

STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR PROPOSED

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	1	149

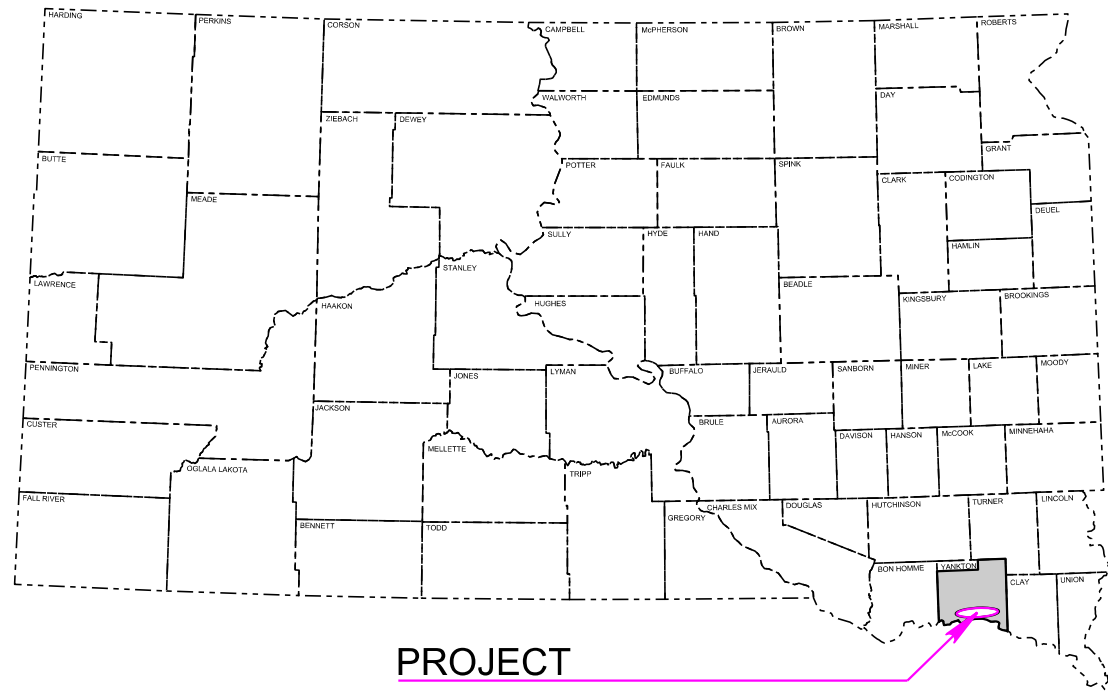
Plotting Date: 03/22/2024  
Revised Date: 03/18/2024 MDJ

INDEX OF SECTIONS

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- Section B: Grading Plans
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- Section M: Pavement Marking Plans
- Section S: Permanent Signing
- Section X: Cross Sections

PROJECT NH 0081(114)0  
US HIGHWAY 81  
YANKTON COUNTY

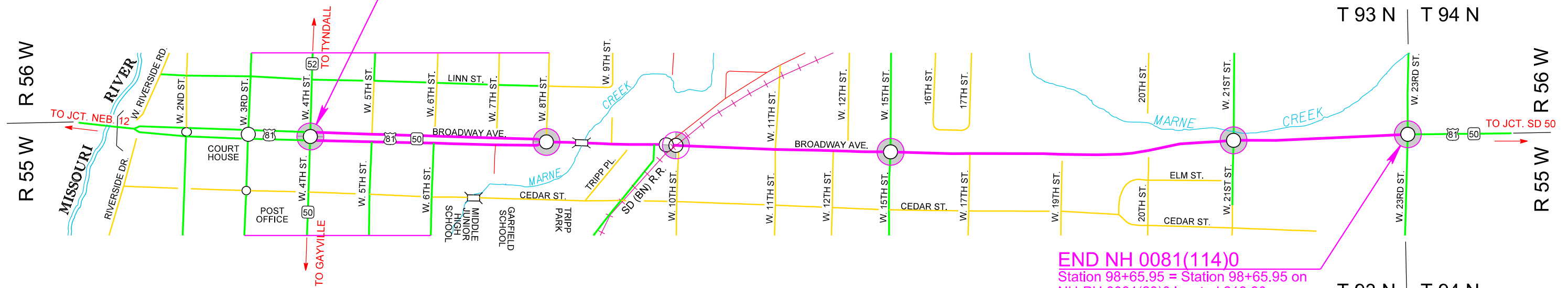
TRAFFIC SIGNAL UPGRADES, ADA UPGRADES,  
MODIFY INTERSECTION  
PCN 07DH



YANKTON

**BEGIN NH 0081(114)0**  
Station 10+80.13 = Station 10+80.13 on NH-PH 0081(23)0 located 184.83 feet North and 68.17 feet West of the Southwest corner of Lot 9 in BBlock 24 of Todd's Addition to Yankton  
MRM = 0.66 + 0.000

**END NH 0081(114)0**  
Station 98+65.95 = Station 98+65.95 on NH-PH 0081(23)0 located 219.90 feet South and 131.04 feet East of the Southeast corner of Lot 2 of Flake's Subdivision to Yankton  
MRM = 0.81 + 0.000



DESIGN DESIGNATION

ADT (2022)	18051
ADT (2047)	27221
DHV	2831
D	52%
T DHV	1.9%
T ADT	4.2%
V	30 mph

STORM WATER PERMIT

None Required

13

March 5, 2025

Plot Scale - 1:200

Plotted From - TRSE12140

File - U:\proj\yank07DH\Title.dgn

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT NH 0081(114)0	SHEET A1	TOTAL SHEETS A4
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Plotting Date: 03/22/2024  
Revised Date: 03/22/2024 MDJ

## Section B - Grading

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	15	Each
009E3230	Grade Staking	0.141	Mile
009E3250	Miscellaneous Staking	0.070	Mile
009E3280	Slope Staking	0.070	Mile
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	1,722	Ft
110E0400	Remove Drop Inlet	4	Each
110E1010	Remove Asphalt Concrete Pavement	1.3	SqYd
110E1100	Remove Concrete Pavement	543.0	SqYd
110E1140	Remove Concrete Sidewalk	1,175.9	SqYd
250E0020	Incidental Work, Grading	Lump Sum	LS
260E2010	Gravel Cushion	287.4	Ton
320E1200	Asphalt Concrete Composite	0.2	Ton
380E0080	9.5" Nonreinforced PCC Pavement	547.4	SqYd
380E3540	8" PCC Approach Pavement	396.0	SqYd
380E4080	9.5" PCC Fillet Section	623.5	SqYd
380E6110	Insert Steel Bar in PCC Pavement	1,143	Each
450E0122	18" RCP Class 2, Furnish	4	Ft
450E0130	18" RCP, Install	4	Ft
450E0142	24" RCP Class 2, Furnish	36	Ft
450E0150	24" RCP, Install	36	Ft
450E0416	24" RCP Bend, Furnish	1	Each
450E0417	24" RCP Bend, Install	1	Each
462E0100	Class M6 Concrete	17.0	CuYd
480E0100	Reinforcing Steel	2,866	Lb
650E0095	Type B69.5 Concrete Curb and Gutter	1,074	Ft
650E0395	Type BL69.5 Concrete Curb and Gutter	499	Ft
650E4695	Type P9.5 Concrete Gutter	24	Ft
651E0040	4" Concrete Sidewalk	11,367	SqFt
651E0740	4" Reinforced Colored Concrete Sidewalk	187	SqFt
651E7000	Type 1 Detectable Warnings	660	SqFt
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	4	Each
671E6007	Type A7 Manhole Frame and Lid	1	Each
998E0100	Railroad Protective Insurance	Lump Sum	LS

## Section C - Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	50.0	Hour
634E0110	Traffic Control Signs	1,075.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	6	Each
634E0330	Temporary Raised Pavement Markers	9,240	Ft
634E0420	Type C Advance Warning Arrow Board	2	Each

## Section D - Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	1.9	CuYd
110E1693	Remove Erosion Control Wattle	250	Ft
110E1695	Remove Sediment Filter Bag	244	Ft
110E1700	Remove Silt Fence	196	Ft
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0206	Type D Permanent Seed Mixture	30	Lb
731E0100	Fertilizing	146	Lb
732E0600	Hydraulic Straw Mulch	297	Lb
734E0154	12" Diameter Erosion Control Wattle	250	Ft
734E0165	Remove and Reset Erosion Control Wattle	63	Ft
734E0180	Sediment Filter Bag	244	Ft
734E0604	High Flow Silt Fence	196	Ft
734E0610	Mucking Silt Fence	14	CuYd
734E0620	Repair Silt Fence	49	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	1	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	52	Ft
734E5005	Dewatering	Lump Sum	LS

### INDEX OF SHEETS

A1 and A2 Estimate of Quantities for Sections B, C, D, L, M and S  
A3 Environmental Commitments

### SPECIFICATIONS

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

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	A2	A4

Plotting Date: 02/06/2025  
Revised Date: 02/06/2025 MDJ

## Section L - Signal and Lighting

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1510	Remove Luminaire Pole	1	Each
110E1520	Remove Signal Equipment	Lump Sum	LS
110E1530	Remove Signal Pole Footing	19	Each
110E1540	Remove Luminaire Pole Footing	1	Each
110E5110	Salvage Signal Equipment	Lump Sum	LS
420E0400	Structure Excavation, Miscellaneous	25	CuYd
460E0382	Install Dowel in Rock	10.0	Ft
462E0100	Class M6 Concrete	7.9	CuYd
480E0200	Epoxy Coated Reinforcing Steel	846	Lb
635E0040	Breakaway Base Luminaire Pole with Am, 40' Mounting Height	1	Each
635E2025	Signal Pole with 25' Mast Arm	2	Each
635E2120	Signal Pole with 20' Mast Arm and Luminaire Arm	1	Each
635E2135	Signal Pole with 35' Mast Arm and Luminaire Arm	1	Each
635E2145	Signal Pole with 45' Mast Arm and Luminaire Arm	2	Each
635E2150	Signal Pole with 50' Mast Arm and Luminaire Arm	5	Each
635E2155	Signal Pole with 55' Mast Arm and Luminaire Arm	4	Each
635E2160	Signal Pole with 60' Mast Arm and Luminaire Arm	2	Each
635E2165	Signal Pole with 65' Mast Arm and Luminaire Arm	2	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	89	Each
635E3815	Decorative Luminaire, LED with Photoelectric Cell	61	Each
635E4030	3 Section Vehicle Signal Head	49	Each
635E4050	5 Section Vehicle Signal Head	10	Each
635E4090	4 Section Directional Vehicle Signal Head	32	Each
635E5020	2' Diameter Footing	6.0	Ft
635E5030	3' Diameter Footing	240.0	Ft
635E5301	Type 1 Electrical Junction Box	15	Each
635E5303	Type 3 Electrical Junction Box	14	Each
635E5400	Electrical Service Cabinet	5	Each
635E5430	Traffic Signal Controller	5	Each
635E5515	Battery Backup System for Traffic Signal	5	Each
635E5520	Video Detection System	6	Each
635E5560	Emergency Vehicle Preemption Unit	5	Each
635E5570	Optical Detector	19	Each
635E5880	Accessible Pedestrian Signal	38	Each
635E5910	Pedestrian Push Button Pole	38	Each
635E5922	Pedestrian Signal Head with Countdown Timer	38	Each
635E5930	Pedestrian Crossing Sign	38	Each
635E6200	Miscellaneous, Electrical	Lump Sum	LS
635E8110	1" Rigid Conduit, Schedule 40	890	Ft
635E8120	2" Rigid Conduit, Schedule 40	765	Ft
635E8130	3" Rigid Conduit, Schedule 40	85	Ft
635E8140	4" Rigid Conduit, Schedule 40	120	Ft

## Section L - Signal and Lighting (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
635E8220	2' Rigid Conduit, Schedule 80	920	Ft
635E8230	3' Rigid Conduit, Schedule 80	1,315	Ft
635E9016	1/C #6 AWG Copper Wire	455	Ft
635E9018	1/C #8 AWG Copper Wire	7,005	Ft
635E9502	2/C #14 AWG Copper Tray Cable, K2	7,200	Ft
635E9503	3/C #14 AWG Copper Tray Cable, K2	920	Ft
635E9504	4/C #14 AWG Copper Tray Cable, K2	2,625	Ft
635E9505	5/C #14 AWG Copper Tray Cable, K2	1,400	Ft
635E9506	6/C #14 AWG Copper Tray Cable, K2	2,020	Ft
635E9507	7/C #14 AWG Copper Tray Cable, K2	1,435	Ft
635E9515	15/C #14 AWG Copper Tray Cable, K2	140	Ft
635E9519	19/C #14 AWG Copper Tray Cable, K2	710	Ft
635E9525	25/C #14 AWG Copper Tray Cable, K2	2,900	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	6,525	Ft

## Section M - Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0210	Preformed Thermoplastic Pavement Marking, 4"	47,340	Ft
633E0225	Preformed Thermoplastic Pavement Marking, 24"	3,240	Ft
633E0230	Preformed Thermoplastic Pavement Marking, Area	19	SqFt
633E0235	Preformed Thermoplastic Pavement Marking, Arrow	98	Each
633E0250	Preformed Thermoplastic Pavement Marking, Railroad Crossing	4	Each
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	47,340	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	3,240	Ft
633E5020	Grooving for Cold Applied Plastic Pavement Marking, Area	19	SqFt
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	98	Each
633E5040	Grooving for Cold Applied Plastic Pavement Marking, Railroad Crossing	4	Each

## Section S - Permanent Signing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	22	Each
632E1320	2.0"x2.0" Perforated Tube Post	68.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	148.0	Ft
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	660.0	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	25.2	SqFt

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	A3	A4

Plotting Date: 03/22/2024  
Revised Date: 03/18/2024 MDJ

## 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 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 ( $\geq 140$  °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.

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](https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04) >

## 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) 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.

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT NH 0081(114)0	SHEET A4	TOTAL SHEETS A4
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Plotting Date: 03/22/2024  
 Revised Date: 03/18/2024 MDJ

## COMMITMENT Q: ARCHAEOLOGICAL COORDINATION

As a result of a Cultural Resources Survey, historic properties have been identified within and/or adjacent to the project rights-of-way.

The following historic properties have been identified that require avoidance of construction activities:

### Table of Historic Properties

Station	Offset (Ft.)	L/R	Environmental Sensitive Site	Action
40+96.00 to 41+23.85	NA	R	Chicago and Northwestern Railroad	Do Not Disturb Railroad

The locations and boundaries of the site(s) for avoidance are shown in Section B - Grading Plans.

### Action Taken/Required:

If evidence for cultural resources is uncovered 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 consult with the Archaeological Research Center (ARC), the State Historic Preservation Office (SHPO), and FHWA, to determine the appropriate course of action.

All artifacts, features, or other items of interest uncovered by project construction activities will not be displaced unless the SHPO consents to it.

Plot Scale - 1:200

Plotted From - TRSF12140

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