

I/PLOT NAME: TITLE  
 PATH & FILENAME: OT\ST\Signing\Training\FREEWAY CLASS 2021\Mono Tube Example\SAMPLE MONOTUBE PLAN  
 PLOTTED/REVISED: 11-MAY-2022

# SIGNING PLAN INDEX

SHEET NO.	DESCRIPTION
ST1	TITLE SHEET
ST2	TABULATIONS
ST3	ROADWAY LAYOUTS
ST4	PANEL LAYOUTS
ST5	STRUCTURE ELEVATIONS

(A) STATEMENT OF ESTIMATED QUANTITIES					ST
TAB	SHEET NO	ITEM NO	ITEM	UNIT	TOTAL SIGNING QUANTITIES
ST-A	ST2	2564.602	DELINEATOR/MARKER PANEL	EACH	1
ST-D	ST2	2564.607	CONCRETE FOOTING (MONOTUBE)	CU YD	5
ST-D	ST2	2564.608	STRUCTURAL STEEL - MONOTUBE SIGN (P)	POUND	5709
ST-A	ST2	2564.618	SIGN PANEL	SQ FT	75

GENERAL NOTE:  
(P) DENOTES PLAN QUANTITY

THIS EXAMPLE ASSUMES THAT THE SIGNING PLAN IS A SUBSET OF A LARGER CONSTRUCTION PLAN. STANDARD PLAN SHEETS RELATED TO THE SIGNING ARE LISTED HERE, BUT THE ACTUAL SHEETS ARE INCLUDED IN THE STANDARD PLANS SECTION OF THE LARGER CONSTRUCTION PLAN.

(A) 80% FEDERAL, 20% STATE FUNDS

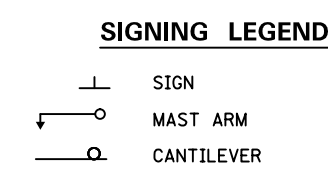
STANDARD PLANS	
NUMBER	DESCRIPTION
5-297.730	SIGN MOUNTING SYSTEMS FOR ROUND SUPPORTS
5-297.745	MONOTUBE OVERHEAD SIGN STRUCTURES - GENERAL ELEVATIONS SECTIONS AND NOTES
5-297.746	MONOTUBE OVERHEAD SIGN STRUCTURES - FOUNDATION DETAILS (2 SHEETS)
5-297.748	MONOTUBE OVERHEAD SIGN STRUCTURES - CANTILEVER (2 SHEETS)
5-297.749	MONOTUBE OVERHEAD SIGN STRUCTURES - SIGN PANEL AND EXIT PANEL (2 SHEETS)

**GENERAL INFORMATION:**

1. MOUNTING HEIGHT IS MINIMUM (WITH A + 6 INCH TOLERANCE)
2. SEE CURRENT MNDOT STANDARD SIGNS AND MARKINGS MANUAL FOR STANDARD SIGN DESIGNS, SPLICE PLATES, STRINGERS AND PUNCHING CODES.
3. SEE PANEL LAYOUTS FOR ALL SIGN PANEL OVERLAYS AND SIGNS WITH PANEL CODES THAT BEGIN WITH THE LETTER "P" (P1, P2 ETC.).
4. SEE STANDARD PLANS AND DETAILS FOR SIGN STRUCTURE INSTALLATION AND PLACEMENT.

**ABBREVIATIONS**

BR-SN	BRIDGE MOUNTED STREET NAME
BR-MG	BRIDGE MOUNTED MINOR GUIDE
CR	CONCRETE RAIL - POST TYPE
MA	MAST ARM
R	ROUND POST
SQ-CONC	SQUARE TUBE ON CONCRETE
SQ-SOIL	SQUARE TUBE IN SOIL
U	U CHANNEL



I HEREBY CERTIFY THAT SHEETS ST1-ST5 WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: ..... LICENSE # .....

DATE: 5/11/2022 ..... SIGNATURE: .....  
DESIGN SQUAD .....

**TITLE SHEET**  
SIGNING

BY:	DATE:	REVISIONS

SIGN AND DELINEATOR / MARKER							ST-A
SIGN NUMBER	PANEL				SUPPORT	SIGN PANEL	DELINEATOR / MARKER PANEL
	PANEL CODE	LEGEND	SIZE (W x H)	MOUNTING HEIGHT	A DISTANCE		
			INCH	FEET	FEET	SQ FT	EACH
OH MN101-990	P1	SOUTH MN101 R 45 DEGREE	120 x 90		10.5	MONOTUBE	75.00
OH MN101-990	X2-1	101-990	12 x 6	4		R	1
							75
							1

I-BEAM, MONOTUBE AND OVERHEAD SIGN STRUCTURE QUANTITIES		ST-D
SIGN SUPPORT NUMBER	STRUCTURAL STEEL-MONOTUBE SIGN	CONCRETE FOOTING (MONOTUBE)
	POUND	CU YD
OH MN101-990	5709	5
TOTAL	5709	5

SPECIFIC NOTE(S):

1. REMOVAL OF FOUNDATION IS INCLUDED IN SALVAGE OVERHEAD SIGN.
2. REMOVAL OF LIGHTING IS INCLUDED IN WALKWAY REMOVAL.

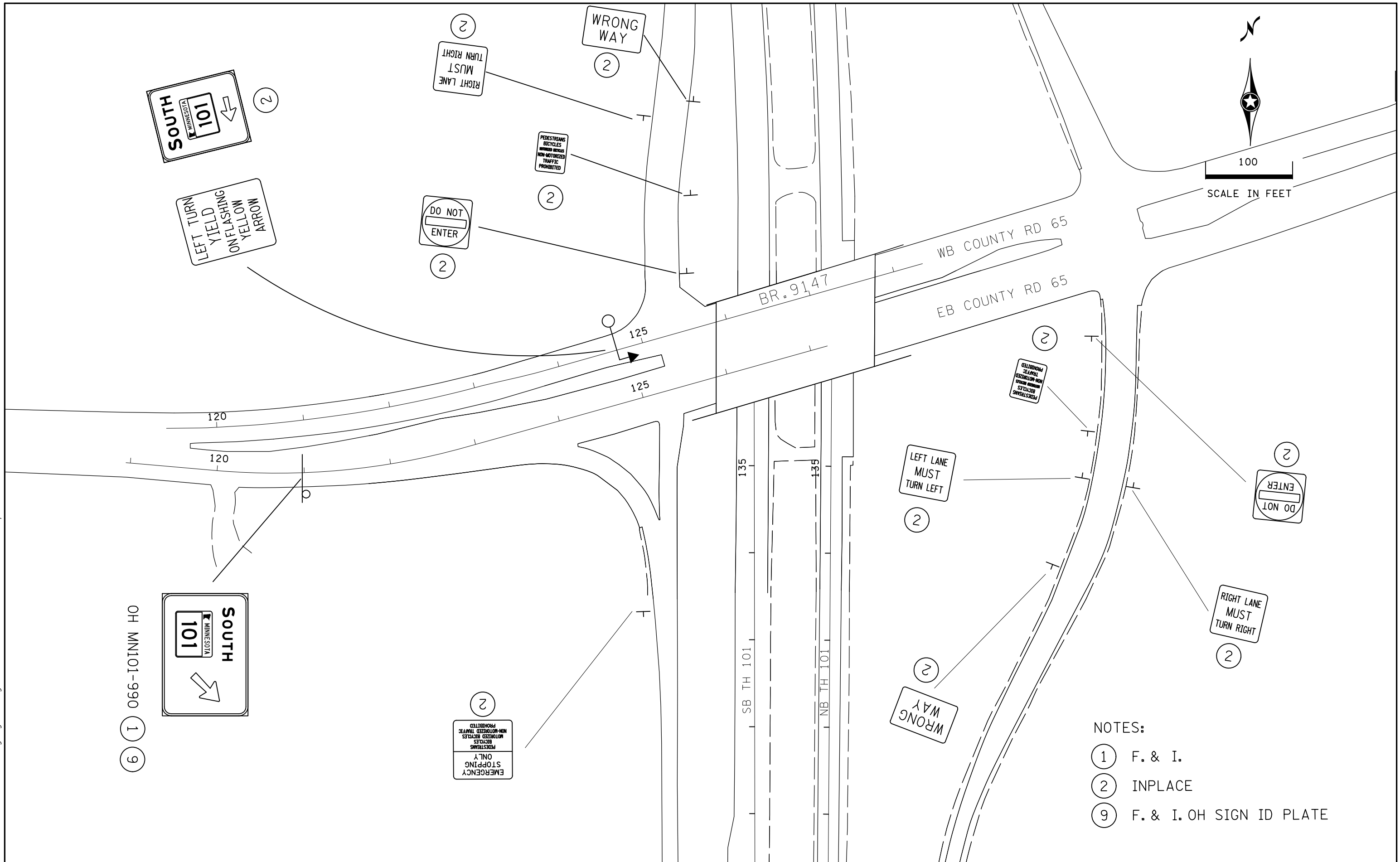
GENERAL NOTE(S):

1. QUANTITIES SHOWN ARE APPROXIMATE BASED UPON ELEVATIONS AND DIMENSIONS SHOWN IN SIGNING STRUCTURE ELEVATIONS. FABRICATIONS DEPENDENT ON THESE ELEVATIONS SHALL NOT BE STARTED UNTIL THE ENGINEER HAS MADE FINAL DETERMINATION OF THEM IN THE FIELD.
2. SEE STRUCTURE ELEVATIONS SHEETS FOR DETAILS.

BY:	DATE:	REVISIONS:	CERTIFIED BY _____ LIC. NO. _____ DATE <u>5/11/2022</u>	<b>TABULATIONS SIGNING</b>
			DRAWN BY: _____ CHECKED BY: _____ S.A.P. NO. _____	
				STATE PROJ. NO. 0000-000 (TH 000) SHEET NO. ST2 OF ST5 SHEETS

PLOTTED/REVISED: 11-MAY-2022

IPLOT NAME: ROADWAY  
PATH & FILENAME: OT\ST\Signing\Training\FREEWAY CLASS 2021\Mono Tube Example\SAMPLE MONOTUBE PLAN



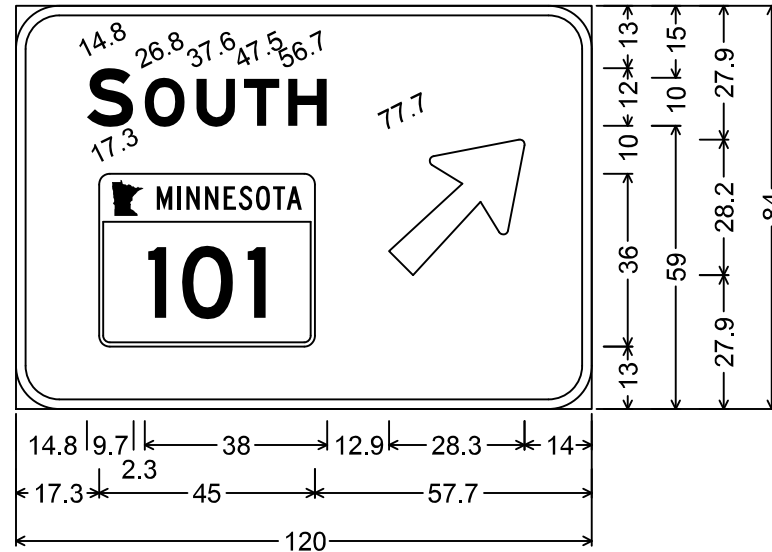
- NOTES:
- ① F. & I.
  - ② INPLACE
  - ⑨ F. & I. OH SIGN ID PLATE

BY:	DATE:	REVISIONS:

CERTIFIED BY _____	LIC. NO. _____	DATE <u>5/11/2022</u>
DRAWN BY: _____	CHECKED BY: _____	S.A.P. NO. _____

<b>TABULATIONS SIGNING</b>	
STATE PROJ. NO. 0000-000 (TH 000)	SHEET NO. ST3 OF ST5 SHEETS

P1



SOUTH MINNESOTA 101 R 45 D;  
 9.0" Radius, 2.0" Border, White on Green;  
 "SOUTH", E Mod 2K;  
 Arrow 17 - 36.0" 45°;

NOTES:

1. CORNERS OF THE SIGN PANELS EXTENDING BEYOND THE BORDER SHALL NOT BE TRIMMED.
2. SEE MNDOT STANDARD SIGNS AND MARKING MANUAL FOR ARROW, FRACTION, ROUTE MARKER AND OVERLAY DETAILS.
3. ALL DIMENSIONS ARE IN INCHES.

BY:	DATE:	REVISIONS:	CERTIFIED BY _____ LIC. NO. _____ DATE <u>5/11/2022</u>		<b>PANEL LAYOUTS</b> SIGNING
			DRAWN BY: _____ CHECKED BY: _____ S.A.P. NO. _____		
					STATE PROJ. NO. 0000-000 (TH 000) SHEET NO. ST4 OF ST5 SHEETS

# OH MN101-990

EB CR 65  
STA 121+00

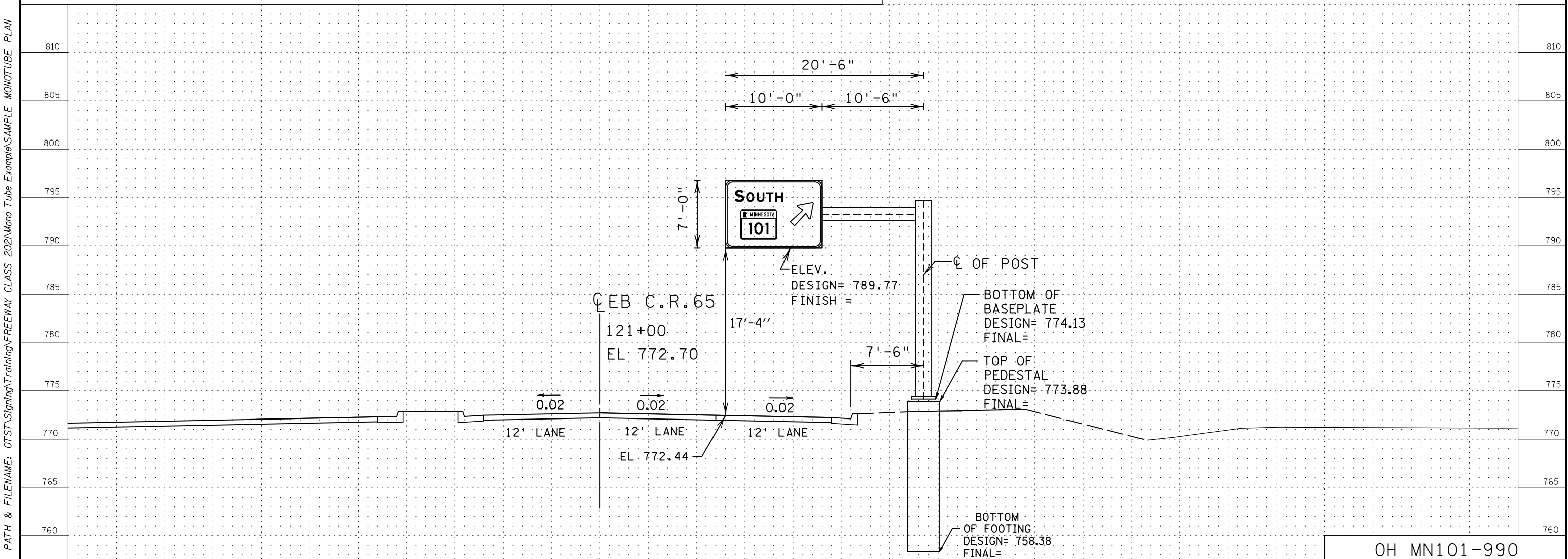
## QUANTITIES

STRUCTURAL STEEL-MONOTUBE POSTS	3190 POUND
STRUCTURAL STEEL-MONOTUBE BEAM	2519 POUND
TOTAL STRUCTURAL STEEL	5709 POUND
CONCRETE FOOTING (TYPE MONOTUBE)	5 CU. YDS.

**GENERAL NOTES:**

- QUANTITIES ARE BASED ON DESIGN ELEVATIONS AND DIMENSIONS WHICH ARE APPROXIMATE. FABRICATION IS DEPENDENT ON THESE ELEVATIONS AND DIMENSIONS AND SHALL NOT BE STARTED UNTIL THE ENGINEER HAS MADE THE FINAL DETERMINATION IN THE FIELD.
- SEE STANDARD PLAN 5-297.745 THROUGH 5-297.749 FOR STRUCTURAL DETAILS.

I PLOT NAME: STRUCTURE ELEVATION  
PATH & FILENAME: OTSTA\Signng\Training\FREWAY CLASS 202\Mono Tube Example\SAMPLE MONOTUBE PLAN



OH MN101-990

BY: DATE:	REVISIONS	CERTIFIED BY _____ LIC. NO. _____ DATE 5/11/2022	<b>STRUCTURE ELEVATIONS</b> SIGNING
		DRAWN BY: _____ CHECKED BY: _____ S.A.P. NO. _____	
			STATE PROJ. NO. 0000-000 (T.H. 000) SHEET NO. ST5 OF ST5 SHEETS