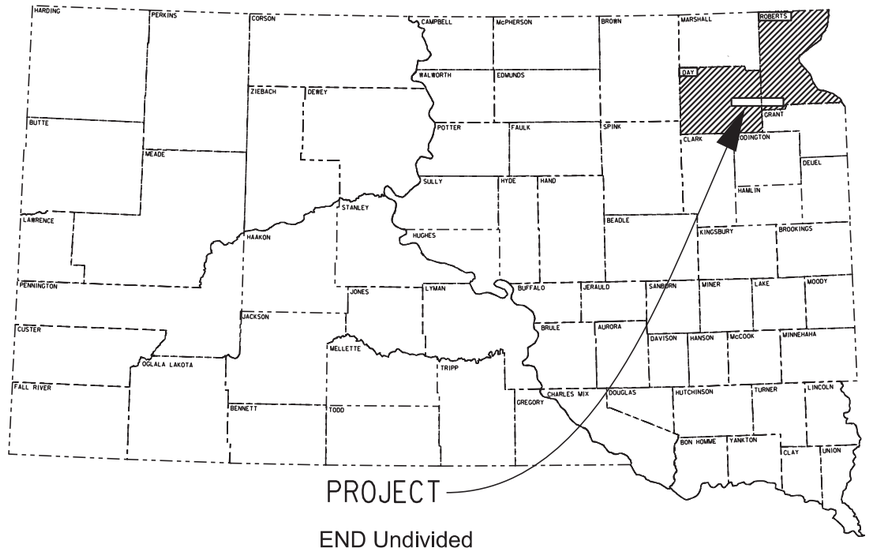
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	1	140
Plotting Date: 12/13/2024			

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

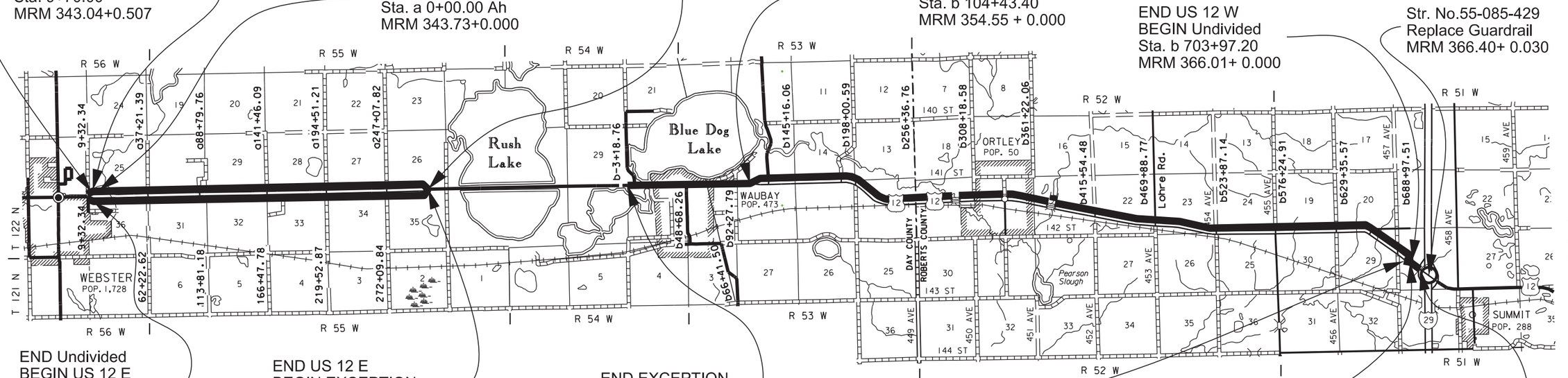
PROJECT NH–CR 0012(311)343
US HIGHWAY 12, 12 E, 12 W
DAY & ROBERTS COUNTIES

Cold Milling, Asphalt Concrete Resurfacing of Shoulders,
Guardrail Replacement, Signing & Delineation

PCN 08XQ



INDEX OF SHEETS



DESIGN DESIGNATION

ADT (2022)	3589
ADT (2042)	5559
DHV	616
D	50%
T DHV	12.4%
T ADT	27.3%
V	70 MPH

STORM WATER PERMIT

None Required

Gross Length	119813.64 FEET	22.692 MILES
Length of Exceptions	17703.84 FEET	3.353 MILES
Net Length	102109.80 FEET	19.339 MILES

4

February 19, 2025

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	2	140

Rev. 01/07/25 PB

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E0130	Remove Traffic Sign	415	Each
110E0700	Remove 3 Cable Guardrail	356	Ft
110E0730	Remove Beam Guardrail	402.0	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	2	Each
110E1010	Remove Asphalt Concrete Pavement	1,347.8	SqYd
110E7150	Remove Sign for Reset	8	Each
120E0100	Unclassified Excavation, Digouts	620	CuYd
120E0600	Contractor Furnished Borrow Excavation	1,402	CuYd
210E1000	Shoulder Preparation	0.073	Mile
260E1010	Base Course	4,490.0	Ton
260E1050	Base Course, Salvaged Asphalt Mix	555.0	Ton
320E0005	PG 58-34 Asphalt Binder	710.8	Ton
320E1070	Class HR Asphalt Concrete	20,055.4	Ton
320E1200	Asphalt Concrete Composite	322.4	Ton
320E3000	Compaction Sample	9	Each
320E5010	Saw and Seal Shoulder Joint	261,163	Ft
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	23.0	Mile
330E0100	SS-1h or CSS-1h Asphalt for Tack	81.3	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	42.2	Ton
330E2000	Sand for Flush Seal	673.5	Ton
332E0010	Cold Milling Asphalt Concrete	184,953	SqYd
600E0300	Type III Field Laboratory	1	Each
629E0110	High Tension 4 Cable Guardrail	178	Ft
629E0290	High Tension Cable Guardrail Anchor Assembly	2	Each
630E0500	Type 1 MGS	125.0	Ft
630E1501	Type 1 Retrofit Guardrail Transition	4	Each
630E2017	MGS MASH Flared End Terminal	4	Each
632E1320	2.0"x2.0" Perforated Tube Post	4,802.7	Ft
632E1340	2.5"x2.5" Perforated Tube Post	1,609.0	Ft
632E2008	4" Tubular Amber Delineator with 1.12 Lb/Ft Post	10	Each
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	351	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	58	Each
632E2220	Guardrail Delineator	16	Each
632E2510	Type 2 Object Marker Back to Back	262	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	2,601.8	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	1,979.4	SqFt
632E3500	Reset Sign	8	Each
633E0030	Cold Applied Plastic Pavement Marking, 24"	506	Ft
633E0225	Preformed Thermoplastic Pavement Marking, 24"	295	Ft
633E0235	Preformed Thermoplastic Pavement Marking, Arrow	38	Each
633E0245	Preformed Thermoplastic Pavement Marking, Message	2	Word
633E0255	Preformed Thermoplastic Pavement Marking, Symbol	4	Each
633E3000	Durable Pavement Marking, 4" White	225,735	Ft
633E3005	Durable Pavement Marking, 4" Yellow	219,037	Ft
633E3010	Durable Pavement Marking, 8" White	1,871	Ft
633E3015	Durable Pavement Marking, 8" Yellow	100	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	506	Ft
633E5037	Grooving for Cold Applied Plastic Pavement Marking, Symbol	4	Each
633E5050	Surface Preparation for Pavement Marking	446,858	Ft
633E5052	Surface Preparation for Pavement Marking	39	Each
633E5100	Grooving for Durable Pavement Marking, 4"	2,303	Ft
634E0010	Flagging	200.0	Hour
634E0110	Traffic Control Signs	1,566.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	20	Each
634E0420	Type C Advance Warning Arrow Board	3	Each
634E0565	Remove Pavement Marking, Arrow	2	Each
634E0600	4" Temporary Pavement Marking Tape Type I	5,040	Ft
634E0630	Temporary Pavement Marking	0.4	Mile
900E0010	Refurbish Single Mailbox	9	Each

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf >

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary. Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥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 >

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

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

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

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.
Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

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

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO 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.

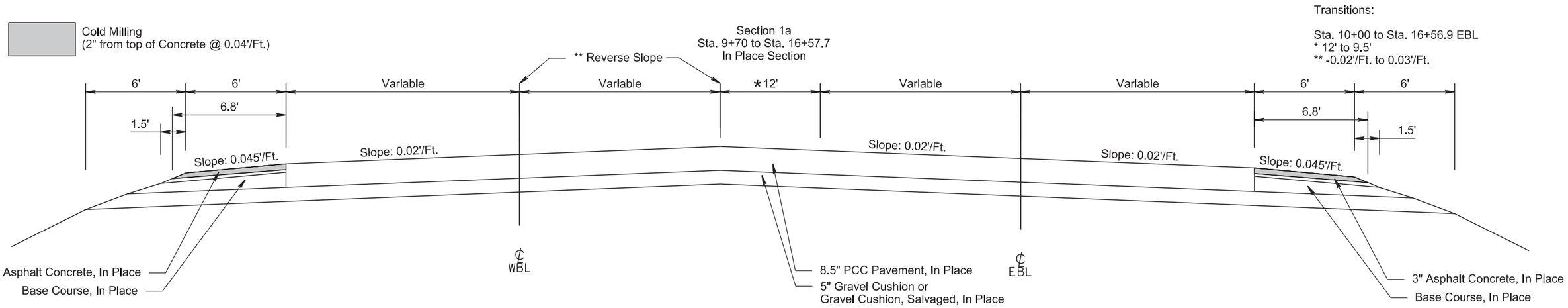
In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

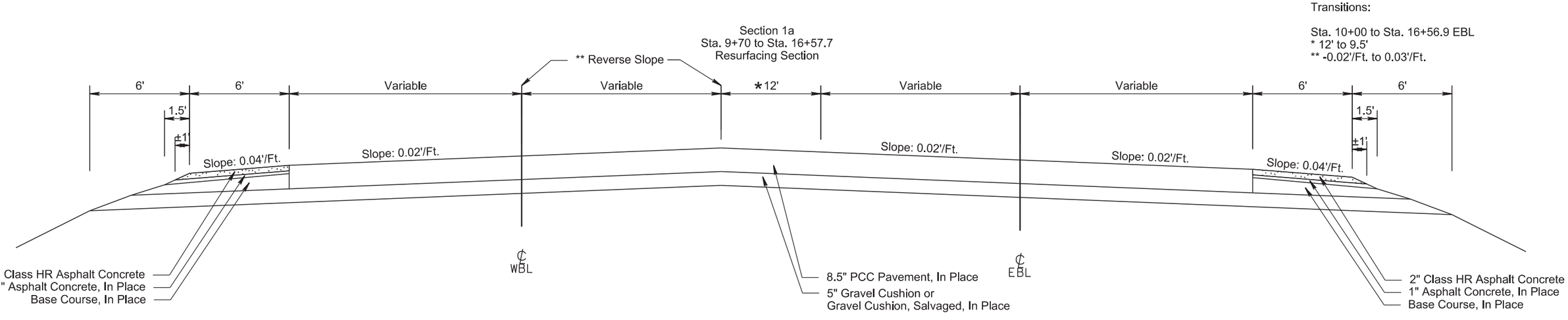
SHPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, 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.

TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	5	140

Plotting Date: 07/23/2024

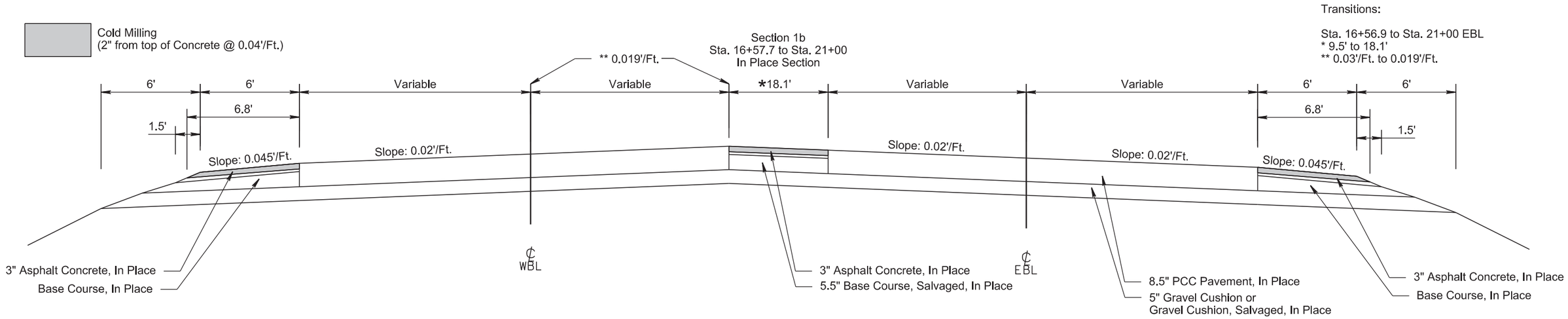


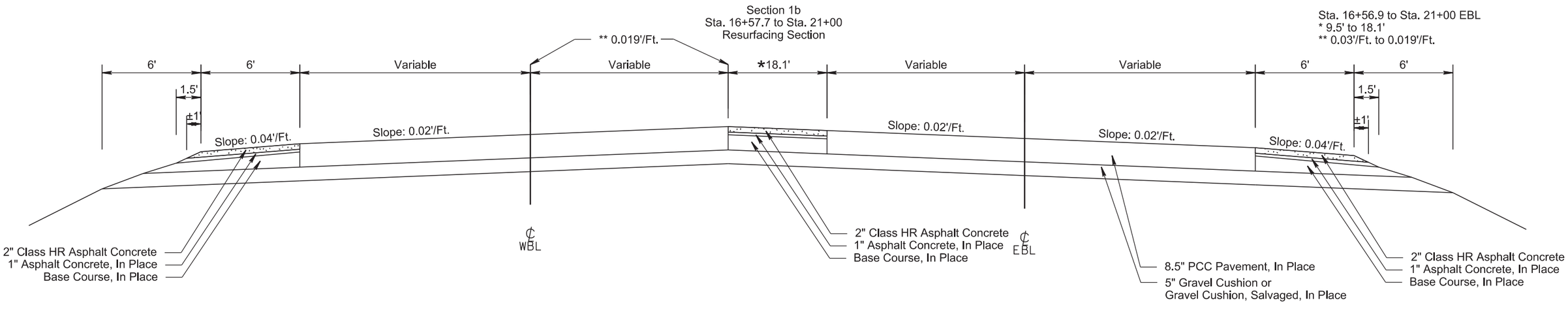


TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	6	140

Plotting Date: 07/23/2024





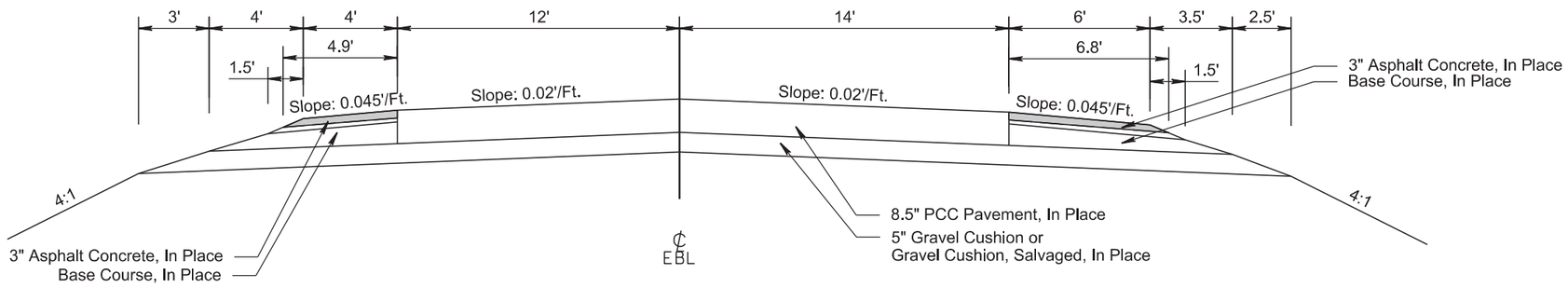
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	7	140

Plotting Date: 07/23/2024

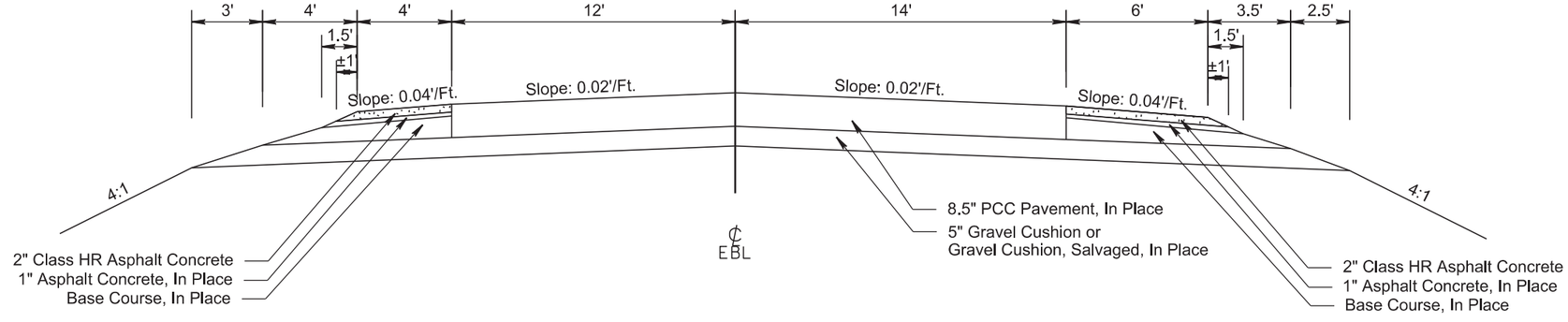
Cold Milling
(2" from top of Concrete @ 0.04'/Ft.)

Section 2
Sta. 21+00 to Sta. 25+00 (WBL Reversed)
Sta. a 0+00 to Sta. a 281+43 (WBL Reversed)
Sta. 21+00 to Sta. 306+64.80 EBL
In Place & Cold Milling Section



Equation:
Sta. 25+00 Bk = Sta. a 0+00 Ah (WBL)

Section 2
Sta. 21+00 to Sta. 25+00 (WBL Reversed)
Sta. a 0+00 to Sta. a 281+43 (WBL Reversed)
Sta. 21+00 to Sta. 306+64.80 EBL
Resurfacing Milling Section



Equation:

Sta. 25+00 Bk =
Sta. a 0+00 Ah (WBL)

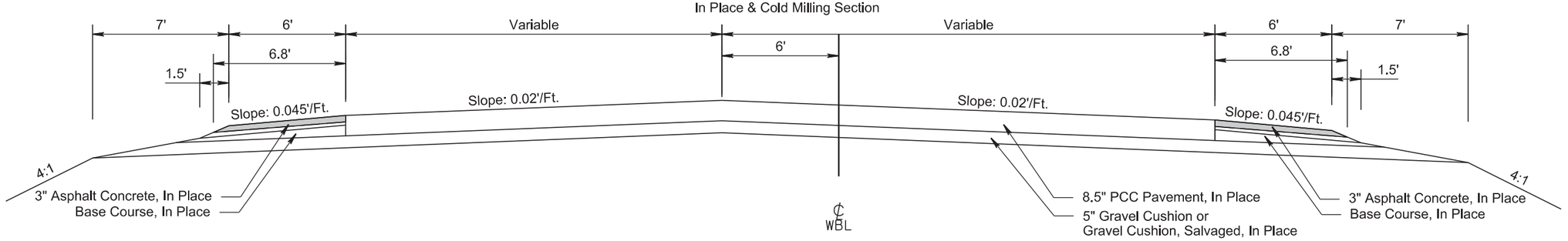
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	8	140

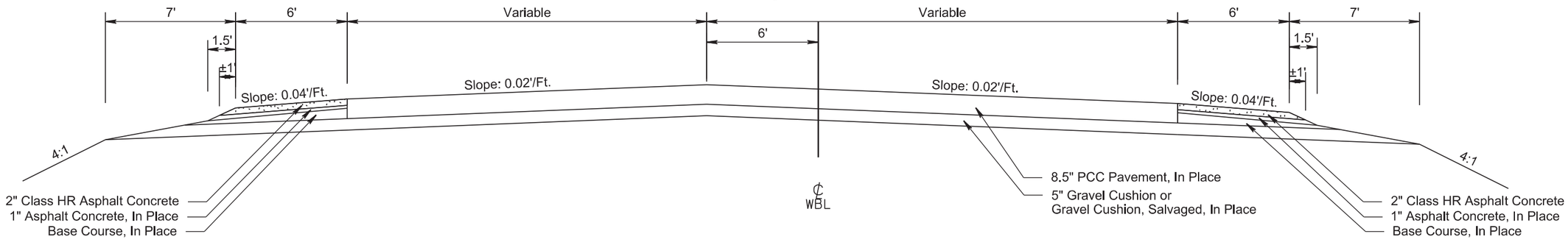
Plotting Date: 07/23/2024

Cold Milling
(2" from top of Concrete @ 0.04'/Ft.)

Section 3
(Undivided)
Sta. b -3+63 to Sta. b 43+02
Sta. b 43+02 to Sta. b 49+66 Lt. Side Only
Sta. b 49+66 to Sta. b 51+83
Sta. b 51+83 to Sta. b 56+40 Rt. Side Only
Sta. b 56+40 to Sta. b 93+20.2
In Place & Cold Milling Section



Section 3
(Undivided)
Sta. b -3+63 to Sta. b 43+02
Sta. b 43+02 to Sta. b 49+66 Lt. Side Only
Sta. b 49+66 to Sta. b 51+83
Sta. b 51+83 to Sta. b 56+40 Rt. Side Only
Sta. b 56+40 to Sta. b 93+20.2
Resurfacing Section



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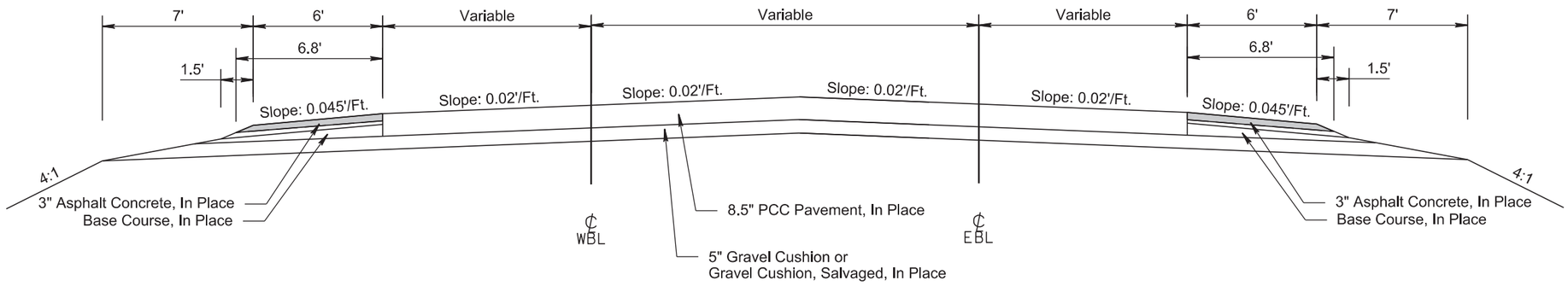
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	9	140

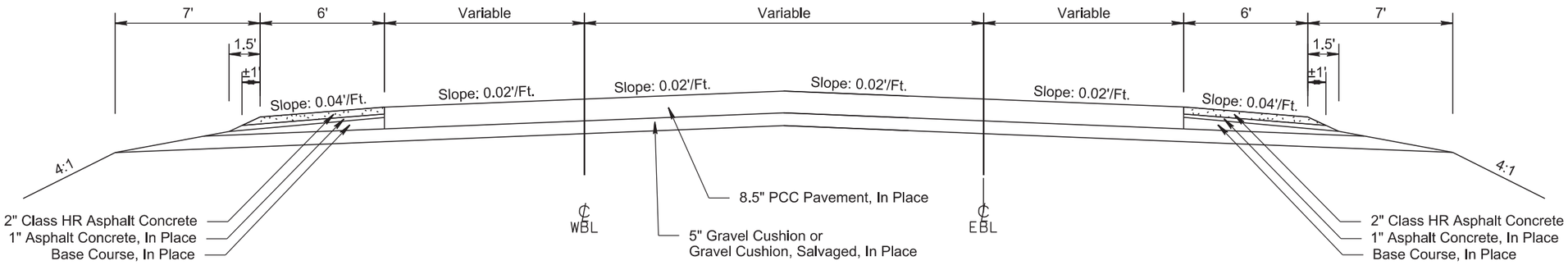
Plotting Date: 07/23/2024

Cold Milling
(2" from top of Concrete @ 0.04'/Ft.)

Section 4
Sta. b 93+20.2 to Sta. b 101+14.2
In Place & Cold Milling Section



Section 4
Sta. b 93+20.2 to Sta. b 101+14.2
Resurfacing Section



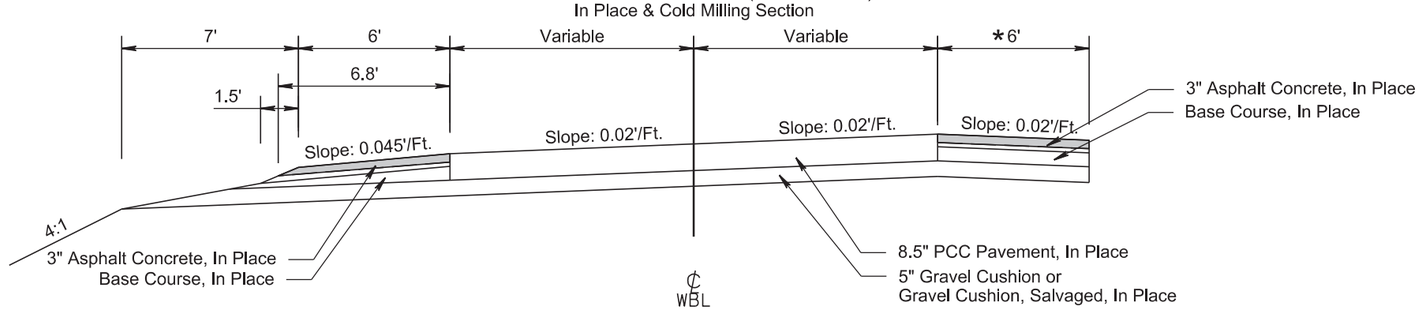
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	10	140

Plotting Date: 07/23/2024

Cold Milling
(2" from top of Concrete @ 0.04'/Ft.)

Section 5
Sta. b 101+14.2 to Sta. b 104+43.4 (EBL Reversed)
Sta. b 699+21.7 to Sta. b 703+97.2 WBL
Sta. c 0+00 to Sta. c 6+99.40 (EBL Reversed)
In Place & Cold Milling Section

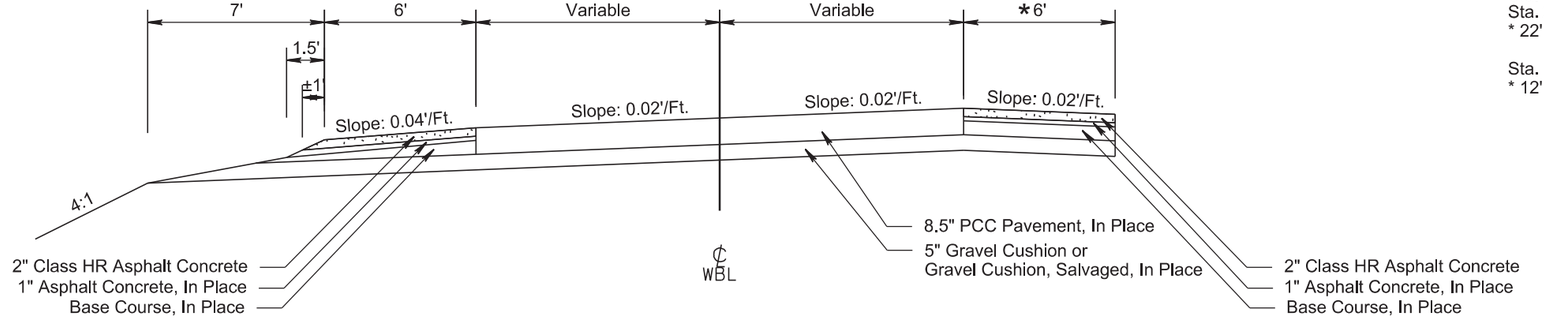


Transitions:

Sta. b 699+21.7 to Sta. b 703+97.2 WBL
Sta. c 2+24.1 to Sta. c 6+99.4 EBL
* 22' to 2'

Sta. b 101+14.2 to Sta. b 104+43.4 WBL
* 12' to 24'

Section 5
Sta. b 101+14.2 to Sta. b 104+43.4 (EBL Reversed)
Sta. b 699+21.7 to Sta. b 703+97.2 WBL
Sta. c 0+00 to Sta. c 6+99.40 (EBL Reversed)
Resurfacing Section



Transitions:

Sta. 699+21.7 to Sta. 703+97.2 WBL
Sta. 2+24.1 to Sta. 6+99.4 EBL
* 22' to 2'

Sta. 101+14.2 to Sta. 104+43.4 WBL
* 12' to 24'

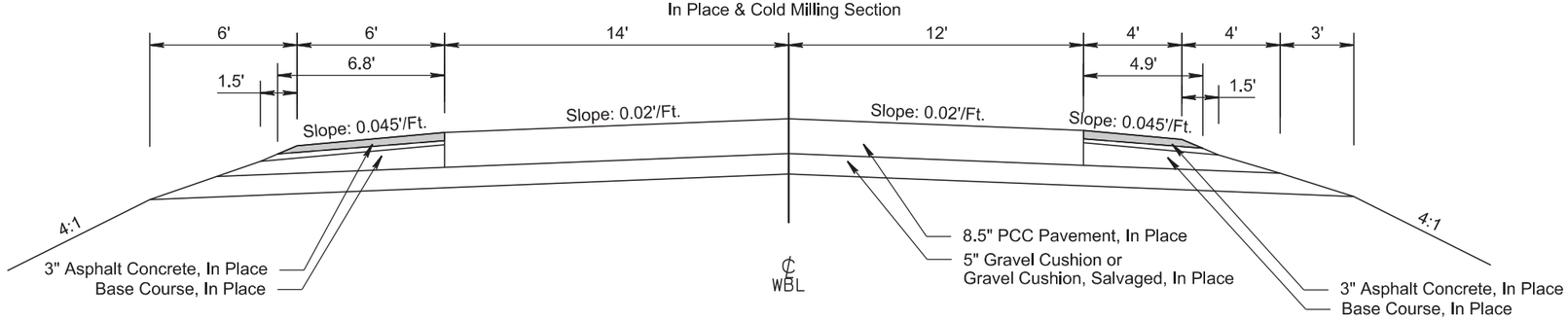
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	11	140

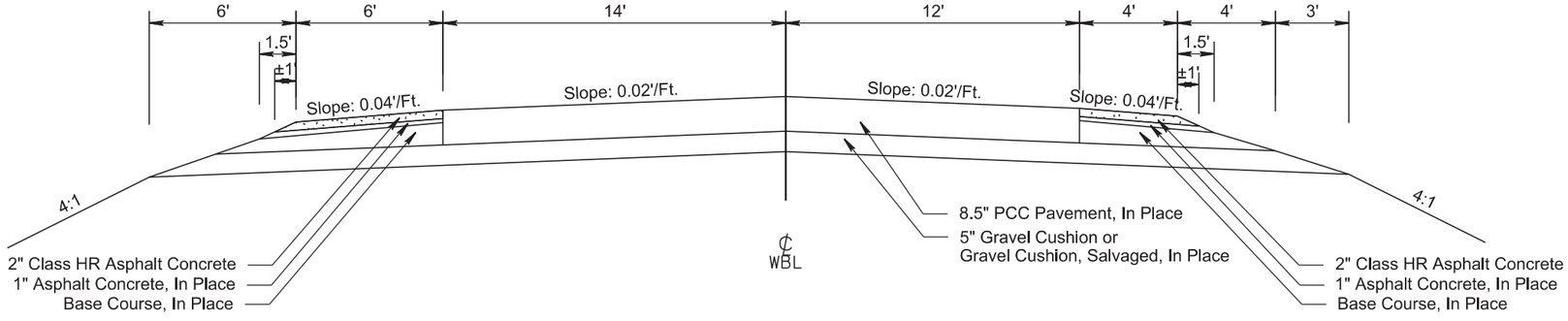
Plotting Date: 07/23/2024

Cold Milling
(2" from top of Concrete @ 0.04'/Ft.)

Section 6
Sta. b 104+43.4 to Sta. b 699+21.7
In Place & Cold Milling Section



Section 6
Sta. b 104+43.4 to Sta. b 699+21.7
Resurfacing Section



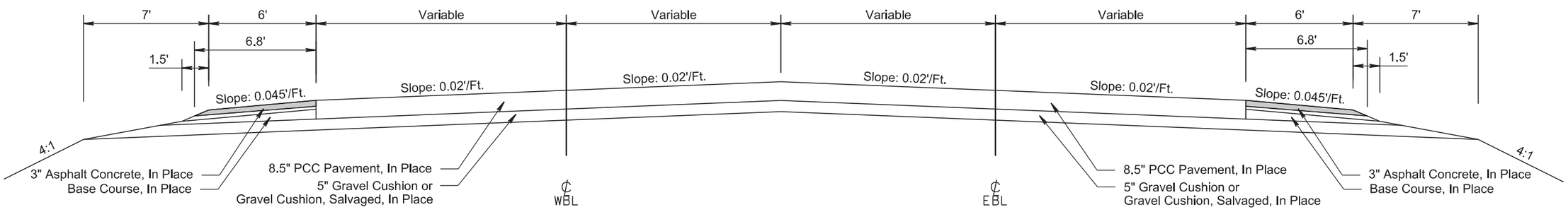
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	12	140

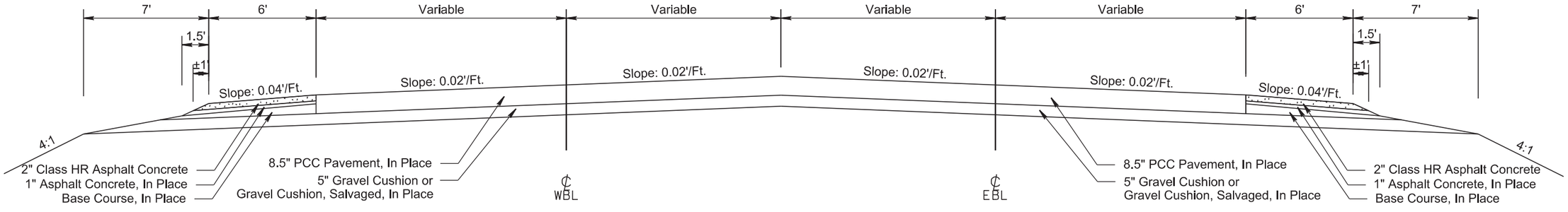
Plotting Date: 07/23/2024

Cold Milling
(2" from top of Concrete @ 0.04'/Ft.)

Section 7
Sta. b 703+97.2 to Sta. b 710+89.57 (Undivided)
In Place & Cold Milling Section



Section 7
Sta. b 703+97.2 to Sta. b 710+89.57 (Undivided)
Resurfacing Section



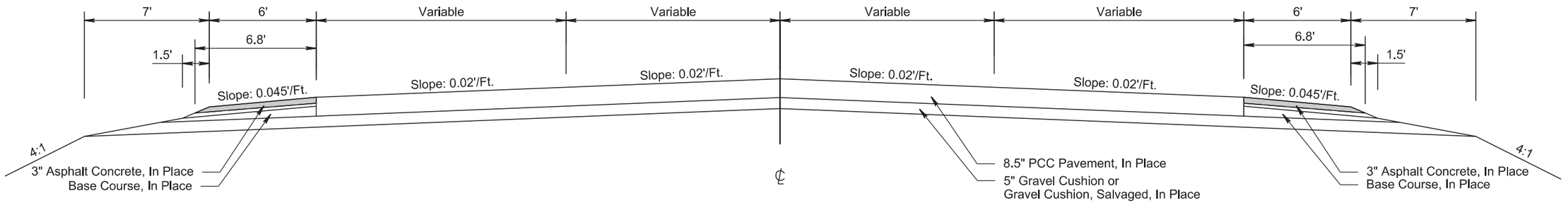
TYPICAL SURFACING SECTIONS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	13	140

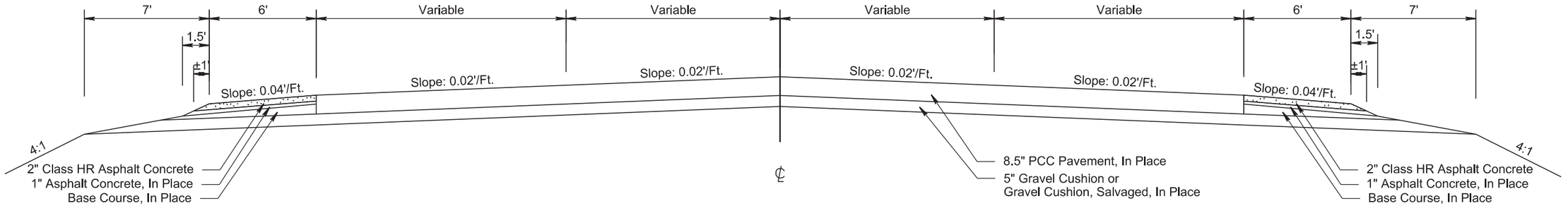
Plotting Date: 07/23/2024

Cold Milling
(2" from top of Concrete @ 0.04'/Ft.)

Section 8
Sta. b 710+89.57 to Sta. b 716+50 (Undivided)
In Place & Cold Milling Section



Section 8
Sta. b 710+89.57 to Sta. b 716+50 (Undivided)
Resurfacing Section



TYPICAL SURFACING SECTIONS

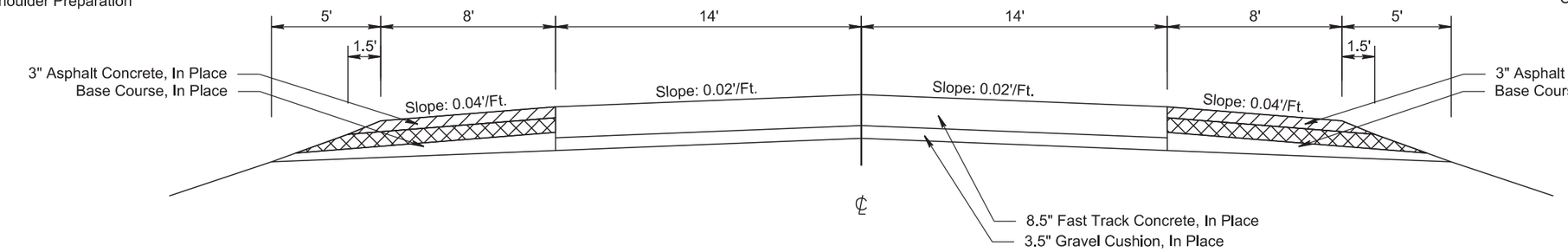
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	14	140

Plotting Date: 10/30/2024

Remove Asphalt Concrete Pavement

4" Shoulder Preparation

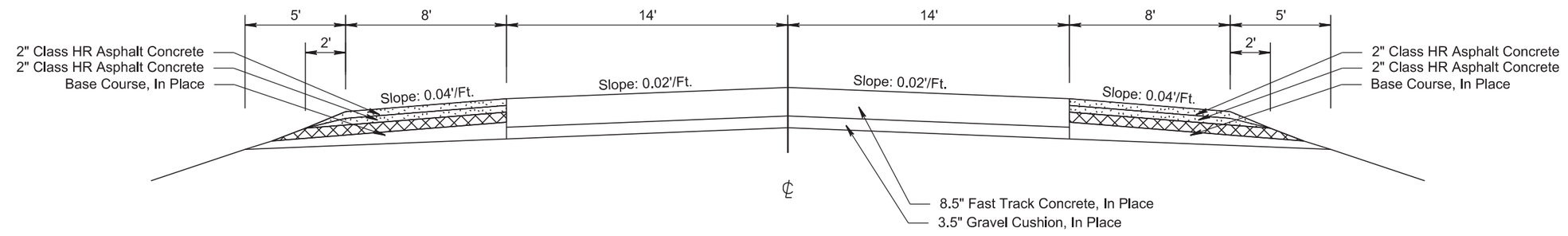
Section 9
(Undivided)
Sta. b 718+60 to Sta. b 720+52 Lt. Side
Sta. b 719+07 to Sta. b 720+52 Rt. Side
In Place Section



Surfacing Exception:

Sta. b 716+50 to Sta. b 718+60

Section 9
(Undivided)
Sta. b 718+85 to Sta. b 720+52 Lt. Side
Sta. b 719+07 to Sta. b 720+52 Rt. Side
Resurfacing Section



RATES OF MATERIALS

Sections are named with the abbreviation “L” (Left) or “R” (Right) to describe which shoulder the following rates apply to.

All rates are for 1 shoulder only.

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

Section 2- R Sta. 21+00 to Sta. 25+00 WBL
Sta. a 0+00 to Sta. a 281+43 WBL

L Sta. 21+00 to Sta. 306+64.80 EBL

Section 6- R Sta. b 104+43.4 to Sta. b 699+21.7 WBL

CLASS HR HOT MIXED ASPHALT CONCRETE – 2’’ LIFT

Crushed Aggregate.....	168 Tons
Salvaged Asphalt Concrete	112 Tons
PG 58-34 Asphalt Binder.....	10 Tons
Total:	**290 Tons**

The exact proportion of these materials will be determined on construction.

SS-1h or CSS-1h Emulsified Asphalt for Tack Seal at the rate of **1.2** tons applied **5.5** feet wide prior to HR lift.
(Rate = 0.09 Gal./Sq.Yd.).

FLUSH SEAL

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of **0.6** tons applied **5** feet wide.
(Rate = 0.05 Gal./Sq.Yd.).

Sand for Flush Seal at the rate of **9** tons applied **4** feet wide.
(Rate = 8 Lb./Sq.Yd.).

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

Section 1a- L&R Sta. 9+70 to Sta. 16+57.7

Section 1b- L&R Sta. 16+57.7 to Sta. 21+00

Section 2- L Sta. 21+00 to Sta. 25+00 WBL
Sta. a 0+00 to Sta. a 281+43 WBL

R Sta. 21+00 to Sta. 306+64.80 EBL

Section 3- L&R Sta. b -3+63 to Sta. b 43+02
Sta. b 43+02 to Sta. b 49+66 Lt. Side Only
Sta. b 49+66 to Sta. b 51+83
Sta. b 51+83 to Sta. b 56+40 Rt. Side Only
Sta. b 56+40 to Sta. b 93+20.2

Section 4- L&R Sta. b 93+20.2 to Sta. b 101+14.2

Section 5- L&R Sta. b 101+14.2 to Sta. b 104+43.4
Sta. b 699+21.7 to Sta. b 703+97.2 WBL
Sta. c 0+00 to Sta. c 6+99.40 EBL

Section 6- L Sta. b 104+43.4 so Sta. b 699+21.7 WBL

Section 7- L&R Sta. b 703+97.2 to Sta. b 710+89.57

Section 8- L&R Sta. b 710+89.57 to Sta. b 716+50

CLASS HR HOT MIXED ASPHALT CONCRETE – 2’’ LIFT

Crushed Aggregate.....	243 Tons
Salvaged Asphalt Concrete	162 Tons
PG 58-34 Asphalt Binder.....	15 Tons
Total:	**420 Tons**

The exact proportion of these materials will be determined on construction.

SS-1h or CSS-1h Emulsified Asphalt for Tack at the rate of **1.7** tons applied **7.5** feet wide prior to HR lift.
(Rate = 0.09 Gal./Sq.Yd.)

FLUSH SEAL

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of **0.9** tons applied **7** feet wide.
(Rate = 0.05 Gal./Sq.Yd.).

Sand for Flush Seal at the rate of **14** tons applied **6** feet wide.
(Rate = 8 Lb./Sq.Yd.).

The Estimate of Quantities is based on the following quantities of material per station.

Section 9- L&R Sta. b 718+60 to Sta. b 720+52

CLASS HR HOT MIXED ASPHALT CONCRETE – 2’’ LIFT

Crushed Aggregate.....	6.45 Tons
Salvaged Asphalt Concrete	4.30 Tons
PG 58-34 Asphalt Binder.....	0.39 Tons
Total:	**11.14 Tons**

The exact proportion of these materials will be determined on construction.

SS-1h or CSS-1h Emulsified Asphalt for Tack Seal at the rate of **0.03** tons applied **10.5** feet wide prior to second HR lift.
(Rate = 0.06 Gal./Sq.Yd.).

FLUSH SEAL

SS-1h or CSS-1h Emulsified Asphalt for Flush Seal at the rate of **0.02** tons applied **10** feet wide.
(Rate = 0.05 Gal./Sq.Yd.).

Sand for Flush Seal at the rate of **0.4** tons applied **8** feet wide.
(Rate = 8 Lb./Sq.Yd.).

TABLE OF QUANTITIES

TABLE OF PROJECT STATIONING

SECTION	LANE	SIDE	STATION	TO	STATION	LENGTH (Ft)	GROSS SECTION LENGTH (Ft)	GROSS SECTION LENGTH (Miles)	NET SECTION LENGTH (Ft)	NET SECTION LENGTH (Miles)
1a	Undivided	Both	9+70.00	to	16+57.70	687.70	687.70	0.130	687.70	0.130
1b	Undivided	Both	16+57.70	to	21+00.00	442.30	442.30	0.084	442.30	0.084
2	WBL	Both	21+00.00	to	25+00.00	400.00	57107.80	10.816	57107.80	10.816
	WBL	Both	a 0+00.00	to	a 281+43.00	28143.00				
	EBL	Both	21+00.00	to	306+64.80	28564.80				
3	Undivided	Both	b -3+63.00	to	b 43+02.00	4665.00	9683.20	1.834	9683.20	1.834
	Undivided	Lt	b 43+02.00	to	b 49+66.00	664.00				
	Undivided	Both	b 49+66.00	to	b 51+83.00	217.00				
	Undivided	Rt	b 51+83.00	to	b 56+40.00	457.00				
	Undivided	Both	b 56+40.00	to	b 93+20.20	3680.20				
4	Undivided	Both	b 93+20.20	to	b 101+14.20	794.00	794.00	0.150	794.00	0.150
5	Undivided	Both	b 101+14.20	to	b 104+43.40	329.20	1504.10	0.285	1504.10	0.285
	WBL	Both	b 699+21.70	to	b 703+97.20	475.50				
	EBL	Both	c 0+00.0	to	c 6+99.40	699.40				
6	WBL	Both	b 104+43.40	to	b 699+21.70	59478.30	59478.30	11.265	59478.30	11.265
7	Undivided	Both	b 703+97.20	to	b 710+89.57	692.37	692.37	0.131	692.37	0.131
8	Undivided	Both	b 710+89.57	to	b 716+50.00	560.43	560.43	0.106	560.43	0.106
9	Undivided	Both	b 718+60.00	to	b 720+52.00	192.00	192.00	0.036	192.00	0.036
			Totals:				131142.20	24.838	131142.20	24.838

TABLE OF MATERIAL QUANTITIES

	UNCLASSIFIED EXCAVATION, DIGOUTS	BASE COURSE	COLD MILLING ASPHALT CONCRETE	Estimated Cold Milled Material Produced	REMOVE ASPHALT CONCRETE PAVEMENT	ASPHALT CONCRETE COMPOSITE	CLASS HR ASPHALT CONCRETE	PG 58-34 ASPHALT BINDER	SALVAGED ASPHALT CONCRETE (RAP=40%) (N.A.B.I.)	VIRG. AGGR. (N.A.B.I.)	SS-1h/ CSS-1h ASPH. FOR TACK	SS-1h/ CSS-1h ASPH. FOR FLUSH	Sand for Flush Seal
SECTION	CuYd	Ton	SqYd	Ton	SqYd	Ton	Ton	Ton	Ton	Ton	Ton	Ton	Ton
1a	3.3	6.5	1039	109.1	4.9	1.7	109.4	3.9	42.2	63.3	0.4	0.2	3.7
1b	2.1	4.2	668	70.2	3.2	1.1	70.4	2.5	27.1	40.8	0.3	0.1	2.4
2	270.4	540.8	74240	7795.2	411.0	140.6	7679.3	270.4	2963.5	4445.4	31.6	16.2	253.8
3	45.8	91.7	14632	1536.4	69.7	23.8	1451.3	51.8	559.8	839.7	6.2	3.2	51.6
4	3.8	7.5	600	63.0	5.7	2.0	126.3	4.5	48.7	73.1	0.5	0.3	4.2
5	7.1	14.2	3228	338.9	10.8	3.7	119.6	8.5	92.3	18.8	1.0	0.5	8.0
6	281.6	563.2	77322	8118.8	428.1	146.4	7998.0	281.6	3086.6	4629.8	32.9	16.9	264.3
7	3.3	6.6	1046	109.9	5.0	1.7	110.1	3.9	42.5	63.7	0.4	0.2	3.7
8	2.7	5.3	847	88.9	4.0	1.4	89.2	3.2	34.4	51.6	0.4	0.2	3.0
9	-	-	-	-	405.3	-	85.6	3.0	33.0	49.6	0.1	0.1	1.4
Sub totals	620.1	1240.1	173623	18230.4	1347.8	322.4	17839.2	633.3	6930.1	10275.8	73.7	37.9	596.1
Additional Quantities	-	3249.9	11330	594.8	-	-	2216.2	77.5	855.5	1283.2	7.6	4.3	77.4
Totals	620	4490.0	184953	18825.2	1347.8	322.4	20055.4	710.8	7785.6	11559.0	81.3	42.2	673.5

TABLE OF ADDITIONAL QUANTITIES

TABLE OF ADDITIONAL QUANTITIES

LOCATIONS:	ASPHALT CONCRETE CLASS HR TON	ASPHALT BINDER 58-34 TON	RECYCLED ASPHALT (RAP) N.A.B.I. TON	VIRGIN AGGREGATE N.A.B.I. TON	SS-1h/ CSS-1h ASPH. FOR TACK TON	SS-1h/ CSS-1h ASPH. FOR FLUSH TON	SAND FOR FLUSH SEAL TON	BASE COURSE TON	CONTRACTOR FURNISHED BORROW EXCAVATION CU YD	BASE COURSE, SALVAGED ASPHALT MIX TON	COLD MILLING ASPHALT CONCRETE SQ YD
Goring Transitions:											
Section 1b	71.2	2.5	27.5	41.2	0.3	0.1	2.8	-	-	-	678.2
Section 5	69.3	2.4	26.8	40.1	0.3	0.1	2.7	-	-	-	660.0
Section 9	89.4	3.1	34.5	51.8	0.3	0.2	3.5	-	-	-	851.0
Guardrail Embankment Widening by Structure 55-085-429	48.3	1.7	18.6	28.0	0.2	0.1	-	2649.9	1402	-	1136.7
***US 12 Shoulders: Intersecting Roads, City Streets, and Rural Entrances**	1938.0	67.8	748.1	1122.1	6.5	3.8	68.4	600.0	-	555.0	8004.0
TOTALS	**2216.2**	**77.5**	**855.5**	**1283.2**	**7.6**	**4.3**	**77.4**	**3249.9**	**1402**	**555.0**	**11330**

*See "TABLE OF INTERSECTING ROADS, CITY STREETS AND RURAL ENTRANCES"
The tonnage shown in the Table of Additional Quantities for Class HR Hot Mix Asphalt Concrete is based on an average compacted thickness of 2 inches, unless otherwise indicated. Intersecting roads, streets, and rural entrances are based on an average compacted thickness of 2 inches. Application will be at the rate shown on the plans or as directed by the Engineer.
The above quantities are included in the Estimate of Quantities.

TABLE OF GUARDRAIL REMOVAL AND INSTALLATION

Location		Remove 3 Cable Guardrail (Ft)	Remove 3 Cable Guardrail Anchor Assembly (Each)	High Tension 4 Cable Guardrail (Ft)	High Tension Cable Guardrail Anchor Assembly (Each)	Remove Beam Guardrail (Ft)	Type 1 MGS (Ft)	Type 1 Retrofit Guardrail Transition (Each)	MGS MASH Flared End Terminal (Each)	Guardrail Delineator (Each)	Contractor Furnished Borrow Excavation (CuYd)	Base Course (Ton)
High Tension: West of Waubay	Sta. b 15+42 to Sta. b 18+98 Lt.	356	2	-	-	-	-	-	-	-	-	-
	Sta. b 16+55 to Sta. b 18+33 Lt.	-	-	178	2	-	-	-	-	-	-	-
MGS Guardrail System: Structure 55-085-429 over I-29	Begin Bridge Left (NW)	-	-	-	-	82	25.0	1	1	4	384	725.8
	Begin Bridge Right (SW)	-	-	-	-	119	37.5	1	1	4	515	973.4
	End Bridge Left (NE)	-	-	-	-	119	37.5	1	1	4	229	432.8
	End Bridge Right (SE)	-	-	-	-	82	25.0	1	1	4	274	517.9
	Totals:	356	2	178	2	402	125	4	4	16	1402	2649.9

*Contractor Furnished Borrow Excavation and Base Course quantities are also included in the "TABLE OF ADDITIONAL QUANTITIES"

TABLE OF INTERSECTING ROADS, CITY STREETS, AND RURAL ENTRANCES

MRM	DISPL.	Sides: Left/Right/ Both/Median	DESCRIPTION	SURFACING REQUIRED	Asphalt Surface Area (SqFt) (N.A.B.I.)	Cold Mill Asphalt Concrete (SqYd)	Base Course (Ton)	Base Course, Salvaged Asphalt Mix (Ton)	Class HR Asphalt Concrete Depth (Inch)	Class HR Hot Mixed Asphalt Concrete (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	SS-1h or CSS-1h Asphalt for Flush (Ton)	Sand for Flush Seal (Ton)
343.00	+.572	R	COMMERCIAL DRIVEWAY	Asphalt	1300	145	-	-	2	17	0.06	0.04	0.6
343.73	+.000		BEGIN DIVIDED		-	-	-	-	-	-	-	-	-
343.73	+.229	L	RESIDENTIAL DRIVEWAY	Asphalt to end of Radius, then Gravel	1300	-	15	-	2	17	0.06	0.04	0.6
343.73	+.229	M	CROSSOVER	Asphalt	2500	134	-	-	2	32	0.11	0.06	1.2
344.00	+.021	L	RESIDENTIAL DRIVEWAY	Asphalt to end of Radius, then Gravel	1500	-	15	-	2	19	0.07	0.04	0.7
344.00	+.021	M	CROSSOVER	Asphalt	2900	167	-	-	2	37	0.13	0.07	1.3
344.00	+.021	R	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
344.00	+.058	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
344.00	+.058	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
344.00	+.244	B	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
344.00	+.244	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
344.00	+.336	R	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
344.00	+.336	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
344.00	+.529	L	436TH AVENUE	Asphalt	1700	-	-	-	2	22	0.08	0.04	0.8
344.00	+.529	R	436TH AVENUE	Asphalt to end of Radius, remove old gravel/asphalt, then add Gravel.	1700	-	15	-	4	43	0.08	0.04	0.8
344.00	+.529	M	CROSSOVER	PCC (No Work Required)	-	-	-	-	-	-	-	-	-
344.00	+.757	L	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
344.00	+.757	R	RESIDENTIAL DRIVEWAY	Gravel	1500	-	15	-	2	19	0.07	0.04	0.7
344.00	+.757	M	CROSSOVER	Asphalt	3400	178	-	-	2	43	0.15	0.08	1.6
345.00	+.000	R	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
345.00	+.000	L	RESIDENTIAL DRIVEWAY	Asphalt to end of Radius, then Gravel	1000	112	15	-	2	13	0.05	0.03	0.5
345.00	+.000	M	CROSSOVER	Asphalt	3300	156	-	-	2	42	0.14	0.08	1.5
345.00	+.110	L	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
345.00	+.391	L	437TH AVENUE NORTH	Asphalt to end of Radius, then Gravel	900	-	15	-	2	12	0.04	0.03	0.4
345.00	+.391	M	CROSSOVER	Asphalt	3200	134	-	-	2	40	0.14	0.08	1.5
345.00	+.506	R	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
345.00	+.506	M	CROSSOVER	Gravel		-	-	-	-	-	-	-	-
345.00	+.797	R	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
345.00	+.797	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
345.00	+.860	L	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
346.00	+.000	B	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
346.00	+.000	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
346.00	+.172	B	FIELD ENTRANCE	Gravel	-	-		15		-	-	-	-
346.00	+.172	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
346.00	+.501	L	438TH AVENUE NORTH	Asphalt to ROW Line, then Gravel	1500	-	15	-	2	19	0.07	0.04	0.7
346.00	+.501	M	CROSSOVER	Asphalt	2900	134	-	-	2	37	0.13	0.07	1.3
346.00	+.796	R	438TH AVENUE SOUTH	Asphalt to end of radius, then Gravel	1000	-	15	-	2	13	0.05	0.03	0.5
346.00	+.796	M	CROSSOVER	Asphalt	3200	112		-	2	40	0.14	0.08	1.5
346.00	+.870	M	MEDIAN	Gravel -Mill out asphalt in median, but no additional gravel or asphalt	-	90	-	-	-	-	-	-	-
346.00	+.870	R	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
346.00	+.927	L	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
347.00	+.294	R	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
347.00	+.294	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
347.00	+.505	B	439TH AVENUE	Asphalt to end of radius, then Gravel	2500	-	15	-	2	32	0.11	0.06	1.2
347.00	+.505	M	CROSSOVER	Asphalt	2500	112	-	-	2	32	0.11	0.06	1.2
347.00	+.848	B	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
347.00	+.848	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
348.00	+.156	R	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
348.00	+.156	M	CROSSOVER	Asphalt	3400	123	-	-	2	43	0.15	0.08	1.6
348.00	+.156	L	RESIDENTIAL DRIVEWAY	Gravel	-	-	15	-	-	-	-	-	-
348.00	+.500	B	440TH AVENUE	Asphalt to end of radius, then gravel	3400	-	15	-	2	43	0.15	0.08	1.6
348.00	+.500	M	CROSSOVER	Asphalt	3700	112	-	-	2	47	0.16	0.09	1.7
348.00	+.585	L	RESIDENTIAL DRIVEWAY	Mill 10 ft at the ROW line, transitioning from 2 to 0 in. towards shoulder. Pave 2" depth to ROW	425	48	15	-	2	6	0.02	0.01	0.2
348.00	+.585	M	CROSSOVER	Asphalt	3000	167	-	-	2	38	0.13	0.07	1.4

TABLE OF INTERSECTING ROADS, CITY STREETS, AND RURAL ENTRANCES

MRM	DISPL.	Sides: Left/Right/ Both/Median	DESCRIPTION	SURFACING REQUIRED	Asphalt Surface Area (SqFt) (N.A.B.I.)	Cold Mill Asphalt Concrete (SqYd)	Base Course (Ton)	Base Course, Salvaged Asphalt Mix (Ton)	Class HR Asphalt Concrete Depth (Inch)	Class HR Hot Mixed Asphalt Concrete (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	SS-1h or CSS-1h Asphalt for Flush (Ton)	Sand for Flush Seal (Ton)
348.00	+.683	L	RESIDENTIAL DRIVEWAY	Asphalt to ROW, then gravel. (Mill Asphalt up to Gravel.)	650	73	15	-	2	9	0.03	0.02	0.3
348.00	+.683		CROSSOVER	Asphalt	3000	89	-	-	2	38	0.13	0.07	1.4
348.00	+.767	L	RESIDENTIAL DRIVEWAY	Mill 10 ft at the ROW line, transitioning from 2 to 0 in. towards shoulder. Pave 2" depth to ROW	490	55	15	-	2	7	0.03	0.02	0.3
348.00	+.767	M	CROSSOVER	Asphalt	2700	112	15	-	2	34	0.12	0.07	1.2
348.00	+.897	L	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
349.00	+.000	L	FIELD ENTRANCE	Gravel	-	-		15	-	-	-	-	-
349.00	+.000	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
349.19	+.000		END DIVIDED					-					
352.00	+.574	B	RESIDENTIAL DRIVEWAY	Gravel	-	-	15	-	-	-	-	-	-
352.00	+.660	L	444TH AVENUE	Asphalt	2500	278	-	-	2	32	0.11	0.06	1.2
352.00	+.755	R	LAKE ACCESS	Gravel	-	-	15	-	-	-	-	-	-
352.00	+.872	R	LAKE ACCESS	Gravel	-	-	30	-	-	-	-	-	-
352.00	+.906	R	LAKE ACCESS	Gravel	-	-	30	-	-	-	-	-	-
352.00	+.980	L	LAKESHORE DRIVE	Asphalt to end of radius, then gravel	1300	-	15	-	2	17	0.06	0.04	0.6
352.00	+.982	R	RESIDENTIAL DRIVEWAY	Asphalt to end of radius, then gravel	1200	-	15	-	2	15	0.05	0.03	0.6
353.00	+.105	R	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
353.00	+.240	L	3RD STREET NORTH	Asphalt to ROW, then gravel	1600	-	15	-	2	20	0.07	0.04	0.8
353.00	+.250	R	3RD STREET SOUTH	Gravel	-	-	15	-	-	-	-	-	-
353.00	+.360	R	COMMERCIAL DRIVEWAY	*Asphalt to ROW	1000	112	-	-	2	13	0.05	0.03	0.5
353.00	+.460	R	COMMERCIAL DRIVEWAY	(New Asphalt, no additional work necessary.)	-	-	-	-	-	-	-	-	-
353.00	+.500	L	MAIN STREET	Asphalt to end of radius	1500	167	-	-	2	19	0.07	0.04	0.7
353.00	+.545	L	COMMERCIAL DRIVEWAY	Asphalt to ROW, then gravel	1500		15	-	2	19	0.07	0.04	0.7
353.00	+.596	L	RESIDENTIAL DRIVEWAY	No additional work necessary.	-	-	-	-	-	-	-	-	-
353.00	+.622	L	RESIDENTIAL DRIVEWAY	No additional work necessary.	-	-	-	-	-	-	-	-	-
353.00	+.655	L	COMMERCIAL DRIVEWAY	Asphalt	1000	112	-	-	2	13	0.05	0.03	0.5
353.00	+.683	L	COMMERCIAL DRIVEWAY	Asphalt	1000	112	-	-	2	13	0.05	0.03	0.5
353.00	+.744	R	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
353.76	+.000		WAYLAND STREET	Asphalt	1000	112	-	-	2	13	0.05	0.03	0.5
353.00	+.956	L	LAKE ACCESS	Asphalt	1500	167	-	-	2	19	0.07	0.04	0.7
354.00	+.011	R	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
354.00	+.082	L	COMMERCIAL DRIVEWAY	Asphalt	1100	123	-	-	2	14	0.05	0.03	0.5
354.00	+.082	R	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
354.00	+.115	L	COMMERCIAL DRIVEWAY	Asphalt	1500	167	-	-	2	19	0.07	0.04	0.7
354.00	+.314	B	446TH AVENUE	Gravel	-	-	30	-	-	-	-	-	-
354.55	+.000		BEGIN DIVIDED		-	-	-	-	-	-	-	-	-
354.55	+.107	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
354.55	+.107	M	CROSSOVER	Asphalt	1700	123	-	-	2	22	0.08	0.04	0.8
354.55	+.107	R	RESIDENTIAL DRIVEWAY	Gravel	-	-	15	-	-	-	-	-	-
354.55	+.316	L	COUNTY HWY 1	*Asphalt to ROW line.	600	67	15	-	2	8	0.03	0.02	0.3
354.55	+.316	M	CROSSOVER	Asphalt	2900	200	-	-	2	37	0.13	0.07	1.3
355.00	+.319	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
355.00	+.319	M	CROSSOVER	Asphalt	1800	112	-	-	2	23	0.08	0.05	0.8
355.00	+.416	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
355.00	+.416	M	CROSSOVER	Asphalt	2000	145	-	-	2	25	0.09	0.05	0.9
355.00	+.758	M	CROSSOVER	Resurface Crossover with 4" Class HR Asphalt Concrete	3650	-	-	-	4	92	0.16	0.09	1.7
355.00	+.936	M	CROSSOVER	Asphalt	2600	145	-	-	2	33	0.11	0.07	1.2
356.00	+.080	L	448TH AVENUE NORTH	Asphalt	1800	200	-	-	2	23	0.08	0.05	0.8
356.00	+.080	M	CROSSOVER	Asphalt	2000	112	-	-	2	25	0.09	0.05	0.9
356.00	+.080	R	RESIDENTIAL DRIVEWAY	Gravel	-	-	15	-	-	-	-	-	-
356.00	+.330	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
356.00	+.330	M	CROSSOVER	Asphalt	2600	189	-		2	33	0.11	0.07	1.2
356.00	+.500	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
356.00	+.758	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
356.00	+.758	M	CROSSOVER	Asphalt	1900	100	15	-	2	24	0.08	0.05	0.9

TABLE OF INTERSECTING ROADS, CITY STREETS, AND RURAL ENTRANCES

MRM	DISPL.	Sides: Left/Right/ Both/Median	DESCRIPTION	SURFACING REQUIRED	Asphalt Surface Area (SqFt) (N.A.B.I.)	Cold Mill Asphalt Concrete (SqYd)	Base Course (Ton)	Base Course, Salvaged Asphalt Mix (Ton)	Class HR Asphalt Concrete Depth (Inch)	Class HR Hot Mixed Asphalt Concrete (Ton)	SS-1h or CSS-1h Asphalt for Tack (Ton)	SS-1h or CSS-1h Asphalt for Flush (Ton)	Sand for Flush Seal (Ton)
357.00	+.174	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
357.00	+.174	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
357.00	+.427	L	449TH AVENUE	Gravel	-	-	15	-	-	-	-	-	-
357.00	+.665	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
357.00	+.665	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
358.00	+.417	L	450TH AVENUE	Asphalt to end of radius, then gravel	1000	112	15	-	2	13	0.05	0.03	0.5
358.00	+.417	M	CROSSOVER	Asphalt	2700	162	-	-	2	34	0.12	0.07	1.2
358.00	+.919	L	COUNTY ROAD 15	Asphalt to end of radius, then gravel	1300	145	15	-	2	17	0.06	0.04	0.6
358.00	+.919	M	CROSSOVER	Asphalt	2900	189	-	-	2	37	0.13	0.07	1.3
360.00	+.455	L	452ND AVENUE	Gravel	-	-	30	-	-	-	-	-	-
360.00	+.455	M	CROSSOVER	Asphalt	2600	139	-	-	2	33	0.11	0.07	1.2
360.00	+.977	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
360.00	+.977	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
361.00	+.460	L	453RD AVENUE	*Asphalt to ROW line.	1200	134	-	-	2	15	0.05	0.03	0.6
361.00	+.460	M	CROSSOVER	Asphalt	3000	178	-	-	2	38	0.13	0.07	1.4
362.00	+.005	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
362.00	+.005	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
362.00	+.520	L	454TH AVENUE	Gravel	-	-	15	-	-	-	-	-	-
362.00	+.520	M	CROSSOVER	Asphalt	5700	367	-	-	2	72	0.24	0.14	2.6
362.00	+.814	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
362.00	+.814	M	CROSSOVER	Gravel	-	-	-		-	-	-	-	-
363.00	+.074	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
363.00	+.074	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
363.00	+.440	L	455TH AVENUE	Asphalt	1300	145	-	-	2	17	0.06	0.04	0.6
363.00	+.440	M	CROSSOVER	Asphalt	5700	323	-	-	2	72	0.24	0.14	2.6
364.00	+.088	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
364.00	+.088	M	CROSSOVER	Gravel	-	-	-	-	-	-	-	-	-
364.00	+.591	L	456TH AVENUE	Asphalt	1300	145	-	-	2	17	0.06	0.04	0.6
364.00	+.591	M	CROSSOVER	Asphalt	2600	123	-	-	2	33	0.11	0.07	1.2
365.00	+.109	M	CROSSOVER	Asphalt	2800	167	-	-	2	35	0.12	0.07	1.3
365.00	+.109	L	142ND STREET	*Asphalt to ROW, then gravel	2600	-	15	-	2	33	0.11	0.07	1.2
365.00	+.713	L	457TH AVENUE	*Asphalt to ROW Line, then gravel	2500	278	15	-	2	32	0.11	0.06	1.2
365.00	+.713	M	CROSSOVER	Asphalt	4000	178	-	-	2	50	0.17	0.1	1.8
365.00	+.986	L	FIELD ENTRANCE	Gravel	-	-	-	15	-	-	-	-	-
365.00	+.986	R	Summit Laydown Yard	Asphalt	2000	223	-	-	2	25	0.09	0.05	0.9
366.01	+.000		END DIVIDED										
				TOTALS:	**147015**	**8004**	**600**	**555**	**-**	**1938**	**6.53**	**3.77**	**68.4**

The above quantities are included in the Table of Additional Quantities. See the Table of Additional Quantities for quantity of binder and aggregate for Class HR Hot Mixed Asphalt Concrete.
Cold mill 15' back from the Asphalt shoulder for each AC intersecting road, city street, rural entrance, and driveway.
*In addition to cold milling 15' from edge of AC Shoulder, cold mill 25' from the ROW. (See Transition Details for Intersecting Roads, City Streets, and Rural Entrances)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	21	140

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Pavement Markings (For Information Only)

Bid Item	Description	Direction	Location	Quantity	Total	Unit
Durable Pavement Markings, 4" White	4'' White Line (Dashed Centerlines)	WB	Sta. 9+70 to Sta. a 281+43.00 (Thru Equation)	7418.3	225735	Ft
		EB	Sta. 9+70 to Sta. 306+64.80	7423.7		
		WB	Sta. b -3+63.00 to Sta. b 716+50.00	18003.3		
		EB	Sta. b -3+63.00 to Sta. b 104+43.40	2701.6		
		EB	Sta. c 0+00.00 to Sta. c 6+99.40	174.9		
		EB	Sta. b 703+97.20 to Sta. b 716+50.00	313.2		
	4'' White Line (Outside Shoulder Edgelines)	WB	Sta. 9+70 to Sta. a 281+43.00 (Thru Equation)	29673.0		
		EB	Sta. 9+70 to Sta. 306+64.80	29694.8		
		WB	Sta. b -3+63.00 to Sta. b 703+97.20	70760.2		
		EB	Sta. b -3+63.00 to Sta. b 104+43.40	10806.4		
		EB	Sta. c 0+00.00 to Sta. c 6+99.40	699.4		
		EB & WB	Sta. b 703+97.20 to Sta. b 720+52.00 (x2)	3309.6		
	4" White Line (Center Turn Line)	-	Sta. b 2+80 to Sta. b 3+80	100		
		-	Sta. b 40+91 to Sta. b 41+91	100		
		-	Sta. b 46+32 to Sta. b 46+82	50		
		-	Sta. b 47+42 to Sta. b 48+12	70		
		-	Sta. b 49+10 to Sta. b 50+05	95		
		-	Sta. b 50+75 to Sta. b 51+25	50		
		-	Sta. b 71+50 to Sta. b 72+50	100		
	4" White Line (Dashed Centerlines) **Through Rush Lake Exception**	EB & WB	Start of asphalt (MRM 349.19) to end of asphalt concrete (MRM 352.51) -West of Waubay	8838.3		
	4" White Line (Outside Shoulder Edgelines) **Through Rush Lake Exception**	EB & WB	Start of asphalt (MRM 349.19) to end of asphalt concrete (MRM 352.51) -West of Waubay	35353.3		
Durable Pavement Markings, 4" Yellow	4" Yellow Line (Center Turn Lane-Solid Lines)	EB & WB	Sta. 9+70 to Sta. 21+00 (x2)	2260.0	219037	Ft
		EB & WB	Sta. b -3+63.00 to Sta. b 104+43.40 (x2)	21612.8		
	4" Yellow Line (Median Goring-Solid Lines)	EB & WB	Sta. 16+57 to Sta. 21+00 (x2)	886.0		
		EB & WB	Sta. b 101+14 to Sta. b 104+43.40 (x2)	660.8		
		EB & WB	Sta. b 699+21 to Sta. b 703+97.20 (x2)	952.4		
	4" Yellow Line (Center Turn Lane-Dashed Lines)	EB & WB	Sta. 9+70 to Sta. 16+57.00 (x2)	223.5		
		EB & WB	Sta. b -3+63.00 to Sta. b 104+43.40 (x2)	5403.2		
	4" Yellow Line (Inside Shoulder Edgelines)	WB	Sta. 21+00 to Sta. a 281+43.00 (Thru Equation)	28543.0		
		EB	Sta. 21+00 to Sta. 306+64.80	28564.8		
		WB	Sta. b 104+43.40 to Sta. b 703+97.20	59953.8		
		EB	Sta. c 0+00.00 to Sta. c 6+99.40	699.4		
	4" Yellow Line (Double)	-	Sta. b 703+97.20 to Sta. b 720+52.00	3309.6		
	4" Yellow Lines (Double Yellow Centerlines and Center Turn Lane) **Through Rush Lake Exception**	-	Start of asphalt (MRM 349.19) to end of asphalt concrete (MRM 352.51) -West of Waubay	65967.5		
Durable Pavement Markings, 8" Yellow	8" Yellow Line	EB & WB	Located at Sta. b 104+43.3 & Sta. b 699+21	100	100	Ft
Durable Pavement Markings, 8" White	8" White Line	WB	Sta. b 715+00 to b 717+15	215	1871	Ft
	8" White Line	EB	Sta. b 716+00 to b 717+80	180		
	8" White Dashed Centerline	EB	Sta. 435+18 to Sta. b 717+80 (Thru equations)	576		
	8" White Lines **Through Rush Lake Exception**	-	MRM 349.19 to MRM 349.71 Five Turn Lane Lines	900		

Pavement Markings (For Information Only)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0012(311)343	22	140

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Bid Item	Description	Direction	Location	Quantity	Total	Unit
Cold Applied Plastic Pavement Marking, 24"	Median Goring	-	East of 435 Ave. & Hwy 12 Intersection Sta. 16+57 to Sta. 21+00 (East of Webster)	141	506	Ft
		-	East of 446 Ave. & Hwy 12 Intersection Sta. b 101+14 to Sta. b 104+43.3 (East of Waubay)	215		
		-	Sta. b 699+21 to Sta. b 703+00 (West of Summit)	150		
Grooving for Cold Applied Plastic Pavement Marking, 24"	Median Goring	-	East of 435 Ave. & Hwy 12 Intersection Sta. 16+57 to Sta. 21+00 (East of Webster)	141	506	Ft
		-	East of 446 Ave. & Hwy 12 Intersection Sta. b 101+14 to Sta. b 104+43.3 (East of Waubay)	215		
		-	Sta. b 699+21 to Sta. b 703+00 (West of Summit)	150		
Grooving for Cold Applied Plastic Pavement Marking, Symbol	I-29, South and US 12, East Shields	EB	Roughly MRM 365+0.8 (Sta. 434+25 and Sta. 435+45)	4	4	Each
Grooving for Durable Pavement Marking, 4"	4" Yellow Line (Center Median Goring- Solid Lines)	EB & WB	Sta. 16+57 to Sta. 21+00 (x2)	886	2303	Ft
		EB & WB	Sta. b 101+14 to Sta. b 104+43.4 (x2)	658.8		
		EB & WB	Sta. b. 699+21 to Sta. 703+00 (x2)	758		
Preformed Thermoplastic Pavement Marking, Arrow	Arrows	-	Left Turn Arrows East of 435 Ave. & Hwy 12 Intersection Between Sta. 12+00 and Sta. 13+00 (East of Webster)	2	38	Each
		-	Left Turn Arrows Starting west of 444 Ave. & Hwy 12 Intersection Between Sta. b 2+00 and Sta. b 97+00 (Through Waubay)	28		
		-	Right Turn and Straight Arrows Leading up to On/Off Ramps West of I-29 Between Sta. b 715+00 to Sta. b 718+00 (West of Summit)	8		
Preformed Thermoplastic Pavement Marking, Message	"ONLY" Message	EB	Sta. b 716+60	2	2	Each
Preformed Thermoplastic Pavement Marking, 24"	24" Median Goring	-	West of 444 Ave. & Hwy 12 Intersection Sta. b 4+70 to Sta. b 7+00 (West of Waubay)	85	295	Ft
	24" Stop Bars	-	Ramps West and East of Str. No. 55-05-429 over I-29 (West of Summit) -105 Ft Each	210		
Preformed Thermoplastic Pavement Marking, Symbol	I-29, South and US 12, East Shields	EB	Roughly MRM 365.00+0.8 (Sta. 434+25 and Sta. 435+45)	4	4	Each

East bound lanes from MRM 354.55+0.000 to MRM 365.00+0.862 will not have any pavement markings installed besides 8" white dashes on centerline starting at MRM 365.80.

All markings are on PCCP except those along the Rush Lake Exception, and specific goring details.

Markings on PCCP will require surface preparation while markings on AC will require grooving.

Pavement Markings (For Information Only)

Bid Item	Description	Direction	Location	Quantity	Total	Unit
Surface Preparation for Pavement Marking	Arrows	-	Left Turn Arrows East of 435 Ave. & Hwy 12 Intersection Between Sta. 12+00 and Sta. 13+00 (East of Webster)	2	39	Each
		-	Left Turn Arrows Starting west of 444 Ave. & Hwy 12 Intersection Between Sta. b 2+00 and Sta. b 97+00 (Through Waubay)	28		
		-	Right Turn and Straight Arrows Leading up to On/Off Ramps West of I-29 Between Sta. b 715+00 to Sta. b 718+00 (West of Summit)	8		
	"ONLY" Message	EB	Sta. b 716+60	1		
	24" Median Goring	-	West of 444 Ave. & Hwy 12 Intersection Sta. b 4+70 to Sta. b 7+00 (West of Waubay)	510	446858	Ft
	24" Stop Bars	-	Ramps West and East of Str. No. 55-05-429 over I-29 (West of Summit) -105 Ft Each	1260		
	4'' White Line (Dashed Centerlines)	WB	Sta. 9+70 to Sta. a 281+43.00 (Thru Equation)	7418.3		
		EB	Sta. 9+70 to Sta. 306+64.80	7423.7		
		WB	Sta. b -3+63.00 to Sta. b 716+50.00	18003.3		
		EB	Sta. b -3+63.00 to Sta. b 104+43.40	2701.6		
		EB	Sta. c 0+00.00 to Sta. c 6+99.40	174.9		
		EB & WB	Sta. b 703+97.20 to Sta. b 716+50.00 (x2)	626.4		
	4'' White Line (Outside Shoulder Edgelines)	EB	Sta. 9+70 to Sta. a 281+43.00 (Thru Equation)	29673.0		
		WB	Sta. 9+70 to Sta. 306+64.80	29694.8		
		WB	Sta. b -3+63.00 to Sta. b 703+97.20	70760.2		
		EB	Sta. b -3+63.00 to Sta. b 104+43.40	10806.4		
		EB	Sta. c 0+00.00 to Sta. c 6+99.40	699.4		
		EB & WB	Sta. b 703+97.20 to Sta. b 720+52.00 (x2)	3309.6		
	4" White Line (Center Turn Line)	-	Sta. b 2+80 to Sta. b 3+80	100		
		-	Sta. b 40+91 to Sta. b 41+91	100		
		-	Sta. b 46+32 to Sta. b 46+82	50		
		-	Sta. b 47+42 to Sta. b 48+12	70		
		-	Sta. b 49+10 to Sta. b 50+05	95		
		-	Sta. b 50+75 to Sta. b 51+25	50		
		-	Sta. b 71+50 to Sta. b 72+50	100		
	4" Yellow Line (Center Turn Lane- Solid Lines)	EB & WB	Sta. 9+70 to Sta. 16+57 (x2)	1374.0		
		EB & WB	Sta. b -3+63.00 to Sta. b 101+14 (x2)	20954.0		
	4" Yellow Line (Median Goring- Solid Lines)	EB & WB	Sta. 16+57 to Sta. 21+00 (x2)	886.0		
	4" Yellow Line (Center Turn Lane- Dashed Lines)	EB & WB	Sta. 9+70 to Sta. 16+57 (x2)	343.5		
		EB & WB	Sta. b -3+63.00 to Sta. b 104+43.40 (x2)	5403.2		
	4" Yellow Line (Inside Shoulder Edgelines)	WB	Sta. 21+00 to Sta. a 281+43.00 (Thru Equation)	28543.0		
		EB	Sta. 21+00 to Sta. 306+64.80	28564.8		
		WB	Sta. b 104+43.40 to Sta. b 703+97.20	59953.8		
		EB	Sta. c 0+00.00 to Sta. c 6+99.40	699.4		
	4" Yellow Line (Double)	-	Sta. b 703+97.20 to Sta. b 720+52.00	3309.6		
	4" White Line (Dashed Centerlines) **Through Rush Lake Exception**	EB & WB	Start of asphalt (MRM 349.19) to end of asphalt concrete (MRM 352.51) -West of Waubay	8838.3		
	4" White Line (Outside Shoulder Edgelines) **Through Rush Lake Exception**	EB & WB	Start of asphalt (MRM 349.19) to end of asphalt concrete (MRM 352.51) -West of Waubay	35353.3		
	4" Yellow Lines (Double Yellow Centerlines and Center Turn Lane) **Through Rush Lake Exception**	-	Start of asphalt (MRM 349.19) to end of asphalt concrete (MRM 352.51) -West of Waubay	65967.5		
	8" Yellow Line	EB & WB	Located at Sta. b 104+43.3 & Sta. b 699+21	200		
	8" White Line	WB	Sta. b 715+00 to b 717+15	430		
	8" White Line	EB	Sta. b 716+00 to b 717+80	360		
	8" White Dashed Centerline	EB	Sta. 435+18 to Sta. b 717 +80 (Thru equations)	1151.0		
	8" White Lines **Through Rush Lake Exception**	-	Sta. 10+00 to 29+00 Four Turn Lane Locations	900		
Remove Pavement Marking, Arrow	Lane Reduction Arrows	EB	Located at MRM 365.00+0.7 & MRM 365.00+0.8	2	2	Each

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
343.48	0.043	Rt.	Speed Limit 60	R2-1	30	36	7.5		24				1			W	Telespar	Replace Existing Sign with New Sign on New Posts
343.48	0.043	Lt.	Speed Limit 40	R2-1	30	36	7.5		24				1			E	Telespar	Replace Existing Sign with New Sign on New Posts
343.48	0.078	Rt.	Divided Highway Begins symbol	W6-1	48	48		16	12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
343.48	0.101	Rt.	END plaque	R3-9dP	24	12	2		12		1		1			W	4" X 6" Wood	Replace Existing Signs with New Signs on New Post
			Center Lane Two-Way Left-Turn-Only	R3-9b	24	36	6											
343.48	0.102	Lt.	BEGIN plaque	R3-9cP	24	12	2		12				1			E	Telespar	Replace Existing Signs with New Signs on New Post
			Center Lane Two-Way Left-Turn-Only	R3-9b	24	36	6											
343.48	0.170	Rt.	Waubay 11 Jct I-29 23 Milbank 46	D2-3	96	60	40			24			1			W	Telespar	Replace Existing Sign with New Sign on New Posts
343.48	0.180	Lt.	WEBSTER Population 1,728	D1-1	60	18	7.5		24				1			E	Telespar	Replace Existing Town/Population Sign with New Sign on New Posts, Reset Purple Heart Sign on New Posts
			CITY OF WEBSTER A PURPLE HEART CITY	I-NS8	24	24								1	1			
343.73	0.000	Rt.	Mile Marker 343.73	D10-6	4.5	21	0.7		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
343.73	0.000	Median	Keep Right symbol	R4-7	36	48	12		26		2		1			W	Telespar	Replace Existing Signs with New Signs on New Posts
			Divided Highway Ends symbol	W6-2	48	48		16								E		
			Conspicuity Strip (two strips)		2	24		0.7								E/W		
343.73	0.000	Lt.	DO NOT ENTER	R5-1	36	36		9	12				1			W	Telespar	Replace Existing Signs with New Signs on New Post at Existing MRM Location
			Divided Highway Ends symbol	W6-2	48	48		16								E		
			Mile Marker 343.73	D10-6	4.5	21	0.7									E		
Divided Roadway																		
349.19	0.000	Rt.	DO NOT ENTER	R5-1	36	36		9	12				1			E	Telespar	Replace Existing Signs with New Signs on New Post at Existing MRM Location
			Divided Highway Ends symbol	W6-2	48	48		16								W		
			Mile Marker 349.19	D10-6	4.5	21	0.7									W		
349.19	0.000	Median	Keep Right symbol	R4-7	36	48	12		26		2		1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			Divided Highway Ends symbol	W6-2	48	48		16								W		
349.19	0.000	Lt.	Mile Marker 349.19	D10-6	4.5	21	0.7		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
349.19	0.109	Rt.	Speed Reduction 65 MPH	W3-5	36	36										W	Telespar	Leave In Place
349.19	0.161	Rt.	Speed Limit 65	R2-1	30	36	7.5		12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
349.19	0.166	Lt.	Speed Limit 70	R2-1	30	36	7.5		12				1			E	Telespar	Replace Existing Sign with New Sign on New Post
349.19	0.214	Lt.	Divided Highway Begins symbol	W6-1	48	48		16	12				1			E	Telespar	Replace Existing Sign with New Sign on New Post

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
349.19	0.302	Lt.	Stop	R1-1	36	36		7.5	12		1		1			N	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
349.19	0.308	Rt.	Stop	R1-1	36	36		7.5	12		1		1			S	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
349.19	0.318	Lt.	441 Ave (Two Signs)	D3-1	36	12	6		12				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
349.19	0.337	Lt.	Adopt A Highway	ADO-5	36	36										E	Telespar	Leave In Place
			JOLLY WORKERS 4-H CLUB	ADO-1	36	12												
			Litter Crew Ahead	ADO-6	30	30												
349.19	0.378	Rt.	WATCH FOR ICE	W16-6	36	36		9	12		1		1			W	4" X 6" Wood	Replace Existing Signs with New Signs on New Post
			NEXT 3 MILES	W7-3aP	24	18		3										
349.19	0.441	Rt.	Slippery When Wet symbol	W8-5	36	36		9	12		1		1			W	Telespar	Replace Existing Sign with New Sign on New Post
349.19	0.498	Rt.	Stop	R1-1	36	36							1			S	Telespar	Remove Existing Sign
349.19	0.529	Rt.	No Parking Symbol	R8-3	30	30	6.3		9		1		1			W	4"X6" Wood	Replace Existing Sign with New Sign on New Post
350	0.000	Rt.	Mile Marker 350	D10-6	4.5	18	0.6		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
350	0.000	Lt.	Mile Marker 350	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
350	0.336	Rt.	No Parking Symbol	R8-3	30	30	6.3		9				1			W	Telespar	Replace Existing Sign with New Sign on New Post
350	0.336	Lt.	No Parking Symbol	R8-3	30	30	6.3		9		1		1			E	4"X6" Wood	Replace Existing Sign with New Sign on New Post
351	0.000	Rt.	Mile Marker 351	D10-6	4.5	18	0.6		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
351	0.000	Lt.	Mile Marker 351	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
351	0.063	Rt.	No Parking Symbol	R8-3	30	30	6.3		9		1		1			W	4"X6" Wood	Replace Existing Sign with New Sign on New Post
351	0.063	Lt.	No Parking Symbol	R8-3	30	30	6.3		9		1		1			E	4"X6" Wood	Replace Existing Sign with New Sign on New Post
351	0.780	Lt.	No Parking Symbol	R8-3	30	30	6.3		9				1			E	Telespar	Replace Existing Sign with New Sign on New Post
351	0.780	Rt.	No Parking Symbol	R8-3	30	30	6.3		9		1		1			W	4"X6" Wood	Replace Existing Sign with New Sign on New Post
352	0.000	Rt.	Mile Marker 352	D10-6	4.5	18	0.6		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
352	0.000	Lt.	Mile Marker 352	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
352	0.490	Rt.	Speed Reduction 55 MPH	W3-5	36	36		9	12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
352	0.522	Lt.	Slippery When Wet symbol	W8-5	36	36		9	12				1			E	Telespar	Replace Existing Sign with New Sign on New Post
352	0.527	Rt.	BLUE DOG LAKE LAKE ACCESS <---	RW-080C	78	42	22.8			24		2	1			W	Telespar	Replace Existing Sign with New Sign on New Posts
352	0.537	Lt.	No Parking Symbol	R8-3	30	30	6.3		9		1		1			E	4"X6" Wood	Replace Existing Sign with New Sign on New Post
352	0.563	Rt.	Speed Limit 55	R2-1	30	36	7.5		24				1			W	Telespar	Replace Existing Sign with New Sign on New Post
352	0.563	Lt.	Speed Limit 65	R2-1	30	36	7.5		24				1			E	Telespar	Replace Existing Sign with New Sign on New Post

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
352	0.571	Rt.	Blue Dog Fish Hatchery <-- 1 MILE	RS-NS1C	66	42	19.3			24		2	1			W	Telespar	Replace Existing Sign with New Sign on New Posts
352	0.600	Rt.	BEGIN plaque	R3-9cP	24	12	2		12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
			Center Lane Two-Way Left-Turn-Only	R3-9b	24	36								1	1			Reset on New Post
352	0.605	Lt.	WATCH FOR ICE	W16-6	36	36		9	24				1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			NEXT 3 MILES	W7-3AP	24	18		3										
352	0.620	Lt.	END plaque	R3-9dP	24	12	2		12				1			E	Telespar	Replace Existing Sign with New Sign on New Post
			Center Lane Two-Way Left-Turn-Only	R3-9b	24	36								1	1			Reset on New Post
352	0.654	Lt.	Stop	R1-1	36	36			12					1	1	N	Telespar	Reset on New Post
			Conspicuity Strip		4	60		1.7					1					Replace Existing Strip with New Strip on New Post
352.66	0.000	Rt.	LARGE HORIZONTAL DOUBLE ARROW	W1-7	48	24		8	12				1			N	Telespar	Replace Existing Sign with New Sign on New Post
352.66	0.004	Lt.	444 Ave (Two Signs)	D3-1	36	12	6		12.5				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
352.66	0.124	Lt.	Blue Dog Fish Hatchery 1 MILE -->	RS-NS1C	66	42	19.3			24		2	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
352.66	0.149	Lt.	BLUE DOG LAKE LAKE ACCESS -->	RW-080C	78	42	22.8			24		2	1			E	4"X6" Wood	Replace Existing Sign with New Sign on New Posts
352.84	0.012	Rt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										W	Telespar	Leave In Place
352.84	0.040	Lt.	Stop	R1-1	36	36		7.5	12		1		1			N	Telespar	Replace Existing Sign with New Sign on New Post
352.98	0.000	Lt.	W Lakeshore Dr (Two Signs)	D3-1	54	12	9		12.0				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
353	0.000	Rt.	Mile Marker 353	D10-6	4.5	18	0.6		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
353	0.000	Lt.	Mile Marker 353	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
353	0.063	Rt.	Waubay Hometown of Woodrow W. Keeble Medal of Honor	I-NS3	90	54	33.8			26		2	1			W	Telespar	Replace Existing Sign with New Sign on New Posts
353	0.136	Rt.	WAUBAY POP. 473	D1-1	60	18	7.5		24				1			W	Telespar	Replace Existing Town/Population Sign with New Sign on New Posts, Reset Purple Heart Sign on New Posts
		Rt.	CITY OF WAUBAY A PURPLE HEART CITY	I-NS8	48	24								1	1			
353	0.195	Lt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										E	Telespar	Leave In Place
353	0.223	Lt.	Stop	R1-1	36	36		7.5	12		1		1			N	4"X6" Wood	Replace Existing Sign with New Sign on New Post

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
353	0.223	Rt.	N 3rd St (Two Signs)	D3-1	36	12	6		12.5				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
353.24	0.008	Rt.	Stop	R1-1	36	36		7.5	12				1			S	Telespar	Replace Existing Sign with New Sign on New Post
353.24	0.008	Lt.	N 3rd St (Two Signs)	D3-1	36	12	6		12.5				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
353.24	0.035	Rt.	Speed Limit 45	R2-1	30	36										W	Telespar	Leave In Place
353.24	0.037	Lt.	Speed Limit 55	R2-1	30	36	7.5		12				1			E	Telespar	Replace Existing Sign with New Sign on New Post
353.24	0.077	Rt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										W	Light Pole	Leave In Place
353.24	0.110	Lt.	LARGE HORIZONTAL DOUBLE ARROW	W1-7	48	24		8	12		1					S		Place New Sign on New Post
353.24	0.117	Rt.	Stop	R1-1	36	36		7.5	12		1		1			S	4"X6" Wood	Replace Existing Sign with New Sign on New Post
353.24	0.117	Lt.	Bartelt Blvd (Two Signs)	D3-1	42	12	7		12.5				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
353.24	0.131	Lt.	WEBSTER 11 ABERDEEN 60	D1-2	102	42	29.8			26		2	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
353.24	0.191	Lt.	Speed Limit 45	R2-1	30	36										E	Telespar	Leave In Place
353.24	0.217	Lt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										E	Telespar	Leave In Place
353.24	0.245	Lt.	West - US	M3-4P	24	12	2		12				1			E	Telespar	Replace Existing Signs with New Signs on New Post
			US 12	M1-4	24	24	4											
353.24	0.260	Lt.	Stop	R1-1	36	36		7.5	12		1		1			N	4"X6" Wood	Replace Existing Sign with New Sign on New Post
353.5	0.005	Lt.	N Main St (Two Signs)	D3-1	42	12	7		12.5				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
353.5	0.010	Rt.	Stop	R1-1	36	36		7.5	12				1			S	Telespar	Replace Existing Sign with New Sign on New Post
353.5	0.024	Rt.	East - US	M3-2P	24	12	2		12				1			W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12	M1-4	24	24	4											
353.5	0.061	Rt.	Speed Limit 45	R2-1	30	36										W	Telespar	Leave In Place
353.5	0.077	Rt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										W	Light Pole (Steel)	Leave In Place
353.5	0.120	Rt.	Jct I-29 13 Milbank 35	D2-2	90	48	30			26		2	1			W	Telespar	Replace Existing Sign with New Sign on New Posts

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
353.5	0.182	Lt.	WAUBAY POP. 473	D1-1	60	18	7.5		24				1			E	Telespar	Replace Existing Town/Population Sign with New Sign on New Posts, Reset Purple Heart Sign on New Posts
			CITY OF WAUBAY A PURPLE HEART CITY	I-NS8	48	24								1	1			
353.5	0.224	Rt.	Speed Limit 55	R2-1	30	36										W	Telespar	Leave In Place
353.5	0.225	Lt.	Speed Limit 45	R2-1	30	36	7.5		12		1		1			E	4"X6" Wood	Replace Existing Sign with New Sign on New Post
353.5	0.254	Lt.	Stop	R1-1	36	36		7.5	12		1		1			N	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
353.76	0.001	Rt.	Home of the Sisseton Wahpeton Oyate	I10-9	96	30	20			36		3	1			W	Telespar	Replace Existing Sign with New Sign on New Posts
353.76	0.002	Lt.	N Wayland St (Two Signs)	D3-1	54	12	9		12.0				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
353.76	0.022	Lt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										E	Telespar	Leave In Place
353.84	0.031	Rt.	PUBLIC WATER ACCESS <--	RW-VAR	42	48	14		24		2		1			W	Telespar	Replace Existing Sign with New Sign on New Posts
353.84	0.044	Lt.	Waubay Hometown of Woodrow W. Keeble Medal of Honor	I-NS3	90	54	33.8			26		2	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
353.84	0.110	Lt.	Stop	R1-1	36	36		7.5	12		1		1			N	4"X6" Wood	Replace Existing Sign with New Sign on New Post
353.85	0.008	Lt.	E Lakeshore Dr (Two Signs)	D3-1	54	12	9		12.0				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
354	0.000	Rt.	Mile Marker 354	D10-6	4.5	18	0.6		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
354	0.000	Lt.	Mile Marker 354	D10-6	4.5	18	0.6		5		1					E		Place New Sign on New Post at MRM Location
354	0.004	Lt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										E	Telespar	Leave In Place
			Mile Marker 354	D10-6	4.5	18							1					Remove Existing Sign
354	0.053	Lt.	PUBLIC WATER ACCESS -->	RW-VAR	42	48	14		24		2		1			E	Telespar	Replace Existing Sign with New Sign on New Posts
354	0.313	Lt.	DYNAMIC ENGINE BRAKING PROHIBITED	R-NS1	30	36							1			E	Telespar	Remove Existing Sign
			BY CITY ORDINANCE	R-NS5	30	12												
			UNMUFFLED DYNAMIC ENGINE BRAKING PROHIBITED By City Ordinance	R-NS1	30	36	7.5		12		1							Place New Sign on New Post

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
354	0.314	Lt.	Stop	R1-1	36	36		7.5	12				1			N	Telespar	Replace Existing Sign with New Sign on New Post
354	0.318	Lt.	446 Ave (Two Signs)	D3-1	36	12	6		12.5				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
354	0.325	Rt.	Stop	R1-1	36	36		7.5	12		1		1			S	4"X6" Wood	Replace Existing Sign with New Sign on New Post
354	0.333	Rt.	END plaque	R3-9dP	24	12	2		12				1			W	Light Pole (Steel)	Replace Existing Signs with New Signs on New Post
			Center Lane Two-Way Left-Turn-Only	R3-9b	24	36	6											
354	0.341	Lt.	Center Lane Two-Way Left-Turn-Only	R3-9b	24	36										E	Telespar	Leave In Place
354	0.425	Rt.	Divided Highway Begins symbol	W6-1	48	48		16	12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
354.55	0.000	Rt.	Mile Marker 354.55	D10-6	4.5	21	0.7		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
354.55	0.000	Lt.	Mile Marker 354.55	D10-6	4.5	21	0.7		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
354.55	0.018	Median	Keep Right symbol	R4-7	36	48	12			26		2	1			W	Telespar	Replace Existing Signs with New Signs on New Posts
			Divided Highway Ends symbol	W6-2	48	48		16								E		
354.55	0.018	Lt.	DO NOT ENTER	R5-1	36	36		9	12				1			W	Telespar	Replace Existing Signs with New Signs on New Post
			Divided Highway Ends symbol	W6-2	48	48		16								E		
Divided Roadway																		
366	0.000	Rt.	Mile Marker 366	D10-6	4.5	18	0.6		5				1			W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
366	0.000	Lt.	Mile Marker 366	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
366.01	0.005	Lt.	Divided Highway Begins symbol	W6-1	48	48		16	12		1		1			E	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
366.01	0.016	Rt.	Merge	W4-1	48	48							1			W	Telespar	Remove Existing Sign
366.01	0.016	Rt.	Right Lane Southbound I-29: DESTINATION BOARD - 2 LINES WORDS ONLY	D1-2C	60	42	17.5			25		2						Place New Sign on New Posts
366.01	0.045	Lt.	No Passing Zone	W14-3	48X48X36			5.6	12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
366.01	0.046	Rt.	JCT - Interstate	M2-1P	21	15	2.2		25		2		1			W	Telespar	Replace Existing Signs with New Signs on New Posts
			I 29	M1-1	24	24	4											
			JCT -US	M2-1P	21	15	2.2											
			US 81	M1-4	24	24	4											
366.01	0.085	Rt.	Speed Limit 45	R2-1	30	36	7.5		12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
366.01	0.095	Lt.	Speed Limit 70	R2-1	30	36	7.5		12				1			E	Telespar	Replace Existing Sign with New Sign on New Post

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
366.01	0.116	Rt.	RIGHT LANE MUST TURN RIGHT		90	54	33.8			24			1			W	Telespar	Replace Existing Sign with New Sign on New Posts
366.01	0.146	Rt.	^ Milbank ^ Sisseton Watertown -->	D1-2	96	54	36.0			24		2	1			W	Telespar	Replace Existing Sign with New Sign on New Posts
366.01	0.146	Lt.	Webster 23 Aberdeen 72	D1-2	102	42	29.8			25		2	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
366.01	0.167	Rt.	Speed Limit 45	R2-1	30	36							1			W	Telespar	Remove Existing Sign
366.01	0.185	Lt.	West - US	M3-4P	24	12	2		25		2		1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			US 12	M1-4	24	24	4											
			Yellowstone Trail up arrow circled		24	30								1	1			Reset on New Post
366.01	0.186	Rt.	Advisory Ramp Speed 20 MPH	W13-11	24	36		6	12				1			W	Telespar	Replace Existing Sign with New Sign on New Post
366.01	0.201	Rt.	Bridge Ices Before Road	W8-13	36	36		9	14				1			W	Telespar	Replace Existing Sign with New Sign on New Post
366.01	0.226	Rt.	East - US	M3-2P	24	12	2			26		2	1			W	Telespar Flush Mount (Bolted to Concrete)	Replace Existing Signs with New Signs on New Posts
			US 12	M1-4	24	24	4											
			Vertical Single Arrow - US	M6-3P	21	15	2.2											
			SOUTH - Interstate	M3-3P	24	12	2											
			I 29	M1-1	24	24	4											
			Horizontal Arrow - Interstate	M6-1P	21	15	2.2											
			SOUTH - US	M3-3P	24	12	2											
			US 81	M1-4	24	24	4											
			Horizontal Arrow - US	M6-1P	21	15	2.2											
366.01	0.232	Rt.	US 12	M1-4	24	24										N	Telespar	Leave In Place
			Horizontal Double Head Arrow - US	M6-4P	21	15												
366.01	0.242	Lt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26		2	1			W	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									E		
			Stop	R1-1	36	36		7.5								N		
			Do Not Enter	R5-1	36	36		9								S		

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
366.01	0.258	Lt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26		2	1			W	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									E		
			Stop	R1-1	36	36		7.5								N		
			Do Not Enter	R5-1	36	36		9								S		
366.26	0.039	Rt.	^ Milbank <- Sisseton	D1-2	90	42	26.3			24		2	1			W	Telespar	Replace Existing Sign with New Sign on New Posts
366.26	0.054	Lt.	SOUTH - US	M3-3P	24	12	2			36		3	1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			US 81	M1-4	24	24	4											
			Horizontal Arrow - US	M6-1P	21	15	2.2											
			SOUTH - Interstate	M3-3P	24	12	2											
			I 29	M1-1	24	24	4											
			Horizontal Arrow - Interstate	M6-1P	21	15	2.2											
			West - US	M3-4P	24	12	2											
			US 12	M1-4	24	24	4											
			Vertical Single Arrow - US	M6-3P	21	15	2.2											
366.4	0.000	Lt.	Mile Marker 366.40 (Two Signs)	D10-6	4.5	21	1.3		5		1		1			E/W	U Channel	Replace Existing Sign with New Sign on New Post at Existing MRM Location
366.4	0.038	Lt.	^ Webster <-- Watertown	D1-2	102	42	29.8			26		2	1			E	Telespar with Extruded Aluminum	Replace Existing Sign with New Sign on New Posts
366.4	0.048	Rt.	East - US	M3-2P	24	12	2			25		2	1			W	Telespar	Replace Existing Signs with New Signs on New Posts
			US 12	M1-4	24	24	4											
			Vertical Single Arrow - US	M6-3P	21	15	2.2											
			North - Interstate	M3-1P	24	12	2											
			I 29	M1-1	24	24	4											
			Horizontal Arrow - Interstate	M6-1P	21	15	2.2											
			North - US	M3-1P	24	12	2											
			US 81	M1-4	24	24	4											
			Horizontal Arrow - US	M6-1P	21	15	2.2											
366.4	0.060	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26		2	1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									W		
			Stop	R1-1	36	36		7.5								S		
			Do Not Exit	R5-1	36	36		9								N		

US 12 Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
366.47	0.003	Lt.	US 12	M1-4	24	24	4		14				1			S	Telespar	Replace Existing Signs with New Signs on New Post
			Horizontal Double Head Arrow - US	M6-4P	21	15	2.2											
366.47	0.017	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26		2	1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									W		
			Stop	R1-1	36	36		7.5								S		
			Do Not Enter	R5-1	36	36		9								N		
366.47	0.019	Lt.	West - US	M3-4P	24	12	2		25				1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			US 12	M1-4	24	24	4											
			Vertical Single Arrow - US	M6-3P	21	15	2.2											
			North - Interstate	M3-1P	24	12	2											
			I 29	M1-1	24	24	4											
			Horizontal Arrow - Interstate	M6-1P	21	15	2.2											
			North - US	M3-1P	24	12	2											
			US 81	M1-4	24	24	4											
			Horizontal Arrow - US	M6-1P	21	15	2.2											
						TOTAL	**973.1**	**432.9**	**1179.0**	**625.0**	**36**	**46**	**119**	**7**	**7**			

Sign Summary US 12

Sign Code	Description	Width (Inches)	Height (Inches)	Sq. Ft.	No.	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	Text / Background
	Conspituity Strip	2	24	0.3	2		0.7	Flourescent Yellow
	Conspituity Strip	4	60	1.7	1		1.7	Flourescent Yellow
D1-1	Webster POP 1,728	60	18	7.5	1	7.5		White on Green
D1-1	Waubay POP 473	60	18	7.5	2	15.0		White on Green
D1-3	Waubay 11 Jct I-29 23 Milbank 46	96	60	40.0	1	40.0		White on Green
D1-3	Webster 23 Aberdeen 72	102	42	29.8	1	29.8		White on Green
D1-2	^ Milbank <- Sisseton	90	42	26.3	1	26.3		White on Green
D1-2	^ Webster <-- Watertown	102	42	29.8	1	29.8		White on Green
D1-2	^ Milbank ^ Sisseton Watertown -->	96	54	36.0	1	36.0		White on Green
D1-2	WEBSTER 11 ABERDEEN 60	102	42	29.8	1	29.8		White on Green
D1-2	Jct I-29 13 Milbank 35	90	48	30.0	1	30.0		White on Green
D1-2C	Right Lane Southbound I-29: DESTINATION BOARD - 2 LINES WORDS ONLY	60	42	17.5	1	17.5		White on Green
D3-1	Street Signs US 12 (Two Signs for Each)	24	12	2.0	20	40.0		White on Green
D3-1	Street Signs 441 Ave, 444 Ave, 446 Ave (Two Signs for Each)	36	12	3.0	6	18.0		White on Green
D3-1	Street Sign N 3rd St	36	12	3.0	4	12.0		White on Green
D3-1	Street Sign N Main St	42	12	3.5	2	7.0		White on Green
D3-1	Street Sign N Wayland St	54	12	4.5	2	9.0		White on Green
D3-1	Street Sign W Lakeshore Dr	54	12	4.5	2	9.0		White on Green
D3-1	Street Sign Bartelt Blvd	42	12	3.5	2	7.0		White on Green
D3-1	Street Sign E Lakeshore Dr	54	12	4.5	2	9.0		White on Green
D10-6	Mile Markers 350-354, 366 (Two Signs for Each)	4.5	18	0.6	12	6.8		White on Green
D10-6	Mile Markers 343.73, 349.19, 354.55, 366.40 (Two Signs for Each)	4.5	21	0.7	8	5.3		White on Green
I10-9	Home of the Sisseton Wahpeton Oyate	96	30	20.0	1	20.0		White on Green
I-NS3	Waubay Hometown of Woodrow W. Keeble Medal of Honor	90	54	33.8	2	67.5		White on Green
M1-1	I 29	24	24	4.0	5	20.0		White on Blue/White Border
M1-5	US 12	24	24	4.0	8	32.0		Black on White Shield/Black Border
M1-5	US 81	24	24	4.0	5	20.0		Black on White Shield/Black Border
M2-1P	Junction Marker - Interstate	21	15	2.2	1	2.2		White on Blue/White Border
M2-1P	Junction Marker - US	21	15	2.2	1	2.2		Black on White/Black Border
M3-1P	North - US	24	12	2.0	2	4.0		Black on White/Black Border
M3-1P	North - Interstate	24	12	2.0	2	4.0		White on Blue/White Border
M3-2P	East - US	24	12	2.0	3	6.0		Black on White/Black Border
M3-3P	South - US	24	12	2.0	2	4.0		Black on White/Black Border
M3-3P	South - Interstate	24	12	2.0	2	4.0		White on Blue/White Border
M3-4P	West - US	24	12	2.0	4	8.0		Black on White/Black Border

Sign Summary US 12

Sign Code	Description	Width (Inches)	Height (Inches)	Sq. Ft.	No.	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	Text / Background
M6-1P	Horizontal Arrow - US	21	15	2.2	4	8.8		Black on White/Black Border
M6-1P	Horizontal Arrow - Interstate	21	15	2.2	4	8.8		White on Blue/White Border
M6-3P	Vertical Single Arrow - US	21	15	2.2	4	8.8		Black on White/Black Border
M6-4P	Horizontal Double Head Arrow - US	21	15	2.2	1	2.2		Black on White/Black Border
R1-1	Stop	36	36	7.5	16		120.0	White on Red
R2-1	Speed Limit 40	30	36	7.5	1	7.5		Black on White
R2-1	Speed Limit 45	30	36	7.5	2	15.0		Black on White
R2-1	Speed Limit 55	30	36	7.5	2	15.0		Black on White
R2-1	Speed Limit 60	30	36	7.5	1	7.5		Black on White
R2-1	Speed Limit 65	30	36	7.5	2	15.0		Black on White
R2-1	Speed Limit 70	30	36	7.5	2	15.0		Black on White
	RIGHT LANE MUST TURN RIGHT	90	54	33.8	1	33.8		Black on White
R3-9b	Center Lane Two-Way Left-Turn-Only	24	36	6.0	3	18.0		Black on White
R3-9cP	BEGIN plaque	24	12	2.0	2	4.0		Black on White
R3-9dP	END plaque	24	12	2.0	3	6.0		Black on White
R4-7	Keep Right symbol	36	48	12.0	3	36.0		Black on White
R5-1	DO NOT ENTER	36	36	9.0	7		63.0	Red on White
R6-1L	ONE WAY ON LEFT ARROW	36	12	3.0	4	12.0		Black on White
R6-1R	ONE WAY ON RIGHT ARROW	36	12	3.0	4	12.0		Black on White
R8-3	No Parking Symbol	30	30	6.3	8	50.0		Black on White
R-NS1	UNMUFFLED DYNAMIC ENGINE BRAKING PROHIBITED By City Ordinance	30	36	7.5	1	7.5		Black on White
RS-NS1C	Blue Dog Fish Hatchery <-- 1 MILE	66	42	19.3	1	19.3		White on Green
RS-NS1C	Blue Dog Fish Hatchery 1 MILE -->	66	42	19.3	1	19.3		White on Green
RW-080C	BLUE DOG LAKE LAKE ACCESS -->	78	42	22.8	1	22.8		White on Brown
RW-080C	BLUE DOG LAKE LAKE ACCESS <--	78	42	22.8	1	22.8		White on Brown
RW-VAR	PUBLIC WATER ACCESS <--	42	48	14.0	1	14.0		White on Brown
RW-VAR	PUBLIC WATER ACCESS -->	42	48	14.0	1	14.0		White on Brown
W1-7	Large Horizontal Double Arrow	48	24	8.0	2		16.0	Black on Fluorescent Yellow
W3-5	Speed Reduction 55 MPH	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W3-5	Speed Reduction 65 MPH	36	36	9.0	0		0.0	Black on Fluorescent Yellow
W6-1	Divided Highway Begins symbol	48	48	16.0	4		64.0	Black on Fluorescent Yellow
W6-2	Divided Highway Ends symbol	48	48	16.0	6		96.0	Black on Fluorescent Yellow
W7-3aP	NEXT 3 MILES	24	18	3.0	2		6.0	Black on Fluorescent Yellow
W8-5	Slippery When Wet symbol	36	36	9.0	2		18.0	Black on Fluorescent Yellow
W8-13	Bridge Ices Before Road	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W13-11	Advisory Ramp Speed 20 MPH	24	36	6.0	1		6.0	Black on Fluorescent Yellow
W14-3	No Passing Zone	48X48X36		5.6	1		5.6	Black on Fluorescent Yellow
W16-6	WATCH FOR ICE	36	36	9.0	2		18.0	Black on Fluorescent Yellow
					Totals	**973.1**	**432.9**	

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
343.73	0.177	Rt.	Speed Limit 60	R2-1	36	48	12		26.0		2		1			E	Telespar	Replace Existing Sign with New Sign on New Posts
343.73	0.235	Rt.	Speed Reduction 60 MPH	W3-5	36	36		9.0	12.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
344	0.000	Rt.	Mile Marker 344	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
344	0.098	Rt.	DYNAMIC ENGINE BRAKING PROHIBITED	R-NS1	30	36							1			E	Telespar	Remove Existing Signs
			By City Ordinance	R-NS5	24	12												
			UNMUFFLED DYNAMIC ENGINE BRAKING PROHIBITED By City Ordinance		30	36	7.5		12.0									Place New Sign on New Post
344	0.512	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
344	0.524	Rt.	436 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
344	0.527	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
344	0.532	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
344	0.819	Rt.	Truck	W11-10	36	36		9	12.0		1		1			E	Telespar	Replace Existing Sign with New Sign on New Post
345	0.000	Rt.	Mile Marker 345	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
345	0.386	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
345	0.400	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
345	0.400	Rt.	437 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
345	0.405	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
345	0.819	Rt.	HELP PROTECT WILDLIFE Turn In Poatchers CALL 1-888-OVERBAG	SR7-7A	84	36							1			E	4" X 6" Wood	Remove Existing Sign
346	0.000	Rt.	Mile Marker 346	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
346	0.506	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
346	0.511	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
346	0.513	Rt.	438 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
346	0.521	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0		1		1			W	Telespar	Replace Existing Sign with New Sign on New Post
346	0.798	Rt.	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		12.0		1		1			S	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
346	0.811	Rt.	Racine 1 (Two Signs)	D3-1	36	12	6		13		1					E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
346	0.803	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
346	0.818	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0		1		1			SW	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
347	0.000	Rt.	Mile Marker 347	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
347	0.498	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
347	0.512	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
347	0.512	Rt.	439 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
347	0.517	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
347	0.517	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0		1		1			NW	Telespar	Place New Sign on New Post
348	0.000	Rt.	Mile Marker 348	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
348	0.496	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
348	0.506	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
348	0.508	Rt.	440 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
348	0.516	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.2		1		1			W	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
349	0.000	Rt.	Mile Marker 349	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
Undivided Roadway																		
354.55	0.304	Rt.	West - US	M3-4	24	12	2		12.0				1			E	Telespar	Replace Existing Signs with New Signs on New Post
			US 12	M1-4	24	24	4											
354.55	0.319	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
354.55	0.319	Lt.	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar Flush Mount (Bolted to Concrete)	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
354.81	0.003	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
354.81	0.004	Rt.	446A Ave (Two Signs)	D3-1	42	12	7		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
354.81	0.011	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar Flush Mount (Bolted to Concrete)	Replace Existing Sign with New Sign on New Post
354.81	0.013	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
354.81	0.018	Rt.	Speed Limit 55	R2-1	36	48	12		26.0		2		1			E	Telespar	Replace Existing Sign with New Sign on New Posts
354.81	0.037	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
354.81	0.037	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar Flush Mount (Bolted to Concrete)	Replace Existing Sign with New Sign on New Post
354.81	0.056	Rt.	WAUBAY NATIONAL WILDLIFE REFUGE 7 --> CAMP NE - SO - DAK 7 -->	RS-NS1C	156	48	52			36.0		3	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
354.81	0.104	Rt.	Speed Reduction 55 MPH	W3-5	36	36		9.0	12.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
355	0.000	Rt.	Mile Marker 355	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
355	0.039	Rt.	ENEMY SWIM LAKESIDE USE AREA 7 MILES -->	RA-080	96	42	28			25.0		2	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
355	0.189	Rt.	PICKEREL LAKE RECREATION AREA 9 MILES --->	RG-101	90	42	26.3			26.0		2	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
356	0.000	Rt.	Mile Marker 356	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
356	0.077	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
356	0.088	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
356	0.093	Rt.	448 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
356	0.097	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
356	0.098	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
356	0.122	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
356	0.126	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
356	0.331	Rt.	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		12.0				1			S	Telespar	Replace Existing Sign with New Sign on New Post
356	0.336	Median	Yellow Delineator		4	8		0.2	25.0		2		1			E	Telespar	Replace Existing Signs with New Signs on New Posts
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
			ONE WAY ON LEFT ARROW	R6-1R	36	12	3											
356	0.343	Rt.	448 Ave (Two Signs)	D3-1	36	12	6		13		1					E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
356	0.344	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
356	0.346	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
356	0.372	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
356	0.374	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
356	0.557	Rt.	Left Curve Arrow	W1-2L	36	36		9	12.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
356	0.558	Median	Left Curve Arrow	W1-2L	36	36		9	12.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
357	0.000	Rt.	Mile Marker 357	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
357	0.111	Median	Right Curve Arrow	W1-2R	36	36		9	12.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
357	0.111	Rt.	Right Curve Arrow	W1-2R	36	36		9	12.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
357	0.438	Rt.	DAY COUNTY	I-1	42	24	7		12.0				1			E	Telespar	Replace Existing Signs with New Signs on New Post; Remove Purple Heart Sign for Reset on new Post
			Purple Heart Community		24	24								1	1			
357.47	0.406	Rt.	Historic Marker 1000 Ft.	I10-8A	48	42	14		26.0		2		1			E	4" X 6" Wood	Replace Existing Sign with New Sign on New Posts
358	0.000	Rt.	Mile Marker 358	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
358	0.409	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
358.42	0.004	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
358.42	0.005	Rt.	450 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
358.42	0.009	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.013	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.037	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.037	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.367	Rt.	WAUBAY POP. 473	D1-1	60	18	7.5		24.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.442	Rt.	US 12	M1-4	24	24	4		12.0		1		1			E	4" X 4" Wood	Replace Existing Signs with New Signs on New Post
			WEST	M3-4A	24	12	2											
358.42	0.475	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
358.9	0.001	Rt.	Leselle Ave (Two Signs)	D3-1	42	12	7		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
358.9	0.003	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
358.9	0.013	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
358.9	0.014	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
358.9	0.040	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
358.9	0.044	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
358.9	0.044	Rt.	Ortley POP. 50	D1-1	60	18	7.5		24.0				1			E	Telespar	Replace Existing Sign with New Sign on New Posts
359	0.000	Rt.	Mile Marker 359	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
359.46	0.116	Lt.	Master Sergeant Woodrow W. Keeble Memorial Highway	I-NS3	90	42	26.3			25		2	1			E	Telespar	Replace Existing Sign with New Sign on New Posts
360	0.000	Rt.	Mile Marker 360	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
360	0.444	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
360	0.454	Rt.	452 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
360	0.455	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
360	0.463	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
360	0.464	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
360	0.492	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
360	0.493	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
361	0.000	Rt.	Mile Marker 361	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
361	0.114	Rt.	Think Sign Why Die?													E	U Channel	Leave In Place
			Think Sign Why Die?													E	U Channel	Leave In Place
361	0.478	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
361.46	0.002	Rt.	Lohre Rd (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Sign with New Sign on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
361.46	0.003	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
361.46	0.012	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
361.46	0.013	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
361.46	0.033	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
361.46	0.042	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
361.46	0.089	Rt.	JCT -County	M2-1P	21	15	2.2		12				1			E	Telespar	Replace Existing Signs with New Signs on New Post
			County 28	M1-4	24	24	4											
			Horizontal Double Head Arrow - County	M6-4P	21	15	2.2											
362	0.000	Rt.	Mile Marker 362	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
362	0.479	Rt.	SPEED LIMIT 70	R2-1X	36	48	12		26.0		2		1			E	Telespar	Replace Existing Sign with New Sign on New Posts
362	0.513	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
362	0.520	Rt.	454 Ave (Two Signs)	D3-1	36	12	6		13				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
362	0.524	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
362	0.529	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
362	0.535	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
362	0.558	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
362	0.559	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
362	0.692	Rt.	Truck	W11-10	48	48										E	Telespar	Leave In Place
363	0.000	Rt.	Mile Marker 363	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
363	0.504	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
363.44	0.008	Rt.	455 Ave (Two Signs)	D3-1	36	12	6		12.5				1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
363.44	0.008	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
363.44	0.013	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
363.44	0.013	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
363.44	0.038	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
363.44	0.042	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
364	0.000	Rt.	Mile Marker 364	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
364	0.590	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
364	0.599	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Place New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
364	0.600	Rt.	456 Ave (Two Signs)	D3-1	36	12	6		12.5				1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
364	0.609	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
364	0.609	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
364	0.634	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
364	0.634	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
365	0.000	Rt.	Mile Marker 365	D10-6	4.5	18	0.6		5				1			E	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
365	0.122	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	36	12	3			26.0		2	1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	36	12	3									S		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
365	0.122	Lt.	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									S		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								N		
365	0.129	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
365	0.131	Rt.	142 St (Two Signs)	D3-1	30	12	5		12		1		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		
365	0.14	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
365	0.142	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
365	0.166	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
365	0.167	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			NW	Telespar	Replace Existing Sign with New Sign on New Post
365	0.714	Rt.	ONE WAY ON LEFT ARROW	R6-1L	36	12	3			26.0		2	1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Stop	R1-1	36	36		7.5								N		
			Divided Highway Crossing	R6-3	24	18	3									N		
365	0.724	Rt.	457 Ave (Two Signs)	D3-1	36	12	6		12.5				1			E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4									N/S		

US 12 West Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Remove Sign For Reset (Each)	Reset Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
365	0.739	Median	ONE WAY ON LEFT ARROW	R6-1L	36	12	3		25.0		2		1			S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	36	12	3									N		
			Yellow Delineator		4	8		0.2								E		
			Yellow Delineator		4	8		0.2								W		
			Yield	R1-2	36X36X36			7.8								S		
365	0.742	Rt.	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			SW	Telespar	Replace Existing Sign with New Sign on New Post
365	0.743	Median	DO NOT ENTER	R5-1	36	36		9.0	12.0				1			N	Telespar	Replace Existing Sign with New Sign on New Post
365	0.766	Rt.	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
365	0.771	Median	WRONG WAY	R5-1A	36	24		6	12.0				1			W	Telespar	Replace Existing Sign with New Sign on New Post
365	0.923	Rt.	Bump	W8-1	36	36		9.0	12.0				1			E	Telespar	Replace Existing Sign with New Sign on New Post
365	0.966	Rt.	VETERANS VICTORY MEMORIAL HIGHWAY	I-NS3	48	24										E	Telespar	Leave In Place
						TOTAL	**690.7**	**779.9**	**1801.7**	**528.0**	**58**	**41**	**150**	**1**	**1**			

Sign Summary US 12 West

Sign Code	Description	Width (Inches)	Height (Inches)	Sq. Ft.	No.	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	Text / Background
	Yellow Delineator	4	8	0.2	40		8.9	
	UNMUFFLED DYNAMIC ENGINE BRAKING PROHIBITED By City Ordinance	30	36	7.5	1	7.5		Black on White/Black Border
	Historic Marker 1000 Ft.	48	42	14.0	1	14.0		White on Brown
D1-1	Waubay POP 473	60	18	7.5	1	7.5		White on Green
D1-1	Ortley POP 50	60	18	7.5	1	7.5		White on Green
D1-2	ENEMY SWIM LAKESIDE USE AREA <--7 MILES	96	42	28.0	1	28.0		White on Green
D1-2	PICKEREL LAKE RECREATION AREA <--- 9 MILES	90	42	26.3	1	26.3		White on Green
D1-2	WAUBAY NATIONAL WILDLIFE REFUGE 7 --> CAMP NE - SO - DAK 7 -->	156	48	52.0	1	52.0		White on Green
D3-1	Street Signs US 12 (Two Signs for Each)	24	12	2.0	36	72.0		White on Green
D3-1	Street Signs 436 Ave - 440 Ave, 448 Ave, 450 Ave., 452 Ave, 454 Ave - 457 Ave (Two Signs for Each)	36	12	3.0	26	78.0		White on Green
D3-1	Street Sign Leselle Ave, 446A Ave	42	12	3.5	4	14.0		White on Green
D3-1	Street Sign Lohre Rd, Racine 1	36	12	3.0	4	12.0		White on Green
D3-1	Street Sign 142 St	30	12	2.5	2	5.0		White on Green
D10-6	Mile Markers 344-348, 355-359, 360-365	4.5	18	0.6	17	10.2		White on Green
I-NS3	Master Sergeant Woodrow W. Keeble Memorial Highway	90	42	26.3	1	26.3		White on Brown
I-1	Day County	42	24	7.0	1	7.0		White on Green/White Border
M1-6	County 28	24	24	4.0	1	4.0		See Standard Plate 632.20
M1-4	US 12	24	24	4.0	2	8.0		Black on White Shield/Black Border
M2-1	Junction Marker - County	21	15	2.2	1	2.2		Yellow on Blue/Yellow Border
M3-4	West	24	12	2.0	2	4.0		Black on White/Black Border
M6-4	Horizontal Double Head Arrow - County	21	15	2.2	1	2.2		Black on White/Black Border
R1-1	Stop	36	36	7.5	16		120.0	White on Red
R1-2	Yield	36X36X36		7.8	20		156.0	White on Red
R2-1	Speed Limit 55	36	48	12.0	1	12.0		Black on White
R2-1	Speed Limit 60	36	48	12.0	1	12.0		Black on White
R2-1	Speed Limit 70	36	48	12.0	1	12.0		Black on White
R5-1a	WRONG WAY	36	24	6.0	24		144.0	Red on White
R5-1	DO NOT ENTER	36	36	9.0	31		279.0	Red on White
R6-1L	ONE WAY ON LEFT ARROW	36	12	3.0	38	114.0		Black on White
R6-1R	ONE WAY ON RIGHT ARROW	36	12	3.0	35	105.0		Black on White
R6-3	Divided Highway Crossing	24	18	3.0	16	48.0		Black on Fluorescent Yellow
W1-2L	Left Curve Arrow	36	36	9.0	2		18.0	Black on Fluorescent Yellow
W1-2R	Right Curve Arrow	36	36	9.0	2		18.0	Black on Fluorescent Yellow
W8-1	Bump	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W11-10	Truck	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W3-5	Speed Reduction 55 MPH	36	36	9.0	1		9.0	Black on Fluorescent Yellow
W3-5	Speed Reduction 60 MPH	36	36	9.0	1		9.0	Black on Fluorescent Yellow
					Totals	**690.7**	**779.9**	

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
343.73	0.136	Median	WRONG WAY	R5-1a	36	24		6	12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
343.73	0.176	Rt.	Speed Limit 70	R2-1	36	48	12		24		2		1	W	4" X 6" Wood	Replace Existing Sign with New Sign on New Posts
343.73	0.229	Rt.	511 Travel Info	D12-5A	48	48	16			12		1	1	W	4" X 6" Wood	Replace Existing Sign with New Sign on New Post
344	0.000	Rt.	Mile Marker 344	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
344	0.225	Rt.	Truck	W11-10	36	36		9	12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
344	0.503	Rt.	Do Not Enter	R5-1	36	36		9	12		1		1	E	4"X6" Wood	Replace Existing Sign with New Sign on New Post
344	0.510	Rt.	436 Ave (Two Signs)	D3-1	36	12	6		12.5				1	E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
344	0.513	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	4"X6" Wood	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							N		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						S		
344	0.523	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26	2	2	1	S	4"X6" Wood	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
345	0.000	Rt.	Mile Marker 345	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
345	0.376	Rt.	Do Not Enter	R5-1	36	36		9	12		1		1	E	Telespar	Replace Existing Sign with New Sign on New Post
345	0.384	Rt.	437 Ave (Two Signs)	D3-1	36	12	6		12.5		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
345	0.386	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	4" X 6" Wood	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
345	0.386	Rt.	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		12		1		1	N	4"X6" Wood	Replace Existing Sign with New Sign on New Post
346	0.000	Rt.	Mile Marker 346	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
346	0.308	Rt.	Bump	W8-1	36	36		9.0	12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
346	0.308	Median	Bump	W8-1	36	36		9.0	12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
346	0.489	Rt.	Do Not Enter	R5-1	36	36		9	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
346	0.501	Rt.	438 Ave (Two Signs)	D3-1	36	12	6		12.5				1	E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
346	0.504	Rt.	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		12				1	N	Telespar	Replace Existing Sign with New Sign on New Post
346	0.504	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
346	0.781	Rt.	Do Not Enter	R5-1	36	36		9	12		1		1	E	U Channel	Replace Existing Sign with New Sign on New Post
346	0.796	Rt.	Racine 1 (Two Signs)	D3-1	36	12	6		12.5				1	E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
346	0.796	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
346	0.806	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26	2	2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							S		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
347	0.000	Rt.	Mile Marker 347	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
347	0.436	Rt.	Adopt A Highway	ADO-5	36	36								W	4"X6" Wood	Leave In Place
			JOLLY WORKERS 4-H CLUB	ADO-1	36	12										
			Litter Crew Ahead	ADO-6	30	30										
347	0.488	Rt.	Do Not Enter	R5-1	36	36		9	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
347	0.498	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	4"X6" Wood	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
347	0.503	Rt.	439 Ave (Two Signs)	D3-1	36	12	6		12.5				1	E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
347	0.508	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
347	0.544	Rt.	Master Sergeant Woodrow W. Keeble Memorial Highway	I-NS3	90	42	26.3			24		2	1	W	Telespar with Extruded Aluminum	Replace Existing Sign with New Sign on New Posts
348	0.000	Rt.	Mile Marker 348	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
348	0.486	Rt.	Do Not Enter	R5-1	36	36		9	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
348	0.496	Rt.	440 Ave (Two Signs)	D3-1	36	12	6		12.5				1	E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
348	0.496	Median	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6		25		2		1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
348	0.506	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			25		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
348	0.559	Rt.	East - US	M3-2P	24	12	2		12.5		1		1	W	4"X6" Wood	Replace Existing Signs with New Signs on New Post
			US 12	M1-4	24	24	4									
349	0.000	Rt.	Mile Marker 349	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
349	0.030	Median	WRONG WAY	R5-1a	36	24		6	7		1		1	E	4"X6" Wood	Replace Existing Sign with New Sign on New Post
Undivided Roadway																
354.55	0.210	Rt.	ENEMY SWIM LAKESIDE USE AREA <-- 7 MILES	D1-2	96	42	28			24			1	W	Telespar	Replace Existing Sign with New Sign on New Posts
354.55	0.239	Rt.	PICKEREL LAKE RECREATION AREA <--- 9 miles	RG-101	90	42	26.3			24			1	W	Telespar	Replace Existing Sign with New Sign on New Posts
354.55	0.275	Rt.	<-- 7 WAUBAY NATIONAL WILDLIFE REFUGE <-- 7 CAMP NE - SO - DAK	RG-VAR	156	48	52			36		3	1	W	Telespar	Replace Existing Sign with New Sign on New Posts

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
354.55	0.284	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
354.55	0.289	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
354.55	0.314	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
354.55	0.318	Rt.	446 A Ave (Two Signs)	D3-1	42	12	7		12.5		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
354.55	0.320	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
354.55	0.324	Rt.	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		12				1	N	Telespar	Replace Existing Sign with New Sign on New Post
354.81	0.027	Rt.	Speed Limit 70	R2-1	36	48	12		25		2		1	W	Telespar	Replace Existing Sign with New Sign on New Posts
354.81	0.056	Rt.	East - US	M3-2P	24	12	2		12		1		1	W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12	M1-4	24	24	4									
355	0.000	Rt.	Mile Marker 355	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
355	0.922	Median	Right Curve Arrow	W1-2R	36	36		9	12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
356	0.000	Rt.	Right Curve Arrow	W1-2R	36	36		9	12				1	W	Telespar	Replace Existing Signs with New Signs on New Post at Existing MRM Location
			Mile Marker 356	D10-6	4.5	18	0.6									
356	0.043	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
356	0.043	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
356	0.067	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
356	0.074	Rt.	448 Ave (Two Signs)	D3-1	36	12	6		13.0		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
356	0.077	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
356	0.078	Rt.	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		12				1	N	Telespar	Replace Existing Sign with New Sign on New Post
356	0.288	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
356	0.290	Median	WRONG WAY	R5-1a	36	24		6	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
356	0.312	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
356	0.314	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
356	0.318	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
356	0.319	Rt.	448 Ave (Two Signs)	D3-1	36	12	6		13.0		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
356	0.340	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
356	0.343	Rt.	448 Ave (Two Signs)	D3-1	36	12							1	E/W	Telespar	Remove Existing Signs
			US 12 (Two Signs)	D3-1	24	12								N/S		
356	0.596	Rt.	Left Curve Arrow	W1-2L	36	36		9	12		1		1	NW	Telespar	Replace Existing Sign with New Sign on New Post
356	0.597	Median	Left Curve Arrow	W1-2L	36	36		9	12		1		1	NW	Telespar	Replace Existing Sign with New Sign on New Post
357	0.000	Rt.	Mile Marker 357	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
357	0.441	Rt.	Roberts County	I-1	48	24	8		12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
357.47	0.018	Rt.	Historic Marker 1000 Ft.	I10-8A	48	42	14		25		2		1	W	Telespar	Replace Existing Sign with New Sign on New Posts
357.47	0.219	Rt.	Historic Marker											W	Telespar	Leave In Place
358	0.000	Rt.	Mile Marker 358	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
358	0.378	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
358	0.378	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
358	0.402	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
358	0.406	Rt.	450Ave (Two Signs)	D3-1	36	12	6		13.0		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
358	0.407	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
358	0.412	Rt.	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		12				1	N	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.457	Rt.	Ortley POP. 50	D1-1D	60	18	7.5		24		2		1	W	4"X6" Wood	Replace Existing Sign with New Sign on New Posts
358.42	0.462	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.482	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.487	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
358.42	0.488	Rt.	Leselle Ave (Two Signs)	D3-1	42	12	7		13.0		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
358.42	0.491	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
358.9	0.000	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
358.9	0.002	Median	Leselle Ave (Two Signs)	D3-1	42	12							1	E/W	Telespar	Remove Existing Signs
			US 12 (Two Signs)	D3-1	24	12								N/S		
358.9	0.036	Rt.	East - US	M3-2P	24	12	2		12		1		1	W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12	M1-4	24	24	4									
359	0.000	Rt.	Mile Marker 359	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
360	0.000	Rt.	Mile Marker 360	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
360	0.415	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
360	0.417	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
360	0.441	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
360	0.442	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post

US 12 East Permanent Sign Installation Table

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360	0.447	Rt.	452 Ave (Two Signs)	D3-1	36	12	6		13.0		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
360	0.447	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar Flush Mount (Bolted to Concrete)	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
360	0.458	Median	452 Ave (Two Signs)	D3-1	36	12							1	E/W	Telespar	Remove Existing Signs
			US 12 (Two Signs)	D3-1	24	12								N/S		
360	0.459	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
361	0.000	Rt.	Mile Marker 361	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
361	0.425	Rt.	JCT -County	M2-1P	21	15	2.2		12				1	W	Telespar	Replace Existing Signs with New Signs on New Post
			County 28	M1-4	24	24	4									
			Horizontal Double Head Arrow - County	M6-4P	21	15	2.2									
361	0.449	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
361	0.454	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
361	0.474	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
361	0.478	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
361	0.483	Rt.	Lohre Rd (Two Signs)	D3-1	36	12	6		13.0		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
361	0.483	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
361.46	0.003	Median	Lohre Rd (Two Signs)	D3-1	36	12							1	E/W	Telespar	Remove Existing Signs
			US 12 (Two Signs)	D3-1	24	12								N/S		

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361.46	0.003	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
362	0.000	Rt.	Mile Marker 362	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
362	0.332	Rt.	Truck	W11-10	48	48								W	Telespar	Leave In Place
362	0.474	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
362	0.477	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
362	0.502	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
362	0.504	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
362	0.508	Rt.	454 Ave (Two Signs)	D3-1	36	12	6		12		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
362	0.511	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
362	0.522	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25				1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
362	0.508	Median	454 Ave (Two Signs)	D3-1	36	12							1	E/W	Telespar	Remove Existing Signs
			US 12 (Two Signs)	D3-1	24	12								N/S		
362	0.523	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
363	0.000	Rt.	Mile Marker 363	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
363	0.476	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
363	0.481	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
363	0.500	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
363	0.505	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
363	0.511	Median	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		25		2		1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
363	0.511	Rt.	455 Ave (Two Signs)	D3-1	36	12	6		12		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
363.44	0.004	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26		2	1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		
363.44	0.028	Rt.	East - US	M3-2P	24	12	2		12		1		1	W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12	M1-4	24	24	4									
364	0.000	Rt.	Mile Marker 364	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
364	0.557	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
364	0.557	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
364	0.581	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
364	0.586	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
364	0.591	Median	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6		25		2		1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
364	0.591	Rt.	456 Ave (Two Signs)	D3-1	36	12	6						1	E/W	Telespar	Replace Existing Signs with New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
364	0.600	Rt.	ONE WAY ON LEFT ARROW	R6-1L	48	18	6			26		2	1	N	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON RIGHT ARROW	R6-1R	48	18	6							S		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3							S		

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
364	0.625	Rt.	Speed Limit 70	R2-1	36	48	12		24		2		1	W	Telespar	Replace Existing Sign with New Sign on New Posts
365	0.000	Rt.	Mile Marker 365	D10-6	4.5	18	0.6		5				1	W	Telespar	Replace Existing Sign with New Sign on New Post at Existing MRM Location
365	0.079	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
365	0.080	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
365	0.100	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
365	0.114	Median	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6		24		2		1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
365	0.114	Rt.	142 St (Two Signs)	D3-1	30	12	5		13		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
365	0.117	Rt.	ONE WAY ON LEFT ARROW	R6-1L	48	18	6		12				1	N	Telespar	Replace Existing Sign with New Sign on New Post
365	0.507	Rt.	DIVIDED HIGHWAY ENDS (WORDS)	W6-1A	48	48		16	12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
365	0.666	Rt.	RIGHT LANE ENDS 1/2 MILE (WORDS)	W9-1R	78	54	29.3			25		2	1	W	Telespar	Replace Existing Sign with New Sign on New Posts
365	0.684	Rt.	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
365	0.686	Median	WRONG WAY	R5-1a	36	24		6	12				1	E	Telespar	Replace Existing Sign with New Sign on New Post
365	0.702	Rt.	Do Not Enter	R5-1	36	36		9	12				1	NE	Telespar	Replace Existing Sign with New Sign on New Post
365	0.706	Median	Do Not Enter	R5-1	36	36		9	12				1	SE	Telespar	Replace Existing Sign with New Sign on New Post
365	0.708	Median	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6		25		2		1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Yellow Delineator		4	8		0.2						E		
			Yellow Delineator		4	8		0.2						W		
			Yield	R1-2	36X36X36			7.8						N		
365	0.711	Rt.	457 Ave (Two Signs)	D3-1	36	12	6		12		1			E/W	Telespar	Place New Signs on New Post
			US 12 (Two Signs)	D3-1	24	12	4							N/S		
365	0.714	Rt.	457 Ave (Two Signs)	D3-1	36	12							1	E/W	Telespar	Remove Existing Signs
			US 12 (Two Signs)	D3-1	24	12								N/S		

US 12 East Permanent Sign Installation Table

MRM	Displacement	Side Of Road	Description	Sign Code	Width	Height	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	2.5"x2.5" Perforated Tube Post 10 Ga. (Ft)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	(N.A.B.I.) 48" Winged Slip Base Anchor (Each)	Remove Traffic Sign (Each)	Direction Sign Faces	Current Type of Post	Remarks
365	0.746	Rt.	ONE WAY ON RIGHT ARROW	R6-1R	48	18	6			26			1	S	Telespar	Replace Existing Signs with New Signs on New Posts
			ONE WAY ON LEFT ARROW	R6-1L	48	18	6							N		
			Stop	R1-1	36	36		7.5						S		
			Divided Highway Crossing	R6-3	24	18	3					2		S		
365	0.789	Rt.	SOUTH - I	M3-3P	24	12	2		24		1			W		Place New Signs on New Posts
			I29	M1-1	24	24	4									
			RIGHT LANE	M5-6P	24	18	3									
365	0.789	Median	East - US	M3-2P	24	12	2		24		2			W		Place New Signs on New Posts
			US 12	M1-4	24	24	4									
			LEFT LANE	M5-4P	24	18	3									
365	0.814	Rt.	THRU TRAFFIC MERGE LEFT <--		72	42							1	W	Telespar	Remove Existing Sign
365	0.859	Rt.	Divided Highway Ends symbol	W6-2	48	48							1	W	Telespar	Remove Existing Signs
			Do Not Enter	R5-1	36	36								E		
365	0.904	Rt.	Divided Highway Ends symbol	W6-2	48	48		16	12		1			W	Telespar	Place New Signs on New Post
			Do Not Enter	R5-1	36	36		9						E	Telespar	
365	0.904	Median	Keep Right symbol	R4-7	36	36	9		12		1		1	E	Telespar	Replace Existing Signs with New Signs on New Post
			Divided Highway Ends symbol	W6-2	48	48		16						W		
365	0.904	Rt.	Right Lane Southbound I-29: DESTINATION BOARD - 2 LINES WORDS ONLY	D1-2C	96	72							1	W	Telespar	Remove Existing Signs
			RAMP ENTRANCE	X-NS0	96	24										
365	0.995	Rt.	Speed Reduction 45 MPH	W3-5	48	48		16	12				1	W	Telespar	Replace Existing Sign with New Sign on New Post
						TOTAL	**938.0**	**766.6**	**1822.0**	**456.0**	**74**	**32**	**146**			

Sign Summary US 12 East

Sign Code	Description	Width (Inches)	Height (Inches)	Sq. Ft.	No.	Flat Aluminum Sign, Nonremovable Copy High Intensity (SQFT)	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity (SQFT)	Text / Background
	Yellow Delineator	4	8	0.2	38		8.4	
D1-1	Ortley POP 50	60	18	7.5	1	7.5		White on Green
D1-2	ENEMY SWIM LAKESIDE USE AREA <-- 7 MILES	96	42	28.0	1	28.0		White on Brown
D1-2	PICKEREL LAKE RECREATION AREA <--- 9 miles	90	42	26.3	1	26.3		White on Brown
D1-2	<-- 7 WAUBAY NATIONAL WILDLIFE REFUGE <-- 7 CAMP NE - SO - DAK	156	48	52.0	1	52.0		White on Brown
D3-1	Street Signs US 12 (Two Signs for Each)	24	12	2.0	36	72.0		White on Green
D3-1	Street Signs 436 Ave, 437 Ave - 440 Ave, 448 Ave, 450 Ave, 452 Ave, 454 Ave - 457 Ave (Two Signs for Each)	36	12	3.0	26	78.0		White on Green
D3-1	Street Sign Racine 1	36	12	3.0	2	6.0		White on Green
D3-1	Street Sign Leselle Ave, 446A Ave	42	12	3.5	4	14.0		White on Green
D3-1	Street Sign Lohre Rd	36	12	3.0	2	6.0		White on Green
D3-1	Street Sign 142 St	30	12	2.5	2	5.0		White on Green
D10-6	Mile Markers 344-349, 355-365	4.5	18	0.6	17	10.2		White on Green
D12-5a	511 SIGNS	48	48	16.0	1	16.0		White on Blue/White Border
I-NS3	Master Sergeant Woodrow W. Keeble Memorial Highway	90	42	26.3	1	26.3		White on Brown
I-1	Roberts County	48	24	8.0	1	8.0		White on Green/White Border
I10-8A	Historic Marker- 1000 Ft	48	42	14.0	1	14.0		White on Brown
M1-1	I29	24	24	4.0	1	4.0		White on Blue/White Border
M1-6	County 28	24	24	4.0	1	4.0		Yellow on Blue/Yellow Border
M1-4	US 12	24	24	4.0	5	20.0		Black on White Shield/Black Border
M2-1	Junction Marker - County	21	15	2.2	1	2.2		White on Blue/White Border
M3-2P	East - US	24	12	2.0	5	10.0		Black on White/Black Border
M3-3P	South - I29	24	12	2.0	1	2.0		White on Blue/White Border
M5-4P	LEFT LANE	24	18	3.0	1	3.0		Black on White/Black Border
M5-6P	RIGHT LANE	24	18	3.0	1	3.0		Black on White/Black Border
M6-4	Horizontal Double Head Arrow - County	21	15	2.2	1	2.2		Black on White/Black Border
R1-1	Stop	36	36	7.5	12		90.0	White on Red
R1-2	Yield	36X36X36		7.8	19		148.2	White on Red
R4-7	Keep Right symbol	36	36	9.0	1	9.0		Black on White
R5-1a	WRONG WAY	36	24	6.0	25		150.0	Red on White
R5-1	DO NOT ENTER	36	36	9.0	27		243.0	Red on White
R6-1L	ONE WAY ON LEFT ARROW	48	18	6.0	37	222.0		Black on White
R6-1R	ONE WAY ON RIGHT ARROW	48	18	6.0	31	186.0		Black on White
R6-3	Divided Highway Crossing	24	18	3.0	12	36.0		Red on White
R2-1	Speed Limit 70	36	48	12.0	3	36.0		Black on White
W1-2L	Left Curve Arrow	36	36	9.0	2		18.0	Black on Fluorescent Yellow
W1-2R	Right Curve Arrow	36	36	9.0	2		18.0	Black on Fluorescent Yellow
W3-5	Speed Reduction 45 MPH	48	48	16.0	1		16.0	Black on Fluorescent Yellow
W6-2	Divided Highway Ends symbol	48	48	16.0	2		32.0	Black on Fluorescent Yellow
W6-1A	Divided Highway Ends words	48	48	16.0	1		16.0	Black on Fluorescent Yellow
W8-1	Bump	36	36	9.0	2		18.0	Black on Fluorescent Yellow
W9-1R	RIGHT LANE ENDS 1/2 MILE (WORDS)	78	54	29.3	1	29.3		Black on Fluorescent Yellow
W11-10	Truck	36	36	9.0	1		9.0	Black on Fluorescent Yellow
					Totals	**938.0**	**766.6**	

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	58	140

Plotting Date: 04/23/2024

Revised 01/07/2025 AT

Rev. 01/07/25 PB

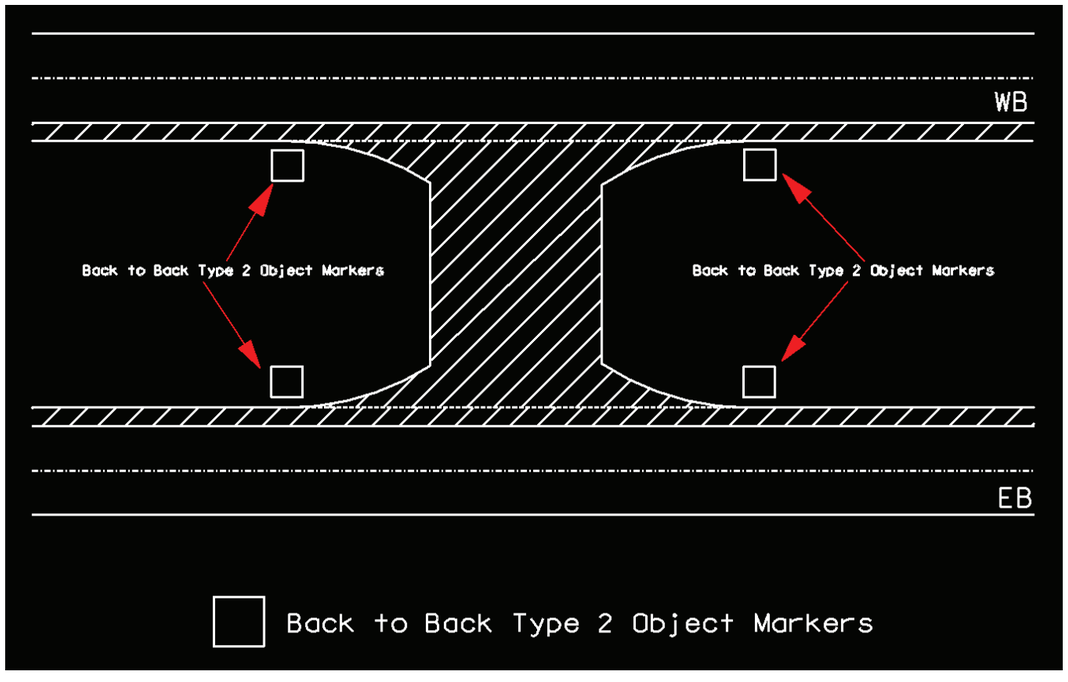
Back to Back Type 2 Object Markers (At Median Crossovers)

MRM	Displacement	Back to Back Type 2 Object Markers
343.73	+.229	4
344.00	+.021	4
344.00	+.058	-
344.00	+.244	-
344.00	+.336	-
344.00	+.757	4
345.00	+.000	4
345.00	+.400	-
345.00	+.506	-
345.00	+.797	-
346.00	+.000	-
346.00	+.172	-
346.00	+.510	-
347.00	+.294	-
347.00	+.510	-
347.00	+.848	-
348.00	+.156	4
348.00	+.500	-
348.00	+.585	4
348.00	+.683	4
348.00	+.767	4
349.00	+.000	-
354.55	+.107	4
354.55	+.260	-
355.00	+.319	4

Back to Back Type 2 Object Markers (At Median Crossovers)

MRM	Displacement	Back to Back Type 2 Object Markers
355.00	+.416	4
355.00	+.758	-
355.00	+.936	4
356.00	+.080	-
356.00	+.330	-
356.00	+.758	4
357.00	+.174	-
357.00	+.665	-
358.00	+.420	-
358.00	+.900	-
360.00	+.450	-
360.00	+.977	-
361.00	+.460	-
362.00	+.005	-
362.00	+.510	-
362.00	+.814	-
363.00	+.074	-
363.00	0.44	-
364.00	+.088	-
364.00	+.590	-
365.00	+.120	-
365.00	+.720	-
	Total:	52

Back to Back Type 2 Markers at Median Crossover Layout



* Leave alone the in-place Type 2 Object Markers at medians marked with a dash.

Type 2 Object Markers -Pipes

MRM	Displacement	North/South Inslope or Both	Back to Back Type 2 Object Markers
343	0.704	Both	-
343.73	0.076	South	-
343.73	0.182	Both	-
343.73	0.224	South	-
344	0.061	South	1
344	0.164	Both	-
344	0.247	South	1
344	0.439	Both	-
344	0.551	Both	-
344	0.808	South	1
344	0.941	South	1
345	0.048	South	1
345	0.377	South	1
345	0.624	South	-
345	0.805	South	1
346	0.089	Both	2
346	0.495	Both	-
346	0.519	South	-
346	0.811	South	1
347	0.037	Both	-
347	0.305	South	1
347	0.387	Both	2
347	0.522	Both	2
347	0.683	South	1
347	0.833	South	1
347	0.998	Both	-
348	0.149	South	1
348	0.327	South	1
348	0.478	South	-
348	0.572	South	1
348	0.671	South	-
348	0.676	Both	-
348	0.754	South	-
348	0.984	South	-
349	0.046	North	-
349.19	0.292	Both	2
350	0.618	Both	-
352	0.636	Both	-
352	0.722	Both	-
352	0.722	Both	
352	0.722	Both	
352	0.898	South	1
353	0.121	Both	2
353	0.312	Both	2
353	0.833	Both	4
353	0.833	Both	
354	0.271	Both	2
354	0.513	Both	-
354.55	0.016	North	-
354.55	0.092	North	1
354.55	0.15	Both	2
355	0.111	North	-
355	0.332	South	1
355	0.455	Both	4
355	0.546	Both	-
355	0.661	Both	-
355	0.804	Both	-
355	0.897	South	-
356	0.155	South	1
356	0.371	Both	-
356	0.574	North	-
356	0.779	North	1
356	0.962	Both	4
356	0.962	Both	
356	0.962	Both	
357	0.166	North	1
357	0.356	Both	-
357	0.404	North	1
357	0.672	North	1
357	0.780	Both	-
358	0.105	Both	-
358	0.105	Both	-
358	0.422	North	1
358	0.988	Both	-
359	0.231	North	1
359	0.46	North	2
359	0.46	South	2
359	0.61	Both	-
359	0.694	Both	-
359	0.694	Both	
359	0.989	north	1
360	0.272	north	1
360	0.555	north	1
360	0.917	both	2
361	0.071	both	2
361	0.254	both	2
361	0.494	north	1
361	0.987	north	1
362	0.293	north	1
362	0.588	both	2
362	0.92	north	1
363	0.199	Both	-
363	0.577	Both	2
363	0.817	Both	2
364	0.103	North	1
364	0.369	Both	-
364	0.923	Both	-
365	0.117	North	1
365	0.28	Both	-
365	0.28	Both	
365	0.572	Both	2
365	0.744	North	1
365	0.836	Both	2
366	0.171	Both	2
		Total:	84

Type 2 Object Markers not included for certain pipes, as shown above, are either underwater or outside the Right-of-Way line.

Rev. 01/02/25 PB

SURFACING THICKNESS DIMENSIONS

The plans shown spread rates will be applied even though the thickness may vary from that shown in the plans.

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

SEQUENCE OF OPERATIONS

The shoulder cold milling will be limited to either the outside shoulder or median shoulder for each direction of travel at any one time on the divided sections. The shoulder cold milling will be limited to one side of the roadway on the undivided sections. In no case will shoulder drop offs exist at the same location on both shoulders on the divided sections or both sides of the roadway on the undivided sections.

The placement of Class HR Hot Mixed Asphalt Concrete will begin within **5** working days after completion of shoulder cold milling at any location.

The following Sequence of Operations will be adhered to. Any changes must be approved in writing by the Area Engineer prior to changes being made.

1. Install Traffic Control Signing.
2. Complete Cold Milling Operations.
3. Complete Unclassified Excavation for Digouts and Backfill Operations.
4. Complete Asphalt Concrete Paving Operations.
5. Install High Tension Cable Guardrail and MGS Steel Guardrail.
6. Grind Rumble Strips.
7. Complete Flush Seal.
8. Install Permanent Pavement Markings.
9. Refurbish Mailboxes.
10. Permanent Sign Replacement
11. Remove Traffic Control Signing.
12. Mow Project Inslopes and Complete any Remaining Project Cleanup.

On US 12, work will only be allowed on one shoulder in each direction at a time. It will not be an option to cold mill both the inside and outside shoulders at the same time.

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

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

GENERAL TRAFFIC CONTROL

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

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

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

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

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

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

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

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

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

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

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

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

A mobile work operation will be allowed provided the rumble strip or rumble stripe grooving, flush sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

If inappropriate or conflicting pavement markings exist, the channelizing devices in the area where the pavement markings conflict will be placed at one-half of the normal channelizing device spacing. Temporary pavement marking will be paid for at the contract unit price per mile/foot for TEMPORARY PAVEMENT MARKING. The additional channelizing devices will be incidental to the contract lump sum price for TRAFFIC CONTROL, MISCELLANEOUS.

For areas of shoulder removal where a shoulder drop-off exists, the shoulder will be closed as shown on Standard Plate 634.03 and Shoulder Drop-Off signs will be placed at ½ mile spacing.

The Contractor will maintain the inside lane closure for shoulder work completed on the median sides of the divided highway. Traffic control for a lane closure will need to remain up until resurfacing of the median shoulder is completed. The outside shoulder can use a shoulder closure setup during non-working hours.

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans. Additional Type 3 Barricades will be installed facing traffic within the closed lane at a spacing of ¼ mile.

Lane closures will be limited to 5 miles in length. The distance between the closest points of any two-lane closures will be at least 3 miles, excluding tapers.

FLAGGING

Flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads and mainline. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours.

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

TYPE III FIELD LABORATORY

The lab will be equipped with an internet connection such as DSL, cable modem, or other approved service. The internet connection will be provided with a multi-port wireless router. The internet connection will be a minimum speed of 5 Mbps unless limited by job location and approved by the DOT. Prior to installing the wireless router, the Contractor will submit the wireless router's technical data to the Area Office to check for compatibility with the state's computer equipment. The internet connection is intended for state personnel usage only. The Contractor's personnel are prohibited from using the internet connection unless pre-approved by the Project Engineer. These items will be incidental to the contract unit price per each for TYPE III FIELD LABORATORY.

SHOULDER WORK

Vegetation and accumulated material adjacent to the existing surface edge will be removed to the satisfaction of the Engineer prior to placement of mainline surfacing. Any remaining windrow of accumulated material will be re-spread evenly on the inslope adjacent to the asphalt shoulder to the satisfaction of the Engineer prior to the application of the flush seal.

This shoulder work will be incidental to other contract items. Separate measurement and payment will not be made. Prior to construction, State Maintenance Forces will spray the shoulders to kill existing vegetation. It will be the Contractor's responsibility to notify the State at least 30 days in advance of when he plans to begin work on the surface of the highway. The State assumes no responsibility for the effectiveness of the herbicide applied.

SHOULDER PREPARATION

Prior to placement of asphalt concrete on the shoulders of Section 9, the existing shoulder material will be watered and compacted until a uniform stable surface is obtained. Cost for this work will be incidental to the contract unit price per mile for SHOULDER PREPARATION. Compaction will be to the satisfaction of the Engineer.

Water needed for compaction will be incidental to the contract unit price per mile for SHOULDER PREPARATION.

SAW AND SEAL JOINT TABLE

SECTION	LANE	SIDE	STATION	TO	STATION	LENGTH (Ft)
1a	Undivided	Both (x2)	9+70.00	to	16+57.70	1375
1b	Undivided	Both (x2)	16+57.70	to	21+00.00	885
2	WBL	Both (x2)	21+00.00	to	25+00.00	800
	WBL	Both (x2)	a 0+00.00	to	a 281+43.00	56286
	EBL	Both (x2)	21+00.00	to	306+64.80	57130
3	Undivided	Both (x2)	b -3+63.00	to	b 43+02.00	9330
	Undivided	Lt	b 43+02.00	to	b 49+66.00	664
	Undivided	Both (x2)	b 49+66.00	to	b 51+83.00	434
	Undivided	Rt	b 51+83.00	to	b 56+40.00	457
	Undivided	Both (x2)	b 56+40.00	to	b 93+20.20	7360
4	Undivided	Both (x2)	b 93+20.20	to	b 101+14.20	1588
5	Undivided	Both (x2)	b 101+14.20	to	b 104+43.40	658
	WBL	Both (x2)	b 699+21.70	to	b 703+97.20	951
	EBL	Both (x2)	c 0+00.0	to	c 6+99.40	1399
6	WBL	Both (x2)	b 104+43.40	to	b 699+21.70	118957
7	Undivded	Both (x2)	b 703+97.20	to	b 710+89.57	1385
8	Undivided	Both (x2)	b 710+89.57	to	b 716+50.00	1121
9	Undivided	Both (x2)	b 718+60.00	to	b 720+52.00	384
					Total:	261163

INTERSECTING ROADS AND ENTRANCES

Intersecting roads and entrances will be satisfactorily cleared of vegetation, shaped, and compacted prior to placement of mainline surfacing. This work will be considered incidental to other contract items. Separate measurement and payment will not be made.

In areas where granular material has been placed adjacent to the existing asphalt concrete, the Contractor will be required to remove the granular material to a depth below the existing asphalt concrete to allow for the placement of the new asphalt concrete. New asphalt concrete will be placed flush with the existing asphalt concrete. The existing granular material removed will be placed on the entrances, intersecting roads or other locations as directed by the Engineer.

All costs to remove and place the granular material including labor, equipment and incidentals will be incidental to the various related contract items.

COLD MILLING ASPHALT CONCRETE

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 25. This value was obtained from testing during construction of the in-place asphalt concrete.

Cold milling asphalt concrete will be done according to the typical section(s). Additional milling will be required for farm, residential, field entrances, and interesting roads to daylight the milling to the outside edge of the roadway.

Any additional costs associated with this additional cold milling will be incidental to the contract unit price per square yard for COLD MILLING ASPHALT CONCRETE.

Cold milling asphalt is estimated to produce 18825 tons of cold milled asphalt concrete material. An estimated 555 tons of cold milled asphalt concrete material will be used on this project as Base Course, Salvaged Asphalt Mix on field entrances and field approaches. An estimated 6471 tons of cold milled asphalt concrete material will be used on this project as RAP in the Class HR Hot Mixed Asphalt Concrete mixture. The Contractor is responsible to assure enough asphalt concrete salvage is available for the Class HR Hot Mixed Asphalt Concrete.

The remainder of the salvaged asphalt concrete material will become the property of the Contractor for disposal.

REMOVE ASPHALT CONCRETE PAVEMENT

The Los Angeles Abrasion Loss value on the aggregate used for the in-place asphalt concrete was 25. This value was obtained from testing during construction of the in-place asphalt concrete.

An estimated 31 Cubic Yards of the in-place asphalt concrete surfacing will be removed from the existing highway according to the in-place surfacing of Section 9 and wasted as directed by the Engineer. Care will be taken not to waste the in-place granular material. The remaining in-place granular material will be reshaped and compacted according to the Shoulder Preparation plan note.

The quantity of removed asphalt material is estimated from the in-place surfacing typical sections. This estimated quantity is not included in the unclassified excavation quantities.

ASPHALT CONCRETE COMPOSITE

Section 324 will apply except that Class HR Hot Mixed Asphalt Concrete as specified elsewhere in the plans may be used as Asphalt Concrete Composite.

Plans specified locations for Asphalt Concrete Composite will be paid for at the contract unit price per ton for “Asphalt Concrete Composite” regardless of the class of asphalt concrete used at such locations.

UNCLASSIFIED EXCAVATION, DIGOUTS

The locations and extent of digout areas will be determined in the field by the Engineer. The backfilling material for the digouts will be Asphalt Concrete Composite and Base Course. The depth of asphalt will match the in-place thickness.

Included in the Estimate of Quantities are 25 cubic yards of Unclassified Excavation, Digouts and 38 square yards of Remove Asphalt Concrete Pavement per mile for the removal of asphalt and unstable material throughout the project.

Included in the Estimate of Quantities are 50 tons of Base Course and 13 tons of Asphalt Concrete Composite per mile for backfill of Unclassified Excavation, Digouts.

The digouts will be extended through the shoulder and backfilled with granular material that will daylight to the inslope to allow water to escape the subsurface.

WATER FOR COMPACTION OF GRANULAR MATERIALS

Cost of water for compaction of the granular material will be incidental to the contract unit price for the various contract items. Six percent, plus or minus, moisture will be required at the time of compaction unless otherwise directed by the Engineer.

CLASS HR ASPHALT CONCRETE

RAP will be obtained from the material produced by cold milling on this project. The Class HR Asphalt Concrete will include 40 percent RAP in the mixture. An estimated 7785.6 tons will be required for use as RAP.

When directed by the Engineer, the Contractor will saw and remove a total of three undamaged compaction cores per asphalt concrete lift from designated area(s) and repair the hole(s) to the satisfaction of the Engineer. All costs associated with the compaction cores will be incidental to the contract unit price per each for COMPACTION SAMPLE.

The thickness of the Class HR Asphalt Concrete surfacing on the shoulders will be measured from the top edge of the concrete pavement.

All other requirements for Class HR Asphalt Concrete will apply.

BASE COURSE, SALVAGED ASPHALT MIX

Base Course, Salvaged Asphalt Mix estimated at 555 tons will be obtained from the cold milled material produced on this project.

The Base Course, Salvaged Asphalt Mix will be crushed to meet the requirements of Section 884.2 D.3 prior to placement.

Base Course, Salvaged Asphalt Mix placed on the field entrances and field approaches will be compacted according to Section 260.3.D of the Specifications.

At the time of compaction, the material will have approximately 4% moisture uniformly blended throughout the depth of material. The Engineer may adjust the percent moisture. Water needed for compaction will be incidental to the contract unit price per ton of BASE COURSE, SALVAGED ASPHALT MIX.

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor will provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. The borrow material will be approved by the Engineer. The plans quantity for CONTRACTOR FURNISHED BORROW EXCAVATION as shown in the Estimate of Quantities will be the basis of payment for this item.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

GUARDRAIL EMBANKMENT

The fill material used for the guardrail embankment will be obtained from Contractor furnished sources.

Contractor Furnished Borrow Excavation quantities are computed using the volume of embankment plus forty (40) percent for shrinkage. The basis of payment will be the plans quantity. No separate measurement will be taken.

Compaction of the fill material will be to the satisfaction of the Engineer.

Prior to removal or placement of fill material the Contractor will be required to remove three (3) inches of topsoil and replace it following the removal or placement of the fill material. Removal and replacement of topsoil will not be measured for payment but will be incidental to the contract unit price per cubic yard for CONTRACTOR FURNISHED BORROW EXCAVATION.

It is anticipated that water for compaction will not be required. If the Engineer deems that the fill material is extremely dry, water may be ordered and placed to the satisfaction of the Engineer. Payment for the water will be incidental to the contract unit price for CONTRACTOR FURNISHED BORROW EXCAVATION.

MEDIAN CROSSOVERS

Asphalt Median Crossover will have a 2" cold milling depth and overlay with 2" Class HR Asphalt Concrete.

Median Crossovers with granular material will have 15 Tons of Base Course for placement.

FLUSH SEAL

Application of flush seal will be completed within 10 working days following completion of the asphalt concrete surfacing.

Application of flush seal may be eliminated by the Engineer. If the paved surface remains tight, the Engineer will notify the Contractor as soon as possible that the flush seal is unnecessary.

HIGH TENSION CABLE GUARDRAIL

The Contractor will furnish and install a high tension cable guardrail system that meets the Test Level 3 crash testing requirements of the Manual for Assessing Safety Hardware (MASH). The maximum dynamic deflection of the system will be less than 10’-0” and the maximum post spacing will be 10’-6” unless specified otherwise in the plans. High Tension 4 Cable Guardrail will be one of the following products:

Valtir (Trinity) – CASS S3 M10
Brifen – 4 Rope O-Post System

The Contractor will install the system according to the manufacturer’s installation recommendations except where stated otherwise in the plans. A copy of the detail drawings and installation instructions for the high tension cable guardrail and anchor assemblies will be given to the Engineer a minimum of 4 weeks prior to installation of the high tension cable guardrail system.

All posts will be galvanized and inserted into driven galvanized steel sleeves with soil plates. The driven sleeves must be designed for a minimum frost depth of 42” and to resist the additional lateral component of curved cable sections.

Delineation of the high tension cable guardrail will be in conformance with standard plate 632.40.

The cables provided will be pre-stretched in the factory.

The Contractor will check and adjust the tension of the cables a minimum of 3 weeks after installation and not longer than 6 weeks after installation. Cost for this work will be incidental to the contract unit price per foot for HIGH TENSION 4 CABLE GUARDRAIL.

HIGH TENSION CABLE GUARDRAIL (Continued)

High tension cable guardrail will be installed on a 10:1 or flatter slope and the embankment limits will match the high tension cable guardrail limits. The embankment quantities may vary from plans quantity.

The lengths of high tension cable guardrail stated in the plans are based on a minimum effective length (length of need). The length and location of the high tension cable guardrail at each site will need to be adjusted during construction as necessary depending on the system provided and will be approved by the Design Engineer before installation. When the Valtir (Trinity) CASS S3 M10 system is installed adjacent to one-way traffic roadways, 26’ of the anchor assembly on the approach end is considered non-effective, and 51’ on the non-approach end is considered non-effective; however, when the same system is installed adjacent to two-way traffic roadways, 26’ of the anchor assembly on both the approach and non-approach ends is considered non-effective. For Brifen 4 Rope O-Post System installations, the anchor assembly is non-effective.

The Contractor will provide a signed letter of compliance to the Engineer upon completion of the high tension cable guardrail installation(s) stating that the high tension cable barrier system has been installed in conformance to the manufacturer installation instructions and specifications, meets the Test Level 3 crash test requirements of MASH, and is terminated with an approved anchor assembly.

The high tension cable guardrail will be measured along the centerline of the cable guardrail from the beginning to the end of the minimum effective length.

All costs for furnishing and installing the high tension cable guardrail system including all labor, materials, and equipment will be incidental to the contract unit price per foot for HIGH TENSION 4 CABLE GUARDRAIL.

HIGH TENSION CABLE GUARDRAIL ANCHOR ASSEMBLY

The beginning and end of each “run” of high tension cable guardrail will terminate with an anchor assembly. The High Tension Cable Anchor Assemblies will be one of the following products:

Valtir (Trinity) – CASS Cable Terminal (CCT)
Brifen – MASH Gating Terminal (MGT)

The footing(s) for the anchor assembly will be designed to allow for 1 inch maximum of lateral deflection. The allowable design soil pressure will be 1000 psf. The top 2 feet of soil pressure will be neglected in the design of the footing(s). The footing(s) will be a minimum of 5’ deep. The footing(s) design will be submitted through proper channels to the Office of Bridge Design for a one-time approval. Any changes to the anchor assembly that could affect footing size including configuration changes such as different number of cables and different number of footings will be resubmitted for approval. The approval will be obtained a minimum of 4 weeks prior to construction of the anchor footing(s).

Delineation of the high tension cable guardrail anchor assembly will be in conformance with standard plate 632.40.

All costs for furnishing and installing the High Tension Cable Guardrail Anchor Assembly including all labor, equipment, and materials which include

the anchor footing(s), hardware, and all attachments to the anchor footing(s), will be incidental to the contract unit price per each for HIGH TENSION 4 CABLE GUARDRAIL and HIGH TENSION CABLE GUARDRAIL ANCHOR ASSEMBLY.

REFURBISH MAILBOXES

Existing mailboxes will be removed, turnouts constructed, and mailboxes reset on new posts with the necessary support hardware for single or double mailbox assemblies (See Standard Plate No's. 900.02 and 900.03). The local Postmaster will determine the recommended mounting height of the mailboxes throughout the project. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

TABLE OF REFURBISH MAILBOXES

Location MRM	DIVIDED SIDE	SINGLE MAILBOX EACH
343.73+0.23	WB	1
344.00+0.01	WB	1
344.00+0.75	WB	1
345.00+0.01	WB	1
345.00+0.39	WB	1
348.00+0.16	WB	1
348.00+0.59	WB	1
348.00+0.68	WB	1
348.00+0.77	WB	1
TOTALS		9

If large mailboxes are located at double mailbox installations, a single post may need to be used for the large mailbox.

All costs for removing existing mailboxes, providing temporary mailboxes, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for REFURBISH SINGLE MAILBOX.

SHOULDER RUMBLE STRIPS IN ASPHALT CONCRETE

Asphalt Concrete Rumble Strips will be constructed on the median shoulders of US 12. Rumble Strips will be paid for at the contract unit price per mile for Grind 12" Rumble Strip or Stripe in Asphalt Concrete. It is estimated that 23.0 miles of asphalt concrete rumble strips will be required. Rumble Strip installation will be completed prior to application of the Flush Seal and Permanent Pavement Markings. In the event the Flush Seal is eliminated from the contract, the Contractor will still be required to apply a Flush Seal to the newly installed 12" Rumble Strips at a width of 1.5' and at the same rate as specified in this plan set. No adjustment in payment will be made and SS-1 h or CSS-1 h Asphalt for Flush Seal will be paid at the contract unit price per ton.

Sta.	to	Sta.	Distance (Ft.)	EB or WB
21+00.00	to	306+64.80	28564.8	EB
21+00.00	to	a 281+43.00 (Thru Equation)	28543.0	WB
b 104+43.40	to	b 703+97.20	59953.9	WB
c 0+00.00	to	c 6+99.40	699.4	EB
b 703+97.20	to	b 710+89.57	1384.8	Undivided
		Total:	121405.9	Ft
			23.0	Miles

RUMBLE STRIPE/STRIP ROADWAY CLEANING

The Contractor will be required to remove loose material from the driving surface and/or asphalt shoulders. Loose material may be broomed to the edge of shoulders and it will be the Contractor’s responsibility to ensure the loose material does not enter any vegetated areas and/or waterways. A pick-up broom will not be required.

All costs associated with this work will be incidental to the contract unit price per mile for and/or GRIND 12” RUMBLE STRIP OR STRIPE IN ASPHALT CONCRETE.

TEMPORARY PAVEMENT MARKINGS

Temporary Pavement Marking Paint or tabs will be used on milled and AC leveling surfaces for goring areas, and as directed by the Engineer. The Contractor will be responsible for marking out those exact locations. A quantity of 0.4 mile of TEMPORARY PAVEMENT MARKING has been included for the goring areas/transitions in sections 1b, 5, and 9.

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.

PERMANENT PAVEMENT MARKING

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

Traffic control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.

SURFACE PREPARATION

Included in the bid item SURFACE PREPARATION, is an adjusted quantity to account for and include 24'' Durable Pavement Markings. (4'' x 6)

PREFORMED THERMOPLASTIC PAVEMENT MARKING

General

- Made of prefabricated retroreflective, resilient thermoplastic material;
- Contains glass beads uniformly distributed through the entire cross-sectional area;
- Capable of being affixed to bituminous or concrete pavement by heating;
- Resistant to deterioration due to exposure to sunlight, water, salt, and adverse weather conditions;
- Under traffic wear, shows no appreciable fading in accordance with the color requirements, lifting, or shrinkage throughout the life of the marking;
- Capable of conforming to pavement contours, breaks, and faults through the action of traffic at normal pavement temperatures;
- Possesses resealing characteristics, such that it is capable of fusing with itself and previous thermoplastic markings when heated; and
- Protected during shipment and in storage.

Apply the preformed thermoplastic pavement marking as recommended by the manufacturer to provide a neat, durable marking that will not flow, distort, or crack due to temperature if the pavement surface remains stable. Use equipment and application methods specified by the manufacturer. Primer as required by the manufacturer will be provided with the material.

Application of the markings will include the use of any manufacturer recommended sealers. Sealers may be required on concrete pavements, inside grooves, or on older asphalt pavements. Prior to placing any markings on new concrete, the Contractor will remove any curing compounds. Removal will be by sandblasting or other standard industry methods.

Any required primers or sealers will be included in the contract unit price for the various preformed thermoplastic pavement marking items.

Provide precut messages and symbols meeting the requirements of the MUTCD and the Standard Signs Manual in custom kits. Use separate pieces or segments to form individual letters or symbols only to the extent supplied by the manufacturer. Provide shapes, sizes, and colors as required by the contract.

Color

- Will meet the color specification limits and luminance factors for Cold Applied Plastic Pavement Marking and Legends (Section 983.2 D, Tables 1 and 2).

Glass Beads

- Ensure the preformed thermoplastic pavement marking contains a minimum 30% intermixed glass beads by weight and a minimum 80% true spheres.
- Ensure preformed thermoplastic pavement markings contain only clear beads.

Skid Resistance

- Ensure the surface of the preformed thermoplastic pavement marking provides a skid resistance value of at least 45 British Pendulum Number (BPN) when tested in accordance with ASTM E303.

Retroreflectivity

- Provide preformed thermoplastic pavement marking meeting the minimum initial pavement marking retroreflectivity values using 30 m geometry and meeting the testing procedures of ASTM E1710:

Minimum Initial Pavement Marking Retroreflectivity		
	White	**Yellow**
Thermoplastic	400 mcd/sq. ft./ft.	250 mcd/sq. ft./ft.
Thermoplastic, enhanced skid resistance (ESR)	250 d/sq. ft./ft.	150 d/sq. ft./ft.

PREFORMED THERMOPLASTIC PAVEMENT MARKING

Thickness

- A longitudinal marking is a minimum 90 mils thick at the edges, and a maximum 125 mils thick at the center of the stripe.
- Transverse markings and symbols are a minimum 125 mils thick at the edges, and a maximum 160 mils thick at the center.

Sample

- Prior to application, the Contractor will provide a sample of the preformed thermoplastic pavement marking to be used on the project to the Region Traffic Engineer for inspection and approval.
- Do not begin application of the preformed thermoplastic pavement marking prior to obtaining the Region Traffic Engineer's approval of the preformed thermoplastic pavement marking material. The Region Traffic Engineer's approval of the preformed thermoplastic pavement marking does not void other preformed thermoplastic pavement marking requirements specified.

REMOVE PAVEMENT MARKING ARROWS

The Contractor will remove two lane reduction arrows at MRM 365.00 + 0.65 and MRM 365.00 + 0.78 along the Eastbound Lanes nearing Summit. This work will be incidental to the bid item REMOVE PAVEMENT MARKING, ARROW.

GROOVING FOR COLD APPLIED PLASTIC & PREFORMED THERMOPLASTIC PAVEMENT MARKING

The Contractor will establish a positive means for the removal of the grinding and/or grooving residue. Residue from dry grooving will be vacuumed. Solid residue will be removed from the pavement surfaces before being blown by traffic action or wind. The Contractor will conduct this work to control and minimize airborne dust and similar debris that may become a hazard to motor vehicle operation or nuisance to property owners. Residue from wet grooving will not be permitted to flow across lanes being used by public traffic or into gutter or drainage facilities. Residue, whether in solid or slurry form, will be disposed of in a manner that will prevent it from reaching any waterway in a concentrated state. The cleaning of the residue for grooving will be to the satisfaction of the Engineer and may require more than one pass to adequately remove material. All costs for removal of grinding and/or grooving residue will be included in the contract unit price per foot, square foot, or each for GROOVING FOR COLD APPLIED PLASTIC PAVEMENT MARKING contract items.

COLD APPLIED PLASTIC PAVEMENT MARKING

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

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

GENERAL PERMANENT SIGNING

New sign installations will be staked in the field by the Contractor and checked by the Engineer. The Contractor will give the Engineer a minimum of one week to check staked locations prior to signpost installation. Lateral offset of signs will be as shown in the plans or as directed by the Engineer.

The Contractor will be responsible for contacting South Dakota One Call to locate the utilities at the staked sign installation locations.

When signs are mounted in an assembly, they will be 1-2 inches apart vertically and horizontally.

The height of the post must not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign will be cut off. No separate payment will be made for cutting the post or for that length cut off.

Aluminum U-Channel stiffeners will be used on all signs 36 inches or greater in width and will conform to ASTM B221 Alloy 6063-T6 or 6061-T6. The U-Channel will be 2 inches in width and free of holes. The U-Channel stiffeners will also be used to connect various signs together so that an entire sign assembly can be erected on a single installation. Stiffeners may be fastened to signs by use of 1/4-inch diameter drive rivets.

The Contractor will use 3/8-inch diameter rust proof machine sign bolts, flat metal washers, neoprene washers (against the sign sheeting), lock washers, and nuts to fasten the sign to the channel aluminum and posts. A minimum of two bolts will extend through each post.

Prior to ordering signs, the Contractor will verify dimensions, background, border, and legend of the signs.

Prior to use, the Contractor will provide documentation for the sign support devices showing they meet the applicable NCHRP 350 or MASH requirements.

REMOVE TRAFFIC SIGN

Existing signs that are shown as being removed in the Permanent Signing Table will become the property of the Contractor. Existing signposts and bases will be removed in their entirety. All existing signs, posts, and/or hardware removed will not be reused. Holes remaining from the removal of wood posts will be backfilled and compacted with material placed in layers not to exceed 6 inches in depth.

All costs associated with the removal of existing signs, posts, hardware, and backfilled holes will be incidental to the contract unit price per each for REMOVE TRAFFIC SIGN. Quantities will be per assembly at the contract unit price per each.

NEW PERMANENT SIGNING

All signs will be manufactured in accordance with the sheeting manufacturer's recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films.

All Flat Aluminum Signs, Nonremovable Copy High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type IV. All Flat Aluminum Signs, Nonremovable Copy Super/Very High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type XI.

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware will be incidental to the contract unit price per square foot for FLAT ALUMINUM SIGN, NONREMOVABLE COPY HIGH INTENSITY or FLAT ALUMINUM SIGN, NONREMOVABLE COPY SUPER/VERY HIGH INTENSITY.

REMOVE SIGN FOR RESET AND RESET SIGN

Signs that are scheduled for reset will be dismantled and reassembled to the extent needed by the Contractor to properly reset the sign. Signs will be handled with care so that the existing signs, posts, and bases are not damaged during the relocation process. The Contractor will replace and pay for any reset signs damaged in their care. The Contractor will remove and dispose of any existing posts for all reset signs that require use of new posts as shown in the Permanent Sign Installation Table.

All costs for removing, dismantling, and disposing of any existing posts will be incidental to the contract unit price per each for REMOVE SIGN FOR RESET.

All costs for resetting the existing signs will be incidental to the contract unit price per each for RESET SIGN. All quantities for Remove Sign for Reset and Reset Sign will be per assembly at the contract unit price per each.

Any 911 Emergency Number signs within the project work limits will not be stockpiled but temporarily repositioned at a location outside the work limits but within the immediate proximity of the existing location. To complete the project sign work, the 911 Emergency Number signs will be permanently installed at their original locations, or as near as practicable where entrances have been reconfigured by the project. The existing supports will be reused. Cost for removing, temporarily repositioning, and permanently resetting 911 Emergency Number signs will be included in the contract unit price per each for REMOVE SIGN FOR RESET and RESET SIGN.

DIGITALLY PRINTED SIGNS

Digitally printed signs will be allowed on this project. If the Contractor elects to provide digitally printed signs, such signs will adhere to the following specifications.

PROTECTIVE OVERLAY FILM

Permanent traffic signs printed with digital ink systems will be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlaminate will comply with the retroreflective sheeting manufacturer's recommendations to ensure proper adhesion and transparency and will also meet the reflective film durability as identified in Table 1.

Table 1: Retroreflective Film Minimum Durability Requirements

ASTM D4956 Type	Full Sign Replacement Term (years)	Sheeting Replacement Term (years)
I	0	7
III	7	10
IV	7	10
VIII	7	10
IX	7	12
XI	7	12

FABRICATION

Retroreflective sheeting will be applied to a properly cleaned and prepared aluminum sign blank in accordance with the retroreflective sheeting manufacturer's recommendations. Sign legend will be applied using digital print technologies and systems in accordance with the retroreflective sheeting manufacturer's recommendations and the requirements of these plans.

Finished signs will be free of ragged edges and must be supplied clean and free of scratches, grease, oil, lubricants or other contaminants. Minor blemishes (dirt speck, dust, etc.) may settle on the fresh ink surface or become entrapped between the sheeting surface and transparent overlay film due to static charge within the sign shop environment. Any blemish must be minor and not interfere with the communication of the sign message to the motorist. The blemish must not be visible to the naked eye when viewed from 30 feet or greater.

After application of the retroreflective sheeting, sign blanks will be stacked and packaged face to face, back to back, and protected in accordance with the sheeting manufacturer's recommendations. Finished signs will be securely packaged to prevent damage during transit or storage according to the sheeting manufacturer's recommendations.

Rev. 01/07/25 PB

DIGITALLY PRINTED SIGNS (Continued)

TRAFFIC SIGN PERFORMANCE WARRANTY PROVISIONS

Based on the ASTM Type of sheeting specified, traffic control signs will be warranted for the duration shown in Table 1. Full product terms and conditions are as established by each sheeting manufacturer and may contain certain limitations based on sheeting and ink colors, and geographic exposure of the sign. A copy of the warranty document with complete details of terms and conditions will be supplied if requested by the Engineer.

CERTIFIED DIGITAL SIGN FABRICATOR

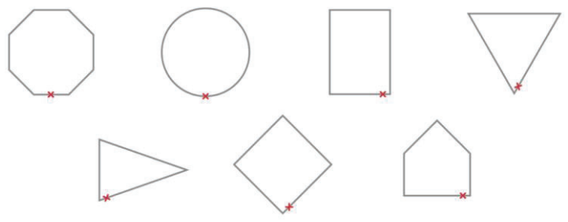
Sign fabricators using digital imaging methods to produce regulated traffic signs must be certified by the reflective sheeting manufacturer whose materials are used to produce the delivered signs.

DATE TAGGING SIGNS WITH PERTINENT INFORMATION

All digitally printed signs are required to be date-tagged with the following 2 components:

1. Date tags on the back of signs
   Tags will have the following information and be fabricated with material and printing system that are as durable as the warranted sign.
   - Name of Sign Fabricator
   - Date the sign was fabricated (month and year)
   - Process that was used for sign fabrication (digitally printed)
   - Supplier of sheeting that was used for fabricating the sign.

2. Border date
   The month and year (mm/yyyy) of sign fabrication will be printed in the border of the sign in 3/8” sans serif font. Border date will be printed with the same warranted printed system as the sign face. The date should be printed in the locations indicated below.



SQUARE TUBE ANCHOR SLEEVE

The Contractor will furnish and install new 2.5” x 2.5” x 18”, 12 Gauge square tube anchor sleeve or equivalent components as approved by the Engineer for 2.0” x 2.0” perforated tube posts. A 2.25” x 2.25” x 4’, 12 Gauge perforated tube post will be used as the anchor post for installation with the square tube anchor sleeve.

SQUARE TUBE POST SLEEVE

All 2.5” x 2.5”, 10 Gauge perforated tube post will be sleeved with a 2-3/16” x 2-3/16” x 4’, 10 Gauge perforated tube post.

WINGED SLIP BASE ANCHOR

The Contractor will furnish and install new winged slip base anchors for 2.5” x 2.5” perforated tube posts as required in the Permanent Signing Table. Winged slip base anchors will be installed using the direct drive method. Winged slip base anchors will consist of a slip base (upper), a 48-inch long winged anchor (lower), and a hardware kit.

TYPE 2 OBJECT MARKERS

	Miles	Spacing (FT)	Quantity
MRM 349.68 +0.00 to 352.84+0.012 (Rush Lake)	3.263	300	116
MRM 354 + 0.421 to MRM 354.55 + 0.056	0.189	250	8
		Total	124

The above 124 Type 2 Object Markers are in addition to 84 used for pipes and 52 used for the median crossovers. *See “Type 2 Object Markers -Pipes” and “Back to Back Type 2 Object Markers (At Median Crossovers)” tables.

Two additional Type 2 Object Marker Back-to-Backs have been added for the ends of the high-tension cable guardrail as per Std. Plate 632.40

All costs associated with the removal of object markers including posts and hardware and the installation of the new back-to-back object markers will be incidental to the contract unit price per each for TYPE 2 OBJECT MARKER BACK-TO-BACK.

REMOVE CONCRETE FOOTING

Concrete footings that are to be removed will be removed by the Contractor to a minimum of 2’ below the ground surface. Restoration of the disturbed area will be to the satisfaction of the Engineer.

The existing footings located in the table below will be removed by the Contractor as per these plans.

Route	MRM	Dis.	Side of Road	Description
US 12	366.01	0.226	Rt.	East – US US 12 Vertical Single Arrow – US South – Interstate I 29 Horizontal Arrow – Interstate South – US US 81 Horizontal Arrow – US
US 12 West	354.55	0.319	Median	ONE WAY LEFT ARROW ONE WAY RIGHT ARROW Yield
US 12 East	360	0.447	Median	ONE WAY LEFT ARROW ONE WAY RIGHT ARROW Yield

All costs for removing the concrete footings will be incidental to the contract lump sum price for REMOVE CONCRETE FOOTING(S).

MILEAGE REFERENCE MARKERS

If moved from original placement, SDDOT will be notified to do Mileage Reference Markers (MRMs) locates prior to project completion by calling the Aberdeen Region Traffic Engineer at (605)626-2245. Payment for this work will be incidental to the various signing contract items.

DELINEATION

All delineation will be placed 8’ from roadway.

Delineation installation and spacing will be done according to Standard Plates 632.40, 632.42, 632.44, 632.46, and 633.07.

Per the discretion of the Engineer, 334 4’’x4’’ White Delineators with 1.12 Lb/Ft Post will be installed for divided sections and 17 4’’x4’’ White Delineators with 1.12 Lb/Ft Post for the undivided sections. No delineation will be placed from MRM 353.01 to MRM 354.34 due to roadway lighting through Waubay.

Locations for delineation are below.

4” Tubular Delineation at Inersecting Approaches

Type	Intersecting Road	Number Per Radius	Total	Route
4” Tubular White	Boat Ramp	3 NE and NW Quadrants	6	US 12 MRM 351+0.38
	444 Ave.	3 NW Quadrant	7	US 12 MRM 352+0.66
		4 NE Quadrant		
	N Main St. (Waubay)	4 SE and SW Quadrants	8	US 12 East MRM 353+0.50
	446A Ave.	3 NE and NW Quadrants	6	US 12 West MRM 354+0.87
	Leselle Ave. (Main Street, Ortley)	3 SE and SW Quadrants	6	US 12 East MRM 358+0.92
	Lohre Rd. (453rd Ave)	3 NW Quadrant	7	US 12 West MRM 361+0.48
		4 NE Quadrant		
	455 Ave.	4 SE and SW Quadrants	8	US 12 East MRM 363+0.51
4” Tubular White	Both I-29 Entrance Ramps	5 SE and SW Quadrants	10	US 12
4” Tubular Amber		5 NE and NW Quadrants	10	

4” X 4” White Delineator with 1.12 Lb/Ft Post

Start		End			
MRM	Disp.	MRM	Disp.	Road	Quantity
343.48	0.068	343.48	0.168	US 12	3
343.73	-	349.19	-	US 12 East	55
343.73	-	349.19	-	US 12 West	55
349.19	-	349.19	0.451	US 12	9
354.00	0.330	354.55	-	US 12	5
354.55	-	365	0.854	US 12 East	112
354.55	-	365	0.854	US 12 West	112
				Total	351

All costs associated with the removal of delineation including posts and hardware and the installation of new delineation will be incidental to the contract unit price per each for 4’’ TUBULAR AMBER DELINEATOR WITH 1.12 LB/FT POST, 4’’X 4’’ WHITE DELINEATOR WITH 1.12 LB/FT POST, and 4’’ TUBULAR WHITE DELINEATOR WITH 1.12 LB/FT POST.

EROSION CONTROL

The estimated area requiring erosion control is 0.50 acres per project. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor and seeding, will be incidental to the contract lump sum price for EROSION CONTROL.

The limits of erosion control work will be determined by the Engineer during construction.

Permanent Seeding

The areas to be seeded consist of all areas where guardrail embankment is placed.

Type C Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	16
Canada Wildrye	Mandan	2
	Total:	18

Mycorrhizal Inoculum

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include the following fungal species:

25% *Glomus intraradices*
25% *Glomus aggregatum or deserticola*
25% *Glomus mosseae*
25% *Glomus etunicatum*

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract lump sum price for EROSION CONTROL.

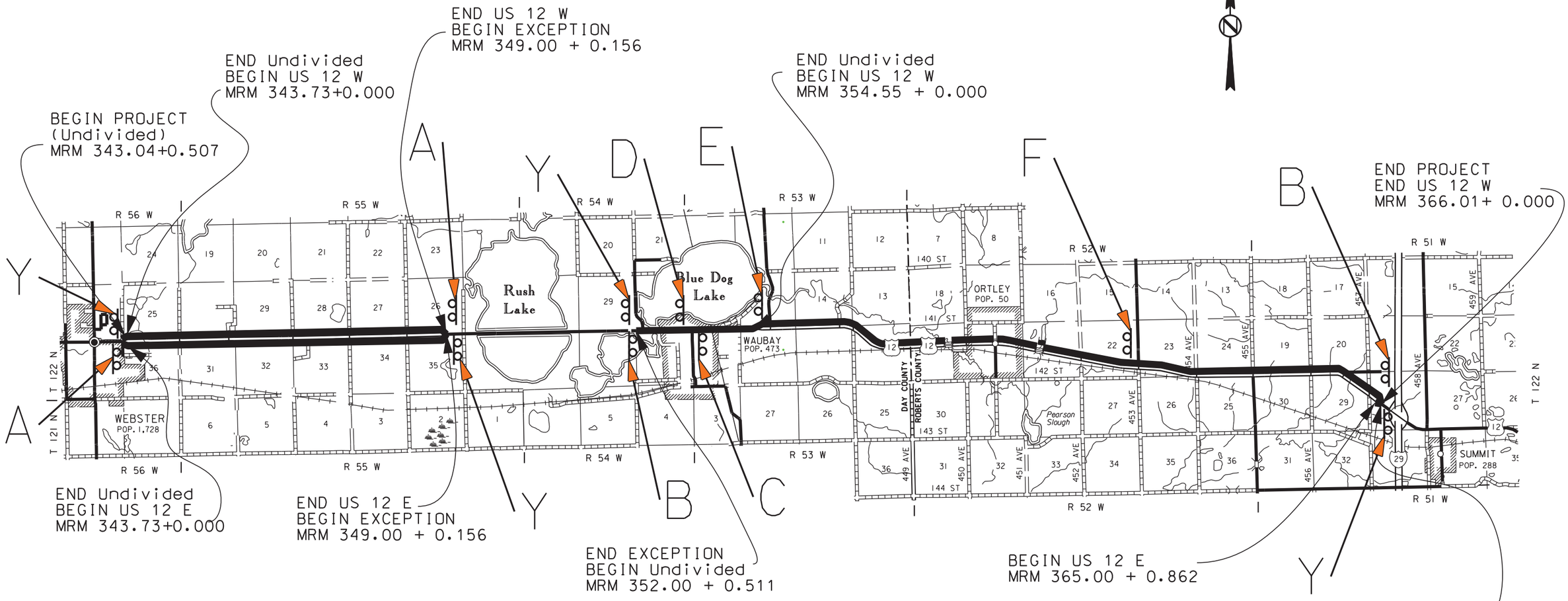
The mycorrhizal inoculum will be as shown below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 www.reforest.com

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	69	140
Plotting Date: 03/21/2024			

FIXED LOCATION TRAFFIC CONTROL

US HWY 12



A	B	C	Y
ROAD WORK NEXT 6 MILES	ROAD WORK NEXT 14 MILES	ROAD WORK NEXT 13 MILES	END ROAD WORK

D	E	F
ROAD WORK NEXT 1 MILE	ROAD WORK NEXT 2 MILES	ROAD WORK NEXT 9 MILES

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.

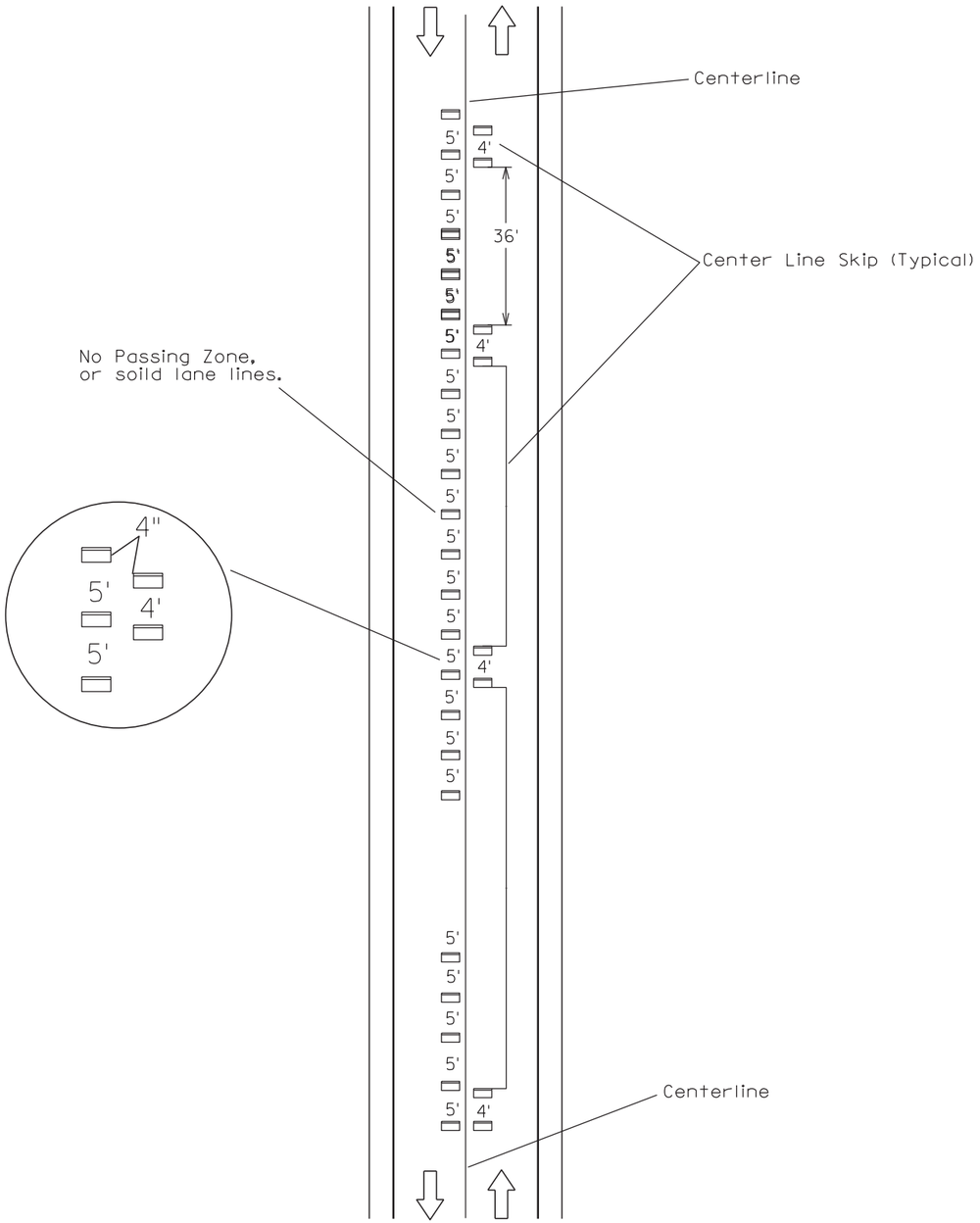
PLOT SCALE - 1:9252.04

PLOTTED FROM - TRAB17901

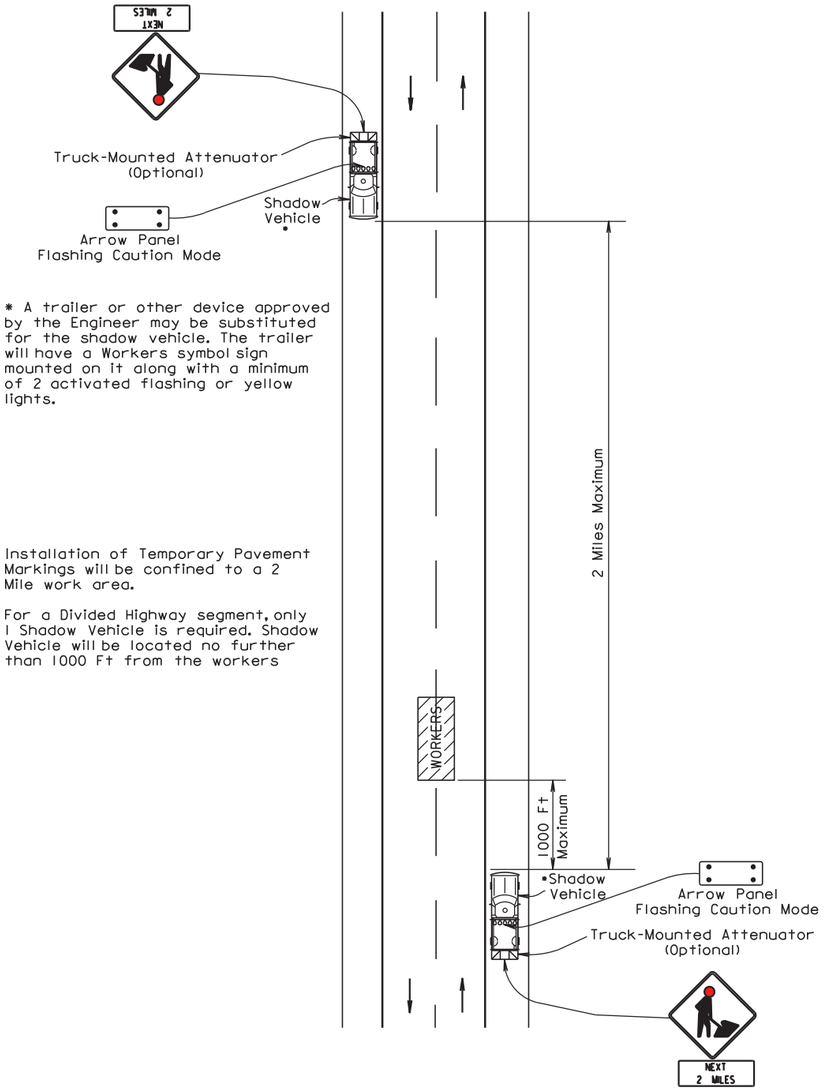
PLOT NAME - 1

FILE - ...\08XO_FIXED SIGN LOCATIONS.DGN

GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD MARKER INSTALLATION



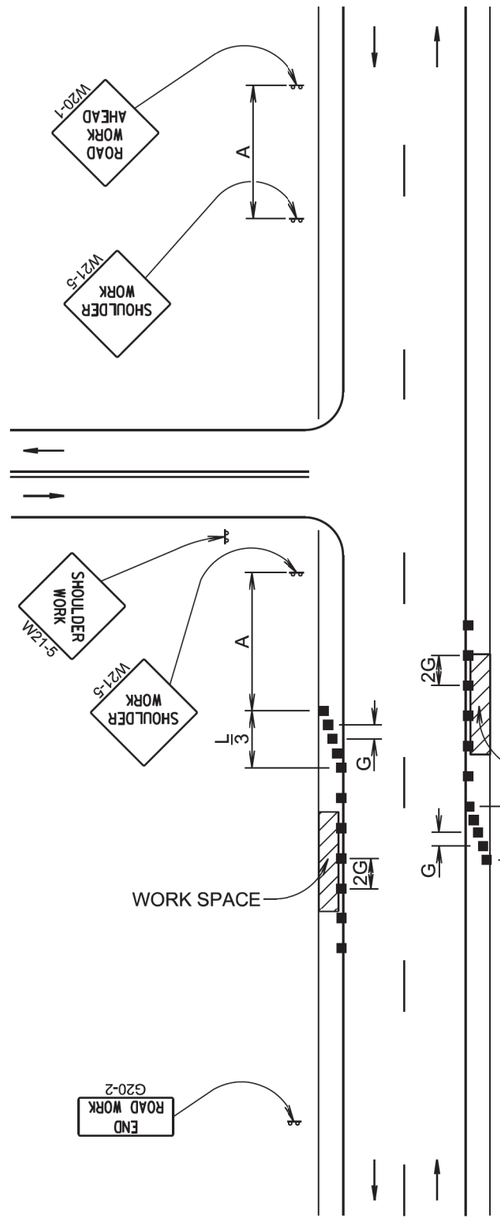
GUIDES FOR TRAFFIC CONTROL DEVICES APPLICATION OF TEMPORARY PAVEMENT MARKING TABS



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

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

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



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

■ Channelizing Device

END ROAD WORK
G20-2

The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

January 22, 2021

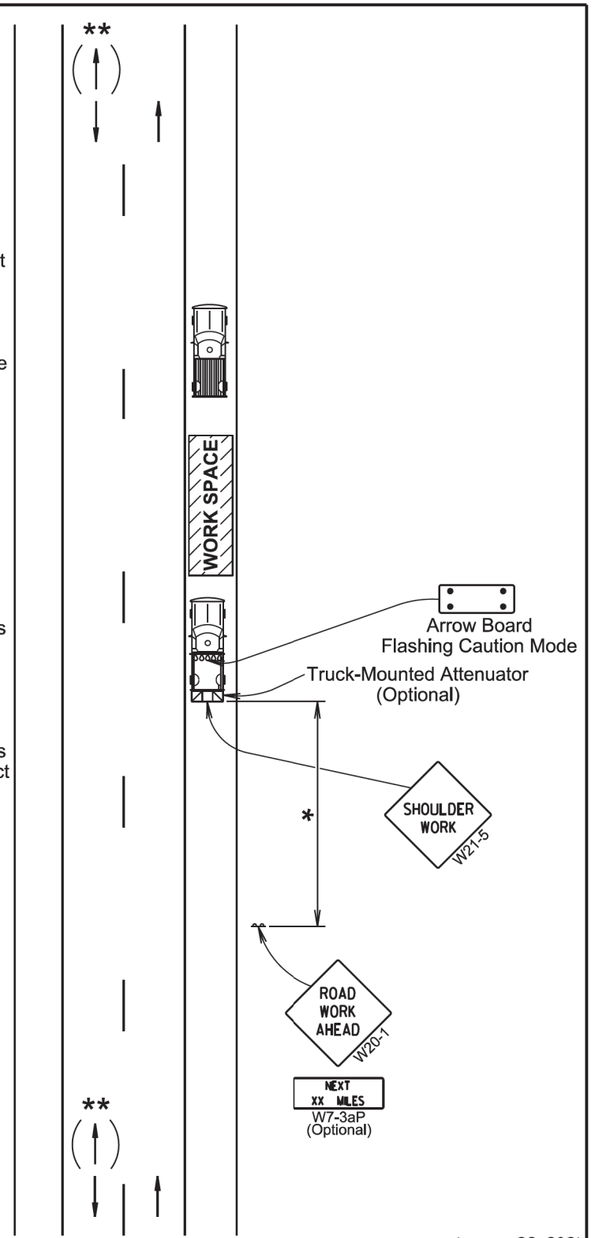
Published Date: 2025

SDDOT

WORK ON SHOULDERS

PLATE NUMBER 634.03

Sheet 1 of 1



*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".

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SDDOT

MOBILE OPERATIONS ON SHOULDERS

PLATE NUMBER 634.04

Sheet 1 of 1

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

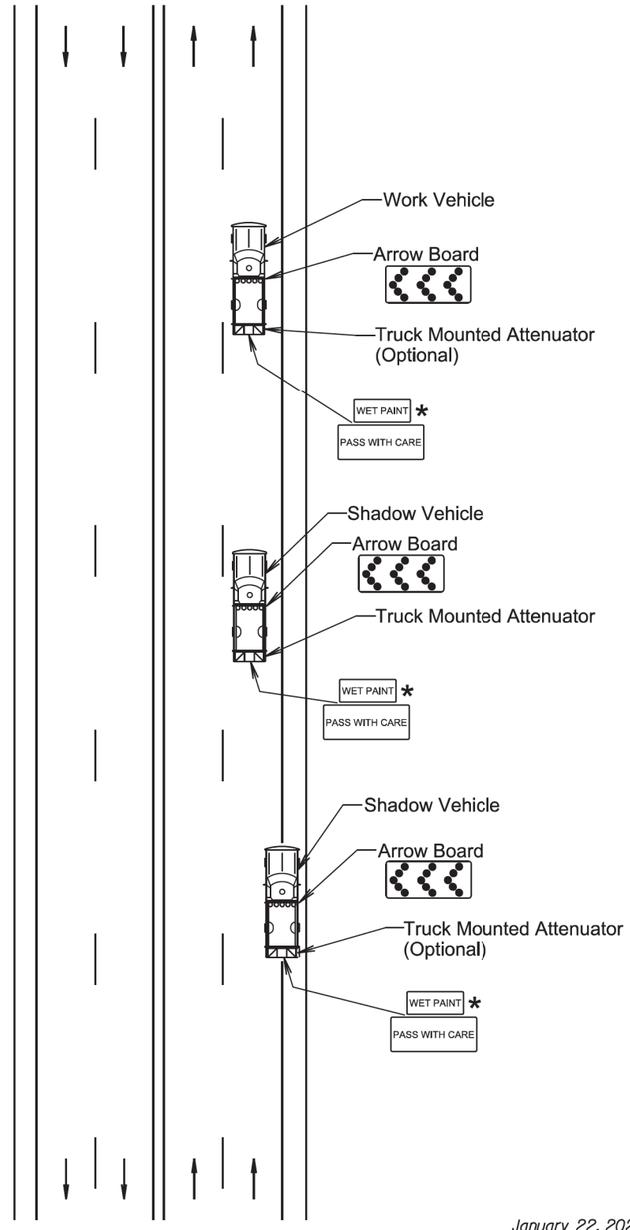
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

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

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

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	SDDOT	MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS	PLATE NUMBER 634.08
			Sheet 1 of 1

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

Flagger

Channelizing Device

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

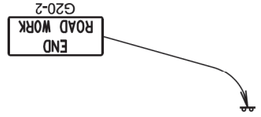
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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

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

The channelizing devices will be drums or 42" cones.

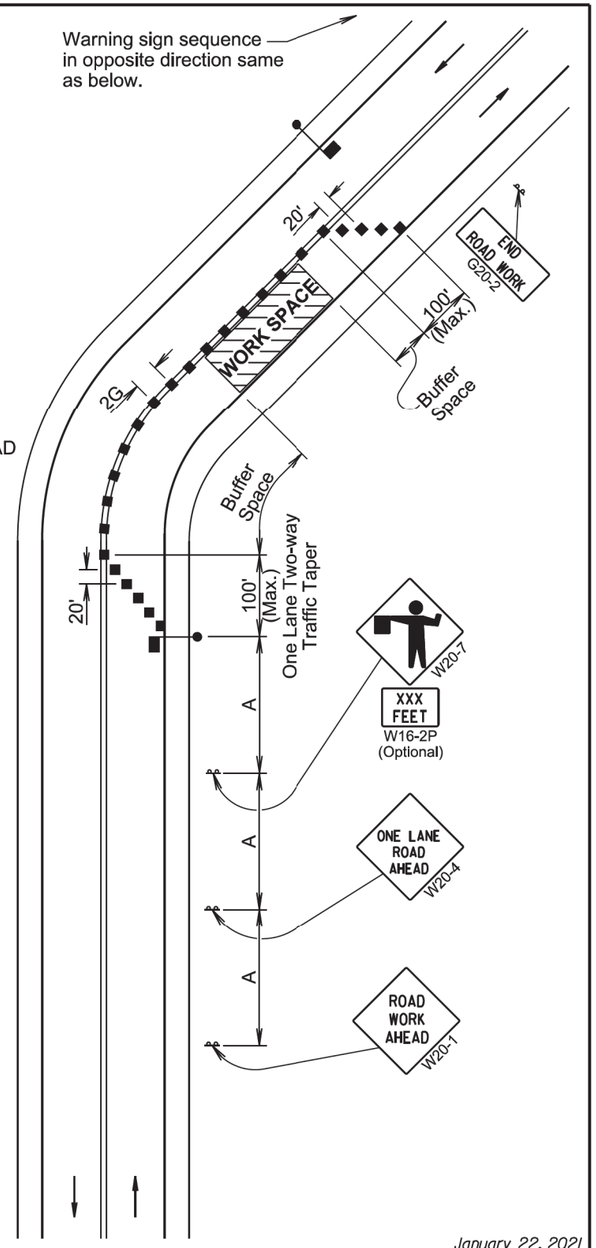
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



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

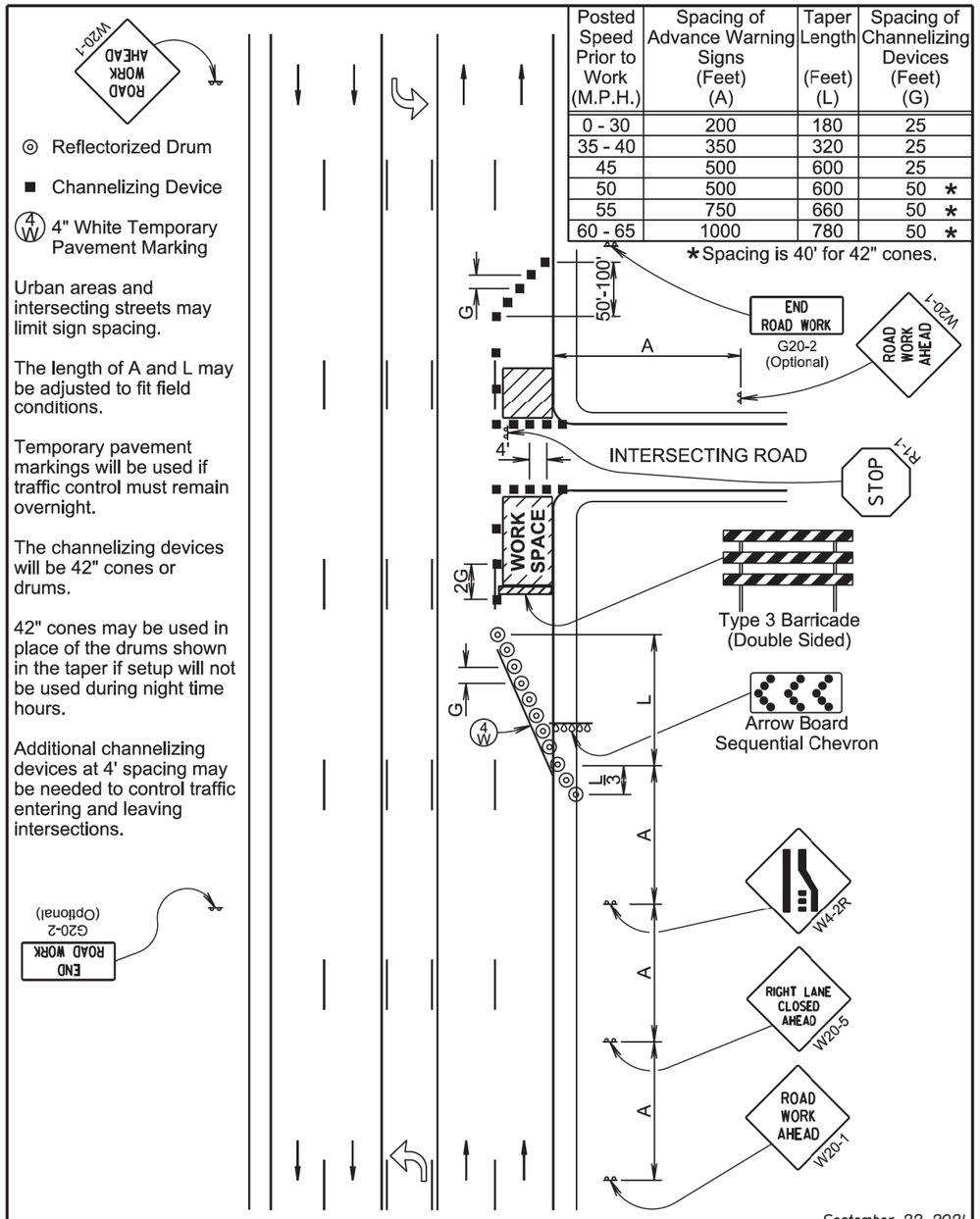
The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

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



January 22, 2021

Published Date: 2025	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1



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

*Spacing is 40' for 42" cones.

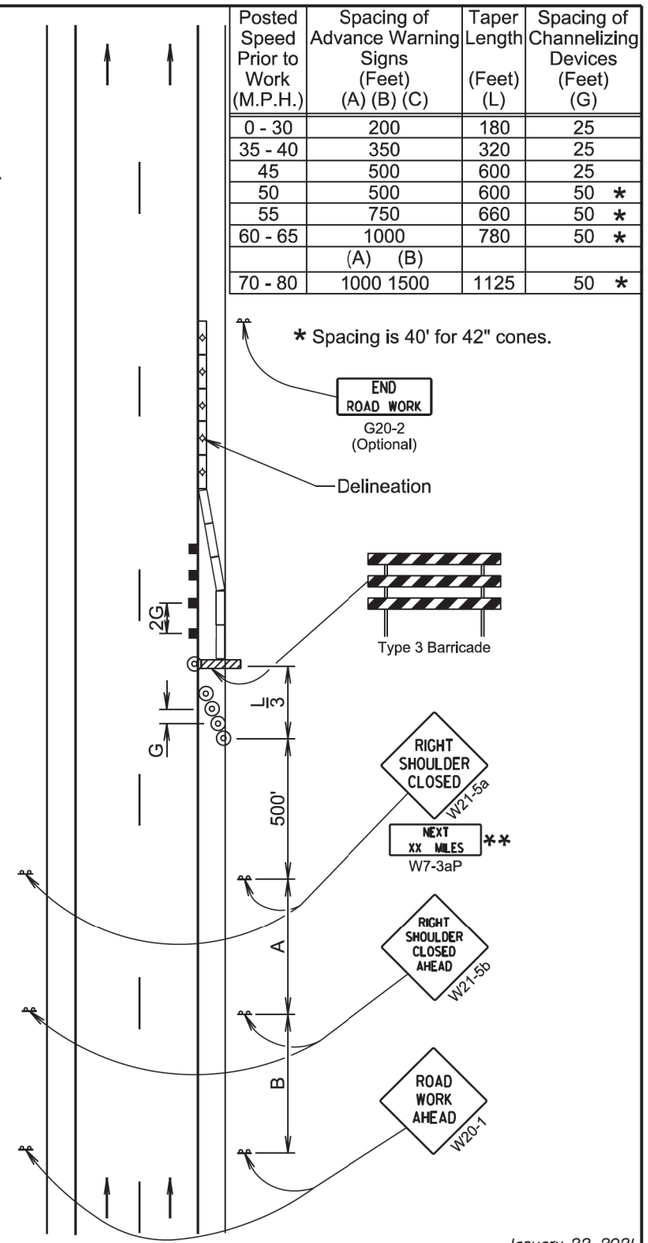
September 22, 2021

Published Date: 2025	SDDOT	5-LANE, OUTSIDE LANE CLOSED	PLATE NUMBER 634.60 Sheet 1 of 1

Reflectorized Drum
Channelizing Device
Movable Concrete Barrier
** For distances ½ mile or greater.

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

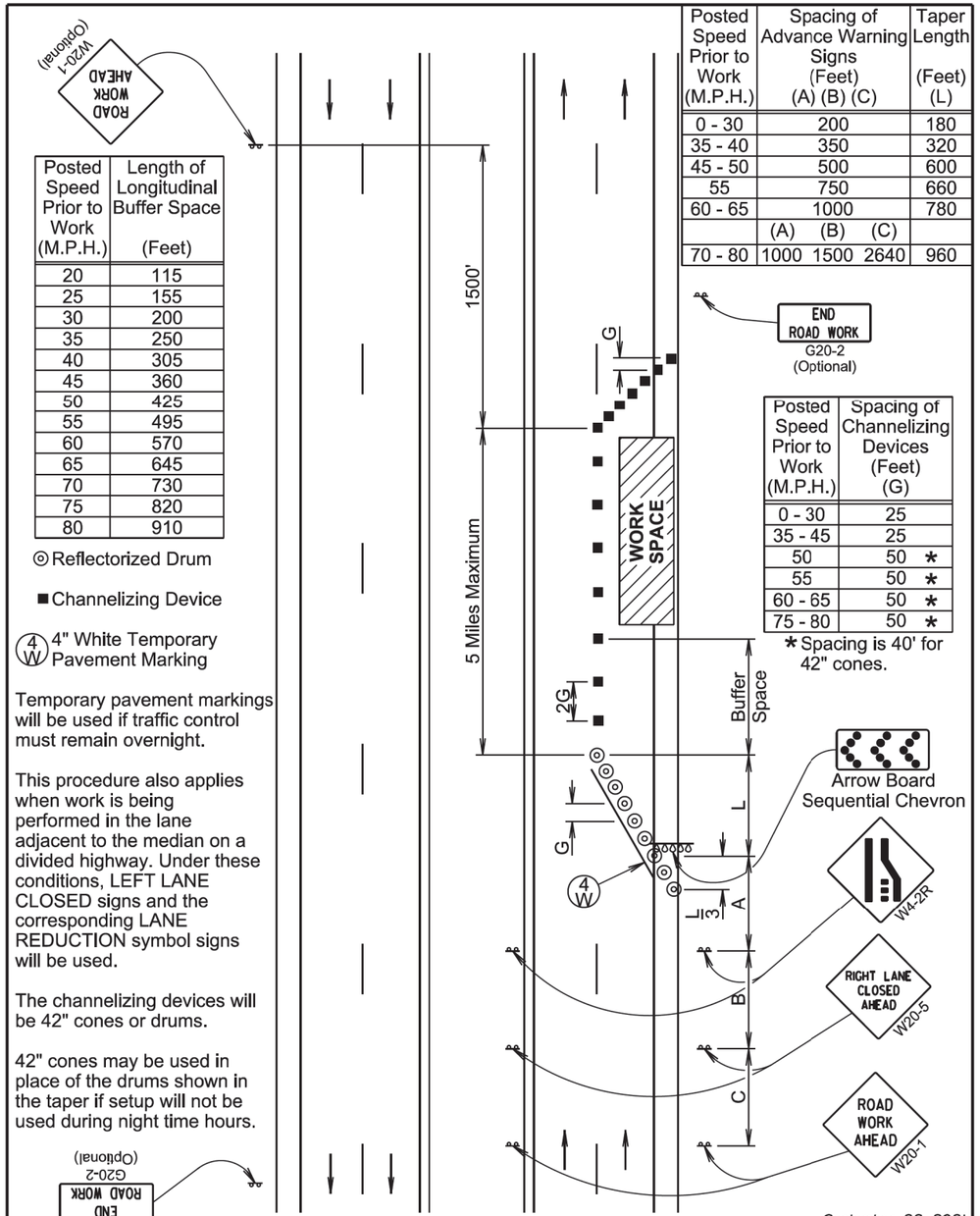
This standard plate shows one method which may be used to close a shoulder of a roadway for a long term project. The Engineer will determine if the use of barriers is required. If barriers are required, the layout details will be included elsewhere in the plans.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *
	(A) (B)		
70 - 80	1000 1500	1125	50 *

January 22, 2021

Published Date: 2025	SDDOT	SHOULDER CLOSED	PLATE NUMBER 634.61 Sheet 1 of 1



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

◎ Reflectorized Drum

■ Channelizing Device

(4 W) 4" White Temporary Pavement Marking

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

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

The channelizing devices will be 42" cones or drums.

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

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780
	(A) (B) (C)	
70 - 80	1000 1500 2640	960

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 65	50 *
75 - 80	50 *

* Spacing is 40' for 42" cones.

September 22, 2021

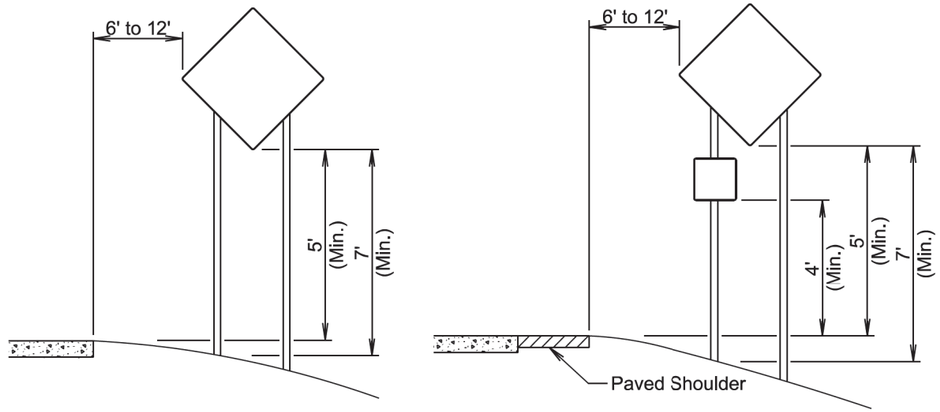
Published Date: 2025

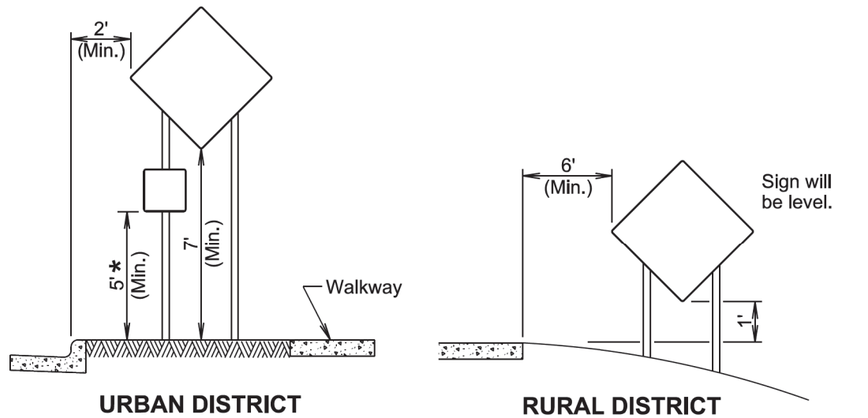
SDDOT

LANE CLOSURE WITHOUT BARRIER

PLATE NUMBER 634.64

Sheet 1 of 1





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

January 22, 2021

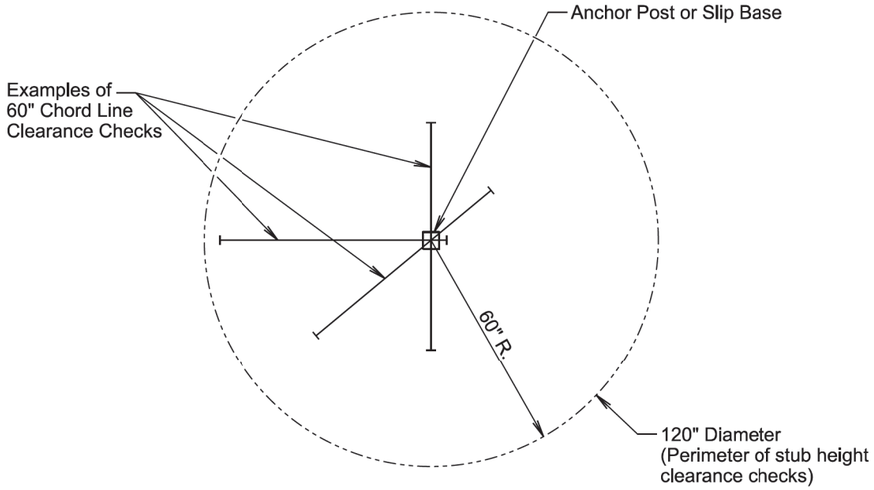
Published Date: 2025

SDDOT

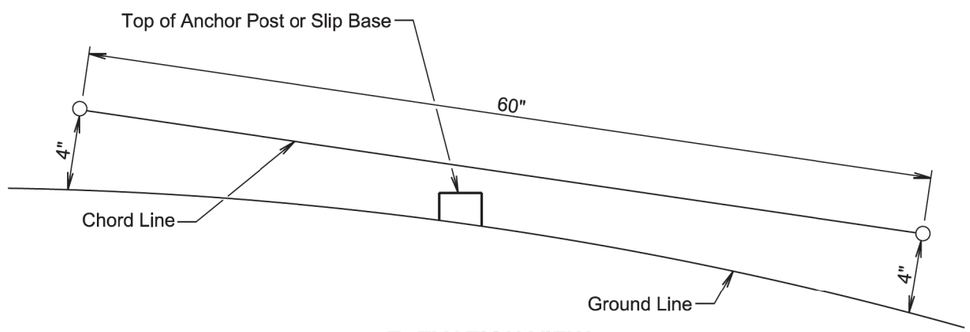
CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)

PLATE NUMBER 634.85

Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases 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

Published Date: 2025	SDDOT	***BREAKAWAY SUPPORT STUB CLEARANCE***	*PLATE NUMBER* 634.99
			Sheet 1 of 1

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	4	36"	7.5	30.0
W3-4	BE PREPARED TO STOP	4	48" x 48"	16.0	64.0
W4-2R	LEFT or RIGHT LANE ENDS (symbol)	6	48" x 48"	16.0	96.0
W8-1	BUMP	4	48" x 48"	16.0	64.0
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-17	SHOULDER DROP-OFF (symbol)	10	48" x 48"	16.0	160.0
W8-17P	SHOULDER DROP-OFF	10	48" x 48"	16.0	160.0
W20-1	ROAD WORK AHEAD	10	48" x 48"	16.0	160.0
W20-4	ONE LANE ROAD AHEAD	10	48" x 48"	16.0	160.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	6	48" x 48"	16.0	96.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
W21-5	SHOULDER WORK	10	48" x 48"	16.0	160.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	6	48" x 48"	16.0	96.0
W21-5b	LEFT or RIGHT SHOULDER CLOSED AHEAD	6	48" x 48"	16.0	96.0
G20-1	ROAD WORK NEXT 6 MILES	2	48" x 24"	8.0	16.0
G20-1	ROAD WORK NEXT 14 MILES	2	48" x 24"	8.0	16.0
G20-1	ROAD WORK NEXT 13 MILES	1	48" x 24"	8.0	8.0
G20-1	ROAD WORK NEXT 1 MILE	1	48" x 24"	8.0	8.0
G20-1	ROAD WORK NEXT 2 MILES	1	48" x 24"	8.0	8.0
G20-1	ROAD WORK NEXT 9 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	4	48" x 24"	8.0	32.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			1566.0

HORIZONTAL ALIGNMENT DATA

High Tension Cable Guardrail - West of Waubay

Type	Station			Northing	Easting
POB	b-5+99.72			561024.217	2655904.049
		TL= 2519.99	N 88°32'47" E		
POE	b19+20.26			561088.143	2658423.225

MGS Guardrail System- Str. No. 55-085-429

Type	Station			Northing	Easting
POB	b718+56.65			554202.746	2415141.075
		TL= 1000.48	S 54°04'19" E		
POE	b728+57.13			553615.695	2727219.788

CONTROL DATA

HORIZONTAL AND VERTICAL CONTROL POINTS

POINT	HWY	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
13227	US 12	-	-	Refmrk (Rebar by fence corner)	555002.0446	2725134.9341	1971.20

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone NAD 83(2011); epoch 2010.00; Geoid 12B; SF = 0.9999029658
The elevations shown on this sheet are based on NAVD 88.

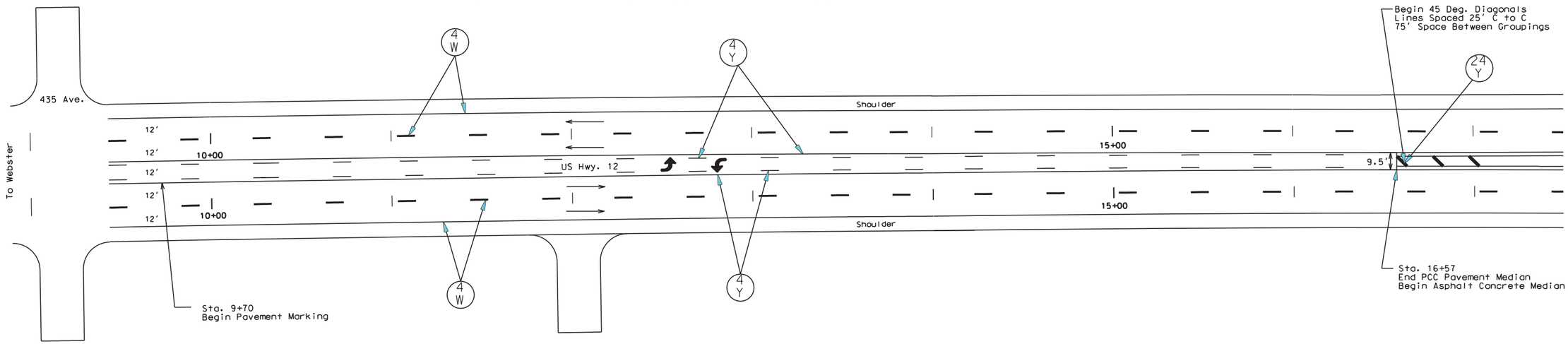
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	78	140
Plotting Date: 10/31/2024			

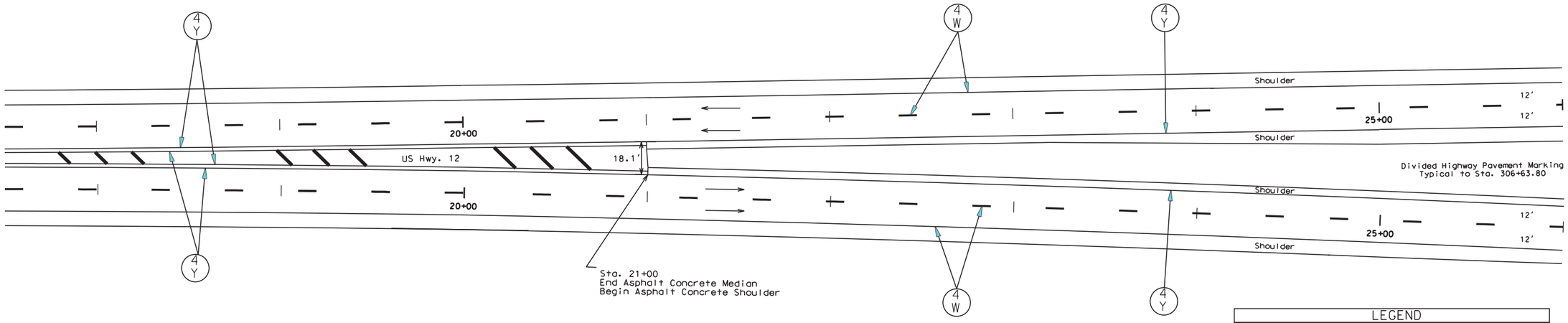
PAVEMENT MARKING LAYOUT

US 12 – EAST OF WEBSTER

24" Cold Applied Plastic Pavement Marking tape will be applied for goring details.
Preformed Thermoplastic Pavement Markings will be used for turn lane arrows on the new and existing pavement.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines
and yellow center turn lane lines (solid/skips) on the new and existing pavement.





ESTIMATE OF QUANTITIES - Hwy 12 (East of Webster)			
KEY	ITEM	EST QUANT	UNIT
(24 Y)	Cold Applied Plastic Pavement Marking, 24" Yellow	141	FT
↰	Preformed Thermoplastic Pavement Marking, Arrow (Left - 2, Right - 0)	2	EACH
	Grooving For Cold Applied Plastic Pavement Marking, 24"	141	FT
	Surface Preparation For Preformed Thermoplastic Pavement Marking, Arrow (Left - 2, Right - 0)	2	EACH

LEGEND
(4 W) Durable Pavement Marking, 4'' White
(4 Y) Durable Pavement Marking, 4'' Yellow
(24 Y) Cold Applied Plastic Pavement Marking, 24'' Yellow
↰ Preformed Thermoplastic Pavement Marking, Arrow

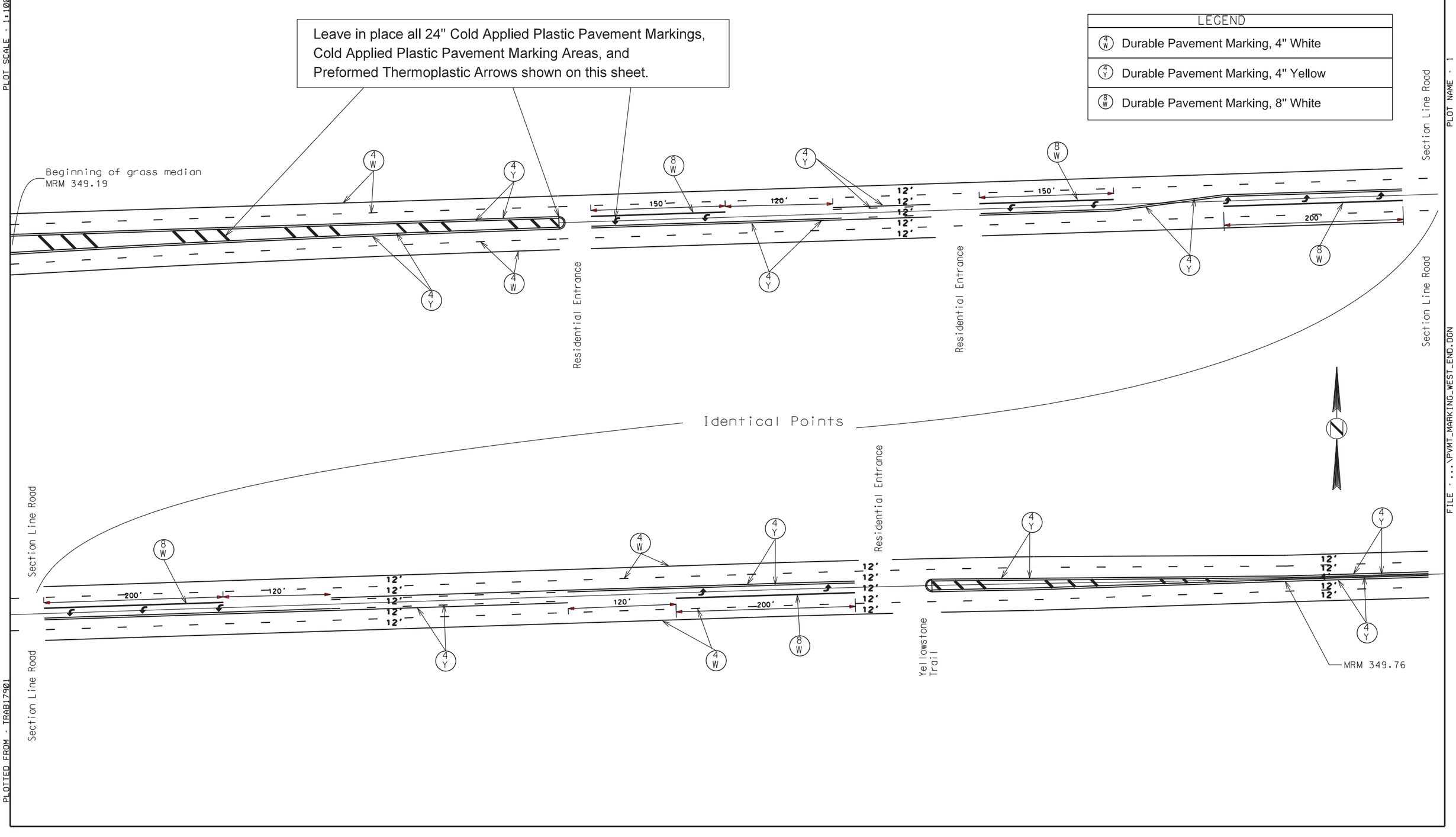
PLOT SCALE - 1:59.3102
PLOTTED FROM - TRAB17901
PLOT NAME - 1
FILE - ...\PAVEMENT MARKING LAYOUT.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	79	140
Plotting Date: 10/31/2024			

DURABLE PAVEMENT MARKING LAYOUT AT WEST END OF RUSH LAKE

Leave in place all 24" Cold Applied Plastic Pavement Markings, Cold Applied Plastic Pavement Marking Areas, and Preformed Thermoplastic Arrows shown on this sheet.

LEGEND	
(4 W)	Durable Pavement Marking, 4" White
(4 Y)	Durable Pavement Marking, 4" Yellow
(8 W)	Durable Pavement Marking, 8" White



PLOT SCALE - 1:100

PLOT NAME - 1

FILE -...\PVMT_MARKING_WEST_END.DGN

PLOTTED FROM - TRAB17301

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	80	140
Plotting Date: 10/31/2024			

PAVEMENT MARKING LAYOUT

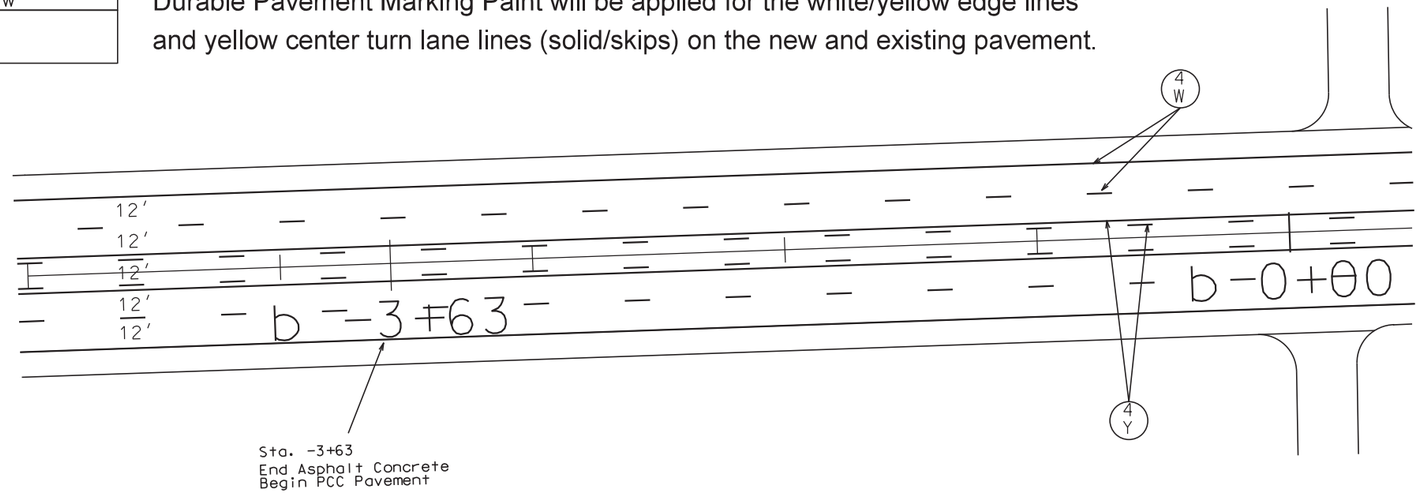
US 12 – WEST OF WAUBAY

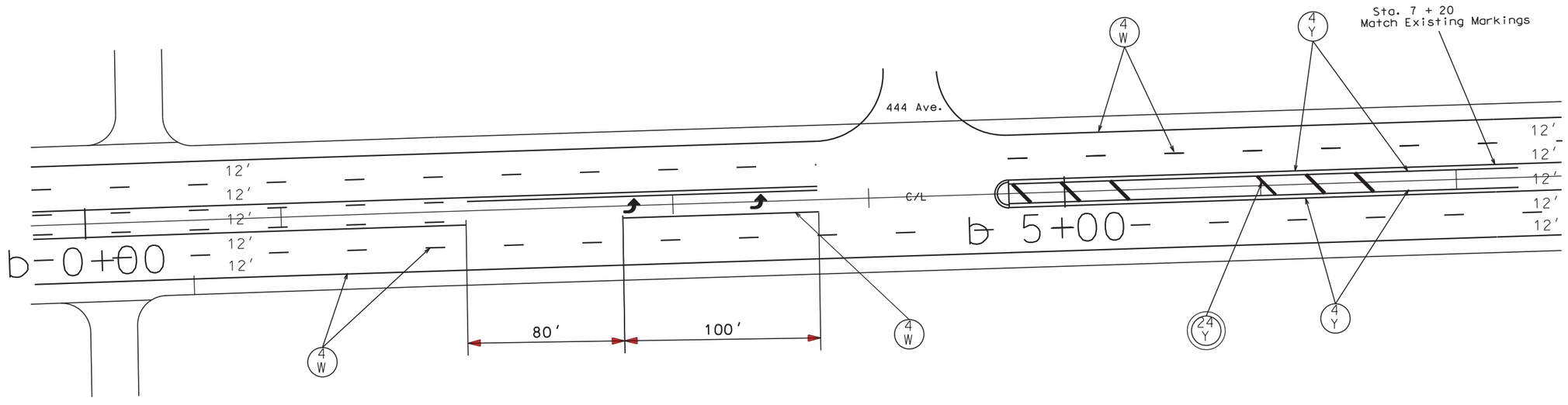
Sheet 1 of 6 (Waubay)

LEGEND
(4 W) Durable Pavement Marking, 4'' White
(4 Y) Durable Pavement Marking, 4'' Yellow
(24 Y) Preformed Thermoplastic Pavement Marking, 24'' Yellow
Preformed Thermoplastic Pavement Marking, Arrow

24" Preformed Thermoplastic Pavement Markings will be applied for goring details. (on PCCP)
Preformed Thermoplastic Pavement Markings will be used for turn lane arrows on existing pavement.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines and yellow center turn lane lines (solid/skips) on the new and existing pavement.





PLOT SCALE - 1:60

PLOTTED FROM - TRAB17901

PLOT NAME - 1

FILE - ...\5865_PAVEMENT_MARKING_LAYOUT.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	81	140
Plotting Date: 12/10/2024			

PAVEMENT MARKING LAYOUT

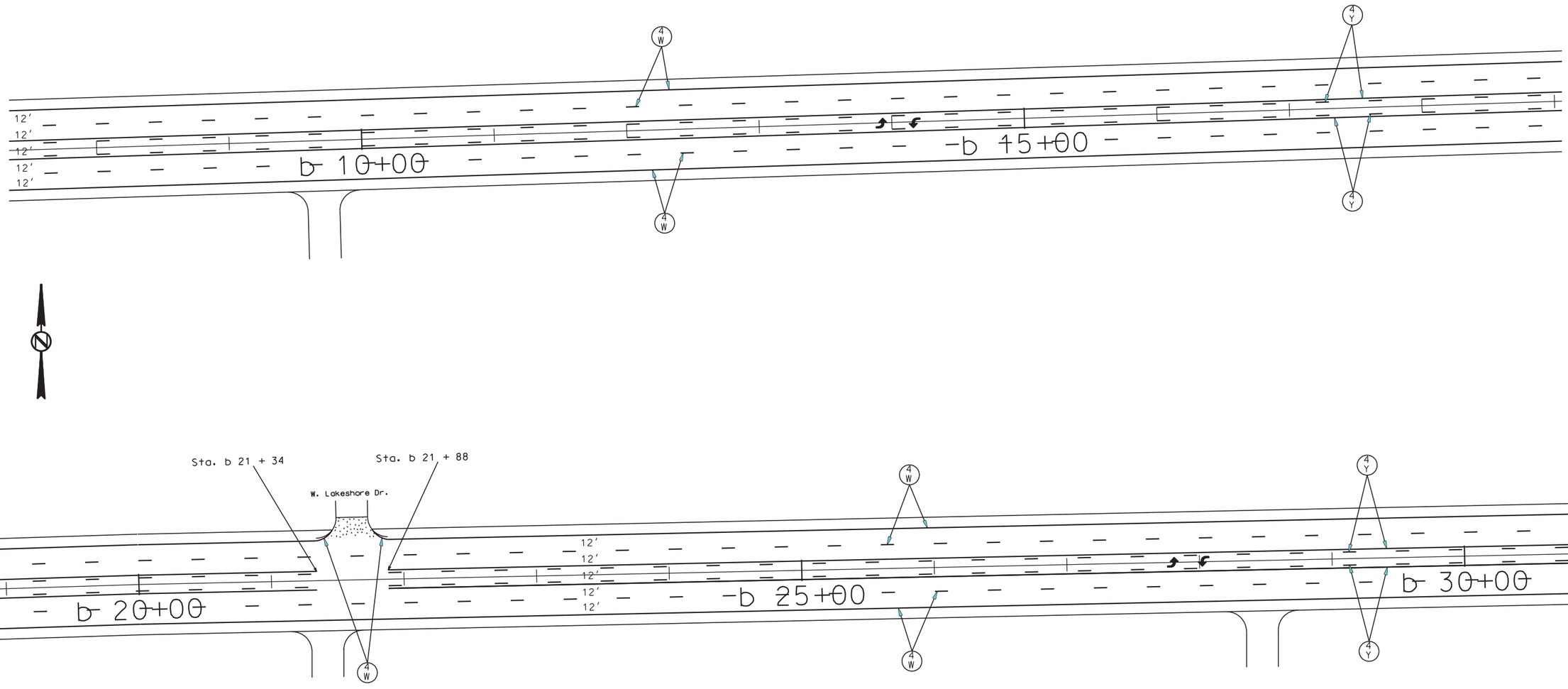
US 12 – WAUBAY

Sheet 2 of 6 (Waubay)

LEGEND
(4 W) Durable Pavement Marking, 4" White
(4 Y) Durable Pavement Marking, 4" Yellow
Preformed Thermoplastic Pavement Marking, Arrow

24" Cold Applied Plastic Pavement Marking tape will be applied for goring details.
Preformed Thermoplastic Pavement Markings will be used for turn lane arrows on the existing pavement.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines
and yellow center turn lane lines (solid/skips) on the existing pavement.



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	82	140
Plotting Date: 12/10/2024			

PAVEMENT MARKING LAYOUT

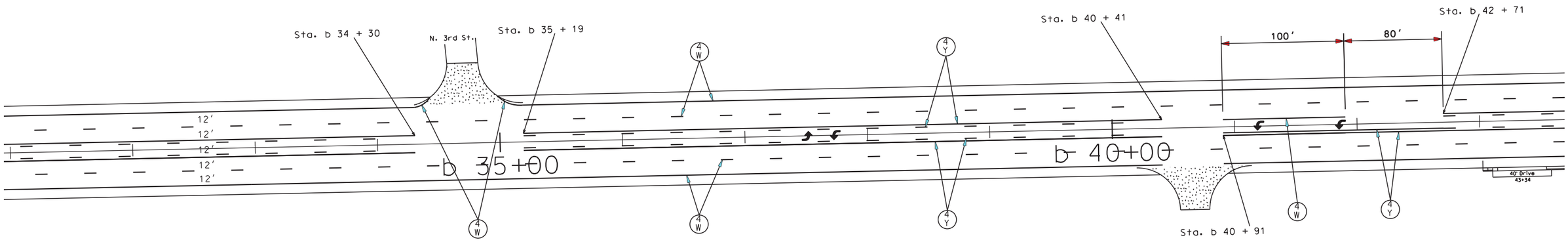
US 12 – WAUBAY

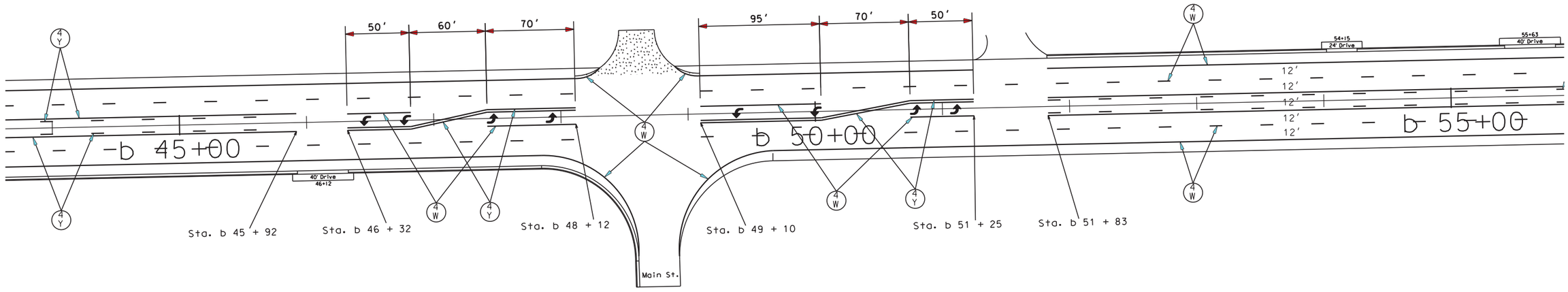
Sheet 3 of 6 (Waubay)

LEGEND
(4 W) Durable Pavement Marking, 4" White
(4 Y) Durable Pavement Marking, 4" Yellow
Preformed Thermoplastic Pavement Marking, Arrow

24" Cold Applied Plastic Pavement Marking tape will be applied for goring details.
Preformed Thermoplastic Pavement Markings will be used for turn lane arrows on the existing pavement.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines
and yellow center turn lane lines (solid/skips) on the existing pavement.





PLOT SCALE - 1:81.0553

PLOTTED FROM - TRAB17901

PLOT NAME - 8

FILE - ...\PAVEMENT MARKING.PRINTFILE.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	83	140
Plotting Date: 12/10/2024			

PAVEMENT MARKING LAYOUT

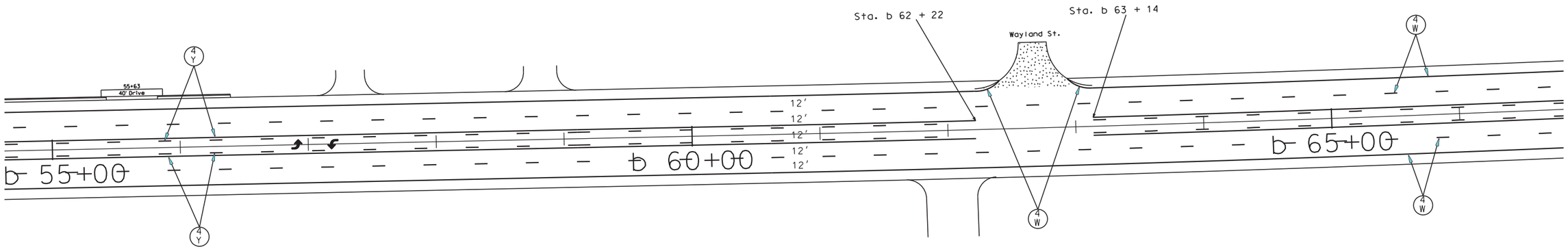
US 12 – WAUBAY

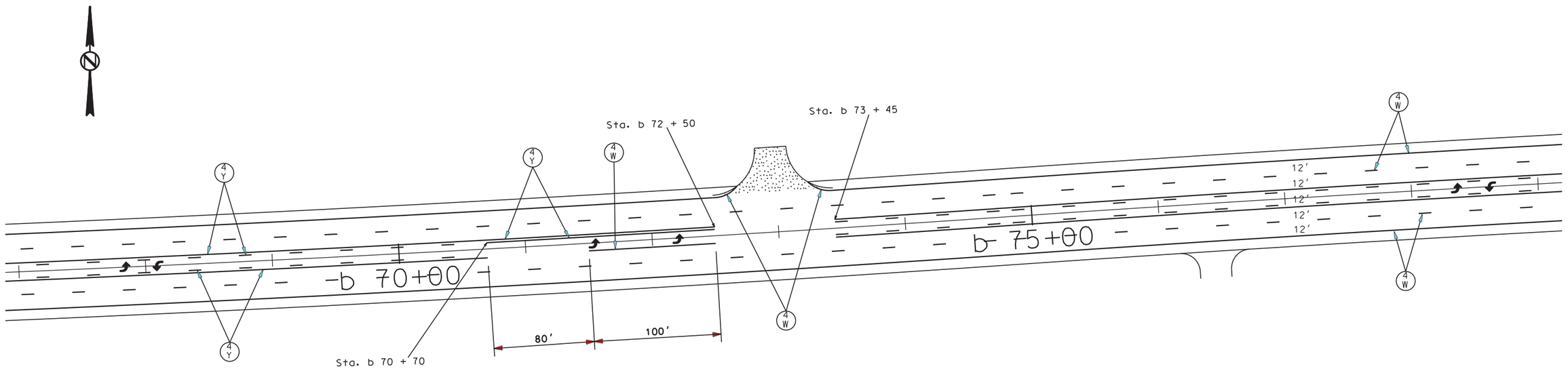
Sheet 4 of 6 (Waubay)

LEGEND
(4 W) Durable Pavement Marking, 4" White
(4 Y) Durable Pavement Marking, 4" Yellow
Preformed Thermoplastic Pavement Marking, Arrow

24" Cold Applied Plastic Pavement Marking tape will be applied for goring details.
Preformed Thermoplastic Pavement Markings will be used for turn lane arrows on the existing pavement.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines
and yellow center turn lane lines (solid/skips) on the existing pavement.





PLOT SCALE - 1:81.0553

PLOTTED FROM - TRAB17901

PLOT NAME - 9

FILE - ...\PAVEMENT MARKING.PRINTFILE.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	84	140
Plotting Date: 12/10/2024			

PAVEMENT MARKING LAYOUT

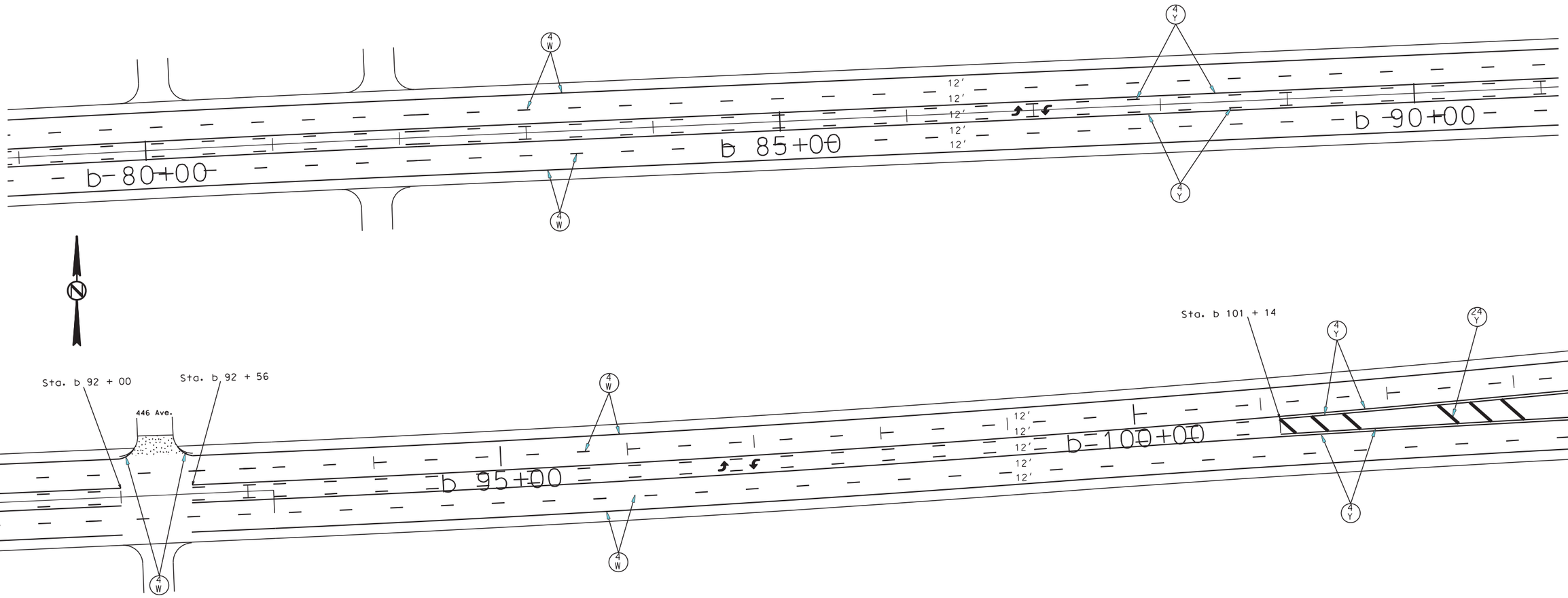
US 12 – EAST OF WAUBAY

Sheet 5 of 6 (Waubay)

LEGEND
(4 W) Durable Pavement Marking, 4" White
(4 Y) Durable Pavement Marking, 4" Yellow
(24 Y) Cold Applied Plastic Pavement Marking, 24" Yellow
Preformed Thermoplastic Pavement Marking, Arrow

24" Cold Applied Plastic Pavement Marking tape will be applied for goring details.
Preformed Thermoplastic Pavement Markings will be used for turn lane arrows on the existing pavement.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines
and yellow center turn lane lines (solid/skips) on the existing pavement.



PLOT SCALE - 1:81.0553
PLOTTED FROM - TRAB17901
PLOT NAME - 10
FILE - ...\PAVEMENT MARKING.PRINTFILE.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	85	140
Plotting Date: 12/10/2024			

PAVEMENT MARKING LAYOUT

US 12 – EAST OF WAUBAY

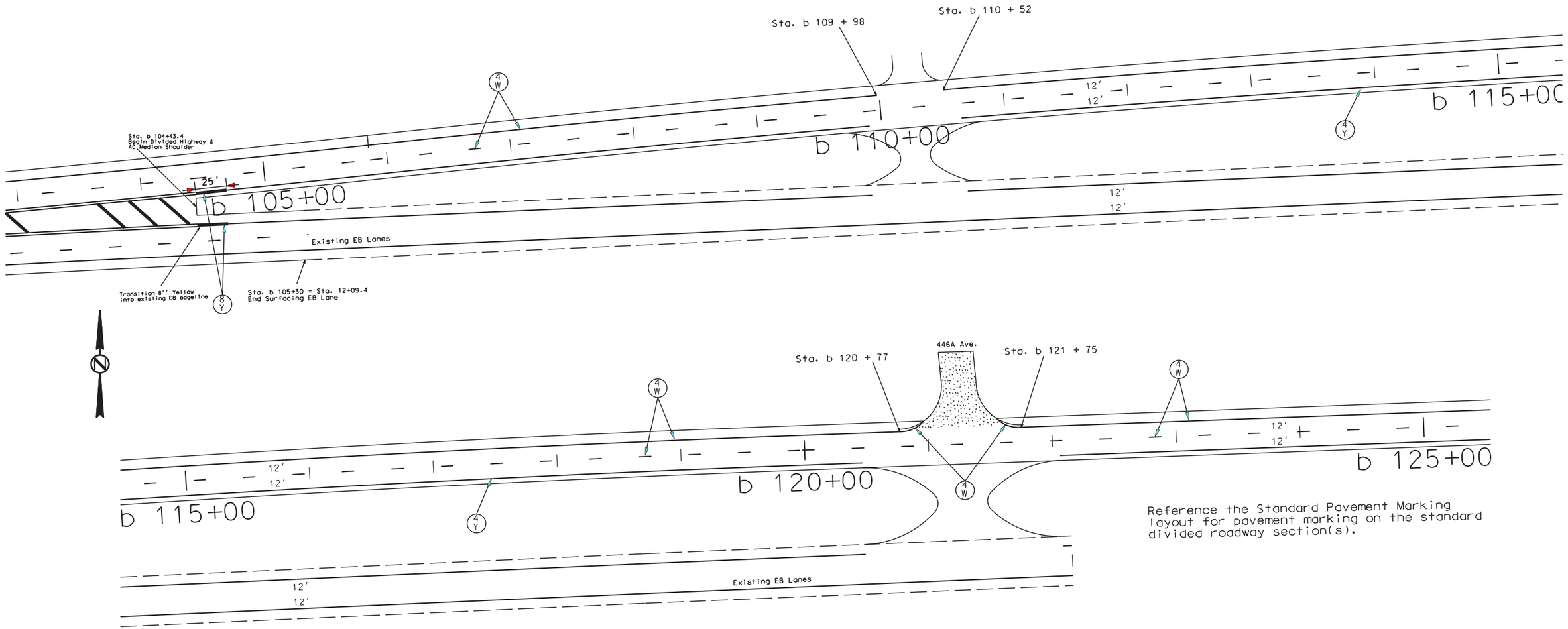
Sheet 6 of 6 (Waubay)

LEGEND
(4 W) Durable Pavement Marking, 4" White
(4 Y) Durable Pavement Marking, 4" Yellow
(24 Y) Cold Applied Plastic Pavement Marking, 24" Yellow

24" Cold Applied Plastic Pavement Marking tape will be applied for goring details.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines and yellow center turn lane lines (solid/skips) on the existing pavement.

ESTIMATE OF QUANTITIES - Hwy 12 (Waubay)			
KEY	ITEM	EST QUANT	UNIT
(24 Y)	Cold Applied Plastic Pavement Marking, 24" Yellow	215	FT
(24 Y)	Preformed Thermoplastic Pavement Marking, 24" Yellow	85	FT
	Preformed Thermoplastic Pavement Marking, Arrow (Left - 28)	28	EACH
	Grooving For Cold Applied Plastic Pavement Marking, 24"	215	FT
	Surface Preparation For Preformed Thermoplastic Pavement Marking, Arrow (Left - 28)	28	EACH
	Surface Preparation For Preformed Thermoplastic Pavement Marking	85	FT



Reference the Standard Pavement Marking layout for pavement marking on the standard divided roadway section(s).

PLOT SCALE - 1:81.0553

PLOTTED FROM - TRAB17901

PLOT NAME - 11

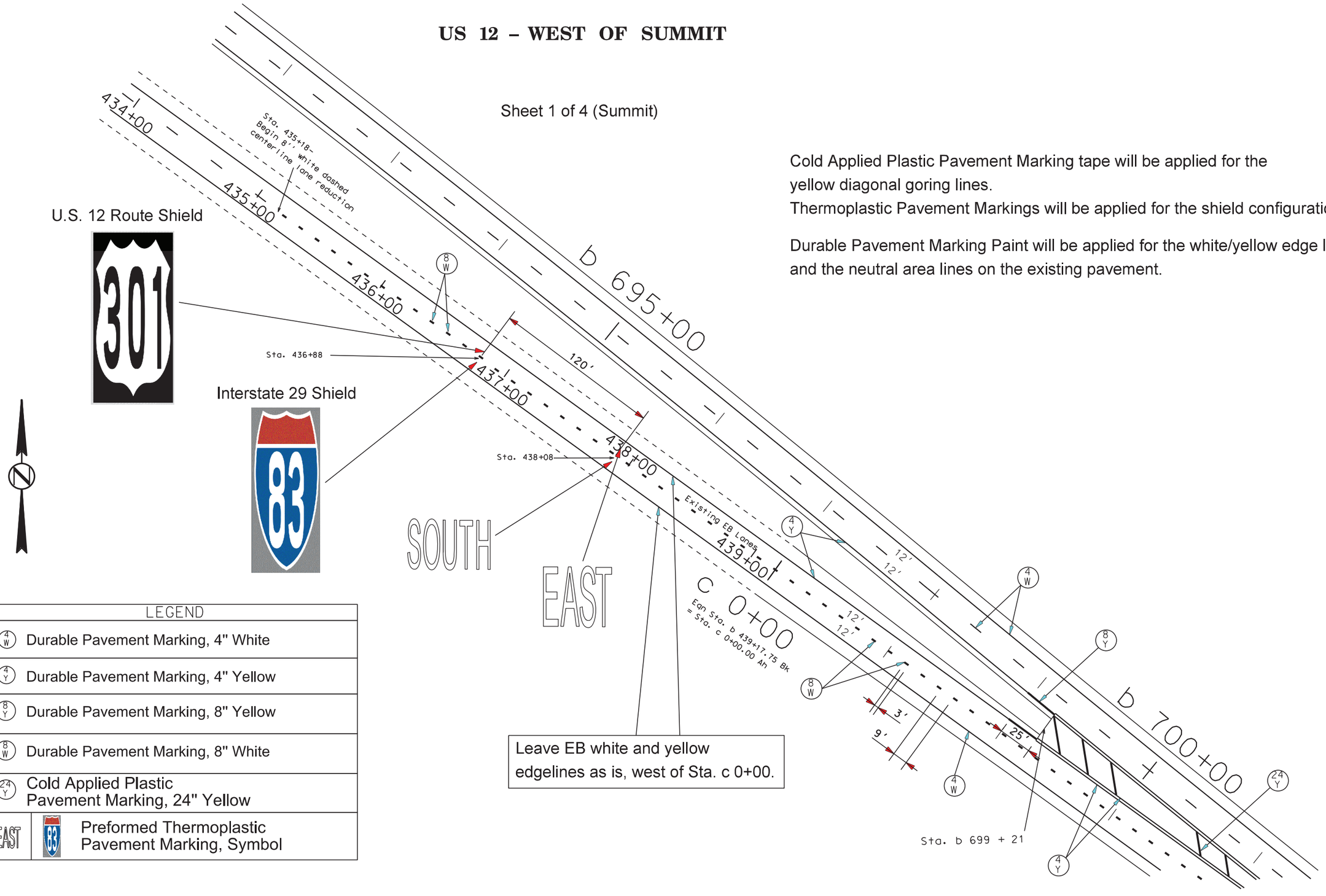
FILE - ...\PAVEMENT MARKING.PRINTFILE.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	86	140
Plotting Date: 12/10/2024			

PAVEMENT MARKING LAYOUT

US 12 – WEST OF SUMMIT

Sheet 1 of 4 (Summit)



Cold Applied Plastic Pavement Marking tape will be applied for the yellow diagonal goring lines.
Thermoplastic Pavement Markings will be applied for the shield configurations.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines and the neutral area lines on the existing pavement.

LEGEND	
(4 W)	Durable Pavement Marking, 4" White
(4 Y)	Durable Pavement Marking, 4" Yellow
(8 Y)	Durable Pavement Marking, 8" Yellow
(8 W)	Durable Pavement Marking, 8" White
(24 Y)	Cold Applied Plastic Pavement Marking, 24" Yellow
EAST / 83	Preformed Thermoplastic Pavement Marking, Symbol

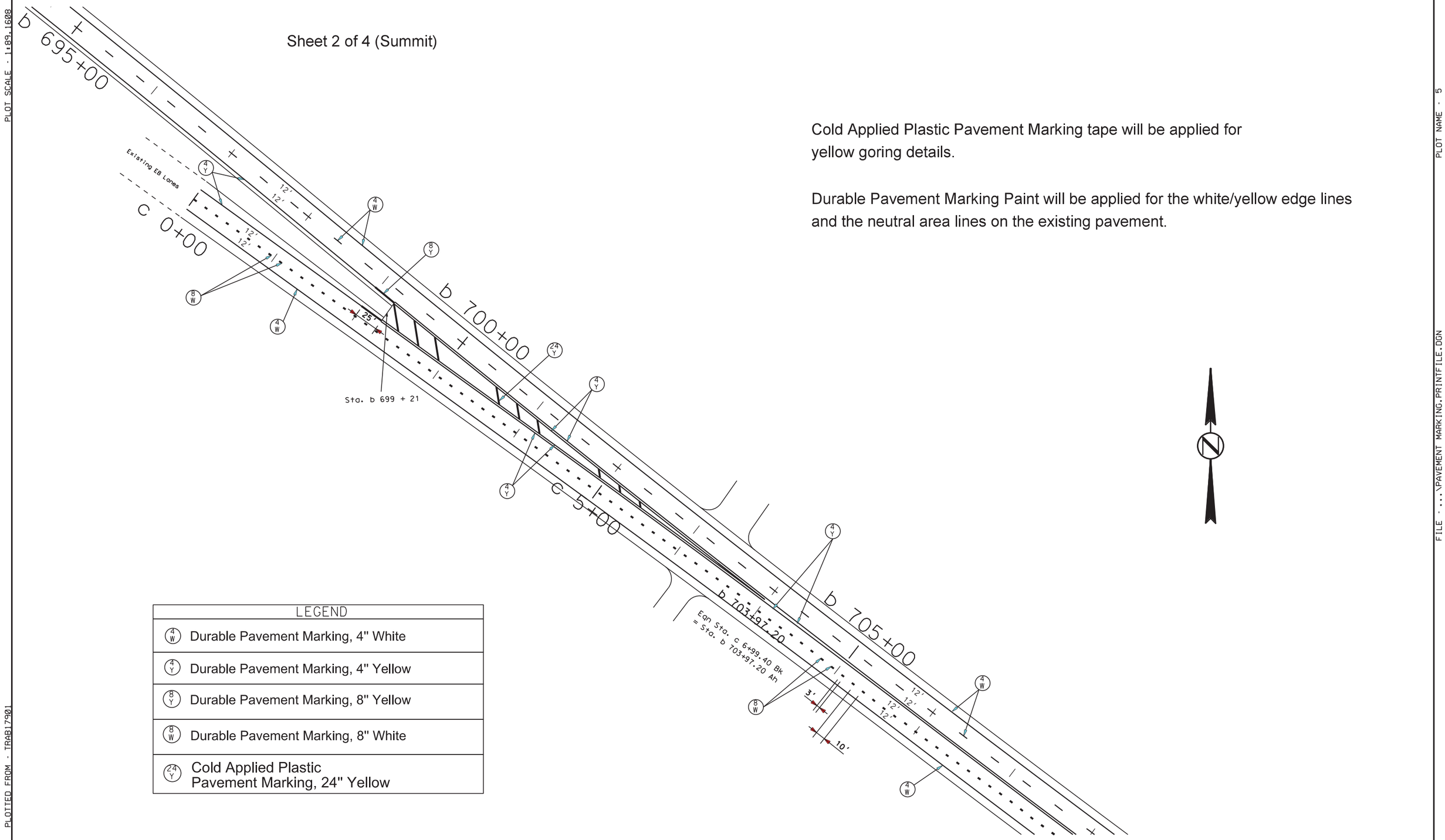
PLOT SCALE - 1:89.1608

PAVEMENT MARKING LAYOUT

US 12 – WEST OF SUMMIT

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	87	140
Plotting Date: 12/10/2024			

Sheet 2 of 4 (Summit)



Cold Applied Plastic Pavement Marking tape will be applied for yellow goring details.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines and the neutral area lines on the existing pavement.

LEGEND
(4 W) Durable Pavement Marking, 4" White
(4 Y) Durable Pavement Marking, 4" Yellow
(8 Y) Durable Pavement Marking, 8" Yellow
(8 W) Durable Pavement Marking, 8" White
(24 Y) Cold Applied Plastic Pavement Marking, 24" Yellow

PLOTTED FROM - TRAB17901
PLOT NAME - 5
FILE - ...\PAVEMENT MARKING.PRINTFILE.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	88	140
Plotting Date: 12/10/2024			

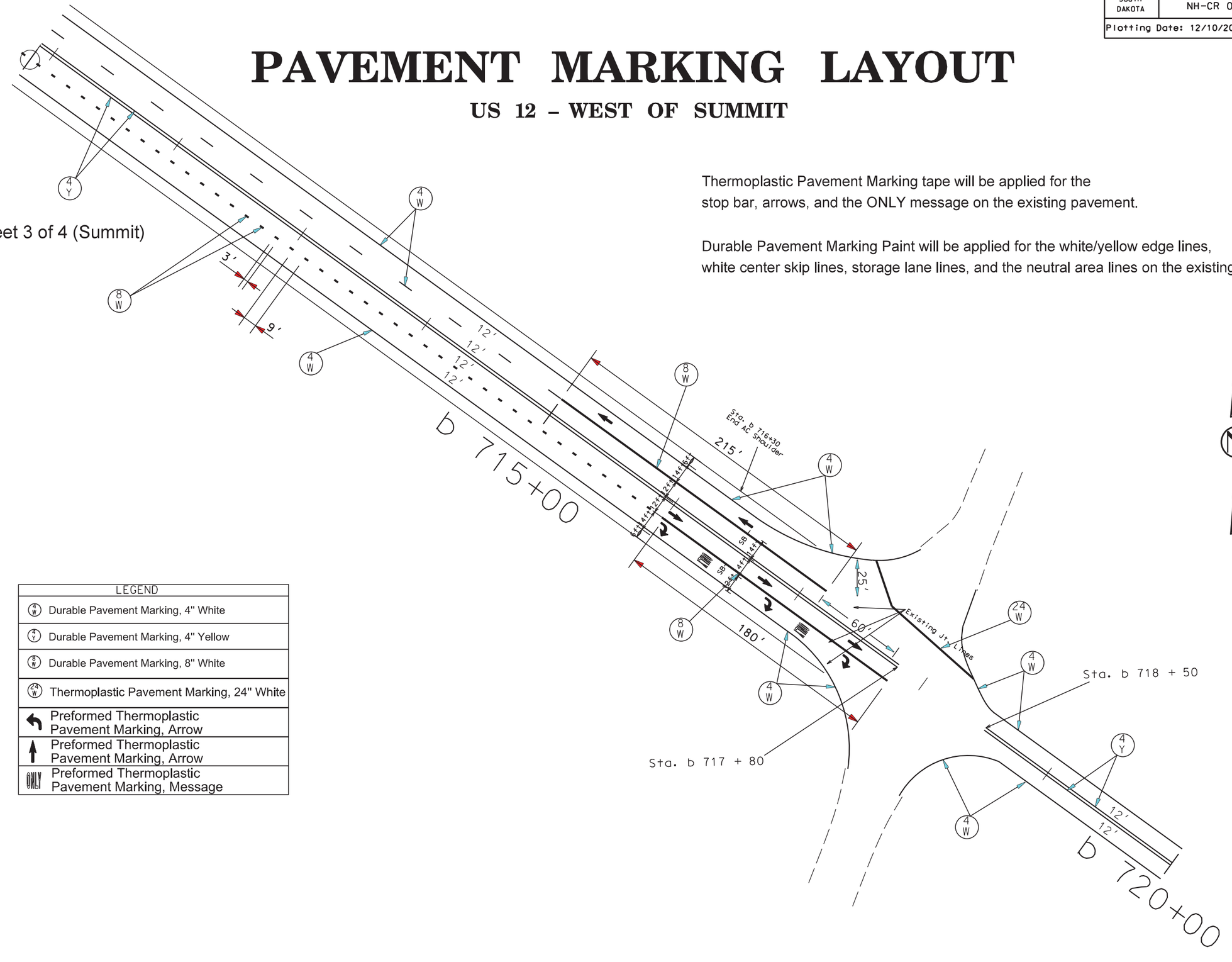
PAVEMENT MARKING LAYOUT

US 12 – WEST OF SUMMIT

Sheet 3 of 4 (Summit)

Thermoplastic Pavement Marking tape will be applied for the stop bar, arrows, and the ONLY message on the existing pavement.

Durable Pavement Marking Paint will be applied for the white/yellow edge lines, white center skip lines, storage lane lines, and the neutral area lines on the existing pavement.



LEGEND
(4 W) Durable Pavement Marking, 4" White
(4 Y) Durable Pavement Marking, 4" Yellow
(8 W) Durable Pavement Marking, 8" White
(24 W) Thermoplastic Pavement Marking, 24" White
Preformed Thermoplastic Pavement Marking, Arrow
Preformed Thermoplastic Pavement Marking, Arrow
ONLY Preformed Thermoplastic Pavement Marking, Message

PLOT SCALE - 1:62.1345

PLOT NAME - 2

FILE - ...\PAVEMENT MARKING.PRINTFILE.DGN

PLOTTED FROM - TRAB17901

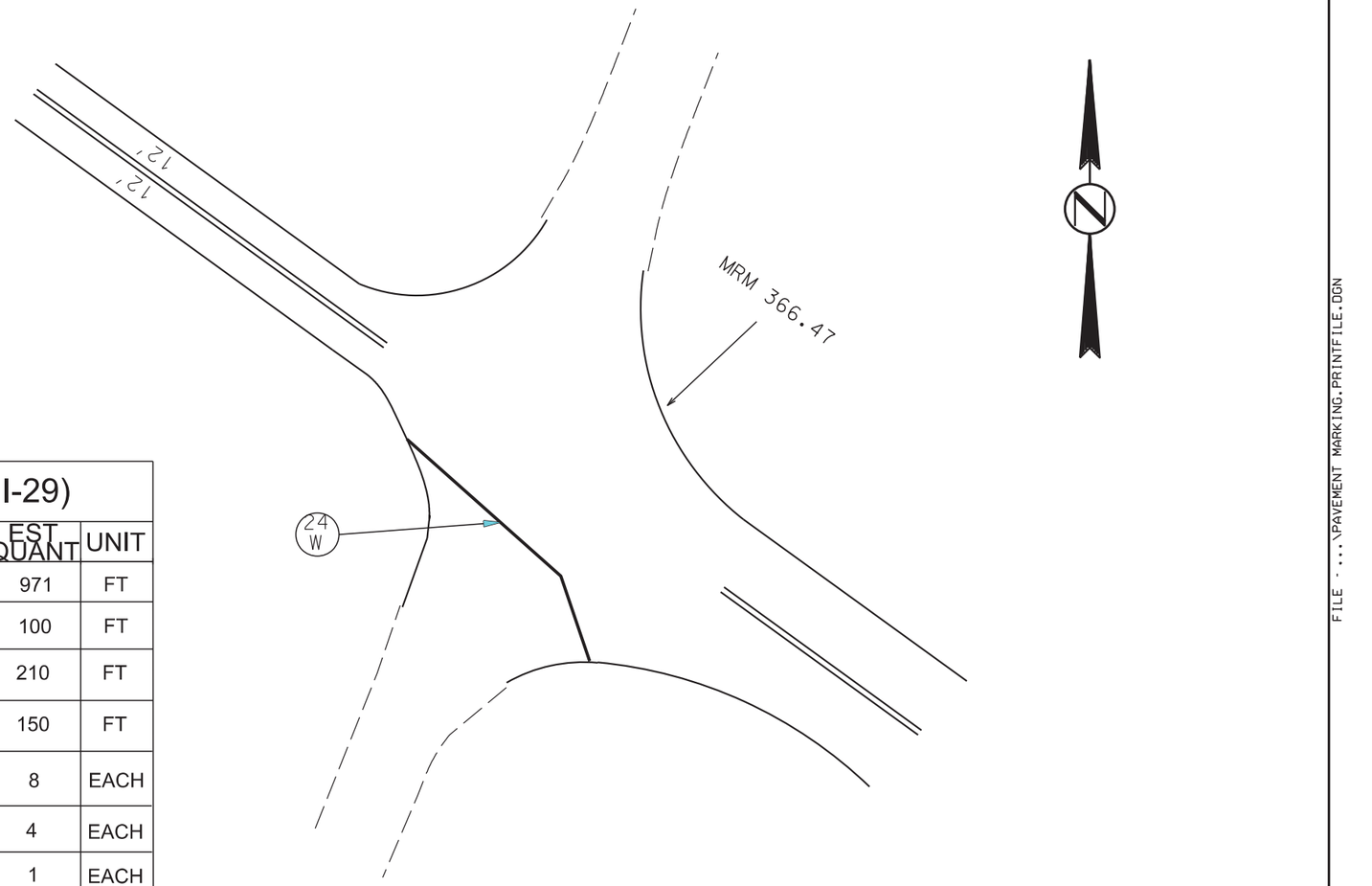
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	89	140
Plotting Date: 12/10/2024			

PAVEMENT MARKING LAYOUT

US 12 – WEST OF SUMMIT

Stop Bar for On/Off Ramp East of Str. 55–085–429

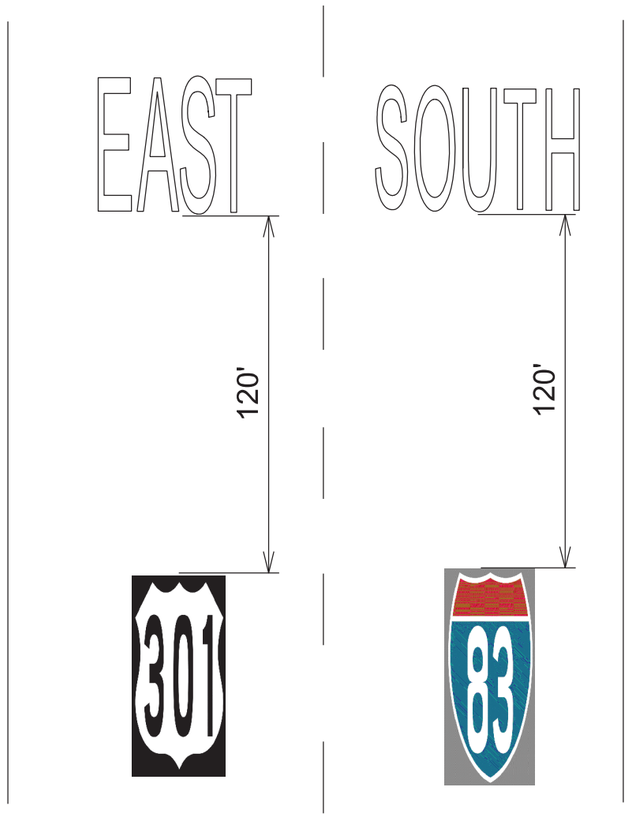
Sheet 4 of 4 (Summit)



ESTIMATE OF QUANTITIES - Hwy 12 (West of I-29)			
KEY	ITEM	EST QUANT	UNIT
8 W	Durable Pavement Marking, 8" White	971	FT
8 Y	Durable Pavement Marking, 8" Yellow	100	FT
24 W	Preformed Thermoplastic Pavement Marking, 24" White	210	FT
24 Y	Cold Applied Plastic Pavement Marking, 24" Yellow	150	FT
	Preformed Thermoplastic Pavement Marking, Arrow (3 Right Turn Arrows; 5 Forward Arrows)	8	EACH
EAST	Preformed Thermoplastic Pavement Marking, Symbol	4	EACH
ONLY	Preformed Thermoplastic Pavement Marking, Message	1	EACH
	Surface Preparation for Thermoplastic Pavement Pavement Marking	9	EACH
	Surface Preparation for Thermoplastic Pavement Pavement Marking	210	FT
	Grooving For Cold Applied Plastic Pavement Marking, 24"	150	FT
	Grooving For Cold Applied Plastic Pavement Marking, Symbol	4	EACH

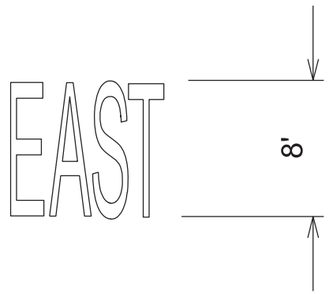
SHIELD PAVEMENT MARKING DETAIL

Marking Spacing



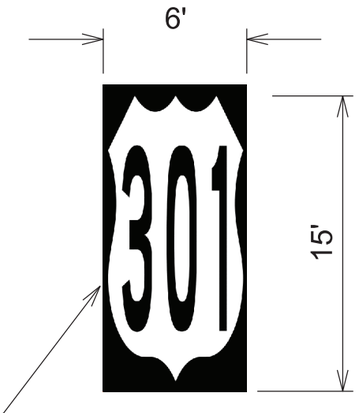
EB Lanes

Dimensions



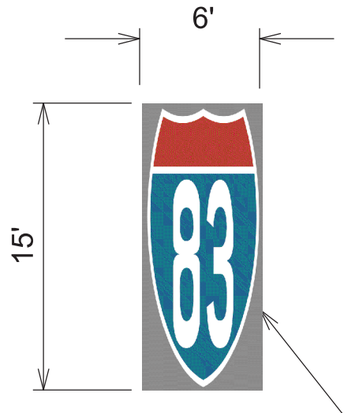
*NOTE: EAST and SOUTH will be in white, FHWA Standard font and spacing.

U..S. Route Shield on light pavement



Route Shield will read "12"
instead of the "301" as shown above.

Interstate Shield on light pavement



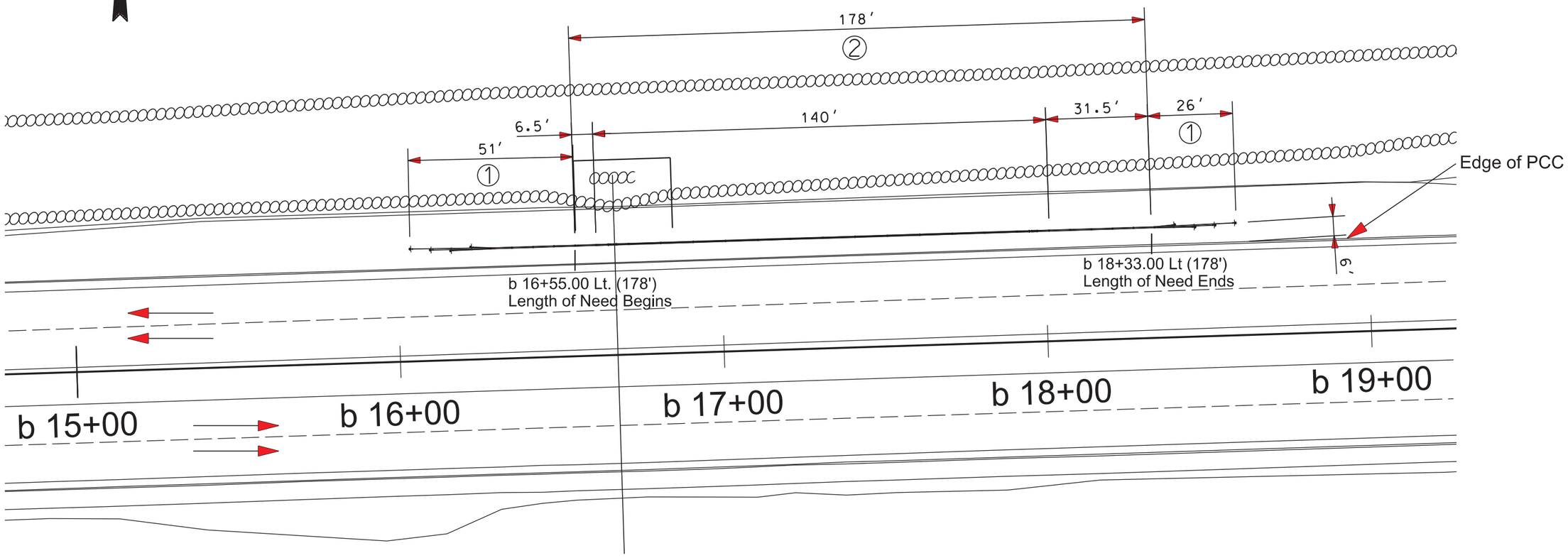
Interstate Shield will read "29" instead
of the "83" as shown above.

PLOT SCALE - 1:33.2189

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	91	140
Plotting Date: 10/02/2024			

GUARDRAIL LAYOUT

HWY 12
WEST OF WAUBAY



① High Tension Cable Guardrail Anchor Assembly

② High Tension 4 Cable Guardrail

PLOTTED FROM - TRAB1790I

PLOT NAME - 1

FILE -...\HIGH TENSION GUARDRAIL.DGN

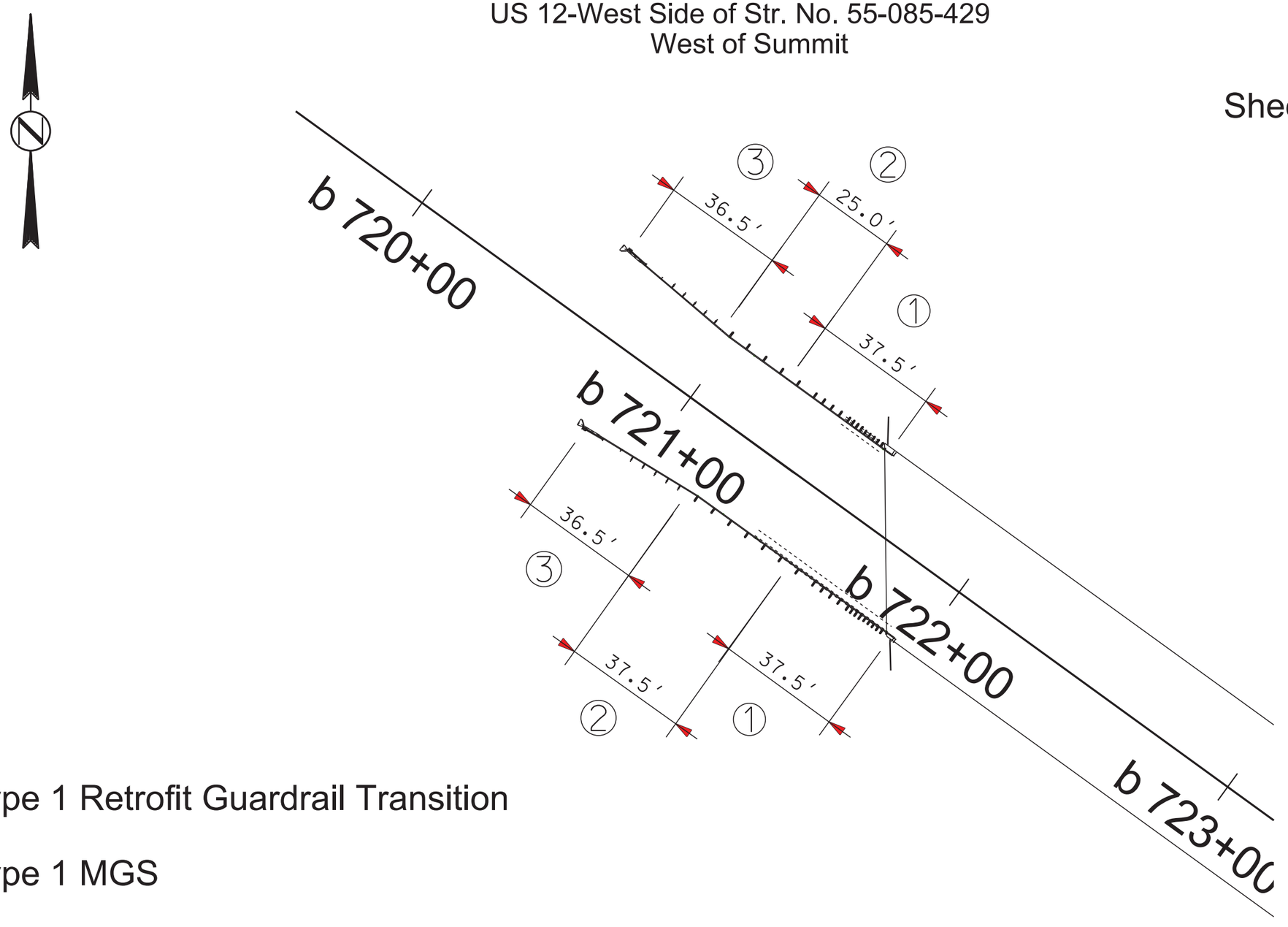
PLOT SCALE - 1:33.3544

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	92	140
Plotting Date: 07/02/2024			

GUARDRAIL LAYOUT

US 12-West Side of Str. No. 55-085-429
West of Summit

Sheet 1 of 2



① Type 1 Retrofit Guardrail Transition

② Type 1 MGS

③ MGS MASH Flared End Terminal

PLOTTED FROM - TRAB17901

PLOT NAME - 1

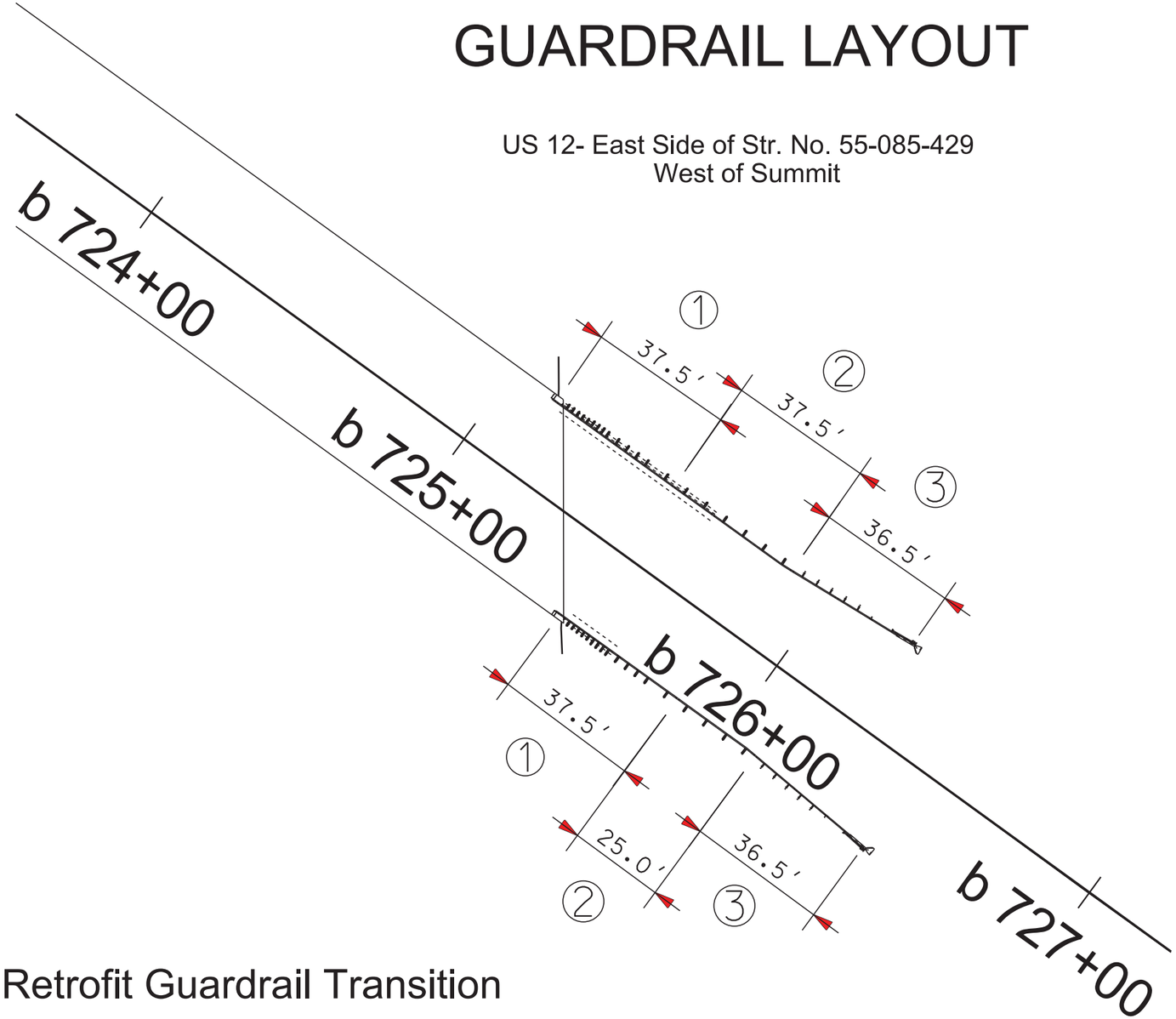
FILE - ...\GUARDRAIL SHEETS.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	93	140
Plotting Date: 07/02/2024			

GUARDRAIL LAYOUT

US 12- East Side of Str. No. 55-085-429
West of Summit

Sheet 2 of 2



① Type 1 Retrofit Guardrail Transition

② Type 1 MGS

③ MGS MASH Flared End Terminal

PLOT SCALE - 1:33.3544

PLOT NAME - 4

FILE ...\GUARDRAIL SHEETS.DGN

PLOTTED FROM - TRAB17901

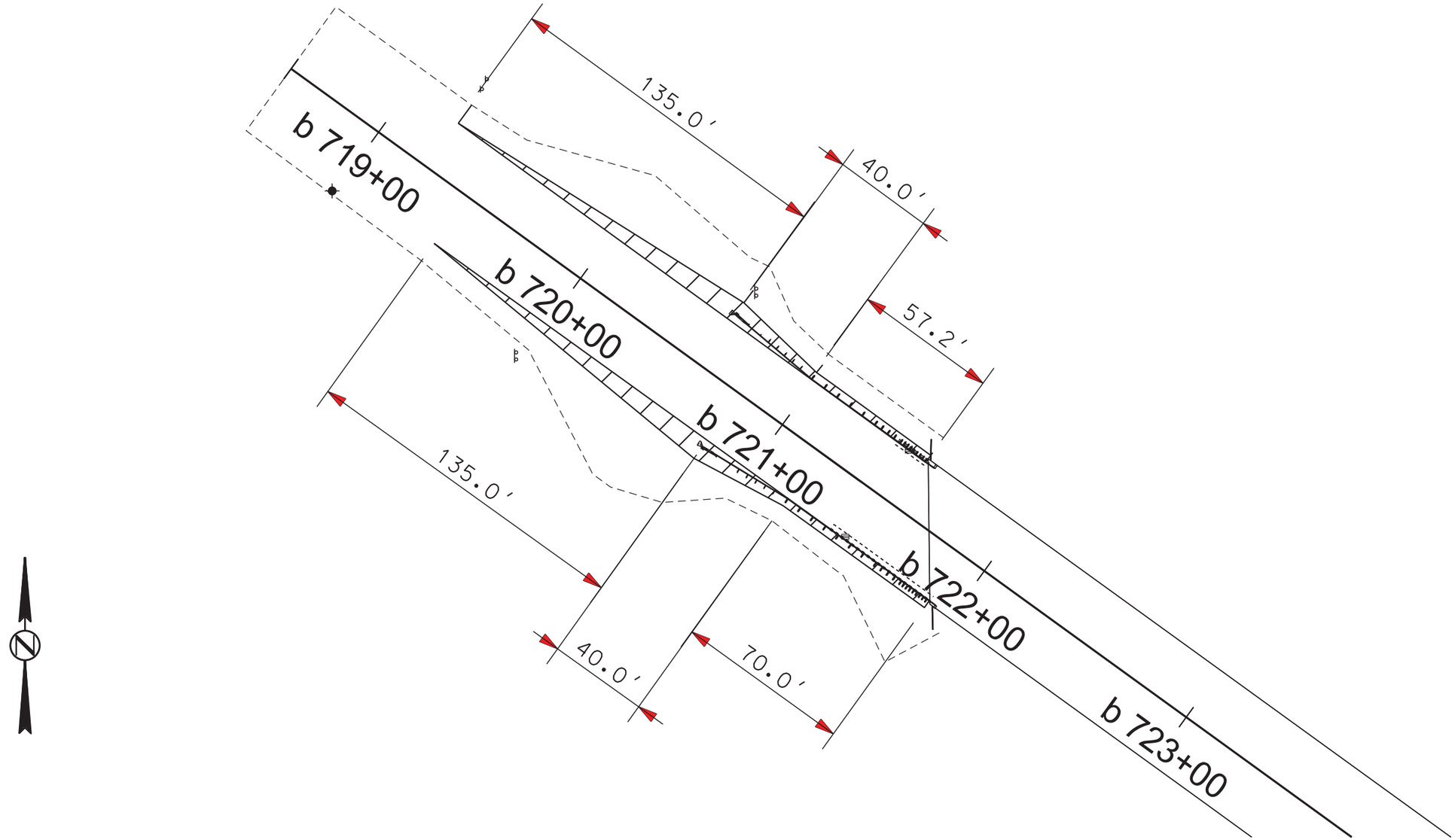
PLOT SCALE - 1:45.7536

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	94	140
Plotting Date: 07/02/2024			

EMBANKMENT AND SURFACING LAYOUT

US 12- West Side of Str. No. 55-085-429
West of Summit

Sheet 1 of 2



PLOTTED FROM - TRAB17901

PLOT NAME - 3

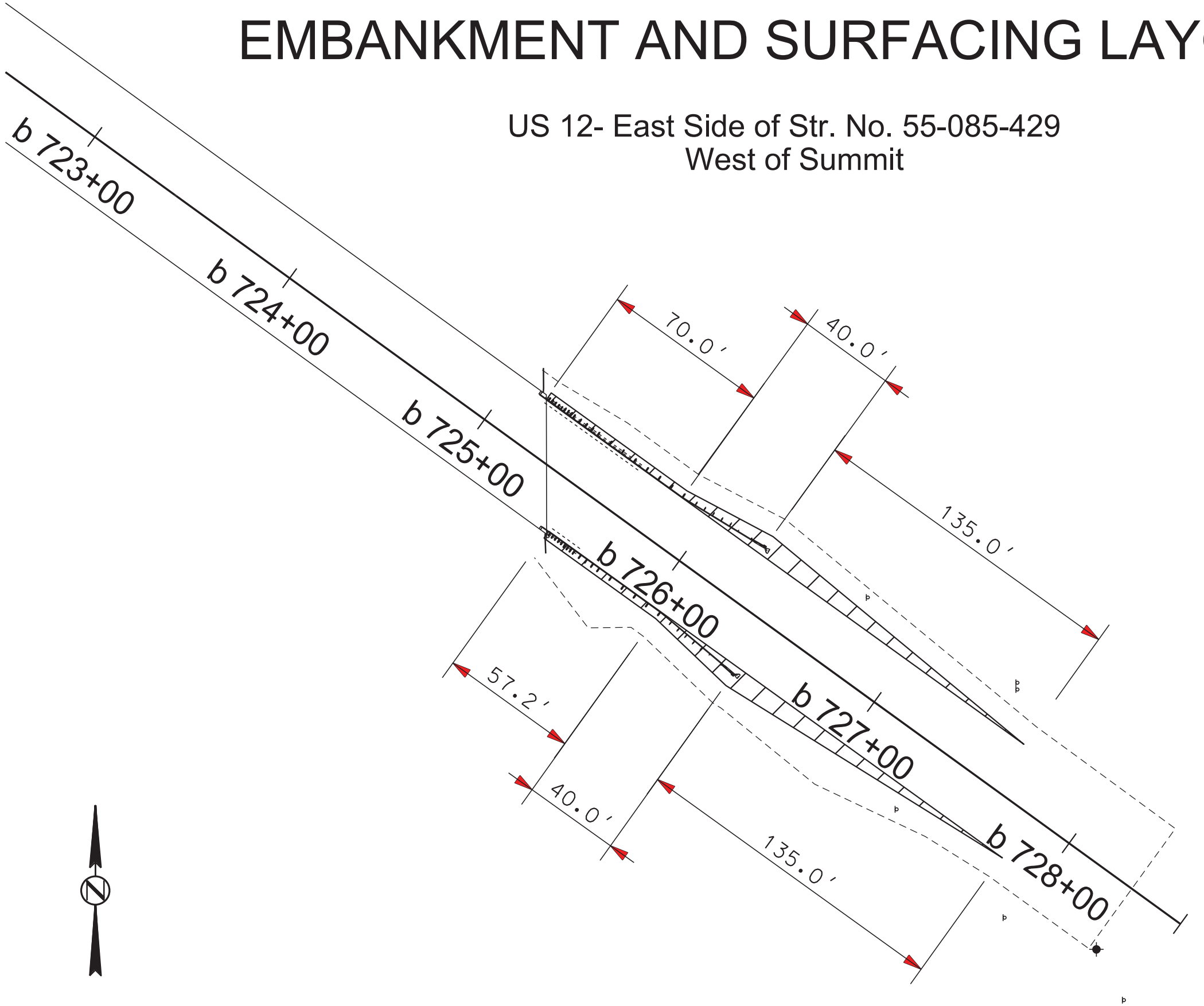
FILE - ...\GUARDRAIL SHEETS.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	95	140
Plotting Date: 07/02/2024			

EMBANKMENT AND SURFACING LAYOUT

US 12- East Side of Str. No. 55-085-429
West of Summit

Sheet 2 of 2



PLOT SCALE - 1145.7536

PLOTTED FROM - TRAB17901

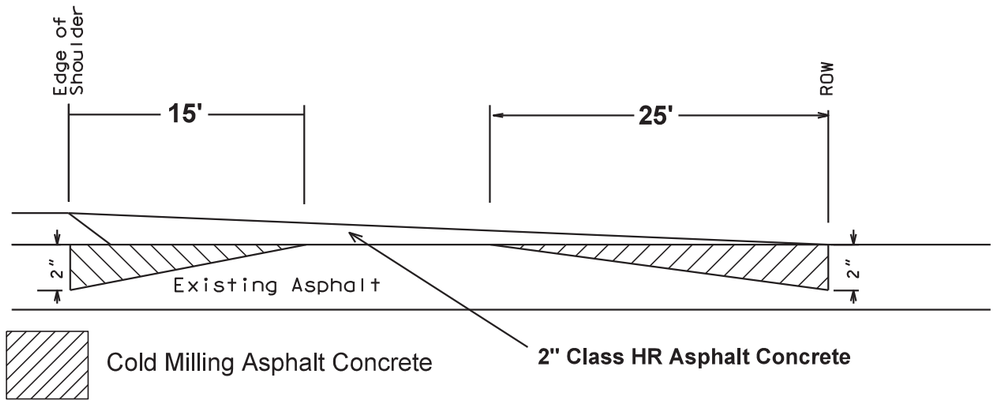
PLOT NAME - 2

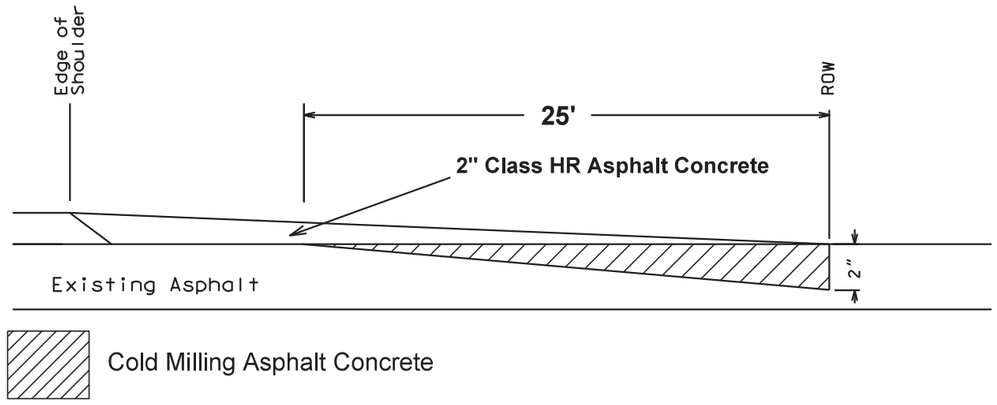
FILE - ...\GUARDRAIL SHEETS.DGN

TRANSITION DETAILS FOR INTERSECTING ROADS

Intersecting Roads

MRM 353.00 + 0.360 Rt.
MRM 361.00 + 0.460 Lt.
MRM 365.00 +0.109 Lt.
MRM 365.00+0.713 Lt.





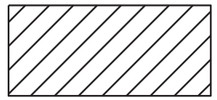
*Cold mill 15' back from the Asphalt shoulder for every AC intersection.
For the above MRMs, this is in addition to cold milling 25' from the ROW as shown above.
Refer to the Table of Intersecting Roads, City Streets, and Rural Entrances for intersection locations.

Notes: Width of Cold Milling Asphalt Concrete will match adjacent surfacing width.

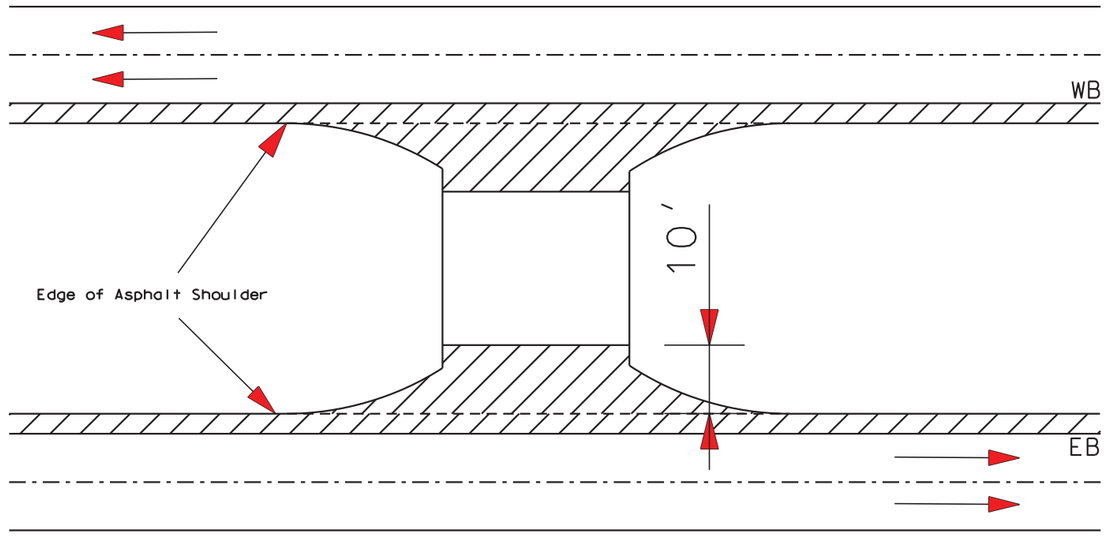
Quantities are Included in the Table of Additional Quantities for these Intersecting Roads for Cold Milling Asphalt Concrete. Basis of payment will be plans quantity regardless of width of the Intersecting Roads.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	97	140
Plotting Date: 08/28/2024			

Cold Milling Median Crossover Detail

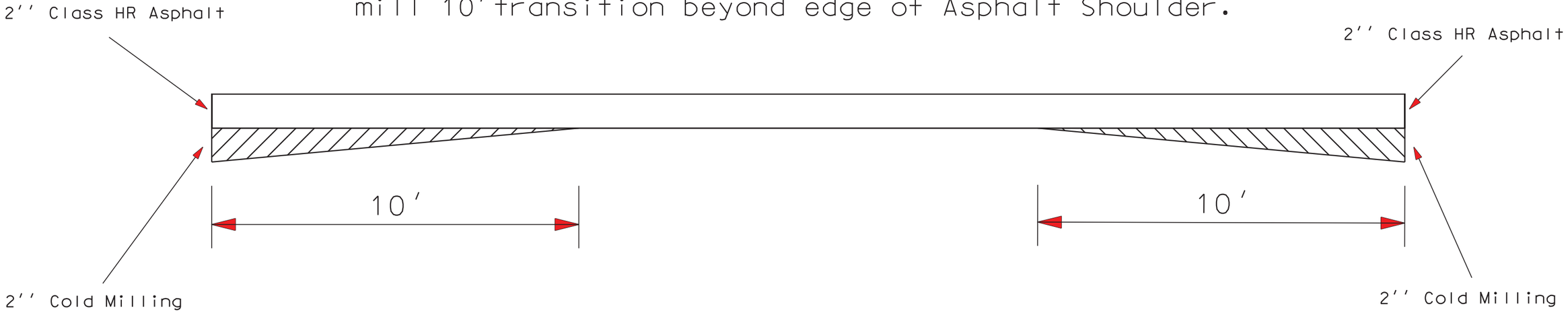


2'' Cold Milling
Asphalt Concrete



* East of Waubay to Summit: EB shoulder will not be cold milling or resurfaced

Note: Across Median Crossovers and Intersecting Roads,
mill 10'transition beyond edge of Asphalt Shoulder.



PLOT SCALE - 1:21.4748

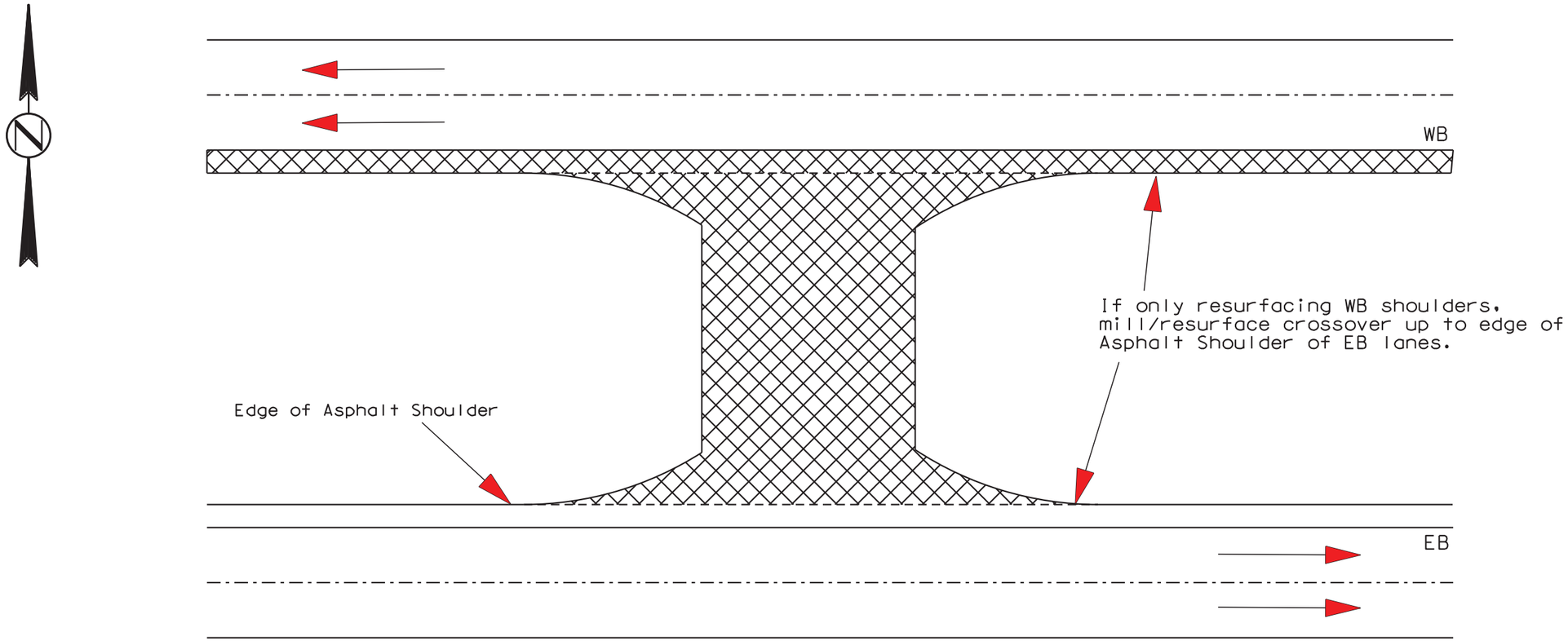
PLOTTED FROM - TRAB17901

PLOT NAME - 1

FILE - ...\MILLING & RESURFACING TRANSITION DETAIL.DGN

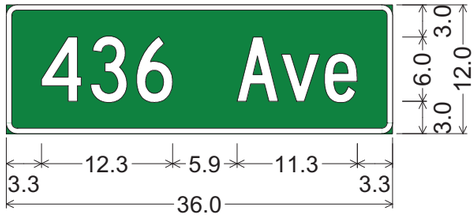
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	98	140
Plotting Date: 03/19/2024			

Resurfacing Median Crossover Detail

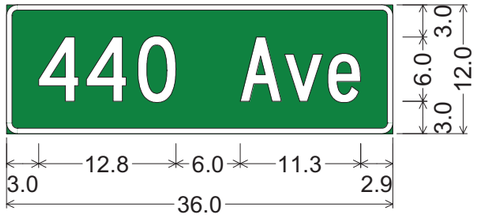


2'' Class HR Hot
Mixed Asphalt Concrete

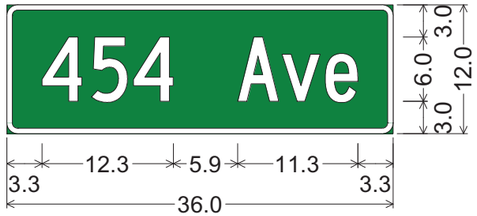
SPECIAL SIGN LAYOUT



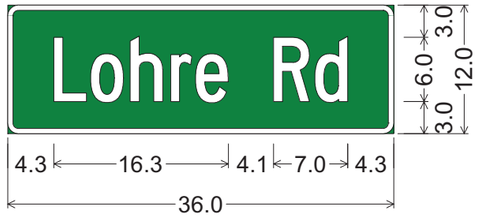
1.0" Radius, 0.5" Border, White on Green;
"436 Ave", C 2K;



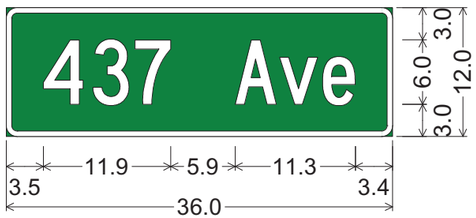
1.0" Radius, 0.5" Border, White on Green;
"440 Ave", C 2K;



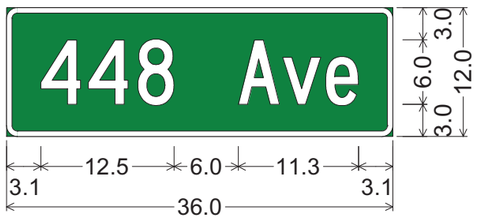
1.0" Radius, 0.5" Border, White on Green;
"454 Ave", C 2K;



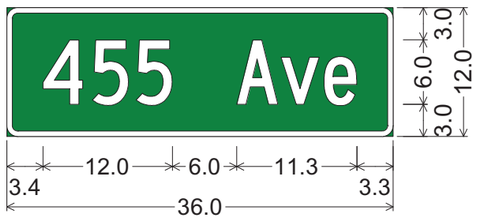
1.0" Radius, 0.5" Border, White on Green;
"Lohre Rd", C 2K 70% spacing;



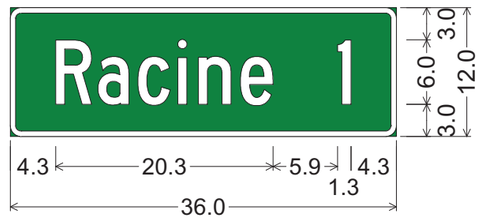
1.0" Radius, 0.5" Border, White on Green;
"437 Ave", C 2K;



1.0" Radius, 0.5" Border, White on Green;
"448 Ave", C 2K;



1.0" Radius, 0.5" Border, White on Green;
"455 Ave", C 2K;



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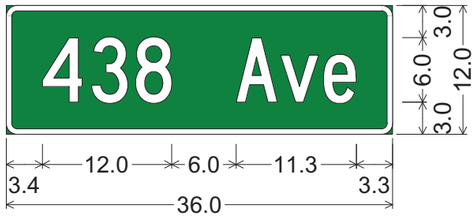
"Racine 1", C 2K;



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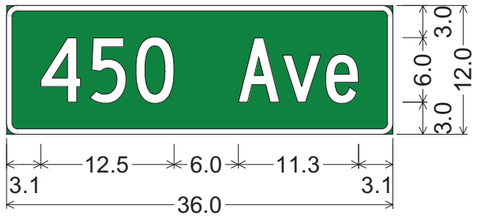
"438 Ave", C 2K;



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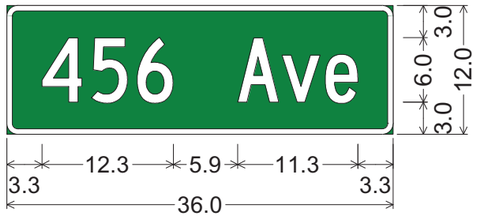
"450 Ave", C 2K;



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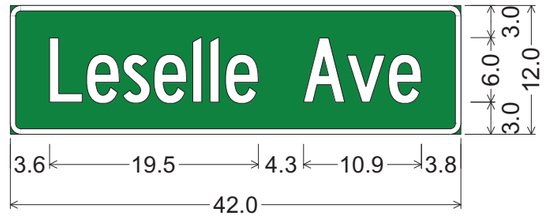
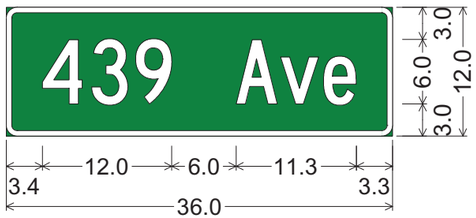
"456 Ave", C 2K;



1.0" Radius, 0.5" Border, White on Green;
"Leselle Ave", C 2K 70% spacing;



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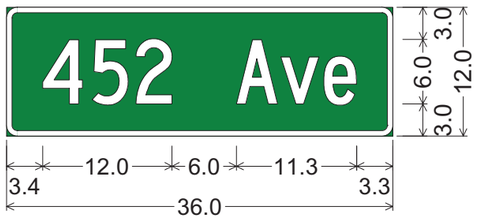
"439 Ave", C 2K;



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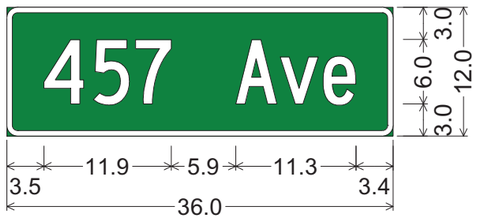
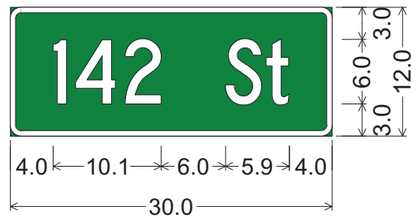
"452 Ave", C 2K;

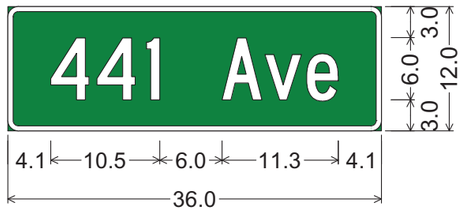


1.0" Radius, 0.5" Border, White on Green;
"457 Ave", C 2K;

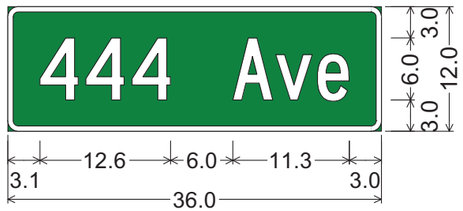


1.0" Radius, 0.5" Border, White on Green;
"142 St", C 2K;

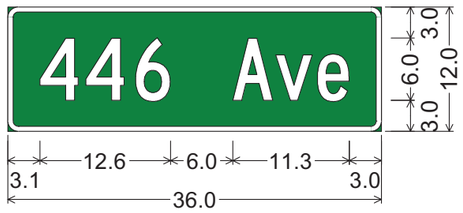
SPECIAL SIGN LAYOUT



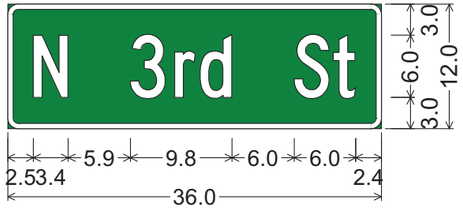
1.0" Radius, 0.5" Border, White on Green;
"441 Ave", C 2K;



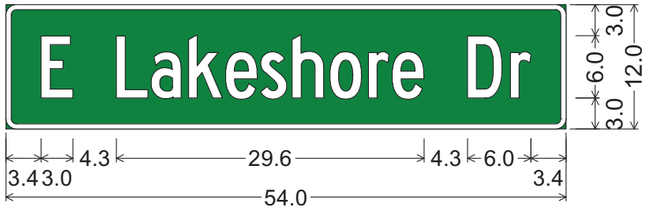
1.0" Radius, 0.5" Border, White on Green;
"444 Ave", C 2K;



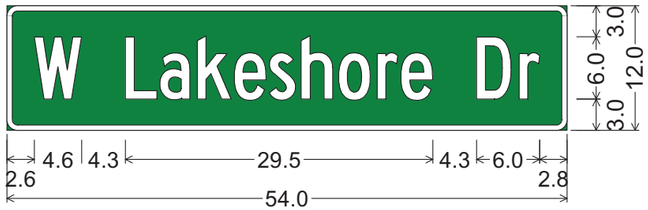
1.0" Radius, 0.5" Border, White on Green;
"446 Ave", C 2K;



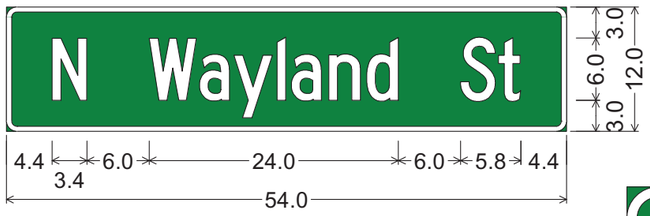
1.0" Radius, 0.5" Border, White on Green;
"N 3rd St", C 2K;



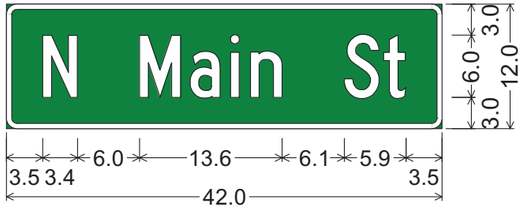
1.0" Radius, 0.5" Border, White on Green;
"E Lakeshore Dr", C 2K 70% spacing;



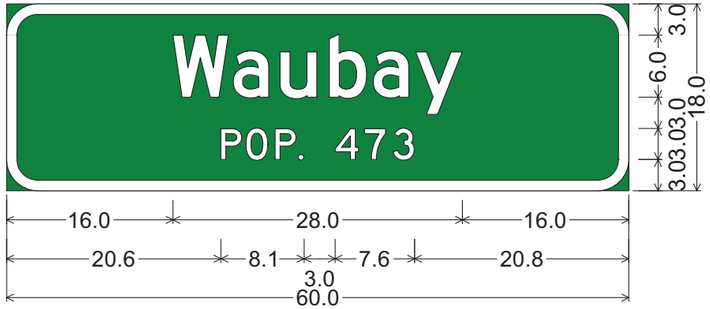
1.0" Radius, 0.5" Border, White on Green;
"W Lakeshore Dr", C 2K 70% spacing;



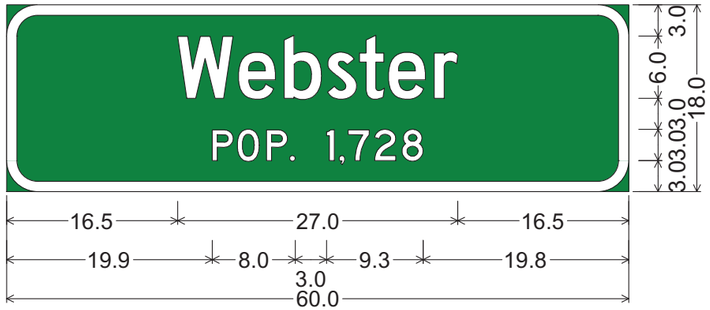
1.0" Radius, 0.5" Border, White on Green;
"N Wayland St", C 2K 70% spacing;



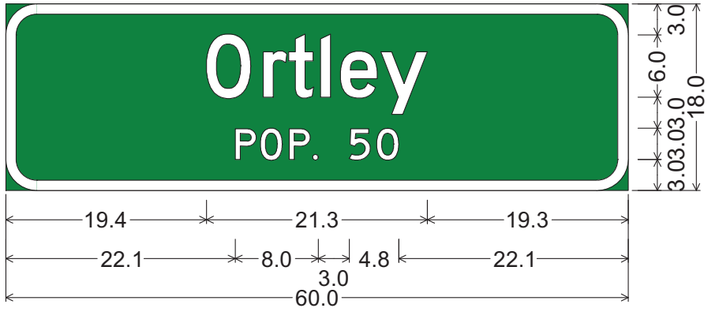
1.0" Radius, 0.5" Border, White on Green;
"N Main St", C 2K;



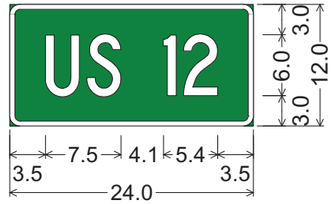
3.0" Radius, 1.0" Border, White on Green;
"Waubay", D 2K; "POP. 473", D 2K;



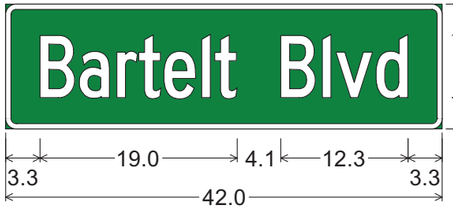
3.0" Radius, 1.0" Border, White on Green;
"Webster", D 2K; "POP. 1,728", D 2K;



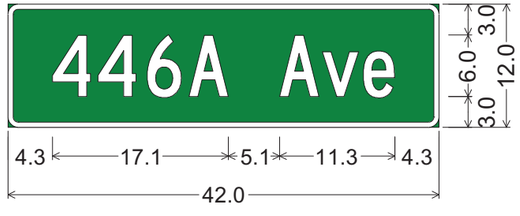
3.0" Radius, 1.0" Border, White on Green;
"Ortley", D 2K; "POP. 50", D 2K;



1.0" Radius, 0.5" Border, White on Green;
"US 12", C 2K 70% spacing;



1.0" Radius, 0.5" Border, White on Green;
"Bartelt Blvd", C 2K 70% spacing;



1.0" Radius, 0.5" Border, White on Green;
"446A Ave", C 2K;

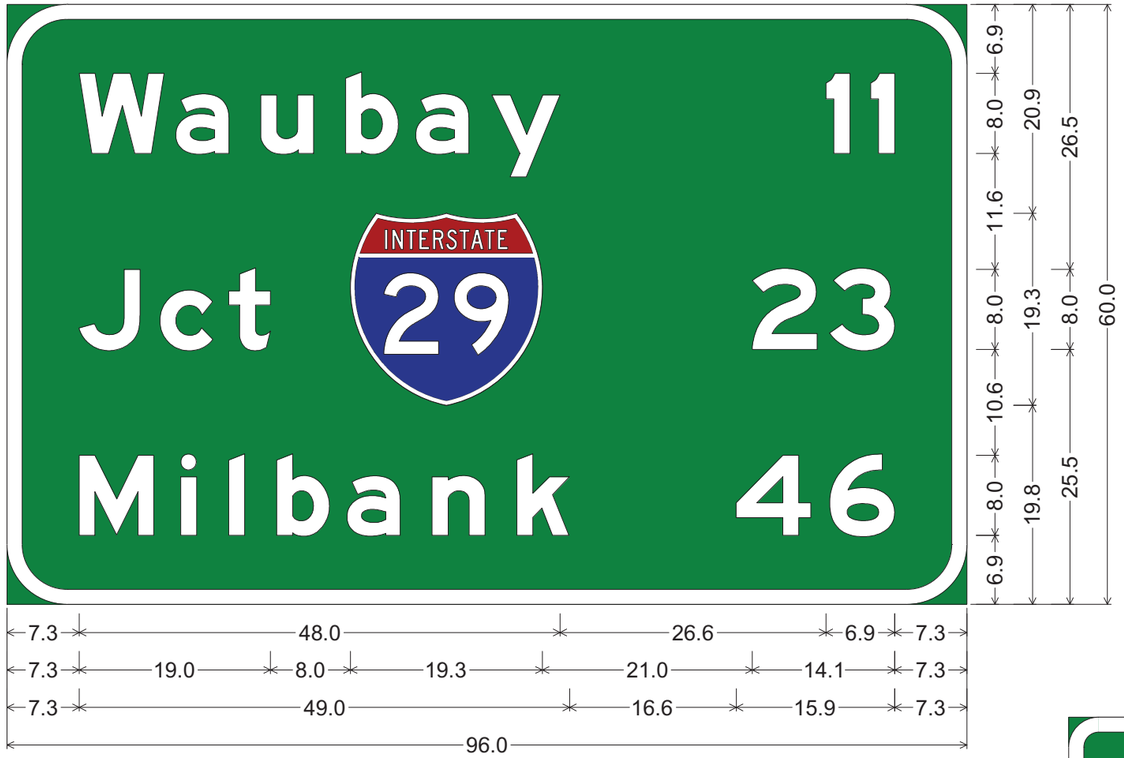
PLOT SCALE - 1:200

PLOTTED FROM - TRAB10100

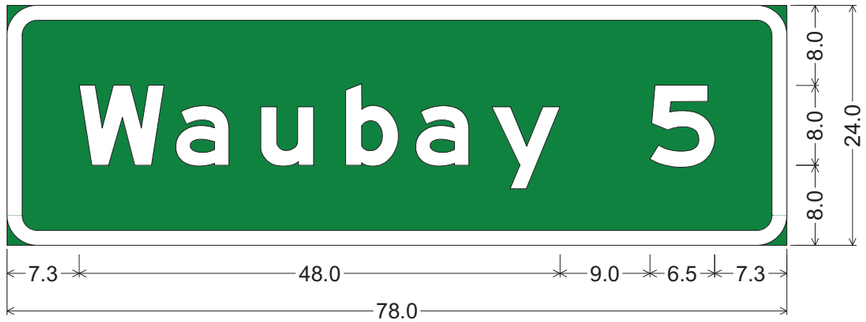
PLOT NAME - 8

FILE - ...\08XO_STANDARD PLATES.DGN

SPECIAL SIGN LAYOUT

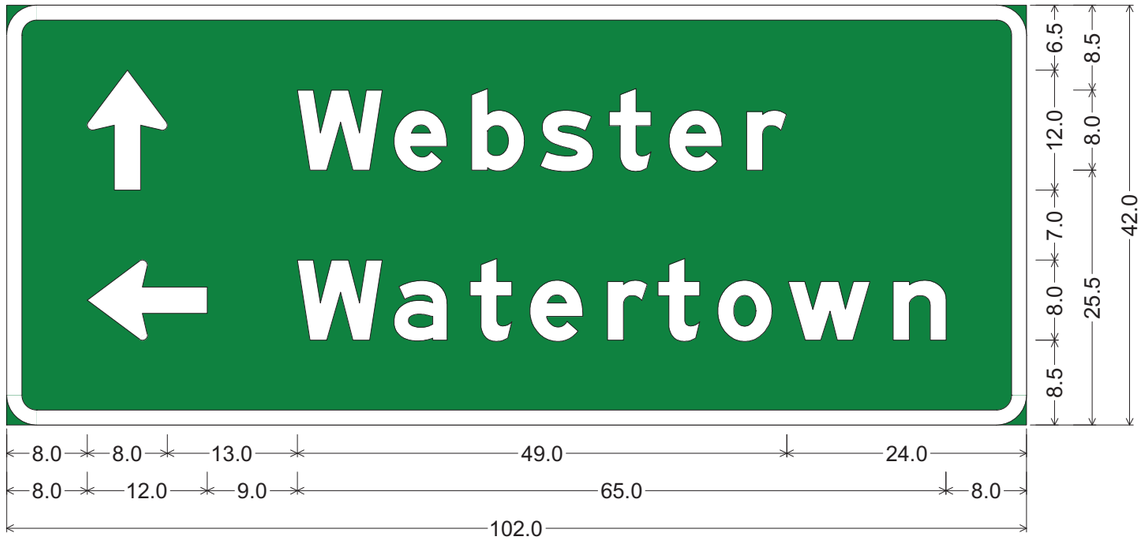


6.0" Radius, 1.5" Border, White on Green;
"Waubay", E Mod 2K; "11", E Mod 2K; "Jct", E Mod 2K; "23", E Mod 2K;
"Milbank", E Mod 2K; "46", E Mod 2K;



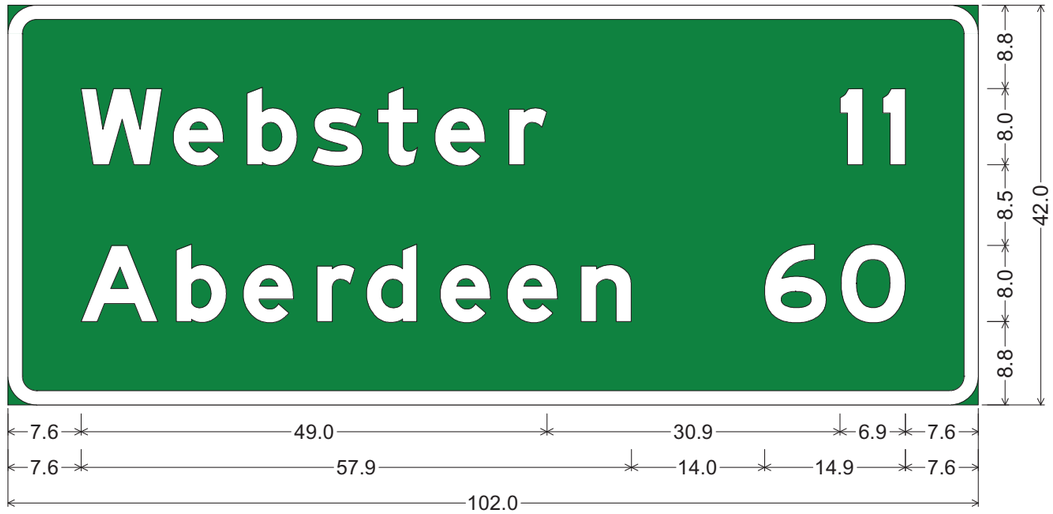
3.0" Radius, 1.5" Border, White on Green;
"Waubay", E Mod 2K; "5", E Mod 2K;

3.0" Radius, 1.5" Border, White on Green;
Standard Arrow Custom 12.0" X 8.0" 90°; "Milbank", E Mod 2K;
Standard Arrow Custom 12.0" X 8.0" 180°; "Sisseton", E Mod 2K;



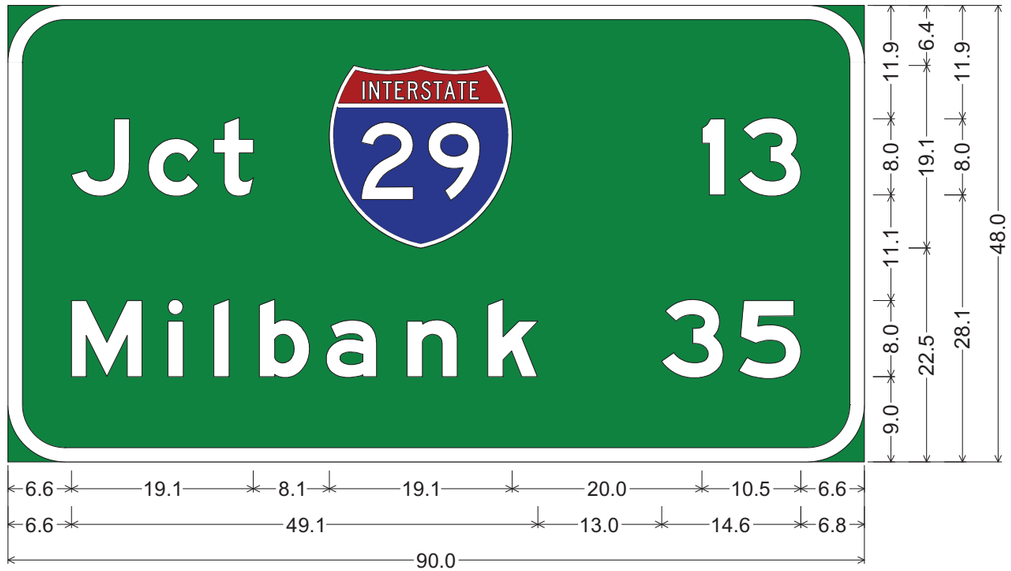
3.0" Radius, 1.5" Border, White on Green;
Standard Arrow Custom 12.0" X 8.0" 90°; "Webster", E Mod 2K;
Standard Arrow Custom 12.0" X 8.0" 180°; "Watertown", E Mod 2K;

SPECIAL SIGN LAYOUT

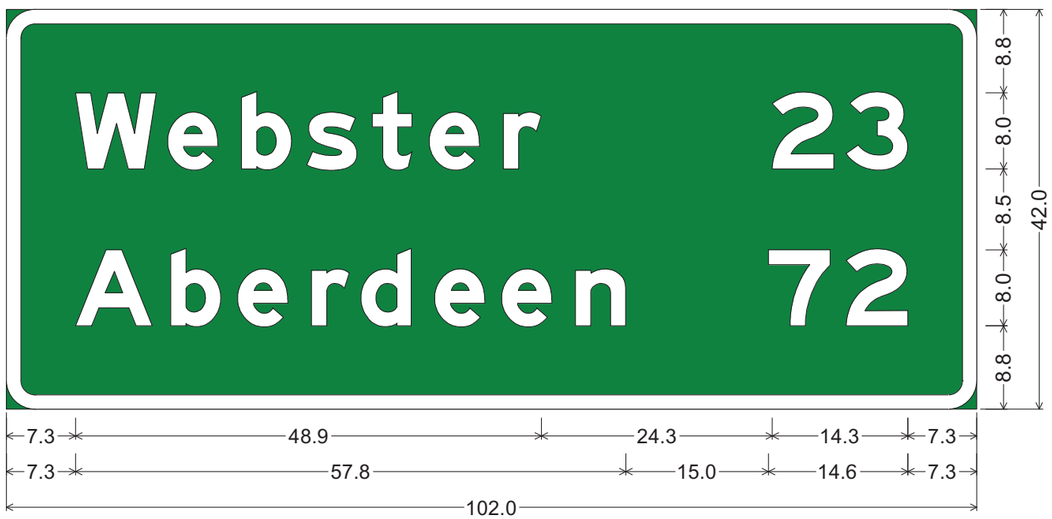


3.0" Radius, 1.5" Border, White on Green;
"Webster", E Mod 2K; "11", E Mod 2K; "Aberdeen", E Mod 2K; "60", E Mod 2K;

6.0" Radius, 1.5" Border, White on Green;
Standard Arrow Custom 12.0" X 8.0" 90°; "Milbank", E Mod 2K;
Standard Arrow Custom 12.0" X 8.0" 90°; "Sisseton", E Mod 2K; "Watertown", E Mod 2K;
Standard Arrow Custom 12.0" X 8.0" 0°;



6.0" Radius, 1.5" Border, White on Green;
"Jct", E Mod 2K; "13", E Mod 2K; "Milbank", E Mod 2K; "35", E Mod 2K;

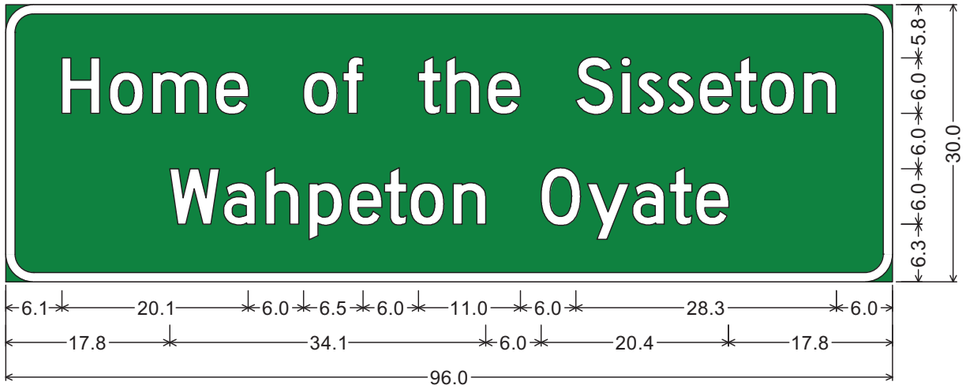


3.0" Radius, 1.5" Border, White on Green;
"Webster", E Mod 2K; "23", E Mod 2K; "Aberdeen", E Mod 2K; "72", E Mod 2K;

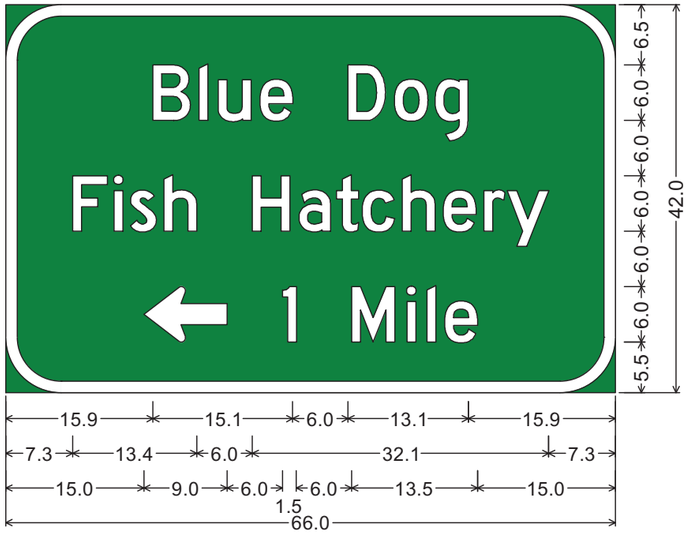
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	103	140

Plotting Date: 08/13/2024

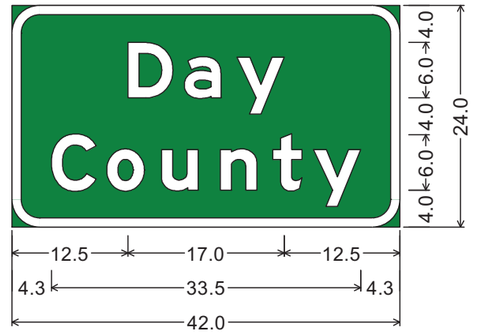
SPECIAL SIGN LAYOUT



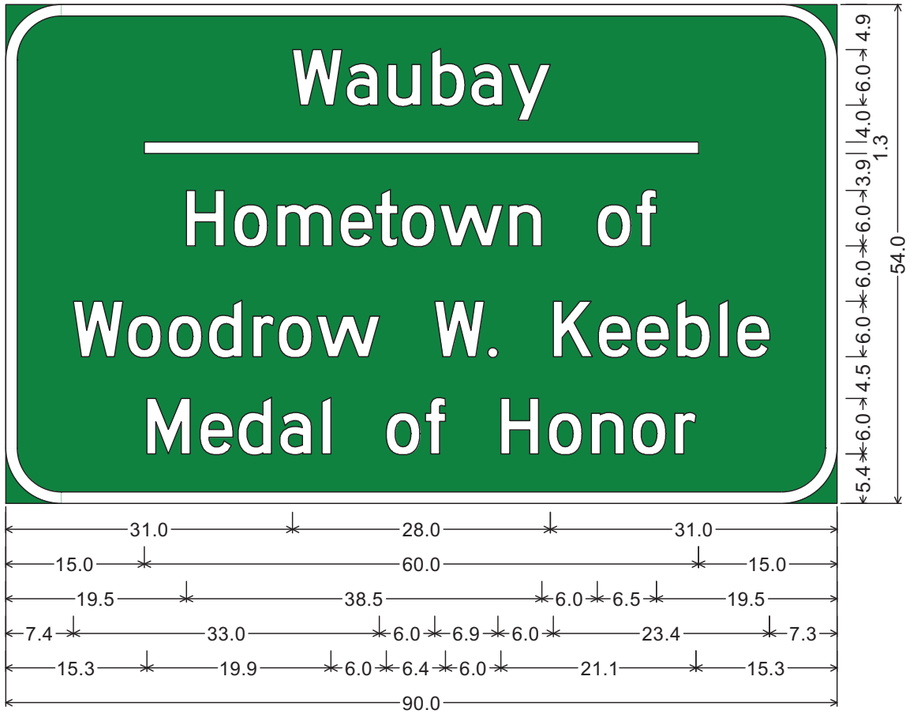
3.0" Radius, 1.0" Border, White on Green;
"Home of the Sisseton", D 2K; "Wahpeton Oyate", D 2K;



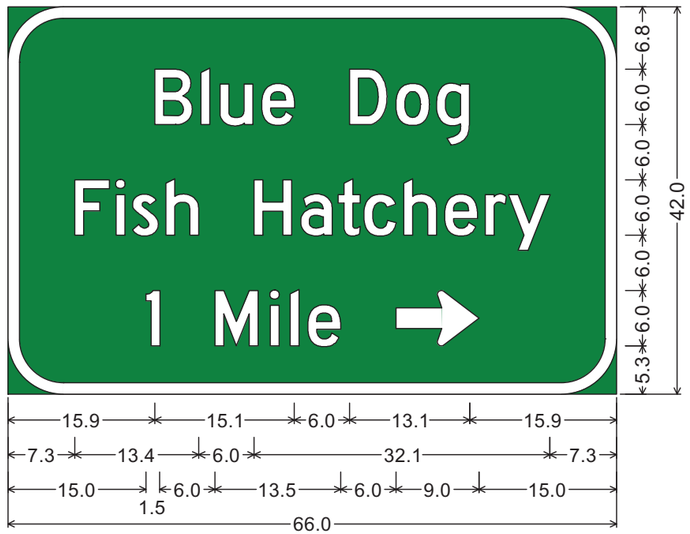
6.0" Radius, 1.3" Border, White on Green;
"Blue Dog", D 2K; "Fish Hatchery", D 2K;
Standard Arrow Custom 9.0" X 6.0" 180°; "1 Mile", D 2K;



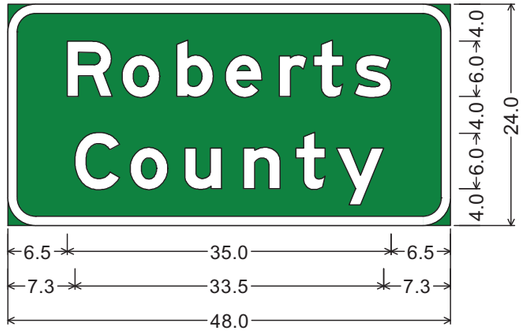
3.0" Radius, 1.0" Border, White on Green;
"Day", E Mod 2K;
"County", E Mod 2K;



6.0" Radius, 1.3" Border, White on Green;
"Waubay", D 2K; "Hometown of", D 2K; "Woodrow W. Keeble", D 2K;
"Medal of Honor", D 2K;



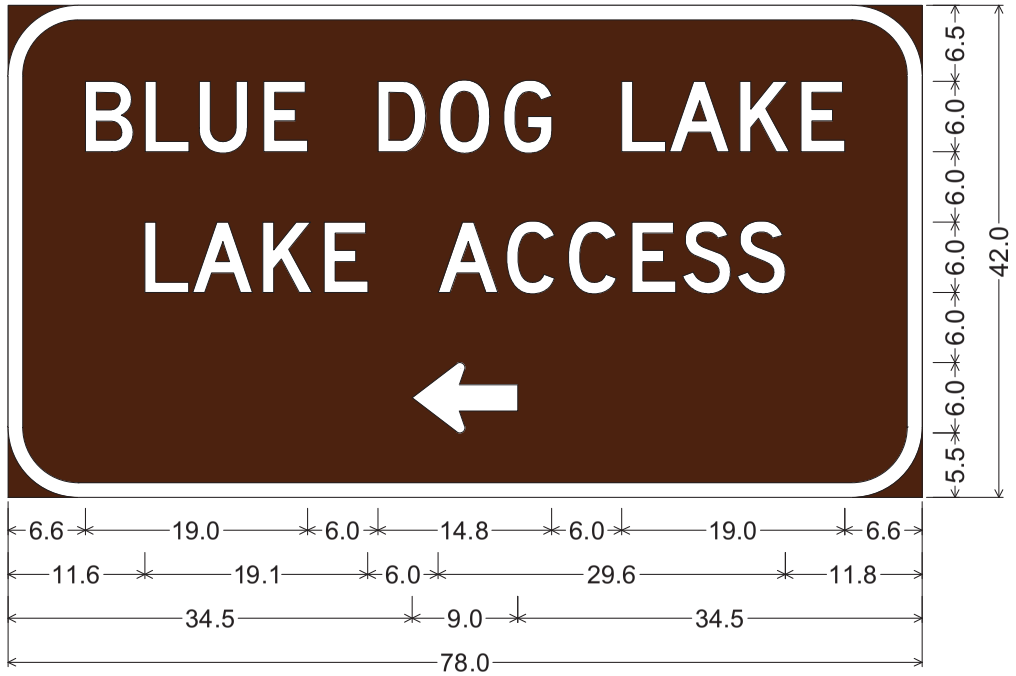
6.0" Radius, 1.3" Border, White on Green;
"Blue Dog", D 2K; "Fish Hatchery", D 2K; "1 Mile", D 2K;
Standard Arrow Custom 9.0" X 6.0" 0°;



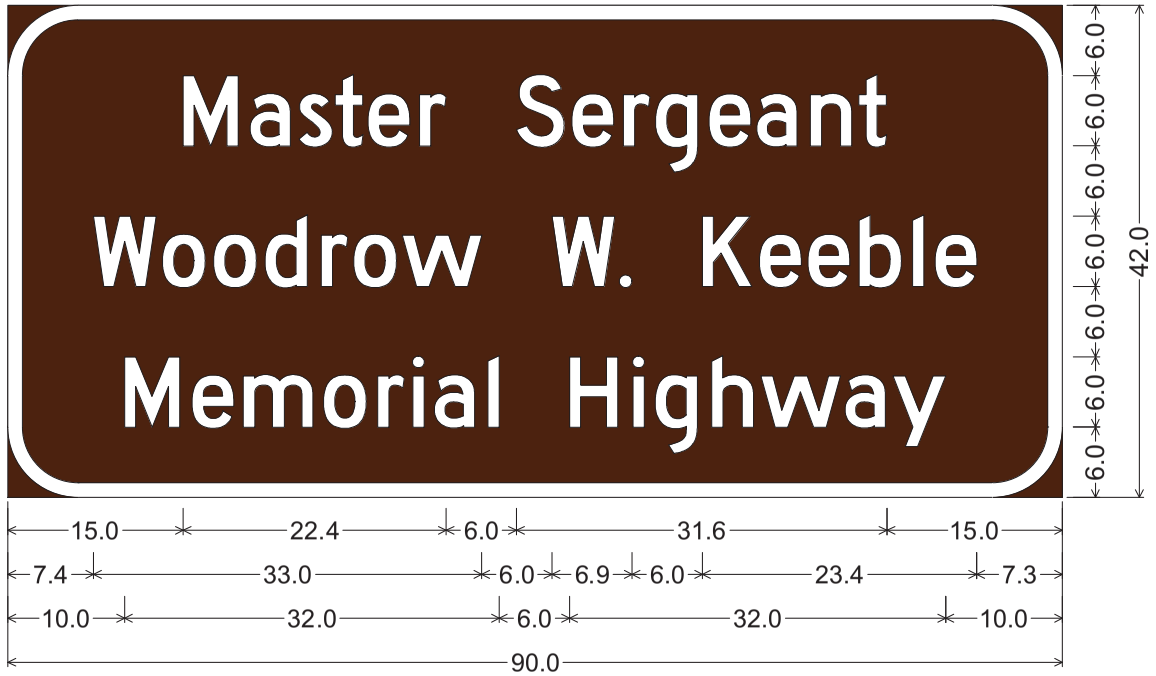
3.0" Radius, 1.0" Border, White on Green;
"Roberts", E Mod 2K; "County", E Mod 2K;

PLOT SCALE - 1:200
PLOT NAME - 8
FILE - ...\08XG_STANDARD PLATES.DGN
-PLOTTED FROM - TRAB10100

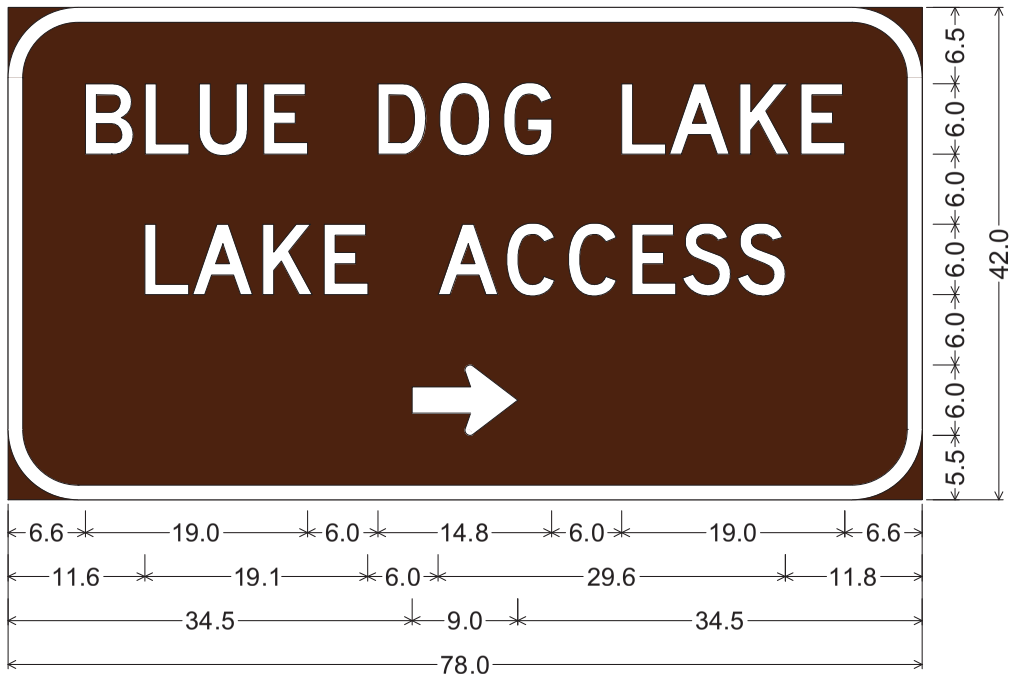
SPECIAL SIGN LAYOUT



6.0" Radius, 1.3" Border, White on Brown;
"BLUE DOG LAKE", D 2K; "LAKE ACCESS", D 2K;
Standard Arrow Custom 9.0" X 6.0" 180°;



6.0" Radius, 1.3" Border, White on Brown;
"Master Sergeant", D 2K; "Woodrow W. Keeble", D 2K; "Memorial Highway", D 2K;



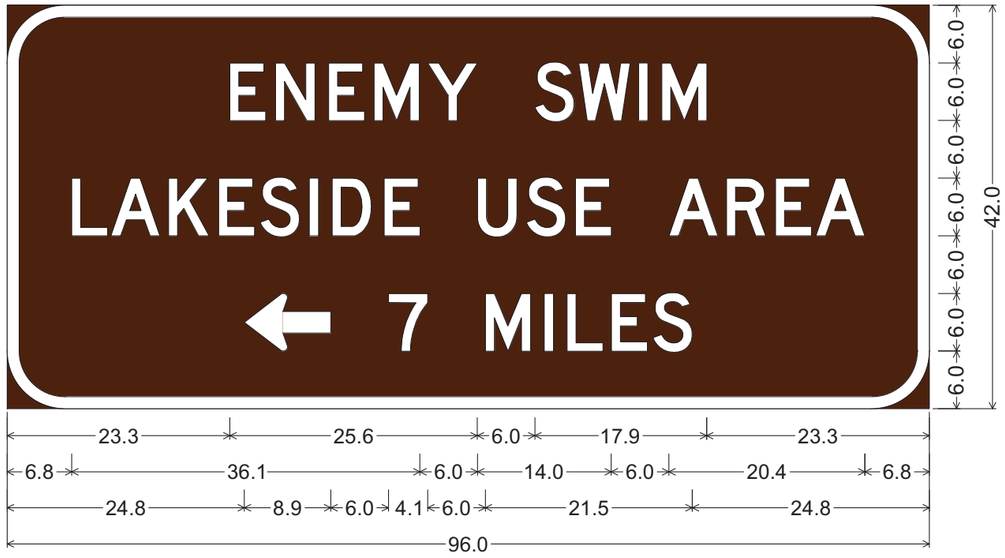
6.0" Radius, 1.3" Border, White on Brown;
"BLUE DOG LAKE", D 2K; "LAKE ACCESS", D 2K;
Standard Arrow Custom 9.0" X 6.0" 0°;

6.0" Radius, 1.3" Border, White on Brown;
"PUBLIC", D 2K; "WATER", D 2K;
"ACCESS", D 2K;
Standard Arrow Custom 9.0" X 6.0" 180°;

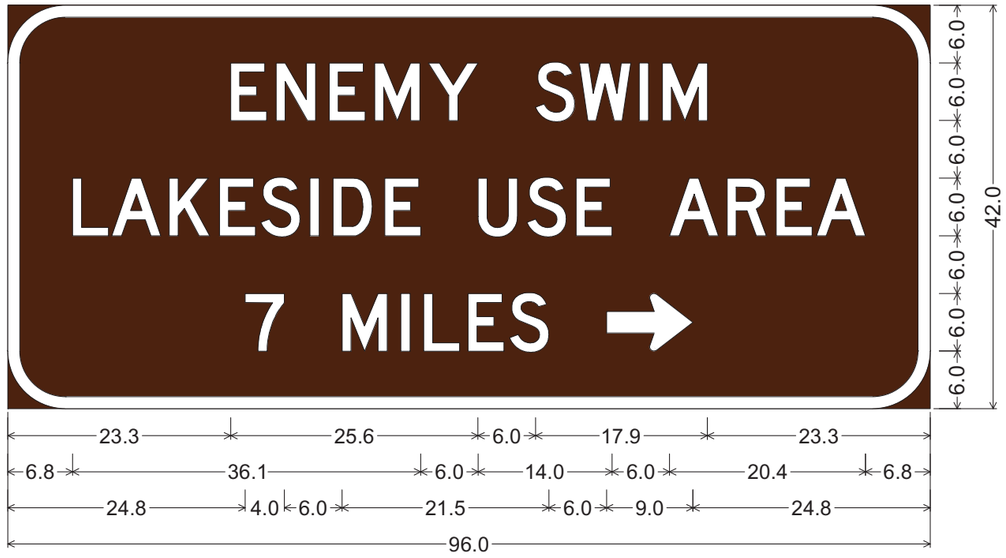
6.0" Radius, 1.3" Border, White on Brown;
"PUBLIC", D 2K; "WATER", D 2K;
"ACCESS", D 2K;
Standard Arrow Custom 9.0" X 6.0" 0°;

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	105	140
Plotting Date: 08/13/2024			

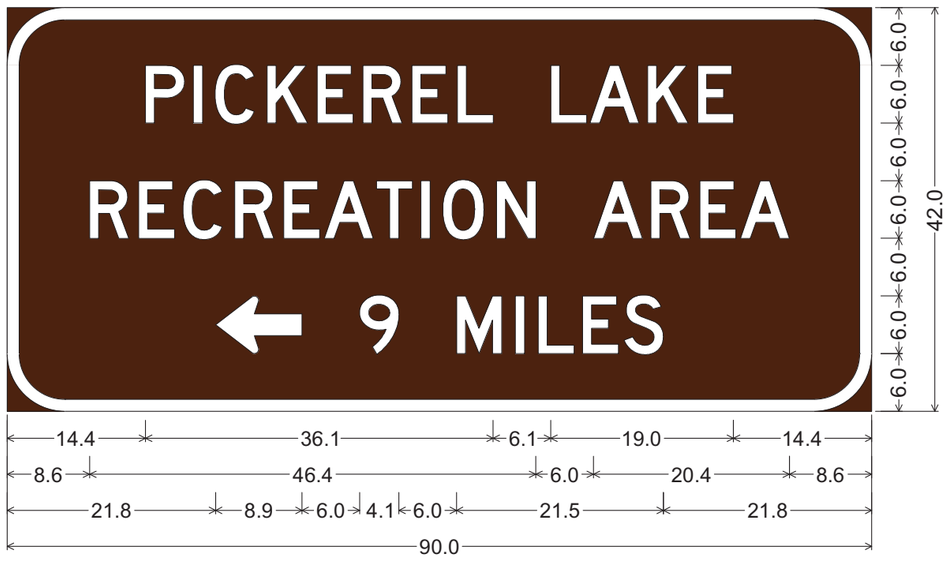
SPECIAL SIGN LAYOUT



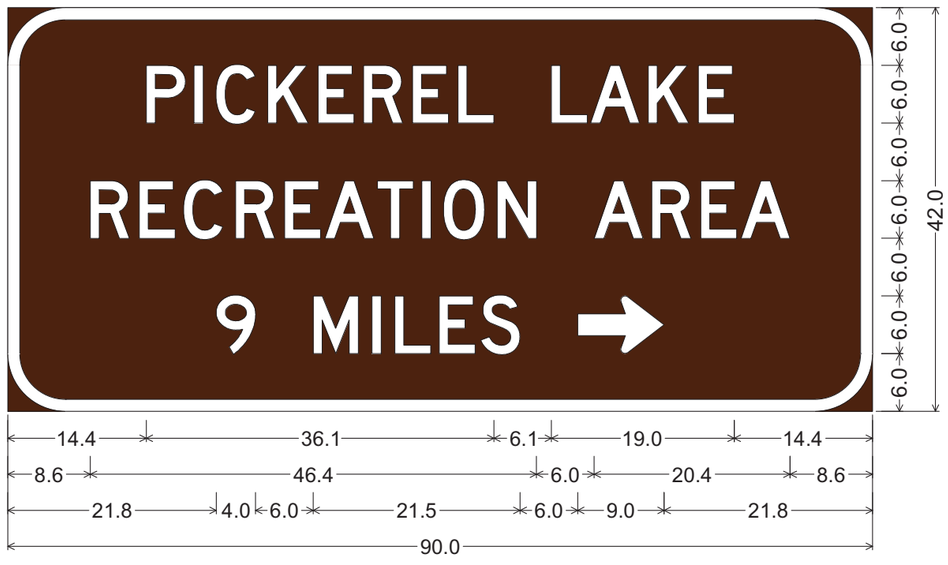
6.0" Radius, 1.3" Border, White on Brown;
"ENEMY SWIM", D 2K; "LAKESIDE USE AREA", D 2K;
Standard Arrow Custom 9.0" X 6.0" 180°; "7 MILES", D 2K;



6.0" Radius, 1.3" Border, White on Brown;
"ENEMY SWIM", D 2K; "LAKESIDE USE AREA", D 2K; "7 MILES", D 2K;
Standard Arrow Custom 9.0" X 6.0" 0°;

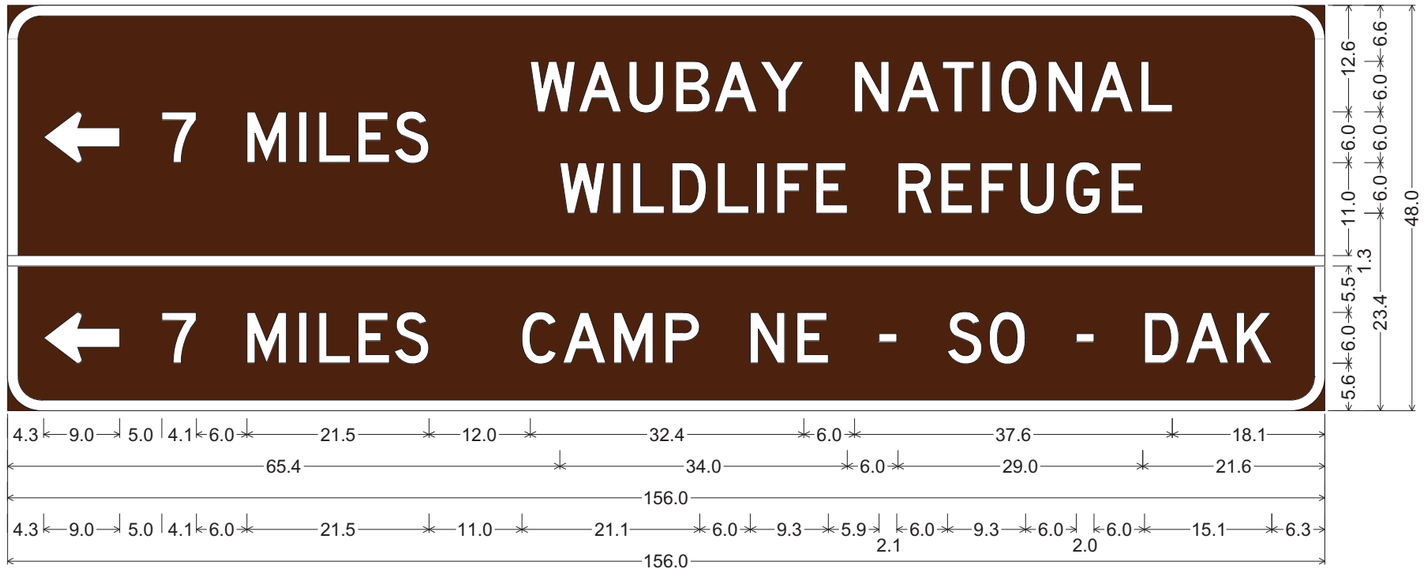


6.0" Radius, 1.3" Border, White on Brown;
"PICKEREL LAKE", D 2K; "RECREATION AREA", D 2K;
Standard Arrow Custom 9.0" X 6.0" 180°; "9 MILES", D 2K;

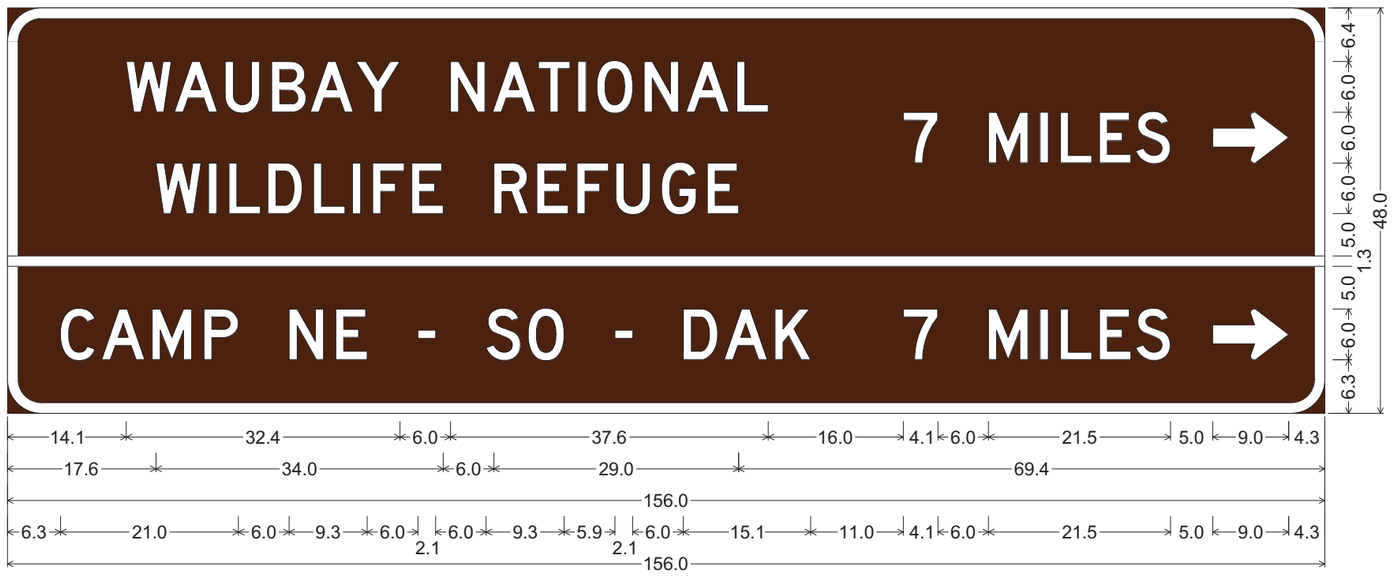


6.0" Radius, 1.3" Border, White on Brown;
"PICKEREL LAKE", D 2K; "RECREATION AREA", D 2K; "9 MILES", D 2K;
Standard Arrow Custom 9.0" X 6.0" 0°;

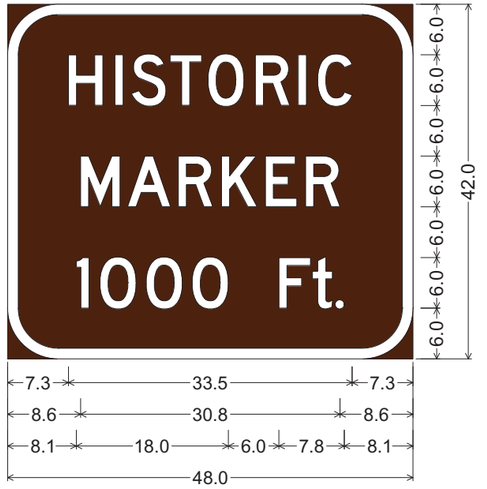
SPECIAL SIGN LAYOUT



4.0" Radius, 1.3" Border, White on Brown;
Standard Arrow Custom 9.0" X 6.0" 180°; "7 MILES", D 2K; "WAUBAY NATIONAL", D 2K; "WILDLIFE REFUGE", D 2K;
Standard Arrow Custom 9.0" X 6.0" 180°; "7 MILES", D 2K; "CAMP NE - SO - DAK", D 2K;



4.0" Radius, 1.3" Border, White on Brown;
"WAUBAY NATIONAL", D 2K; "WILDLIFE REFUGE", D 2K; "7 MILES", D 2K; Standard Arrow Custom 9.0" X 6.0" 0°;
"CAMP NE - SO - DAK", D 2K; "7 MILES", D 2K; Standard Arrow Custom 9.0" X 6.0" 0°;



6.0" Radius, 1.3" Border, White on Brown;
"HISTORIC", D 2K; "MARKER", D 2K;
"1000 Ft.", D 2K;

PLOT SCALE - 1:200

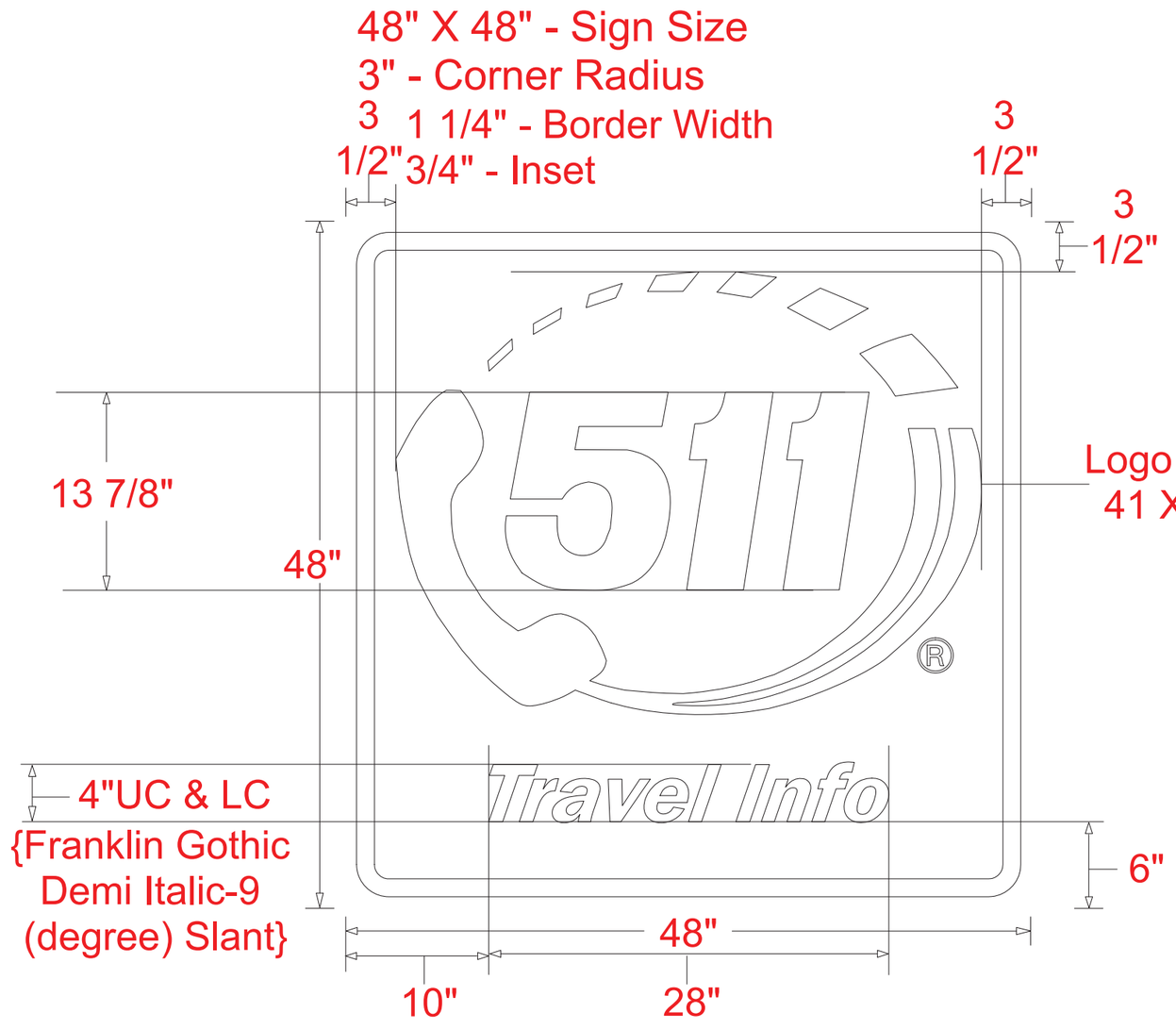
PLOT NAME - 8

FILE - ...\08XQ_STANDARD PLATES.DGN

-PLOTTED FROM - TRAB10100

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-CR 0012(311)343	107	140
Plotting Date: 08/13/2024			

SPECIAL SIGN LAYOUT



PLOT SCALE - 1:200

PLOT NAME - 8

FILE ....\08XD_STANDARD PLATES.DGN

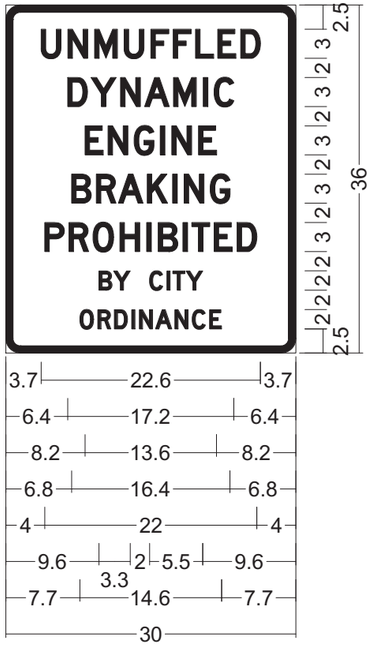
-PLOTTED FROM - TRAB10100

SPECIAL SIGN LAYOUT

6.0" Radius, 1.3" Border, Black on Yellow;
"RIGHT LANE", D 2K; "ENDS", D 2K; "1/2 MILE", D 2K;

6.0" Radius, 1.3" Border, Black on White;
"RIGHT LANE", E Mod 2K; "MUST", E Mod 2K; "TURN RIGHT", E Mod 2K;

4.0" Radius, 1.3" Border, White on Green;
"RIGHT LANE", D 2K; "SOUTH", E Mod;



1.5" Radius, 0.8" Border, Black on, White;
"UNMUFFLED", D 2K;
"DYNAMIC", D 2K;
"ENGINE", D 2K;
"BRAKING", D 2K;
"PROHIBITED", D 2K;
"BY CITY", D 2K;
"ORDINANCE", D 2K;

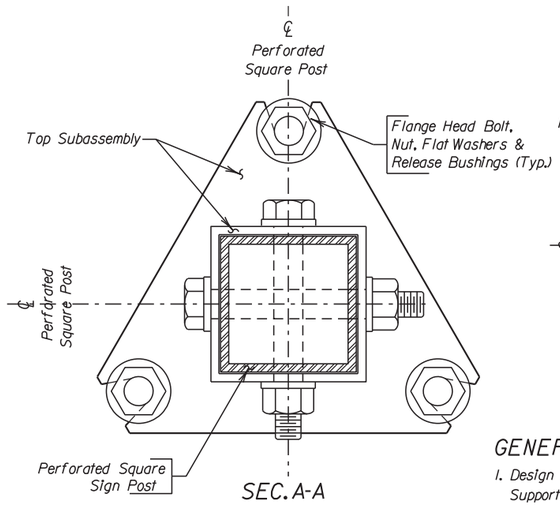
PLOT SCALE - 1:200

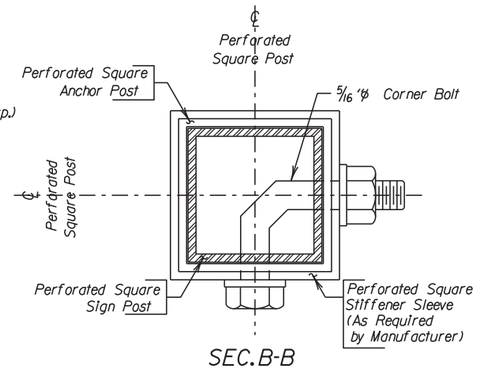
PLOT NAME - 8

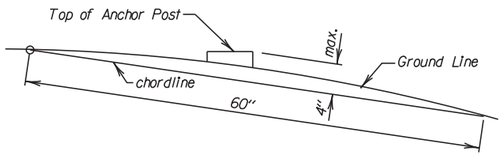
FILE - ...\08XD_STANDARD PLATES.DGN

-PLOTTED FROM - TRAB10100

BREAKAWAY SIGN SUPPORTS







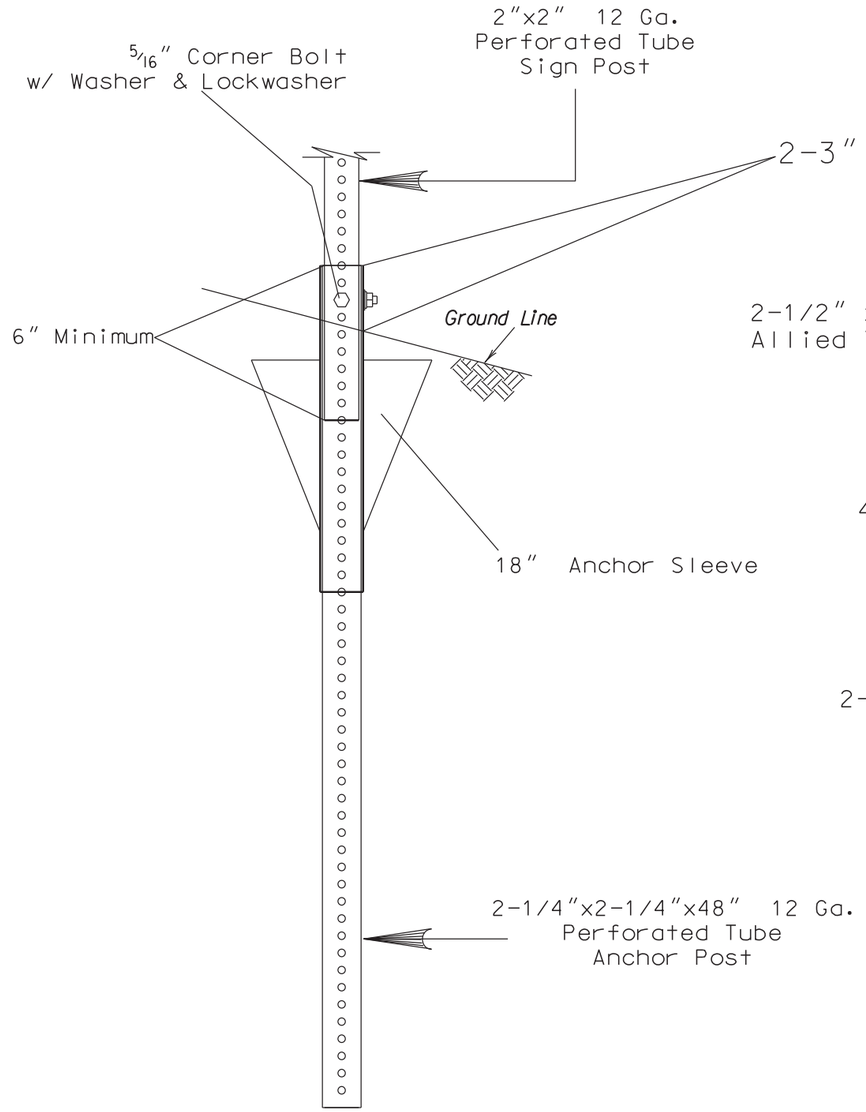
BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

NOTE: The top of anchor post will NOT extend more than 4" max. above the chordline within a 60" chord.

GENERAL NOTES-

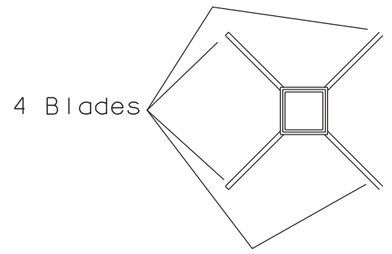
1. Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Latest Edition.
2. The manufacturer will provide certification that the posts and hardware furnished have essentially the same chemistry, mechanical properties and geometry as that used in the FHWA tests, and that it will meet the FHWA change in velocity requirements.
3. The manufacturer will also provide certification that the breakaway system furnished will develop the full shear and bending yield strength of the sign post section being spliced.
4. All posts will be galvanized in accordance with ASTM A653, Des. G-90.
5. All hardware will be galvanized in accordance with ASTM A153.

SIGN BASE DETAILS FOR A 2" SIGN POST



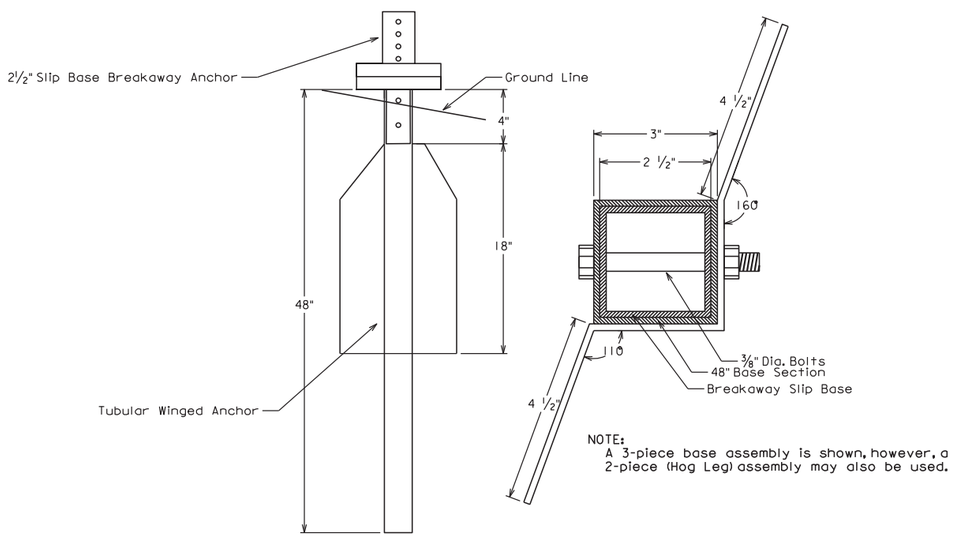
Anchor Sleeve
Top View

2-1/2" x 18" 12 Ga. Anchor Sleeve
Allied Tube - Part No. 739199



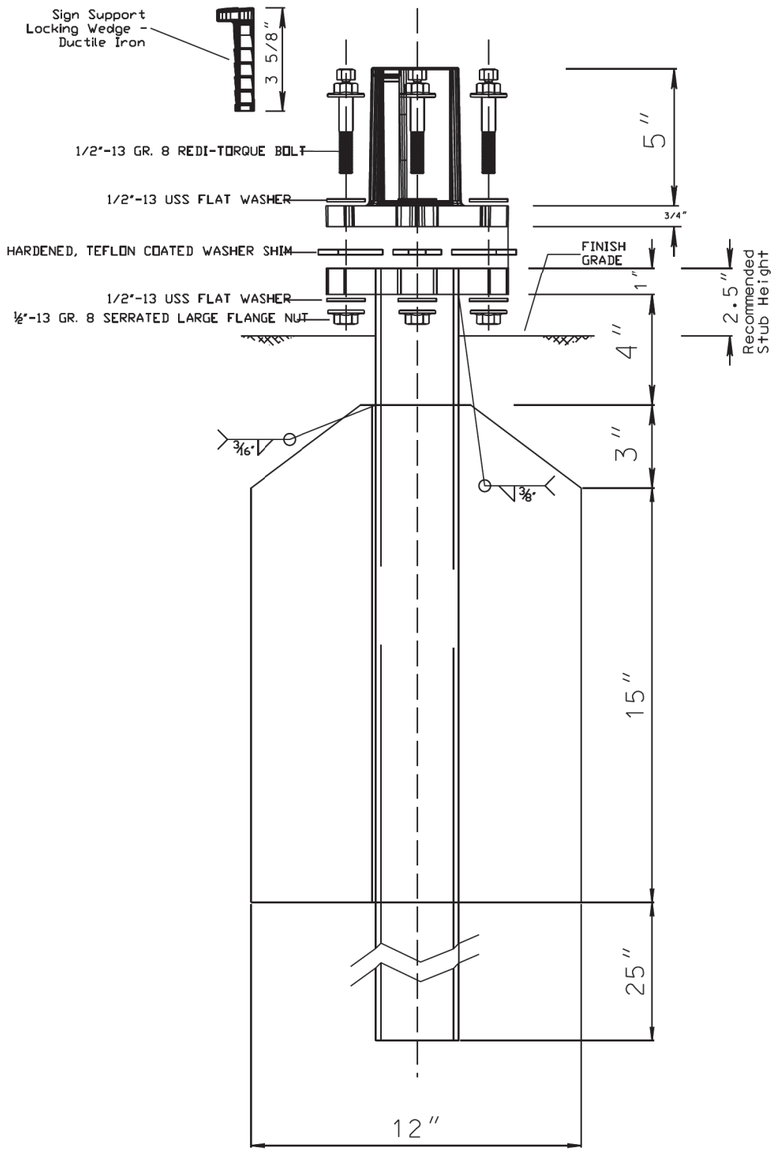
2-1/2" x 18" Anchor Sleeve
For Soil Stabilization

SIGN BASE DETAILS FOR A 2½" SIGN POST

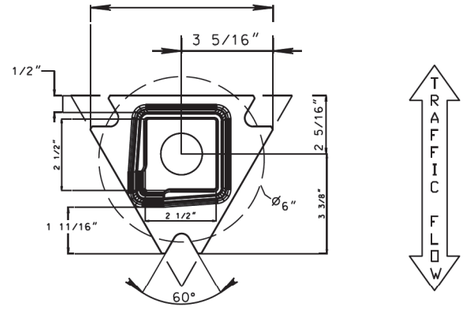


NOTE:
A 3-piece base assembly is shown, however, a 2-piece (Hog Leg) assembly may also be used.

48" WINGED ANCHOR SLIP BASE



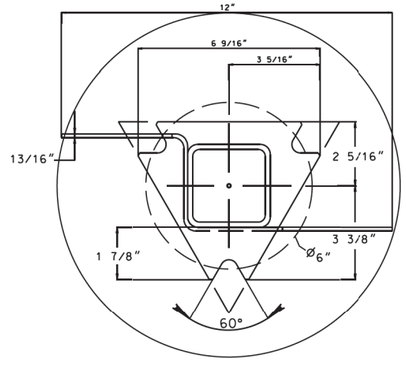
TOP POST RECEIVER for 2-½" SQUARE POST



MATERIAL:
DUCTILE IRON CASTING, CLASS 65-45-12

TRAFFIC FLOW

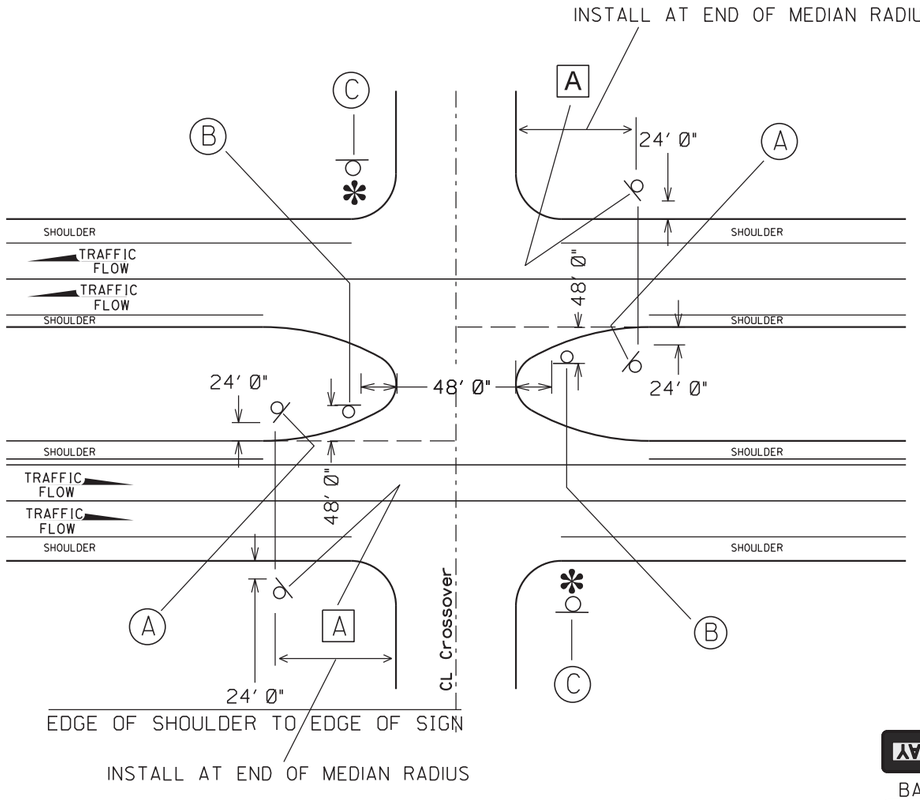
BOTTOM UNIBASE SOIL STUB



MATERIALS:
Tube - 3" x 3" x 7 ga. ASTM A500 Grade B tube
Stabilizing Wing - 7 ga. H.R.P.O. ASTM A 569
Plate - ASTM A572 grade 50

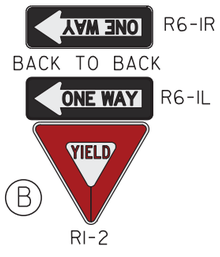
PERMANENT SIGNING

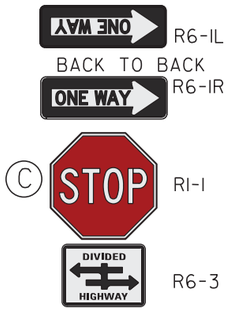
INTERSECTING CROSSROAD



MEDIAN MOUNT

SHOULDER MOUNT



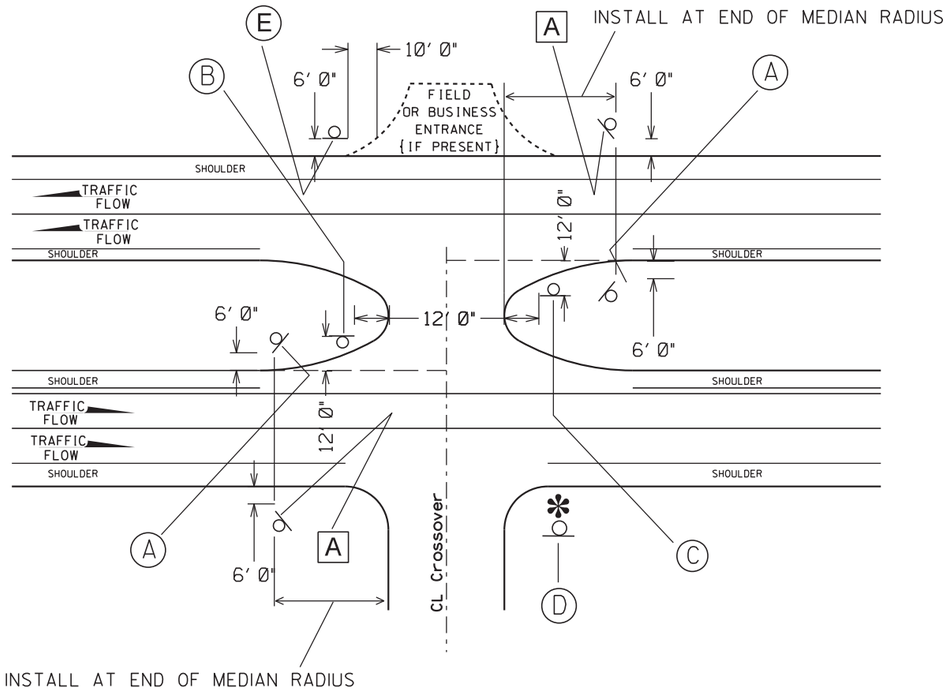


CROSS ROAD OFFSET:
NO SHOULDER - INSTALL AT 12' LATERAL OFFSET
SHOULDER > 6 '- INSTALL 6' FROM EDGE OF SHOULDER

✻ - SETBACK VARIES WITH RADIUS FROM 12' AT ACUTE ANGLE INTERSECTIONS TO 50' AT WIDE THROAT INTERSECTIONS

PERMANENT SIGNING

INTERSECTING SIDEROAD

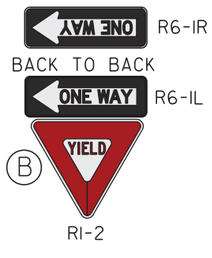


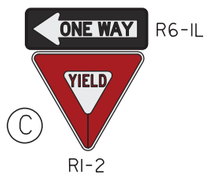
A

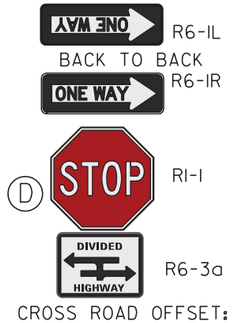
MEDIAN MOUNT

A

SHOULDER MOUNT

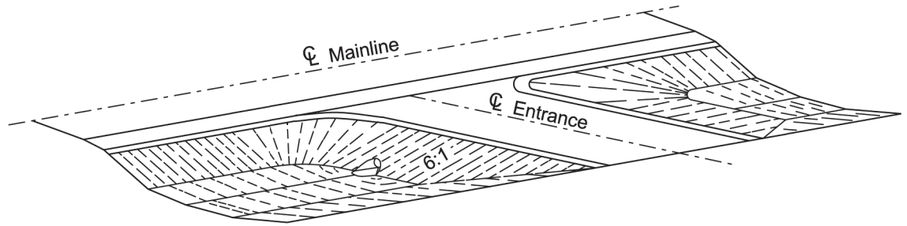




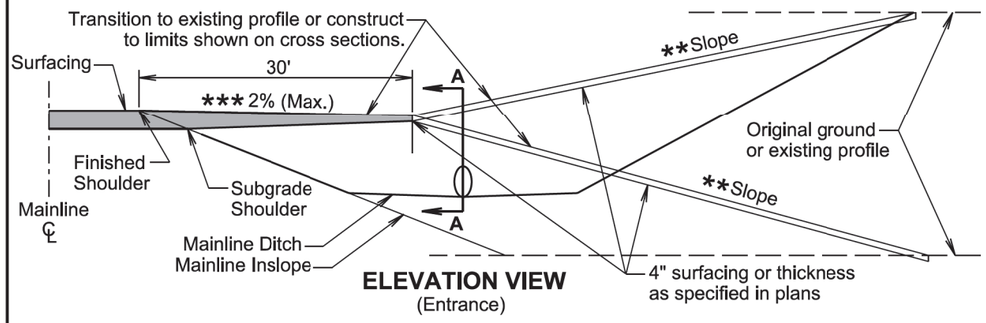


CROSS ROAD OFFSET:
NO SHOULDER - 12' LATERAL OFFSET
SHOULDER WIDER THAN 6' - 6' FROM EDGE OF SHOULDER

✻ SETBACK VARIES WITH RADIUS FROM 12' AT ACUTE ANGLE INTERSECTIONS TO 50' AT WIDE THROAT INTERSECTIONS



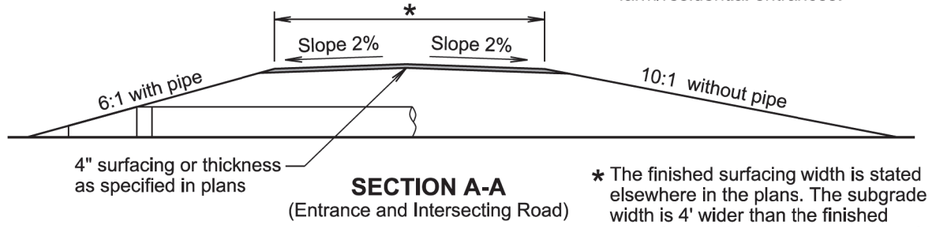
PERSPECTIVE OF ENTRANCE



ELEVATION VIEW
(Entrance)

*** 2% When on the inside of superelevation and 0% or flat when on outside of superelevation.

** Entrance maximum slope is typically 10:1 for field entrances and 15:1 for farm/residential entrances.



SECTION A-A
(Entrance and Intersecting Road)

* The finished surfacing width is stated elsewhere in the plans. The subgrade width is 4' wider than the finished surfacing width unless stated otherwise in the plans.

GENERAL NOTES:

The ditch section shown above in the perspective view is only for illustrative purpose.

The elevation view above is typical for either a ditch cut or fill section. Entrances that vary from above should be specified in the plans.

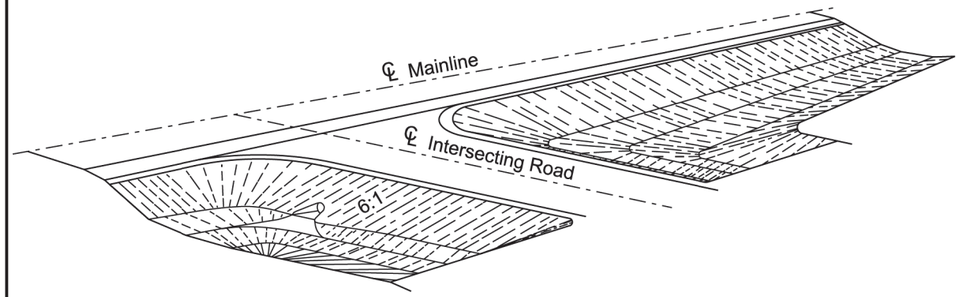
Pipe length will be adjusted if necessary during construction to obtain the 6:1 slope. For grading projects, the pipe length is estimated typically using a 4" thickness of surfacing directly over the subgrade above the pipe.

The transition area between the mainline inslope and the entrance or intersecting road inslope will be rounded to eliminate an abrupt transition.

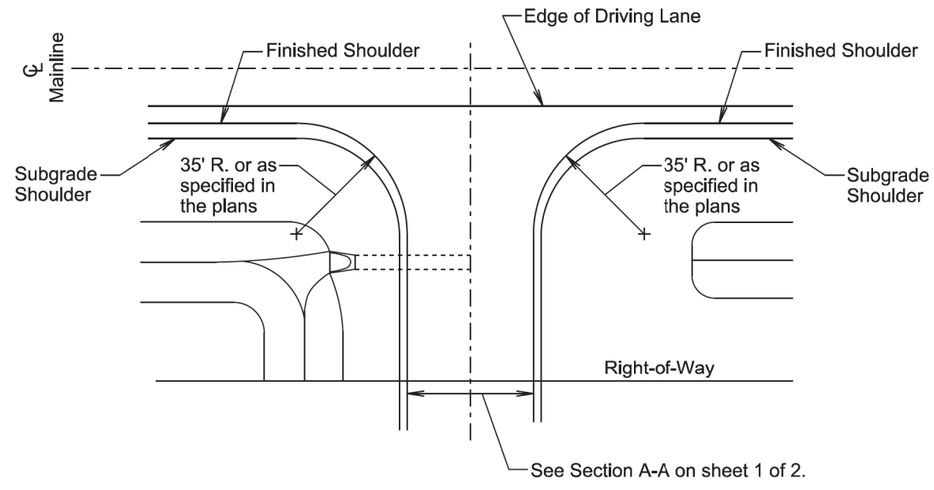
The turning radii will be 35' for intersecting roads and entrances unless stated otherwise in the plans.

November 19, 2021

Published Date: 2025	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01 Sheet 1 of 2



PERSPECTIVE OF INTERSECTING ROAD



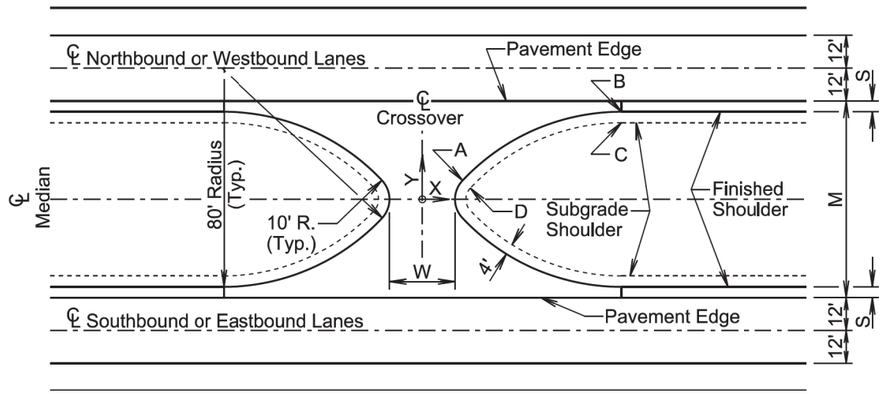
PLAN VIEW

GENERAL NOTES:

The 6:1 or 10:1 intersecting road inslope will transition to the existing intersecting road inslope near the right-of-way or at a location as determined by the Engineer.

November 19, 2021

Published Date: 2025	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01 Sheet 2 of 2



PLAN VIEW

S = Finished Shoulder Width
M = Median Width
W = Finished Median Crossover Width

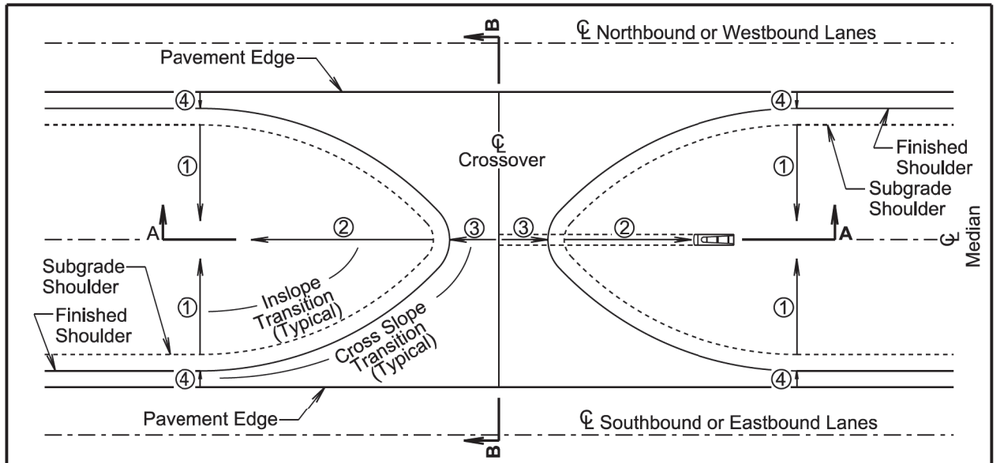
PUBLIC ACCESS MEDIAN CROSSOVER LAYOUT INFORMATION

M	S	W	Point A		Point B		Point C		Point D	
			X	Y	X	Y	X	Y	X	Y
(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)	(Ft)
60	4	24	15.7	7.7	66.5	26.0	66.5	22.0	18.2	4.7
60	4	40	23.7	7.7	74.5	26.0	74.5	22.0	26.2	4.7
60	6	24	16.0	8.0	64.0	24.0	64.0	20.0	18.4	4.8
60	6	40	24.0	8.0	72.0	24.0	72.0	20.0	26.4	4.8
66	4	24	15.2	7.3	70.0	29.0	70.0	25.0	17.9	4.4
66	4	40	23.2	7.3	78.0	29.0	78.0	25.0	25.9	4.4
66	6	24	15.5	7.6	67.7	27.0	67.7	23.0	18.1	4.6
66	6	40	23.5	7.6	75.7	27.0	75.7	23.0	26.1	4.6
72	4	24	14.8	6.9	73.0	32.0	73.0	28.0	17.6	4.1
72	4	40	22.8	6.9	81.0	32.0	81.0	28.0	25.6	4.1
72	6	24	15.0	7.1	71.0	30.0	71.0	26.0	17.8	4.3
72	6	40	23.0	7.1	79.0	30.0	79.0	26.0	25.8	4.3
80	4	24	14.2	6.3	76.4	36.0	76.4	32.0	17.3	3.8
80	4	40	22.2	6.3	84.4	36.0	84.4	32.0	25.3	3.8
80	6	24	14.5	6.6	74.8	34.0	74.8	30.0	17.5	4.0
80	6	40	22.5	6.6	82.8	34.0	82.8	30.0	25.5	4.0

The dimensions provided for "X" and "Y" begin from the intersection of the median centerline and the crossover centerline.

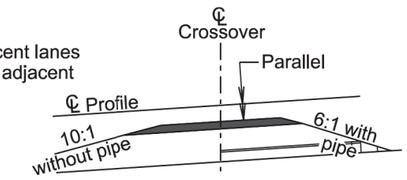
September 14, 2018

Published Date: 2025	SDDOT	PUBLIC ACCESS MEDIAN CROSSOVER	PLATE NUMBER 120.03
			Sheet 1 of 2

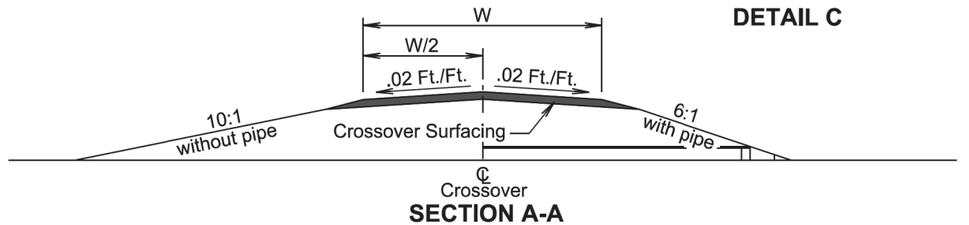


PLAN VIEW

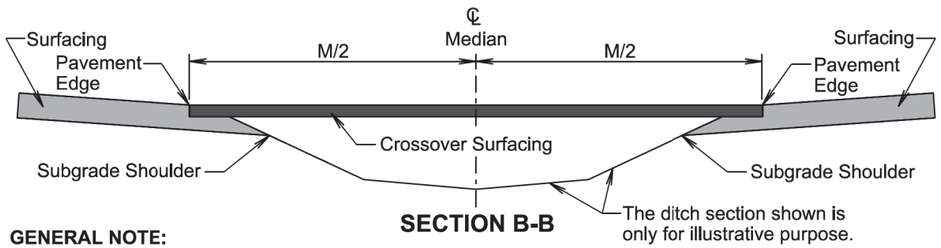
① Inslope as specified on the typical sections or cross sections
② 10:1 Inslope without pipe, 6:1 with pipe
③ Cross slope will be .02 Ft./Ft. when centerline profiles of adjacent lanes are at less than 2% grade. When the centerline profiles of the adjacent lanes are 2% and greater the cross slope will be parallel to the profile or as approved by the Engineer. (See Detail C)
④ Cross slope as specified on the typical sections



DETAIL C



SECTION A-A



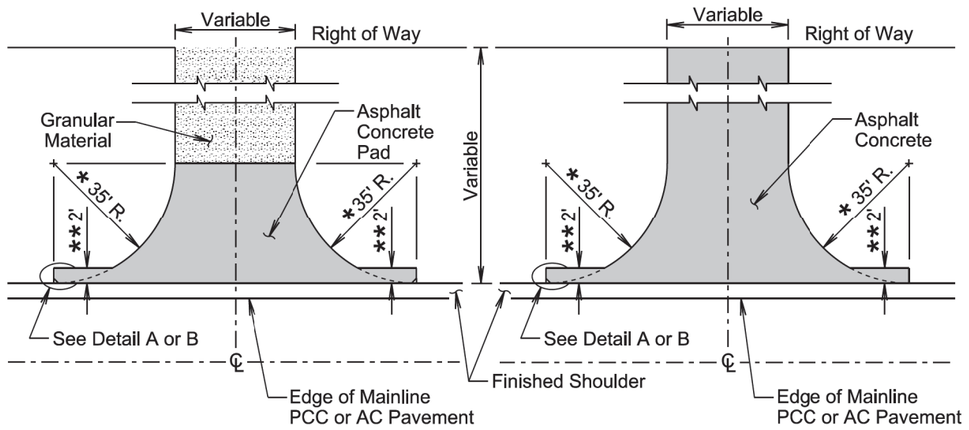
SECTION B-B

GENERAL NOTE:

The quantities of materials necessary for construction of the public access median crossover are as provided in the plans and will be paid for at their respective contract unit prices for the various materials used.

September 14, 2018

Published Date: 2025	SDDOT	PUBLIC ACCESS MEDIAN CROSSOVER	PLATE NUMBER 120.03
			Sheet 2 of 2



PLAN VIEW
(Intersecting Road)
(No Asphalt Concrete Surfacing Beyond Right of Way)

PLAN VIEW
(Intersecting Road)
(Asphalt Concrete Surfacing Beyond Right of Way)

GENERAL NOTES:

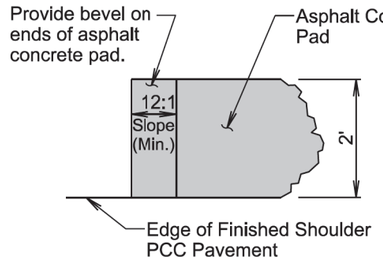
The precise construction limits for situations other than shown above will be determined by the Engineer during construction.

* For new construction, 35' radius typical or as specified in the plans. For resurfacing projects, radius is variable depending on existing conditions.

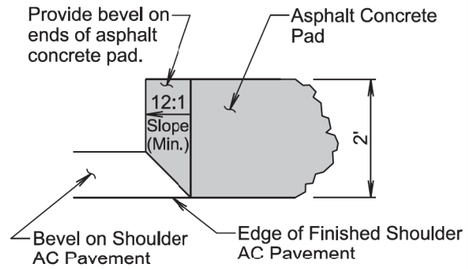
** The Contractor may adjust the screed of the paver during mainline paving operations to provide the 2-foot asphalt concrete pad or the Contractor may provide the 2-foot asphalt concrete pad during paving of the intersecting roads as shown above. The Engineer may eliminate the 2-foot asphalt concrete pads if the Engineer, in the Engineer's sole discretion, determines the pads are infeasible to construct due to site specific reasons including, but not limited to; existing inslope configuration, borrow and material availability, and right-of-way constraints.

August 27, 2020

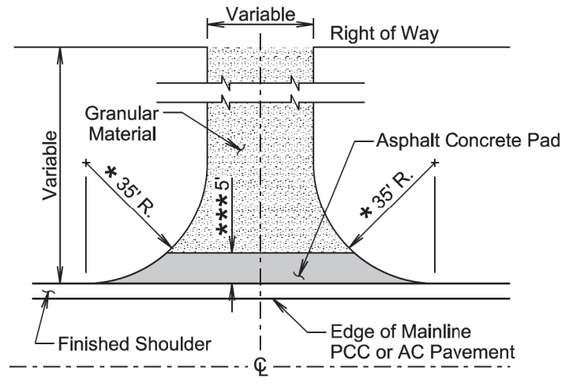
Published Date: 2025	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04
			Sheet 1 of 2



DETAIL A
(Typ. for Projects with PCC Pavement on Shoulder)



DETAIL B
(Typ. for Projects with AC Pavement on Shoulder)

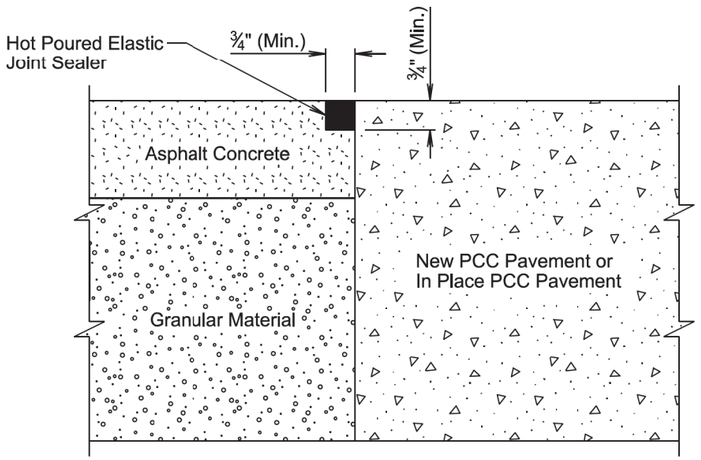


PLAN VIEW
(Entrance)

*** Not required if finished shoulder width is 4' or greater.

August 27, 2020

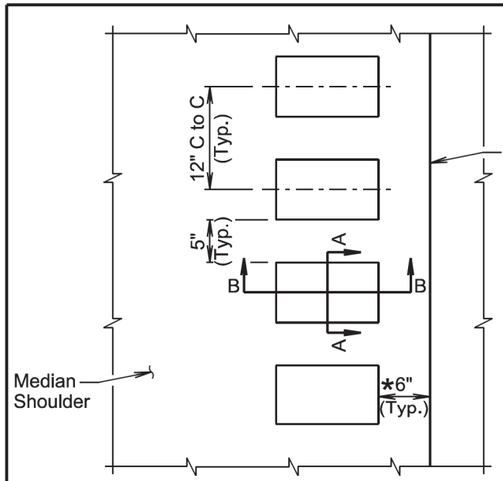
Published Date: 2025	SDDOT	SURFACING OR RESURFACING OF INTERSECTING ROADS AND ENTRANCES (MAINLINE AND SHOULDERS: PCC OR AC PAVEMENT)	PLATE NUMBER 320.04
			Sheet 2 of 2



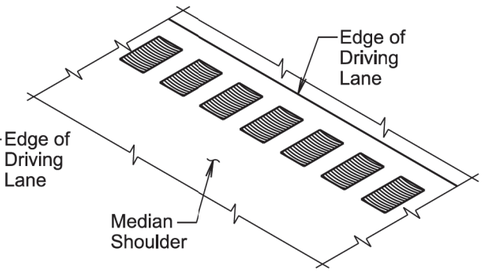
TRANSVERSE SECTION
(Asphalt Concrete Shoulder Joint)

September 14, 2019

Published Date: 2025	SDDOT	ASPHALT CONCRETE SHOULDER JOINT ADJACENT TO PCC PAVEMENT	PLATE NUMBER 320.15
			Sheet 1 of 1

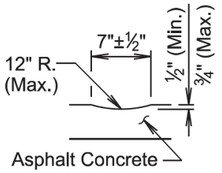


PLAN VIEW
(Typical Rumble Strip in Asphalt Concrete)

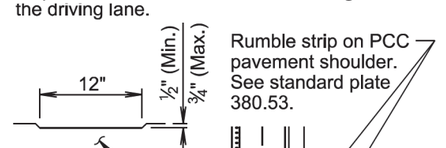


PERSPECTIVE VIEW
(Typical Rumble Strip in Asphalt Concrete)

* When PCC pavement width from centerline to edge of pavement is 12', the rumble strip may be placed a maximum of 2' from the edge of the driving lane.



SECTION A-A



SECTION B-B

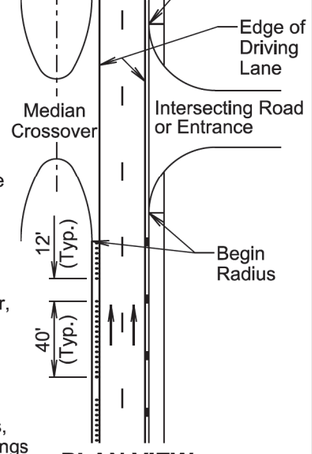
GENERAL NOTES:

A rumble strip will be constructed on all of the asphalt concrete median shoulders by grinding alternating patterns of 40' continuous indentations in the asphalt concrete. The rumble strip will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble strip will not be constructed through intersecting roads, entrances, median crossovers, entrance ramps, exit ramps, turnouts, gore areas, bridge decks, bridge approach slabs, and railroad crossings. The lengths of the 40' segments with continuous indentations and the 12' segments without a rumble strip adjacent to the intersecting roads, entrances, median crossovers, entrance ramps, exit ramps, turnouts, gore areas, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

Prior to constructing the rumble strip the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble strip.

Measurement of the rumble strip will be to the nearest 0.1 of a mile for each median shoulder. Measurement and payment of the rumble strip will include the 12' long segments without rumble strips and the segments adjacent to intersecting roads, entrances, median crossovers, entrance ramps, exit ramps, turnouts, gore areas, bridge decks, bridge approach slabs, and railroad crossings without rumble strips. Payment for constructing the rumble strip will be at the contract unit price per mile for "Grind 12" Rumble Strip or Stripe in Asphalt Concrete".



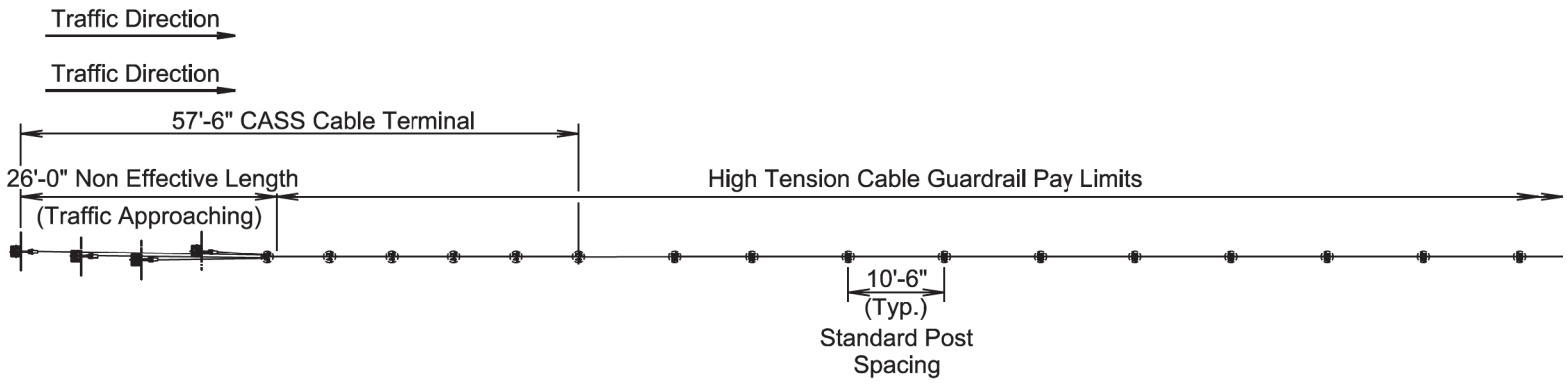
PLAN VIEW

March 31, 2024

Published Date: 2025	SDDOT	12" RUMBLE STRIP IN ASPHALT CONCRETE ON DIVIDED HIGHWAY MEDIAN SHOULDER	PLATE NUMBER 320.26
			Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 7
FILE - ...\REGION DESIGN\STD PLATES.DGN
PLOTTED FROM - TRAB17901

Pay Limits for One-Way Traffic Roadways
Valtir (Trinity) System

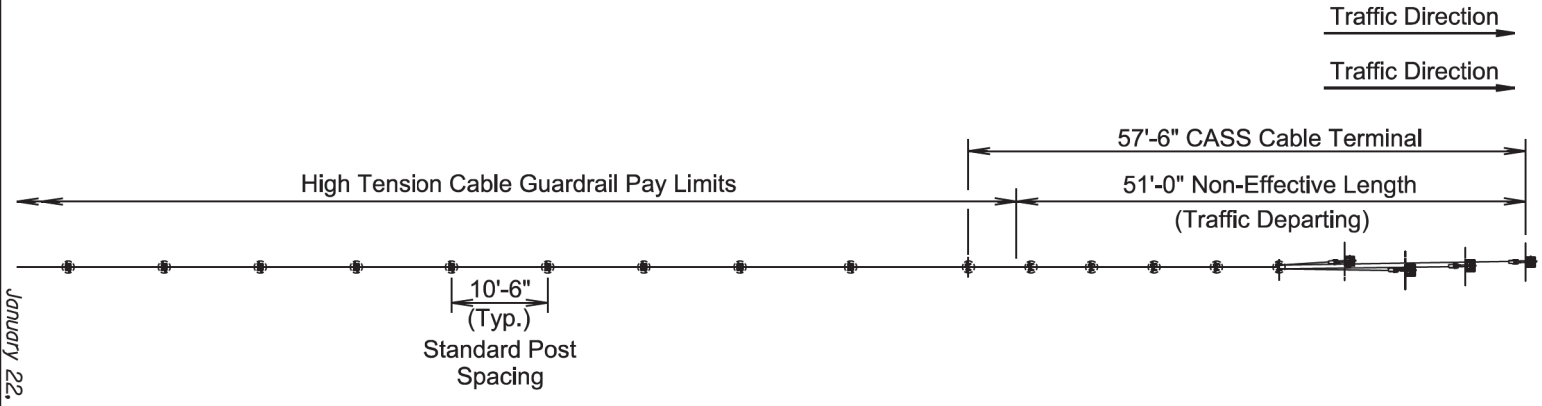


GENERAL NOTES:

Valtir (Trinity) CASS Cable Terminal has a total length of 57'-6". On one-way traffic roadways, it has 31'-6" effective length on the approach end of the terminal and 6'-6" effective length on the non-approach (departure) end. On two-way traffic roadways, it has 31'-6" effective length on both the approach and the non-approach ends of the terminal.

The High Tension Cable Guardrail pay limits will be the length of need (LON) or the effective length.

The High Tension Cable Guardrail Anchor Assembly pay limits will be the non-effective length of the terminal.



Published Date: 2025

SDDOT

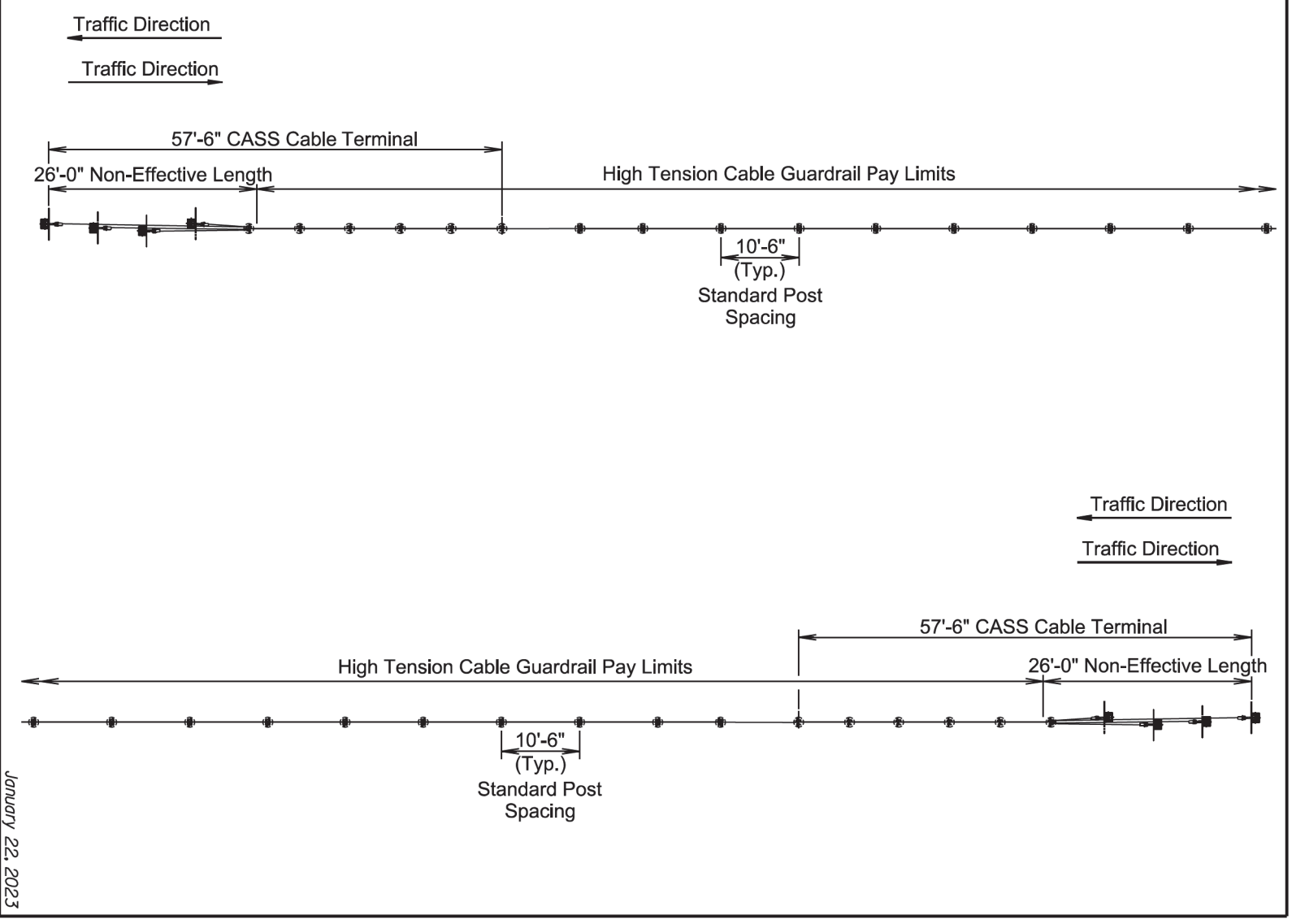
HIGH TENSION CABLE GUARDRAIL

PLATE NUMBER 629.50

Sheet 1 of 3

January 22, 2023

Pay Limits for Two-Way Traffic Roadways
Valtir (Trinity) System



Published Date: 2025

SDDOT

HIGH TENSION CABLE GUARDRAIL

PLATE NUMBER 629.50

Sheet 2 of 3

January 22, 2023

Plotting Date: 08/19/2024

STATE OF SOUTH DAKOTA

PROJECT NH-CR 0012(311)343

SHEET 117

TOTAL SHEETS 140

Published Date: 2025

SDDOT

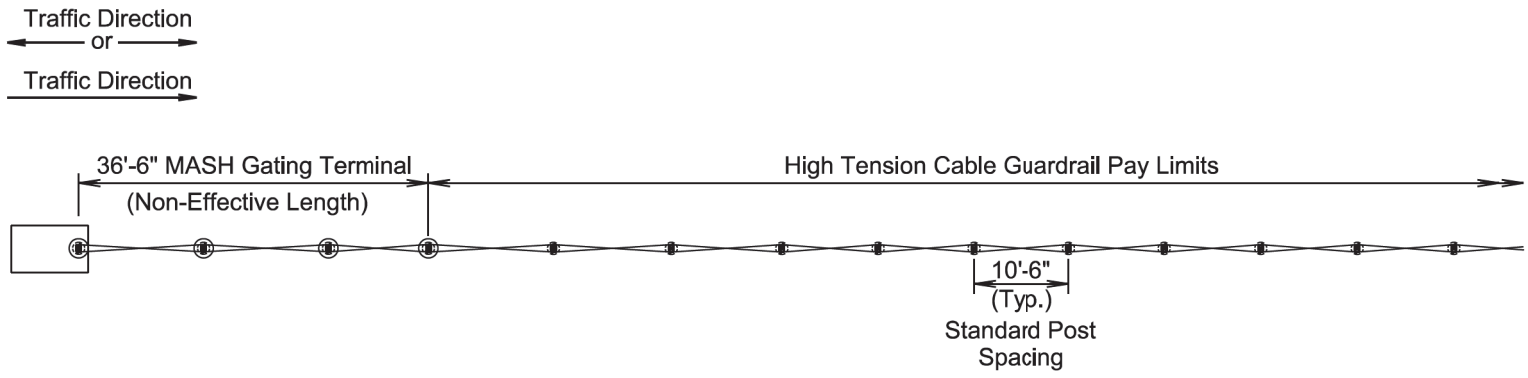
HIGH TENSION CABLE GUARDRAIL

PLATE NUMBER 629.50

Sheet 3 of 3

January 22, 2023

Pay Limits for One-Way and Two-Way Traffic Roadway
Brifen System

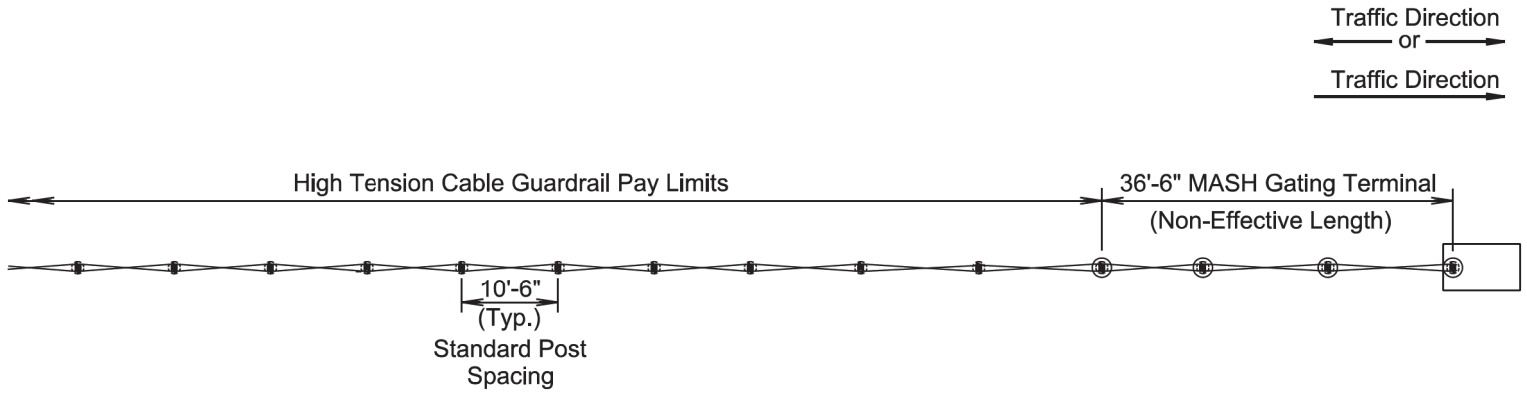


GENERAL NOTES:

The Brifen MASH Gating Terminal has a total length of 36'-6" and is non-effective.

The High Tension Cable Guardrail pay limits will be the length of need (LON) or the effective length.

The High Tension Cable Guardrail Anchor Assembly pay limits will be the non-effective length of the terminal.



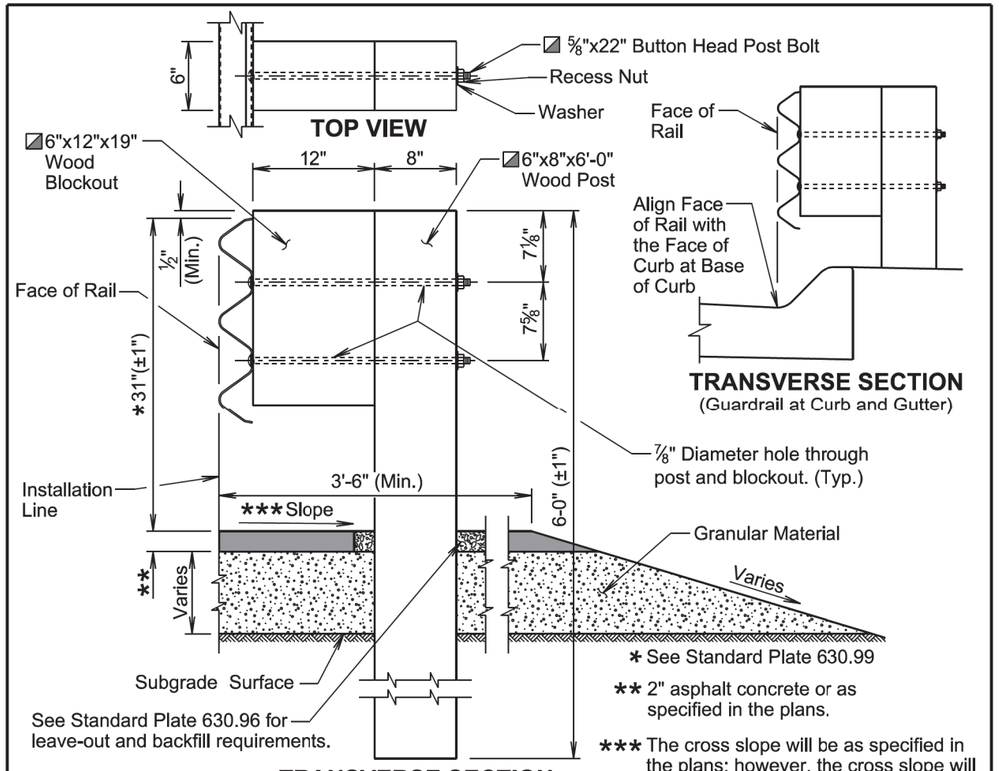
STATE OF SOUTH DAKOTA

PROJECT NH-CR 0012(311)343

SHEET 118

TOTAL SHEETS 140

Plotting Date: 08/19/2024



* See Standard Plate 630.99

** 2" asphalt concrete or as specified in the plans.

*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing.

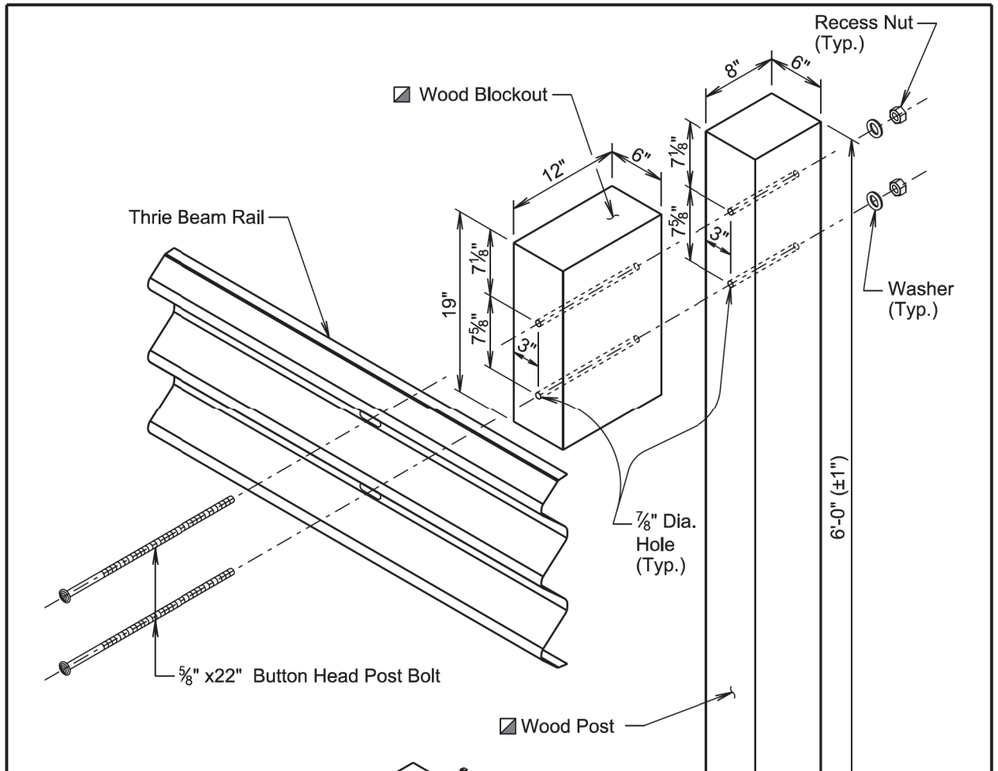
⧄ The post and blockout illustrated above is typical for single thrie beam guardrail. When other variations of posts and blockouts are specified on other standard plates (e.g. transitions) then the posts and blockouts will be as specified on the other standard plates or as specified in the plans.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

The top of post and top of block will have a true square cut. The top of block will be a maximum of ±½ inch from the top of the post.

September 14, 2019

Published Date: 2025	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 1 of 5



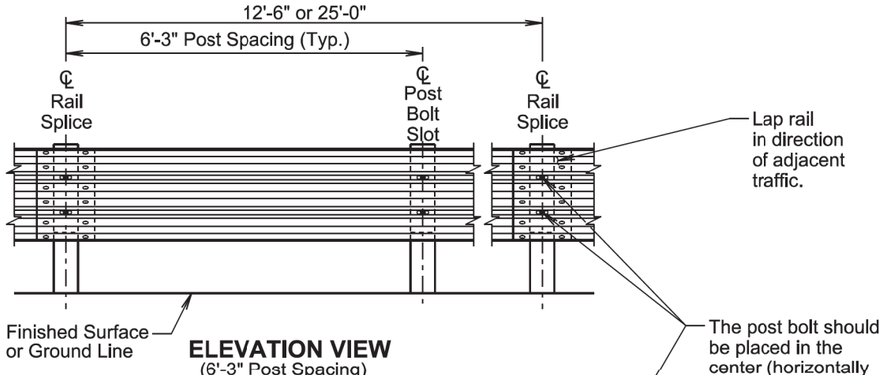
EXPANDED ISOMETRIC VIEW AT MIDSPAN OF THRIE BEAM GUARDRAIL

EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) THRIE BEAM GUARDRAIL AT MIDSPAN
(For Information Only, Not to Scale)

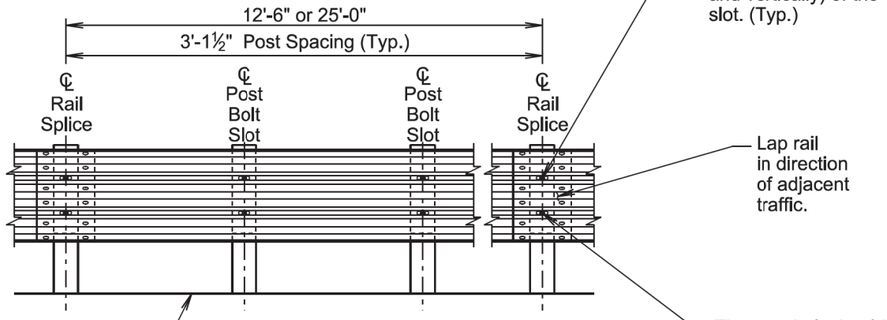
⧄ For single thrie beam guardrail use 6"x12"x19" wood blockout, ⅝"x22" button head post bolt, and 6"x8"x6'-0" wood post. For double (nested) thrie beam guardrail use 6"x8"x19" wood blockout, ⅝"x18" button head post bolt, and 6"x8"x7'-0" wood post.

September 14, 2019

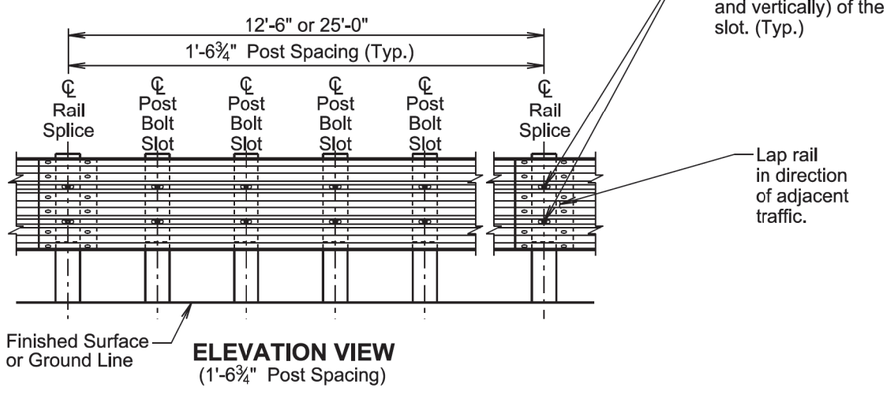
Published Date: 2025	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 2 of 5



ELEVATION VIEW
(6'-3" Post Spacing)



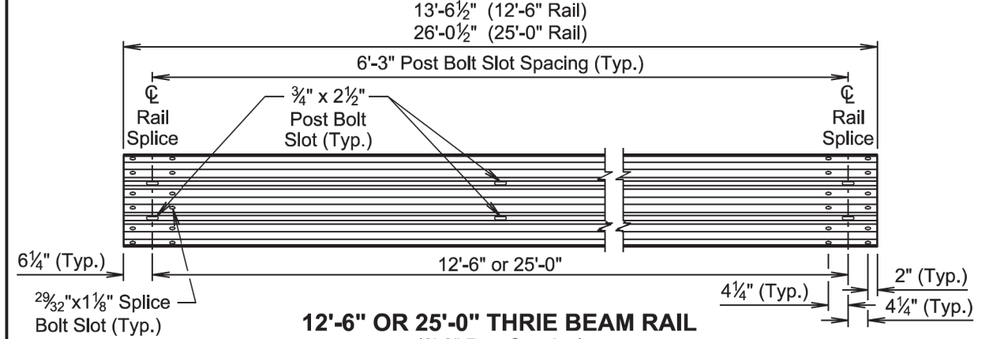
ELEVATION VIEW
(3'-1½" Post Spacing)



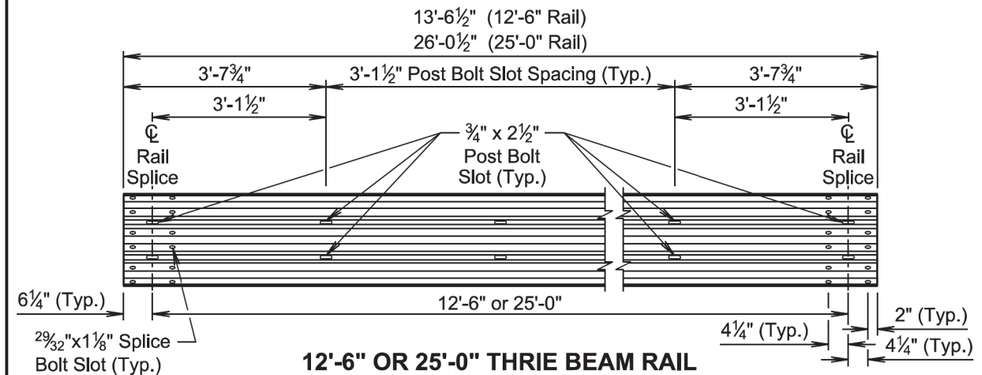
ELEVATION VIEW
(1'-6¾" Post Spacing)

September 14, 2019

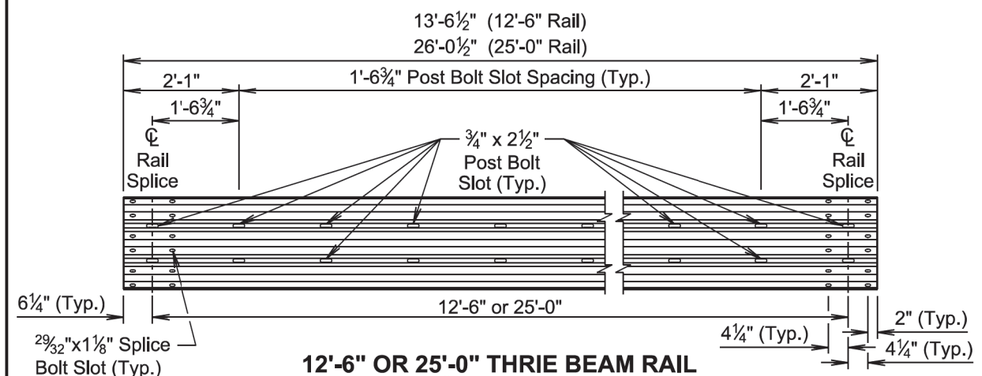
Published Date: 2025	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 3 of 5



12'-6" OR 25'-0" THRIE BEAM RAIL
(6'-3" Post Spacing)



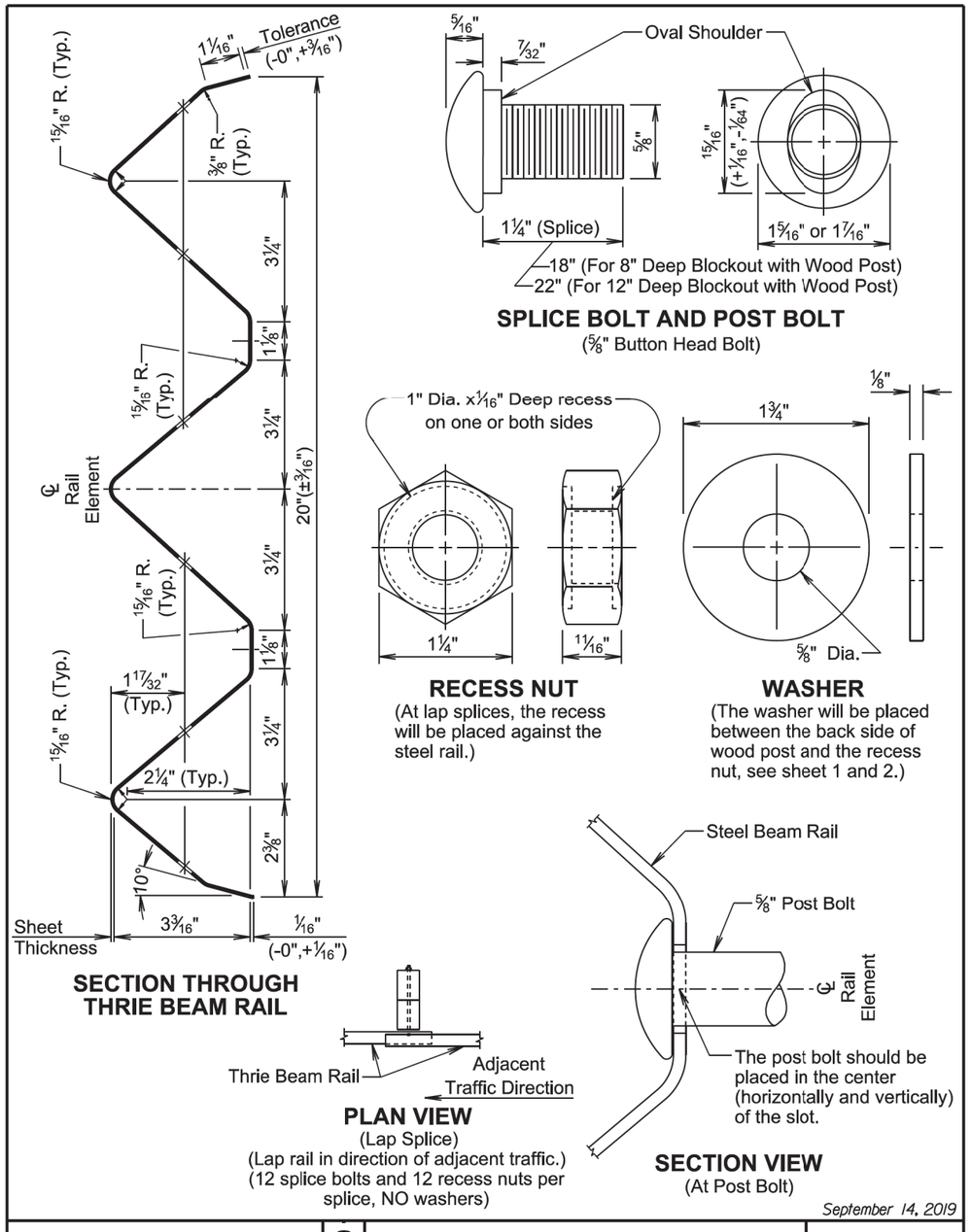
12'-6" OR 25'-0" THRIE BEAM RAIL
(3'-1½" Post Spacing)



12'-6" OR 25'-0" THRIE BEAM RAIL
(1'-6¾" Post Spacing)

September 14, 2019

Published Date: 2025	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 4 of 5



September 14, 2019

Published Date: 2025	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 5 of 5

TYPE AND DETAILS OF MGS						
Type of MGS	W Beam Rail Single or Double (Nested)	Blockout Size	Blockout Material	Post Size	Post Material	Post Spacing
1	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"
1C	Single	6"x12"x14"	Wood	6"x8"x7'-6"	Wood	6'-3"
2	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	3'-1½"
3	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	1'-6¾"
4	Double	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"

STANDARD PLATE REFERENCE	
Type of MGS	See Standard Plate(s)
1	630.20, 630.22
1C	630.20, 630.25
2	630.20
3	630.20
4	630.20

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite".

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing on sheet 2 of 6.

All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

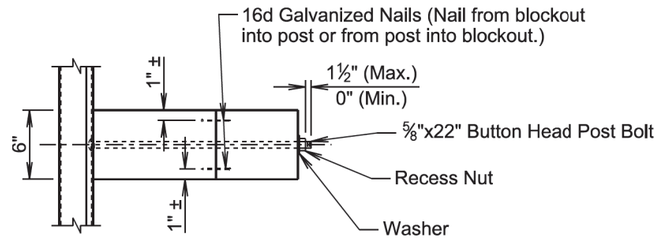
W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

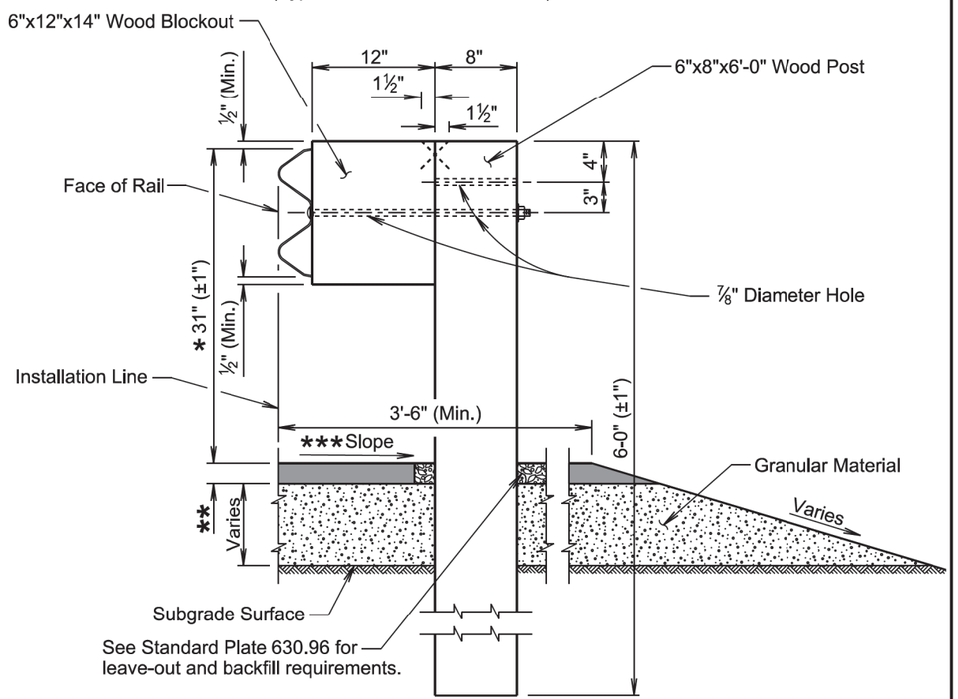
All costs for constructing the MGS including labor, equipment, and materials including all posts, blockouts, steel beam rail, and hardware will be incidental to the contract unit price per foot for the respective MGS contract item.

September 14, 2019

Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 1 of 6



TOP VIEW
(Type 1, 2, or 3 MGS Installation)



TRANSVERSE SECTION
(Type 1, 2, or 3 MGS Installation)

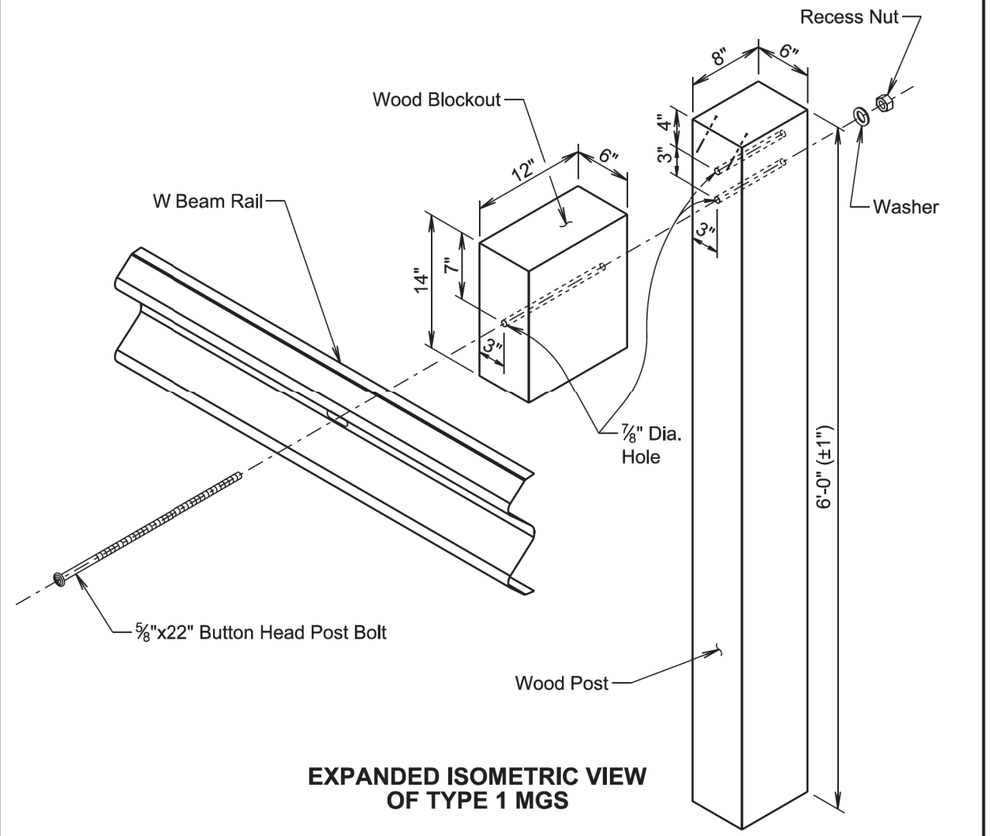
* See Standard Plate 630.99

** 2" asphalt concrete or as specified in the plans.

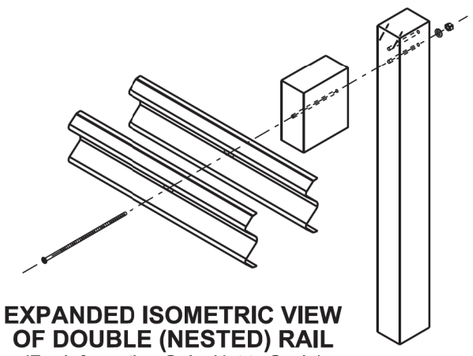
*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

September 14, 2019

Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 2 of 6



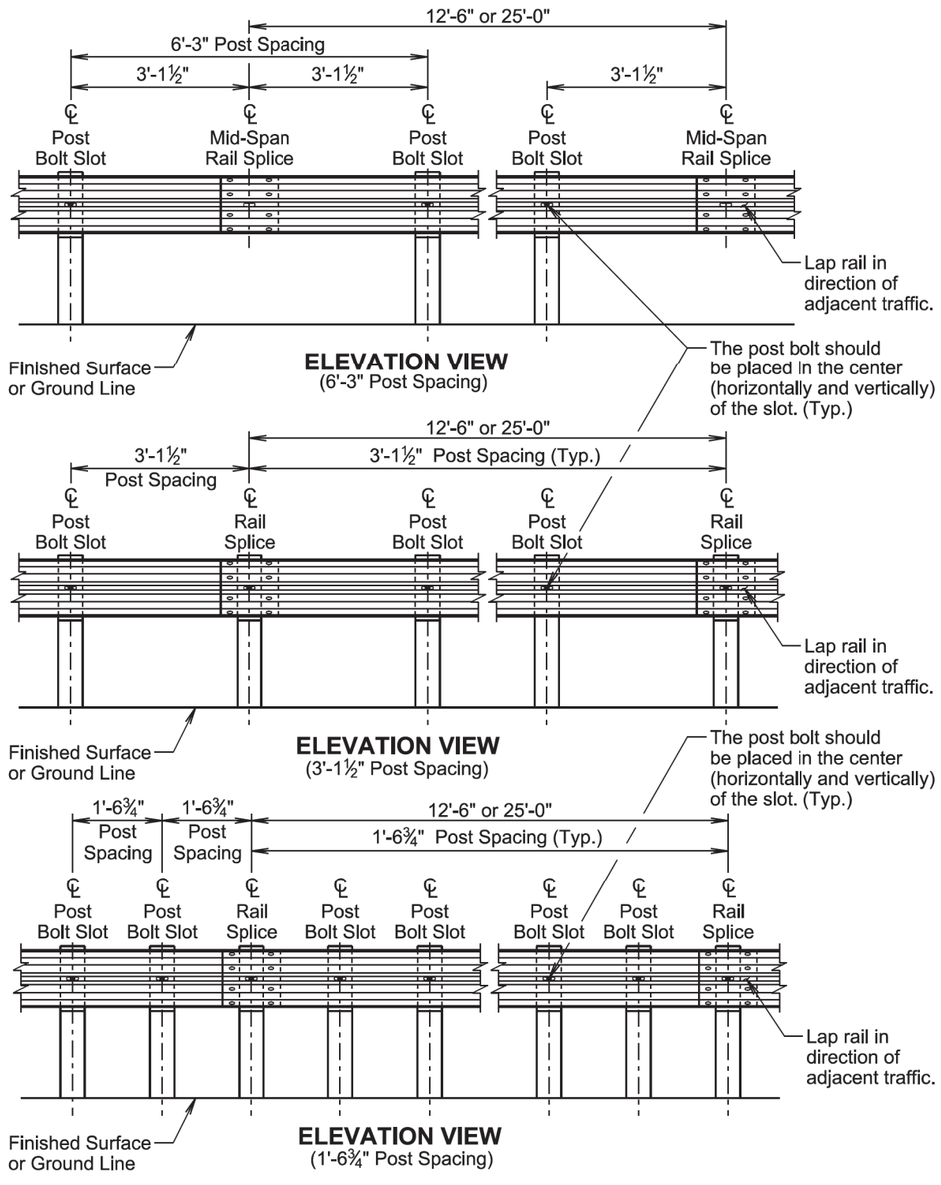
EXPANDED ISOMETRIC VIEW OF TYPE 1 MGS



EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) RAIL
(For Information Only, Not to Scale)

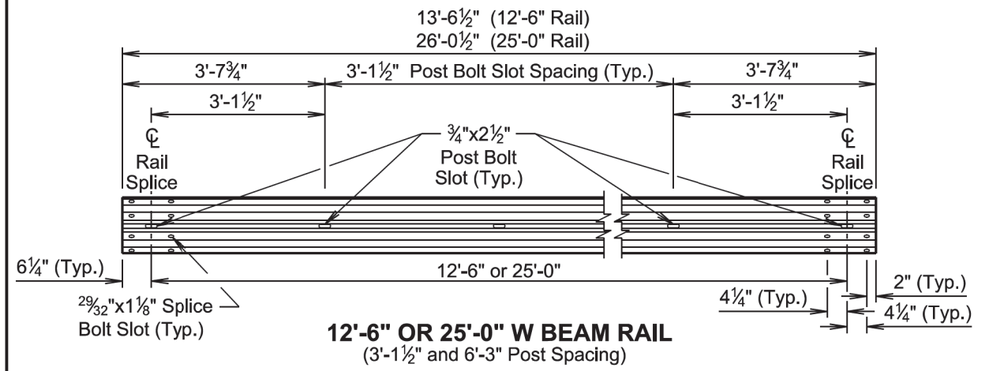
September 14, 2019

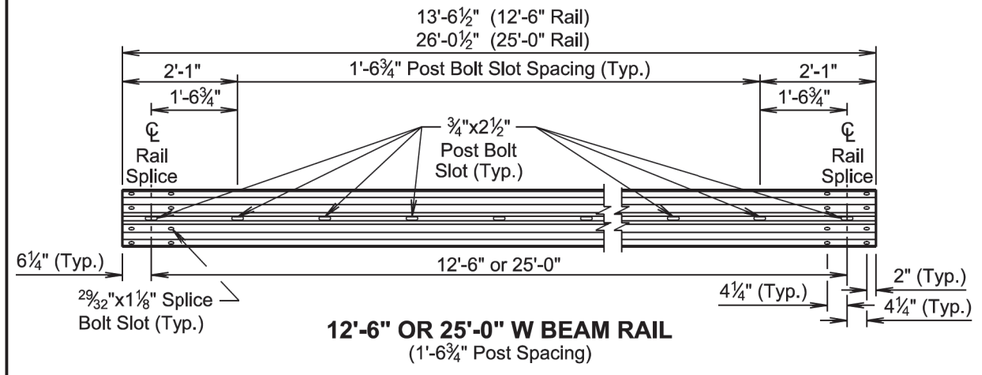
Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 3 of 6



September 14, 2019

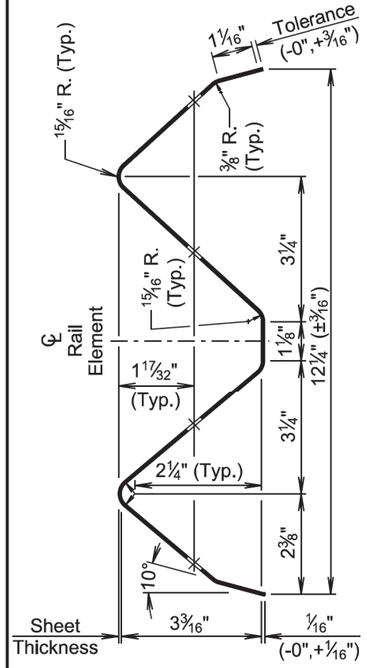
Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20 Sheet 4 of 6



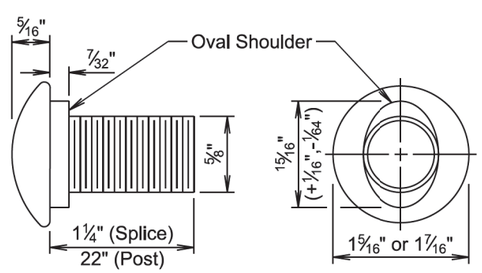


September 14, 2019

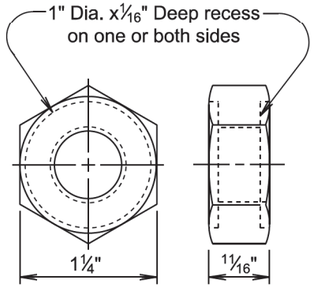
Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20 Sheet 5 of 6



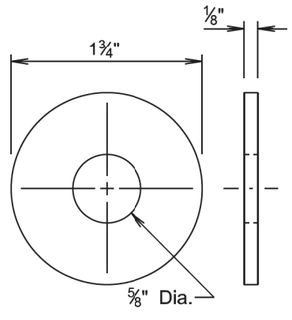
SECTION THROUGH W BEAM RAIL



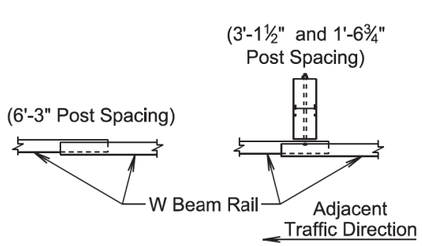
SPLICE BOLT AND POST BOLT
(5/8" Button Head Bolt)



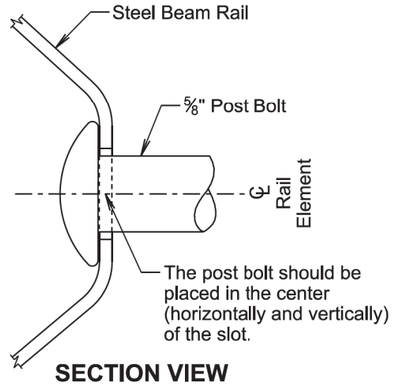
RECESS NUT
(At lap splices, the recess will be placed against the steel rail.)



WASHER
(The washer will be placed between the back side of wood post and the recess nut, see sheet 2 and 3.)



PLAN VIEW
(Lap Splice)
(Lap rail in direction of adjacent traffic.)
(8 splice bolts and 8 recess nuts per splice, NO washers)

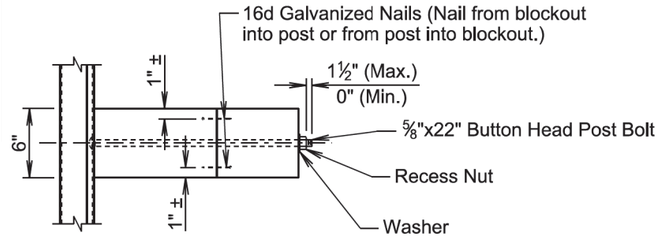


SECTION VIEW
(At Post Bolt)

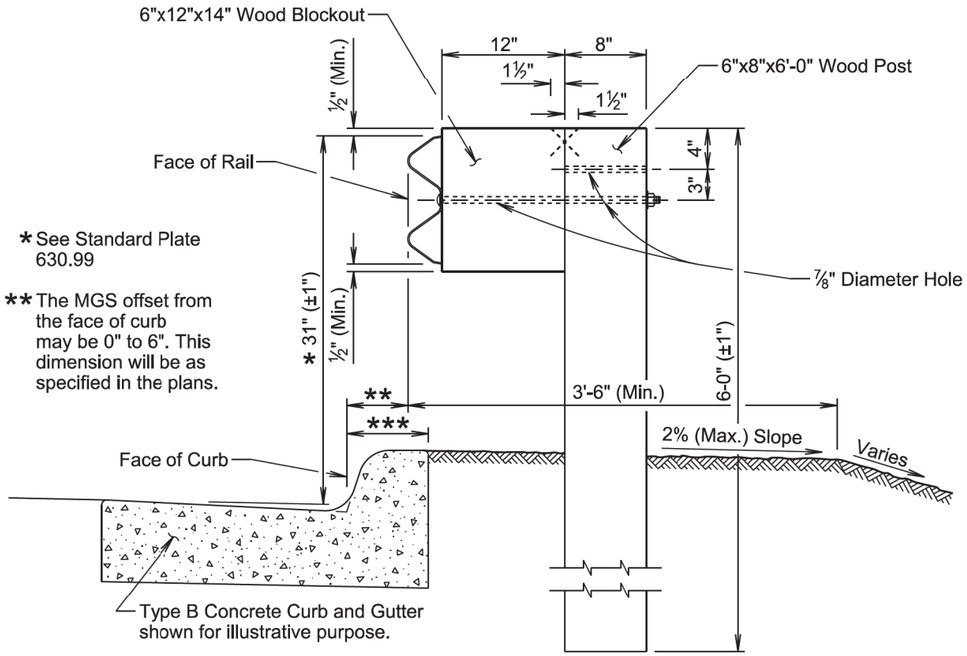
September 14, 2019

Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 6 of 6

CONCRETE CURB AND GUTTER TYPE	DIMENSION *** (in.)
B and BL	8
D	12
F and FL	10
R	11



TOP VIEW



TRANSVERSE SECTION

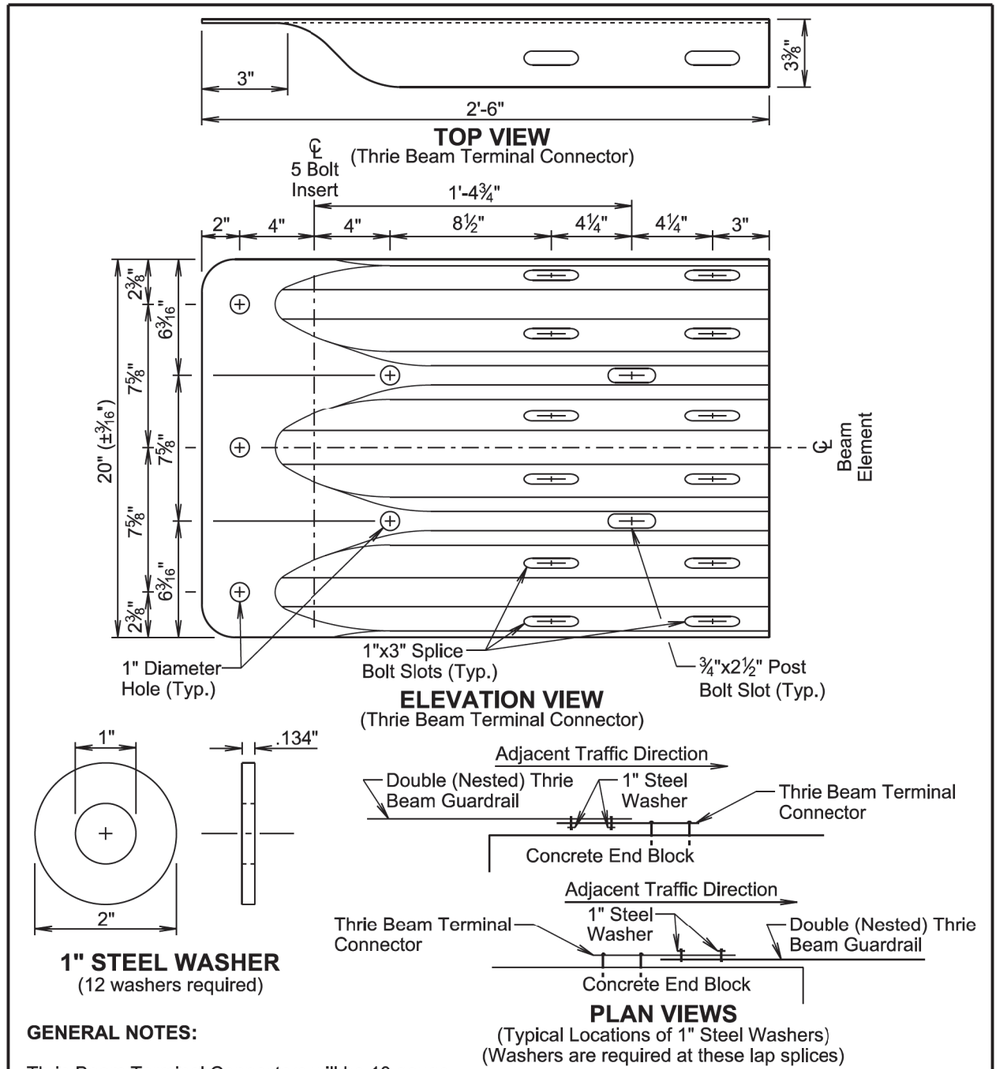
GENERAL NOTES:

The guardrail on this standard plate is Type 1 MGS. See standard plate 630.20 for specifications regarding Type 1 MGS.

When PCC pavement or asphalt concrete pavement is adjacent to the post, see standard plate 630.96 for leave-out and backfill requirements.

September 14, 2019

Published Date: 2025	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) AT CURB AND GUTTER	PLATE NUMBER 630.22
			Sheet 1 of 1



GENERAL NOTES:

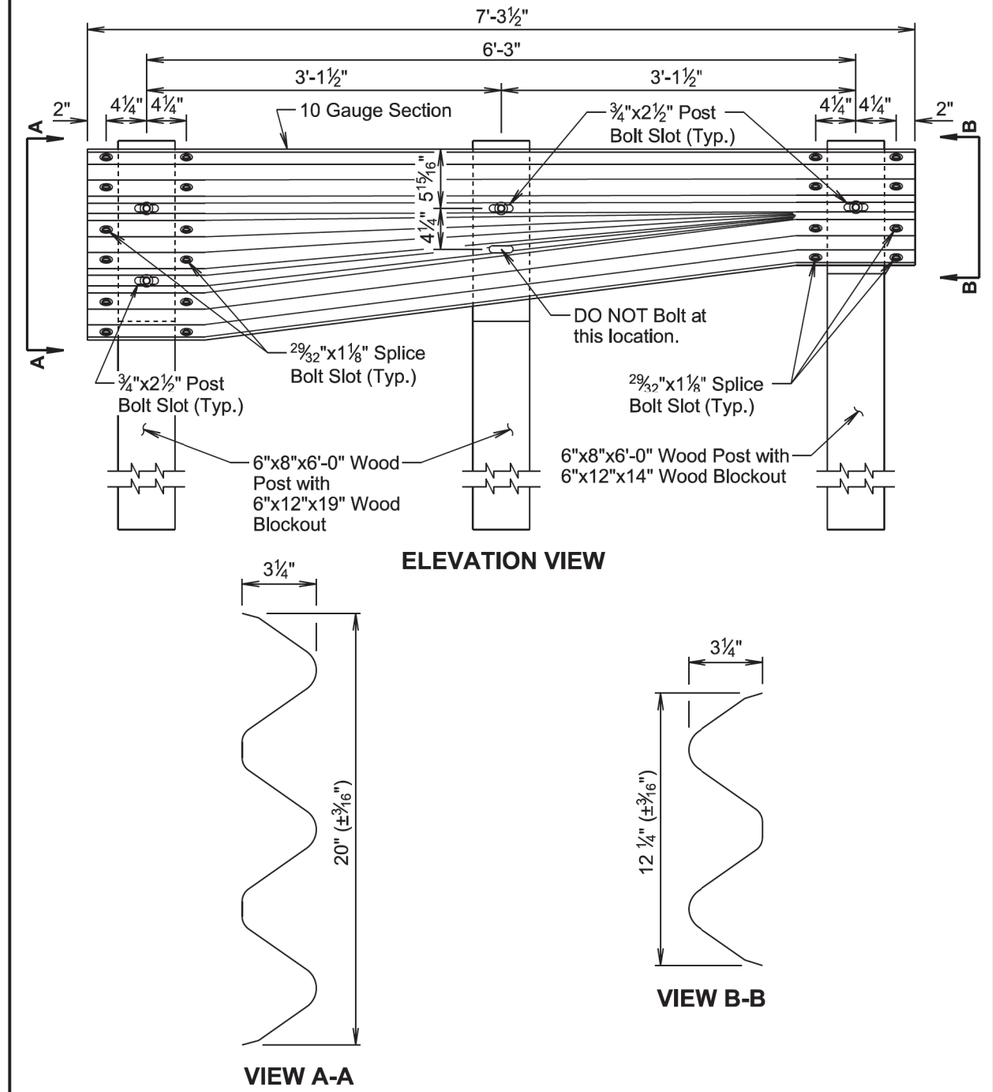
Thrie Beam Terminal Connectors will be 10 gauge.

When the thrie beam terminal connector is used to connect the rail to the bridge or concrete end block, 1" steel washers will be used at the lap splice and the washers will be in direct contact with the 3" slots of the thrie beam terminal connector. See the drawings above for the typical locations of the 1" steel washers.

There will be no separate payment for furnishing and installing the thrie beam terminal connector. All costs for furnishing and installing the thrie beam terminal connector will be incidental to the contract unit price of the respective guardrail item it is attached to.

September 14, 2019

Published Date: 2025	SDDOT	*THRIE BEAM TERMINAL CONNECTOR*	*PLATE NUMBER* 630.47 *Sheet 1 of 1*

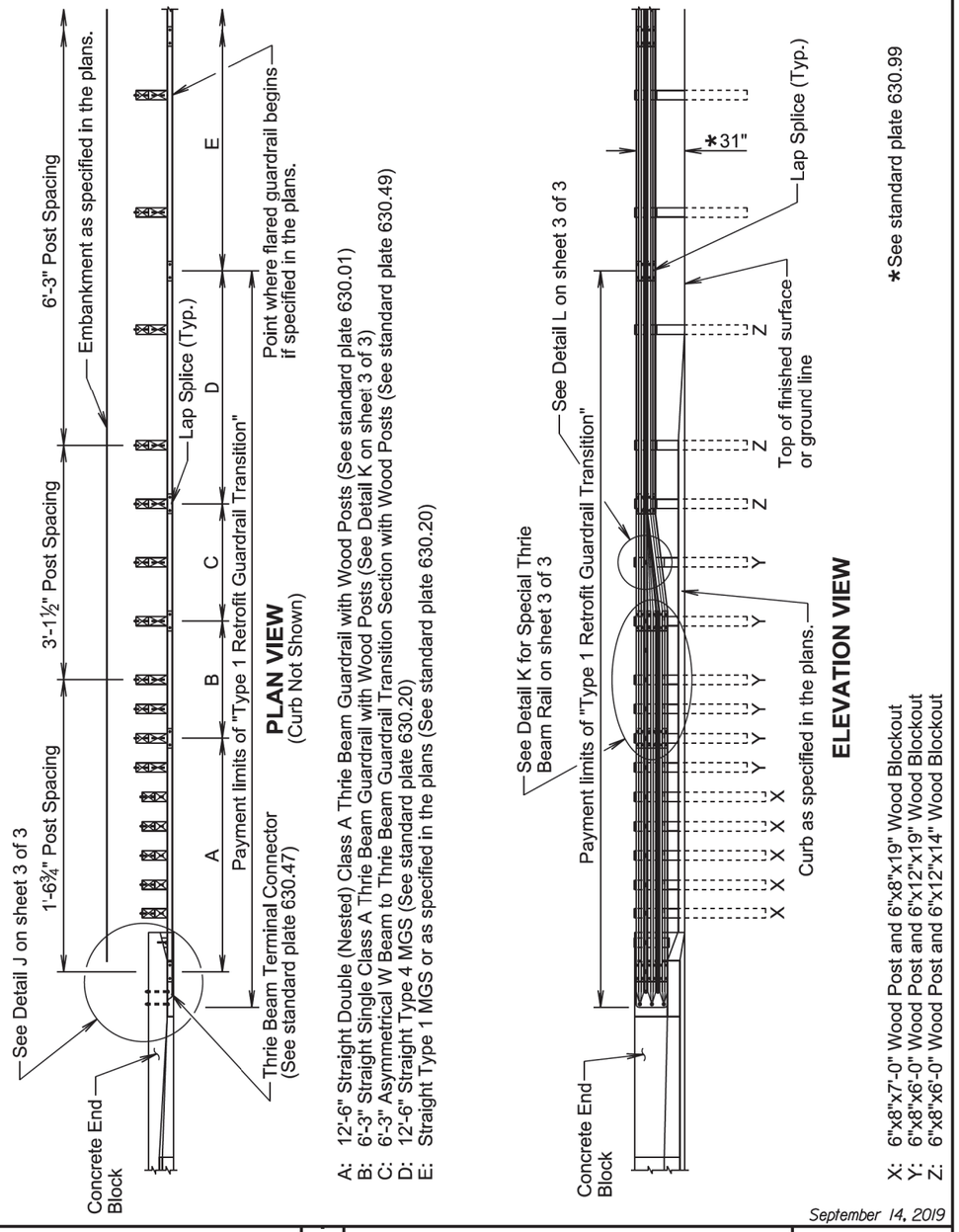


GENERAL NOTES:

All costs for furnishing and installing the asymmetrical W beam to thrie beam guardrail transition including labor, equipment, and materials including two posts, two blocks, asymmetrical W beam to thrie beam transition section, and hardware will be incidental to the contract unit price per each for the corresponding guardrail transition contract item.

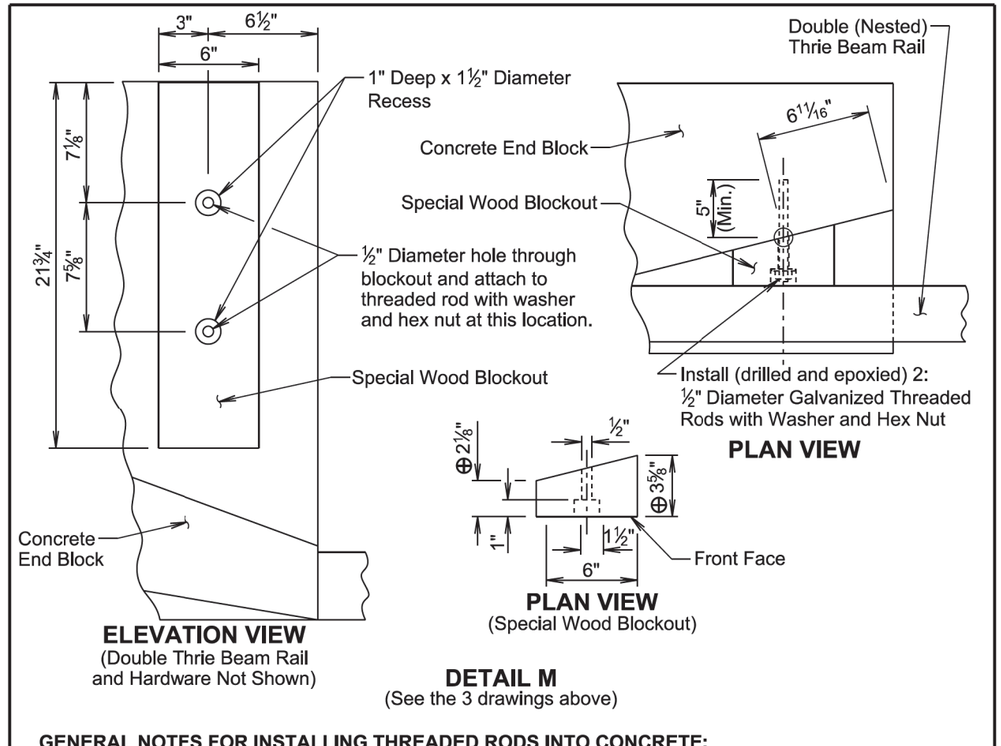
September 14, 2019

Published Date: 2025	SDDOT	*ASYMMETRICAL W BEAM TO THRIE BEAM GUARDRAIL TRANSITION SECTION*	*PLATE NUMBER* 630.49 *Sheet 1 of 1*



September 14, 2019

Published Date: 2025	SDDOT	TYPE 1 RETROFIT GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.51
			Sheet 1 of 3



DETAIL M
(See the 3 drawings above)

GENERAL NOTES FOR INSTALLING THREADED RODS INTO CONCRETE:

⊕ The dimensions shown are estimated based on original construction plans of the concrete end block. The special wood blockout will be cut as necessary such that the front face of the special wood blockout will align with the vertical front face of the concrete end block ±½".

The threaded rods will be ½" diameter and conform to ASTM F1554, Grade 55. The threaded rods will be embedded a minimum of 5" into the concrete.

The diameter of the drilled holes will not be less than ⅛" greater or more than ⅜" greater than the diameter of the threaded rods or as per the Manufacturer's recommendations. The holes will not be drilled using core bits. The drilled holes will be blown out with compressed air using a device that will reach the back of the hole to ensure that all debris or loose material has been removed prior to the epoxy injection.

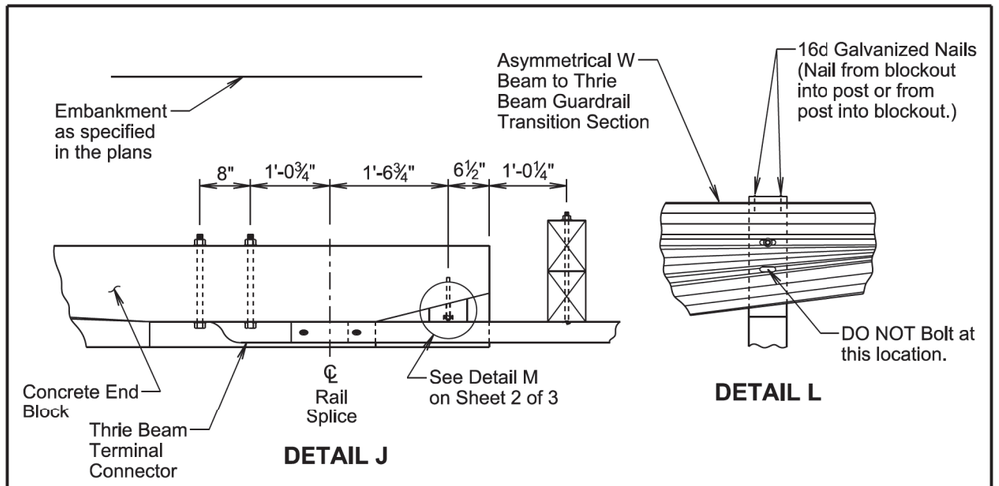
The epoxy resin mixture will be of a type for bonding steel to hardened concrete and will conform to AASHTO M235 Type IV, Grade 3 (Equivalent to ASTM C881, Type IV, Grade 3).

Mix epoxy resin as recommended by the Manufacturer and apply by an injection method as approved by the Engineer. Beginning at the back of the drilled holes, fill the holes ⅓ to ½ full of epoxy, or as recommended by the Manufacturer, prior to insertion of the steel rod. Rotate the steel rod during installation to eliminate voids and ensure complete bonding of the rod. Insertion of the rods by the dipping or painting methods will not be allowed.

Loads will not be applied to the epoxy grouted threaded rods until the epoxy resin has had sufficient time to cure as specified by the epoxy resin Manufacturer.

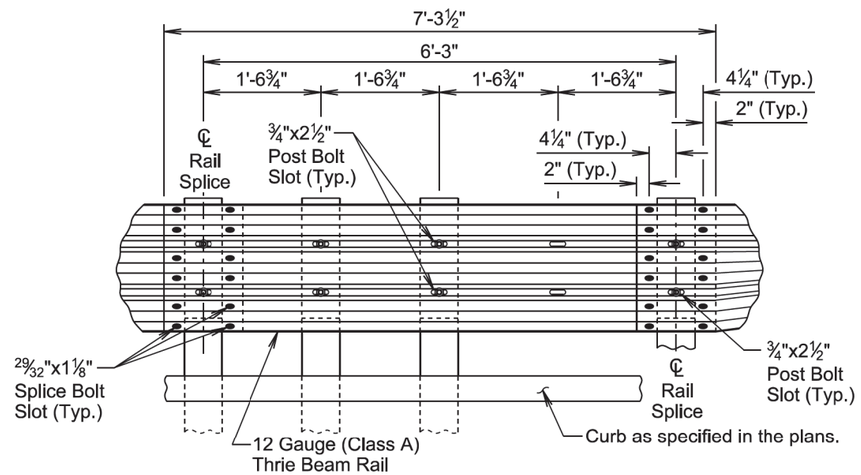
September 14, 2019

Published Date: 2025	SDDOT	TYPE 1 RETROFIT GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.51
			Sheet 2 of 3



DETAIL J

DETAIL L



DETAIL K
(Special Thrie Beam Rail)

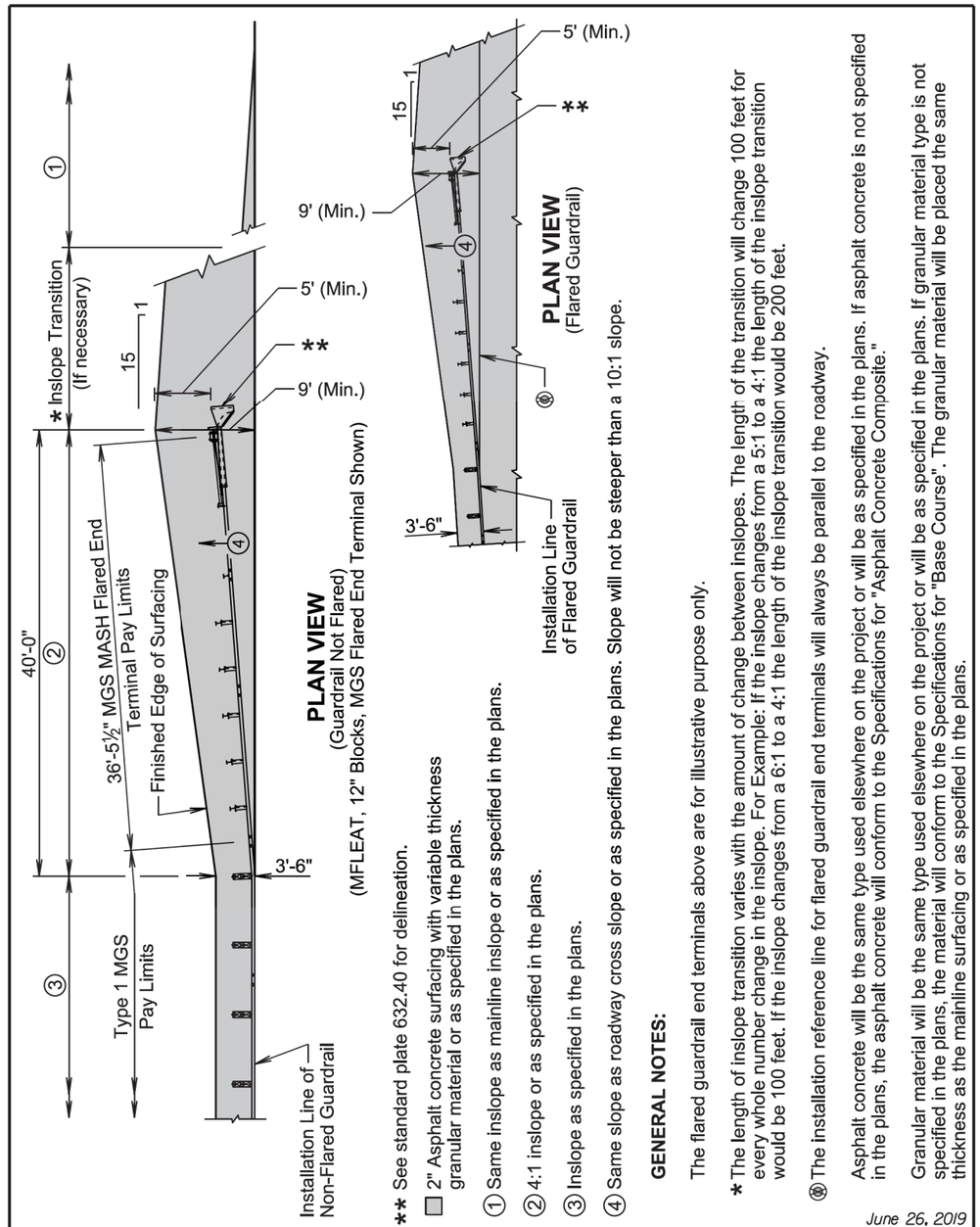
GENERAL NOTES:

Throughout the type 1 retrofit guardrail transition, slots in the rails will be provided as specified in the plans and by the Manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for furnishing and installing the type 1 retrofit guardrail transition including labor, equipment, and materials which includes all rail sections, posts and blockouts, special blockout, hardware, and incidentals will be included in the contract unit price per each for "Type 1 Retrofit Guardrail Transition".

September 14, 2019

Published Date: 2025	SDDOT	TYPE 1 RETROFIT GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.51
			Sheet 3 of 3



** See standard plate 632.40 for delineation.

☐ 2" Asphalt concrete surfacing with variable thickness granular material or as specified in the plans.

① Same inslope as mainline inslope or as specified in the plans.

② 4:1 inslope or as specified in the plans.

③ Inslope as specified in the plans.

④ Same slope as roadway cross slope or as specified in the plans.

GENERAL NOTES:

The flared guardrail end terminals above are for illustrative purpose only.

* The length of inslope transition varies with the amount of change between inslopes. The length of the transition will change 100 feet for every whole number change in the inslope. For Example: If the inslope changes from a 5:1 to a 4:1 the length of the inslope transition would be 200 feet. If the inslope changes from a 6:1 to a 4:1 the length of the inslope transition would be 200 feet.

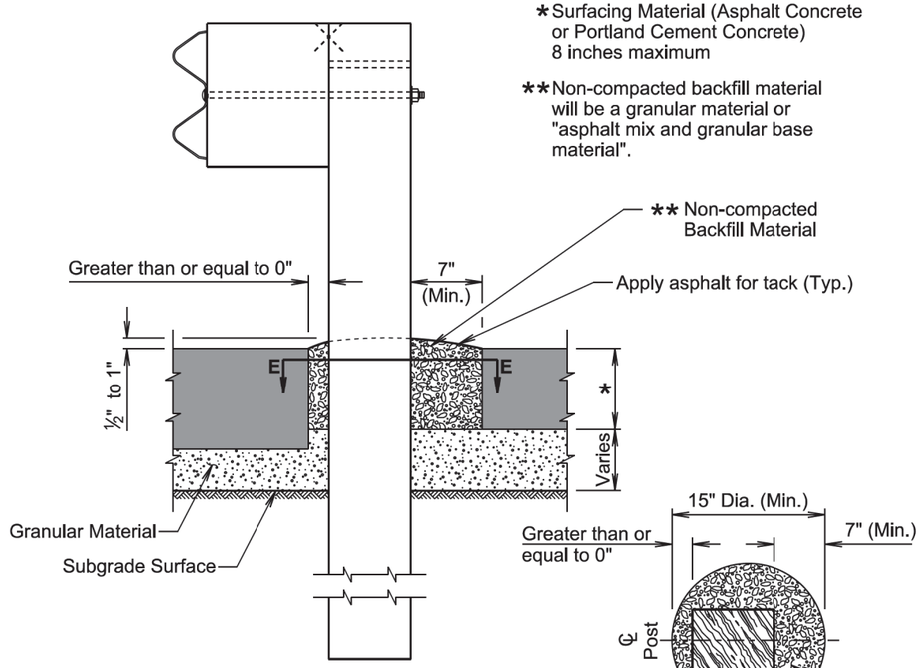
Ⓡ The installation reference line for flared guardrail end terminals will always be parallel to the roadway.

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

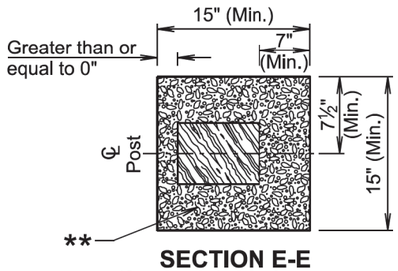
June 26, 2019

Published Date: 2025	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH FLARED END TERMINAL	PLATE NUMBER 630.87
			Sheet 1 of 1



TRANSVERSE SECTION
(Wood post shown for illustrative purpose only)

SECTION E-E
(Round option for leave-out and backfill limits)
(Wood post shown for illustrative purpose only)



SECTION E-E
(Square option for leave-out and backfill limits)
(Wood post shown for illustrative purpose only)

GENERAL NOTES:

The leave-out limits may be increased to accommodate construction equipment and tolerances.

When posts are installed in augured or dug holes, the backfill material will be compacted to the bottom of the pavement surfacing material to the satisfaction of the Engineer. The backfill material for the thickness of the pavement surfacing material will be non-compacted.

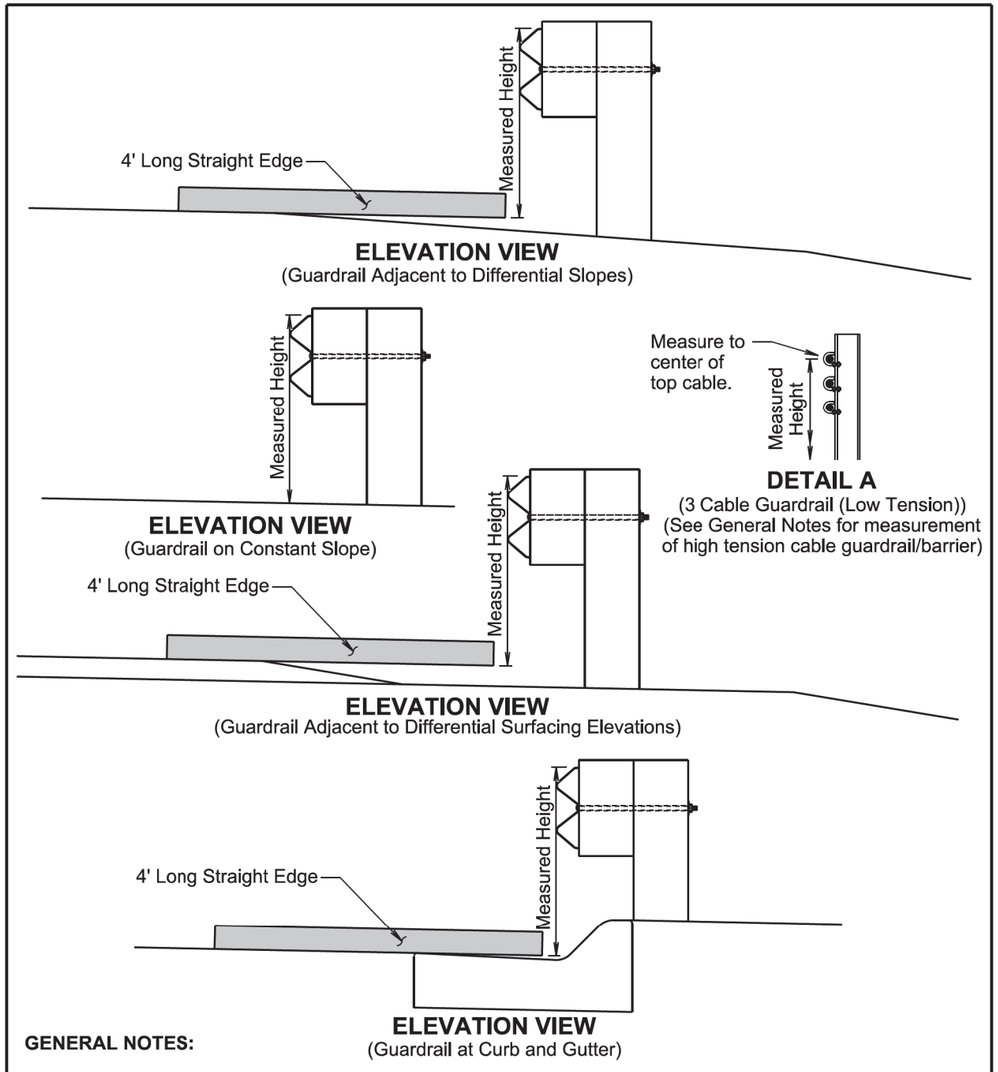
The backfill material will be mounded ½ inch to 1 inch above the top of the adjacent surfacing as illustrated above.

Asphalt for tack will be applied to the surface of the backfill material at the rate of 0.15 to 0.20 gallons per square yard.

All costs for constructing the leave-out including labor, equipment, and materials which includes the backfill material and tack coat will be incidental to the contract unit price for the respective guardrail contract item.

November 19, 2021

Published Date: 2025	SDDOT	GUARDRAIL POST INSTALLED IN ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE	PLATE NUMBER 630.96
			Sheet 1 of 1



ELEVATION VIEW
(Guardrail Adjacent to Differential Slopes)

ELEVATION VIEW
(Guardrail on Constant Slope)

DETAIL A
(3 Cable Guardrail (Low Tension))
(See General Notes for measurement of high tension cable guardrail/barrier)

ELEVATION VIEW
(Guardrail Adjacent to Differential Surfacing Elevations)

ELEVATION VIEW
(Guardrail at Curb and Gutter)

GENERAL NOTES:

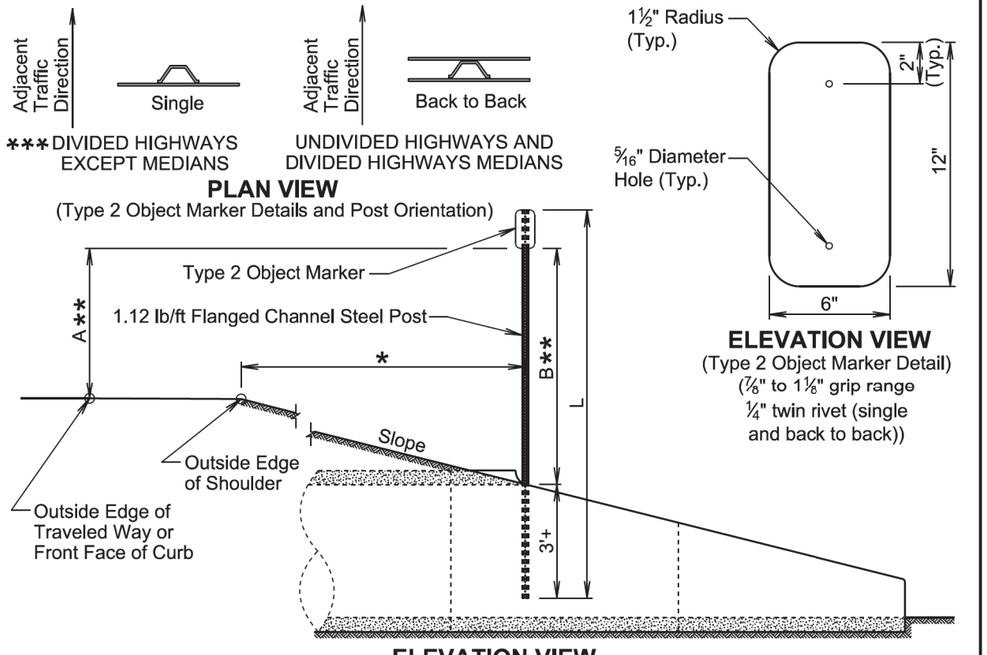
The W Beam guardrail shown is for illustrative purpose. The guardrail height for all types of guardrail systems except for high tension cable guardrail/barrier will be measured in accordance with this standard plate.

When measuring height of 3 cable guardrail (low tension) the height will be measured to the center of the top cable. See Detail A.

The height of high tension cable guardrail/barrier will be measured in accordance with the Manufacturer's installation instructions.

September 14, 2019

Published Date: 2025	SDDOT	MEASURING GUARDRAIL HEIGHT	PLATE NUMBER 630.99
			Sheet 1 of 1



TYPE 2 OBJECT MARKER POST LENGTHS									
OFFSET (*)		1'	2'	3'	4'	5'	6'	7'	8'	Greater Than 8'
		POST LENGTH (L)								
SLOPE	3:1	8'-6"	8'-9"	9'-3"	9'-6"	9'-9"	10'-3"	10'-6"	10'-9"	8'-0"
	4:1	8'-6"	8'-9"	9'-0"	9'-3"	9'-9"	9'-9"	10'-0"	10'-3"	8'-0"
	5:1	8'-3"	8'-6"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	9'-9"	8'-0"
	6:1	8'-3"	8'-6"	8'-9"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	8'-0"

GENERAL NOTES:

*** The type 2 object marker may be installed back to back when specified in the plans.

Post Length L was calculated based on a shoulder width of 6 feet at a crosslope of 4 percent and L was rounded up to the nearest 3 inches.

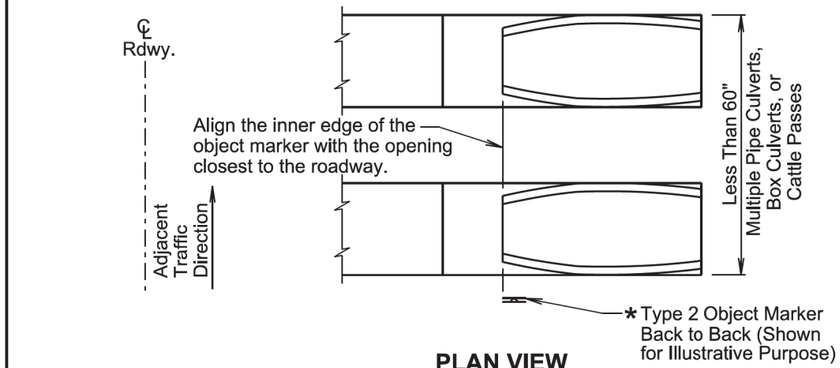
** Dimension A is 4 feet when the Offset * is 8 feet and less. Dimension B is 4 feet when Offset * is greater than 8 feet.

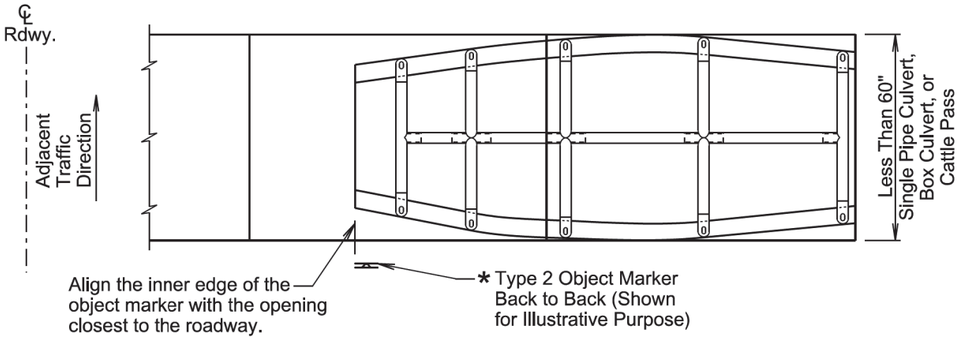
The type 2 object marker and the 1.12 lb/ft flanged channel steel post will be in conformance with Specifications Section 982.2 J.

Payment for the type 2 object marker will be in conformance with Specification Section 632.5 B.

December 23, 2019

Published Date: 2025	SDDOT	TYPE 2 OBJECT MARKER (DIRECT DRIVE)	PLATE NUMBER 632.01
			Sheet 1 of 1





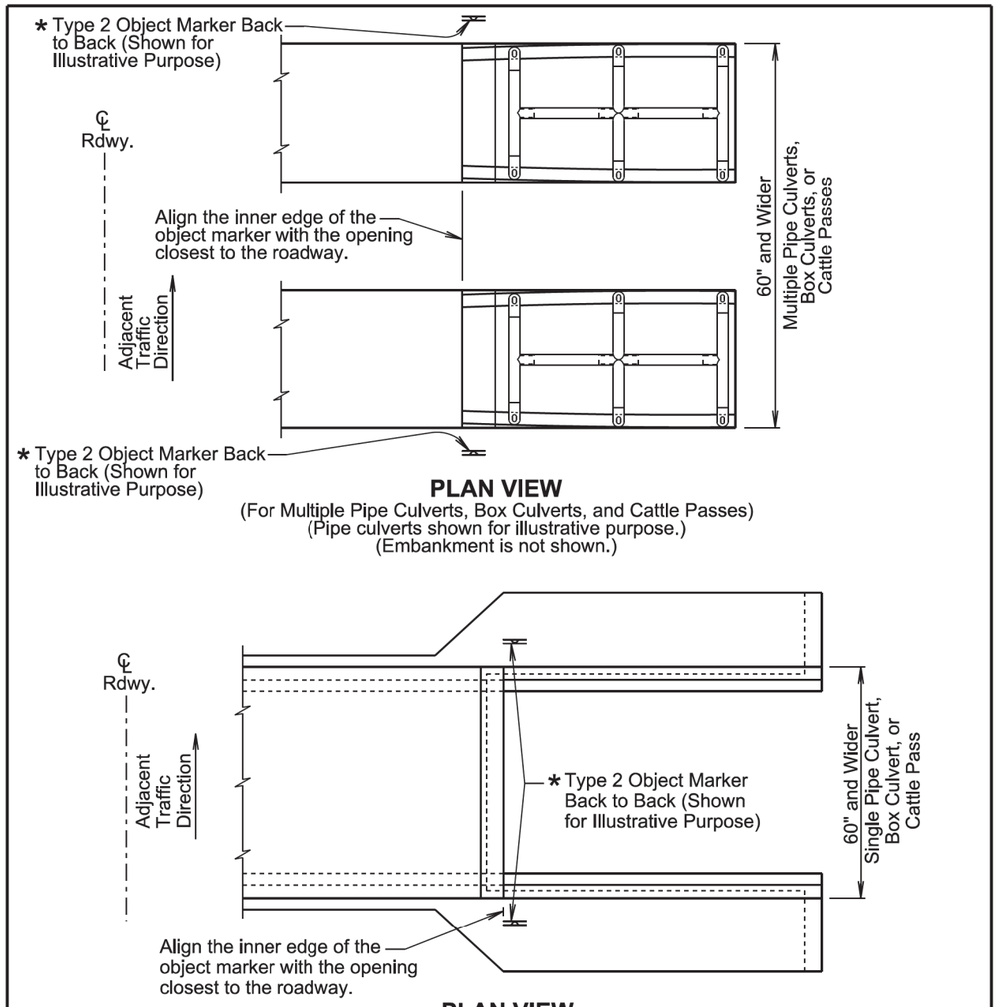
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2025	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (Less than 60" Overall Width)	PLATE NUMBER 632.03
			Sheet 1 of 1



PLAN VIEW
(For Multiple Pipe Culverts, Box Culverts, and Cattle Passes)
(Pipe culverts shown for illustrative purpose.)
(Embankment is not shown.)

PLAN VIEW
(For Single Pipe Culvert, Box Culvert, and Cattle Pass)
(Box culvert shown for illustrative purpose.)
(Embankment is not shown.)

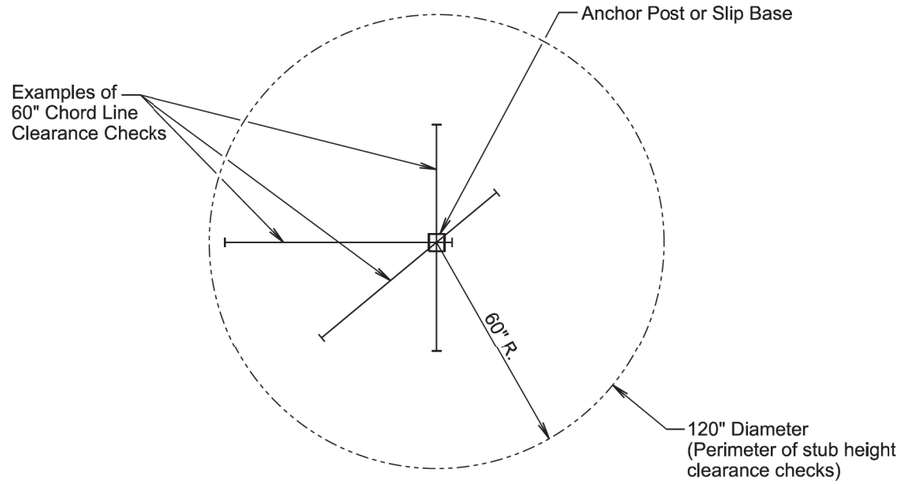
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

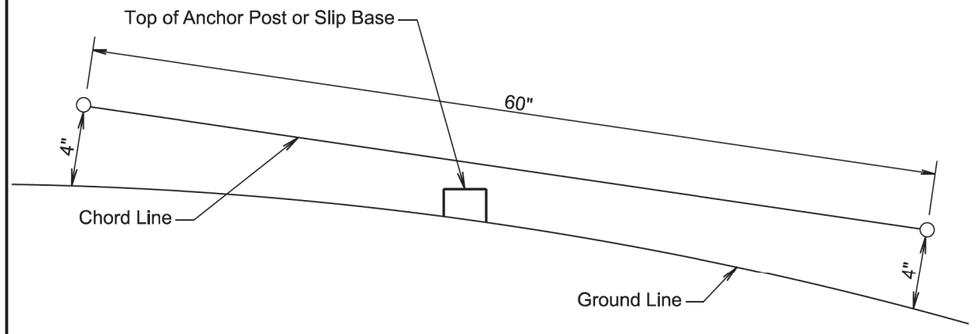
* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2025	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (60" and Greater Overall Width)	PLATE NUMBER 632.04 Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

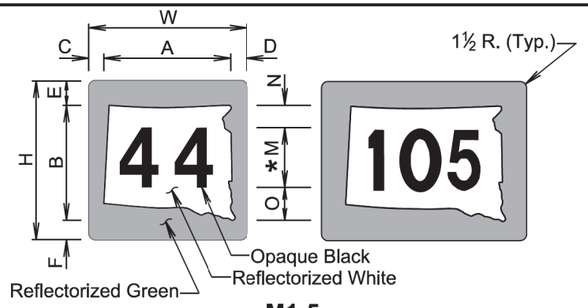
GENERAL NOTES:

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.

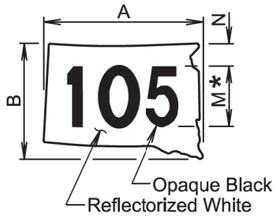
January 22, 2021

Published Date: 2025	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 632.18 Sheet 1 of 1



M1-5

SIGN CODE	WxH	A	B	C	D	E	F	M*	N	O
M1-5	24x24	20½	18	2	1½	3½	2½	12D	2	4
M1-5 **	30x24	24	18	2¼	1¾	3½	2½	12D	2	4
M1-5	30x30	25⅝	22½	2½	1⅞	4⅜	3⅛	15D	2½	5
M1-5	36x36	30¾	27	3	2¼	5¼	3¾	18D	3	6

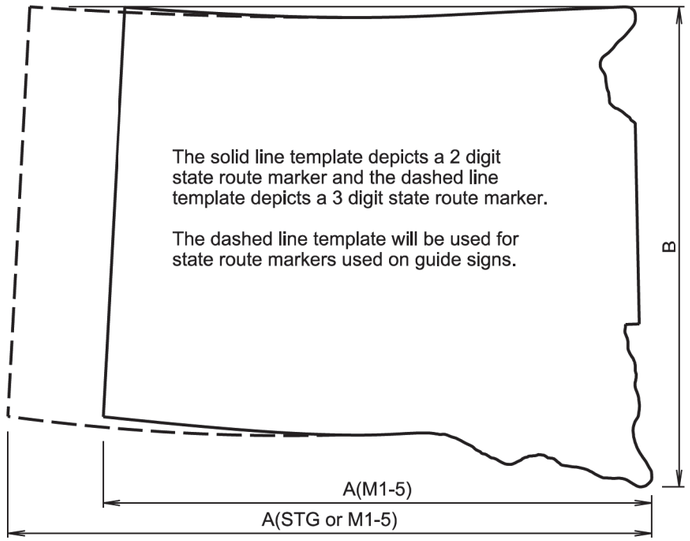


STG

SIGN CODE	AxB	M*	N
STG-24	24x18	10D	4
STG-32	32x24	12D	4¾
STG-48	48x36	18D	7
STG-64	64x48	24D	9½

* In the few cases where there is not enough space for the numerals, the standard D series font may be replaced with C series font if approved by the Engineer.

** 3 Digits



TEMPLATE FOR STATE ROUTE MARKER

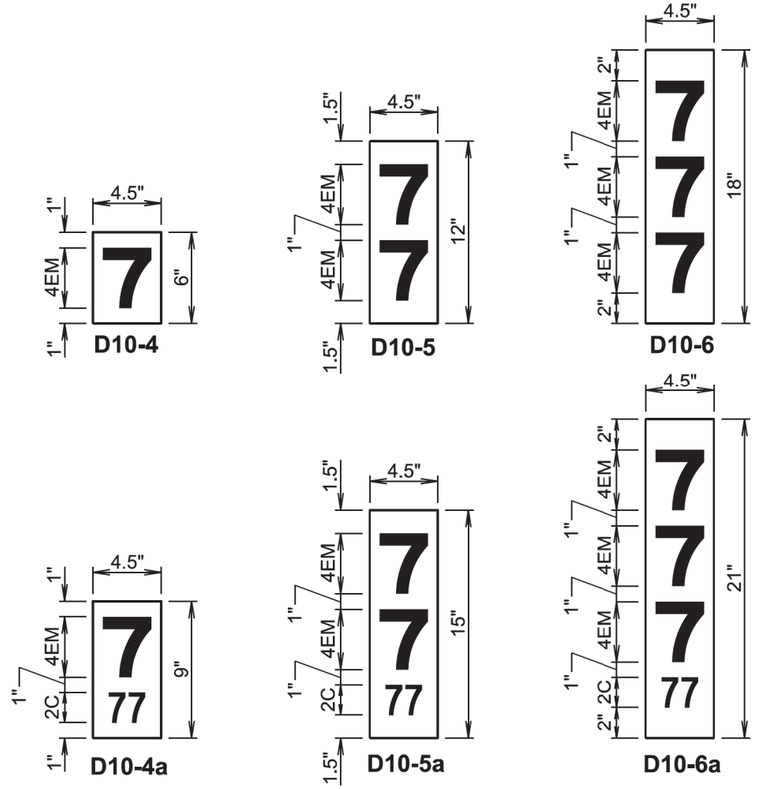
GENERAL NOTES:

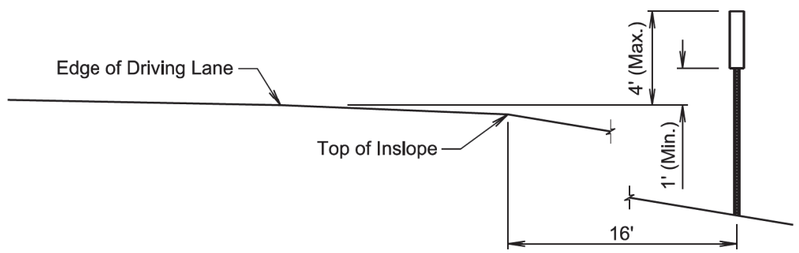
The unit for all dimensions shown is inches.

Numerals will be D series font for all state route markers except as noted above.

December 23, 2019

Published Date: 2025	SDDOT	STATE ROUTE MARKERS	PLATE NUMBER 632.20 Sheet 1 of 1





ELEVATION VIEW

GENERAL NOTES:

Background will be high intensity green.

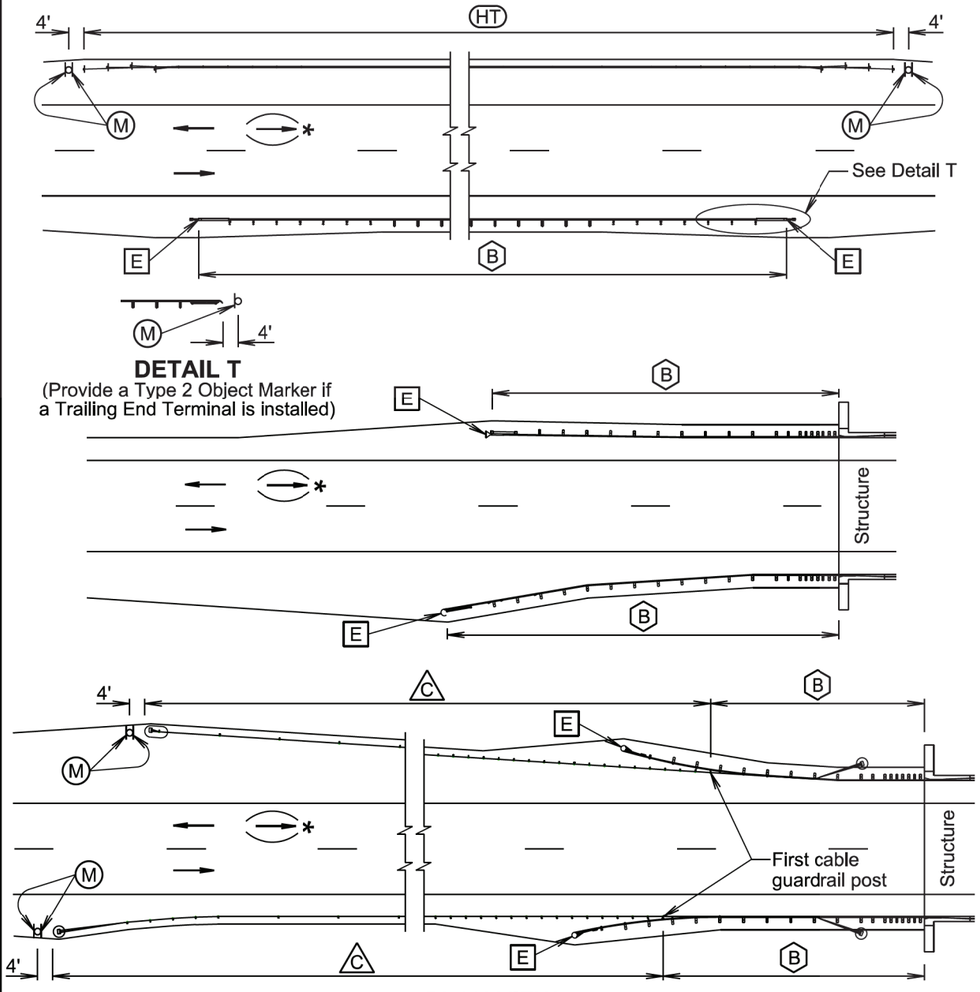
Legend will be high intensity white.

Signs will have squared corners with no border.

Sign locations will be staked by the Engineer.

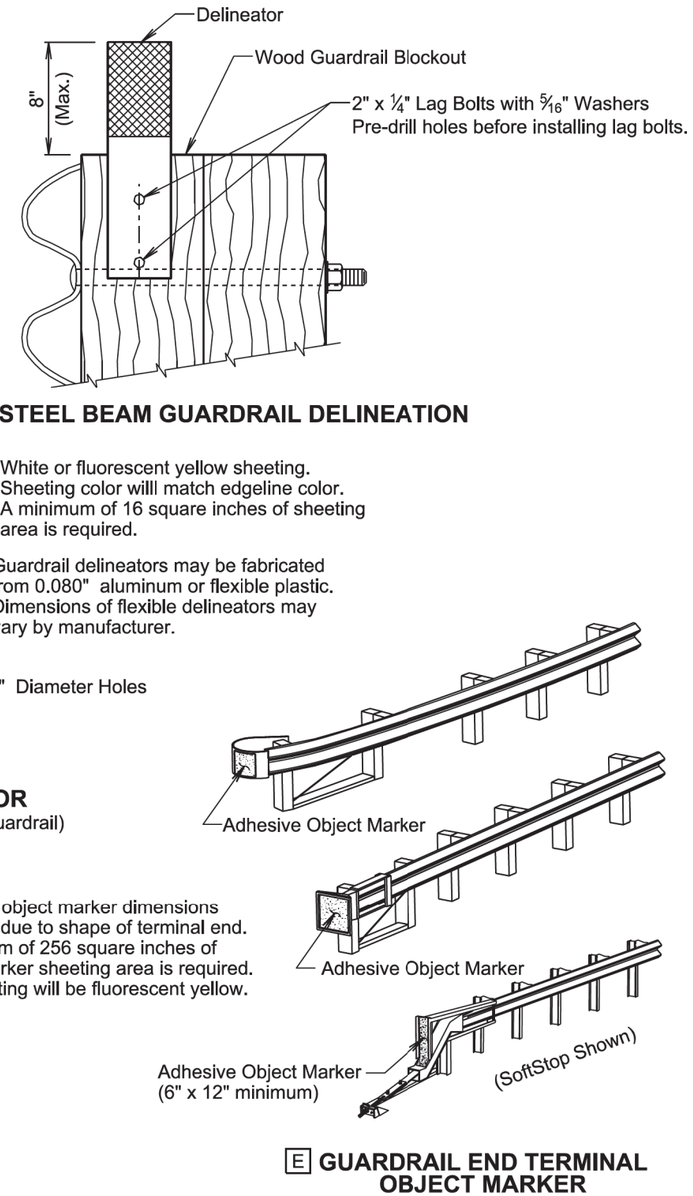
December 23, 2019

Published Date: 2025	SDDOT	NON-INTERSTATE MILEAGE REFERENCE MARKERS	PLATE NUMBER 632.30 Sheet 1 of 1



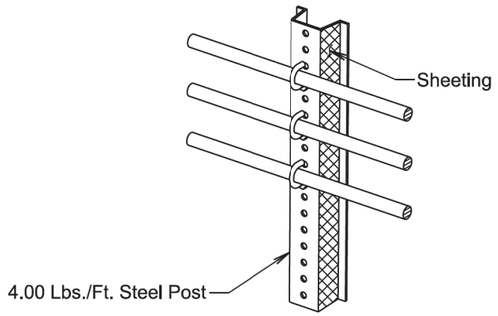
March 31, 2024

Published Date: 2025	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 1 of 4

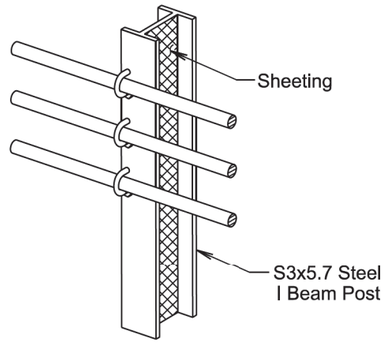


March 31, 2024

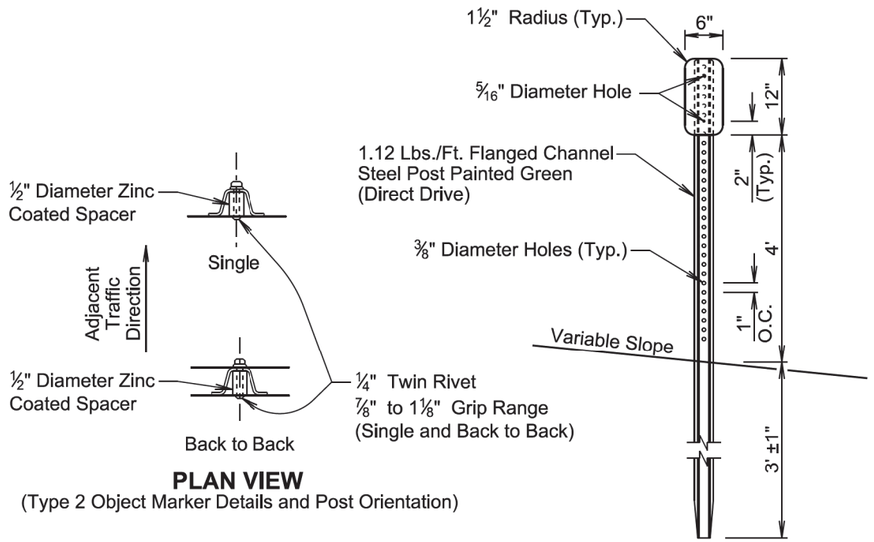
Published Date: 2025	SDDOT	DELINEATION GUARDRAIL	PLATE NUMBER 632.40
			Sheet 2 of 4



Ⓒ **3 CABLE GUARDRAIL (LOW TENSION) DELINEATION**



Ⓒ **3 CABLE GUARDRAIL (LOW TENSION) DELINEATION**



PLAN VIEW
(Type 2 Object Marker Details and Post Orientation)

ELEVATION VIEW
Ⓜ (Type 2 Object Marker)
(For Marking 3 Cable Guardrail (Low Tension) Anchor, High Tension Cable Guardrail Anchor, and Trailing End Terminal)

March 31, 2024

Published Date: 2025	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 3 of 4

GENERAL NOTES:

The delineation of high tension cable guardrail will be reflective sheeting placed back to back on every third post cap or cable spacer. Maximum spacing of delineation will not exceed 35 feet. The sheeting will be type XI in conformance with ASTM D4956. The color of the reflective sheeting will be the same as the nearest pavement marking.

The delineators for steel beam guardrail and sheeting on 3 cable guardrail (low tension) posts will be covered with a minimum of 16 square inches of reflective sheeting. The reflective sheeting will be type XI in conformance with ASTM D4956. Along two-way roadways the sheeting will be on both sides of the delineators and guardrail posts and will be white in color. For one-way roadways the sheeting will only be required on the side facing traffic and the color will be the same as the nearest pavement marking, yellow on the left side of the roadway and white on the right side.

When steel beam guardrail is attached to a bridge the first delineator will be attached to the post nearest the bridge.

At bridges with guardrail less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object marker. The spacing between the delineators will be approximately one third of the length of the guardrail.

At bridges with guardrail 200 feet and greater in length, including bridges that have steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

Steel beam guardrail that is not attached to a bridge and is less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object markers. The spacing between the delineators will be approximately one third of the length of the guardrail.

Steel beam guardrail that is not attached to a bridge and is 200 feet and greater in length, including steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

All costs for furnishing and installing single or back to back guardrail delineation on 3 cable guardrail and steel beam guardrail will be included in the contract unit price per each for "Guardrail Delineator".

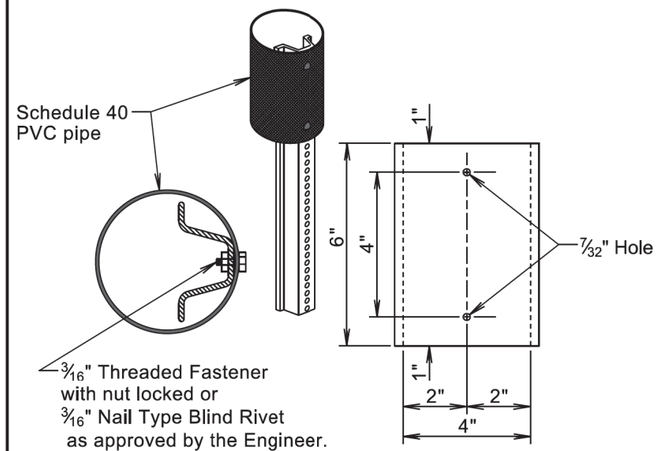
All costs for furnishing and installing the reflective sheeting on the cable spacers or post caps for the high tension cable guardrail will be incidental to the respective high tension cable guardrail contract item.

An adhesive object marker will be placed on the end of the W beam guardrail or MGS end terminal. The adhesive object marker dimensions may vary due to the shape of the terminal end. A minimum of 256 square inches of object marker reflective sheeting area is required on end terminals with sufficient surface area. Other end terminals (SoftStop) will require an adhesive object marker with a minimum size of 6" x 12". The reflective sheeting will be fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the adhesive object marker will be incidental to various contract items.

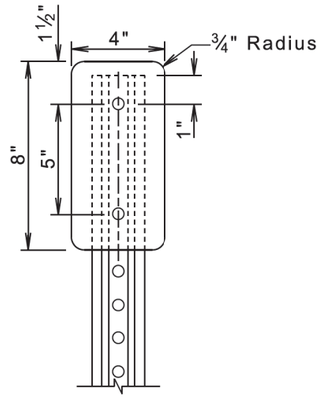
A type 2 object marker will be placed adjacent to the 3 cable guardrail (low tension) anchor, high tension cable guardrail anchor, and trailing end terminal at the location noted on sheet 1 of this standard plate. The type 2 object marker (6" x 12") will have fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the type 2 object marker including the steel post, 6" x 12" reflective panel, and hardware will be included in the contract unit price per each for "Type 2 Object Marker" for single-sided and "Type 2 Object Marker Back to Back" for back to back type 2 object markers.

March 31, 2024

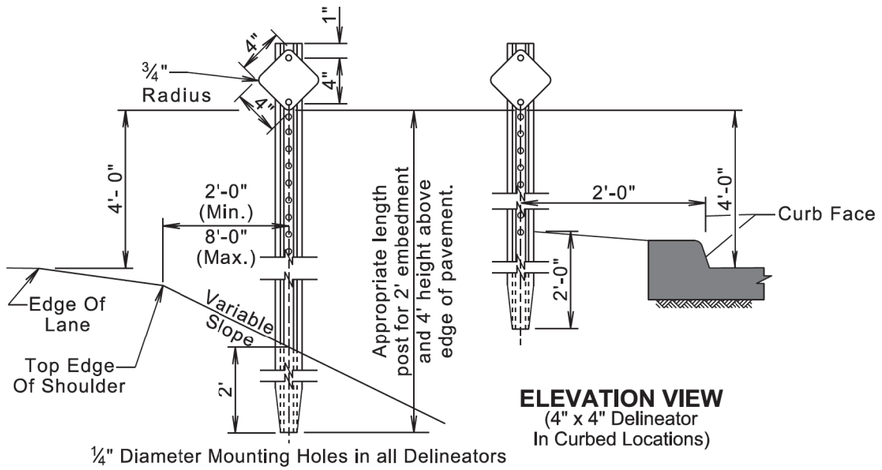
Published Date: 2025	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 4 of 4



ELEVATION VIEW
(4" Tubular delineator
mounted on post)



ELEVATION VIEW
(4" x 8" Delineator)



ELEVATION VIEW
(4" x 4" Delineator
In Curbed Locations)

¼" Diameter Mounting Holes in all Delineators

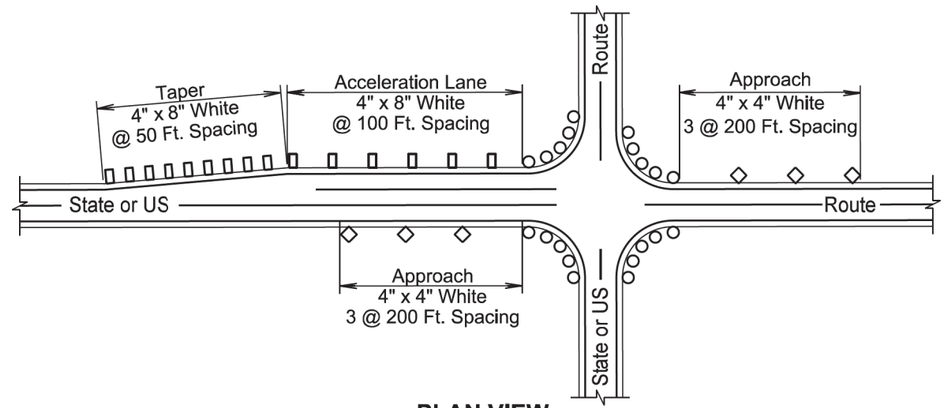
ELEVATION VIEW
(4" x 4" Delineators)

GENERAL NOTES:

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

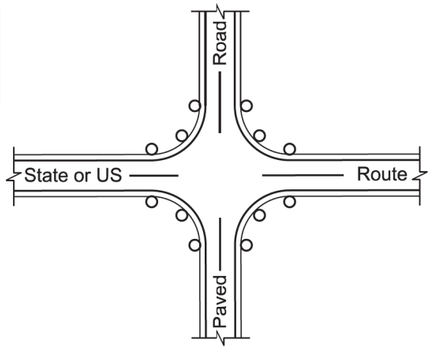
March 31, 2024

Published Date: 2025	SDDOT	DELINEATOR INSTALLATION DETAIL	PLATE NUMBER 632.42
			Sheet 1 of 1



PLAN VIEW
(State or US Highway Intersection)

LEGEND
◇ 4" x 4" White Delineator
▯ 4" x 8" White Delineator
○ 4" x 6" White Tubular Delineator



PLAN VIEW
(Paved County Crossroad)

GENERAL NOTES:

At all intersections with State or US highways and paved county roads:

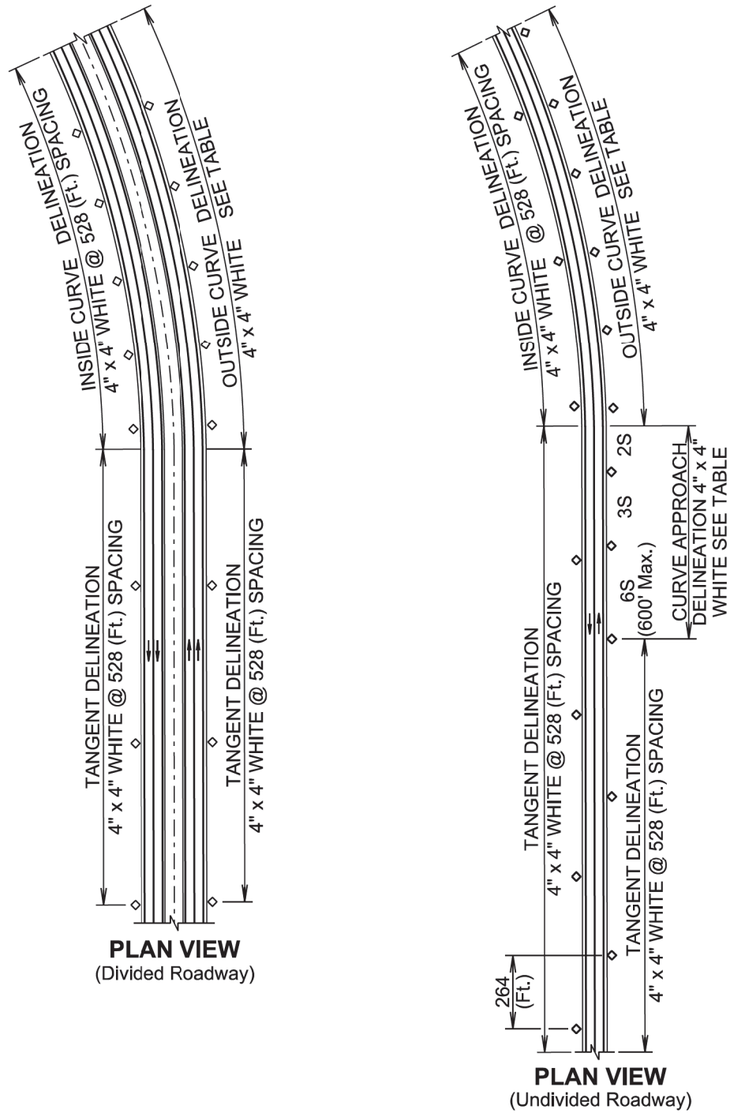
For radii greater than 100 feet, place 5 tubular white delineators on equally spaced posts around the turning radius.

For radii greater than 50 feet up to 100 feet, place 4 tubular white delineators on equally spaced posts around the turning radius.

For radii of 50 feet or less, place 3 tubular white delineators on equally spaced posts around the turning radius.

November 19, 2020

Published Date: 2025	SDDOT	DELINEATOR AT INTERSECTIONS	PLATE NUMBER 632.44
			Sheet 1 of 1



PLAN VIEW
(Divided Roadway)

PLAN VIEW
(Undivided Roadway)

March 31, 2024

Published Date: 2025	SDDOT	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 1 of 2

GENERAL NOTES:

Delineators will be located from 2 to 8 feet outside of the outer edge of shoulder. When a roadside barrier or other obstruction intrudes into the space between the pavement edge and the extension of the line of delineators, the delineators should be in line with the barrier or in line with the innermost edge of the obstruction.

When normal spacing is interrupted by driveways, crossroads, or approaches, delineators falling within such areas may be moved in either direction a distance not exceeding one-quarter of the standard spacing. Delineators still falling within such areas should be eliminated.

The spacing for specific radii may be interpolated from the table. The minimum spacing should be 20 feet. The spacing on curves should not exceed 300 feet. In advance of or beyond a curve, and proceeding away form the end of the curve, the spacing of the first delineator is 2S, the second 3S, and the third 6S, but not to exceed 300 feet. S refers to the delineator spacing for specific radii computed from the formula $S = 3\sqrt{R - 50}$. The distances for S shown in the table were rounded to the nearest 5 feet.

Curve approach delineation is not required if curve delineation spacing exceeds 100 ft.

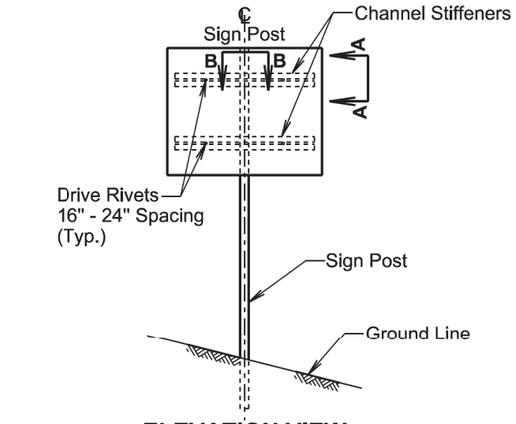
Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

DELINEATOR SPACING
OUTSIDE CURVE

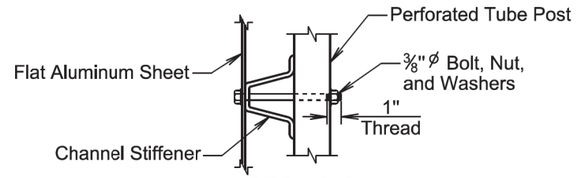
Radius of Curve (Ft.)	Curve Delineator Spacing (Ft.)	Curve Approach Spacing (Ft.)		
		A	B	C
50	20	40	65	125
115	25	50	75	150
150	30	60	90	180
180	35	70	110	215
250	40	85	125	250
300	45	95	140	285
400	55	110	170	300
500	65	125	190	300
600	70	140	210	300
700	75	150	230	300
800	80	165	245	300
900	85	175	260	300
1000	90	185	275	300

March 31, 2024

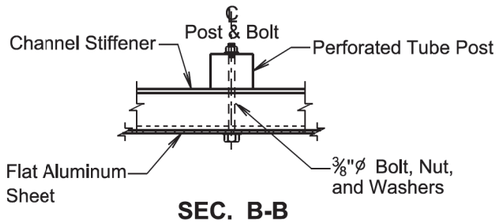
Published Date: 2025	SDDOT	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46
			Sheet 2 of 2



ELEVATION VIEW
(One post breakaway sign supports.)



SEC. A-A

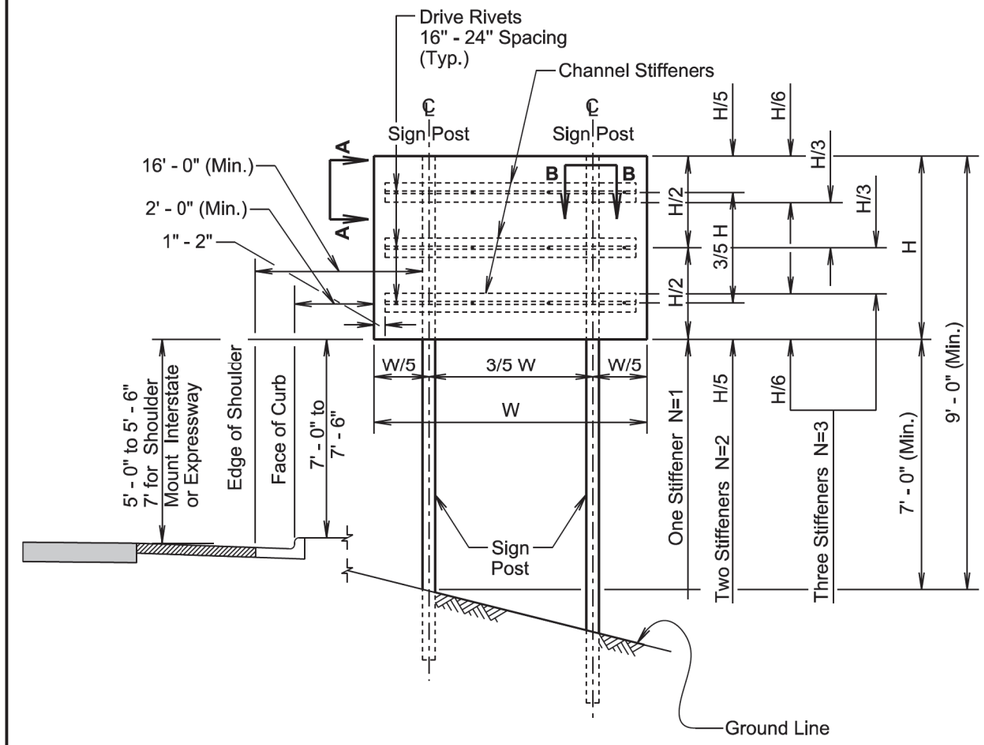


SEC. B-B
(Typical sign and stiffener details.)

ø A plastic washer, as recommended by the sheeting manufacturer, will be installed between the sign face and the metal washer shown.

November 19, 2020

Published Date: 2025	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 1 of 2



TWO POST BREAKAWAY SIGN SUPPORTS

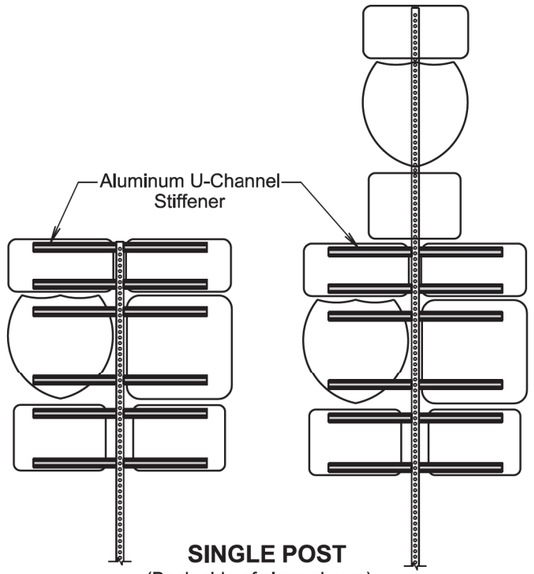
GENERAL NOTES:

The number of stiffeners used (N) will be as follows:
If H < = 2' - 0" then N = 1
if 2' - 0" < H < = 8' - 0" then N = 2
if 8' - 0" < H < = 15' - 0" then N = 3
where H is the vertical dimension of the sign.

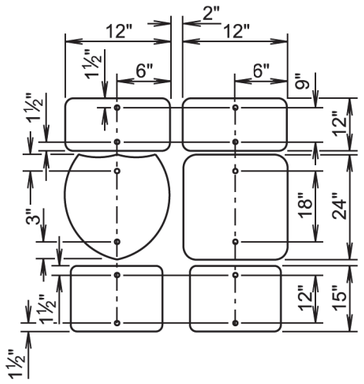
A minimum of two bolts will be required to fasten the sign to each post.

November 19, 2020

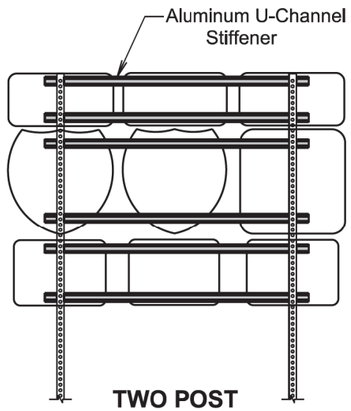
Published Date: 2025	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 2 of 2



SINGLE POST
(Back-side of signs shown)



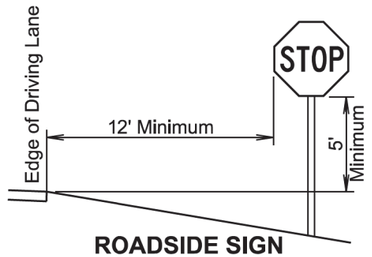
TYPICAL ROUTE MARKER BOLT HOLE LOCATIONS



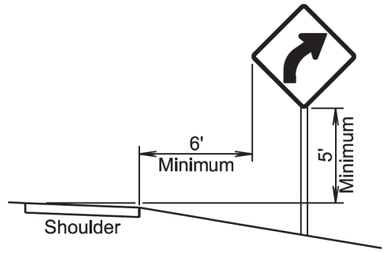
TWO POST
(Back-side of signs shown)

November 19, 2020

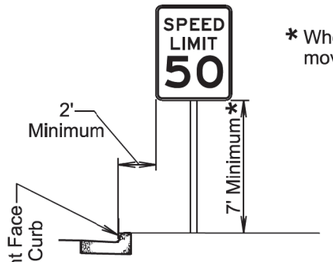
Published Date: 2025	SDDOT	MULTIPLE ROUTE MARKER SIGN STIFFENER INSTALLATION DETAILS	PLATE NUMBER 632.62
			Sheet 1 of 1



ROADSIDE SIGN IN RURAL AREA

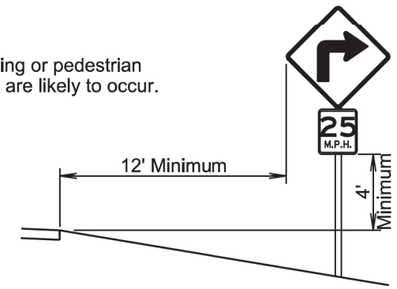


ROADSIDE SIGN IN RURAL AREA
(If shoulder width is greater than 6 foot)

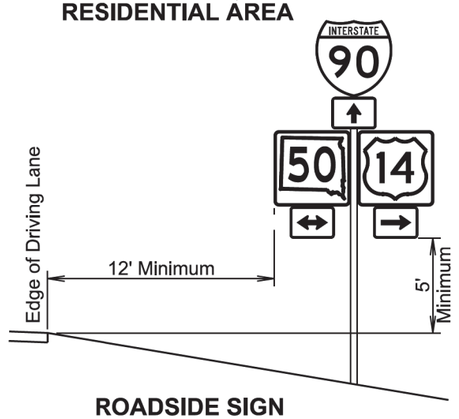


ROADSIDE SIGN IN BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA

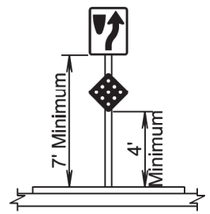
* Where parking or pedestrian movements are likely to occur.



WARNING SIGN ADVISORY SPEED PLAQUE IN RURAL AREA



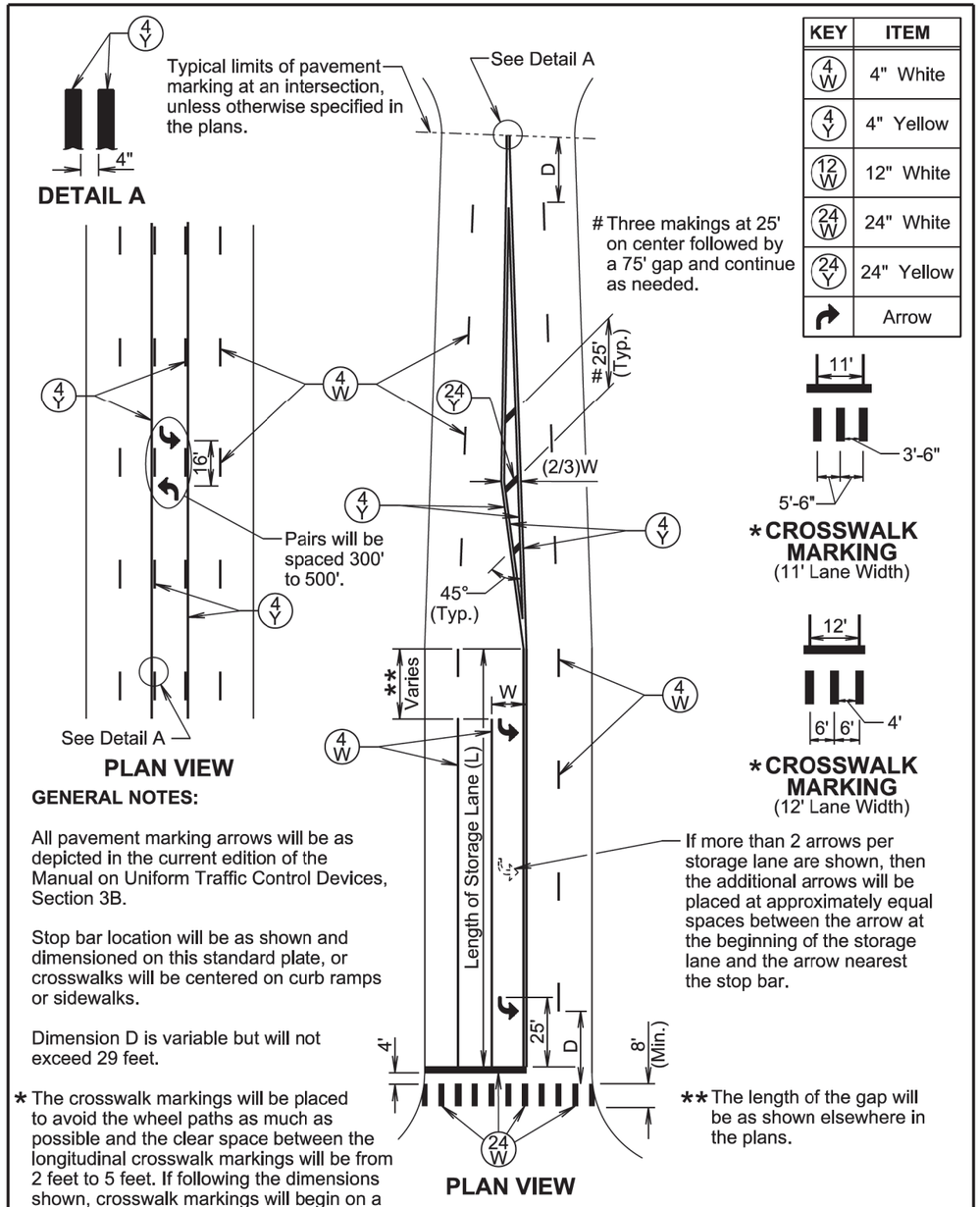
ROADSIDE SIGN IN RURAL AREA



SIGN ON NOSE OF MEDIAN

November 19, 2020

Published Date: 2025	SDDOT	OFFSETS FOR SIGN INSTALLATION	PLATE NUMBER 632.90
			Sheet 1 of 1



GENERAL NOTES:

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

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

Dimension D is variable but will not exceed 29 feet.

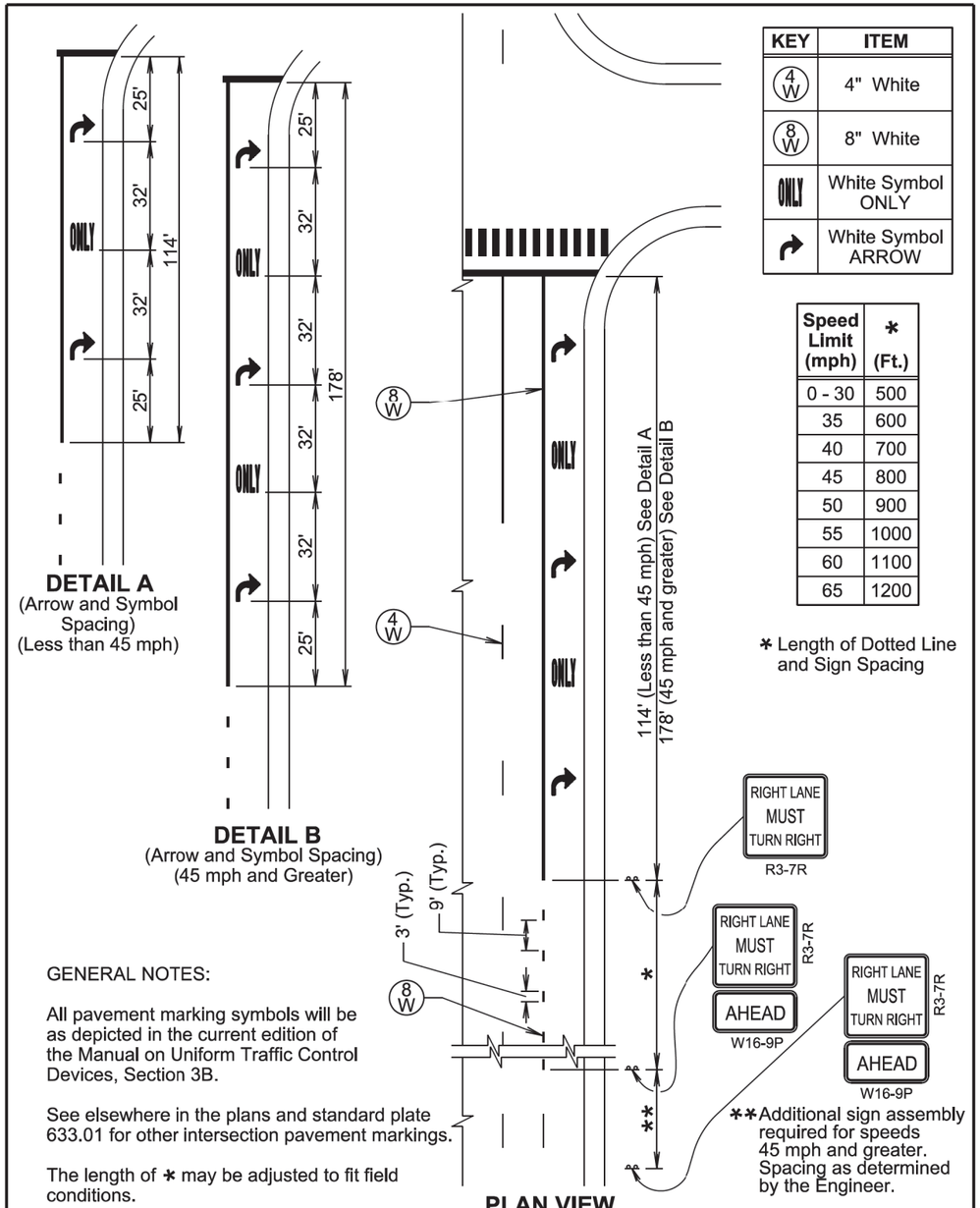
* The crosswalk markings will be placed to avoid the wheel paths as much as possible and the clear space between the longitudinal crosswalk markings will be from 2 feet to 5 feet. If following the dimensions shown, crosswalk markings will begin on a lane line or centerline.

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

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

March 31, 2024

Published Date: 2025	SDDOT	PAVEMENT MARKINGS FOR ADJACENT INTERSECTIONS AND CENTER TURN LANE	PLATE NUMBER 633.01 Sheet 1 of 1



GENERAL NOTES:

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

See elsewhere in the plans and standard plate 633.01 for other intersection pavement markings.

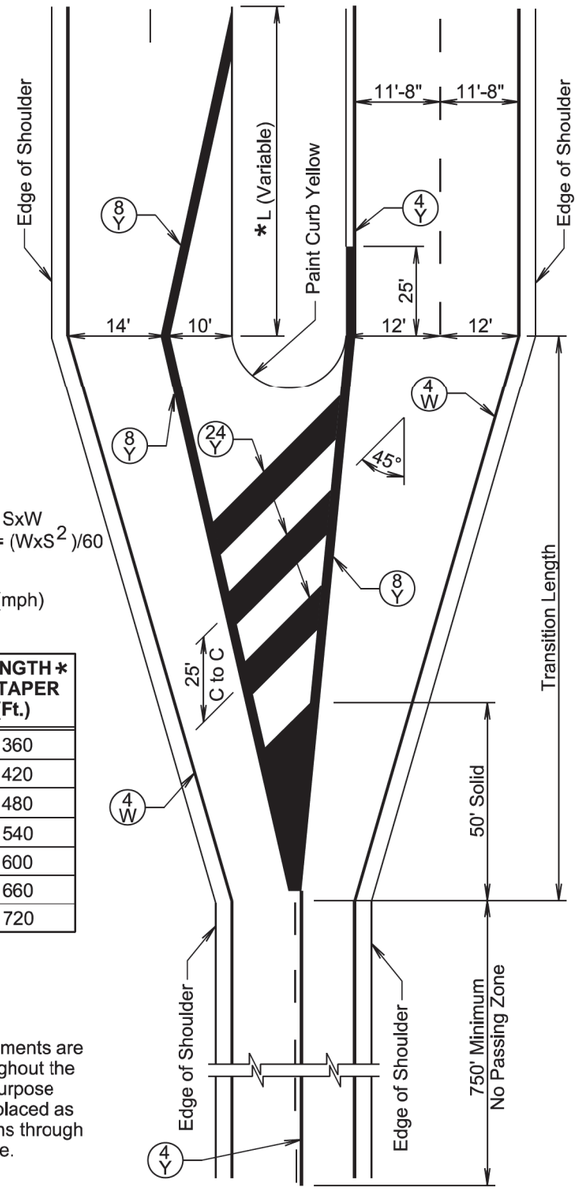
The length of * may be adjusted to fit field conditions.

November 19, 2020

Published Date: 2025	SDDOT	LANE-DROP PAVEMENT MARKINGS	PLATE NUMBER 633.02 Sheet 1 of 1

PLOT SCALE - 1:200
PLOT NAME - 12
FILE - ...\REGION DESIGN\STD PLATES.DGN
-PLOTTED FROM - TRAB17901

KEY	ITEM
4W	4" White
4Y	4" Yellow
8Y	8" Yellow
24Y	24" Yellow



PLAN VIEW

For 45 MPH and faster L = SxW
For 40 MPH and slower L = $(WxS^2)/60$

L = Length of Taper (Ft.)
S = 85th Percentile Speed (mph)
W = Width of Offset (Ft.)

85th PERCENTILE SPEED (mph)	LENGTH * OF TAPER (Ft.)
30	360
35	420
40	480
45	540
50	600
55	660
60	720

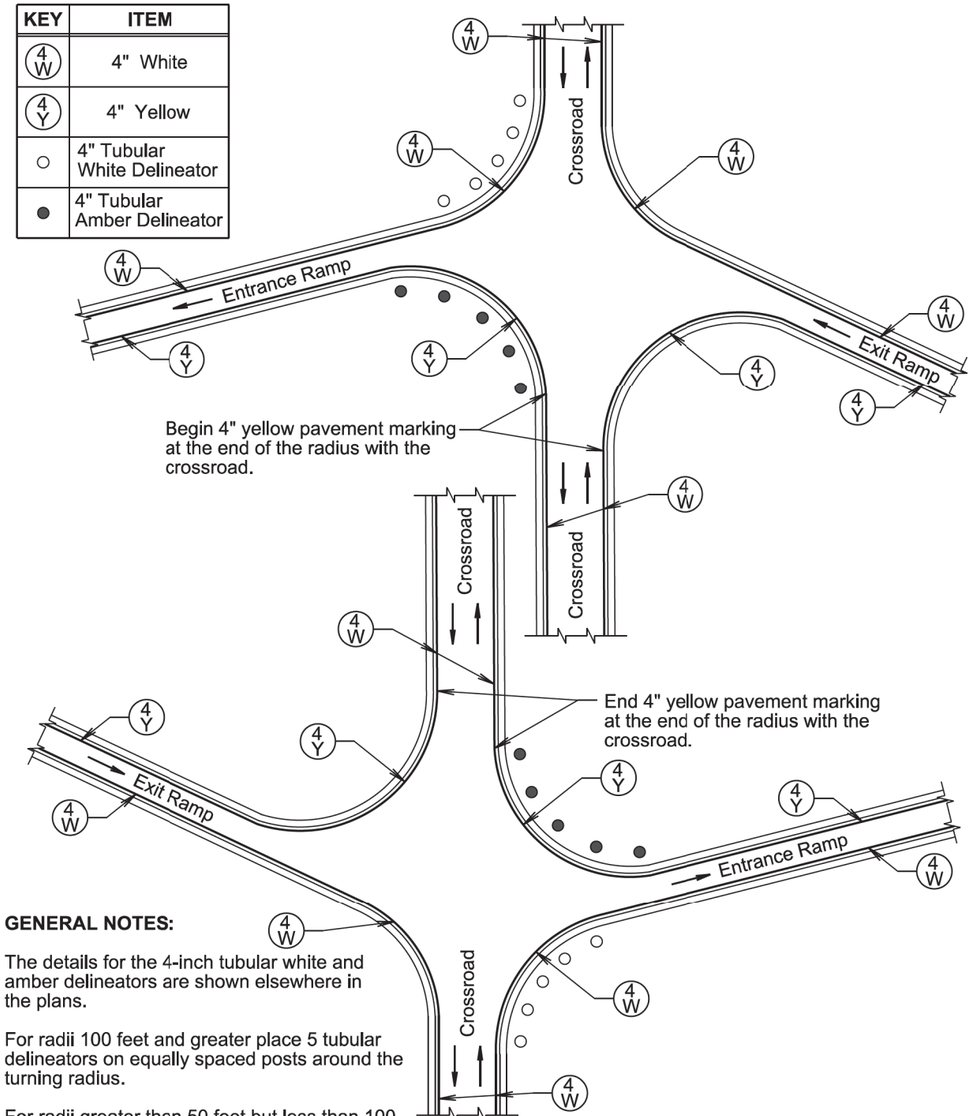
GENERAL NOTE:

Straight line angular alignments are shown on this plate throughout the transition for illustration purpose only. The striping will be placed as rounded/smooth transitions through areas of alignment change.

June 26, 2019

Published Date: 2025	SDDOT	APPROACH PAVEMENT MARKINGS FOR TWO-LANE TO FOUR-LANE DIVIDED HIGHWAYS	PLATE NUMBER 633.03
			Sheet 1 of 1

KEY	ITEM
4W	4" White
4Y	4" Yellow
○	4" Tubular White Delineator
●	4" Tubular Amber Delineator



PLAN VIEW

GENERAL NOTES:

The details for the 4-inch tubular white and amber delineators are shown elsewhere in the plans.

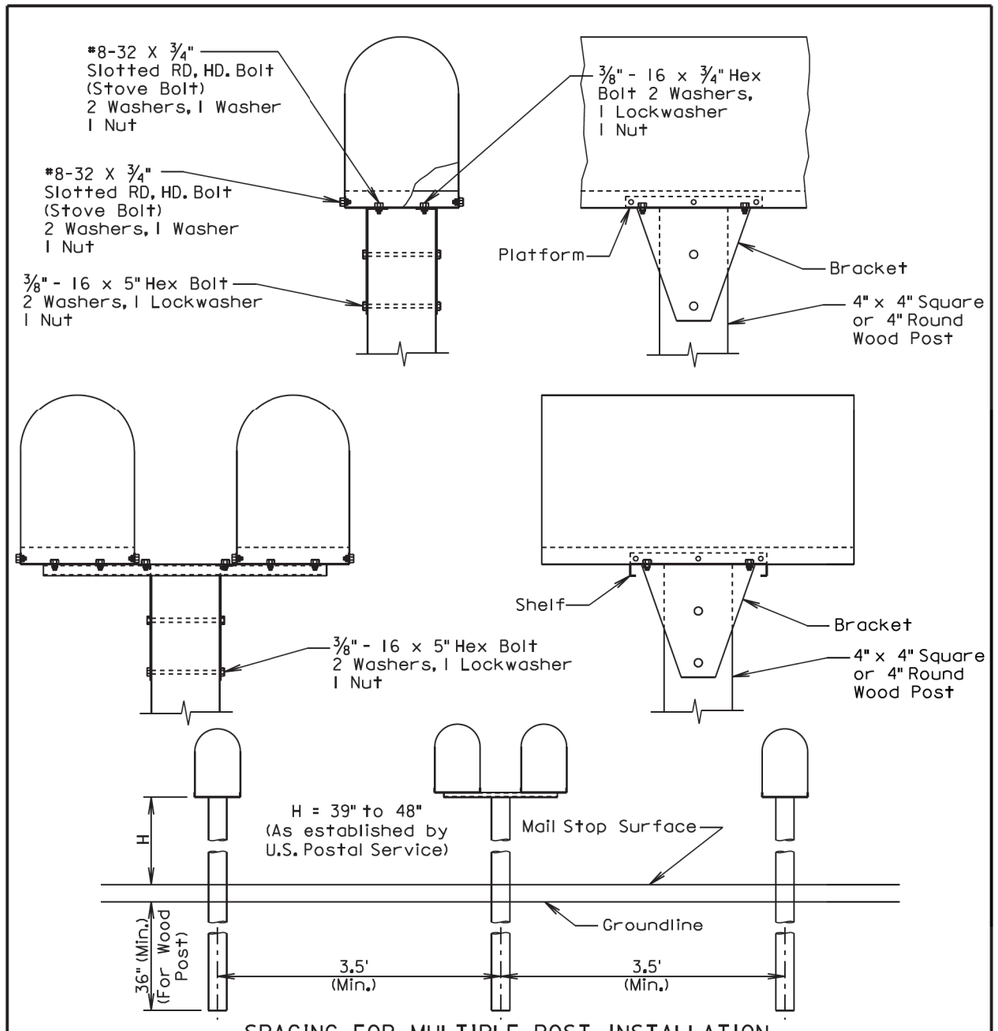
For radii 100 feet and greater place 5 tubular delineators on equally spaced posts around the turning radius.

For radii greater than 50 feet but less than 100 feet place 4 tubular delineators on equally spaced posts around the radius.

For radii 50 feet and less place 3 tubular delineators on equally spaced posts around the radius.

June 26, 2019

Published Date: 2025	SDDOT	PAVEMENT MARKINGS AND DELINEATION FOR JUNCTION OF INTERSTATE RAMPS AND CROSSROAD	PLATE NUMBER 633.07
			Sheet 1 of 1



SPACING FOR MULTIPLE POST INSTALLATION

GENERAL NOTES:

The post support assemblies provided should be consistant throughout the project.

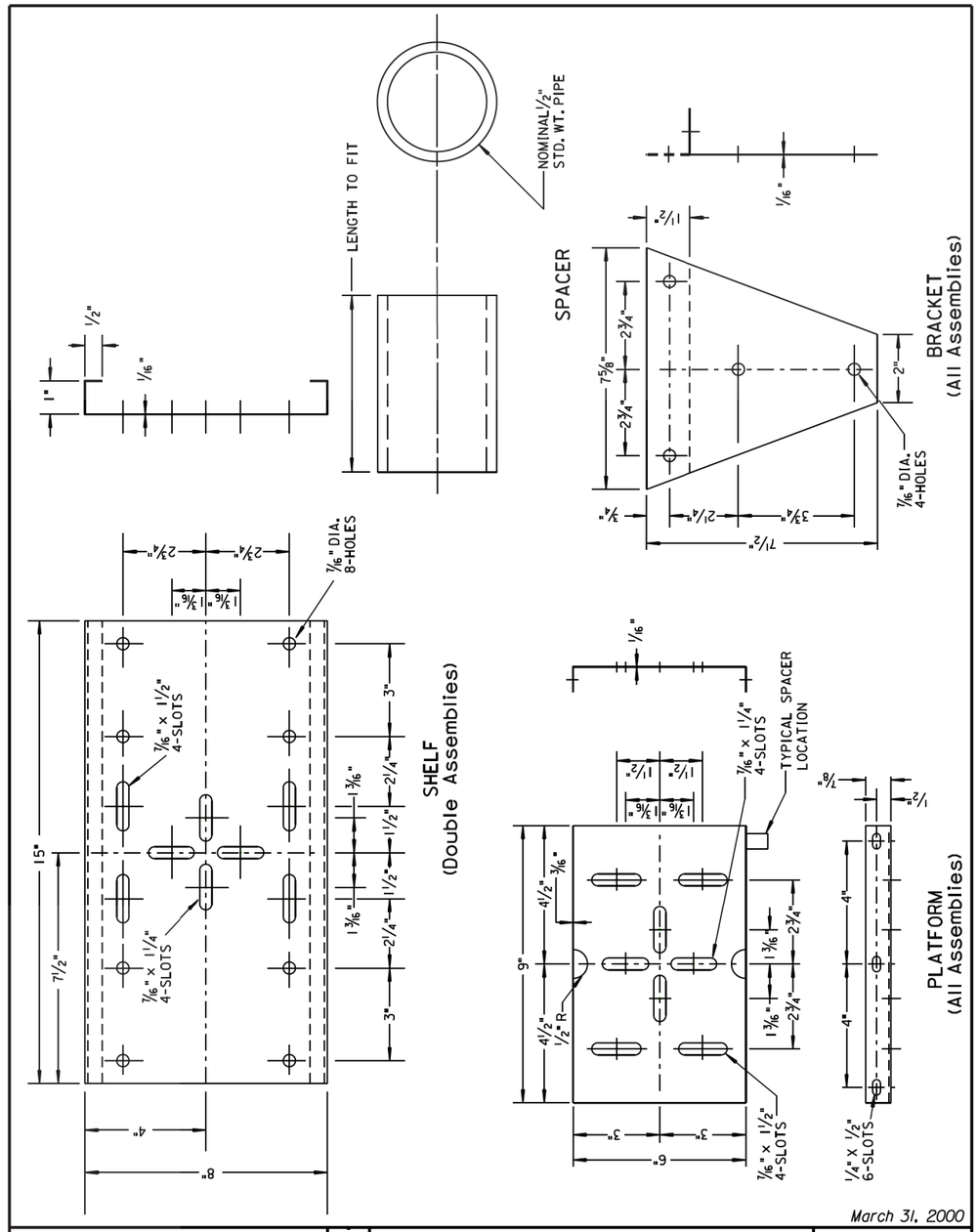
Single and double mailboxes may be in any sequence.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

September 6, 2013

Published Date: 2025	SDDOT	**SINGLE AND DOUBLE MAILBOX ASSEMBLIES**	*PLATE NUMBER* 900.02 *Sheet 1 of 1*



March 31, 2000

Published Date: 2025	SDDOT	**MAILBOX SUPPORT HARDWARE**	*PLATE NUMBER* 900.03 *Sheet 1 of 1*