

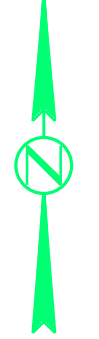
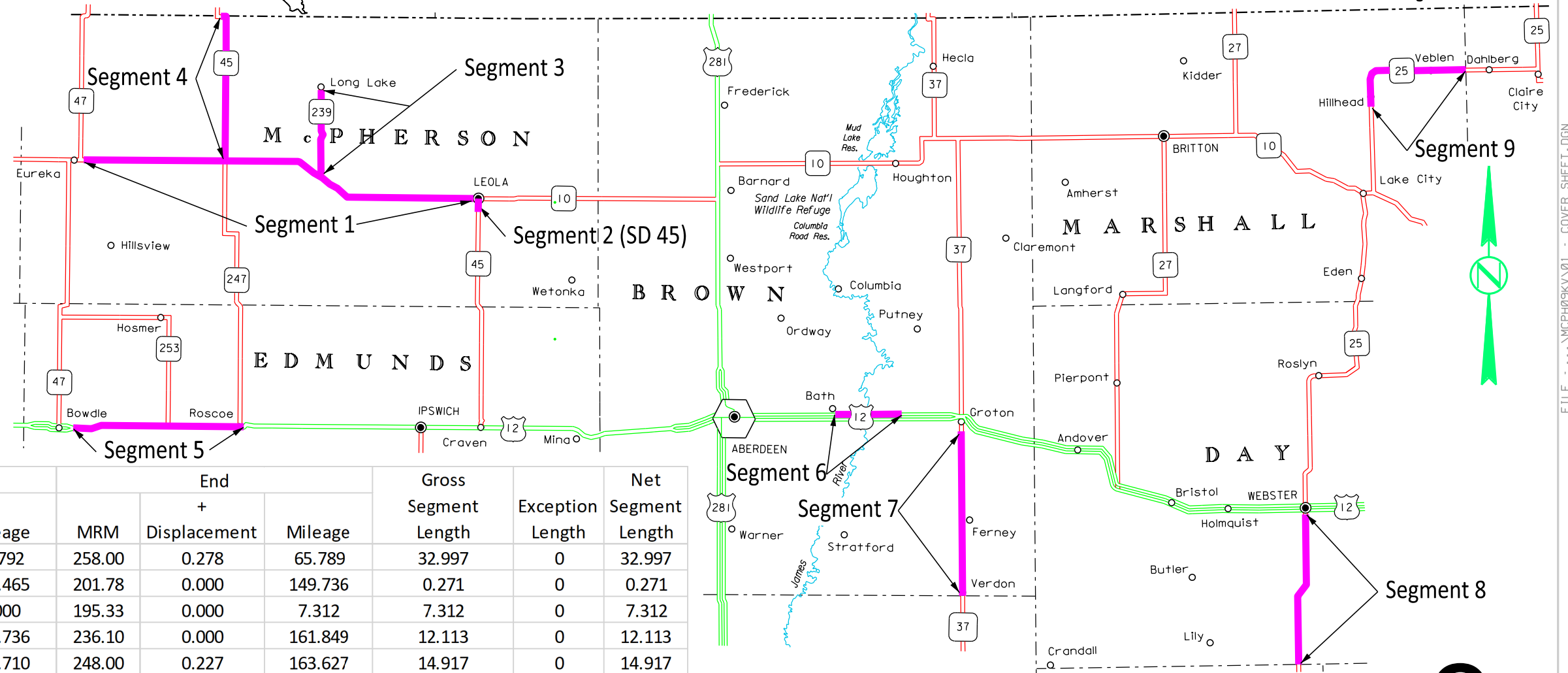
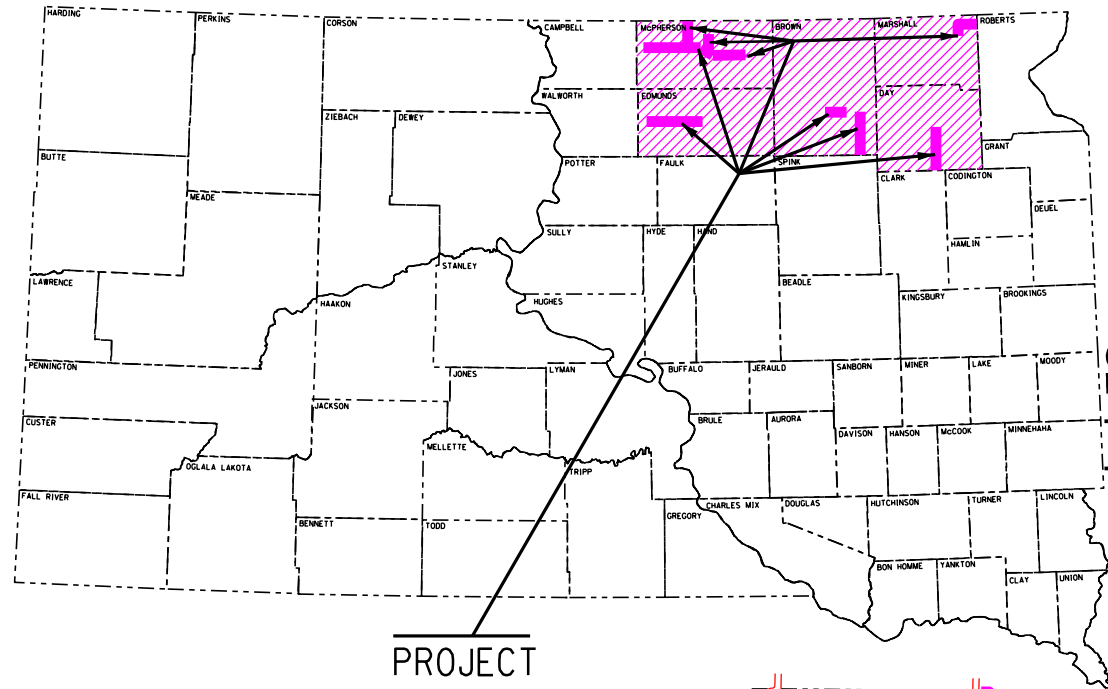
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	01	46
Plotting Date: 02/18/2025			

PROJECT NH-P 0011(317)
U.S. HIGHWAY 12
S.D. HIGHWAYS 10, 25, 37, 45 & 239
BROWN, DAY MARSHALL, EDMUNDS & MCPHERSON COUNTIES
ASPHALT SURFACE TREATMENT & FLUSH SEAL
PCN 09KV

INDEX OF SHEETS

- Sheet 01 Title Sheet and Overall Layout Map
- Sheets 02 - 06 Segment Title Sheets
- Sheets 07 - 08 Estimate of Quantities & Environmental Commitments
- Sheets 09 - 12 Tables of Segment Quantities
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- Sheets 22 - 23 Tables of Traffic Control Quantities
- Sheets 24 - 28 Fixed Sign Layout
- Sheets 29 - 33 Standard Plates Temporary Traffic Control
- Sheet 34 Table of Segment Striping Quantities
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- Sheet 45 Pavement Marking Details
- Sheet 46 Permanent Pavement Marking Standard Plates



Segment No.	Route	Begin			End			Gross Segment Length	Exception Length	Net Segment Length
		MRM	Displacement	Mileage	MRM	Displacement	Mileage			
1	SD 10	225.24	0.046	32.792	258.00	0.278	65.789	32.997	0	32.997
2	SD 45	201.00	0.497	149.465	201.78	0.000	149.736	0.271	0	0.271
3	SD 239	187.99	0.000	0.000	195.33	0.000	7.312	7.312	0	7.312
4	SD 45	224.05	0.000	149.736	236.10	0.000	161.849	12.113	0	12.113
5	US 12	233.36	0.000	148.710	248.00	0.227	163.627	14.917	0	14.917
6	US 12 W	298.11	0.145	10.265	306.00	0.651	18.690	8.425	0.203	8.222
7	SD 37	193.40	0.000	131.451	207.00	0.417	145.445	13.994	0.058	13.936
8	SD 25	168.84	0.000	122.787	181.00	0.016	134.918	12.131	0	12.131
9	SD 25	219.00	0.111	172.186	230.44	0.000	183.494	11.308	0	11.308
							Total	113.468	0.261	113.207

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April 16, 2025

STORM WATER PERMIT
None Required

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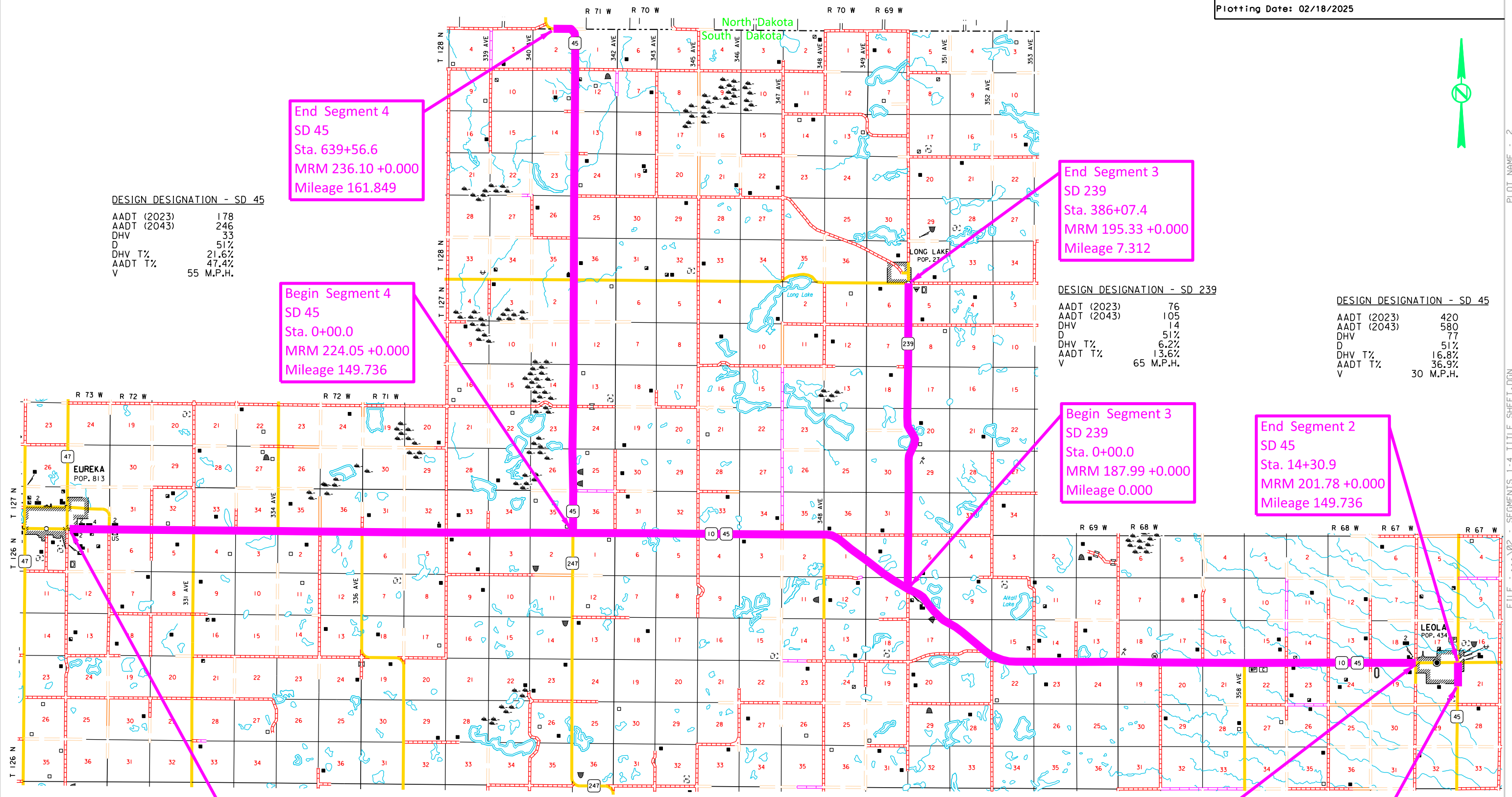
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FILE - ... \MCPH09KV\01 - COVER SHEET.DGN

PLOT SCALE - 1:11800

PLOT NAME - 2

FILE - ... \02 - SEGMENTS 1-4 TITLE SHEET.DGN



DESIGN DESIGNATION - SD 45

AADT (2023)	178
AADT (2043)	246
DHV	33
D	51%
DHV T%	21.6%
AADT T%	47.4%
V	55 M.P.H.

End Segment 4
SD 45
Sta. 639+56.6
MRM 236.10 +0.000
Mileage 161.849

Begin Segment 4
SD 45
Sta. 0+00.0
MRM 224.05 +0.000
Mileage 149.736

End Segment 3
SD 239
Sta. 386+07.4
MRM 195.33 +0.000
Mileage 7.312

DESIGN DESIGNATION - SD 239

AADT (2023)	76
AADT (2043)	105
DHV	14
D	51%
DHV T%	6.2%
AADT T%	13.6%
V	65 M.P.H.

Begin Segment 3
SD 239
Sta. 0+00.0
MRM 187.99 +0.000
Mileage 0.000

End Segment 2
SD 45
Sta. 14+30.9
MRM 201.78 +0.000
Mileage 149.736

DESIGN DESIGNATION - SD 45

AADT (2023)	420
AADT (2043)	580
DHV	77
D	51%
DHV T%	16.8%
AADT T%	36.9%
V	30 M.P.H.

Begin Segment 1
SD 10
Sta. 0+00.0
MRM 225.24 +0.046
Mileage 32.792

DESIGN DESIGNATION - SD 10

AADT (2023)	679
AADT (2043)	938
DHV	125
D	51%
DHV T%	11.0%
AADT T%	24.2%
V	65 M.P.H.

End Segment 1
SD 10
Sta. 1742+24.2
MRM 258.00 +0.278
Mileage 65.789

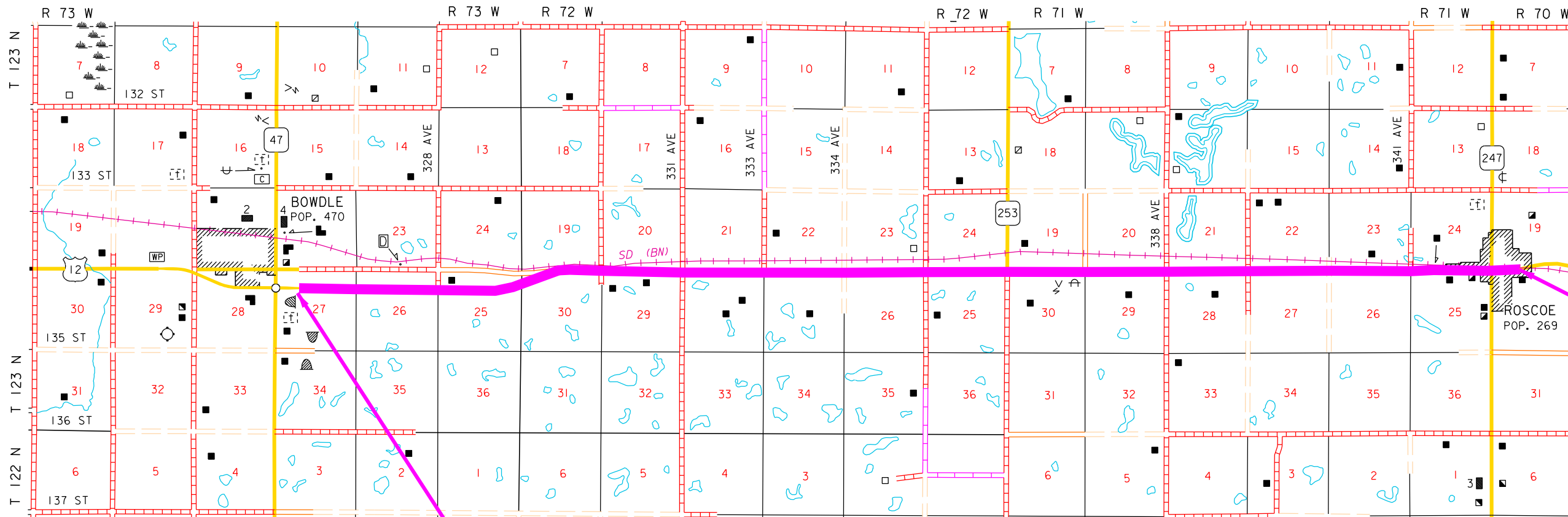
Begin Segment 2
SD 45
Sta. 0+00.0
MRM 201.00 +0.497
Mileage 149.465

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PLOT SCALE - 1:7670

PLOT NAME - 3



End Segment 5
US 12
Sta. 787+61.8
MRM 248.00 +0.227
Mileage 163.627

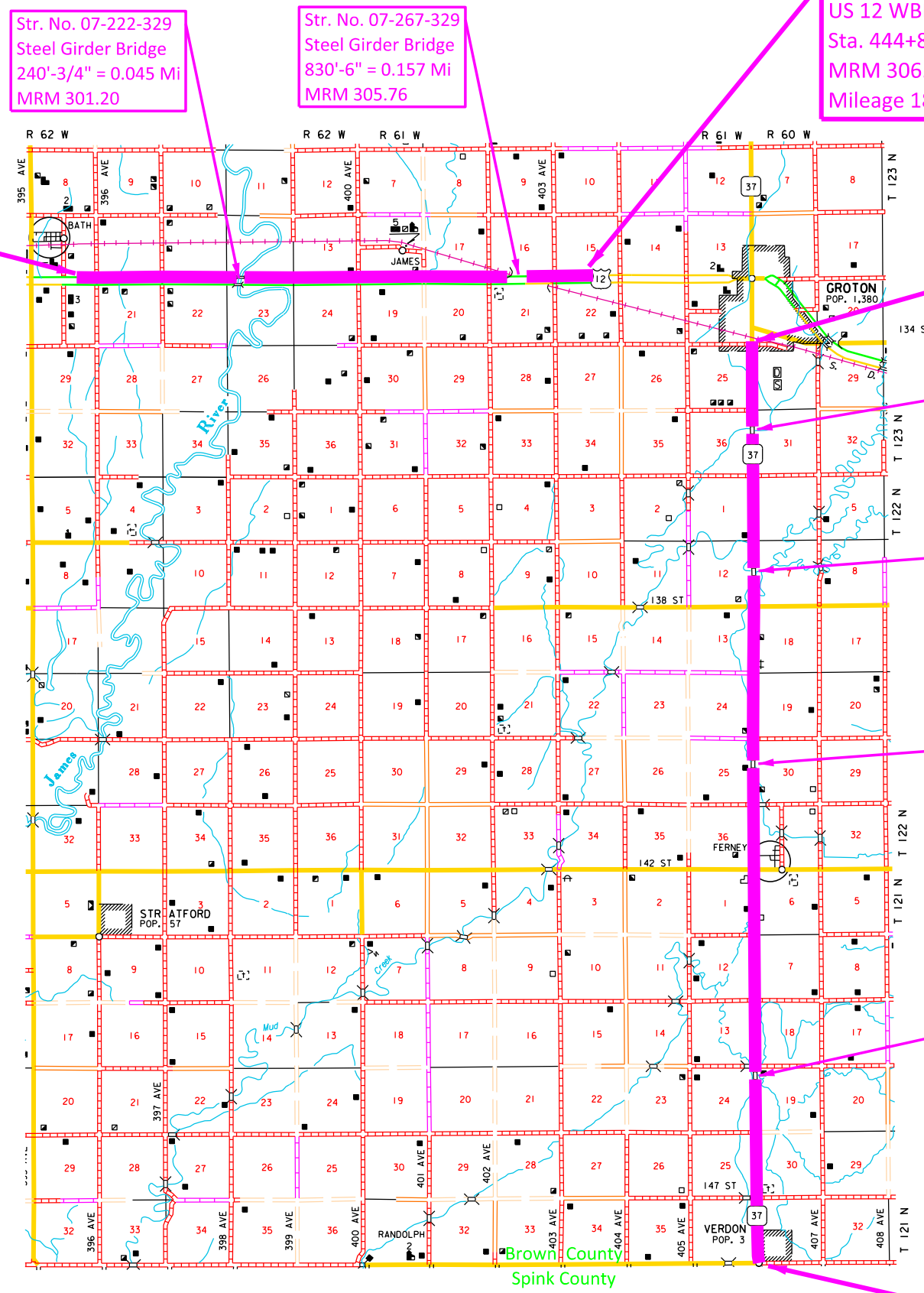
Begin Segment 5
US 12
Sta. 0+00.0
MRM 233.36 +0.000
Mileage 148.710

DESIGN DESIGNATION - US 12

AADT (2023)	1346
AADT (2043)	1780
DHV	237
D	51%
DHV T%	12.3%
AADT T%	27.0%
V	65 M.P.H. RURAL 30 M.P.H. URBAN

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FILE - ... \03 - SEGMENT 5 TITLE SHEET.DGN



FLUSH SEAL
Begin Segment 6
US 12 WBL
Sta. 0+00.0
MRM 298.11 +0.145
Mileage 10.265

Str. No. 07-222-329
Steel Girder Bridge
240'-3/4" = 0.045 Mi
MRM 301.20

Str. No. 07-267-329
Steel Girder Bridge
830'-6" = 0.157 Mi
MRM 305.76

End Segment 6
US 12 WBL
Sta. 444+84.0
MRM 306.00 +0.651
Mileage 18.690

End Segment 7
SD 37
Sta. 738+88.3
MRM 207.00 +0.417
Mileage 145.445

Str. No. 07-300-353
Cont. Concrete Bridge
54'-0" = 0.010 Mi
MRM 206.08

Str. No. 07-300-375
Cont. Concrete Bridge
92'-0" = 0.017 Mi
MRM 203.93

Str. No. 07-300-405
Cont. Concrete Bridge
54'-0" = 0.010 Mi
MRM 201.01

Str. No. 07-300-451
Cont. Concrete Bridge
106'-0" = 0.020 Mi
MRM 196.31

Begin Segment 7
SD 37
Sta. 0+00.0
MRM 193.40 +0.000
Mileage 131.451

DESIGN DESIGNATION - US 12 WBL

AADT (2023)	2873
AADT (2043)	3690
DHV	409
D	50%
DHV T%	8.0%
AADT T%	17.5%
V	70 M.P.H.

DESIGN DESIGNATION - SD 37

AADT (2023)	1100
AADT (2043)	1459
DHV	162
D	50%
DHV T%	11.8%
AADT T%	26.0%
V	65 M.P.H.





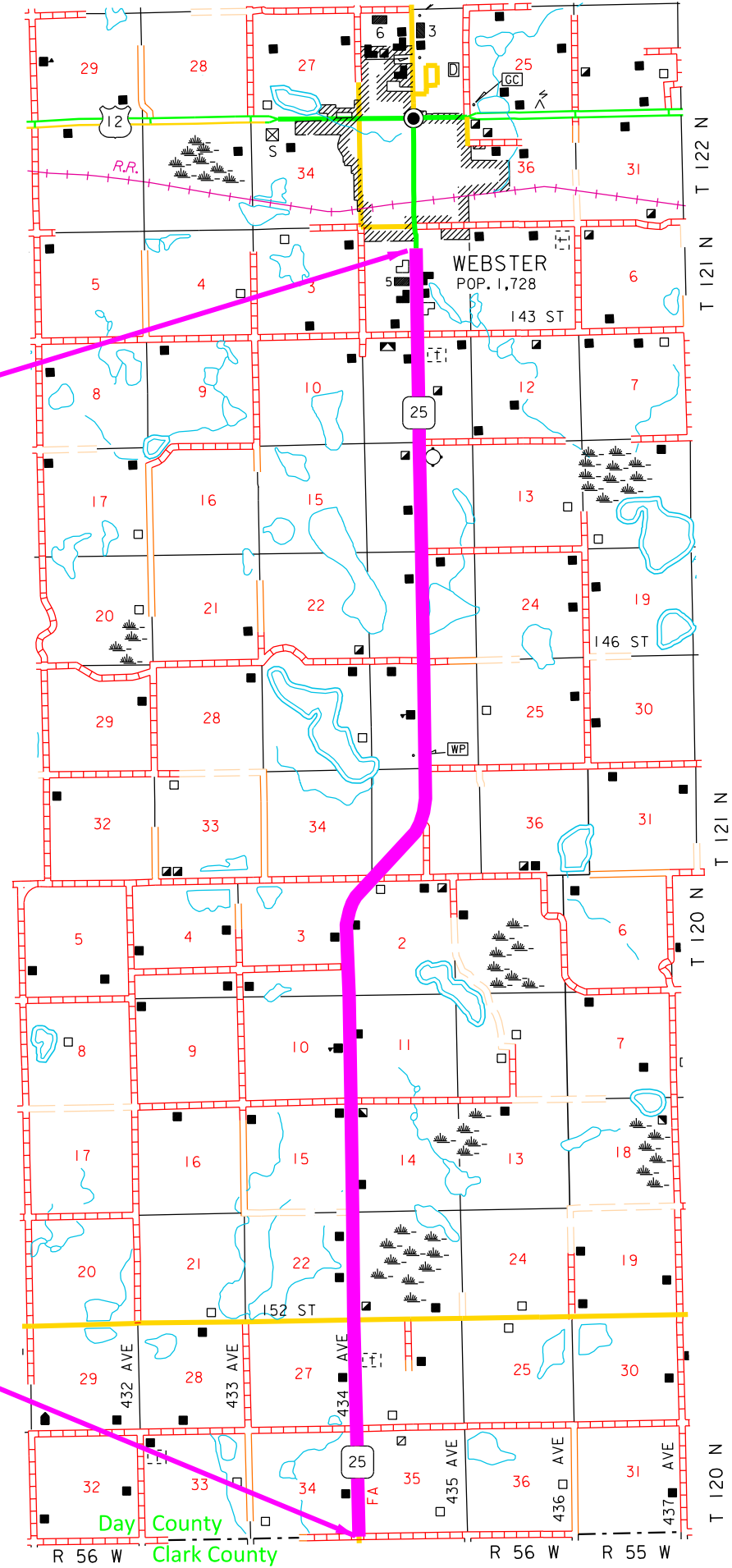
PLOT SCALE - 1:7670

PLOT NAME - 1

FILE - ... \05 - SEGMENT 8 TITLE SHEET.DGN

End Segment 8
SD 25
Sta. 640+51.7
MRM 181.00 +0.016
Mileage 134.918

Begin Segment 8
SD 25
Sta. 0+00.0
MRM 168.84 +0.000
Mileage 122.787



DESIGN DESIGNATION - SD 25

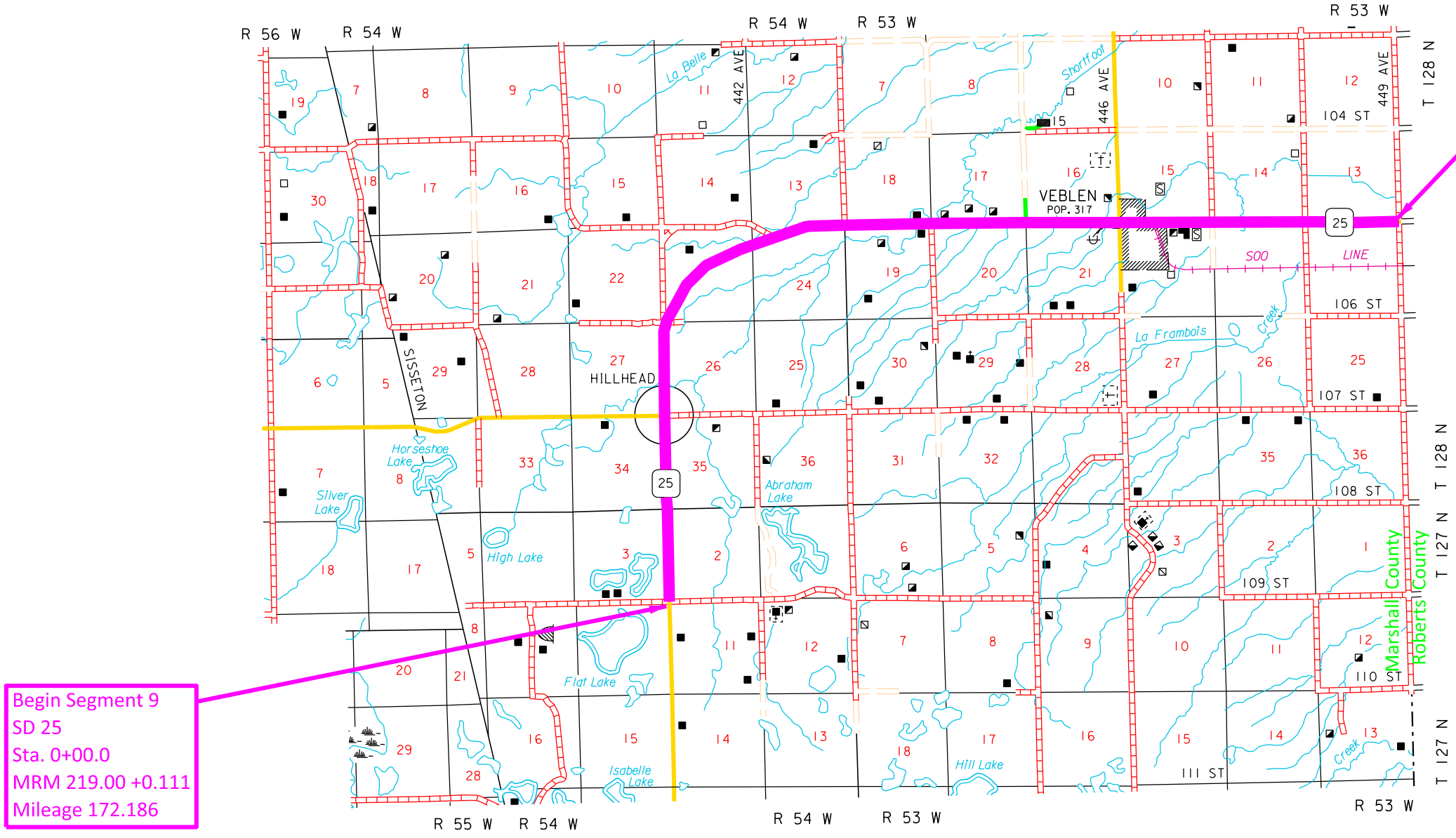
AADT (2023)	1215
AADT (2043)	1784
DHV	198
D	50%
DHV T%	6.3%
AADT T%	13.8%
V	65 M.P.H. RURAL

PLOTTED FROM - TRAB11017

PLOT SCALE - 1:7670

PLOTTED FROM - TRAB11017

FILE - ... \06 - SEGMENT 9 TITLE SHEET.DGN PLOT NAME - 1



Begin Segment 9
SD 25
Sta. 0+00.0
MRM 219.00 +0.111
Mileage 172.186

End Segment 9
SD 25
Sta. 597+06.2
MRM 230.44 +0.000
Mileage 183.494

DESIGN DESIGNATION - SD 25

AADT (2023)	279
AADT (2043)	328
DHV	36
D	50%
DHV T%	9.1%
AADT T%	20.0%
V	65 M.P.H. RURAL 30 M.P.H. URBAN

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	9.0	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	508.1	Ton
330E2000	Sand for Flush Seal	3.0	Ton
330E3000	Sand for Fog Seal	40.0	Ton
360E0042	CRS-2P Asphalt for Surface Treatment	2,758.1	Ton
360E1010	Type 1A Cover Aggregate	1,957.1	Ton
360E1010	Type 1A Cover Aggregate	2,033.9	Ton
360E1010	Type 1A Cover Aggregate	80.4	Ton
360E1010	Type 1A Cover Aggregate	4,183.4	Ton
360E1010	Type 1A Cover Aggregate	1,876.1	Ton
360E1010	Type 1A Cover Aggregate	2,248.3	Ton
360E1010	Type 1A Cover Aggregate	1,132.5	Ton
360E1010	Type 1A Cover Aggregate	6,209.6	Ton
633E0040	Cold Applied Plastic Pavement Marking, Arrow	2	Each
633E0046	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	1	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	6,858	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	1,610	Gal
633E1206	High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow	420	Gal
633E6020	Pavement Marking Masking, 25"	394	Ft
633E6030	Pavement Marking Masking, Arrow	16	Each
633E6036	Pavement Marking Masking, Lane Reduction Arrow	14	Each
634E0010	Flagging	1,550.0	Hour
634E0020	Pilot Car	359.0	Hour
634E0110	Traffic Control Signs	3,333.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0565	Remove Pavement Marking, Arrow	2	Each
634E0630	Temporary Pavement Marking	359.6	Mile

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 C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

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

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

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

<https://sdleastwanted.sd.gov/maps/default.aspx>

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

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

SPECIFICATIONS

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

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

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

Action Taken/Required:

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

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

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

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

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

SHPO/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.

QUANTITIES BY SEGMENT - FOR INFORMATION ONLY

STATE OF SOUTH DAKOTA	PROJECT NH-P 0011(317)	SHEET 09	TOTAL SHEETS 46
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Revised 02/18/2025

SBI Nbr	SBI Description	Seg. 1 SD 10	Seg. 2 SD 45	Seg. 3 SD 239	Seg. 4 SD 45	Seg. 5 US 12	Seg. 6 US 12W	Seg. 7 SD 37	Seg. 8 SD 25	Seg. 9 SD 25	Total Quantity	Unit
009E0010	Mobilization										1	LS
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal						9.0				9.0	Ton
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	148.2	2.0	27.0	44.8	99.8		68.7	69.1	48.5	508.1	Ton
330E2000	Sand for Flush Seal						3				3	Ton
330E3000	Sand for Fog Seal	5	5	5	5	5		5	5	5	40	Ton
360E0042	CRS-2P Asphalt for Surface Treatment	804.4	10.5	146.7	243.0	541.9		372.8	375.3	263.5	2758.1	Ton
360E1010	Type 1A Cover Aggregate	6209.6									6209.6	Ton
360E1010	Type 1A Cover Aggregate		80.4								80.4	Ton
360E1010	Type 1A Cover Aggregate			1132.5							1132.5	Ton
360E1010	Type 1A Cover Aggregate				1876.1						1876.1	Ton
360E1010	Type 1A Cover Aggregate					4183.4					4183.4	Ton
360E1010	Type 1A Cover Aggregate						2248.3				2248.3	Ton
360E1010	Type 1A Cover Aggregate							1957.1			1957.1	Ton
360E1010	Type 1A Cover Aggregate								2033.9		2033.9	Ton
633E0040	Cold Applied Plastic Pavement Marking, Arrow	2									2	Each
633E0046	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	1									1	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	1834	16	407	1683	840		775	674	629	6858	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	665	19	126	359			129	162	150	1610	Gal
633E1206	High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow					420					420	Gal
633E6020	Pavement Marking Masking, 25'	30				334				30	394	Ft
633E6030	Pavement Marking Masking, Turn Arrow	4				12					16	EA
633E6036	Pavement Marking Masking, Lane Reduction Arrow	2				12					14	EA
634E0010	Flagging	450	20	140	160	250		230	160	140	1550	Hour
634E0020	Pilot Car	100	4	30	40	60		55	40	30	359	Hour
634E0110	Traffic Control Signs	794.0	231.4	253.0	306.6	420.2	155.0	372.8	395.8	404.8	3333.6	Sq. Ft.
634E0120	Traffic Control, Miscellaneous										1	LS
634E0565	Remove Pavement Marking, Arrow	2									2	EA
634E0630	Temporary Pavement Marking	113.912	1.416	24.487	45.945	56.115		42.643	38.894	36.234	359.646	Mile

PLOT SCALE - 1:200

PLOT NAME - 7

FILE - ... \07 - TABLE OF U BT SEGMENT.DWG

PLOTTED FROM - TRAB11017

Plotting Date: 02/18/2025
Revised 02/18/2025

ASPHALT SURFACE TREATMENT QUANTITIES BY SEGMENT - Sheet 1 of 2 FOR INFORMATION ONLY

Segment	Route	FROM STATION	TO STATION	Width of Surface Treatment FT	Width of Type 1A Cover Aggregate Treatment FT	Width of Asphalt Fog Seal FT	Width of Flush Seal FT	NOTE	LENGTH FT	Area of Surface Treatment SY	Area of Type 1A Cover Aggregate Treatment SY	Area of Asphalt Fog Seal SY	Area of Flush Seal SY	VOL CRS-2P SURF TREAT TONS	WEIGHT TYPE 1A COVER AGGREGATE TONS	VOL SS-1h OR CSS-1h ASPHALT FOG SEAL TONS	VOL SS-1h OR CSS-1h ASPHALT FLUSH SEAL TONS
1	HWY 10	0+00.00	174+24.00	28.0	28.0	28.0			17424.0	54208.0	54208.0	54208.0		77.2	596.3	14.2	
1	HWY 10	174+24.00	211+20.00	28.0	28.0	28.0			3696.0	11498.7	11498.7	11498.7		16.4	126.5	3.0	
1	HWY 10	211+20.00	248+68.80	36.0	36.0	36.0			3748.8	14995.2	14995.2	14995.2		21.4	164.9	3.9	
1	HWY 10	248+68.80	438+24.00	36.0	36.0	36.0			18955.2	75820.8	75820.8	75820.8		108.0	834.0	19.9	
1	HWY 10	438+24.00	702+24.00	28.0	28.0	28.0			26400.0	82133.3	82133.3	82133.3		117.0	903.5	21.6	
1	HWY 10	601+92.00	616+70.40	14.0	14.0	14.0		North WB Accel / Turn lane	1478.4	2299.7	2299.7	2299.7		3.3	25.3	0.6	
1	HWY 10	702+24.00	1056+00.00	28.0	28.0	28.0			35376.0	110058.7	110058.7	110058.7		156.8	1210.6	28.9	
1	HWY 10	1056+00.00	1494+24.00	28.0	28.0	28.0			43824.0	136341.3	136341.3	136341.3		194.3	1499.8	35.8	
1	HWY 10	1494+24.00	1742+24.20	28.0	28.0	28.0			24800.2	77156.2	77156.2	77156.2		109.9	848.7	20.3	
								FT	175702.6	564511.9	564511.9	564511.9	Tons	804.4	6209.6	148.2	
								M	33.3								
2	HWY 45	0+00.00	14+30.90	44.0	44.0	44.0			1494.2	7305.2	7305.2	7305.2	Tons	10.5	80.4	2.0	
								M	0.3								
3	HWY 239	0+00.00	53+32.80	24.0	24.0	24.0		INT of HWY 10 & HWY 239	5332.8	14220.8	14220.8	14220.8		20.3	156.4	3.7	
3	HWY 239	53+32.80	158+92.80	24.0	24.0	24.0			10560.0	28160.0	28160.0	28160.0		40.1	309.8	7.4	
3	HWY 239	158+92.80	211+72.80	24.0	24.0	24.0			5280.0	14080.0	14080.0	14080.0		20.1	154.9	3.7	
3	HWY 239	211+72.80	317+32.80	24.0	24.0	24.0			10560.0	28160.0	28160.0	28160.0		40.1	309.8	7.4	
3	HWY 239	317+32.80	386+07.40	24.0	24.0	24.0			6874.6	18332.3	18332.3	18332.3		26.1	201.7	4.8	
								FT	38607.4	102953.1	102953.1	102953.1	Tons	146.7	1132.5	27.0	
								M	7.3								
4	HWY 45	0+00.00	16+36.80	24.0	24.0	24.0		INT of HWY 10 & HWY 45	1636.8	4364.8	4364.8	4364.8		6.2	48.0	1.1	
4	HWY 45	16+36.80	54+38.40	24.0	24.0	24.0		No shoulder	3801.6	10137.6	10137.6	10137.6		14.4	111.5	2.7	
4	HWY 45	54+38.40	639+56.60	24.0	24.0	24.0		No shoulder	58518.2	156048.5	156048.5	156048.5		222.4	1716.5	41.0	
								FT	63956.6	170550.9	170550.9	170550.9	Tons	243.0	1876.1	44.8	
								M	12.1								
5	HWY 12	0+00.00	467+80.80	34.0	34.0	34.0			46780.8	176727.5	176727.5	176727.5		251.8	1944.0	46.4	
5	HWY 12	456+08.64	465+16.80	12.0	12.0	12.0		South EB Accel / Turn	908.2	1210.9	1210.9	1210.9		1.7	13.3	0.3	
5	HWY 12	0+00.00	459+88.80					SD 253		1889.0	1889.0	1889.0		2.7	20.8	0.5	
5	HWY 12	0+00.00	459+88.80					336th Ave		465.0	465.0	465.0		0.7	5.1	0.1	
5	HWY 12	456+08.64	467+80.80	12.0	12.0	12.0		North WB Accel / Turn lane	1172.2	1562.9	1562.9	1562.9		2.2	17.2	0.4	
5	HWY 12	467+80.80	734+44.80	56.0	56.0	56.0			26664.0	165909.3	165909.3	165909.3		236.4	1825.0	43.6	
5	HWY 12	709+10.40	729+16.80	12.0	12.0	12.0		South EB Accel / Turn	2006.4	2675.2	2675.2	2675.2		3.8	29.4	0.7	
5	HWY 12		722+40.96					341st AVE		389.0	389.0	389.0		0.6	4.3	0.1	
5	HWY 12	709+10.40	734+44.80	12.0	12.0	12.0		North WB Accel / Turn lane	2534.4	3379.2	3379.2	3379.2		4.8	37.2	0.9	
5	HWY 12	734+44.80	765+60.00	46.0	46.0	46.0			3115.2	15922.1	15922.1	15922.1		22.7	175.1	4.2	
5	HWY 12		755+04.00					C&B Operations		180.0	180.0	180.0		0.3	2.0	0.0	
5	HWY 12		786+68.34					HWY 247		105.0	105.0	105.0		0.1	1.2	0.0	
5	HWY 12		786+68.34					Mitchell ST		105.0	105.0	105.0		0.1	1.2	0.0	
5	HWY 12	765+60.00	787+61.80	40.0	40.0	40.0		curbing both sides	2201.8	9785.8	9785.8	9785.8		13.9	107.6	2.6	
5	HWY 12							Mailbox Widening 1		30.0	30.0	30.0		0.3	2.0	0.0	
5	HWY 12							Mailbox Widening 2		30.0	30.0	30.0		0.3	2.0	0.0	
5	HWY 12							Mailbox Widening 3		30.0	30.0	30.0		0.3	2.0	0.0	
5	HWY 12							Mailbox Widening 4		30.0	30.0	30.0		0.3	2.0	0.0	
5	HWY 12							Mailbox Widening 5		30.0	30.0	30.0		0.3	2.0	0.0	
								FT	85382.9	380455.9	380455.9	380455.9	Tons	541.9	4183.4	99.8	
								M	16.2								

PLOT SCALE - 1:200

PLOT NAME - 10

FILE - ... \10 - TABLE OF AST 0 F10 BY SEGMENT.DGN

Plotting Date: 02/18/2025
Revised 02/18/2025

ASPHALT SURFACE TREATMENT QUANTITIES BY SEGMENT - Sheet 2 of 2 FOR INFORMATION ONLY

Segment	Route	FROM STATION	TO STATION	Width of Surface Treatment FT	Width of Type 1A Cover Aggregate Treatment FT	Width of Asphalt Fog Seal FT	Width of Flush Seal FT	NOTE	LENGTH FT	Area of Surface Treatment SY	Area of Type 1A Cover Aggregate Treatment SY	Area of Asphalt Fog Seal SY	Area of Flush Seal SY	VOL CRS-2P SURF TREAT TONS	WEIGHT TYPE 1A COVER AGGREGATE TONS	VOL SS-1h OR CSS-1h ASPHALT FOG SEAL TONS	VOL SS-1h OR CSS-1h ASPHALT FLUSH SEAL TONS
6	HWY 12W	0+00.00	155+49.60				4.0	FT	15549.6				6910.9		Median		1.3
6	HWY 12W	157+90.35	396+29.55				4.0	FT	23839.2				10595.2		Median		2.0
6	HWY 12W	404+60.05	444+84.00				4.0	FT	4024.0				1788.4		Median		0.3
								FT	43412.8				19294.6		Median	Tons	3.6
								MI	8.2								
6	HWY 12W	0+00.00	155+49.60				6.0	FT	15549.6				10366.4		Outside		1.9
6	HWY 12W	157+90.35	396+29.55				6.0	FT	23839.2				15892.8		Outside		3.0
6	HWY 12W	404+60.05	444+84.00				6.0	FT	4024.0				2682.6		Outside		0.5
								FT	43412.8				28941.8		Outside	Tons	5.4
								MI	8.2							Tons	9.0
7	HWY 37	0+00.00	156+28.80	25.0	25.0	32.0		Fog Seal edge to edge	15628.8	55569.1	43413.3	55569.1		79.2	477.5	14.6	
7	HWY 37	157+34.80	404+45.20	25.0	25.0	32.0		Fog Seal edge to edge	24710.4	87859.2	68640.0	87859.2		125.2	755.0	23.1	
7	HWY 37	404+99.20	558+62.80	25.0	25.0	32.0		Fog Seal edge to edge	15363.6	54626.1	42676.7	54626.1		77.8	469.4	14.3	
7	HWY 37	559+54.80	671+79.04	25.0	25.0	32.0		Fog Seal edge to edge	11224.2	39908.4	31178.4	39908.4		56.9	343.0	10.5	
7	HWY 37	672+33.04	738+88.30	25.0	25.0	32.0		Fog Seal edge to edge	6655.3	23663.1	18486.8	23663.1		33.7	203.4	6.2	
								FT	73888.3	261626.0	204395.3	261626.0		372.8	2248.3	68.7	
								MI	14.0								
8	SD 25	0+00.00	114+04.80	25.0	25.0	45.0		Fog Seal edge to edge	11404.8	57024.0	31680.0	57024.0		81.3	348.5	15.0	
8	SD 25	114+04.80	354+28.80	25.0	25.0	33.0		Fog Seal edge to edge	24024.0	88088.0	66733.3	88088.0		125.5	734.1	23.1	
8	SD 25	354+28.80	370+12.80	25.0	25.0	39.0		Fog Seal edge to edge	1584.0	6864.0	4400.0	6864.0		9.8	48.4	1.8	
8	SD 25	370+12.80	467+28.00	25.0	25.0	39.0		Fog Seal edge to edge	9715.2	42099.2	26986.7	42099.2		60.0	296.9	11.1	
8	SD 25	467+28.00	640+51.70	25.0	25.0	36.0		Fog Seal edge to edge	17323.7	69294.8	48121.4	69294.8		98.7	529.3	18.2	
								FT	64051.7	263370.0	177921.4	263370.0	Tons	375.3	1957.1	69.1	
								MI	12.1								
9	SD 25	0+00.00	143+56.32	24.0	24.0	24.0			14356.3	38283.5	38283.5	38283.5		54.6	421.1	10.0	
9	SD 25	143+56.32	152+53.92	30.0	30.0	30.0		INT of Marshall 4 & 25	897.6	2992.0	2992.0	2992.0		4.3	32.9	0.8	
9	SD 25	152+53.92	174+18.72	34.0	34.0	34.0			2164.8	8178.1	8178.1	8178.1		11.7	90.0	2.1	
9	SD 25	174+18.72	185+80.32	28.0	28.0	28.0		INT of Marshall 4 & 25	1161.6	3613.9	3613.9	3613.9		5.1	39.8	0.9	
9	SD 25	185+80.32	212+73.12	24.0	24.0	24.0			2692.8	7180.8	7180.8	7180.8		10.2	79.0	1.9	
9	SD 25	212+73.12	248+10.72	28.0	28.0	28.0			3537.6	11005.9	11005.9	11005.9		15.7	121.1	2.9	
9	SD 25	248+10.72	275+03.52	34.0	34.0	34.0			2692.8	10172.8	10172.8	10172.8		14.5	111.9	2.7	
9	SD 25	275+03.52	433+96.32	28.0	28.0	28.0			15892.8	49444.3	49444.3	49444.3		70.5	543.9	13.0	
9	SD 25	433+96.32	452+44.32	44.0	44.0	44.0			1848.0	9034.7	9034.7	9034.7		12.9	99.4	2.4	
9	SD 25	452+44.32	597+06.20	28.0	28.0	28.0			14461.9	44992.5	44992.5	44992.5		64.1	494.9	11.8	
								FT	59706.2	184898.4	184898.4	184898.4	Tons	263.5	2033.9	48.5	
								MI	11.3								

PLOT SCALE - 1:200

PLOT NAME - 11

FILE - ... \11 - TABLE OF AST 0 F10 BY SEGMENT.DGN

PLOTTED FROM - TRABILL017

TABLE OF ADDITIONAL QUANTITIES- FOR INFORMATION ONLY

Segment	Route	STATION	NOTE	Area of CRS-2P Surface Treatment SY	Area of Type 1A Cover Aggregate Treatment SY	Area of SS-1h or CSS-1h Asphalt Fog Seal SY	Vol of CRS-2P Surface Treatment Ton	Vol of Type 1A Cover Aggregate Treatment Ton	Vol of SS-1h or CSS-1h Asphalt Fog Seal Ton
5	HWY 12	459+88.80	SD 253	1889.0	1889.0	1889.0	2.69	20.78	0.50
5	HWY 12	459+88.80	336th Ave	465.0	465.0	465.0	0.66	5.12	0.12
5	HWY 12	722+40.96	341st AVE	389.0	389.0	389.0	0.55	4.28	0.10
5	HWY 12	755+04.00	C&B Operations	180.0	180.0	180.0	0.26	1.98	0.05
5	HWY 12	786+68.34	HWY 247	105.0	105.0	105.0	0.15	1.16	0.03
5	HWY 12	786+68.34	Mitchell ST	105.0	105.0	105.0	0.15	1.16	0.03
5	HWY 12	Where needed	Mail box Widening 1	30.0	30.0	30.0	0.26	1.98	0.05
5	HWY 12	Where needed	Mail box Widening 2	30.0	30.0	30.0	0.26	1.98	0.05
5	HWY 12	Where needed	Mail box Widening 3	30.0	30.0	30.0	0.26	1.98	0.05
5	HWY 12	Where needed	Mail box Widening 4	30.0	30.0	30.0	0.26	1.98	0.05
5	HWY 12	Where needed	Mail box Widening 5	30.0	30.0	30.0	0.26	1.98	0.05
				3283.0	3283.0	3283.0	5.75	44.36	1.06

PLOT SCALE - 1:200

PLOTTED FROM - TRAB11017

PLOT NAME - 12

FILE - ... \12 - TABLE OF ADDITIONAL Q.FIO.DGN

RATES OF MATERIAL COVERAGE

Segment	Route	FROM STATION	TO STATION	LENGTH FT	Width of CRS-2P Surface Treatment FT	Width of Type 1A Cover Aggregate Treatment FT	Width of SS-1h or CSS-1h Asphalt Fog Seal FT	NOTE	Area of CRS-2P Surface Treatment SY	Area of Type 1A Cover Aggregate Treatment SY	Area of Asphalt SS-1h or CSS-1h Fog Seal SY	Vol of CRS-2P Surface Treatment Tons	Vol of Type 1A Cover Aggregate Treatment Tons	Vol SS-1h OR CSS-1h of Asphalt Fog Seal Tons
5	HWY 12	456+08.64	465+16.80	908.2	12.0	12.0	12.0	South EB Accel / Turn lane	1210.9	1210.9	1210.9	1.73	13.32	0.32
5	HWY 12	456+08.64	467+80.80	1172.2	12.0	12.0	12.0	North WB Accel / Turn lane	1562.9	1562.9	1562.9	2.23	17.19	0.41
5	HWY 12	709+10.40	729+16.80	2006.4	12.0	12.0	12.0	South EB Accel / Turn lane	2675.2	2675.2	2675.2	3.81	29.43	0.70
5	HWY 12	709+10.40	734+44.80	2534.4	12.0	12.0	12.0	North WB Accel / Turn lane	3379.2	3379.2	3379.2	4.82	37.17	0.89
				6621.1					8828.2	8828.2	8828.2	12.6	97.1	2.3

CRS-2P Asphalt for Surface Treatment at the rate of 10.03 tons per mile applied at 12 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 77.44 tons per mile applied at 12 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 1.85 tons per mile applied at 12 feet wide.
(Rate = 0.07 Gal./S.Y.).

1	HWY 10	601+92.00	616+70.40	1478.4	14.0	14.0	14.0	North WB Accel / Turn lane	2299.7	2299.7	2299.7	3.28	25.30	0.60
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CRS-2P Asphalt for Surface Treatment at the rate of 11.70 tons per mile applied at 14 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 90.35 tons per mile applied at 14 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 2.16 tons per mile applied at 14 feet wide.
(Rate = 0.07 Gal./S.Y.).

3	HWY 239	0+00.00	53+32.80	5332.8	24.0	24.0	24.0	INT of HWY 10 & HWY 239	14220.8	14220.8	14220.8	20.26	156.43	3.73
3	HWY 239	53+32.80	158+92.80	10560.0	24.0	24.0	24.0		28160.0	28160.0	28160.0	40.13	309.76	7.39
3	HWY 239	158+92.80	211+72.80	5280.0	24.0	24.0	24.0		14080.0	14080.0	14080.0	20.06	154.88	3.70
3	HWY 239	211+72.80	317+32.80	10560.0	24.0	24.0	24.0		28160.0	28160.0	28160.0	40.13	309.76	7.39
3	HWY 239	317+32.80	386+07.40	6874.6	24.0	24.0	24.0		18332.3	18332.3	18332.3	26.12	201.65	4.81
4	HWY 45	0+00.00	16+36.80	1636.8	24.0	24.0	24.0	INT of HWY 10 & HWY 45	4364.8	4364.8	4364.8	6.22	48.01	1.15
4	HWY 45	16+36.80	54+38.40	3801.6	24.0	24.0	24.0		10137.6	10137.6	10137.6	14.45	111.51	2.66
4	HWY 45	54+38.40	639+56.60	58518.2	24.0	24.0	24.0		156048.5	156048.5	156048.5	222.37	1716.53	40.96
9	SD 25	0+00.00	143+56.32	14356.3	24.0	24.0	24.0		38283.5	38283.5	38283.5	54.55	421.12	10.05
9	SD 25	185+80.32	212+73.12	2692.8	24.0	24.0	24.0		7180.8	7180.8	7180.8	10.23	78.99	1.88
				117976.3					318968.3	318968.3	318968.3	454.5	3508.7	83.7

CRS-2P Asphalt for Surface Treatment at the rate of 20.06 tons per mile applied at 24 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 154.88 tons per mile applied at 24 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 3.70 tons per mile applied at 24 feet wide.
(Rate = 0.07 Gal./S.Y.).

Plotting Date: 02/18/2025
Revised 02/18/2025

RATES OF MATERIAL COVERAGE

Segment	Route	FROM STATION	TO STATION	LENGTH FT	Width of CRS-2P Surface Treatment FT	Width of Type 1A Cover Aggregate Treatment FT	Width of SS-1h or CSS-1h Asphalt Fog Seal FT	NOTE	Area of CRS-2P Surface Treatment SY	Area of Type 1A Cover Aggregate Treatment SY	Area of Asphalt SS-1h or CSS-1h Fog Seal SY	Vol of CRS-2P Surface Treatment Tons	Vol of Type 1A Cover Aggregate Treatment Tons	Vol SS-1h OR CSS-1h of Asphalt Fog Seal Tons
7	HWY 37	157+34.80	404+45.20	24710.4	25.0	25.0	32.0	Fog Seal edge to edge	87859.2	68640.0	87859.2	125.20	755.04	23.06
7	HWY 37	404+99.20	558+62.80	15363.6	25.0	25.0	32.0	Fog Seal edge to edge	54626.1	42676.7	54626.1	77.84	469.44	14.34
7	HWY 37	559+54.80	671+79.04	11224.2	25.0	25.0	32.0	Fog Seal edge to edge	39908.4	31178.4	39908.4	56.87	342.96	10.48
7	HWY 37	672+33.04	738+88.30	6655.3	25.0	25.0	32.0	Fog Seal edge to edge	23663.1	18486.8	23663.1	33.72	203.36	6.21
8	SD 25	0+00.00	114+04.80	11404.8	25.0	25.0	45.0	Fog Seal edge to edge	57024.0	31680.0	57024.0	81.26	348.48	14.97
8	SD 25	114+04.80	354+28.80	24024.0	25.0	25.0	33.0	Fog Seal edge to edge	88088.0	66733.3	88088.0	125.53	734.07	23.12
8	SD 25	354+28.80	370+12.80	1584.0	25.0	25.0	39.0	Fog Seal edge to edge	6864.0	4400.0	6864.0	9.78	48.40	1.80
8	SD 25	370+12.80	467+28.00	9715.2	25.0	25.0	39.0	Fog Seal edge to edge	42099.2	26986.7	42099.2	59.99	296.85	11.05
8	SD 25	467+28.00	640+51.70	17323.7	25.0	25.0	36.0	Fog Seal edge to edge	69294.8	48121.4	69294.8	98.75	529.34	18.19
				122005.2					469426.9	338903.3	469426.9	668.9	3727.9	123.2

CRS-2P Asphalt for Surface Treatment at the rate of 28.7 tons per mile applied at 25 feet wide.

(Rate = 0.38 Gal./S.Y.).

Type 1A Cover Aggregate at the rate of 161.33 tons per mile applied at 25 feet wide.

(Rate= 22 Lbs./S.Y.).

CSS-1H or SS-1H for Fog Seal at the rate of 4.93 tons per mile applied at 32 feet wide; 5.08 T for 33 FT, 5.54 T for 36 FT; 6.01 T for 39 FT, & 6.93 T for 45 FT wide.

(Rate = 0.07 Gal./S.Y.).

1	HWY 10	0+00.00	174+24.00	17424.0	28.0	28.0	28.0		54208.0	54208.0	54208.0	77.25	596.29	14.23
1	HWY 10	174+24.00	211+20.00	3696.0	28.0	28.0	28.0		11498.7	11498.7	11498.7	16.39	126.49	3.02
1	HWY 10	438+24.00	702+24.00	26400.0	28.0	28.0	28.0		82133.3	82133.3	82133.3	117.04	903.47	21.56
1	HWY 10	702+24.00	1056+00.00	35376.0	28.0	28.0	28.0		110058.7	110058.7	110058.7	156.83	1210.65	28.89
1	HWY 10	1056+00.00	1494+24.00	43824.0	28.0	28.0	28.0		136341.3	136341.3	136341.3	194.29	1499.75	35.79
1	HWY 10	1494+24.00	1742+24.20	24800.2	28.0	28.0	28.0		77156.2	77156.2	77156.2	109.95	848.72	20.25
9	SD 25	174+18.72	185+80.32	1161.6	28.0	28.0	28.0	INT of Marshall 4 & 25	3613.9	3613.9	3613.9	5.15	39.75	0.95
9	SD 25	212+73.12	248+10.72	3537.6	28.0	28.0	28.0		11005.9	11005.9	11005.9	15.68	121.06	2.89
9	SD 25	275+03.52	433+96.32	15892.8	28.0	28.0	28.0		49444.3	49444.3	49444.3	70.46	543.89	12.98
9	SD 25	452+44.32	597+06.20	14461.9	28.0	28.0	28.0		44992.5	44992.5	44992.5	64.11	494.92	11.81
				186574.1					580452.7	580452.7	580452.7	827.1	6385.0	152.4

CRS-2P Asphalt for Surface Treatment at the rate of 23.41 tons per mile applied at 28 feet wide.

(Rate = 0.38 Gal./S.Y.).

Type 1A Cover Aggregate at the rate of 180.69 tons per mile applied at 28 feet wide.

(Rate= 22 Lbs./S.Y.).

CSS-1H or SS-1H for Fog Seal at the rate of 4.31 tons per mile applied at 28 feet wide.

(Rate = 0.07 Gal./S.Y.).

PLOT SCALE - 1:200

PLOTTED FROM - TRAB11017

PLOT NAME - 14

FILE - ... \14 - RATE OF MATERIALS.DGN

RATES OF MATERIAL COVERAGE

Segment	Route	FROM STATION	TO STATION	LENGTH FT	Width of CRS-2P Surface Treatment FT	Width of Type 1A Cover Aggregate Treatment FT	Width of SS-1h or CSS-1h Asphalt Fog Seal FT	NOTE	Area of CRS-2P Surface Treatment SY	Area of Type 1A Cover Aggregate Treatment SY	Area of Asphalt SS-1h or CSS-1h Fog Seal SY	Vol of CRS-2P Surface Treatment Tons	Vol of Type 1A Cover Aggregate Treatment Tons	Vol SS-1h OR CSS-1h of Asphalt Fog Seal Tons
9	SD 25	143+56.32	152+53.92	897.6	30.0	30.0	30.0	INT of Marshall 4 & 25	2992.0	2992.0	2992.0	4.26	32.91	0.79

CRS-2P Asphalt for Surface Treatment at the rate of 25.08 tons per mile applied at 30 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 193.60 tons per mile applied at 30 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 4.62 tons per mile applied at 30 feet wide.
(Rate = 0.07 Gal./S.Y.).

5	HWY 12	0+00.00	467+80.80	46780.8	34.0	34.0	34.0		176727.5	176727.5	176727.5	251.84	1944.00	46.39
9	SD 25	152+53.92	174+18.72	2164.8	34.0	34.0	34.0		8178.1	8178.1	8178.1	11.65	89.96	2.15
9	SD 25	248+10.72	275+03.52	2692.8	34.0	34.0	34.0		10172.8	10172.8	10172.8	14.50	111.90	2.67
				51638.4					195078.4	195078.4	195078.4	278.0	2145.9	51.2

CRS-2P Asphalt for Surface Treatment at the rate of 28.42 tons per mile applied at 34 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 219.41 tons per mile applied at 34 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 5.24 tons per mile applied at 34 feet wide.
(Rate = 0.07 Gal./S.Y.).

1	HWY 10	211+20.00	248+68.80	3748.8	36.0	36.0	36.0		14995.2	14995.2	14995.2	21.37	164.95	3.94
1	HWY 10	248+68.80	438+24.00	18955.2	36.0	36.0	36.0		75820.8	75820.8	75820.8	108.04	834.03	19.90
				22704.0					90816.0	90816.0	90816.0	129.4	999.0	23.8

CRS-2P Asphalt for Surface Treatment at the rate of 30.10 tons per mile applied at 36 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 232.32 tons per mile applied at 36 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 5.54 tons per mile applied at 36 feet wide.
(Rate = 0.07 Gal./S.Y.).

5	HWY 12	765+60.00	787+61.80	2201.8	40.0	40.0	40.0	curbing both sides	9785.8	9785.8	9785.8	13.94	107.64	2.57
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CRS-2P Asphalt for Surface Treatment at the rate of 33.44 tons per mile applied at 40 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 258.13 tons per mile applied at 40 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 6.16 tons per mile applied at 40 feet wide.
(Rate = 0.07 Gal./S.Y.).

RATES OF MATERIAL COVERAGE

Segment	Route	FROM STATION	TO STATION	LENGTH FT	Width of CRS-2P Surface Treatment FT	Width of Type 1A Cover Aggregate Treatment FT	Width of SS-1h or CSS-1h Asphalt Fog Seal FT	NOTE	Area of CRS-2P Surface Treatment SY	Area of Type 1A Cover Aggregate Treatment SY	Area of Asphalt SS-1h or CSS-1h Fog Seal SY	Vol of CRS-2P Surface Treatment Tons	Vol of Type 1A Cover Aggregate Treatment Tons	Vol SS-1h or CSS-1h of Asphalt Fog Seal Tons
2	HWY 45	0+00.00	14+30.90	1494.24	44.0	44.0	44.0		7305.2	7305.2	7305.2	10.50	80.36	2.00
9	SD 25	433+96.32	452+44.32	1848.0	44.0	44.0	44.0		9034.7	9034.7	9034.7	12.87	99.38	2.37
				3342.2					16339.8	16339.8	16339.8	23.3	179.7	4.3

CRS-2P Asphalt for Surface Treatment at the rate of 36.78 tons per mile applied at 44 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 283.95 tons per mile applied at 44 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 6.78 tons per mile applied at 44 feet wide.
(Rate = 0.07 Gal./S.Y.).

5	HWY 12	734+44.80	765+60.00	3115.2	46.0	46.0	46.0		15922.1	15922.1	15922.1	22.69	175.14	4.18
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CRS-2P Asphalt for Surface Treatment at the rate of 38.46 tons per mile applied at 46 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 296.85 tons per mile applied at 46 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 7.08 tons per mile applied at 46 feet wide.
(Rate = 0.07 Gal./S.Y.).

5	HWY 12	467+80.80	734+44.80	26664.0	56.0	56.0	56.0		165909.3	165909.3	165909.3	236.42	1825.00	43.55
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CRS-2P Asphalt for Surface Treatment at the rate of 46.82 tons per mile applied at 56 feet wide.
(Rate = 0.38 Gal./S.Y.).
Type 1A Cover Aggregate at the rate of 361.39 tons per mile applied at 56 feet wide.
(Rate= 22 Lbs./S.Y.).
CSS-1H or SS-1H for Fog Seal at the rate of 8.62 tons per mile applied at 56 feet wide.
(Rate = 0.07 Gal./S.Y.).

RATES OF MATERIAL COVERAGE

Segment	Route	FROM STATION	TO STATION	LENGTH FT	Width of Surface Treatment FT	NOTE	Area of Asphalt SS-1h or CSS-1h Flush Seal SY	Vol SS-1h or CSS-1h of Asphalt Flush Seal Tons
6	HWY 12W	0+00.00	155+49.60	15549.6	4.0	Median	6910.9	1.30
6	HWY 12W	157+90.35	396+29.55	23839.2	4.0	Median	10595.2	1.99
6	HWY 12W	404+60.05	444+84.00	4024.0	4.0	Median	1788.4	0.34
				43412.8			19294.6	3.62

Median Shoulder

CSS-1H or SS-1H for Flush Seal at the rate of .44 tons per mile applied at 4 feet wide.

(Rate = 0.05 Gal./S.Y.).

6	HWY 12W	0+00.00	155+49.60	15549.6	6.0	Outside	10366.4	1.94
6	HWY 12W	157+90.35	396+29.55	23839.2	6.0	Outside	15892.8	2.98
6	HWY 12W	404+60.05	444+84.00	4024.0	6.0	Outside	2682.6	0.50
				43412.8			28941.8	5.43

Outside Shoulder

CSS-1H or SS-1H for Flush Seal at the rate of .66 tons per mile applied at 6 feet wide.

(Rate = 0.05 Gal./S.Y.).

PLOT SCALE - 1:200

PLOTTED FROM - TRAB11017

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-P 0011(317)	19	46

TRAFFIC CONTROL FOR 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. LOOSE GRAVEL signs and 40 MPH advisory speed plaques will be covered or removed from view when they are not applicable.

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.

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.

ESTIMATED QUANTITIES

The quantities of SS-1h or CSS-1h Asphalt for Flush Seal are based off the rates shown in the Rates of Materials. This is only an estimate. The Contract unit prices for the Flush Seal contract items will be nonnegotiable regardless of changes in contract 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. The contract unit prices for the Asphalt Surface Treatment contract items will be nonnegotiable regardless of changes in contract quantities.

FLUSH SEAL

The Contractor will maintain traffic control on the flush sealing area until flush seal is cured enough to prevent pickup on vehicles.

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 Segment 1.

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.

SAND FOR FLUSH SEAL

3.0 tons of Sand for Flush Seal have been included in the estimate of quantities. This is to be used for intersections along Segment 6 at the discretion of the Engineer.

TYPE 1A COVER AGGREGATE

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

Application of the cover aggregate will be maintained within 500 feet or have a time limit of 1 minute between the application of the CRS-2P for Asphalt Surface Treatment and the application of the cover aggregate, whichever amounts to the shorter time period.

The Contractor will continue chip spreader progress, forward, thru the asphalt application at any end where work will be temporarily shut down for a time greater than 5 minutes, to allow for satisfactory uniform rolling of the placed cover aggregate. The Contractor will not allow chip spreader, trucks, or other equipment to lie dormant on the aggregate while transitioning between asphalt distributor loads and or any other temporary shutdown or production, before uniform rolling is complete.

All passes of the rollers will be completed within 8 minutes of application of the CRS-2P Asphalt for Surface Treatment.

PLOT NAME - 19

FILE - ... \19- CONSTRUCTION NOTES.DGN

PROJECT BROOMING

No material will be broomed into the ditches or on the boulevards in residential and commercial areas where the adjacent landowner conducts the mowing of the right-of-way. This material will be disposed of in a manner satisfactory to the Engineer.

Material that is broomed onto the roadway inslopes will not be left in piles or windrows. The material will be evenly distributed at a height that will not hinder mowing operations or cause dispersion of the material into the traveled roadway when passed over with a mower.

All material will be broomed off of bridges and curb & gutter areas. This material from the curb & gutter areas and the drop inlets will be disposed of in a manner satisfactory to the Engineer.

EXISTING PAVEMENT CONDITIONS & TRAFFIC VOLUMES

The existing pavement conditions have been checked for each project and factored into the rates of materials. All segments except Segment 5 are slightly pocked, porous, and oxidized. Actual rates will be adjusted in the field using test strips during construction by the Engineer.

The descriptions used were from the McLeod procedure for seal coat design.

The traffic volumes are shown on the title sheets.

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 be placed 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. A CSS-1h or SS-1h emulsion will be used for the fog seal application. A water-to-emulsion rate of 1:1 should be used for the Fog Seal application.

The Contractor will fog seal the entire asphalt surface treatment surface.

The Contractor will plan the fog seal operation to allow adequate cure time for the fog seal and to minimize/eliminate the need to apply Sand for Fog Seal.

If adequate cure time for the Fog Seal is not available, to facilitate traffic, the Contractor will be allowed to place a minimum sufficient amount of blotting sand on the fog seal to allow traffic to cross the uncured portion of the fog seal, as permitted by the Engineer.

Sand for Fog Seal is only intended to be placed for accesses to businesses, intersection crossings, and as determined by the Engineer to facilitate traffic movements. Sand for Fog Seal will not be placed to accelerate the Contractor's schedule.

Sand will be broomed off the surface of the roadway once the fog seal has sufficiently cured as determined by the Engineer.

Sand for Fog Seal will conform to Section 879.1.B.

Prior to hauling, Sand for Fog Seal will be screened to minimize segregation, eliminate oversize, and effectively breakup or discard material bonded into chunks. All costs for supplying, hauling, placing, and brooming the blotting sand will be incidental to the contract unit price per ton for Sand for Fog Seal.

TEMPORARY PAVEMENT MARKING

The total number and lengths of no passing zone on this project are:

Segment 1: SD 10	59	13.50 MI
Segment 2: SD 45		
Segment 3: SD 239	10	2.51 MI
Segment 4: SD 45	30	7.77 MI
Segment 5: US 12	33	7.73 MI
Segment 6: US 12W		
Segment 7: SD 37	6	0.72 MI
Segment 8: SD 25	15	2.02 MI
Segment 9: SD 25	6	1.68 MI

It is estimated that 88 DO NOT PASS (R4-1) and 230 PASS WITH CARE (R4-2) signs will be required to mark the no passing zones, should the Contractor elect to use these signs.

Temporary flexible vertical markers (tabs) will be used to mark dashed centerline, No Passing Zones, and applicable lane lines. Paint will not be allowed for temporary pavement marking on the asphalt concrete wear course or after application of the flush seal.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

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.

Quantities of Temporary Pavement Markings consist of:

- One pass prior to the chip seal
- One pass after the chip seal
- One pass after the fog seal

The following are the temporary pavement markings quantities:

SEGMENT	Length	Temporary Striping
Segment 1: SD 10	32.997 MI	98.99 MI
Segment 2: SD 45	0.271 MI	0.81 MI
Segment 3: SD 239	7.312 MI	21.94 MI
Segment 4: SD 45	12.113 MI	36.34 MI
Segment 5: US 12	14.917 MI	44.75 MI

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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Segment 6: US 12W	8.222 MI	0 MI
Segment 7: SD 37	13.936 MI	41.81 MI
Segment 8: SD 25	12.131	36.39 MI
Segment 9: SD 25	11.308	33.92 MI

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

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

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 the supplemental specifications for Section 980.1 B.

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

The Contractor will advise the Engineer a minimum of 3 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of no passing zones.

The application of permanent pavement marking will begin no sooner than 7 calendar days following completion of the fog seal. Application of permanent pavement marking will be completed within 14 calendar days following completion of the final surfacing.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

- Solid 4" line = 27.8 Gals/Mile (includes Segment 5 parking)
- Solid 6" line = 41.7 Gals/Mile (Segment 4, Item 633E1200)
- Dashed 4" line = 7.6 Gal/Mile
- Glass Beads = 8 Lbs/Gal.

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.

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.

The following items are new Cold Applied Plastic Pavement Markings:

Segment 1: SD 10 & SD 45/SD 247 Jct	
Cold Applied Plastic Pavement Marking, Arrow (Left - 0, Right - 2)	2 EA
Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	1 EA

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.

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 included in the contract unit price for the various contract items.

PAVEMENT MARKING MASKING

Immediately prior to placement of the asphalt surface treatment, and prior to the fog seal, durable markings will be covered with an approved pavement marking masking. The masking will protect the pavement marking tape from oil and aggregates. Tabs will be placed on each masking line to provide a guide for locating the masking material after the surface treatment has been applied. Masking application ahead of the surface treatment will not exceed the amount estimated for the current day's operation. Upon completion of the fog seal, all masking material will be removed and disposed of by the Contractor.

All cost for furnishing, installing, removing, and disposing of masking will be incidental to the various contract unit prices for Pavement Marking Masking. Any damaged pavement markings will be replaced by the Contractor at no additional cost to the State.

The following item will be masked following installation or before site work:

Segment 1: SD 10 & SD 45/SD 247 Jct	Quantity
Cold Applied Plastic Pavement Marking, Arrow (Left - 0, Right - 2)	4 EA
Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	2 EA
Cold Applied Plastic Pavement Marking, 24" White	30 Ft
Segment 5: US 12 & SD 253 Jct	
Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	4 EA
Cold Applied Plastic Pavement Marking, 24" White	60 Ft
Segment 5: US 12 & 341st Ave (Agtegra)	
Cold Applied Plastic Pavement Marking, Arrow (Left - 3, Right - 3)	12 EA
Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	8 EA
Cold Applied Plastic Pavement Marking, 24" Yellow	244 Ft

Typical masking products may require multiple layers installed prior to the asphalt surface treatment. Masking of pavement marking will be measured and paid for once for the application prior to the Asphalt Surface Treatment and once for the application of the Fog Seal. The above quantities are doubled in the Estimate of Quantities to account for the payment for 2 applications.

The Contractor will remove and dispose of the masking material after completion of the work.

All costs associated with this work will be incidental to the various contract items for Pavement Marking Masking.

Plotting Date: 02/18/2025

ITEMIZED LIST FOR SEGMENT 1 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	22	48" x 48"	16.0	352.0
W13-1P	ADVISORY SPEED (plaque)	22	30" x 30"	6.3	138.6
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 3 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 4 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 5 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 7 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 12 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 13 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 15 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 18 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 20 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 21 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 26 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 28 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 29 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 30 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 33 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 794.0					

ITEMIZED LIST FOR SEGMENT 2 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	2	48" x 48"	16.0	32.0
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 231.4					

ITEMIZED LIST FOR SEGMENT 3 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	2	48" x 48"	16.0	32.0
W13-1P	ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 7 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 253.0					

ITEMIZED LIST FOR SEGMENT 4 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
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	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 6 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 12 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 306.6					

PLOT SCALE - 1:200

PLOTTED FROM - TRAB11017

FILE - ... \22 - TABLES OF SEGMENT TRAFFIC CONTROL QUANTITIES.DGN PLOT NAME - 22

ITEMIZED LIST FOR SEGMENT 5 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	10	48" x 48"	16.0	160.0
W13-1P	ADVISORY SPEED (plaque)	1	30" x 30"	6.3	6.3
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 7 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 9 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 12 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 16 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 420.2					

ITEMIZED LIST FOR SEGMENT 6 TRAFFIC CONTROL SIGNS

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
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W21-2	FRESH OIL	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 9 MILES	4	36" x 18"	4.5	18.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 155.0					

ITEMIZED LIST FOR SEGMENT 7 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
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)	8	30" x 30"	6.3	50.4
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 4 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 6 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 8 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 10 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 14 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 372.8					

Plotting Date: 02/18/2025

ITEMIZED LIST FOR SEGMENT 8 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
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	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 2 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 11 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 13 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 395.8					

ITEMIZED LIST FOR SEGMENT 9 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W3-4	BE PREPARED TO STOP	2	48" x 48"	16.0	32.0
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	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 2 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 3 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 9 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 10 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 12 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 404.8					

PLOT SCALE - 1:200

PLOTTED FROM - TRAB11017

PLOT NAME - 23 FILE - ... \23 - TABLES OF SEGMENT TRAFFIC CONTROL QUANTITIES.DGN

FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

SD 10, SD 45, & SD 239 SEGMENTS 1, 2, 3, & 4

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	24	46
Plotting Date: 02/18/2025			

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



- | | |
|--|--|
| A
ROAD WORK
NEXT 3 MILES | G
ROAD WORK
NEXT 13 MILES |
| B
ROAD WORK
NEXT 4 MILES | H
ROAD WORK
NEXT 15 MILES |
| C
ROAD WORK
NEXT 5 MILES | I
ROAD WORK
NEXT 18 MILES |
| D
ROAD WORK
NEXT 6 MILES | J
ROAD WORK
NEXT 20 MILES |
| E
ROAD WORK
NEXT 7 MILES | K
ROAD WORK
NEXT 21 MILES |
| F
ROAD WORK
NEXT 12 MILES | M
ROAD WORK
NEXT 26 MILES |
| N
ROAD WORK
NEXT 28 MILES | P
ROAD WORK
NEXT 30 MILES |
| O
ROAD WORK
NEXT 29 MILES | Q
ROAD WORK
NEXT 33 MILES |

End Segment 4
SD 45
Sta. 639+56.6
MRM 236.10 +0.000
Mileage 161.849

Begin Segment 4
SD 45
Sta. 0+00.0
MRM 224.05 +0.000
Mileage 149.736

Begin Segment 3
SD 239
Sta. 0+00.0
MRM 187.99 +0.000
Mileage 0.000

End Segment 3
SD 239
Sta. 386+07.4
MRM 195.33 +0.000
Mileage 7.312

End Segment 2
SD 45
Sta. 14+30.9
MRM 201.78 +0.000
Mileage 149.736

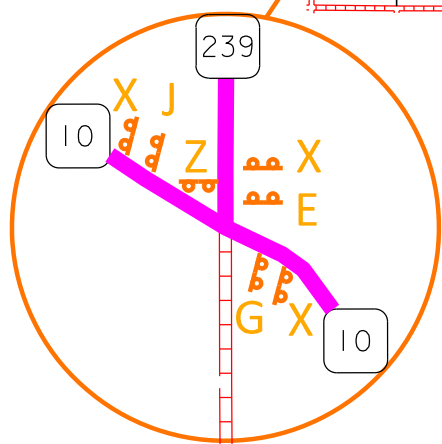
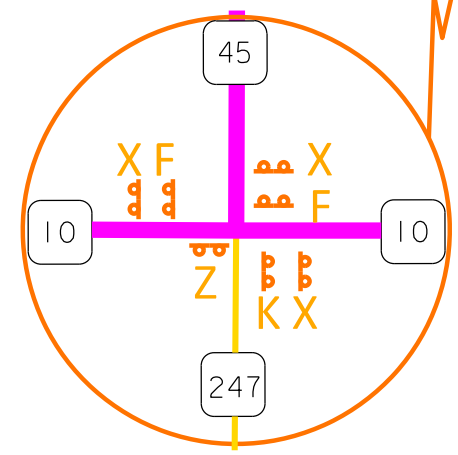
Begin Segment 1
SD 10
Sta. 0+00.0
MRM 225.24 +0.046
Mileage 32.792

End Segment 1
SD 10
Sta. 1742+24.2
MRM 258.00 +0.278
Mileage 65.789

Begin Segment 2
SD 45
Sta. 0+00.0
MRM 201.00 +0.497
Mileage 149.465



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



PLOT SCALE - 1:11800
PLOTTED FROM - TRAB11017

PLOT NAME - 24
FILE - ... \24 - SEGMENTS 1-4 FIXED SIGN LAYOUT.DGN

FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

US 12 SEGMENT 5

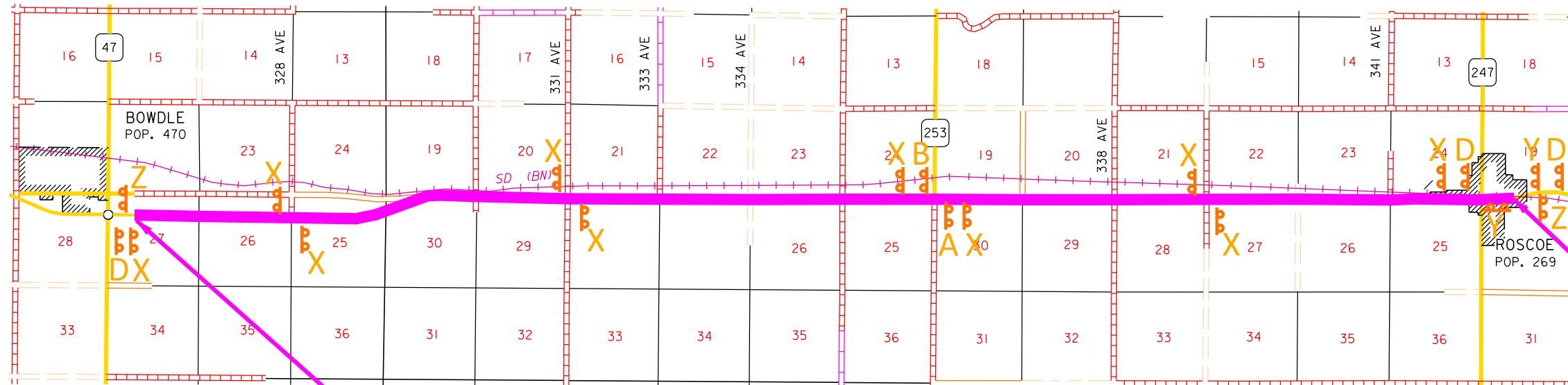
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	25	46
Plotting Date: 02/18/2025			

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



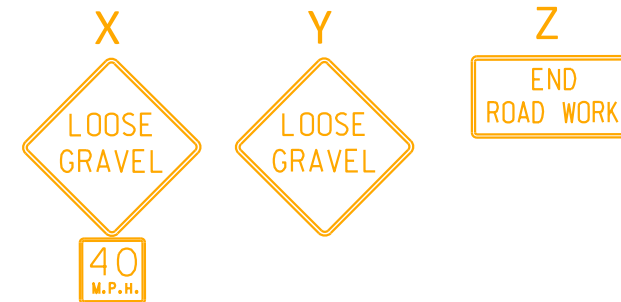
W20-1 ROAD WORK AHEAD signs will be mounted on portable supports, and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD signs will be moved as necessary to keep current with the work activities.

- A
ROAD WORK
NEXT 7 MILES
- B
ROAD WORK
NEXT 9 MILES
- D
ROAD WORK
NEXT 15 MILES



Begin Segment 5
US 12
Sta. 0+00.0
MRM 233.36 +0.000
Mileage 148.710

End Segment 5
US 12
Sta. 787+61.8
MRM 248.00 +0.227
Mileage 163.627



PLOT SCALE - 1:7670

PLOTTED FROM - TRABILL017

PLOT NAME - 25

FILE - ... \25 - SEGMENT 5 FIXED SIGN LAYOUT.DGN

FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

US 12 WBL & SD 37

SEGMENTS 6 & 7

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	26	46
Plotting Date: 02/18/2025			

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



PLOT SCALE - 1:11800

- A**
ROAD WORK
NEXT 4 MILES
- B**
ROAD WORK
NEXT 6 MILES
- C**
ROAD WORK
NEXT 8 MILES
- D**
ROAD WORK
NEXT 9 MILES
- E**
ROAD WORK
NEXT 10 MILES
- F**
ROAD WORK
NEXT 14 MILES

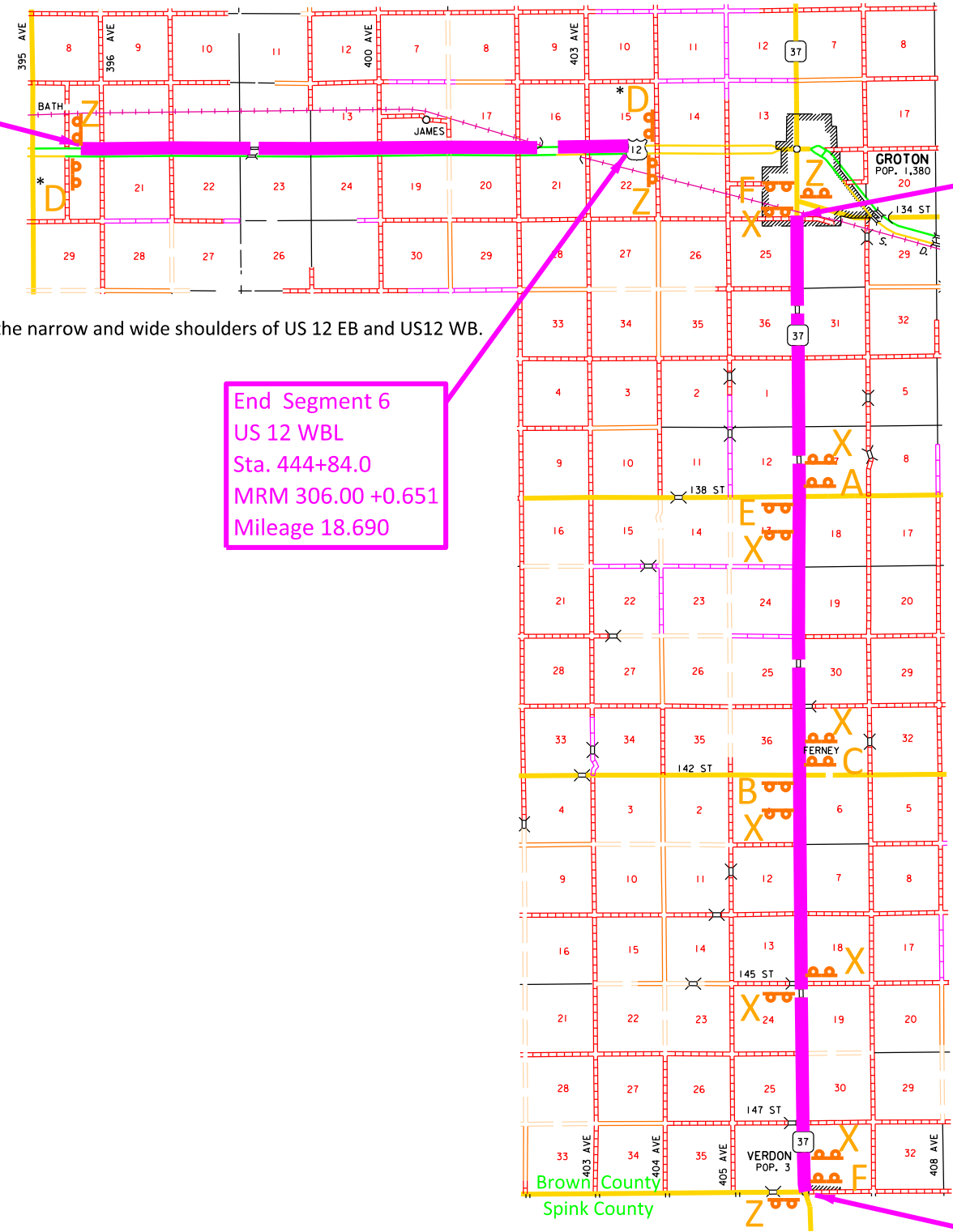
Begin Segment 6
US 12 WBL
Sta. 0+00.0
MRM 298.11 +0.145
Mileage 10.265

*Sign "D" will be placed on the narrow and wide shoulders of US 12 EB and US12 WB.

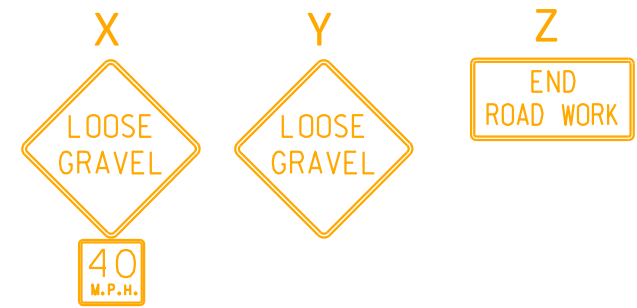
End Segment 6
US 12 WBL
Sta. 444+84.0
MRM 306.00 +0.651
Mileage 18.690

End Segment 7
SD 37
Sta. 738+88.3
MRM 207.00 +0.417
Mileage 145.445

Begin Segment 7
SD 37
Sta. 0+00.0
MRM 193.40 +0.000
Mileage 131.451



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



PLOTTED FROM - TRAB11017

FILE - ... \26 - SEGMENTS 6 & 7 FIXED SIGN LAYOUT.DGN

PLOT NAME - 26

FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS

SD 25 SEGMENT 8

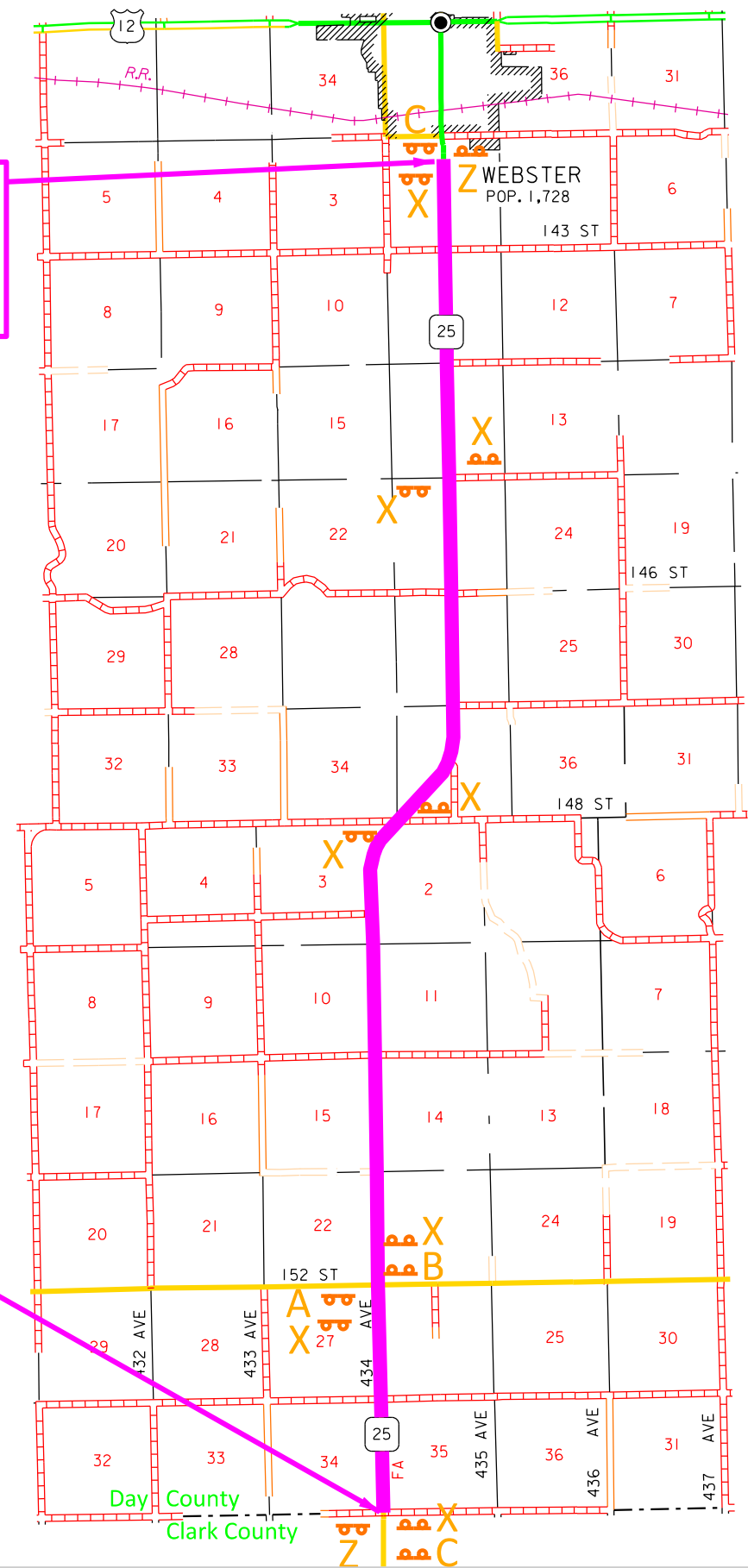
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	27	46
Plotting Date: 02/19/2025			

PLOT SCALE - 1:7670

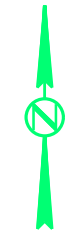
- A
ROAD WORK
NEXT 2 MILES
- B
ROAD WORK
NEXT 11 MILES
- C
ROAD WORK
NEXT 13 MILES

End Segment 8
SD 25
Sta. 640+51.7
MRM 181.00 +0.016
Mileage 134.918

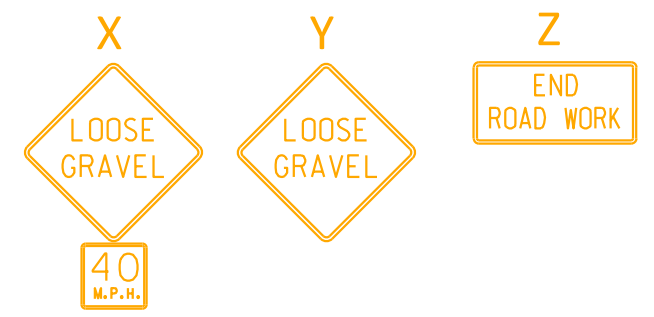
Begin Segment 8
SD 25
Sta. 0+00.0
MRM 168.84 +0.000
Mileage 122.787



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



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



PLOTTED FROM - TRAB11017

FILE - ... \27 - SEGMENT 8 FIXED SIGN LAYOUT.DGN

FIXED LOCATION GROUND MOUNTED BREAKAWAY SUPPORT SIGNS SD 25 SEGMENT 9

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	28	46
Plotting Date: 02/18/2025			

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



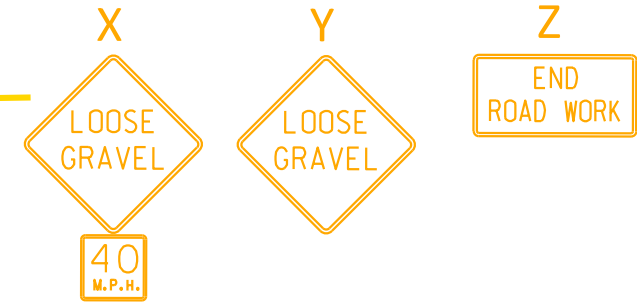
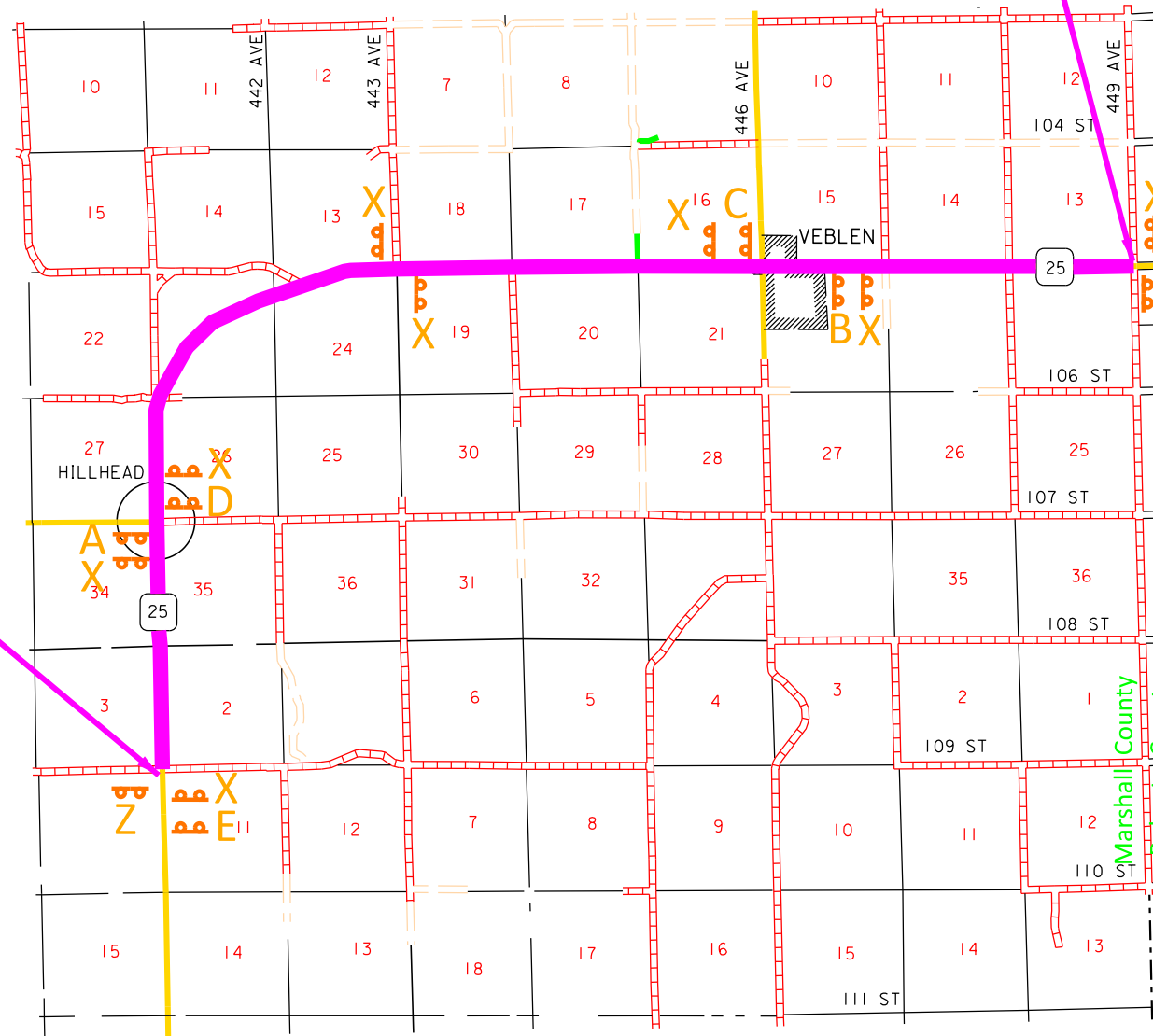
W20-1 ROAD WORK AHEAD signs will be mounted on portable supports, and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD signs will be moved as necessary to keep current with the work activities.

PLOT SCALE - 1:7670

- A**
ROAD WORK
NEXT 2 MILES
- B**
ROAD WORK
NEXT 3 MILES
- C**
ROAD WORK
NEXT 9 MILES
- D**
ROAD WORK
NEXT 10 MILES
- E**
ROAD WORK
NEXT 12 MILES

Begin Segment 9
SD 25
Sta. 0+00.0
MRM 219.00 +0.111
Mileage 172.186

End Segment 9
SD 25
Sta. 597+06.2
MRM 230.44 +0.000
Mileage 183.494

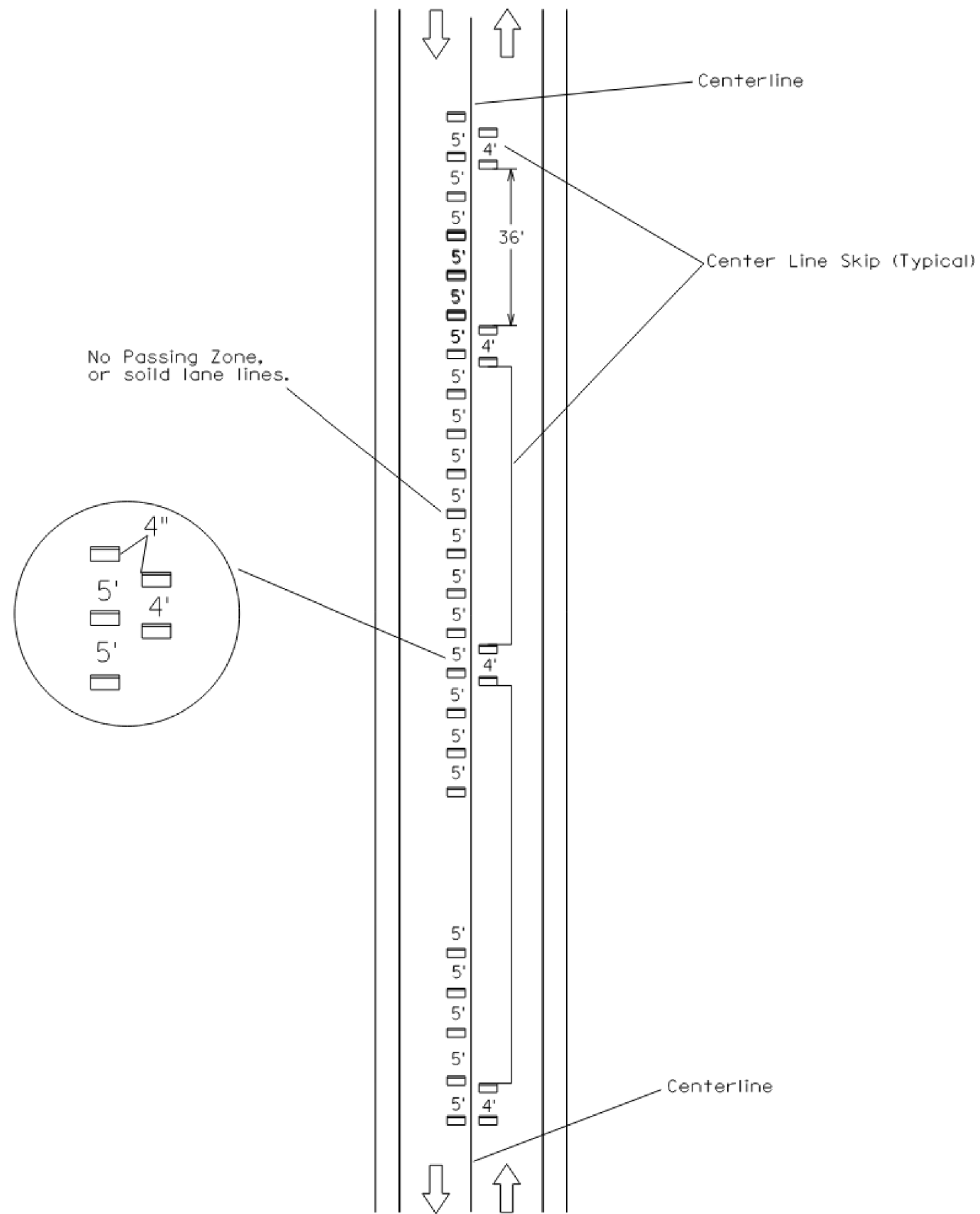


PLOTTED FROM - TRABILL017

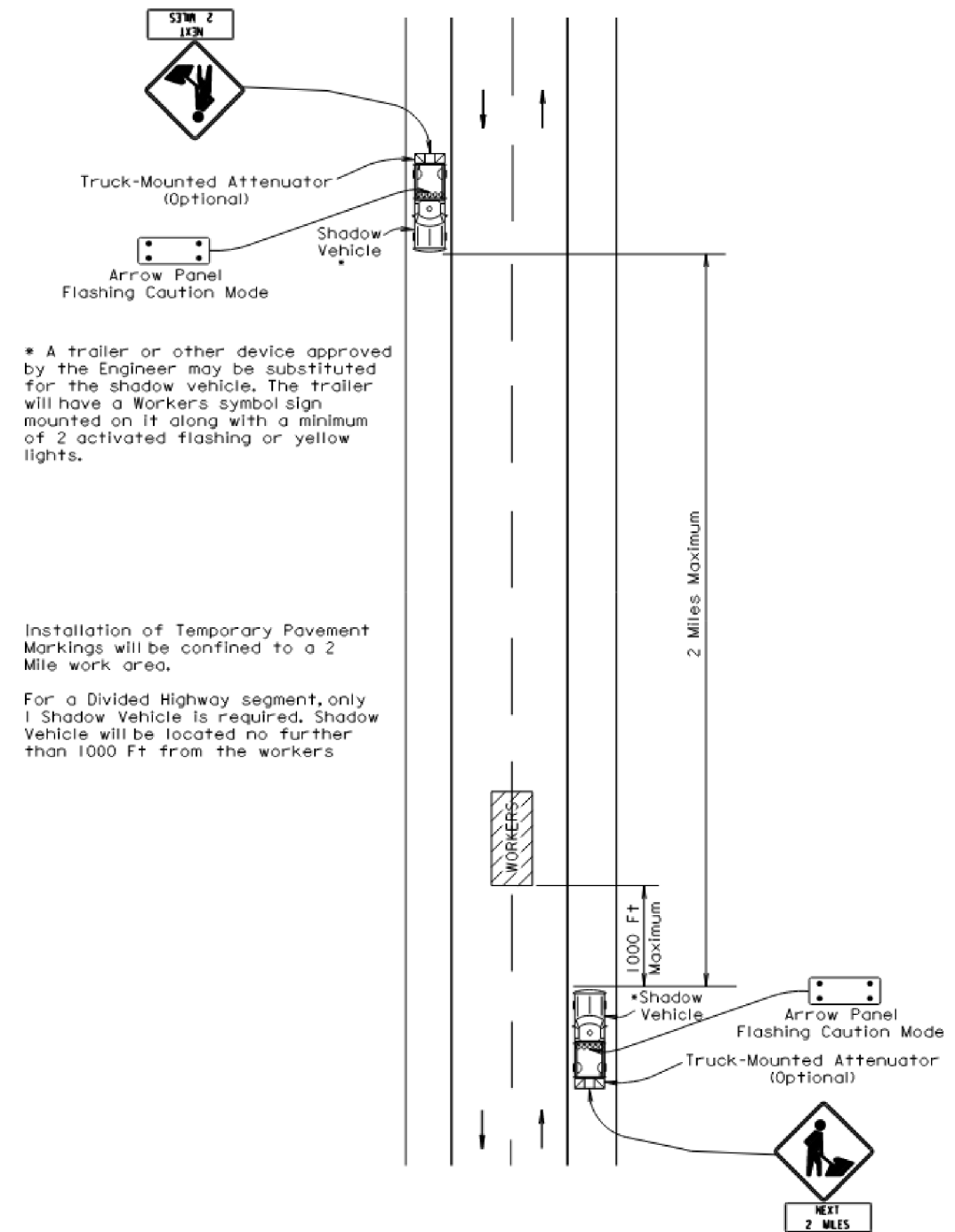
PLOT NAME - 28

FILE ... \28 - SEGMENT 9 FIXED SIGN LAYOUT.DGN

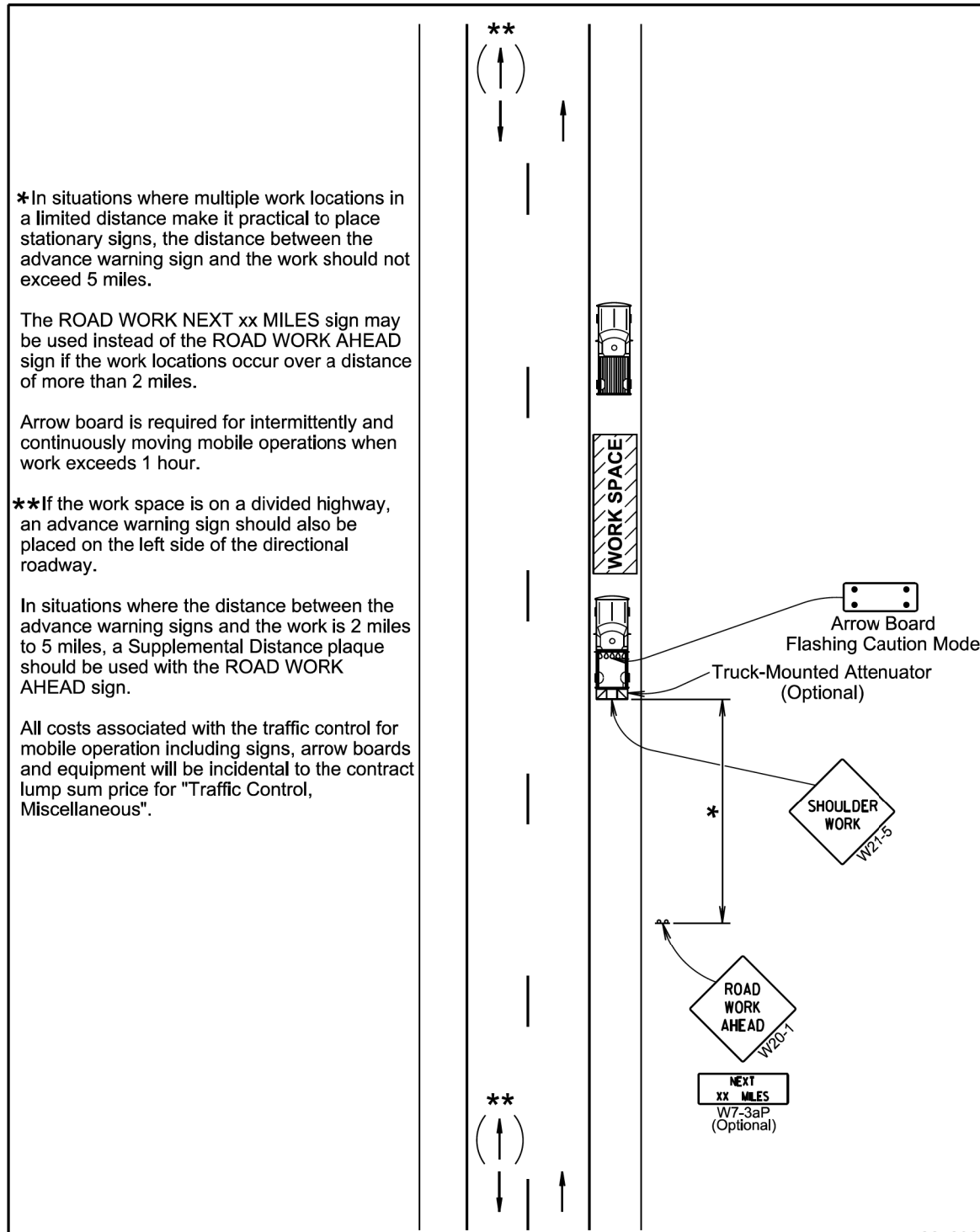
GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD MARKER INSTALLATION



GUIDES FOR TRAFFIC CONTROL DEVICES APPLICATION OF TEMPORARY PAVEMENT MARKING TABS



PLOT SCALE - 1:200



* In situations where multiple work locations in a limited distance make it practical to place stationary signs, the distance between the advance warning sign and the work should not exceed 5 miles.

The ROAD WORK NEXT xx MILES sign may be used instead of the ROAD WORK AHEAD sign if the work locations occur over a distance of more than 2 miles.

Arrow board is required for intermittently and continuously moving mobile operations when work exceeds 1 hour.

** If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

In situations where the distance between the advance warning signs and the work is 2 miles to 5 miles, a Supplemental Distance plaque should be used with the ROAD WORK AHEAD sign.

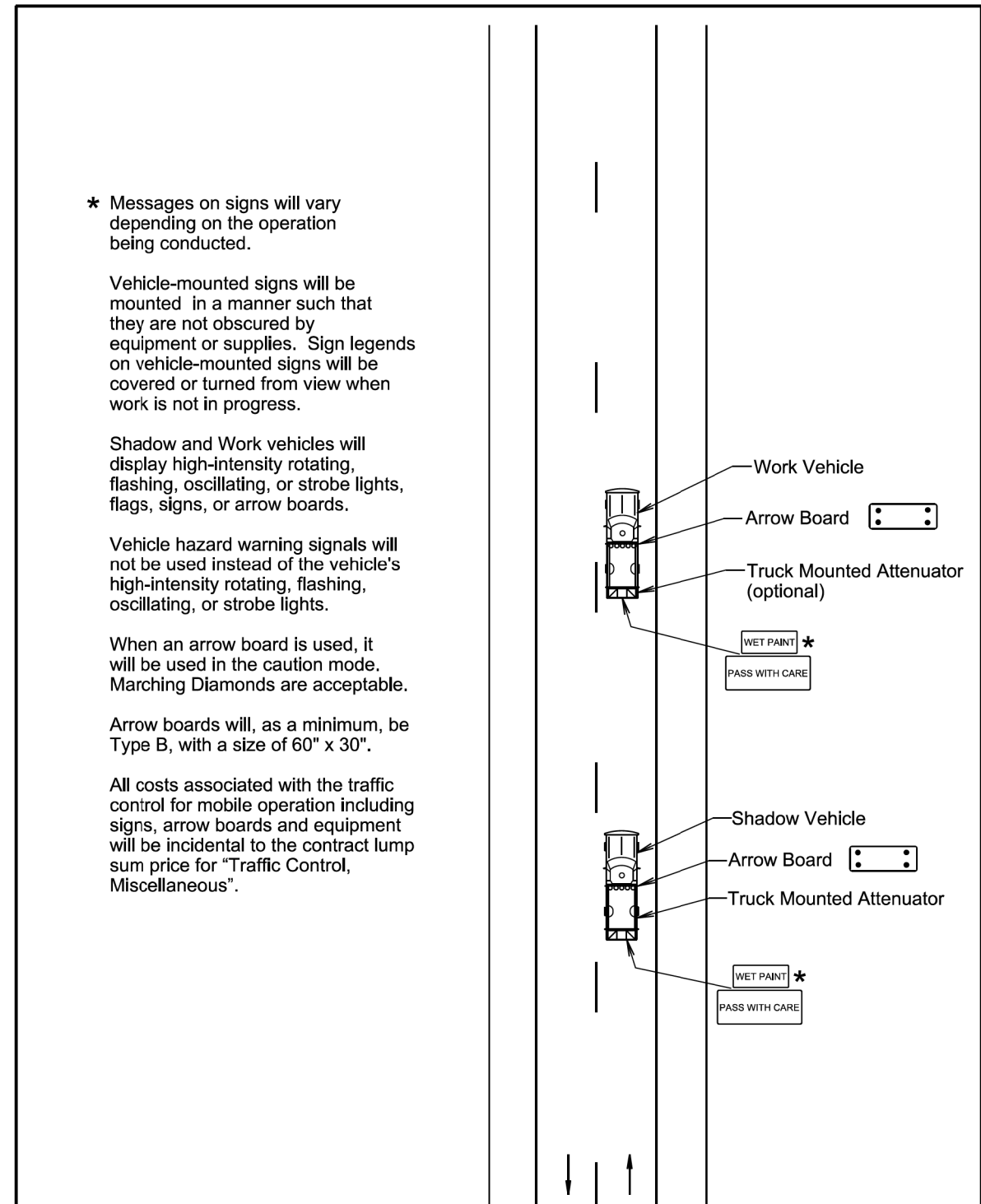
All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

January 22, 2021

Published Date: 2025	S D D O T	MOBILE OPERATIONS ON SHOULDERS	PLATE NUMBER
			634.04
			Sheet 1 of 1

PLOT NAME - 30

FILE - ... \29 - 30-31 - STOPPLATES TMP TC X 3 SHTS.DGN



* 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".

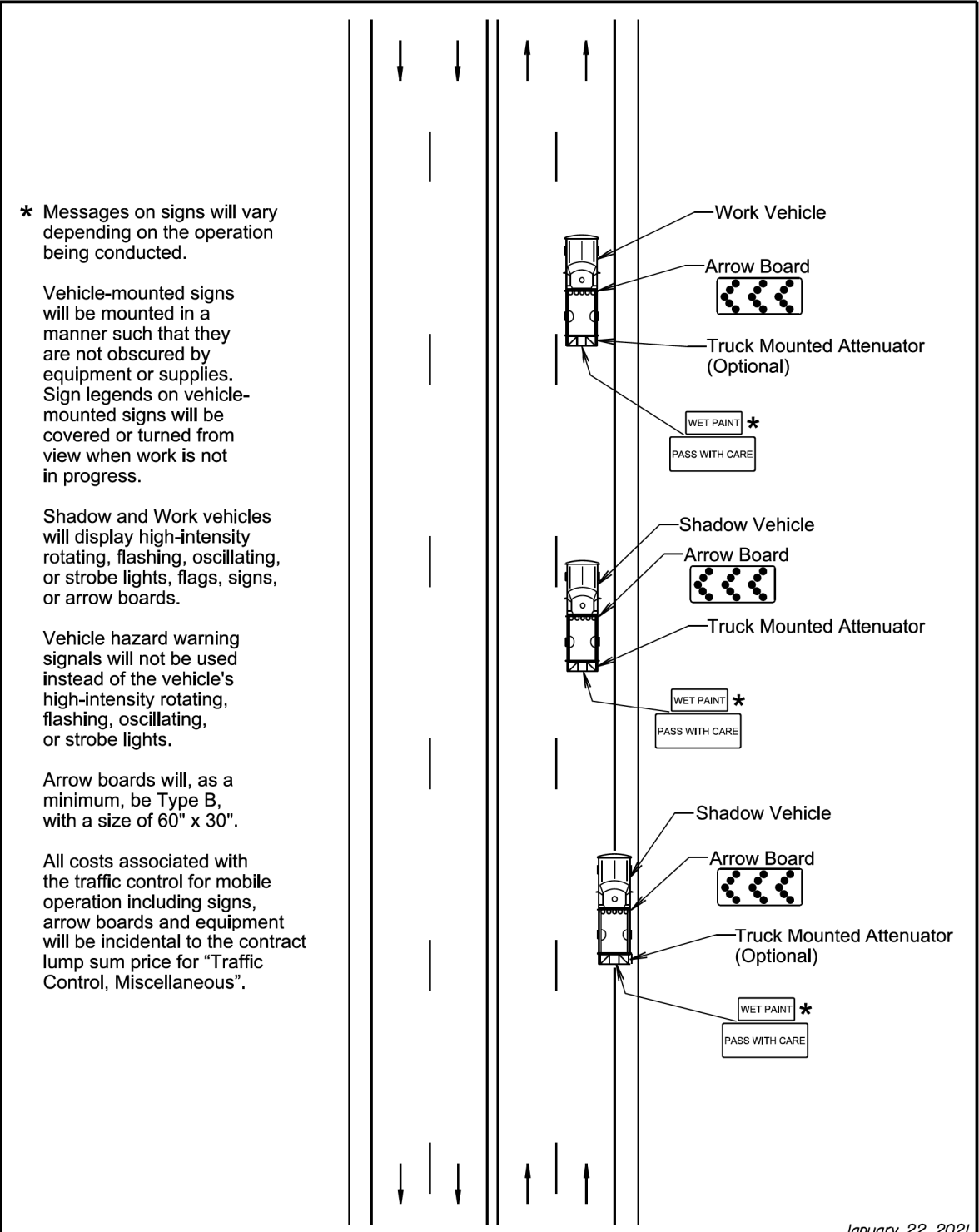
All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

January 22, 2021

Published Date: 2025	S D D O T	MOBILE OPERATIONS ON 2-LANE ROAD	PLATE NUMBER
			634.06
			Sheet 1 of 1

PLOTTED FROM - TRAB11017

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

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

Published Date: 2025

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.

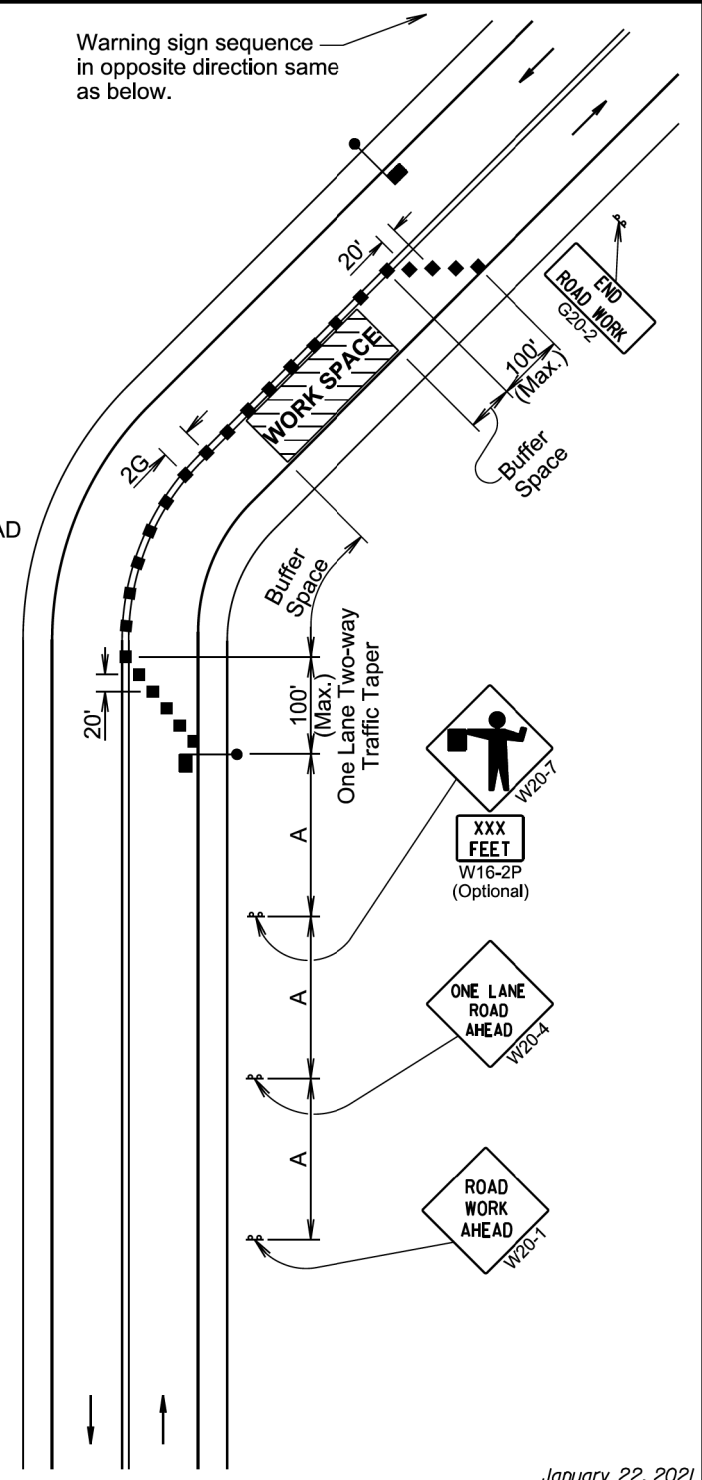
Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

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.

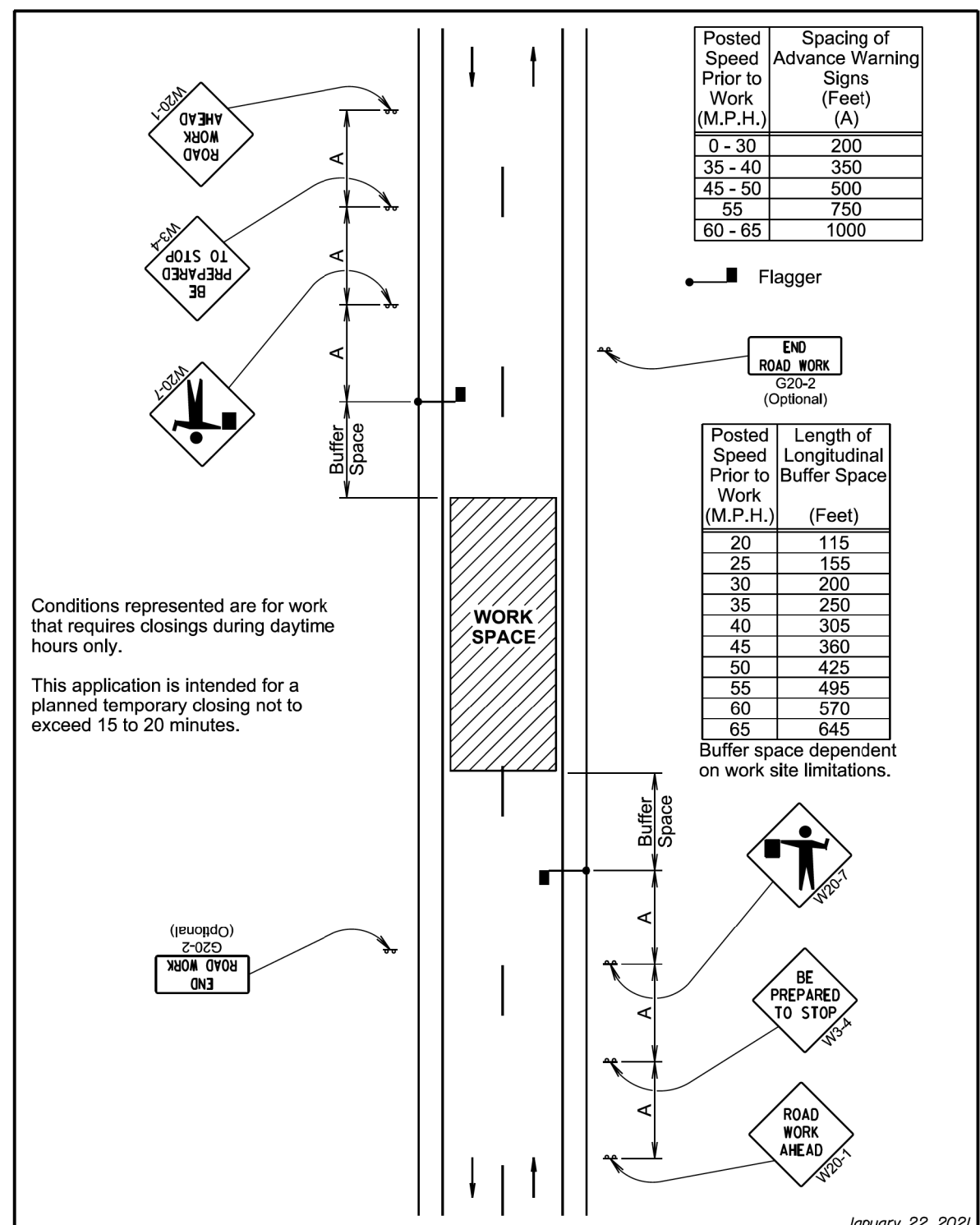
S D D O T	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
		Sheet 1 of 1

Published Date: 2025



January 22, 2021

FILE ... \29 - 30-31 - STOPPLATES TMP TC X 3 SHITS.DGN PLOT NAME - 31



January 22, 2021

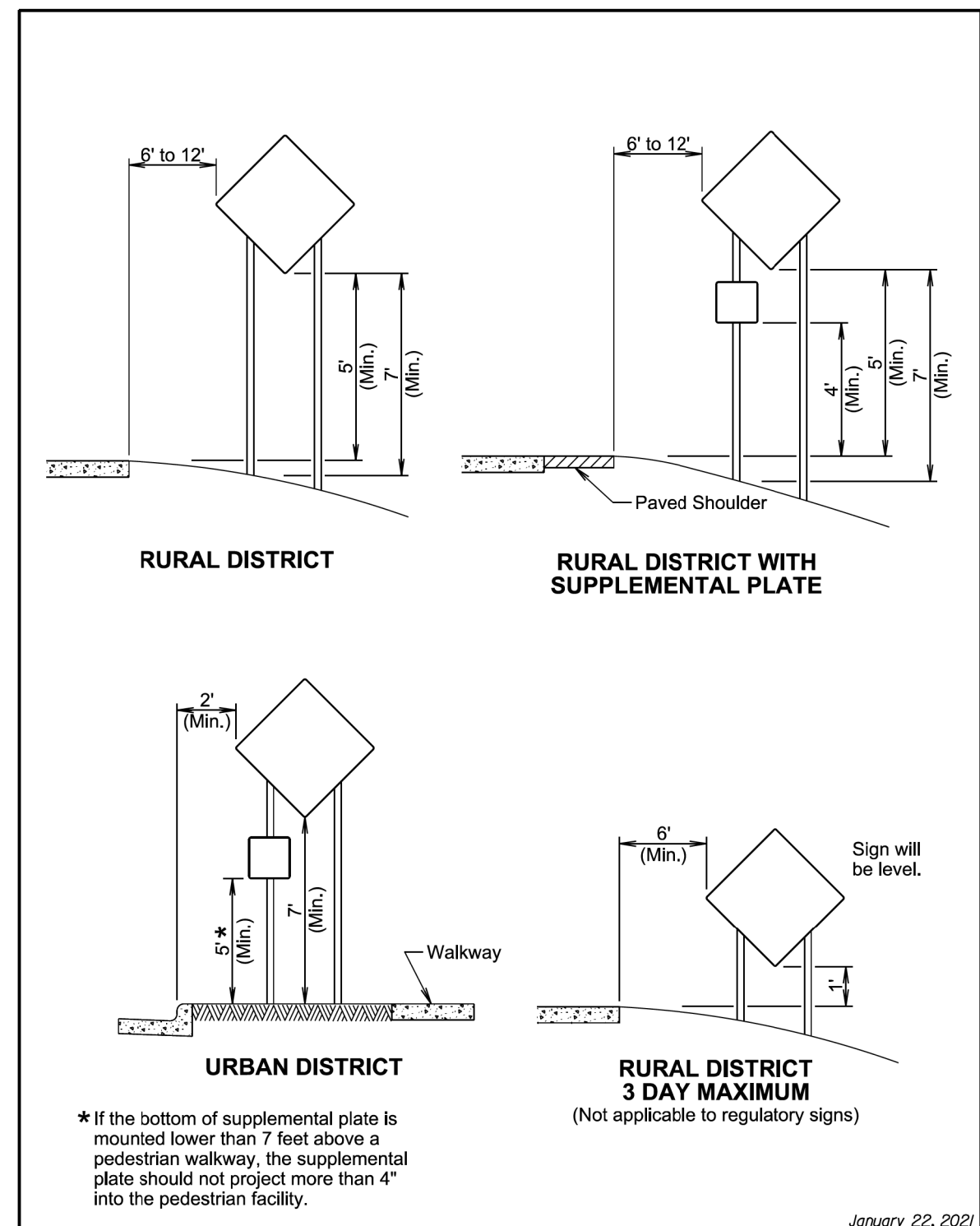
Published Date: 2025

S
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T

TEMPORARY ROAD WORK

PLATE NUMBER
634.30

Sheet 1 of 1



January 22, 2021

Published Date: 2025

S
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T

CRASHWORTHY SIGN SUPPORTS
(Typical Construction Signing)

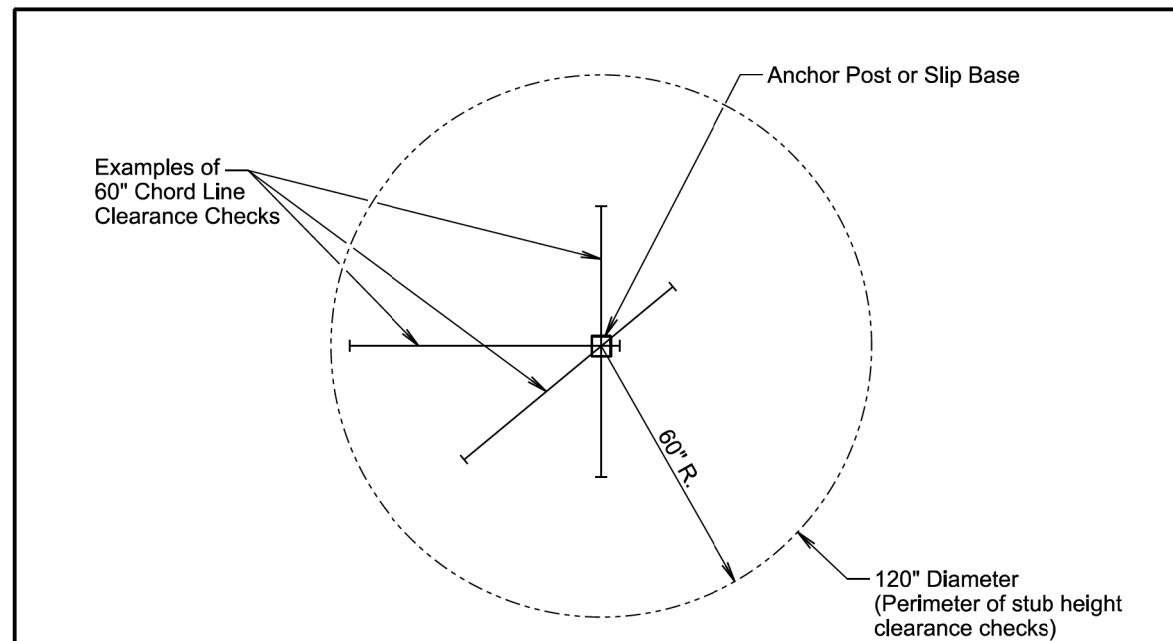
PLATE NUMBER
634.85

Sheet 1 of 1

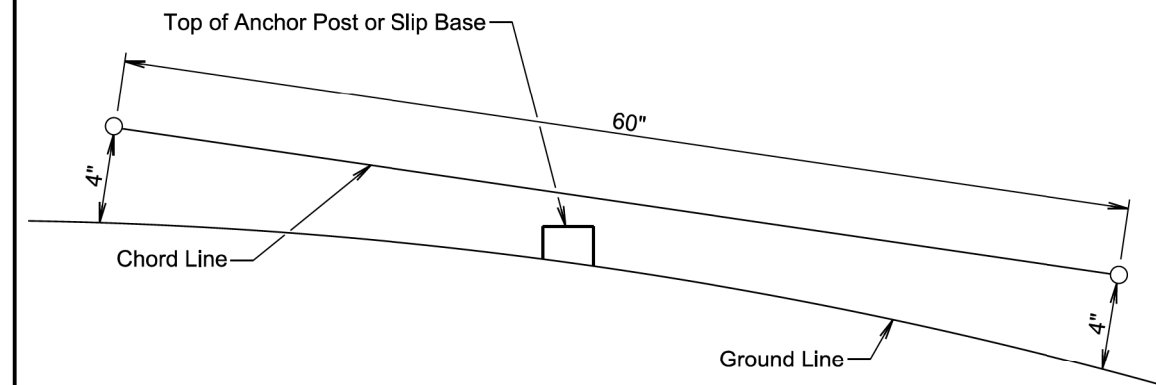
PLOT SCALE - 1:200

PLOTTED FROM - TRAB11017

PLOT NAME - 32
FILE - ... \32 - 33 - STOPPLATES TMP TC X 2 SHTS.DGN



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

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: 2025</i>	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER
			634.99
			Sheet 1 of 1

Plotting Date: 02/18/2025
Revised 02/18/2025

Permanent Striping Quantities Table

SEGMENT	Segment Length Mi	4" White Mi	6" White Mi	4" Yellow Skip Mi	NPZ 4" yellow striping Mi	4" White Parking Stalls Mi
1: SD 10	32.997	66.030		8.249	14.885	
2: SD 45	0.271	0.542		0.068	0.603	
3: SD 239	7.312	14.624		1.828	2.551	
4: SD 45	12.113		24.226	3.028	9.606	
5: US 12	14.917	30.158		3.729	11.040	.047
6: US 12W	8.222					
7: SD 37	13.936	27.872		3.484	0.835	
8: SD 25	12.131	24.262		3.033	2.501	
9: SD 25	11.308	22.616		2.827	2.31	

PAVEMENT MARKING LAYOUT

Segment 1

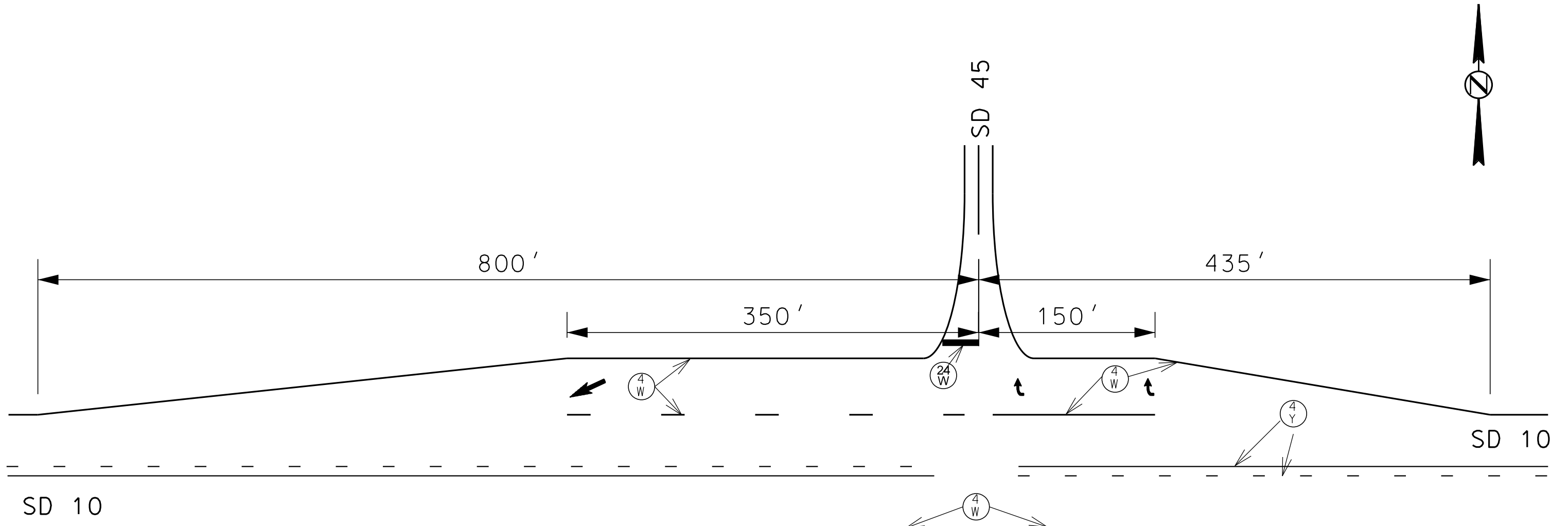
SD 10 & SD 45/SD 247 Jct

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	35	46
Plotting Date: 02/18/2025			

PLOT SCALE - 1:84

PLOT NAME - 35

FILE - ... \35 - SD 10 & 45 - PAVEMENT MARKING LAYOUT.DGN



Lanes Widths are 12'

ESTIMATE OF QUANTITIES		NEW		REMOVALS	
KEY	ITEM	EST QUANT	UNIT	EST QUANT	UNIT
	Cold Applied Plastic Pavement Marking, Arrow (Left - 0, Right - 2)	2	EACH	2	EACH
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	1	EACH		
	Cold Applied Plastic Pavement Marking, 24" White	15	FT	15	FT

Legend	
KEY	ITEM
	High Build Waterborne Pavement Marking Paint, White
	High Build Waterborne Pavement Marking Paint, Yellow

PLOTTED FROM - TRAB11017

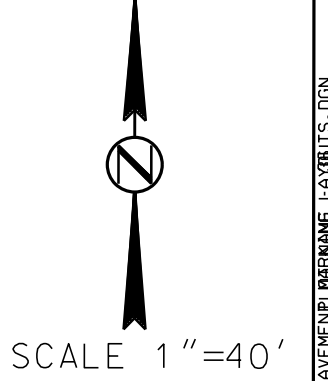
PAVEMENT MARKING LAYOUT

Segment 5

US 12 & SD 253 Jct

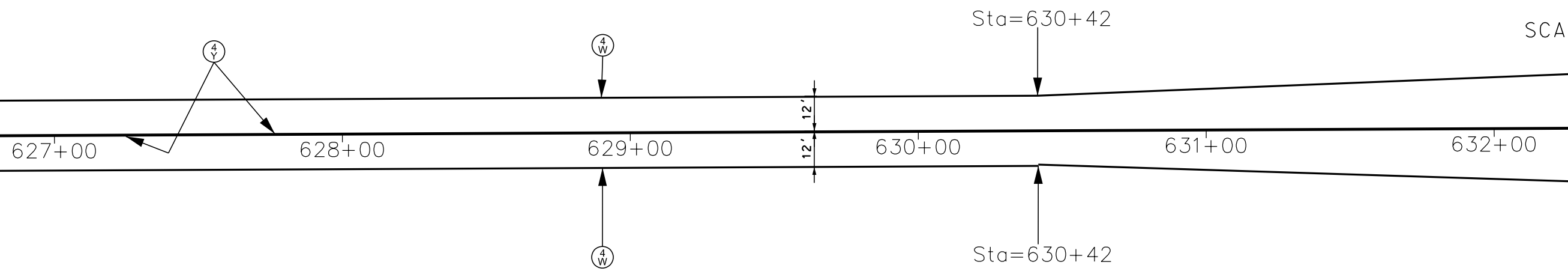
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	36	46
Plotting Date: 02/18/2025			

(Sheet 1 of 3)



PLOT SCALE - 1"=40'

FILE ... \36 37-38-39-40-41-42-43 - US 12 - 253 JCT & AETGRA INT PAVEMENT MARKING LAYOUTS.DGN



LEGEND	
KEY	ITEM
⊕ 4 W	High Build Waterborne Pavement Marking Paint, 4" White
⊕ 4 Y	High Build Waterborne Pavement Marking Paint, 4" Yellow
⊕ 24 W	Cold Applied Plastic Pavement Marking, 24" White
⊕ 24 Y	Cold Applied Plastic Pavement Marking, 24" Yellow
↶	Cold Applied Plastic Pavement Marking, Arrow

PLOTTED FROM - TRABIL017

PAVEMENT MARKING LAYOUT

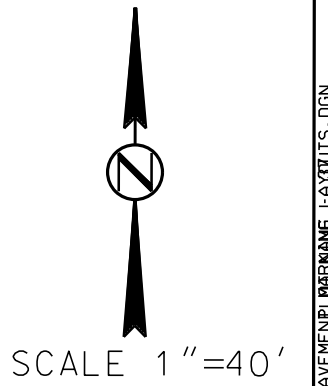
Segment 5 US 12 & SD 253 Jct

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	37	46

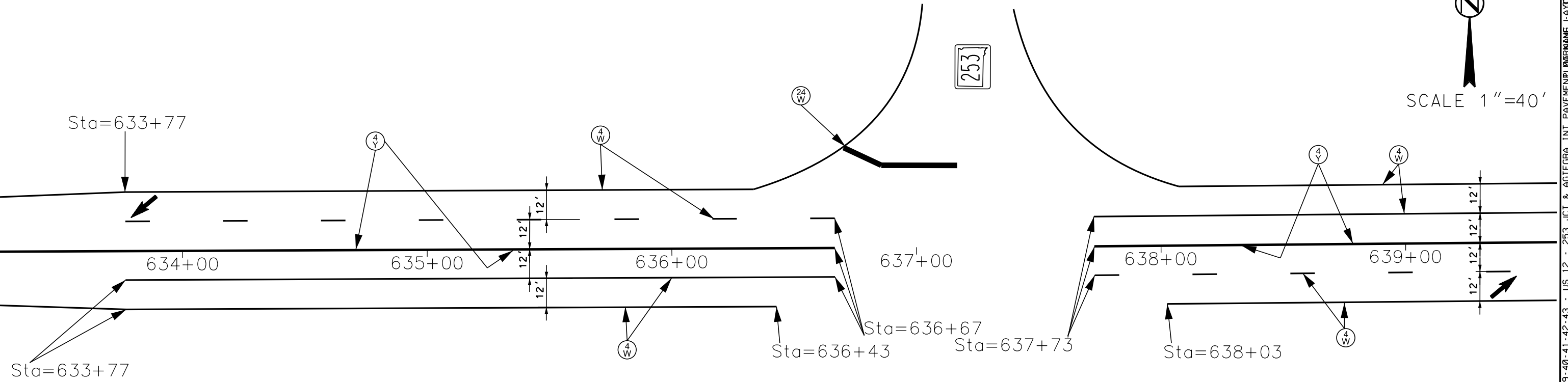
Plotting Date: 02/18/2025

Revised 02/18/2025

(Sheet 2 of 3)



PLOT SCALE - 1:40



FILE ... \36 37-38-39-40-41-42-43 - US 12 - 253 JCT & AETEGRA INT PAVEMENT MARKING LAYOUTS.DGN

ESTIMATE OF QUANTITIES		MASKING	
KEY	ITEM	EST QUANT	UNIT
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	2	EACH
	Cold Applied Plastic Pavement Marking, 24" White	30	FT

LEGEND	
KEY	ITEM
	High Build Waterborne Pavement Marking Paint, 4" White
	High Build Waterborne Pavement Marking Paint, 4" Yellow
	Cold Applied Plastic Pavement Marking, 24" White
	Cold Applied Plastic Pavement Marking, 24" Yellow
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow

PLOTTED FROM - TRABIL017

PAVEMENT MARKING LAYOUT

Segment 5 US 12 & SD 253 Jct

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	38	46

Plotting Date: 02/18/2025

Revised 02/18/2025

(Sheet 3 of 3)

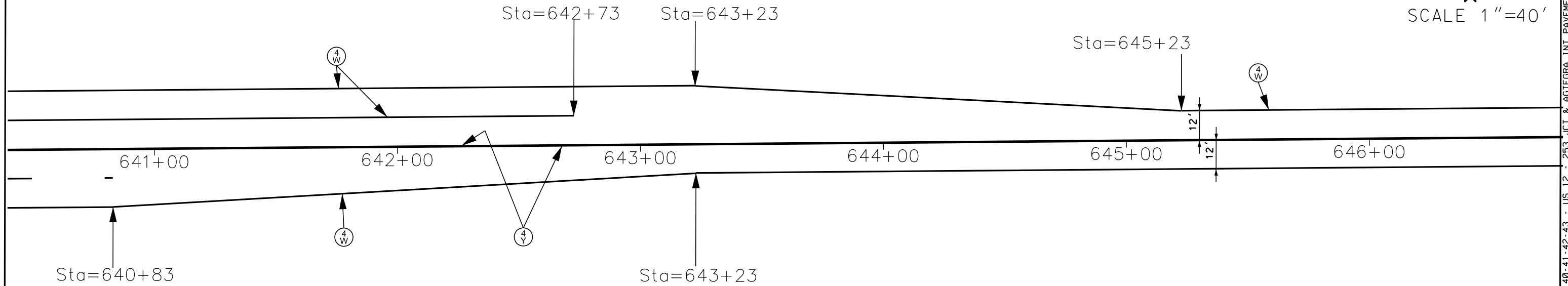


SCALE 1"=40'

PLOT SCALE - 1:40

PLOTTED FROM - TRABILL017

FILE - ... \36 37-38-39-40-41-42-43 - US 12 - 253 JCT & ASTORIA INT PAVEMENT MARKING LAYOUTS.DGN



LEGEND	
KEY	ITEM
	High Build Waterborne Pavement Marking Paint, 4" White
	High Build Waterborne Pavement Marking Paint, 4" Yellow
	Cold Applied Plastic Pavement Marking, 24" White
	Cold Applied Plastic Pavement Marking, 24" Yellow
	Cold Applied Plastic Pavement Marking, Arrow

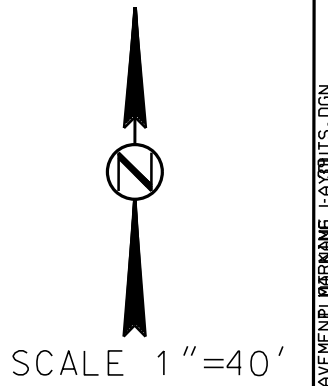
PAVEMENT MARKING LAYOUT

Segment 5

US 12 & 341st Ave

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	39	46
Plotting Date: 02/18/2025			

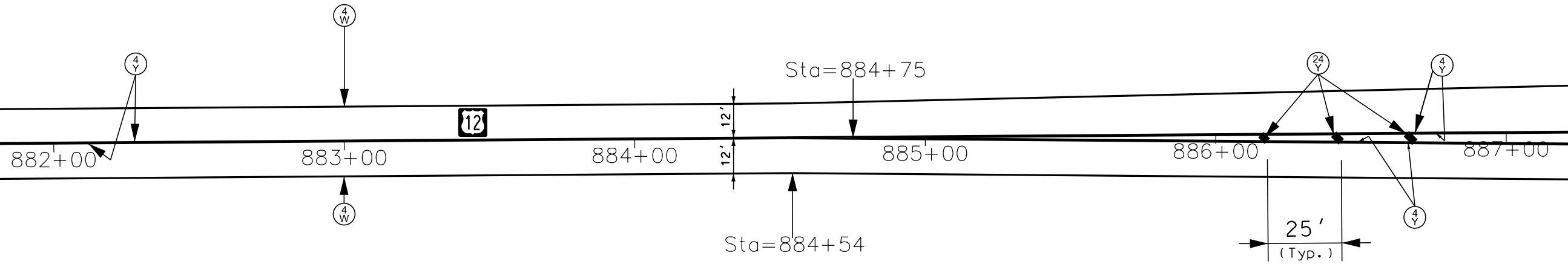
Revised 02/18/2025
(Sheet 1 of 5)



PLOT SCALE - 1:40

PLOTTED FROM - TRABILL017

FILE ... \36 37-38-39-40-41-42-43 - US 12 - 253 JCT & AETEGRA INT PAVEMENT MARKING LAYOUTS.DGN



ESTIMATE OF QUANTITIES		MASKING	
KEY	ITEM	EST QUANT	UNIT
(24)	Cold Applied Plastic Pavement Marking, 24" Yellow	12	FT

LEGEND	
KEY	ITEM
(4W)	High Build Waterborne Pavement Marking Paint, 4" White
(4Y)	High Build Waterborne Pavement Marking Paint, 4" Yellow
(24)	Cold Applied Plastic Pavement Marking, 24" Yellow

PAVEMENT MARKING LAYOUT

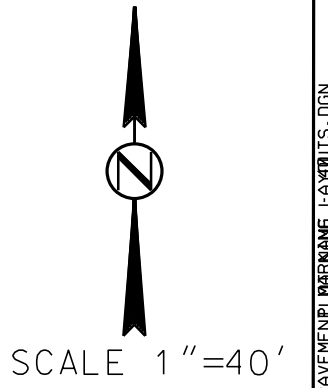
Segment 5

US 12 & 341st Ave

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	40	46
Plotting Date: 02/18/2025			

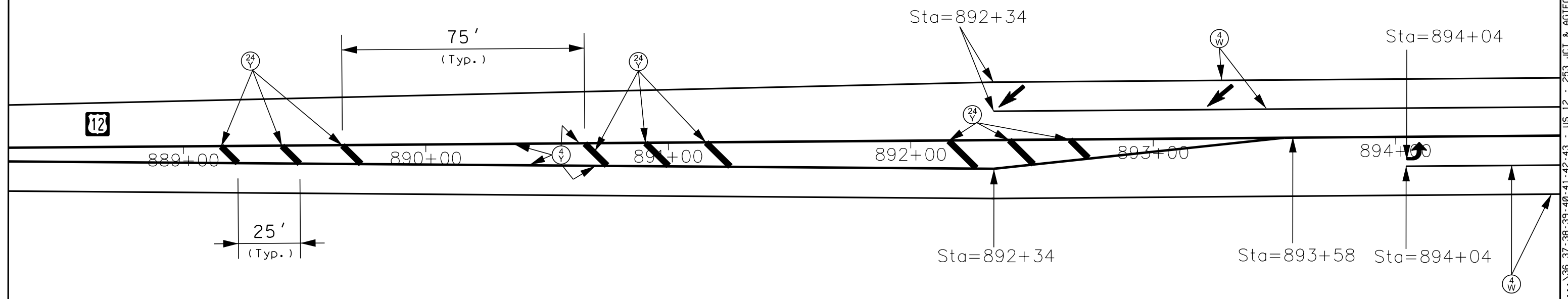
Revised 02/18/2025

(Sheet 2 of 5)



PLOT SCALE - 1"=40'

FILE ... \36 37-38-39-40-41-42-43 - US 12 - 253 JCT & ATEGRA INT PAVEMENT PLANNING LAYOUTS.DGN



ESTIMATE OF QUANTITIES		MASKING	
KEY	ITEM	EST QUANT	UNIT
	Cold Applied Plastic Pavement Marking, Arrow (Left - 1, Right - 0)	1	EACH
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	2	EACH
	Cold Applied Plastic Pavement Marking, 24" Yellow	110	FT

LEGEND	
KEY	ITEM
	High Build Waterborne Pavement Marking Paint, 4" White
	High Build Waterborne Pavement Marking Paint, 4" Yellow
	Cold Applied Plastic Pavement Marking, 24" Yellow
	Cold Applied Plastic Pavement Marking, Arrow
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow

PLOTTED FROM - TRABILL017

PAVEMENT MARKING LAYOUT

Segment 5

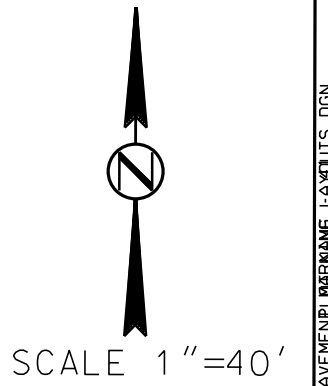
US 12 & 341st Ave

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	41	46

Plotting Date: 02/18/2025

Revised 02/18/2025

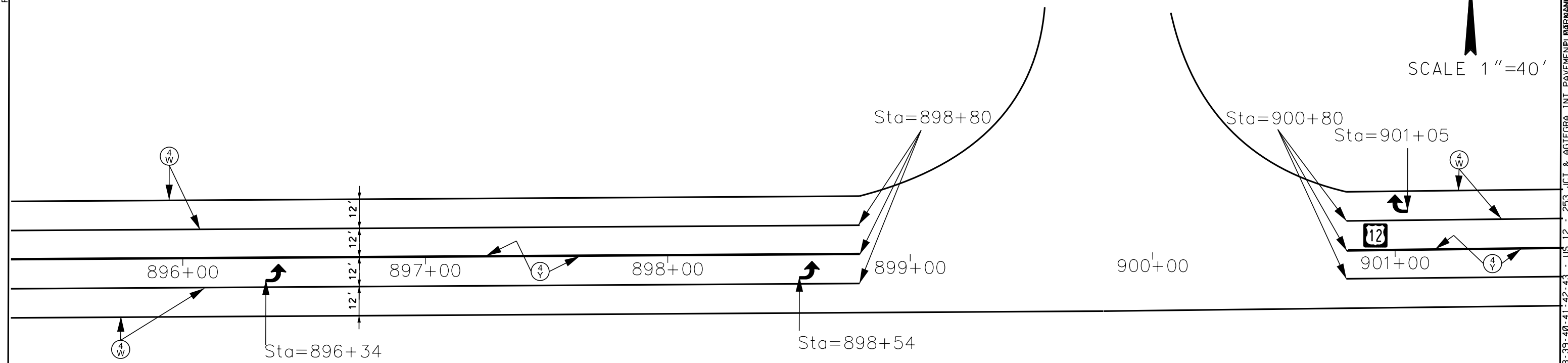
(Sheet 3 of 5)



PLOT SCALE - 1:40

PLOTTED FROM - TRABIL017

FILE ... \36 37-38-39-40-41-42-43 - US 12 - 253 JCT & AOTEGRA INT PAVEMENT MARKING LAYOUTS.DGN



ESTIMATE OF QUANTITIES		MASKING	
KEY	ITEM	EST QUANT	UNIT
	Cold Applied Plastic Pavement Marking, Arrow (Left - 2, Right - 1)	3	EACH
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	1	EACH

LEGEND	
KEY	ITEM
	High Build Waterborne Pavement Marking Paint, 4" White
	High Build Waterborne Pavement Marking Paint, 4" Yellow
	Cold Applied Plastic Pavement Marking, Arrow
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow

PAVEMENT MARKING LAYOUT

Segment 5

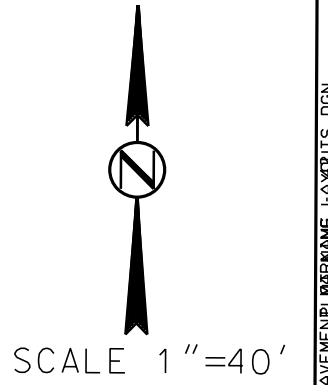
US 12 & 341st Ave

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	42	46

Plotting Date: 02/18/2025

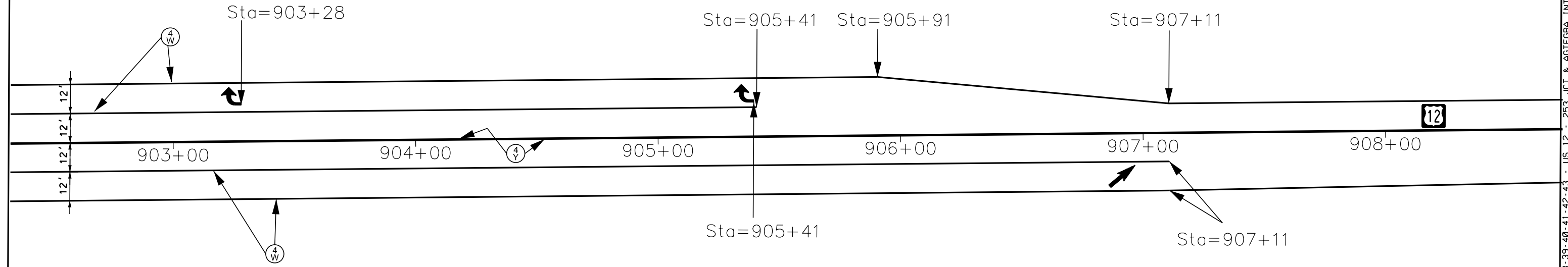
Revised 02/18/2025

(Sheet 4 of 5)



PLOT SCALE - 1"=40'

FILE ... \36 37-38-39-40-41-42-43 - US 12 - 293 JCT & AGRICOLA INT PAVEMENT PLANNING LAYOUTS.DGN



ESTIMATE OF QUANTITIES		MASKING	
KEY	ITEM	EST QUANT	UNIT
	Cold Applied Plastic Pavement Marking, Arrow (Left - 0, Right - 2)	2	EACH
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	1	EACH

LEGEND	
KEY	ITEM
	High Build Waterborne Pavement Marking Paint, 4" White
	High Build Waterborne Pavement Marking Paint, 4" Yellow
	Cold Applied Plastic Pavement Marking, Arrow
	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow

PLOTTED FROM - TRAB1017

PAVEMENT MARKING LAYOUT

Segment 5

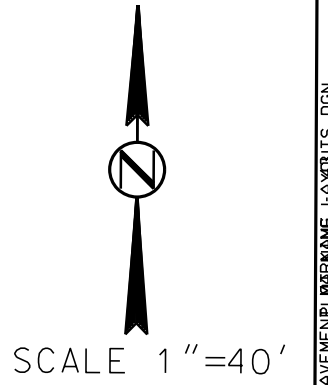
US 12 & 341st Ave

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(317)	43	46

Plotting Date: 02/18/2025

Revised 02/18/2025

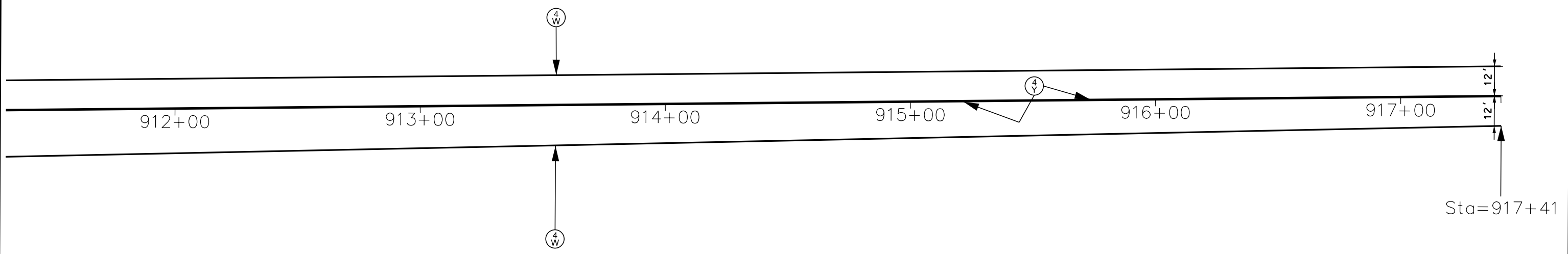
(Sheet 5 of 5)



PLOT SCALE - 1:40

PLOTTED FROM - TRAB11017

FILE - ... \36 37-38-39-40-41-42-43 - US 12 - 253 JCT & ATEGRA INT PAVEMENT MARKING LAYOUTS.DGN

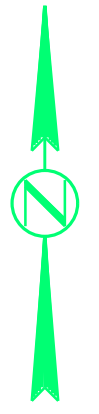
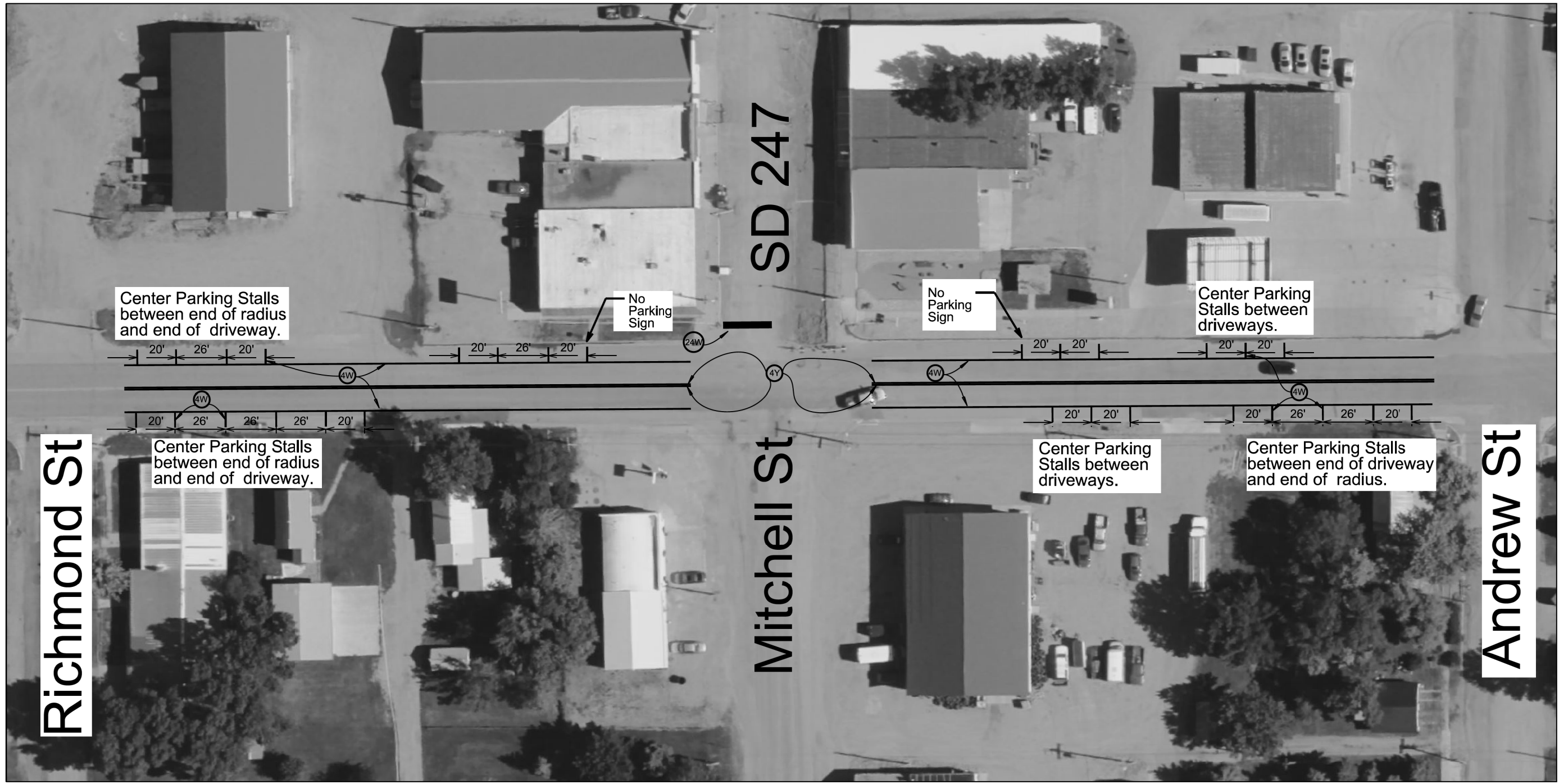


LEGEND	
KEY	ITEM
	High Build Waterborne Pavement Marking Paint, 4" White
	High Build Waterborne Pavement Marking Paint, 4" Yellow

Pavement Marking Layout Segment 5 Parking Stall Layout for Roscoe

PLOT SCALE - 1:200

FILE - ... \44 - US 12 - ROSCOE PARKING STALLS PDF INSERT PRINT.DGN PLOT NAME - 1



Richmond St

SD 247

Mitchell St

Andrew St

Legend	
KEY	ITEM
④W	High Build Waterborne Pavement Marking Paint, White
④Y	High Build Waterborne Pavement Marking Paint, Yellow
②4W	Cold Applied Plastic Pavement Marking, 24" (White)

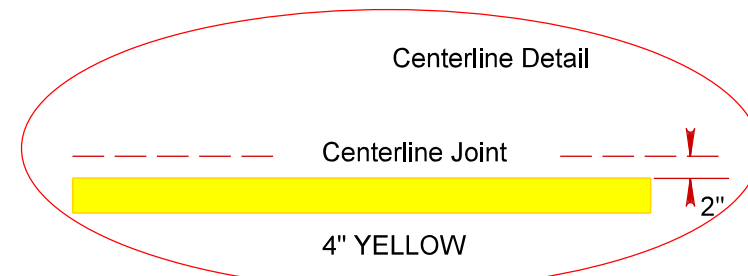
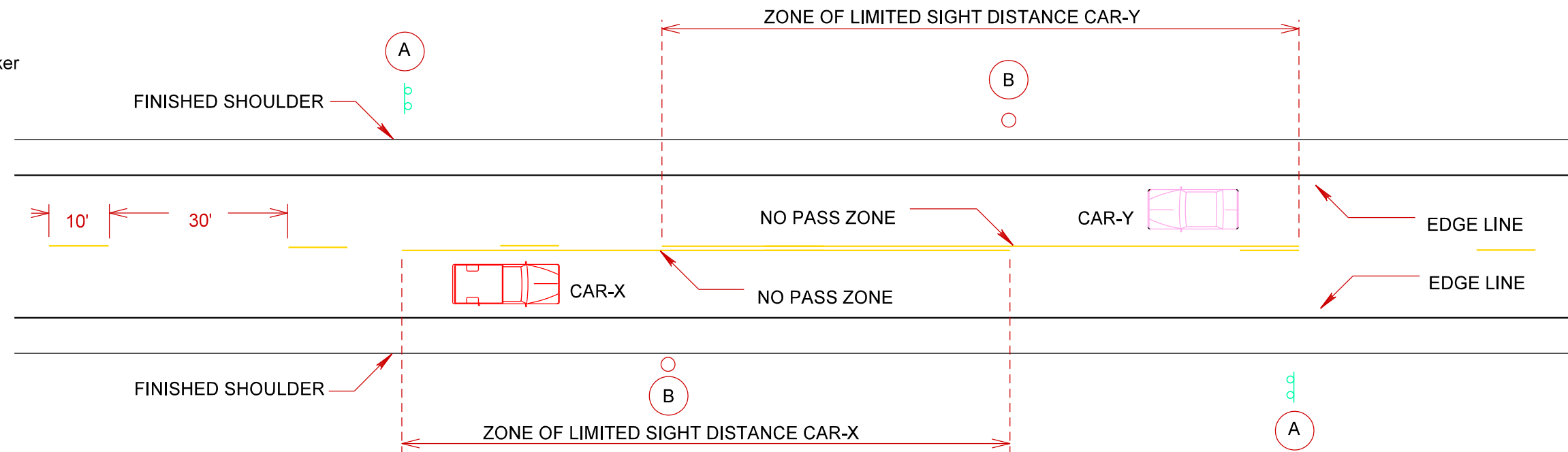
4" parking striping included in Item 633E1200.

PLOT FROM - TRAB11017

TYPICAL PAVEMENT MARKING LAYOUT

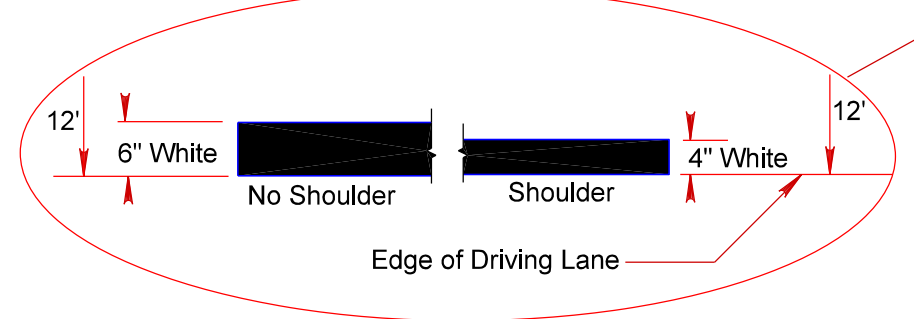
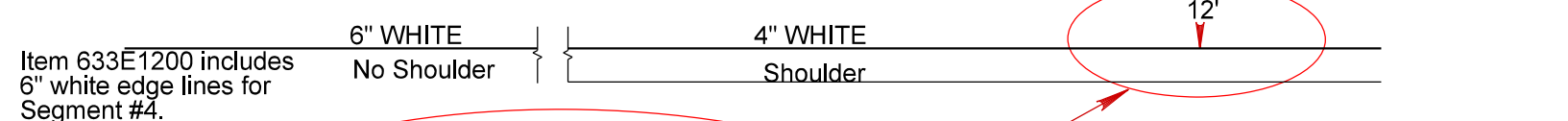
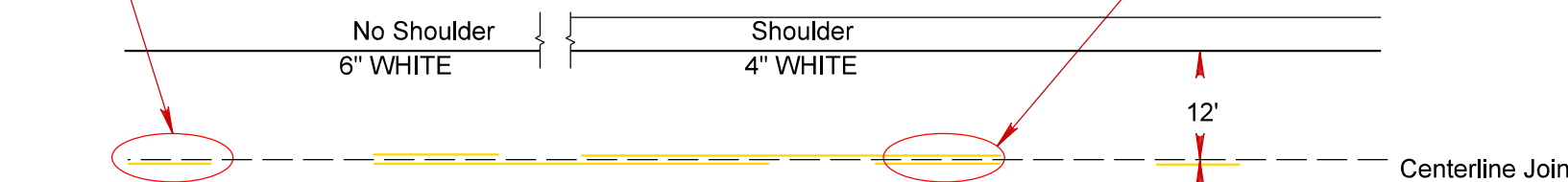
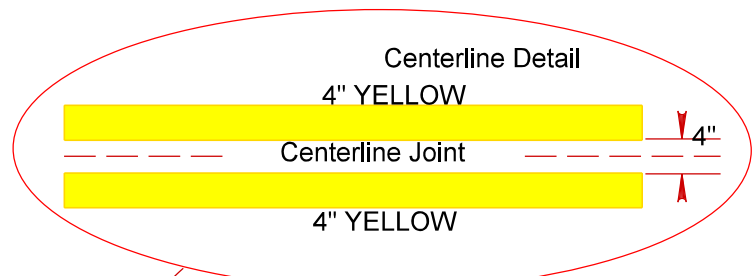


B End of Zone Marker



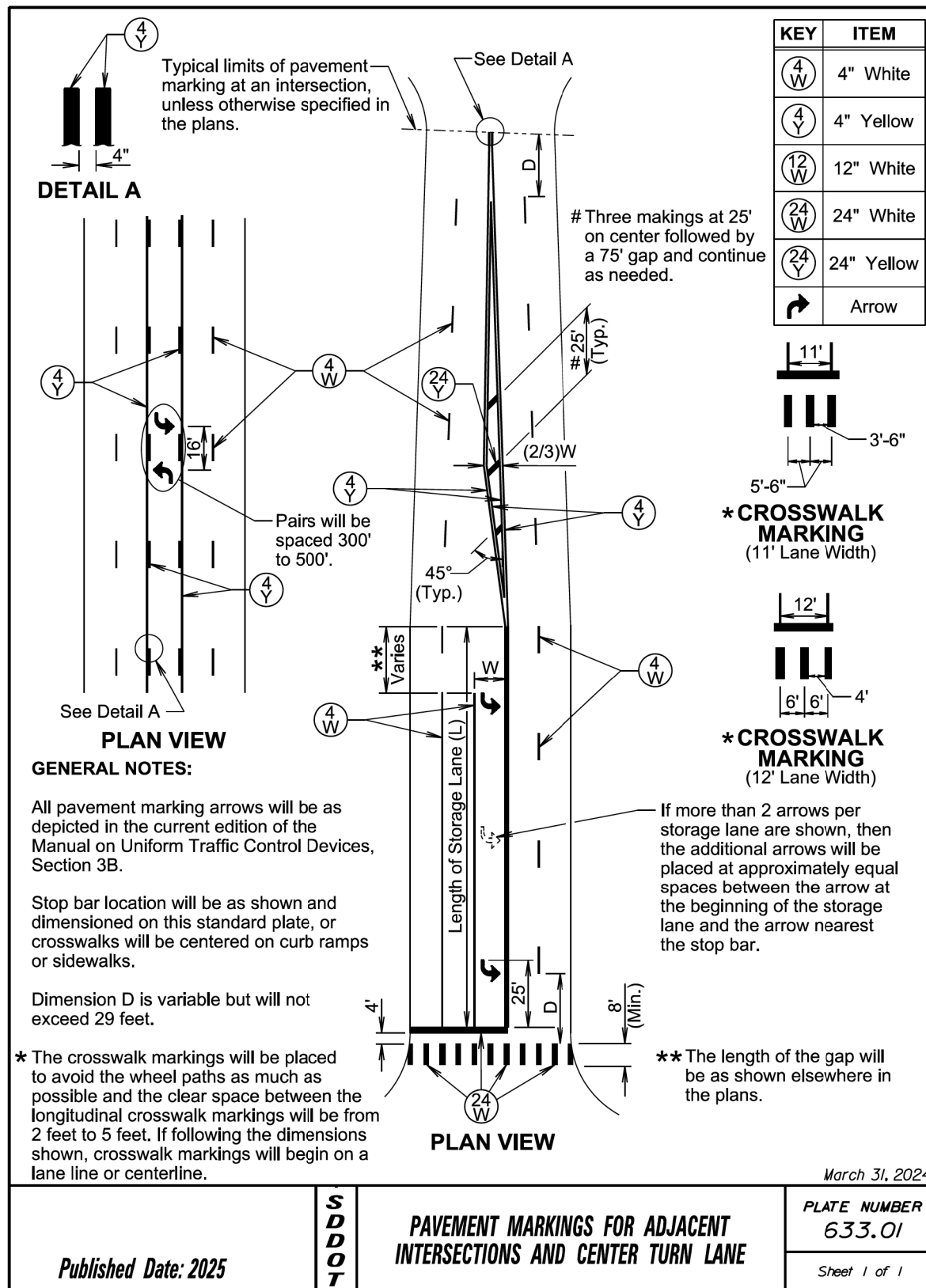
NOTE: A TWO "GUN" SYSTEM WILL BE USED TO OBTAIN THIS PATTERN.

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 striping and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.



PLOT SCALE - 1:200

PLOT NAME - 46

FILE - ... \46 - STDPLATES PERM TC.DGN

PLOTTED FROM - TRAB11017