

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(163)9	1	144

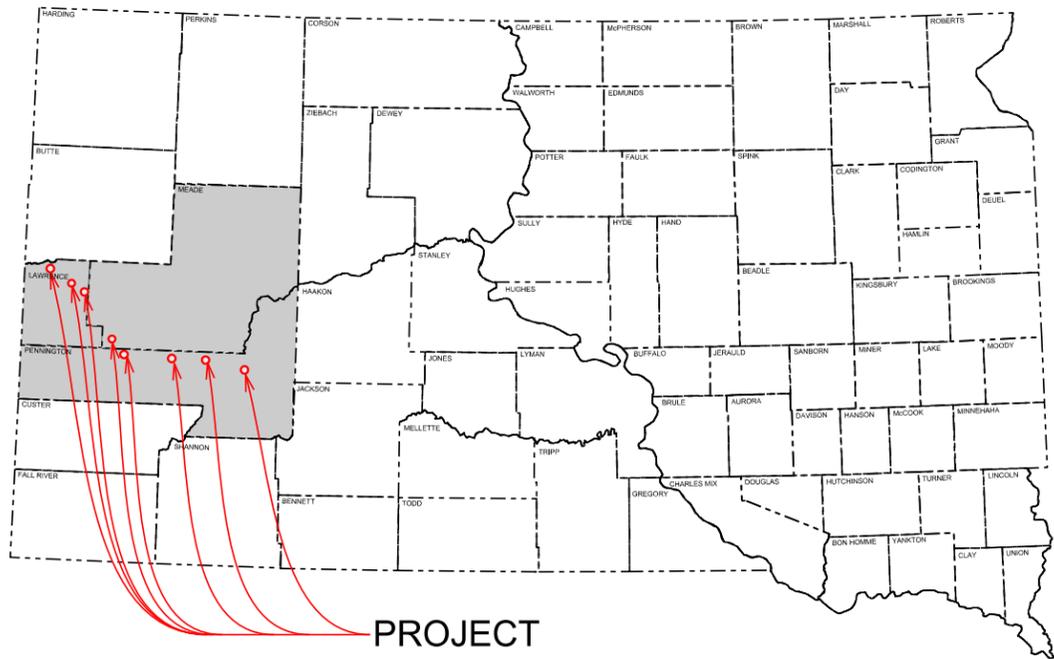
Plotting Date: 07/02/2014

PROJECT IM 0901(163)9
INTERSTATE 90
LAWRENCE, MEADE & PENNINGTON COUNTY

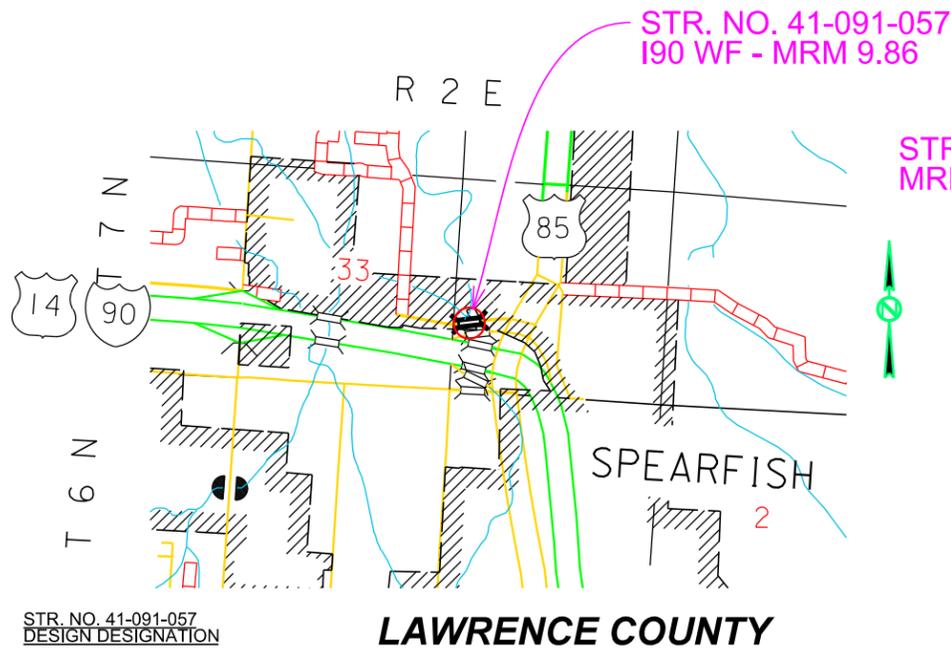
EPOXY CHIP SEAL, RAIL REPLACEMENT,
JOINT MODIFICATION, BERM REPAIR
& TYPE C RETROFIT
PCN 0223

INDEX OF SECTIONS

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



PROJECT



STR. NO. 41-091-057
190 WF - MRM 9.86

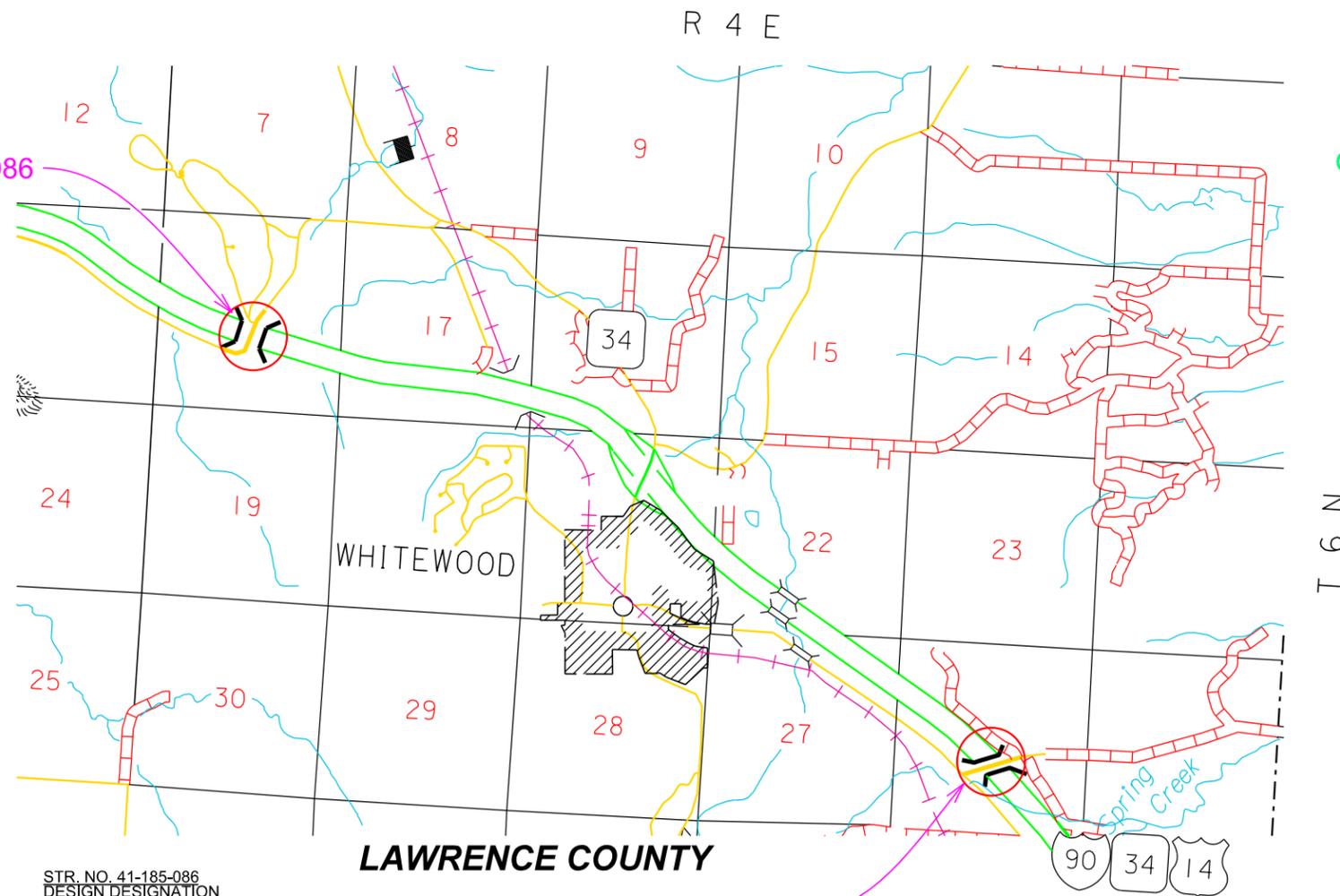
STR. NO. 41-185-086
MRM 21.56

STR. NO. 41-091-057
DESIGN DESIGNATION

ADT (2010) 50
T ADT 5 %
V 35 MPH

LAWRENCE COUNTY

STORM WATER PERMIT
None Required



LAWRENCE COUNTY

STR. NO. 41-185-086
DESIGN DESIGNATION

ADT (2010) 260
T ADT 5 %
V 55 MPH

STR. NO. 41-226-107
MRM 26.14

STR. NO. 41-226-107
DESIGN DESIGNATION

ADT (2010) 195
T ADT 5 %
V 40 MPH

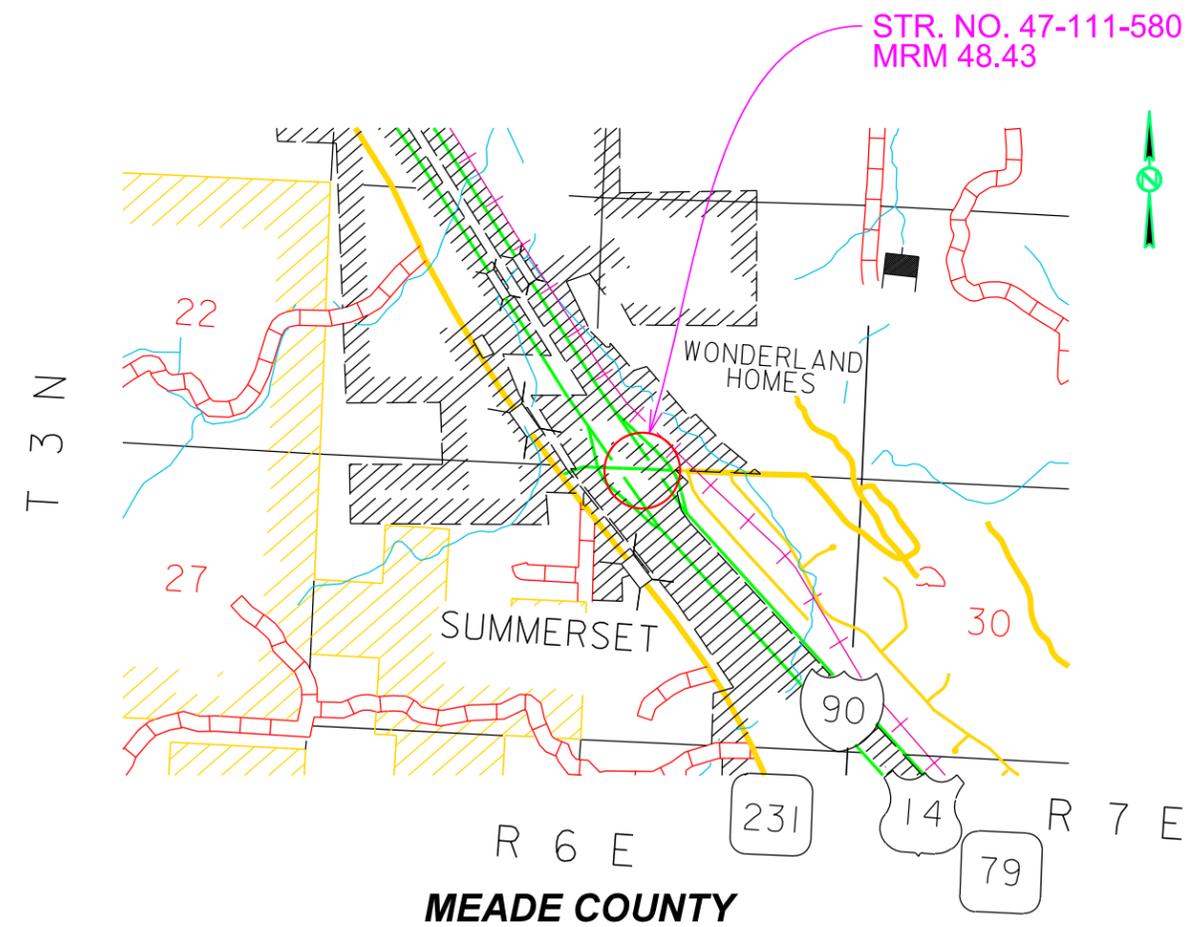
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Plot Scale - 1:200

Plotted From - lrrc11610

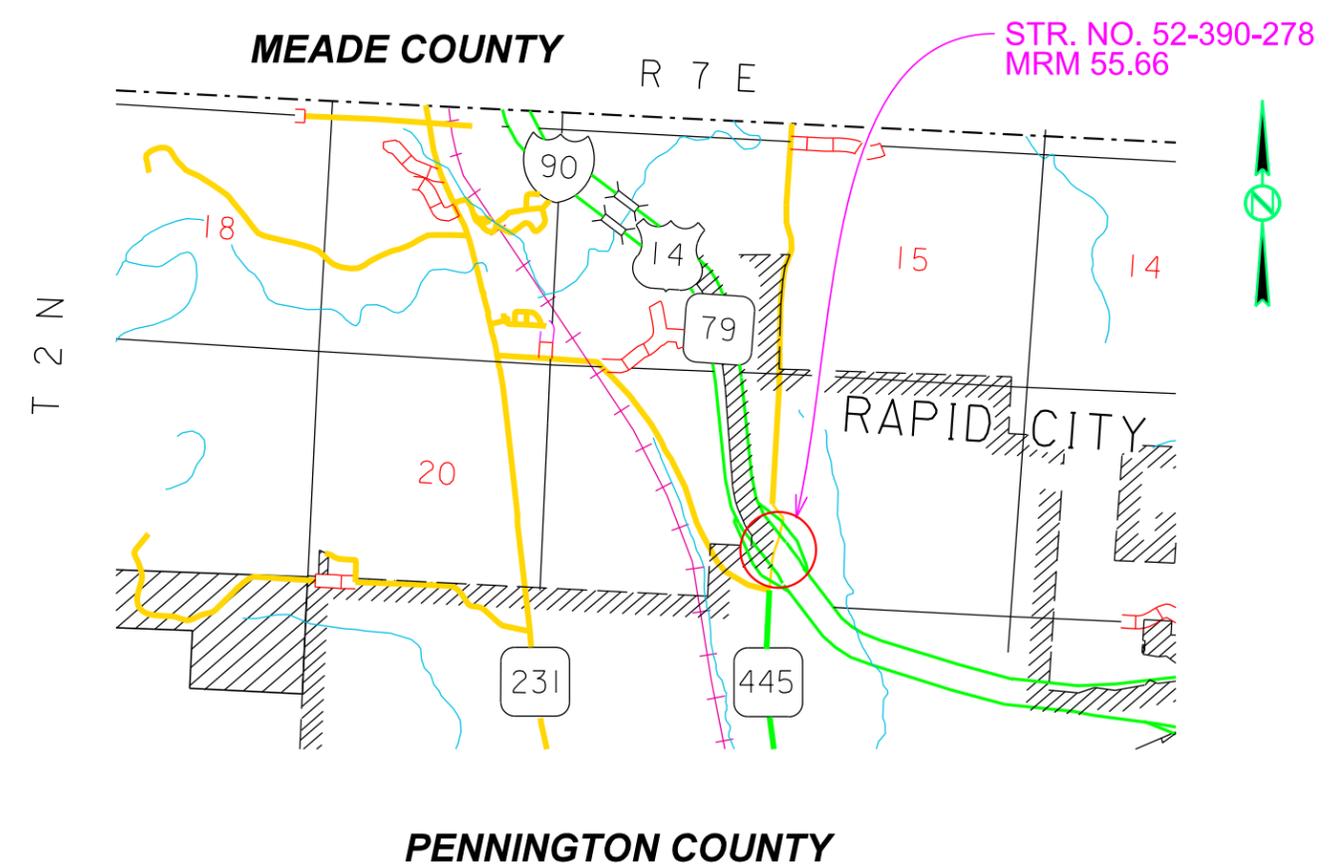
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Plot Scale - 1:200



STR. NO. 47-111-580
DESIGN DESIGNATION

ADT (2010)	2815
ADT (2030)	3770
DHV	565
D	50 %
T DHV	3.9 %
T ADT	8.6 %
V	35 MPH



STR. NO. 52-390-278
DESIGN DESIGNATION

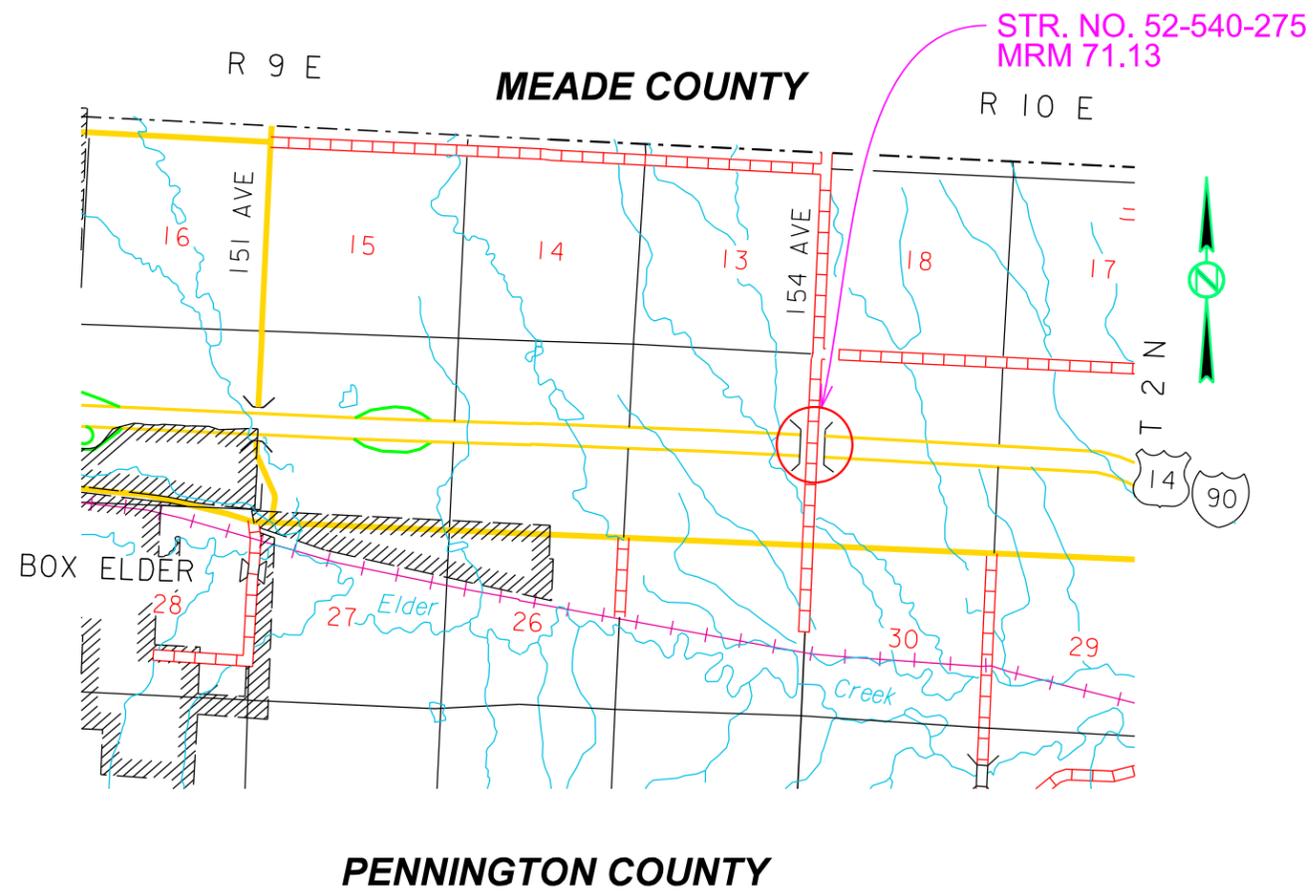
ADT (2013)	14045
ADT (2033)	24460
DHV	3035
D	50 %
T DHV	1.5 %
T ADT	3.4 %
V	45 MPH

Plotted From - irrc11610

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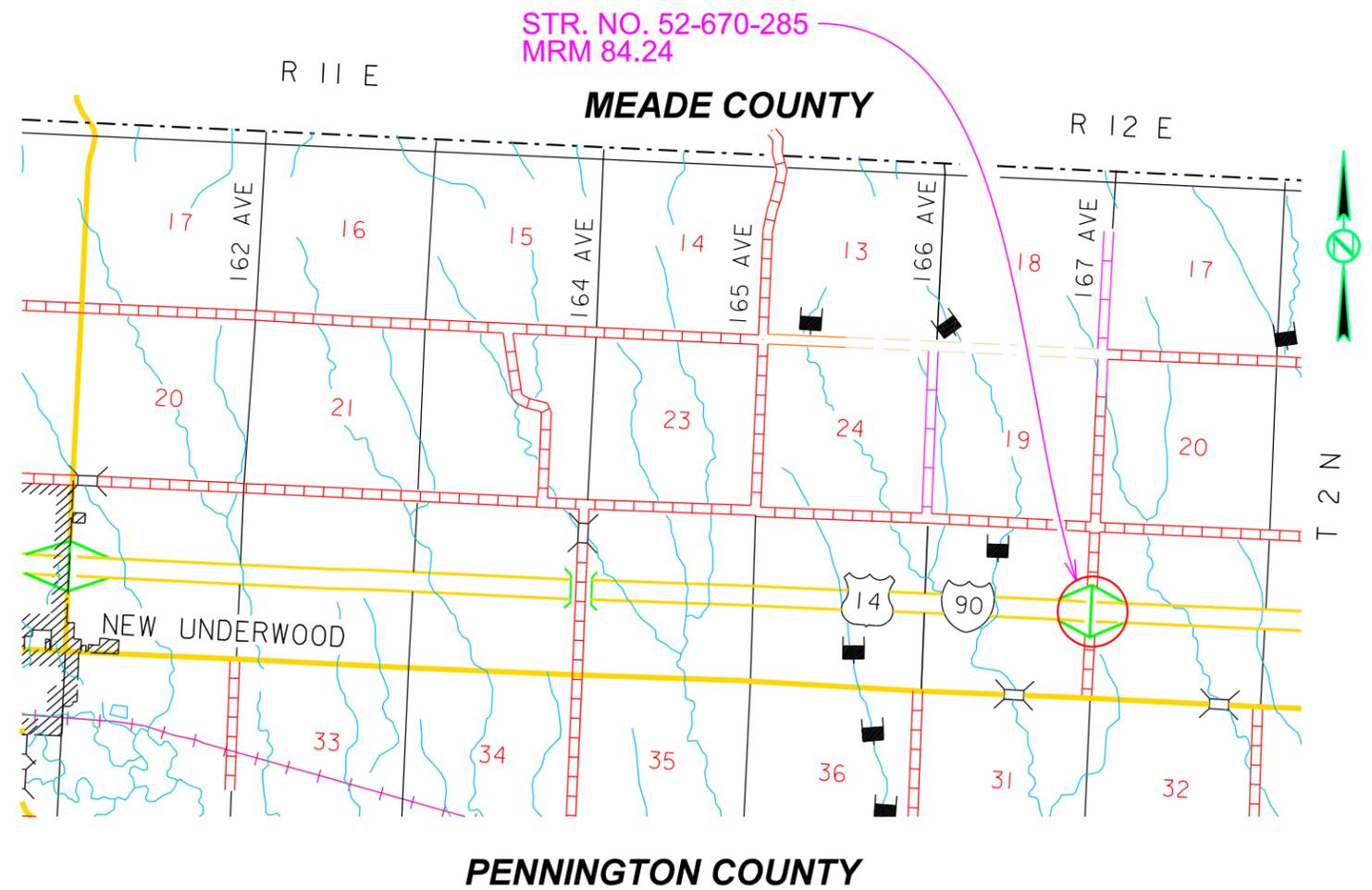
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Plotted From - Irrc11610



STR. NO. 52-540-275
DESIGN DESIGNATION

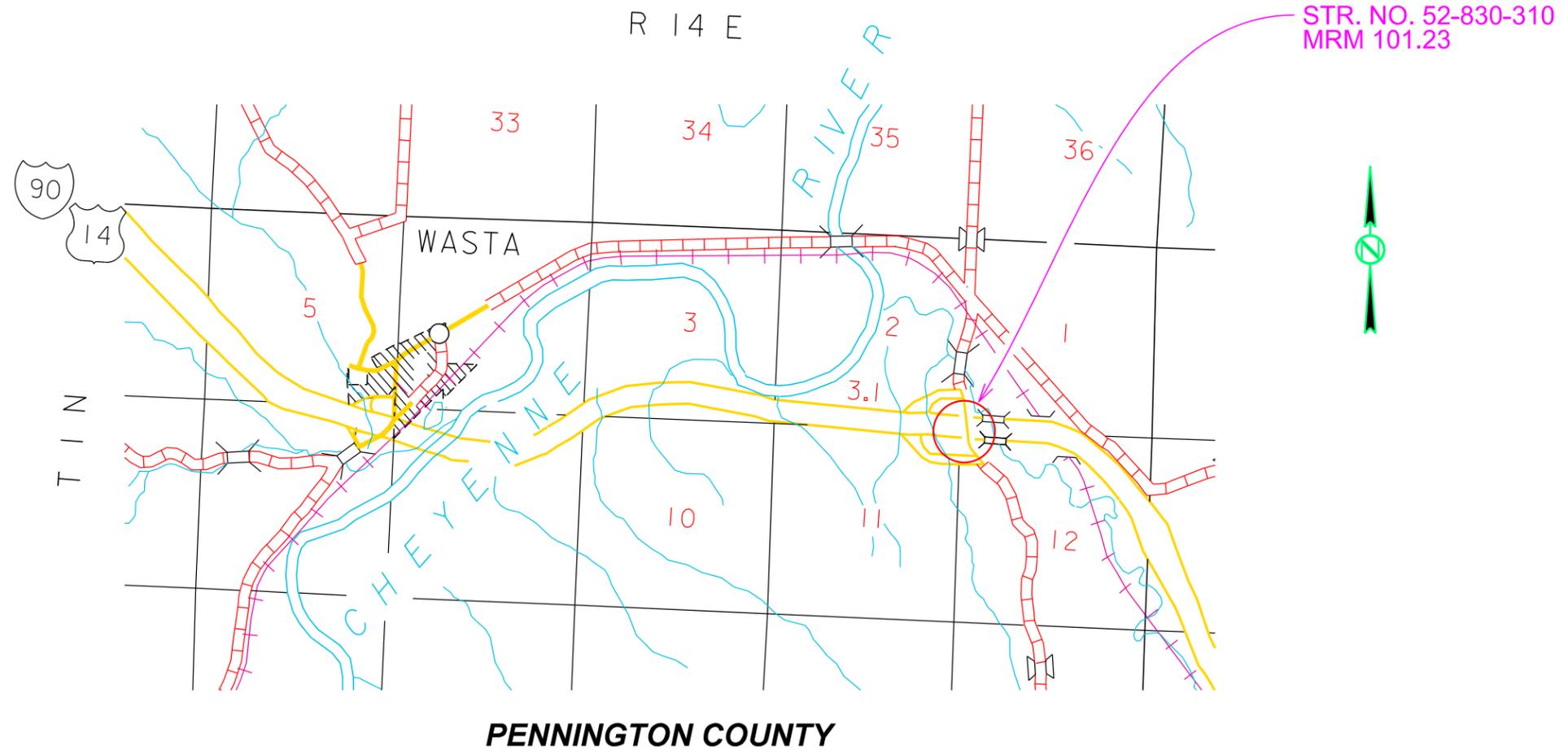
ADT (2010)	150
ADT ()	
DHV	
D	
T DHV	
T ADT	2 %
V	50 MPH



STR. NO. 52-670-285
DESIGN DESIGNATION

ADT (2006)	90
ADT (2026)	130
DHV	20
D	50 %
T DHV	1.5 %
T ADT	3.4 %
V	25 MPH

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PENNINGTON COUNTY

STR. NO. 52-830-310
DESIGN DESIGNATION

ADT (2011)	65
ADT (2031)	87
DHV	13
D	50 %
T DHV	3.9 %
T ADT	8.6 %
V	

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(163)9	A1	A4

Revised: 7-14-14 KLh

Traffic Control – Section C

Bid Item Number	Item	Quantity	Unit
110E1400	Remove Pavement Marking, 4" or Equivalent	6,000	Ft
634E0010	Flagging	100	Hour
634E0100	Traffic Control	8,509	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	8	Each
634E0610	4" Temporary Pavement Marking Tape Type 2	864	Ft
634E0640	Temporary Pavement Marking	12,000	Ft
634E0896	Portable Temporary Traffic Signal System	1	Each
634E1215	Contractor Furnished Portable Changeable Message Sign	6	Each

Erosion Control – Section D

Bid Item Number	Item	Quantity	Unit
230E0020	Placing Contractor Furnished Topsoil	5	CuYd
734E0010	Erosion Control	Lump Sum	LS
734E0131	Type 1 Turf Reinforcement Mat	44.4	SqYd

Structure – Section E – Str. 41-091-057

Bid Item Number	Item	Quantity	Unit
410E0103	Fatigue Retrofit Steel Girder, Type C	30	Each
410E3010	Magnetic Particle Weld Inspection	36	In
412E0100	Bridge Repainting, Class I	Lump Sum	LS
412E0500	Paint Residue Containment	Lump Sum	LS
460E0170	Concrete Patching Material	47.4	CuFt
460E0300	Breakout Structural Concrete	1.0	CuYd
460E0380	Install Dowel in Concrete	16	Each
480E0200	Epoxy Coated Reinforcing Steel	62	Lb
491E0015	Two Coat Epoxy Bridge Deck Chip Seal	355.6	SqYd
491E0110	Abrasive Blasting of Bridge Deck	355.6	SqYd
491E0120	Bridge Deck Grinding	355.6	SqYd
491E0130	Concrete Removal, Class A	4.0	SqYd
491E0140	Concrete Removal, Class B	4.0	SqYd

Structure – Section E – Str. 41-185-086

Bid Item Number	Item	Quantity	Unit
110E0070	Remove Rubberized Asphalt Chip Seal	534.1	SqYd
410E0030	Structural Steel, Miscellaneous	Lump Sum	LS
410E0103	Fatigue Retrofit Steel Girder, Type C	60	Each
410E2600	Membrane Sealant Expansion Joint	26.4	Ft
410E3010	Magnetic Particle Weld Inspection	72	In
412E0100	Bridge Repainting, Class I	Lump Sum	LS
412E0500	Paint Residue Containment	Lump Sum	LS
460E0170	Concrete Patching Material	18.0	CuFt
491E0015	Two Coat Epoxy Bridge Deck Chip Seal	667.6	SqYd
491E0110	Abrasive Blasting of Bridge Deck	667.6	SqYd
491E0120	Bridge Deck Grinding	667.6	SqYd
491E0130	Concrete Removal, Class A	4.0	SqYd
491E0140	Concrete Removal, Class B	4.0	SqYd

Structure – Section E – Str. 41-226-107

Bid Item Number	Item	Quantity	Unit
110E0070	Remove Rubberized Asphalt Chip Seal	350.3	SqYd
120E3120	Bridge Berm Repair	1	Each
460E0070	Class A45 Concrete, Bridge Repair	10.9	CuYd
460E0170	Concrete Patching Material	40.8	CuFt
460E0300	Breakout Structural Concrete	1.0	CuYd
460E0380	Install Dowel in Concrete	28	Each
462E0200	Controlled Density Fill	4.0	CuYd
480E0200	Epoxy Coated Reinforcing Steel	1,590	Lb
491E0015	Two Coat Epoxy Bridge Deck Chip Seal	834.8	SqYd
491E0110	Abrasive Blasting of Bridge Deck	834.8	SqYd
491E0120	Bridge Deck Grinding	834.8	SqYd
491E0130	Concrete Removal, Class A	4.0	SqYd
491E0140	Concrete Removal, Class B	4.0	SqYd

Structure – Section E – Str. 47-111-580

Bid Item Number	Item	Quantity	Unit
009E3310	Bridge Elevation Survey	Lump Sum	LS
110E0070	Remove Rubberized Asphalt Chip Seal	937.9	SqYd
410E2600	Membrane Sealant Expansion Joint	84.0	Ft
460E0070	Class A45 Concrete, Bridge Repair	3.2	CuYd
460E0300	Breakout Structural Concrete	3.6	CuYd
462E0100	Class M6 Concrete	2.5	CuYd
462E0200	Controlled Density Fill	1.2	CuYd
480E0100	Reinforcing Steel	162	Lb
480E0200	Epoxy Coated Reinforcing Steel	346	Lb
480E0505	No. 5 Rebar Splice	8	Each
530E0435	Split Face Concrete Masonry Block Wall	50	SqFt
550E0010	Low Slump Dense Concrete Bridge Deck Overlay	75	CuYd
550E0100	Concrete Removal Type 1A	1,406.2	SqYd
550E0110	Concrete Removal Type 1B	140.6	SqYd
550E0120	Concrete Removal Type 1C	70.3	SqYd
550E0130	Concrete Removal Type 1D	70.3	SqYd
550E0140	Concrete Removal Type B	20.0	Ft
550E0200	Class A45 Concrete Fill	15.5	CuYd
550E0500	Finishing and Curing	1,406.2	SqYd

Structure – Section E – Str. 52-390-278

Bid Item Number	Item	Quantity	Unit
110E0070	Remove Rubberized Asphalt Chip Seal	146.8	SqYd
410E2600	Membrane Sealant Expansion Joint	83.0	Ft
460E0070	Class A45 Concrete, Bridge Repair	3.4	CuYd
460E0170	Concrete Patching Material	46.1	CuFt
460E0300	Breakout Structural Concrete	4.2	CuYd
480E0200	Epoxy Coated Reinforcing Steel	427	Lb
480E0505	No. 5 Rebar Splice	24	Each
491E0015	Two Coat Epoxy Bridge Deck Chip Seal	1,108.6	SqYd
491E0110	Abrasive Blasting of Bridge Deck	1,108.6	SqYd
491E0120	Bridge Deck Grinding	1,108.6	SqYd
491E0130	Concrete Removal, Class A	7.7	SqYd
491E0140	Concrete Removal, Class B	7.7	SqYd

INDEX OF SHEETS

A1 and A2 Estimate of Quantities for Sections C,E, F, and M
A3 and A4 Environmental Commitments

Structure – Section E – Str. 52-540-275

Bid Item Number	Item	Quantity	Unit
110E0070	Remove Rubberized Asphalt Chip Seal	668.0	SqYd
120E3120	Bridge Berm Repair	1	Each
410E0030	Structural Steel, Miscellaneous	Lump Sum	LS
410E0103	Fatigue Retrofit Steel Girder, Type C	60	Each
410E0300	Modify Girder End	4	Each
410E0508	Field Weld	72	In
410E0512	Grind Weld	60	In
410E0560	Jack Superstructure and Shift Bearing Shoes	Lump Sum	LS
410E2220	Replace Expansion Device	2	Each
410E3010	Magnetic Particle Weld Inspection	98	In
412E0100	Bridge Repainting, Class I	Lump Sum	LS
412E0500	Paint Residue Containment	Lump Sum	LS
460E0070	Class A45 Concrete, Bridge Repair	13.8	CuYd
460E0170	Concrete Patching Material	18.0	CuFt
460E0300	Breakout Structural Concrete	13.8	CuYd
460E0310	Breakout and Replace Grout Pad	1	Each
460E0380	Install Dowel in Concrete	2	Each
462E0200	Controlled Density Fill	1.0	CuYd
480E0200	Epoxy Coated Reinforcing Steel	4,014	Lb
491E0015	Two Coat Epoxy Bridge Deck Chip Seal	668.0	SqYd
491E0110	Abrasive Blasting of Bridge Deck	668.0	SqYd
491E0120	Bridge Deck Grinding	668.0	SqYd
491E0130	Concrete Removal, Class A	4.0	SqYd
491E0140	Concrete Removal, Class B	4.0	SqYd

Structure – Section E – Str. 52-670-285

Bid Item Number	Item	Quantity	Unit
460E0070	Class A45 Concrete, Bridge Repair	0.3	CuYd
460E0170	Concrete Patching Material	87.8	CuFt
460E0300	Breakout Structural Concrete	1.1	CuYd
460E0380	Install Dowel in Concrete	16	Each
480E0200	Epoxy Coated Reinforcing Steel	56	Lb
480E5000	Galvanic Anode	6	Each
491E0015	Two Coat Epoxy Bridge Deck Chip Seal	846.6	SqYd
491E0110	Abrasive Blasting of Bridge Deck	846.6	SqYd
491E0120	Bridge Deck Grinding	846.6	SqYd
491E0130	Concrete Removal, Class A	4.0	SqYd
491E0140	Concrete Removal, Class B	4.0	SqYd

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(163)9	A2	A4

Revised: 7-14-14 KLh

Structure – Section E – Str. 52-830-310

Bid Item Number	Item	Quantity	Unit
110E0070	Remove Rubberized Asphalt Chip Seal	683.3	SqYd
460E0170	Concrete Patching Material	127.6	CuFt
460E0300	Breakout Structural Concrete	0.8	CuYd
460E0380	Install Dowel in Concrete	16	Each
480E0200	Epoxy Coated Reinforcing Steel	56	Lb
491E0015	Two Coat Epoxy Bridge Deck Chip Seal	759.2	SqYd
491E0110	Abrasive Blasting of Bridge Deck	759.2	SqYd
491E0120	Bridge Deck Grinding	759.2	SqYd
491E0130	Concrete Removal, Class A	23.3	SqYd
491E0140	Concrete Removal, Class B	23.3	SqYd

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

Surfacing – Section F

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	192	Ft
110E1010	Remove Asphalt Concrete Pavement	101.5	SqYd
110E1100	Remove Concrete Pavement	94.1	SqYd
110E6220	Remove Double W Beam Guardrail for Reset	50.0	Ft
110E6230	Remove W Beam Guardrail for Reset	225.0	Ft
110E6300	Remove Rubrail for Reset	48.0	Ft
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	2	Each
320E1200	Asphalt Concrete Composite	34.3	Ton
380E5030	Nonreinforced PCC Pavement Repair	101.7	SqYd
380E6000	Dowel Bar	14	Each
380E6110	Insert Steel Bar in PCC Pavement	74	Each
410E2600	Membrane Sealant Expansion Joint	80.0	Ft
630E2110	Beam Guardrail Post and Block	56	Each
630E5160	Reset W Beam Rail	225.0	Ft
630E5170	Reset Double W Beam Rail	50.0	Ft
630E5220	Reset Rubrail	48.0	Ft
635E5540	Sawed-In Detector Loop	1	Each
670E7000	Reset Drop Inlet Frame and Grate Assembly	2	Each

Pavement Marking – Section M

Bid Item Number	Item	Quantity	Unit
633E0010	Cold Applied Plastic Pavement Marking, 4"	616	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	2	Each
633E1400	Pavement Marking Paint, 4" White	4,603	Ft
633E1405	Pavement Marking Paint, 4" Yellow	3,504	Ft
633E1445	Pavement Marking Paint, Arrow	4	Each
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	616	Ft
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	2	Each

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(163)9	A3	A4

Revised: 7-14-14 KLh

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 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 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.

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.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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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 designated option borrow 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: staging areas, borrow sites, waste disposal sites, and all material processing sites.

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 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 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 staging areas, borrow sites, waste disposal sites, or material processing sites 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 K: RAPID CITY AREA AIR QUALITY CONTROL ZONE

Administrative Rule of South Dakota (ARSD) 74:36:18:03 states that "no state facility or state contractor may engage in any construction activity or continuous operation activity within the Rapid City air quality control zone which may cause fugitive emissions of particulate to be released into the ambient air without first obtaining a permit issued by the board or the secretary."

Construction activity is defined as any temporary activity at a state facility, which involves the removal or alteration of the natural or pre-existing cover of one acre or more of land. One acre of surface area is based on a cumulative area of disturbance to be completed for the entire project. Construction activity shall include, but not be limited to, stripping of topsoil, drilling, blasting, excavation, dredging, ditching, grading, street maintenance and repair, or earth moving. Construction activity is generally completed within one year. It also includes stockpiles, access roads, and disposal areas. An off-site disposal area of excess material will require an additional permit.

Action Taken/Required:

In order to be considered eligible for authorization to conduct a construction activity under the terms and conditions of this permit, the owner operator must submit a Notice of Intent (NOI) form. The form must be submitted to the address below at least seven business days prior to the anticipated date of beginning the construction activity.

South Dakota Department of Environment and Natural Resources Air Quality Program
523 East Capitol, Joe Foss Building
Pierre, SD 57501-3181
Phone: 605-773-3151

The permit requires the Contractor to use reasonably available technology to control fugitive dust emissions. The Contractor is required to use control measures for track out, paved areas, unpaved roads, unpaved parking lots, disturbed areas, and for material handling and storage. The control measures that the Contractor is required to use are listed in the permit.