

SECTION S: PERMANENT SIGNING PLANS

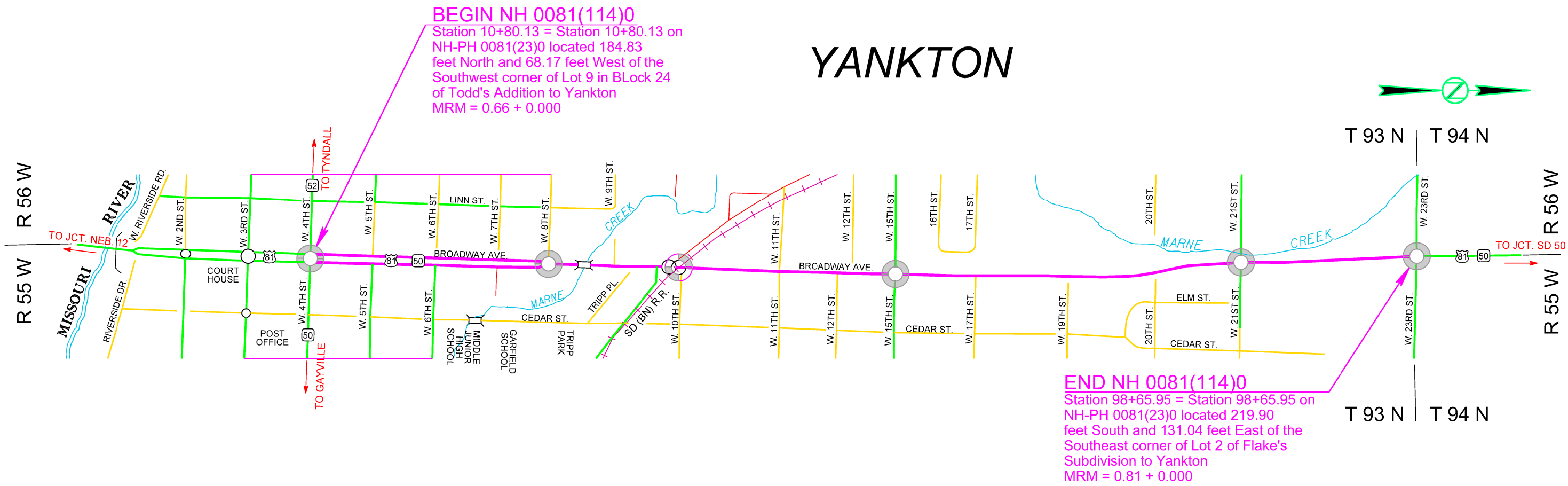
STATE OF SOUTH DAKOTA	PROJECT NH 0081(114)0	SHEET S1	TOTAL SHEETS S15
-----------------------	--------------------------	-------------	---------------------

Plotting Date: 09/27/2023

INDEX OF SHEETS

- S1 General Layout with Index
- S2-S3 Estimate with General Notes & Tables
- S4-S6 Permanent Signing Tables
- S7-S11 Permanent Signing Layouts
- S12 Flat Aluminum Sign Details
- S13 Breakaway Base Details
- S14-S15 Standard Plattes

YANKTON



PLOT SCALE - 1:202.009

PLOTTED FROM - IRM113318

PLOT NAME - 3

FILE - ... \PRJ\YANK\7DH\DN\TITLES.DGN

Section S - Permanent Signing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	22	Each
632E1320	2.0"x2.0" Perforated Tube Post	68.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	148.0	Ft
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	660.0	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	25.2	SqFt

GENERAL PERMANENT SIGNING

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

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

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

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

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

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

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

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

REMOVE TRAFFIC SIGN

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

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

NEW PERMANENT SIGNING

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

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

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware will be incidental to the contract unit price per square foot for "Flat Aluminum Sign, Nonremovable Copy High Intensity" or "Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity".

DIGITALLY PRINTED SIGNS

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

PROTECTIVE OVERLAY FILM

Permanent traffic signs printed with digital ink systems will be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlamine 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.

CERTIFIED DIGITAL SIGN FABRICATOR

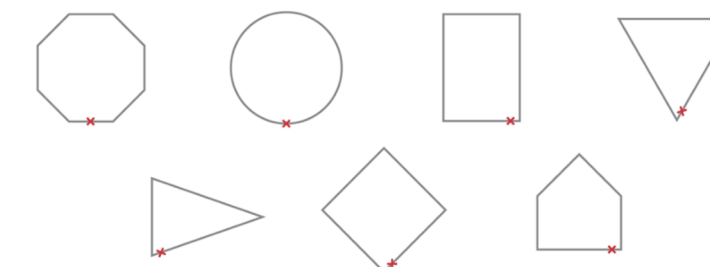
Sign fabricators using digital imaging methods to produce regulated traffic signs must be certified by the reflective sheeting manufacturer whose materials are used to produce the delivered signs.

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.



POLE AND MAST ARM MOUNTED SIGNS

Signs that are mounted on signal poles, or luminaire poles will be attached with high strength stainless steel bands or galvanized pole clamps. Signs mounted on signal mast arm supports shall be installed with Astro-brac, or equivalent, formed tube sign mounting brackets and will be attached as recommended by the manufacturer.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	S3	S15

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.

MILEAGE REFERENCE MARKERS

Mileage Reference Markers (MRMs) are not to be disturbed. If an MRM is attached to a sign listed for replacement it will be removed and reattached to the new sign in the same location. Payment for this work will be incidental to the various signing contract items.

SIGN TABLE

SIGN DATA										POST DATA							
MRM & OFFSET* {Ft}	REMOVE TRAFFIC SIGN ^	REMOVE SIGN FOR RESET & RESET SIGN^	DESCRIPTION	SIGN CODE	SIGN SIZE (in.)	NEW SIGN (SqFt)			SIGN FACES	COMMENTS	POST LENGTHS X		BASE #	SIZE/QUANT. {Ft}			
						Type IV	Type XI				INSIDE	OUTSIDE		2.0"x2.0" TUBE	2.5"x2.5" TUBE		
US81 NB	110E0130	110E7150 & 632E3500			W X H	632E3203	632E3205						632E1320	632E1340			
0.58 + 0.046 -2.0' M	1{2PT}			D1-2	90.0 X 60				SOUTH		12.0'	12.0'	S		24.0		
0.58 + 0.056 -2.0' R	-	-							SOUTH	DO NOT DISTURB							
0.58 + 0.073 -2.0' R	-	-							SOUTH	DO NOT DISTURB							
0.58 + 0.073 -2.0' M	1{PT}			R5-1	30 X 30		6.3		SOUTH		9.5'		A	9.5			
0.58 + 0.08 R	1{SP}			R6-1	36 X 12	3.0			WEST	Mount signs on signal mast arm							
0.58 + 0.08 -2.0' R	1{SP}		MRM 383.85	D10-3	4.5 X 21	0.7			WEST	Mount MRM on signal post							
0.58 + 0.08 -2.0' OH	1{SP}			D3-1	108 X 24	18.0			WEST	Overhead sign Mount signs on signal mast arm							
				R3-5	30 X 36	7.5			WEST								
				R3-5	30 X 36	7.5			WEST								
0.66 + 0.003 OH	1{SP}			D3-1	72 X 18	9.0			SOUTH	Overhead sign Mount signs on signal mast arm							
				R3-5	30 X 36	7.5			SOUTH								
0.66+0.003 -4.0' M	1{PT}			M1-4 M6-4 M1-5 M6-3 M6-1 R3-1	24 X 24 21 X 15 24 X 24 21 X 15 21 X 15 24 X 24	4.0 2.2 4.0 2.2 2.2 4.0			EAST EAST EAST EAST EAST SOUTH		13.5'		S	13.5			
0.66+0.003 -2.0' M	1{PT}			R5-1	30 X 30		6.3		SOUTH		9.5'		A	9.5			
0.66+0.017 -2.0' R	1{W}			M1-4 M6-3 M1-5 M6-1 M6-6	24 X 24 21 X 15 24 X 24 21 X 15 21 X 15	4.0 2.2 4.0 2.2 2.2			SOUTH SOUTH SOUTH SOUTH SOUTH		13.5'		S	13.5			
0.66+0.036				M3-3 M1-4 M3-1 M1-5	24 X 12 24 X 24 24 X 12 24 X 24	2.0 4.0 2.0 4.0			SOUTH SOUTH SOUTH SOUTH		10.0'		S	10.0			
0.66 + 0.036 -2.0' M	1{2PT}			D1-2	72 X 30	15.0			NORTH		9.5'	9.5	S	19.0			
0.77 + 0.056 -2.0' R	1{PT}			R5-1	30 X 30		6.3		NORTH		9.5'		A	9.5			
0.77 + 0.062 -2.0' M	1{PT}			R4-7	24 X 30	5.0			NORTH		9.5'		A	9.5			
TOTALS THIS SHEET						163.8	18.9								38.0	80.0	

* - Offset measured from face of curb to edge of Sign.

^ -Number and type- {U}-Channel {W}ood {PT} Perforated Tube {SP}signal Post]- of support(s)

- (S)lip Base, (A)nchor Stub Post

X -Plan post lengths are estimates. The post lengths shall be field verified by the Contractor.

SIGN TABLE

SIGN DATA										POST DATA						
MRMs & OFFSET* {Ft}	REMOVE TRAFFIC SIGN ^	REMOVE SIGN FOR RESET & RESET SIGN^	DESCRIPTION	SIGN CODE	SIGN SIZE (in.)	NEW SIGN (SqFt)			SIGN FACES	COMMENTS	POST LENGTHS X		BASE #	SIZE/QUANT. {Ft}		
						Type IV	Type XI				INSIDE	OUTSIDE		2.0"x2.0" TUBE	2.5"x2.5" TUBE	
US81 NB	110E0130	110E7150 & 632E3500			W X H	632E3203	632E3205						632E1320	632E1340		
0.77 + 0.067 -2.0' R	1{PT}			R6-1	36 X 12	3.0			WEST	Mount signs on signal mast arm						
0.77 + 0.068 OH	1{SP}			D3-1	108 X 24	18.0			WEST	Overhead sign						
				R3-5	30 X 36	7.5			WEST	Mount signs on signal mast arm						
				R3-5	30 X 36	7.5			WEST							
0.77 + 0.069 OH	1{SP}			D3-1	72 X 18	9.0			SOUTH	Overhead sign						
				R3-5	30 X 36	7.5			SOUTH	Mount on signal mast arm						
US81 SB																
0.65 + 0.0 -2.0' R	1{PT}			M1-4	24 X 24	4.0			NORTH		13.5'		S		13.5	
				M6-3	21 X 15	2.2			NORTH							
				M1-5	24 X 24	4.0			NORTH							
				M1-5	24 X 24	4.0			NORTH							
				M6-1	21 X 15	2.2			NORTH							
				M6-1	21 X 15	2.2			NORTH							
0.65 + 0.001 -2.0' M	1{PT}			R3-9	24 X 12	2.0			WEST		13.3'		S		13.5	
				M1-5	24 X 24	4.0			WEST							
				M1-4	24 X 24	4.0			WEST							
				M1-5	24 X 24	4.0			WEST							
				M6-4	21 X 15	2.2			WEST							
				M6-6	21 X 15	2.2			WEST							
				R3-1	24 X 24	4.0			NORTH							
			MRM 0.65	D10-3	5 X 21	0.7			N/S							
				R6-1	36 X 12	3.0			WEST	Mount sign on signal post						
				R6-1	36 X 12	3.0			EAST							
				R6-3	30 X 24	5.0			WEST							
			MRM 343.07	D10-3	4.5 X 21	0.7			WEST							
0.66 + 0.004 R	1{SP}			R6-1	36 X 12	3.0			EAST	Mount sign on signal post						
				R3-5	30 X 36	7.5			NORTH	Overhead sign						
				D3-1	72 X 18	9.0			NORTH	Mount signs on signal mast arm						
				D3-1	108 X 24	18.0			EAST							
	R	1{PT}		R5-1	30 X 30		6.3		SOUTH	Reuse existing base	10.0'		S		10.0	
				D9-10	42 X 36	10.5			NORTH							
0.66 + 0.06 R	1{2PT}			D1-2	72 X 42	21.0			NORTH		10.5'	10.5	S		21.0	
0.77 + 0.044 -2.0' R	1{W}			M3-3	24 X 12	2.0			NOTTH		10.0'		S		10.0	
				M3-2	24 X 12	2.0			NORTH							
				M1-4	24 X 24	4.0			NORTH							
0.77 + 0.068 OH				R3-5	30 X 36	7.5			NORTH	Overhead sign						
				D3-1	72 X 18	9.0			NORTH	Mount signs on signal mast arm						
TOTALS THIS SHEET													68.0			

* - Offset measured from face of curb to edge of Sign.

- (S)lip Base, (A)nchor Stub Post

^ -Number and type- [(U)-Channel (W)ood (PT) Perforated Tube (P)ipe]- of support(s)

X -Plan post lengths are estimates. The post lengths shall be field verified by the Contractor.

SIGN TABLE

SIGN DATA										POST DATA							
LOCATION OVERHEAD SIGN	REMOVE TRAFFIC SIGN ^	REMOVE SIGN FOR RESET & RESET SIGN^	DESCRIPTION	SIGN CODE	SIGN SIZE (in.)	NEW SIGN (SqFt)			SIGN FACES	COMMENTS	POST LENGTHS X		BASE #	SIZE/QUANT. {Ft}			
						Type IV	Type XI				INSIDE	OUTSIDE		2.0"x2.0" TUBE	2.5"x2.5" TUBE		
US81	110E0130	110E7150 & 632E3500			W X H	632E3203	632E3205						632E1320	632E1340			
Broadway & 15th ST				R3-5	30 X 36	7.5			NORTH	Overhead sign Mount signs on signal mast arm							
Broadway & 15th ST				D3-1	78 X 18	9.8			NORTH	Mount signs on signal mast arm See signing layout							
Broadway & 15th ST				R3-5	30 X 36	7.5			WEST	Overhead sign Mount signs on signal mast arm							
Broadway & 15th ST				D3-1	108 X 24	18.0			WEST	Mount signs on signal mast arm See signing layout							
Broadway & 15th ST				D3-1	108 X 24	18.0			EAST	Mount on mast arm							
Broadway & 15th ST				R3-5	30 X 36	7.5			SOUTH	Overhead sign Mount signs on signal mast arm							
Broadway & 15th ST				R3-5	30 X 36	7.5			SOUTH	Mount signs on signal mast arm See signing layout							
Broadway & 21ST ST				R3-7	36 X 36	9.0			SOUTH	Install sign on steel tube post	10.0'		A	10.0			
Broadway & 21ST ST				R3-5	30 X 36	7.5			NORTH	Overhead sign Mount signs on signal mast arm							
Broadway & 21ST ST				R3-5	30 X 36	7.5			NORTH	Mount signs on signal mast arm See signing layout							
Broadway & 21ST ST				D3-1	78 X 18	9.8			NORTH								
Broadway & 21ST ST				R3-5	30 X 36	7.5			WEST	Overhead sign Mount signs on signal mast arm							
Broadway & 21ST ST				D3-1	108 X 24	18.0			WEST	Mount signs on signal mast arm See signing layout							
Broadway & 21ST ST				R3-5	30 X 36	7.5			EAST	Overhead sign Mount signs on signal mast arm							
Broadway & 21ST ST				R3-6	30 X 36	7.5			EAST	Mount signs on signal mast arm See signing layout							
Broadway & 21ST ST				D3-1	108 X 24	18.0			EAST								
Broadway & 21ST ST				R3-5	30 X 36	7.5			SOUTH	Overhead sign Mount signs on signal mast arm							
Broadway & 21ST ST				R3-5	30 X 36	7.5			SOUTH	Mount signs on signal mast arm See signing layout							
Broadway & 21ST ST				D3-1	78 X 18	9.8			SOUTH								
Broadway & 23RD ST				R3-5	30 X 36	7.5			NORTH	Overhead sign Mount signs on signal mast arm							
Broadway & 23RD ST				R3-5	30 X 36	7.5			NORTH	Mount signs on signal mast arm See signing layout							
Broadway & 23RD ST				D3-1	84 X 18	10.5			NORTH								
Broadway & 23RD ST				R3-5	30 X 36	7.5			EAST	Overhead sign Mount signs on signal mast arm							
Broadway & 23RD ST				R3-5	30 X 36	7.5			EAST	Mount signs on signal mast arm See signing layout							
Broadway & 23RD ST				D3-1	108 X 24	18.0			EAST								
Broadway & 23RD ST				R3-7	36 X 36	9.0			EAST	Install sign for WB traffic 120 feet inadvance of the intersection	10.0'		A	10.0			
Broadway & 23RD ST				R3-5	30 X 36	7.5			SOUTH	Overhead sign Mount signs on signal mast arm							
Broadway & 23RD ST				R3-5	30 X 36	7.5			SOUTH	Mount signs on signal mast arm See signing layout							
Broadway & 23RD ST				D3-1	84 X 18	10.5			SOUTH								
Broadway & 23RD ST				R3-7	36 X 36	9.0			NORTH	Install sign for SB traffic 100 feet inadvance of the intersection	10.0'		A	10.0			
Broadway & 23RD ST	1{PT}									Remove sign							
Broadway & 23RD ST																	
TOTALS THIS SHEET						297.0											
07DH TOTAL						660.0	25.2								30.0		
	1																
	22																

* - Offset measured from face of curb to edge of Sign.

- (S)lip Base, (A)nchor Stub Post

^ -Number and type- [{U}-Channel {W}ood {PT} Perforated Tube {P}ipe]- of support(s)

X -Plan post lengths are estimates. The post lengths shall be field verified by the Contractor.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	S7	S15

Plotting Date: 10/02/2023

PERMANENT SIGNING

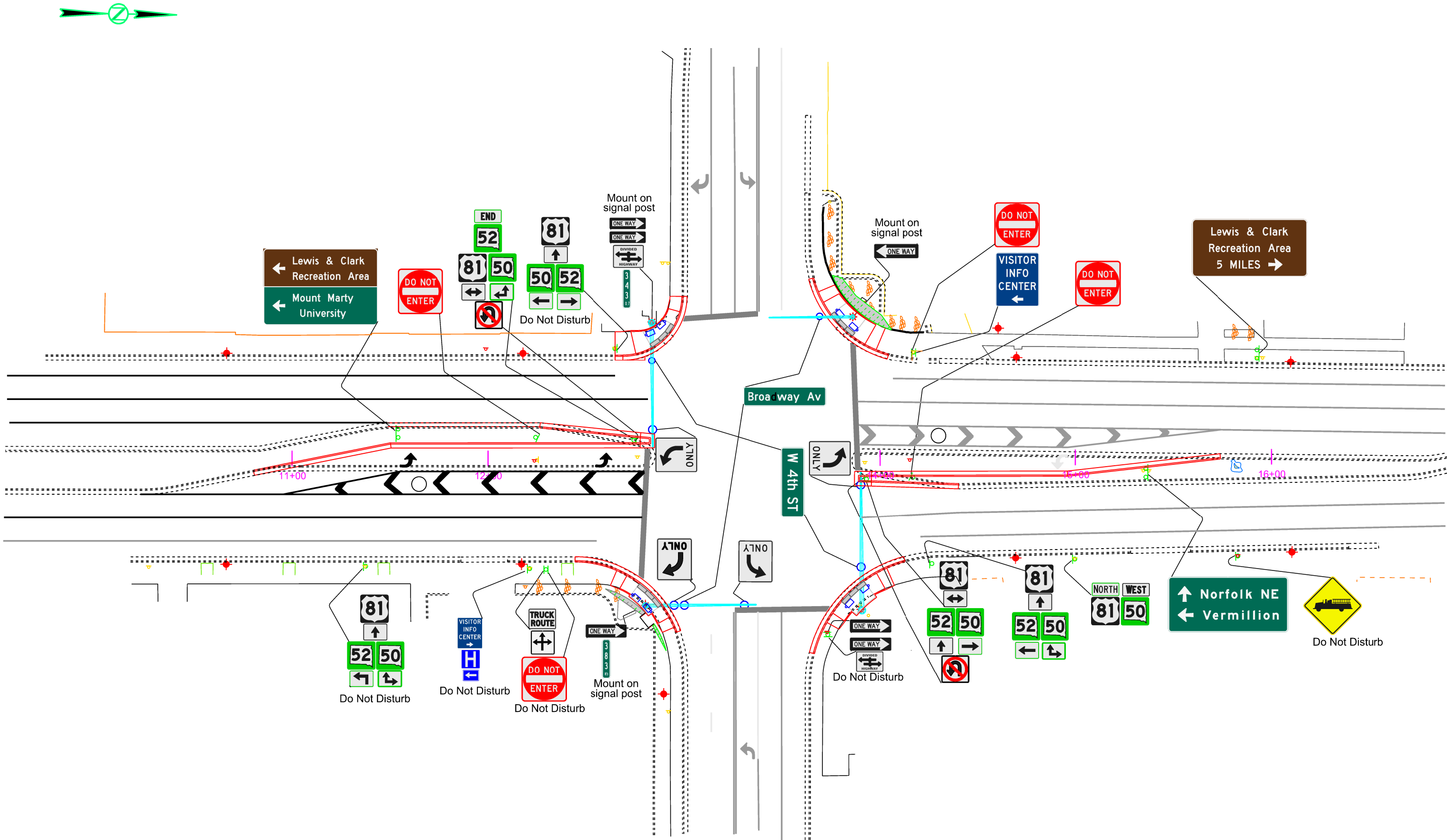
US HWY 81 / BROADWAY AVE. & 4TH STREET

PLOT SCALE - 1:233.451

PLOT NAME - 7

FILE - ... \PRJ\YANK\7DH\DN\VE\7DH.DGN

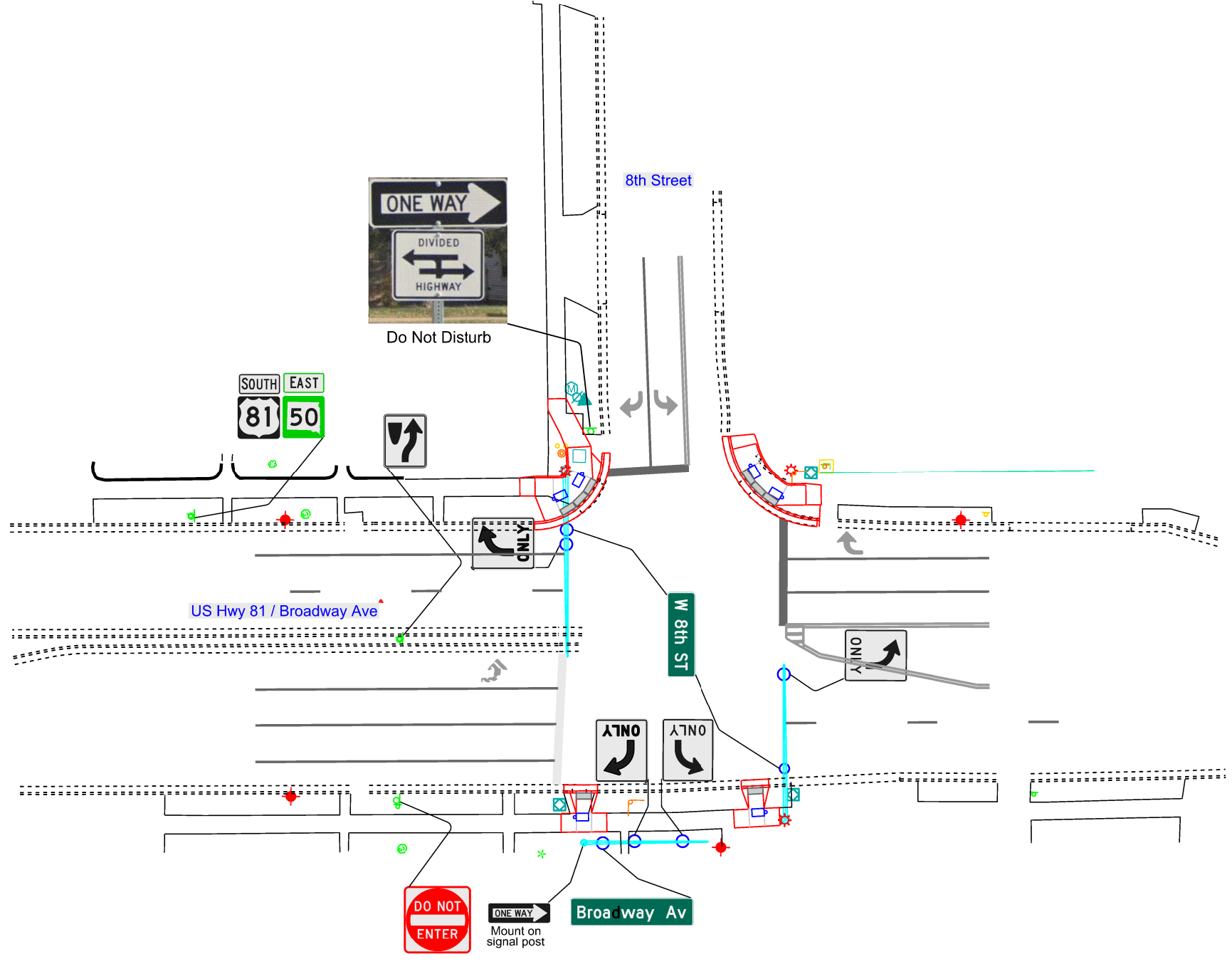
PLOTTED FROM - IRML13318



PERMANENT SIGNING

US HWY 81 / BROADWAY AVE. & 8TH STREET

STATE OF SOUTH DAKOTA	PROJECT NH 0081(114)0	SHEET S8	TOTAL SHEETS S15
Plotting Date: 10/02/2023			



PLOT SCALE - 1:233.451

PLOTTED FROM - IRMI13318

PLOT NAME - 8

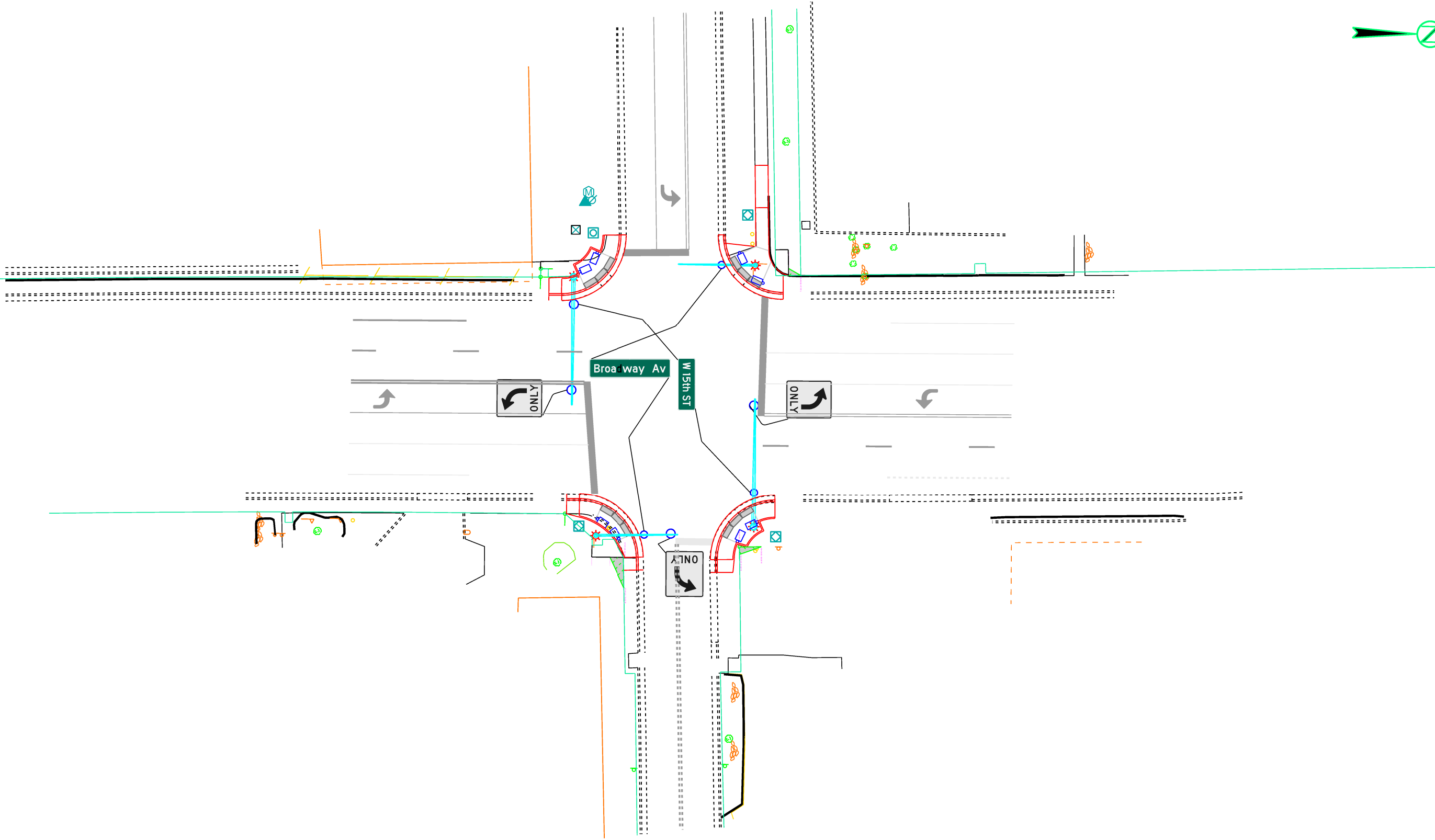
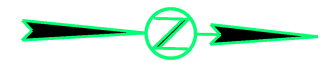
FILE - ... \PRJ\YANK\7DH\DN\VE\7DH.DGN

PERMANENT SIGNING

US HWY 81 / BROADWAY AVE. & 15TH STREET

STATE OF SOUTH DAKOTA	PROJECT NH 0081(114)0	SHEET S9	TOTAL SHEETS S15
-----------------------	--------------------------	-------------	---------------------

Plotting Date: 10/02/2023



PLOT SCALE - 1:233.451

PLOTTED FROM - IRM113318

PLOT NAME - 9

FILE - ... \PRJ\YANK\7DH\DN\VE\07DH.DGN

PLOT SCALE - 1:233.451

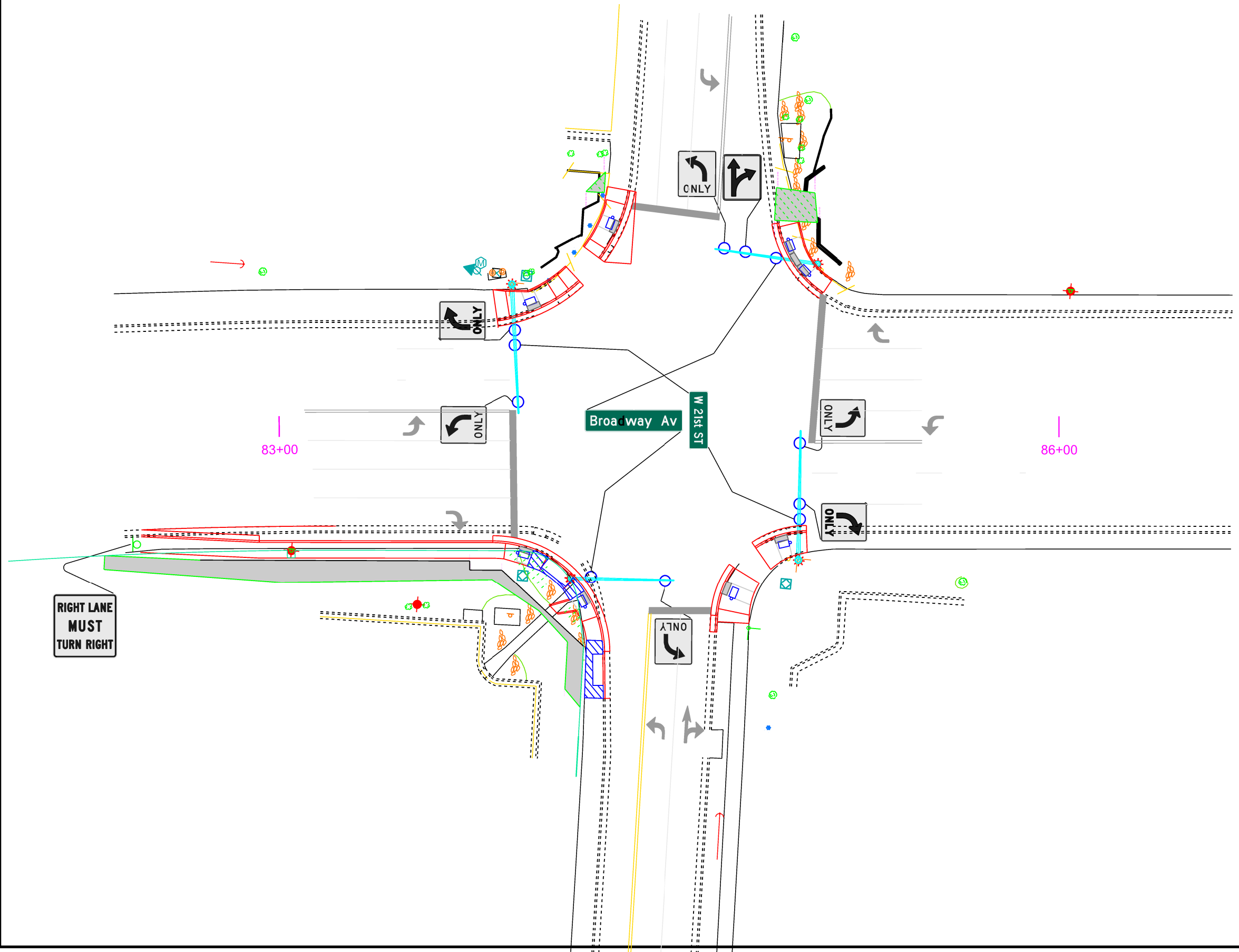
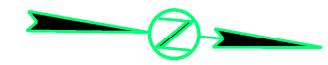
PLOTTED FROM - IRM113318

PERMANENT SIGNING

US HWY 81 / BROADWAY AVE. & 21ST STREET

STATE OF SOUTH DAKOTA	PROJECT NH 0081(114)0	SHEET S10	TOTAL SHEETS S15
-----------------------	--------------------------	--------------	---------------------

Plotting Date: 10/02/2023



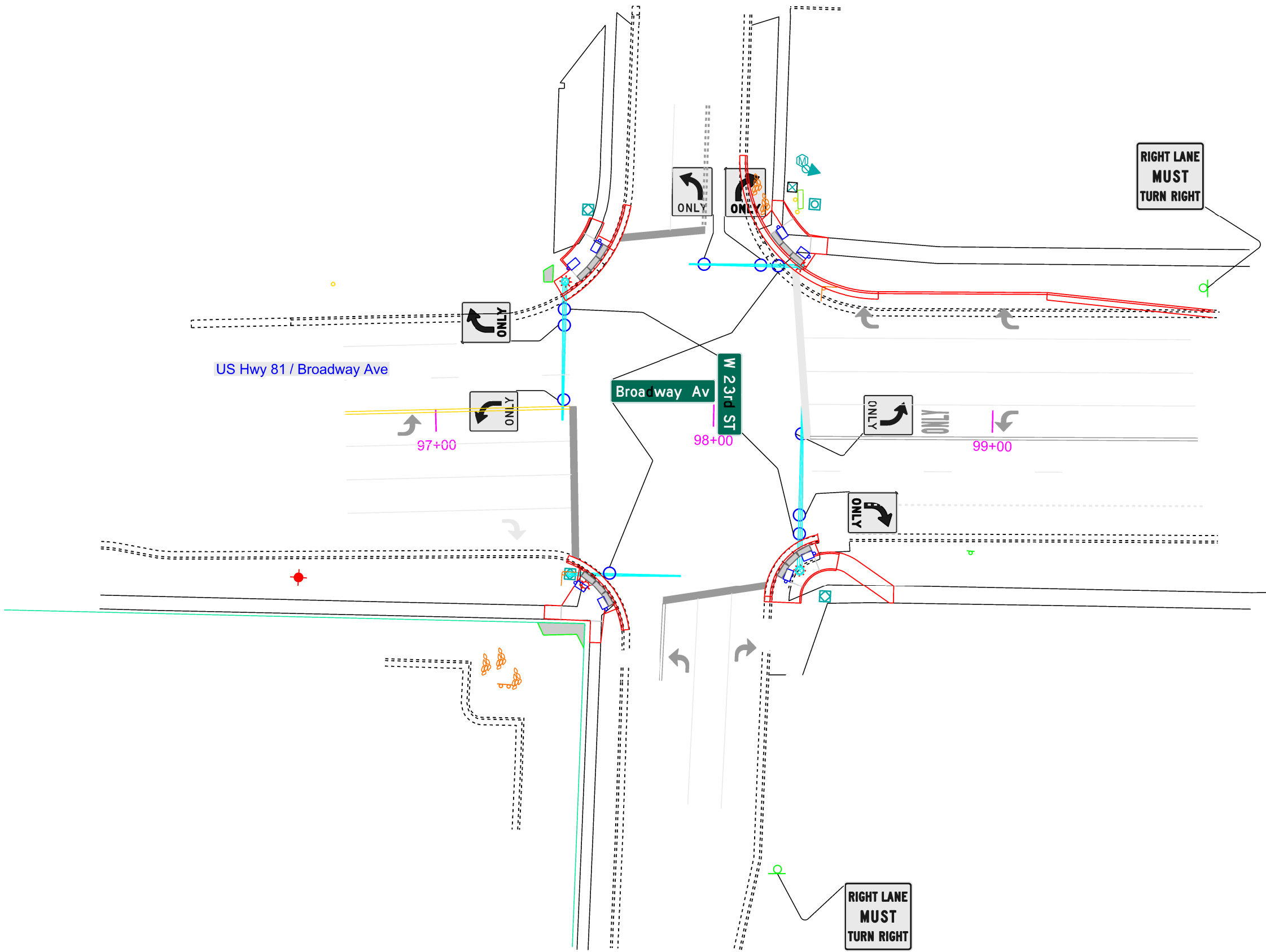
FILE - ... \PRJ\YANK\07DH\DN\VE\07DH.DGN PLOT NAME - 10

PERMANENT SIGNING

US HWY 81 / BROADWAY AVE. & 23RD STREET

STATE OF SOUTH DAKOTA	PROJECT NH 0081(114)0	SHEET S11	TOTAL SHEETS S15
-----------------------	--------------------------	--------------	---------------------

Plotting Date: 10/02/2023



PLOT SCALE - 1:233.451

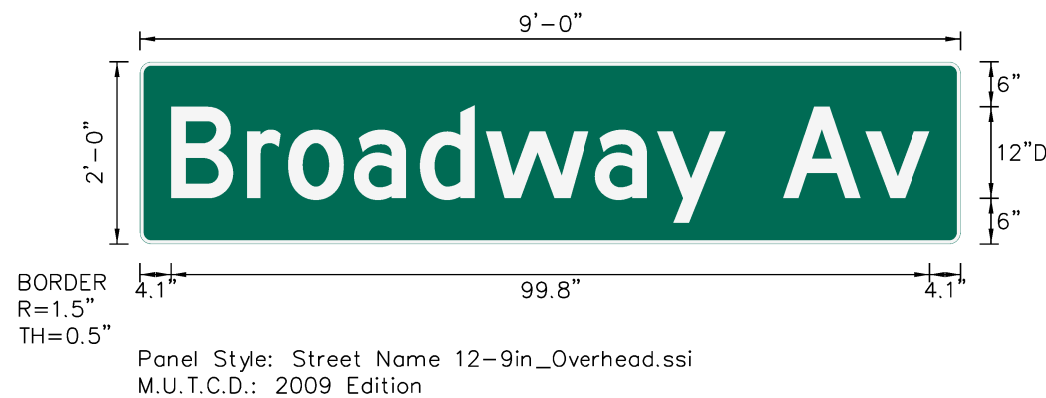
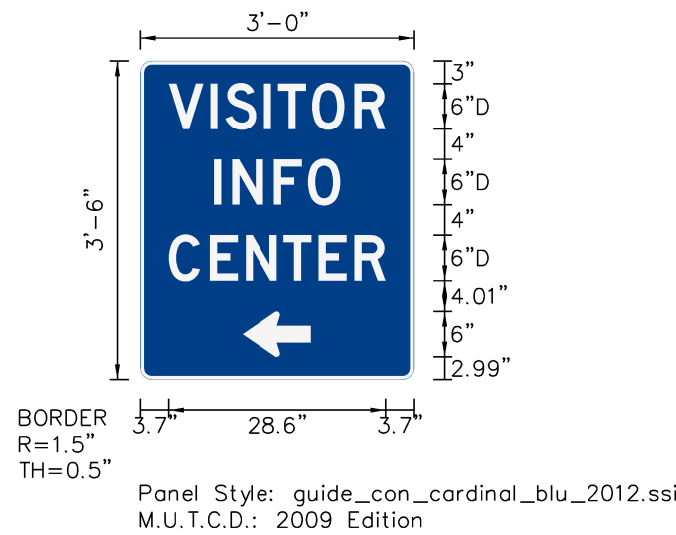
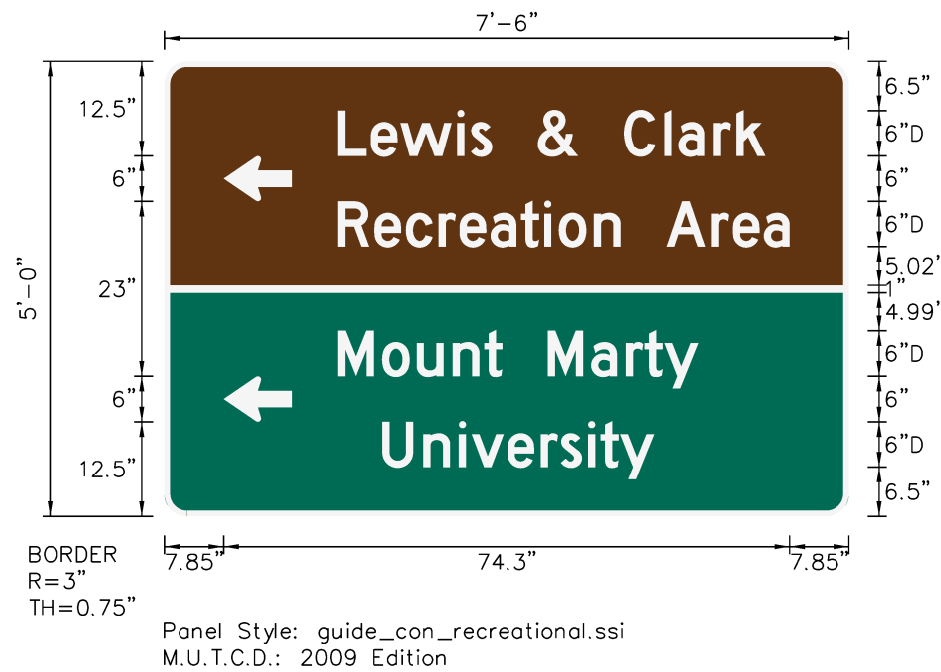
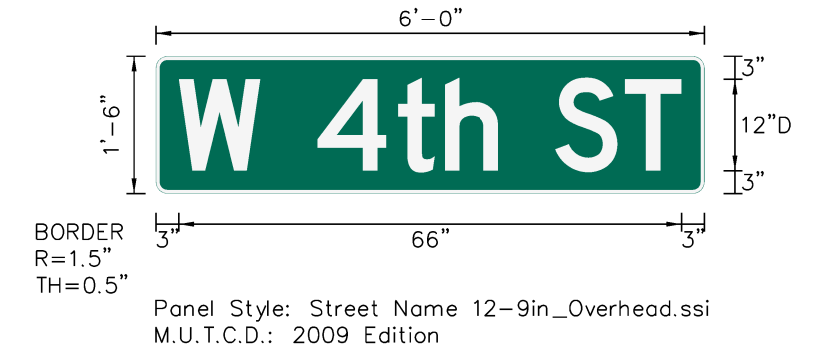
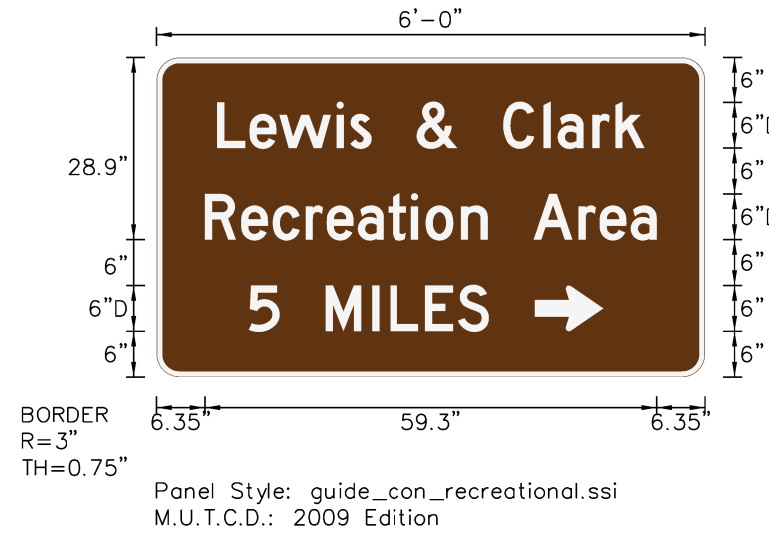
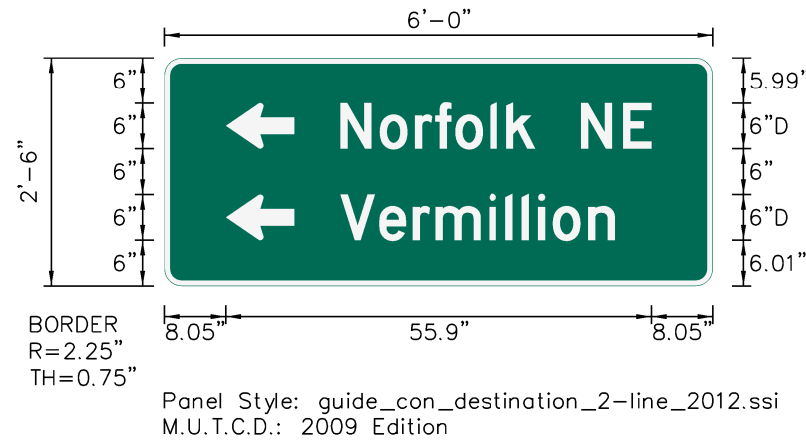
PLOTTED FROM - IRMI13318

PLOT NAME - 11

FILE - ... \PRJ\YANK\7DH\DCN\VE\7DH.DGN

Flat Aluminum Sign Details - High Intensity Sheeting Type (IV)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	S12	S15
Plotting Date: 10/04/2023			



PLOT SCALE - 1:202.009

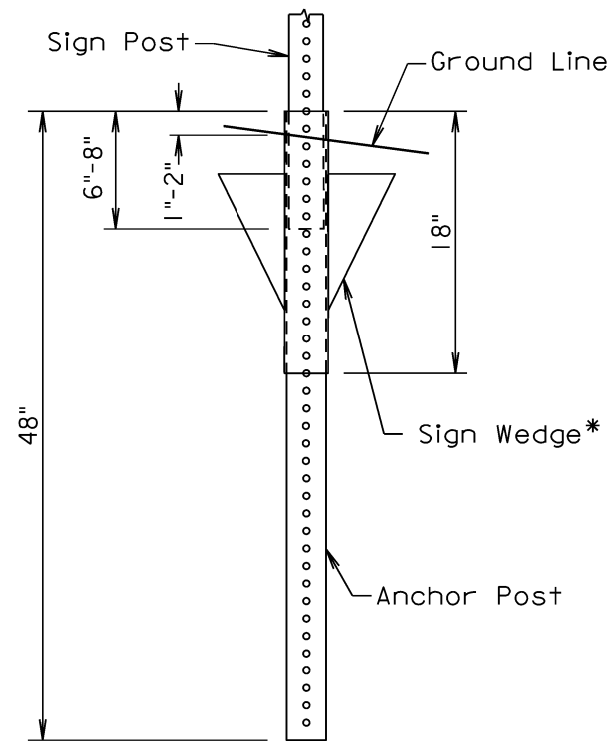
PLOTTED FROM - IRML13318

PLOT NAME - 1

FILE - ... \PRJ\YANK\7DH\DWG\TITLES.DWG

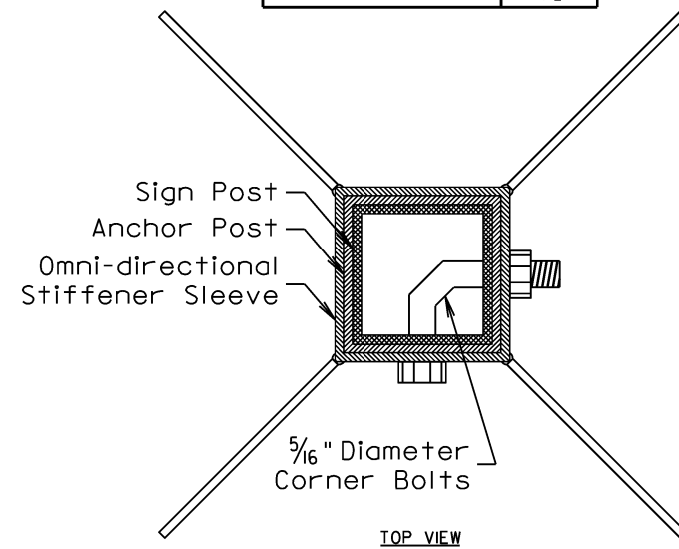
Plotting Date: 09/27/2023

2" SQUARE STEEL PERFORATED TUBE POST WINGED SLEEVE ANCHOR BASE DETAILS (Typical)

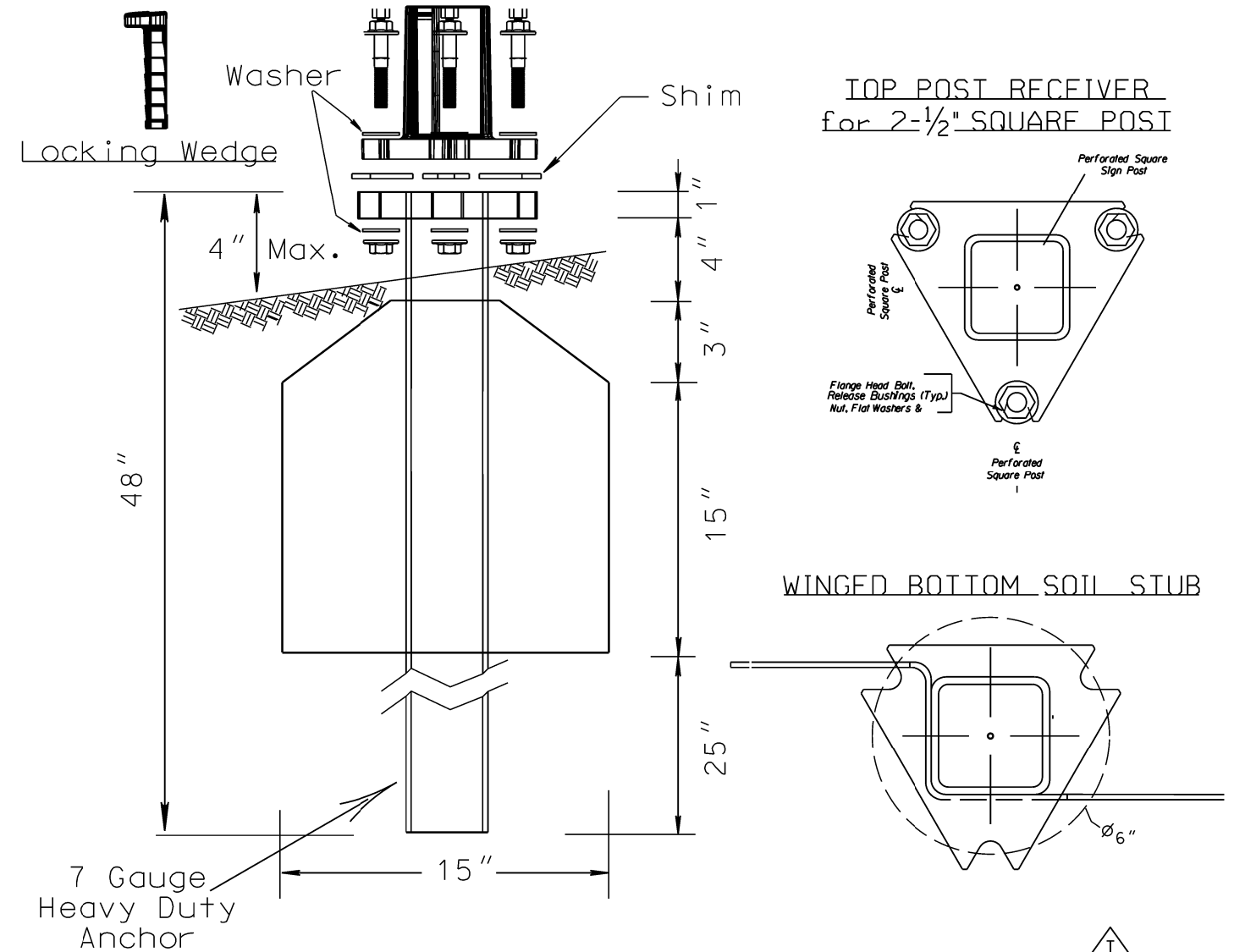


* - 18" Multi-directional Sleeve w/4 Blades, or Equivalent.
Manufacturer Recommended Dimensions and Installation.

POST SIZE	
Sign Post	2"
Anchor Post	2 1/4"
Stiffener Sleeve	2 1/2"

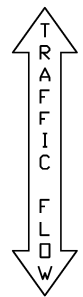


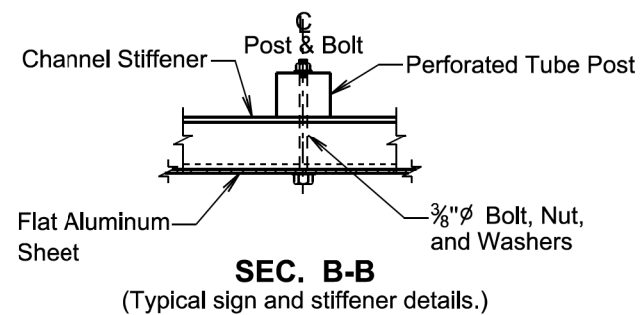
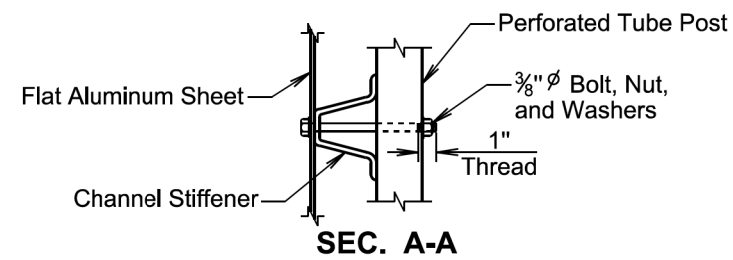
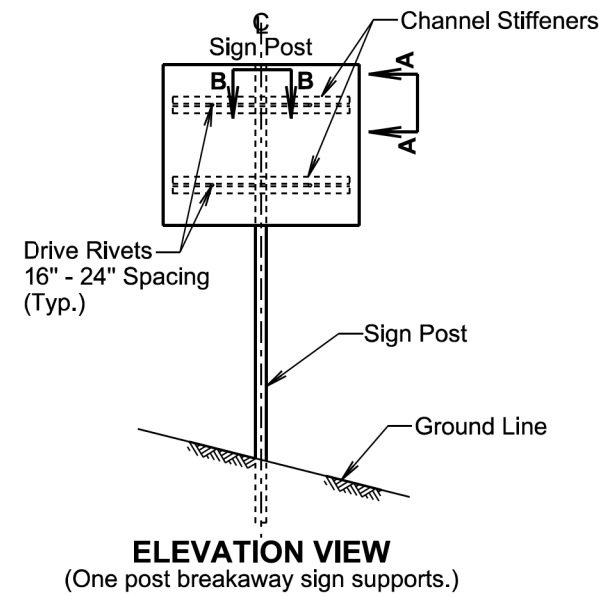
2 1/2" SQUARE STEEL PERFORATED TUBE POST WINGED BREAKAWAY ANCHOR DETAILS FOR SOIL INSTALLATIONS (Typical)



GENERAL NOTES:

1. Dimensions shown may vary by Manufacturer.
2. The Contractor will use Manufacturer recommended assembly parts and procedures.
3. Sign installations must meet NCHRP350 or MASH crashworthy criteria.



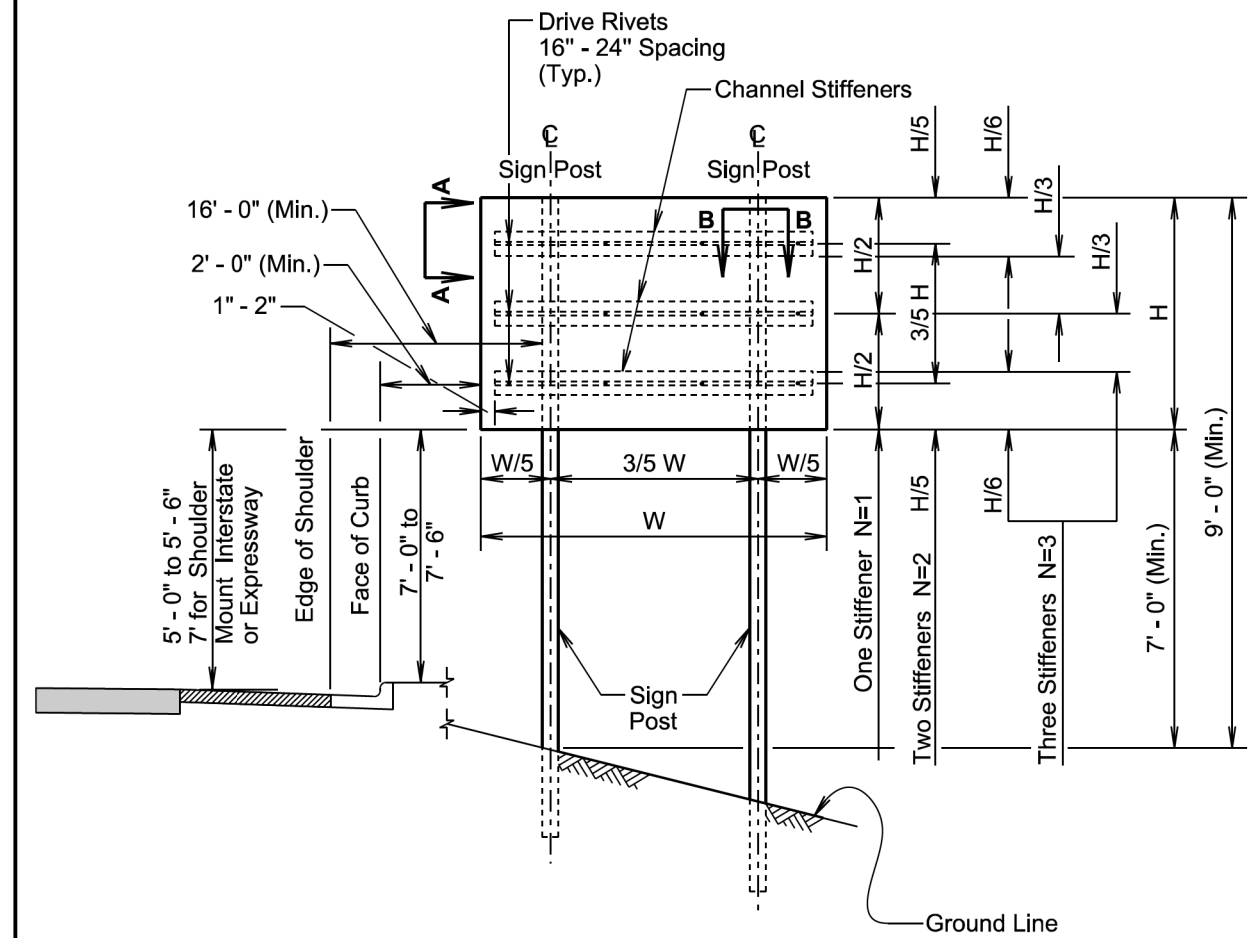


∅ A plastic washer, as recommended by the sheeting manufacturer, will be installed between the sign face and the metal washer shown.

November 19, 2020

S D D O T	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
		Sheet 1 of 2

Published Date: 2024



GENERAL NOTES:

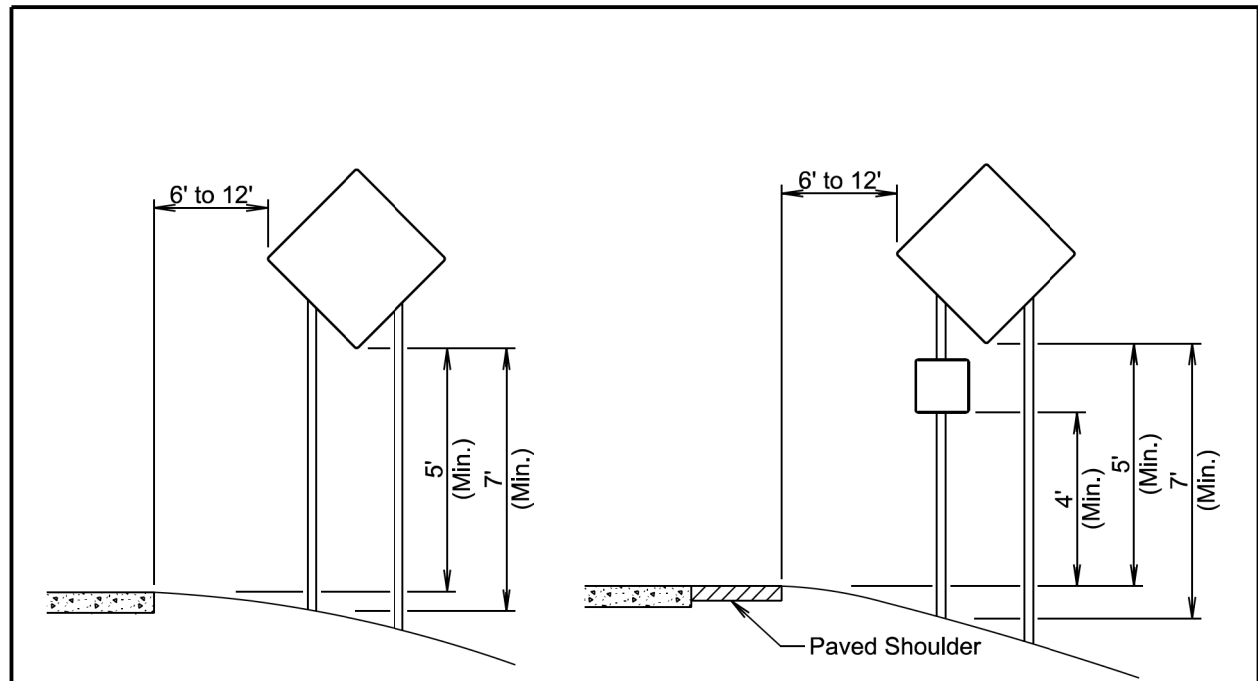
The number of stiffeners used (N) will be as follows:
 If $H \leq 2' - 0''$ then $N = 1$
 if $2' - 0'' < H \leq 8' - 0''$ then $N = 2$
 if $8' - 0'' < H \leq 15' - 0''$ then $N = 3$
 where H is the vertical dimension of the sign.

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

November 19, 2020

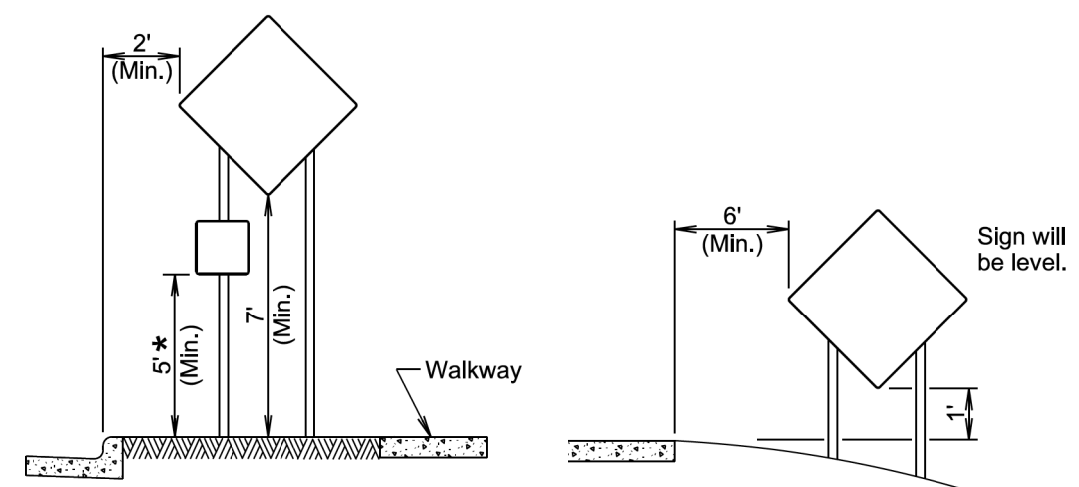
S D D O T	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
		Sheet 2 of 2

Published Date: 2024



RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



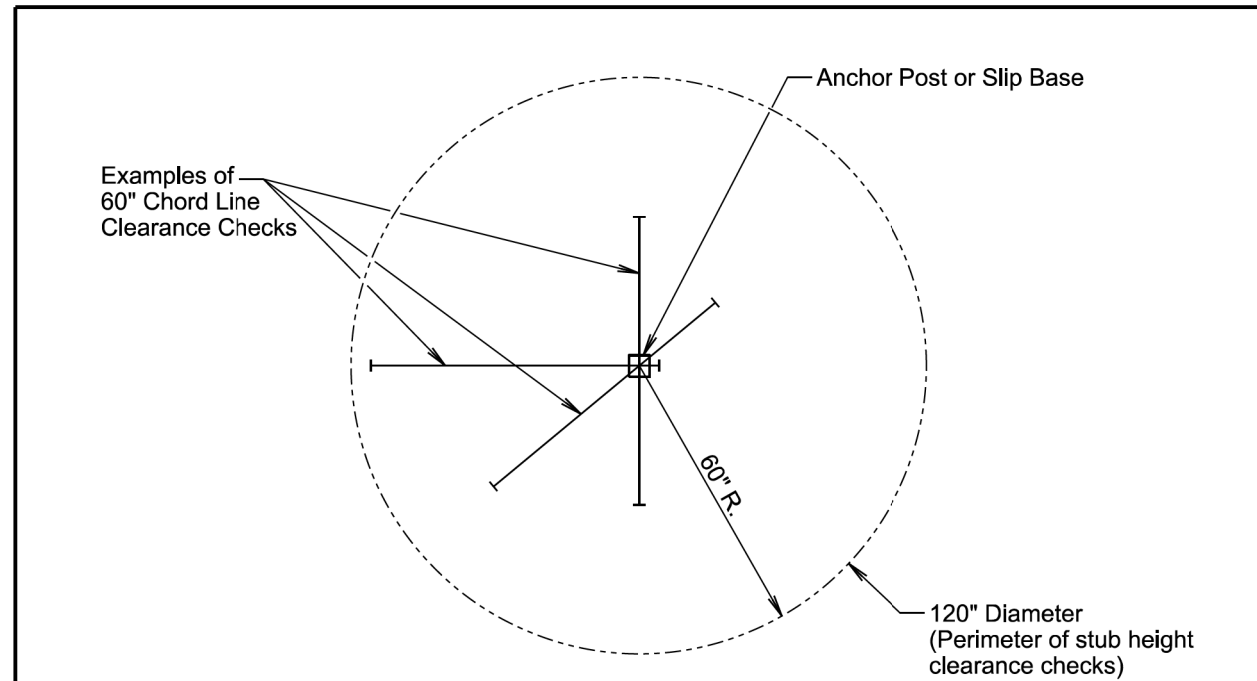
URBAN DISTRICT

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

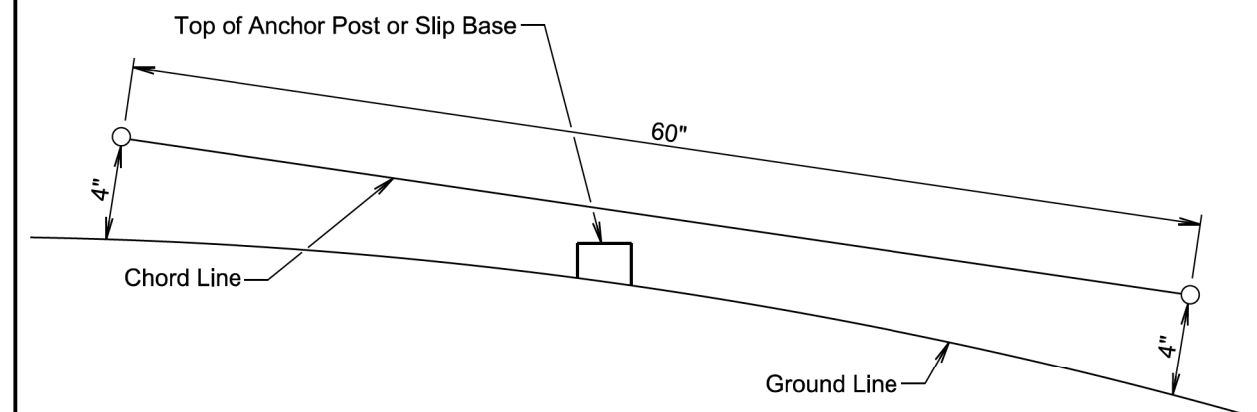
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2024	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

- The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.
- At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.
- The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2024	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

Plot Scale - 1:200

Plotted From - TRM113318

File - ...Signing\dm\Standard Plate.dgn