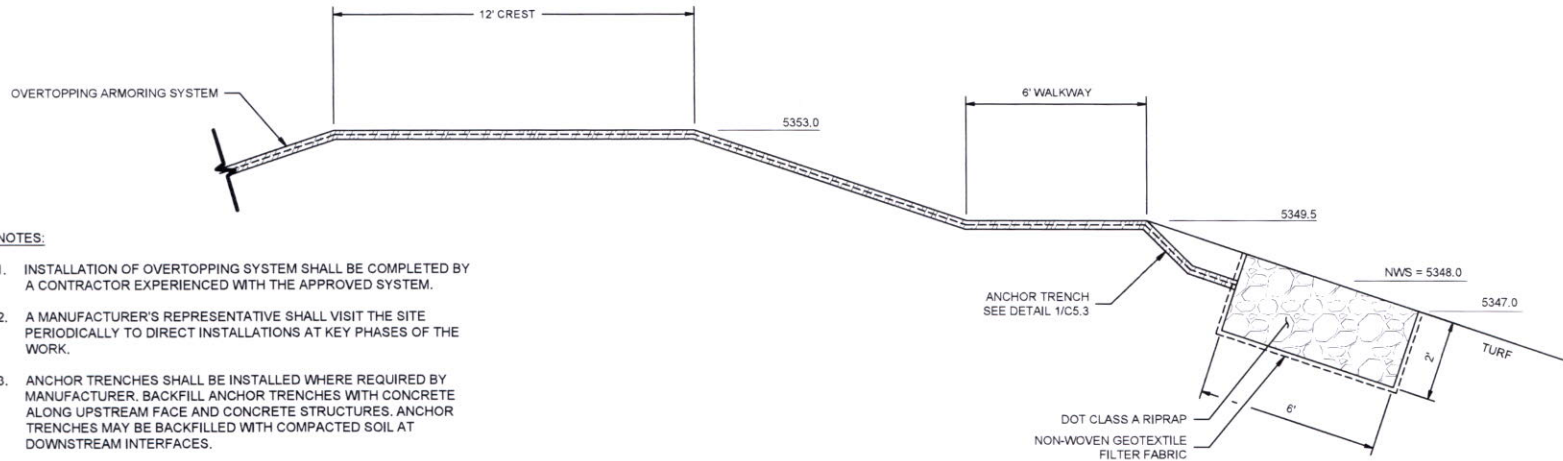
95% REVIEW
PLANS



Sheet Title:

OVERTOPPING
SYSTEM -
SECTION AND
DETAILS

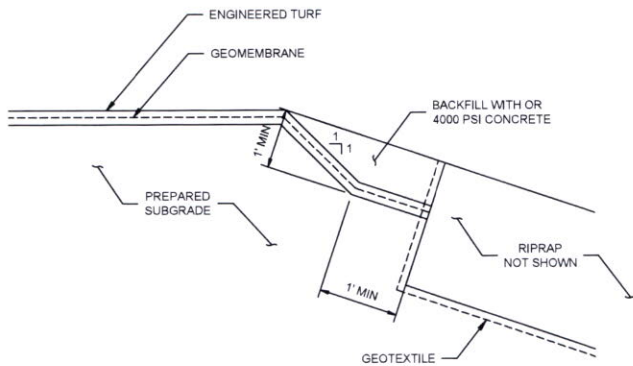
Sheet
C5.3



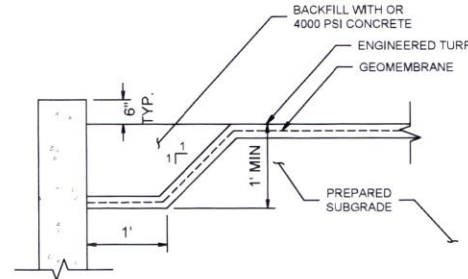
NOTES:

1. INSTALLATION OF OVERTOPPING SYSTEM SHALL BE COMPLETED BY A CONTRACTOR EXPERIENCED WITH THE APPROVED SYSTEM.
2. A MANUFACTURER'S REPRESENTATIVE SHALL VISIT THE SITE PERIODICALLY TO DIRECT INSTALLATIONS AT KEY PHASES OF THE WORK.
3. ANCHOR TRENCHES SHALL BE INSTALLED WHERE REQUIRED BY MANUFACTURER. BACKFILL ANCHOR TRENCHES WITH CONCRETE ALONG UPSTREAM FACE AND CONCRETE STRUCTURES. ANCHOR TRENCHES MAY BE BACKFILLED WITH COMPACTED SOIL AT DOWNSTREAM INTERFACES.

3
C5.3 TYPICAL DAM CREST ARMORING
NOT TO SCALE

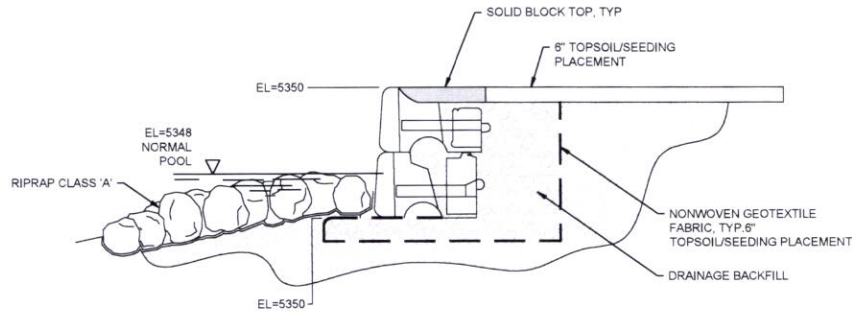


1
C5.3 TYPICAL ANCHOR TRENCH AT U/S FACE
NOT TO SCALE



2
C5.3 TYPICAL ANCHOR TRENCH AT SPILLWAY
NOT TO SCALE

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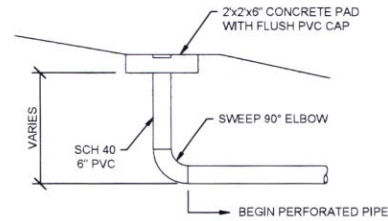
NOTES:

1. STANDARD BLOCK HEIGHT = 18".
2. ALL WALLS DESIGNED AS INTERCONNECTED MODULAR GRAVITY STRUCTURES.
3. ALL TOP BLOCKS ARE SOLID TOPS UNLESS NOTED OTHERWISE.
4. COLOR (BY ACID ETCHING AND SEALING), AND BLOCK FACE TYPE SHALL BE PER OWNER SELECTION IN ACCORDANCE WITH CONTRACT DOCUMENTS.
5. CONTRACTOR SHALL SUBMIT AND FOLLOW MANUFACTURER'S INSTALLATION GUIDE AND APPROVED SHOP AND LAYOUT DRAWINGS FOR THE APPROVED PRECAST MODULAR BLOCK (PMB) RETAINING WALL SYSTEM INSTALLATION.

1
C6.1

**PRECAST MODULAR BLOCKS
SECTION - LAKE WALL (TYP)**

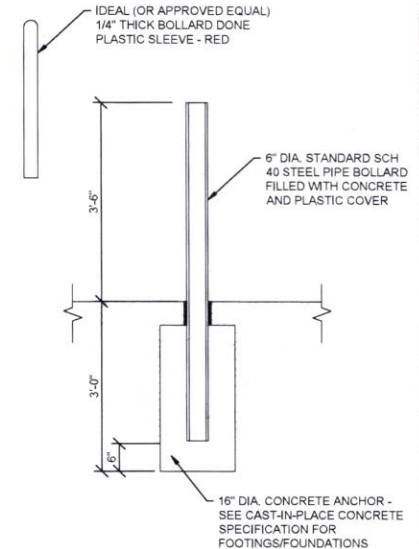
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3
C6.1

CLEAN-OUT DETAIL

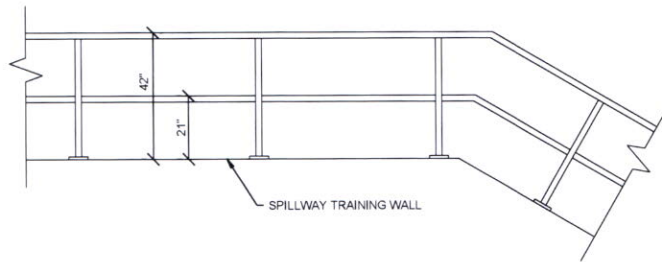
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5
C6.1

STEEL PIPE BOLLARD

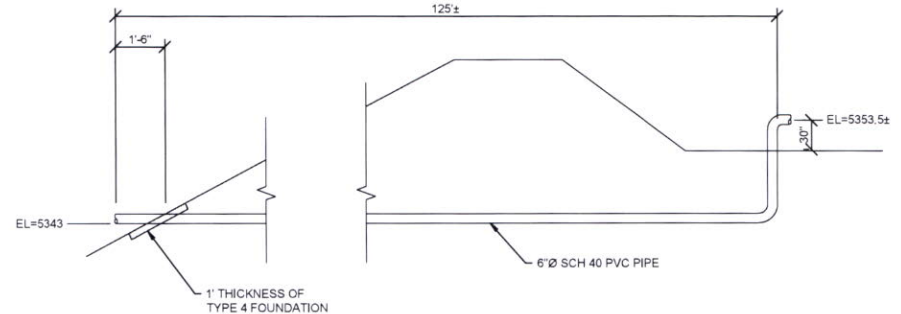
NOT TO SCALE



2
C6.1

PIPE RAILING

NOT TO SCALE



4
C6.1

DRY FIRE HYDRANT

NOT TO SCALE

NOTES:

1. HYDRANT HEAD, 6" NST (MALE), WITH SCREEN AND CAP.
2. AT INLET, PROVIDE INTAKE STRAINER.
3. EXTEND PIPE 2-FEET CLEAR OF EMBANKMENT AND SUPPORT WITH PAD OF COMPACTED BASE COURSE.



Prepared For
**CUSTER
WEST DAM
CONSTRUCTION**

CUSTER
SOUTH DAKOTA

Reviewed By: SWB	Drawn By: B.A. 01/19/20
Design Date: 08/2025	Print Date: 08/2025
Internal Job No: V05605.004	Survey Date:
Reviewed By:	Survey Date:

Notes



**95% REVIEW
PLANS**



DETAILS AND
NOTES

Sheet
C6.1

Dewell, Amanda

From: Kilts, Whitney (DENR)
Sent: Thursday, August 14, 2025 10:47 AM
To: Dewell, Amanda
Subject: FW: [EXT] Custer West Dam - 95% Documents for Safety of Dams Review
Attachments: Custer West Dam - 95% Plan Set for SOD Review 250813.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

The attached should go with the new permit app for Custer West Dam. Thanks.



Whitney Kilts
Office of Water-Water Rights Program
Department of Agriculture and Natural Resources
523 E. Capitol Ave. Pierre SD, 57501
605.773.3352
danr.sd.gov

From: Steve Bareis <Steve.Bareis@respec.com>
Sent: Thursday, August 14, 2025 10:28 AM
To: Kilts, Whitney (DENR) <Whitney.Kilts@state.sd.us>; Mayer, Mark <Mark.Mayer@state.sd.us>
Cc: Peter (Pete) Rausch <Peter.Rausch@respec.com>; Trent Bruce <trent.bruce@dgr.com>
Subject: [EXT] Custer West Dam - 95% Documents for Safety of Dams Review

Good morning. We overnighted the plans, specifications, and a Design Report to you yesterday - two copies. Let me know if you would like more hard-copies.

I will send you electronically when available. Attached are the plans.

On behalf of Custer City, we intend to submit a new Water Rights Permit application this week also.

Let me know if you need any additional clarifications or information. Thank you.



Stephen Bareis, PE
Resident Consultant

✉ Steve.Bareis@respec.com
☎ 605-381-0387

📍 3824 Jet Drive
Rapid City, SD 57703

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Rodriguez, Rachel

From: Dewell, Amanda
Sent: Tuesday, August 26, 2025 8:36 AM
To: Steve Bareis
Cc: Rodriguez, Rachel
Subject: RE: [EXT] Custer West Dam - Water Right Permit Application

Steve,

the Water Rights Program has received your application and attached it to the supplemental dam information sent earlier this month. Once payment has been made (\$500 total), we will begin processing the application. Fees may be paid by mailing a check (payable to SD Water Rights) to: DANR-Water Rights, 523 E Capitol Ave, Pierre SD 57501; or by calling our Fiscal Office at (605) 773-5559.

When the application for the original permit (2751-2) was made, the \$200.00 licensing and inspection fee was paid and will be waived for this application.

Thank you,

Amanda Dewell
DANR - Water Rights Program
Permitting Administrator
Main Phone: 605 773-3352
Website: danr.sd.gov



From: Steve Bareis <Steve.Bareis@respec.com>
Sent: Friday, August 22, 2025 1:38 PM
To: Dewell, Amanda <Amanda.Dewell@state.sd.us>; Kilts, Whitney (DENR) <Whitney.Kilts@state.sd.us>; Mayer, Mark <Mark.Mayer@state.sd.us>
Cc: Mayor <mayor@cityofcuster.com>; Laurie Woodward <laurie@cityofcuster.com>; Trent Bruce <trent.bruce@dgr.com>; Mike Tennyson <mike@custerhospitality.com>; Peter (Pete) Rausch <Peter.Rausch@respec.com>; Alexis (Allie) Simons <Allie.Simons@respec.com>
Subject: [EXT] Custer West Dam - Water Right Permit Application

Attached is a new Water Right Permit application from the City of Custer. The new application reflects an increase in storage volume and surface area for the reservoir (supersedes Permit No. 2878-2), and includes updated information for the dam dimensions and flow rates.

Let me know if you have any questions. Thank you.



Stephen Bareis, PE
Resident Consultant

✉ Steve.Bareis@respec.com

☎ 605-381-0387

📍 3824 Jet Drive
Rapid City, SD 57703

RECEIPT

WATER RIGHTS PROGRAM South Dakota Department of Agriculture and Natural Resources

Date August 26th, 2025

RECEIVED OF City of Custer 622 Crook St Custer SD 57730

The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>2899-2</u> to Appropriate Water, to construct and to put water to beneficial use	\$ <u>500.00</u>
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____	\$ _____
Fee for Filing Transfer Form _____	\$ _____
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law) TOTAL	\$ <u>500.00</u>

By Mark Mayke
Ske Chief Engineer



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

**RECOMMENDATION OF ACTING CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2899-2, City of Custer**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the acting Chief Engineer, Water Rights Program, Department of Agriculture and Natural Resources concerning Water Permit Application No. 2899-2, City of Custer, 622 Crook Street, Custer SD 57730.

The acting Chief Engineer is recommending APPROVAL of Water Permit Application No. 2899-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board with the following qualifications:

1. Water Right No. 298-2, Water Permit No. 2878-2, and this Permit, combined, authorize an impoundment with a storage capacity of 100 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 5,348.0 feet mean sea level (NAVD 88).
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.
3. Plan and specifications for reconstruction of Custer West Dam were reviewed and approved by the Chief Engineer on October 14, 2025. Any changes the Chief Engineer considers to be significant changes to the 2025 reconstruction plans must be submitted to the Chief Engineer for review and approval for compliance with the Safety of Dams Rules (ARSD 74:02:08).
4. The Emergency Preparedness Plan must be reviewed annually and updated, as needed, to reflect current contact information for emergency services and emergency notification contacts with the updates provided to all plan holders.

See report on application for additional information.

Mark Mayer, PE
Director of Office of Water
November 4, 2025

Report to the Chief Engineer
Water Application No. 2899-2
City of Custer
October 24, 2025

Water Permit Application No. 2899-2, filed by the City of Custer, requests to impound an additional 22.5 acre-feet of water in Custer West Dam on French Creek in the NE ¼ SE ¼ Section 27-T3S-R4E with water impounded in N ½ SE ¼ Section 27-T3S-R4E. The water will be used for recreation, fish and wildlife propagation, and public safety purposes. This is in addition to the 30 acre-feet of water authorized for impoundment by the same dam on French Creek by Water Right No. 298-2 and the 47.5 acre-feet of water authorized for impoundment by the same dam by Water Permit No. 2878-2 (along with reconstruction of the dam). Combined this application, Water Permit No. 2878-2, and Water Right No. 298-2 would impound 100 acre-feet of water by a dam on French Creek to maintain water at an outlet elevation of 5,348.0 mean sea level (NAVD 88). The dam is located in the southwest part of the City of Custer in Custer County, South Dakota.

Water Source: French Creek

South Dakota Codified Laws (SDCL) and Administrative Rule of South Dakota (ARSD)
SDCL 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is a reasonable probability there is unappropriated water available for the applicant's proposed use, the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, and the proposed use is a beneficial use and in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. This report will address availability of unappropriated water and potential for unlawful impairment to existing rights that are pertinent to this application.

ARSD Chapter 74:02:08 Safety of Dams

ARSD Chapter 74:02:08 provides the minimum design standards for dams that are 25 feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier or from the lowest elevation of the outside limit of the barrier or has an impounding capacity at maximum water storage elevation of 50 acre-feet or more. A barrier is not considered a dam for the purpose of this chapter if the height does not exceed 6 feet regardless of storage capacity or if the storage capacity at maximum water storage elevation does not exceed 15 acre-feet, regardless of height.

History

The Custer West Dam was originally constructed in 1943 and was permitted under Water Right No. 298-2 for 30 acre-feet of storage (Water Rights, 2025a). In 1981, Water Right No. 298-2 was inspected, and the earthen dam was licensed as 15 ft high with a storage of 30 acre-feet (Water Rights, 2025a). Around 2012, the outlet works for the dam became non-functional and the reservoir was drained. In 2015, the City of Custer retained Banner Engineering to conduct an assessment of the dam. During the assessment, Banner Engineering determined that the existing

dam had a normal storage (storage at the primary spillway) of approximately 60 acre-feet (the date of the storage increase is unknown). In 2016, plans for the dam's reconstruction and a water permit for the additional storage to Water Right No. 298-2 were submitted to the Water Rights Program and approved (Water Permit No. 2751-2). The plans for dam reconstruction also included dredging a portion of the reservoir area for improved fish habitat for a normal storage at the outlet elevation of 77.5 acre-feet. The dam was not reconstructed by the construction deadline (July 6, 2021) for Water Permit No. 2751-2, so Water Permit No. 2878-2 was obtained to reinstate Water Permit No. 2751-2. As the dredging work was completed in the reservoir area the amount of sediment removed was greater than initially planned which resulted in space for an additional 22.5 acre-feet of water storage, which is the amount this application is requesting.

Review of the Water Source

French Creek is located in the southern Black Hills and listed as a perennial stream in the National Hydrography Dataset immediately upstream of the dam (USGS, 2016). French Creek is a tributary of the Cheyenne River with the confluence located near the Custer County-Oglala Lakota County line. The dam for this application is located in the N $\frac{1}{2}$ SE $\frac{1}{4}$ Section 27-T3S-R4E on French Creek on the west side of Custer, SD. Upstream of this location, French Creek is formed by the confluence of the North and South Forks of French Creek with the other larger contributing tributary upstream of the dam being Ruby Creek (USGS, 2020). The headwaters of the North Fork French Creek (the longer of the two forks) is in the area south of Bear Mountain in southern Pennington County and the headwaters of the South Fork French Creek is the Round Mountain area in Custer County (USGS, 2016). The headwaters of both the North and South Forks of French Creek are along the edge of the Limestone Plateau area of the Black Hills (Martin et al., 2004).

The contributing drainage area for the dam was delineated using the United States Geological Survey (USGS) Streamstats Application, shown in Figure 1 (Ries, et al., 2024). The contributing drainage area for the dam is approximately 36.4 square miles (23,296 acres). The drainage area of French Creek upstream of the dam is in an area of the Black Hill where it is common for spring flow to contribute to the baseflow of creeks based on the underlying geology.

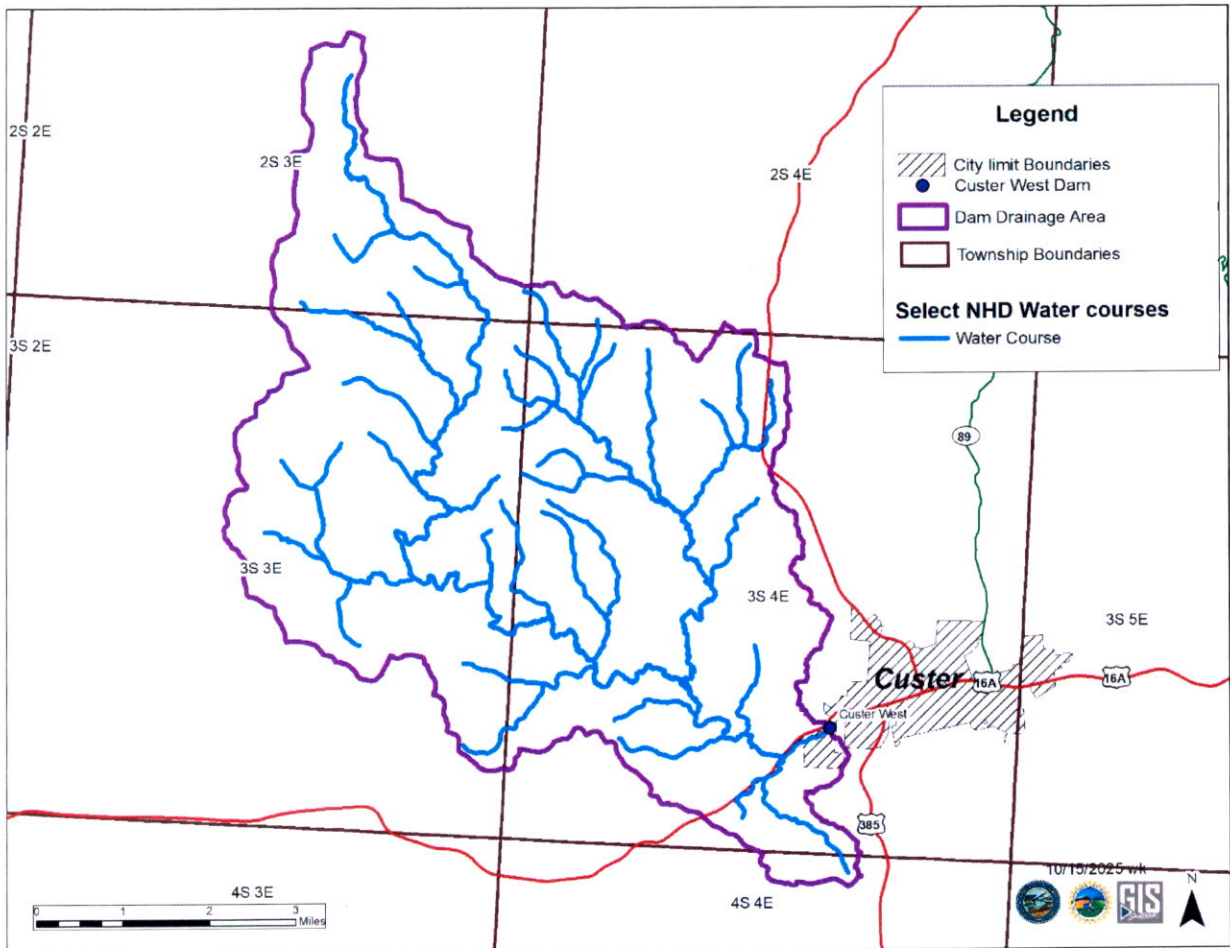


Figure 1: Contributing drainage area for the Custer West Dam (Ries, et al., 2024 and USGS, 2016)

Water Availability

Stream Gage Data

The nearest stream gage to Custer West Dam with some amount of daily data is the USGS surface water site No. 06402995 French Creek above Stockade Lake near Custer, SD. This gage was operated from October 1, 1990, to September 30, 1997 (USGS, 2025). The gage is located approximately six stream miles downstream of the Custer West Dam with a contributing drainage area of 68.4 square miles (43,776 acres) (USGS, 2025). The approximate drainage area for the gage is shown in Figure 2 with the portion of the drainage area that is for Custer West Dam indicated. The drainage area for the Custer West Dam is about half of the drainage area above the gage. Based on the available information, the Custer West Dam was in operation and impounding water during the monitoring period for the gage. So, the gage data during the period of record reflects flows after water has already been retained by the dam. While the period of record on this gage is limited, the data is currently the best available information for this area and can provide some basic information on water availability.

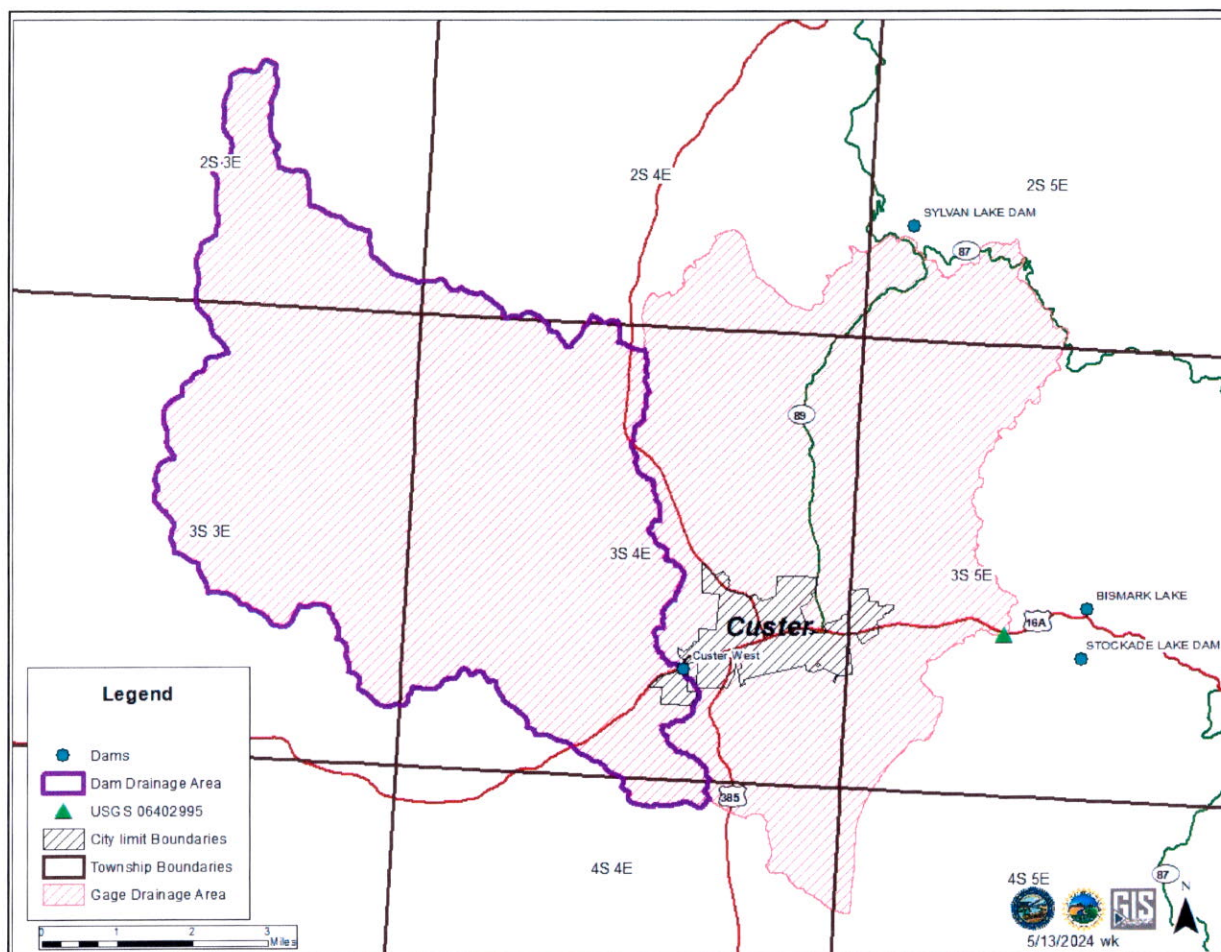


Figure 2: Contributing drainage area for USGS Gage No. 06402995 French Creek above Stockade Lake near Custer, SD (Ries, et al., 2024 and USGS, 2025)

The daily percentile flow hydrographs for this gage at the 20th, 25th, and 50th percentiles are shown in Figure 3 by calendar year (USGS, 2025). Typically, for stream gage analysis the Water Rights Program looks at the 10th percentile data rather than the 20th percentile data. However, 10th percentile data was not available for this gage so the smallest percentile data available (20th) was presented instead. The 50th percentile shows the flow rate which is met or exceeded 1 out of every 2 years. The 25th percentile shows the flow rate which is met or exceeded 3 out of every 4 years. The 20th percentile shows the flow rate which is met or exceeded 8 out of every 10 years. Estimated annual volumes from the percentile data is 1,368 acre-feet per year at the 20th percentile, 1,820 acre-feet per year at the 25th percentile, and 5,163 acre-feet per year at the 50th percentile. These estimated annual volumes were calculated by averaging the daily discharge for each percentile and converting to acre-feet per year. So, based on the gage period of record, on average, 8 out of 10 years an annual volume of run off above the gage location of at least 1,368 acre-feet per year is estimated.

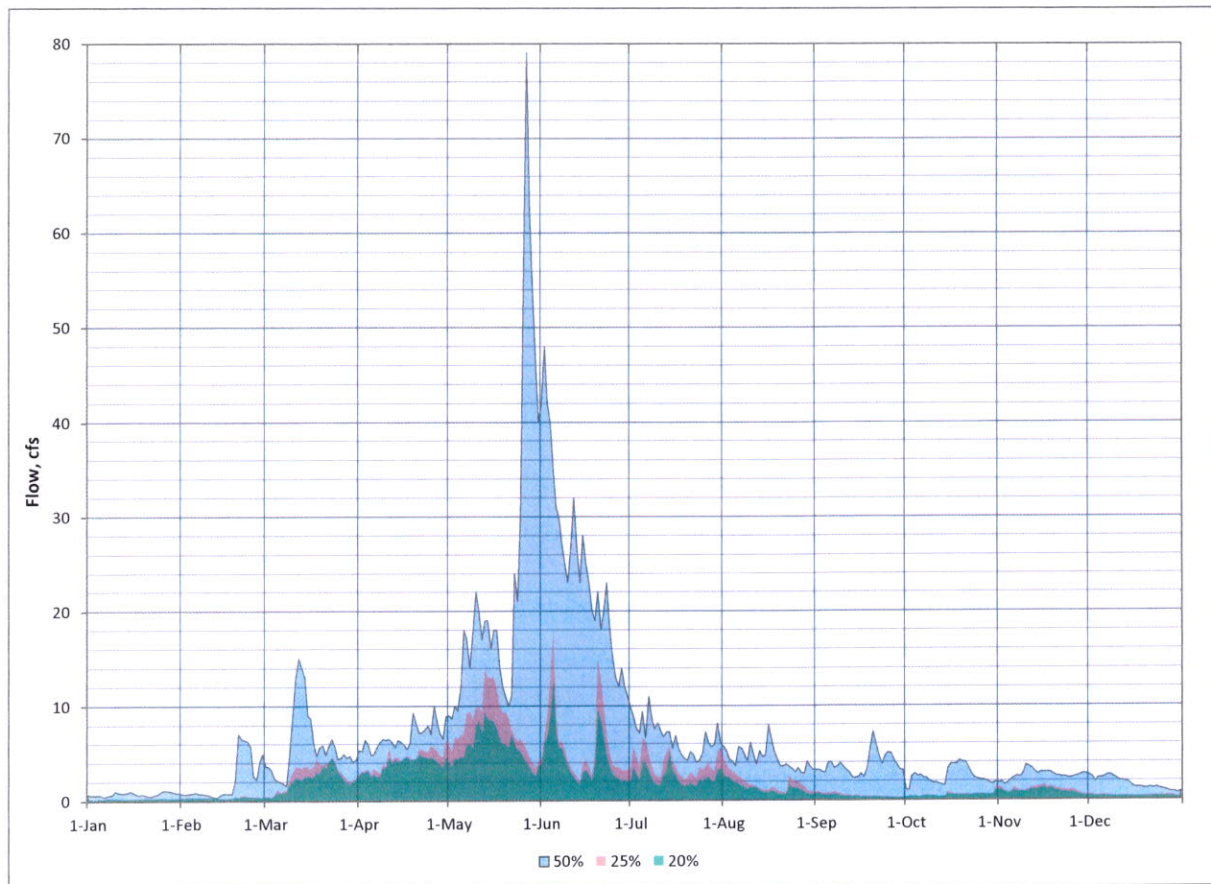


Figure 3: Daily percentile flow hydrographs for the USGS gage French Creek above Stockade (operated Oct 1, 1990 to Sept 30, 1997) (USGS, 2025).

The average daily discharge for the gage for water years 1991 to 1997 are shown in Table 1. Also provided in Table 1 is the corresponding annual volume for the average discharge for the water year (October 1 to September 30). The annual volume for each year was found by converting all daily mean discharge values into acre-feet (one cubic foot per second of water flowing 24 hours = 1.98346 acre-feet) and then summing for each year. The total precipitation for the 1991 to 1997 water year is provided in Table 1. For comparison, Figure 4 provides total precipitation by water year for Custer County from water year 1896 to 2023 (NOAA, 2025). The average precipitation by water year during this time period (1896 to 2023) is 17.8 inches. Two years during the gaging period (Oct 1, 1990 to Sept 30, 1997) fall below this average: 1992 and 1994 (NOAA, 20245).

Table 1: Average daily flow at gage by water year and calculated annual volume (USGS, 2025) (NOAA, 2025)

Water Year	Average Discharge (cfs)	Annual Volume (acre-feet)	Precipitation (inches)
1991	8.48	6,136	19.89
1992	5.15	7,465	17.67
1993	7.67	5,552	23.21
1994	4.87	3,519	12.61
1995	18.14	13,168	24.59
1996	10.02	7,275	20.50
1997	14.68	10,628	24.90

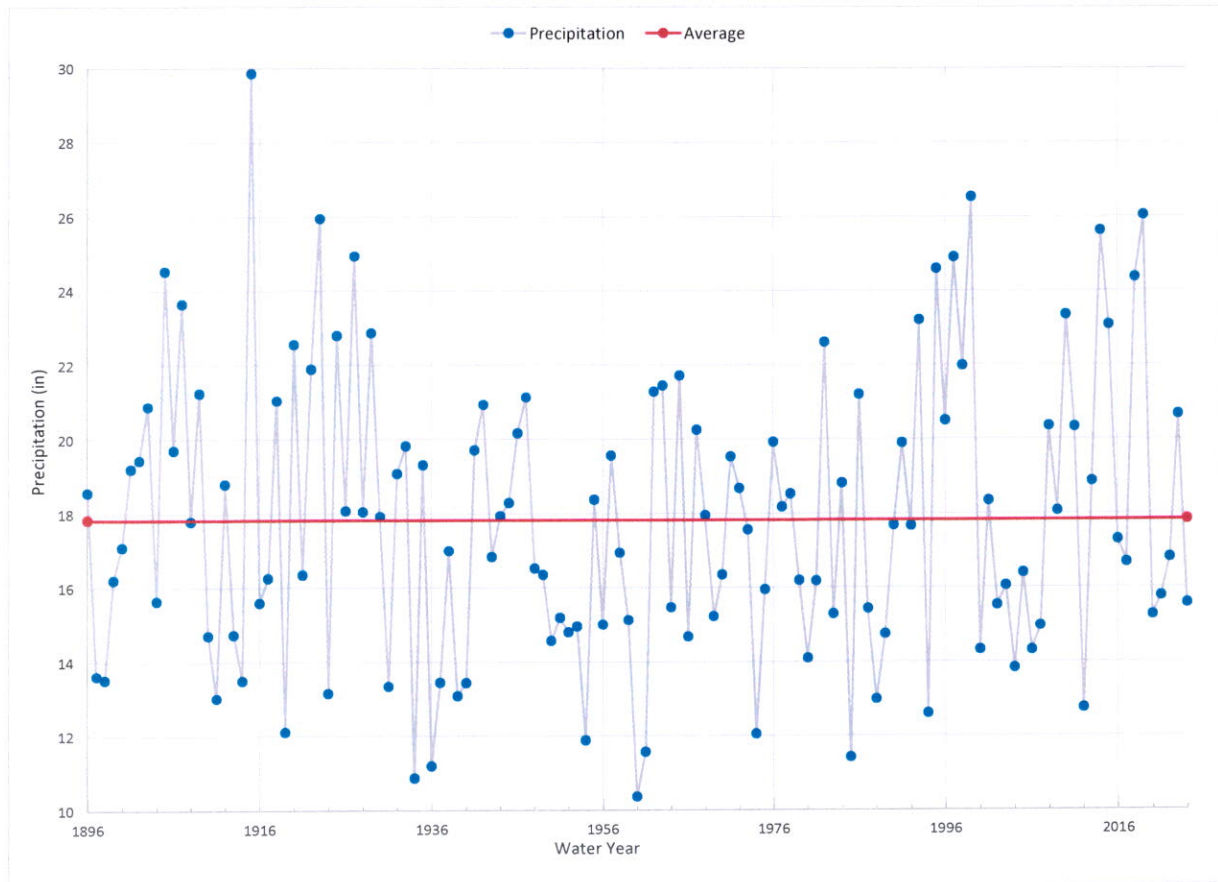


Figure 4: Total precipitation by water year for Custer County, SD from 1896 to 2024 (NOAA, 2025)

To estimate annual yield to a portion of the gaged watershed a variable called the runoff ratio (or runoff coefficient depending on the reference) for the gaged area can be used. This is based on taking the Modified Rational Method (or Bowstring Method) for estimating runoff volume from a storm event for reservoir design (NRCS, 2021) and adapting it to estimate annual yield (annual runoff volume) from a watershed. The runoff ratio is the normalized ratio of total runoff from a basin to the total precipitation within that basin. Equations 1 through 3 show the

process to determine annual yield to a portion of the gaged watershed (Weil and Kannenberg, 2023). Since data is limited at Gage No. 06402995, the year in Equations 1 and 2 are used water year to maximize the use of gaged data and Equation 3 is using calendar year.

$$\text{Unit Runoff (feet)} = \frac{\text{Annual volume from the gaged watershed (acre-feet)}}{\text{Gaged watershed area (acres)}}$$

Equation 1: Unit runoff (depth, units in feet)

$$\text{Runoff Ratio (unitless)} = \frac{\text{Unit runoff (inches)}}{\text{Total Annual Precipitation (inches)}}$$

Equation 2: Runoff ratio (unitless)

$$\text{Annual Yield} = \text{total annual precipitation (feet)} * \text{runoff ratio} * \text{ungaged watershed area (acres)}$$

Equation 3: Annual equation (volume, units in acre-feet)

Table 2 shows this calculation for the USGS gage French Creek above Stockade and the average runoff ratio for the years of gage data. The runoff ratio varies from year to year due to variables like antecedent moisture conditions or runoff origin (snowmelt vs rainfall) and can vary long term due to significant changes in the watershed (for example increased urbanization). Seven years of gage data is a relatively short period of record for estimating typical runoff in this watershed that is significantly influenced by climatological factors; however, it is the best available information. Figure 5 shows the estimated annual yield using the measured precipitation for Custer County from 1896 to 2024 (NOAA, 2025), the watershed area for the dam (43,776 acres) and the average runoff ratio from Table 2 (0.101). The average estimated annual yield is 3,497 acre-feet per year.

Table 2: Runoff Ratio Calculation from Gage and Precipitation Data (USGS, 2025)
(NOAA, 2025)

Water Year	Annual Volume (acre-feet)	Precipitation (inches)	Unit Runoff (ft)	Runoff Ratio
1991	6,136	19.89	0.140	0.085
1992	7,465	17.67	0.171	0.116
1993	5,552	23.21	0.127	0.066
1994	3,519	12.61	0.080	0.076
1995	13,168	24.59	0.301	0.147
1996	7,275	20.50	0.166	0.097
1997	10,628	24.90	0.243	0.117
Average	7,677	20	0.175	0.101

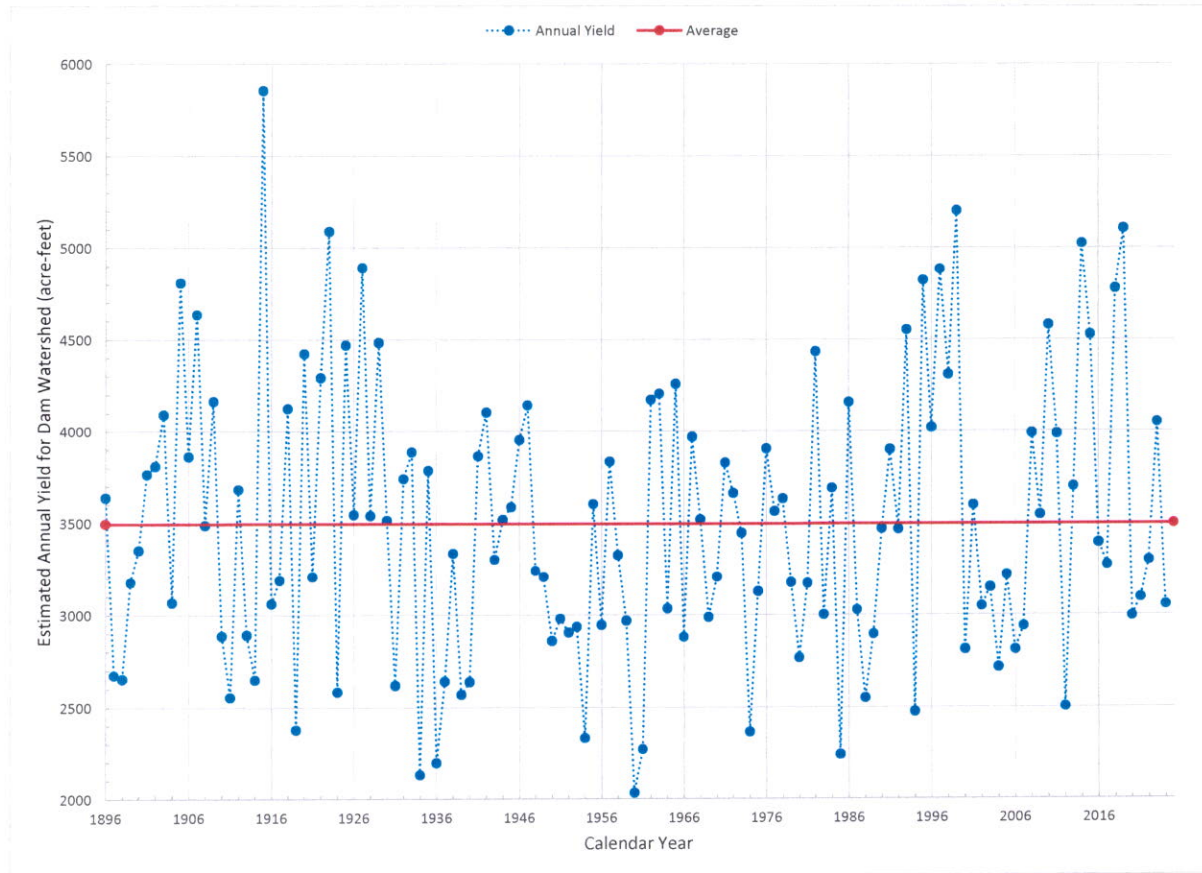


Figure 5: Estimated annual yield for the Custer West Dam watershed using measured precipitation for Custer County from 1896 to 2024 (NOAA, 2025)

Once filled, annual water losses from the reservoir will be mainly due to evaporation, seepage, and domestic use. The reservoir created by the reconstructed Custer West Dam is anticipated to have a surface area of 9.0 acres. Using data from 1956 to 1970, NOAA (1982) provided annual free water surface evaporation data for the contiguous United States. Utilizing NOAA (1982), the estimated annual free water surface evaporation for the proposed dam site is 44 inches per year (approximately 3.7 ft per year). Average annual (calendar year) precipitation in the Custer, SD area is 17.83 inches per year (1.49 ft) (NOAA, 2025). So, net loss between direct precipitation on the reservoir and evaporation is estimated at 26.17 inches (2.18 ft). Applying this over the anticipated surface area results in an estimated annual net loss to evaporation of 19.63 acre-feet. Information is not available to estimate losses to seepage since what is average loss to seepage for a dam is usually not known until after years of operation and is typically not measured. The city's pumping out of the reservoir for domestic use is limited to not exceeding 18 gallons per minute on an average daily basis (or up to 25,920 gallons per day), which is up to approximately 29 acre-feet per year. Since this domestic use of water is part of supplying a public recreation area, actual use will likely be much less since the use will be seasonal in nature and not constant pumping. Information is not available to estimate water use for public safety purposes. The application indicates public safety purposes would primarily be emergency fire suppression, so in most years the volume used for public safety would likely be minimal to none.

Table 3 summarizes the water rights/permits in the watershed above Custer West dam, the water rights/permits for Custer West dam, and the water rights/permits between Custer West dam and USGS Gage 06403300 French Creek above Fairburn SD. USGS Gage 06403300 is located approximately 30 stream miles downstream of the Custer West dam location (USGS, 2025) and has a longer period of record. The gage is just upstream of the Madison and Minnelusa outcrops, which are streamflow loss zones in most of the Black Hills area. USGS Gage 06403300 is currently active and has been collecting data since 1982 (USGS, 2025). The daily percentile flow hydrographs for this gage at the 10th, 25th, and 50th percentiles are shown in Figure 6 by calendar year. Average annual volumes from the percentile data are 924 acre-feet at the 10th percentile, 1,998 acre-feet at the 25th percentile, and 4,452 acre-feet at the 50th percentile.

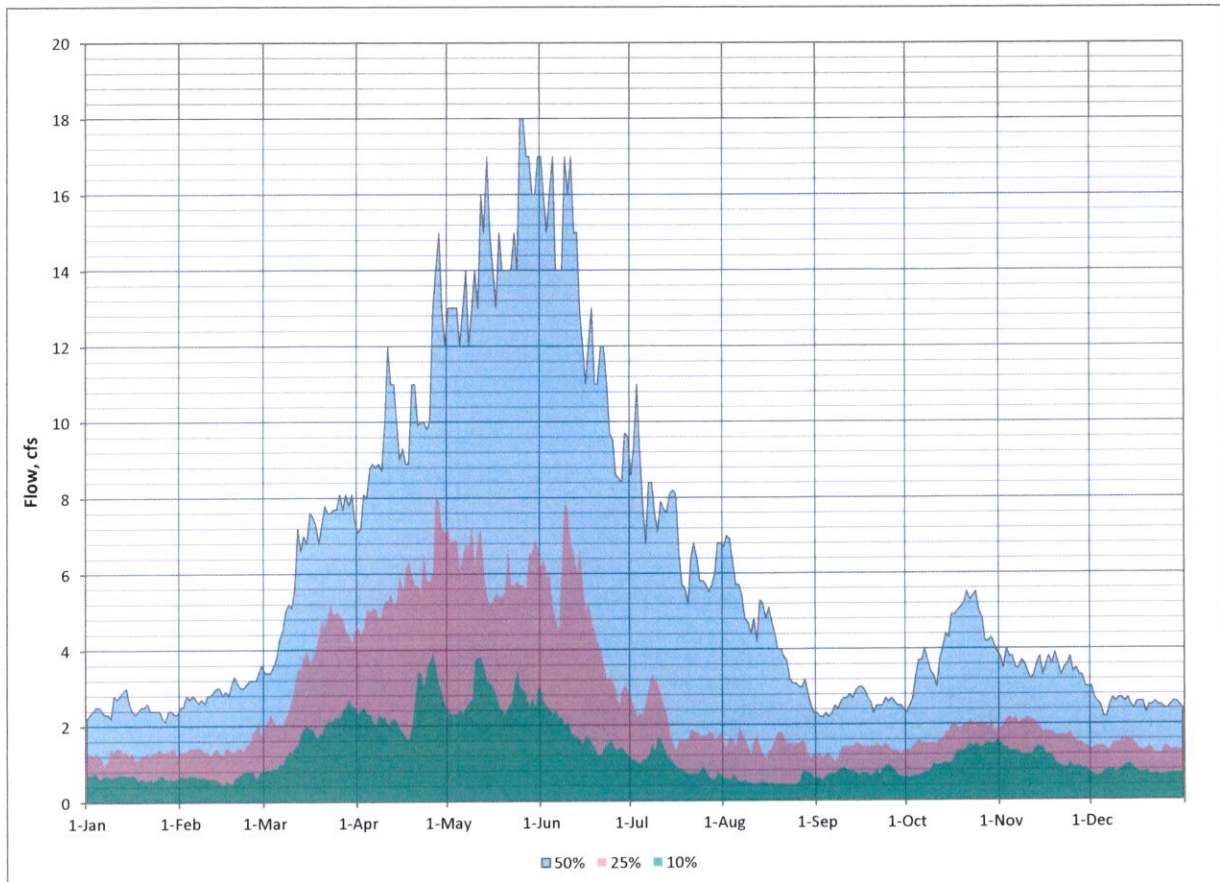


Figure 6: Daily percentile flow hydrographs for the USGS Gage 06403300 French Creek above Fairburn (USGS, 2025).

Table 3: Summary of Water Rights (Water Rights, 2025a)								
Surface Water Permits in Watershed Upstream of Application								
Permit No.	Name	Use	Priority Date	Annual Appropriation or Storage (acre-ft)	Sources	Rate (cfs)	Estimate Annual Volume @ 60% Usage (acre-ft)	Comments
US102-2	USDA	FWP&DOM&REC	03/14/1934	0.071	MILE HIGH CREEK	n/a	n/a	small pond
US99-2	USDA	IRR&DOM&REC	06/14/1939	5.4	French Creek	n/a	n/a	small pond
US103-2	USDA	DOM&REC&FWP	06/14/1939	0.07	French Creek	n/a	n/a	small pond
US180-2	USDA	FWP&DOM	07/10/1939	0.91	FRENCH CREEK	n/a	n/a	small pond
US183-2	USDA	DOM&FWP&IRR	07/10/1939	0.29	MIDDLE FORK FRENCH CREEK	n/a	n/a	small pond
US218-2	USDA	DOM&FWP	07/21/1939	0.55	French Creek	n/a	n/a	small pond
US249-2	USDA	FWP&DOM&REC	07/21/1939	0.36	JOE DRAW	n/a	n/a	small pond
US251-2	USDA	FWP&REC&IRR	07/21/1939	0.22	GRAVES DRAW	n/a	n/a	small pond
US399-2	USDA	IRR&DOM	08/28/1939	n/a	FOUR MILE SPRING	0.055	23.9	spring flow
US400-2	USDA	IRR&DOM	08/28/1939	n/a	PANNER JOE SPRING	0.012	5.2	spring flow
US401-2	USDA	IRR&DOM	08/28/1939	n/a	VESTAL SPRING	0.012	5.2	spring flow
2380-2	Dillion	IND	02/06/1997	n/a	French Creek	0.022	9.6	returns water to French Creek
Custer West Dam								
298-2	City of Custer	FWP&DOM	04/23/1943	30	French Creek	n/a	n/a	
2751-2	City of Custer	REC & FWP	04/21/2016	47.5	French Creek	n/a	n/a	Past completion date
2878-2	City of Custer	REC & FWP	04/05/2024	47.5*	French Creek	n/a	n/a	*Reinstatement of 2751-2, no new storage
App. 2899-2	City of Custer	REC & FWP	08/22/2025	22.5	French Creek	n/a	n/a	this application
Downstream of Custer West Dam to USGS Gage 06403300 French Creek Above Fairburn								
257-2	City of Custer	MUN	11/03/1930	n/a	French Creek	0.23	99.9	Described as 20 ft well in gravel next to creek.
734-2	Game, Fish, & Parks	REC	01/01/1933	400	French Creek	n/a	n/a	Stockade Dam
US212-2	USDA	FWP&DOM&REC	07/21/1939	0.86	French Creek	n/a	n/a	small pond
US210-2	USDA	FWP&DOM&REC	07/21/1939	2.9	French Creek	n/a	n/a	small pond
Total all groups				511.6	Total all groups		143.8	
Abbreviations: FWP=fish & wildlife production, DOM= domestic, REC=recreation, IRR=irrigation, IND=industrial								

Table 3 estimates appropriative water use above the USGS Gage No. 06403300, using either 60% usage for water rights/permit limited by diversion rate or by authorized annual appropriation or storage (impoundment volume). The Water Rights Program estimates average water use by non-irrigation appropriations limited by instantaneous diversion rate to be less than 60% of full time pumping at the permitted diversion rate. The estimated annual appropriated volume including this application upstream of USGS Gage No. 06403300 is approximately 655 acre-feet per year. This estimate is likely conservative, since some of the water rights/permit may not require the full volume to fill every year or return water to the creek. Several of the water rights in Table 3 have permit numbers which include “US”, these are very old filings that while recorded as a water right some filings are closer to a modern-day location notice filing for domestic use. However, they are included here since they are on file with the Program as entries in the Water Rights Database (Water Rights, 2025a). There are additional water rights on French Creek below the loss zone, however they were not included in Table 3 since the presence of the loss zone and the stream gage just upstream of it meant water availability for this application could be evaluated without going further downstream. In conclusion, based on best available information, there is water available annually most years to support the impoundment of an additional 22.5 acre-feet of water in Custer West Dam.

Existing Users

The nearest downstream water right/permit is Water Right No. 257-2 held by the City of Custer for municipal use. Water Right No. 257-2 described the water source as the “French Creek drainage basin” and “water is pumped from a well 20 feet deep at the side of French Creek where it is believed the waters of French Creek filter through the gravel into the well” (Water Rights, 2025a). The described well is likely completed into the alluvial deposits along the creek, which receives recharge from the creek. Therefore, it may be more appropriate to consider the water source for Water Right No. 257-2 as groundwater from the quaternary alluvium along French Creek rather than as a whole surface water right from French Creek.

The nearest appropriative user (not the applicant) downstream of the Custer West Dam is the South Dakota Department of Game, Fish, and Parks for Stockade Dam. Stockade Dam is located approximately seven stream miles downstream of Custer West Dam. The USGS gage on French Creek above Stockade is approximately 0.3 stream miles upstream of backwater for the reservoir created by Stockade Dam. The South Dakota Department of Game, Fish, and Parks holds Vested Water Right Claim No. 734-2 for 400 acre-feet per year to fill the reservoir to the spillway outlet. Vested Water Right Claim No. 734-2 was filed in 1961 asking for a priority date of 1933. The amount of appropriation, approximately 400 acre-feet, is based on estimated evaporation losses of three feet per year over the surface area of the reservoir (Schaal, 2016). The reservoir created by Stockade Dam is also fed by Bismark Creek. Due to the size of Stockade Dam and its effect on creek flow, this application, if approved, would have no noticeable impact on flows downstream of Stockade Dam.

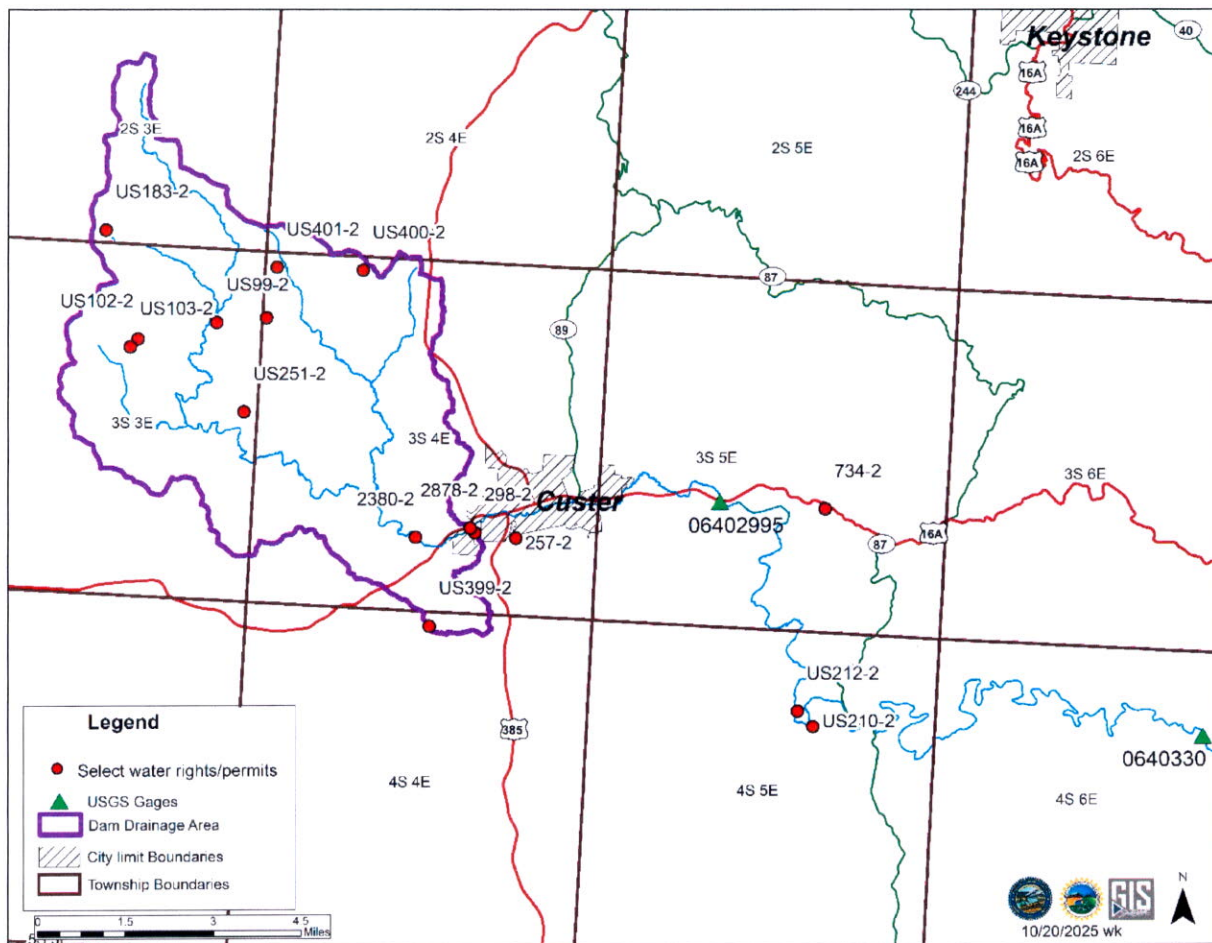


Figure 7: Location of water rights/permits listed in Table 3

There is no history of unlawful impairment between the two dams, and Custer West Dam has been in existence since 1943, impounding water from 1943 to 2012 based on the available information (Water Rights, 2025a and 2025c). Based on the available stream gaging data under average to slightly below average conditions, there is expected to be sufficient runoff to supply both dams including the requested storage increase by this application.

Domestic use concerns have come up downstream of Custer West Dam primarily in the early 1970s (Water Rights, 2025a). These concerns were more in relation to irrigation of portions of a golf course adjacent to the dam and reservoir, rather than an issue with the water impounded by the dam itself (Water Rights, 2025a). Past reviews of these concerns concluded that since a golf course, open to the public, is included under the definition of a public recreation area (ARSD 74:02:1:01.01), that the city's municipal golf course could be irrigated out of the dam without additional water permitting under the definition of domestic use (SDCL 46-1-6(7)) (Water Rights, 2025a). However, the city's pumping for irrigation could not exceed a rate of 18 gallons per minute. This history does suggest that under drier conditions low flows may need to be bypassed for downstream domestic users between the Custer West Dam and Stockade Dam, especially users in the first mile downstream of Custer West Dam which is the approximate distance in stream miles to the next drainage contributing to French Creek (USGS, 2016). Therefore, it is

recommended that the low flow bypass qualification on Water Permit No. 2878-2 for downstream domestic use also be included on this permit, if approved. The design of Custer West Dam does include a low-level outlet, which could be used to bypass low flows if needed (Water Rights, 2025b).

Safety of Dams

The Custer West Dam is classified as a small-sized category 1 dam. A category 1 dam is a high hazard dam which is a dam whose failure may cause loss of life. Reconstruction of a dam regulated under the Safety of Dams rules cannot begin until plans and specifications have been approved by the Chief Engineer of the Water Rights Program and a water permit application, if needed, has been approved. On October 14, 2025, the plans and specifications were approved by the Acting Chief Engineer of the Water Rights Program for compliance with the dam safety rules.

Pursuant to ARSD 74:02:08:10, an emergency preparedness plan (EPP) (more commonly known as an emergency action plan (EAP)) is required for all category 1 dams. The rule does not specify how often a plan needs to be reviewed. However, best practice is that a plan be reviewed at least annually and updated as needed (FEMA, 2013). The majority of state-regulated high hazard dams do not meet the best practice of an annual review of EPPs or EAPs (Water Rights, 2025b). Water Permit No. 2878-2 included a qualification requiring the 2016 EPP for the Custer West Plan be updated prior to the start of dam reconstruction and the plan be reviewed annually and any needed updated provided to all plan holders (Water Rights, 2025a). The updates to the emergency contact information for the Emergency Preparedness Plan have been submitted to the Water Rights Program and other plan holders (Simons, 2025). It is recommended the portion of the qualification on Water Permit No. 2878-2 for the Emergency Preparedness Plan (EPP) to be reviewed and updated annually be included on this permit, if approved.

Conclusions

1. Water Permit Application No. 2899-2, filed by the City of Custer, requests to impound an additional 22.5 acre-feet of water in Custer West Dam on French Creek in the N $\frac{1}{2}$ SE $\frac{1}{4}$ Section 27-T3S-R4E. The water will be used for recreational, fish and wildlife propagation, and public safety purposes.
2. Combined, this application (if approved), Water Permit No. 2878-2, and Water Right No. 298-2 will authorize the impoundment of a total of 100 acre-feet of water by the reconstructed Custer West Dam on French Creek in the N $\frac{1}{2}$ SE $\frac{1}{4}$ Section 27-T3S-R4E.
3. While water is expected to be available in average or slightly below average years, water availability for downstream users could be an issue in extremely dry years. Should this occur, the City of Custer would need to bypass inflow water to downstream domestic users and water right holders with a senior priority date.
4. It is recommended that the low flow bypass qualification on Water Permit No. 2878-2 for downstream domestic use and senior water rights also be included on this permit, if approved.

5. It is recommended that the qualification on Water Permit No. 2878-2 for the Emergency Preparedness Plan (EPP) to be reviewed and updated annually be included on this permit, if approved.


Whitney Kilts
SDDANR- Water Rights Program

References

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- Water Rights, 2025c. County Complaint Files. SD DANR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Weil, P and Kannenberg, M. 2023. Slip-up Creek Watershed Average Annual Flow Estimate. Technical Memorandum. LRE Water. Sioux Falls, South Dakota.



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

October 14, 2025

RESPEC Engineering
Attn: Stephen Bareis
3824 Jet Drive
Rapid City SD 57703
VIA Email Delivery

City of Custer
Attn: Mayor Robert Brown
622 Crook St
Custer SD 57730
VIA Email Delivery

Custer West Dam Project – Plans and Specifications Approval

Dear Sirs:

The Department of Agriculture and Natural Resources (DANR) has reviewed the plans and specifications prepared and submitted by RESPEC on behalf of the City of Custer (dam owner) for Custer West Dam (NID No. SD02616) located in Sec. 27-T3S-R4E in Custer County authorized under Water Permit No. 2878-2 with additional storage being requested under Water Permit Application No. 2899-2 (currently under review by the Water Rights Program). The project consists of reconstruction of the dam to bring the dam in line with current dam safety standards and South Dakota Safety of Dam Rules including new primary and auxiliary spillway structures, overtopping protection, and associated work.

Custer West Dam will remain a small sized, category 1 (high hazard) dam after the reconstruction project is complete. DANR's review is to determine compliance with the minimum design requirements of the Administrative Rules of South Dakota (ARSD) Chapter 74:02:08 Safety of Dams for a small sized, category 1 (high hazard) dam. Approval of these plans and specifications does not release the City of Custer, the owner of the dam, from the responsibility for operating and maintaining the dam to ensure the safety of the dam.

The plans and specifications for the rehabilitation of Custer West Dam are approved with the following conditions:

- Prior to the start of construction, the Water Rights Program be provided with a final copy of the plans signed and stamped by a professional engineer licensed in South Dakota.
- Impoundment of the additional 22.5 acre-feet of water being requested by Water Permit Application No. 2899-2 cannot occur until the application is approved and permit issued. However, bidding and construction on the project can start if the dam owner is willing to risk moving forward before the permit for additional storage has been issued.
- Notify the Water Rights Program of the scheduled installation of the overtopping system, so Water Rights Program staff have the opportunity to attend and observe installation if staff are available.

- Notify the Water Rights Program of the scheduled inspection to determine substantial completion and development of the final punch list for the project, so Water Rights Program staff have the opportunity to attend if staff are available.
- Once the project is completed, provide an electronic copy of the final as-built plans/final construction documentation for the project.

If RESPEC or the City of Custer has any questions or is unable to meet any of the approval conditions and needs to discuss acceptable alternatives, please feel free to contact Whitney Kilts or Mark Mayer with the Water Rights Program at (605) 773-3352. Requested items are to be provide to Whitney Kilts (whitney.kilts@state.sd.us) with the Water Rights Program either hard copy or digitally.

Sincerely,



Mark Mayer, PE
Acting Chief Engineer, Water Rights Program



2899-2

**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

October 14, 2025

RESPEC Engineering
Attn: Stephen Bareis
3824 Jet Drive
Rapid City SD 57703
VIA Email Delivery

City of Custer
Attn: Mayor Robert Brown
622 Crook St
Custer SD 57730
VIA Email Delivery

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Sincerely,



Mark Mayer, PE
Acting Chief Engineer, Water Rights Program

Nancy Hilding
President
Prairie Hills Audubon Society
P.O. Box 788
Black Hawk, SD 57718
phas.wsd@rapidnet.com,
605-787-6466
Nov. 24th, 2025

Acting Chief Engineer's
Water Rights Program,
Foss Building,
523 E Capitol, Pierre, SD 57501

RE: This is application 2899-2 Application to Appropriate Water in SD

- City of Custer, 622 Crook Street, Custer SD 57730, has filed an application for a water permit to impound an additional 22.5 acre-feet of water, in Custer West Dam, located on French Creek, to what is currently authorized by Water Right No. 298-2 & Water Permit No. 2878-2.

Dear Chief Engineer,

We are an environmental group concerned about the protection of the American dipper in the Black Hills. It is non-migratory and lives year-round near fast moving, clear, rocky streams. The dipper once existed in French Creek, Rapid Creek, Box Elder Creek, Elk Creek, Bear Butte Creek, Spearfish Creek and Whitewood Creek in the Black Hills. It now exists in Spearfish and Whitewood Creek (and some tributaries). Our Black Hills dipper are isolated from other dipper populations in the American west and are developing unique genetics that may warrant a sub-species classification, however in 2009, the USFWS wanted more research to prove that, before listing as a Distinct Population Segment, under the ESA.

This aquatic song bird is listed as a state threatened species under SD's Endangered Species Act. It is a Forest Service sensitive species. We and 3 other groups petitioned in 2008 to have the Black Hill's American dipper listed as a Distinct Population Segment (DPS) under the federal Endangered Species Act, but that petition was denied in 2009 by the USFWS.

The dipper is believed to have been lost in French Creek due to loss of water quality and perhaps loss of water quantity due to Stockage Lake. The dipper were prevalent in French Creek in 1920s but disappeared in 1930s, perhaps due to Stockade Lake water quantity and/or quality impacts.

Prairie Hills Audubon Society wants to recover the American dipper in as many Black Hills streams as possible. It's existence in only 2 drainages, makes its' existence vulnerable to major events such as floods or fires. We think Custer State Park (CSP) is supposed to be managed at least in part for wildlife and we want the Park and DANR to work towards protecting the water quality and quantity in the French Creek, so it can once again support an American dipper population.

Here is a map of potential nest sites from page 9 of 2019 report: "Identification and Monitoring of American Dipper Populations and Inhabited Areas in South Dakota Final Report," (Link to this page devoted to French Creek - https://phas-wsd.org/wp-content/uploads/French-Creek_Dipper_2019reportDrilling.pdf):

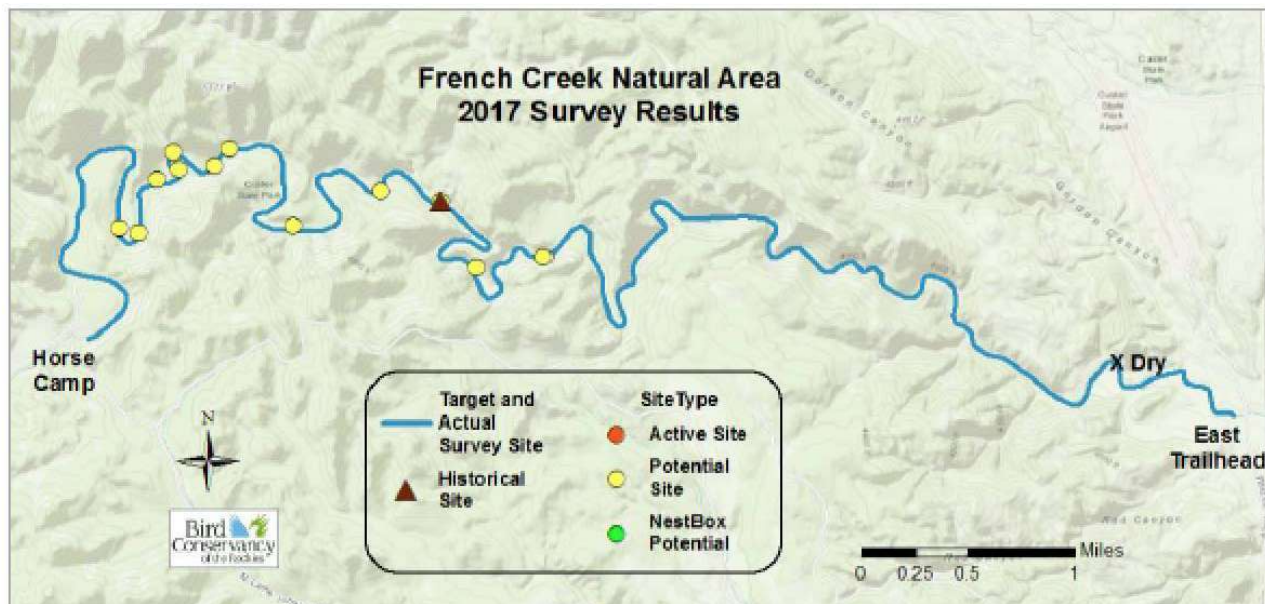


Figure 8. Map of French Creek survey area
Approximately 25 potential nest sites on the east end were not marked.

The Report says:

“Given the number of good nest sites and creek stretches with the potential for fast flows it there is enough water, the 1920s historical records of many dippers along this creek is certainly likely. However, Stockade Lake was built upstream in the 1930s and there have been no subsequent dipper records on this creek, suggesting that the lake has altered stream flows and water quality to the detriment of dippers.”

The 2008 Petition to list the Black Hills American dipper says:

“Probable causes for the loss of a breeding population of dippers are pollution, construction of the Stockade Lake Dam, heavy sedimentation, and the presence of many small rock dams (Backlund 2007). Stockade Lake has a history of being highly eutrophic (Froiland 1978, Backlund 2007).”

We however want DANR to look at the CUMULATIVE IMPACTS of all water quantity withdrawals and impoundments on French Creek to the in-stream flow in areas of the historic American dipper population and consider the cumulative impacts to American dipper habitat of increased impoundment of water in on the City’s dam on French Creek.. We want you all to work to maximize water quality and quantity in the Creek at the area of the historic dipper population. We very much doubt this increased impoundment will help French Creek provide the aquatic habitat needed by dippers..

We are also concerned about water quality. There was a recent fight between residents of Custer County and the City of Custer about the decision to dump the City’s treated waste water into French

Creek. Opponents of the City of Custer's treated sewage dumping, say the water quantity sampling was done 20 miles from the proposed new discharge point -- down in the southern side of CSP. The opponents claim the DANR or the City is relying on unrealistic water quantities to create effluent dilution that won't exist up north at the point source & thus violation of water quality standards will occur. The voters of Custer County passed a referendum to declare the proposed dumping to French Creek a nuisance but the Courts ruled in the City's favor, saying that actions approved by DANR can't be a nuisance. We question the impacts of increased up-stream impoundment on the water quality of French Creek.

Has Custer City started to discharge effluent already and if so, has the water quality in French Creek been sampled post discharge, during a low flow season?

We ask that you evaluate the impact of this water impoundment to American dipper habitat in French Creek. We ask where in the Black Hills will the water quality and quantity of streams will be protected to allow reintroduction of dippers to the streams? Why not in Custer State Park.

Bibliography:

We include some references below with hyper-links to the articles so you can download them:

Identification and Monitoring of American Dipper Populations and Inhabited Areas in South Dakota Final Report, March 31, 2019, Bird Conservancy of the Rockies, Tech. Report AMDI-4, <https://apps.sd.gov/gf56fisheriesreports/getWDRReport.ashx?GUID=20190507-1943-4399-3235-846864d7e3d0&revNum=1>

Conservation genetics of American Dipper (*Cinclus mexicanus*): the genetic status of a population in severe decline, Cynthia M. Anderson, Garth M. Spellman, Carolyn S. Ferrell, Katherine Strickler, Shane K. Sarver, 2007, <https://phas-wsd.org/wp-content/uploads/Anderson-Conserv-Genet-Dipper.pdf>

Final Report: Evaluation of DNA Microsatellite Fingerprinting Markers for the American Dipper, *Cinclus mexicanus*, Cynthia Anderson and Shane Sarver, <https://phas-wsd.org/wp-content/uploads/BH-dipper-genetics.pdf>

Petition to list the Black Hills of South Dakota distinct population segment of American dipper (*Cinclus mexicanus unicolor*), as THREATENED or ENDANGERED under the Endangered Species Act 16 USC § 1531 et seq. (1973 as amended) and for the designation of Critical Habitat, 2008, <https://phas-wsd.org/wp-content/uploads/2008-American-Dipper-Petition-Final.pdf>

Sincerely,



Nancy Hilding
President
Prairie Hills Audubon Society



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

**NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPERS RIGHT AWAY.**

November 6, 2025

City of Custer
c/o Robert Brown
622 Crook Street
Custer SD 57730

Dear Mr. Brown:

Water Permit Application No. 2899-2 has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Custer County Chronicle printed at Custer SD (Ph # 605 673-2217) and the Rapid City Journal printed at Rapid City SD (see attachment for contact number). You will need to contact the newspapers and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Acting Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspapers to authorize publication of your Notice and to arrange for payment. Early contact with the papers can eliminate delays. Upon receiving authorization from you, the publishers have been instructed to publish your notice. The newspapers have also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Rachel Rodriguez

Rachel Rodriguez
Water Rights Program
(605) 773-3352

enclosures

NOTE: If you plan to contest any part of the Acting Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

NOTICE OF APPLICATION NO. 2899-2 to Appropriate Water

Notice is given that the City of Custer, 622 Crook Street, Custer SD 57730, has filed an application for a water permit to impound an additional 22.5 acre-feet of water, in Custer West Dam, located on French Creek, to what is currently authorized by Water Right No. 298-2 & Water Permit No. 2878-2. Water Right No. 298-2 authorizes the impoundment of 30 acre-feet of water by the dam, and Water Permit No. 2878-2 authorizes the impoundment of 47.5 additional acre-feet of water and authorized reconstruction of the dam, located in the NE 1/4 SE 1/4 Section 27, with water to be impounded in the N 1/2 SE 1/4 Section 27; all in T3S-R4E. If approved, this application, Water Right No. 298-2, and Permit No. 2878-2, would authorize the impoundment of sufficient water annually to maintain water to the primary outlet elevation of 5,348.0 feet mean sea level. The normal pool storage capacity at the primary spillway elevation will be 100 acre-feet of water, with water to be used for recreation, fish & wildlife propagation, and public safety purposes. This site is located in the southwest part of the City of Custer, SD.

Pursuant to SDCL 46-2A-2, the Acting Chief Engineer recommends APPROVAL of Application No. 2899-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. The Acting Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Acting Chief Engineer. A petition opposing the application shall be filed on a form provided by the Acting Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Acting Chief Engineer. The Acting Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Acting Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by November 24, 2025.

The petition shall include a statement describing the unique injury upon approval of the application on the petitioner, the petitioner's reasons for opposing the application, and the name and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

Any interested person may file a comment on the application with the Acting Chief Engineer. The comment shall be filed on a form provided by the Acting Chief Engineer and is available online at <https://danr.sd.gov/public> or by calling (605) 773-3352 or writing the Acting Chief Engineer at the address provided above. Filing a comment does not make the commenter a party of record or a participant in any hearing that may be held. Any comment must be filed by November 24, 2025.

If the applicant does not contest the recommendation of the Acting Chief Engineer and no petition to oppose the application is received, the Acting Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at the total approximate cost of _

Rodriguez, Rachel

From: Samantha Pryor <leelegals@column.us>
Sent: Thursday, November 6, 2025 8:43 AM
To: mayor@cityofcuster.com
Cc: Rodriguez, Rachel
Subject: Re: [EXT] 2899-3 City of Custer - Public Notice

Hi there,

Your notice is scheduled to be published in the The Rapid City Journal on November 13, 2025. Your payment must be received by November 7, 2025 at 3:00 PM MST. For your convenience, you can quickly access your invoice and pay securely online using a credit/debit card or bank transfer (ACH) by clicking this link:

www.column.us/invoices/dRpl88nqPUYHNdsMjKsB/pay. Your Notice ID is: [shVWSElw7Xt4mWbn6aeZ](https://column.us/notice/shVWSElw7Xt4mWbn6aeZ)

You will be receiving a notification from Column Support with your proof. If you don't see it, check your spam folder and any email restrictions you may have.

For the fastest and most reliable placement process, use column.us to quickly place notices yourself, get proofs, view pricing, and access your invoices and affidavits. Visit our [help center](#) for tips, or sign up for one of our [training webinars](#).

If you have any questions or concerns, please don't hesitate to let us know so we can look into it!

—
// Samantha Pryor
// Column Pro Representative
// [Column.us](https://column.us) is an easy-to-use online platform where you can place public notices, and access your proofs, invoices and affidavits.



On November 6, 2025 at 9:26 AM EST rachel.rodriguez@state.sd.us wrote:

Attached is a notice to be published on November 13, 2025.

City of Custer, 622 Crook Street, Custer SD 57730, 605-673-4824, mayor@cityofcuster.com has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol Ave, Pierre SD 57501.

Let me know if you have questions. Please confirm receipt of this email.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Thursday, November 6, 2025 8:26 AM
To: RCY Legals
Subject: 2899-3 City of Custer - Public Notice
Attachments: 2899-2 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on November 13, 2025.

City of Custer, 622 Crook Street, Custer SD 57730, 605-673-4824, mayor@cityofcuster.com has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol Ave, Pierre SD 57501.

Let me know if you have questions. Please confirm receipt of this email.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Thursday, November 6, 2025 8:24 AM
To: Jason Ferguson
Subject: 2899-3 City of Custer - Public Notice
Attachments: 2899-2 public.short_final.docx; FORM8.FRM.doc

Attached is a notice to be published on November 12, 2025

City of Custer, 622 Crook Street, Custer SD 57730, 605-673-4824, mayor@cityofcuster.com has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol Ave, Pierre SD 57501.

Let me know if you have questions. Please confirm receipt of this email.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us



RECEIVED

DEC 12 2025

OFFICE OF
WATER

Affidavit of Publication

State of South Dakota)

)ss.

County of Custer)

Jerry Lee Lenander of said county, being duly sworn, on oath says that he is publisher of the Custer County Chronicle, a weekly newspaper printed and published in Custer City, said County of Custer and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein, mentioned, and was and is printed wholly or in part in an office maintained at said place of publication: that the

City of Custer City
Notice of Application
No 2899-2 to Appropriate Water

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for one successive week(s), on which said newspaper was regularly published, to wit:

Nov 12, 2025 _____;

_____;

_____;

_____;

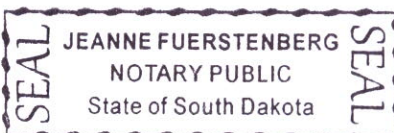
the full amount of the fees for the publication of the annexed notice is \$ 50.71.

Subscribed and sworn to me before this 12th

of November, 2025;

Jeanne Fuerstenberg
NOTARY PUBLIC

MY COMMISSION EXPIRES: NOV 30 2027



NOTICE OF APPLICATION

NO. 2899-2 TO
APPROPRIATE WATER

Notice is given that the City of Custer, 622 Crook Street, Custer SD 57730, has filed an application for a water permit to impound an additional 22.5 acre-feet of water, in Custer West Dam, located on French Creek, to what is currently authorized by Water Right No. 298-2 & Water Permit No. 2878-2. Water Right No. 298-2 authorizes the impoundment of 30 acre-feet of water by the dam, and Water Permit No. 2878-2 authorizes the impoundment of 47.5 additional acre-feet of water and authorized

reconstruction of the dam, located in the NE 1/4 SE 1/4 Section 27, with water to be impounded in the N 1/2 SE 1/4 Section 27; all in T3S-R4E. If approved, this application, Water Right No. 298-2, and Permit No. 2878-2, would authorize the impoundment of sufficient water annually to maintain water to the primary outlet elevation of 5,348.0 feet mean sea level. The normal pool storage capacity at the primary spillway elevation will be 100 acre-feet of water, with water to be used for recreation, fish & wildlife propagation, and public safety purposes. This site is located in the southwest part of the City of Custer, SD.

Pursuant to SDCL 46-2A-2, the Acting Chief Engineer recommends APPROVAL of Application No. 2899-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing domestic water uses and water rights, 3) the proposed use is a beneficial use and 4) it is in the public interest as it pertains to matters of public interest within the regulatory authority of the Water Management Board. The Acting Chief Engineer's recommendation with qualifications, the application, and staff report are available at <https://danr.sd.gov/public> or contact Ron Duvall for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing this application or recommendation shall allege that the application, upon approval, will cause injury to the person that is unique from any injury suffered by the public in general. The injury must concern a matter either within the regulatory authority found in SDCL 46-2A-9 for approval or denial of the application, or other matter concerning the application within the regulatory authority of the board to act upon as defined by SDCL 46-2-9 and 46-2-11, or both. Any person meeting the petitioner

held. Any comment must be filed by November 24, 2025.

If the applicant does not contest the recommendation of the Acting Chief Engineer and no petition to oppose the application is received, the Acting Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the recommendation is filed, then a hearing will be scheduled, and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Published once at an approximate cost of \$50.71 and may be viewed free of charge at www.sdpublicnotices.com.

11/12

requirements and wishing to be a party of record in a contested case hearing shall file a written petition to oppose the application with BOTH the applicant and Acting Chief Engineer. A petition opposing the application shall be filed on a form provided by the Acting Chief Engineer. The petition form is available online at <https://danr.sd.gov/public> or by contacting the Acting Chief Engineer. The Acting Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501" or call (605) 773-3352. The applicant's mailing address is given above. If contesting the Acting Chief Engineer's recommendation, the applicant shall also file a petition. A petition filed by either an interested person or the applicant must be filed by November 24, 2025.

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Fwd: 2899-3 City of Custer - Public Notice

1 message

Jason Ferguson <custernews@gwtc.net>

To: Jeanne <custerchronicle@gmail.com>

RECEIVED**DEC 12 2025**

Tue, Dec 2, 2025 at 1:59 PM

**OFFICE OF
WATER**

Begin forwarded message:

From: "Rodriguez, Rachel" <Rachel.Rodriguez@state.sd.us>**Subject:** RE: 2899-3 City of Custer - Public Notice**Date:** December 2, 2025 at 1:48:24 PM MST**To:** Jason Ferguson <custernews@gwtc.net>

Good Afternoon Jason,

Was the affidavit mailed last week?

Thank you,

Rachel Rodriguez

DANR | Program Assistant

Rachel.Rodriguez@state.sd.us**From:** Jason Ferguson <custernews@gwtc.net>**Sent:** Thursday, November 20, 2025 4:30 PM**To:** Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>**Subject:** Re: [EXT] 2899-3 City of Custer - Public Notice

We will be sending it soon, Rachel!

On Nov 20, 2025, at 3:16 PM, Rodriguez, Rachel
<Rachel.Rodriguez@state.sd.us> wrote:

Please send the affidavit for this publication.

Thank you,

Rachel Rodriguez

DANR | Program Assistant

*We were in
the middle of moving
to a new local last
week - Sorry for the delay.
emailed copy
12/4 dx*

Rachel.Rodriguez@state.sd.us

<image001.png>

From: Jason Ferguson <custernews@gwtc.net>

Sent: Friday, November 7, 2025 11:10 AM

To: Rodriguez, Rachel <Rachel.Rodriguez@state.sd.us>

Subject: Re: [EXT] 2899-3 City of Custer - Public Notice

Got it! For some reason it went into my spam folder!

On Nov 6, 2025, at 7:24 AM, Rodriguez, Rachel
<Rachel.Rodriguez@state.sd.us> wrote:

Attached is a notice to be published on November 12, 2025

City of Custer, 622 Crook Street, Custer SD 57730, 605-673-4824, mayor@cityofcuster.com has been notified to contact you to authorize publication and arrange for payment.

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Let me know if you have questions. Please confirm receipt of this email.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us
<image001.png>

<2899-2 public.short_final.docx><FORM8.FRM.doc>

Jason Ferguson
General Manager, Southern Hills Publishing
custernews@gwtc.net
673-2217

When you subscribe to the hard-copy edition or the on-line E-edition of the Custer County Chronicle newspaper, you support local journalism which is critical to our constitutional republic, and all for less than \$5 a month.

Subscribe today: (605) 673-2217 or email us at custerchronicle@gwtc.net. You may also subscribe through our website <https://www.custercountychronicle.com> or by stopping by our office at [522 Mt. Rushmore Rd., Custer](#), Monday - Friday, 8 a.m. to 5 p.m.

Jason Ferguson
General Manager, Southern Hills Publishing
custernews@gwtc.net
673-2217

When you subscribe to the hard-copy edition or the on-line E-edition of the Custer County Chronicle newspaper, you support local journalism which is critical to our constitutional republic, and all for less than \$5 a month.

AFFIDAVIT OF PUBLICATION

City of Custer undefined

State of Florida, County of Broward, ss:

I, Anjana Bhadoriya, of lawful age, being duly sworn upon oath depose and say that I am an agent of Column Software, PBC, duly appointed and authorized agent of the Publisher of The Rapid City Journal, a corporation of Rapid City, South Dakota, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published for at least one year prior to the first date of the published notice. This affidavit is a true and corrected copy of notice which appeared in said newspaper on the following dates.

Publication Dates:

- Nov 13, 2025

NOTICE ID: shVWSElw7Xt4mWbn6aeZ

NOTICE NAME: NOTICE OF APPLICATION NO. 2899-2

TOTAL AD COST: \$102.87

Anjana Bhadoriya

Agent

VERIFICATION

State of Florida
County of Broward

Signed or attested before me on this: 11/14/2025



Notary Public

Notarized remotely online using communication technology via Proof.

RECEIVED

NOV 21 2025

**Water Rights
Program**

**NOTICE OF APPLICATION
NO. 2899-2
to Appropriate Water**

Notice is given that the City of Custer, 622 Crook Street, Custer SD 57730, has filed an application for a water permit to impound an additional 22.5 acre-feet of water, in Custer West Dam, located on French Creek, to what is currently authorized by Water Right No. 298-2 & Water Permit No. 2878-2. Water Right No. 298-2 authorizes the impoundment of 30 acre-feet of water by the dam, and Water Permit No. 2878-2 authorizes the impoundment of 47.5 additional acre-feet of water and authorized reconstruction of the dam, located in the NE 1/4 SE 1/4 Section 27, with water to be impounded in the N 1/2 SE 1/4 Section 27; all in T3S-R4E. If approved, this application, Water Right No. 298-2, and Permit No. 2878-2, would authorize the impoundment of sufficient water annually to maintain water to the primary outlet elevation of 5,348.0 feet mean sea level. The normal pool storage capacity at the primary spillway elevation will be 100 acre-feet of water, with water to be used for recreation, fish & wildlife propagation, and public safety purposes. This site is located in the southwest part of the City of Custer, SD.

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(Published November 13, 2025 for a total approximate cost of \$102.87 and may be viewed for free at www.sdpublicnotices.com)
Legal No: COL-SD-3651

RECEIVED

NOV 21 2025

**Water Rights
Program**

Rodriguez, Rachel

From: Rodriguez, Rachel
Sent: Thursday, November 6, 2025 8:57 AM
To: Mayor
Subject: 2899-3 City of Custer - Public Notice
Attachments: 2899-2 Rec.pdf; 2899-2 Ltr.pdf; 2899-2 PubNotice.pdf; RapidCityJournal Info.pdf

Good morning,

Attached is a copy of the report, acting chief engineer's recommendation, and information regarding the public notice for your water permit application. **Please note that payment must be received by Friday, November 7th at 3 PM.** You have already received an email directly to you from the Rapid City Journal. As stated in the letter, please contact the paper(s) as soon as possible to authorize publication and arrange for payment. This information is also being mailed to you today.

Let me know if you have questions. Please confirm receipt of this email.

Thank you,

Rachel Rodriguez
DANR | Program Assistant
Rachel.Rodriguez@state.sd.us





**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

January 6, 2026

City of Custer
c/o Robert Brown
622 Crook Street
Custer SD 57730

Dear Mr. Brown:

Enclosed is Water Permit No. 2899-2 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Mark Mayer, PE
Director of Office of Water

enclosures



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

**Affidavit of Public Notice
Posting on DANR Website**

Pursuant to SDCL § 46-2A-4, public notice of the following application was posted on the DANR web site at <https://danr.sd.gov/public>. The posted public notice is the same notice as published in the pertinent newspaper(s) and a copy of the public notice is maintained in the application file. If the application is contested, the posting is moved to the DANR contested case website at <https://danr.sd.gov/public/ContestedCase.aspx> until final action is taken on the application pursuant to SDCL § 46-2A-4.

Application No.: 2899-2
Name of Applicant: City of Custer
Date of Posting: 11/10/2025
Date of Removal: 1/6/2026



Ron Duvall, Engineer III

1/6/2026

Date

Subscribed and sworn to before me, a notary public, this 6th day of Jan, 2026.



Notary Public - South Dakota
My commission expires:

(SEAL)

**Rachel Rodriguez
My Commission Expires
May 16, 2029**

