

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	1	39
Plotting Date: 01/15/2026			

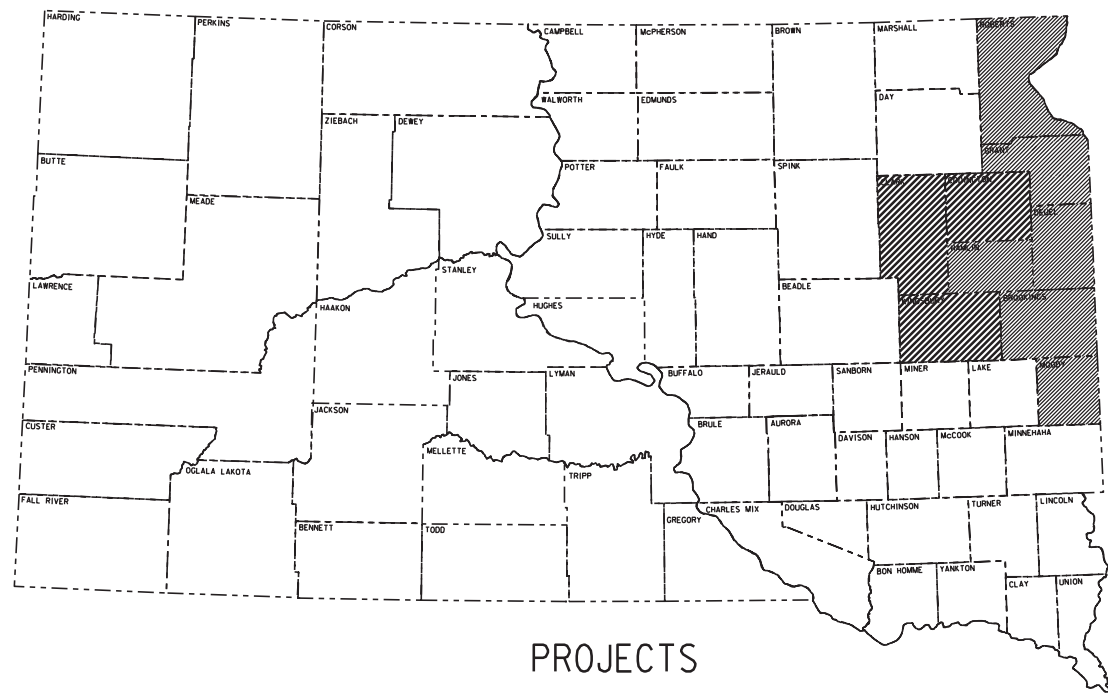
STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT IM-NH-P 0012(332)  
INTERSTATE HIGHWAY 29,  
SOUTH DAKOTA HWY  
15, 20, 28, & 158  
UNITED STATES HWY  
14 & 81

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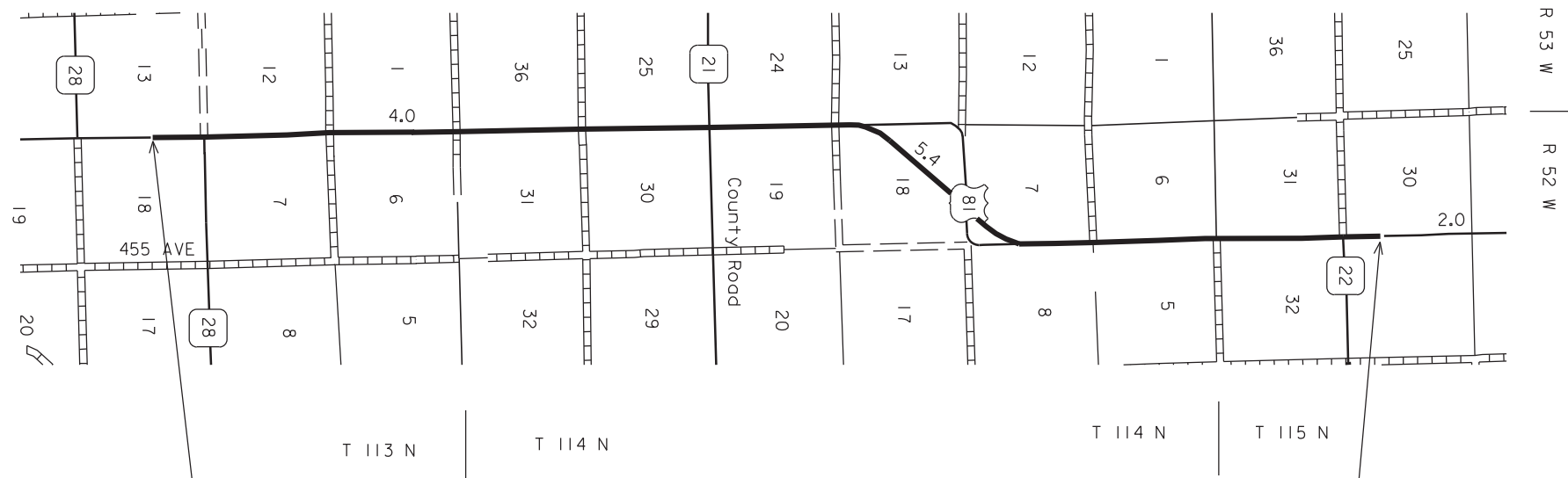
PROJECTS

BROOKINGS, CLARK, CODINGTON, DEUEL  
GRANT, HAMLIN, KINGSBURY, MOODY,  
ROBERTS COUNTIES

Segment 1  
US 81 - MRM 135.00+0.309 to MRM 145.09+0.184  
Codington County  
Length 9.960 miles

ASPHALT SURFACE TREATMENT & MIRCOSURFACING

PCN 09WV



Design Designation Segment 1	
AADT (2024)	2708
AADT (2044)	4075
DHV	458
D	50%
DHV T%	7.2%
AADT T%	15.7%
V	65 m.p.h.

BEGIN PROJECT  
STA. 0+00.00  
MRM 135.00 + 0.309  
MILEAGE 128.186

END PROJECT  
STA. 525+88.8  
MRM 145.09 + 0.184  
MILEAGE 138.146

5

May 13, 2026

STORM WATER PERMIT  
NONE REQUIRED

PLOT SCALE - 1:200

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

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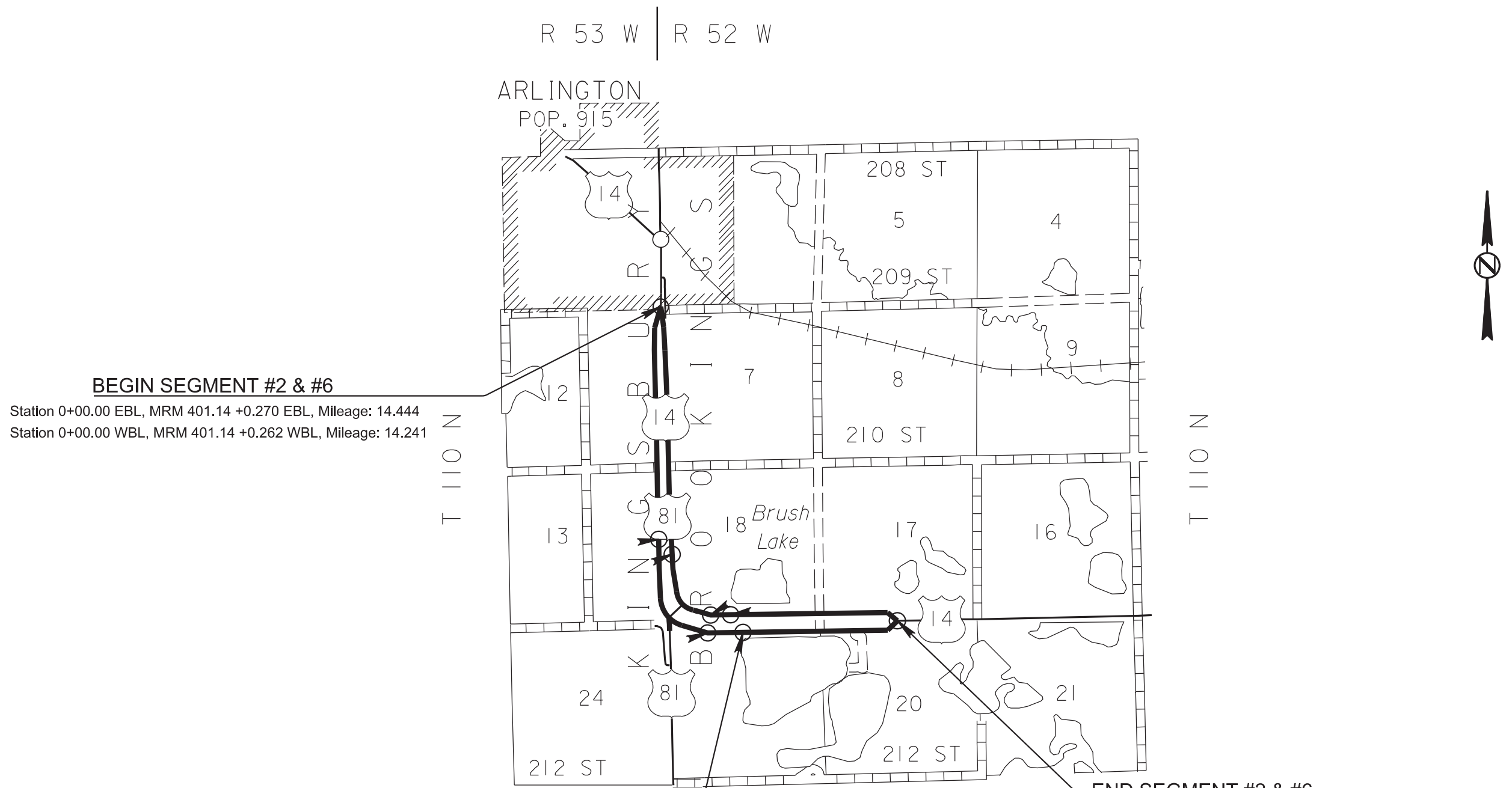
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	2	39
Plotting Date: 01/15/2026			

Segment 2  
 US 14W - MRM 401.14+0.262 to MRM 404.00+0.275  
 Kingsbury/Brookings Counties  
 Length 2.849 miles

Segment 6  
 US 14E - MRM 401.14+0.270 to MRM 404.00+0.278  
 Kingsbury/Brookings Counties  
 Length 2.875 miles

PLOT SCALE - 1:200

PLOT NAME - 1



**BEGIN SEGMENT #2 & #6**

Station 0+00.00 EBL, MRM 401.14 +0.270 EBL, Mileage: 14.444  
 Station 0+00.00 WBL, MRM 401.14 +0.262 WBL, Mileage: 14.241

**END SEGMENT #2 & #6**

Station 150+16.32 EBL, MRM 404.00 +0.278 EBL, Mileage: 17.319  
 Station 152+06.4 WBL, MRM 404.00 +0.275 WBL, Mileage: 17.09

Design Designation Segment 2	
AADT (2024)	2317
AADT (2044)	3385
DHV	70%
D	50%
DHV T%	7.1%
AADT T%	15.5%
V	55 m.p.h.

Design Designation Segment 6	
AADT (2024)	2317
AADT (2044)	3386
DHV	70%
D	50%
DHV T%	7.1%
AADT T%	15.5%
V	55 m.p.h.



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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	3	39
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Segment 3  
SD 20 - MRM 383.73+0.000 to MRM 394.26+0.122  
Codington County  
Length 10.657 miles

PLOT SCALE - 1:200

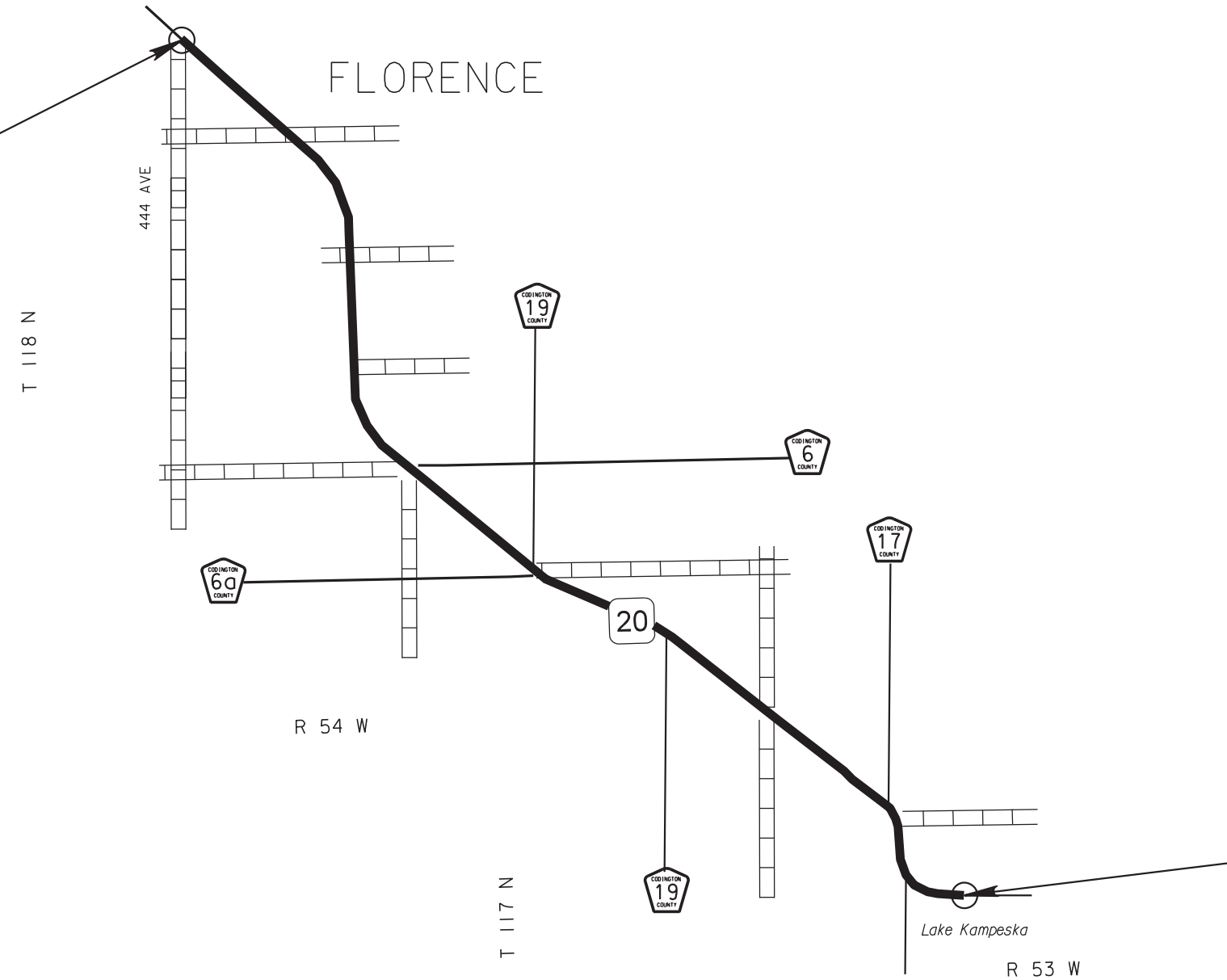
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PLOTTED FROM - TRHJUNT04

BEGIN PROJECT  
STA. 0+00.00  
MRM 383.73 + 0.000  
MILEAGE 331.526

END PROJECT  
STA. 562+69  
MRM 394.26 + 0.122  
MILEAGE 342.183



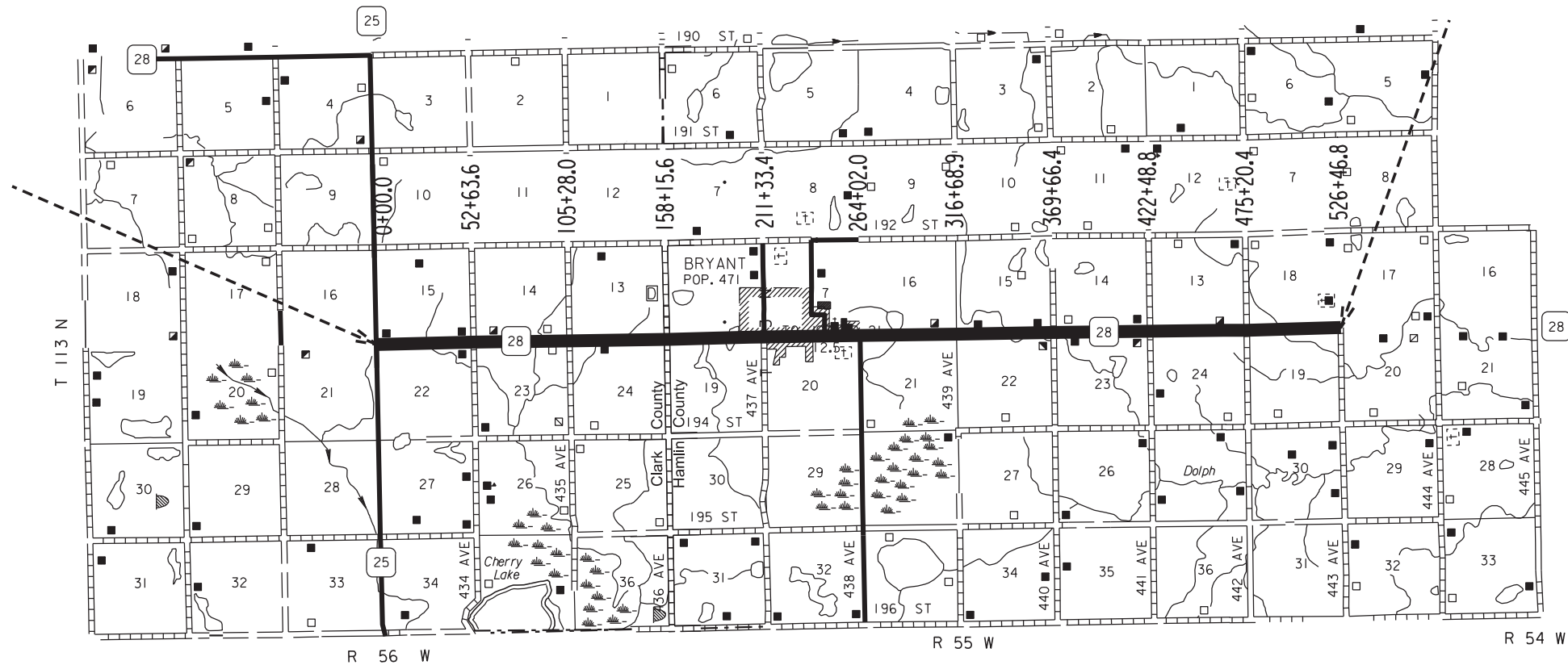
Design Designation Segment 3	
AA DT (2024)	1831
AA DT (2044)	2582
DHV	290
D	50%
DHV T%	6.4%
AA DT T%	14.0%
V	65 m.p.h. (rural)
	45 m.p.h. (urban)

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	4	39
Plotting Date: 01/15/2026			

Segment 4  
SD 28 - MRM 319.91+0.000 to MRM 329.95+0.000  
Clark & Hamlin Counties  
Length 9.979 miles

END PROJECT  
STA. 526+89.1  
MRM 329.95 + 0.000  
MILEAGE 59.85

BEGIN PROJECT  
STA. 0+00.00  
MRM 319.91+ 0.000  
MILEAGE 49.871



Design Designation Segment 4  
AADT (2024) 1006  
AADT (2044) 1499  
DHV 168  
D 50%  
DHV T% 7.1%  
AADT T% 15.6%  
V 65 m.p.h. (rural)

PLOT SCALE - 1:200

PLOTTED FROM - TRHJUNT04

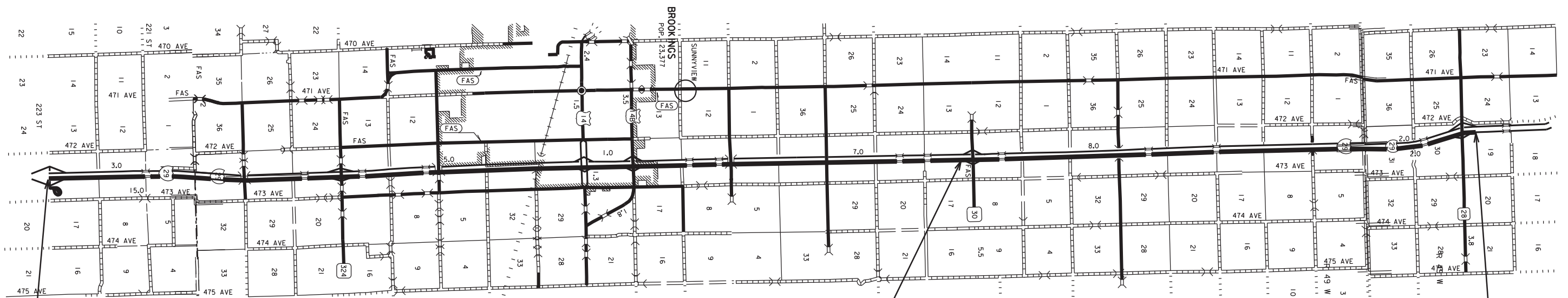
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	6	39
Plotting Date: 01/15/2026			

Segment 8  
 I 29 N - MRM 123.00+0.796 to MRM 151.31+0.371  
 Moody / Brookings/Deuel Counties  
 Length 27.829 miles



BEGIN PROJECT MICROSURFACING  
 STA. 0+00.00  
 MRM 123.00 + 0.796  
 MILEAGE 123.667

END PROJECT MICROSURFACING  
 BEGIN PROJECT FLUSH SEAL  
 STA. 820+35.36  
 MRM 139.30+0.565  
 MILEAGE 139.771

END PROJECT FLUSH SEAL  
 STA. 1469+37.12  
 MRM 151.31 + 0.371  
 MILEAGE 151.496

Design Designation Segment 8	
AADT (2024)	6339
AADT (2044)	10095
DHV	1219
D	50%
DHV T%	11.2%
AADT T%	24.5%
V	80 m.p.h.

PLOT SCALE - 1:200

PLOTTED FROM - TRHJUNT04

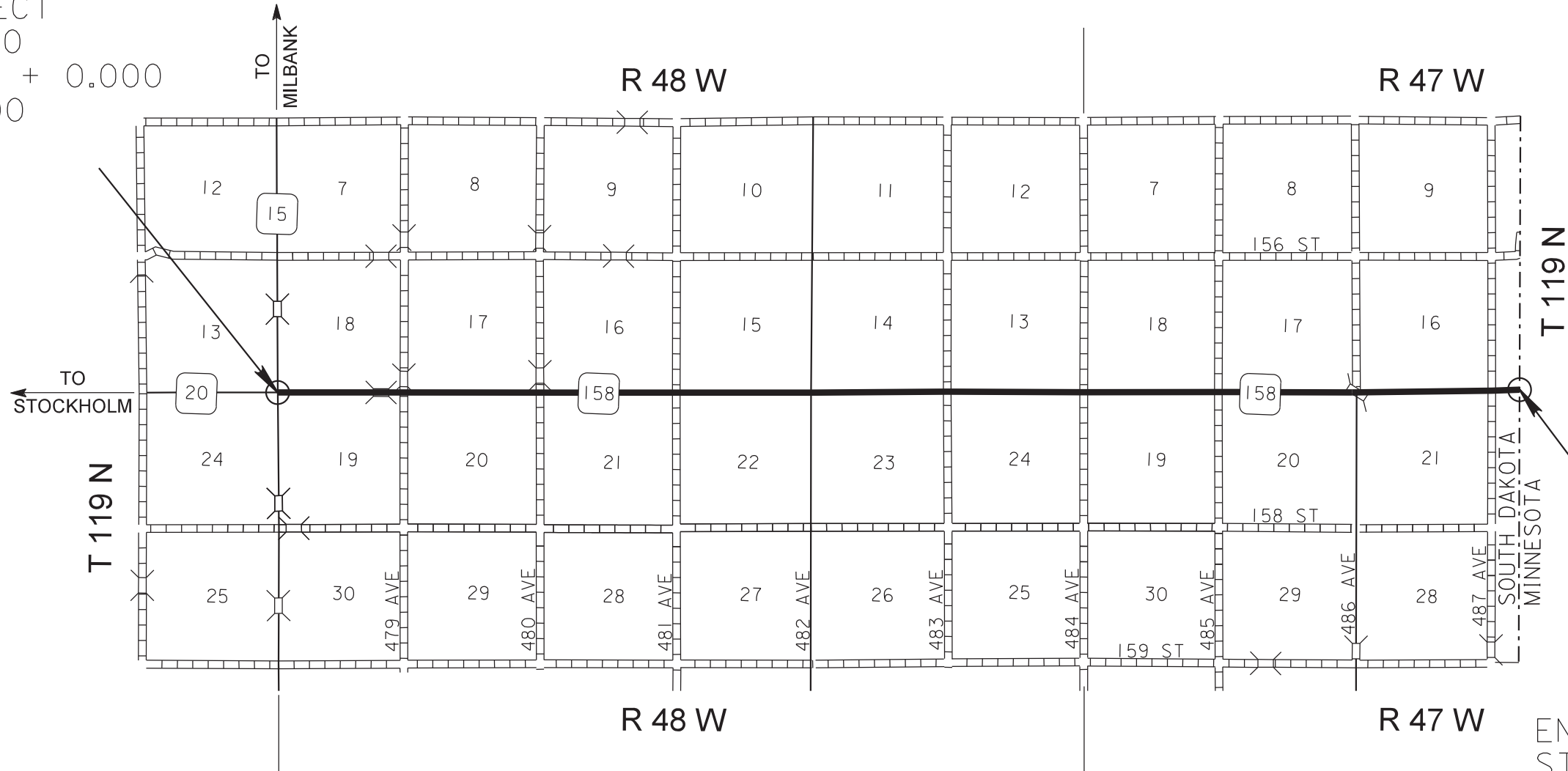
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	7	39
Plotting Date: 01/15/2026			

Segment 9  
SD 158 - MRM 439.25+0.000 to MRM 448.40+0.000  
Grant County  
Length 9.150 miles

BEGIN PROJECT  
STA. 0+00.00  
MRM 439.25 + 0.000  
MILEAGE 0.00



END PROJECT  
STA. 483+12  
MRM 448.40 + 0.000  
MILEAGE 9.150

Design Designation Segment 9	
AAADT (2024)	275
AAADT (2044)	376
DHV	42
D	50%
DHV T%	6.5%
AAADT T%	14.2%
V	65 m.p.h. (rural)

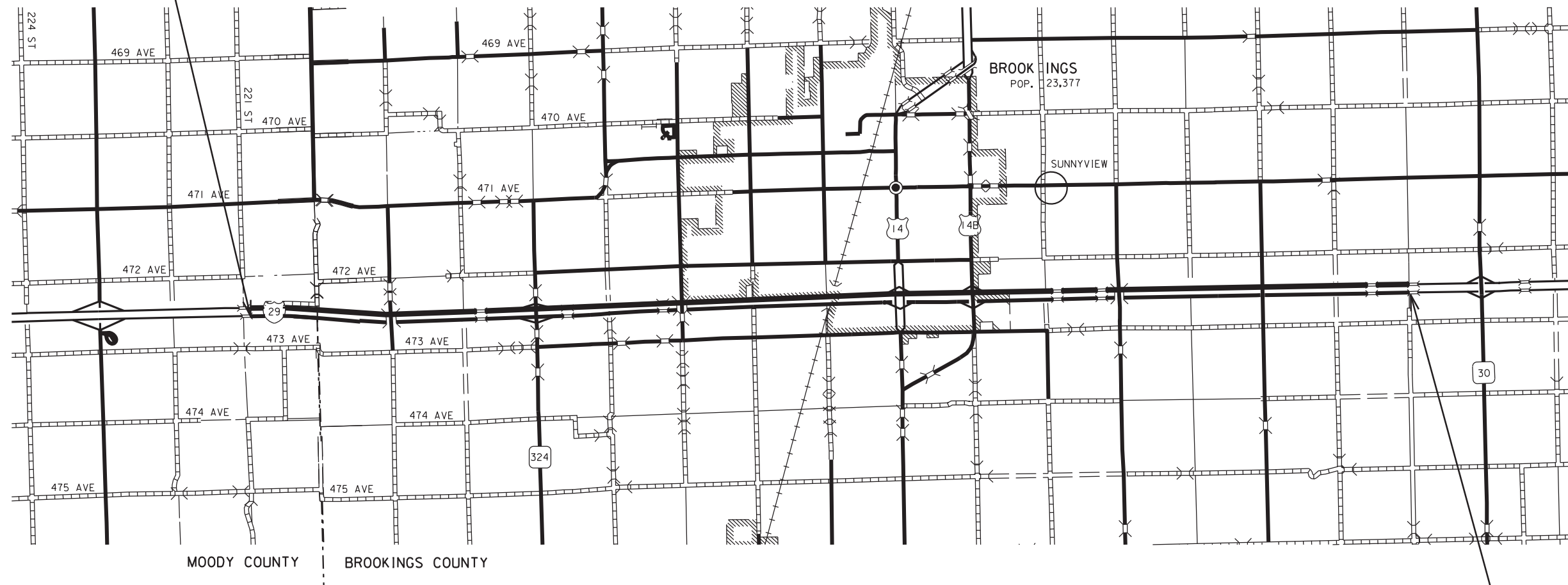
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	8	39
Plotting Date: 01/15/2026			

PLOT SCALE - 1:200

PLOT NAME - 1

Segment 10  
 I 29 S - MRM 123.00+0.811 to MRM 139.30+0.566  
 Moody / Brookings County  
 Length 16.086 miles

BEGIN PROJECT FLUSH SEAL/MICROSURFACING  
 STA. 0+00.00  
 MRM 123.00 + 0.811  
 MILEAGE 123.713



END PROJECT FLUSH SEAL/MICROSURFACING  
 STA. 850+13.3  
 MRM 139.30 + 0.566  
 MILEAGE 139.799

Design Designation Segment 10	
AADT (2024)	7180
AADT (2044)	11336
DHV	1343
D	50%
DHV T%	9.8%
AADT T%	21.6%
V	80 m.p.h.

PLOTTED FROM - TRHJUNT04

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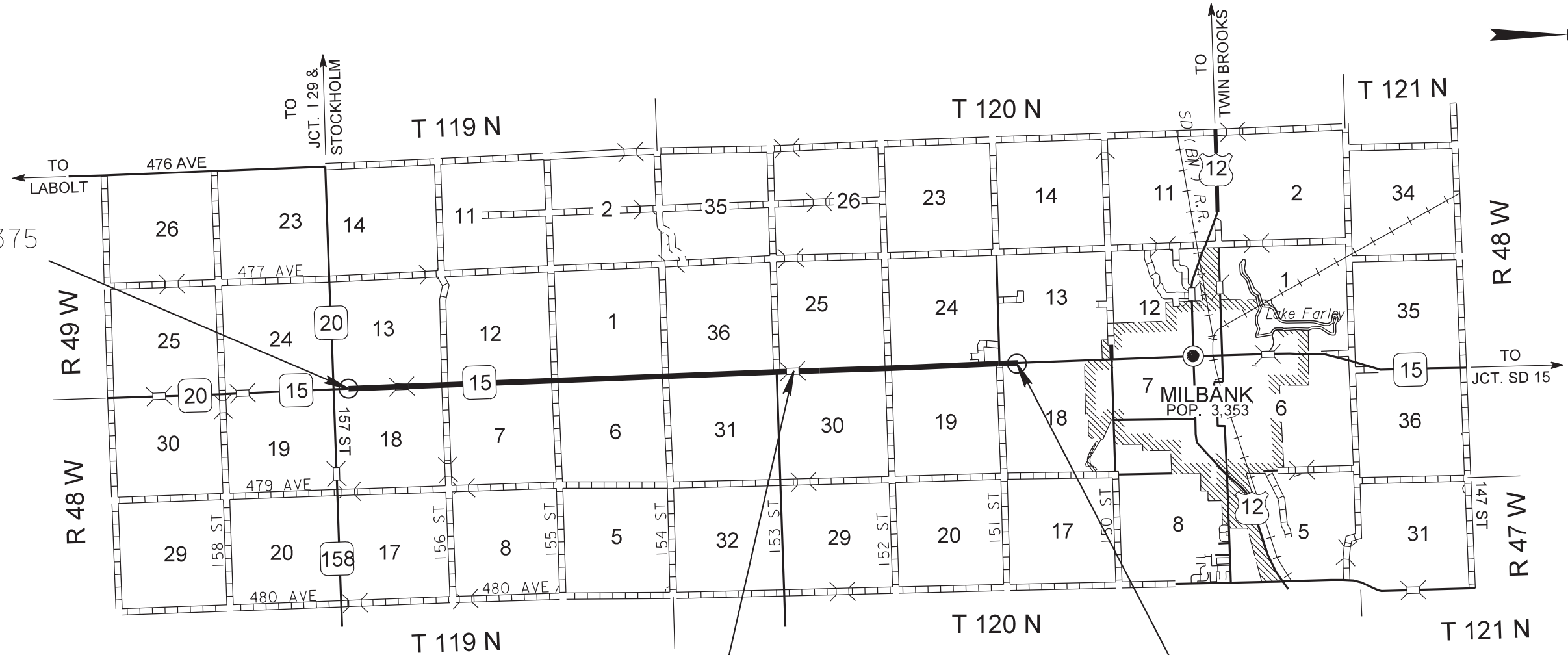
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	9	39
Plotting Date: 01/15/2026			

Segment 11  
SD 15 - MRM 167.33+0.375 to MRM 173.00+0.491  
Grant County  
Length 5.786 miles

PLOT SCALE - 1:200

PLOT NAME - 1

BEGIN PROJECT  
STA. 0+00.00  
MRM 167.33 + 0.375  
MILEAGE 27.565



Structure No. 26-290-109  
MRM 171.40

END PROJECT  
STA. 305+50.1  
MRM 173.00 + 0.491  
MILEAGE 33.351

Design Designation Segment 11	
AAADT (2024)	1756
AAADT (2044)	2399
DHV	266
D	50%
DHV T%	9.1%
AAADT T%	20.1%
V	65 m.p.h.

PLOTTED FROM - TRHJUNT04

FILE - ... \0.0 DESIGN\BORDER 06DW.DGN

REVISED 3/3/26 PAR

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	10	39
Plotting Date: 01/15/2026			

Estimate of Quantities

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
320E0300	CQS-1P Asphalt Emulsion for Microsurfacing	23,465	Gal
320E4510	Mineral Aggregate for Microsurfacing	766.0	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	292.5	Ton
330E3000	Sand for Fog Seal	70.0	Ton
360E0042	CRS-2P Asphalt for Surface Treatment	1,897.8	Ton
360E1010	Type 1A Cover Aggregate	2,410.9	Ton
360E1010	Type 1A Cover Aggregate	753.8	Ton
360E1010	Type 1A Cover Aggregate	1,683.8	Ton
360E1010	Type 1A Cover Aggregate	1,817.3	Ton
360E1010	Type 1A Cover Aggregate	759.8	Ton
360E1010	Type 1A Cover Aggregate	1,358.1	Ton
360E1010	Type 1A Cover Aggregate	1,517.0	Ton
633E0030	Cold Applied Plastic Pavement Marking, 24"	1,872	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	31	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	3,249	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	1,096	Gal
633E6020	Pavement Marking Masking, 25"	6,464	Ft
633E6025	Pavement Marking Masking, Area	1,260	SqFt
633E6030	Pavement Marking Masking, Arrow	74	Each
634E0010	Flagging	1,110.0	Hour
634E0020	Pilot Car	310.0	Hour
634E0110	Traffic Control Signs	5,578.3	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	6	Each
634E0420	Type C Advance Warning Arrow Board	6	Each
634E0630	Temporary Pavement Marking	153.8	Mile
634E1215	Contractor Furnished Portable Changeable Message Sign	6	Each
634E1255	Contractor Furnished Vehicle Speed Feedback Sign	6	Each

PLOT SCALE - 1:200

PLOTTED FROM - TRHJINT04

PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06SW.DGN

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**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 B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES**

**COMMITMENT B2: WHOOPING CRANE**

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

**Action Taken/Required:**

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

**COMMITMENT B4: BALD EAGLE**

Bald eagles are known to occur in this area.

**Action Taken/Required:**

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

**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: HISTORICAL PRESERVATION OFFICE CLEARANCES**

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

**Action Taken/Required:**

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/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.

REVISED 3/3/26 PAR

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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# TABLE OF QUANTITIES

(For Information Only)

BID ITEM	DESCRIPTION	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	SEGMENT 8	SEGMENT 9	SEGMENT 10	SEGMENT 11	TOTAL QUANTITY	UNITS
		US 81	US 14 W	SD 20	SD 28	I29 N	US 14 E	I29 S	I29 N	SD 158	I29 S	SD 15		
009E0010	MOBILIZATION	MRM 135.00+ 0.309 to 145.09+0.184	MRM 401.14+0.262 to 404.00+0.184	MRM 383.73 to 394.26+0.122	MRM 319.91 to 329.95	MRM 179.00+.341 to 208.00+0.380	MRM 401.14+0.270 to 404.00+0.278	MRM 179.00+0.383 to 208.00+0.385	MRM 123.00+0.796 to 151.31+0.371	MRM 439.25 to 448.40	MRM 123.00+0.811 to 139.30+0.566	MRM 167.33+0.375 to 173.00+0.491	LUMP SUM	LS
320E0300	CQS-1P ASPHALT EMULSION FOR MICROSURFACING	-	-	-	-	-	-	-	11738	-	11727	-	23465	GAL
320E4510	MINERAL AGGREGATE FOR MICROSURFACING	-	-	-	-	-	-	-	383.2	-	382.8	-	766.0	TON
330E0300	SS-1H OR CSS-1H ASPHALT FOR FOG SEAL	65.2	20.6	60.4	49.2	-	20.4	-	-	36.7	-	40	292.5	TON
330E3000	SAND FOR FOG SEAL	10.0	10.0	10.0	10.0	-	10.0	-	-	10.0	-	10.0	70.0	TON
360E0042	CRS-2P ASPHALT FOR SURFACE TREATMENT	353.7	111.7	247.2	266.8	130.3	110.5	130.2	55.2	200.0	72.3	219.9	1897.8	TON
360E1010	TYPE 1A COVER AGGREGATE	2410.9	-	-	-	-	-	-	-	-	-	-	2410.9	TON
360E1010	TYPE 1A COVER AGGREGATE	-	753.8	-	-	-	-	-	-	-	-	-	753.8	TON
360E1010	TYPE 1A COVER AGGREGATE	-	-	1683.8	-	-	-	-	-	-	-	-	1683.8	TON
360E1010	TYPE 1A COVER AGGREGATE	-	-	-	1817.3	-	-	-	-	-	-	-	1817.3	TON
360E1010	TYPE 1A COVER AGGREGATE	-	-	-	-	-	759.8	-	-	-	-	-	759.8	TON
360E1010	TYPE 1A COVER AGGREGATE	-	-	-	-	-	-	-	-	1358.1	-	-	1358.1	TON
360E1010	TYPE 1A COVER AGGREGATE	-	-	-	-	-	-	-	-	-	-	1517.0	1517.0	TON
633E0030	COLD APPLIED PLASTIC PAVEMENT MARKING, 24"	1310	-	270	-	-	-	-	-	12	-	280	1872	FT
633E0040	COLD APPLIED PLASTIC PAVEMENT MARKING, ARROW	19	-	5	-	-	-	-	-	-	-	7	31	EACH
633E1200	HIGH BUILD WATERBORNE PAVEMENT PAINT, WHITE	552	105	593	555	-	105	-	-	1017	-	322	3249	GAL
633E1205	HIGH BUILD WATERBORNE PAVEMENT PAINT, YELLOW	276	80	201	277	-	80	-	-	80	-	102	1096	GAL
633E6020	PAVEMENT MARKING MASKING, 25"	2620	2720	540	-	-	-	-	-	24	-	560	6464	FT
633E6030	PAVEMENT MARKING MASKING, ARROW	38	12	10	-	-	-	-	-	-	-	14	74	EACH
633E6025	PAVEMENT MARKING MASKING, AREA	-	1260	-	-	-	-	-	-	-	-	-	1260	SQFT
634E0010	FLAGGING	200.0	100.0	200.0	210.0	-	100.0	-	-	200.0	-	100	1110.0	HOURL
634E0020	PILOT CAR	50.0	30.0	50.0	60.0	-	30.0	-	-	60.0	-	30.0	310.0	HOURL
634E0110	TRAFFIC CONTROL SIGNS	449.1	543.2	391.0	435.6	813.0	-	813.0	813.0	391.0	583.0	346.4	5578.3	SQFT
634E0120	TRAFFIC CONTROL, MISCELLANEOUS	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LS
634E0275	TYPE 3 BARRICADE	-	1	-	-	1	1	1	1	-	1	-	6.0	EACH
634E0420	TYPE C ADVANCE WARNING ARROW BOARD	-	1	-	-	1	1	1	1	-	1	-	6.0	EACH
634E0630	TEMPORARY PAVEMENT MARKING	29.9	8.5	32.0	29.9	-	8.6	-	-	27.5	-	17.4	153.8	MILE
634E1215	CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE BOARD	-	1	-	-	1	1	1	1	-	1	-	6.0	EACH

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## Table of Additional Quantities

Segments	Highway	Temp Pavement Markings (Miles)	Aggregate (Tons)	CRS-2P (Tons)	Fog Seal (Tons)	Location	County
1	81	-	97.0	14.0	2.6	Turn Lanes	Hamlin
2	14W	-	91.9	13.5	2.5	Widening Area	Brookings
3	20	-	33.2	4.9	0.9	Turn Lane	Codington
4	28	-	14.2	2.1	0.4	Through Bryant	Kingsbury
6	14E	-	91.9	13.5	2.5	Widening Area	Brookings
11	15	-	23.5	3.5	0.6	Turn Lane	Grant
<b>TOTALS</b>			<b>351.7</b>	<b>51.5</b>	<b>9.5</b>		

Highway	Begin MRM+Disp.	End MRM+Disp.	Description	Length (miles)	Width (ft)	Mineral Aggregate for Microsurfacing (Ton)	Asphalt Emulsion for Microsurfacing (Gal)
29 N	123.00+0.796	139.30+0.565	Outside Shoulder	16.102	2.0	305.9	9371
29 N	123.00+0.796	139.30+0.565	Median Shoulder	16.102	0.5	77.3	2367
29 S	123.00+.0811	139.30+0.566	Outside Shoulder	16.086	2.0	305.6	9362
29 S	123.00+.0811	139.30+0.566	Median Shoulder	16.086	0.5	77.2	2365
<b>Totals:</b>						<b>766.1</b>	<b>23465</b>

**RATE OF MATERIALS**

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

**ASPHALT SURFACE TREATMENT:**

SEGMENT	ROUTE	STATION	to	STATION
1	US 81	0+00		525+88.8
2	US 14W	0+00		152+06.4
6	US 14E	0+00		150+16.3

CRS-2P Asphalt for Surface Treatment at the rate of 34.1 tons applied 36 feet wide.  
(Rate = 0.38 Gal./S.Y.)

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

CSS-1H or SS-1H for Fog Seal at the rate of 6.3 tons applied 36 feet wide.  
(Rate = 0.07 Gal./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
3	SD 20	0+00		562+69

CRS-2P Asphalt for Surface Treatment at the rate of 22.7 tons applied 24 feet wide.  
(Rate = 0.38 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 154.9 tons applied 24 feet wide.  
(Rate = 22 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.2 tons applied 24 feet wide.  
(Rate = 0.07 Gal./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
4	SD 28	0+00		526+89.1

CRS-2P Asphalt for Surface Treatment at the rate of 26.5 tons applied 28 feet wide.  
(Rate = 0.38 Gal./S.Y.)

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

CSS-1H or SS-1H for Fog Seal at the rate of 4.9 tons applied 28 feet wide.  
(Rate = 0.07 Gal./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
9	SD 158	0+00		483+12

CRS-2P Asphalt for Surface Treatment at the rate of 21.8 tons applied 23 feet wide.  
(Rate = 0.38 Gal./S.Y.)

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

CSS-1H or SS-1H for Fog Seal at the rate of 4.0 tons applied 23 feet wide.  
(Rate = 0.07 Gal./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
11	SD 15	0+00		305+50.1

CRS-2P Asphalt for Surface Treatment at the rate of 37.9 tons applied 40 feet wide.  
(Rate = 0.38 Gal./S.Y.)

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

CSS-1H or SS-1H for Fog Seal at the rate of 7.0 tons applied 40 feet wide.  
(Rate = 0.07 Gal./S.Y.)

**FLUSH SEAL:**

SEGMENT	ROUTE	STATION	to	STATION
5	I 29 N	0+00		1533+15
7	I 29 S	0+00		1531+41
8	I 29 N	820+35.36		1469+37.12
10	I 29 S	0+00		850+13.3

**Median Shoulders**

CRS-2P Asphalt for Surface Treatment at the rate of 1.5 tons applied 4 feet wide.  
(Rate = 0.15 Gal./S.Y.)

**Outside Shoulders**

CRS-2P Asphalt for Surface Treatment at the rate of 3.0 tons applied 8 feet wide.  
(Rate = 0.15 Gal./S.Y.)

**MICROSURFACING:**

The Estimate of Quantities is based on the following quantities of material per mile, all of which will be furnished in place by the Contractor.

The Contractor will be responsible to verify the exact locations of all rate changes in the field.

SEGMENT	ROUTE	STATION	to	STATION
8	I29 N	0+00		820+35.36
10	I29 S	0+00		850+13.3

Micro-surfacing – SDDOT Type II or III Mineral Aggregate

Aggregate For Microsurfacing applied 2' wide 19 Tons/mile

Asphalt For Microsurfacing applied 2' wide 582 Gal/mile

Aggregate For Microsurfacing applied 0.5' wide 4.8 Tons/mile

Asphalt For Microsurfacing applied 0.5' wide 147 Gal/mile

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**SEQUENCE OF OPERATIONS**

The below sequence is for **Segments 1, 2, 3, 4, 6, 9 & 11 (Asphalt Surface Treatment):**

1. Install fixed location ground mounted traffic control devices.
  2. Install and remove temporary traffic control devices as needed for each type of work.
  3. Install cold applied plastic pavement marking.
  4. Place temporary pavement marking and pavement marking masking not more than 24 hours prior to chip seal.
  5. Apply chip seal.
- The brooming operation will be immediately in front of the asphalt distributor.
- The Contractor will begin sealing operations at the farthest point from the stockpile site and work towards the stockpile site to eliminate unnecessary driving and turning on the fresh seal.
- The application of the asphalt and aggregate will cease at least one hour prior to sunset each day.
- Remove cover from tabs and remove masking.
6. Broom chip sealed areas each morning following chip seal application.
  7. Pick up cover aggregate in curb & gutter areas and on portions of Segments 2 (Arlington) and 4 (Bryant) within City Limits and as directed by the Engineer.
  8. Install Masking.
  9. Apply fog seal.  
Remove cover from tabs and remove masking.
  10. Complete the pavement marking. Immediately prior to application of the permanent pavement marking, the areas to be painted will be broomed or blown off with high pressure compressed air. (If a high pressure air device is used to clean the pavement surface, it will be capable of sustaining continuous high pressure for the duration of the pavement marking process.)
  11. Remove temporary pavement marking within the seven day time period specified elsewhere in the plans.
  12. Remove traffic control devices.

The below sequence is for **Segment 5, 7, 8 & 10 (Shoulder Flush Seal):**

1. Install fixed location ground mounted traffic control devices.
2. Install and remove temporary traffic control devices as needed for each type of work.
3. Microsurfacing at Segments 8 & 10.
4. Apply flush seal.  
  
The application of the asphalt will cease at least one hour prior to sunset each day.
5. Remove traffic control devices.

The method of flush seal placement for Segments **5, 7, 8 & 10** will be discussed and approved at the preconstruction meeting by the Area Engineer.

A lane closure as per standard plates 634.47, 634.48, 634.63 & 634.64 is anticipated however a mobile closure per Standard Plate 634.08 will be considered and will be discussed at the preconstruction meeting.

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

**TRAFFIC CONTROL SIGNS**

Traffic control signs have been included in a table for each route. Payment will only be for those signs used on each route.

**GENERAL TRAFFIC CONTROL**

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

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

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

On Segments 1,2,3,4,6,9 & 11 (Asphalt Surface Treatment), the Contractor will furnish, install, and maintain LOOSE GRAVEL (W8-7) signs with 40 MPH (W13-1P) advisory speed plaques upon start of surface treatment operations at each end of the segment and on either side of intersecting asphalt roads and major intersections as determined by the Engineer. In addition, LOOSE GRAVEL signs with 40 MPH advisory speed plaques will be installed at no more than 4 mile intervals throughout each segment. The 40 MPH advisory speed plaque should not be installed with LOOSE GRAVEL signs in areas where the posted speed limit is less than 40 MPH. LOOSE GRAVEL signs and 40 MPH advisory speed plaques will be covered or removed from view when they are not applicable.

Construction vehicles will exit or enter the construction work zone at locations identified by the Engineer. At no time will construction vehicles utilize the maintenance crossovers or the Interstate median to exit or enter Interstate traffic.

On Interstate projects with more than one construction site, slow moving equipment that operates at a speed less than 40 MPH may mobilize between sites if the equipment travels on the shoulder. The slow-moving equipment will also display a flashing amber light and a slow-moving sign.

On Segment 5,7,8 &10 (Flush Seal), the Contractor will furnish, install and maintain FRESH OIL signs with SHOULDER WORK signs upon start of flush seal operations at each end of the project. In addition, FRESH OIL signs with

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**GENERAL TRAFFIC CONTROL, CONTINUED**

SHOULDER WORK signs will be installed at 3 mile intervals throughout each project and at other location(s) determined in the field by the Engineer. The aforementioned signs will be removed 3 days following application of flush seal.

Traffic Control for Segment 5,7,8 & 10 will conform to Standard Plates 634.63 & 634.64. Segments 1,3,4,9 & 11 will conform to Standard Plate 634.23. Segments 2 & 6 will conform to Standard Plates 634.47, 634.48, 634.63 or 634.64.

A lane closure will be required when applying shoulder wedge microsurfacing on I 29 northbound and southbound. Traffic will be returned to normal driving lanes during non-working hours.

ROAD WORK NEXT XX MILES (G20-1), LOOSE GRAVEL (W8-7), and END ROAD WORK (G20-2) signs are the only signs that need to be mounted on fixed location breakaway sign supports, as shown on the plan layout. ROAD WORK AHEAD (W20-1), FLAGGER (W20-7), ONE LANE ROAD AHEAD (W20-4), and TRUCK CROSSING (W8-6) signs may be mounted on portable supports. Signs mounted on portable supports will be moved as necessary to keep current with the work activities.

Until the end of each day's chip seal operations, at the discretion of the Contractor, additional flaggers and FLAGGER (W20-7) symbol signs will be provided to alert the traveling public entering completed portions of the project to the potential of airborne chips.

The flaggers will provide each motorist with a printed notice on the Contractor's letterhead similar to the one shown below. Cost of the notice will be incidental to other contract items.

**"CONTRACTOR'S LETTERHEAD"**

THIS HIGHWAY IS BEING RESURFACED WITH A ROCK 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.

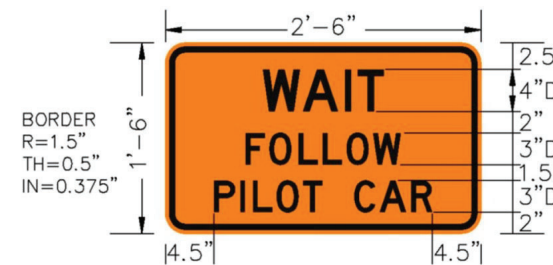
YOU MAY WISH TO CONSIDER TAKING AN ALTERNATE ROUTE. IF YOU PROCEED, KEEP TO THE RIGHT AND DRIVE 40 MPH OR LESS. ANOTHER FLAGGER AND A PILOT CAR WILL BE ESCORTING YOU AROUND THE OIL SEAL COAT APPLICATION AREA.

THANK YOU.

**FLAGGING**

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.



It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

**HAUL ROAD**

The Contractor will 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.

**SHOULDER WORK**

Prior to construction, Department of Transportation Maintenance Forces will spray the shoulders to kill existing vegetation. It will be the Contractor's responsibility to notify the State a minimum of thirty days prior to starting work on the shoulders of the highway. The State assumes no responsibility for the effectiveness of the herbicide applied. Contact: Watertown Area Engineer, Matt Brey 605-882-5166.

Vegetation and accumulated material on or adjacent to the existing roadway will be removed by the Contractor to the satisfaction of the Engineer prior to asphalt flush seal.

Shoulder work will be incidental to other contract items. Separate measurement and payment will not be made.

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

Asphalt Surface Treatment will not be placed on any of the bridges, approach slabs, sleeper slabs, strip seals, manholes, water valves or any type of concrete on these projects.

Loose aggregate will not be swept onto bridge decks or into drop inlets. Aggregate will be removed from neoprene joints located on approach slabs or bridge decks.

**ESTIMATED QUANTITIES**

The quantities of asphalt for surface treatment and cover aggregate are based off the rates shown in the Rates of Materials. This is only an estimate. The actual application rates of materials will be determined in the field during construction based upon the surface condition, aggregate type, aggregate gradation and flakiness index.

**FLUSH SEAL**

The Contractor will maintain traffic control on the flush sealing area until flush seal is cured enough to prevent pickup on vehicles. Sand application following application of the CRS-2p for shoulder flush seal on I-29 (or segment 5,7,8 &10) will be as per Section 330.3 F.

The Contractor will take care not to get asphalt on the existing pavement marking. The distributors used during the flush seal will be equipped with guards to prevent the emulsified asphalt from coming in contact with the existing pavement marking. The existing pavement marking on the concrete is approximately two inches from the asphalt shoulder on the median side of the I-29 Segment 8.

The Contractor will use guides (wheels, cameras, etc.) installed on the distributors to follow the alignment of the concrete during sealing operations. The tracking of asphalt materials onto existing markings will not be acceptable.

Any damage to the existing pavement marking on the shoulders will be replaced with waterborne paint at the Contractor's expense with no additional costs to the State.

**TYPE 1A COVER AGGREGATE**

Failure on the #200 sieve will shut down operations until the Engineer determines if changes or corrections are required.

**ASPHALT FOR SURFACE TREATMENT**

The asphalt for surface treatment that is delivered for use on this contract will be used in the order it is received. Storage of asphalt for surface treatment will only be allowed at the end of the work day. The material that is placed in storage will be the first material used the following day.

**FOG SEAL**

The fog seal will begin within 7 calendar days following the completion of the chip seal on each segment. Prior to the application of the fog seal the Contractor will be required to broom the chip seal. A CSS-1h or SS-1h

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Segment 4 (SD 28)	44	43
Segment 6 (US 14E)	0	0
Segment 9 (SD 158)	6	5
Segment 11 (SD 15)	12	12

**FOG SEAL (Continued)**

emulsion will be used for the fog seal application. A water-to-emulsion ratio of 1:1 will be used for the fog application.

The Contractor will avoid placing the Fog Seal over any newly placed Cold Applied Permanent Pavement Markings. The Contractor will be responsible for removing any CSS-1h or SS-1h that is on the markings. All costs associated with cleaning the pavement markings will be incidental to the contract unit price per ton for CSS-1h or SS-1h Asphalt for Fog Seal.

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

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

The Contractor will maintain traffic control on the fog sealing area until the fog seal is cured enough to prevent pickup on vehicles. Sand will be applied at intersections or other locations as directed by the Engineer.

**SHOULDER WORK FOR MICROSURFACING**

The Contractor will notify the State at least **30** days prior to beginning work to allow the state time to inspect and spray for vegetation. Vegetation and accumulated debris will be removed from the shoulder surface by the Contractor prior to the micro-surfacing work.

The Contractor will not cover or disturb the inside shoulder yellow edge line.

The Contractor will remove loose material from the asphalt shoulders on a daily basis.

All costs associated with this work will be incidental to the various microsurfacing bid items.

**MICROSURFACING**

The polymer modified emulsion used in the mixture will be a CQS-1p.

Micro-surfacing will be placed on the asphalt median shoulders in a way that does not fill in the rumble strips. If rumble strips are filled in, material will be removed from the rumble strips at no cost to the State.

Micro-surfacing will not be placed on any bridge or bridge approach slabs.

The asphalt shoulder settlement depth along the project varies along the longitudinal joint between mainline and the shoulder. The Contractor will fill in this settlement along the project in accordance with the details found in these plans. Micro-surfacing material will be placed on the shoulder to assure the longitudinal joint is filled and sealed.

The filling for shoulder settlement will be applied 2' wide to the outside shoulders and 0.5' wide to the median shoulders. This work may be done with one pass provided the asphalt shoulder settlement filling does not recess below the adjacent surfacing more than 1/4". If unacceptable results occur the

Contractor will be required to perform additional passes to fill the shoulder settlement as directed by the Engineer.

**TEMPORARY PAVEMENT MARKING**

Temporary flexible vertical markers (tabs) with covers will be used to mark centerline. Paint will not be allowed for Temporary Pavement Marking.

The temporary flexible vertical markers (tabs) will have secure double covers. The Contractor will be required to remove the covers manually after completion of the sand seal and again after completion of the fog seal. Any markers that are non-reflective will be cleaned. Cleaning of temporary flexible vertical markers (tabs) will be incidental to the contract unit price per mile for Temporary Pavement Marking. Petroleum products will not be used to clean markers. The tab covers are considered construction debris and will be disposed of properly by the Contractor.

Any temporary flexible vertical markers (tabs) with covers removed before the fog seal will be replaced prior to application of the fog seal. Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs at no additional cost to the State.

The Contractor will remove and dispose of the temporary flexible vertical markers (tabs) after Permanent Pavement Marking is applied. Method of removal will be nondestructive to the road surface and will result in the marker being separated from the adhesive (the adhesive will remain on the road surface and the marker is discarded) or the marker will be cut in such a manner that no more than 1/4" of the vertical portion of the marker remains on the road surface. Removal will be accomplished within 7 days of completion of the permanent pavement marking.

Cost for furnishing, applying, uncovering, cleaning, removing and disposing of the temporary flexible vertical markers (tabs) will be included in the contract unit price per mile for Temporary Pavement Marking.

The total length of no passing zone on this project is estimated to be as follows:

- Segment 1 (US 81): 6.5 miles
- Segment 2 (US 14W): 0.0 miles
- Segment 3 (SD 20): 4.3 miles
- Segment 4 (SD 28): 7.2 miles
- Segment 6 (US 14E): 0.0 miles
- Segment 9 (SD 158): 0.9 miles
- Segment 11 (SD 15): 1.8 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, should the Contractor elect to use these signs. It is estimated that the following signs will be required to mark the no passing zones:

Location	DO NOT PASS	PASS WITH CARE
Segment 2 (US 14W)	0	0
Segment 3 (SD 20)	18	18

Flagger Symbol signs (W20-7) and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights, will 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 will 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 will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work will be approved by the Engineer.

Cost for traffic control to install and remove the temporary flexible vertical markers (tabs) will be incidental to the contract unit price per mile for Temporary Pavement Marking.

Quantities of Temporary Pavement Markings consist of:  
 One pass prior to the Seal Coat.  
 One pass after the Seal Coat.  
 One pass after the Fog Seal.

**PERMANENT PAVEMENT MARKING**

The Contractor will be required to repaint both centerline and edgelines with High Build Waterborne Pavement Marking Paint.

The application of Permanent Pavement Marking Paint will begin no sooner than 7 calendar days following completion of Flush Sealing or Fog Sealing and will be completed within 14 calendar days following completion of Flush Sealing or Fog Sealing.

Damage or covering of the in place pavement markings on I 29 where the microsurfacing or flush seal is applied to the shoulder will be repainted by the Contractor to the satisfaction of the Engineer at no cost to the State.

**HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT**

All materials will be applied as per manufacturer's recommendations. High build waterborne pavement marking paint will conform to Section 980.1.B.

Reflective media will consist of glass beads. Reflective media will require a Certificate of Compliance for Certification for each source and lot. Acceptance sampling will not be required.

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**RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT**

Solid 4" line = 27.8 Gals/Mile  
Dashed 4" line = 7.6 Gals/Mile  
Glass Beads = 8 Lbs/Gal.

Solid 8" line = 55.6 Gals/Mile

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

**REMOVE EXISTING PAVEMENT MARKING**

The existing pavement markings consist of cold applied plastic pavement marking and paint.

Existing cold applied plastic pavement marking being replaced will be removed in their entirety. It will be the Contractor's responsibility to visit the project site to determine what type of material(s) are present and the extent of the work required to remove the existing pavement markings.

**REMOVE EXISTING PAVEMENT MARKING CONT.**

Removal of the existing markings will be accomplished without causing damage to the pavement, pavement joints, or joint sealant. The Contractor will repair any damage to the pavement, pavement joints, or joint sealant for no additional payment and at no cost to the State.

Payment for removal of the existing lines and other miscellaneous payment markings as necessary will be incidental to the contract unit price for the various contract items.

**COLD APPLIED PLASTIC PAVEMENT MARKING**

All materials will be applied as per the manufacturer's recommendations.

Cold Applied Plastic Pavement Markings will be 3M Series 380 AW or an approved equal.

Cold Applied Plastic Pavement Marking will be placed prior to asphalt surface treatment as noted in the plans and as directed by the Engineer.

Cold Applied Plastic Pavement Marking will be placed in the same location as existing markings, unless otherwise directed by the Engineer.

ITEM	SEGMENT 1 US 81	SEGMENT 3 SD 20	SEGMENT 9 SD 158	SEGMENT 11 SD 15
Gore Area	1310	270	-	280
Arrows RT	5	-	-	-
Arrows LT	12	5	-	7
Stop bars	-	-	12	-

**PAVEMENT MARKING MASKING**

Immediately prior to placement of asphalt surface treatment, and prior to the fog seal, durable markings will be covered with an approved pavement marking masking. All cost for furnishing, installing, removing, and disposing of masking will be incidental to the various contract unit prices for Pavement Marking Masking.

If new markings are damaged due to masking failure they will be replaced at the Contractor's expense.

**CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN**

During any work on Segments 5,7,8 &10 (I-29 Shoulder Flush), a portable changeable message sign (PCMS) will be installed 1 mile in advance of the project along the Driving Lane Shoulder to notify drivers of the upcoming construction. The Contractor will program the portable changeable message signs with the following message:

RT LANE  
CLOSED  
AHEAD

LT LANE  
CLOSED  
AHEAD

The Engineer will coordinate with the Contractor for any changes to the messages displayed on the sign.

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PLOTTED FROM - TRHJUNT04

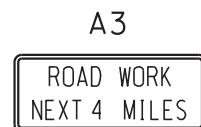
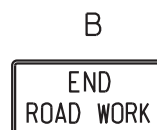
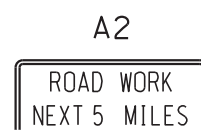
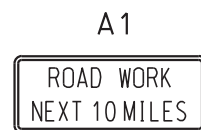
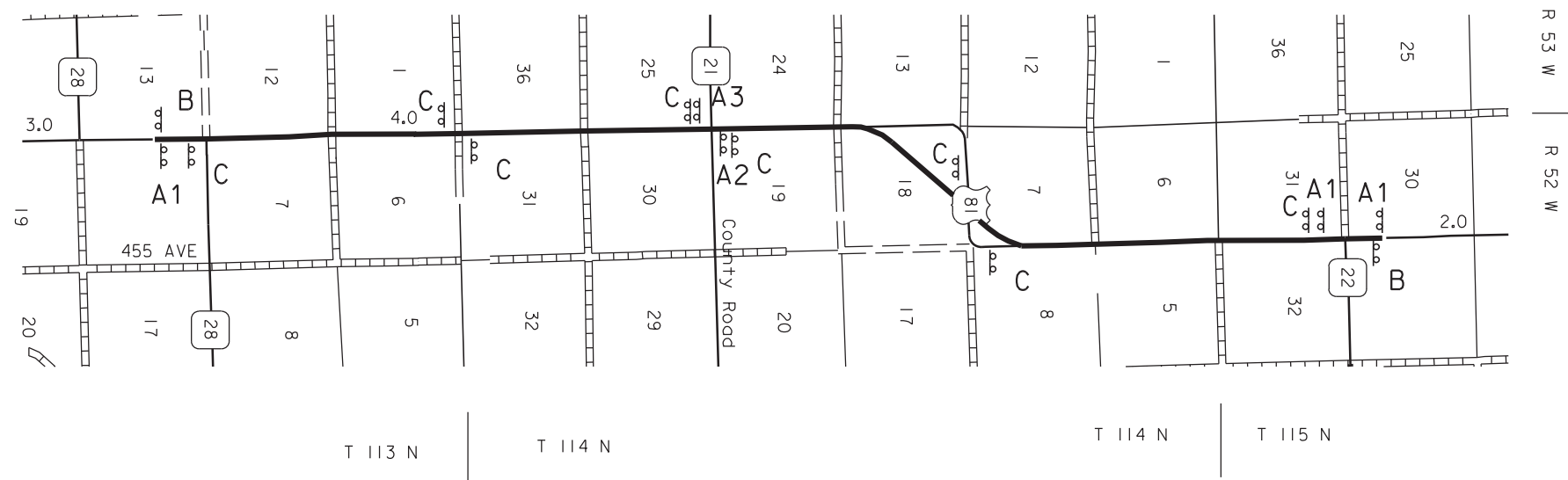
PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06WV.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	19	39
Plotting Date: 01/15/2026			

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

Segment 1  
 US 81 - MRM 135.00+0.309 to MRM 145.09+0.184  
 Codington County  
 Length 9.960 miles



W20-1 ROAD WORK AHEAD signs shall be mounted on portable supports, and shall be placed on intersecting ramps as directed by the Engineer. ROAD WORK AHEAD signs shall be moved as necessary to keep current with the work activities as per the applicable Standard Plate.

EXACT LOCATION OF SIGNS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

PLOT SCALE - 1:200

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

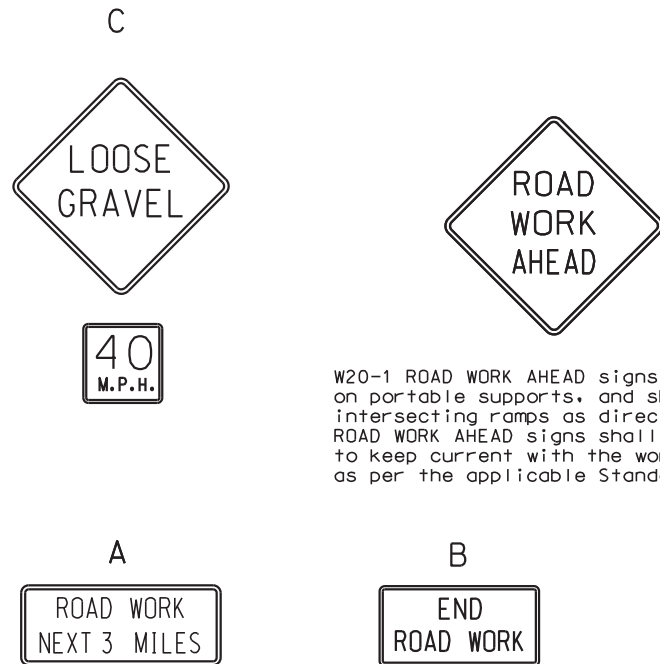
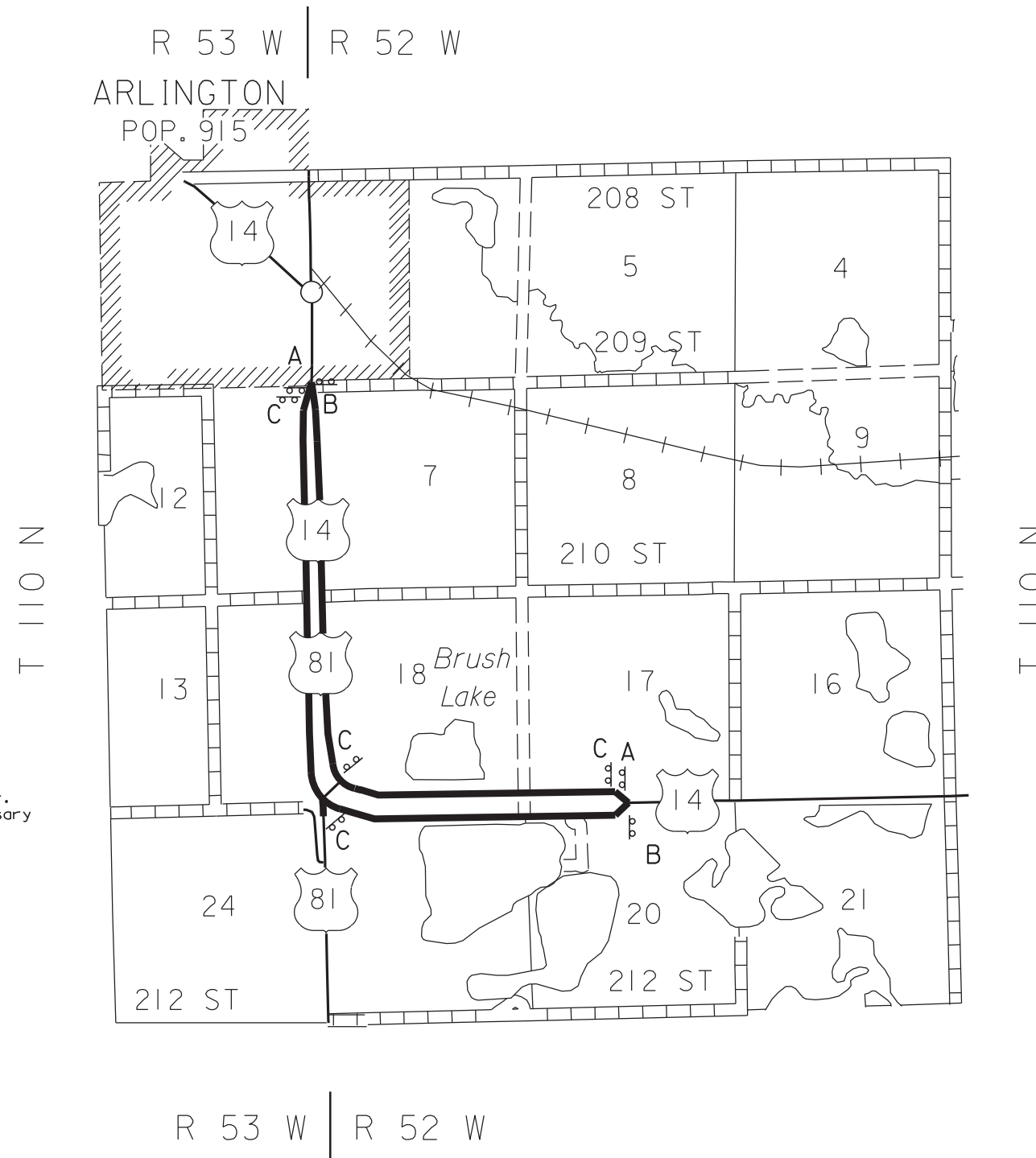
FILE - ... \0.0 DESIGN\BORDER 06SW.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	20	39
Plotting Date: 01/15/2026			

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

Segment 2  
 US 14W - MRM 401.14+0.262 to MRM 404.00+0.275  
 Kingsbury/ Brookings Counties  
 Length 2.849 miles

Segment 6  
 US 14E - MRM 401.14+0.270 to MRM 404.00+0.278  
 Kingsbury/ Brookings Counties  
 Length 2.875 miles



W20-1 ROAD WORK AHEAD signs shall be mounted on portable supports, and shall be placed on intersecting ramps as directed by the Engineer. ROAD WORK AHEAD signs shall be moved as necessary to keep current with the work activities as per the applicable Standard Plate.

EXACT LOCATION OF SIGNS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

PLOT SCALE - 1:200

PLOTTED FROM - TRHJINT04

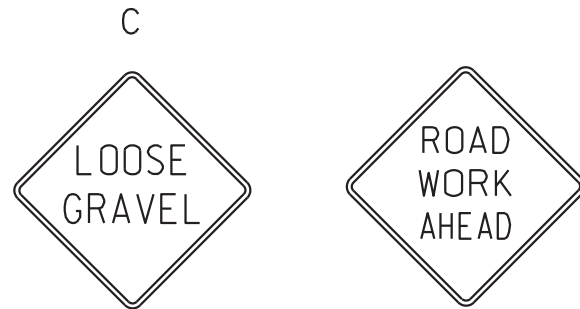
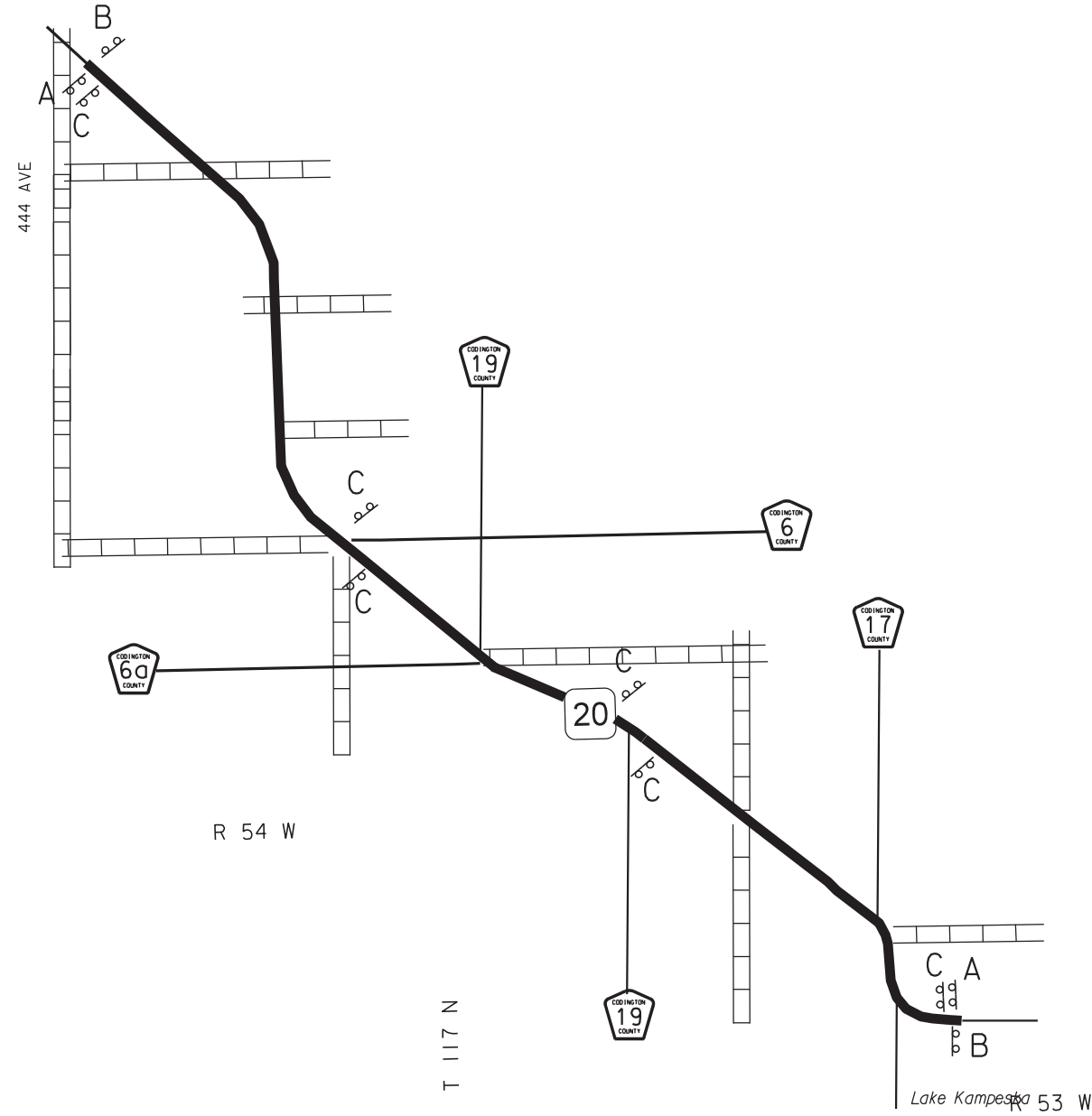
PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06WV.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	21	39
Plotting Date: 01/15/2026			

Segment 3  
SD 20 - MRM 383.73+0.000 to MRM 394.26+0.122  
Codington County  
Length 10.657 miles

FLORENCE



W20-1 ROAD WORK AHEAD signs shall be mounted on portable supports, and shall be placed on intersecting ramps as directed by the Engineer. ROAD WORK AHEAD signs shall be moved as necessary to keep current with the work activities as per the applicable Standard Plate.

EXACT LOCATION OF SIGNS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.



PLOT SCALE - 1:200

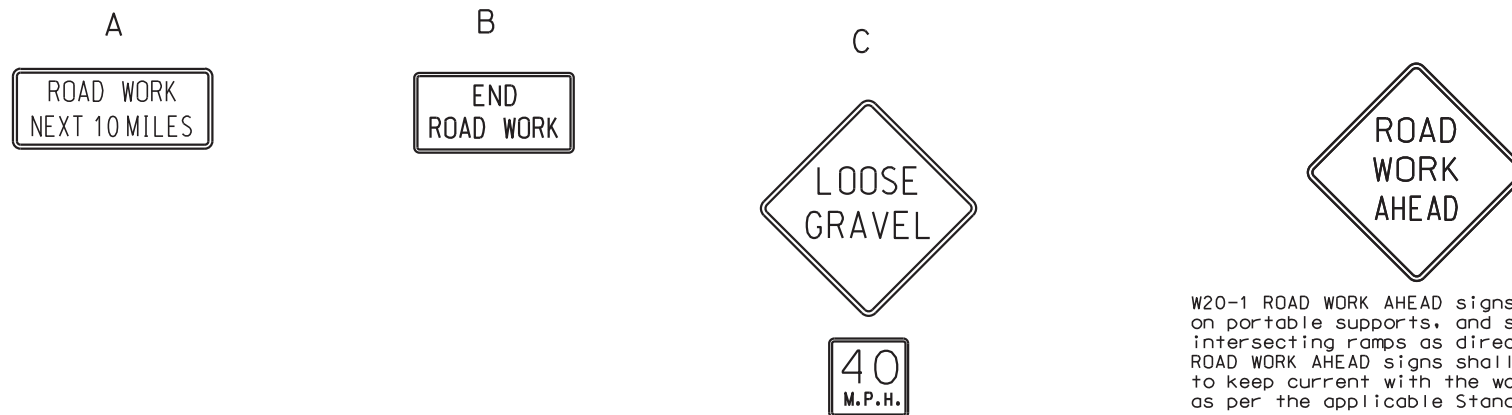
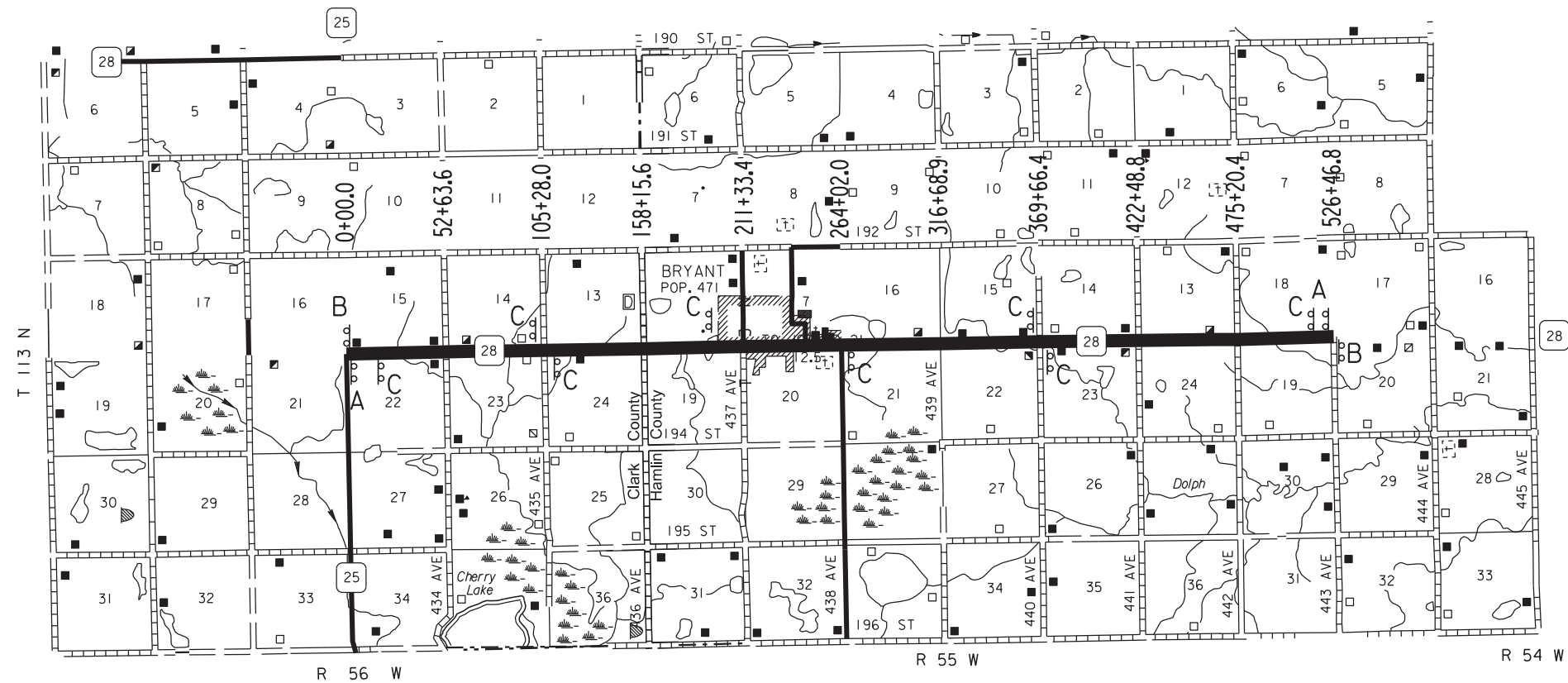
PLOTTED FROM - TRHJINT04

PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06SW.DGN

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

Segment 4  
 SD 28 - MRM 319.91+0.000 to MRM 329.95+0.000  
 Clark & Hamlin Counties  
 Length 9.979 miles



W20-1 ROAD WORK AHEAD signs shall be mounted on portable supports, and shall be placed on intersecting ramps as directed by the Engineer. ROAD WORK AHEAD signs shall be moved as necessary to keep current with the work activities as per the applicable Standard Plate.

EXACT LOCATION OF SIGNS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	23	39
Plotting Date: 01/15/2026			

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

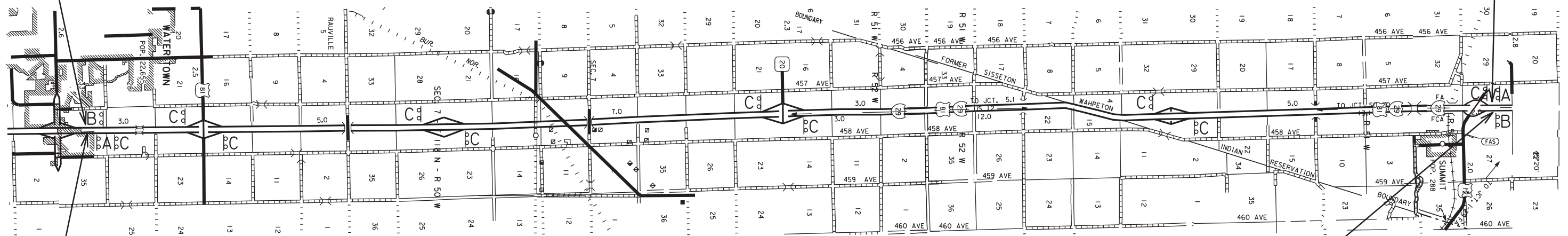
Segment 5  
 I 29 N - MRM 179.00+0.341 to MRM 208.00+0.380  
 Codinton/ Grant / Roberts Counties  
 Length 29.037 miles

Segment 7  
 I 29 S - MRM 179.00+0.383 to MRM 208.00+0.385  
 Codinton/ Grant / Roberts Counties  
 Length 29.004 miles



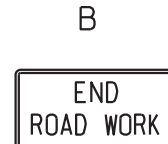
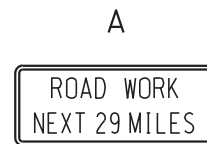
I29S START PROJECT FLUSH SEAL  
 STA. 0+00  
 MRM 179.00 + 0.383  
 MILEAGE 179.282

I29S END PROJECT FLUSH SEAL  
 STA. 1531+41  
 MRM 208.00 + 0.385  
 MILEAGE 208.286



I29N START PROJECT FLUSH SEAL  
 STA. 0+00  
 MRM 179.00 + 0.341  
 MILEAGE 179.216

I29N END PROJECT FLUSH SEAL  
 STA. 1533+15  
 MRM 208.00 + 0.380  
 MILEAGE 208.253



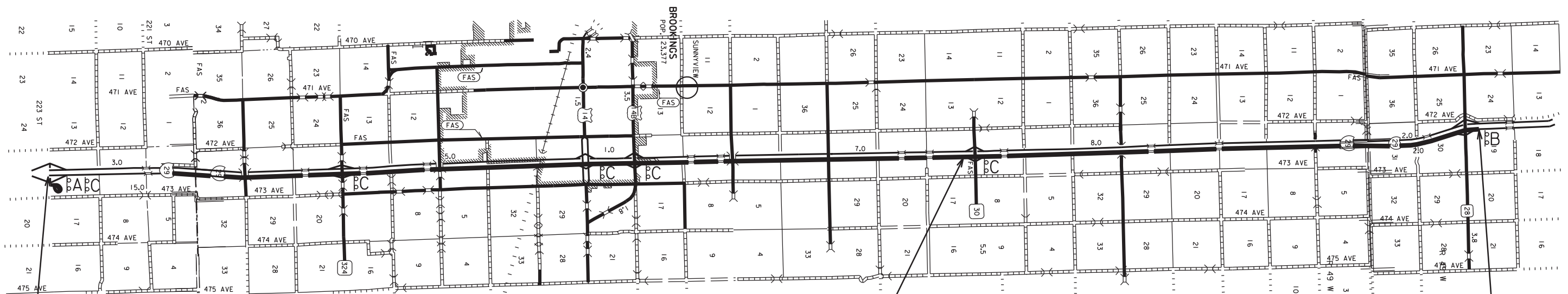
EXACT LOCATION OF SIGNS TO BE DETERMINED  
 IN THE FIELD BY THE ENGINEER.

W20-1 ROAD WORK AHEAD signs shall be mounted  
 on portable supports, and shall be placed on  
 intersecting ramps as directed by the Engineer.  
 ROAD WORK AHEAD signs shall be moved as necessary  
 to keep current with the work activities.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	24	39
Plotting Date: 01/15/2026			

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

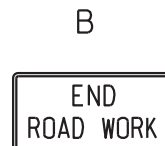
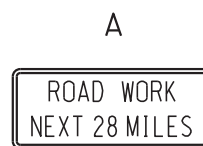
Segment 8  
 I 29 N - MRM 123.00+0.796 to MRM 151.31+0.371  
 Moody / Brookings/Deuel Counties  
 Length 27.829 miles



BEGIN PROJECT MICROSURFACING  
 STA. 0+00.00  
 MRM 123.00 + 0.796  
 MILEAGE 123.667

END PROJECT MICROSURFACING  
 BEGIN PROJECT FLUSH SEAL  
 STA. 820+35.36  
 MRM 139.30+0.565  
 MILEAGE 139.771

END PROJECT FLUSH SEAL  
 STA. 1469+37.12  
 MRM 151.31 + 0.371  
 MILEAGE 151.496



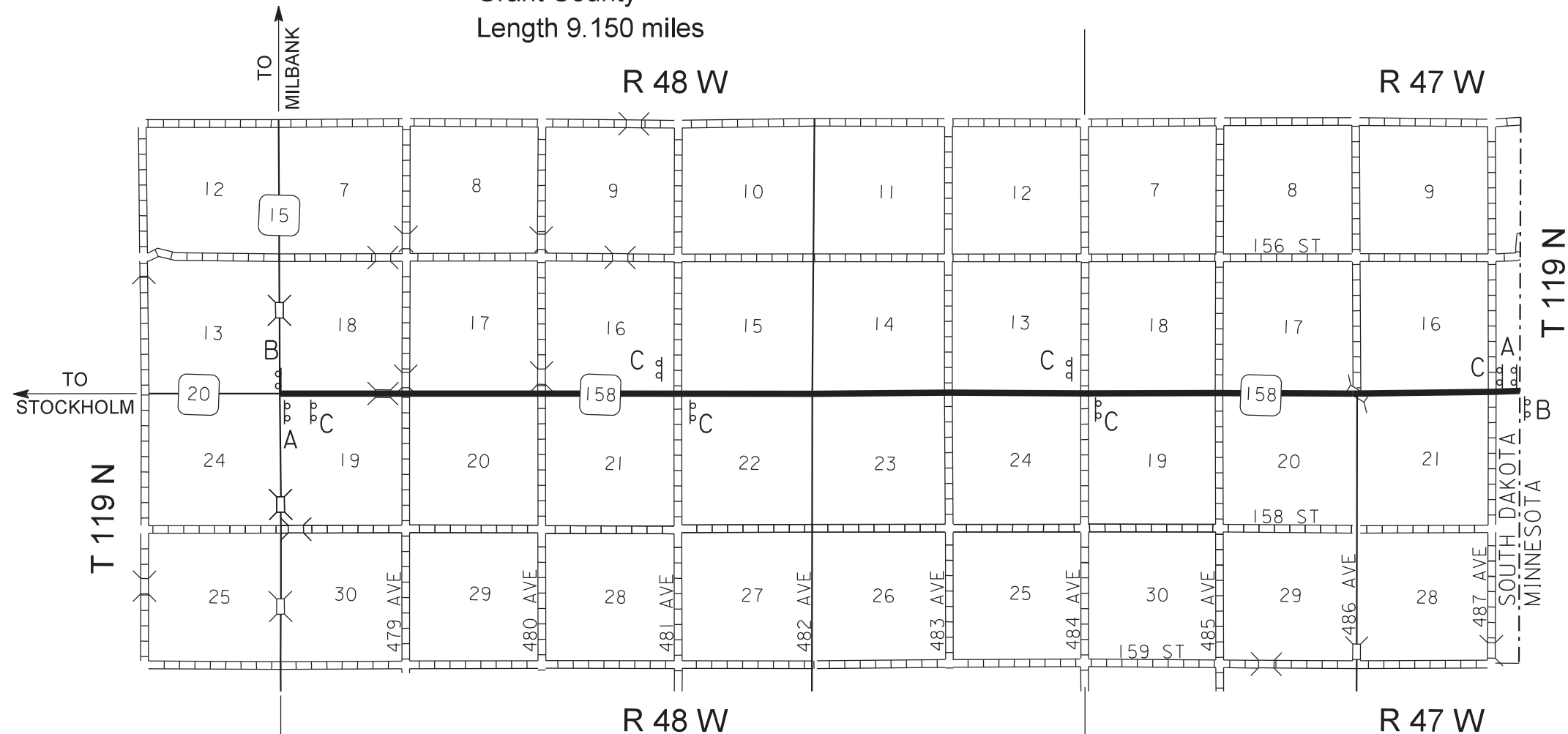
EXACT LOCATION OF SIGNS TO BE DETERMINED  
 IN THE FIELD BY THE ENGINEER.

W20-1 ROAD WORK AHEAD signs shall be mounted on portable supports, and shall be placed on intersecting ramps as directed by the Engineer. ROAD WORK AHEAD signs shall be moved as necessary to keep current with the work activities as per the applicable Standard Plate.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	25	39
Plotting Date: 01/15/2026			

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

Segment 9  
 SD 158 - MRM 439.25+0.000 to MRM 448.40+0.000  
 Grant County  
 Length 9.150 miles



EXACT LOCATION OF SIGNS TO BE DETERMINED  
 IN THE FIELD BY THE ENGINEER.

W20-1 ROAD WORK AHEAD signs shall be mounted on portable supports, and shall be placed on intersecting ramps as directed by the Engineer. ROAD WORK AHEAD signs shall be moved as necessary to keep current with the work activities as per the applicable Standard Plate.

PLOT SCALE - 1:200

PLOTTED FROM - TRHJUNT04

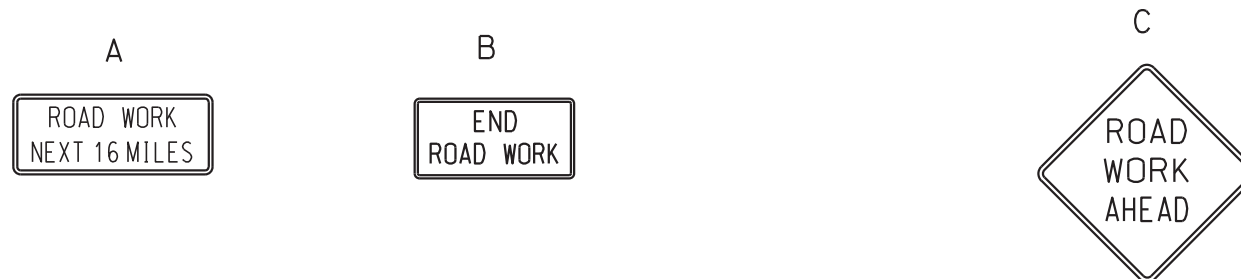
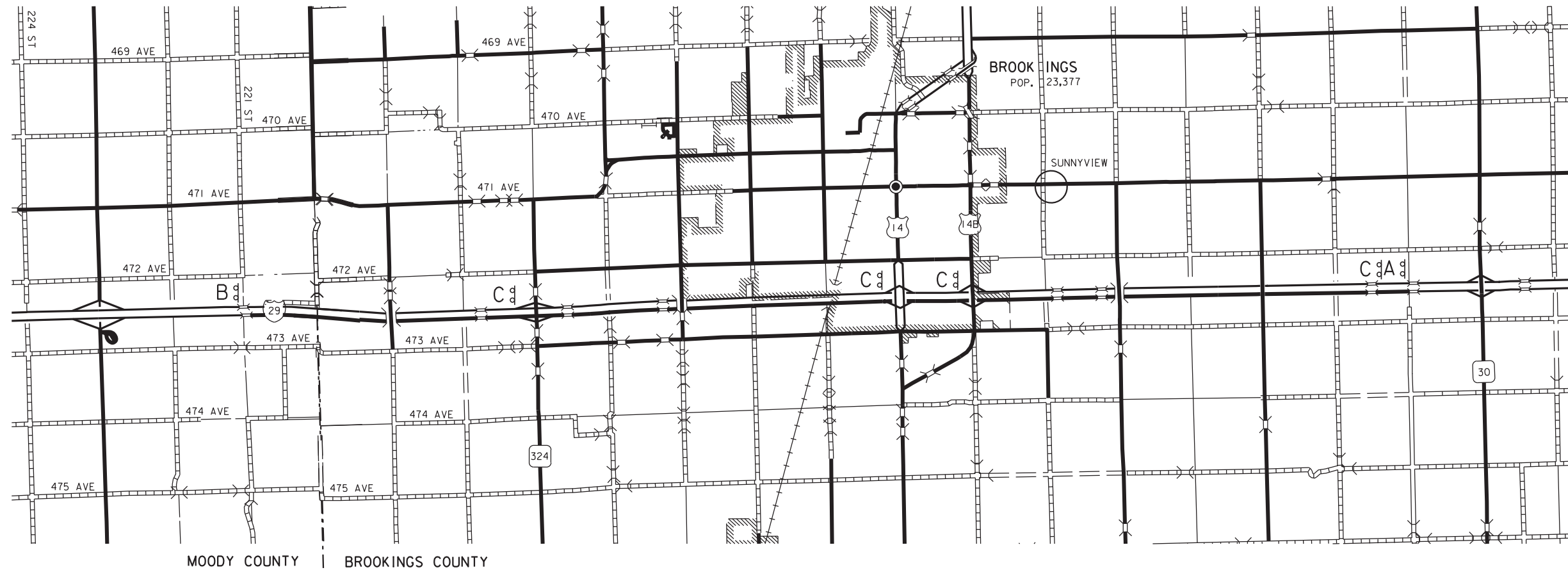
PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06SW.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	26	39
Plotting Date: 01/15/2026			

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

Segment 10  
 I 29 S - MRM 123.00+0.811 to MRM 139.30+0.566  
 Moody / Brookings County  
 Length 16.086 miles



EXACT LOCATION OF SIGNS TO BE DETERMINED  
 IN THE FIELD BY THE ENGINEER.

W20-1 ROAD WORK AHEAD signs shall be mounted  
 on portable supports, and shall be placed on  
 intersecting ramps as directed by the Engineer.  
 ROAD WORK AHEAD signs shall be moved as necessary  
 to keep current with the work activities  
 as per the applicable Standard Plate.

PLOT SCALE - 1:200

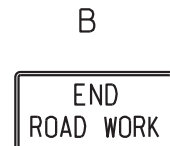
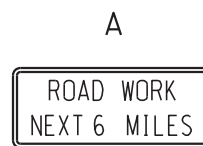
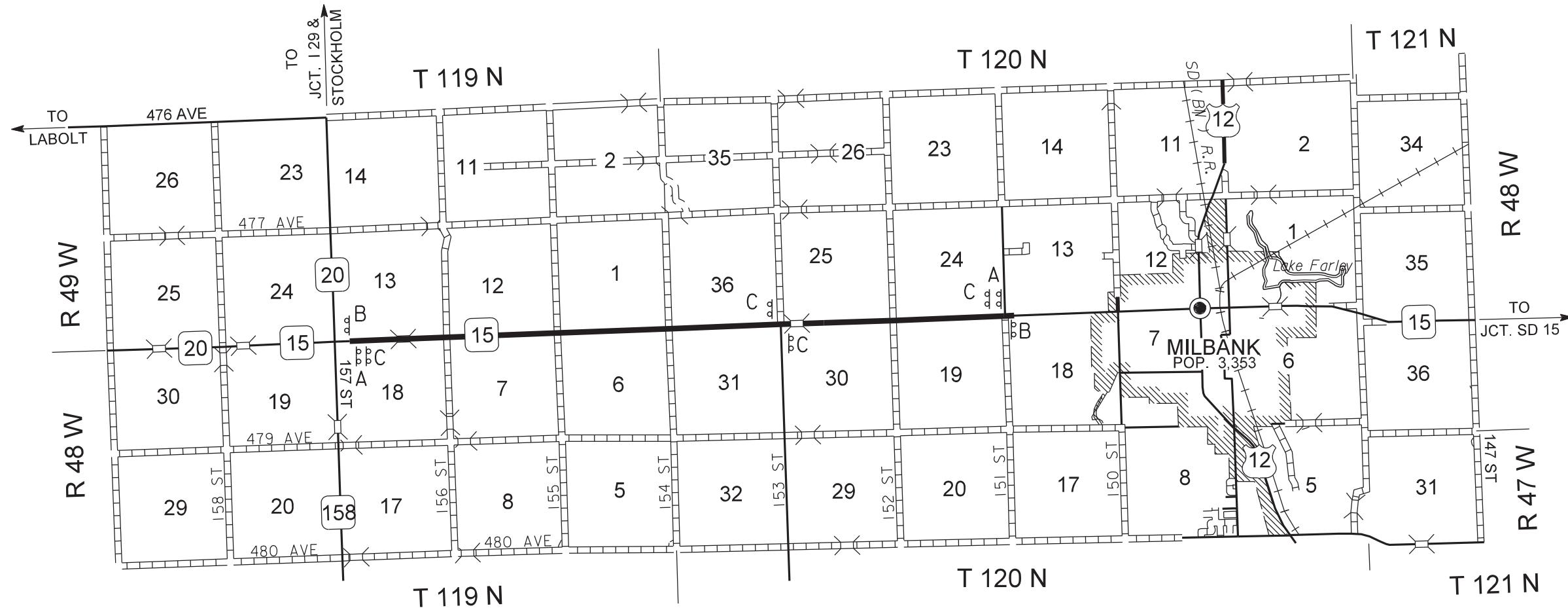
PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06WV.DGN

# FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

Segment 11  
 SD 15 - MRM 167.33+0.375 to MRM 173.00+0.491  
 Grant County  
 Length 5.786 miles



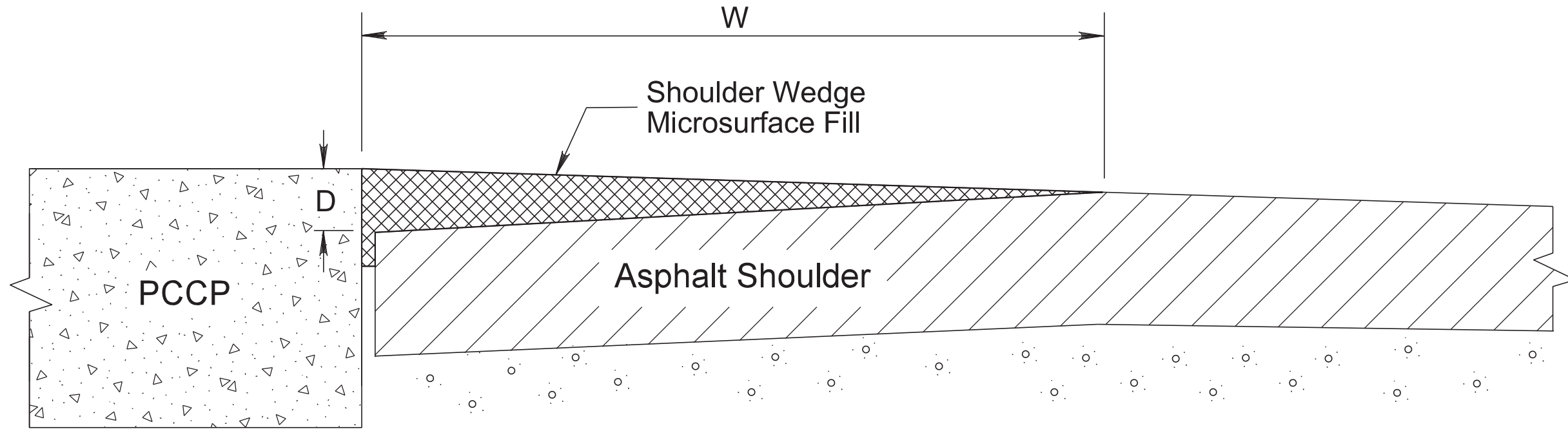
EXACT LOCATION OF SIGNS TO BE DETERMINED  
 IN THE FIELD BY THE ENGINEER.

W20-1 ROAD WORK AHEAD signs shall be mounted on portable supports, and shall be placed on intersecting ramps as directed by the Engineer. ROAD WORK AHEAD signs shall be moved as necessary to keep current with the work activities as per the applicable Standard Plate.

# SHOULDER WEDGE MICROSURFACING

SHOULDER SETTLEMENT ADJACENT TO PCCP

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012(332)	28	39
Plotting Date: 01/15/2026			



HWY	*D	W	
		Outside Shoulder	Median Shoulder
29 N	1.0"	24"	6"
29 S	1.0"	24"	6"

\* Average Depth Shown, D may vary from 0.25" to 2"

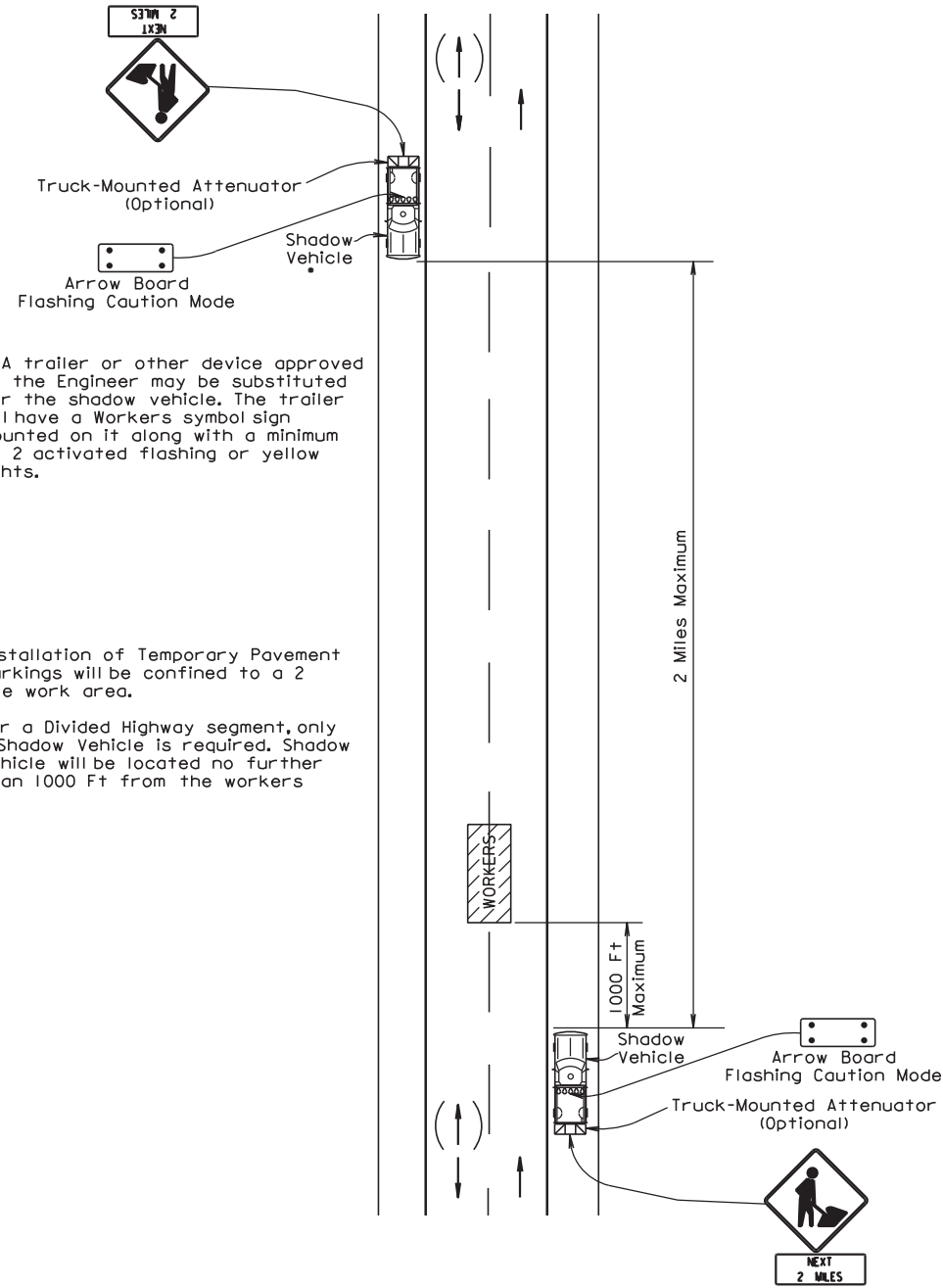
PLOT SCALE - 1:200

PLOTTED FROM - TRHJINT04

PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06W.DGN

**GUIDES FOR TRAFFIC CONTROL DEVICES  
APPLICATION OF TEMPORARY FLEXIBLE VERTICAL MARKERS**

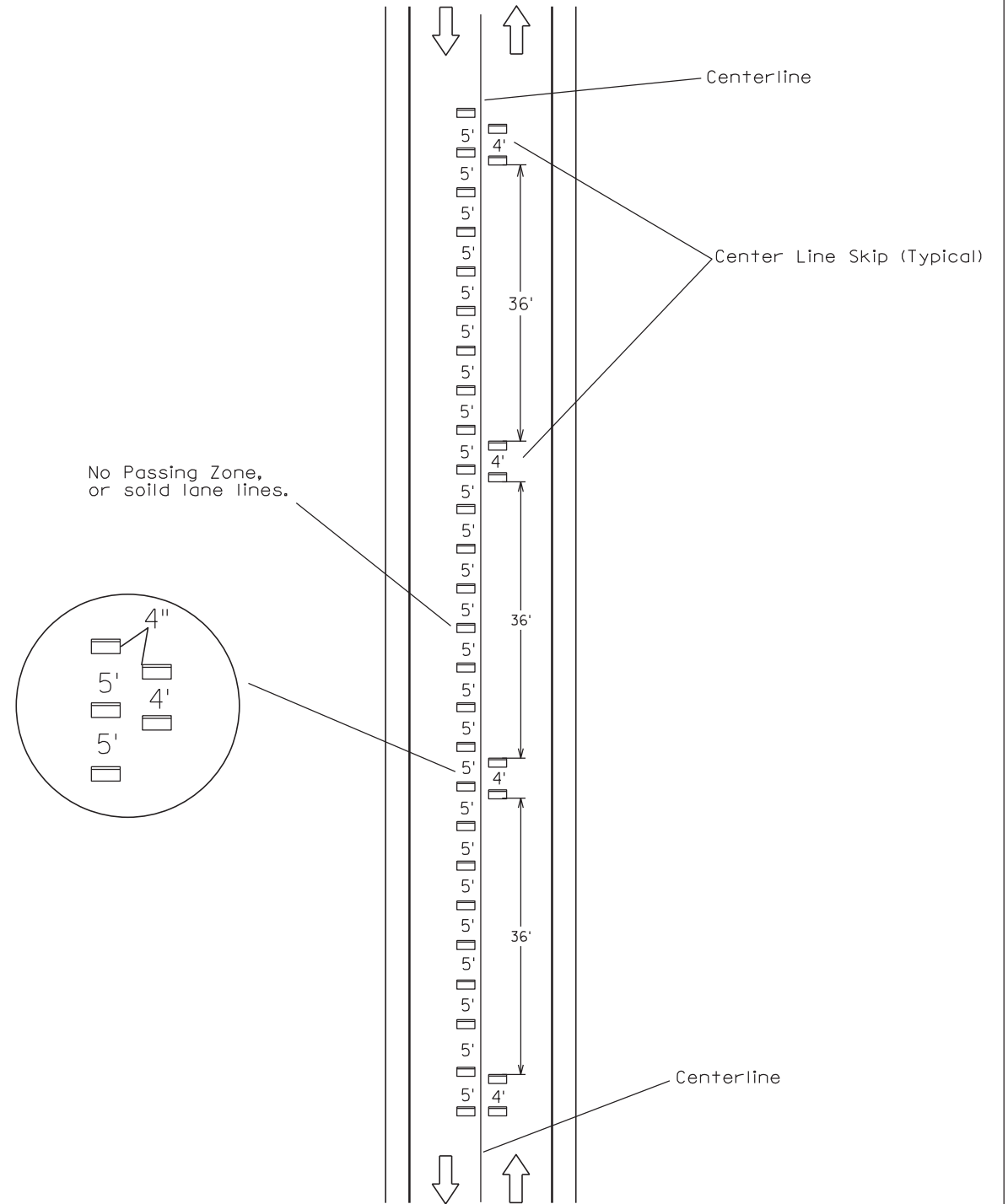


\* A trailer or other device approved by the Engineer may be substituted for the shadow vehicle. The trailer will have a Workers symbol sign mounted on it along with a minimum of 2 activated flashing or yellow lights.

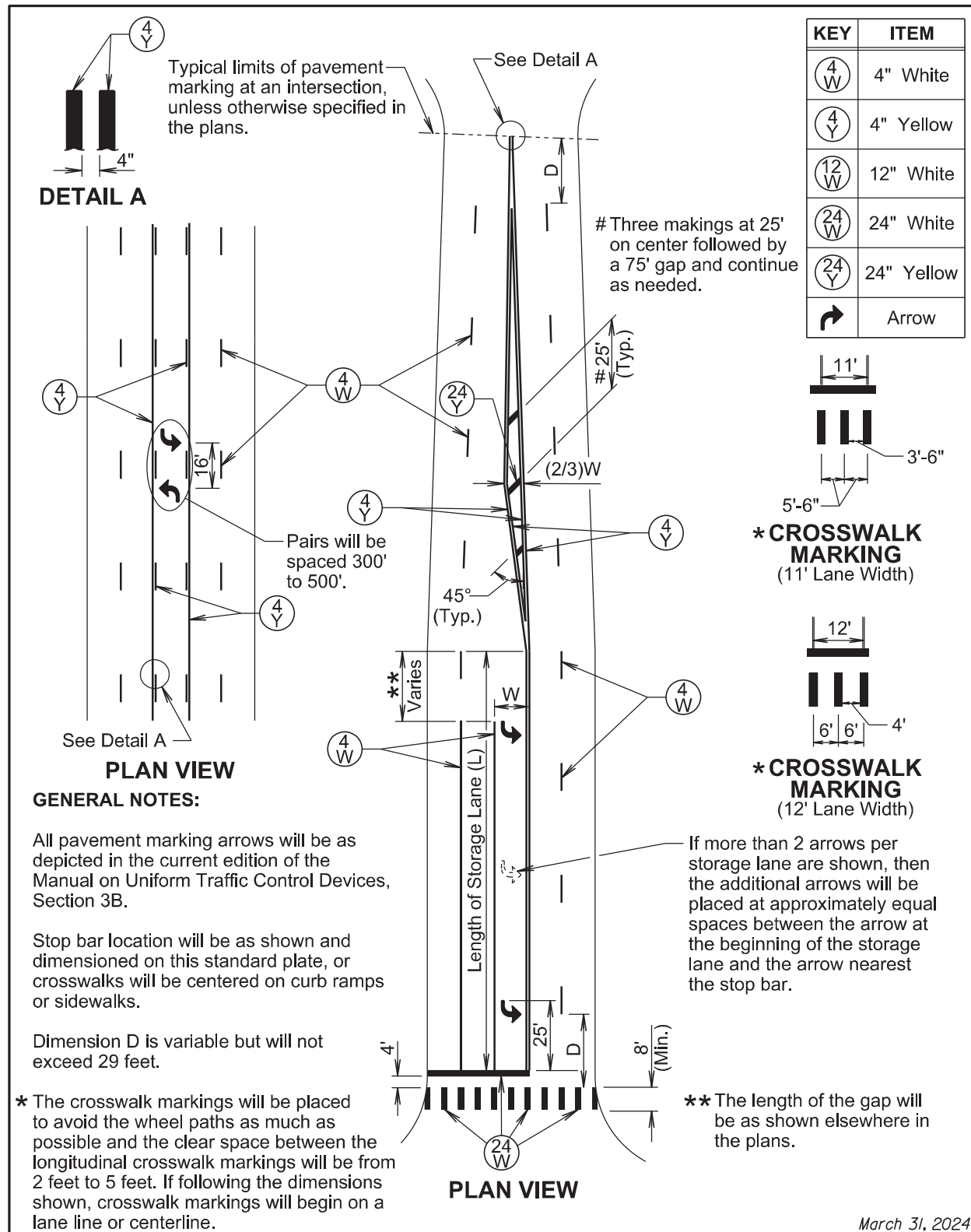
Installation of Temporary Pavement Markings will be confined to a 2 Mile work area.

For a Divided Highway segment, only 1 Shadow Vehicle is required. Shadow Vehicle will be located no further than 1000 Ft from the workers

**DETAILS FOR TRAFFIC CONTROL DEVICES  
TEMPORARY ROAD MARKER INSTALLATION**



PLOT SCALE - 1:200



**GENERAL NOTES:**

All pavement marking arrows will be as depicted in the current edition of the Manual on Uniform Traffic Control Devices, Section 3B.

Stop bar location will be as shown and dimensioned on this standard plate, or crosswalks will be centered on curb ramps or sidewalks.

Dimension D is variable but will not exceed 29 feet.

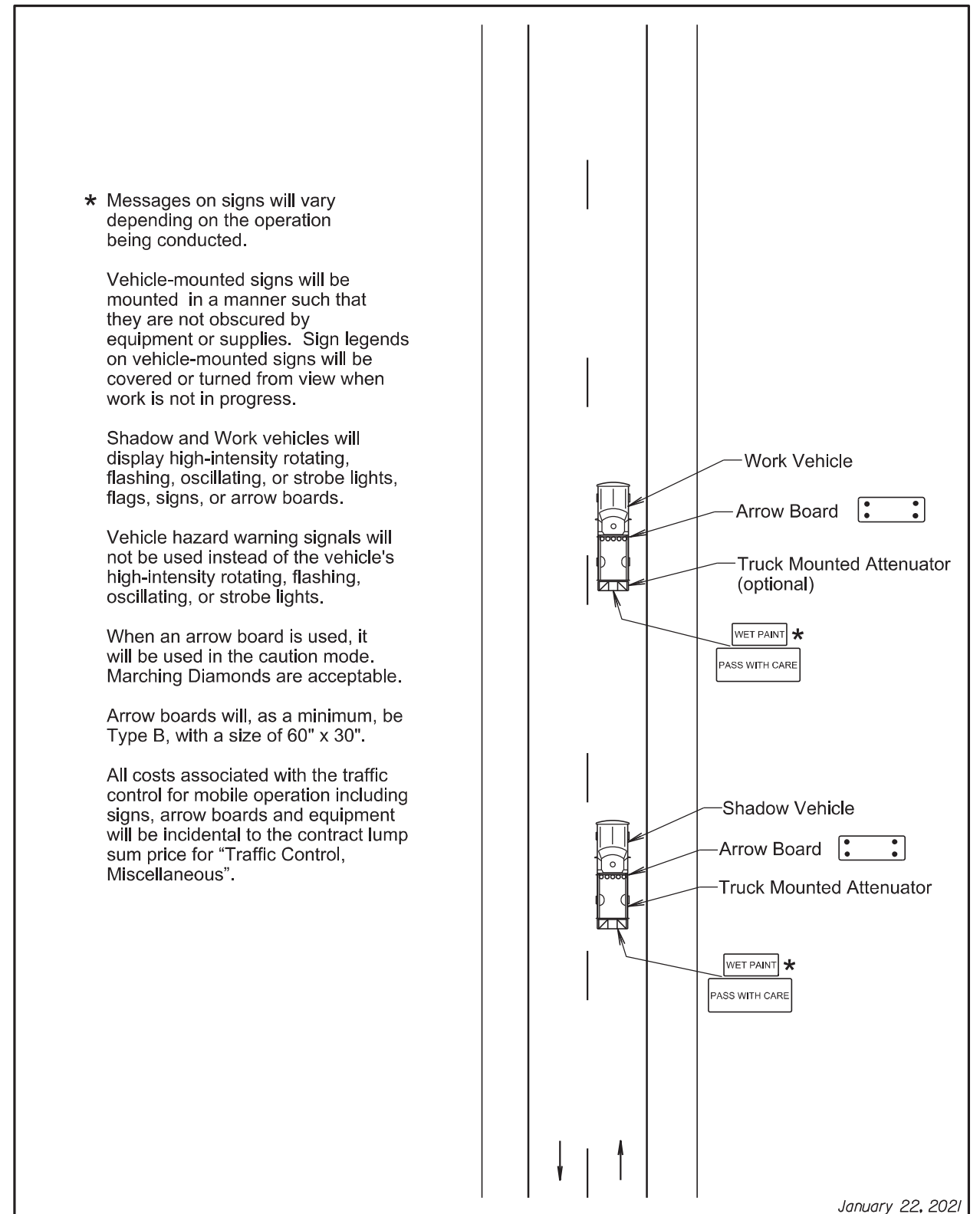
\* The crosswalk markings will be placed to avoid the wheel paths as much as possible and the clear space between the longitudinal crosswalk markings will be from 2 feet to 5 feet. If following the dimensions shown, crosswalk markings will begin on a lane line or centerline.

If more than 2 arrows per storage lane are shown, then the additional arrows will be placed at approximately equal spaces between the arrow at the beginning of the storage lane and the arrow nearest the stop bar.

\*\* The length of the gap will be as shown elsewhere in the plans.

March 31, 2024

Published Date: 2026	S D D O T	PLATE NUMBER
		633.01
		Sheet 1 of 1



\* Messages on signs will vary depending on the operation being conducted.

Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

January 22, 2021

Published Date: 2026	S D D O T	PLATE NUMBER
		634.06
		Sheet 1 of 1

PLOT NAME - 1  
FILE - ... \0.0 DESIGN\BORDER 06WV.DGN

PLOT SCALE - 1:200

\* Messages on signs will vary depending on the operation being conducted.

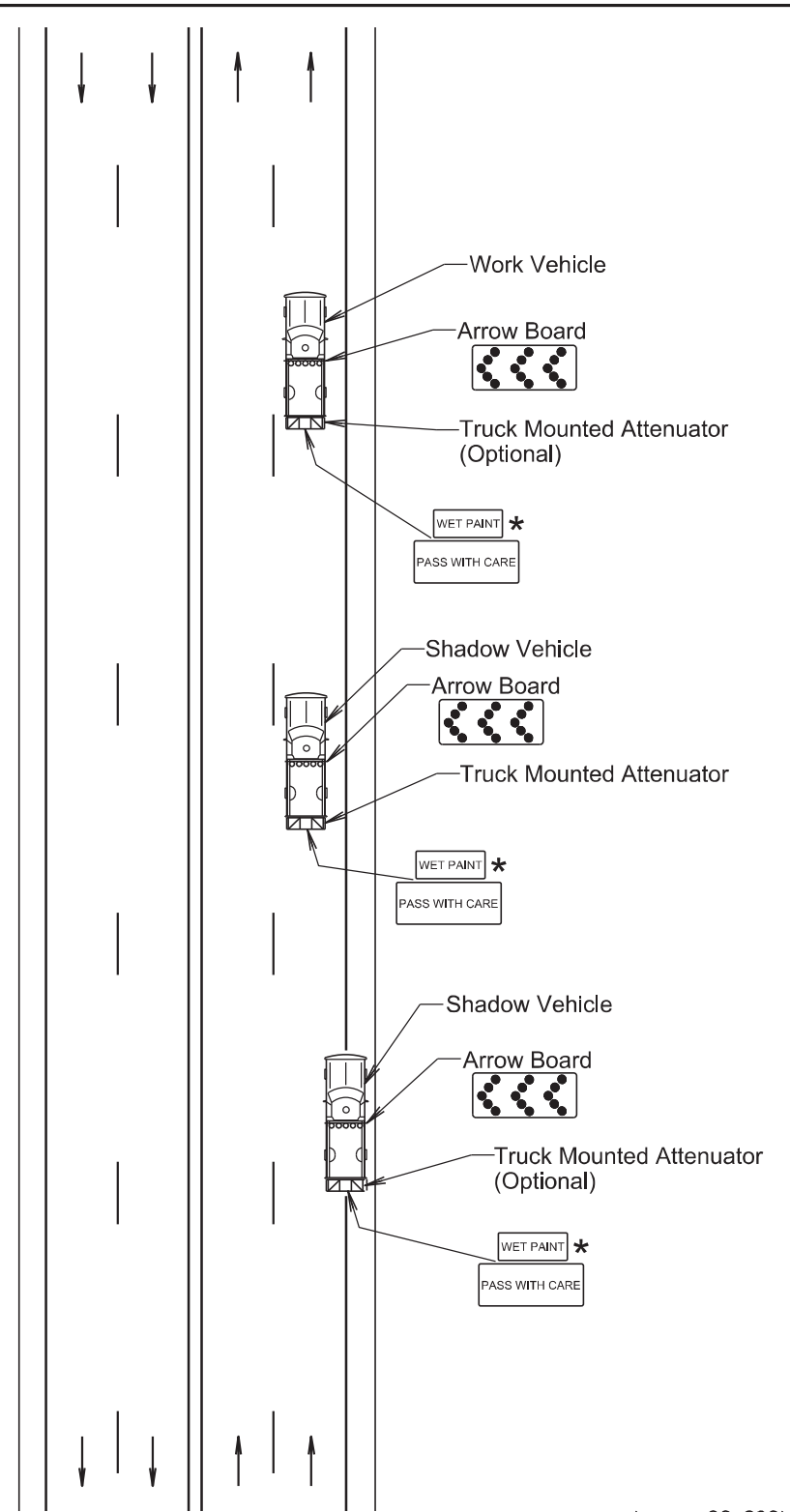
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2026	S D D O T	MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS	PLATE NUMBER 634.08
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

● Flagger  
■ Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

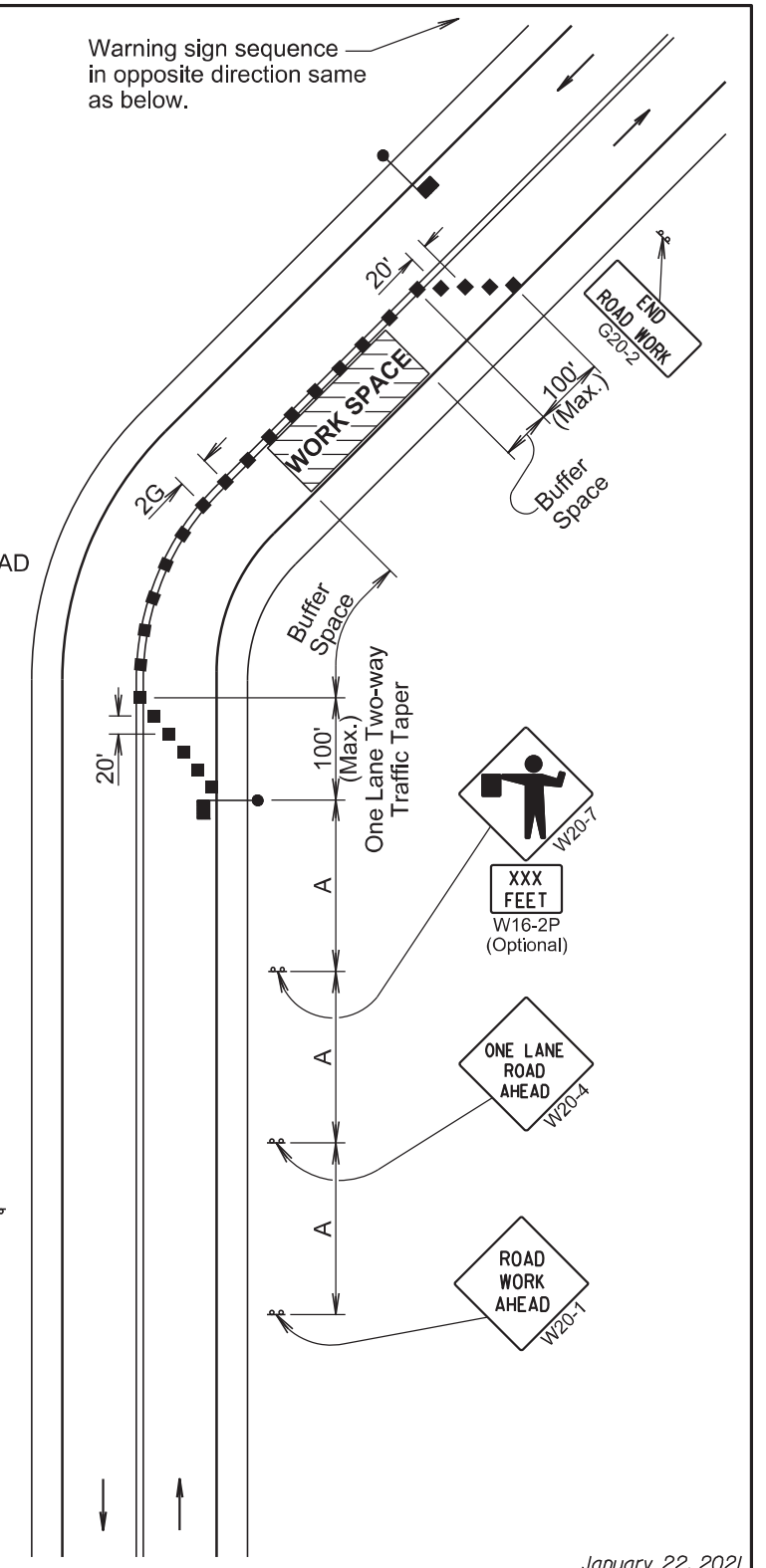
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

The length of A may be adjusted to fit field conditions.

Published Date: 2026	S D D O T	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1



January 22, 2021

PLOTTED FROM - TRHJINT04

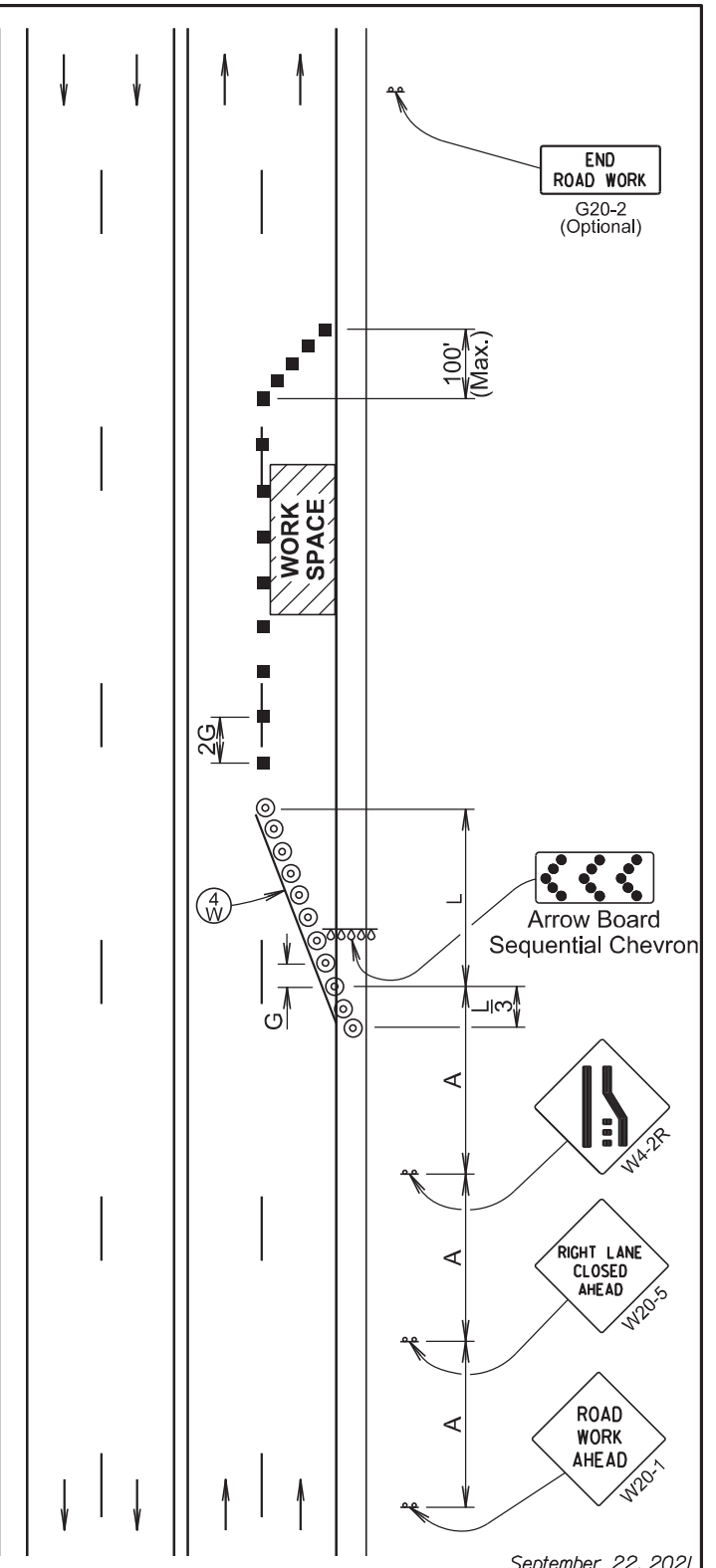
PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06WV.DGN

PLOT SCALE - 1:200

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

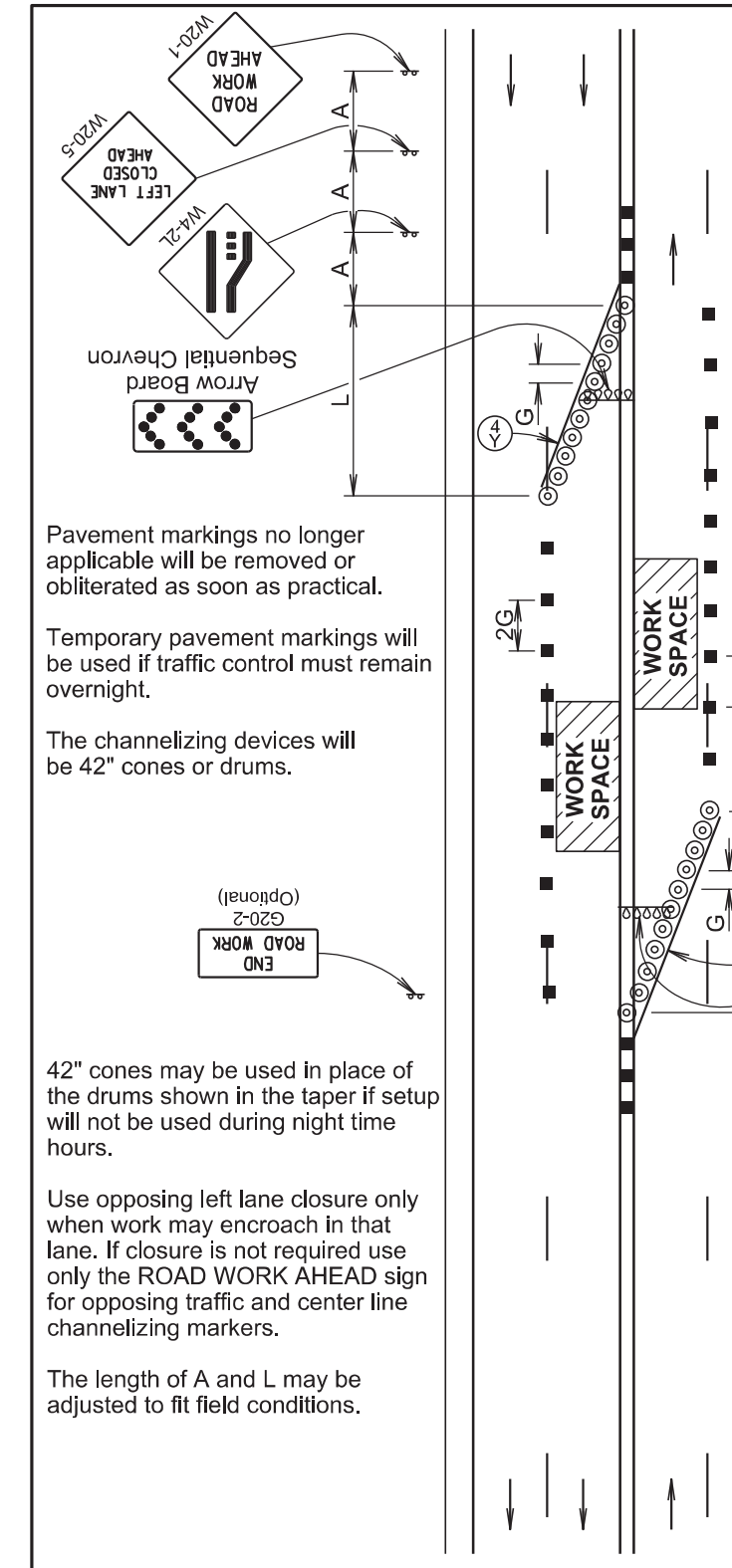
- \* Spacing is 40' for 42" cones.
  - ⊙ Reflectorized Drum
  - Channelizing Device
  - ④ 4" White Temporary Pavement Marking
- The channelizing devices will be 42" cones or drums.
- 42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.
- Temporary pavement markings will be used if traffic control must remain overnight.
- The length of A and L may be adjusted to fit field conditions.



September 22, 2021

Published Date: 2026	S D D O T	4-LANE UNDIVIDED, RIGHT LANE CLOSED	PLATE NUMBER 634.47
			Sheet 1 of 1

PLOT NAME - 1



August 31, 2022

Published Date: 2026	S D D O T	4-LANE UNDIVIDED, LEFT LANE CLOSED	PLATE NUMBER 634.48
			Sheet 1 of 1

FILE - ... \0.0 DESIGN\BORDER 06SW.DGN

PLOT SCALE - 1:200

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)		
	(A)	(B)	(C)
0 - 30	200		
35 - 40	350		
45 - 50	500		
55	750		
60 - 65	1000		
	(A)	(B)	(C)
70 - 80	1000	1500	2640

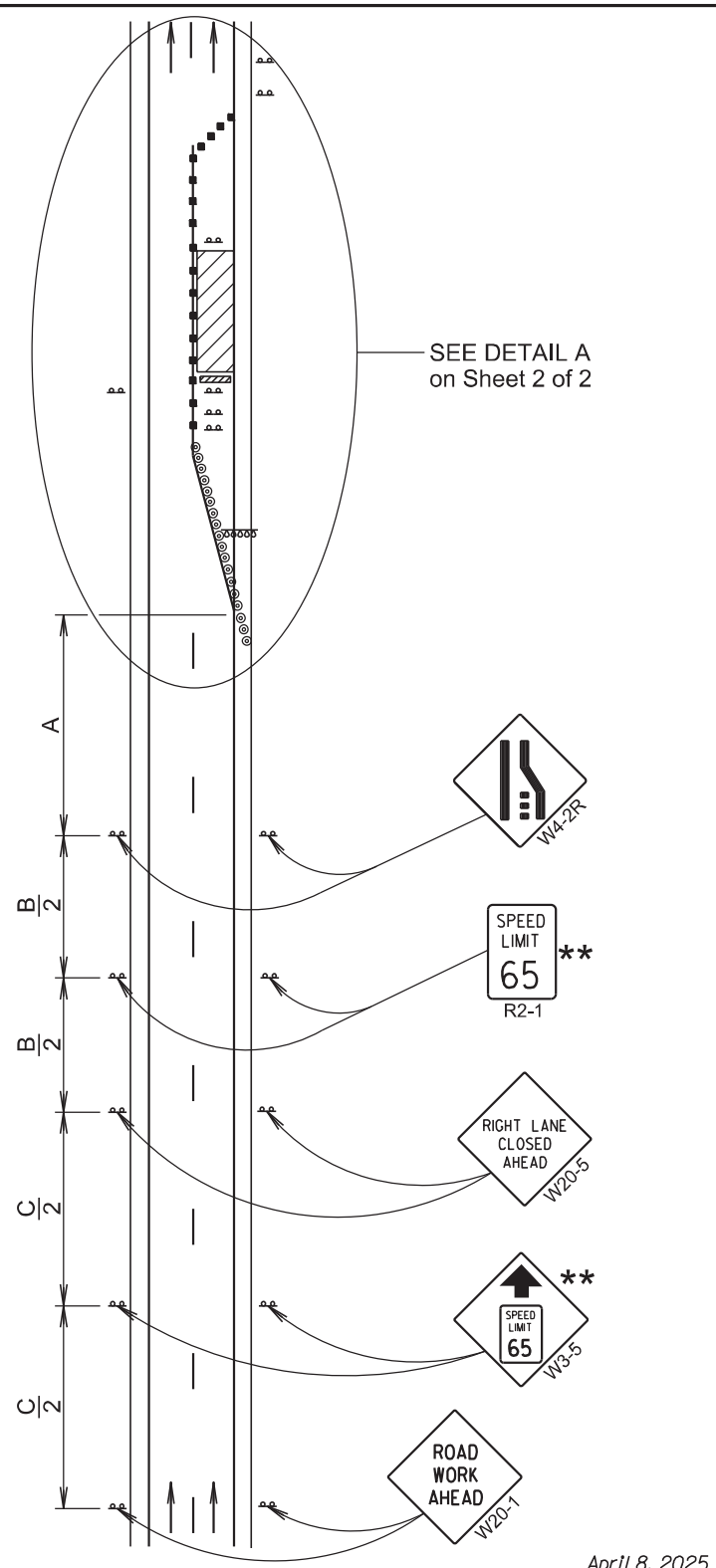
\*\* Speed appropriate for location.

⊙ Reflectorized Drum

■ Channelizing Device

ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.



SEE DETAIL A on Sheet 2 of 2

April 8, 2025

Published Date: 2026	S D D O T	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
			Sheet 1 of 2

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)
0 - 30	25	180
35 - 40	25	320
45	25	600
50	50 *	600
55	50 *	660
60 - 65	50 *	780
70 - 80	50 *	960

\* Spacing is 40' for 42" cones.

\*\* Speed appropriate for location.

\*\*\* Use speed limit designated for the condition when workers are present in the work space. Signs will be covered or removed when workers are not present.

⊙ Reflectorized Drum

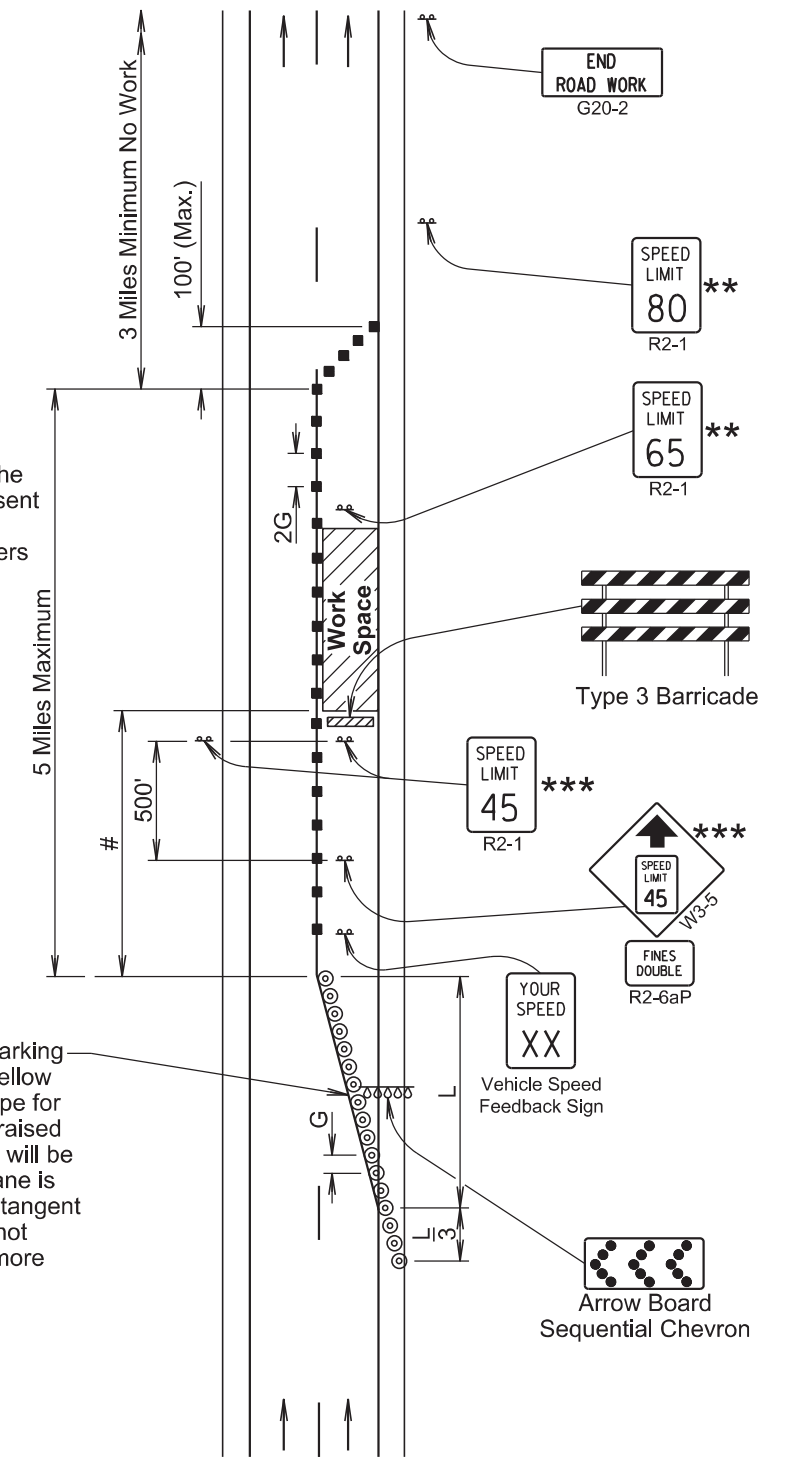
■ Channelizing Device

# The Work Space will be a minimum of 500' from the end of the taper.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do not exist and the lane is closed for more than 3 days.



DETAIL A

April 8, 2025

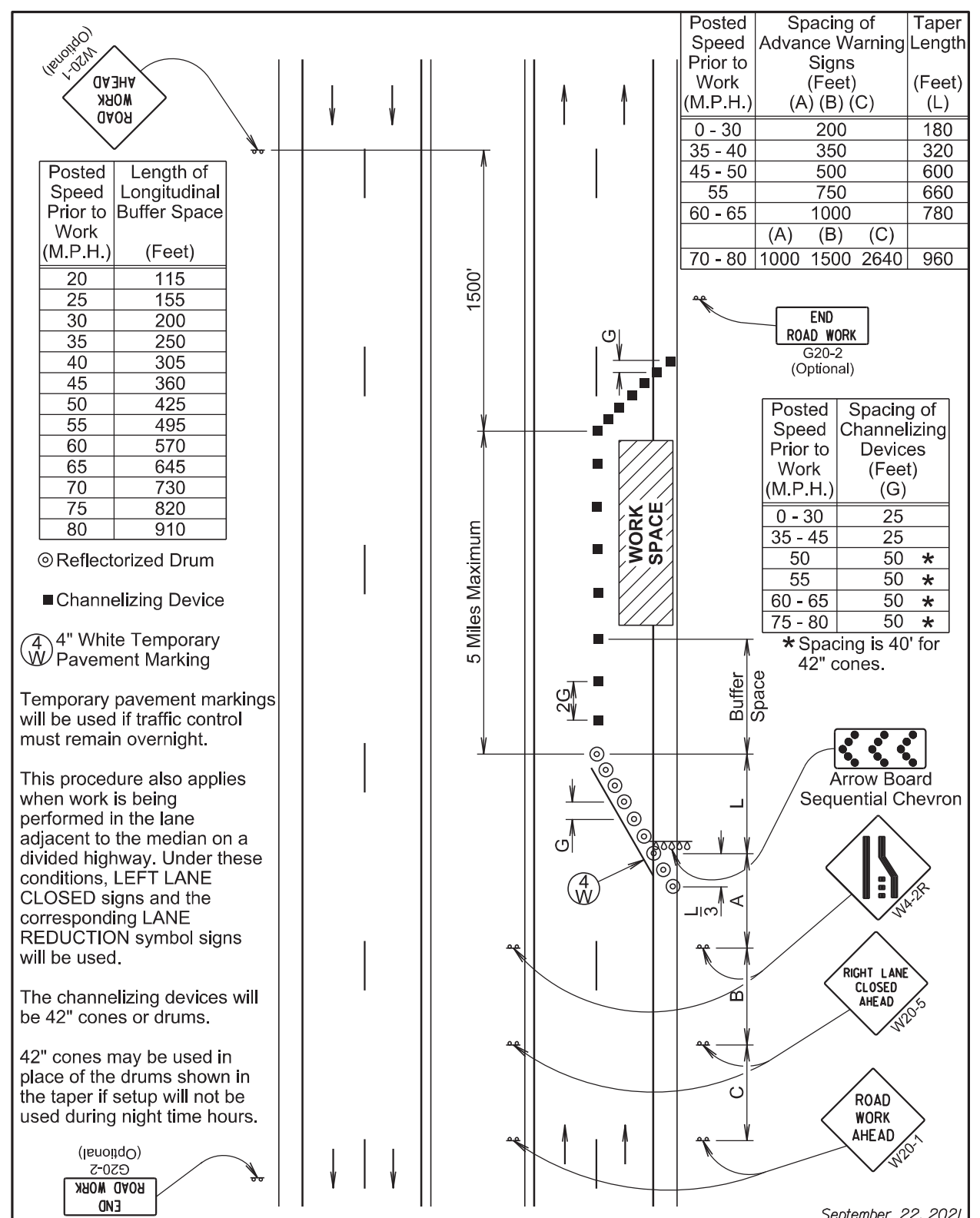
Published Date: 2026	S D D O T	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
			Sheet 2 of 2

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

FILE - ... \0.0 DESIGN\BORDER 06WV.DGN

PLOT SCALE - 1:200



Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820
80	910

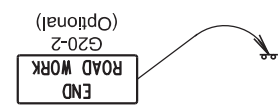
⊙ Reflectorized Drum  
 ■ Channelizing Device  
 (4) 4" White Temporary Pavement Marking

Temporary pavement markings will be used if traffic control must remain overnight.

This procedure also applies when work is being performed in the lane adjacent to the median on a divided highway. Under these conditions, LEFT LANE CLOSED signs and the corresponding LANE REDUCTION symbol signs will be used.

The channelizing devices will be 42" cones or drums.

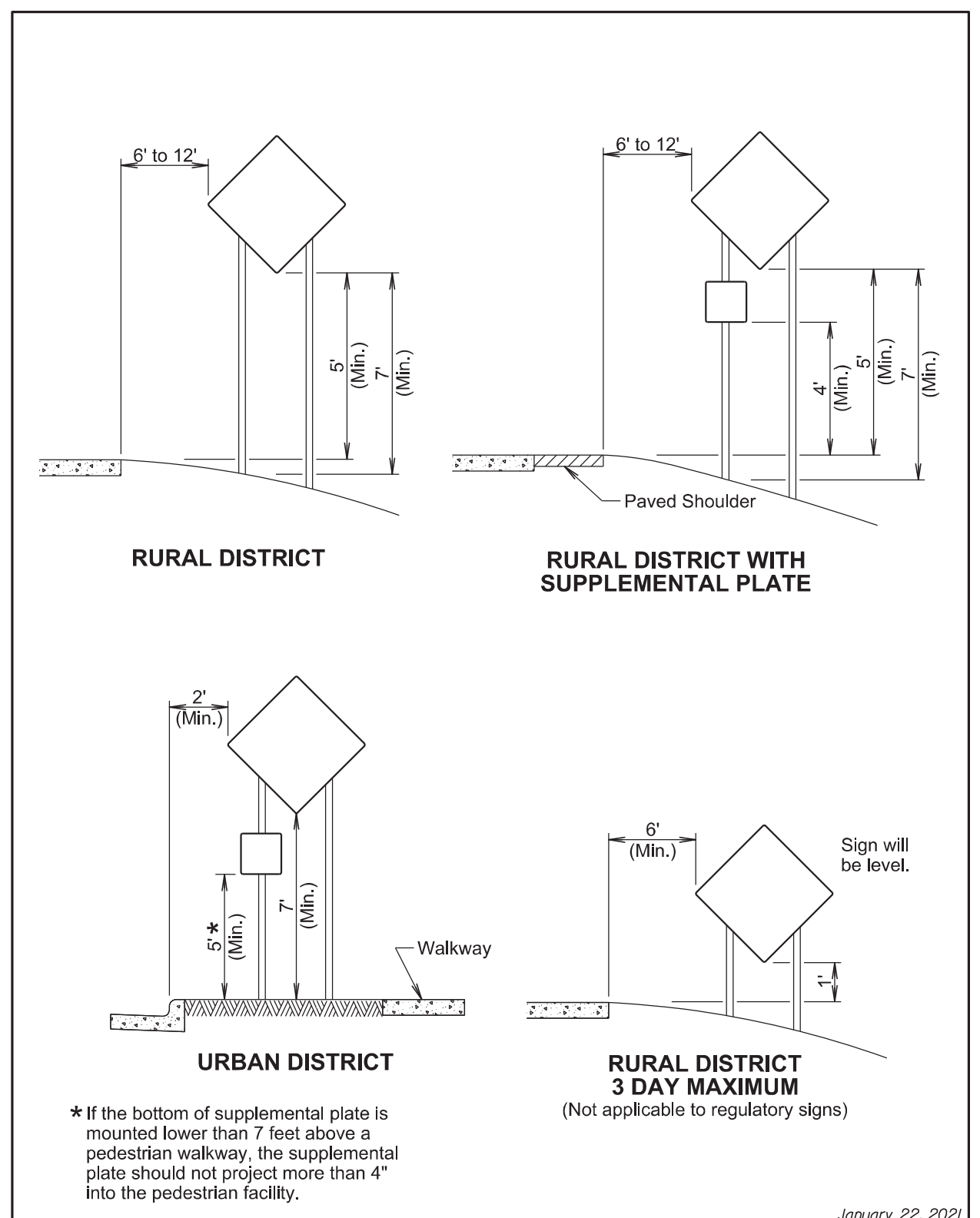
42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.



September 22, 2021

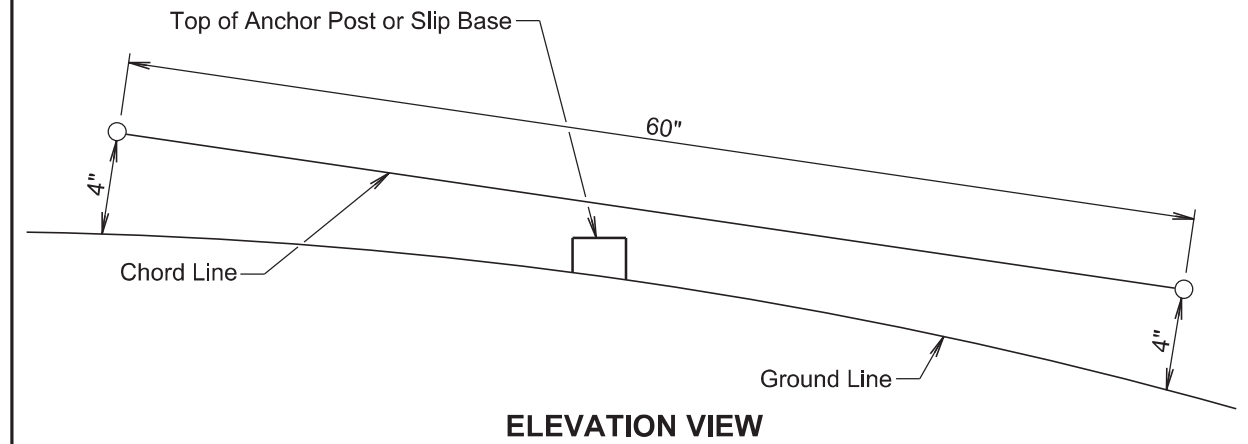
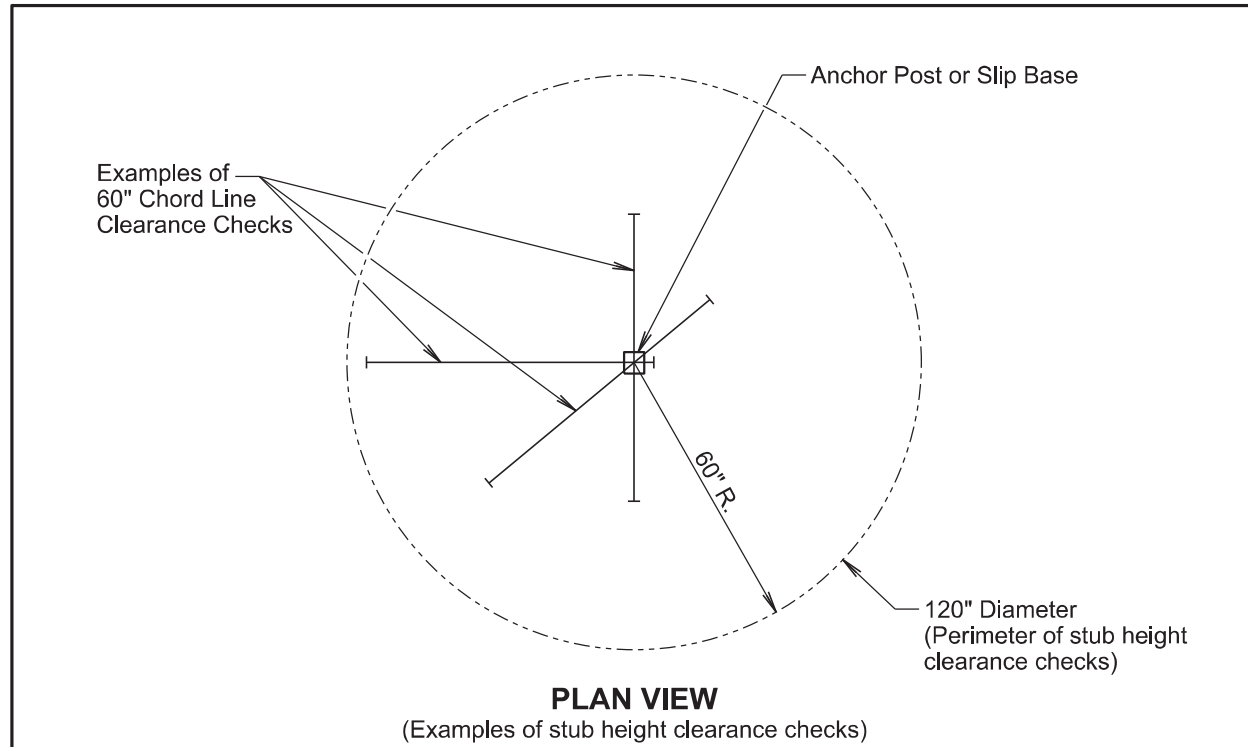
<b>SDDOT</b>	<b>LANE CLOSURE WITHOUT BARRIER</b>	PLATE NUMBER <b>634.64</b>
	Published Date: 2026	Sheet 1 of 1

PLOT NAME - 1  
FILE - ... \0.0 DESIGN\BORDER 06SW.DGN



<b>SDDOT</b>	<b>CRASHWORTHY SIGN SUPPORTS</b> <i>(Typical Construction Signing)</i>	PLATE NUMBER <b>634.85</b>
	Published Date: 2026	Sheet 1 of 1

January 22, 2021



**GENERAL NOTES:**

The top of anchor posts and slip bases WILL 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 will 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.

January 22, 2021

<i>Published Date: 2026</i>	<b>S D D O T</b>	<b>BREAKAWAY SUPPORT STUB CLEARANCE</b>	PLATE NUMBER <b>634.99</b>
			Sheet 1 of 1

## ITEMIZED TRAFFIC CONTROL SIGNS

### SEGMENT #1 (US 81)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	8	48" x 48"	16.0	128.0
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 10 MILES	3	36" x 18"	4.5	13.5
G20-1	ROAD WORK NEXT 5 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 4 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>449.1</b>

### SEGMENT #3 (SD 20)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	6	48" x 48"	16.0	96.0
W13-1P	ADVISORY SPEED (plaque)	6	30" x 30"	6.3	37.8
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 11 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>391.0</b>

### SEGMENT #2 & #6 (US 14)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT <u>45</u>	4	24" x 30"	5.0	20.0
W3-5	SPEED REDUCTION AHEAD ( <u>40</u> MPH)	4	48" x 48"	16.0	64.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	4	48" x 48"	16.0	64.0
W13-1P	ADVISORY SPEED (plaque)	4	30" x 30"	6.3	25.2
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 3 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>543.2</b>

### SEGMENT #4 (SD 28)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	8	48" x 48"	16.0	128.0
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 11 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>435.6</b>

## ITEMIZED TRAFFIC CONTROL SIGNS

### SEGMENT #5 (I 29N)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT <u>65</u>	4	24" x 30"	5.0	20.0
W3-5	SPEED REDUCTION AHEAD ( <u>65</u> MPH)	4	48" x 48"	16.0	64.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	16	48" x 48"	16.0	256.0
W21-5	SHOULDER WORK	16	48" x 48"	16.0	256.0
G20-1	ROAD WORK NEXT <u>29</u> MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>813.0</b>

### SEGMENT #9 (SD 158)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	6	48" x 48"	16.0	96.0
W13-1P	ADVISORY SPEED (plaque)	6	30" x 30"	6.3	37.8
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT <u>9</u> MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>391.0</b>

### SEGMENT #7 (I 29S)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT <u>65</u>	4	24" x 30"	5.0	20.0
W3-5	SPEED REDUCTION AHEAD ( <u>65</u> MPH)	4	48" x 48"	16.0	64.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	16	48" x 48"	16.0	256.0
W21-5	SHOULDER WORK	16	48" x 48"	16.0	256.0
G20-1	ROAD WORK NEXT <u>29</u> MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>813.0</b>

### SEGMENT #10 (I 29S)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT <u>65</u>	4	30" x 36"	7.5	30.0
W3-5	SPEED REDUCTION AHEAD ( <u>65</u> MPH)	4	48" x 48"	16.0	64.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	9	48" x 48"	16.0	144.0
W21-5	SHOULDER WORK	9	48" x 48"	16.0	144.0
G20-1	ROAD WORK NEXT <u>16</u> MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>583.0</b>

### SEGMENT #8 (I 29N)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT <u>65</u>	4	24" x 30"	5.0	20.0
W3-5	SPEED REDUCTION AHEAD ( <u>65</u> MPH)	4	48" x 48"	16.0	64.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	16	48" x 48"	16.0	256.0
W21-5	SHOULDER WORK	16	48" x 48"	16.0	256.0
G20-1	ROAD WORK NEXT <u>28</u> MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>813.0</b>

### SEGMENT #11 (SD 15)

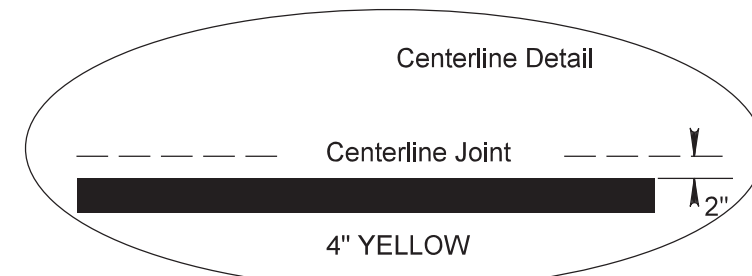
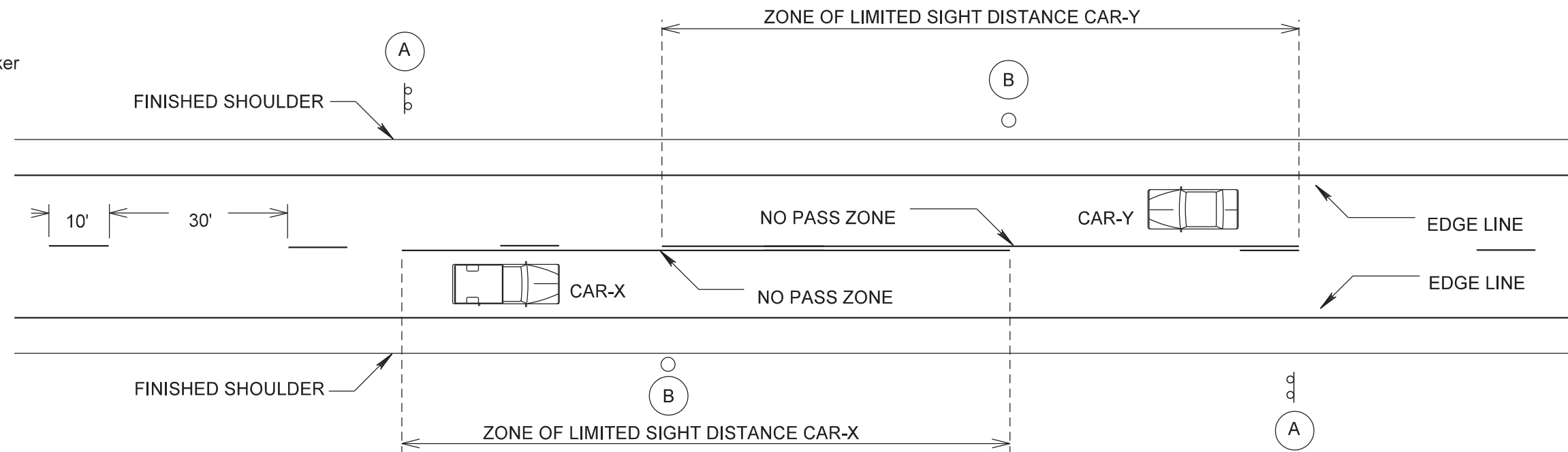
SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	4	48" x 48"	16.0	64.0
W13-1P	ADVISORY SPEED (plaque)	4	30" x 30"	6.3	25.2
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT <u>6</u> MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>346.4</b>

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012 (332)	38	39
Plotting Date: 01/15/2026			

# SD 158 TYPICAL PAVEMENT MARKING LAYOUT

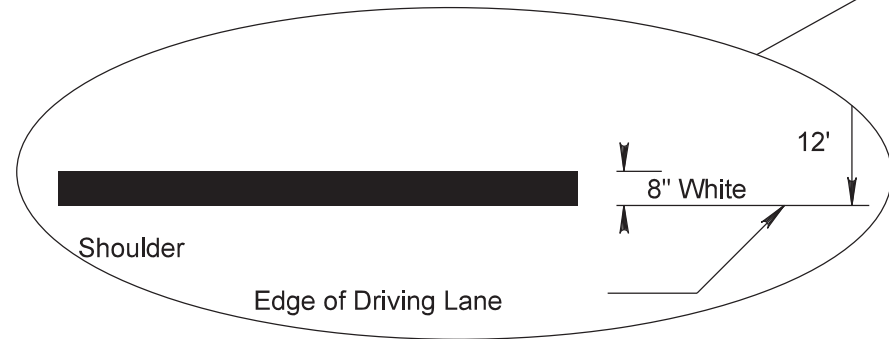
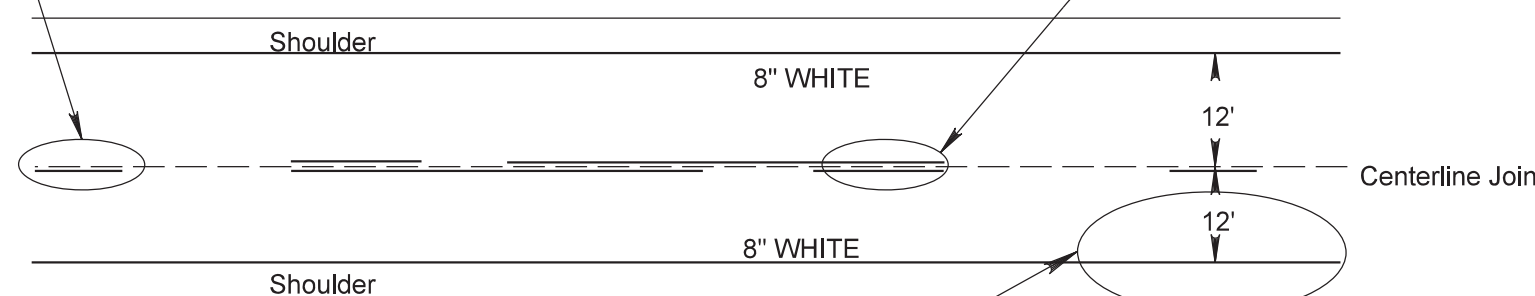
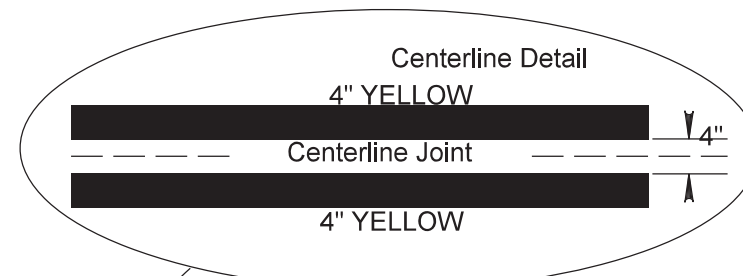


B End of Zone Marker



NOTE: A TWO "GUN" SYSTEM WILL BE USED TO OBTAIN THIS PATTERN.

WHEN A SINGLE SKIP LINE EXISTS, THE SKIP WILL BE PLACED TO THE SOUTH OR EAST OF THE CENTERLINE JOINT.



### FURNISHING AND APPLYING HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

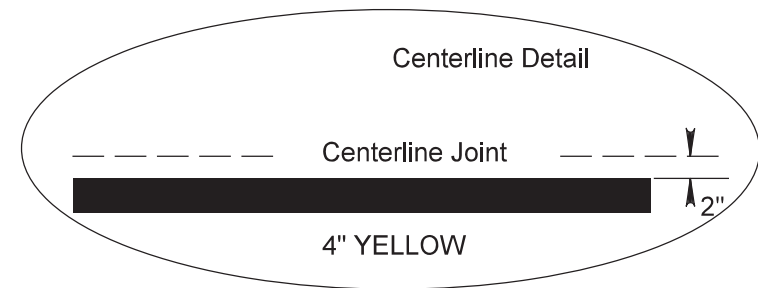
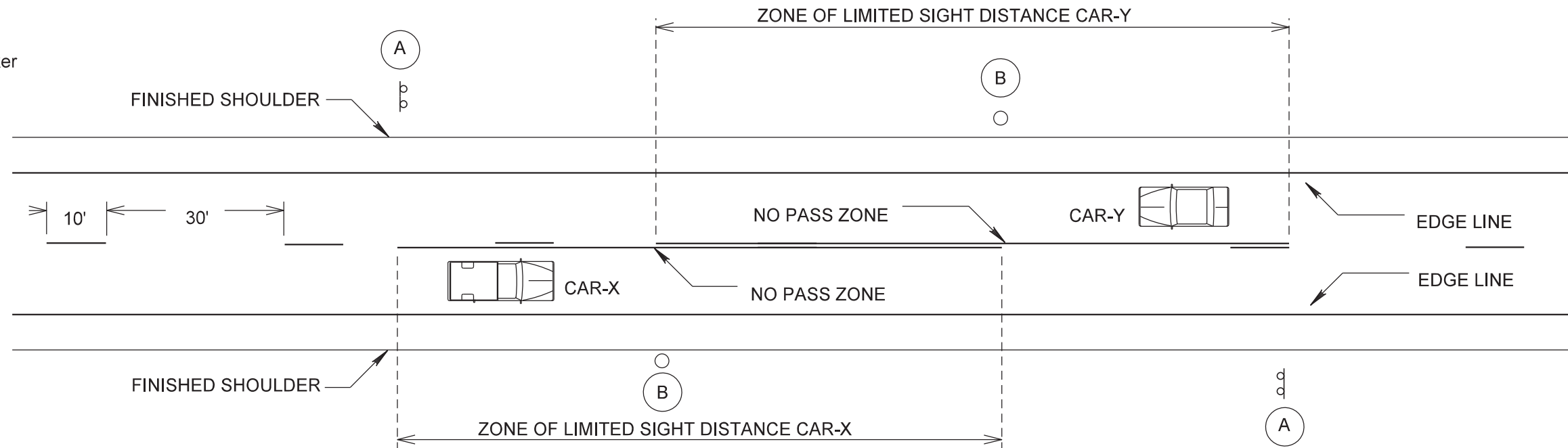
- The typical pavement markings as shown on this sheet will be applied throughout the entire length of the project.
- Exact location of the NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, will not be used as the beginning and ending NO PASSING ZONE lines.
- Traffic Control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM-NH-P 0012 (332)	39	39
Plotting Date: 01/15/2026			

# TYPICAL PAVEMENT MARKING LAYOUT

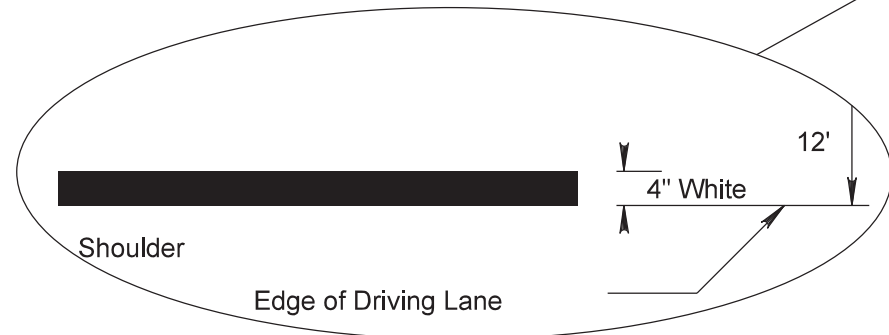
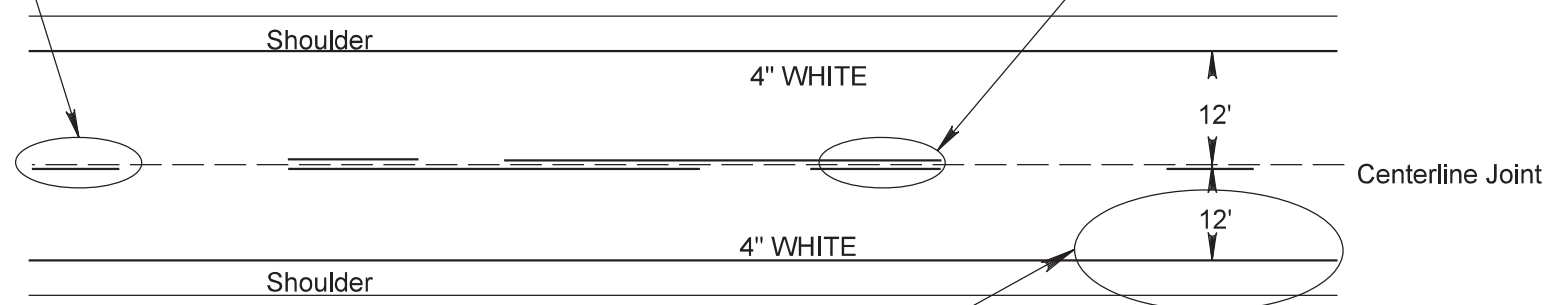
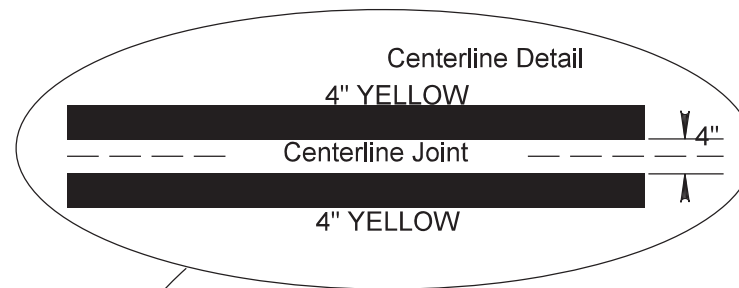


B End of Zone Marker



NOTE: A TWO "GUN" SYSTEM WILL BE USED TO OBTAIN THIS PATTERN.

WHEN A SINGLE SKIP LINE EXISTS, THE SKIP WILL BE PLACED TO THE SOUTH OR EAST OF THE CENTERLINE JOINT.



## FURNISHING AND APPLYING HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

1. The typical pavement markings as shown on this sheet will be applied throughout the entire length of the project.
2. Exact location of the NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, will not be used as the beginning and ending NO PASSING ZONE lines.
3. Traffic Control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.