

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	1	22

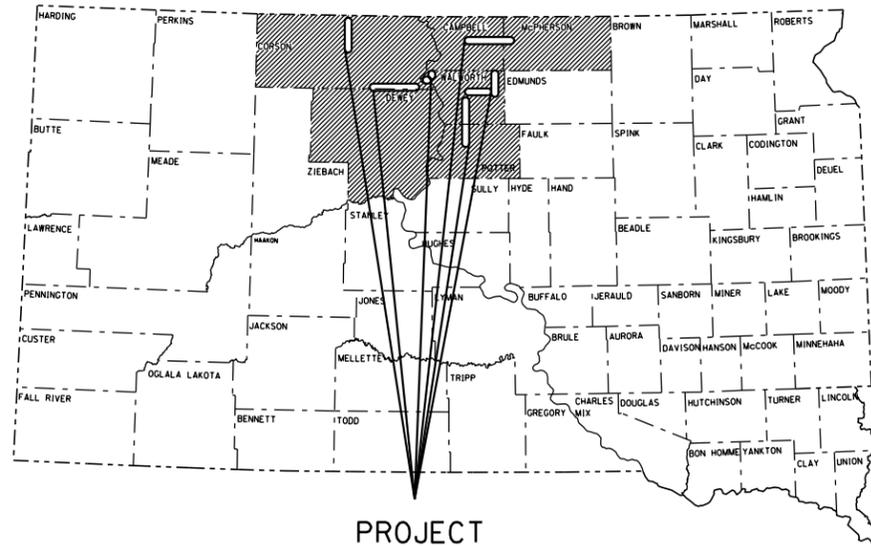
**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED**

**PROJECT NH-P 0032(25)
SD HIGHWAYS 10, 20, 65, 130, 144, 271 & 1804
US HIGHWAYS 12 & 83
CAMPBELL, CORSON, DEWEY, MCPHERSON,
POTTER & WALWORTH COUNTIES**

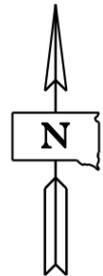
**ASPHALT SURFACE TREATMENT
PCN 053G**

INDEX OF SHEETS

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Sheet Nos. 6-7	Estimate of Quantities
Sheet No. 8	Environmental Commitments
Sheet Nos. 9-13	Rates of Materials, Specifications & Notes
Sheet Nos. 14-22	Traffic Control Sheets



PROJECT



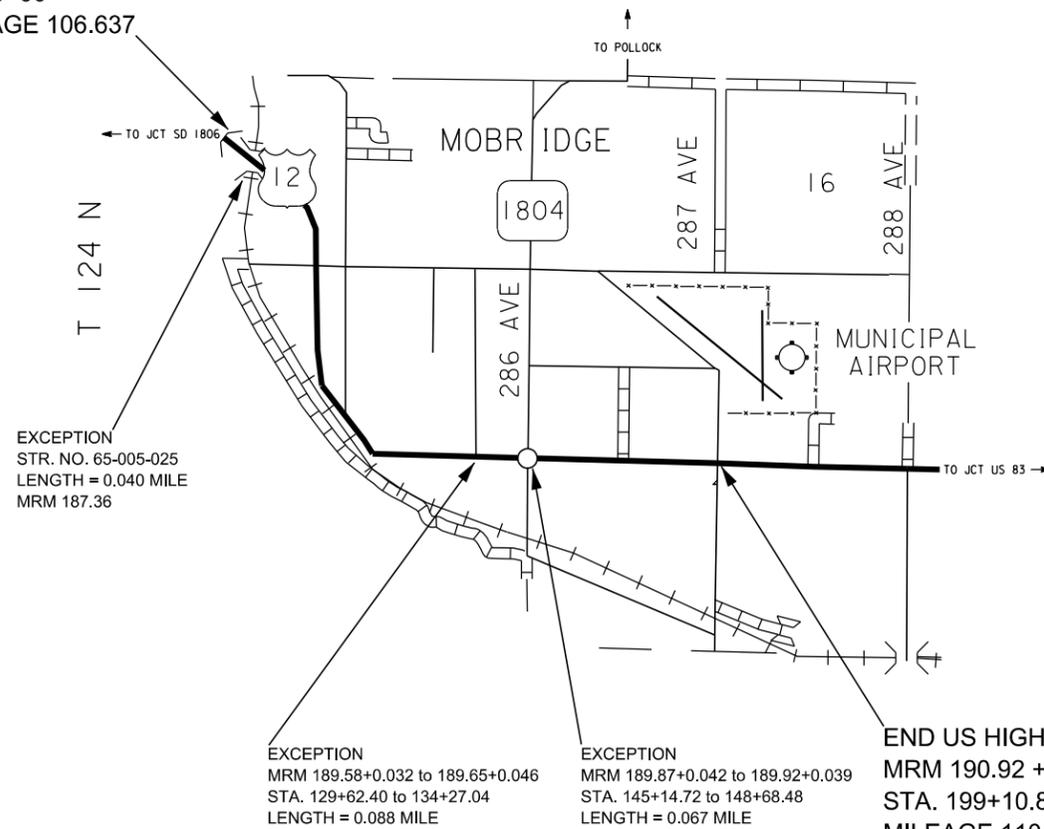
**US HIGHWAY 12
WALWORTH COUNTY
LENGTH 3.616 MILES**

**SD HIGHWAY 1804
WALWORTH COUNTY
LENGTH 2.373 MILES**

BEGIN US HIGHWAY 12
MRM 187.15 + 0.000
STA. 0+00
MILEAGE 106.637

R 79 W

R 79 W



EXCEPTION
STR. NO. 65-005-025
LENGTH = 0.040 MILE
MRM 187.36

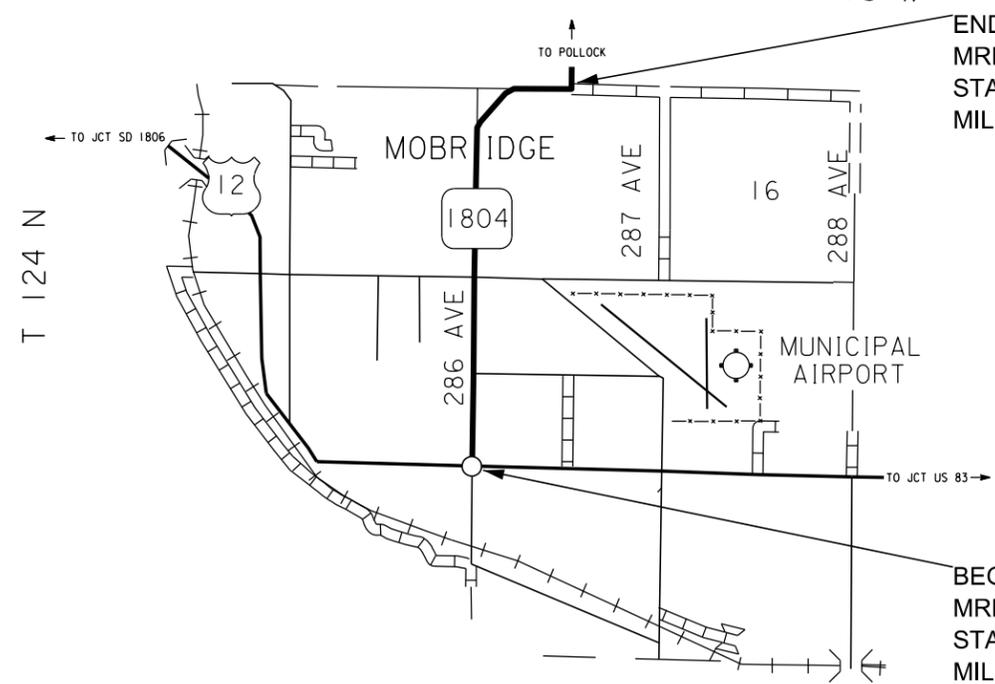
EXCEPTION
MRM 189.58+0.032 to 189.65+0.046
STA. 129+62.40 to 134+27.04
LENGTH = 0.088 MILE

EXCEPTION
MRM 189.87+0.042 to 189.92+0.039
STA. 145+14.72 to 148+68.48
LENGTH = 0.067 MILE

END US HIGHWAY 12
MRM 190.92 + 0.000
STA. 199+10.88
MILEAGE 110.408

STORM WATER PERMIT
None Required

DESIGN DESIGNATION
ADT (2014) 3195



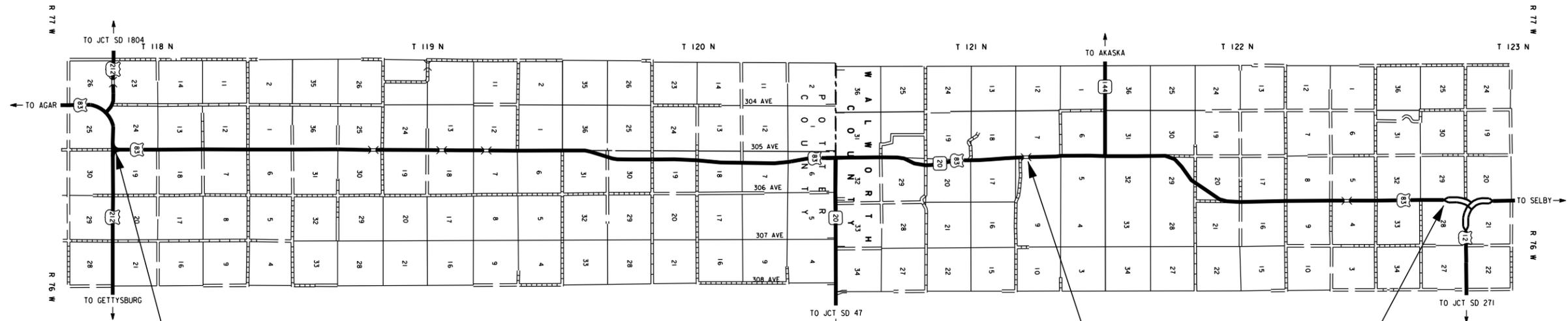
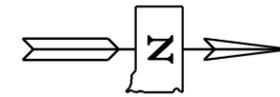
END SD HIGHWAY 1804
MRM 357.00 + 0.870
STA. 125+29.44
MILEAGE 83.547

BEGIN SD HIGHWAY 1804
MRM 355.50 + 0.000
STA. 0+00
MILEAGE 81.174

DESIGN DESIGNATION
ADT (2014) 883

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	2	22

**US HIGHWAY 83
POTTER & WALWORTH COUNTY
LENGTH 29.964 MILES**



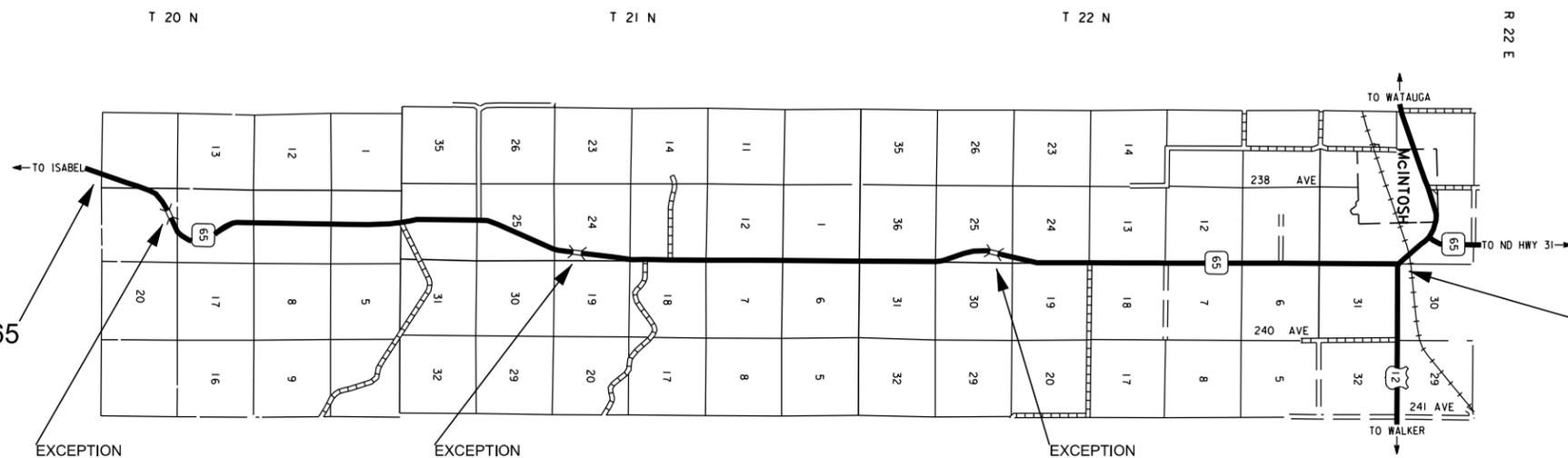
BEGIN US HIGHWAY 83
MRM 175.18 + 0.078
STA. 0+00
MILEAGE 103.730

DESIGN DESIGNATION
ADT (2014) 1196

EXCEPTION
STR. NO. 65-200-197
LENGTH = 0.021 MILE
MRM 195.56

END US HIGHWAY 83
MRM 205.28 + 0.000
STA. 1582+09.92
MILEAGE 133.694

**SD HIGHWAY 65
CORSON COUNTY
LENGTH 16.944 MILES**



BEGIN SD HIGHWAY 65
MRM 214.00 + 0.095
STA. 0+00
MILEAGE 45.687

EXCEPTION
STR. NO. 16-323-181
LENGTH = 0.075 MILE
MRM 214.65

EXCEPTION
STR. NO. 16-329-127
LENGTH = 0.033 MILE
MRM 220.95

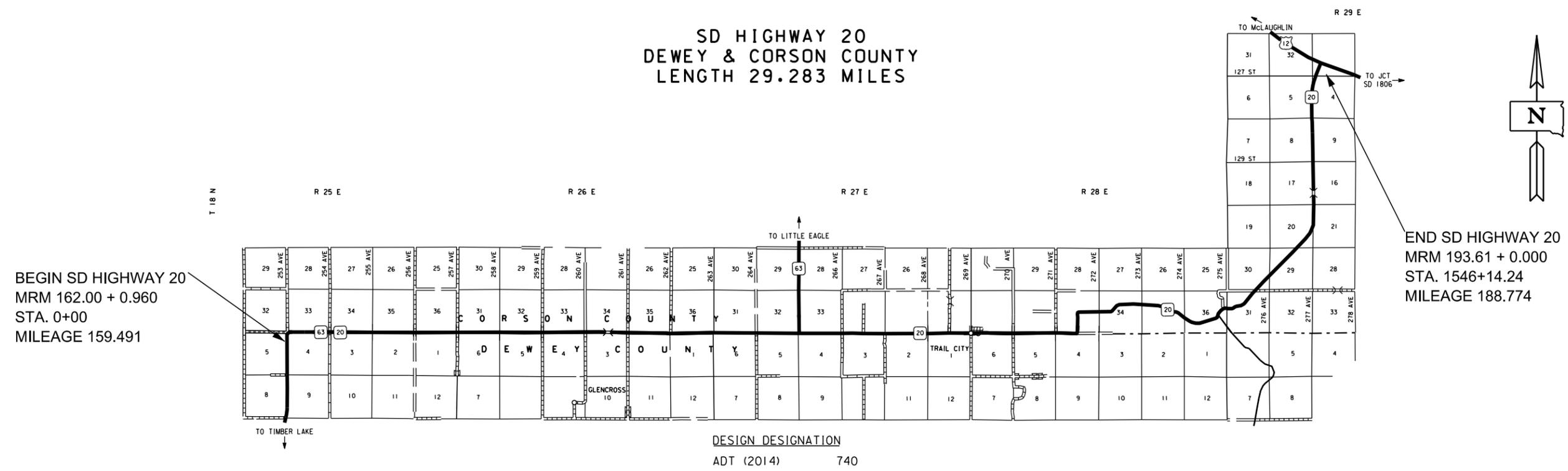
DESIGN DESIGNATION
ADT (2014) 213

EXCEPTION
STR. NO. 16-328-073
LENGTH = 0.029 MILE
MRM 226.46

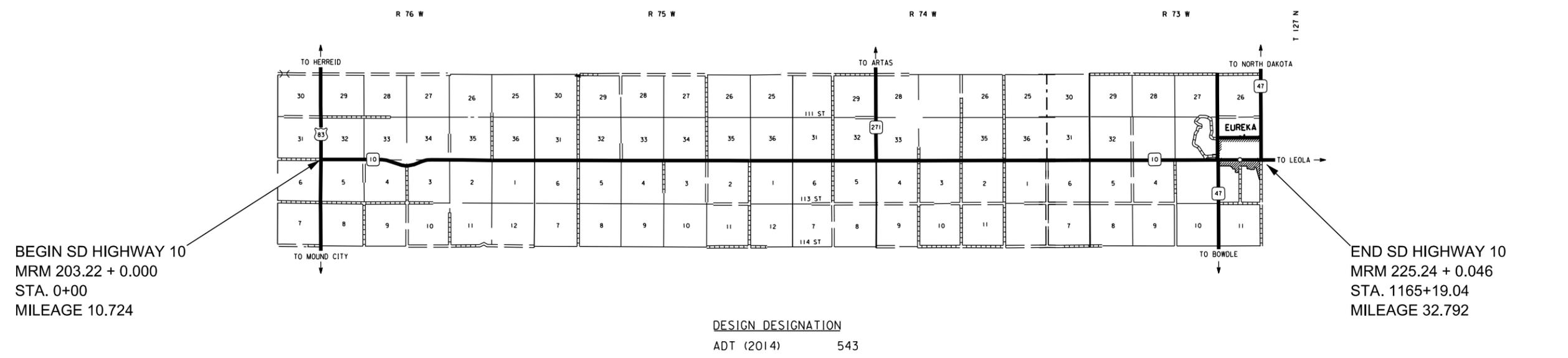
END SD HIGHWAY 65
MRM 231.81 + 0.000
STA. 894+64.32
MILEAGE 62.631

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	3	22

**SD HIGHWAY 20
DEWEY & CORSON COUNTY
LENGTH 29.283 MILES**



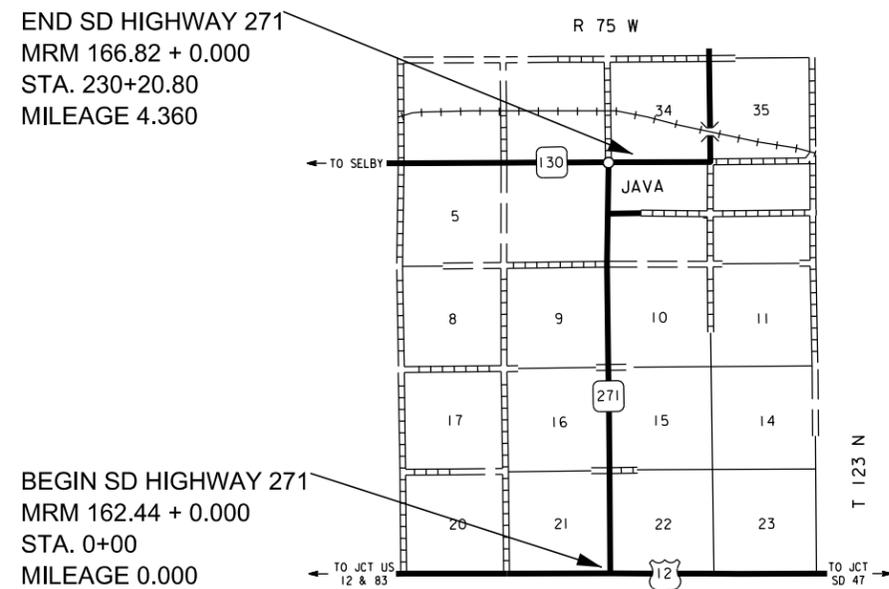
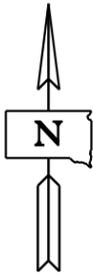
**SD HIGHWAY 10
CAMPBELL & MCPHERSON COUNTY
LENGTH 22.068 MILES**



STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	4	22

SD HIGHWAY 271
WALWORTH COUNTY
LENGTH 4.360 MILES

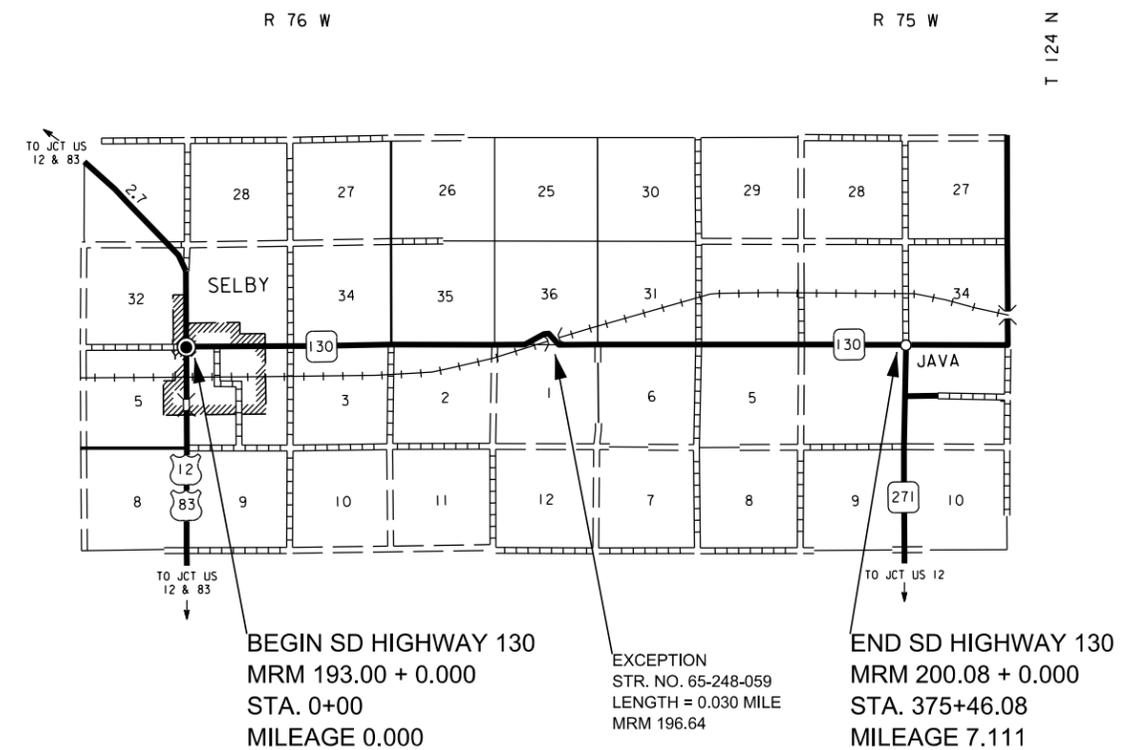
SD HIGHWAY 130
WALWORTH COUNTY
LENGTH 7.111 MILES



BEGIN SD HIGHWAY 271
MRM 162.44 + 0.000
STA. 0+00
MILEAGE 0.000

END SD HIGHWAY 271
MRM 166.82 + 0.000
STA. 230+20.80
MILEAGE 4.360

DESIGN DESIGNATION
ADT (2014) 145



BEGIN SD HIGHWAY 130
MRM 193.00 + 0.000
STA. 0+00
MILEAGE 0.000

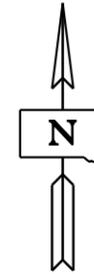
END SD HIGHWAY 130
MRM 200.08 + 0.000
STA. 375+46.08
MILEAGE 7.111

EXCEPTION
STR. NO. 65-248-059
LENGTH = 0.030 MILE
MRM 196.64

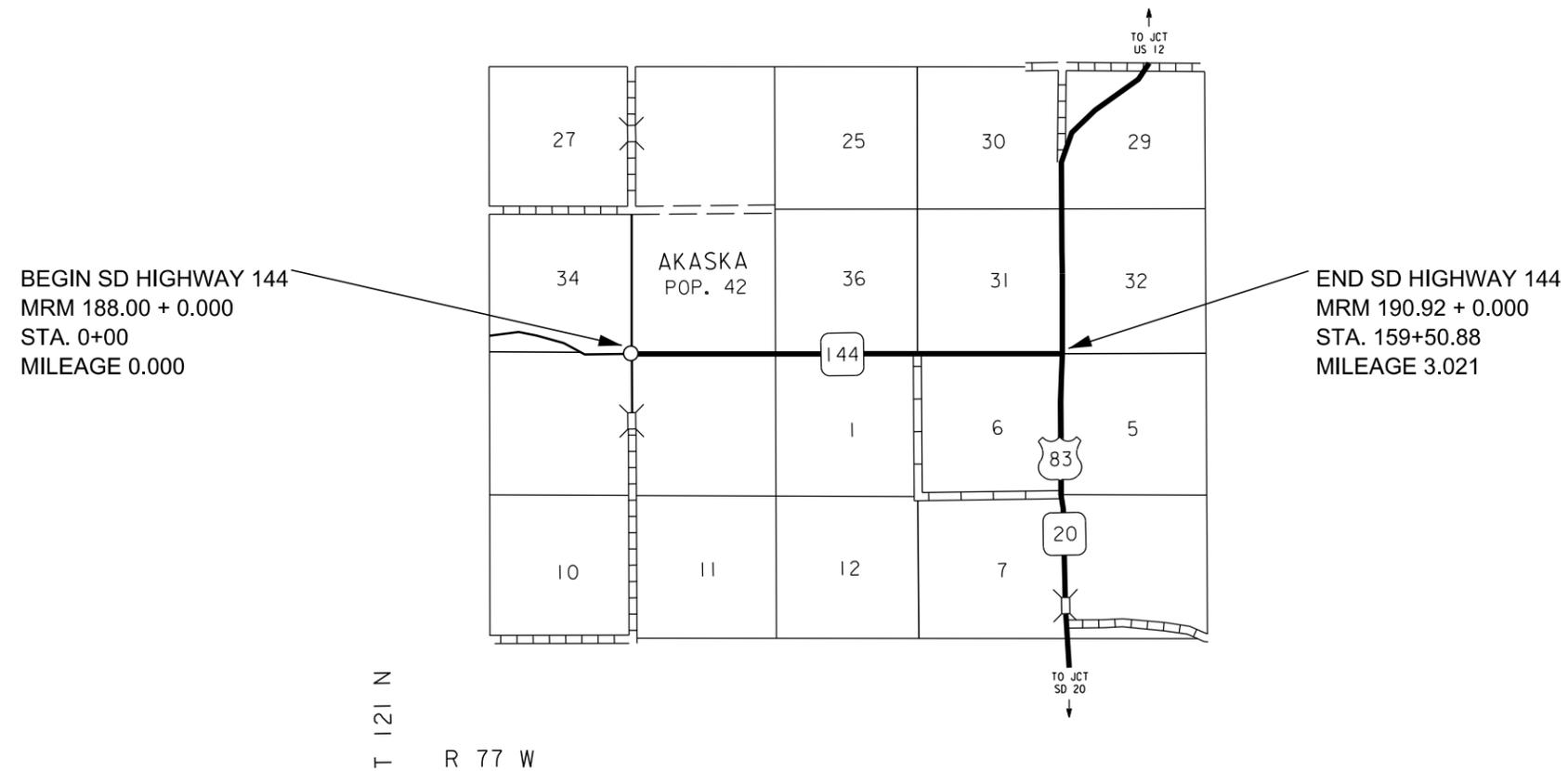
DESIGN DESIGNATION
ADT (2014) 434

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	5	22

Revised 1/12/16 CDV



SD HIGHWAY 144
WALWORTH COUNTY
LENGTH 3.021 MILES



DESIGN DESIGNATION
ADT (2014) 145

**ESTIMATE OF QUANTITIES
NH-P 0032(25)**

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	1	LS
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	499.9	Ton
330E3000	Sand for Fog Seal	90.0	Ton
360E0020	AE150S Asphalt for Surface Treatment	2,993.3	Ton
360E1020	Type 1B Cover Aggregate	1,207.7	Ton
360E1020	Type 1B Cover Aggregate	6,955.8	Ton
360E1020	Type 1B Cover Aggregate	4,510.4	Ton
360E1020	Type 1B Cover Aggregate	6,604.8	Ton
360E1020	Type 1B Cover Aggregate	3,504.0	Ton
360E1020	Type 1B Cover Aggregate	1,244.1	Ton
360E1020	Type 1B Cover Aggregate	347.0	Ton
360E1020	Type 1B Cover Aggregate	619.1	Ton
360E1020	Type 1B Cover Aggregate	418.6	Ton
633E1300	Pavement Marking Paint, White	5,675	Gal
633E1305	Pavement Marking Paint, Yellow	2,070	Gal
633E6005	Pavement Marking Masking, 5"	159,628	Ft
633E6020	Pavement Marking Masking, 25"	2,922	Ft
633E6030	Pavement Marking Masking, Arrow	64	Each
634E0010	Flagging	870.0	Hour
634E0020	Pilot Car	220.0	Hour
634E0110	Traffic Control Signs	6,264	SqFt
634E0120	Traffic Control, Miscellaneous	1	LS
634E0630	Temporary Pavement Marking	236.5	Mile

The quantities of asphalt for surface treatment and cover aggregate are based on the rates shown in the Rates of Materials. This is only an estimate. The actual application rates of materials will be determined by mix design as stated in these plans. The mix design rates may vary from the estimated rates stated in the Rates of Materials depending on the aggregate source and the variation in gradation and flakiness index. The application rates may also be adjusted in the field due to results of gradations, flakiness index and differing surface conditions. Pay quantities will be those actually used, even though they may vary significantly from plans estimate.

Revised 1/12/16 CDV

**QUANTITY SUBTOTALS
NH-P 0032(25)**

Bid Item Number	Item	Quantity									Unit	
		US 12	US 83	SD 10	SD 20	SD 65	SD 130	SD 144	SD 271	SD 1804		Total
009E0010	Mobilization	Lump Sum	LS									
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	23.2	134.8	87.9	127.7	67.9	28.3	9.1	11.8	9.2	499.9	Ton
330E3000	Sand for Fog Seal	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	90.0	Ton
360E0020	AE150S Asphalt for Surface Treatment	134.1	841.1	548.1	769.4	402.9	136.6	45.5	70.2	45.4	2993.3	Ton
360E1020	Type 1B Cover Aggregate	1207.7	6955.8	4510.4	6604.8	3504.0	1244.1	416.2	619.1	418.6	25480.7	Ton
633E1300	Pavement Marking Paint, White	14.0	1481.0	1091.0	1447.0	837.0	352.0	124.0	216.0	113.0	5675.0	Gal
633E1305	Pavement Marking Paint, Yellow	5.0	540.0	398.0	528.0	305.0	128.0	46.0	79.0	41.0	2070.0	Gal
633E6005	Pavement Marking Masking, 5"	137910.0	17566.0	0.0	0.0	0.0	0.0	0.0	0.0	4152.0	159628.0	Ft
633E6020	Pavement Marking Masking, 25"	834.0	1768.0	0.0	0.0	0.0	0.0	0.0	0.0	320.0	2922.0	Ft
633E6030	Pavement Marking Masking, Arrow	52.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.0	Each
634E0010	Flagging	120	100	180	110	60	120	30	30	120	870.0	Hour
634E0020	Pilot Car	10	50	40	50	30	10	10	10	10	220.0	Hour
634E0100	Traffic Control	1391	582	1019	727	408	735	425	405	572	6264.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS									
634E0630	Temporary Pavement Marking	7.232	59.928	44.136	58.566	33.888	14.222	5.020	8.720	4.746	236.458	Mile

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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ENVIRONMENTAL COMMITMENTS

An Environment 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 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 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/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 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 separated 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 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 reclaiming of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrences 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 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 the 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 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 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.

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RATES OF MATERIALS

The Estimate of Quantities is based on the following quantities of materials per mile.

US Highway 12

MRM 187.15 to 188.60+0.041 (Sta. 0+00 to 78+56.64)

MRM 188.60+0.151 to 188.89+0.029 (Sta. 84+37.44 to 93+82.56)

AE150S Asphalt for Surface Treatment at the rate of 28.6 tons applied 41 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 245.2 tons applied 38 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.7 tons applied 38 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 188.60+0.041 to 188.60+0.151 (Sta. 78+56.64 to 84+37.44)

AE150S Asphalt for Surface Treatment at the rate of 35.6 tons applied 51 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 309.8 tons applied 48 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 6.0 tons applied 48 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 188.89+0.029 to 189.02+0.006 (Sta. 93+82.56 to 98+47.20)

AE150S Asphalt for Surface Treatment at the rate of 33.5 tons applied 48 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 309.8 tons applied 48 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 6.0 tons applied 48 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 189.02+0.006 to 189.58+0.032 (Sta. 98+47.20 to 129+62.40)

MRM 189.65+0.046 to 189.87+0.042 (Sta. 134+27.04 to 145+14.72)

MRM 189.92+0.039 to 190.92 (Sta. 148+68.48 to 199+10.88)

AE150S Asphalt for Surface Treatment at the rate of 41.9 tons applied 60 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 369.8 tons applied 60 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 7.5 tons applied 60 feet wide.
(Rate= 0.05 Gal./S.Y.).

US Highway 12 (continued)

Adjacent street intersections in Mobridge

AE150S Asphalt for Surface Treatment at the rate of 0.28 Gal./S.Y.
(Estimated at 7.5 Tons)

Type 1B Cover Aggregate at the rate of 22 Lbs./S.Y.
(Estimated at 69.4 Tons)

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 0.05 Gal./S.Y.
(Estimated at 1.3 Tons)

US Highway 83

MRM 175.18+0.078 to 196.00+0.630 (Sta. 0+00 to 1125+85.44)

MRM 198.00+0.660 to 205.28 (Sta. 1232+82.72 to 1582+09.92)

AE150S Asphalt for Surface Treatment at the rate of 27.9 tons applied 40 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 232.3 tons applied 36 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.5 tons applied 36 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 196.00+0.630 to 198.00+0.660 (Sta. 1125+85.44 to 1232+82.72)

AE150S Asphalt for Surface Treatment at the rate of 30.7 tons applied 44 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 232.3 tons applied 36 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.5 tons applied 36 feet wide.
(Rate= 0.05 Gal./S.Y.).

SD Highway 10

MRM 203.22 to 212.00+0.282 (Sta. 0+00 to 478+95.60)

AE150S Asphalt for Surface Treatment at the rate of 23.7 tons applied 34 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 200.1 tons applied 31 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 3.9 tons applied 31 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 212.00+0.282 to 224.24+0.002 (Sta. 478+95.6 to 1110+01.52)

MRM 225.23+0.004 to 225.24+0.046 (Sta. 1162+55.52 to 1165+19.04)

AE150S Asphalt for Surface Treatment at the rate of 25.1 tons applied 36 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 200.1 tons applied 31 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 3.9 tons applied 31 feet wide.
(Rate= 0.05 Gal./S.Y.).

SD Highway 10 (continued)

MRM 224.24+0.002 to 225.23+0.004 (Sta. 1110+01.52 to 1162+55.52)

AE150S Asphalt for Surface Treatment at the rate of 27.9 tons applied 40 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 258.1 tons applied 40 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 5.0 tons applied 40 feet wide.
(Rate= 0.05 Gal./S.Y.).

Adjacent street intersections in Eureka

AE150S Asphalt for Surface Treatment at the rate of 0.28 Gal./S.Y.
(Estimated at 4.0 Tons)

Type 1B Cover Aggregate at the rate of 22 Lbs./S.Y.
(Estimated at 36.9 Tons)

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 0.05 Gal./S.Y.
(Estimated at 0.7 Tons)

SD Highway 20

MRM 162.00+0.960 to 179.00+0.200(Sta. 0+00 to 857+47.20)

MRM 179.00+0.406 to 181.00+0.529 (Sta. 868+34.88 to 980+44.32)

AE150S Asphalt for Surface Treatment at the rate of 26.5 tons applied 38 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 232.3 tons applied 36 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.5 tons applied 36 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 179.00+0.200 to 179.00+0.338 (Sta. 857+47.20 to 864+75.84)

AE150S Asphalt for Surface Treatment at the rate of 27.9 tons applied 40 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 258.1 tons applied 40 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 5.0 tons applied 40 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 179.00+0.338 to 179.00+0.406 (Sta. 864+75.84 to 868+34.88)

AE15 S Asphalt for Surface Treatment at the rate of 27.2 tons applied 39 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 245.2 tons applied 38 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.7 tons applied 38 feet wide.
(Rate= 0.05 Gal./S.Y.).

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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RATES OF MATERIALS (continued)

The Estimate of Quantities is based on the following quantities of materials per mile.

SD Highway 20 (continued)

MRM 181.00+0.529 to 187.00+0.859 (Sta. 980+44.32 to 1242+06.72)

AE150S Asphalt for Surface Treatment at the rate of 25.1 tons applied 36 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 206.5 tons applied 32 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.0 tons applied 32 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 187.00+0.859 to 193.61 (Sta. 1242+06.72 to 1546+14.24)

AE150S Asphalt for Surface Treatment at the rate of 26.5 tons applied 38 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 219.4 tons applied 34 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.2 tons applied 34 feet wide.
(Rate= 0.05 Gal./S.Y.).

SD Highway 65

MRM 214.00+0.095 to 215.00+0.464 (Sta. 0+00 to 72+28.32)

AE150S Asphalt for Surface Treatment at the rate of 27.2 tons applied 39 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 232.3 tons applied 36 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.5 tons applied 36 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 215.00+0.464 to 231.81 (Sta. 72+28.32 to 894+64.32)

AE150S Asphalt for Surface Treatment at the rate of 23.7 tons applied 34 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 206.5 tons applied 32 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.0 tons applied 32 feet wide.
(Rate= 0.05 Gal./S.Y.).

SD Highway 130

MRM 193.00 to 193.71+0.075 (Sta. 0+00 to 37+75)

AE150S Asphalt for Surface Treatment at the rate of 27.9 tons applied 40 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 258.1 tons applied 40 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 5.0 tons applied 40 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 193.71+0.075 to 194.00+0.014 (Sta. 37+75 to 53+27.52)

MRM 196.00+0.171 to 197.00+0.241 (Sta. 166+74.24 to 223+23.84)

AE150S Asphalt for Surface Treatment at the rate of 25.1 tons applied 36 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 219.4 tons applied 34 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.2 tons applied 34 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 194.00+0.014 to 196.00+0.171 (Sta. 53+27.52 to 166+74.24)

MRM 197.00+0.241 to 200.08 (Sta. 223+23.84 to 375+46.08)

AE150S Asphalt for Surface Treatment at the rate of 16.1 tons applied 23 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 148.4 tons applied 23 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 3.7 tons applied 30 feet wide.
(Rate= 0.05 Gal./S.Y.).

Adjacent street intersections in Selby

AE150S Asphalt for Surface Treatment at the rate of 0.28 Gal./S.Y.
(Estimated at 2.2 Tons)

Type 1B Cover Aggregate at the rate of 22 Lbs./S.Y.
(Estimated at 20.2 Tons)

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 0.05 Gal./S.Y.
(Estimated at 0.4 Tons)

SD Highway 271

MRM 162.44 to 166.82 (Sta. 0+00 to 230+20.80)

AE150S Asphalt for Surface Treatment at the rate of 16.1 tons applied 23 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 142.0 tons applied 22 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 2.7 tons applied 22 feet wide.
(Rate= 0.05 Gal./S.Y.).

SD Highway 1804

MRM 355.50 to 355.82+0.036 (Sta. 0+00 to 16+63.20)

AE150S Asphalt for Surface Treatment at the rate of 25.1 tons applied 36 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 232.3 tons applied 36 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.5 tons applied 36 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 355.82+0.036 to 355.85+0.145 (Sta. 16+63.20 to 26+08.32)

AE150S Asphalt for Surface Treatment at the rate of 30.7 tons applied 44 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 283.9 tons applied 44 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 5.5 tons applied 44 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 355.85+0.145 to 356.00+0.028 (Sta. 26+08.32 to 28+82.88)

AE150S Asphalt for Surface Treatment at the rate of 26.5 tons applied 38 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 232.3 tons applied 36 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 4.5 tons applied 36 feet wide.
(Rate= 0.05 Gal./S.Y.).

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0032(25)	11	22

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RATES OF MATERIALS (continued)

The Estimate of Quantities is based on the following quantities of materials per mile.

SD Highway 1804 (continued)

MRM 356.00+0.028 to 357.00+0.870 (Sta. 28+82.88 to 125+29.44)

AE150S Asphalt for Surface Treatment at the rate of 16.1 tons applied 23 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 148.4 tons applied 23 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 3.5 tons applied 28 feet wide.
(Rate= 0.05 Gal./S.Y.).

Adjacent street intersections in Mobridge

AE150S Asphalt for Surface Treatment at the rate of 0.28 Gal./S.Y.
(Estimated at 1.2 Tons)

Type 1B Cover Aggregate at the rate of 22 Lbs./S.Y.
(Estimated at 11.4 Tons)

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 0.05 Gal./S.Y.
(Estimated at 0.2 Tons)

SD Highway 144

MRM 188.00+0.000 to 190.00+0.867 (Sta. 0+00 to 151+48.32)

AE150S Asphalt for Surface Treatment at the rate of 14.7 tons applied 21 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 135.5 tons applied 21 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 3.0 tons applied 24 feet wide.
(Rate= 0.05 Gal./S.Y.).

MRM 190.00+0.867 to 190.92+0.000 (Sta. 151+48.32 to 159+50.88)

AE150S Asphalt for Surface Treatment at the rate of 21.6 tons applied 31 feet wide.
(Rate = 0.28 Gal./S.Y.).

Type 1B Cover Aggregate at the rate of 180.7 tons applied 28 feet wide.
(Rate= 22 Lbs./S.Y.).

Asphalt for Fog Seal CSS-1h or SS-1h at the rate of 3.5 tons applied 28 feet wide.
(Rate= 0.05 Gal./S.Y.).

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SPECIFICATIONS

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

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project 271-371 – PCN i3X3 is being let at the same time as this project. The Contractor shall contact the Moberly Area prior to beginning work to coordinate with the other Contractor.

The Contractor shall schedule the work so as not to interfere with or hinder the progress of the work performed by the other Contractors on the other project. Conflicting traffic control devices may need to be temporarily adjust or removed as directed by the Engineer at no additional cost to the contract.

SEQUENCE OF OPERATIONS

The Contractor shall submit a proposed sequence of operations for the Engineer's approval at least one week prior to the preconstruction meeting.

BRIDGES, APPROACH SLABS, SLEEPER SLABS, STRIP SEALS, RAILROAD CROSSINGS, MANHOLES, WATER VALVES AND CONCRETE

Asphalt Surface Treatment and Fog Seal Treatment shall not be placed on any of the bridges, approach slabs, sleeper slabs, bridge joints, railroad crossings.

All utility covers and manhole lids shall be masked prior to the Asphalt Surface Treatment applications to prevent oil and aggregates from adhering to the covers. The masking material shall be removed upon completion of the final brooming operations. All costs for this work shall be incidental to the various contract items. Any emulsion or cover aggregate found to be on any of the above listed items after final brooming shall be removed by the contractor as directed by the Engineer at no cost to the state.

All bridge joints on any bridge along the project shall be masked the entire length prior to Asphalt Surface Treatment operations. This masking shall remain in place until completion of the Fog Seal and any final brooming operations. The masking shall then be removed and any loose material cleaned out of all bridge joints. Any damage to the bridge joints caused by the Asphalt Surface Treatment operations shall be repaired at no cost to the state contract. All costs related to this work shall be incidental to the various contract bid items.

Cover aggregate materials shall not be broomed under any guardrail, 3 cable guardrail, or into any drop inlets along the project.

Bridge joint masking needs are listed in the table below.

Route	MRM	Number Of Joints
US HWY 83	195.56	2
SD HWY 65	214.65	1
SD HWY 130	196.64	2

FOG SEAL

The fog seal shall be placed immediately following the completion of the Asphalt Surface Treatment. Prior to the application of the fog seal the Contractor will be required to broom the Asphalt Surface Treatment. In addition, the rumble strips shall be thoroughly broomed clean prior to the application of the fog seal. A CSS-1h or SS-1h emulsion shall be used for the fog seal application. A water-to-emulsion ratio of 1:1 should be used for the binder application. The oil applied shall be dependent on the type of aggregate used.

Blotting Sand for Fog Seal shall conform to the Specifications Section 879.1 B.

Prior to hauling, Blotting Sand shall be screened to minimize segregation, eliminate oversize and effectively breakup or discard material bonded into chunks.

HAUL ROAD

The Contractor shall be responsible for any haul roads used to transport material to the project site. The State will not participate in the cost of restoration of any haul roads used by the Contractor.

GENERAL MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

Work activities during non-daylight hours are subject to prior approval.

Traffic approaching the project from intersecting roadways, streets, and approaches must be adequately accommodated. Major intersections or large commercial entrances may require additional signing, flaggers, and channelizing devices on a temporary basis until work activities pass these areas.

“ROAD WORK NEXT ___ MILES”, “LOOSE GRAVEL”, and “END ROAD WORK” signs are the only signs that need to be mounted on Fixed Location Breakaway Sign Supports. “ROAD WORK AHEAD”, “FLAGGER”, “ONE LANE ROAD AHEAD” and any other signs may be mounted on portable supports. The bottom of signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas, and one foot above the pavement in rural areas. The signs mounted on portable supports shall be moved as necessary to keep current with the work activities.

The Contractor shall furnish, install and maintain “LOOSE GRAVEL” signs with “40 MPH” advisory speed plate signs upon start of surface treatment operations at each end of the project. In addition, “LOOSE GRAVEL” signs with “40 MPH” advisory speed plates shall be installed at 5 mile intervals throughout each project and at other location(s) determined in the field by the Engineer. The aforementioned signs shall be removed after the final brooming has been completed.

Traffic Control sign quantities, as shown in the Estimate of Quantities, are estimates. Contractor's operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used. Traffic Control signs will be paid for separately for each roadway segment.

All fixed location signs, sign posts and breakaway bases shall be removed within 7 calendar days following pavement marking.

REFLECTORIZED SHEETING REQUIREMENTS FOR TEMPORARY TRAFFIC CONTROL DEVICES

Temporary traffic control devices, including signs, drums, cones, tubular markers, barricades, vertical panels, and direction indicator barricades shall be reflectORIZED with sheeting applied to a satisfactory backing. Flat surfaced temporary traffic control devices including, but not limited to; signs, barricades, vertical panels, and direction indicator barricades shall be reflectORIZED with super/very high intensity reflectORIZED sheeting meeting the standards of Type XI as defined by AASHTO M 268 (ASTM D4956). Round surfaced temporary traffic control devices including, but not limited to; drums, cones, and tubular markers shall be reflectORIZED with high intensity reflectORIZED sheeting meeting the standards of Type IV as defined by AASHTO M 268 (ASTM D4956). All orange colored materials shall be fluorescent.

MAINTENANCE OF TRAFFIC CONTROL

Until initial brooming, additional flagger(s) and FLAGGER symbol sign(s) shall be provided to alert the traveling public entering completed portions of the project to the potential of airborne chips.

The flagger(s) shall provide each motorist with a printed notice on the Contractor's letterhead similar to the one shown. Cost of the notice shall be incidental to other contract bid items.

"CONTRACTORS LETTERHEAD"

THIS HIGHWAY IS BEING RESURFACED WITH A CHIP SEAL COAT.

THIS TYPE OF CONSTRUCTION HAS THE POTENTIAL OF CAUSING VEHICLE DAMAGE SUCH AS CHIPPED WINDSHIELDS AND BROKEN HEADLIGHTS DUE TO ROCKS BEING THROWN BY HIGH SPEED ONCOMING OR PASSING TRAFFIC.

YOU MAY WISH TO CONSIDER TAKING AN ALTERNATE ROUTE. IF YOU PROCEED, KEEP TO THE RIGHT AND DRIVE 40 MPH OR LESS. ANOTHER FLAGGER AND A PILOT CAR WILL BE ESCORTING YOU AROUND THE SEAL COAT APPLICATION AREA.

THANK YOU.

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TEMPORARY PAVEMENT MARKINGS

The temporary flexible vertical markers (tabs) shall have secure covers, which must be manually removed. Any markers that are non-reflective shall be cleaned.

All costs associated with furnishing, installing, removing covers and cleaning of the temporary flexible vertical markers (tabs) used on this project will be incidental to the contract unit price per mile for Temporary Pavement Marking.

The total length of no passing zone on this project is estimated to be 51.2 miles. US Hwy 12 = 0.5 miles, US Hwy 83 = 5.1 miles, SD Hwy 10 = 9.5 miles, SD Hwy 20 = 9.0 miles, SD Hwy 65 = 14.5 miles, SD Hwy 130 = 4.0 miles, SD Hwy 271 = 2.4 miles, SD Hwy 1804 = 3.5 miles and SD Hwy 144 = 2.7 miles.

The Contractor is allowed to use DO NOT PASS and PASS WITH CARE signs for a period of 2 weeks to mark no passing zones on roads with an average daily traffic of 2500 vehicles or less. It is estimated that 203 DO NOT PASS and 197 PASS WITH CARE signs will be required to mark the no passing zones, should the Contractor elect to use these signs. Portable sign supports may be used as long as the duration is less than 3 days. If the duration is more than three days, the signs shall be on fixed location, breakaway supports.

Route	DO NOT PASS	PASS WITH CARE
US HWY 12	0	0
US HWY 83	20	20
SD HWY 10	49	49
SD HWY 20	47	46
SD HWY 65	43	42
SD HWY 130	16	16
SD HWY 144	10	8
SD HWY 271	13	11
SD HWY 1804	5	5

Cost for furnishing, installing and removing the DO NOT PASS and PASS WITH CARE signs shall be incidental to the contract unit price per mile for Temporary Pavement Marking.

Flagger symbol signs (W20-7) and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights, shall be positioned on the roadway shoulder in advance of workers for both directions of traffic during the installation of temporary flexible vertical markers (tabs). The traffic control device used shall be moved to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a Workers symbol sign (W21-1), or a BE PREPARED TO STOP (W3-4) warning sign shall be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work shall be approved by the Engineer.

PERMANENT PAVEMENT MARKINGS

Traffic Control for permanent pavement marking operations shall be incidental to the cost of application. The striper and advance or trailing warning vehicle shall be equipped with flashing amber lights or advance warning arrow panel.

The Contractor shall advise the Engineer a minimum of 2 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of no passing zones. All materials shall be applied as per manufacturer's recommendations.

The Contractor will be required to repaint all existing pavement marking including centerline, edge line, lane lines, turn arrows, crosswalk, stop bars, railroad crossing symbols, etc. This list is approximate. The Contractor will be required to inventory and mark, with appropriately colored tabs, the extent and location of the existing word messages, turn arrows, stop bars, railroad crossings, pedestrian crossings, etc. before the markings are obliterated. The Engineer will be provided a copy of the pavement marking inventory. The cost of the tabs shall be incidental to the contract unit prices for the various items.

The application of permanent pavement marking paint may begin 7 calendar days following completion of final surfacing and shall be completed within 14 calendar days following completion of final surfacing.

For each working day the application of permanent pavement marking paint remains uncompleted after the previously stated time requirements, the Contractor will be assessed liquidated damages at the rate of \$250.00 per day.

The liquidated damages shall apply up to the Contract Completion Date, as extended. After the completion date, liquidated damages will be assessed in accordance with section 8.8 of the Specifications, until the Permanent Pavement Marking is completed, even though the project may be open to traffic.

RETROREFLECTIVITY FOR PAVEMENT MARKING PAINT

The Department may take retroreflectivity readings on the pavement marking lines after 2 days and within 30 days of the line application using either a portable or mobile retroreflectometer that conforms to a-30 meter geometry. If the Department chooses to take retroreflectivity readings, three retroreflectivity readings will be taken on each line at each test location. The three readings will be averaged and become the reading for that test location.

If the Department chooses to take retroreflectivity readings, three readings will be taken on the edge lines and lane lines in the direction of application. For combination solid yellow and skip yellow lines for turn lanes and for centerline markings on two-way roadways, three readings will be taken in one direction, the reflectometer will be turned 180 degrees and three more readings will be taken. The six readings for the centerline markings will be averaged and become the test reading for that test location.

If the Department chooses to take readings, the minimum retroreflectivity values shall be 230 mc/m²/lux for white and 140 mc/m²/lux for yellow.

PAVEMENT MARKING MASKING

All utility covers and manhole lids shall be masked prior to the asphalt surface treatment applications to prevent oil and aggregates from adhering to the covers. The masking material shall be removed upon completion of the final brooming operations. All costs for this work shall be incidental to the various contract items.

The Contractor shall install the new pavement marking and masking materials in the same locations as the existing pavement markings.

Just prior to the beginning of the asphalt surface treatment operation (once for the chip seal and once for the fog seal), all durable pavement markings shall be covered with an approved pavement marking masking material to protect the tape from oil and aggregates. Tabs shall be placed at the beginning of each paper liner to provide a guide for locating the masking material after the seal has been applied. The masking material shall be placed to the length of that day's seal run. Upon the completion of that day's run, all masking and seal coat material shall be removed and disposed of by the Contractor.

All costs for furnishing, installing, removing, and disposing of the masking materials shall be incidental to the contract unit price for the "Pavement Marking Masking" bid items.

PAVEMENT MARKING MASKING TABLE

	US 12	US 83	SD 1804	TOTAL
5" Masking	137910	17566	4152	159628 Ft
25" Masking	834	1768	320	2922 Ft
Turn Arrow	52	12	0	64 Each
Area	0	0	0	0 SqFt

The above quantities are estimated, and are for information only. The final quantities will be measured in the field and will be the basis of payment, with no adjustments in unit price.

The cost of placing tabs and paper liners, removing the materials, and disposing of any waste shall be incidental to the contract unit prices for the "Pavement Marking Masking" items.

EXISTING PAVEMENT CONDITIONS AND TRAFFIC VOLUMES

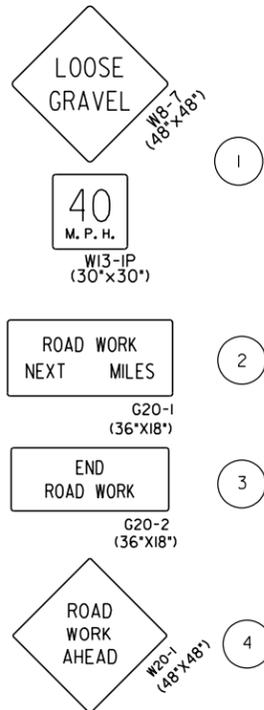
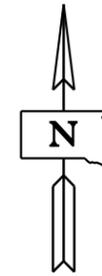
The existing pavement conditions for each project are listed in the table below. The descriptions are from the McLeod procedure for seal coat design.

PROJECT	EXISTING PAVEMENT CONDITION
US HWY 12	Slightly porous and oxidized
US HWY 83	Slightly porous and oxidized
SD HWY 10	Slightly porous and oxidized
SD HWY 20	Slightly porous and oxidized
SD HWY 65	Slightly pocked porous and oxidized
SD HWY 130	Slightly porous and oxidized
SD HWY 271	Slightly porous and oxidized
SD HWY 1804	Slightly porous and oxidized
SD HWY 144	Slightly pocked porous and oxidized

The traffic volumes are shown on the title sheet for each project.

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	14	22

FIXED LOCATION SIGNS



1

40
M. P. H.
W13-1P
(30"x30")

ROAD WORK
NEXT MILES
G20-1
(36"x18")

2

END
ROAD WORK
G20-2
(36"x18")

3

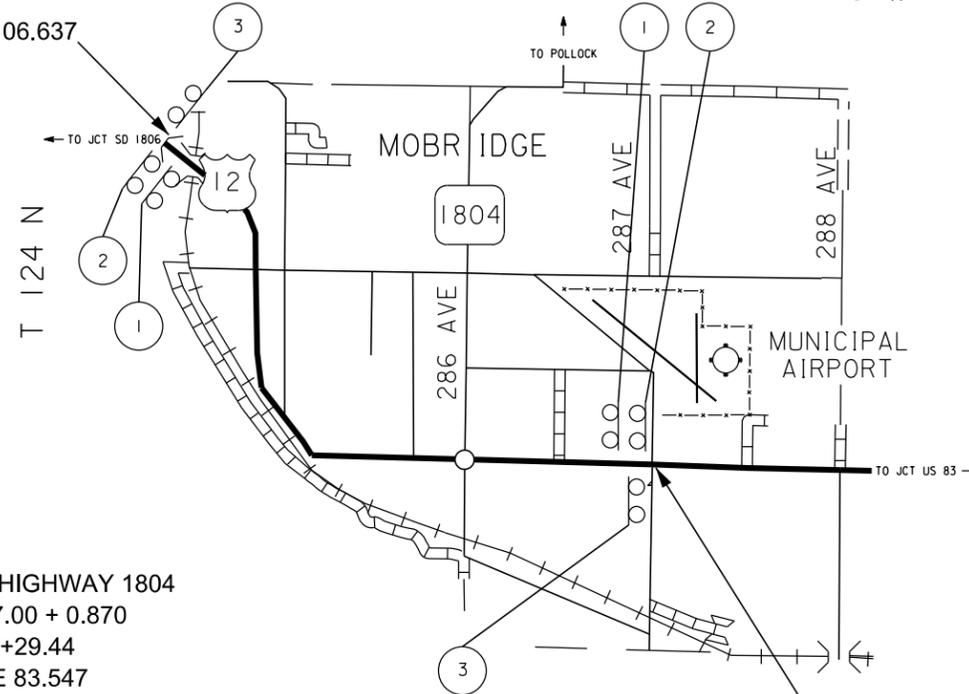
ROAD WORK
AHEAD
WB-6
(48"x48")

4

US HIGHWAY 12

R 79 W

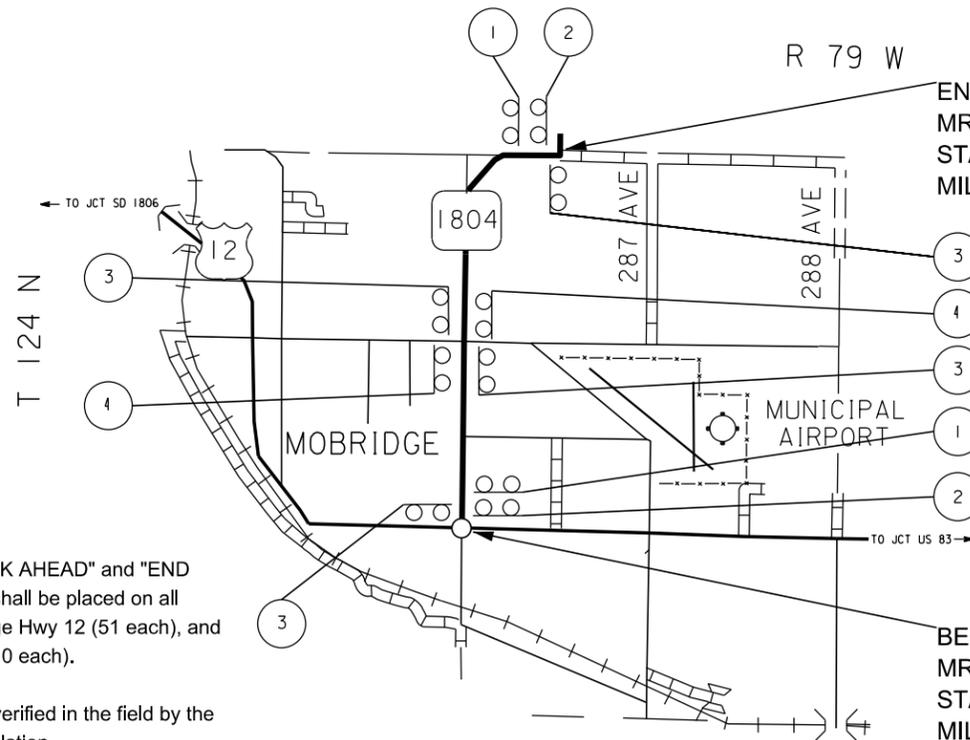
BEGIN US HIGHWAY 12
MRM 187.15 + 0.000
STA. 0+00
MILEAGE 106.637



SD HIGHWAY 1804

R 79 W

END SD HIGHWAY 1804
MRM 357.00 + 0.870
STA. 125+29.44
MILEAGE 83.547



END US HIGHWAY 12
MRM 190.92 + 0.000
STA. 199+10.88
MILEAGE 110.408

BEGIN SD HIGHWAY 1804
MRM 355.50 + 0.000
STA. 0+00
MILEAGE 81.174

Notes:

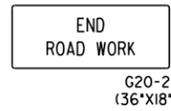
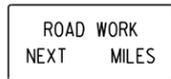
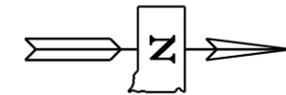
Portable "ROAD WORK AHEAD" and "END ROAD WORK" signs shall be placed on all side streets in Mobridge Hwy 12 (51 each), and Mobridge Hwy 1804 (10 each).

Sign locations will be verified in the field by the Engineer prior to installation.

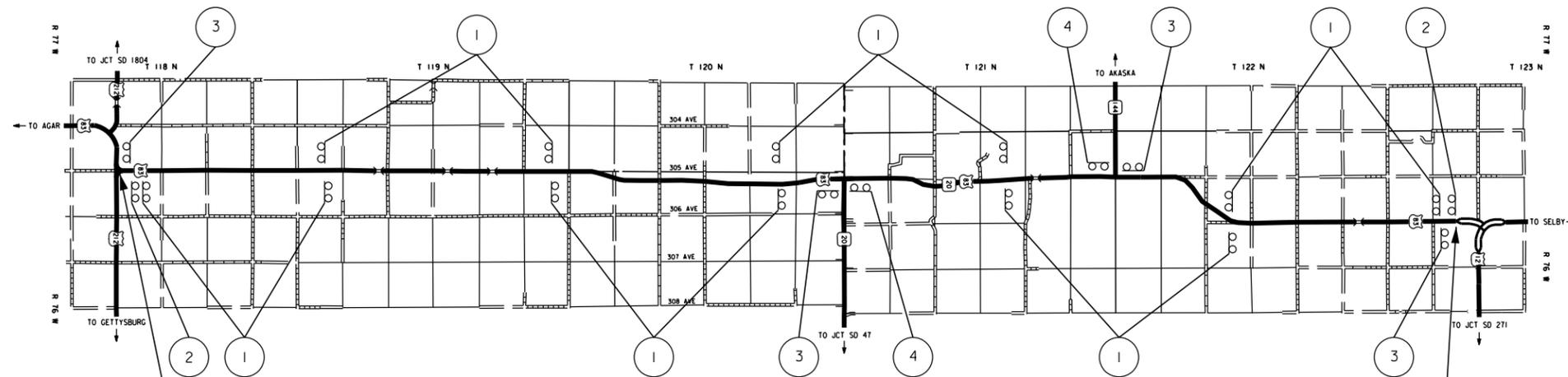
Fixed location signs to remain in place until the completion of permanent pavement markings.

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	15	22

FIXED LOCATION SIGNS



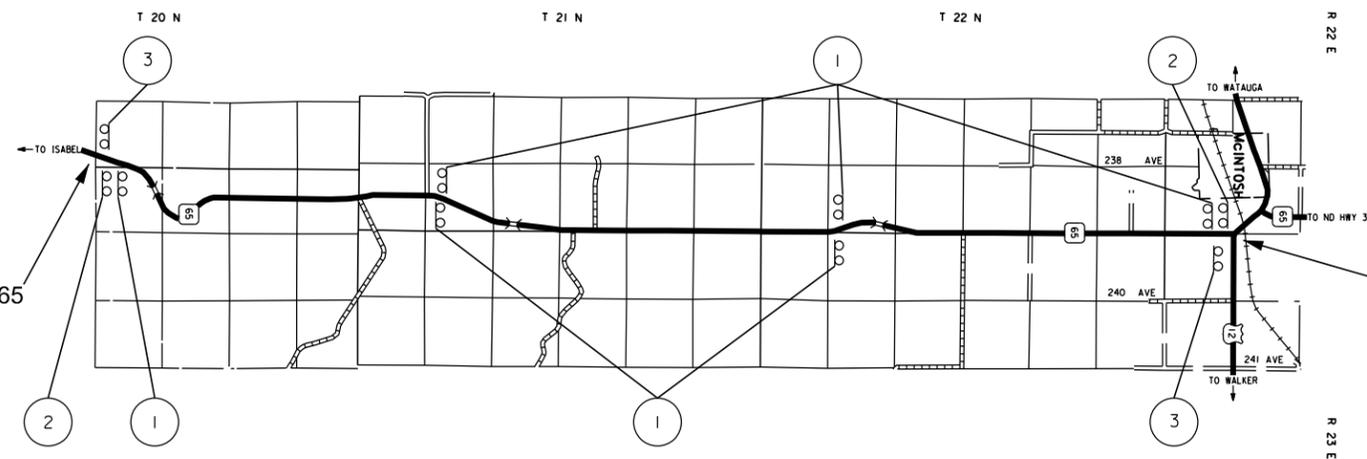
US HIGHWAY 83



BEGIN US HIGHWAY 83
MRM 175.18 + 0.078
STA. 0+00
MILEAGE 103.730

END US HIGHWAY 83
MRM 205.28 + 0.000
STA. 1582+09.92
MILEAGE 133.694

SD HIGHWAY 65



BEGIN SD HIGHWAY 65
MRM 214.00 + 0.095
STA. 0+00
MILEAGE 45.687

END SD HIGHWAY 65
MRM 231.81 + 0.000
STA. 894+64.32
MILEAGE 62.631

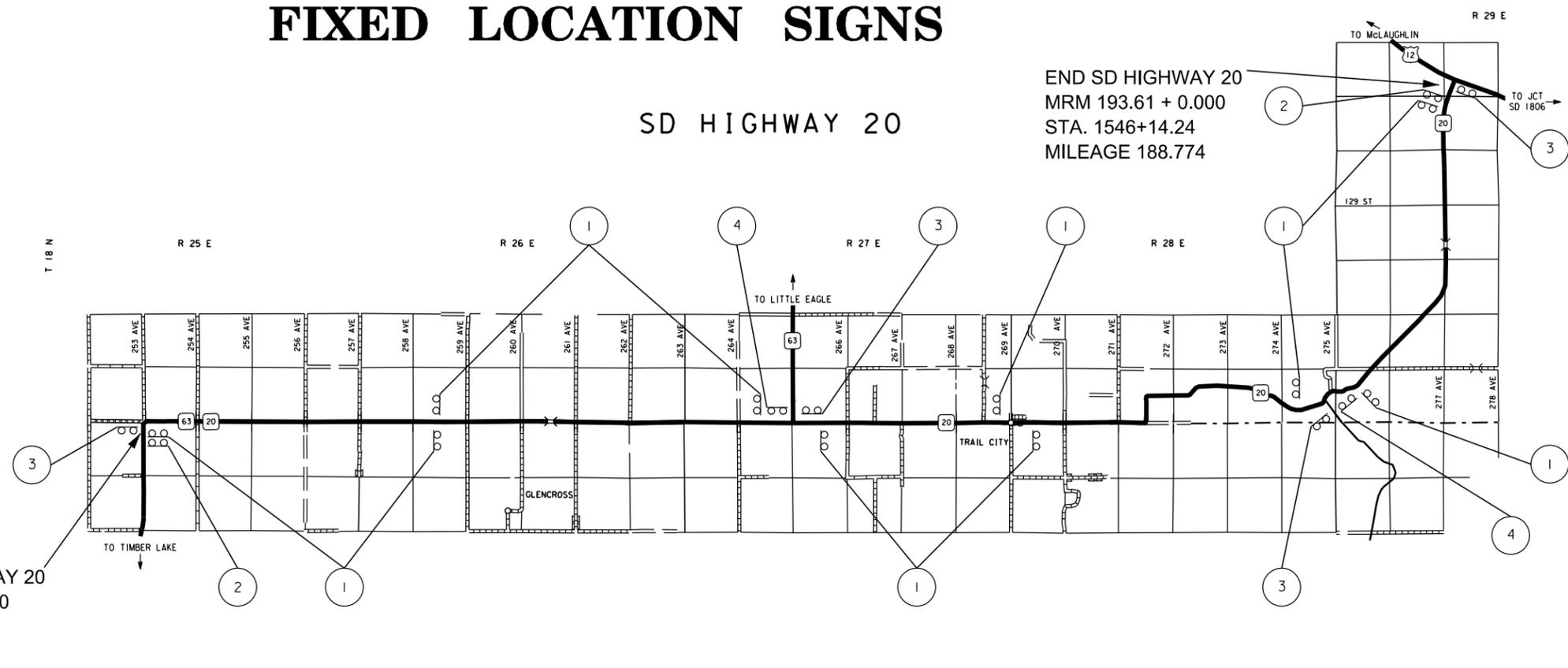
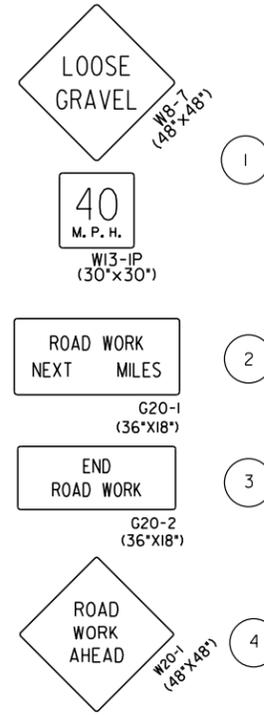
Notes:

Sign locations will be verified in the field by the Engineer prior to installation.

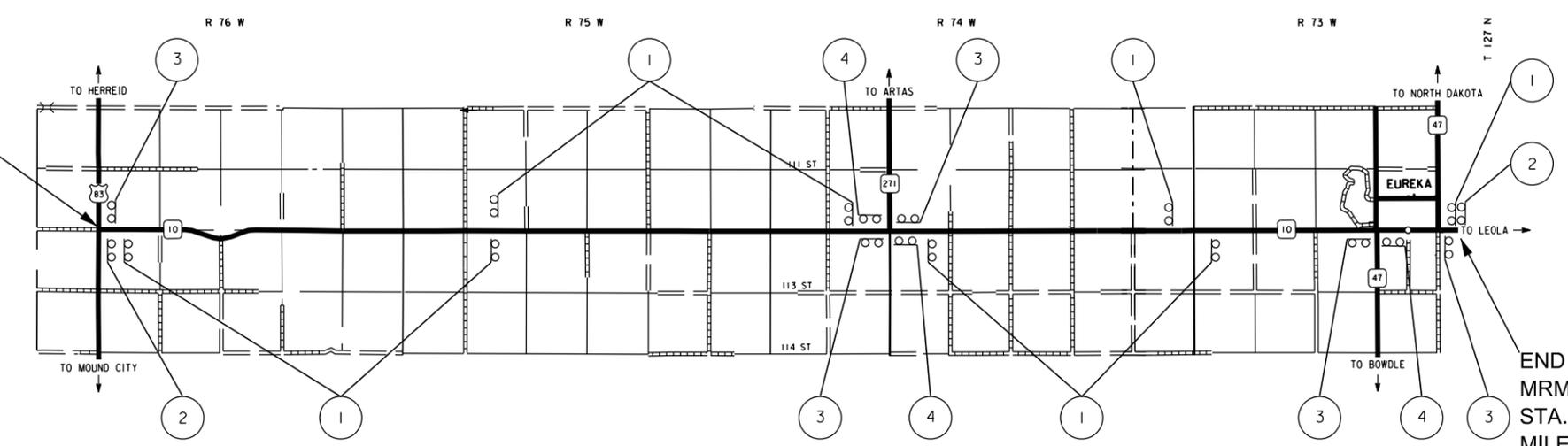
Fixed location signs to remain in place until the completion of permanent pavement markings.

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	16	22

FIXED LOCATION SIGNS

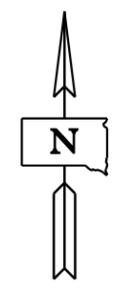


BEGIN SD HIGHWAY 10
MRM 203.22 + 0.000
STA. 0+00
MILEAGE 10.724



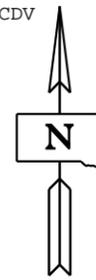
Notes:

- Portable "ROAD WORK AHEAD" and "END ROAD WORK" signs shall be placed on all side streets in Trail City (9 each) and Eureka (24 each).
- Sign locations will be verified in the field by the Engineer prior to installation.
- Fixed location signs to remain in place until the completion of permanent pavement markings.

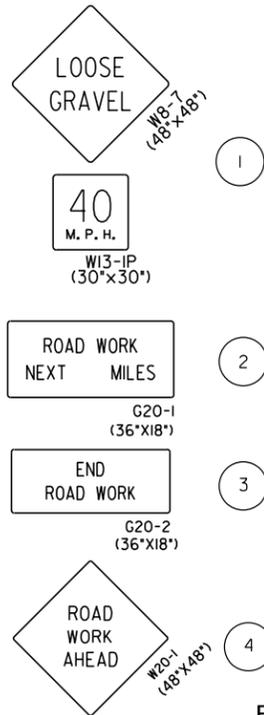


STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	17	22

Revised 1/12/16 CDV

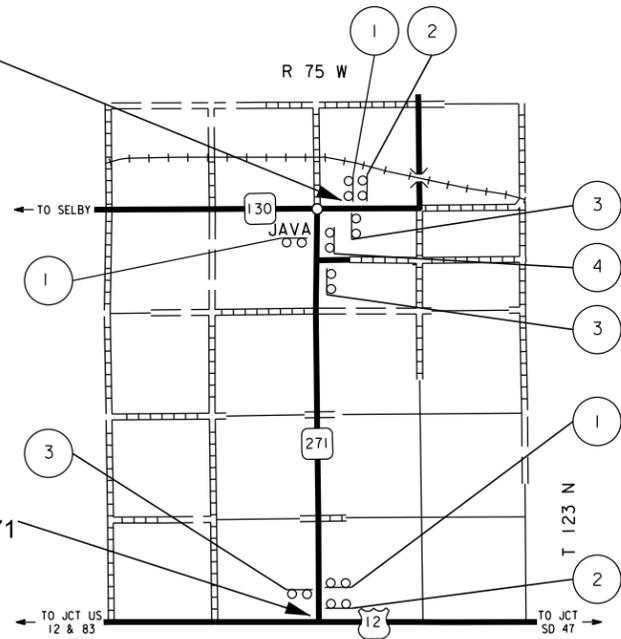


FIXED LOCATION SIGNS



END SD HIGHWAY 271
MRM 166.82 + 0.000
STA. 230+20.80
MILEAGE 4.360

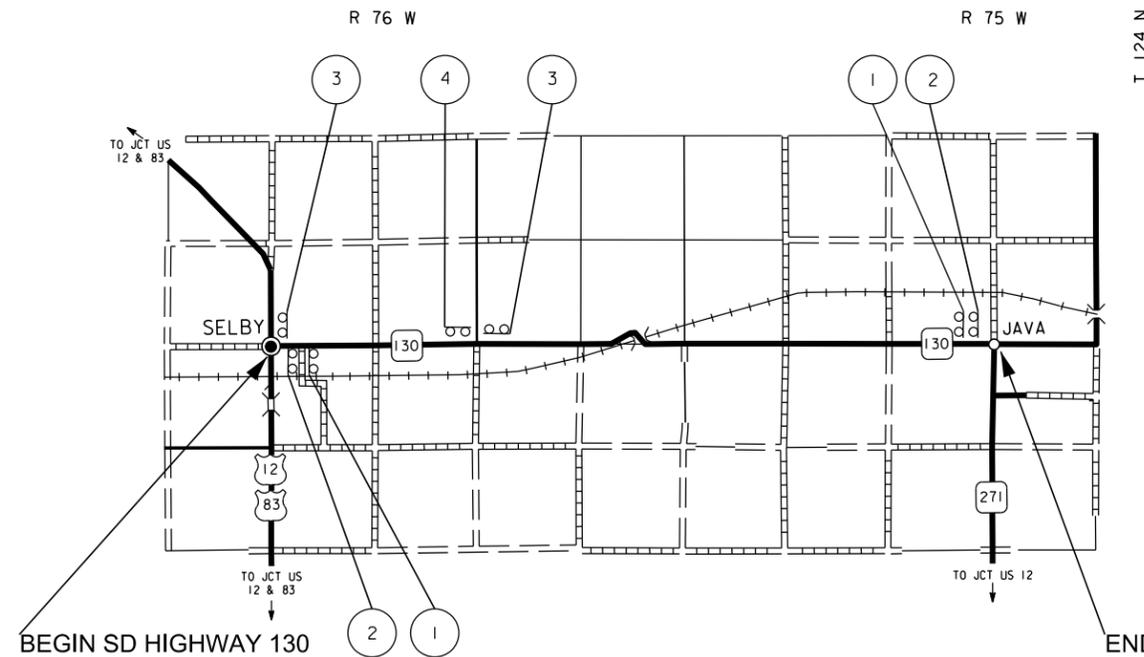
BEGIN SD HIGHWAY 271
MRM 162.44 + 0.000
STA. 0+00
MILEAGE 0.000



SD HIGHWAY 130

BEGIN SD HIGHWAY 130
MRM 193.00 + 0.000
STA. 0+00
MILEAGE 0.000

END SD HIGHWAY 130
MRM 200.08 + 0.000
STA. 375+46.08
MILEAGE 7.111



Notes:

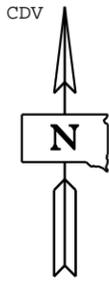
Portable "ROAD WORK AHEAD" and "END ROAD WORK" signs shall be placed on all side street in Selby (19 each) and Java (2 each).

Sign locations will be verified in the field by the Engineer prior to installation.

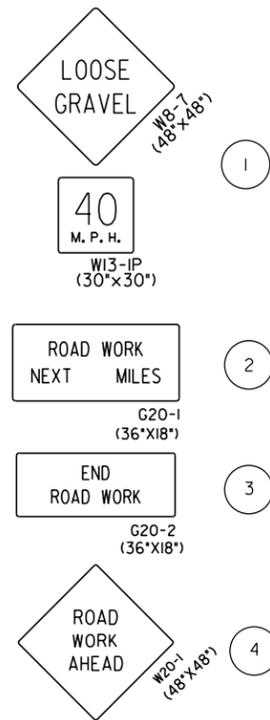
Fixed location signs to remain in place until the completion of permanent pavement markings.

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0032(25)	18	22

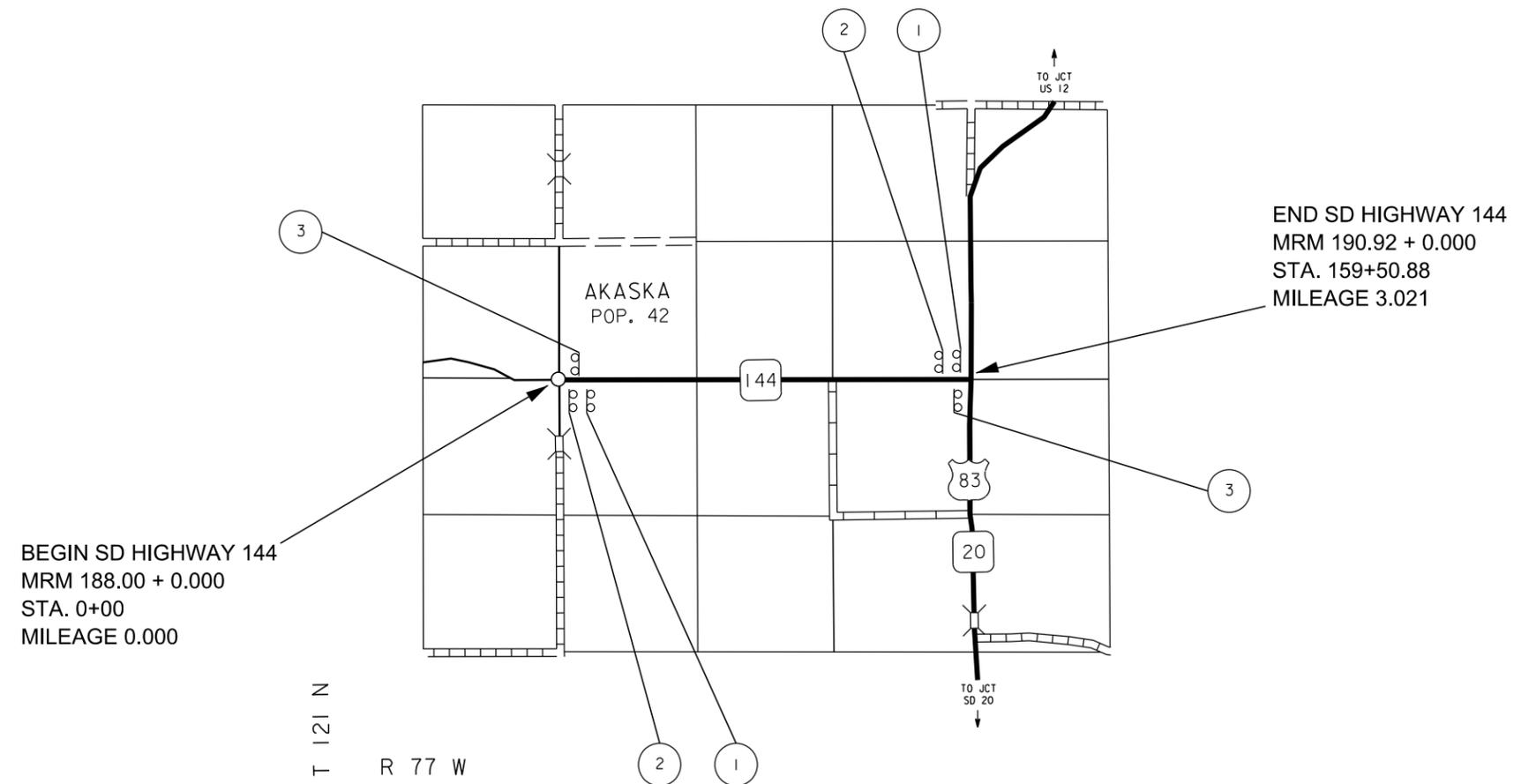
Revised 1/12/16 CDV



FIXED LOCATION SIGNS



SD HIGHWAY 144



Notes:

Portable "ROAD WORK AHEAD" and "END ROAD WORK" signs shall be placed on all side street in Akaska(5 each).

Sign locations will be verified in the field by the Engineer prior to installation.

Fixed location signs to remain in place until the completion of permanent pavement markings.

SIGN TABULATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0032(25)	19	22

PROJECT NH-P 0032(25)

Revised 1/12/16 CDV

US HIGHWAY 12

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	2	48" x 48"	16	32
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6	12
W20-1	ROAD WORK AHEAD	55	48" x 48"	16	880
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT _ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	53	36" x 18"	5	265
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					1391

US HIGHWAY 83

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	12	48" x 48"	16	192
W13-1P	ADVISORY SPEED (plaque)	12	30" x 30"	6	72
W20-1	ROAD WORK AHEAD	6	48" x 48"	16	96
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT _ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	4	36" x 18"	5	20
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					582

SD HIGHWAY 10

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	8	48" x 48"	16	128
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6	48
W20-1	ROAD WORK AHEAD	31	48" x 48"	16	496
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT _ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	29	36" x 18"	5	145
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					1019

SD HIGHWAY 20

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	10	48" x 48"	16	160
W13-1P	ADVISORY SPEED (plaque)	10	30" x 30"	6	60
W20-1	ROAD WORK AHEAD	15	48" x 48"	16	240
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT _ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	13	36" x 18"	5	65
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					727

SD HIGHWAY 65

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	6	48" x 48"	16	96
W13-1P	ADVISORY SPEED (plaque)	6	30" x 30"	6	36
W20-1	ROAD WORK AHEAD	4	48" x 48"	16	64
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT _ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	2	36" x 18"	5	10
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					408

SD HIGHWAY 130

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	2	48" x 48"	16	32
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6	12
W20-1	ROAD WORK AHEAD	24	48" x 48"	16	384
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT _ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	21	36" x 18"	5	105
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					735

SIGN TABULATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0032(25)	20	22

PROJECT NH-P 0032(25)

Revised 1/12/16 CDV

SD HIGHWAY 271

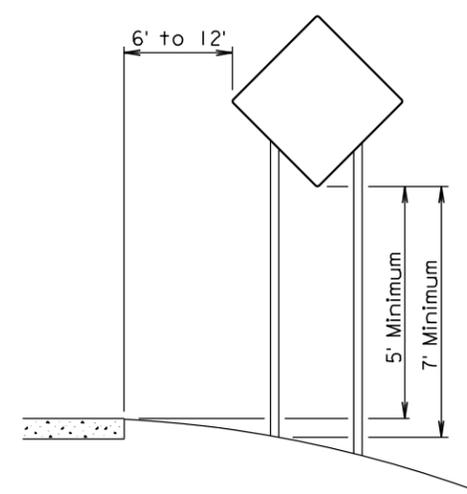
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	3	48" x 48"	16	48
W13-1P	ADVISORY SPEED (plaque)	3	30" x 30"	6	18
W20-1	ROAD WORK AHEAD	7	48" x 48"	16	112
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT ___ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	5	36" x 18"	5	25
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					405

SD HIGHWAY 1804

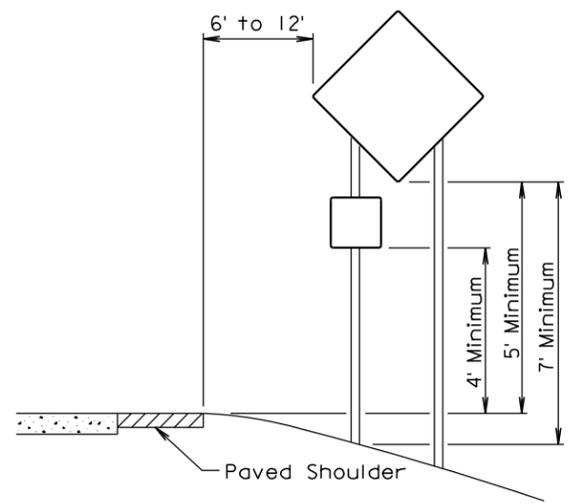
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	2	48" x 48"	16	32
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6	12
W20-1	ROAD WORK AHEAD	16	48" x 48"	16	256
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT ___ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	14	36" x 18"	5	70
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					572

SD HIGHWAY 144

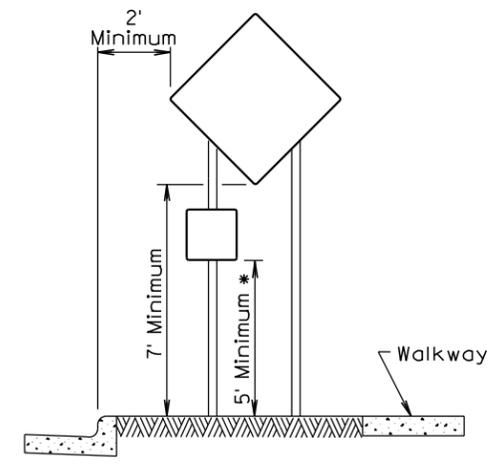
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16	32
W8-7	LOOSE GRAVEL	2	48" x 48"	16	32
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6	12
W20-1	ROAD WORK AHEAD	9	48" x 48"	16	144
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16	64
W20-7	FLAGGER (symbol)	4	48" x 48"	16	64
W21-2	FRESH OIL	2	48" x 48"	16	32
G20-1	ROAD WORK NEXT ___ MILES	2	36" x 18"	5	10
G20-2	END ROAD WORK	7	36" x 18"	5	35
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					425



RURAL DISTRICT

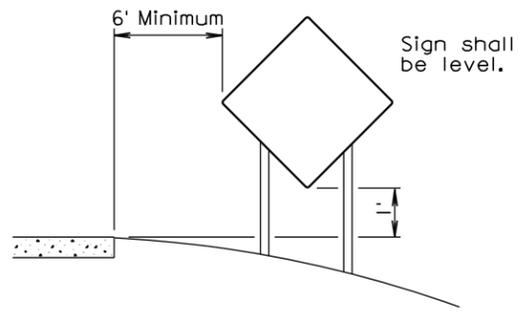


RURAL DISTRICT WITH
SUPPLEMENTAL PLATE



URBAN DISTRICT

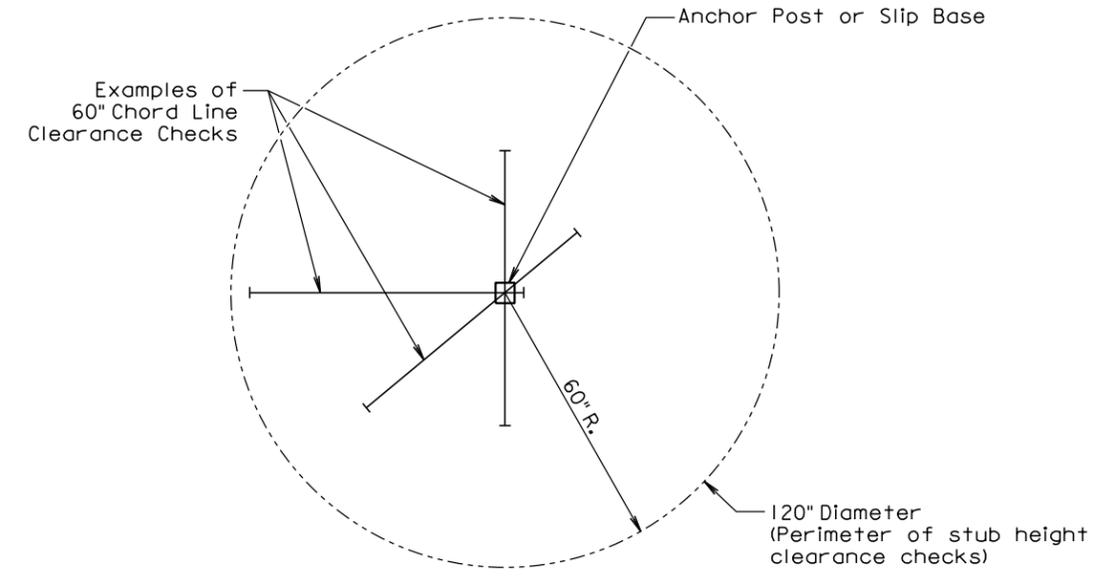
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.



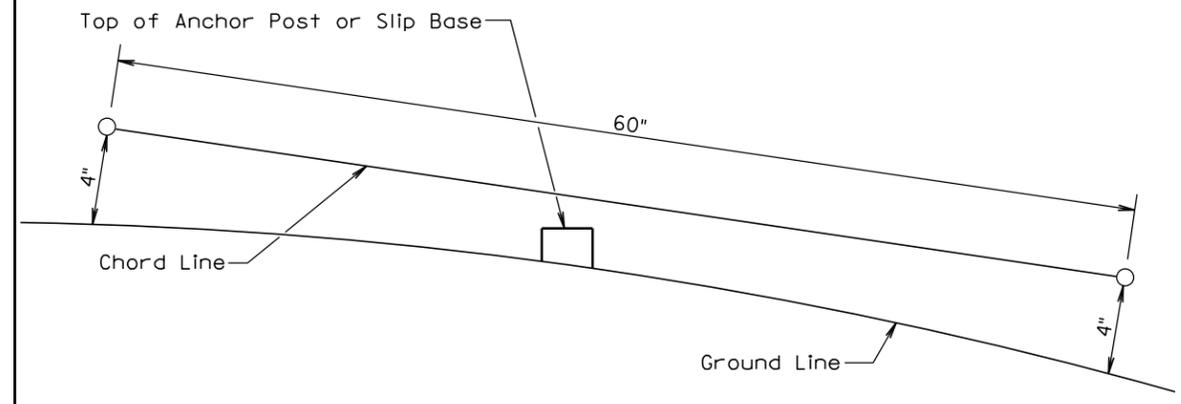
RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

September 22, 2014

Published Date: 4th Qtr. 2015	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases SHALL 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 shall 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.

July 1, 2005

Published Date: 4th Qtr. 2015	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1