

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

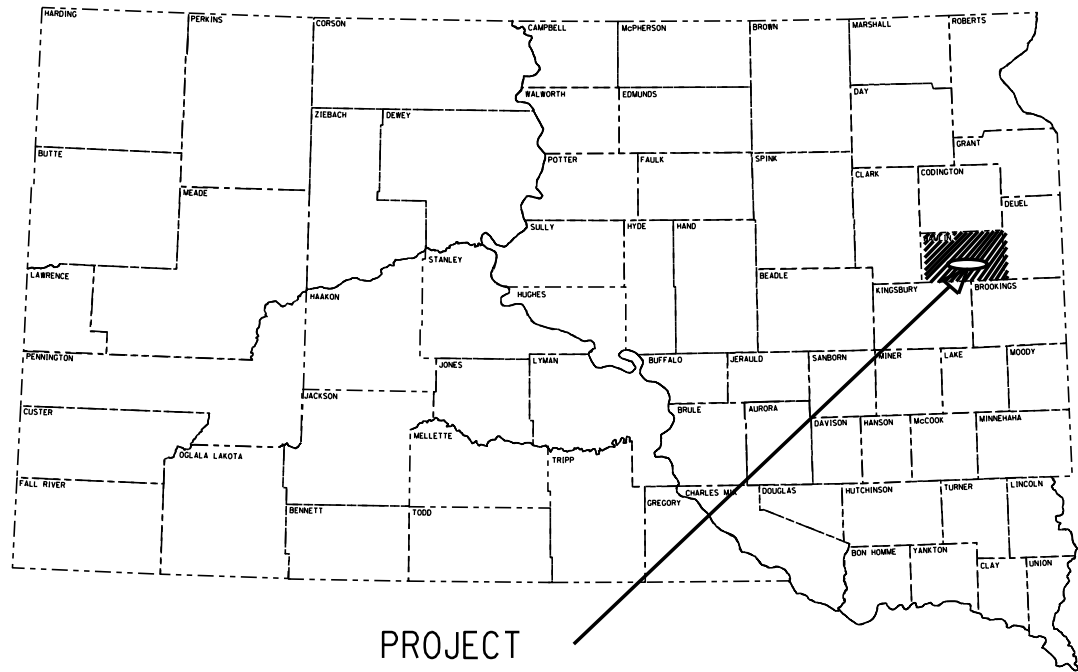
PLANS FOR PROPOSED

PROJECT P 0021(174)127
SD HIGHWAY 21
HAMLIN COUNTY

Full Depth Reclamation, AC Surfacing, Pipe Work & ROW
PCN 06CW

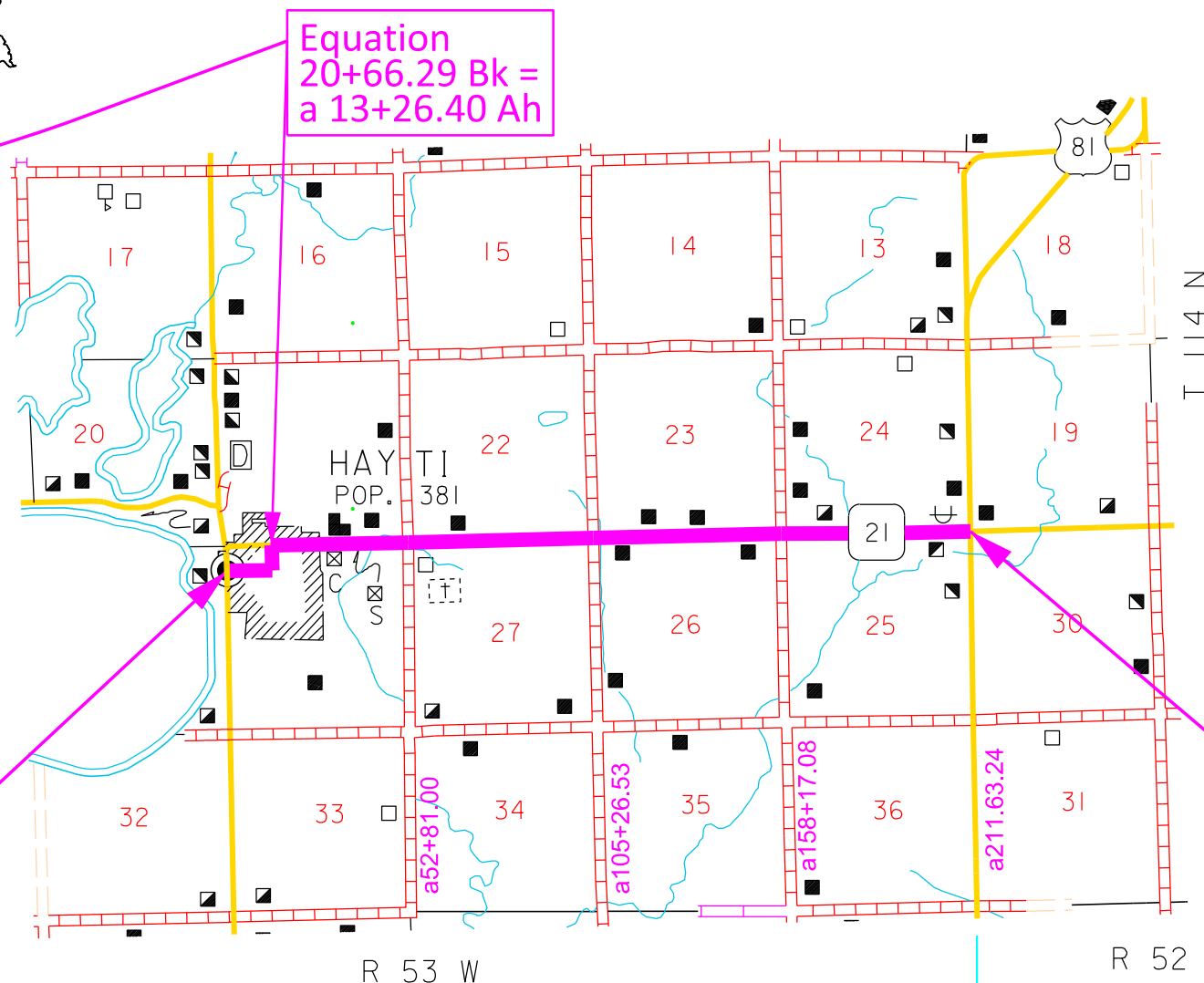
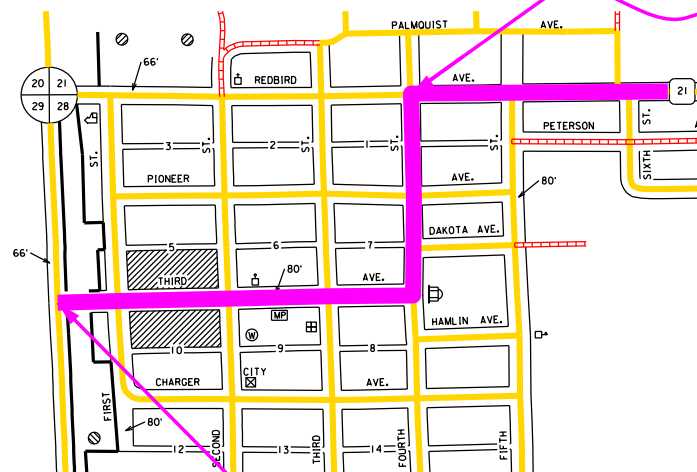
INDEX OF SECTIONS

- Section A: Estimate of Quantities and Environmental Commitments
- Section B: Grading Plans
- Section C: Traffic Control Plans
- Section D: Erosion Control Plans
- Section F: Surfacing Plans
- Section M: Pavement Marking Plans



PROJECT

Enlarged View of Beginning of Project in Hayti



Equation
20+66.29 Bk =
a 13+26.40 Ah

Begin Project
Sta. 0+00.0
MRM 127.34 +0.000

End Project
Sta. a 211+65.00
MRM 131.00 +0.448

DESIGN DESIGNATION

AADT (2021)	806
AADT (2041)	1213
DHV	136
D	50%
DHV T%	5.2%
AADT T%	11.2%
V	65

STORM WATER PERMIT

(None Required)

GROSS LENGTH	21904.89 FEET	4.149	MILES
LENGTH OF EXCEPTIONS	0 FEET	0	MILES
NET LENGTH	21904.89 FEET	4.149	MILES

6

March 20, 2024

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0021(174)127	A1	A3

Rev 2/2/2024 TDJ

Section B – Grading

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3220	Reestablish Right-of-Way and Property Corner	4	Each
009E3250	Miscellaneous Staking	0.423	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
110E0300	Remove Concrete Curb and/or Gutter	710	Ft
110E0420	Remove Drop Inlet Frame and Grate Assembly	1	Each
110E1010	Remove Asphalt Concrete Pavement	220.0	SqYd
110E1100	Remove Concrete Pavement	52.2	SqYd
110E1140	Remove Concrete Sidewalk	620.2	SqYd
110E1300	Remove Concrete Retaining Wall	21.0	Ft
110E7150	Remove Sign for Reset	5	Each
120E0600	Contractor Furnished Borrow	17	CuYd
250E0020	Incidental Work, Grading	Lump Sum	LS
320E1200	Asphalt Concrete Composite	3.5	Ton
380E4050	8" PCC Fillet Section	80.0	SqYd
451E6080	Adjust Water Valve Box	3	Each
451E6510	Move Fire Hydrant	1	Each
632E1320	2.0"x2.0" Perforated Tube Post	65.0	Ft
632E3500	Reset Sign	5	Each
650E0060	Type B66 Concrete Curb and Gutter	682	Ft
650E4660	Type P6 Concrete Gutter	2	Ft
651E0040	4" Concrete Sidewalk	6,668	SqFt
651E7000	Type 1 Detectable Warnings	460	SqFt
670E1200	Type B Frame and Grate	1	Each
670E5400	Precast Drop Inlet Collar	1	Each
900E2030	Miscellaneous Work	1	Site

Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E1320	2.0"x2.0" Perforated Tube Post	60.0	Ft
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	72	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	12.0	SqFt
634E0010	Flagging	330.0	Hour
634E0020	Pilot Car	150.0	Hour
634E0110	Traffic Control Signs	873.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	23.8	Mile
634E2000	Longitudinal Pedestrian Barricade	200	Ft
634E2020	Temporary Curb Ramp	8	Each

Section D – Erosion Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1700	Remove Silt Fence	25	Ft
230E0100	Remove and Replace Topsoil	Lump Sum	LS
734E0010	Erosion Control	Lump Sum	LS
734E0154	12" Diameter Erosion Control Wattle	100	Ft
734E0604	High Flow Silt Fence	100	Ft
734E0610	Mucking Silt Fence	7	CuYd
734E0620	Repair Silt Fence	25	Ft

Section F - Surfacing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3320	Checker	Lump Sum	LS
110E0510	Remove Pipe End Section	1	Each
110E1010	Remove Asphalt Concrete Pavement	41.0	SqYd
110E7500	Remove Pipe for Reset	14	Ft
110E7510	Remove Pipe End Section for Reset	3	Each
110E7802	Remove Fence for Reset	60	Ft
120E0100	Unclassified Excavation, Digouts	206	CuYd
210E3500	Heavy Roadway Shaping	0.100	Mile
250E0010	Incidental Work	Lump Sum	LS
260E1010	Base Course	691.8	Ton
280E0010	Full Depth Reclamation	82,372	SqYd
320E0005	PG 58-34 Asphalt Binder	900.6	Ton
320E1200	Asphalt Concrete Composite	13.3	Ton
320E1202	CLASS Q2R HOT MIXED ASPHALT CONCRETE	19,228.1	Ton
320E1800	Asphalt Concrete Blade Laid	79.7	Ton
320E4000	Hydrated Lime	193.0	Ton
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	6.4	Mile
320E7035	Grind Sinusoidal Transverse Rumble Strip in Asphalt Concrete	392.0	SqFt
330E0010	MC-70 Asphalt for Prime	54.1	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	48.9	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	20.9	Ton
330E1000	Blotting Sand for Prime	261.0	Ton
330E2000	Sand for Flush Seal	217.6	Ton
332E0010	Cold Milling Asphalt Concrete	101,209	SqYd
450E2028	36" RCP Flared End, Furnish	1	Each
450E2029	36" RCP Flared End, Install	1	Each
450E4699	Tie Bolts for RCP	26	Each
* 450E8900	Cleanout Pipe Culvert	1	Each
450E9000	Reset Pipe	14	Ft
450E9001	Reset Pipe End Section	3	Each
600E0300	Type III Field Laboratory	1	Each
620E1020	2 Post Panel	2	Each
620E4100	Reset Fence	60	Ft
720E1010	PVC Coated Bank and Channel Protection Gabion	60.0	CuYd
831E0110	Type B Drainage Fabric	90	SqYd
900E0010	Refurbish Single Mailbox	9	Each
900E1980	Storage Unit	1	Each

* - Denotes Non-Participating

INDEX OF SHEETS

A1 Estimate of Quantities for Sections B, C, D, F, M
A2 to A3 Environmental Commitments

Section M – Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0030	Cold Applied Plastic Pavement Marking, 24"	40	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	3	Each
633E0255	Preformed Thermoplastic Pavement Marking, Symbol	7	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	233	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	110	Gal
633E1220	High Build Waterborne Pavement Marking Paint, 4" White	2,658	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	40	Ft
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	3	Each
633E5037	Grooving for Cold Applied Plastic Pavement Marking, Symbol	7	Each

SPECIFICATIONS

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

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/media/documents/EnvironmentalProceduresManual.pdf>

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: WETLANDS

All efforts to avoid and minimize wetland impacts from the project have resulted in approximately 0.015 acre(s) of wetlands (includes temporary and permanent) becoming impacted. Refer to Section B – Grading Plans for location and boundaries of the impacted wetlands.

Table of Impacted Wetlands

Wetland No.	Station	Perm. Impact Left (Acres)	Perm. Impact Right (Acres)	Temp. Impact Left (Acres)	Temp. Impact Right (Acres)	Total Impact (Acres)
1	77+30	0.00	0.00	0.0023	0.0023	0.0046
4	179+40	0.0049	0.00	0.0055	0.00	0.0104
5	206+30	0.00	0.00	0.0003	0.0001	0.0004

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 0.005 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 Section B – Grading Plans. Prior to initiating temporary work in wetlands, the Contractor will submit a plan to the Project Engineer in accordance with Section 7.21 D 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 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

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.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

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.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:

< <http://sdleastwanted.com/maps/default.aspx> >

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

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

Marsh Lake is classified as warm water, marginal fishery with a total suspended solids standard of less than 150 mg/L 30-day average, less than 263 mg/L daily maximum.

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.

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.

COMMITMENT D2: SURFACE WATER DISCHARGE CONT.

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 not required to be covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the Contractor will obtain the General Permit for Temporary Discharge Activities from the DANR Surface Water Program, 605-773-3351.

<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_TemporaryDischargeNOI2018Fillable.pdf>

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:

< <http://denr.sd.gov/des/sw/WhatisaDMR.aspx> >

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

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.

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 100 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 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 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.