SECTION S: PERMANENT SIGNING PLANS

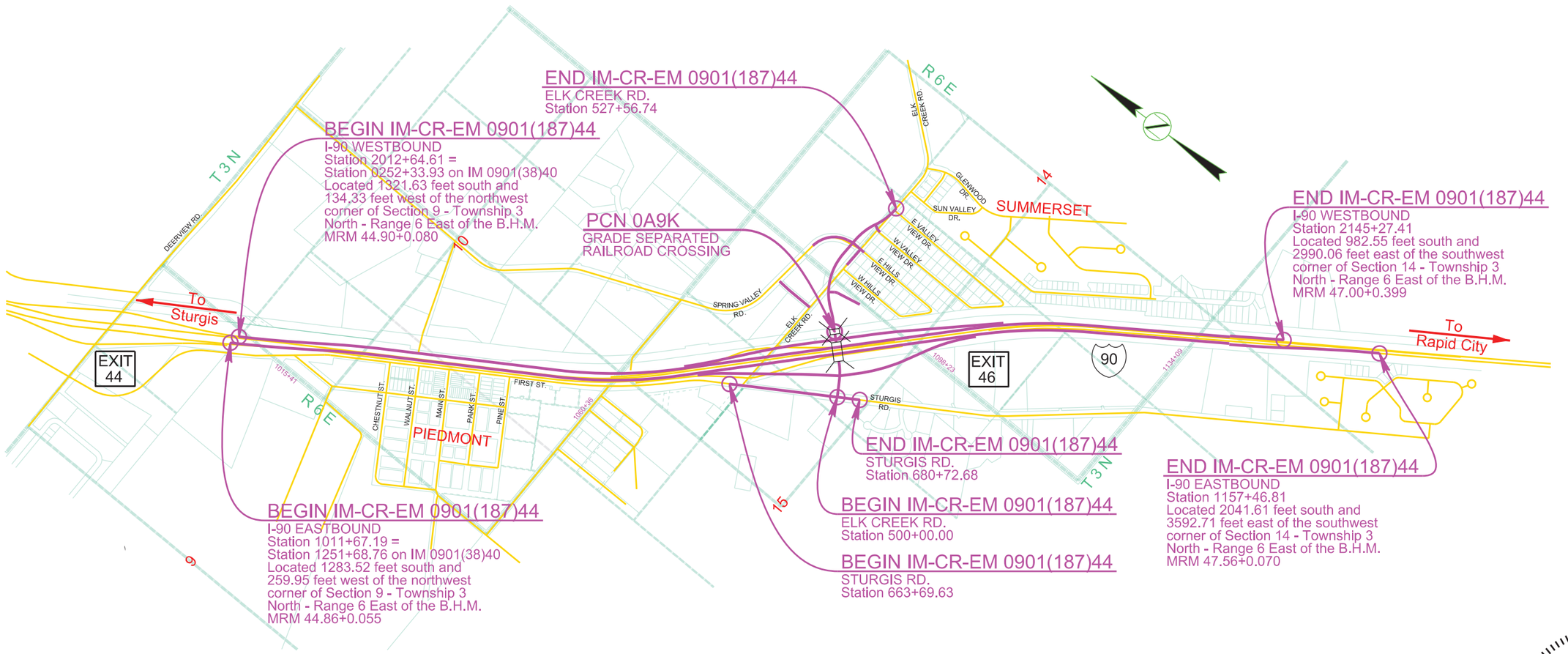
FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S1	S57

Plotting Date: 3/6/2026 Rev: 9/8/2025 BRC
Rev: 3/6/2026 MRM

Plot Scale - 1:1400

INDEX OF SHEETS



LICENSED PROFESSIONAL ENGINEER
REG. NO.
17401
BRADLEY D
HARTMANN
SOUTH DAKOTA
3-6-2026

Plotted From - Marcus.Martinez

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Plotting Date: 3/6/2026
Rev: 9/25/2025 BRC
Rev: 9/30/2025 LPZ
Rev: 3/06/2026 MRM

SECTION S ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E0130	Remove Traffic Sign	96	Each
110E7150	Remove Sign for Reset	53	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	16.0	Ft
632E0016	2' Diameter Breakaway Support Concrete Footing	198.0	Ft
632E1225	W6x12 Steel Post	49.2	Ft
632E1265	W10x33 Steel Post	396.1	Ft
632E1320	2.0"x2.0" Perforated Tube Post	645.5	Ft
632E1340	2.5"x2.5" Perforated Tube Post	314.0	Ft
632E2000	4"x4" Amber Delineator with 1.12 Lb/Ft Post	8	Each
632E2004	4"x8" Amber Delineator with 1.12 Lb/Ft Post	10	Each
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	58	Each
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	147	Each
632E2203	4" Tubular Amber Delineator Reflector	16	Each
632E2207	4" Tubular White Delineator Reflector	28	Each
632E2220	Guardrail Delineator	68	Each
632E2510	Type 2 Object Marker Back to Back	25	Each
632E2520	Type 2 Object Marker	56	Each
632E3005	Aluminum Overlay Sign, Nonremovable Copy Super/Very High Intensity	1,036.5	SqFt
632E3113	Extruded Aluminum Sign, Nonremovable Copy High Intensity	156.0	SqFt
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	273.5	SqFt
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	254.4	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	326.5	SqFt
632E3500	Reset Sign	53	Each
635E6200	Miscellaneous, Electrical	Lump Sum	LS

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Plotting Date: 10/9/2025
Rev: 9/25/2025 BRC
Rev: 9/30/2025 BRC

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.

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 Signing 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”.

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”.

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 retro reflectivity, 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.

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.

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DIGITALLY PRINTED SIGNS (CONTINUED)

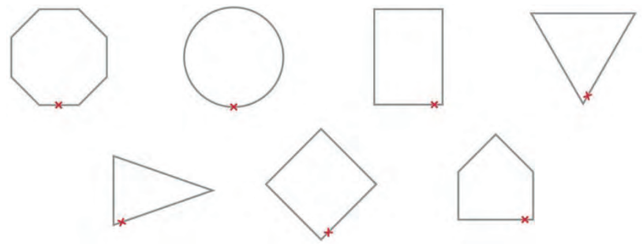
CERTIFIED DIGITAL SIGN FABRICATOR

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.

POLE MOUNTED SIGNS

Signs that are mounted on luminaire poles will be attached with high strength stainless steel bands or galvanized pole clamps. Signs will be attached as recommended by the manufacturer. All sign mounting hardware will be stainless steel or galvanized steel.

Pole mounted signs will be mounted a minimum of 7 ft above the ground. Mounting heights are measured to the bottom of the signs.

All costs for pole sign mounting 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".

INSTALLATION OF OVERLAY

Some of the in place extruded aluminum panels have been previously overlaid. Any rivets and overlay pieces remaining from previous overlays will be removed.

Excess amounts of dirt or other foreign material will be removed from the surface of the extruded aluminum panels. Any surface irregularities (bullet holes) will be repaired prior to the installation of the new overlay.

The new overlays will be installed on the in place extruded aluminum panels. The overlay sections will be fabricated to minimize the number of seams.

Overlays will be attached to the extruded aluminum panels beginning with the pieces along the top of the sign. Fastening will proceed from the top of the overlay downward working out any bulges.

Fasteners will be aluminum rivets 5/32" in diameter. Rivets will be placed at 9" +/- 1" centers along the horizontal and vertical seams. Rivets will be placed ¼" to ½" from the edges of the overlay pieces. Adjoining overlays will be butted tightly together before fastening begins. In addition to the perimeter rivets, fasteners are required inside the overlay spaced approximately 1' vertically and 2' horizontally from the overlay piece edges.
Prior to installing overlays, all in place extruded aluminum panels will be level and edges plumb. Post clips on the back of the sign will be tightened to the post.

All costs for leveling, plumbing and tightening will be incidental to the contract unit price per square foot for "Aluminum Overlay, Nonremovable Copy Super/Very High Intensity".

LOGO SIGNS

The Contractor will remove and reset the existing logos to match the existing signs.

All costs associated with removing and resetting existing logos will be incidental to the contract unit price per square foot for "Extruded Aluminum Sign, Nonremovable Copy High Intensity".

MILEAGE REFERENCE MARKERS

Mileage Reference Markers (MRMs) are to be removed and replaced with a new sign and post at the exact same stations. Payment for this work will be incidental to the various signing contract items.

SIGNPOST INSTALLATION IN CONCRETE

On concrete surfaces, a core will be drilled out or a block out will be used for sign installation. The core or block out diameter will be sized accordingly depending on post size. Concrete surrounding the core or block out must not be cracked or damaged. This method shall apply to posts in concrete including delineators and object markers.

All costs associated with installation in concrete will be incidental to the sign installation.

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 at Exit 46 will be removed by the Contractor as per these plans.

All costs for removing the concrete footings will be incidental to the contract lump sum price for "Remove Concrete Footing(s)".

ROAD CLOSURE WARNING SIGNS

The Contractor shall furnish and install two road closure warning sign assemblies with LED lights as detailed in these plans.

Payment for all cost of labor, materials, and equipment necessary for the sign assemblies, including to furnish and install flashing beacons, conduit, and wiring on signs to the pull box nearest to the base of sign assembly shall be incidental to other various contract unit prices. Wiring shall be three (3) 1/C #8 AWG copper wires.

Payment for the road closure warning signs shall be paid for at the contract unit price per square foot for Flat Aluminum Sign / Nonremovable Copy Super/Very High Intensity.

Payment for the road closure warning signposts, hardware, bases, and labor will be made at the contract unit price per foot for 2.5" x 2.5" Perforated Tube Post.

Payment for all cost of work, labor, materials, and equipment necessary for the transformer and switch assembly, including post, enclosure, flasher, and conduit and wiring from nearest pull box to assembly shall be paid for at the contract lump sum price for Miscellaneous, Electrical. Wiring shall be three (3) 1/C #8 AWG copper wires.

SIGN POST AND FOOTING DETAILS

Plotting Date: 10/9/2025

Rev: 12/5/2024 BDH
Rev: 9/30/2025 BRC

LOCATION	POST			FOOTING DIMENSIONS			ANCHOR BOLT / BASE PLATE REQUIREMENTS (FIXED ONLY)						Longitudinal Steel Quantities			Spiral Steel Quantities	
	Size	Estimated Length (ft)	Breakaway / Fixed	Diameter (ft)	Depth (ft)	Stub Post Length (ft)	"A" (in)	"E" (in)	Plate Thickness (in)	Bolt Diameter (in)	Bolt Length (in)	Embed. Length (in)	No.	Size	Length (ft)	Diameter (ft)	Length (ft)
EB I-90, STA. 1010+11, 68.0 RIGHT	W10X33	17.9	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90, STA. 1010+11, 74.0 RIGHT	W10X33	18.9	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90, STA. 1018+11, 49.0 RIGHT	W10X33	14.6	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90, STA. 1018+11, 59.2 RIGHT	W10X33	16.3	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90, STA. 1060+50, 53.0 RIGHT	W10X33	16.4	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90, STA. 1060+50, 60.8 RIGHT	W10X33	17.7	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90, STA. 1131+00, 53.6 RIGHT	W10X33	18.5	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90, STA. 1131+00, 61.4 RIGHT	W10X33	19.8	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2014+31, 58.6 LEFT	W10X33	18.1	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2014+31, 69.4 LEFT	W10X33	19.9	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2064+58, 69.6 LEFT	W10X33	16.1	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2064+58, 80.4 LEFT	W10X33	17.9	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2121+00, 56.6 LEFT	W10X33	17.0	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2121+00, 64.4 LEFT	W10X33	18.3	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2129+00, 54.0 LEFT	W10X33	21.5	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2129+00, 63.0 LEFT	W10X33	23.0	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2137+00, 54.0 LEFT	W10X33	21.5	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2137+00, 63.0 LEFT	W10X33	23.0	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2162+64, 54.4 LEFT	W10X33	16.6	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90, STA. 2162+64, 64.6 LEFT	W10X33	18.3	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90 OFF RAMP D, STA. 409+31, 39.0 RIGHT	W10X33	14.8	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90 OFF RAMP D, STA. 409+31, 46.2 RIGHT	W10X33	16.0	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
EB I-90 OFF RAMP D, STA. 413+76, 42.0 RIGHT	W6X12	11.8	Breakaway	1.75	4.0	2.0	-	-	-	-	-	-	8	#6 Bars	3.67	1.42	28.75
EB I-90 OFF RAMP D, STA. 413+76, 48.0 RIGHT	W6X12	12.8	Breakaway	1.75	4.0	2.0	-	-	-	-	-	-	8	#6 Bars	3.67	1.42	28.75
WB I-90 OFF RAMP B, STA. 207+00, 39.0 LEFT	W6X12	11.8	Breakaway	1.75	4.0	2.0	-	-	-	-	-	-	8	#6 Bars	3.67	1.42	28.75
WB I-90 OFF RAMP B, STA. 207+00, 45.0 LEFT	W6X12	12.8	Breakaway	1.75	4.0	2.0	-	-	-	-	-	-	8	#6 Bars	3.67	1.42	28.75
WB I-90 OFF RAMP B, STA. 211+00, 39.0 LEFT	W10X33	14.8	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00
WB I-90 OFF RAMP B, STA. 211+00, 46.2 LEFT	W10X33	16.0	Breakaway	2.0	9.0	3.0	-	-	-	-	-	-	8	#7 Bars	8.67	1.67	60.00

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9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Tab Sheets.dgn

PERMANENT SIGNING - INTERSTATE 90 (EB)

Plotting Date: 10/9/2025 Rev: 1/30/2025 BDH Rev: 9/30/2025 BRC

EXISTING STATION	NEW STATION	SIGN								POST					DESCRIPTION	REMARKS
		Width (in)	Height (in)	MUTCD No. or Type	Facing Traffic	New Sign	Remove Existing	Square Footage	Sheeting Type	New Post	Length (feet)	Size (in)	Posts	Shear Slip Base		
INTERSTATE 90 - Eastbound																
647+03; Right	1010+11; Right	120	84	Service	EB	Reset	Yes	70	XI	Yes	See Breakaway Support Details				Exit 46 - Gas, Food, Camping Service Sign (4 Businesses)	Reset; Remove Footing; Aluminum Overlay
1014+56; Right	1018+11; Right	108	30	Exit Guide	EB	Reset	Yes	22.5	XI	Yes	See Breakaway Support Details				Exit 46	Reset; Remove Footing; Aluminum Overlay
		204	72	Exit Guide	EB	Reset	Yes	102	XI						Elk Creek Rd 1 Mile	
1016+41; Right	Same	12	36	D10-2	EB	Flat Alum	Yes	3	IV	Yes	8.0	2	1	-	Mile Marker 45	New Sign and Post
1066+70; Right	1060+50; Right	156	72	Exit Guide	EB	Extruded	Yes	78	XI	Yes	See Breakaway Support Details				Elk Creek Rd	New Signs and Post; Remove Footing
		114	30	E1-5P	EB	Extruded	Yes	23.75	XI						Exit 46	
1070+08, Right	Same	12	36	D10-2	EB	Flat Alum	Yes	3	IV	Yes	8.0	2	1	-	Mile Marker 46	New Sign and Post
1072+79; Right	1073+96; Right	78	60	E5-1a	EB	Flat Alum	Yes	32.5	XI	Yes	13.0	2.5	2	Yes	Exit 46 Gore Sign	Remove and Replace with New Sign and Posts at New Location
1078+86; Right	-	-	-	D10-2a	EB	No	Yes	-	-	No	-	-	-	-	Mile Marker 46.14	Remove Sign and Post
1086+38; Right	-	-	-	R1-2	EB	No	Yes	-	-	No	-	-	-	-	Yield	Remove Sign and Post
1096+91; Right	1135+50; Right	36	18	M3-2i	EB	Flat Alum	Yes	4.5	IV	Yes	14.0	2.5	2	Yes	Interstate Cardinal Direction Marker (EAST)	New Signs and Post
		36	36	M1-1 (90)	EB	Flat Alum	Yes	9.0	IV						Interstate Shield (90)	
		36	18	M3-2	EB	Flat Alum	Yes	4.5	IV						Cardinal Direction Marker (EAST)	
		36	36	M1-4 (14)	EB	Flat Alum	Yes	9.0	IV						US Route Marker (14)	
		36	18	M3-3	EB	Flat Alum	Yes	4.5	IV						Cardinal Direction Marker (SOUTH)	
		36	36	M1-5 (79)	EB	Flat Alum	Yes	9.0	IV						SD Route Marker (79)	
1097+04; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Remove Billboard Sign & Post (By Others)
1100+23; Right	1124+00; Right	36	48	R2-1 (75)	EB	Flat Alum	Yes	12	IV	Yes	12.0	2.5	2	Yes	Speed Limit (75 mph)	New Sign and Post
1102+54; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Remove Billboard Sign & Post (By Others)
1108+97; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Do Not Disturb Billboard
1112+55; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Do Not Disturb Billboard
1112+68; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Remove Billboard Sign & Post (By Others)
1118+00; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Remove Billboard Sign & Post (By Others)
1123+21; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Remove Billboard Sign & Post (By Others)
1124+26; Right	Same	12	36	D10-2	EB	Flat Alum	Yes	3	IV	Yes	8.0	2	1	-	Mile Marker 47	New Sign and Post
-	1127+50; Right	48	36	R8-4	EB	Flat Alum	-	12	IV	Yes	11.0	2.5	2	Yes	Emergency Parking Only	New Sign and Post
1131+10; Right	1131+00; Right	108	30	Exit Guide	EB	Reset	Yes	22.5	XI	Yes	See Breakaway Support Details				Exit 48	Reset; Remove Footing; Aluminum Overlay
		156	96	Exit Guide	EB	Reset	Yes	104	XI						Stage Stop Rd 1 Mile	
1134+45; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Remove Billboard Sign & Post (By Others)
1139+72; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Billboard	Remove Billboard Sign & Post (By Others)

LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Tab Sheets.dgn

PERMANENT SIGNING - INTERSTATE 90 (WB)

Plotting Date: 10/9/2025 Rev: 1/30/2025 BDH Rev: 9/30/2025 BRC

EXISTING STATION	NEW STATION	SIGN								POST					DESCRIPTION	REMARKS
		Width (in)	Height (in)	MUTCD No. or Type	Facing Traffic	New Sign	Remove Existing	Square Footage	Sheeting Type	New Post	Length (feet)	Size (in)	Posts	Shear Slip Base		
INTERSTATE 90 - Westbound																
2014+41; Left	2014+31; Left	108	30	Exit Guide	WB	Reset	Yes	22.5	XI	Yes	See Breakaway Support Details				Exit 44	Reset; Remove Footing; Aluminum Overlay
		216	84	Exit Guide	WB	Reset	Yes	126	XI						Deerview Rd	
2016+24; Left	Same	12	36	D10-2	WB	Reset	Yes	3	IV	Yes	8.0	2	1	-	Mile Marker 45	New Sign and Post
2034+46; Left	Same	-	-	Special	WB	Reset	Yes	-	-	Yes	-	-	-	-	Piedmont Valley Lutheran Church Sign	Reset
2034+46; Left	Same	-	-	Special	WB	Reset	Yes	-	-	Yes	-	-	-	-	Wonderland Cave Exit 32 Sign	Reset
-	2046+65; Left	36	18	M3-4i	WB	Flat Alum	-	4.5	IV	Yes	14.0	2.5	2	Yes	Interstate Cardinal Direction Marker (WEST)	New Signs and Post
		36	36	M1-1 (90)	WB	Flat Alum	-	9.0	IV						Interstate Shield (90)	
		36	18	M3-4	WB	Flat Alum	-	4.5	IV						Cardinal Direction Marker (WEST)	
		36	36	M1-4 (14)	WB	Flat Alum	-	9.0	IV						US Route Marker (14)	
		36	18	M3-1	WB	Flat Alum	-	4.5	IV						Cardinal Direction Marker (NORTH)	
		36	36	M1-5 (79)	WB	Flat Alum	-	9.0	IV						SD Route Marker (79)	
2064+68; Left	2064+58; Left	108	30	Exit Guide	WB	Reset	Yes	22.5	XI	Yes	See Breakaway Support Details				Exit 44	Reset; Remove Footing; Aluminum Overlay
		216	60	Exit Guide	WB	Reset	Yes	90	XI						Deerview Rd 1 Mile	
2069+87; Left	Same	12	36	D10-2	WB	Flat Alum	Yes	3	IV	Yes	8.0	2	1	-	Mile Marker 46	New Sign and Post
2080+02; Left	-	-	-	D10-2a	WB	No	Yes	-	-	No	-	-	-	-	Mile Marker 46.14	Remove Sign and Post
2087+41; Left	2104+52; Left	78	60	E5-1a	WB	Flat Alum	Yes	32.5	XI	Yes	13.0	2.5	2	Yes	Exit 46 Gore Sign	New Sign and Post
2095+12; Left	2121+00; Left	156	72	Exit Guide	WB	Extruded	Yes	78	XI	Yes	See Breakaway Support Details				Elk Creek Rd	New Signs and Post; Remove Footing
		114	30	E1-5P	WB	Extruded	Yes	23.75	XI						Exit 46	
2103+20; Left	2129+00; Left	180	132	Service	WB	Reset	Yes	165	XI	Yes	See Breakaway Support Details				Exit 46 - Gas, Food Service Sign (3 Businesses)	Reset; Remove Footing; Aluminum Overlay
2111+23; Left	2137+00; Left	180	132	Service	WB	Reset	Yes	165	XI	Yes	See Breakaway Support Details				Exit 46 - Lodging, Camping Service Sign (1 Business)	Reset; Remove Footing; Aluminum Overlay
2124+25; Left	Same	12	36	D10-2	WB	Flat Alum	Yes	3	IV	Yes	8.0	2	1	-	Mile Marker 47	New Sign and Post
2145+60; Left	2162+64; Left	108	30	Exit Guide	WB	Reset	Yes	22.5	XI	Yes	See Breakaway Support Details				Exit 46	Reset; Remove Footing; Aluminum Overlay
		204	72	Exit Guide	WB	Reset	Yes	102	XI						Elk Creek Rd 1 Mile	

LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

PERMANENT SIGNING - INTERSTATE 90 (WB RAMPS)

Plotting Date: 10/9/2025 Rev: 02/06/2024 BDH Rev: 9/30/2025 BRC

EXISTING STATION	NEW STATION	SIGN								POST					DESCRIPTION	REMARKS
		Width (in)	Height (in)	MUTCD No. or Type	Facing Traffic	New Sign	Remove Existing	Square Footage	Sheeting Type	New Post	Length (feet)	Size (in)	Posts	Shear Slip Base		
WB I-90 ON RAMP A																
103+62; Left	-	-	-	R1-2	WB	No	Yes	-	-	No	-	-	-	-	Yield	Remove Sign and Post
-	105+12; Right	36	36	W4-1R	WB	Flat Alum	-	9.0	XI	Yes	10.5	2.0	2	No	Right Merge (Symbol)	New Sign and Post
108+83; Left	-	-	-	Regulatory	WB	No	Yes	-	-	No	-	-	-	-	Adopt-A-Highway, Litter Control Courtesy of, ID Plaque	Remove Sign and Post
110+95; Right	-	30	30	W3-1	WB	No	Yes	-	-	No	-	-	-	-	Stop Ahead	Remove Sign from Luminaire
110+95; Right	-	24	30	R2-1 (15)	WB	No	Yes	-	-	No	-	-	-	-	Speed Limit (15 mph)	Remove Sign and Post
		-	-	Special	WB	No	Yes	-	-						Weight Limits	
111+41; Right	-	30	15	M3-4i	EB	No	Yes	-	-	No	-	-	-	-	Interstate Cardinal Direction Marker (WEST)	Remove Signs and Post
		36	36	M1-1 (90)	EB	No	Yes	-	-						Interstate Shield (90)	
		21	15	M6-1L	EB	No	Yes	-	-						Directional Route Arrow (Left)	
111+41; Right	-	36 Dia	-	W10-1	EB	No	Yes	-	-	No	-	-	-	-	Grade Crossing Advance Warning	Remove Sign and Post
112+34; Left	-	30	15	M3-4i	WB	No	Yes	-	-	No	-	-	-	-	Interstate Cardinal Direction Marker (WEST)	Remove Sign and Post
		36	36	M1-1 (90)	WB	No	Yes	-	-						Interstate Shield (90)	
		21	15	M6-1R	WB	No	Yes	-	-						Directional Route Arrow (Right)	
112+34; Left	-	30	36	Special	WB	No	Yes	-	-	No	-	-	-	-	Caution No Pedestrians	Remove Signs from Luminaire
		24	30	W5-2	WB	No	Yes	-	-						Narrow Bridge	
112+69; Left	-	48	9	R15-1	WB	No	No	-	-	No	-	-	-	-	Grade Crossing (Crossbuck)	Do Not Disturb Railroad Crossing Sign
112+75; Left	-	36	12	R6-1L	EB	No	Yes	-	-	No	-	-	-	-	One Way (Left)	Remove Signs and Posts
		36	12	R6-1R	WB	No	Yes	-	-						One Way (Right)	
		30	30	R1-1	WB	No	Yes	-	-						Stop Sign	
		30	30	R5-1	EB	No	Yes	-	-						Do Not Enter	
112+93; Left	-	48	9	R15-1	EB	No	No	-	-	No	-	-	-	-	Grade Crossing (Crossbuck)	Do Not Disturb Railroad Crossing Sign
113+10; Left	-	-	-	Special	EB	No	Yes	-	-	No	-	-	-	-	Off Road Travel Prohibited	Remove Sign and Post
113+51; Left	-	24	30	R2-1 (15)	EB	No	Yes	-	-	No	-	-	-	-	Speed Limit (15 mph)	Remove Sign and Post
113+56; Right	-	36	24	R5-1a	EB	No	Yes	-	-	No	-	-	-	-	Wrong Way	Remove Sign and Post
113+78; Left	-	-	-	Special	EB	No	Yes	-	-	No	-	-	-	-	Off Road Travel Prohibited	Remove Signs and Post
		36	36	M1-6 (4C)	EB	No	Yes	-	-						County Route Sign (4C Meade County)	
113+90; Left	-	228	132	Service	WB	No	Yes	-	-	No	-	-	-	-	Exit 46 - Gas, Food Service Sign (3 Businesses)	Remove Sign, Post, and Footing
114+29; Left	-	30	30	W10-2	WB	No	Yes	-	-	No	-	-	-	-	Grade Crossing Advance Warning	Remove Sign and Post
114+89; Left	-	-	-	Guide	WB	No	Yes	-	-	No	-	-	-	-	Piedmont Left, Elk Creek Rd Right	Remove Sign, Post, and Footing
115+90; Right	-	-	-	Service	WB	No	Yes	-	-	No	-	-	-	-	Exit 46 - Lodging, Camping Service Sign (1 Business)	Remove Sign, Post, and Footing
WB I-90 OFF RAMP B																
-	200+50; Left	30	30	R5-1	EB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	2	No	Do Not Enter	New Signs and Post
		30	30	R1-1	WB	Flat Alum	-	6.3	XI						Stop Sign	
		36	12	R6-1R	SB	Flat Alum	-	3.0	XI						One Way (Right)	
		36	12	R6-1L	NB	Flat Alum	-	3.0	XI						One Way (Left)	
-	200+50; Right	30	30	R5-1	EB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	2	No	Do Not Enter	New Signs and Post
		30	30	R1-1	WB	Flat Alum	-	6.3	XI						Stop Sign	
		36	12	R6-1R	SB	Flat Alum	-	3.0	XI						One Way (Right)	
		36	12	R6-1L	NB	Flat Alum	-	3.0	XI						One Way (Left)	
-	202+00; Right	36	24	R5-1a	EB	Flat Alum	-	6.0	XI	Yes	10.5	2.0	2	No	Wrong Way	New Sign and Post
-	203+20; Left	30	30	R3-7R	WB	Flat Alum	-	6.3	IV	Yes	10.5	2.0	1	No	Right Lane Must Turn Right	New Sign and Post
203+69; Left	-	-	-	-	WB	-	-	-	-	-	-	-	-	-	Billboard - Resort & RV Park/Petrified Forest	Remove Billboard Sign & Post (By Others)
-	207+00; Left	120	42	Guide	WB	Extruded	-	35.0	XI	Yes	See Breakaway Support Details				Piedmont Left, Elk Creek Rd Right	New Sign and Post
-	211+00; Left	144	78	Service	WB	Extruded	-	78	IV	Yes	See Breakaway Support Details				Exit 46 - Gas, Food, Camping Service Sign (4 Businesses)	New Sign and Post

LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\034J_Section S_Tab Sheets.dgn

Plotting Date: 10/9/2025 Rev: 02/06/2024 BDH Rev: 9/30/2025 BRC

PERMANENT SIGNING - INTERSTATE 90 (EB RAMPS)

EXISTING STATION	NEW STATION	SIGN								POST					DESCRIPTION	REMARKS
		Width (in)	Height (in)	MUTCD No. or Type	Facing Traffic	New Sign	Remove Existing	Square Footage	Sheeting Type	New Post	Length (feet)	Size (in)	Posts	Shear Slip Base		
EB I-90 ON RAMP C																
-	314+96; Left	36	36	W4-1R	WB	Flat Alum	-	9.0	XI	Yes	10.5	2.0	2	No	Right Merge (Symbol)	New Sign and Post
EB I-90 OFF RAMP D																
403+04; Right	-	228	132	Service	EB	No	Yes	-	-	No	-	-	-	-	Exit 46 - Gas, Food, Camping Service Sign (4 Businesses)	Remove Sign, Post, and Footing
404+16; Right	-	-	-	Guide	EB	No	Yes	-	-	No	-	-	-	-	Elk Creek Rd Left, Piedmont Right	Remove Sign, Post, and Footing
404+81; Right	-	36	24	R5-1a	WB	No	Yes	-	-	No	-	-	-	-	Wrong Way	Remove Sign and Post
405+68; Right	-	30	30	R1-1	WB	No	Yes	-	-	No	-	-	-	-	Stop Sign	Remove Signs and Post
		24	12	W4-4P	WB	No	Yes	-	-						Cross Traffic Does Not Stop	
405+77; Right	-	36	12	R6-1L	WB	No	Yes	-	-	No	-	-	-	-	One Way (Left)	Remove Sign and Post
		36	12	R6-1R	EB	No	Yes	-	-						One Way (Right)	
		30	30	R1-1	EB	No	Yes	-	-						Stop Sign	
		30	30	R5-1	WB	No	Yes	-	-						Do Not Enter	
406+48; Right	-	30	15	M3-2i	EB	No	Yes	-	-	No	-	-	-	-	Interstate Cardinal Direction Marker (EAST)	Remove Sign and Post
		36	36	M1-1 (90)	EB	No	Yes	-	-						Interstate Shield (90)	
		21	15	M6-1R	EB	No	Yes	-	-						Directional Route Arrow (Right)	
406+77; Left	-	30	36	Special	EB	No	Yes	-	-	No	-	-	-	-	Caution No Pedestrians	Remove Signs from Luminaire
		24	30	W5-2	EB	No	Yes	-	-						Narrow Bridge	
		30	15	M3-2i	WB	No	Yes	-	-						Interstate Cardinal Direction Marker (EAST)	
		36	36	M1-1 (90)	WB	No	Yes	-	-						Interstate Shield (90)	
		21	15	M6-1L	WB	No	Yes	-	-						Directional Route Arrow (Left)	
407+33; Left	-	24	30	R2-1 (15)	EB	No	Yes	-	-	No	-	-	-	-	Speed Limit (15 mph)	Remove Signs and Post
		-	-	Special	WB	No	Yes	-	-						Weight Limits	
-	409+31; Right	144	78	Service	EB	Extruded	Yes	78	IV	Yes	See Breakaway Support Details				Exit 46 - Gas, Food, Camping Service Sign (4 Businesses)	New Sign and Post
-	413+76; Right	120	42	Guide	EB	Extruded	Yes	35.0	XI	Yes	See Breakaway Support Details				Elk Creek Rd Left, Piedmont Right	New Sign and Post
-	415+17; Left	30	30	R3-7L	EB	Flat Alum	-	6.3	IV	Yes	10.5	2.0	2	No	Left Lane Must Turn Left	New Sign and Post
		36	24	R5-1a	WB	Flat Alum	-	6.0	XI						Wrong Way	
-	417+40; Left	30	30	R5-1	WB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	2	No	Do Not Enter	New Signs and Post
		30	30	R1-1	EB	Flat Alum	-	6.3	XI						Stop Sign	
		36	12	R6-1L	SB	Flat Alum	-	3.0	XI						One Way (Left)	
		36	12	R6-1R	NB	Flat Alum	-	3.0	XI						One Way (Right)	
-	417+40; Right	30	30	R5-1	WB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	2	No	Do Not Enter	New Signs and Post
		30	30	R1-1	EB	Flat Alum	-	6.3	XI						Stop Sign	
		36	12	R6-1L	SB	Flat Alum	-	3.0	XI						One Way (Left)	
		36	12	R6-1R	NB	Flat Alum	-	3.0	XI						One Way (Right)	

LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Tab Sheets.dgn

PERMANENT SIGNING - ELK CREEK ROAD

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: S10 | TOTAL SHEETS: S57

Plotting Date: 10/9/2025 Rev: 02/13/2024 BDH Rev: 9/30/2025 BRC

EXISTING STATION	NEW STATION	SIGN								POST					DESCRIPTION	REMARKS
		Width (in)	Height (in)	MUTCD No. or Type	Facing Traffic	New Sign	Remove Existing	Square Footage	Sheeting Type	New Post	Length (feet)	Size (in)	Posts	Shear Slip Base		
ELK CREEK ROAD																
-	500+55; Left	66	12	D3-1	EB	Flat Alum	-	5.5	IV	Yes	9.0	2.0	1	No	Street Sign (Sturgis Rd)	New Signs and Post
		66	12	D3-1	WB	Flat Alum	-	5.5	IV						Street Sign (Sturgis Rd)	
		66	12	D3-1	NB	Flat Alum	-	5.5	IV						Street Sign (Elk Creek Rd)	
		66	12	D3-1	SB	Flat Alum	-	5.5	IV						Street Sign (Elk Creek Rd)	
-	500+65; Left	30	30	R1-1	WB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	1	No	Stop Sign	New Sign and Post
-	501+37; Right	30	30	R3-7R	EB	Flat Alum	-	6.3	IV	Yes	10.5	2.0	1	No	Right Lane Must Turn Right	New Sign and Post
-	501+67; Left	30	30	R3-7R	WB	Flat Alum	-	6.3	IV	Yes	10.5	2.0	1	No	Right Lane Must Turn Right	New Sign and Post
-	501+82; Right	96	48	Regulatory	EB	Flat Alum	-	32.0	XI	Yes	12.0	2.5	2	Yes (T)	I-90 Closed When Flashing	New Sign and Post (Flashing Beacon)
-	502+28; Right	24	12	M3-2i	EB	Flat Alum	-	2.0	IV	Yes	14.0	2.5	2	Yes	Interstate Cardinal Direction Marker (East)	New Sign and Post
		24	24	M1-1(90)	EB	Flat Alum	-	4.0	IV						Interstate Shield (90)	
		24	12	M6-1Ri	EB	Flat Alum	-	2.0	IV						Directional Route Arrow (Right)	
-	502+95; Left	24	12	M3-2i	WB	Flat Alum	-	2.0	IV	Yes	14.0	2.5	2	Yes	Interstate Cardinal Direction Marker (East)	New Sign and Post
		24	24	M1-1(90)	WB	Flat Alum	-	4.0	IV						Interstate Shield (90)	
		24	12	M6-1Li	WB	Flat Alum	-	2.0	IV						Directional Route Arrow (Left)	
-	507+03; Right	24	12	M3-4i	EB	Flat Alum	-	2.0	IV	Yes	14.0	2.5	2	Yes	Interstate Cardinal Direction Marker (West)	New Sign and Post
		24	24	M1-1(90)	EB	Flat Alum	-	4.0	IV						Interstate Shield (90)	
		24	12	M6-1Li	EB	Flat Alum	-	2.0	IV						Directional Route Arrow (Left)	
-	507+86; Left	24	12	M3-4i	WB	Flat Alum	-	2.0	IV	Yes	14.0	2.5	2	Yes	Interstate Cardinal Direction Marker (West)	New Sign and Post
		24	24	M1-1(90)	WB	Flat Alum	-	4.0	IV						Interstate Shield (90)	
		24	12	M6-1Ri	WB	Flat Alum	-	2.0	IV						Directional Route Arrow (Right)	
-	508+80; Left	96	48	Regulatory	WB	Flat Alum	-	32.0	XI	Yes	12.0	2.5	2	Yes (T)	I-90 Closed When Flashing	New Sign and Post (Flashing Beacon)
-	509+50; Right	24	30	R2-1 (35)	EB	Flat Alum	-	5.0	IV	Yes	-	-	-	-	Speed Limit (35)	New Sign Mounted on Luminaire
509+54; Left	510+85; Right	24	30	R12-2	EB	Reset	Yes	-	-	No	-	-	-	-	Axle Weight Limit 7 Tons	Remove Sign and Reset on Luminaire
509+63; Left	-	-	-	Other	EB/WB	No	Yes	-	-	No	-	-	-	-	Extreme Fireworks	Remove Sign and Post
511+32, Left	-	-	-	R2-1 (35)	EB	No	Yes	-	-	No	-	-	-	-	Speed Limit (35)	Remove Sign and Post
511+56; Left	-	-	-	W14-3	WB	No	Yes	-	-	No	-	-	-	-	No Passing Pennant (36" x 48" x 48")	Remove Sign and Post
511+65, Left	-	24	30	R2-1 (15)	WB	No	Yes	-	-	No	-	-	-	-	Speed Limit (15)	Remove Sign and Post
-	512+10; Right	24	36	R3-9b	EB	Flat Alum	Yes	6.0	IV	No	-	-	-	-	Two Way Left Turn Only	New Signs Mounted on Luminaire
		30	12	R3-9cP	EB	Flat Alum	Yes	2.5	IV						Begin	
512+49, Left	-	24	30	W3-5	WB	No	Yes	-	-	No	-	-	-	-	Reduced Speed Limit Ahead (15)	Remove Sign and Post
-	512+80; Left	24	36	R3-9b	WB	Flat Alum	Yes	6.0	IV	Yes	11.0	2.0	1	No	Two Way Left Turn Only	New Signs and Post
		30	12	R3-9dP	WB	Flat Alum	Yes	2.5	IV						End	
512+92; Left	514+25; Right	36	36	S3-1	EB	Reset	Yes	-	-	Yes	11.0	2.0	1	No	School Bus Stop Ahead	Reset
513+79; Left	-	-	-	W10-1	WB	No	Yes	-	-	No	-	-	-	-	Grade Crossing Advance Warning (36" Dia)	Remove Sign and Post
514+06; Right	516+25; Right	30	30	W11-2	EB	Reset	Yes	-	-	No	-	-	-	-	Pedestrian Crossing	Reset
515+39; Right	-	24	18	Other	NB	No	Yes	-	-	No	-	-	-	-	No Trespassing State of South Dakota	Remove Sign and Post
-	518+00; Left	24	30	R2-1 (35)	WB	Flat Alum	-	5.0	IV	Yes	10.5	2.0	1	No	Speed Limit (35)	New Sign and Post
519+71, Right	519+66; Right	36	12	D5-MISC	EB	Reset	Yes	-	-	Yes	9.0	2.0	1	No	Piedmont Valley Lutheran Church 1 Mile	Reset
521+42; Right	521+42; Left	36	12	D5-MISC	WB	Reset	Yes	-	-	Yes	9.0	2.0	1	No	Piedmont Valley Lutheran Church 1 Mile	Reset
-	525+25; Right	24	36	R3-9b	WB	Flat Alum	Yes	6.0	IV	Yes	11.0	2.0	1	No	Two Way Left Turn Only	New Signs and Post
		30	12	R3-9dP	WB	Flat Alum	Yes	2.5	IV						End	
-	525+25; Left	24	36	R3-9b	EB	Flat Alum	Yes	6.0	IV	Yes	11.0	2.0	1	No	Two Way Left Turn Only	New Signs and Post
		30	12	R3-9cP	EB	Flat Alum	Yes	2.5	IV						Begin	
527+78; Right	-	30	30	W1-2	EB	No	No	-	-	No	-	-	-	-	Horizontal Alignment - Curve (Left)	Leave Existing In Place
		18	18	W13-1P (25)	EB	No	No	-	-						Advisory Speed (25)	
530+04; Left	-	30	30	W11-2	WB	No	No	-	-	No	-	-	-	-	Pedestrian Crossing	Leave Existing In Place
531+89; Left	-	36	36	S3-1	WB	No	No	-	-	No	-	-	-	-	School Bus Stop Ahead	Leave Existing In Place

LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

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PERMANENT SIGNING - STURGIS ROAD

FELSBURG HOLT & ULLEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: S11 | TOTAL SHEETS: S57

Plotting Date: 10/9/2025 Rev: 02/06/2024 BDH Rev: 9/30/2025 BRC

EXISTING STATION	NEW STATION	SIGN								POST					DESCRIPTION	REMARKS
		Width (in)	Height (in)	MUTCD No. or Type	Facing Traffic	New Sign	Remove Existing	Square Footage	Sheeting Type	New Post	Length (feet)	Size (in)	Posts	Shear Slip Base		
STURGIS ROAD																
606+00; Left	Same	48	36	W14-3	SB	Reset	Yes	-	-	Yes	11	2.0	1	No	No Passing Pennant (48" x 48" x 36")	Reset
607+39; Left	Same	24	30	R2-1 (35)	NB	Reset	Yes	-	-	Yes	10.5	2.0	1	No	Speed Limit (35)	Reset
623+37; Right	623+29; Right	12	36	OM3-L	NB	Reset	Yes	-	-	Yes	11	2.0	1	No	Object Marker (Left)	Reset
		12	36	OM3-R	SB	Reset	Yes	-	-						Object Marker (Right)	
-	623+72; Right	12	36	OM3-L	NB	Flat Alum	-	3.0	XI	Yes	11	2.0	1	No	Object Marker (Left)	New Signs and Post
		12	36	OM3-R	SB	Flat Alum	-	3.0	XI						Object Marker (Right)	
632+27; Right	631+87; Right	12	36	OM3-L	NB	Reset	Yes	-	-	Yes	11	2.0	1	No	Object Marker (Left)	Reset
		12	36	OM3-R	SB	Reset	Yes	-	-						Object Marker (Right)	
632+30; Right	Same	24	24	I-8	NB	Reset	Yes	-	-	Yes	10	2.0	1	No	Library	Reset
		-	-	-	NB	Reset	Yes	-	-						Direction Arrow	
		24	24	I-8	SB	Reset	Yes	-	-						Library	
		-	-	-	SB	Reset	Yes	-	-						Direction Arrow	
632+30; Right	Same	24	30	R2-1 (15)	WB	Reset	Yes	-	-	Yes	10.5	2.0	1	No	Speed Limit (15)	Reset
632+65; Right	632+71; Right	66	12	D3-1	NB/SB	Reset	Yes	-	-	Yes	9	2.0	1	No	Street Sign (Park Street)	Reset
		66	12	D3-1	EB/WB	Reset	Yes	-	-						Street Sign (Sturgis Rd)	
632+65; Right	Same	30	30	R1-1	EB	Reset	Yes	-	-	Yes	10.5	2.0	1	No	Stop Sign	Reset
632+67; Right	Same	12	36	OM3-L	NB	Reset	Yes	-	-	Yes	11	2.0	1	No	Object Marker (Left)	Reset
		12	36	OM3-R	SB	Reset	Yes	-	-						Object Marker (Right)	
640+07; Right	Same	24	30	R2-1 (35)	SB	No	No	-	-	No	-	-	-	-	Speed Limit (35)	Leave Existing In Place
642+21; Right	642+12; Right	12	36	OM3-L	NB	Reset	Yes	-	-	Yes	11	2.0	1	No	Object Marker (Left)	Reset
		12	36	OM3-R	SB	Reset	Yes	-	-						Object Marker (Right)	
-	642+30; Right	12	36	OM3-L	NB	Flat Alum	-	3.0	XI	Yes	11	2.0	1	No	Object Marker (Left)	New Signs and Post
		12	36	OM3-R	SB	Flat Alum	-	3.0	XI						Object Marker (Right)	
647+03; Right	-	-	-	Service	EB	-	-	-	-	-	-	-	-	-	Exit 46 - Gas, Food, Camping Service Sign (4 Businesses)	See Notes on Interstate 90 Eastbound Sheet
663+00; Right	-	48	30	D1-MISC	SB	No	Yes	-	-	No	-	-	-	-	Destination (Elk Creek Road)	Remove Sign and Post
663+77; Left	Same	24	30	R2-1 (35)	NB	No	Yes	-	-	No	-	-	-	-	Speed Limit (35)	Reset
665+05; Right	664+05; Right	48	36	W14-3	NB	Reset	Yes	-	-	No	-	-	-	-	No Passing Pennant (48" x 48" x 36")	Reset
-	664+85; Right	30	30	W11-15	SB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	1	No	Bicycle / Pedestrian	New Signs and Post
		24	18	W16-2P	SB	Flat Alum	-	3.0	XI						100 Feet	
665+72; Right	Same	30	30	R1-1	EB	Reset	Yes	-	-	No	-	-	-	-	Stop Sign	Reset
-	665+97; Right	30	30	W11-15	SB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	1	No	Bicycle / Pedestrian	New Signs and Post
		24	12	W16-7P	SB	Flat Alum	-	2.0	XI						Downward Diagonal Arrow	
-	666+12; Left	30	30	W11-15	NB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	1	No	Bicycle / Pedestrian	New Signs and Post
		24	12	W16-7P	NB	Flat Alum	-	2.0	XI						Downward Diagonal Arrow	
666+17; Right	-	24	18	D9-MISC	WB	No	Yes	-	-	No	-	-	-	-	Food (Left/Right)	Remove Sign and Post
-	667+00; Left	30	30	W11-15	SB	Flat Alum	-	6.3	XI	Yes	10.5	2.0	1	No	Bicycle / Pedestrian	New Signs and Post
		24	18	W16-2P	SB	Flat Alum	-	3.0	XI						100 Feet	
667+81; Left	-	24	24	R5-3	EB	No	Yes	-	-	No	-	-	-	-	No Motorized Vehicles	Reset
-	671+53; Right	24	30	R2-1 (35)	SB	Flat Alum	-	5.0	IV	Yes	10.5	2.0	1	No	Speed Limit (35)	New Sign and Post
672+07; Right	-	24	30	R2-1 (45)	SB	No	Yes	-	-	No	-	-	-	-	Speed Limit (45)	Remove Sign and Post
-	676+10; Left	36	36	W4-2	NB	Flat Alum	-	9.0	XI	Yes	11	2.0	1	No	Lane Ends	New Sign and Post
676+50; Right	669+00; Right	24	36	R3-9b	SB	Reset	Yes	-	-	Yes	11	2.0	1	No	Two-Way Left Turn Only (Post Mounted)	Reset
		30	12	R3-9cP	SB	Reset	Yes	-	-						BEGIN	
		-	-	W14-3	NB	No	Yes	-	-						No Passing Pennant (36" x 48" x 48")	Remove Sign
676+59; Left	669+00; Left	24	36	R3-9b	NB	Reset	Yes	-	-	Yes	11	2.0	1	No	Two-Way Left Turn Only (Post Mounted)	Reset
		30	12	R3-9dP	NB	Reset	Yes	-	-						END	
-	679+52; Left	30	30	R3-7R	NB	Flat Alum	-	6.3	IV	Yes	10.5	2.0	1	No	Right Lane Must Turn Right	New Sign and Post

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9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

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PERMANENT SIGNING - ACCESS ROADS

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: S12 | TOTAL SHEETS: S57

Plotting Date: 10/9/2025 Rev: 12/5/2024 BDH Rev: 9/30/2025 BRC

EXISTING STATION	NEW STATION	SIGN								POST					DESCRIPTION	REMARKS
		Width (in)	Height (in)	MUTCD No. or Type	Facing Traffic	New Sign	Remove Existing	Square Footage	Sheeting Type	New Post	Length (feet)	Size (in)	Posts	Shear Slip Base		
STEAK HOUSE ACCESS ROAD																
40+26; Right	-	-	-	W3-5 (15)	WB	-	-	-	-	-	-	-	-	-	Reduced Speed Limit Ahead (15)	See Notes on Elk Creek Road sheet
40+30; Left	-	-	-	R2-1 (15)	WB	-	-	-	-	-	-	-	-	-	Speed Limit (15)	See Notes on Elk Creek Road sheet
-	46+71; Right	30	30	R1-1	SB	Flat Alum	-	5.2	XI	Yes	10.5	2.0	1	No	Stop Sign	New Sign and Post
W HILLS VIEW DRIVE / PRESENT ELK CREEK ROAD																
10+24; Right	Same	24	30	R2-1	SB	No	No	-	-	No	-	-	-	-	Speed Limit (15)	Leave Existing Sign In Place
10+28; Right	-	66	12	D3-1	NB/SB	No	Yes	-	-	No	-	-	-	-	Street Sign (Elk Creek Rd)	Remove Signs, Leave Post
		72	12	D3-1	EB/WB	No	No	-	-						Street Sign (W Hills View Dr)	Leave Existing Signs In Place
12+51; Right	-	-	-	-	EB	-	-	-	-	-	-	-	-	-	Piedmont Valley Lutheran Church 1 Mile	See Notes on Elk Creek Road sheet
-	13+07; Right	30	30	R1-1	EB	Flat Alum	-	5.2	XI	Yes	10.5	2.0	1	No	Stop Sign	New Sign and Post
E HILLS VIEW DRIVE																
20+23; Left	Same	24	30	R2-1 (15)	SB	No	No	-	-	No	-	-	-	-	Speed Limit (15)	Leave Existing Sign In Place
21+20; Right	22+35; Right	30	30	R1-1	NB	Flat Alum	Yes	5.2	XI	Yes	10.5	2.0	1	No	Stop Sign	New Sign and Post
21+28; Right	22+40, Left	66	12	D3-1	NB/SB	Reset	Yes	-	-	No	-	-	-	-	Street Sign (Elk Creek Rd)	Reset
		72	12	D3-1	EB/WB	Reset	Yes	-	-						Street Sign (E Hills View Dr)	
W VALLEY VIEW DRIVE																
31+38; Right	32+12, Right	30	30	R1-1	NB	Flat Alum	Yes	5.2	XI	Yes	10.5	2.0	1	No	Stop Sign	New Sign and Post
31+42; Right	32+14, Right	66	12	D3-1	NB/SB	Reset	Yes	-	-	No	-	-	-	-	Street Sign (Elk Creek Rd)	Reset
		72	12	D3-1	EB/WB	Reset	Yes	-	-						Street Sign (W Valley View Dr)	
E VALLEY VIEW DRIVE																
0+18; Right	0+24; Right	30	30	R1-1	NB	Flat Alum	Yes	5.2	XI	Yes	10.5	2.0	1	No	Stop Sign	New Sign and Post
0+23; Right	0+29; Right	66	12	D3-1	NB/SB	Reset	Yes	-	-	Yes	9.0	2.0	1	No	Street Sign (Elk Creek Rd)	Reset
		72	12	D3-1	EB/WB	Reset	Yes	-	-						Street Sign (E Valley View Dr)	
SPRING VALLEY ROAD																
712+87; Left	711+05; Left	24	30	R2-1 (35)	NB	No	Yes	-	-	Yes	10.5	2.0	1	No	Speed Limit (35)	Reset
21+90; Left	712+10; Right	30	30	R1-1	SB	Flat Alum	Yes	5.2	XI	Yes	10.5	2.0	1	No	Stop Sign	New Sign and Post
	712+10; Right	66	12	D3-1	NB/SB	Reset	Yes	-	-	No	-	-	-	-	Street Sign (Elk Creek Rd)	Reset (separate post from stop sign)
		72	12	D3-1	EB/WB	Reset	Yes	-	-						Street Sign (Spring Valley Rd)	

LICENSED PROFESSIONAL ENGINEER
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9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

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DELINEATORS

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S13	S57

Plotting Date: 1/19/2026

Rev: 10/16/2024 LPZ
Rev: 9/30/2025 LPZ

Location		Station			Tangent or Curve	Curve Radius	Section Length	Maximum Spacing	QUANTITIES (EACH)											
									Delineators								Object Markers			
									Mainline Single (4"x4")		Ramp/Gore Single (4"x8")		4" ø Tubular Reflector	4" ø Tubular Reflector	Guardrail (4"x6")	Guardrail (4"x6")	Single (Type 2)	Single (Type 2)	BK-to-BK (Type 2)	
						(Ft)	(Ft)	(Ft)	White	Amber	White	Amber	White	Amber	White	Amber	White	Amber	White	Amber	
WB I-90	Off-Ramp Deceleration	2012+64	to	2014+59	-	-	195	100	-	-	3	-	-	-	-	-	-	-	-	
WB I-90	Mainline	2014+59	to	2022+75	Curve	17500	816	300	4	-	-	-	-	-	-	-	-	-	-	
WB I-90	Mainline	2022+75	to	2031+26	Curve	12984	851	300	4	-	-	-	-	-	-	-	-	-	-	
WB I-90	Mainline	2031+26	to	2053+30	Tangent	-	2204	528	6	-	-	-	-	-	-	-	-	-	-	
WB I-90	On-Ramp Acceleration	2053+30	to	2069+18	Curve	5950	1588	100	-	-	17	-	-	-	-	-	-	-	-	
WB I-90	Mainline	2073+50	to	2103+00	Tangent	-	2950	528	7	-	-	-	-	-	-	-	-	-	-	
WB I-90	Off-Ramp Deceleration	2109+84	to	2120+98	Curve	6362	1114	100	-	-	13	-	-	-	-	-	-	-	-	
WB I-90	Mainline	2120+98	to	2145+28	Tangent	-	2430	528	6	-	-	-	-	-	-	-	-	-	-	
WB I-90	Mainline	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	18	2	
EB I-90	On-Ramp Acceleration	1011+67	to	1022+29	-	-	1062	100	-	-	12	-	-	-	-	-	-	-	-	
EB I-90	Mainline	1022+29	to	1031+06	Curve	12924	877	300	4	-	-	-	-	-	-	-	-	-	-	
EB I-90	Mainline	1031+06	to	1053+09	Tangent	-	2203	528	6	-	-	-	-	-	-	-	-	-	-	
EB I-90	Mainline	1053+09	to	1060+55	Curve	6034	746	233	5	-	-	-	-	-	-	-	-	-	-	
EB I-90	Off-Ramp Deceleration	1060+55	to	1070+91	Both	-	1036	100	-	-	12	-	-	-	-	-	-	-	-	
EB I-90	Mainline	1075+50	to	1103+60	Tangent	-	2810	528	7	-	-	-	-	-	-	-	-	-	-	
EB I-90	On-Ramp Acceleration	1106+36	to	1120+05	Curve	6278	1369	237	-	-	7	-	-	-	-	-	-	-	-	
EB I-90	Mainline	1120+05	to	1150+34	Tangent	-	3029	528	7	-	-	-	-	-	-	-	-	-	-	
EB I-90	Guardrail, RT.	1150+34	to	1154+33	Tangent	-	399	-	-	-	-	-	-	-	-	-	2	-	-	
EB I-90	Mainline	1154+33	to	1157+47	Tangent	-	314	528	2	-	-	-	-	-	-	-	-	-	-	
EB I-90	Mainline	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	8	1	
WB I-90 Off-Ramp B	Exit Gore	-		-	-	-	125	25	-	-	5	5	-	-	-	-	-	1	-	
	Ramp B	209+45	to	221+28	Both	-	1183	100	-	-	13	-	-	-	-	-	-	-	-	
	Guardrail Ramp B, RT.	201+49	to	207+27	Both	-	578	-	-	-	-	-	-	-	-	4	-	1	-	
	Guardrail Ramp B, LT.	200+99	to	209+45	Both	-	846	-	-	-	-	-	-	-	4	-	1	-	-	
	Near Intersection	-		-	-	-	-	15	-	-	-	-	5	4	-	-	-	-	-	
WB I-90 On-Ramp A	Merge Gore	-		-	-	-	400	100	-	4	-	-	-	-	-	-	-	-	-	
	Ramp A	100+00	to	109+21	Both	-	921	100	-	-	11	-	-	-	-	-	-	-	-	
	Guardrail Ramp A, RT.	107+49	to	117+95	Both	-	1046	-	-	-	-	-	-	-	-	4	-	2	-	
	Guardrail Ramp A, LT.	109+21	to	117+95	Both	-	874	-	-	-	-	-	-	-	4	-	2	-	-	
	Near Intersection	-		-	-	-	-	15	-	-	-	-	5	4	-	-	-	-	-	
	Ramp A	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	
EB I-90 Off-Ramp D	Exit Gore	-		-	-	-	125	25	-	-	5	5	-	-	-	-	-	1	-	
	Ramp D	400+00	to	417+32	Both	-	1732	100	-	-	19	-	-	-	-	-	-	-	-	
	Near Intersection	-		-	-	-	-	15	-	-	-	-	5	4	-	-	-	-	-	
	Ramp D	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	
EB I-90 On-Ramp C	Merge Gore	-		-	-	-	400	100	-	4	-	-	-	-	-	-	-	-	-	
	Ramp C	300+76	to	317+96	Both	-	1720	100	-	-	19	-	-	-	-	-	-	-	-	
	Near Intersection	-		-	-	-	-	15	-	-	-	-	5	4	-	-	-	-	-	
	Ramp C	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	
Elk Creek Road	Guardrail At Bridge, LT.	503+39	to	504+58	-	-	119	40	-	-	-	-	-	-	4	-	-	-	-	
	Guardrail At Bridge, RT.	503+46	to	504+58	-	-	112	37	-	-	-	-	-	-	4	-	-	-	-	
	Guardrail At Bridge, LT.	508+62	to	509+78	-	-	116	39	-	-	-	-	-	-	4	-	-	-	-	
	Guardrail At Bridge, RT.	508+62	to	509+78	-	-	116	39	-	-	-	-	-	-	4	-	-	-	-	
	Mainline	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	
Spring Valley Road	Mainline	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Sturgis Road	Near Intersection	-		-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	
	Guardrail, LT.	663+70	to	664+96	-	-	126	42	-	-	-	-	-	-	4	-	-	-	-	
	Mainline	671+11	to	674+11	Tangent	-	300	50	-	-	7	-	-	-	-	-	-	-	-	
	Mainline	674+11	to	676+83	Tangent	-	272	100	-	-	4	-	-	-	-	-	-	-	-	
	Mainline	At Culverts			-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	
WB I-90, Little Elk Creek	Guardrail	West of Bridge, North of Road			-	-	114	38	-	-	-	-	-	-	4	-	-	-	-	
	Guardrail	West of Bridge, South of Road			-	-	99	33	-	-	-	-	-	-	4	-	1	1	-	
WB I-90, Exit 44	Guardrail	West of Bridge, North of Road			-	-	114	38	-	-	-	-	-	-	4	-	-	-	-	
	Guardrail	West of Bridge, South of Road			-	-	99	33	-	-	-	-	-	-	4	-	1	1	-	
EB I-90, Little Elk Creek	Guardrail	East of Bridge, North of Road			-	-	99	33	-	-	-	-	-	-	4	-	1	1	-	
	Guardrail	East of Bridge, South of Road			-	-	114	38	-	-	-	-	-	-	4	-	-	-	-	
EB I-90, Exit 44	Guardrail	East of Bridge, North of Road			-	-	99	33	-	-	-	-	-	-	4	-	1	1	-	
	Guardrail	East of Bridge, South of Road			-	-	114	38	-	-	-	-	-	-	4	-	-	-	-	
								TOTALS	58	8	147	10	28	16	60	8	9	47	25	

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17401
BRADLEY D
HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:200

Plotted From - Lucas.Zimmerman

File - ...\034J_Section S_Tab Sheets.dgn

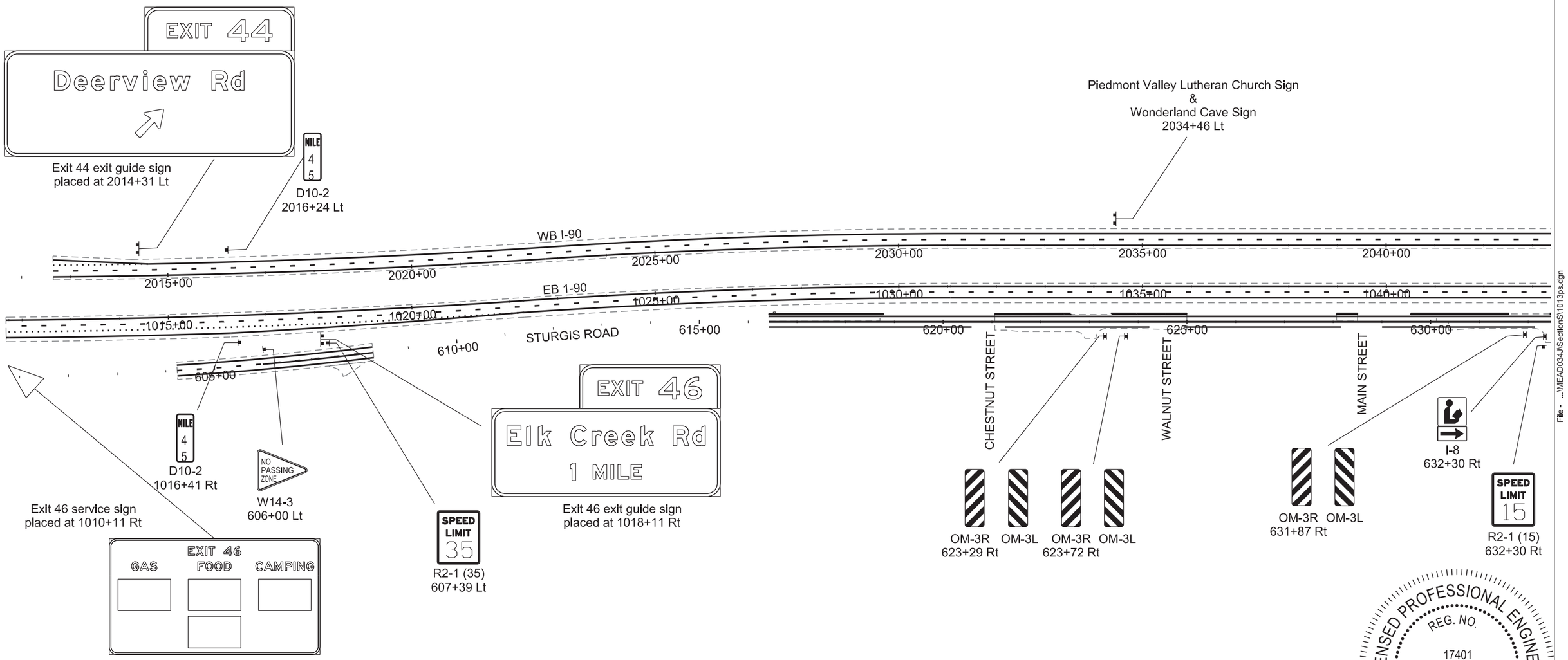
FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S14	S57

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

PERMANENT SIGNING LAYOUT
I-90 & STURGIS ROAD

Plot Scale - 1:200



LICENSED PROFESSIONAL ENGINEER
REG. NO.
17401
BRADLEY D
HARTMANN
SOUTH DAKOTA
9-30-2025

Plotted From - Bayley.Colemer

File - ...\MEAD0034\Section\S1f013ps.dgn

PERMANENT SIGNING LAYOUT
I-90 & STURGIS ROAD

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S15	S57

Plotting Date: 10/9/2025

Rev: 12/5/2024 BDH
Rev: 9/30/2025 BRC

Plot Scale = 1:200

M3-4i WEST
M1-1 INTERSTATE 90
M3-4 WEST NORTH M3-1
M1-4 14 79 M1-5
2046+65 Lt

OM-3R OM-3L

2045+00
1045+00
2050+00
635+00
1050+00
2055+00
640+00
1055+00
645+00
1060+00
650+00
1065+00
655+00
1070+00
660+00

I-90 EB
I-90 WB
STURGIS ROAD
PARK STREET
PINE STREET

EXIT 44
Deerview Rd
1 MILE
Exit 44 exit guide sign
placed at 2064+58 Lt

MILE 4 6
D10-2
2069+87 Lt

100+00
2065+00
2070+00

MILE 4 6
D10-2
1070+08 Rt

I-8

SPEED LIMIT 15
R2-1
(15)

Sturgis Rd
Park St
D3-1
632+71 Rt

STOP
R1-1
632+65 Rt

OM-3R OM-3L
632+67 Rt

OM-3R OM-3L
642+12 Rt

OM-3R OM-3L
642+30 Rt

EXIT 46
Elk Creek Rd
Exit 46 exit guide sign
placed at 1060+50 Rt

LICENSED PROFESSIONAL ENGINEER
REG. NO.
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BRADLEY D
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SOUTH DAKOTA
9-30-2025

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File - ...\MEAD034JSectionSt\1043ps.dgn

PERMANENT SIGNING LAYOUT
I-90

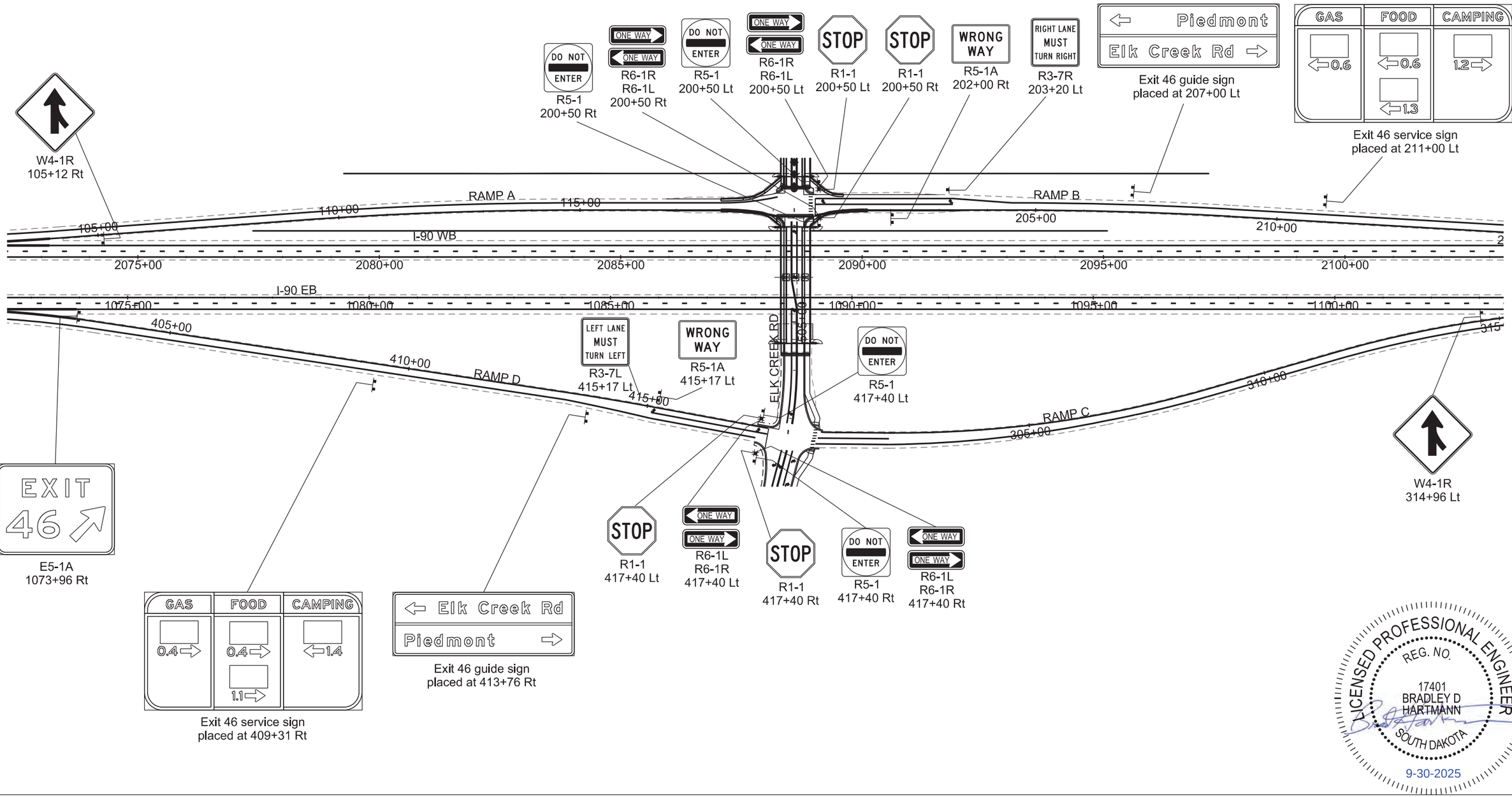
FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S16	S57

Plotting Date: 10/9/2025

Rev: 02/06/2024 BDH
Rev: 9/30/2025 BRC

Plot Scale - 1:200



LICENSED PROFESSIONAL ENGINEER
REG. NO.
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BRADLEY D
HARTMANN
SOUTH DAKOTA
9-30-2025

Plotted From - Bayley.Colemer

File - ...\MEAD034J\Sections\S11073ps.dgn

PERMANENT SIGNING LAYOUT
I-90

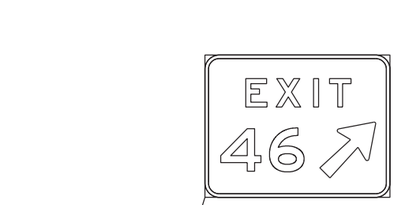
FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S17	S57

Plotting Date: 10/9/2025

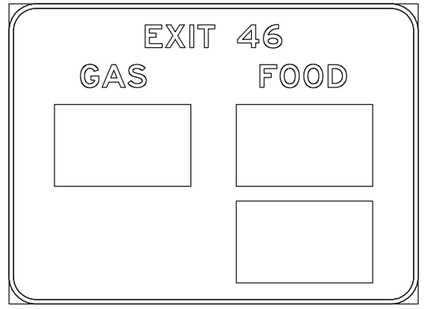
Rev: 1/30/2025 BDH
Rev: 9/30/2025 BRC

Plot Scale = 1:200

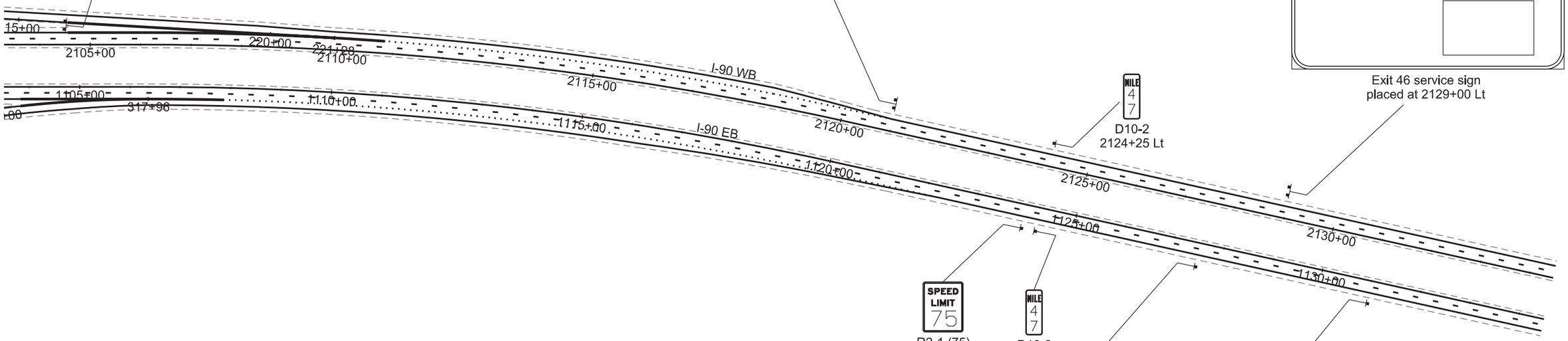


E5-1A
2104+52 Lt

Exit 46 exit guide sign
placed at 2121+00 Lt



Exit 46 service sign
placed at 2129+00 Lt

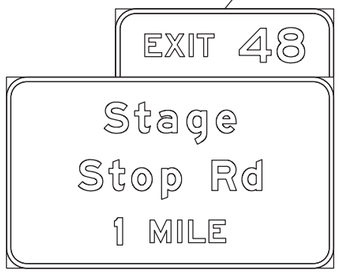


D10-2
2124+25 Lt

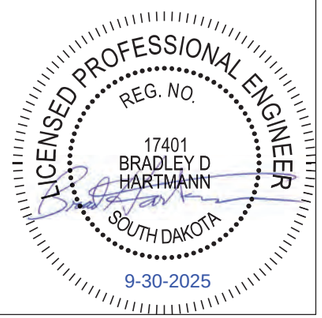
R2-1 (75)
1124+00 Rt

D10-2
1124+26 Rt

R8-4
1127+50 Rt



Exit 48 exit guide sign
placed at 1131+00 Rt



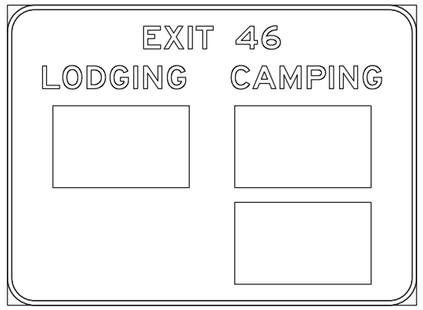
Plotted From - Bayley.Colemer

File - ...\MEAD034J\Section\S1\1103ps.dgn

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

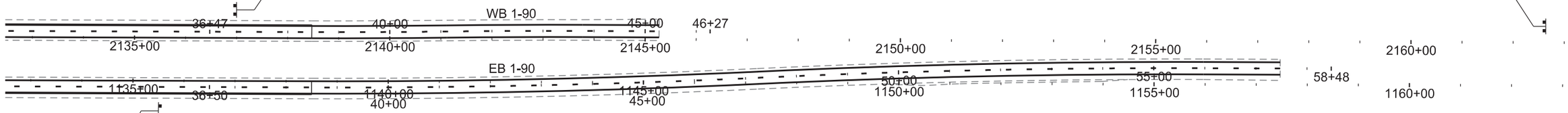
PERMANENT SIGNING LAYOUT
I-90

Plot Scale - 1:200



Exit 46 service sign
placed at 2137+00 Lt

Exit 46 exit guide sign
placed at 2162+64 Lt



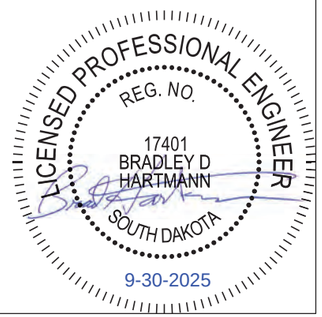
1135+50 Rt

M3-2i EAST

M1-1 INTERSTATE 90

M3-2 EAST SOUTH M3-3

M1-4 14 79 M1-5



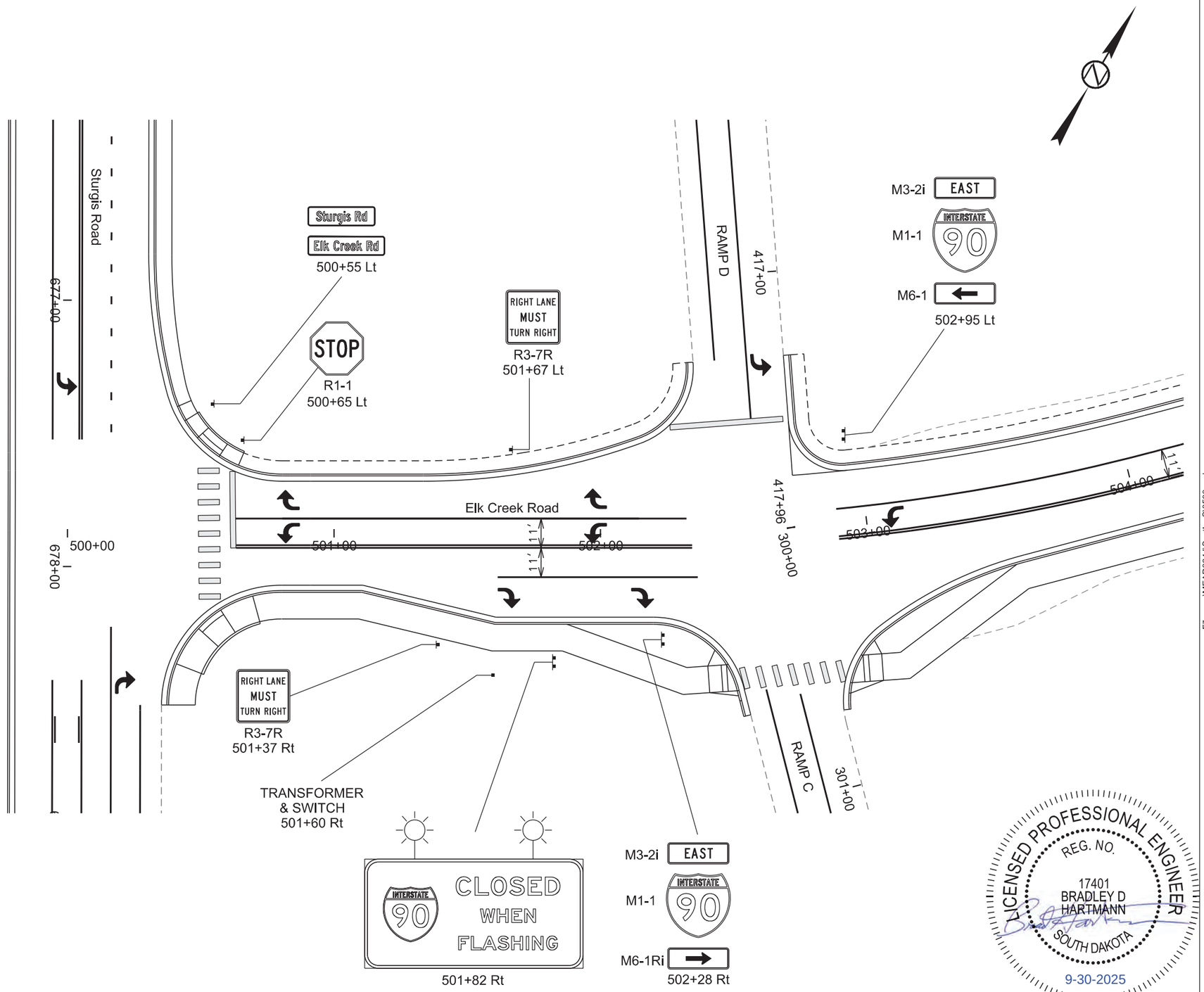
Plotted From - Bayley.Colemer

File - ...\MEAD0344\Section\S1133ps.dgn

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S19	S57

Plotting Date: 10/9/2025 Rev: 02/13/2024 BDH
Rev: 9/30/2025 BRC

PERMANENT SIGNING LAYOUT
ELK CREEK ROAD



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BRADLEY D
HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:40

Plotted From - Bayley.Colemer

File - ...\MEAD0034J\Sections\S\0500ps.dgn

FELSBURG HOLT & ULLEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: S20 | TOTAL SHEETS: S57

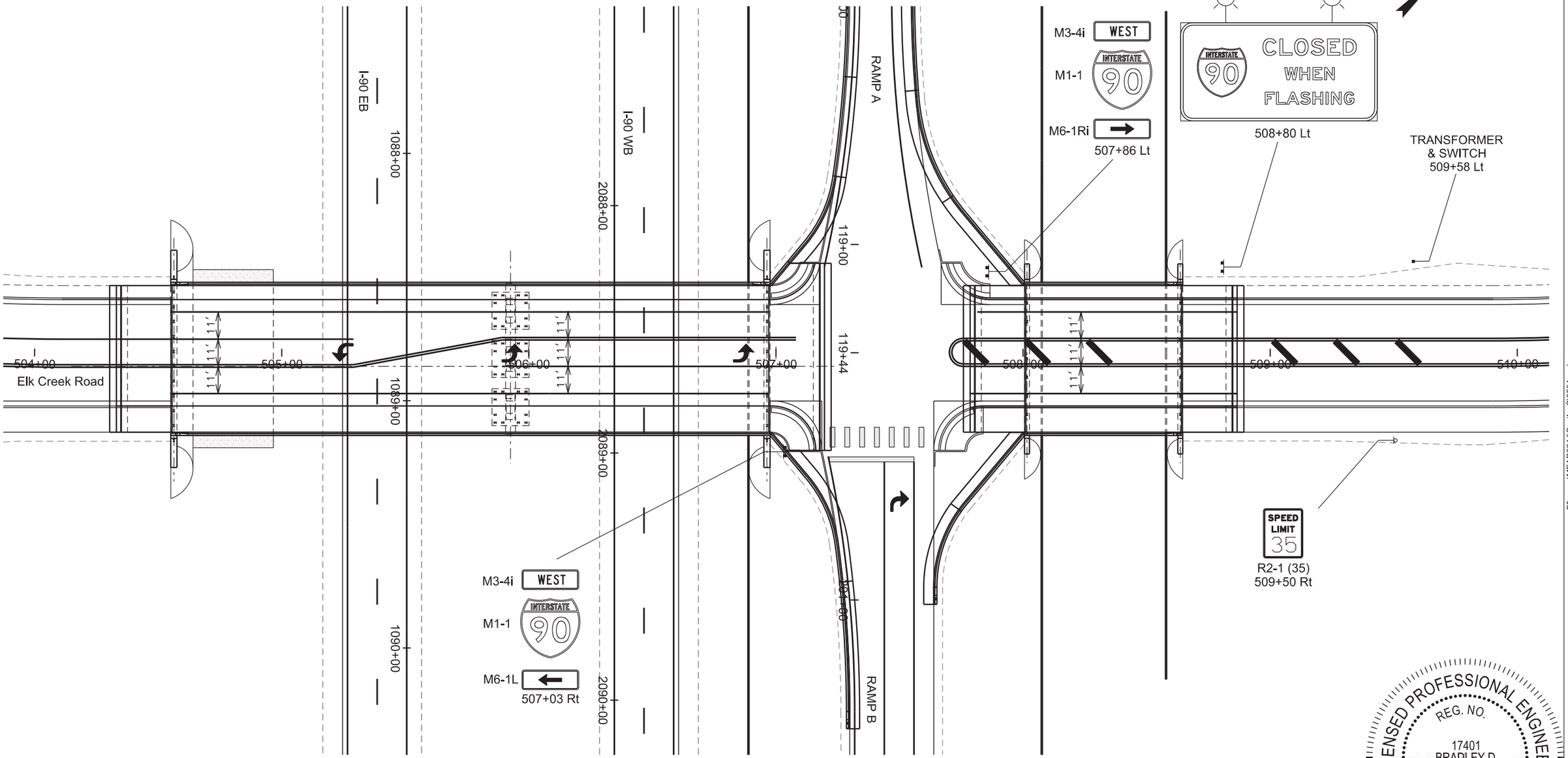
FOR BIDDING PURPOSES ONLY

Plotting Date: 10/9/2025

Rev: 2/13/2025 BDH
Rev: 9/30/2025 BRC

PERMANENT SIGNING LAYOUT
ELK CREEK ROAD

Plot Scale - 1:40



LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

Plotted From - Bayley.Colemer

File - ...\MEAD0334J\Section\S\0504ps.dgn

PERMANENT SIGNING LAYOUT
ELK CREEK ROAD

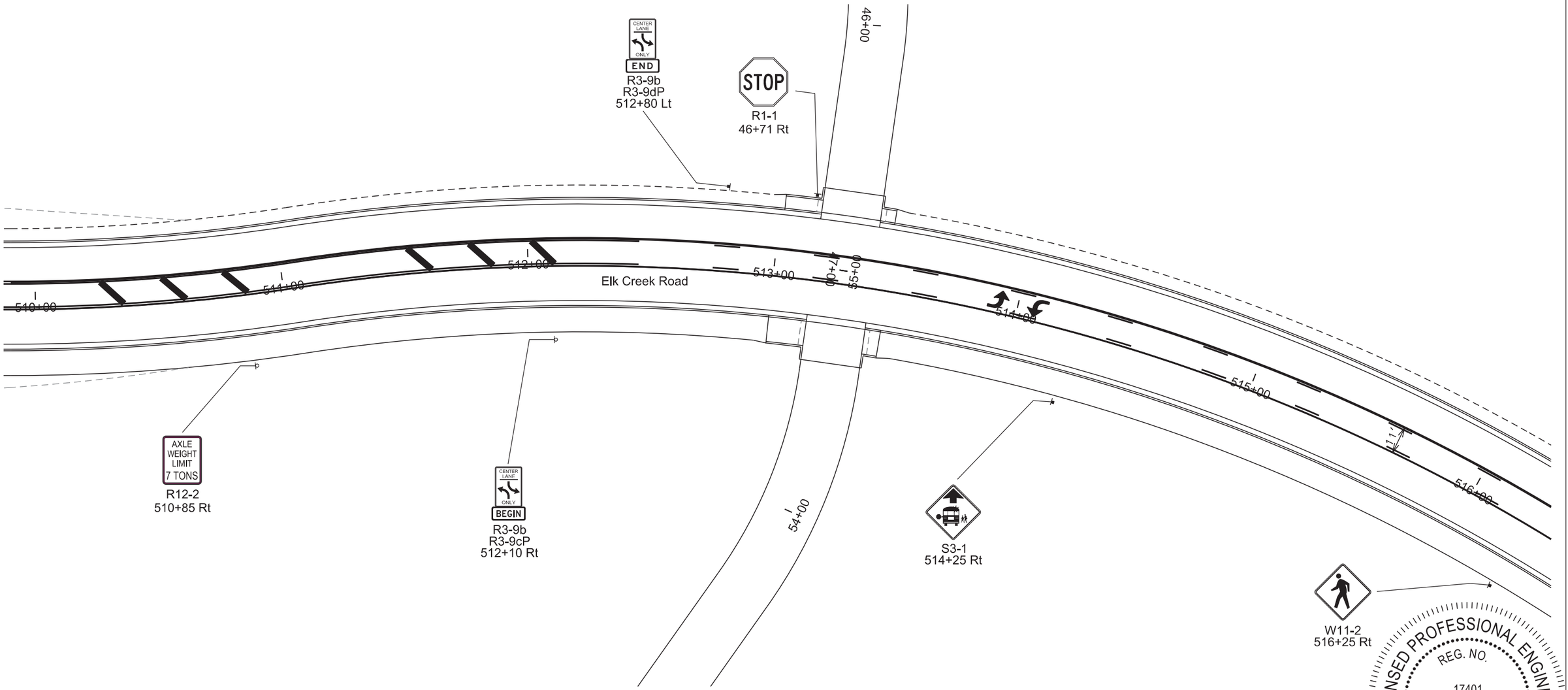
FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S21	S57

Plotting Date: 10/9/2025

Rev: 1/30/2025 BDH
Rev: 9/30/2025 BRC

Plot Scale - 1:40



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SOUTH DAKOTA
9-30-2025

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File - ...\MEAD0344\Section\SI0510ps.dgn

PERMANENT SIGNING LAYOUT
ELK CREEK ROAD

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S22	S57

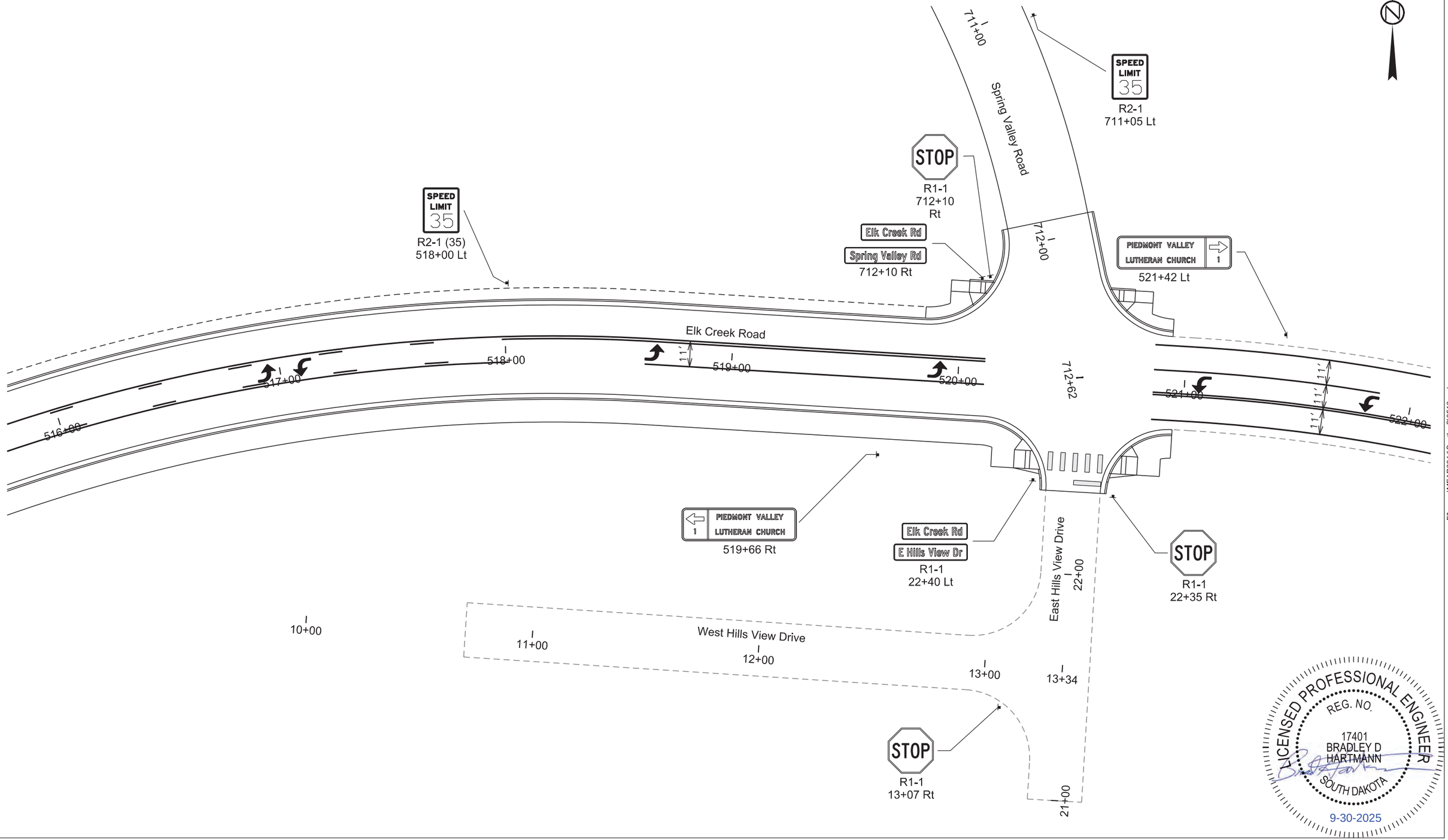
Plotting Date: 10/9/2025

Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

Plot Scale - 1:40

Plotted From - Bayley.Colemer

File - ...\MEAD034J\Section\S0516ps.dgn



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SOUTH DAKOTA
9-30-2025

FELSBURG HOLT & ULLEVIG | STATE OF SOUTH DAKOTA | PROJECT: IM-CR-EM 0901(187)44 | SHEET: S23 | TOTAL SHEETS: S57

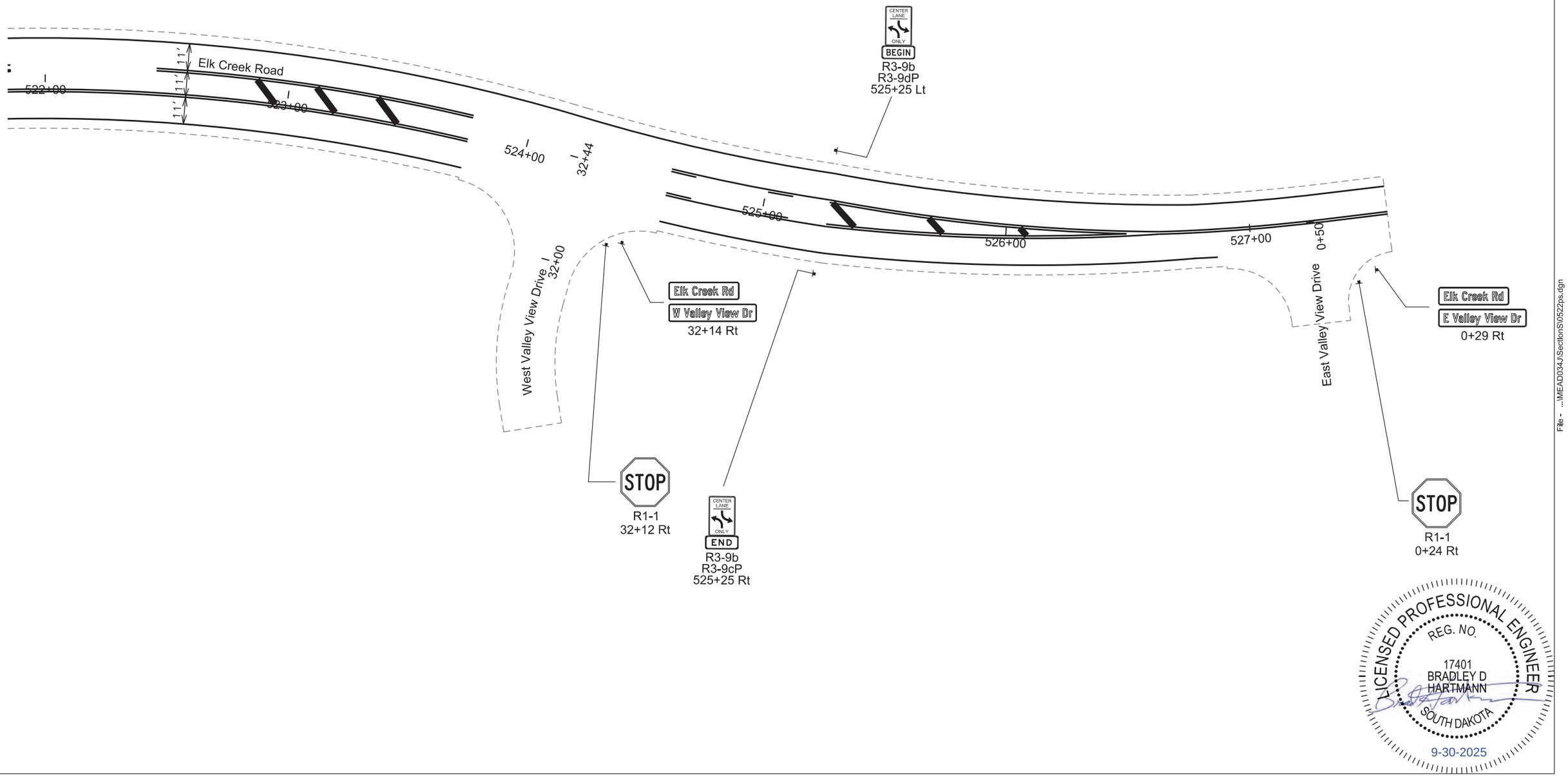
FOR BIDDING PURPOSES ONLY

PERMANENT SIGNING LAYOUT
ELK CREEK ROAD

Plotting Date: 10/9/2025

Rev: 1/30/2025 BDH
Rev: 9/30/2025 BRC

Plot Scale - 1:40



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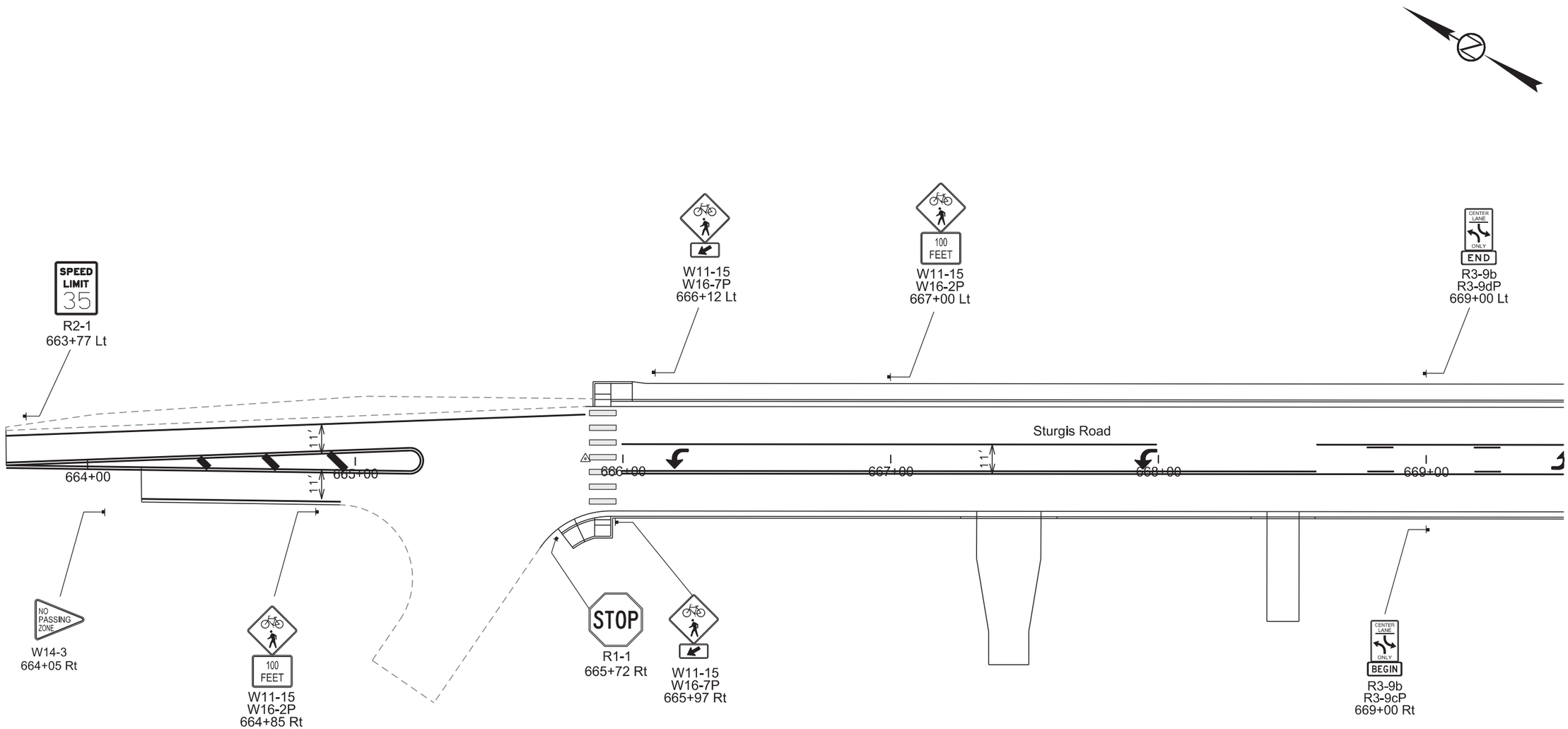
File - ...\MEAD034J\Section\SI0522ps.dgn

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S24	S57

Plotting Date: 10/9/2025

Rev: 02/06/2024 BDH
Rev: 9/30/2025 BRC

PERMANENT SIGNING LAYOUT
STURGIS ROAD



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9-30-2025

Plot Scale - 1:40

Plotted From - Bayley.Colemer

File - ...\MEAD034J\Section\S\0664ps.dgn

PERMANENT SIGNING LAYOUT
STURGIS ROAD

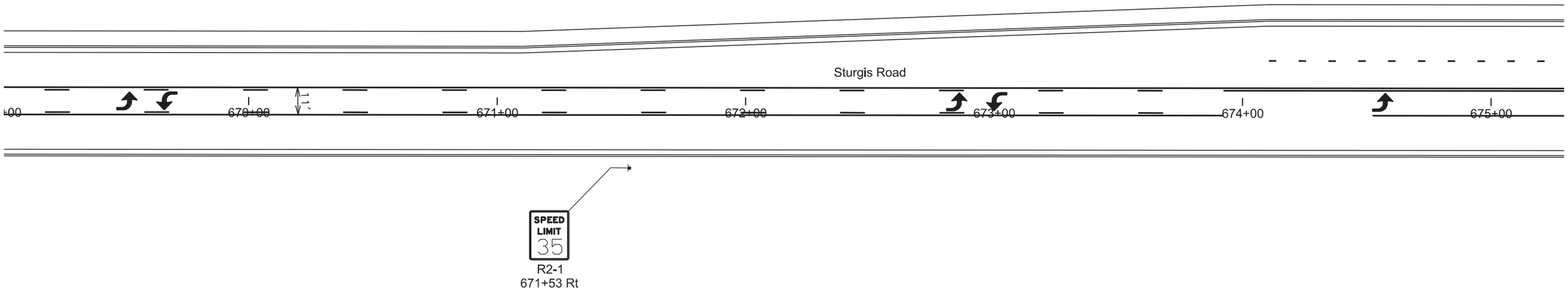
FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S25	S57

Plotting Date: 10/9/2025

Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

Plot Scale - 1:40



LICENSED PROFESSIONAL ENGINEER
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9-30-2025

Plotted From - Bayley.Colemer

File - ...\MEAD034J\SectionSI\0670ps.dgn

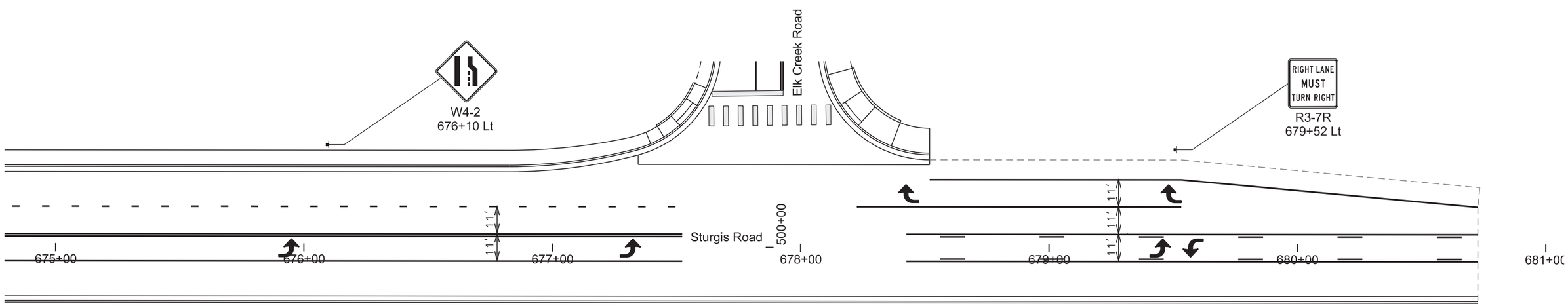
FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S26	S57

Plotting Date: 10/9/2025

Rev: 02/06/2024 BDH
Rev: 9/30/2025 BRC

PERMANENT SIGNING LAYOUT
STURGIS ROAD



LICENSED PROFESSIONAL ENGINEER
REG. NO.
17401
BRADLEY D
HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:40

Plotted From - Bayley.Colemer

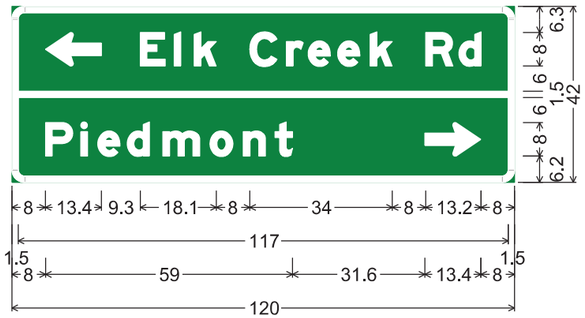
File - ...\MEAD0344\Section\S\06750ps.dgn

SIGN LAYOUTS

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S27	S57

Plotting Date: 10/9/2025 Rev 12/05/2024 TB Rev: 9/30/2025 BRC



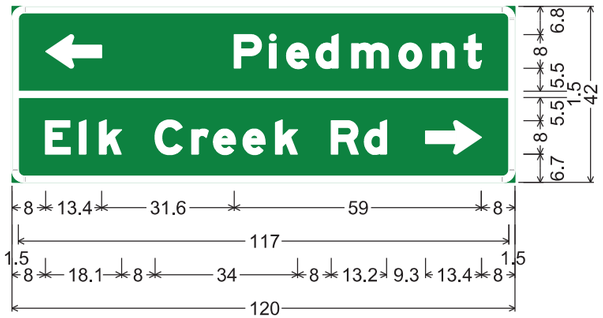
3.0" Radius, 1.5" Border, White on Green;
Standard Arrow Custom 13.4" X 8.0" 180°;
"Elk Creek Rd", E Mod 2K; "Piedmont", E Mod 2K;
Standard Arrow Custom 13.4" X 8.0" 0°;
Table of letter and object lefts

← 8.0	E 30.7	l 38.7	k 43.5	C 56.8	r 65.5	e 70.7	e 77.8	k 85.5
	R 98.8	d 106.7						

— 1.5

P 8.0	i 16.4	e 20.5	d 27.6	m 36.0	o 47.3	n 55.2	t 62.8	→ 98.6

SIGN NUMBER	D1-2
WIDTH x HEIGHT	120" x 42"
BORDER WIDTH	1.5"
CORNER RADIUS	3.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: GREEN
LEGEND/BORDER	TYPE: VINYL
	COLOR: WHITE



3.0" Radius, 1.5" Border, White on Green;
Standard Arrow Custom 13.4" X 8.0" 180°;
"Piedmont", E Mod 2K; "Elk Creek Rd", E Mod 2K;
Standard Arrow Custom 13.4" X 8.0" 0°;
Table of letter and object lefts

← 8.0	P 53.0	i 61.4	e 65.5	d 72.5	m 81.0	o 92.3	n 100.2	t 107.8

— 1.5

E 8.0	l 16.1	k 20.9	C 34.1	r 42.9	e 48.1	e 55.1	k 62.9	R 76.1	d 84.1

→ 98.6

SIGN NUMBER	D1-2
WIDTH x HEIGHT	120" x 42"
BORDER WIDTH	1.5"
CORNER RADIUS	3.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: GREEN
LEGEND/BORDER	TYPE: VINYL
	COLOR: WHITE

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17401
BRADLEY D
HARTMANN
SOUTH DAKOTA
9-30-2025

Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\Sections\Sign Layouts 02.dgn

SIGN LAYOUTS

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S28	S57

Plotting Date: 10/9/2025 Rev 12/05/2024 TB Rev: 9/30/2025 BRC

Plot Scale - 1:200

9.0" Radius, 2.0" Border, White on Green;
"EXIT", E Mod 2K specified length; "46", E 2K;

9.0" Radius, 2.0" Border, White on Green;
"Elk Creek Rd", E Mod 2K; Arrow 80 - 25.0" 45°;
Table of letter and object lefts

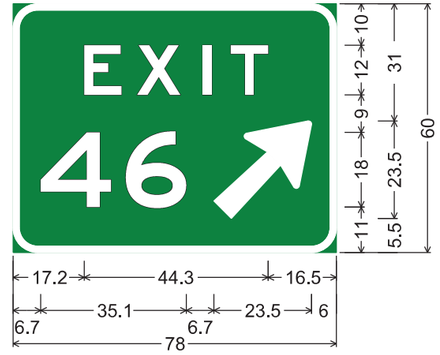
E	X	I	T	4	6
19.1	28.1	39.2	43.3	65.7	82.8

E	l	k	C	r	e	e	k	R	d
10.2	23.7	31.7	53.8	68.3	77.0	88.7	101.7	123.8	137.0

↗
68.2

SIGN NUMBER	E1-5P
WIDTH x HEIGHT	114" x 30"
BORDER WIDTH	2.0"
CORNER RADIUS	9.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: GREEN
LEGEND/BORDER	TYPE: VINYL
	COLOR: WHITE

SIGN NUMBER	EXIT GUIDE
WIDTH x HEIGHT	156" x 72"
BORDER WIDTH	2.0"
CORNER RADIUS	9.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: GREEN
LEGEND/BORDER	TYPE: VINYL
	COLOR: WHITE

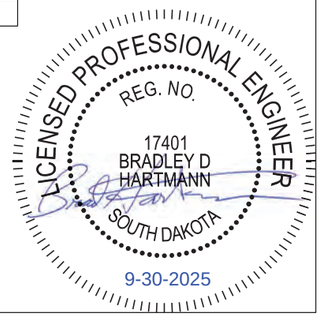


6.0" Radius, 1.5" Border, White on Green;
"EXIT", E 2K specified length;
"46", E 2K;
Arrow 133 - 30.0" 45°;
Table of letter and object lefts

E	X	I	T
17.2	29.9	45.8	52.5

4	6	↗
6.7	27.2	48.5

SIGN NUMBER	E5-1a
WIDTH x HEIGHT	78" x 60"
BORDER WIDTH	1.5"
CORNER RADIUS	6.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: GREEN
LEGEND/BORDER	TYPE: VINYL
	COLOR: WHITE



Plotted From - Bayley.Colemer

File - ...\Sections\SIgn Layouts 03.dgn

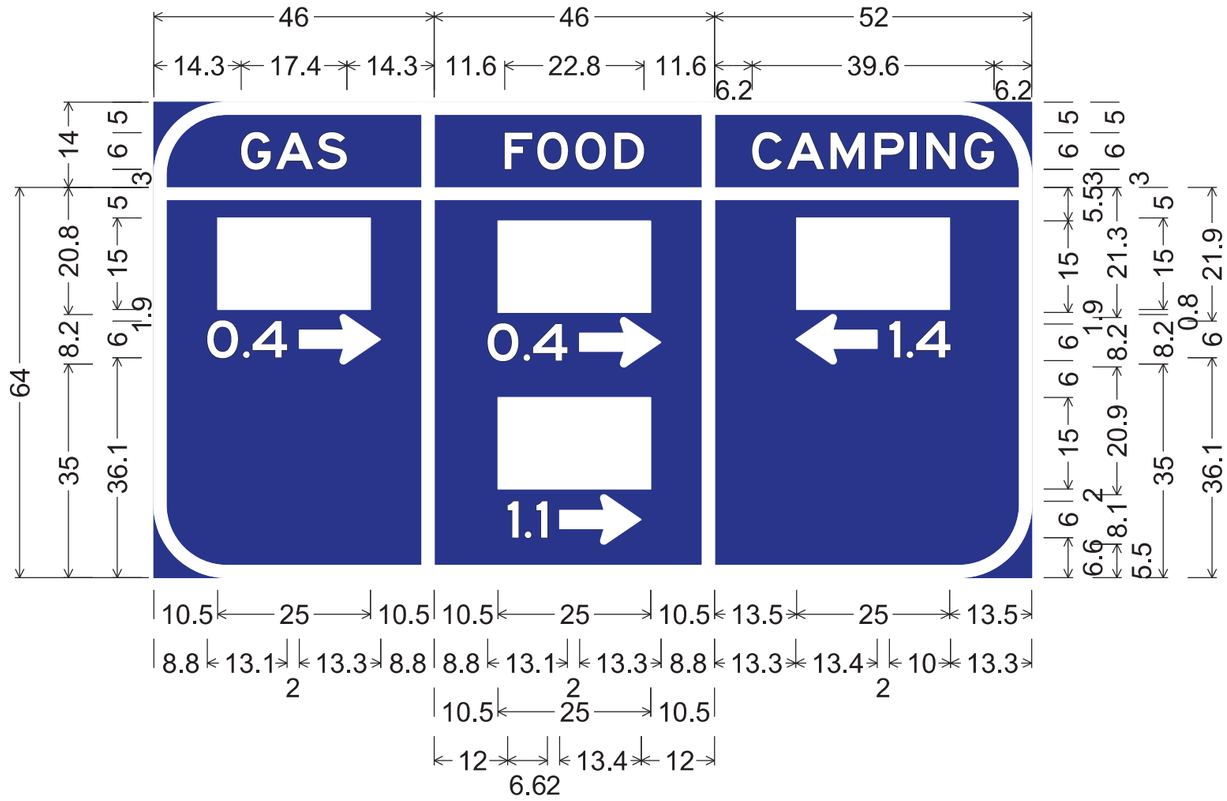
SIGN LAYOUTS

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S29	S57

Plotting Date: 10/9/2025 Rev 12/05/2024 TB
Rev: 9/30/2025 BRC

Plot Scale - 1:200



12.0" Radius, 2.0" Border, White on Blue;
"GAS", E 2K;
12.0" Radius, 2.0" Border, White on Blue;
"FOOD", E 2K;
12.0" Radius, 2.0" Border, White on Blue;
"CAMPING", E 2K;
12.0" Radius, 2.0" Border, White on Blue;
"0.4", E 2K; Standard Arrow Custom 13.4" X 8.1" 0°;
12.0" Radius, 2.0" Border, White on Blue;
"0.4", E 2K; Standard Arrow Custom 13.4" X 8.1" 0°;
"1.1", E 2K; Standard Arrow Custom 13.4" X 8.1" 0°;
12.0" Radius, 2.0" Border, White on Blue;
Standard Arrow Custom 13.4" X 8.1" 180°; "1.4", E 2K;
Table of letter and object lefts

G 14.3	A 20.0	S 26.8	
F 11.6	O 16.9	O 23.2	D 29.6
C 6.2	A 11.9	M 19.0	P 26.2	I 32.1	N 34.7	G 41.0
■ 10.5			
0 8.8	. 14.7	4 16.2	→ 23.9
■ 10.5			
0 8.8	. 14.7	4 16.2	→ 23.9
■ 10.5			
1 12.0	. 14.9	1 16.8	→ 20.6
■ 13.5			
← 13.3	1 28.7	. 31.5	4 33.1

SIGN NUMBER	SERVICE SIGN
WIDTH x HEIGHT	144" x 78"
BORDER WIDTH	2.0"
CORNER RADIUS	12.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: BLUE
LEGEND/BORDER	TYPE: VINYL
	COLOR: WHITE

LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

Plotted From - Bayley.Colemer

File - ...\Section\S\Sign Layouts 04.dgn

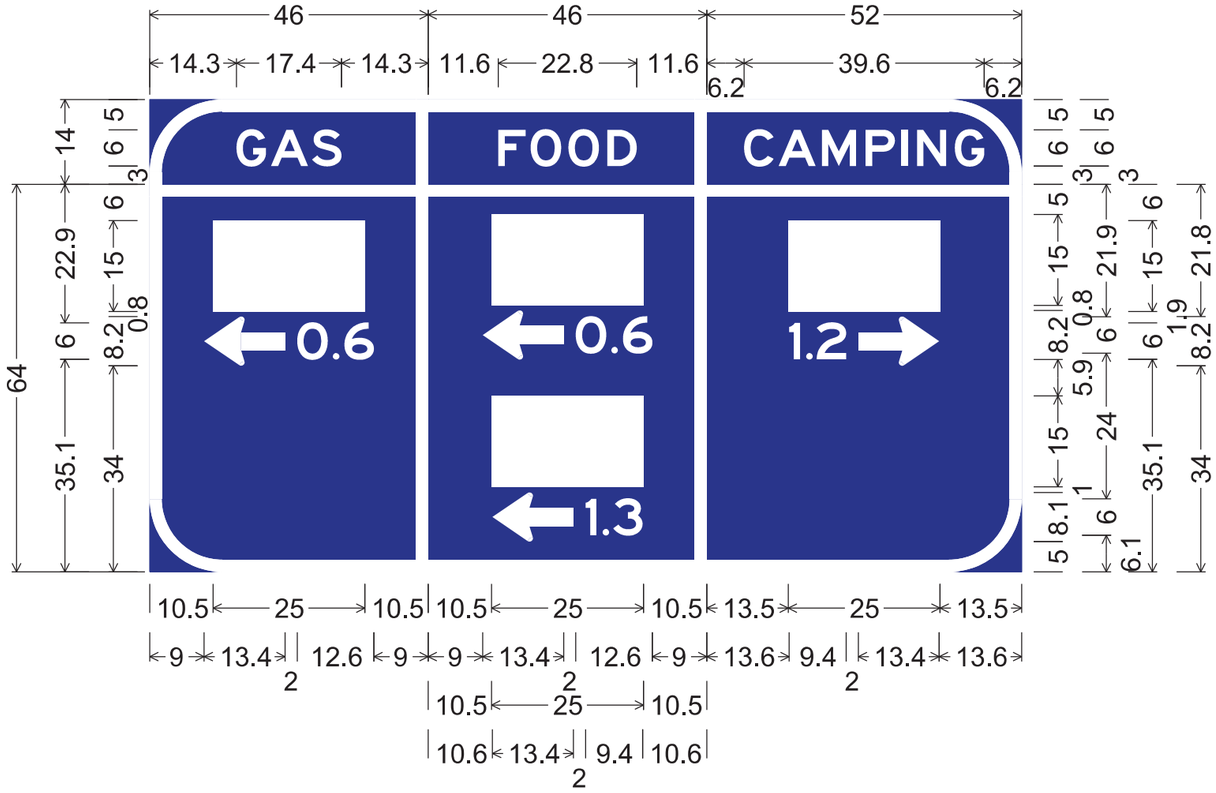
SIGN LAYOUTS

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S30	S57

Plotting Date: 10/9/2025 Rev 12/05/2024 TB Rev: 9/30/2025 BRC

Plot Scale - 1:200



12.0" Radius, 2.0" Border, White on Blue;
"GAS", E 2K;

12.0" Radius, 2.0" Border, White on Blue;
"FOOD", E 2K;

12.0" Radius, 2.0" Border, White on Blue;
"CAMPING", E 2K;

12.0" Radius, 2.0" Border, White on Blue;
Standard Arrow Custom 13.4" X 8.1" 180°; "0.6", E 2K;
12.0" Radius, 2.0" Border, White on Blue;
Standard Arrow Custom 13.4" X 8.1" 180°; "0.6", E 2K;
Standard Arrow Custom 13.4" X 8.1" 180°; "1.3", E 2K;
12.0" Radius, 2.0" Border, White on Blue;
"1.2", E 2K; Standard Arrow Custom 13.4" X 8.1" 0°;

Table of letter and object lefts

G 14.3	A 20.0	S 26.8	
F 11.6	O 16.9	O 23.2	D 29.6
C 6.2	A 11.9	M 19.0	P 26.2	I 32.1	N 34.7	G 41.0
■ 10.5			
← 9.0	0 24.4	. 30.2	6 32.2
■ 10.5			
← 9.0	0 24.4	. 30.2	6 32.2
■ 10.5			
← 10.6	1 26.0	. 28.8	3 30.5
■ 13.5			
1 13.6	. 16.4	2 18.2	→ 25.0

SIGN NUMBER	SERVICE SIGN
WIDTH x HEIGHT	144" x 78"
BORDER WIDTH	2.0"
CORNER RADIUS	12.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: BLUE
LEGEND/BORDER	TYPE: VINYL
	COLOR: WHITE

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

Plotted From - Bayley.Colemer

File - ...\Section\S\Sign Layouts 06.dgn

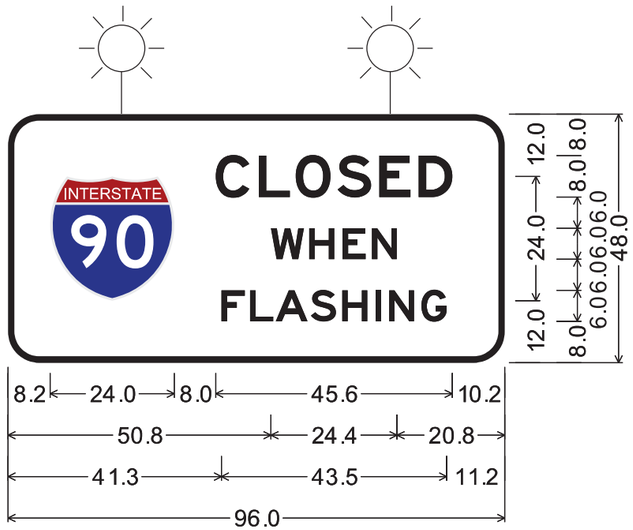
SIGN LAYOUTS

FOR BIDDING PURPOSES ONLY

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S31	S57

Plotting Date: 10/9/2025 Rev 12/05/2024 TB
Rev: 9/30/2025 BRC

Plot Scale - 1:200



6.0" Radius, 1.3" Border, Black on White;
"CLOSED", E 2K; "WHEN", E 2K;
"FLASHING", E 2K;

Table of letter and object lefts

90	C	L	O	S	E	D
8.2	40.2	48.5	55.6	63.7	71.8	79.4

W	H	E	N
50.8	58.2	64.6	70.3

F	L	A	S	H	I	N	G
41.3	46.8	51.8	58.5	64.6	71.0	73.7	79.9

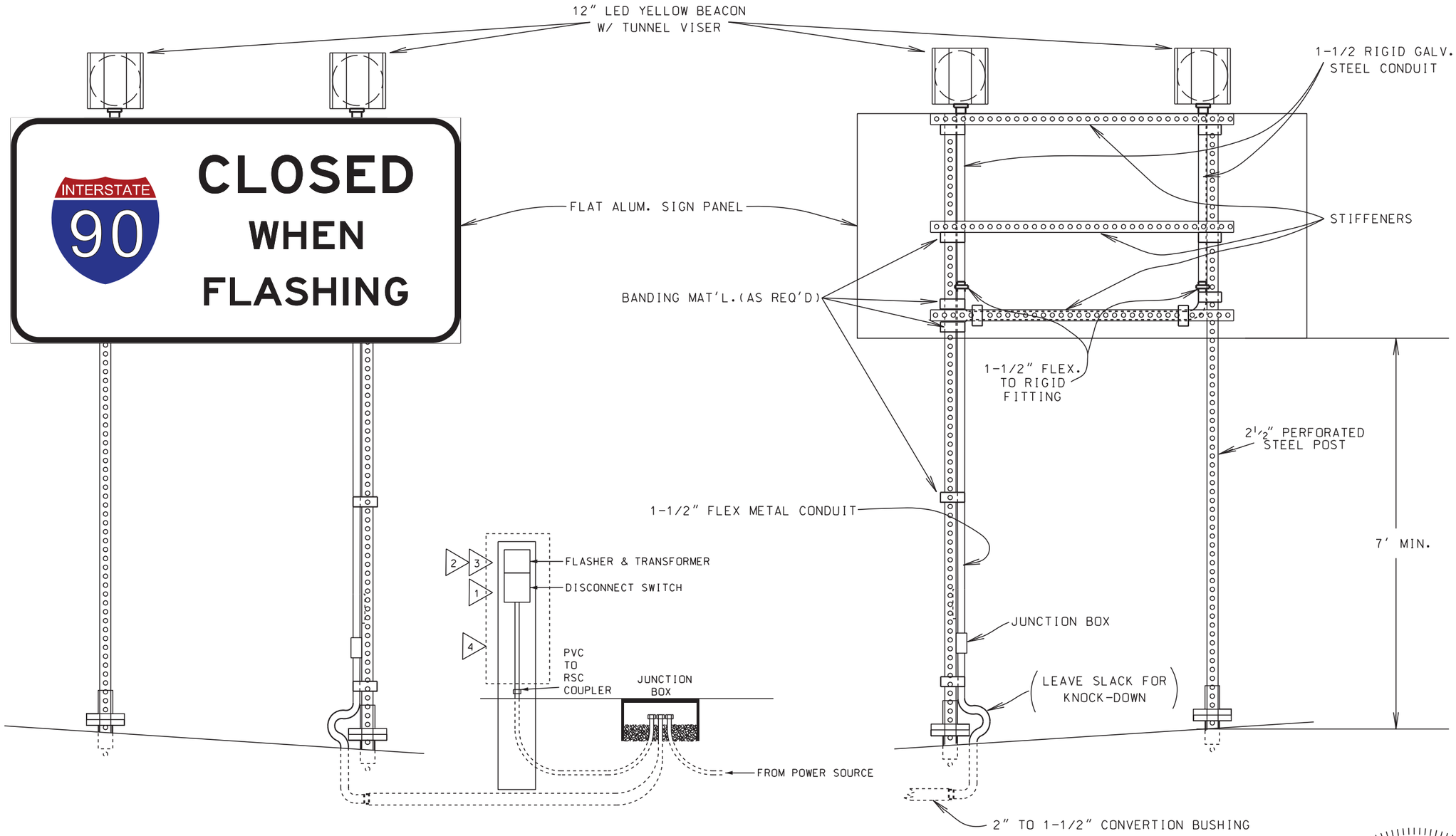
SIGN NUMBER	SPECIAL
WIDTH x HEIGHT	96" x 48"
BORDER WIDTH	1.3"
CORNER RADIUS	6.0"
MOUNTING	GROUND
BACKGROUND	TYPE: HIGH INTENSITY
	COLOR: WHITE
LEGEND/BORDER	TYPE: VINYL
	COLOR: BLACK

LICENSED PROFESSIONAL ENGINEER
REG. NO.
17401
BRADLEY D
HARTMANN
SOUTH DAKOTA
9-30-2025

Plotted From - Bayley.Colemer

File - ...\Section\SIgn Layouts 05.dgn

Plotting Date: 10/9/2025 Rev: 02/14/2025 LPZ Rev: 9/30/2025 BRC



1. 30 AMP SAFETY SWITCH IN LOCKABLE ENCLOSURE
2. CUBE FLASHER MODEL 25DF IN LOCKABLE ENCLOSURE
3. 120/240 VOLT PRIMARY, 12/24 VOLT SECONDARY TRANSFORMER, IN LOCKABLE ENCLOSURE
4. ENCLOSURES AND RIGID STEEL CONDUIT SHALL BE MOUNTED TO A STEEL POST. POST SHALL BE BREAKAWAY TYPE. DISCONNECT SWITCH SHALL BE MOUNTED AT A HEIGHT OF 5 FEET.

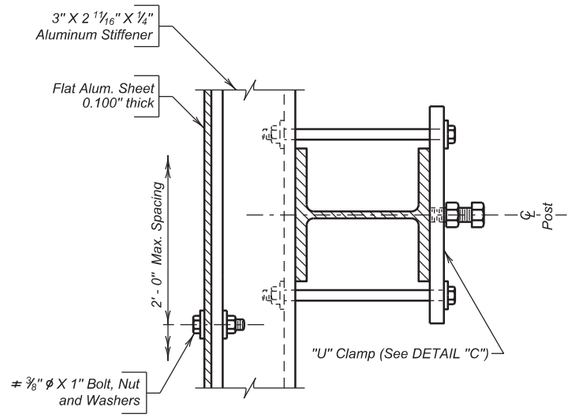
ERECTION DETAIL FOR CONDUIT & FLASHING BEACON AND TRANSFORMER & SWITCH

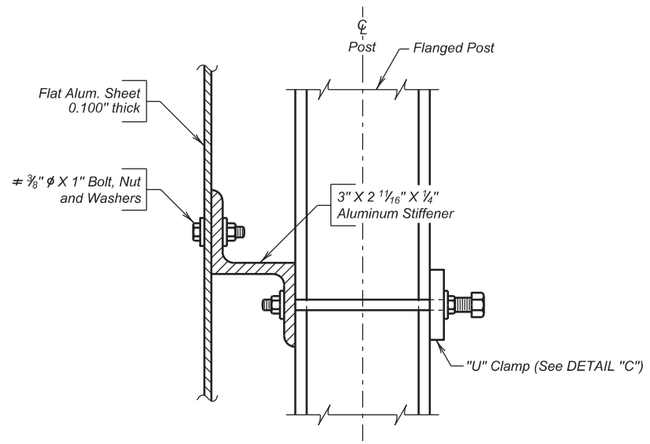
LICENSED PROFESSIONAL ENGINEER
REG. NO. 17401
BRADLEY D HARTMANN
SOUTH DAKOTA
9-30-2025

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S33	S57

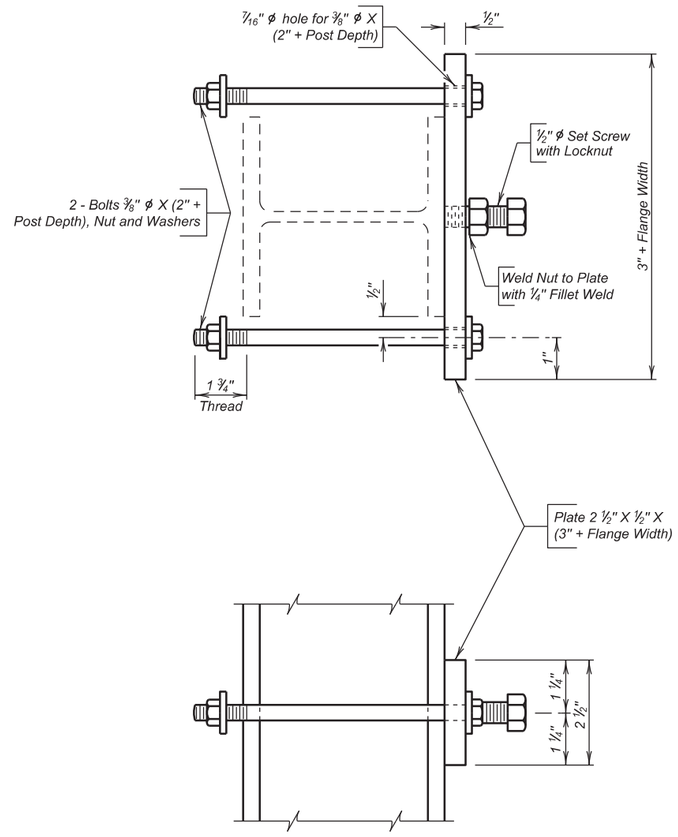
Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

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

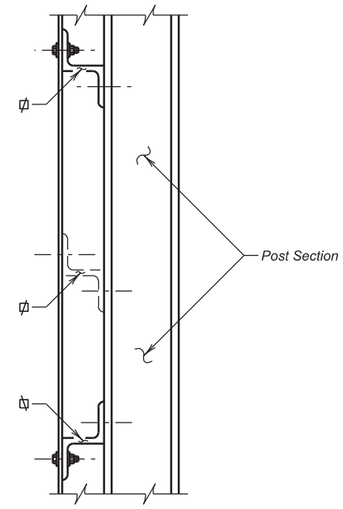




DETAILS FOR MOUNTING SHEET ALUMINUM SIGNS ON STEEL FLANGED POSTS



DETAIL "C"



POSITIONING OF TOP AND BOTTOM STIFFENERS

STIFFENER NOTES

1. *Stiffeners must always be used on multiple post breakaway signs regardless of type of sign face employed.*
2. ⧠ *Number of stiffeners used, N, shall 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 equals the vertical dimension of the sign panel of sign cluster.
3. *All stiffener Bolts and Nuts will conform to ASTM A307. Washers will conform to ASTM F436. All hardware will be galvanized in accordance with ASTM F2329.*

ERECTION DETAILS
FOR
SHEET ALUMINUM SIGNS
(ON FLANGED AND PIPE POSTS)
S. D. DEPT. OF TRANSPORTATION
MARCH 2022

1 OF 1

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	RH/TB/MDG	RH/DM/PW	Steve A Johnson BRIDGE ENGINEER
CNTYPCNX	PCNXDSPG	BSTDSASI	

Plot Scale - 1:200
Plotted From - Bayley.Colemer
File - ...\0344_Section S_Sign Support Standards.dgn

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

Plot Scale - 1:200

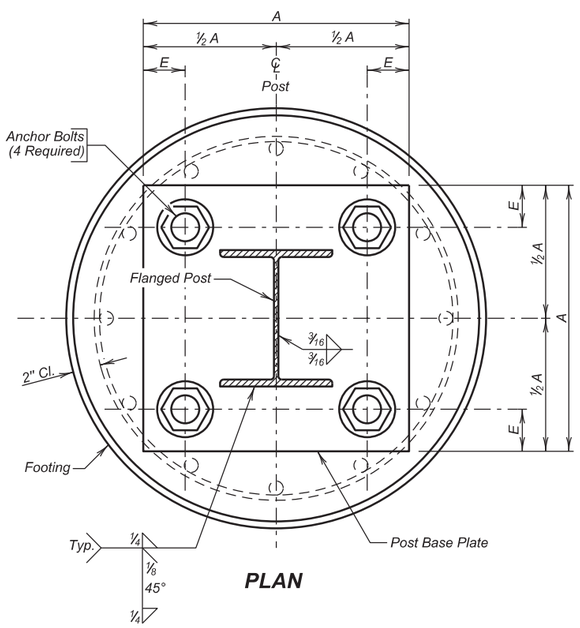
SITE LOCATION	POST SIZE	FOOTING DIMENSIONS		POST BASE PLATE DIMENSIONS			ANCHOR BOLT SIZE			LONGITUDINAL STEEL QUANTITIES			# SPIRAL STEEL QUANTITIES	
		DIA.	DEPTH	"A"	"E"	THICK.	DIA.	LENGTH	✠ MINIMUM EMBEDMENT	NO.	SIZE	LENGTH	DIA.	LENGTH

NOTE:
The above is a Site Specific data entry table and the inserted information is the responsibility of the Region Traffic Engineer.

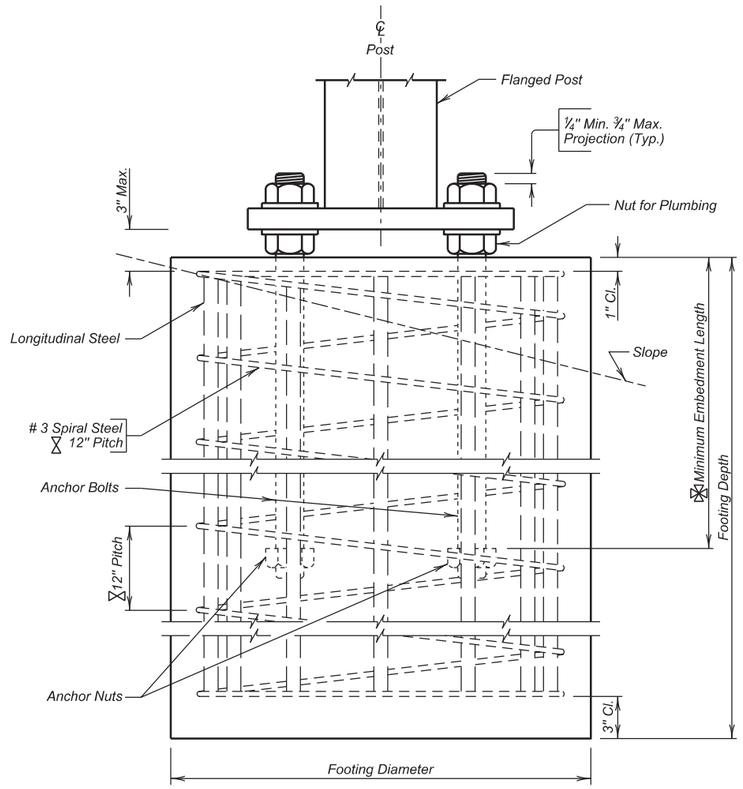
⧖ # Spirals - Use 12" pitch and 1 ½ extra turns at each end. Use 1 ½ turns for lap at splice as required, or weld as approved by the Office of Bridge Design, Spirals may be smooth bars, Bar length shown does not include Splices.

Dimensions are out to out of bars.

✠ See Footing Detail



PLAN



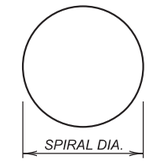
FOOTING DETAIL

NOTES

1. Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2001 Edition with 2003 Interims.
2. Concrete Footings shall be Class M6 - fc = 4000 p.s.i.
3. Structural Steel shall comform to ASTM A36.
4. All Reinforcing Steel, except spirals, shall conform to ASTM A615 Grade 60.
5. Spiral Reinforcing Steel may be fabricated from cold drawn wire ASTM A1064, or hot rolled plain or deformed bars conforming to the strength requirements of ASTM A615, Grade 60.
6. All Anchor Rods shall conform to ASTM F1554, Grade 36 having a minimum yield stress of 36000 p.s.i. Anchor Bolts shall be cleaned to remove any oil from the threading process before galvanizing.
7. Anchor Rods shall have 7" thread length on both ends.
8. All nuts shall conform to ASTM A563, DH. All nuts shall be heavy hex. All washers shall conform to ASTM F436.
9. All structural steel including the Steel Posts shall be galvanized according to ASTM A123. The Nuts, Washers and 10" of one end of the Anchor Rods shall be galvanized according to ASTM F2329.
10. All Rod Holes shall be drilled. All plate cuts shall preferably be Saw Cuts, however, Flame Cutting will be permitted providing all edges are ground smooth (metal projecting beyond the plane of the plate face will NOT be allowed).
11. All welding and weld inspection shall be in accordance with the latest edition of AWS D 1.5 Structural Welding Code.

SHOP PLANS

The fabricator shall submit shop plans in accordance with the Specifications or in Adobe PDF format. Shop plan submittals shall be sent to the Office of Bridge Design. Include design and check design, if applicable, with initial submittal.



ERECTION DETAILS FOR FIXED SIGN SUPPORTS

S. D. DEPT. OF TRANSPORTATION

DECEMBER 2016

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	RH/TB/MDG	RH/DM/PW	Steven A. Johnson BRIDGE ENGINEER
CNTYPCNX	PCNXDSPG	BSTDFSSA	

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Sign Support Standards.dgn

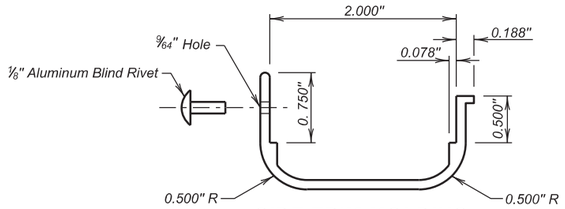
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S35	S57

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

Plot Scale - 1:200

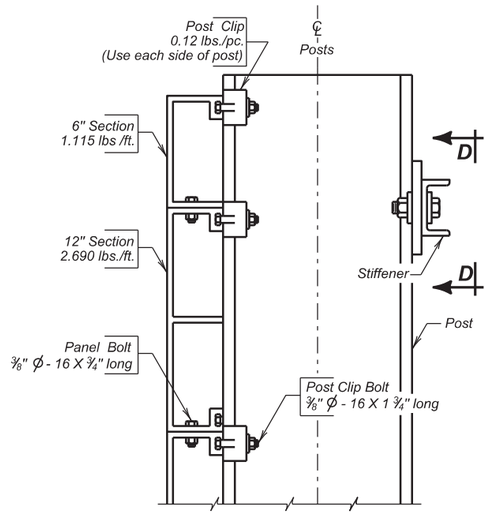
NOTE:
P = Number of Posts to be used
H = Vertical dimension of sign
L = Horizontal dimension of Main Sign

NOTE:
2 stiffeners are required when H is 8' - 0" or less
3 stiffeners are required when H is more than 8' - 0"

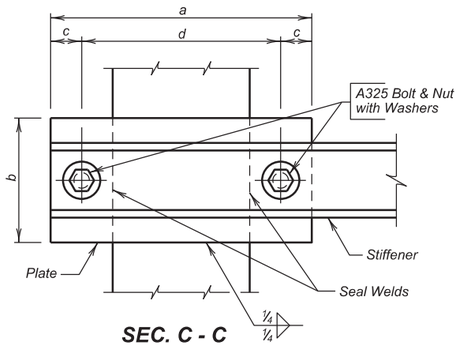


SIDE TRIM MOLDING

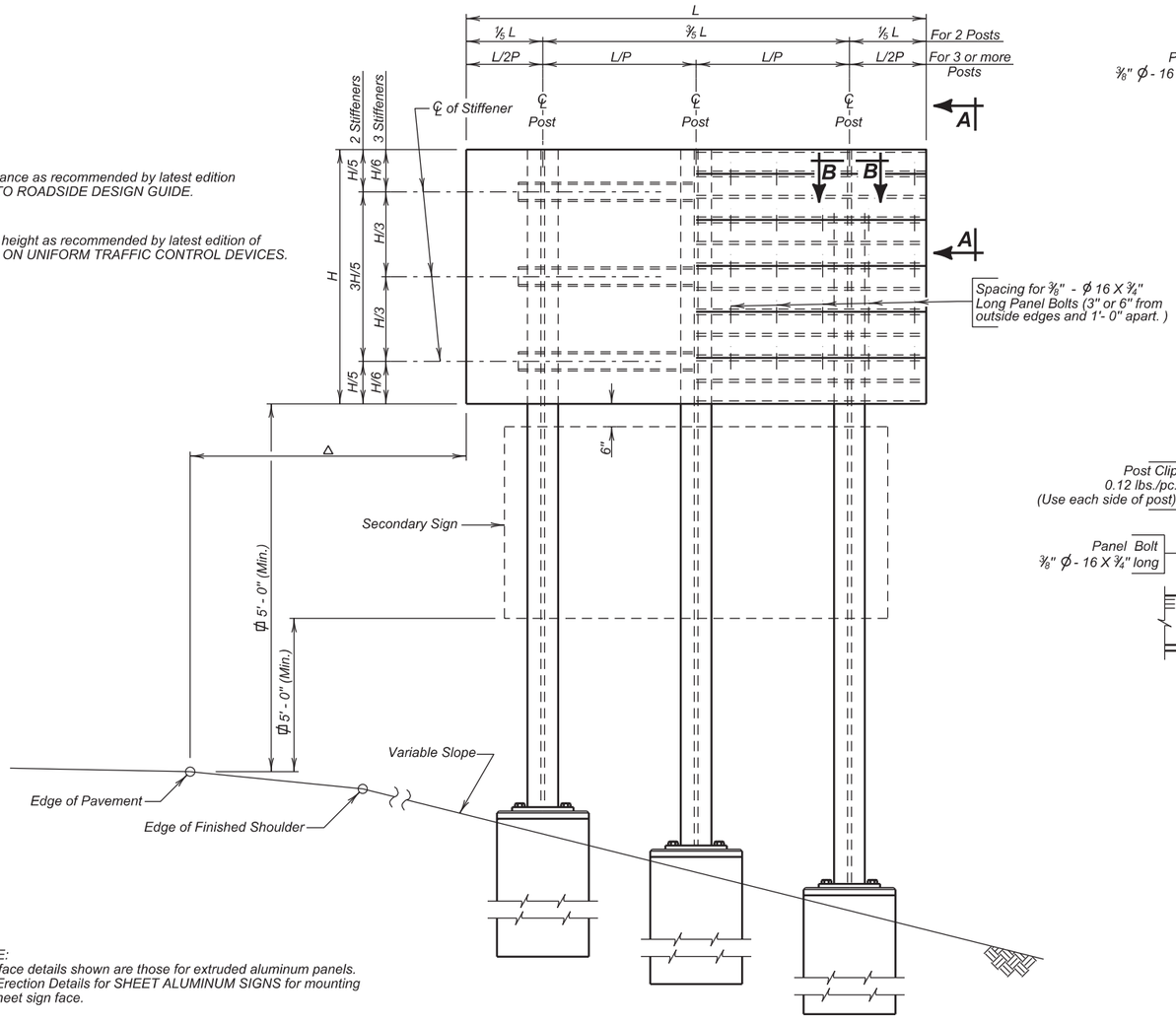
SideTrim Molding is required on all vertical edges of extruded panels. They shall be fastened at a minimum of one (1) rivet per panel.



SEC. A - A



SEC. C - C



△ Clear distance as recommended by latest edition of AASHTO ROADSIDE DESIGN GUIDE.

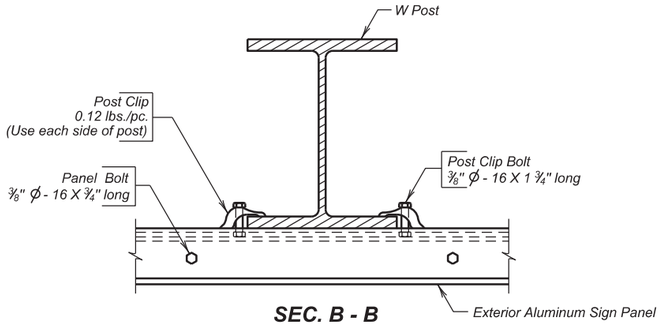
℄ Mounting height as recommended by latest edition of MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NOTE:
Sign face details shown are those for extruded aluminum panels. See Erection Details for SHEET ALUMINUM SIGNS for mounting flat sheet sign face.

ELEVATION

STIFFENER DATA

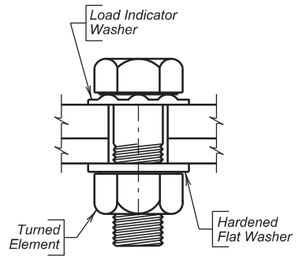
Post	Stiffener	a	b	c	d	Bolt (A325)	Plate Thk.
S3X5.7 thru W8X21	C3X5	10 1/2"	5"	1 1/4"	8"	5/8" ϕ	5/16"
W8X24 thru W10X45	C5X6.7	13 1/2"	6"	1 1/2"	10 1/2"	7/8" ϕ	3/8"



SEC. B - B
(Stiffener not shown)

STIFFENER BOLTING PROCEDURE

High strength bolts shall be tightened so as to obtain a minimum residual tension by the use of load indicator washers.



LOAD INDICATOR WASHER DETAIL

ERECTION DETAILS FOR FIXED SIGN SUPPORTS

S. D. DEPT. OF TRANSPORTATION
DECEMBER 2016 (2) OF (2)

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	RH/TB/MDG	RH/DM/PW	Steve A Johnson BRIDGE ENGINEER
CNTYPCNX	PCNXDSPG	BSTDFSSB	

Plotted From - Bayley.Colemer

File - ...\034J_Section S_Sign Support Standards.dgn

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S36	S57

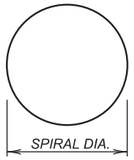
Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

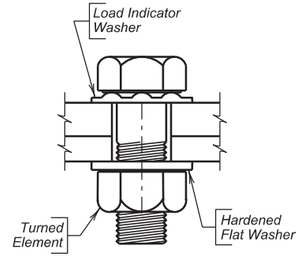
Plot Scale - 1:200

SITE LOCATION	POST SIZE	FOOTING DIMENSIONS		STUB POST LENGTH	LONGITUDINAL STEEL QUANTITIES			# SPIRAL STEEL QUANTITIES	
		DIA.	DEPTH		NO.	SIZE	LENGTH	DIA.	LENGTH

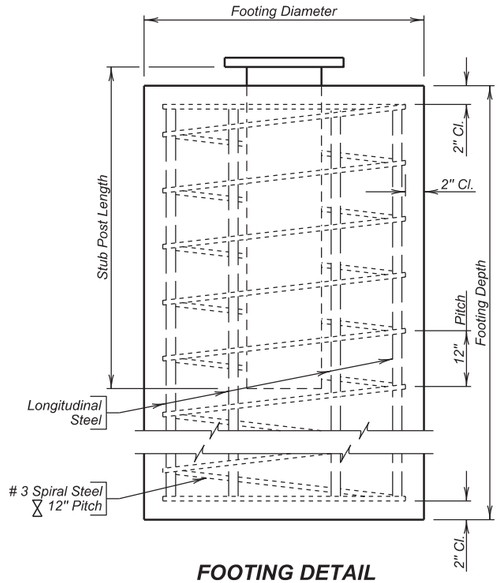
⧖ # Spirals - Use 12" pitch and 1 ½ extra turns at each end. Use 1 ½ turns for lap at splice as required, or weld as approved by the Office of Bridge Design, Spirals may be smooth bars, Bar length shown does not include Splices. Dimensions are out to out of bars.

NOTE:
The above is a Site Specific data entry table and the inserted information is the responsibility of the Region Traffic Engineer.



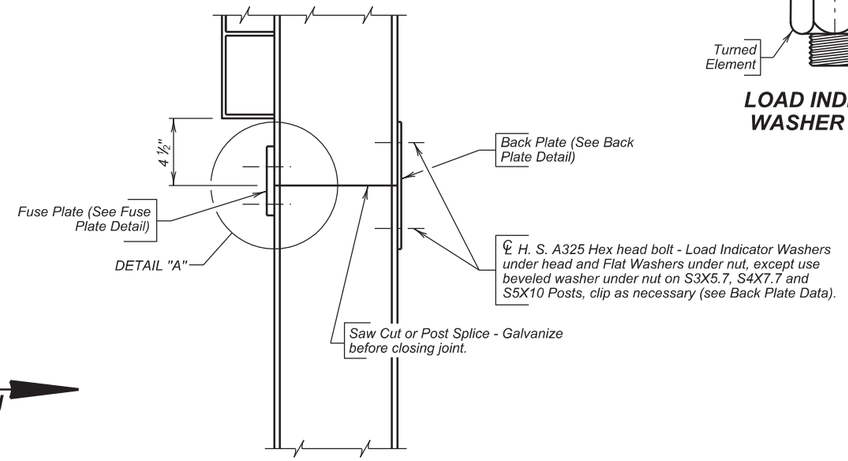


LOAD INDICATOR WASHER DETAIL

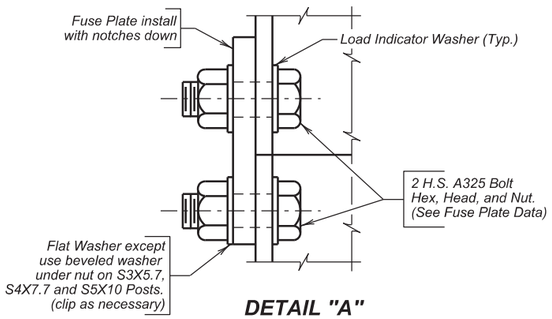


FOOTING DETAIL

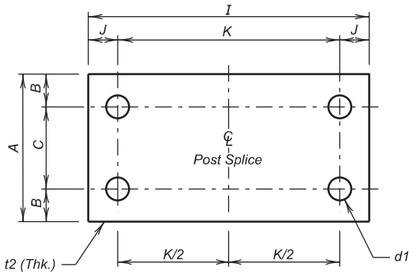
TRAFFIC DIRECTION



FUSE & BACK PLATE INSTALLATION



DETAIL "A"



BACK PLATE DETAIL

NOTES

1. Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2001 Edition with 2003 Interims.
2. Concrete Footings shall be Class M6 - fc = 4000 p. s. i.
3. Structural Steel shall comform to ASTM A36.
4. All Reinforcing Steel, except spirals, shall conform to ASTM 615 Grade 60.
5. Spiral Reinforcing Steel may be fabricated from cold drawn wire ASTM A1064, or hot rolled plain or deformed bars conforming to the strength requirements of ASTM A615, Grade 60.
6. All Bolts and Nuts shall conform to ASTM A325 except that ½" diameter bolts may conform to either ASTM A325 or ASTM A449. Washers shall conform to ASTM F436. All hardware shall be galvanized in accordance with ASTM F2329.
7. All structural steel including Posts and Post Stubs shall be galvanized in accordance with ASTM A123.
8. All Bolt Holes shall be drilled. All plate cuts shall preferably be saw cuts. However, Flame Cutting will be permitted providing all edges are ground smooth (metal projecting beyond the plane of the plate face will NOT be allowed).
9. All welding and weld inspection shall be in accordance with the latest edition of AWS D 1.5 Structural Welding Code.

PROCEDURE FOR ASSEMBLING SLIP BASE

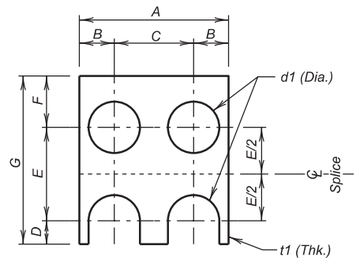
1. Place galvanized Sheet Metal Diaphrams on top of the lower slip plate.
2. Connect main post to Stub Post with clean unlubricated bolts and nuts with one Hardened Washer on each bolt between slip plates.
3. Plumb post by adding shims between slip plates.
4. Tighten bolts to a practical maximum, using a 12" - 15" wrench in order to bed surfaces and clean threads. DO NOT TIGHTEN TO PROOF LOAD.
5. Loosen all bolts and retighten in increments, using a systematic order, until each bolt has been tightened to the specified torque corresponding to the post size used (See Slip Base Plate Data). Tighten bolts only to the torque specified. DO NOT OVERTIGHTEN. Check torque on each bolt after entire sign has been erected.

ASSEMBLY OF FRICTION FUSE PLATES, BACK PLATES AND STIFFENERS

High strength bolts shall be tightened so as to obtain a residual tension by the use of load indicator washers.

SHOP PLANS

The fabricator shall submit shop plans in accordance with the Specifications or in Adobe PDF format. Shop plan submittals shall be sent to the Office of Bridge Design. Include design and check design, if applicable, with initial submittal.



FUSE PLATE DETAIL

TABLE 1 - FUSE PLATE DATA

Post Size	A	B	C	D	E	F	G	d1	t1	Bolt Size
S3X5.7	2 5/8"	9/16"	1 ½"	½"	1 ½"	1 1/8"	3 1/8"	5/8" Ø	¼"	½" Ø
S4X7.7	2 5/8"	9/16"	1 ½"	½"	1 ½"	1 1/8"	3 1/8"	5/8" Ø	¼"	½" Ø
S5X10	3"	11/16"	1 5/8"	5/8"	2 ¼"	1 1/8"	4"	¾" Ø	⅜"	5/8" Ø
W6X12	4"	15/16"	2 1/8"	⅜"	2 ½"	1 ⅜"	4 ½"	¾" Ø	⅜"	5/8" Ø
W6X15	6"	1 ⅜"	3 ¼"	5/8"	2 ½"	1 ⅜"	4 ½"	¾" Ø	⅜"	5/8" Ø
W6X20	6"	1 ⅜"	3 ¼"	5/8"	2 ½"	1 ⅜"	4 ½"	¾" Ø	⅜"	5/8" Ø
W8X18	5 ¼"	1 11/16"	2 ⅜"	¾"	2 ½"	1 ⅜"	4 ⅝"	⅞" Ø	½"	¾" Ø
W8X21	5 ¼"	1 11/16"	2 ⅜"	¾"	2 ½"	1 ⅜"	4 ⅝"	⅞" Ø	½"	¾" Ø
W8X24	6 ½"	1 ½"	3 ½"	⅞"	3"	1 5/8"	5 ½"	1" Ø	9/16"	⅞" Ø
W8X28	6 ½"	1 11/16"	3 ⅜"	⅞"	3"	1 ¾"	5 ⅝"	1" Ø	½"	⅞" Ø
W8X31	8"	1 ⅝"	4 ¾"	1"	3 ½"	2"	6 ½"	1 ⅛" Ø	5/8"	1" Ø
W10X33	8"	1 ⅞"	4 ¼"	1 ⅛"	4 ½"	2 ¼"	7 ⅞"	1 ¼" Ø	¾"	1 ⅛" Ø

TABLE 5 - BACK PLATE DATA

Post Size	A	B	C	J	K	I	d1	t2	Bolt Size
S3X5.7	2 5/8"	9/16"	1 ½"	1 ¼"	4 ½"	7"	5/8" Ø	¼"	½" Ø
S4X7.7	2 5/8"	9/16"	1 ½"	1 ¼"	4 ½"	7"	5/8" Ø	¼"	½" Ø
S5X10	3"	11/16"	1 5/8"	1 ¼"	4 ¾"	7 ¼"	¾" Ø	¼"	5/8" Ø
W6X12	4"	15/16"	2 ⅛"	1 ½"	4 ¾"	7 ¼"	¾" Ø	¼"	⅜" Ø
W6X15	6"	1 ⅜"	3 ¼"	1 ¼"	5 ¼"	7 ¾"	¾" Ø	¼"	5/8" Ø
W6X20	6"	1 ⅜"	3 ¼"	1 ¼"	5 ¼"	7 ¾"	¾" Ø	¼"	5/8" Ø
W8X18	5 ¼"	1 11/16"	2 ⅝"	1 ⅜"	5 ¾"	8 ½"	⅞" Ø	¼"	¾" Ø
W8X21	5 ¼"	1 11/16"	2 ⅝"	1 ⅜"	5 ¾"	8 ½"	⅞" Ø	¼"	¾" Ø
W8X24	6 ½"	1 ½"	3 ½"	1 5/8"	6"	9 ¼"	1" Ø	5/16"	⅞" Ø
W8X28	6 ½"	1 11/16"	3 ⅜"	1 ¾"	6"	9 ½"	1" Ø	⅜"	⅞" Ø
W8X31	8"	1 ⅝"	4 ¾"	2"	6 ½"	10 ½"	1 ⅛" Ø	⅜"	1" Ø
W10X33	8"	1 ⅞"	4 ¼"	2 ½"	7"	1'- 0"	1 ¼" Ø	7/16"	1 ⅛" Ø

ERECTION DETAILS FOR TWO-POST ONE-DIRECTION BREAKAWAY SIGN SUPPORTS

S. D. DEPT. OF TRANSPORTATION

DECEMBER 2016 (1) OF (2)

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	TB/MDG	RH/DM/PW	Steven A Johnson BRIDGE ENGINEER
CNTYPCNX	PCNXDSPG	BSTDBS2A	

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Sign Support Standards.dgn

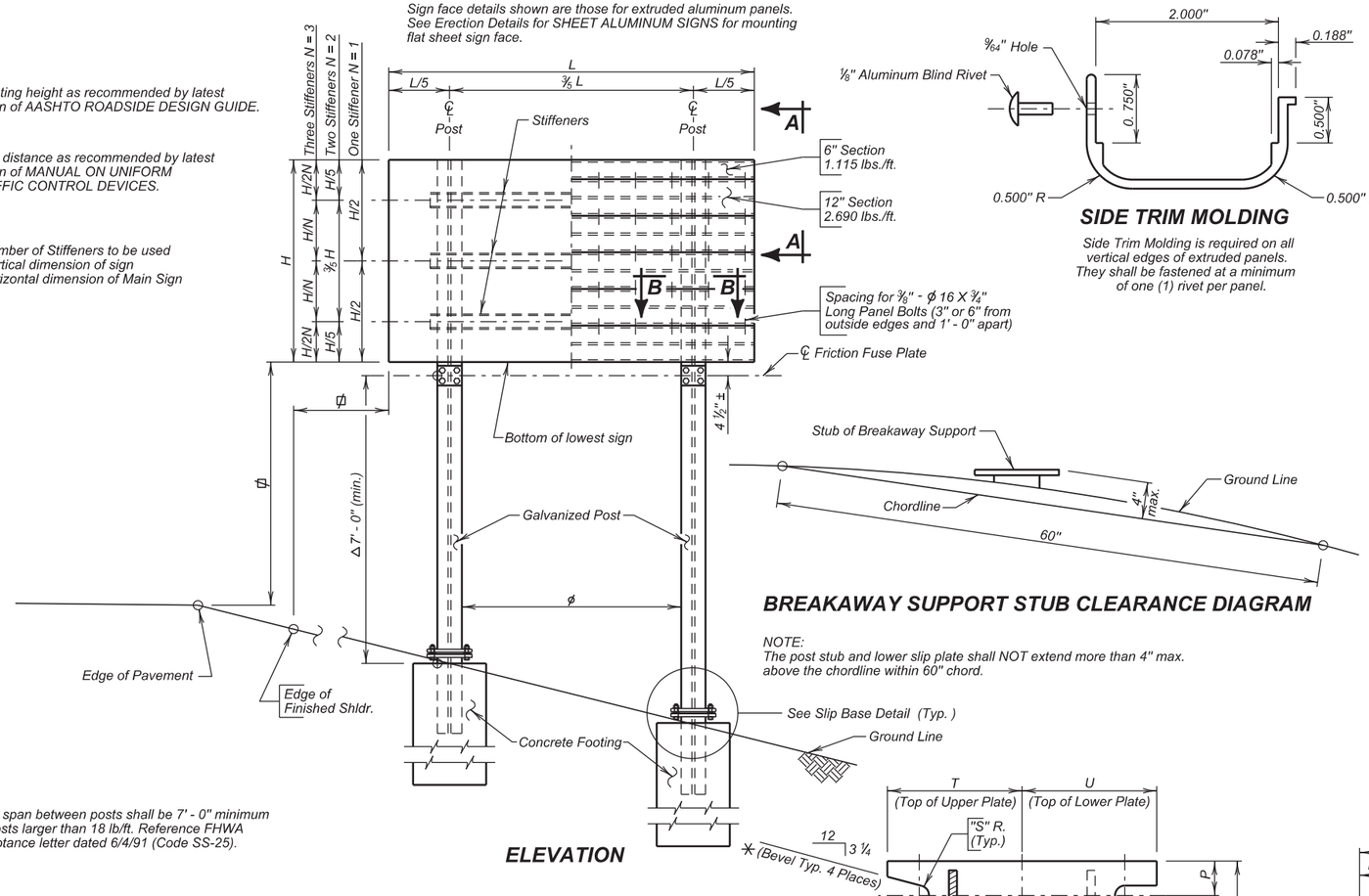
Plot Scale - 1:200

NOTE:
Sign face details shown are those for extruded aluminum panels. See Erection Details for SHEET ALUMINUM SIGNS for mounting flat sheet sign face.

△ Mounting height as recommended by latest edition of AASHTO ROADSIDE DESIGN GUIDE.

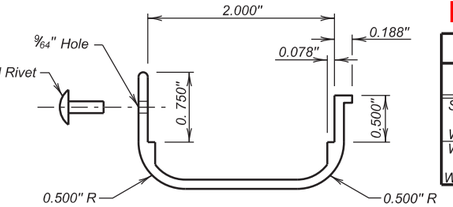
ϕ Clear distance as recommended by latest edition of MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NOTE:
N = Number of Stiffeners to be used
H = Vertical dimension of sign
L = Horizontal dimension of Main Sign



ϕ Clear span between posts shall be 7' - 0" minimum for posts larger than 18 lb/ft. Reference FHWA acceptance letter dated 6/4/91 (Code SS-25).

ELEVATION



SIDE TRIM MOLDING

Side Trim Molding is required on all vertical edges of extruded panels. They shall be fastened at a minimum of one (1) rivet per panel.

BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

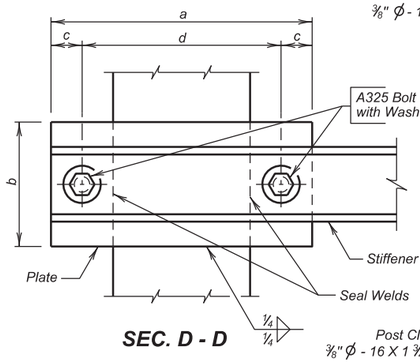
NOTE:
The post stub and lower slip plate shall NOT extend more than 4" max. above the chordline within 60" chord.

STIFFENER DATA

Post	Stiffener	a	b	c	d	Bolt (A325)	Plate Thk.
S3X5.7 thru W8X21	C3X5	10 ½"	5"	1 ¼"	8"	⅝" ϕ	5/16"
W8X24 thru W10X45	C5X6.7	13 ½"	6"	1 ½"	10 ½"	⅞" ϕ	⅜"

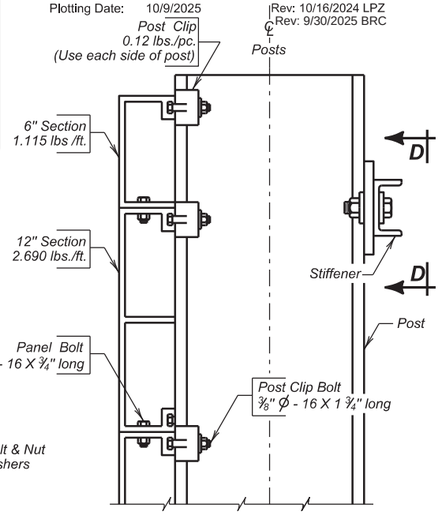
STIFFENER NOTES

1. Stiffeners must always be used on Two Post Breakaway signs regardless of type of sign face employed.
2. Number of stiffeners used, N, shall 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

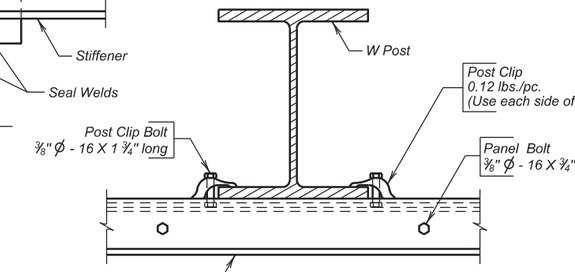


SEC. D - D

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

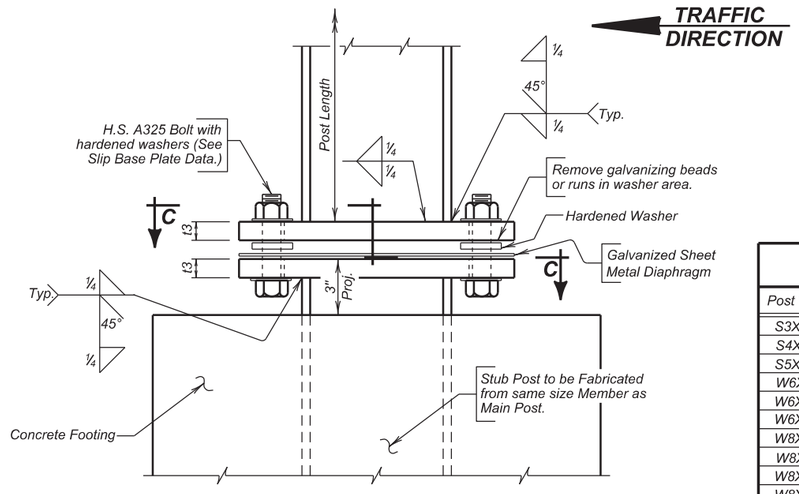


SEC. A - A

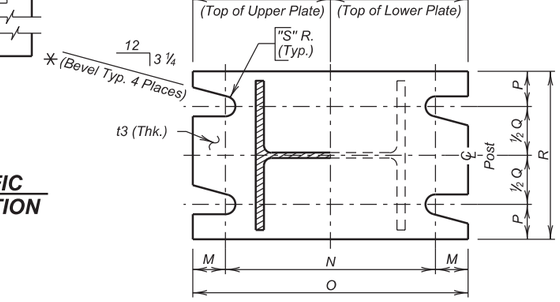


SEC. B - B

(Stiffener not shown)

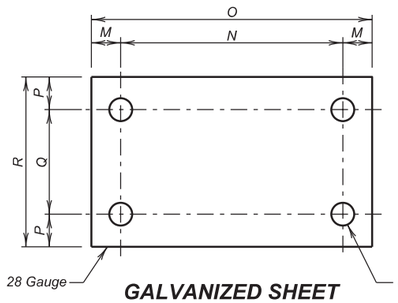


SLIP BASE DETAIL



SEC. C - C

✳ NOTE:
Above Bevel is for Sign on Right Shoulder. Plate Bevels are Opposite hand for Sign on Left Shoulder.



GALVANIZED SHEET METAL DIAPHRAGM

TABLE 3 - SHEET METAL DIAPHRAGM DATA

Post Size	M	N	O	P	Q	R	V
S3X5.7	¾"	6"	7 ½"	¾"	1 ½"	3"	⅝"
S4X7.7	¾"	6"	7 ½"	¾"	1 ½"	3"	⅝"
S5X10	⅞"	7 ¼"	9"	¾"	2"	3 ½"	¾"
W6X12	⅞"	8 ½"	10"	⅞"	2 ¾"	4 ½"	¾"
W6X15	1 ⅛"	8 ½"	10 ¾"	1 ¼"	4"	6 ½"	⅞"
W6X20	1 ⅛"	10"	1'- 0 ¼"	1 ¼"	4"	6 ½"	⅞"
W8X18	1 ⅛"	10 ½"	1' - 0 ¾"	1 ¼"	3 ½"	6"	⅞"
W8X21	1 ¼"	11 ¼"	1' - 1 ¾"	1 ¼"	3 ½"	6"	1"
W8X24	1 ½"	11"	1' - 2"	1 ⅝"	4 ¼"	7 ½"	1"
W8X28	1 ⅜"	11 ¼"	1' - 2 ½"	1 ⅜"	4 ¼"	7 ½"	1 ⅛"
W8X31	1 ¾"	11 ¼"	1' - 2 ¾"	1 ⅞"	5 ¼"	9"	1 ⅛"
W10X33	1 ¾"	1' - 2"	1' - 5 ½"	1 ⅞"	5 ¼"	9"	1 ⅛"

TABLE 4 - SLIP BASE PLATE DATA

Post Size	M	N	O	P	Q	R	S	T	U	t3	Bolt Size	Bolt Torque
S3X5.7	¾"	6"	7 ½"	¾"	1 ½"	3"	9/32"	3 ¾"	3 ¾"	⅝"	½" ϕ	142" - #
S4X7.7	¾"	6"	7 ½"	¾"	1 ½"	3"	9/32"	3 ¾"	3 ¾"	⅝"	½" ϕ	142" - #
S5X10	⅞"	7 ¼"	9"	¾"	2"	3 ½"	11/32"	4 ½"	4 ½"	⅞"	⅝" ϕ	345" - #
W6X12	⅞"	8 ¼"	10"	⅞"	2 ¾"	4 ½"	11/32"	5"	5"	⅞"	⅝" ϕ	345" - #
W6X15	1 ⅛"	8 ½"	10 ¾"	1 ¼"	4"	6 ½"	13/32"	5 ⅜"	5 ⅜"	1"	¾" ϕ	554" - #
W6X20	1 ⅛"	10"	1' - 0 ¼"	1 ¼"	4"	6 ½"	13/32"	6 ⅛"	6 ⅛"	1"	¾" ϕ	554" - #
W8X18	1 ⅛"	10 ½"	1' - 0 ¾"	1 ¼"	3 ½"	6"	13/32"	6 ⅜"	6 ⅜"	1"	¾" ϕ	554" - #
W8X21	1 ¼"	11 ¼"	1' - 1 ¾"	1 ¼"	3 ½"	6"	15/32"	6 ⅞"	6 ⅞"	1"	⅞" ϕ	645" - #
W8X24	1 ½"	11"	1' - 2"	1 ⅝"	4 ¼"	7 ½"	15/32"	7"	7"	1"	⅞" ϕ	645" - #
W8X28	1 ⅜"	11 ¼"	1' - 2 ½"	1 ⅜"	4 ¼"	7 ½"	17/32"	7 ¼"	7 ¼"	1 ⅛"	1" ϕ	735" - #
W8X31	1 ¾"	11 ¼"	1' - 2 ¾"	1 ⅛"	5 ¼"	9"	17/32"	7 ⅜"	7 ⅜"	1 ⅛"	1" ϕ	735" - #
W10X33	1 ¾"	1' - 2"	1' - 5 ½"	1 ⅞"	5 ¼"	9"	17/32"	8 ¾"	8 ¾"	1 ¼"	1" ϕ	735" - #

NOTE:
Diaphragm need not be regalvanized after cutting to size and drilling of holes.

ERECTION DETAILS FOR TWO-POST ONE-DIRECTION BREAKAWAY SIGN SUPPORTS

S. D. DEPT. OF TRANSPORTATION

DECEMBER 2016

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	TB/MDG	RH/DM/PW	Steve A Johnson
CNTYPCNX	PCNXDSPG	BSTDBS28	BRIDGE ENGINEER

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Sign Support Standards.dgn

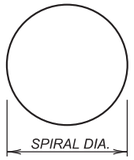
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S38	S57

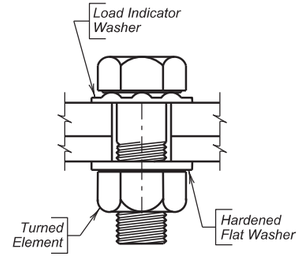
Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

SITE LOCATION	POST SIZE	FOOTING DIMENSIONS		STUB POST LENGTH	LONGITUDINAL STEEL QUANTITIES			# SPIRAL STEEL QUANTITIES	
		DIA.	DEPTH		NO.	SIZE	LENGTH	DIA.	LENGTH

⧖ # Spirals - Use 12" pitch and 1 ½ extra turns at each end. Use 1 ½ turns for lap at splice as required, or weld as approved by the Office of Bridge Design, Spirals may be smooth bars, Bar length shown does not include Splices. Dimensions are out to out of bars.

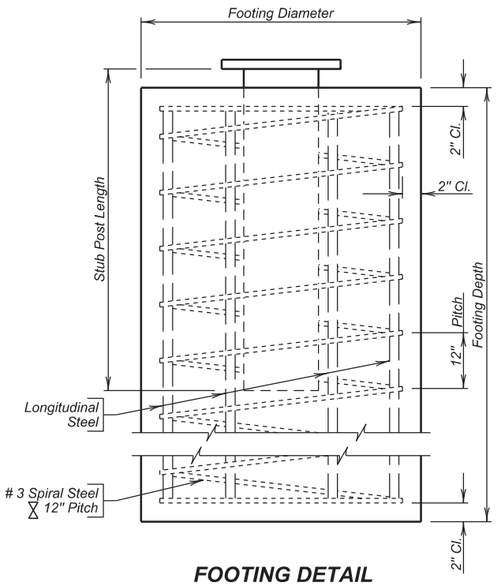
NOTE:
The above is a Site Specific data entry table and the inserted information is the responsibility of the Region Traffic Engineer.



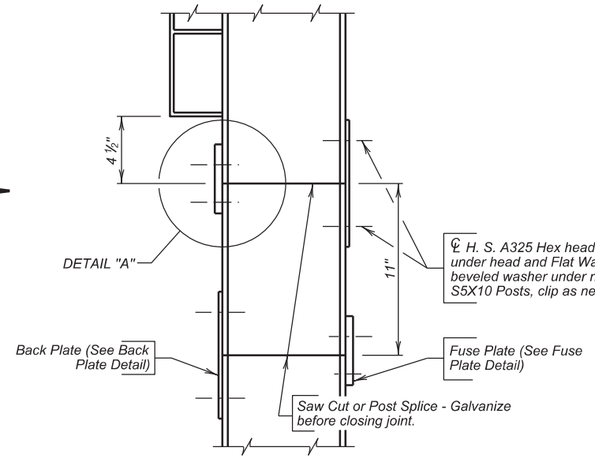


LOAD INDICATOR WASHER DETAIL

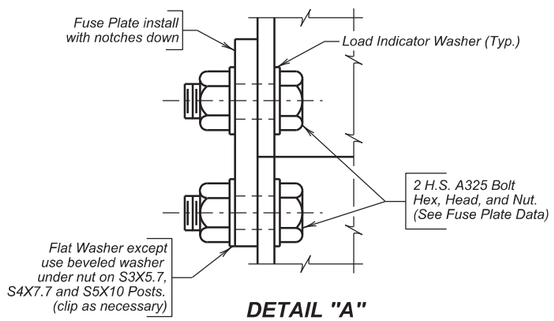
TRAFFIC DIRECTION



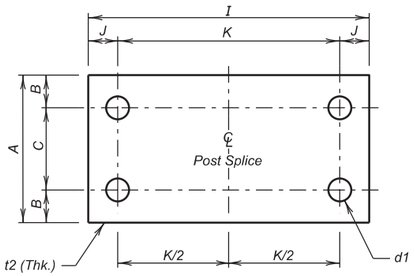
FOOTING DETAIL



FUSE & BACK PLATE INSTALLATION



DETAIL "A"



BACK PLATE DETAIL

NOTES

1. Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2001 Edition with 2003 Interims.
2. Concrete Footings shall be Class M6 - fc = 4000 p. s. i.
3. Structural Steel shall comform to ASTM A36.
4. All Reinforcing Steel, except spirals, shall conform to ASTM 615 Grade 60.
5. Spiral Reinforcing Steel may be fabricated from cold drawn wire ASTM A1064, or hot rolled plain or deformed bars conforming to the strength requirements of ASTM A615, Grade 60.
6. All Bolts and Nuts shall conform to ASTM A325 except that ½" diameter bolts may conform to either ASTM A325 or ASTM A449. Washers shall conform to ASTM F436. All hardware shall be galvanized in accordance with ASTM F2329.
7. All structural steel including Posts and Post Stubs shall be galvanized in accordance with ASTM A123.
8. All Bolt Holes shall be drilled. All plate cuts shall preferably be saw cuts. However, Flame Cutting will be permitted providing all edges are ground smooth (metal projecting beyond the plane of the plate face will NOT be allowed).
9. All welding and weld inspection shall be in accordance with the latest edition of AWS D 1.5 Structural Welding Code.

PROCEDURE FOR ASSEMBLING SLIP BASE

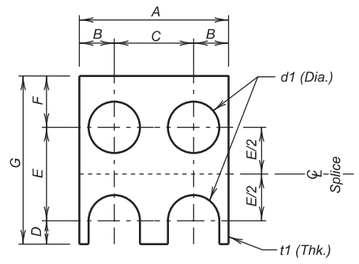
1. Place galvanized Sheet Metal Diaphrams on top of the lower slip plate.
2. Connect main post to Stub Post with clean unlubricated bolts and nuts with one Hardened Washer on each bolt between slip plates.
3. Plumb post by adding shims between slip plates.
4. Tighten bolts to a practical maximum, using a 12" - 15" wrench in order to bed surfaces and clean threads. DO NOT TIGHTEN TO PROOF LOAD.
5. Loosen all bolts and retighten in increments, using a systematic order, until each bolt has been tightened to the specified torque corresponding to the post size used (See Slip Base Plate Data). Tighten bolts only to the torque specified. DO NOT OVERTIGHTEN. Check torque on each bolt after entire sign has been erected.

ASSEMBLY OF FRICTION FUSE PLATES, BACK PLATES AND STIFFENERS

High strength bolts shall be tightened so as to obtain a residual tension by the use of load indicator washers.

SHOP PLANS

The fabricator shall submit shop plans in accordance with the Specifications or in Adobe PDF format. Shop plan submittals shall be sent to the Office of Bridge Design. Include design and check design, if applicable, with initial submittal.



FUSE PLATE DETAIL

TABLE 1 - FUSE PLATE DATA

Post Size	A	B	C	D	E	F	G	d1	t1	Bolt Size
S3X5.7	2 5/8"	9/16"	1 ½"	½"	1 ½"	1 1/8"	3 1/8"	5/8" Ø	¼"	½" Ø
S4X7.7	2 5/8"	9/16"	1 ½"	½"	1 ½"	1 1/8"	3 1/8"	5/8" Ø	¼"	½" Ø
S5X10	3"	11/16"	1 5/8"	5/8"	2 ¼"	1 1/8"	4"	¾" Ø	⅜"	5/8" Ø
W6X12	4"	15/16"	2 1/8"	⅜"	2 ½"	1 ⅜"	4 ½"	¾" Ø	⅜"	5/8" Ø
W6X15	6"	1 ⅜"	3 ¼"	5/8"	2 ½"	1 ⅜"	4 ½"	¾" Ø	⅜"	5/8" Ø
W6X20	6"	1 ⅜"	3 ¼"	5/8"	2 ½"	1 ⅜"	4 ½"	¾" Ø	⅜"	5/8" Ø
W8X18	5 ¼"	1 5/16"	2 ⅜"	¾"	2 ½"	1 ⅜"	4 ⅝"	⅞" Ø	½"	¾" Ø
W8X21	5 ¼"	1 5/16"	2 ⅜"	¾"	2 ½"	1 ⅜"	4 ⅝"	⅞" Ø	½"	¾" Ø
W8X24	6 ½"	1 ½"	3 ½"	⅞"	3"	1 5/8"	5 ½"	1" Ø	9/16"	⅞" Ø
W8X28	6 ½"	1 9/16"	3 ⅜"	⅞"	3"	1 ¾"	5 ⅝"	1" Ø	½"	⅞" Ø
W8X31	8"	1 ⅝"	4 ¾"	1"	3 ½"	2"	6 ½"	1 ⅛" Ø	5/8"	1" Ø
W10X33	8"	1 ⅞"	4 ¼"	1 ⅛"	4 ½"	2 ¼"	7 ⅞"	1 ¼" Ø	¾"	1 ⅛" Ø

TABLE 5 - BACK PLATE DATA

Post Size	A	B	C	J	K	I	d1	t2	Bolt Size
S3X5.7	2 5/8"	9/16"	1 ½"	1 ¼"	4 ½"	7"	5/8" Ø	¼"	½" Ø
S4X7.7	2 5/8"	9/16"	1 ½"	1 ¼"	4 ½"	7"	5/8" Ø	¼"	½" Ø
S5X10	3"	11/16"	1 5/8"	1 ¼"	4 ¾"	7 ¼"	¾" Ø	¼"	5/8" Ø
W6X12	4"	15/16"	2 ⅛"	1 ¼"	4 ¾"	7 ½"	¾" Ø	¼"	5/8" Ø
W6X15	6"	1 ⅜"	3 ¼"	1 ¼"	5 ¼"	7 ¾"	¾" Ø	¼"	⅝" Ø
W6X20	6"	1 ⅜"	3 ¼"	1 ¼"	5 ¼"	7 ¾"	¾" Ø	¼"	5/8" Ø
W8X18	5 ¼"	1 5/16"	2 ⅜"	1 ⅜"	5 ¾"	8 ½"	⅞" Ø	¼"	¾" Ø
W8X21	5 ¼"	1 5/16"	2 5/8"	1 ⅜"	5 ¾"	8 ½"	⅞" Ø	¼"	¾" Ø
W8X24	6 ½"	1 ½"	3 ½"	1 5/8"	6"	9 ¼"	1" Ø	5/16"	⅞" Ø
W8X28	6 ½"	1 9/16"	3 ⅜"	1 ¾"	6"	9 ½"	1" Ø	⅜"	⅛" Ø
W8X31	8"	1 5/8"	4 ¾"	2"	6 ½"	10 ½"	1 ⅛" Ø	⅜"	1" Ø
W10X33	8"	1 ⅞"	4 ¼"	2 ½"	7"	1' - 0"	1 ¼" Ø	7/16"	1 ⅛" Ø

ERECTION DETAILS FOR TWO-POST TWO-DIRECTION BREAKAWAY SIGN SUPPORTS

S. D. DEPT. OF TRANSPORTATION

DECEMBER 2016 (1) OF (2)

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	RH/TB/MDG	RH/DM/PW	Steve A Johnson
CNTYPCNX	PCNXDSPG	BSTDBS2C	BRIDGE ENGINEER

Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Sign Support Standards.dgn

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

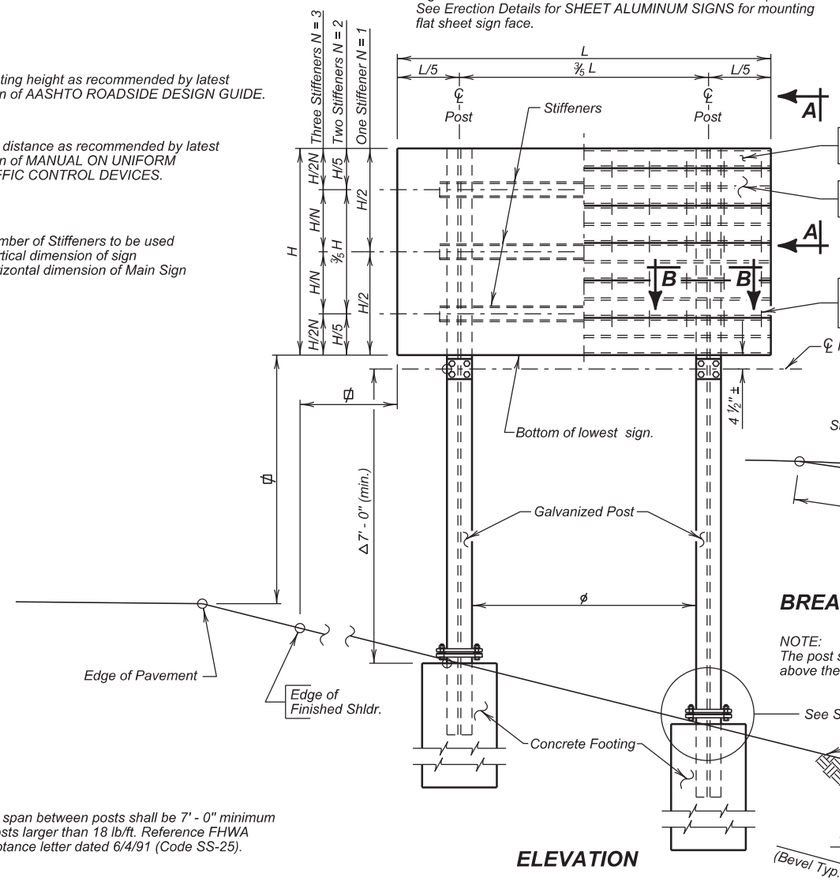
Plot Scale - 1:200

NOTE:
Sign face details shown are those for extruded aluminum panels. See Erection Details for SHEET ALUMINUM SIGNS for mounting flat sheet sign face.

△ Mounting height as recommended by latest edition of AASHTO ROADSIDE DESIGN GUIDE.

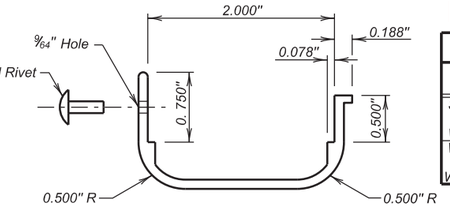
ϕ Clear distance as recommended by latest edition of MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NOTE:
N = Number of Stiffeners to be used
H = Vertical dimension of sign
L = Horizontal dimension of Main Sign



ø Clear span between posts shall be 7' - 0" minimum for posts larger than 18 lb/ft. Reference FHWA acceptance letter dated 6/4/91 (Code SS-25).

ELEVATION



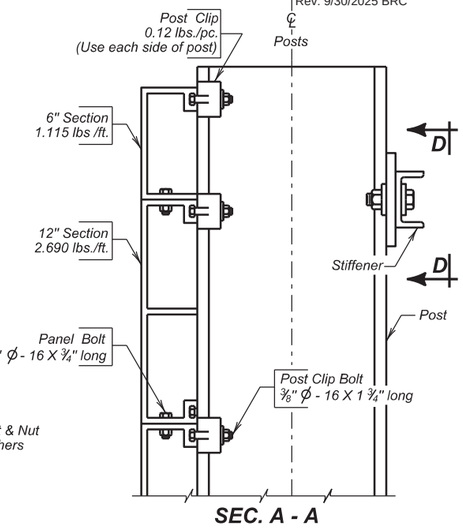
SIDE TRIM MOLDING

Side Trim Molding is required on all vertical edges of extruded panels. They shall be fastened at a minimum of one (1) rivet per panel.

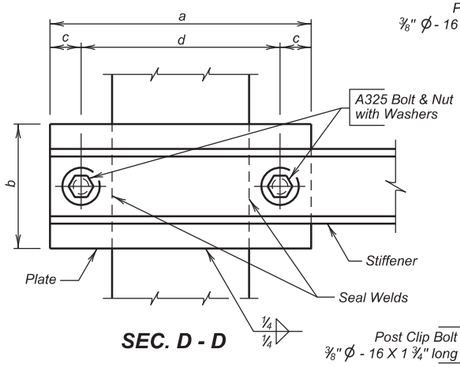
STIFFENER DATA							
Post	Stiffener	a	b	c	d	Bolt (A325)	Plate Thk.
S3X5.7 thru W8X21	C3X5	10 ½"	5"	1 ¼"	8"	⅝" ϕ	5⁄16"
W8X24 thru W10X45	C5X6.7	13 ½"	6"	1 ½"	10 ½"	⅞" ϕ	⅜"

STIFFENER NOTES

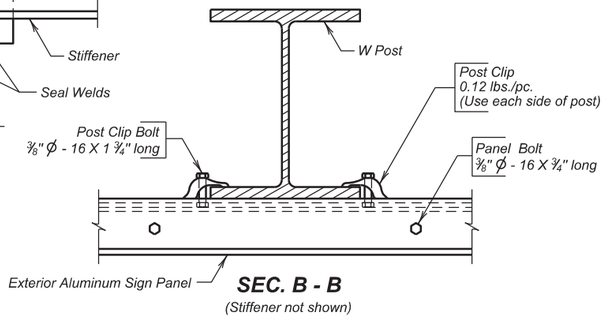
1. Stiffeners must always be used on Two Post Breakaway signs regardless of type of sign face employed.
2. Number of stiffeners used, N, shall be as follows:
   if H < = 2' - 0" then N = 1
   if 2' - 0" < H < = 8' - 0" then N = 2
   if 8' - 0" < H < = 15' - 0" then N = 3



SEC. A - A

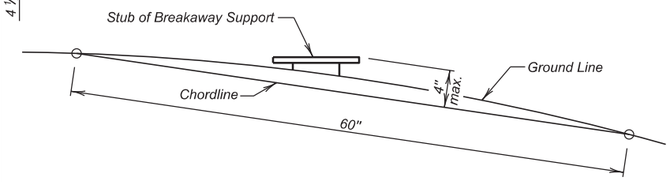


SEC. D - D

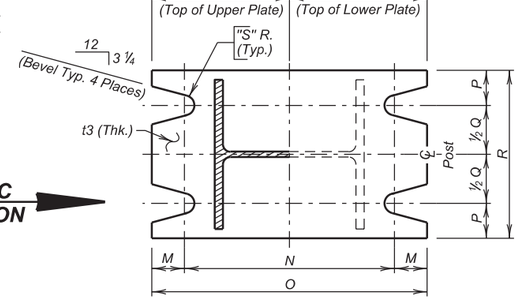


SEC. B - B
(Stiffener not shown)

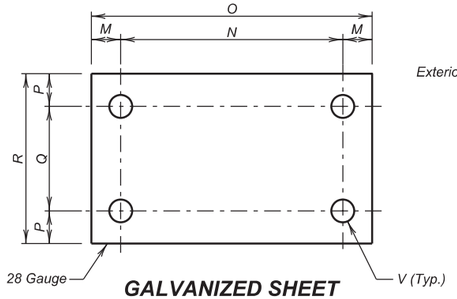
BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM



NOTE:
The post stub and lower slip plate shall NOT extend more than4" max. above the chordline within 60" chord.



SEC. C - C



GALVANIZED SHEET METAL DIAPHRAGM

TRAFFIC DIRECTION

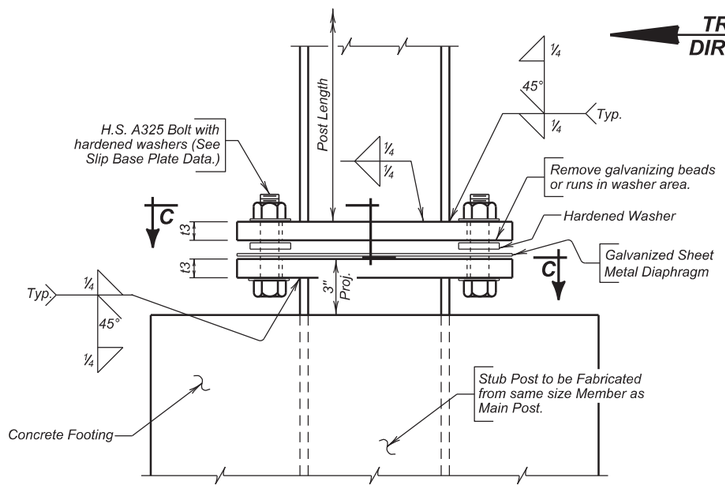


TABLE 3 - SHEET METAL DIAPHRAGM DATA							
Post Size	M	N	O	P	Q	R	V
S3X5.7	¾"	6"	7 ½"	¾"	1 ½"	3"	⅝"
S4X7.7	¾"	6"	7 ½"	¾"	1 ½"	3"	⅝"
S5X10	⅞"	7 ¼"	9"	¾"	2"	3 ½"	¾"
W6X12	⅞"	8 ½"	10"	⅞"	2 ¾"	4 ½"	¾"
W6X15	1 ⅛"	8 ½"	10 ¾"	1 ¼"	4"	6 ½"	⅞"
W6X20	1 ⅛"	10"	1' - 0 ¼"	1 ¼"	4"	6 ½"	⅞"
W8X18	1 ⅛"	10 ½"	1' - 0 ¾"	1 ¼"	3 ½"	6"	⅝"
W8X21	1 ¼"	11 ¼"	1' - 1 ¾"	1 ¼"	3 ½"	6"	1"
W8X24	1 ½"	11"	1' - 2"	1 ⅝"	4 ¼"	7 ½"	1"
W8X28	1 ⅜"	11 ¼"	1' - 2 ½"	1 ⅜"	4 ½"	7 ½"	1 ⅛"
W8X31	1 ¾"	11 ¼"	1' - 2 ¾"	1 ⅞"	5 ¼"	9"	1 ⅛"
W10X33	1 ¾"	1' - 2"	1' - 5 ½"	1 ⅞"	5 ¼"	9"	1 ⅛"

TABLE 4 - SLIP BASE PLATE DATA												
Post Size	M	N	O	P	Q	R	S	T	U	t3	Bolt Size	Bolt Torque
S3X5.7	¾"	6"	7 ½"	¾"	1 ½"	3"	9⁄32"	3 ¾"	3 ¾"	⅝"	½" ϕ	142" - #
S4X7.7	¾"	6"	7 ½"	¾"	1 ½"	3"	9⁄32"	3 ¾"	3 ¾"	⅝"	½" ϕ	142" - #
S5X10	⅞"	7 ¼"	9"	¾"	2"	3 ½"	11⁄32"	4 ½"	4 ½"	⅞"	⅝" ϕ	345" - #
W6X12	⅞"	8 ¼"	10"	⅞"	2 ¾"	4 ½"	11⁄32"	5"	5"	⅞"	⅝" ϕ	345" - #
W6X15	1 ⅛"	8 ½"	10 ¾"	1 ¼"	4"	6 ½"	13⁄32"	5 ⅜"	5 ⅜"	1"	¾" ϕ	554" - #
W6X20	1 ⅛"	10"	1' - 0 ¼"	1 ¼"	4"	6 ½"	13⁄32"	6 ⅛"	6 ⅛"	1"	¾" ϕ	554" - #
W8X18	1 ⅛"	10 ½"	1' - 0 ¾"	1 ¼"	3 ½"	6"	13⁄32"	6 ⅜"	6 ⅜"	1"	¾" ϕ	554" - #
W8X21	1 ¼"	11 ¼"	1' - 1 ¾"	1 ¼"	3 ½"	6"	15⁄32"	6 ⅞"	6 ⅞"	1"	⅞" ϕ	645" - #
W8X24	1 ½"	11"	1' - 2"	1 ⅝"	4 ¼"	7 ½"	15⁄32"	7"	7"	1"	⅞" ϕ	645" - #
W8X28	1 ⅜"	11 ¼"	1' - 2 ½"	1 ⅜"	4 ¼"	7 ½"	17⁄32"	7 ¼"	7 ¼"	1 ⅛"	1" ϕ	735" - #
W8X31	1 ¾"	11 ¼"	1' - 2 ¾"	1 ⅞"	5 ¼"	9"	17⁄32"	7 ⅜"	7 ⅜"	1 ⅛"	1" ϕ	735" - #
W10X33	1 ¾"	1' - 2"	1' - 5 ½"	1 ⅞"	5 ¼"	9"	17⁄32"	8 ¾"	8 ¾"	1 ¼"	1" ϕ	735" - #

NOTE:
Diaphragm need not be regalvanized after cutting to size and drilling of holes.

ERECTION DETAILS FOR TWO-POST TWO-DIRECTION BREAKAWAY SIGN SUPPORTS

S. D. DEPT. OF TRANSPORTATION

DECEMBER 2016

(2) OF (2)

DESIGNED BY	DRAWN BY	CHECKED BY	
RH/DM	TB/MDG	RH/DM/PW	Steve A Johnson
CNTYPCNX	PCNXDSPG	BSTDBS2D	BRIDGE ENGINEER

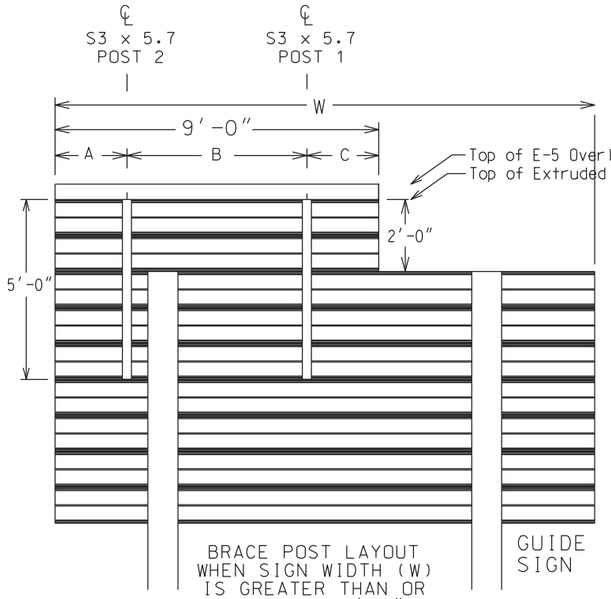
Plotted From - Bayley.Colemer

File - ...\0344_Section S_Sign Support Standards.dgn

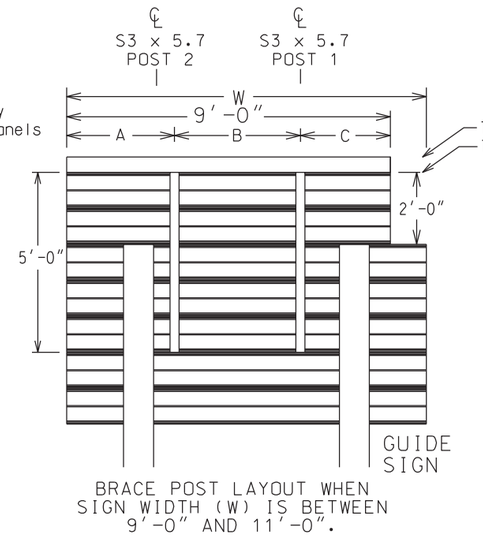
Plotting Date: 10/9/2025

Rev: 9/30/2025 BRC

Plot Scale - 1:200



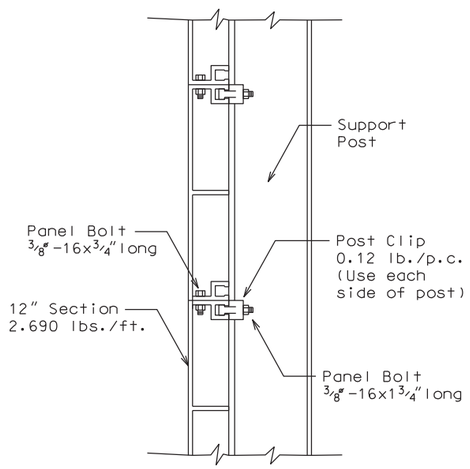
Case 1



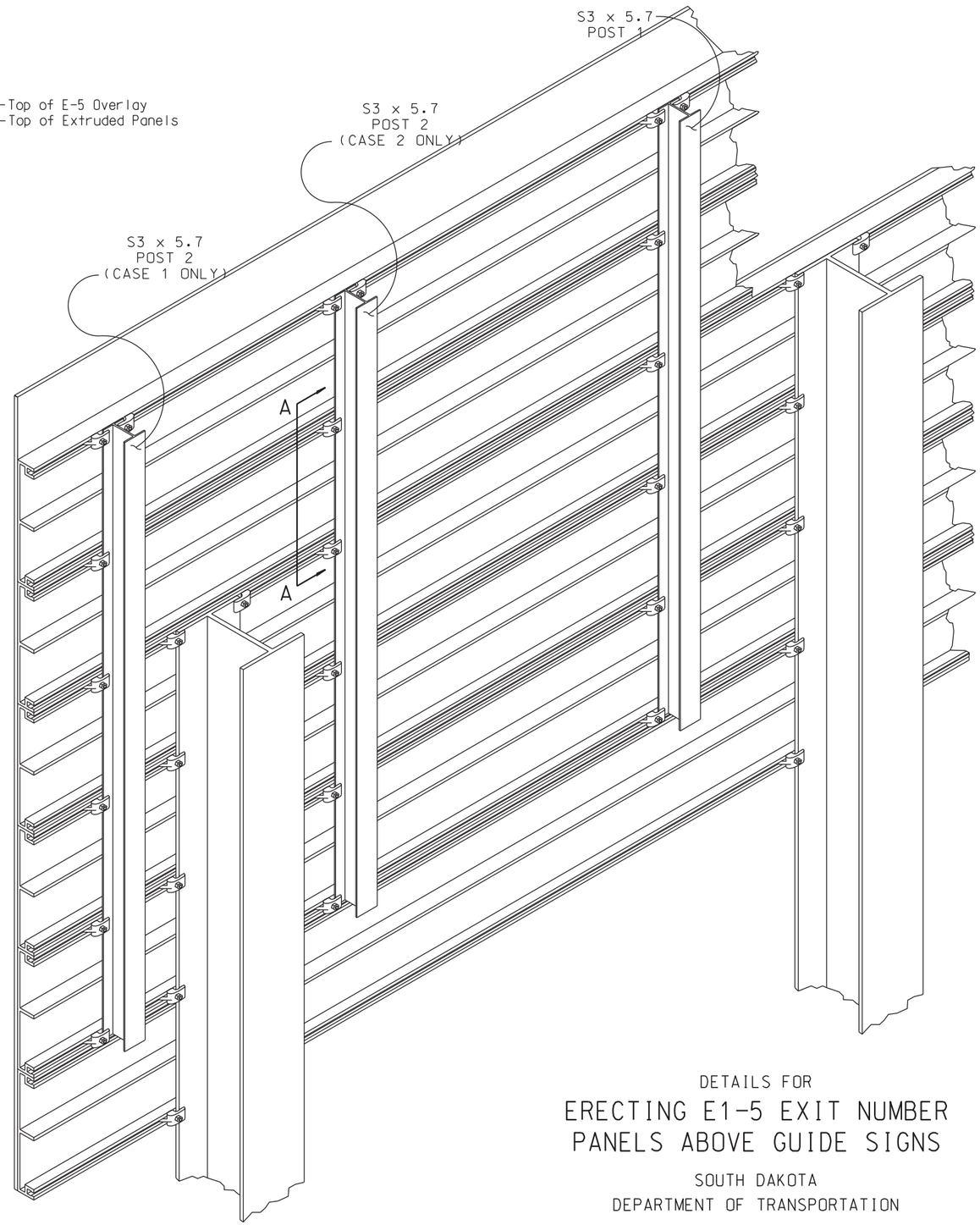
Case 2

BRACE POST LOCATION TABLE				
	SIGN WIDTH (W)	* A	B	C
CASE 2	9'-0"	2'-6"	4'-0"	2'-6"
	10'-0" to 11'-0"	3'-0"	3'-6"	2'-6"
CASE 1	12'-0" to 13'-0"	1'-6"	5'-6"	2'-0"
	14'-0" and up	2'-0"	5'-0"	2'-0"

* The A dimension may be adjusted (1" max.) to allow room for post clips.



Section A-A



ESTIMATED BRACE POST QUANTITIES				
SIGN #/DESCRIPTION	STATION	LOCATION	LANE	FLANGED POST S3 X 5.7
Exit 8 Advanced Warning	8.000	Rt.	EB	10'
Exit 8 Exit Directional	8.509	Rt.	EB	10'
Exit 17 Advanced Warning	16.740	Rt.	EB	10'
Exit 14 Supplemental	15.237	Rt.	WB	10'
Exit 8 Advanced Warning	9.795	Rt.	WB	10'
Exit 8 Exit Directional	9.314	Rt.	WB	10'

DETAILS FOR

ERECTING E1-5 EXIT NUMBER PANELS ABOVE GUIDE SIGNS

SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

Plotted From - Bayley.Colemer

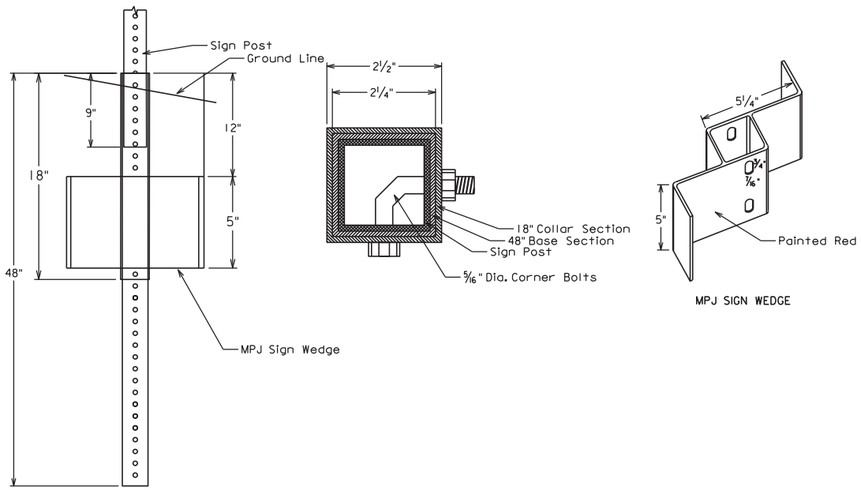
File - ...\0344_Section S_Sign Support Standards.dgn

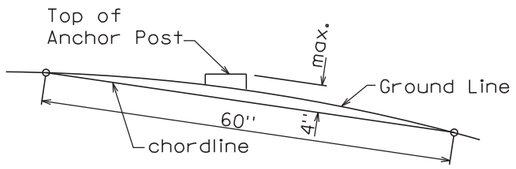
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S41	S57

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

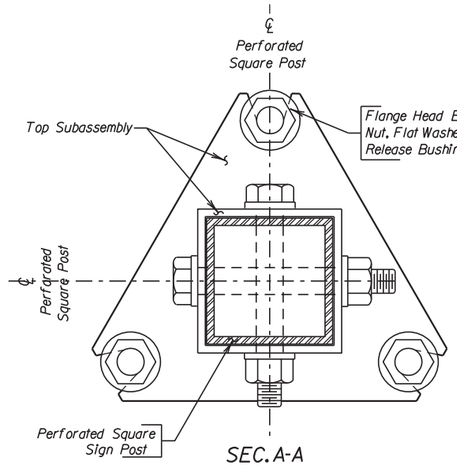
TYPICAL SIGN BASE DETAIL

SIGN BASE DETAILS FOR A 2" SIGN POST

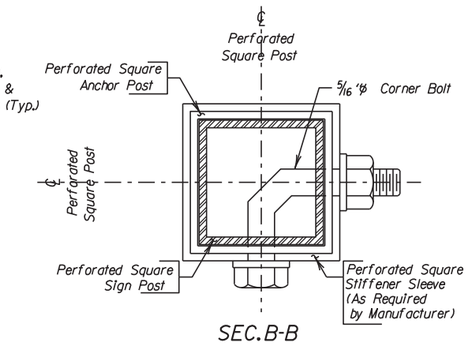




BREAKAWAY SIGN SUPPORTS



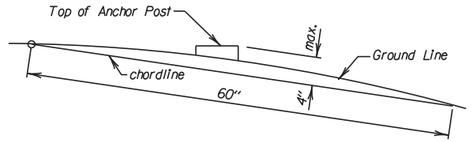
SEC. A-A



SEC. B-B

GENERAL NOTES-

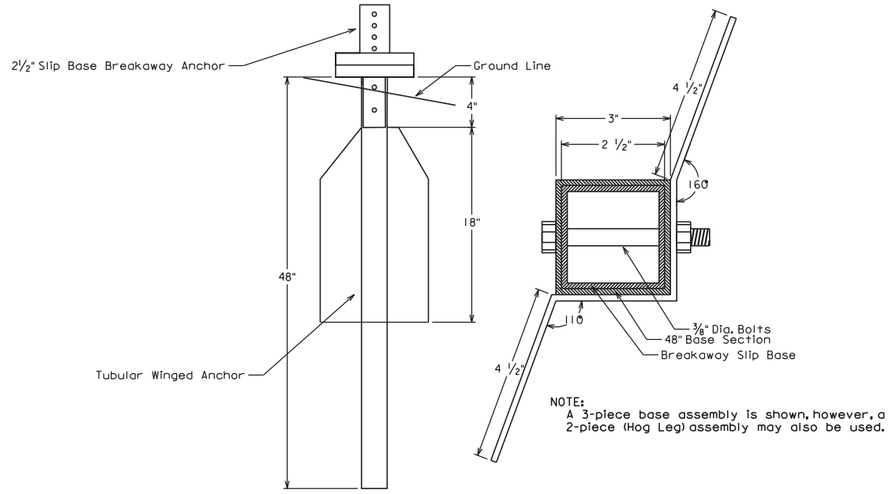
1. Design Specification: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Latest Edition.
2. The manufacturer shall provide certification that the posts and hardware furnished have essentially the same chemistry, mechanical properties and geometry as that used in the FHWA tests, and that it will meet the FHWA change in velocity requirements.
3. The manufacturer shall 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 shall be galvanized in accordance with ASTM A653, Des. G-90.
5. All hardware shall be galvanized in accordance with ASTM A153.



BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

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

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.

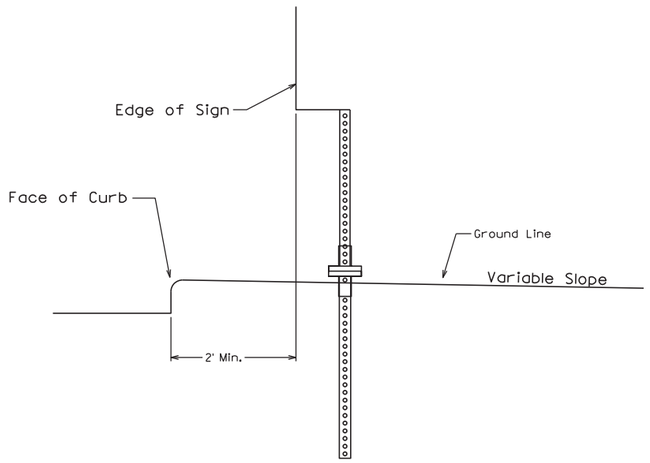
Plot Scale - 1:200

Plotted From - Bayley.Colemer

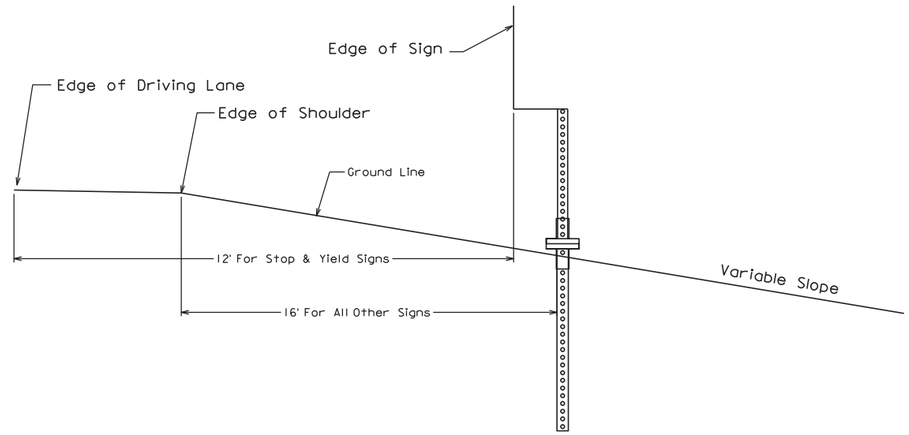
File - ...\0344_Section S_Sign Support Standards.dgn

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

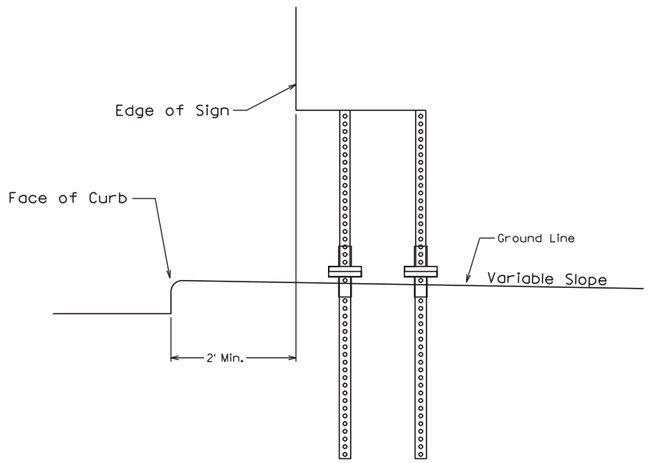
TYPICAL SIGN BASE DETAIL



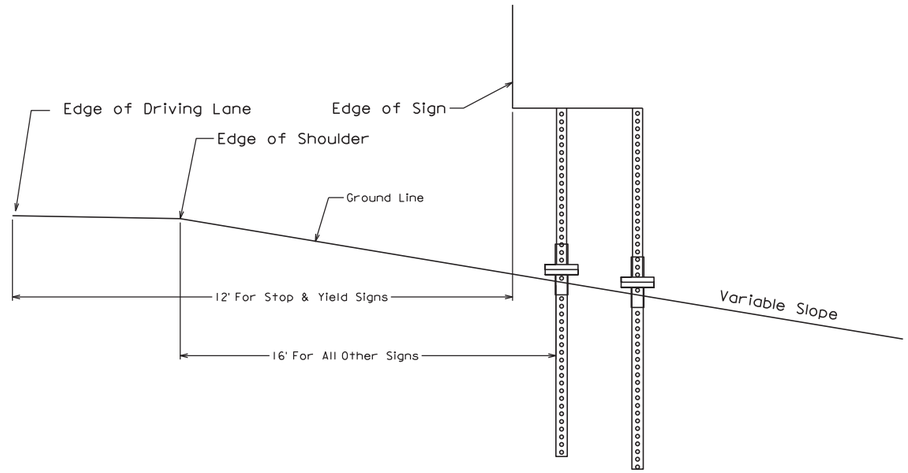
URBAN LOCATION WITH 1 POST
(Drawing shown from face of sign)



RURAL LOCATION WITH 1 POST
(Drawing shown from face of sign)



URBAN LOCATION WITH 2 POSTS
(Drawing shown from face of sign)



RURAL LOCATION WITH 2 POSTS
(Drawing shown from face of sign)

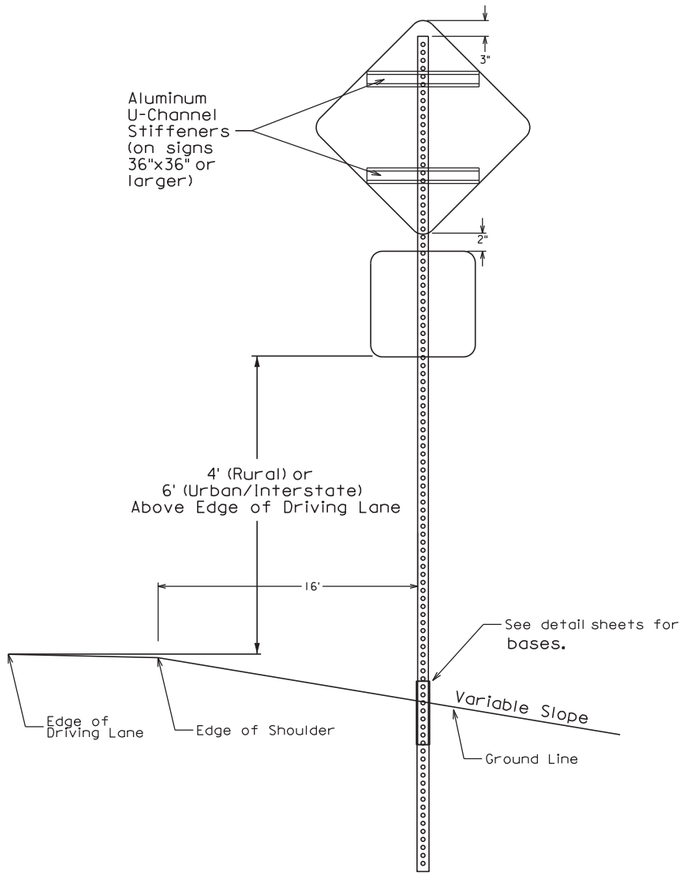
Plot Scale - 1:200

Plotted From - Bayley.Colemer

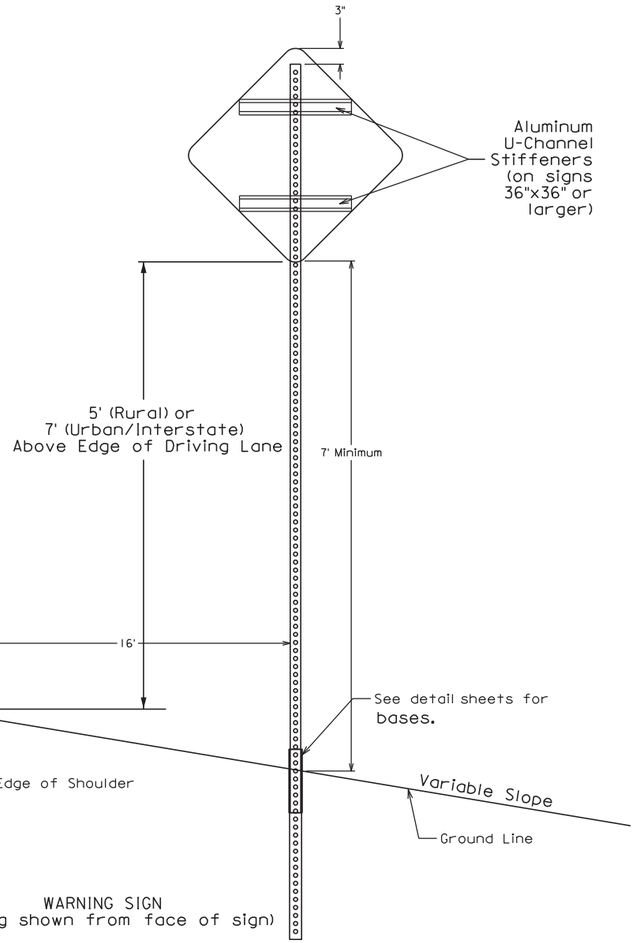
File - ...\0344_Section S_Sign Support Standards.dgn

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

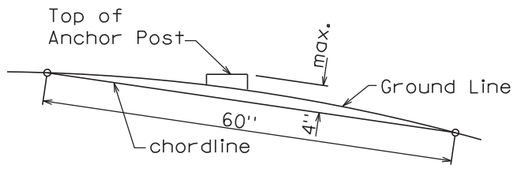
TYPICAL SIGN DETAIL



WARNING SIGN WITH SUPPLEMENTAL SIGN
(Drawing shown from face of sign)



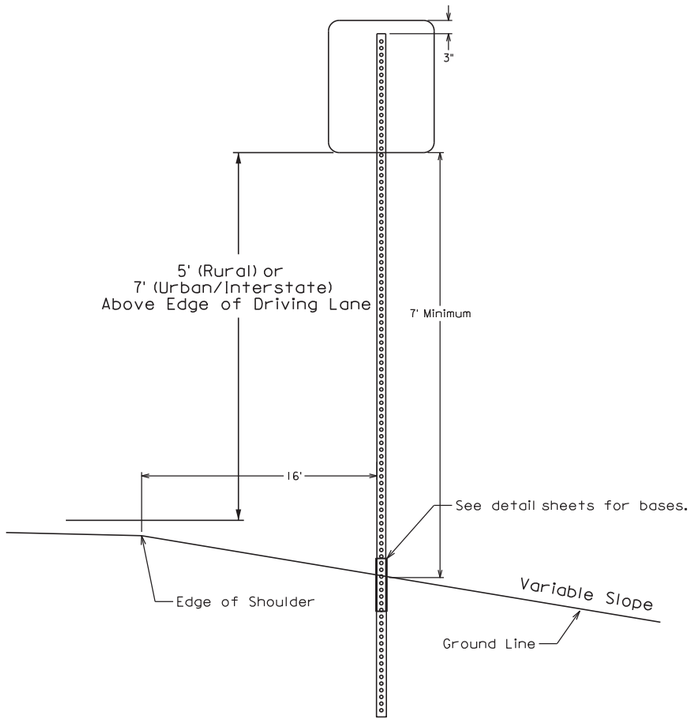
WARNING SIGN
(Drawing shown from face of sign)



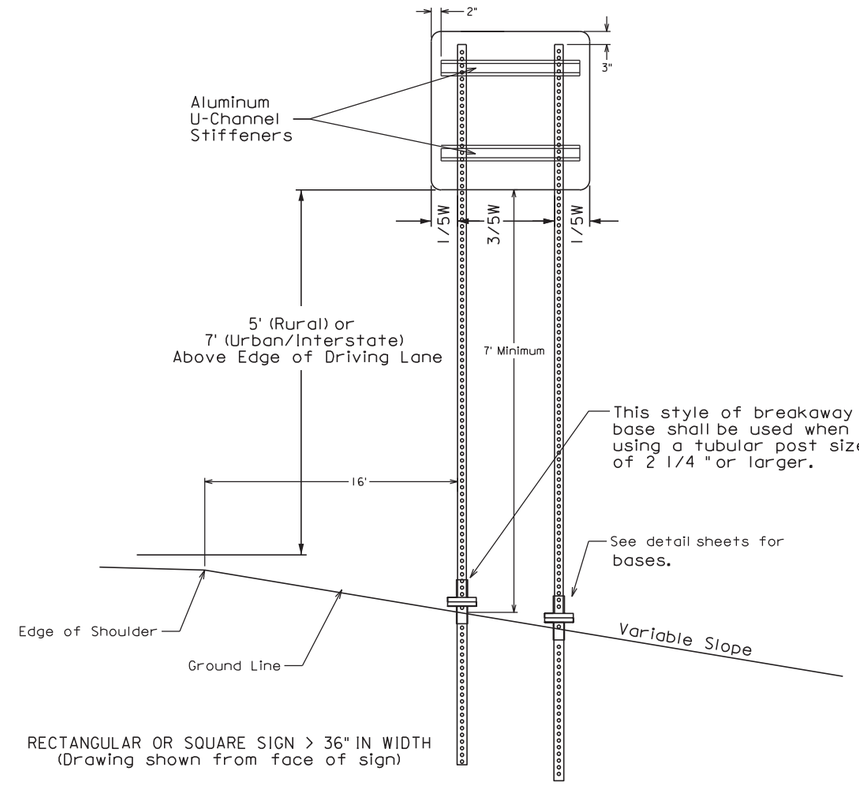
TYPICAL ERECTION DETAILS FOR WARNING SIGNS

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

TYPICAL SIGN DETAIL

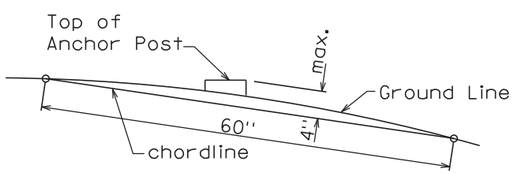


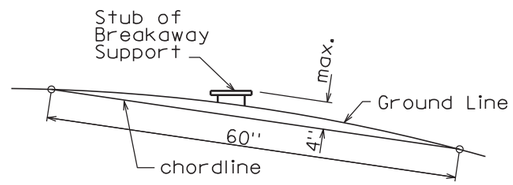
RECTANGULAR OR SQUARE SIGN < 36" IN WIDTH
(Drawing shown from face of sign)



RECTANGULAR OR SQUARE SIGN > 36" IN WIDTH
(Drawing shown from face of sign)

TYPICAL ERECTION DETAILS FOR SQUARE OR RECTANGULAR SIGNS





Plot Scale - 1:200

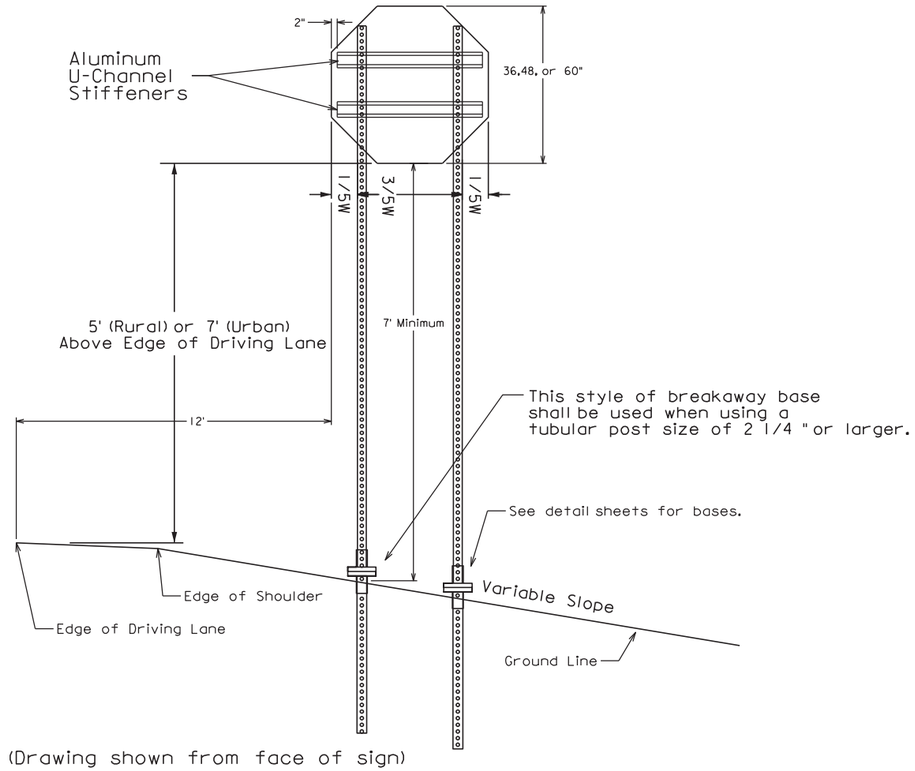
Plotted From - Bayley.Colemer

File - ...\1034J_Section S_Sign Support Standards.dgn

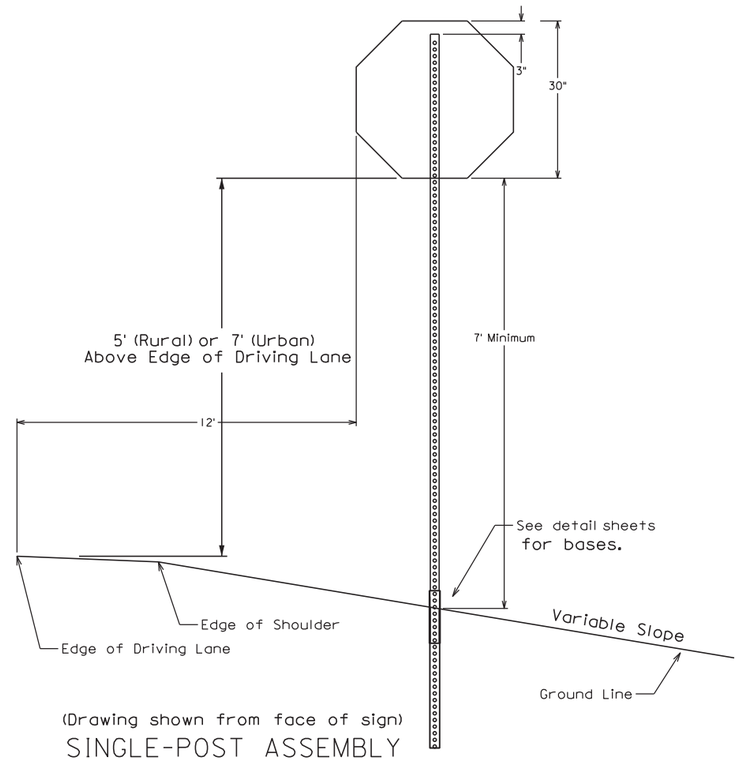
FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S45	S57

Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ
Rev: 9/30/2025 BRC

TYPICAL SIGN DETAIL

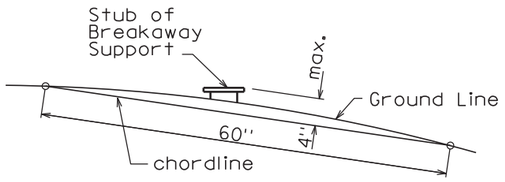


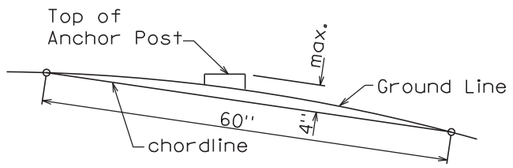
(Drawing shown from face of sign)
TWO-POST ASSEMBLY



(Drawing shown from face of sign)
SINGLE-POST ASSEMBLY

TYPICAL ERECTION DETAILS FOR STOP SIGNS





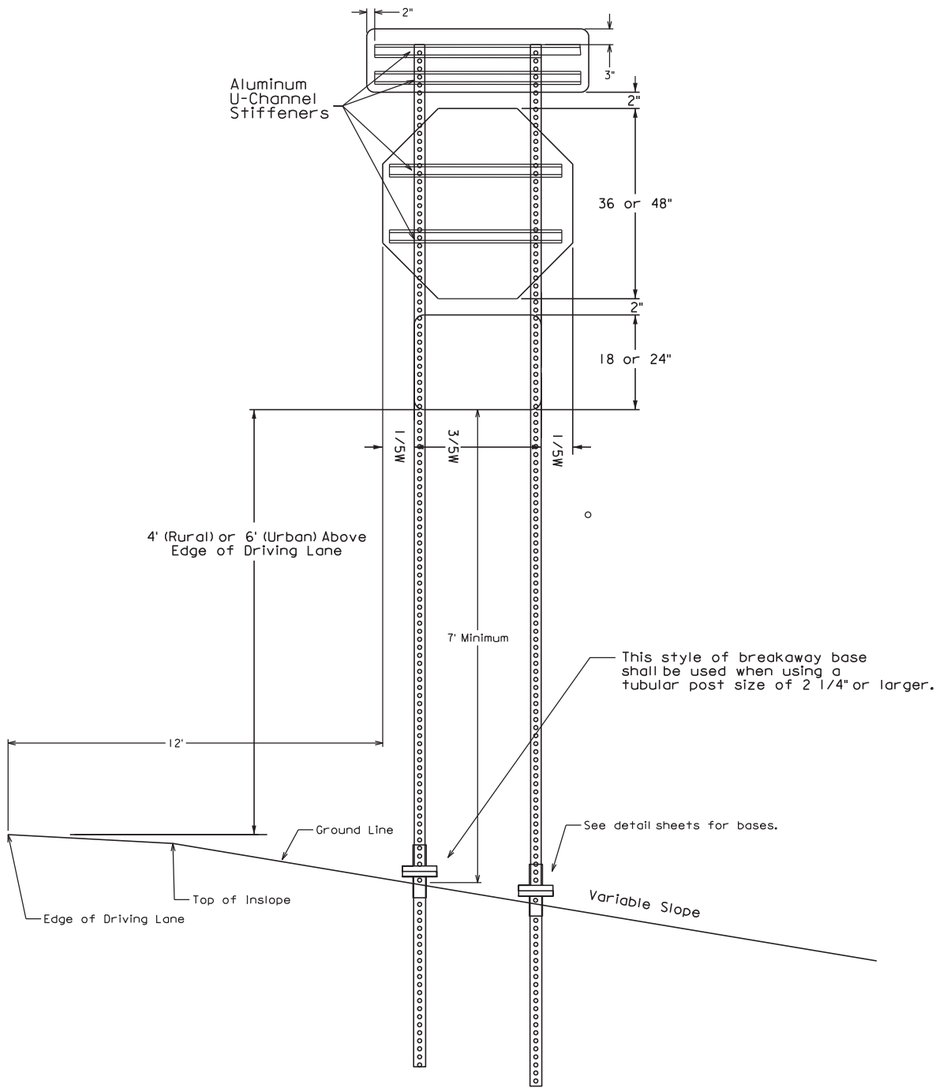
Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\0344_Section S_Sign Support Standards.dgn

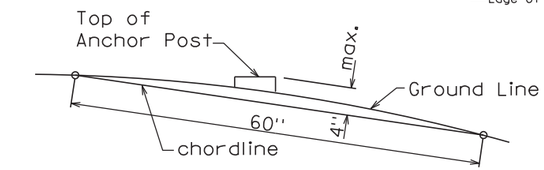
Plotting Date: 10/9/2025 Rev: 10/16/2024 LPZ Rev: 9/30/2025 BRC

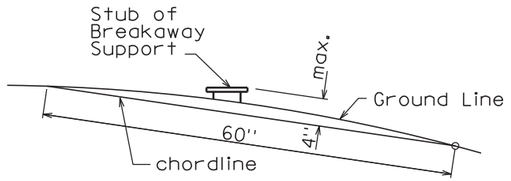
TYPICAL SIGN DETAIL

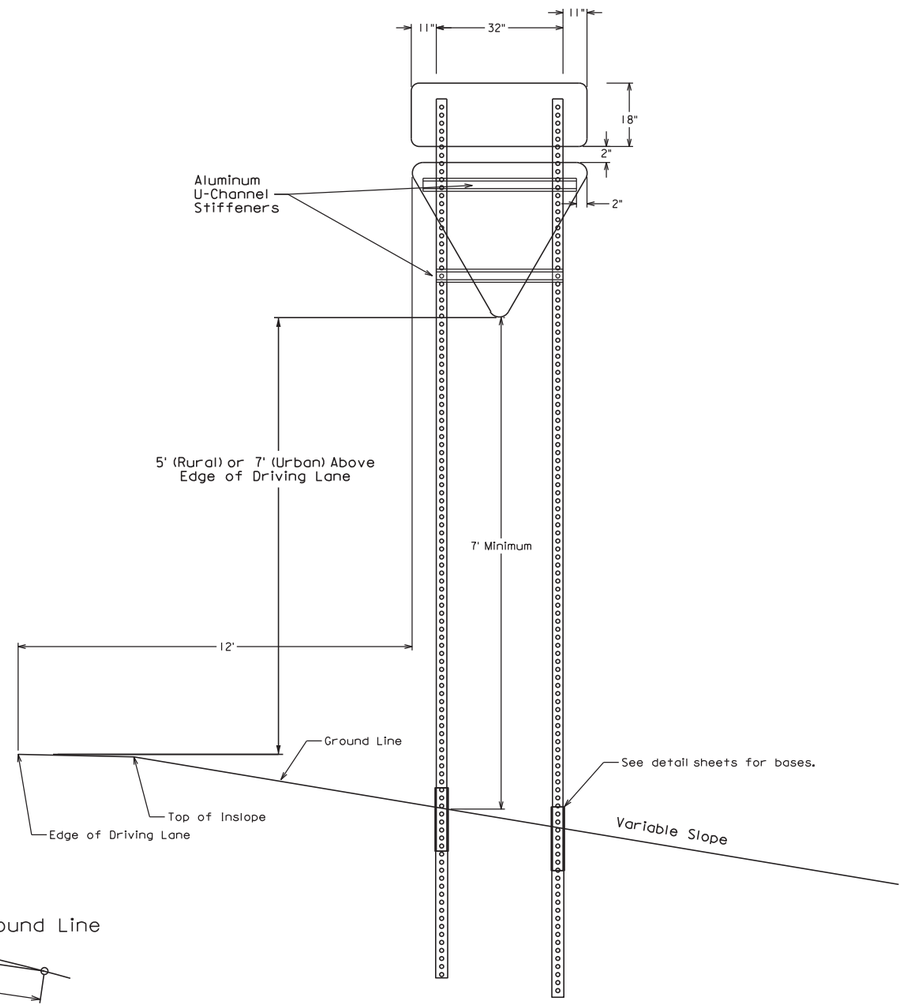


STOP SIGN WITH DIVIDED HIGHWAY SIGN AND ONE WAY SIGNS
(Drawing shown from face of sign)

TYPICAL ERECTION DETAILS FOR STOP SIGNS ON DIVIDED HIGHWAYS







YIELD SIGN WITH ONE WAY SIGNS
(Drawing shown from face of sign)

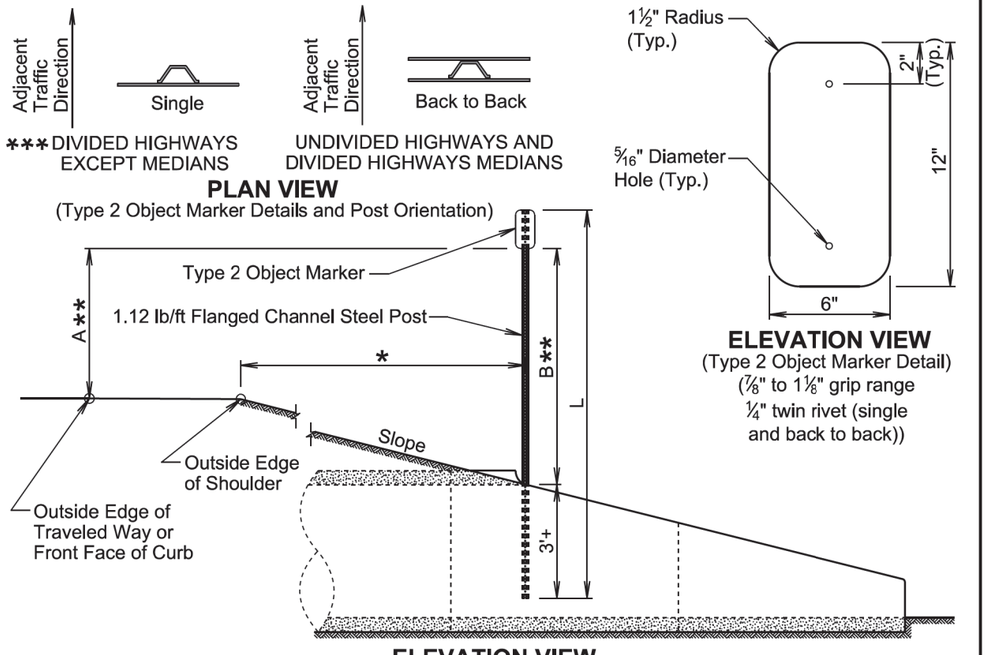
TYPICAL ERECTION DETAILS FOR YIELD SIGNS ON DIVIDED HIGHWAYS

Plot Scale - 1:200

Plotted From - Bayley.Colemer

File - ...\034J_Section S_Sign Support Standards.dgn

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC



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.

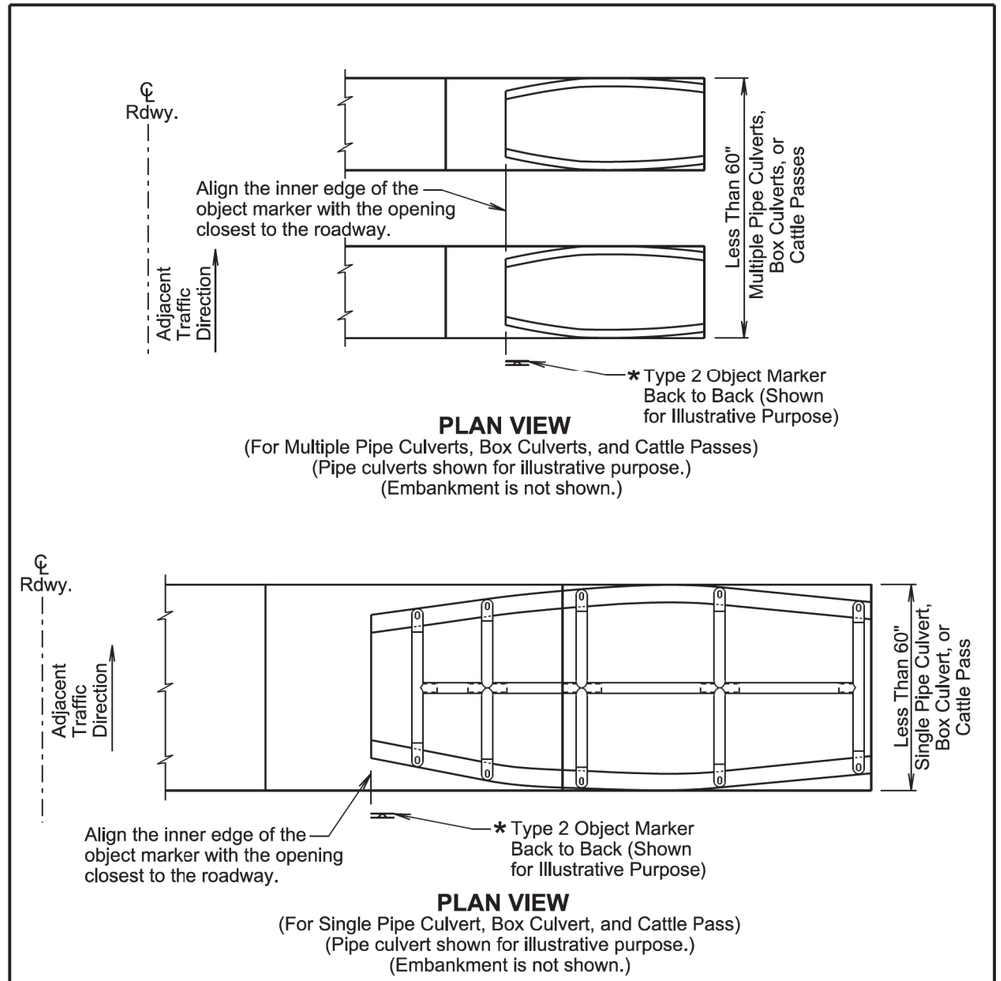
** Dimension A is 4 feet when the Offset * is 8 feet and less. Dimension B is 4 feet when Offset * is greater than 8 feet.

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: 2026	SDDOT	TYPE 2 OBJECT MARKER (DIRECT DRIVE)	PLATE NUMBER 632.01
			Sheet 1 of 1



GENERAL NOTES:

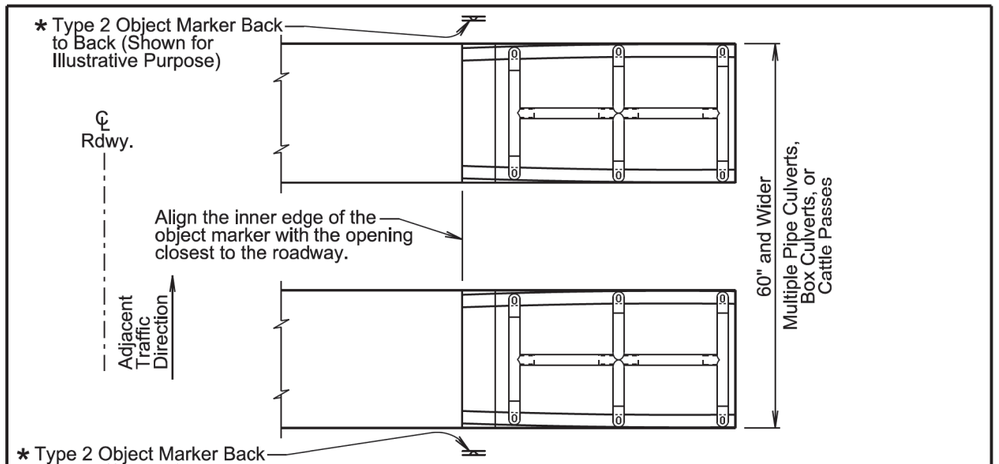
This standard plate will be used in conjunction with standard plate 632.01.

* 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.

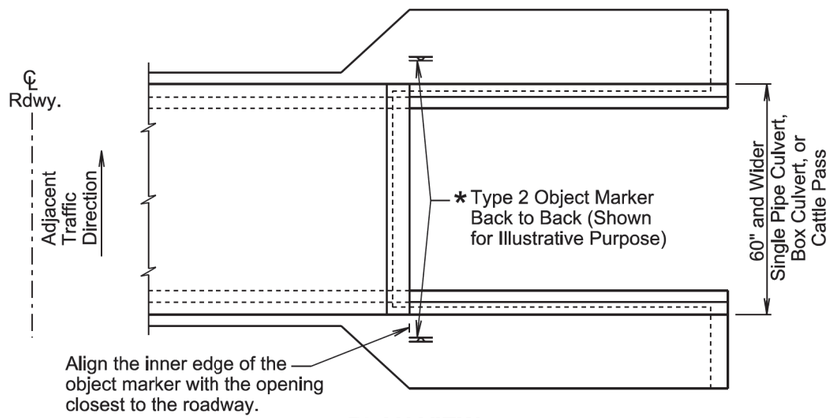
December 23, 2019

Published Date: 2026	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

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC



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.)

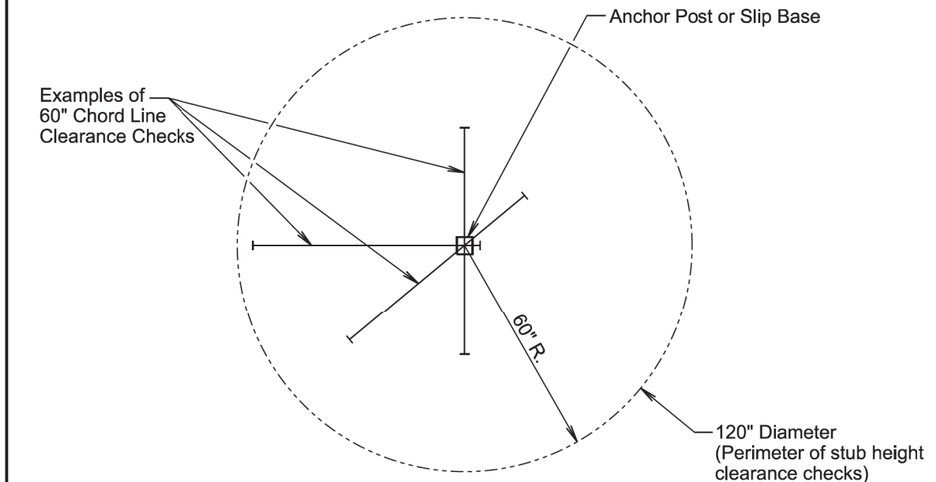
GENERAL NOTES:

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

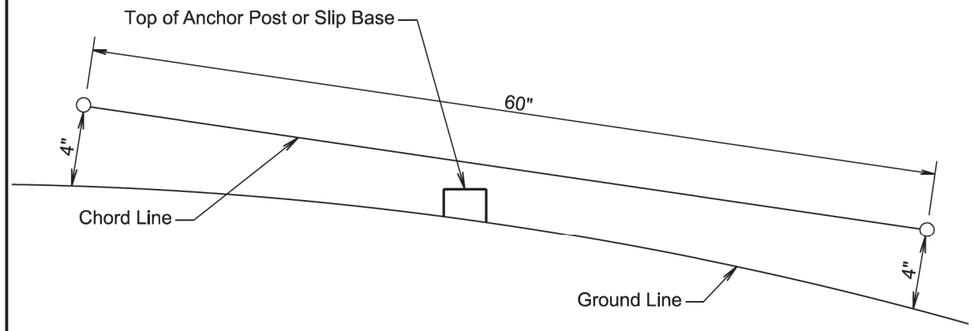
* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2026	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:

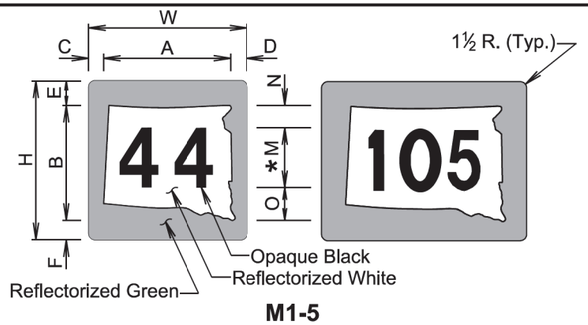
The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

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

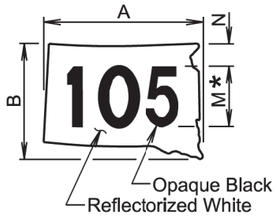
Published Date: 2026	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 632.18 Sheet 1 of 1

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC



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

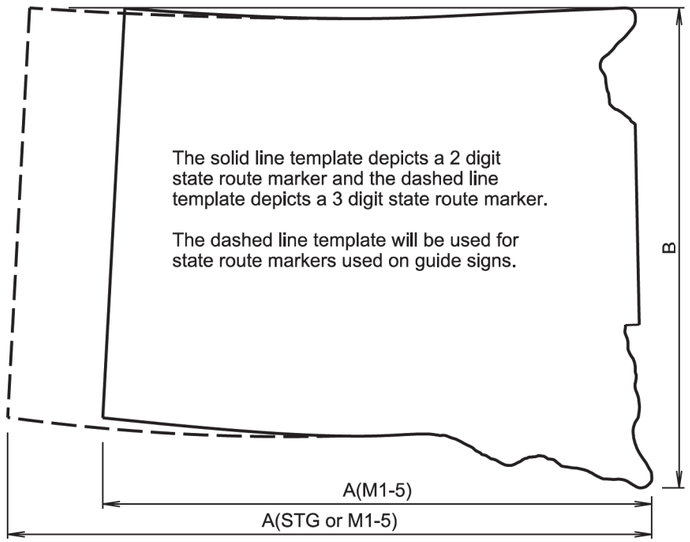


STG

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

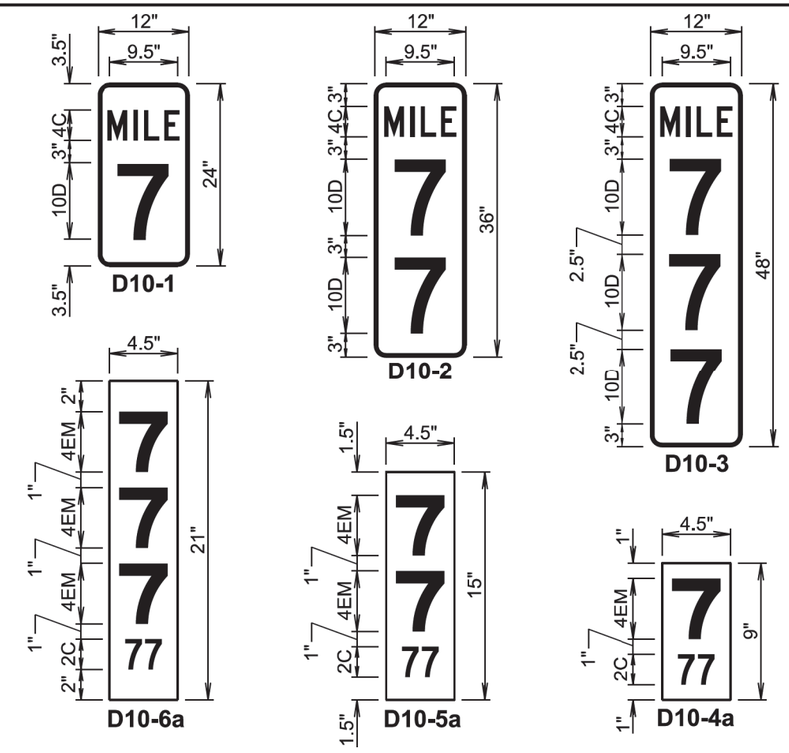
GENERAL NOTES:

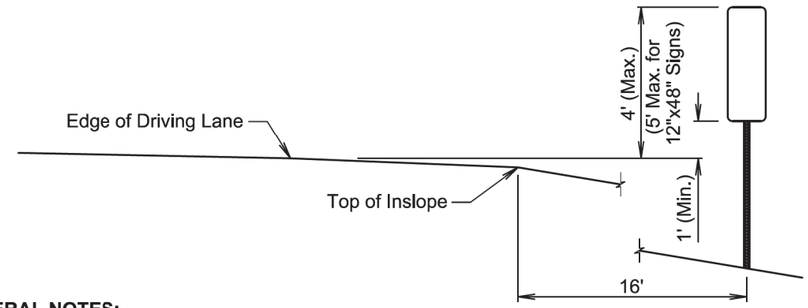
The unit for all dimensions shown is inches.

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

December 23, 2019

Published Date: 2026	SDDOT	STATE ROUTE MARKERS	PLATE NUMBER 632.20
			Sheet 1 of 1





ELEVATION VIEW

GENERAL NOTES:

Background will be high intensity green.

Legend and border will be high intensity white.

Signs 12 inches wide will have rounded corners (Radius = 1.5 inches) with 0.5 inch wide border.

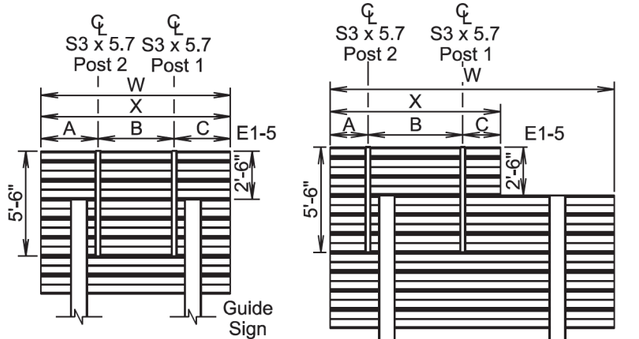
Signs 4.5 inches wide will have squared corners with no border.

Sign locations will be staked by the Engineer.

December 23, 2019

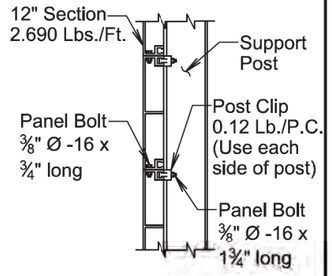
Published Date: 2026	SDDOT	INTERSTATE MILEAGE REFERENCE MARKERS	PLATE NUMBER 632.31
			Sheet 1 of 1

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

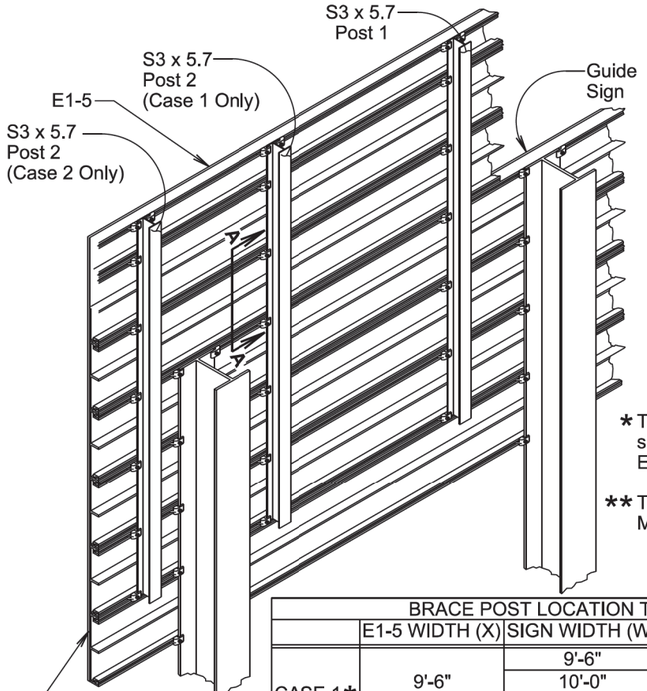


Brace Posts Case 1

Brace Posts Case 2



Section A-A



* The brace posts may be omitted if the sign posts extend to the top of the E1-5 sign, if specified in the plans.

** The A dimension may be adjusted (1" Max.) to allow room for post clips.

BRACE POST LOCATION TABLE					
	E1-5 WIDTH (X)	SIGN WIDTH (W)	A**	B	C
CASE 1*	9'-6"	9'-6"	2'-6"	4'-6"	2'-6"
		10'-0"	2'-9"	4'-6"	2'-3"
		11'-0"	2'-9"	4'-9"	2'-0"
	11'-0"	11'-0"	2'-9"	5'-6"	2'-9"
CASE 2	9'-6"	12'-0 to 13'-0"	1'-9"	5'-9"	2'-0"
		14'-0" and up	2'-0"	5'-6"	2'-0"
		12'-0"	1'-9"	7'-0"	2'-3"
	11'-0"	13'-0" and up	2'-0"	7'-0"	2'-0"

November 19, 2020

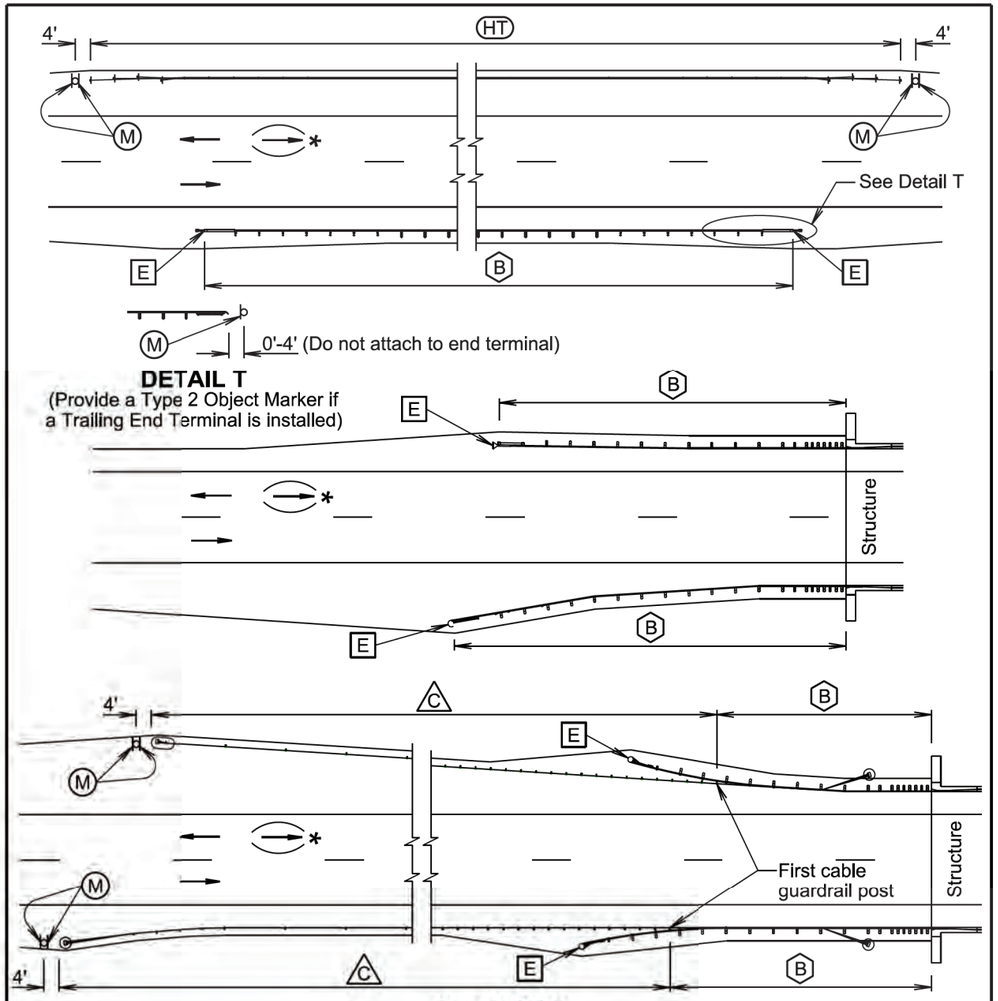
Published Date: 2026

SDDOT

ERECTING E1-5P EXIT NUMBER PLAQUES ABOVE GUIDE SIGNS

PLATE NUMBER 632.35

Sheet 1 of 1



DETAIL T
(Provide a Type 2 Object Marker if a Trailing End Terminal is installed)

PLAN VIEW
(Typical Guardrail Layouts)

(B) Steel Beam Guardrail Delineation
(E) Guardrail End Terminal Object Marker
(C) 3 Cable Guardrail (Low Tension) Delineation
(HT) High Tension Cable Guardrail Delineation
(M) Type 2 Object Marker

* For two-way traffic, install delineation at the opposite end of structure the same as shown. Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

April 8, 2025

Published Date: 2026

SDDOT

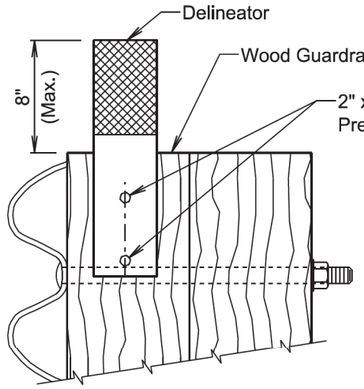
DELINEATION OF GUARDRAIL

PLATE NUMBER 632.40

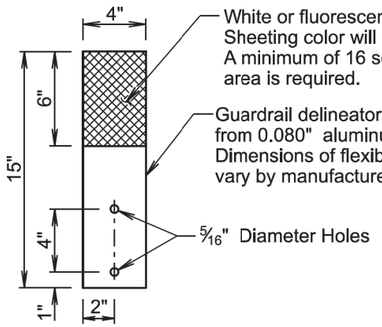
Sheet 1 of 4

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

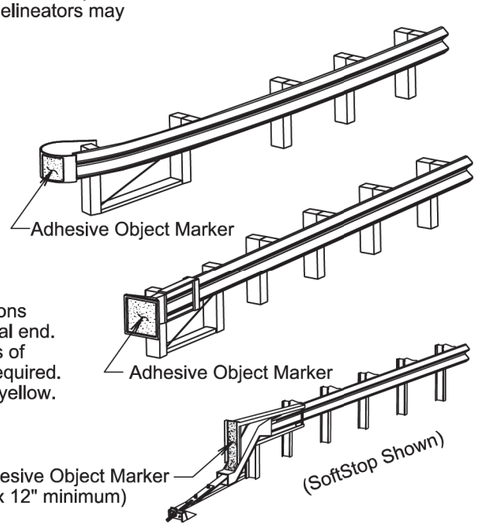
Plot Scale - 1:200



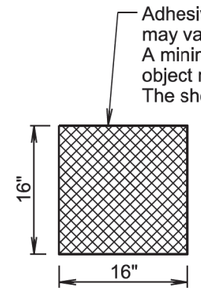
(B) STEEL BEAM GUARDRAIL DELINEATION



DELINEATOR
(For Steel Beam Guardrail)



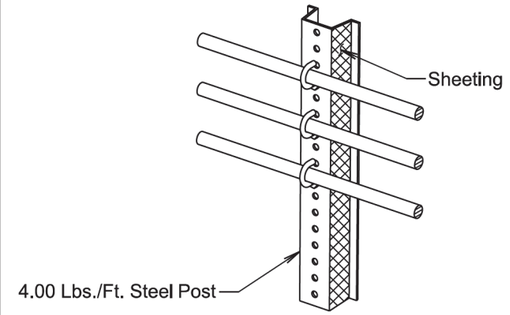
(E) GUARDRAIL END TERMINAL OBJECT MARKER



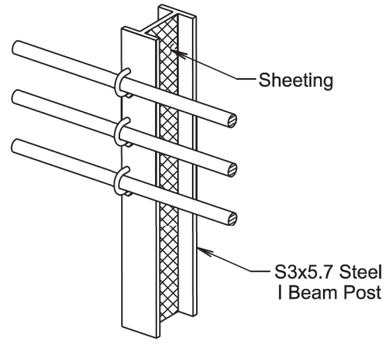
ADHESIVE OBJECT MARKER

April 8, 2025

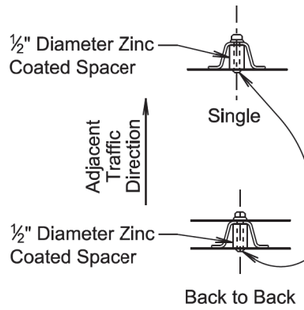
Published Date: 2026	SDDOT	DELINEATION GUARDRAIL	PLATE NUMBER 632.40
			Sheet 2 of 4



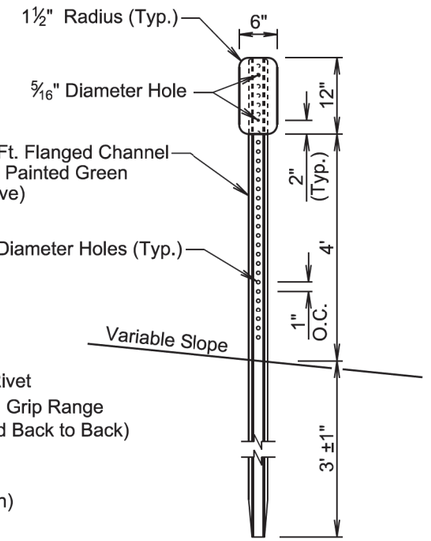
(C) 3 CABLE GUARDRAIL (LOW TENSION) DELINEATION



(C) 3 CABLE GUARDRAIL (LOW TENSION) DELINEATION



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



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

April 8, 2025

Published Date: 2026	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 3 of 4

Plotted From - Bayley.Colemer

File - ...\1034J_Section S_Standard Plates.dgn

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

Plot Scale - 1:200

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".

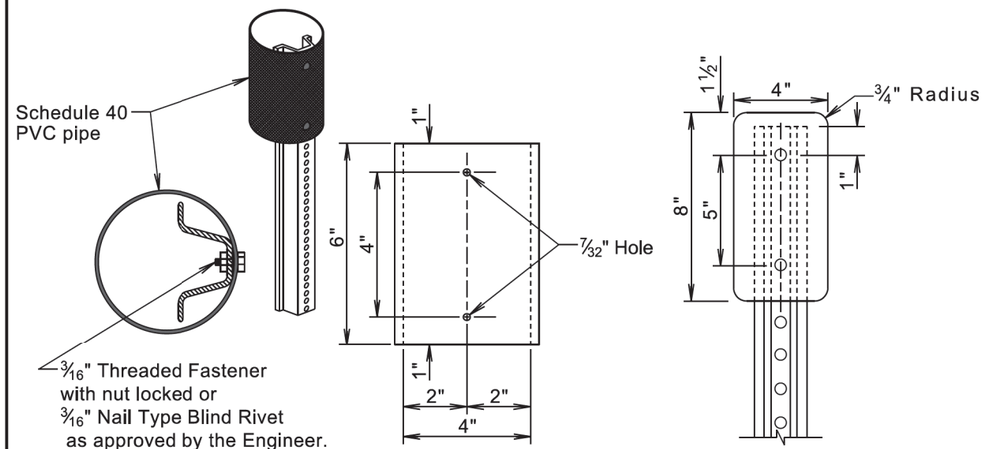
All costs for furnishing and installing the reflective sheeting on the cable spacers or post caps for the high tension cable guardrail will be incidental to the respective high tension cable guardrail contract item.

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 such that the edges of the type 2 object marker and the 3 cable guardrail (low tension) anchor, high tension cable guardrail anchor, or the trailing end terminal that are nearest to the roadway will be installed in line with the same lateral offset from the traveled way at the location as 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.

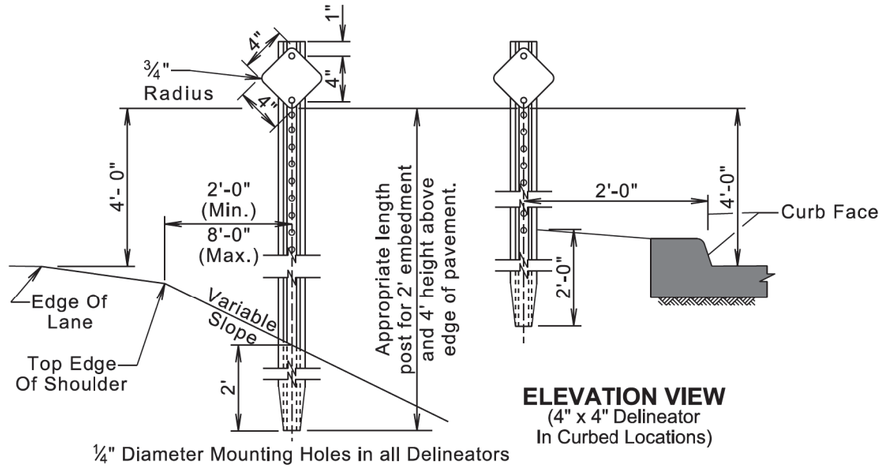
April 8, 2025

Published Date: 2026	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)



¼" Diameter Mounting Holes in all Delineators

ELEVATION VIEW
(4" x 4" Delineators)

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

GENERAL NOTES:

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

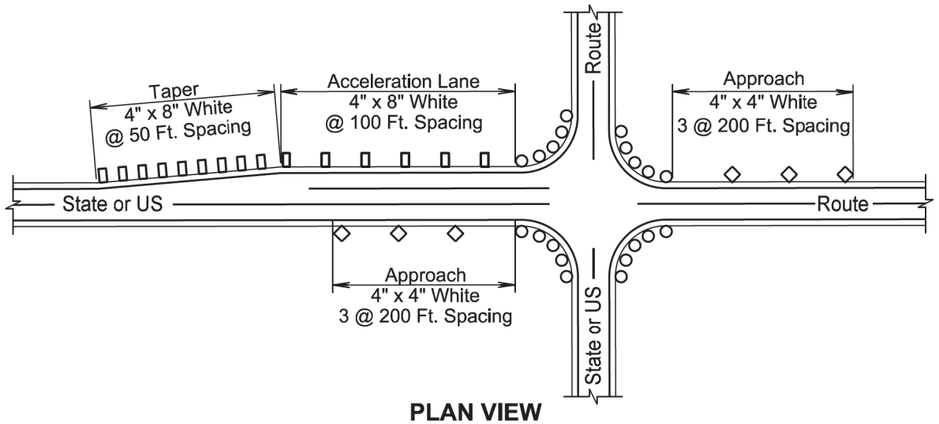
March 31, 2024

Published Date: 2026	SDDOT	DELINEATOR INSTALLATION DETAIL	PLATE NUMBER 632.42
			Sheet 1 of 1

Plotted From - Bayley.Colemer

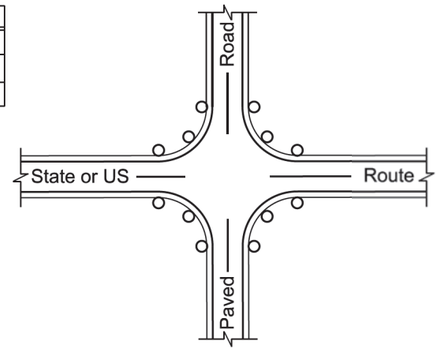
File - ...\0344_Section S_Standard Plates.dgn

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC



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:

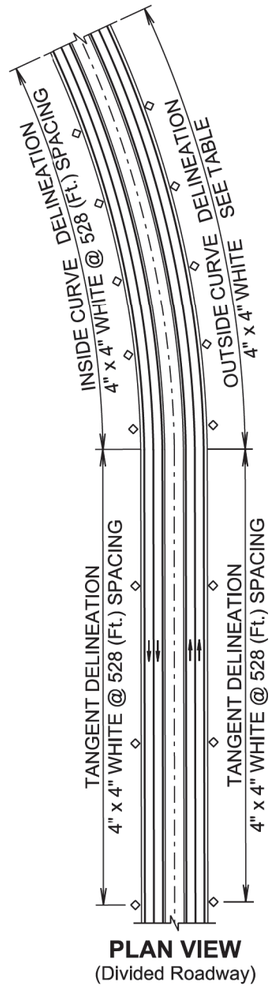
For radii greater than 100 feet, place 5 tubular white delineators on equally spaced posts around the turning radius.

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

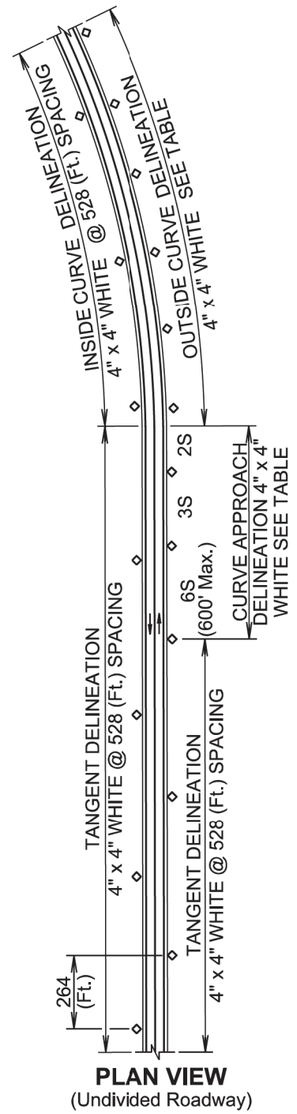
For radii of 50 feet or less, place 3 tubular white delineators on equally spaced posts around the turning radius.

November 19, 2020

Published Date: 2026	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: 2026	SDDOT	DELINEATOR INSTALLATION SPACING	PLATE NUMBER 632.46 Sheet 1 of 2

Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC

Plot Scale - 1:200

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.

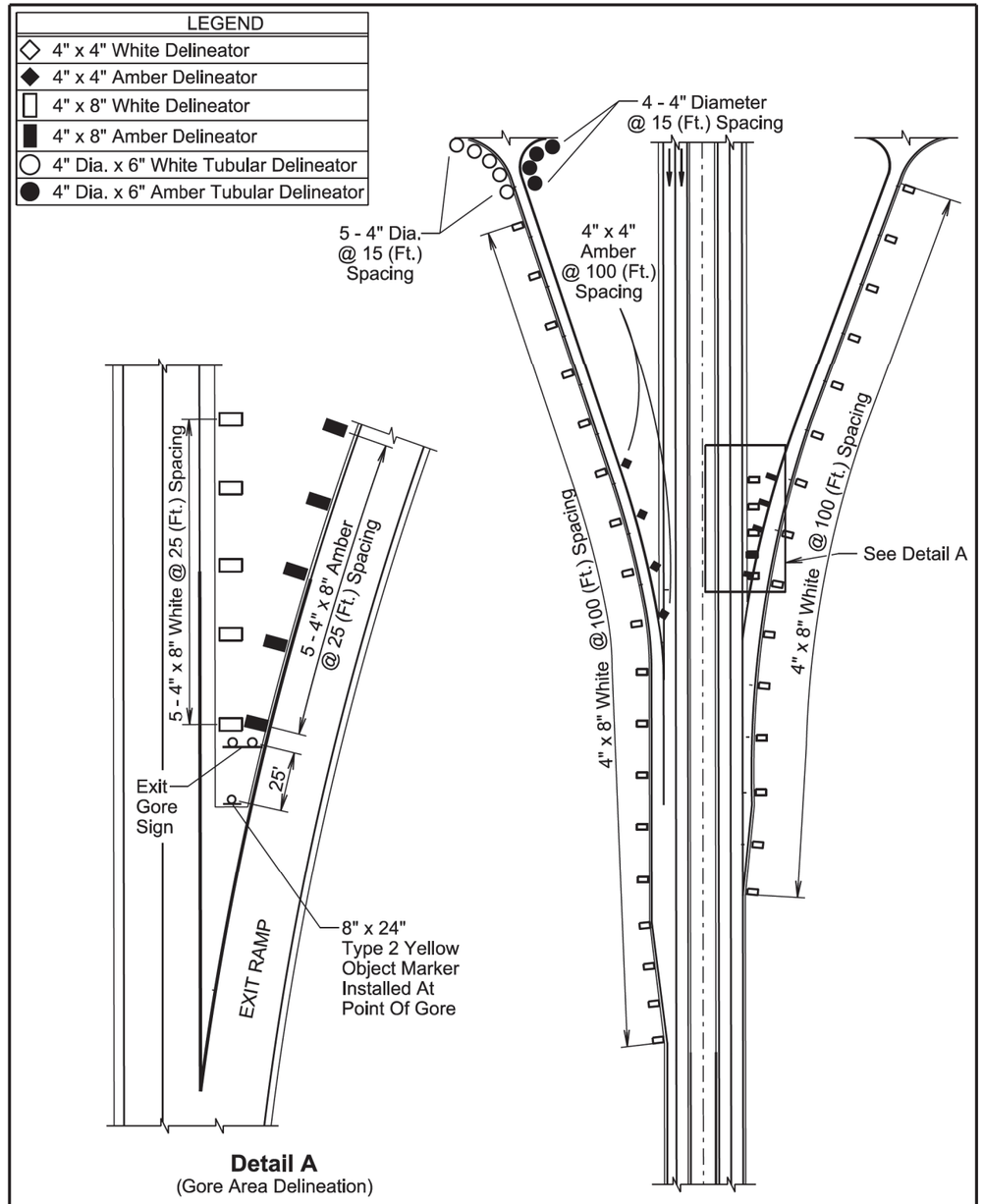
Curve approach delineation is not required if curve delineation spacing exceeds 100 ft.

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: 2026 | SDDOT | DELINEATOR INSTALLATION SPACING | PLATE NUMBER 632.46 | Sheet 2 of 2



Detail A
(Gore Area Delineation)

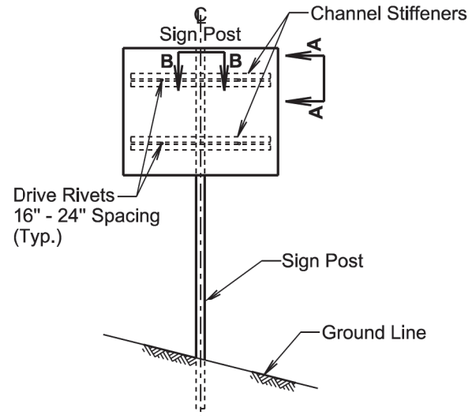
November 19, 2020

Published Date: 2026 | SDDOT | DELINEATORS AT RAMPS AND GORE AREAS | PLATE NUMBER 632.48 | Sheet 1 of 1

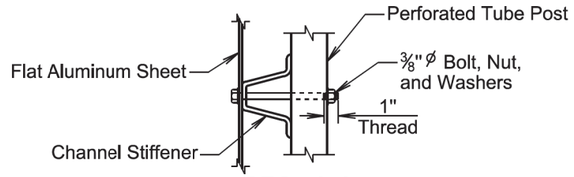
Plotted From - Bayley.Colemer

File - ...\0344_Section S_Standard Plates.dgn

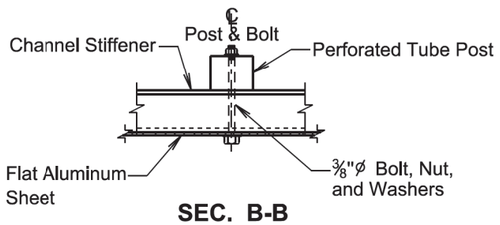
Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC



ELEVATION VIEW
(One post breakaway sign supports.)



SEC. A-A

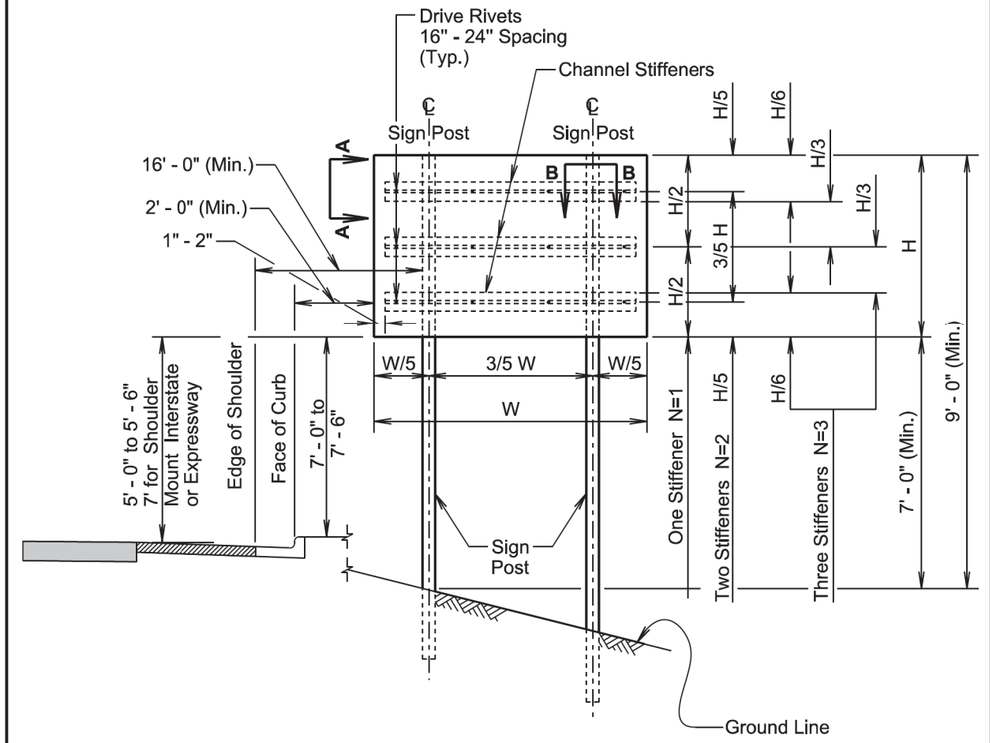


SEC. B-B
(Typical sign and stiffener details.)

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: 2026	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 1 of 2



TWO POST BREAKAWAY SIGN SUPPORTS

GENERAL NOTES:

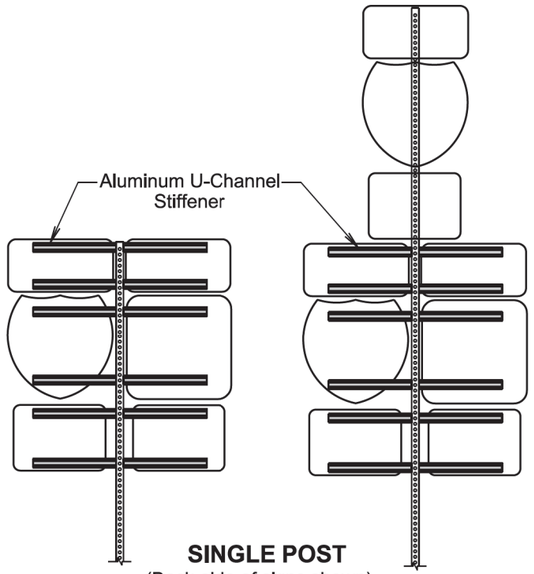
The number of stiffeners used (N) will be as follows:
If H < = 2' - 0" then N = 1
if 2' - 0" < H < = 8' - 0" then N = 2
if 8' - 0" < H < = 15' - 0" then N = 3
where H is the vertical dimension of the sign.

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

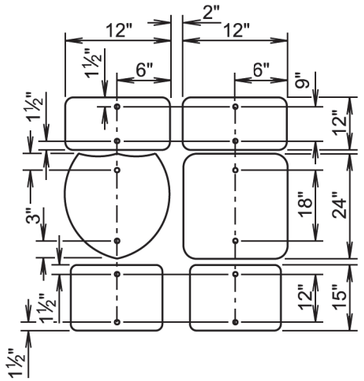
November 19, 2020

Published Date: 2026	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 2 of 2

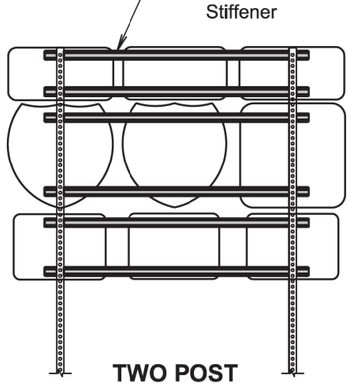
Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC Rev: 9/30/2025 BRC



SINGLE POST
(Back-side of signs shown)



TYPICAL ROUTE MARKER BOLT HOLE LOCATIONS

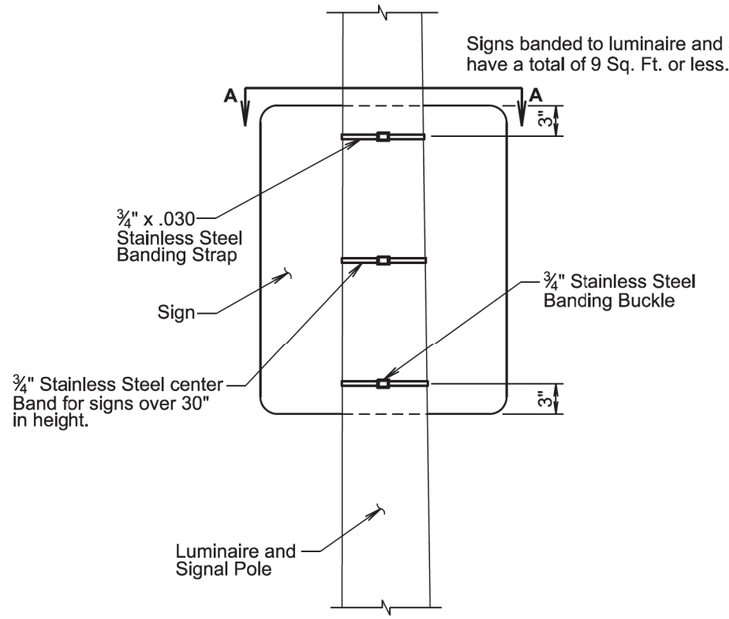


TWO POST
(Back-side of signs shown)

November 19, 2020

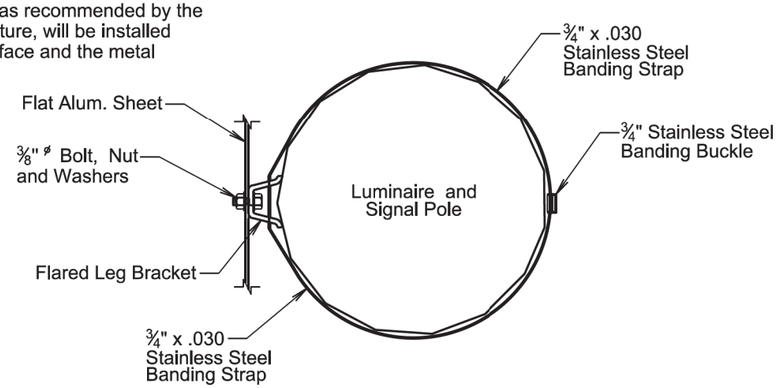
Published Date: 2026	SDDOT	MULTIPLE ROUTE MARKER SIGN STIFFENER INSTALLATION DETAILS	PLATE NUMBER 632.62 Sheet 1 of 1

Signs banded to luminaire and signal pole will have a total of 9 Sq. Ft. or less.



Back View

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



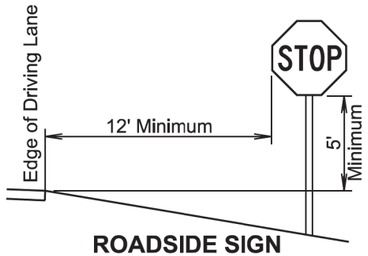
View A - A

November 19, 2020

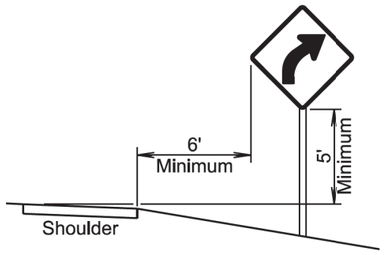
Published Date: 2026	SDDOT	BANDING SIGN TO LUMINAIRE AND SIGNAL POLE	PLATE NUMBER 632.80 Sheet 1 of 1

FELSBURG HOLT & ULLEVIG	STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
		IM-CR-EM 0901(187)44	S57	S57

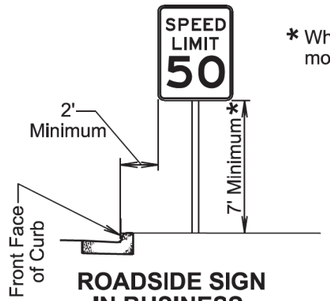
Plotting Date: 10/9/2025 Rev: 9/11/2025 BRC
Rev: 9/30/2025 BRC



ROADSIDE SIGN IN RURAL AREA

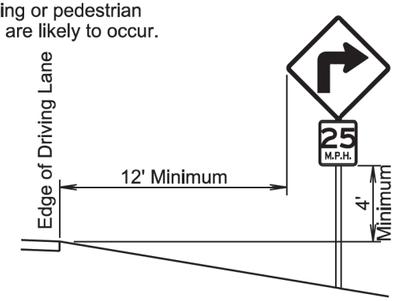


ROADSIDE SIGN IN RURAL AREA
(If shoulder width is greater than 6 foot)

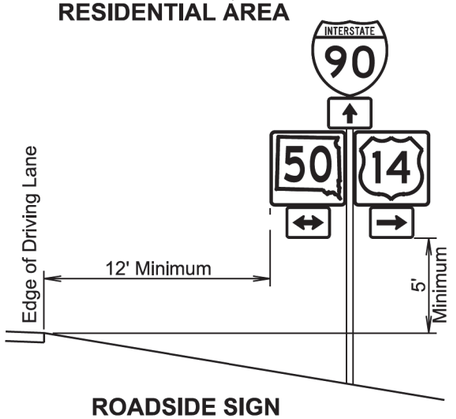


ROADSIDE SIGN IN BUSINESS, COMMERCIAL, OR RESIDENTIAL AREA

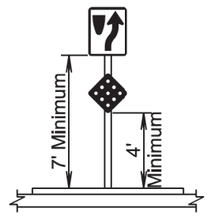
* Where parking or pedestrian movements are likely to occur.



WARNING SIGN ADVISORY SPEED PLAQUE IN RURAL AREA



ROADSIDE SIGN IN RURAL AREA



SIGN ON NOSE OF MEDIAN

April 8, 2025

Published Date: 2026	SDDOT	OFFSETS FOR SIGN INSTALLATION	PLATE NUMBER 632.90
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Bayley.Colemer
File - ...\0344_Section S_Standard Plates.dgn