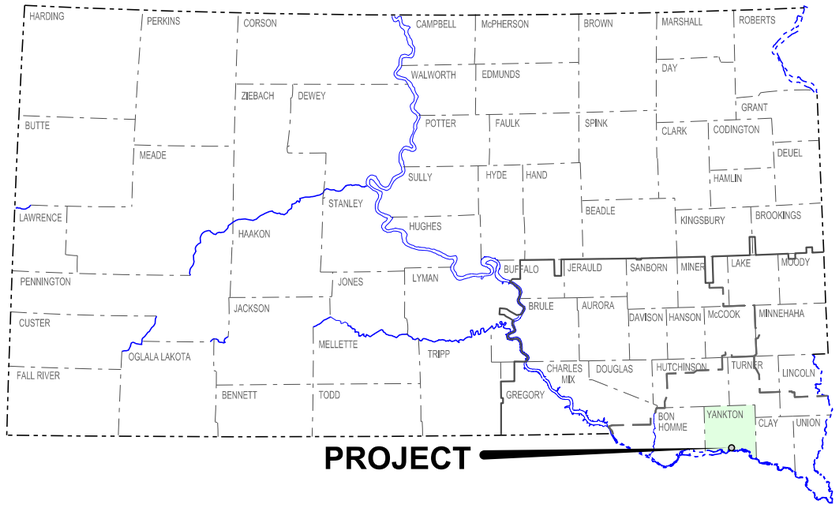


PLOT SCALE - 1:70000

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECTS
PT 0050(132)384
SD HIGHWAY 50
YANKTON COUNTY

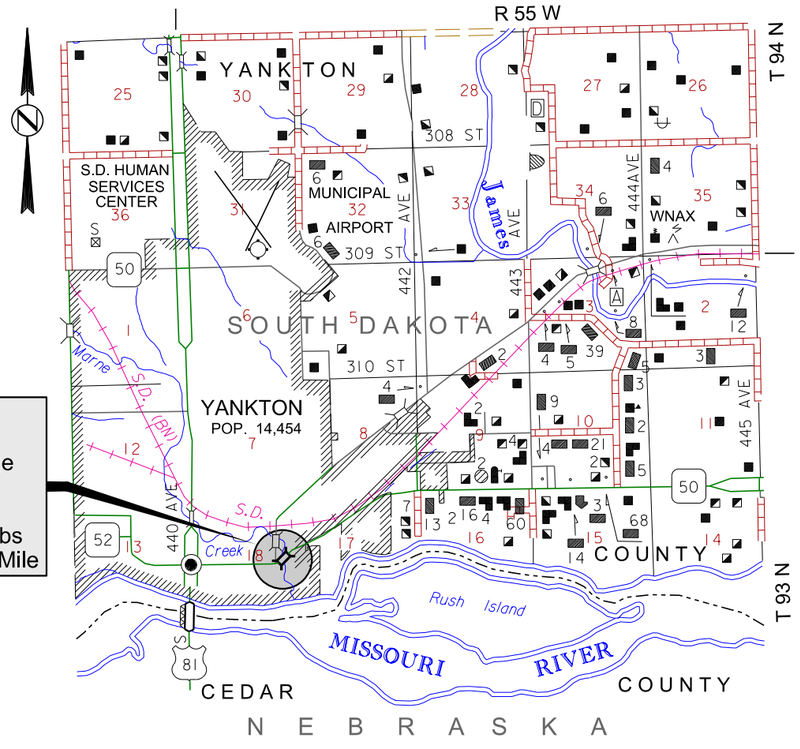
BERM REPAIR & RIPRAP
PCN 07E9

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0050(132)384	1	32

Plotting Date: 09/14/2026

INDEX OF SHEETS

Sheet 1	Layout Map & Index of Sheets
Sheet 2	Estimates of Quantities
Sheets 3-5	Environmental Commitments
Sheets 6-10	Plan Notes & SWPPP
Sheets 11-12	Traffic Control
Sheet 13	Control Data
Sheet 14	Horizontal Alignment Data
Sheet 15	Legend
Sheet 16	Plan Sheet
Sheets 17-31	Bridge Work at Str. No. 68-129-205
Sheet 32	Standard Plates



STR. NO. 68-129-205
43+99.23 to 45+18.46
Continuous Concrete Bridge
119'-2¾"=0.023 Mile
SD50 MRM 384.66
Two Approach/Sleeper Slabs
1@34',1@37'=71' = 0.013 Mile

DESIGN DESIGNATION	
ADT(2022)	8,710
ADT(2042)	12,247
DHV	1,413
D	51%
T DHV	3.4%
T ADT	7.4%
V	30 MPH

STORM WATER PERMIT
Receiving Waters: Marne Ck
Area Disturbed: 0.25 Acre
Total Project Area: 1 Acre
Latitude: 42.8717
Longitude: -97.3813

1

December 2, 2026

PLOTTED FROM - TRM111118

PLOT NAME - 2

FILE - ...\PRJ2026\YANK07E9\TTL07E9.DGN

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0050(132)384	2	32

Rev 10-19-26 GAW

PT 0050(132)384 – PCN 07E9

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
634E0010	Flagging	20.0	Hour
634E0110	Traffic Control Signs	160.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Board	1	Each
734E0010	Erosion Control	Lump Sum	LS
734E0154	12" Diameter Erosion Control Wattle	200	Ft

PT 0050(132)384 – PCN 07E9
Str. No. 68-129-205

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E7500	Remove Pipe for Reset	4	Ft
110E7510	Remove Pipe End Section for Reset	1	Each
450E9000	Reset Pipe	4	Ft
450E9001	Reset Pipe End Section	1	Each
462E0100	Class M6 Concrete	0.8	CuYd
480E0100	Reinforcing Steel	22	Lb
700E0210	Class B Riprap	1,686.8	Ton
700E1200	Partially Grouted Class B Riprap	19.1	Ton
831E0110	Type B Drainage Fabric	1,137	SqYd

ENVIRONMENTAL COMMITMENTS

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ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/doing-business/environmental/about-environmental/>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT A: AQUATIC RESOURCES

COMMITMENT A1: WETLANDS

All efforts to avoid and minimize wetland impacts from the project have resulted in approximately 0.03 acres of wetlands (includes temporary and permanent) becoming impacted. Refer to plans for location and boundaries of the impacted wetlands.

Table of Impacted Wetlands

Wetland No.	Station	Perm. Impact (Acres)	Temp Impact (Acres)	Total Impact (Acres)
1E	44+50 (L)	0.01	0.02	0.03

Action Taken/Required:

Mitigation is required in accordance with the "*Statewide Finding Regarding Wetlands for South Dakota Federal-Aid Highway Projects (February 2018)*". Replacement of 0.01 acres of permanent wetland impacts will be completed through another wetland mitigation opportunity in a manner which considers FHWA's program-wide goal of 'net gain' of wetlands through enhancement, creation, and preservation.

Temporary impacts identified in the Table of Impacted Wetlands will not be mitigated as original contours and elevations will be re-established as designated in the plans. Prior to initiating temporary work in wetlands, the Contractor will submit a plan to the Project Engineer in accordance with Section 7.18 of the Specifications.

The Contractor will notify the Project Engineer if additional easement is needed to complete work adjacent to any wetland. The Project Engineer will obtain an appropriate course of action from the Environmental Office before proceeding with construction activities that affect any wetlands beyond the work limits and easements shown in the plans.

COMMITMENT A2: STREAMS

All efforts to avoid and minimize stream impacts from the project have resulted in approximately 0.12 acre of stream (includes temporary and permanent) becoming impacted. Refer to plans for location and boundaries of the impacted streams.

Table of Impacted Streams

Stream Name	Station	Perm. Impact (Acres)	Temp. Impact (Acres)	Total Impact (Acres)
Marne Creek	44+50 (L/R)	0.06	0.06	0.12

Action Taken/Required:

It has been determined that project impacts do not require stream mitigation. Temporary impacts identified in the Table of Impacted Streams will not be mitigated as the finished ground under the bridge will be shaped to match the upstream channel and flood plain and the existing low water channel will be maintained as near as practical to the existing location as designated in the plans.

The contractor will complete excavation after temporary diversion is in place, if required, with minimal standing water to create the profile of slope protection specified in plans. Once the instream work is completed, the removed material will be placed on top of the riprap to match the natural ground, proposed groundline, or specified shape and elevations shown in plans. When overburden extends into the streambed it will form the channel bottom and profile as specified in plans. The finished ground under the bridge will be shaped to match the upstream and downstream channel and flood plain.

The Contractor will notify the Project Engineer if additional easement is needed to complete work adjacent to any stream. The Project Engineer will obtain an appropriate course of action from the Environmental Office before proceeding with construction activities that affect any streams beyond the work limits and easements shown in the plans.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT C: WATER SOURCE

If a Contractor needs access to state waters for extraction, the Contractor must obtain a water right, through the application of a Temporary Permit to Use Public Waters before work begins.

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Temporary permit to use public waters for highway construction purposes application can be found on the SDDANR website: https://danr.sd.gov/OfficeOfWater/WaterRights/PermitForms/default.aspx

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
< https://sdleastwanted.sd.gov/maps/default.aspx >

South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species:
< https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the South Dakota Department of Agriculture and Natural Resources (DANR), apply to this project. Special construction measures will be taken to ensure the above standard(s) of the surface waters are maintained and protected.

ENVIRONMENTAL COMMITMENTS

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

If construction dewatering is required and this project is currently covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the contractor will need to submit the dewatering information to the Project Engineer using the following SDDOT Dewatering Info CDX form:

<https://dot.sd.gov/doing-business/environmental/forms/>

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:

<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/swdpermitting/Ereporting.aspx >

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

The Contractor must adhere to the “Special Provision Regarding Storm Water Discharges to Waters of the State.”

The Contractor will complete the DANR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

The form can be found at:
<
https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPAppendixCCA2023Fillable.pdf >

The Contractor is advised that permit coverage may also be required for off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

The DOT 298 Form will be used for site inspections and to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents and retained for a minimum of three years.

The inspection will include disturbed areas of the construction site that have not been finally stabilized, areas used for storage materials, structural control measures, and locations where vehicles enter or exit the site. These areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP will be observed to ensure that they are operating correctly, and sediment is not tracked off the site.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT: < https://dot.sd.gov/doing-business/environmental/stormwater >

DANR:<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/default.aspx>

EPA: < https://www.epa.gov/npdes >

COMMITMENT F: SEASONAL WORK RESTRICTION

The State of South Dakota Game, Fish, and Parks has designated a warmwater fishery associated with this project.

Action Taken/Required:

Construction or demolition activities should not take place during the Seasonal Work Restriction listed in the table below to avoid conflicts with spawning fish. If flows during this time are nonexistent or extremely low, the seasonal use restriction may not be applicable. The Contractor will not conduct in-stream work during the Seasonal Work Restriction without prior approval from the SDDOT Environmental Office.

Stream Name	Stream Classification	Seasonal Work Restriction
Marne Creek	Warm Water	April 1 to June 30

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, “No Dumping Allowed”.
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

ENVIRONMENTAL COMMITMENTS

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COMMITMENT M: SECTION 4(f)/6(f) RESOURCES

COMMITMENT M1: SECTION 4(f) PROPERTY

A Section 4(f) Evaluation concluded there are no feasible and prudent alternatives to avoiding Section 4(f) property located within the project.

Station	Section 4(f) Property
43+25 – 45+20 L; 43+00 – 44+95 R	Auld-Brokaw Trail (City of Yankton)

The locations and boundaries of the site(s) for avoidance are shown the plans.

Action Taken/Required:

The following measures are required to minimize harm to the above Section 4(f) property:

- Access to the trail to the Rotary Nature Area will be maintained during construction.
- Appropriate signage shall be installed to alert users of the Auld-Brokaw Trail of construction activities, access restrictions or closures, and to direct users to secondary access points.
- An approved pedestrian detour shall be in place to maintain connectivity to the Auld-Brokaw Trail for trail users.
- The Contractor shall be required to closely coordinate the construction schedule with the SDDOT Project Engineer to coordinate with SDDOT Environmental office and the City of Yankton Public Works Director (Phone #: 605-668-4250) prior to the start of construction activities.

The Contractor will notify the Project Engineer if additional easement is needed to complete the work adjacent to any Section 4(f) property. The Project Engineer will obtain an appropriate course of action from the Environmental Office before proceeding with construction activities that affect any Section 4(f) property.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the USACE for the permanent actions associated with this project.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 404 Permit.

The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States.

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UTILITIES

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

SITE ACCESS

The existing Auld-Brokaw Trail is located adjacent to the project. The contractor will be required to avoid damaging the existing shared use trail when completing the project. Any portion of concrete damaged by the Contractor shall be replaced at the expense of the contractor.

EROSION CONTROL

The estimated area requiring erosion control is 0.5 Acre. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor, seeding and mulching will be incidental to the contract lump sum price for Erosion Control.

The limits of erosion control work will be determined by the Engineer during construction.

Permanent Seeding

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways.

Type C Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	16
Canada Wildrye	Mandan	2
	Total:	18

Mulching (Grass Hay or Straw)

If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor will provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles will remain on the project to decompose.

The erosion control wattle provided will be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

https://apps.sd.gov/HC60ApprovedProducts/main.aspx

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work.

GENERAL TRAFFIC CONTROL

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	1	48" x 48"	16.0	16.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	1	48" x 48"	16.0	16.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			160.0

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST
*(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION
To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES
- **5.3 (3a): Project Limits** (See Title Sheet)
- **5.3 (3a): Project Description** (See Title Sheet)
- **5.3 (4): Site Map(s)** (See Title Sheet and Plans)
- **Major Soil Disturbing Activities** (check all that apply)
  - ☐ Clearing and grubbing
  - ☒ Excavation/borrow
  - ☒ Grading and shaping
  - ☐ Filling
  - ☐ Other (describe):
- **5.3 (3b): Total Project Area** 1 Acre
- **5.3 (3b): Total Area to be Disturbed** 0.5 Acre
- **5.3 (3c): Maximum Area Disturbed at One Time** 0.5 Acre
- **5.3 (3d): Existing Vegetative Cover (%)** 70-80
  - **5.3 (3d): Description of Vegetative Cover** Typical Eastern SD native and introduced grasses and forbs
- **5.3 (3e): Soil Properties:** AASHTO Soil or USDA-NRCS Soil Series Classification Loam
- **5.3 (3f): Name of Receiving Water Body/Bodies** Marne Creek
- **5.3 (3g): Location of Construction Support Activity Areas**

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES
The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Excavate to limits shown in plans	
Place Riprap.	
Reseed all disturbed areas.	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES
All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)

Description	Estimated Start Date
☐ Natural Buffers (within 50 ft of Waters of State)	
☐ Silt Fence	
☒ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls

Description	Estimated Start Date
☐ Silt Fence	
☐ Temporary Berm/Windrow	
☐ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☒ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☐ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

Dust Controls

Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☐ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs

Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
☐ Other:	

Stabilization Practices (See Detail Plan Sheets)
(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (**3.18**))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
☐ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☐ Mulching (Grass Hay or Straw)	
☐ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☐ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
☐ Other:	

Wetland Avoidance
Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☒ No ☐ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

➢ **Material Management**

- Housekeeping
  - Only needed products will be stored on-site by the Contractor.
  - Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
  - Products must be stored in original containers and labeled.
  - Material mixing will be conducted in accordance with the manufacturer's recommendations.
  - When possible, all products will be completely used before properly disposing of the container off-site.
  - The manufacturer's directions for disposal of materials and containers will be followed.
  - The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
  - Dust generated will be controlled in an environmentally safe manner.
- Hazardous Materials
  - Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
  - Original labels and material safety data sheets will be retained in a safe place to relay important product information.
  - If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
  - Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
  - Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

➢ **Spill Control Practices**

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

➢ **Spill Response**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDANR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

➢ **Waste Disposal**

- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

➢ **Hazardous Waste**

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

➢ **Sanitary Waste**

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading "POLLUTION PREVENTION PROCEDURES" (check all that apply).

- ☐ Concrete and Portland Cement
- ☐ Detergents
- ☐ Paints
- ☐ Metals
- ☐ Bituminous Materials
- ☐ Petroleum Based Products
- ☒ Diesel Exhaust Fluid
- ☐ Cleaning Solvents
- ☐ Wood
- ☐ Cure
- ☐ Texture
- ☐ Chemical Fertilizers
- ☐ Other:

Product Specific Practices

- **Petroleum Products**
  All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

- **Fertilizers**
  Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

- **Paints**
  All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer's instructions and any applicable state and local regulations.

- **Concrete Trucks**
  Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

- ☐ Discharges from water line flushing.
- ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- ☐ Uncontaminated ground water associated with dewatering activities.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor's site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
  - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
  - The release or spill causes an immediate danger to human health or safety
  - The release or spill exceeds 25 gallons
  - The release or spill causes a sheen on surface water
  - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
  - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
  - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
  - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

- 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 will be sent to SDDANR within 14 days of the discharge.

5.4: SWPPP CERTIFICATIONS

➢ **Certification of Compliance with Federal, State, and Local Regulations**

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ **South Dakota Department of Transportation**

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.



_____

Authorized Signature (See the General Permit, Section 7.4 (1))

➢ **Prime Contractor**

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained 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.

_____

Authorized Signature

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➢ **Contractor Information**:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **Erosion Control Supervisor**

- Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDOT Project Engineer**

- Name: _____
- Business Address: _____
- Job Office Location: _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDANR Contact Spill Reporting**
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➢ **SDDANR Contact for Hazardous Materials.**
- (605) 773-3153

➢ **National Response Center Hotline**
- (800) 424-8802.

➢ **SDDANR Stormwater Contact Information**
- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➢ **5.5 (1): Conditions Requiring SWPPP Modification**

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➢ **5.5 (2): Deadlines for SWPPP Modification**

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➢ **5.5 (3): Documentation of Modifications to the Plan**

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

➢ **5.5 (4): Certification Requirements**

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➢ **5.5 (5): Required Notice to Other Operators**

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

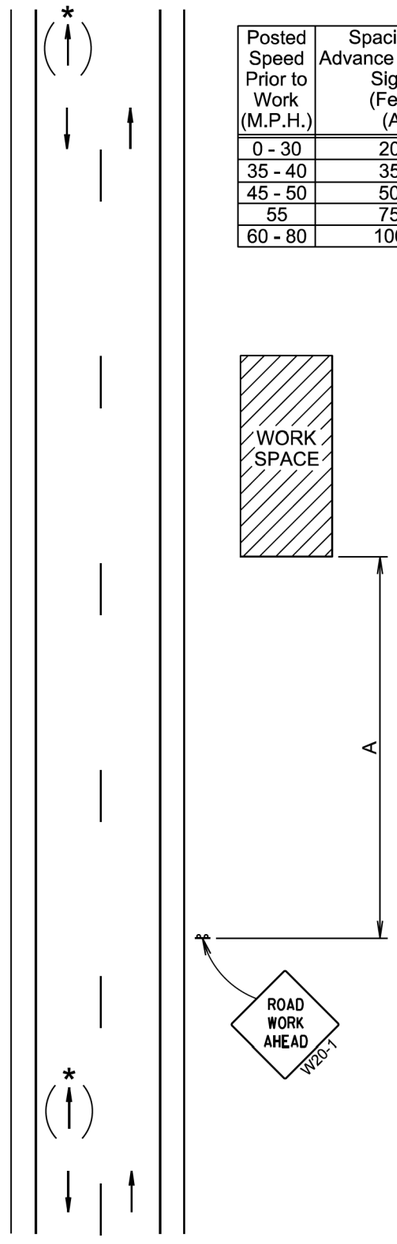
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000

January 22, 2021

Published Date: 2027

SDDOT

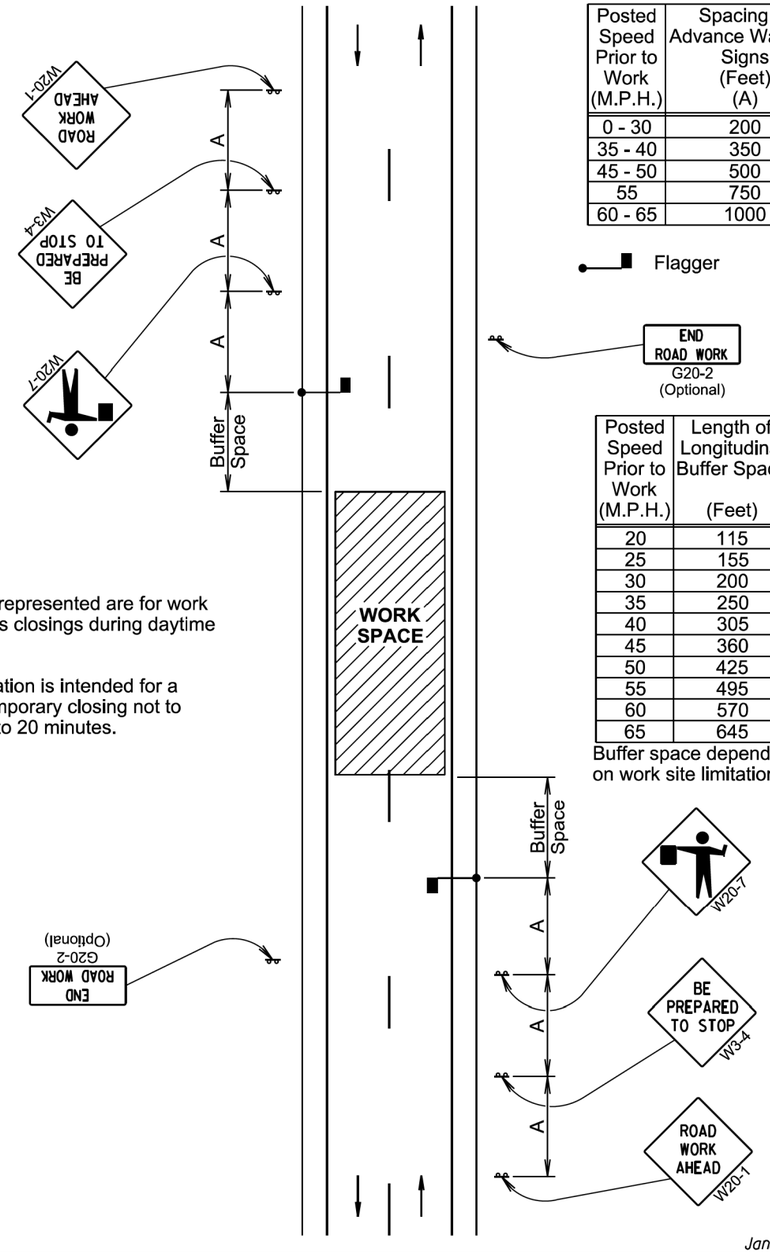
WORK BEYOND THE SHOULDER

PLATE NUMBER 634.01

Sheet 1 of 1

Conditions represented are for work that requires closings during daytime hours only.

This application is intended for a planned temporary closing not to exceed 15 to 20 minutes.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000

Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

Buffer space dependent on work site limitations.

January 22, 2021

Published Date: 2027

SDDOT

TEMPORARY ROAD WORK

PLATE NUMBER 634.30

Sheet 1 of 1

Plot Scale - 1:85.259
Plotted From - TRM13315
Plot Name - $$dolnames$$
File - ...\lc\07E9 Standard Plates .dgn

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

■ Channelizing Device

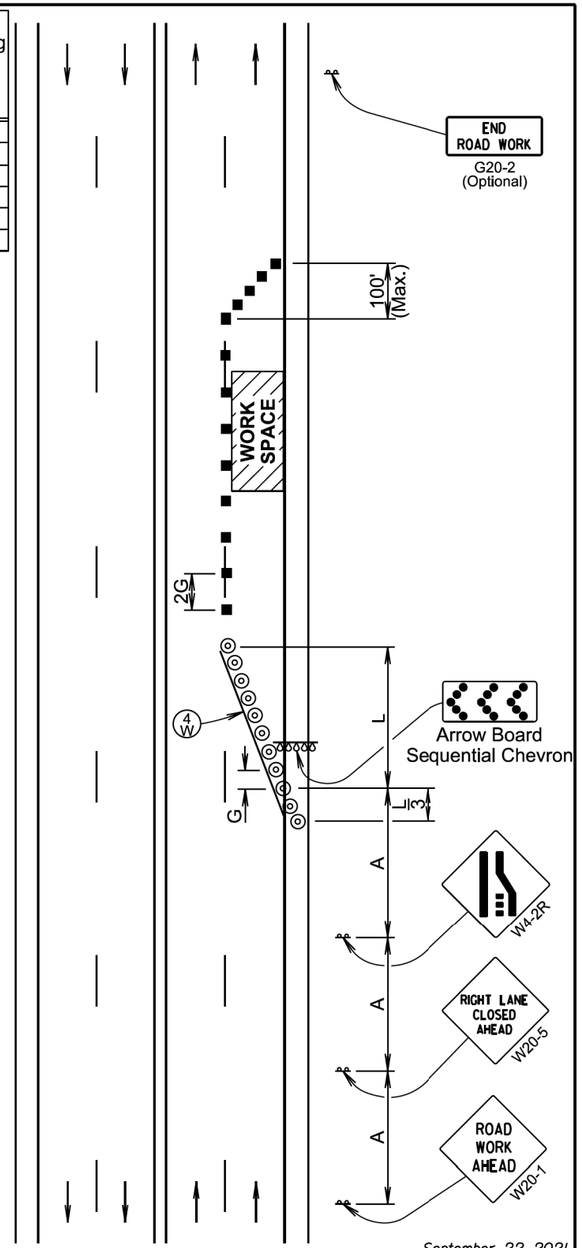
(4W) 4" White Temporary Pavement Marking

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

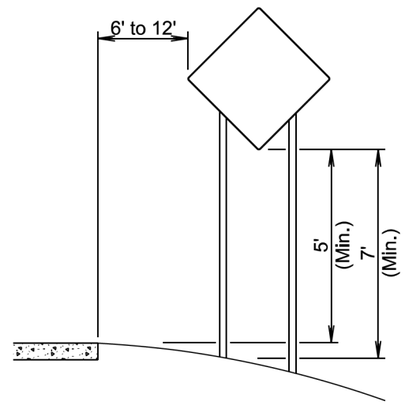
Temporary pavement markings will be used if traffic control must remain overnight.

The length of A and L may be adjusted to fit field conditions.

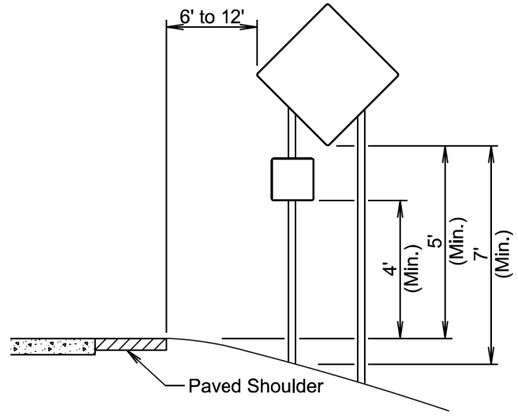


September 22, 2021

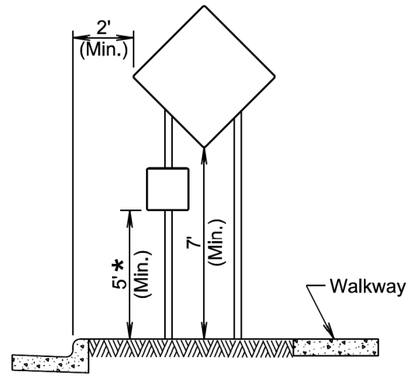
Published Date: 2027	SDDOT	4-LANE UNDIVIDED, RIGHT LANE CLOSED	PLATE NUMBER 634.47
			Sheet 1 of 1



RURAL DISTRICT

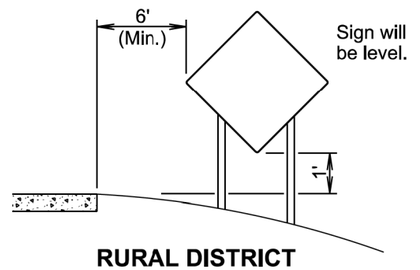


RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

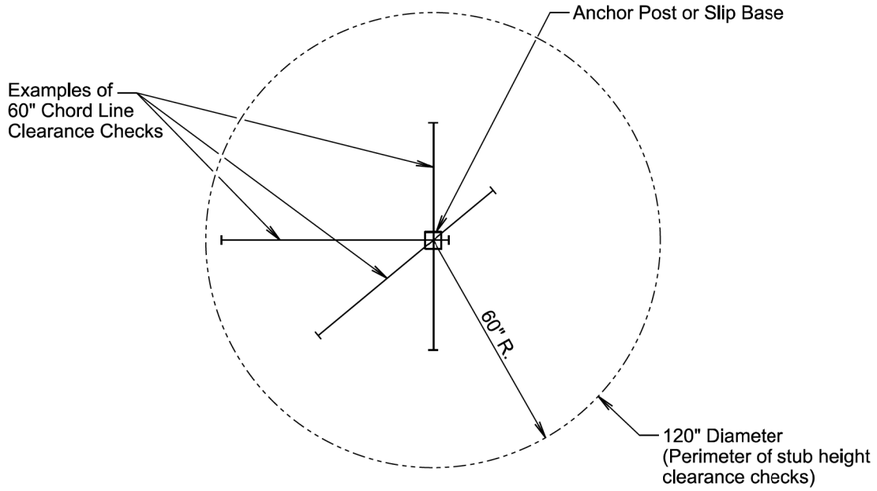


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

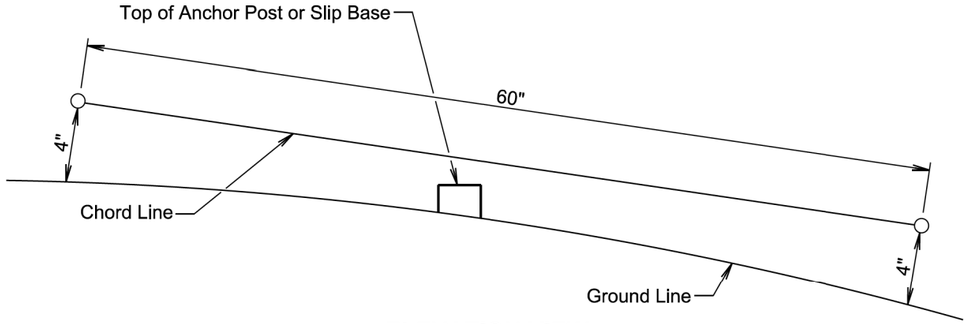
January 22, 2021

Published Date: 2027	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1

Plot Scale - 1:85.259
Plotted From - TRM113315
Plot Name - $$dolname$$
File - ...\tc\07E9 Standard Plates .dgn



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2027	SDDOT	**BREAKAWAY SUPPORT STUB CLEARANCE**	PLATE NUMBER 634.99
			Sheet 1 of 1

Plot Scale - 1:85.259
Plotted From - TRM13315
Plot Name - $$dolname$$
File - ...\1c\07E9 Standard Plates .dgn

CONTROL DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0050(132)384	13	32

HORIZONTAL AND VERTICAL CONTROL POINTS						
POINT	**STATION**	**OFFSET**	**DESCRIPTION**	**NORTHING**	**EASTING**	**ELEVATION**
CP 100	45+83.99	74.42’ L	Rebar with Cap	210414.7	2759702	1184.21
CP 101	43+87.68	32.11’ R	Brass Disk on Wingwall	210198	2759665	1186.16

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/2011)
The elevations shown on this sheet are based on NAVD 88.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0050(132)384	14	32

HORIZONTAL ALIGNMENT DATA

mainline

Type	Station			Northing	Easting
POB	0+00			209936.110	2755317.244
		TL= 400.00	N 89°02'14" E		
PI	4+00			209942.831	2755717.190
		TL= 213.87	N 88°23'43" E		
PI	6+13.87			209948.820	2755930.973
		TL= 388.15	N 89°03'21" E		
PI	10+02.02			209955.216	2756319.071
		TL= 420.72	N 89°15'30" E		
PI	14+22.74			209960.661	2756739.757
		TL= 120.00	N 89°01'17" E		
PI	15+42.74			209962.711	2756859.740
		TL= 745.57	N 89°03'19" E		
PI	22+88.31			209975.002	2757605.208
		TL= 100.01	N 89°41'11" E		
PI	23+88.32			209975.549	2757705.214
		TL= 315.49	N 89°05'39" E		
PI	27+03.81			209980.537	2758020.662
		TL= 693.92	N 89°16'03" E		
PC	33+97.73			209989.407	2758714.525
PI	35+47.73	R = 10880.00	Delta = 1°34'47" R	209991.325	2758864.521
PT	36+97.72			209989.107	2759014.513
		TL= 49.16	N 89°09'09" E		
PC	37+46.89			209988.379	2759063.672
PI	41+92.42	R = 808.07	Delta = 57°44'27" L	209981.790	2759509.158
PT	45+61.24			210354.996	2759752.508
		TL= 71.36	N 33°06'23" E		
PC	46+32.60			210414.774	2759791.486
PI	50+72.67	R = 1432.14	Delta = 34°09'45" R	210783.403	2760031.852
PT	54+86.51			210953.449	2760437.745
		TL= 79.29	N 67°16'09" E		
PC	55+65.80			210984.087	2760510.877
PI	62+61.62	R = 7639.49	Delta = 10°24'31" L	211252.954	2761152.652
PT	69+53.61			211633.342	2761735.291
		TL= 1446.39	N 56°51'38" E		
PI	84+00.00			212424.049	2762946.415
		TL= 500.00	N 57°06'59" E		
PI	89+00.00			212695.516	2763366.302
		TL= 399.67	N 56°33'30" E		
POE	92+99.67			212915.767	2763699.802

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/2011)

LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0050(132)384	15	32

Plotting Date: 09/15/2020

Anchor
Antenna
Approach
Assumed Corner
Azimuth Marker
BBQ Grill/ Fireplace
Bearing Tree
Bench Mark
Box Culvert
Bridge
Brush/Hedge
Buildings
Bulk Tank
Cattle Guard
Cemetery
Centerline
Cistern
Clothes Line
Concrete Symbol
Control Point
Creek Edge
Curb/Gutter
Curb
Dam Grade/Dike/Levee
Deck Edge
Ditch Block
Doorway Threshold
Drainage Profile
Drop Inlet
Edge Of Asphalt
Edge Of Concrete
Edge Of Gravel
Edge Of Other
Edge Of Shoulder
Electric Transformer/Power Junction Box
Fence Barbwire
Fence Chainlink
Fence Electric
Fence Miscellaneous
Fence Rock
Fence Snow
Fence Wood
Fence Woven
Fire Hydrant
Flag Pole
Flower Bed
Gas Valve Or Meter
Gas Pump Island
Grain Bin
Guardrail
Gutter
Guy Pole
Haystack
Highway ROW Marker
Interstate Close Gate
Iron Pin
Irrigation Ditch
Lake Edge
Lawn Sprinkler

Mailbox
Manhole Electric
Manhole Gas
Manhole Miscellaneous
Manhole Sanitary Sewer
Manhole Storm Sewer
Manhole Telephone
Manhole Water
Merry-Go-Round
Microwave Radio Tower
Miscellaneous Line
Miscellaneous Property Corner
Miscellaneous Post
Overhang Or Encroachment
Overhead Utility Line — OH —
Parking Meter
Pedestrian Push Button Pole
Pipe With End Section
Pipe With Headwall
Pipe Without End Section
Playground Slide
Playground Swing
Power And Light Pole
Power And Telephone Pole
Power Meter
Power Pole
Power Pole And Transformer
Power Tower Structure
Propane Tank
Property Pipe
Property Pipe With Cap
Property Stone
Public Telephone
Railroad Crossing Signal
Railroad Milepost Marker
Railroad Profile
Railroad ROW Marker
Railroad Signs
Railroad Switch
Railroad Track
Railroad Trestle
Rebar
Rebar With Cap
Reference Mark
Retaining Wall
Riprap
River Edge
Rock And Wire Baskets
Rockpiles
Satellite Dish
Septic Tank
Shrub Tree
Sidewalk
Sign Face
Sign Post
Slough Or Marsh
Spring
Stream Gauge
Street Marker

Subsurface Utility Exploration Test Hole
Telephone Fiber Optics — T/F —
Telephone Junction Box
Telephone Pole
Television Cable Jct Box
Television Tower
Test Wells/Bore Holes
Traffic Sign Double Face
Traffic Sign One Post
Traffic Sign Two Post
Traffic Signal
Trash Barrel
Tree Belt
Tree Coniferous
Tree Deciduous
Tree Stumps
Triangulation Station
Underground Electric Line — P —
Underground Gas Line — G —
Underground High Pressure Gas Line — HG —
Underground Sanitary Sewer — S —
Underground Storm Sewer — S —
Underground Tank
Underground Telephone Line — T —
Underground Television Cable — TV —
Underground Water Line — W —
Water Fountain
Water Hydrant
Water Meter
Water Tower
Water Valve
Water Well
Weir Rock
Windmill
Wingwall
Witness Corner

State and National Line
County Line
Section Line
Quarter Line
Sixteenth Line
Property Line
Construction Line
ROW Line
New ROW Line
Cut and Fill Limits
Control of Access
New Control of Access
Proposed ROW (After Property Disposal)

Drainage Arrow

Remove Concrete Pavement
Remove Concrete Driveway Pavement
Remove Asphalt Concrete Pavement
Remove Concrete Sidewalk
Remove Concrete Median Pavement
Remove Concrete Curb and/or Gutter

Detectable Warning
Pedestrian Push Button Pole
and 30" x 48" Clear Space
with 1.5% slope

Plot Scale - 1:200
Plotted From - TRPR14419
File - C:\Work\Legend.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PT 0050(132)384	16	32

43+30-75' to 43+68-56' L
Do Not Disturb Power Poles

43+68'-56' to 44+50-58' L
Do Not Disturb Underground Electric Lines

43+28-50' to 45+04-58' L
Do Not Disturb Telephone Fiber Optics

43+54-129' to 43+57-46' L
Do Not Disturb Sanitary Sewer

SEC 18 - T93N - R55W

RAILROAD SUBDIVISION

Lot 20

City of Yankton
Parcel A1

Lot 1

Yankton Real Estate, LLC
(INFORMATION ONLY)

Lot 20A

Yankton Real Estate, LLC
(INFORMATION ONLY)

Daniel M. Korus
(INFORMATION ONLY)
Lot 17

1/16 Line

43+32.47-178.75

44+48-167'

45+01-145'

45+45-103'

45+24.54-80.91'

43+27.50-45.86'

Lot PE1

45+04.14-57.41'

45+03.89-43.36'

1+00

42+00

43+00

44+00

45+00

46+00

47+00

93'

43'

42'

33'

4th Street
Present SD Hwy 50

Existing 30'
Utility Easement

43+97.62-47.90'
43+98-58'

44+42.37-56.00'
44+42.84-52.39'

44+47.27-48.59'

44+53.10-43.00'

44+88-56'

44+93.55-43.00'

Lot PE1

Lot 34

City of Yankton
(INFORMATION ONLY)

Yankton Area Chamber of Commerce, Inc.
(INFORMATION ONLY)

Paddle Wheel Drive

R.O.W. line

Tract 2 of Outlot 97

Chad Soulek
(INFORMATION ONLY)

Lot 2

EAST CORNERSTONE SUBDIVISION

Lot PE2

30'

Lot PE1

City of Yankton
Parcel A2

Lot 1

Marne Creek

City of Yankton, A Municipal Corporation
Parcel A3

MARNE CREEK TRACT #19

43+98-50' to 44+88-55' R
Do Not Disturb Telephone Fiber Optics

44+19-57' to 44+92-46' R
Do Not Disturb Sanitary Sewer

Parcel A1
43+27.50 to 45+45 L
Temporary Easement containing
0.46 ac, more or less

Parcel A2
43+97.62 to 44+47.27 R
Temporary Easement containing
0.1 ac, more or less

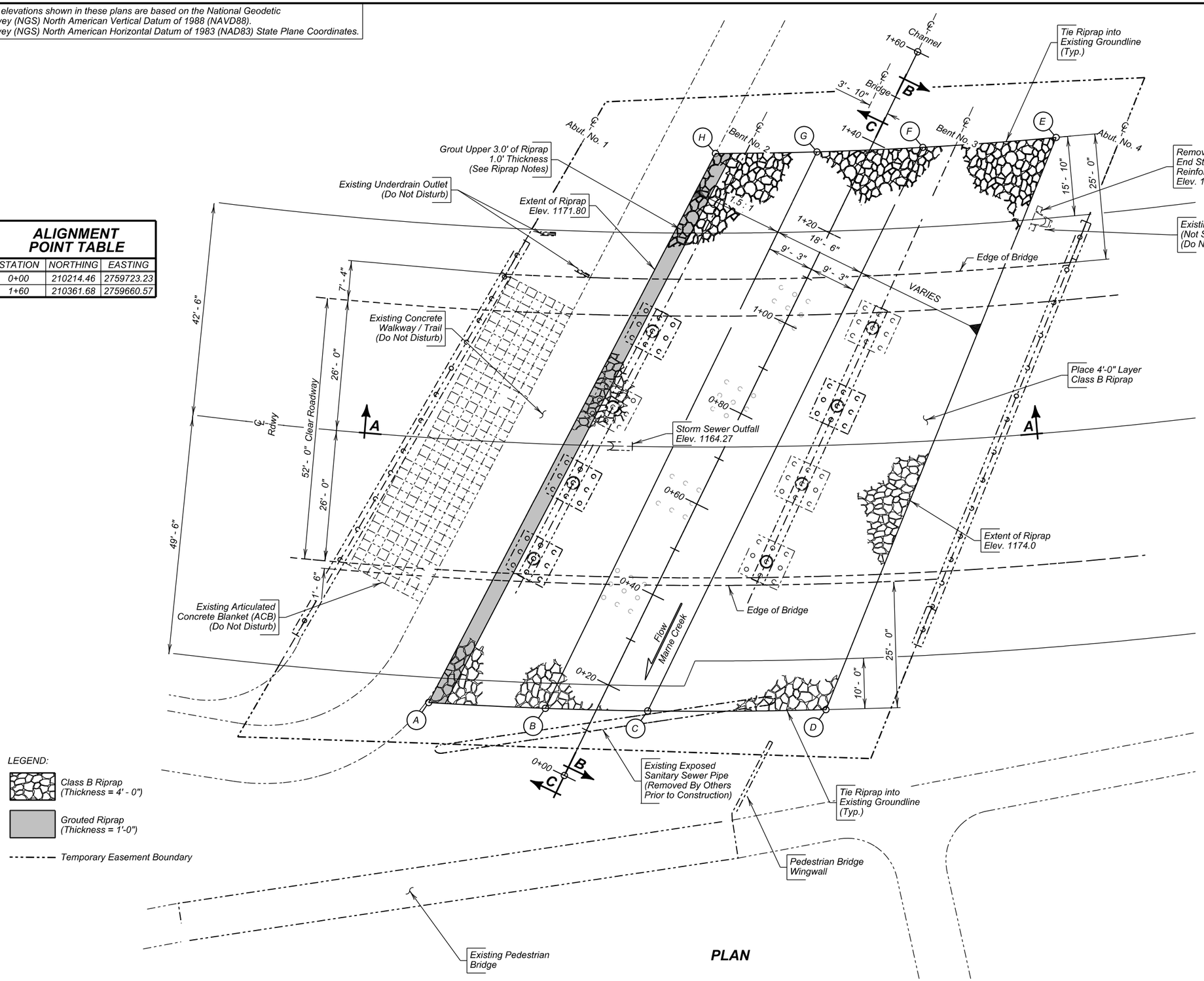
Parcel A3
44+42.37 to 44+93.55 R
Temporary Easement containing
0.1 ac, more or less

The elevations shown in these plans are based on the National Geodetic Survey (NGS) North American Vertical Datum of 1988 (NAVD88).
Survey (NGS) North American Horizontal Datum of 1983 (NAD83) State Plane Coordinates.

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	17	32

ALIGNMENT POINT TABLE

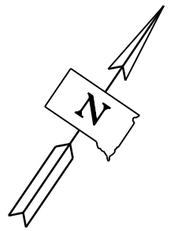
STATION	NORTHING	EASTING
0+00	210214.46	2759723.23
1+60	210361.68	2759660.57



PLAN

LEGEND:

- Class B Riprap (Thickness = 4' - 0")
- Grouted Riprap (Thickness = 1'-0")
- Temporary Easement Boundary



INDEX OF SHEETS -

Sheet No. 1 - Layout for Upgrade
Sheet No. 2 - Estimate of Structure Quantities and Notes
Sheet No. 3 thru 4 - Sections and Longitudinal Profile
Sheet No. 5 thru 8 - Mainline Cross Sections
Sheet No. 9 thru 15 - Original Construction Plans

RIPRAP POINT TABLE

POINT	NORTHING	EASTING	ELEVATION
A	210203.60	2759694.61	1171.80
B	210220.30	2759710.44	1158.70
C	210235.28	2759724.17	1158.70
D	210262.28	2759747.39	1174.00
E	210371.31	2759691.45	1174.00
F	210350.02	2759675.59	1158.70
G	210333.55	2759662.49	1158.70
H	210318.11	2759649.53	1171.80

NOTE:
1. All point table elevations refer to the top of Class B Riprap.
2. Utility locations are approximate.



LAYOUT FOR UPGRADE
FOR
119'-2¾" CONT. CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205
PCN 07E9

26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(132)384

YANKTON COUNTY
S. D. DEPT. OF TRANSPORTATION
AUGUST 2026

1 OF 15

-X021-

PLANS BY: FELSBURG HOLT & ULLEVIG

DESIGNED BY	CK. DES. BY	DRAFTED BY	
KGK/FFM	DGL	JEJ	BRIDGE ENGINEER

ESTIMATE OF STRUCTURE QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E7500	Remove Pipe for Reset	4	Ft
110E7510	Remove Pipe End Section for Reset	1	Each
450E9000	Reset Pipe	4	Ft
450E9001	Reset Pipe End Section	1	Each
462E0100	Class M6 Concrete	0.8	CuYd
480E0100	Reinforcing Steel	22	Lb
700E0210	Class B Riprap	1,686.8	Ton
700E1200	Partially Grouted Class B Riprap	19.1	Ton
831E0110	Type B Drainage Fabric	1,137	SqYd

SPECIFICATIONS

Construction Specifications: Standard Specifications for Roads and Bridges, 10-7-26 Version; Required Provisions; and Special Provisions as included in the Proposal. The Standard Specifications for Roads and Bridges is available for download and viewing at https://dot.sd.gov/doing-business/contractors/standard-specifications.

DETAILS AND DIMENSIONS OF EXISTING BRIDGE

All details and dimensions of the existing bridge, contained in these plans, are based on the original construction plans and are provided as information only. It is the Contractor's responsibility to inspect and verify the actual field conditions and any necessary as-built dimensions affecting the satisfactory completion of the work required for this project.

COORDINATION OF OPERATIONS

These Bridge Scour Countermeasures will be accomplished in conjunction with project PCN X07C Channel Armoring & Pedestrian Bridge Wingwall Repairs over Marne Creek.

HYDRAULIC DATA – BRIDGE SCOUR COUNTERMEASURE

Design Event: 100-YR
Discharge (cfs): 4960
Water Surface Elev (ft): 1171.65 (Section Up Stream of Bridge)
Velocity (fps): 12.17

RIPRAP

1. The cross sections shown in this plan set are provided as a guide for riprap placement and are based on the existing ground locations at the time of the survey in 2020. The location of the toe of the riprap and riprap surface elevation may vary to suit local site conditions provided the following items are adhered to:
   a. A minimum riprap thickness of 4'-0" (Class B Riprap) is maintained throughout the structure.
   b. Infill the upper 3'-0" of riprap (adjacent to the sidewalk) with 1' of grout. Costs associated with the installation of grout will be incidental to the contract unit price for Partially Grouted Class B Riprap.
   c. The opening provided under the structure for water flow is not reduced from what is shown on the cross sections.
   d. Any changes in the riprap configuration are approved by the Office of Bridge Design.
2. Excavate to limits shown on cross sections for riprap placement. All material excavated to allow for riprap placement will be disposed of by the Contractor. Excavated material may include, but is not limited to, riprap, soil, and concrete.
3. The Contractor will locate, survey, and mark all utilities prior to excavation. All utility survey data will be maintained and provided to the Engineer. Payment for the Contractor staked excavation survey will be incidental to the Class B Riprap. Extreme care will be exercised while excavating near utilities.
4. Make every effort to excavate to the bottom limits shown in this plan set. Existing riprap may remain below these excavation limits. Type B Drainage Fabric will be placed on the undisturbed soil exposed to the excavation limits prior to placing Riprap.
5. Timber piles from prior structure shall be cut off below proposed riprap elevation. This shall be paid for incidental to Class B Riprap.
6. The removal of existing riprap will be incidental to the contract unit price for Class B Riprap. Existing material may be reused on site with permission from the Project Engineer.
7. Type B Drainage Fabric will be placed underneath the Class B Riprap. The fabric will be installed where riprap comes in contact with soil and adjacent to bridge footings where applicable. The fabric will conform to Section 831 of the construction specifications.
8. The Class B Riprap will be constructed to the configuration, limits and elevations shown. All costs associated with placement of the riprap including all material, excavation, labor, and equipment will be included in the contract unit price per ton.
9. A factor of 1.4 tons/cuyd was used to convert the riprap quantity from cubic yards to tons.

WATER CONTROL

1. Water control will include all labor, equipment, and material to convey or divert water away from the construction area. The bridge scour protection measures will be constructed in a dry condition. This work will include but not be limited to pumping and diversion of the water passing through the location of the proposed bridge scour protection in addition to groundwater or surface runoff that may enter the construction area.
2. Thirty (30) days prior to construction the Contractor must submit to the Engineer a detailed methods statement that outlines the installation, operation, maintenance and removal of the water control system. Work must not commence until the Engineer has approved the methods statement.
3. Measurement and payment for Water Control will not be made nor paid for separately and will be incidental to various contract items. Any required repairs or maintenance to the water control system will be at the Contractor's expense.

STORM WATER STRUCTURES

1. Costs associated with furnishing and installing the tie bolts associated with removing and resetting 4'-0" of 30" RCP with a flared end section will be incidental to the contract unit price per foot for Reset Pipe.
2. Any excavation and disposal of excess material associated with removing and resetting the existing 30" RCP will be incidental to the contract unit price for Remove Pipe End Section.
3. Costs associated with furnishing and constructing the concrete toe wall will be incidental to the contract unit price per cubic yard for Class M6 Concrete.

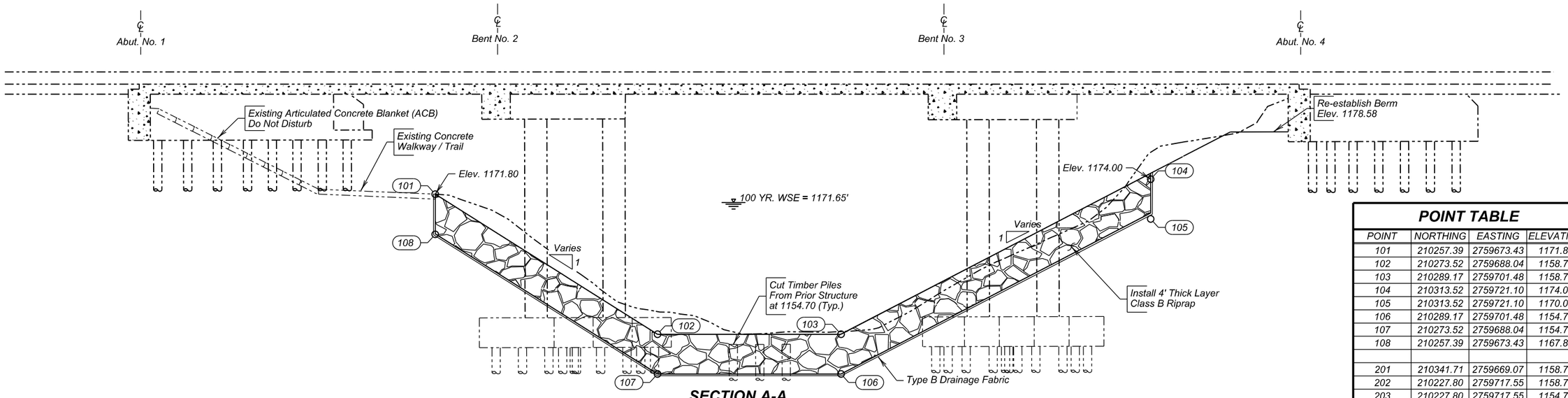
LICENSED PROFESSIONAL ENGINEER
REG. NO 17556
10/15/2026
JARED B KAIN
SOUTH DAKOTA

ESTIMATE OF STRUCTURE QUANTITIES AND NOTES
FOR
119'-2 ¾" CONT. CONCRETE BRIDGE

STR. NO. 68-129-205
AUGUST 2026

DESIGNED BY	CK. DES. BY	DRAFTED BY	
JEJ/FFM	DGL	JEJ	BRIDGE ENGINEER

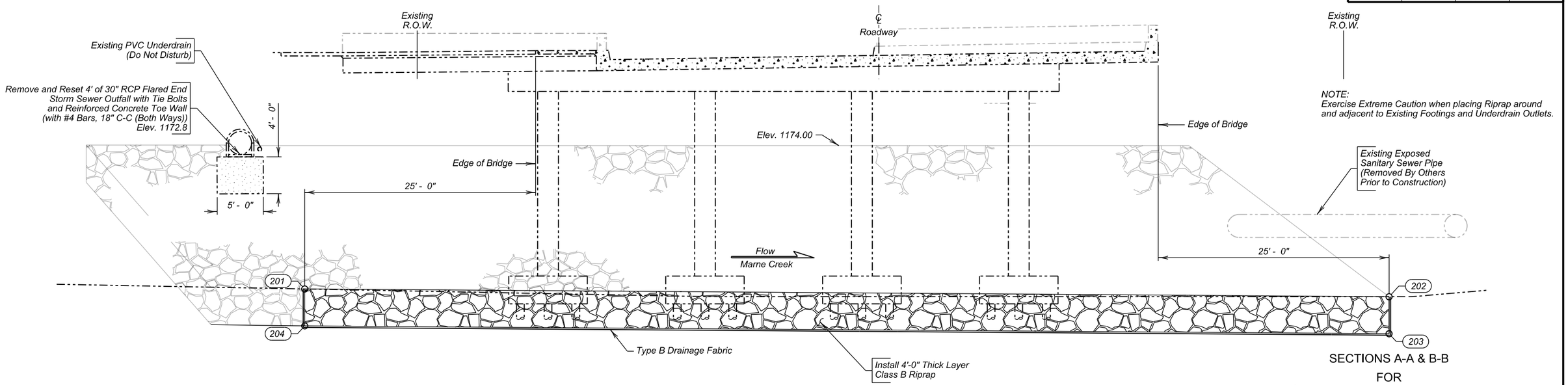
STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	19	32



SECTION A-A

POINT TABLE

POINT	NORTHING	EASTING	ELEVATION
101	210257.39	2759673.43	1171.80
102	210273.52	2759688.04	1158.70
103	210289.17	2759701.48	1158.70
104	210313.52	2759721.10	1174.00
105	210313.52	2759721.10	1170.00
106	210289.17	2759701.48	1154.70
107	210273.52	2759688.04	1154.70
108	210257.39	2759673.43	1167.80
201	210341.71	2759669.07	1158.70
202	210227.80	2759717.55	1158.70
203	210227.80	2759717.55	1154.70
204	210341.71	2759669.07	1154.70



SECTION B-B

NOTE:
Exercise Extreme Caution when placing Riprap around and adjacent to Existing Footings and Underdrain Outlets.

SECTIONS A-A & B-B
FOR
119'-2¾" CONT. CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205

26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(132)384

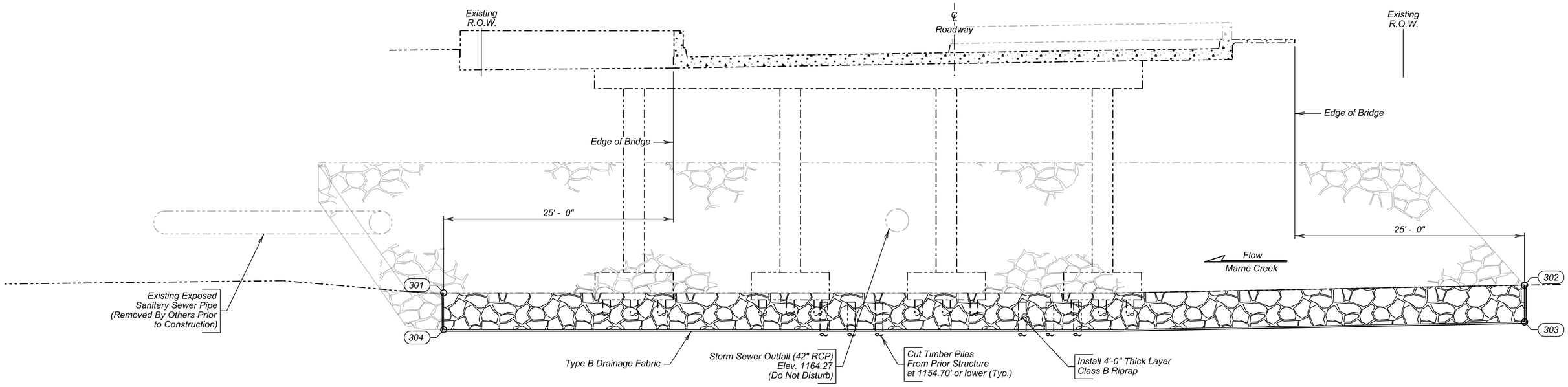
YANKTON COUNTY
S. D. DEPT. OF TRANSPORTATION
AUGUST 2026

3 OF 15

LICENSED PROFESSIONAL ENGINEER
REG. NO. 17556
9/2/2026
JARED B KAIN
SOUTH DAKOTA

DESIGNED BY	CK. DES. BY	DRAFTED BY	
KGK/FFM	DGL	JEJ	BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	20	32



SECTION C-C

NOTE:
Exercise Extreme Caution when placing Riprap around and adjacent to Existing Footings and Underdrain Outlets.

POINT TABLE

POINT	NORTHING	EASTING	ELEVATION
301	210227.80	2759717.55	1158.70
302	210341.71	2759669.07	1158.70
303	210341.71	2759669.07	1154.70
304	210227.80	2759717.55	1154.70

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KAHN
SOUTH DAKOTA
9/2/2026

SECTION C-C
FOR
119'-2¾" CONT. CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205

26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(132)384

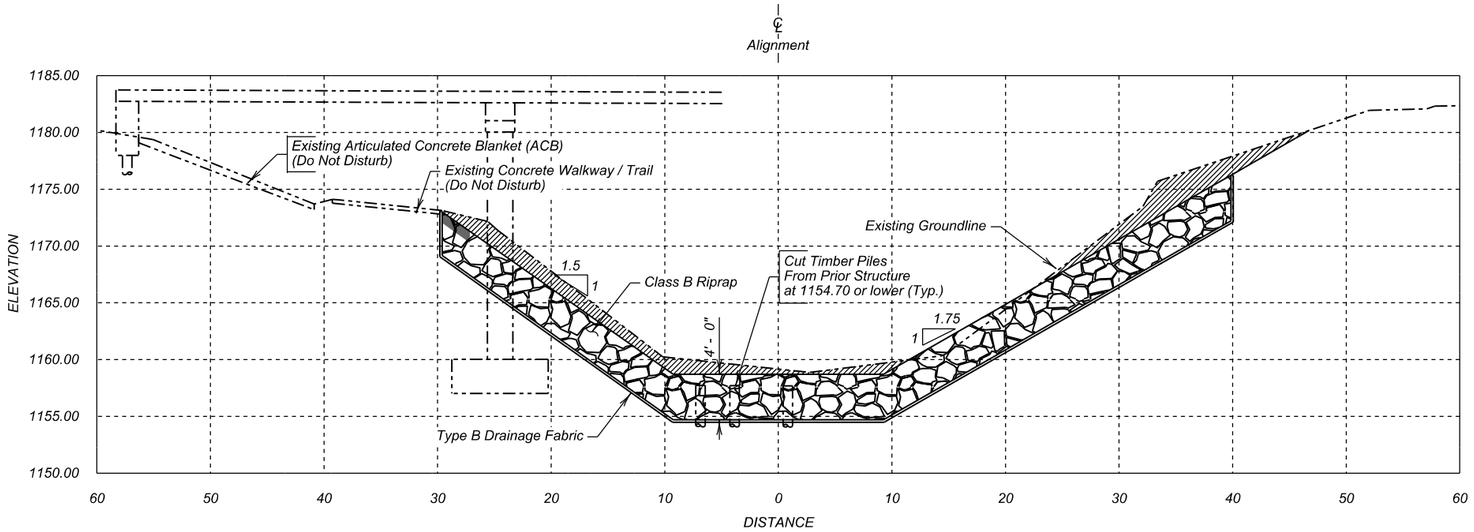
YANKTON COUNTY
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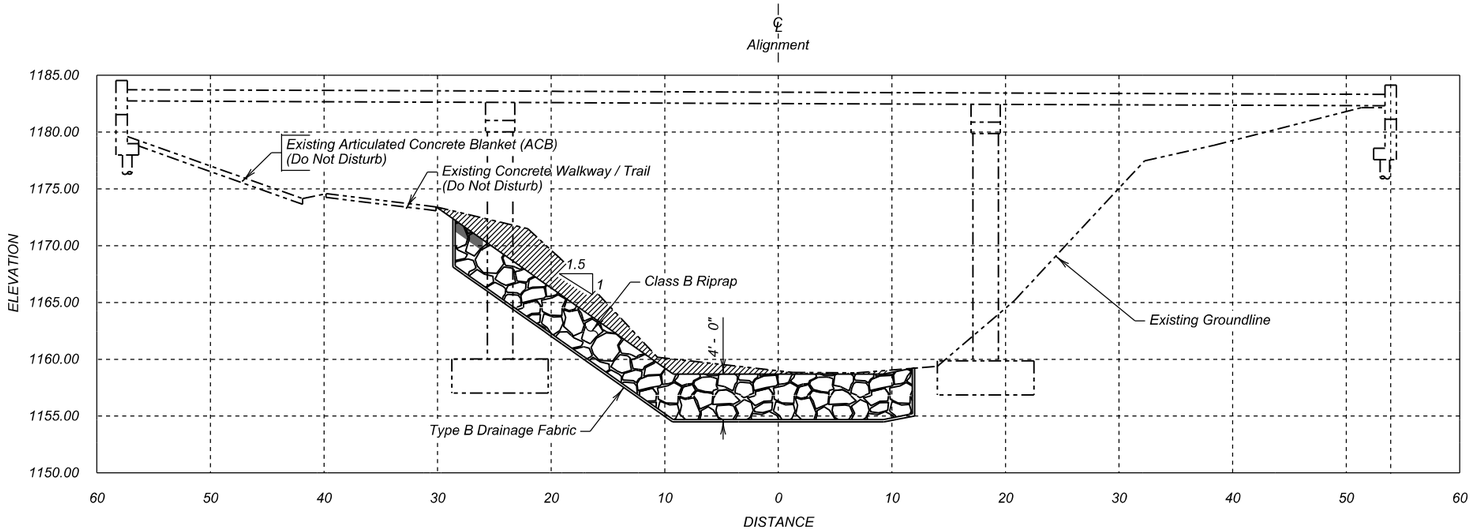
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STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	21	32

REVISED: 10/07/2026



CHANNEL - STATION 0+40



CHANNEL - STATION 0+20

LEGEND:

- *Class B Riprap (Thickness = 4' - 0")*
- *Excavated Material*
- *Grouted Riprap (Thickness = 1'-0")*

NOTE:
Exercise Extreme Caution when placing Riprap around and adjacent to Existing Footings and Underdrain Outlets.

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17556
JARED B
KAHN
SOUTH DAKOTA
10/8/2026

CROSS SECTIONS (A)

FOR

119'-2¾" CONT. CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205

26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(132)384

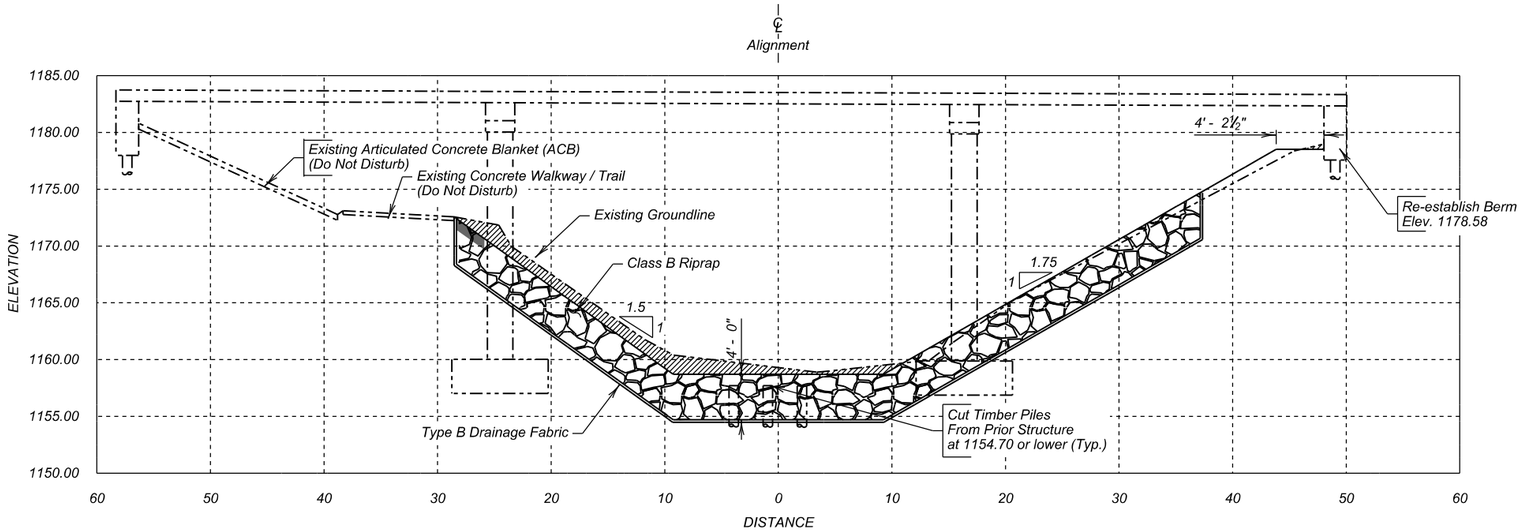
YANKTON COUNTY
S. D. DEPT. OF TRANSPORTATION
AUGUST 2026

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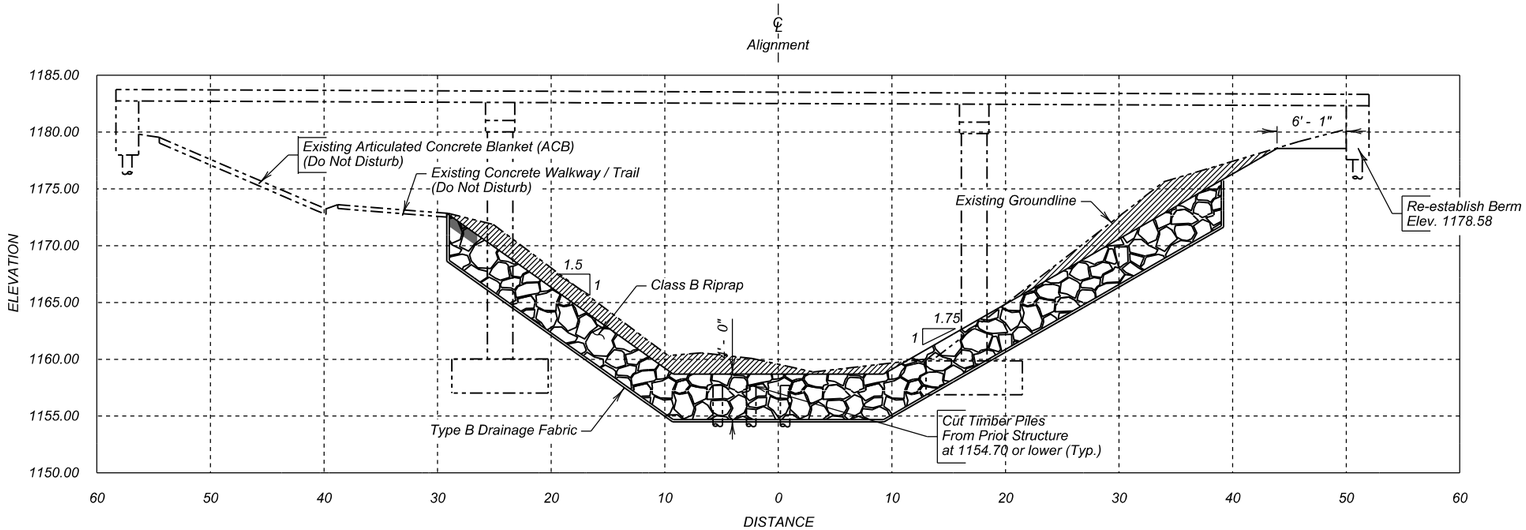
DESIGNED BY	CK. DES. BY	DRAFTED BY	
KGK/FFM	DGL	JEJ	BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	22	32

REVISED: 10/07/2026



CHANNEL - STATION 0+80



CHANNEL - STATION 0+60

LEGEND:

- Class B Riprap (Thickness = 4' - 0")
- Excavated Material
- Grouted Riprap (Thickness = 1'-0")

NOTE:
Exercise Extreme Caution when placing Riprap around and adjacent to Existing Footings and Underdrain Outlets.

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17556
JARED B
KAIN
SOUTH DAKOTA
10/8/2026

CROSS SECTIONS (B)
FOR
119'-2¾" CONT. CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205

26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(132)384

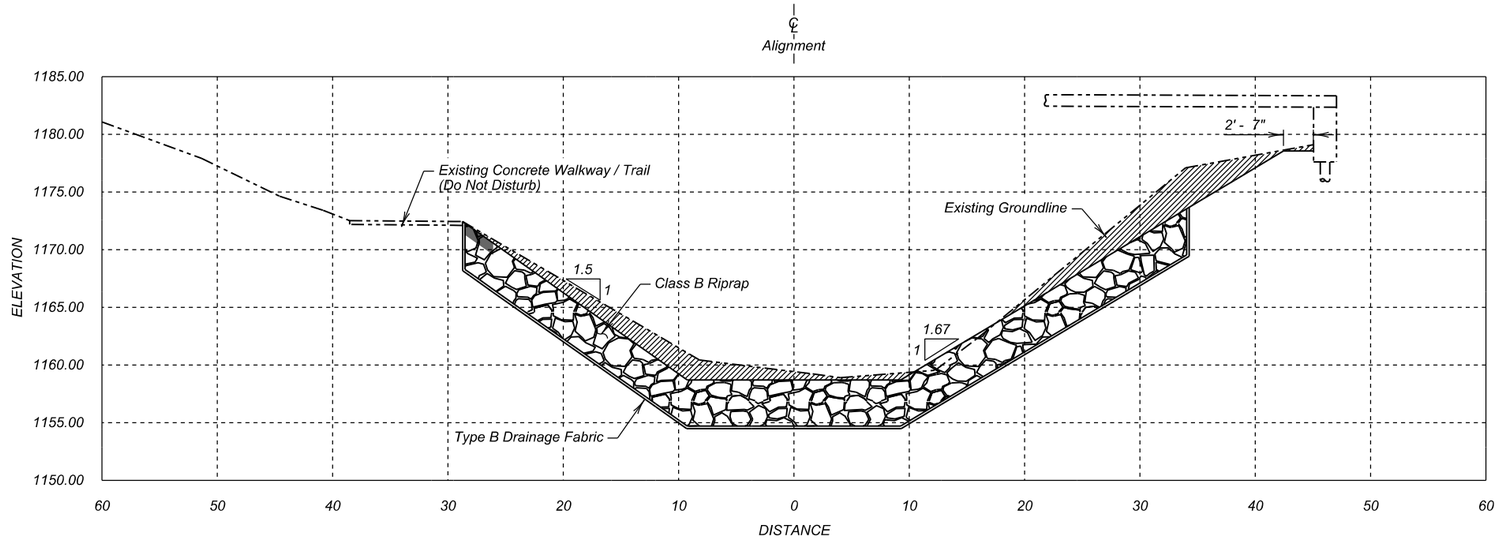
YANKTON COUNTY
S. D. DEPT. OF TRANSPORTATION
AUGUST 2026

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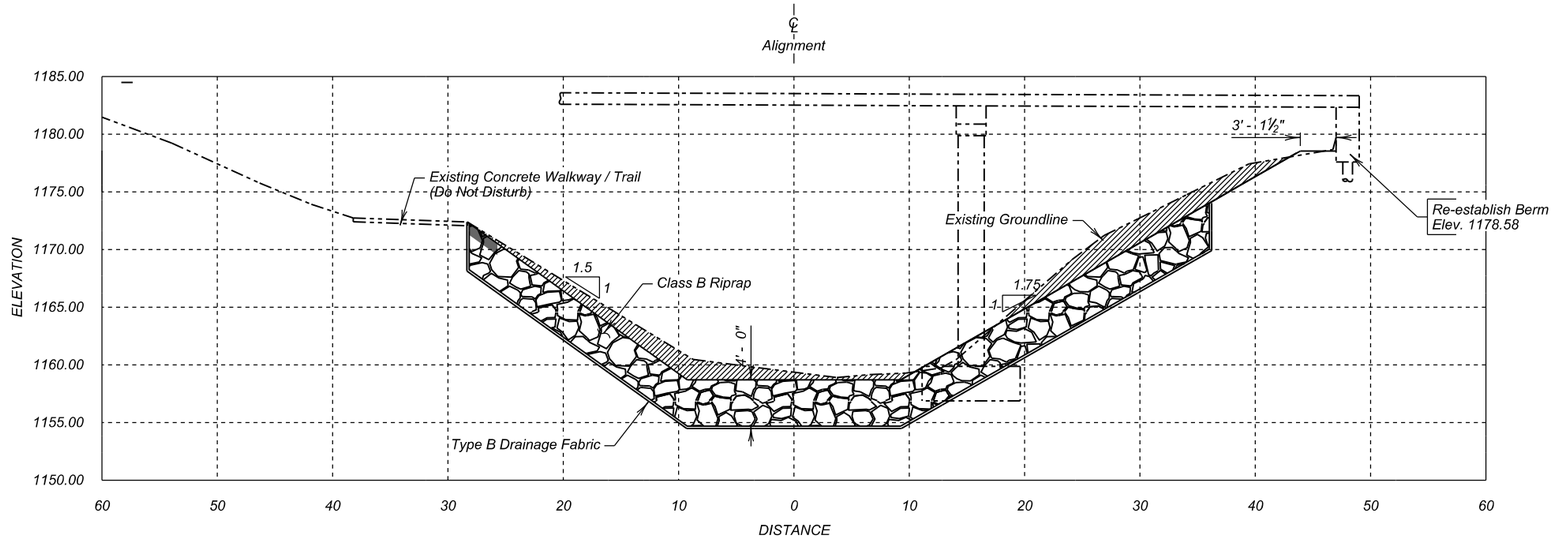
DESIGNED BY	CK. DES. BY	DRAFTED BY	
KGK/FFM	DGL	JEJ	BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	23	32

REVISED: 10/07/2026



CHANNEL - STATION 1+20



CHANNEL - STATION 1+00

LEGEND:

- *Class B Riprap (Thickness = 4' - 0")*
- *Excavated Material*
- *Grouted Riprap (Thickness = 1'-0")*

NOTE:
Exercise Extreme Caution when placing Riprap around and adjacent to Existing Footings and Underdrain Outlets.

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17556
JARED B
KAIN
SOUTH DAKOTA
10/8/2026

CROSS SECTIONS (C)
FOR
119'-2¾" CONT. CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205

26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(132)384

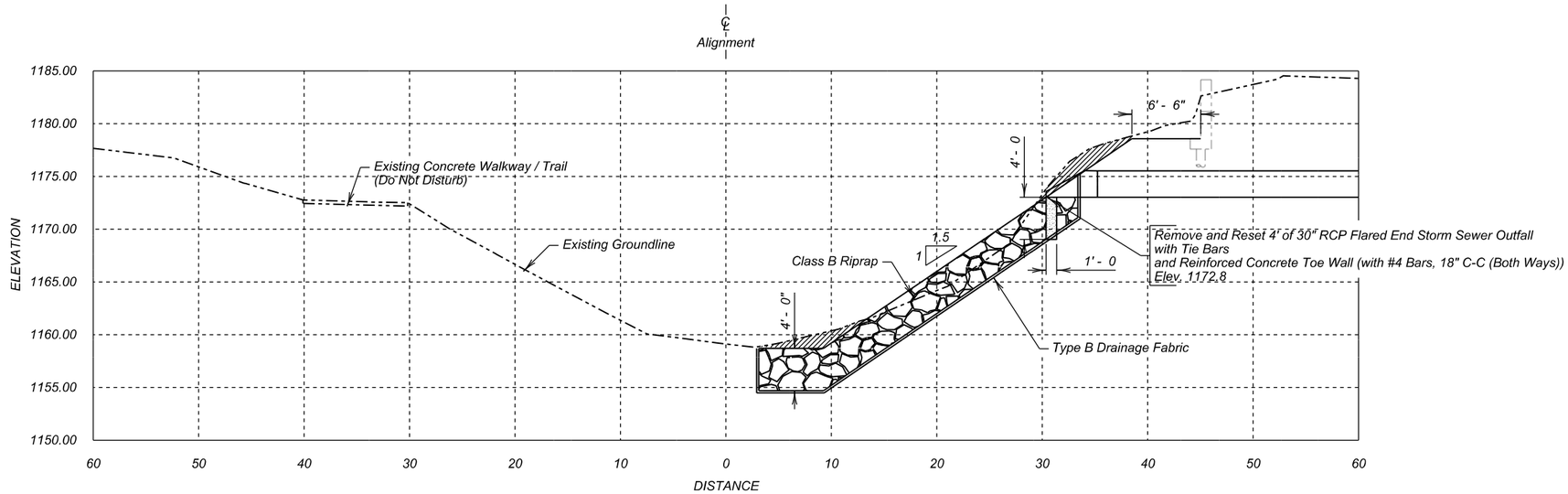
YANKTON COUNTY
S. D. DEPT. OF TRANSPORTATION
AUGUST 2026

7 OF 15

DESIGNED BY	CK. DES. BY	DRAFTED BY	
KGK/FFM	DGL	JEJ	BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	24	32

REVISED: 10/07/2026



CHANNEL - STATION 1+40

LEGEND:

Class B Riprap
(Thickness = 4' - 0")

Excavated Material

Reinforced Concrete Toe Wall
(Class M6 Concrete)

NOTE:
Exercise Extreme Caution when placing Riprap around and adjacent to Existing Footings and Underdrain Outlets.

CROSS SECTIONS (D)

FOR

119'-2¾" CONT. CONCRETE BRIDGE

52'-0" ROADWAY — 26° SKEW L.H.F.
OVER MARNE CREEK — SEC. 18-T93N-R55W
STR. NO. 68-129-205 — NH 0050(132)384

YANKTON COUNTY

S. D. DEPT. OF TRANSPORTATION

AUGUST 2026

8 OF 15

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17556
JARED B
KAHN
SOUTH DAKOTA
10/8/2026

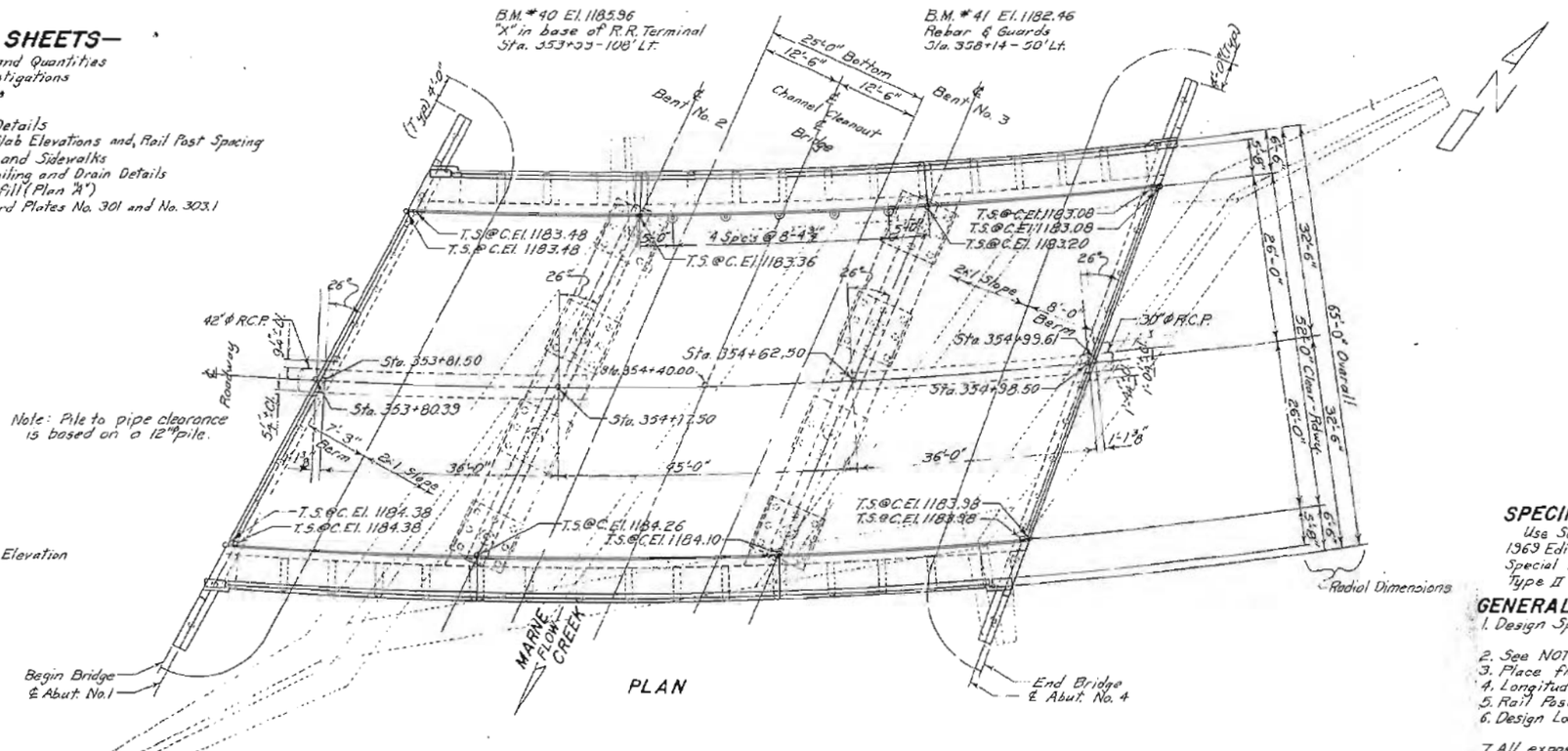
DESIGNED BY	CK. DES. BY	DRAFTED BY	
KGK/FFM	DGL	JEJ	BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	25	32

-X020-

INDEX OF BRIDGE SHEETS—

Sheet No. 1 – General Drawing and Quantities
Sheet No. 2 – Subsurface Investigations
Sheet No. 3 – Abutment Details
Sheet No. 4 – Bent Details
Sheet No. 5 – Superstructure Details
Sheet No. 6 – Curve Ordinates, Slab Elevations and, Rail Post Spacing
Sheet No. 7 – Details of Curb and Sidewalks
Sheet No. 8 – Type RE-Steel Railing and Drain Details
Sheet No. 9 – Bridge End Backfill (Plan "A")
Sheet No. 10 – Details of Standard Plates No. 301 and No. 303.1

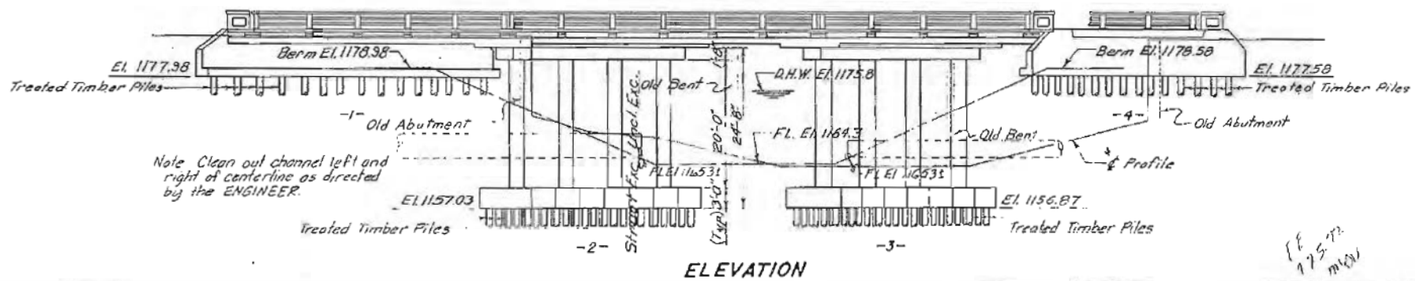


PLAN

Q100	2300 c.f.s
A	483 sq. ft.
V	6.0 f.p.s

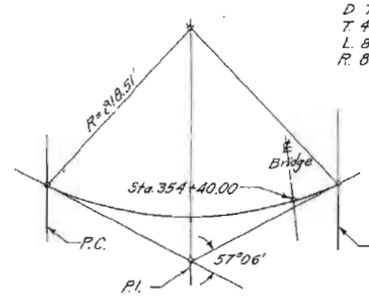
Note: Pile to pipe clearance is based on a 12" pile.

NOTE:
T.S.@ C. El. = Top of Slab at Curb Elevation



ELEVATION

P.C. Sta. 347+50.20
P.I. Sta. 351+35.54
P.T. Sta. 355+65.91
Δ 57° 06' Lt.
D 7°
T. 445.34'
L. 815.71'
R. 818.51'



HORIZONTAL CURVE DATA

ESTIMATED QUANTITIES

ITEM	Cl. A Conc. Cu. Yds.	Steel – Lbs. Reinf. (Epoxy)	Steel – Lbs. Struct.	Type RE-Steel Railing Lin. Ft.	Timber Piles – Lin. Ft. Fld. Timber	Timber Piles – Lin. Ft. @ Test	Excavation – Cu. Yds. Struct.	Excavation – Cu. Yds. & Unclass.	Pile Shoes @ No.	Bridge End Backfill # Lump Sum	*
Superstructure	337.5	103,938	60	226.5							
Abut. No. 1 & No. 4	74.0	5,940	1380		28 @ 45 = 1260	2 @ 50 = 100	50		30		
Bent No. 2 & No. 3	112.0	21,000			10 @ 25 = 1750	2 @ 30 = 60	440		72		
Totals	518.5	130,878	1440	226.5	300	@ 160	490	△	□ 102	#	✓

INCIDENTAL WORK*

Item	Str. Exc.	Tim. Pile	Tim. Cu. Ft.	Test Pile	Test Cu. Ft.
Abut. 1	241.0	96.2	352.5	27.0	23.0
Bent 2	211.2	67.5.1	226.5	23.3	4.7
Bent 3	158.6	59.2.2	12.1.0	25.2	4.8
Abut. 4	29.2	32.4.6	63.4	56.3	42.7
Total	819.4	1747.6	462.2	131.8	78.2

@ One Treated Timber Test Pile shall be driven at Abutments No. 1 and No. 4 and Bents No. 2 and No. 3 before remaining piles are ordered.
△ See Grading Plans For Unclassified Excavation.
□ All Steel Piles shoes shall be as shown on Standard Plate No. 301.
For information only, the approximate volume of Granular Backfill will be 120 cu. yds. in place; and length of 6"ø perforated Metal Pipe will be 244'±.
* Incidental Work:- In place on ℄ Sta. 354+12.6 to Sta. 355+03.5 is a 3-Span 90°-11" x Variable Roadway 42'± to 48'± I Beam Bridge with 5' sidewalk on south side, concrete railing and concrete floor. The substructure is concrete Abutments and concrete Bents on timber piles. The bridge is on horizontal curve and variable skew. Break down and remove the concrete railing and concrete floor slab. Dismantle and remove the steel stringers, bearings plates and joint angles, material to be salvaged. The steel stringers and other salvaged materials shall be placed neatly within the right-of-way as directed by the ENGINEER, the site not to exceed 500'± from present location, to be picked up by the state forces for future maintenance work. Care shall be taken not to injure the structural properties of the steel stringers and other salvable materials during the dismantling or storage operations. The concrete abutments of old structure shall be broken down and removed completely or as necessary to provide the required area for construction of the new bent No. 2 and new abutment No. 4 as directed by the ENGINEER. The concrete bents of old structure shall be broken down and removed to 1'± below finished ground line except for new bent No. 3 where old footings interfere with its component parts, the old footings shall be removed completely as directed by the the ENGINEER. All broken concrete from existing bridge shall be disposed of at the same site as for broken pavement as directed by the ENGINEER see grading plans for location. All other material not salvaged shall be disposed of as directed by the ENGINEER.

SPECIFICATION NOTE—

Use South Dakota Standard Specifications for Roads and Bridges, 1969 Edition, and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.
Type II Cement is required.

GENERAL NOTES—

1. Design Specifications: AASHO Specifications for Highway Bridges, 1965, with Interim Specifications for 1966 and 1967.
2. See NOTES on Sheets No. 1 thru No. 10.
3. Place floor drains as shown in Plan (5 Required).
4. Longitudinal elements of the slab shall conform to the grade.
5. Rail Posts including End Posts shall be built normal to grade.
6. Design Loading: H S 20-44 AASHO
7. All exposed edges shall be chamfered 1" except as shown.
8. The contractor shall have sufficient pile splice material on hand before pile driving is started. See Standard Plate No. 303.1 for splice details.
9. Prebored holes for piles at Abutments shall be backfilled with granular material acceptable to the ENGINEER and compacted as specified by the ENGINEER. The cost of granular material in place shall be included in the unit price bid for the piles. Prebore Abut. piles to the El. 1164.3±.
10. All steel pile shoes shall be used, See Standard Plate No. 301 for details.
11. Elevation top of slab at centerline is 0.6687' above centerline subgrade elevation.
12. Standard Plates referred to in these plans are the plates printed on Sheet No. 10 of these plans and are not intended to be referred to in the Standard Plates Manual.
13. The Contractor shall imprint on the Structure the date of construction as specified and detailed on Standard Plate No. 308, which is on file with the ENGINEER.

ORIGINAL CONSTRUCTION PLANS

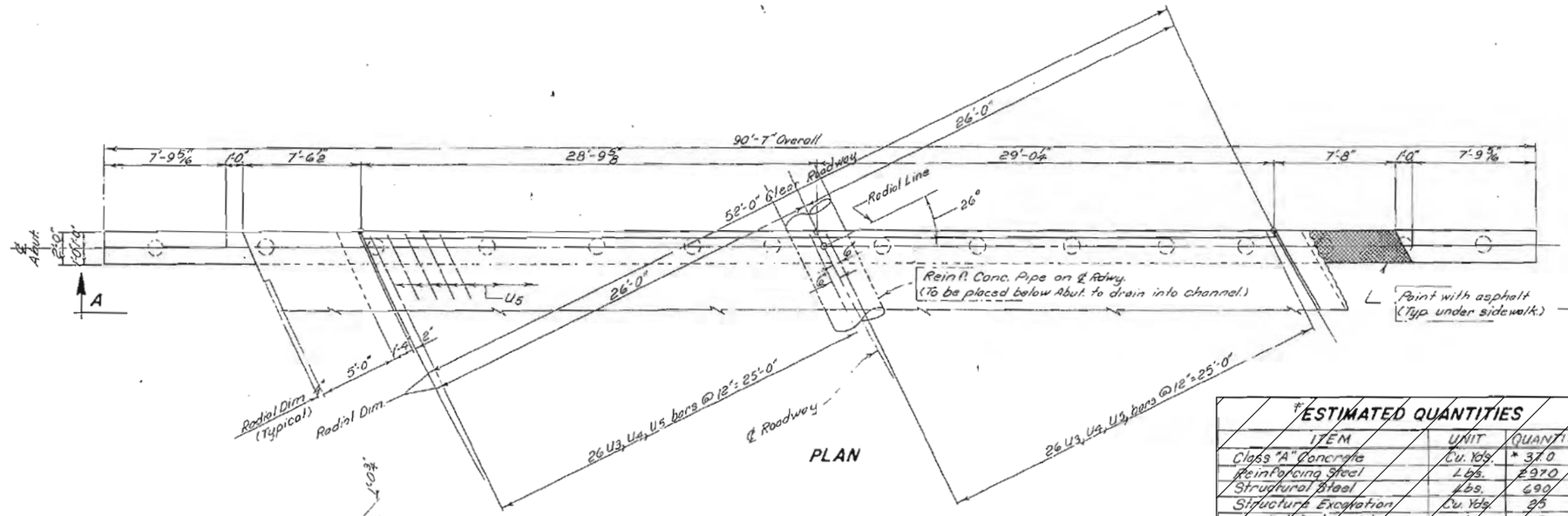
GENERAL DRAWING AND QUANTITIES
FOR
119'-2¾" CONTINUOUS CONCRETE BRIDGE
52'-0" ROADWAY 26° SKEW L.H.F. 2-5'-8" SIDEWALKS
OVER MARNE CREEK SEC. 18-T93N-R55W
STA. 353+80.385 TO 354+99.615 F 012-3(1)
YANKTON COUNTY
SOUTH DAKOTA HS 20-44
DEPARTMENT OF HIGHWAYS
JULY 1969

PLANS BY
BRIDGE SEC. S. DAK. DEPT. HWYS.

-X020-

DRAWN BY	CHECKED BY	APPROVED
C.D.	W.C.P.	BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	26	32



*ESTIMATED QUANTITIES

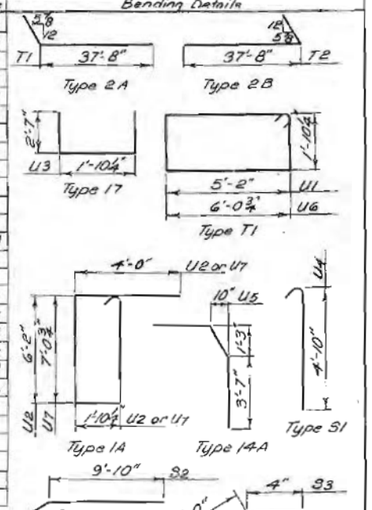
ITEM	UNIT	QUANTITY
Class "A" Concrete	Cu. Yds.	* 370
Reinforcing Steel	Lbs.	29770
Structural Steel	Lbs.	690
Structure Excavation	Cu. Yds.	95
Treated Timber Piles	No.	15

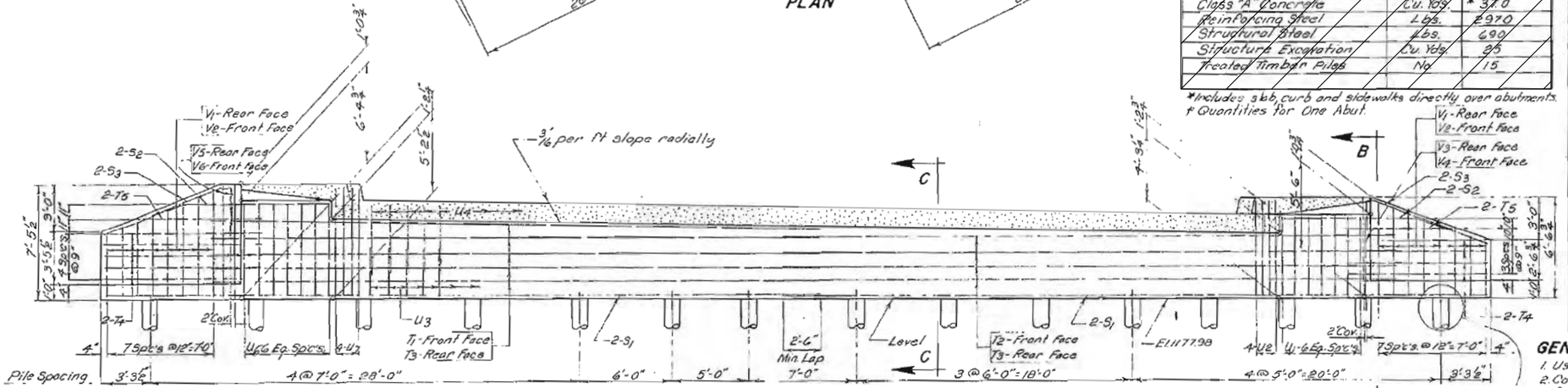
*Includes slab, curb and sidewalks directly over abutments.
* Quantities for One Abut.

*REINFORCING SCHEDULE

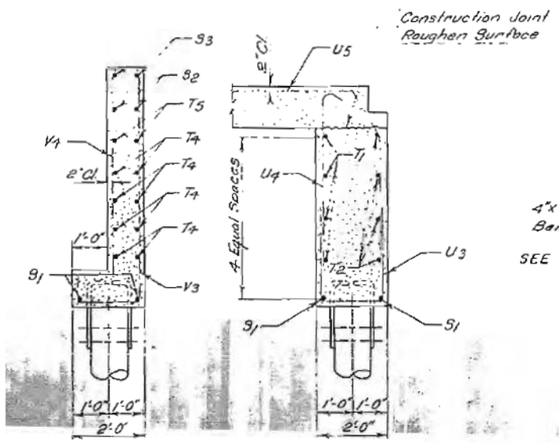
Mk.	No.	Size	Length	Type
S1	4	9	42'-6"	Str.
S2	4	9	15'-3"	19A
S3	4	6	6'-6"	16A
T1	5	5	39'-6"	2A
T2	4	5	39'-6"	2B
T3	9	5	39'-3"	Str.
T4	18	4	10'-6"	Str.
T5	4	4	8'-3"	Str.
U1	7	4	15'-0"	T1
U2	4	5	16'-9"	1A
U3	52	4	7'-0"	17
U4	52	4	5'-3"	S1
U5	52	4	9'-0"	14A
U6	7	4	16'-9"	T1
U7	4	5	20'-6"	1A
V1	8	4	15'-0"	21A
V2	8	4	9'-3"	Str.
V3	1	4	8'-6"	21A
V4	1	4	5'-9"	Str.
V5	2	4	9'-6"	21A
V6	2	4	6'-9"	Str.

Bending Details

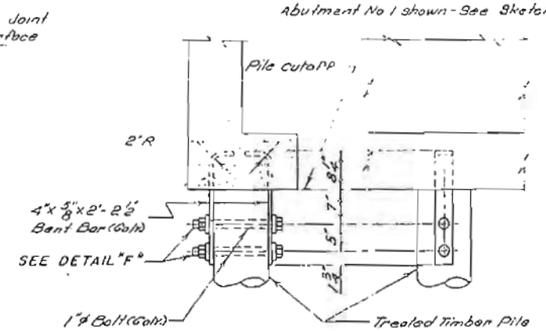




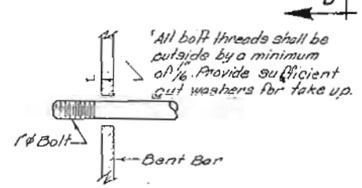
SECTION A-A
Abutment No. 1 shown - See Sketch below for Abutment No. 4



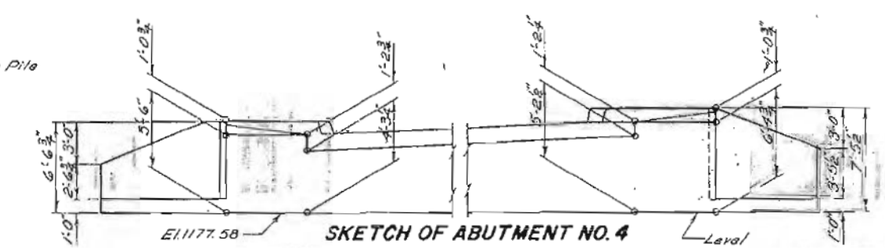
SEC. B-B SEC. C-C



DETAIL "E"
(Typical for all Abutment Piles)



DETAIL "F"



SKETCH OF ABUTMENT NO. 4

GENERAL NOTES

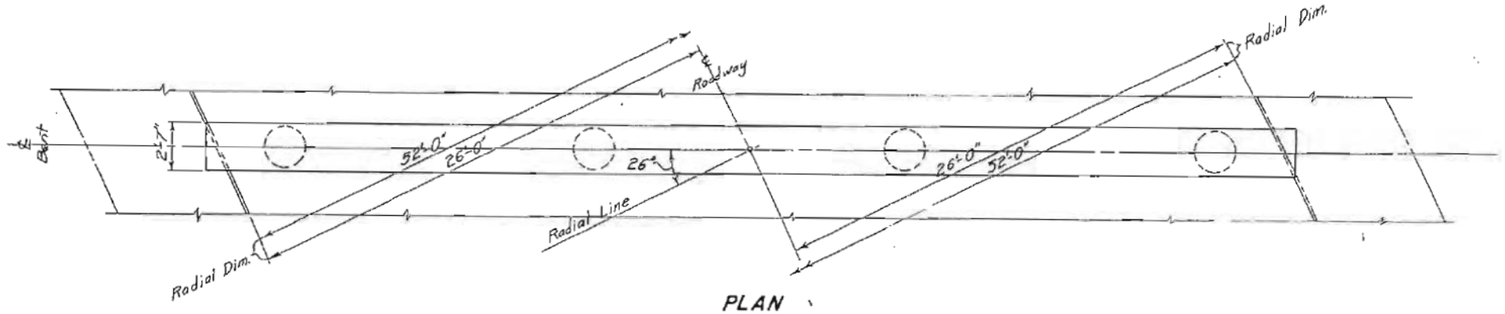
1. Use 2" clear cover on all reinforcing except as shown.
2. Cost of Asphalt Paint shall be included in the unit price bid for Class "A" Concrete.
3. See General Drawing for length of Treated Timber Piles.
4. Piling shall develop a bearing value of 24 tons per pile.
5. See NOTES on Sheet No. 5.

ORIGINAL CONSTRUCTION PLANS

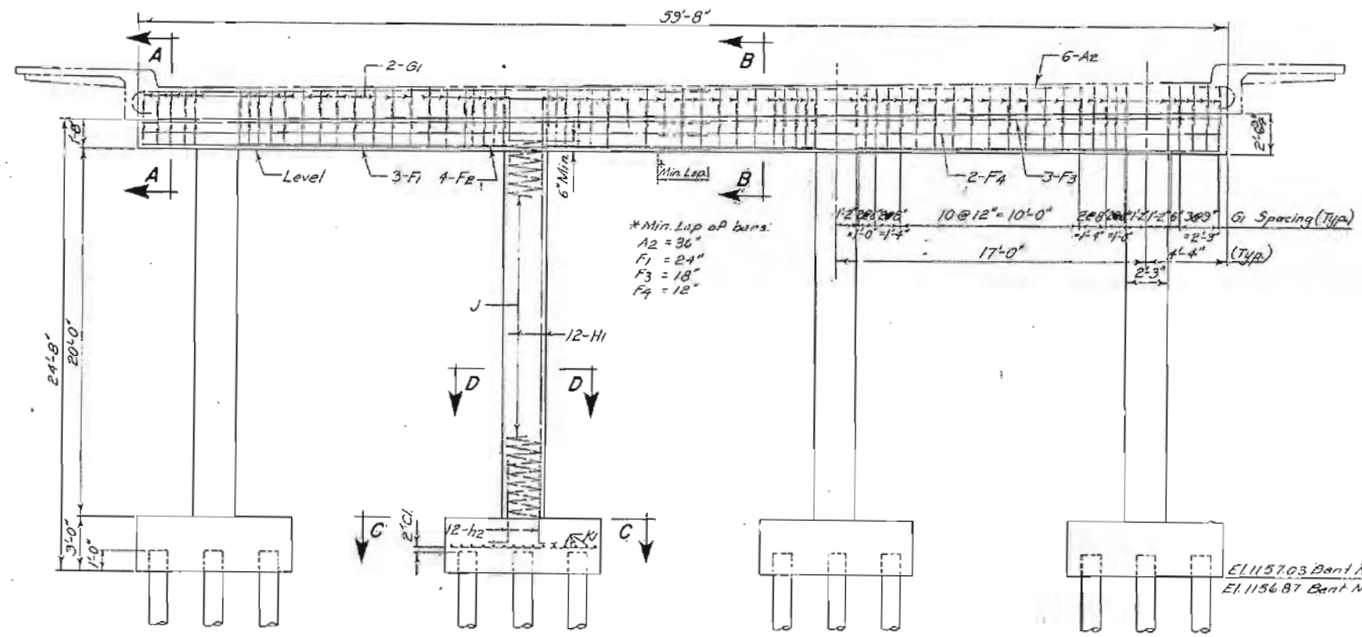
ABUTMENT DETAILS
FOR
119'-2¾" CONTINUOUS CONCRETE BRIDGE
52'-0" ROADWAY 26° SKEW L.H.F. 2-5'-8" SIDEWALKS
OVER MARNE CREEK SEC. 18-T93N-R55W
STA. 353+80.385 TO 354+99.615 FO 12-3(1)
YANKTON COUNTY
SOUTH DAKOTA HS20-44
DEPARTMENT OF HIGHWAYS
JULY 1969

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED
	E.J.L.	D.B.	BRIDGE ENGINEER

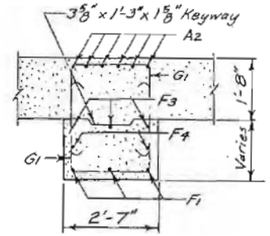
STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	27	32



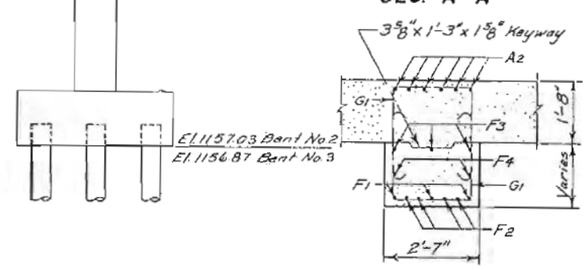
PLAN



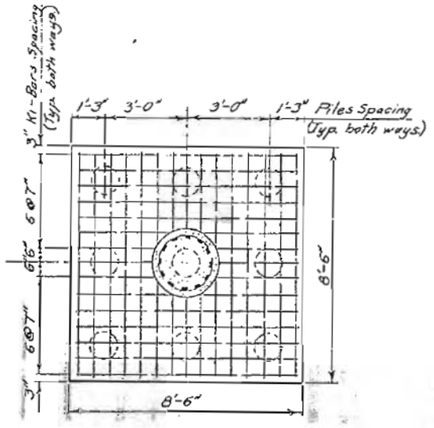
ELEVATION



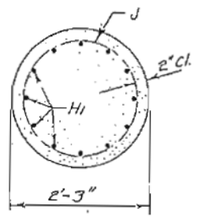
SEC. A-A



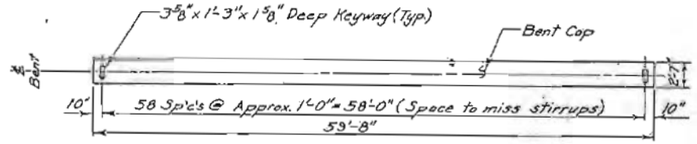
SEC. B-B



SEC. C-C



SEC. D-D

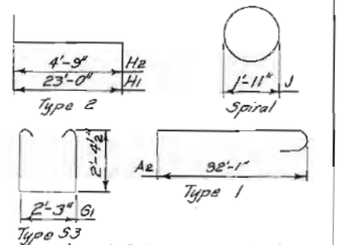


KEYWAY SPACING

+ REINFORCING SCHEDULE

Mk	No.	Size	Length	Type
A2	12	11	33'-3"	1
F1	6	8	30'-9"	Str.
F2	12	8	15'-0"	Str.
F3	6	6	30'-6"	Str.
F4	4	4	30'-3"	Str.
G1	134	4	7'-9"	S3
H1	48	8	24'-0"	2
H2	48	8	5'-9"	2
J	4	3	264'-0"	Spiral
K1	120	7	8'-0"	Str.

Bending Details



NOTE: All dimensions are out to out of bars.

Spiral-6" Pitch-1½ extra turns at each end. Splice as required, using a lap of 1½ turns or weld as approved by the BRIDGE SECTION. Use three vertical spacer bars per column. Weight of spacer bars is included in re-steel estimate. Spirals may be smooth bars.

+ Quantities for one Bent only.

℗ ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Class "A" Concrete	Cu. Yds.	56.0
Reinforcing Steel	Lbs.	10,500
Structure Exc. Per Ft. depth	Cu. Yds.	19.5℗
Treated Timber Piles	No.	36

℗ Quantities for one Bent only.
* Includes 185 Lbs. for spacer bars. Each spacer bar is computed at ¾ Lbs. per linear foot, regardless of type furnished.

GENERAL NOTES —

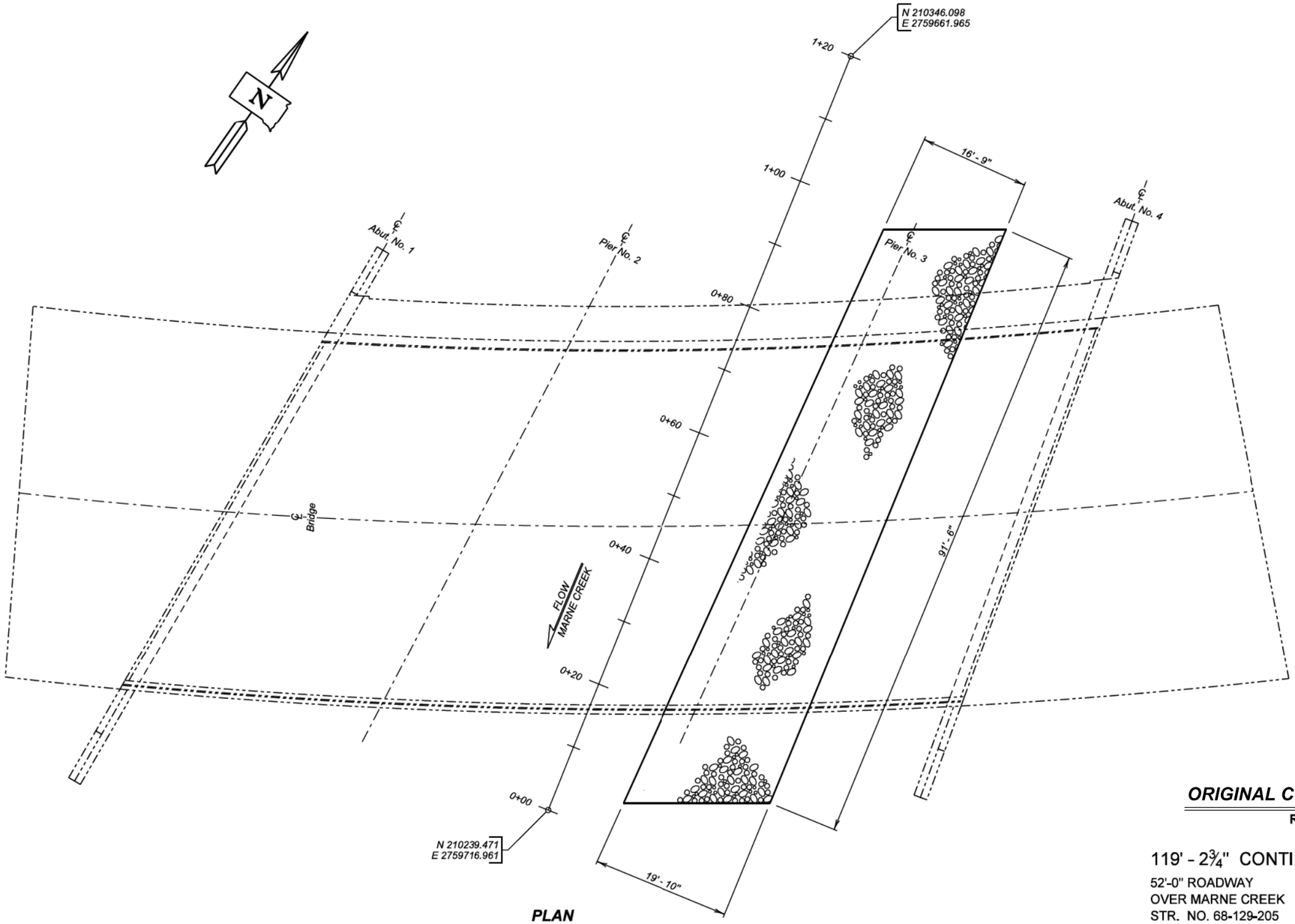
1. NOTES on Sheet No. 5 of 10 shall also apply to the Bent.
2. Use 2" clear cover on all reinforcing steel except as shown.
3. Piling shall develop a minimum bearing value of 24 Tons per pile.

ORIGINAL CONSTRUCTION PLANS

BENT DETAILS
FOR
119'-2¾" CONTINUOUS CONCRETE BRIDGE
52'-0" ROADWAY 26° SKEW L.H.F. 2-5'-8" SIDEWALKS
OVER MARNE CREEK SEC. 18-T93N-R55W
STA. 353+80.385 TO 354+99.615 FO12-3(1)
YANKTON COUNTY
SOUTH DAKOTA HS20-44
DEPARTMENT OF HIGHWAYS
JULY 1969

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED
	C.D.	D.C.	R.H. Lehnert BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	28	32



PLAN

ORIGINAL CONSTRUCTION PLANS

RIPRAP LAYOUT

FOR

119' - 2¾" CONTINUOUS CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205

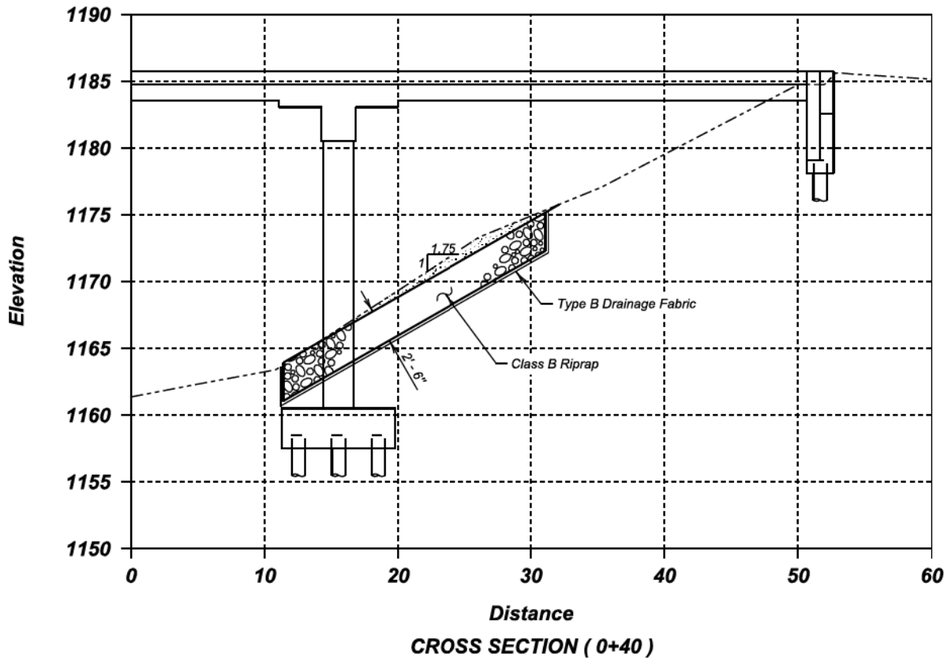
26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(122)384

YANKTON COUNTY
S. D. DEPT. OF TRANSPORTATION
JANUARY 2015

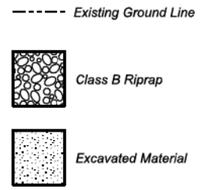
12 OF 15

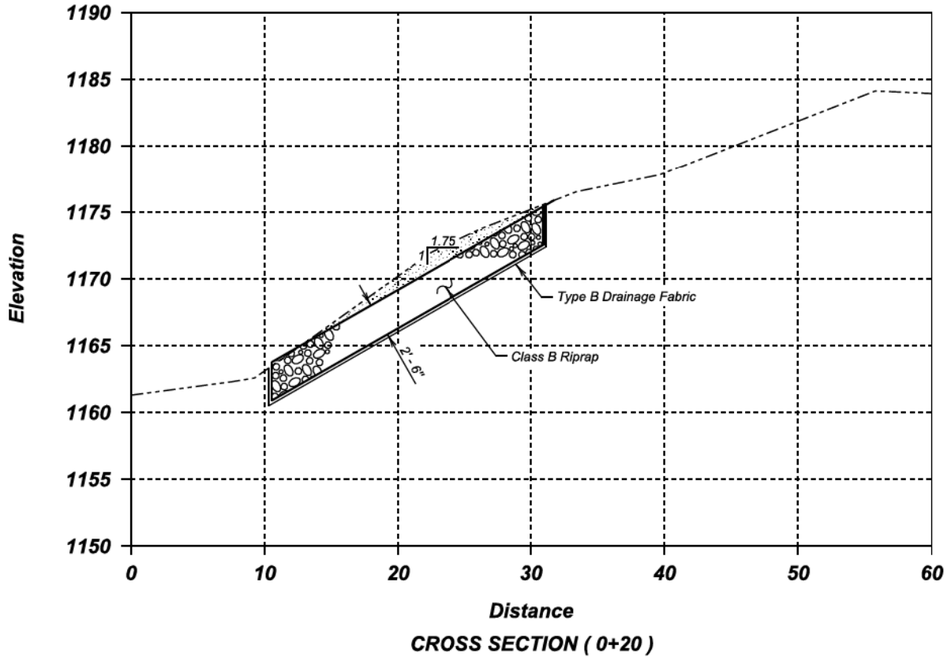
DESIGNED BY	CK. DES. BY	DRAFTED BY	
NP	KH	KR	Kevin N. Boeden
YANK05HD	05HDRA30		BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	29	32



CROSS SECTION (0+40)





CROSS SECTION (0+20)

ORIGINAL CONSTRUCTION PLANS

RIRAP CROSS SECTIONS

FOR

119' - 2¾" CONTINUOUS CONCRETE BRIDGE

52'-0" ROADWAY — 26° SKEW L.H.F.

OVER MARNE CREEK — SEC. 18-T93N-R55W

STR. NO. 68-129-205 — NH 0050(122)384

YANKTON COUNTY

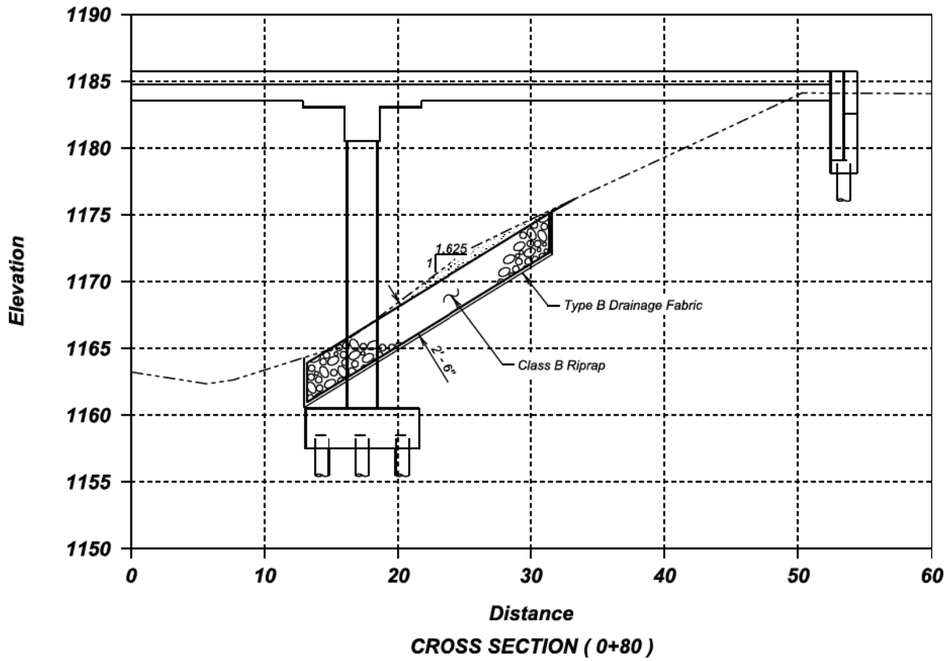
S. D. DEPT. OF TRANSPORTATION

JANUARY 2015

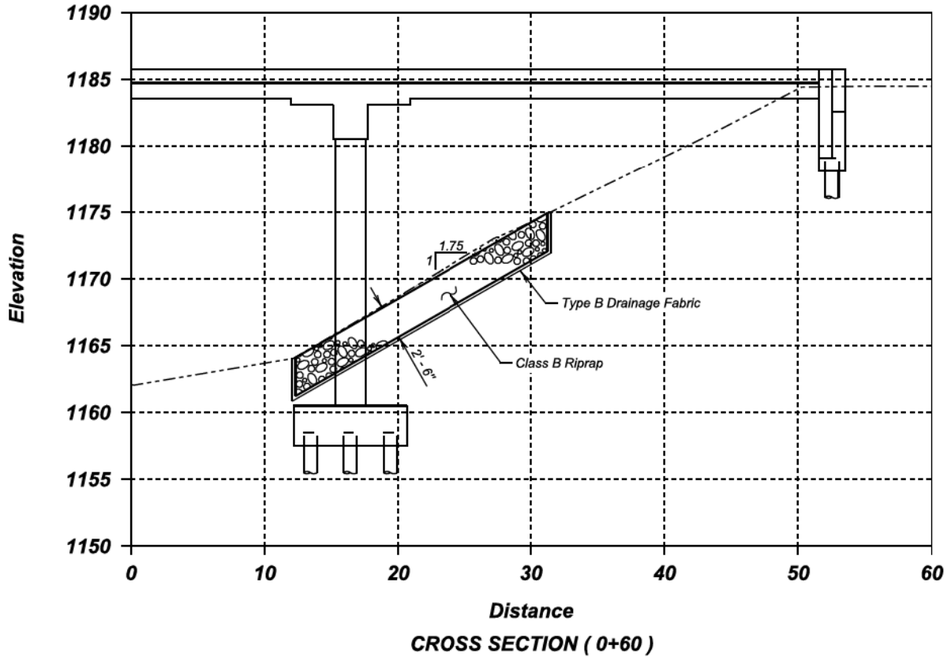
13 OF 15

DESIGNED BY	CK. DES. BY	DRAFTED BY	
NP	KH	NP	Kevin N. Goeden
YANK05HD	05HDRA31		BRIDGE ENGINEER

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	30	32



CROSS SECTION (0+80)



CROSS SECTION (0+60)

Existing Ground Line

Class B Riprap

Excavated Material

ORIGINAL CONSTRUCTION PLANS

RIPRAP CROSS SECTIONS (CONTINUED)

FOR

119' - 2¾" CONTINUOUS CONCRETE BRIDGE

52'-0" ROADWAY — 26° SKEW L.H.F.

OVER MARNE CREEK — SEC. 18-T93N-R55W

STR. NO. 68-129-205 — NH 0050(122)384

YANKTON COUNTY

S. D. DEPT. OF TRANSPORTATION

JANUARY 2015

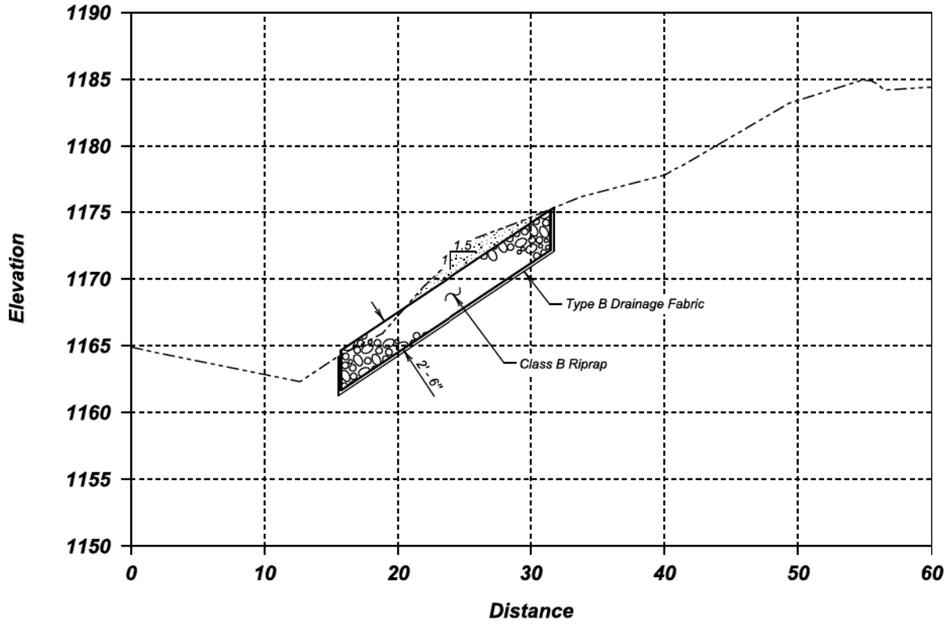
DESIGNED BY	CK. DES. BY	DRAFTED BY	
NP	KH	NP	Kevin N. Goeden BRIDGE ENGINEER
YANK05HD	05HDRA32		

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH 0050(132)384	31	32

Existing Ground Line

Class B Riprap

Excavated Material



ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
* Class B Riprap	Ton	263.2
Type B Drainage Fabric	Sq. Yd.	285

* A factor of 1.4 was used to convert Cubic Yards to Tons.

For informational purposes only, 216.0 cubic yards of excavated material is included in this payment item

ORIGINAL CONSTRUCTION PLANS

RIPRAP CROSS SECTIONS (CONTINUED)

FOR

119' - 2¾" CONTINUOUS CONCRETE BRIDGE

52'-0" ROADWAY
OVER MARNE CREEK
STR. NO. 68-129-205

26° SKEW L.H.F.
SEC. 18-T93N-R55W
NH 0050(122)384

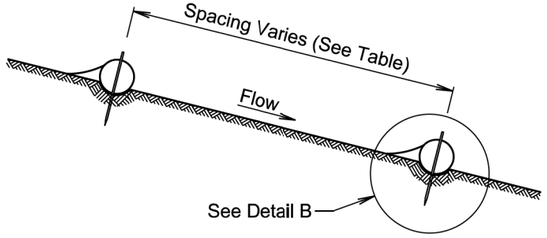
YANKTON COUNTY

S. D. DEPT. OF TRANSPORTATION

JANUARY 2015

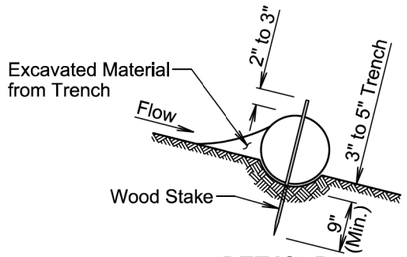
15 OF 15

DESIGNED BY	CK. DES. BY	DRAFTED BY	
NP	KH	NP	Kevin N. Goeden
YANK05HD	05HDRA33		BRIDGE ENGINEER

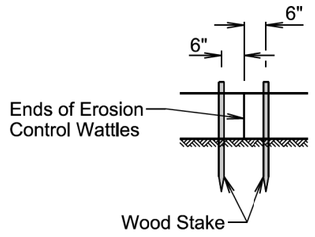


ELEVATION VIEW
(Cut or Fill Slope Installation)

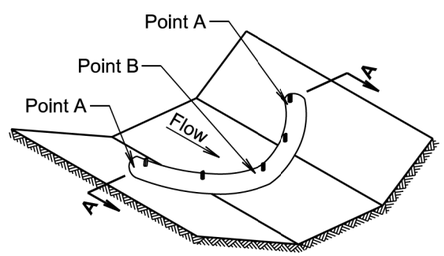
CUT OR FILL SLOPE INSTALLATION	
Slope	Spacing (Ft.)
1:1	10
2:1	20
3:1	30
4:1	40



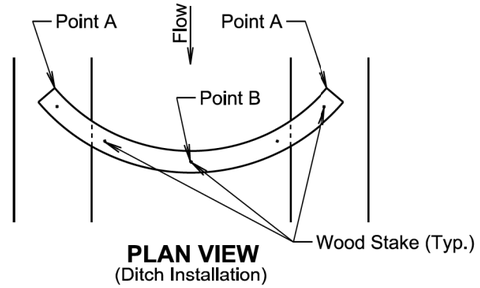
DETAIL B
(Typical of All Installations)



DETAIL C
(See General Notes)

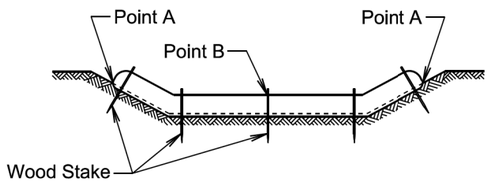


ISOMETRIC VIEW
(Ditch Installation)



PLAN VIEW
(Ditch Installation)

DITCH INSTALLATION	
Grade	Spacing (Ft.)
2%	150
3%	100
4%	75
5%	50



SECTION A-A

February 14, 2020

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			Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

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			Sheet 2 of 2

PLOT SCALE - 1:200
PLOT NAME - 3
FILE - ...\STANDARDPLATES_07E9.DGN
_PLOTTED FROM - TRM111118