

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0903(101)153	1	143

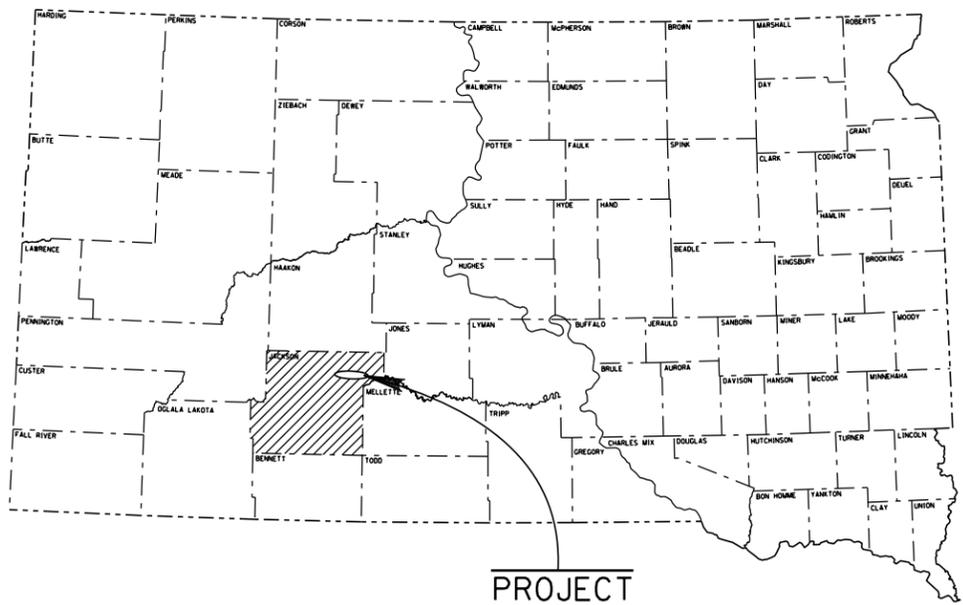
Plotting Date: 08/13/2015

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
PROJECT IM 0903(101)153
INTERSTATE 90 EBL
JACKSON COUNTY

- INDEX OF SECTIONS
- Section A: Estimate of Quantities
 - Section C: Traffic Control Plans
 - Section D: Erosion And Sediment Control Plans
 - Section F: Surfacing Plans
 - Section M: Pavement Marking Plans
 - Section S: Permanent Signing Plans
 - Section X: Cross Sections
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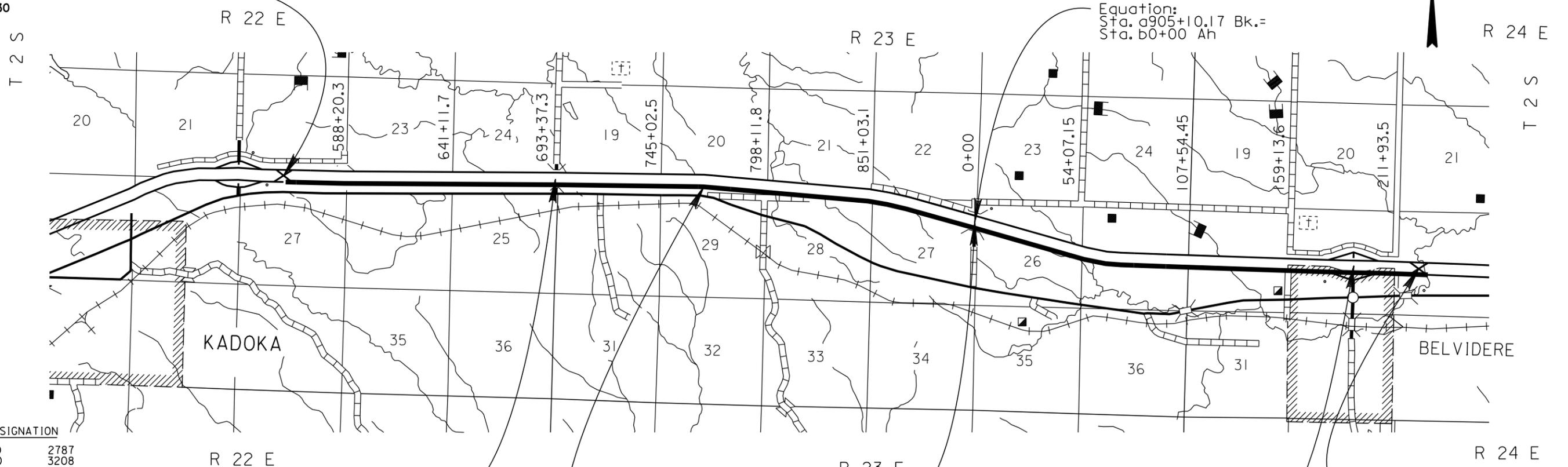
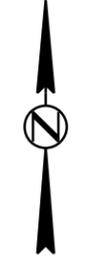
REMOVE AND REPLACE PCC PAVEMENT
INSTALL EDGE DRAINS, INSLOPE FLATTENING
AND PIPE WORK
PCN 03W4



PLOT SCALE - 1:15280

PLOT NAME - 1

BEGIN IM 0903(101)153
MRM 153.00+ 0.000 (EB Lanes)
Sta. 566+30



DESIGN DESIGNATION

ADT (2014)	2787
ADT (2034)	3208
DHV	612.7
D	51
T DHV	11.9
T ADT	26.1
V	80

Continuous Concrete Bridge
Str. # 36-360-099
MRM 155.44

Continuous Concrete Bridge
Str. # 36-400-103
MRM 159.42

Continuous Concrete Bridge
Str. # 36-436-106
MRM 163.04

END IM 0903(101)153
MRM 163.00 +0.890 (EB Lanes)
Sta. b236+50

Equation:
Sta. 778+03.37 Bk.=
Sta. a778+35.27 Ah

Equation:
Sta. a905+10.17 Bk.=
Sta. b0+00 Ah

STORM WATER PERMIT
MAJOR STREAM - Brave Bull Creek

ACRES DISTURBED - 42
PROJECT AREA - 220
LATITUDE = 43.8509
LONGITUDE = -101.4705

LENGTH	57,498.27 FEET	10.89 MILES
EXCEPTIONS	455.28 FEET	0.086 MILES
NET	57,042.99 FEET	10.804 MILES

Plans Stationing is at the Centerline
of the Eastbound Lanes Underlying
Plans Stationing is in the Median

1

PLOTTED FROM - TRPR18387

FILE - U:\MS\PR\JACK03W4\TITLE.DGN

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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Traffic Control – Section C

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	480.0	Hour
634E0110	Traffic Control Signs	2,827	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0285	Type 3 Barricade, 8' Double Sided	15	Each
634E0340	Temporary Raised Pavement Markers	12,600	Mile
634E0380	Tubular Marker	1,201	Each
634E0420	Type C Advance Warning Arrow Board	4	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	5,000	Ft
634E0620	Temporary Pavement Marking, Continuous 4" Edge Line	111,936	Ft
634E0630	Temporary Pavement Marking	7.8	Mile
634E1002	Detour Signing	1,973.8	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	4	Each

Erosion and Sediment Control – Section D

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	2.0	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0251	Special Permanent Seed Mixture 1	1,092	Lb
732E0100	Mulching	84.0	Ton
734E0154	12" Diameter Erosion Control Wattle	400	Ft
734E0165	Remove and Reset Erosion Control Wattle	100	Ft

Surfacing – Section F

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	23,136	Mile
009E3240	Graded Centerline Staking	11,259	Mile
009E3250	Miscellaneous Staking	12,206	Mile
009E3280	Slope Staking	0.991	Mile
009E3300	Three Man Survey Crew	40.0	Hour
009E4300	Construction Schedule, Category III	Lump Sum	LS
110E0500	Remove Pipe Culvert	816	Ft
110E0510	Remove Pipe End Section	3	Each
110E0700	Remove 3 Cable Guardrail	5,070	Ft
110E0730	Remove Beam Guardrail	1,012.5	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	20	Each
110E0745	Remove 3 Cable Guardrail Slip Base Anchor Assembly	6	Each
110E0770	Remove W Beam Guardrail Breakaway Cable Terminal	9	Each
110E0800	Remove W Beam Guardrail End Terminal	3	Each
110E1100	Remove Concrete Pavement	157,979.0	SqYd
110E7000	Remove Crossover Closure for Reset	448	Ft
110E7020	Remove Interim Crossover Closure for Reset	256	Ft
110E7152	Remove Delineator for Reset	38	Each
110E7500	Remove Pipe for Reset	12	Ft
110E7510	Remove Pipe End Section for Reset	25	Each
120E0010	Unclassified Excavation	226,980	CuYd
120E0100	Unclassified Excavation, Digouts	50	CuYd
120E0400	Select Subgrade Topping	123,443	CuYd

Surfacing – Section F - Continued

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
120E4100	Reprofiling Ditch	45.0	Sta
120E6100	Water for Embankment	83.4	MGal
120E6200	Water for Granular Material	2,179.4	MGal
120E9000	Pit Run	12,636.8	Ton
210E2000	Shoulder Shaping	21.5	Mile
250E0010	Incidental Work	Lump Sum	LS
260E1030	Base Course, Salvaged	2,331.5	Ton
260E1090	Base Course, State Furnished	43,930.0	Ton
260E2010	Gravel Cushion	19,700.2	Ton
260E2030	Gravel Cushion, Salvaged	39,694.1	Ton
260E2090	Gravel Cushion, State Furnished	36,136.4	Ton
260E6000	Granular Material, Furnish	1,666.0	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	39,609.0	Ton
270E0110	Salvage and Stockpile Granular Material	56,118.0	Ton
270E0220	Blend and Stockpile Granular Material	3,332.0	Ton
320E1200	Asphalt Concrete Composite	12,500.0	Ton
320E3000	Compaction Sample	3	Each
320E5010	Saw and Seal Shoulder Joint	108,724	Ft
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	10.3	Mile
330E0010	MC-70 Asphalt for Prime	143.1	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	30.0	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	21.8	Ton
330E2000	Sand for Flush Seal	20.1	Ton
332E0010	Cold Milling Asphalt Concrete	14,919	SqYd
380E0100	10.5" Nonreinforced PCC Pavement	168,842.3	SqYd
380E0800	PCC Shoulder Pavement	3,200.0	SqYd
380E6000	Dowel Bar	63,510	Each
380E6545	Grind 12" Rumble Strip or Stripe in PCC Pavement	10.3	Mile
410E2600	Membrane Sealant Expansion Joint	292.0	Ft
430E0700	Precast Concrete Headwall for Drain	228	Each
450E0142	24" RCP Class 2, Furnish	390	Ft
450E0150	24" RCP, Install	390	Ft
450E2200	24" RCP Sloped End, Furnish	10	Each
450E2201	24" RCP Sloped End, Install	10	Each
450E2208	36" RCP Sloped End, Furnish	1	Each
450E2209	36" RCP Sloped End, Install	1	Each
450E4768	24" CMP 14 Gauge, Furnish	386	Ft
450E4770	24" CMP, Install	386	Ft
450E5015	24" CMP Elbow, Furnish	16	Each
450E5016	24" CMP Elbow, Install	16	Each
450E5215	24" CMP Flared End, Furnish	8	Each
450E5216	24" CMP Flared End, Install	8	Each
450E8014	24" RCP to CMP Transition, Furnish	8	Each
450E8015	24" Pipe Transition, Install	8	Each
450E8900	Cleanout Pipe Culvert	48	Each
450E9000	Reset Pipe	12	Ft
* 450E9001	Reset Pipe End Section	25	Each
600E0300	Type III Field Laboratory	1	Each
629E0100	3 Cable Guardrail	5,044	Ft
629E0300	3 Cable Guardrail Slip Base Anchor Assembly	12	Each
629E0400	3 Cable Guardrail Anchor Assembly	12	Each
629E9050	Reset Crossover Closure	448	Ft
629E9060	Reset Interim Crossover Closure	256	Ft
630E0110	Straight Double Class A Thrie Beam Guardrail with Wood Posts	225.0	Ft
630E1010	Straight Class A W Beam Guardrail with Wood Posts	1,200.0	Ft
630E2000	W Beam to Thrie Beam Guardrail Transition	18	Each
630E2020	W Beam Guardrail Tangent End Terminal	6	Each
630E2030	W Beam Guardrail Breakaway Cable Terminal	12	Each

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Surfacing – Section F - Continued

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E2100	Reset Delineator	38	Each
680E0010	2' Deep Edge Drain	114,090	Ft
680E0015	Edge Drain Outlet	228	Each
720E1015	Bank and Channel Protection Gabion	121.0	CuYd
831E0210	Non-woven Geotextile Separator	4,227	SqYd

* - Denotes Non-Participating

Surfacing - Section F - Alternate A

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0004	PG 58-28 Asphalt Binder	634.8	Ton
320E1070	Class HR Asphalt Concrete	15,810.6	Ton

Surfacing - Section F - Alternate B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0004	PG 58-28 Asphalt Binder	588.9	Ton
320E1070	Class HR Asphalt Concrete	16,226.6	Ton

Pavement Marking – Section M

Bid Item Number	Item	Quantity	Unit
633E1300	Pavement Marking Paint, White	474	Gal
633E1305	Pavement Marking Paint, Yellow	372	Gal

Permanent Signing – Section S

Bid Item Number	Item	Quantity	Unit
110E5020	Salvage Traffic Sign	7	Each
632E2000	4"x4" Amber Delineator with 1.12 Lb/Ft Post	18	Each
632E2004	4"x8" Amber Delineator with 1.12 Lb/Ft Post	13	Each
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	139	Each
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	26	Each
632E2520	Type 2 Object Marker	1	Each

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

INDEX OF SHEETS

A1	Estimate of Quantities for Sections C,D, F, M, S, X and Z
A2 to A3	Environmental Commitments

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived 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. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

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 pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and 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

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

Action Taken/Required:

The Contractor shall obtain the necessary permits from the regulatory agencies such as the Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (COE) prior to executing water extraction activities.

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

These tributaries of Indian Creek, Brave Bull Creek, and unnamed creek are classified as fish and wildlife propagation, recreation, irrigation, and stock watering waters. Because of these beneficial uses, special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

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

COMMITMENT D2: SURFACE WATER DISCHARGE

These tributaries of Indian Creek, Brave Bull Creek, and unnamed creek are classified as fish and wildlife propagation, recreation, irrigation and stock watering waters. Because of these beneficial uses, special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

If construction dewatering is required, the Contractor shall obtain a Temporary Discharge Permit from the DENR and provide a copy to the Project Engineer. Contact the DENR Surface Water Program at 605-773-3351 to apply for a permit.

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance.

Action Taken/Required:

The DENR and the US Environmental Protection Agency (EPA) have issued separate general permits for the discharge of storm water runoff. The DENR permit applies to discharges on state land and the EPA permit applies to discharges on federal or reservation land. The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to DENR a minimum of 15 days prior to project start by the DOT Environmental Office. A letter must be received from DENR that acknowledges project coverage under this general permit before project start. The Contractor is advised that permit coverage may also be required by off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

The Contractor shall adhere to the "Special Provision Regarding Storm Water Discharges to Waters of the State".

A major component of the storm water construction permits is development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is a joint effort and responsibility of the SDDOT and the Contractor. Erosion control measures and best management practices will be implemented in accordance with the SWPPP. The SWPPP is a dynamic document and is to be available on-site at all times.

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

SDDOT:
<http://sddot.com/transportation/highways/environmental/stormwater/Default.aspx>

DENR: <http://www.denr.sd.gov/des/sw/stormwater.aspx>

EPA: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

Contractor Certification Form:

The "Department of Environmental and Natural Resources – Contractor Certification Form" (SD EForm – 2110LDV1-ContractorCertification.pdf) shall be completed by the Contractor or their certified Erosion Control Supervisor after the award of the contract. Work may not begin on the project until this form is signed.

The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the Surface Water Discharge General Permit for Storm Water Discharges Associated with Construction Activities for the Project.

The online form can be found at:
<http://denr.sd.gov/des/sw/eforms/E2110LDV1-ContractorCertification.pdf>

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall 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 State ROW.

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

The waste disposal site(s) shall 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 Project Engineer.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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COMMITMENT H: WASTE DISPOSAL SITE - CONTINUED

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

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of 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 of time not to exceed the duration of the project. Prior to project completion, the waste shall 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) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical 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 review of cultural resources impacts. 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 shall arrange and pay for a cultural resource survey and/or records search. 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; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the proposed 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 shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). 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.

If evidence for historic or cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order 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 shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

COMMITMENT J: CONSTRUCTION PRACTICES FOR TEMPORARY WORKS IN WATERWAYS OF THE U.S.

The Contractor is advised that special construction measures have to be taken to ensure that the waterways of the U.S. are not impacted.

Action Taken/Required:

No excavation shall be made below the ordinary high water elevation in waterways outside of caissons, cribs, cofferdams, steel piling, or sheeting; and the natural streambed shall not be disturbed unless specified by the plans and under the observation of the Project Engineer. Refer to the Table of U.S. Waterways to Protect for ordinary high water elevations.

All dredged or excavated materials shall be placed at a site above the ordinary high water elevation in a confined area (not classified as a wetland) that is a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and inlets to prevent return of such material to the waterway.

The construction of temporary work platforms, crossings, or berms below the ordinary high water elevation will be allowed provided that all material placed below the ordinary high water elevation consists of Class B or larger riprap.

All temporary caissons, cribs, cofferdams, steel piling, sheeting, work platforms, crossings, and berms shall be removed with minimal disturbance to the streambed. Proper construction practices shall be used to minimize increases in suspended solids and turbidity in the waterway.

Bridge berms, wing dams, traffic diversions, channel reconstruction, grading, etc. shall be constructed in close conformity with the plans to ensure that the hydraulic capacity of the waterway is not changed.

Temporary waterway crossings required for the Contractors construction operations shall be constructed with an adequate drainage structure size and minimum fill height to reduce the potential for upstream flooding. The Contractor will be responsible for sizing the temporary drainage structure for these crossings.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the US Army Corps of Engineers for the permanent actions associated with this project.

Action Taken/Required:

The Contractor shall comply with all requirements contained in the Section 404 permit.

The Contractor shall also be responsible for obtaining a Section 404 permit for any dredge, excavation, or fill activities associated with staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands or waters of the United States.