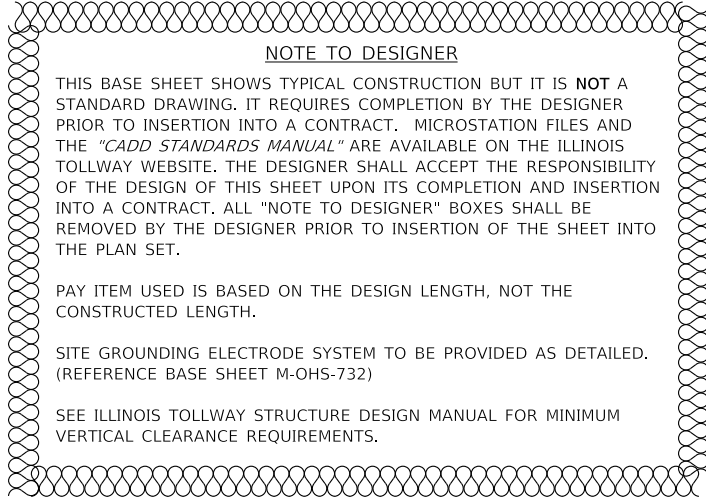


Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings		
	Drawing	Modification Summary	Effective: 03-01-2023
	Overhead Sign (OHS)-Series 720		
	M-OHS-729	OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS	
	Sheet 1	Revised note to designer to use Type I foundation outside clear zone or behind guardrail.	
		Corrected the thickness and height of gantry frame beams for spans less than 100ft and 100-130ft.	
	Sheet 2	Revised equipment loads. Weight and size of DMS and LCS are updated. Design loading note is updated.	
	Sheet 5	Revised number of of v(E) bars in bar schedule, update reinforcement weight and Section P-P.	
	Sheet 6	Revised v(E) bar lengths, updated total bar weights and added note 10 referencing location of "W" and "X" dimensions.	
	Sheet 7	Removed cost included in the cost of "Foundation for ITS Gantry Frame" from note 2.	
		Revised number of of v(E) bars in bar schedule, update reinforcement weight and Section S-S.	
	M-OHS-730	OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS	
	Sheet 1	Revised note to designer to use Type I foundation outside clear zone or behind guardrail.	
		Corrected the thickness and height of gantry frame beams for spans less than 100ft and 100-130ft.	
	Sheet 2	Revised equipment loads. Weight and size of DMS and LCS are updated. Design loading note is updated.	
	Sheet 6	Revised number of of v(E) bars in bar schedule and update reinforcement weight.	
Sheet 7	Revised v(E) bar lengths, updated total bar weights and added note 10 referencing location of "W" and "X" dimensions.		
Sheet 8	Removed cost included in the cost of "Foundation for ITS Gantry Frame" from note 2. Revised number of of v(E) bars in bar schedule, update reinforcement weight and Section S-S.		

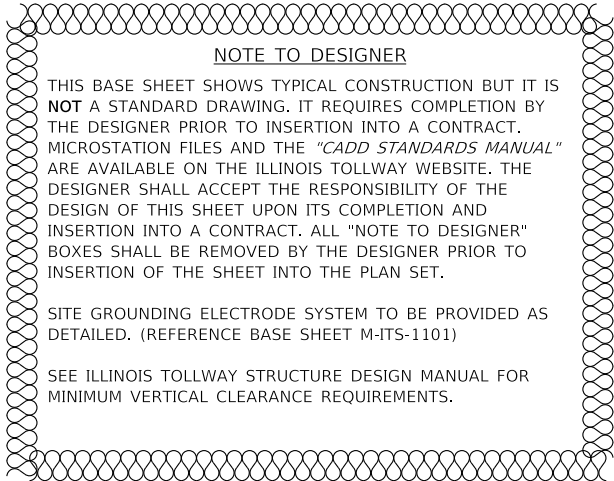
New Sheet

Retired Standard




TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
XXX-XXXX	OVERHEAD SIGN STRUCTURE, SPAN TYPE (ALUMINUM)	FOOT	XXX'-XX"
XXX-XXXX	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	XXX.XX
XXX-XXXX	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX.XX
XXX-XXXX	PROTECTIVE COAT	SQ YD	X,XXX.XX





TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
XXX-XXXX	OVERHEAD SIGN STRUCTURE, MAINLINE ENTRANCE MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
XXX-XXXX	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, MAINLINE MONOTUBE TYPE	CU YD	XXX.XX
XXX-XXXX	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX.XX
XXX-XXXX	PROTECTIVE COAT	SQ YD	X,XXX.XX

		
<p align="center"><b>OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND BILL OF MATERIAL</b></p>		
<b>VERSION:</b> 2020-03	<b>STANDARD:</b> M-OHS-722	<b>SHEET:</b> 1 OF 1

NOTE:  
WORK THIS SHEET WITH STANDARD F13





THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "*CADD STANDARDS MANUAL*" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS  
DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR  
MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

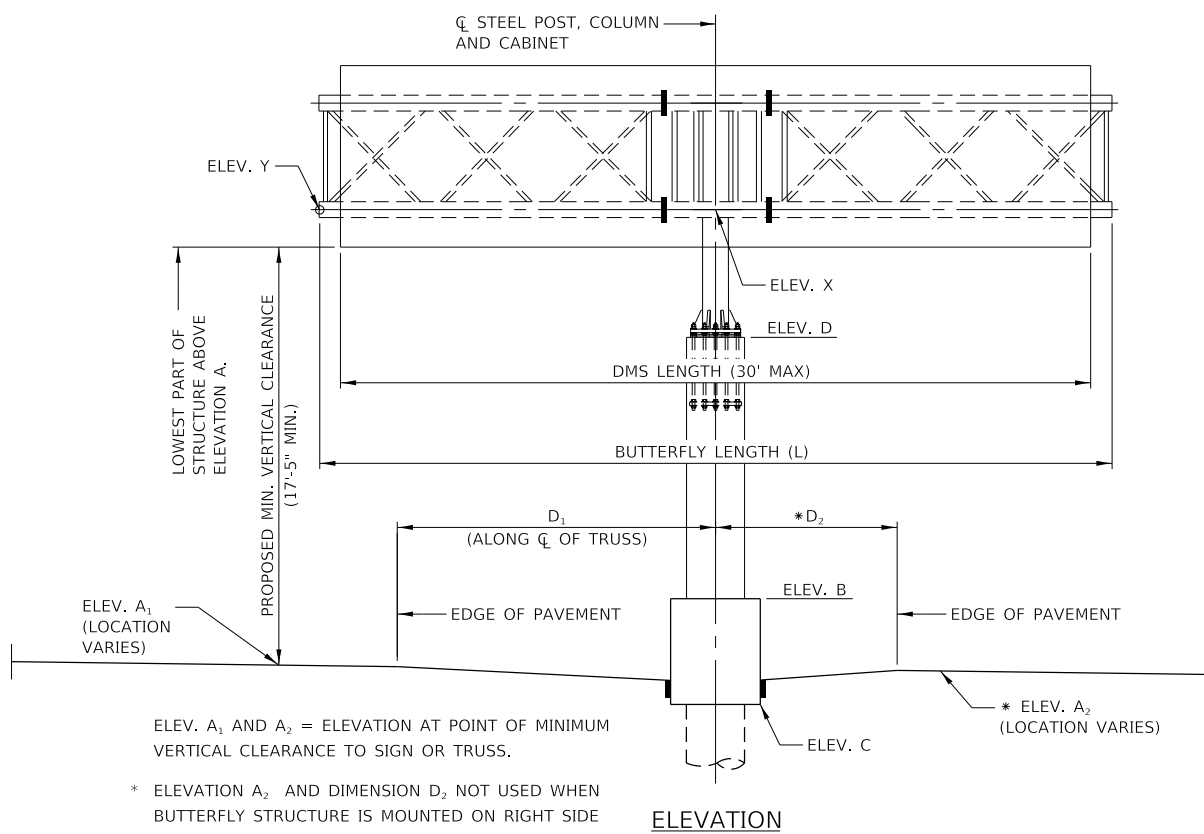
TOTALTOTAL BILL OF MATERIAL

**NOTE:**  
WORK THIS SHEET WITH STANDARD F13

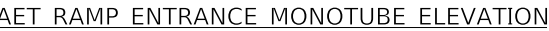


OVERHEAD SIGN STRUCTURE  
EXIT MONOTUBE TYPE  
(STEEL) MAINLINE SUMMARY  
AND TOTAL BILL OF  
MATERIAL

VERSION: 2020-03	STANDARD: M-OHS-723	SHEET: 1 OF 1
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TOTALTOTAL

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THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "*CADD STANDARDS MANUAL*" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR  
MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

TOTALTOTAL BILL OF MATERIAL

WORK THIS SHEET WITH STANDARD F15



VERSION: 2020-03	STANDARD: M-OHS-725	SHEET: 1 OF 1
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THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS  
DETAILED. (REFERENCE BASE SHEET M-ITS-1101)

TOTAL BILL OF MATERIAL

TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
XXX-XXXX	OVERHEAD SIGN STRUCTURE, AET RAMP EXIT MONOTUBE TYPE (STEEL)	FOOT	XXX'-XX"
XXX-XXXX	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU YD	XXX.XX
XXX-XXXX	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX.XX
XXX-XXXX	PROTECTIVE COAT	SQ YD	X,XXX.XX

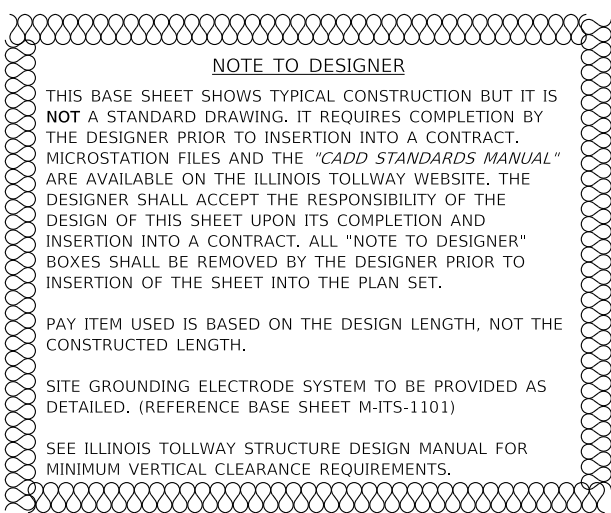
SUMMARY																					
STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEVATIONS						PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F15						SHEET 6 OF STANDARD F15	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
			A	B	C	D	E	F		L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	H	H <sub>1</sub>	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		

WORK THIS SHEET WITH STANDARD F15




VERSION: 2022-03	STANDARD: M-OHS-726	SHEET: 1 OF 1
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[illegible]

TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
XXX-XXXX	OVERHEAD SIGN STRUCTURE, SPAN TYPE (STEEL)	FOOT	XXX'-XX"
XXX-XXXX	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	XXX.XX
XXX-XXXX	CONCRETE STRUCTURES	CU YD	X,XXX.XX
XXX-XXXX	REINFORCEMENT BARS, EPOXY COATED	POUND	X,XXX.XX
XXX-XXXX	PROTECTIVE COAT	SQ YD	X,XXX.XX

		
<p align="center"><b>OVERHEAD SIGN STRUCTURE SPAN TYPE (STEEL) SUMMARY AND TOTAL BILL OF MATERIAL</b></p>		
<b>VERSION:</b> 2020-03	<b>STANDARD:</b> M-OHS-728	<b>SHEET:</b> 1 OF 1

NOTE:

WORK THIS SHEET WITH STANDARD F17

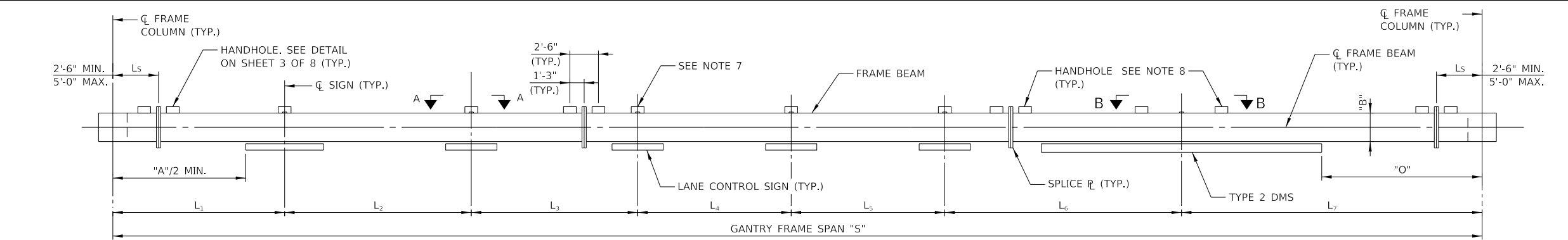


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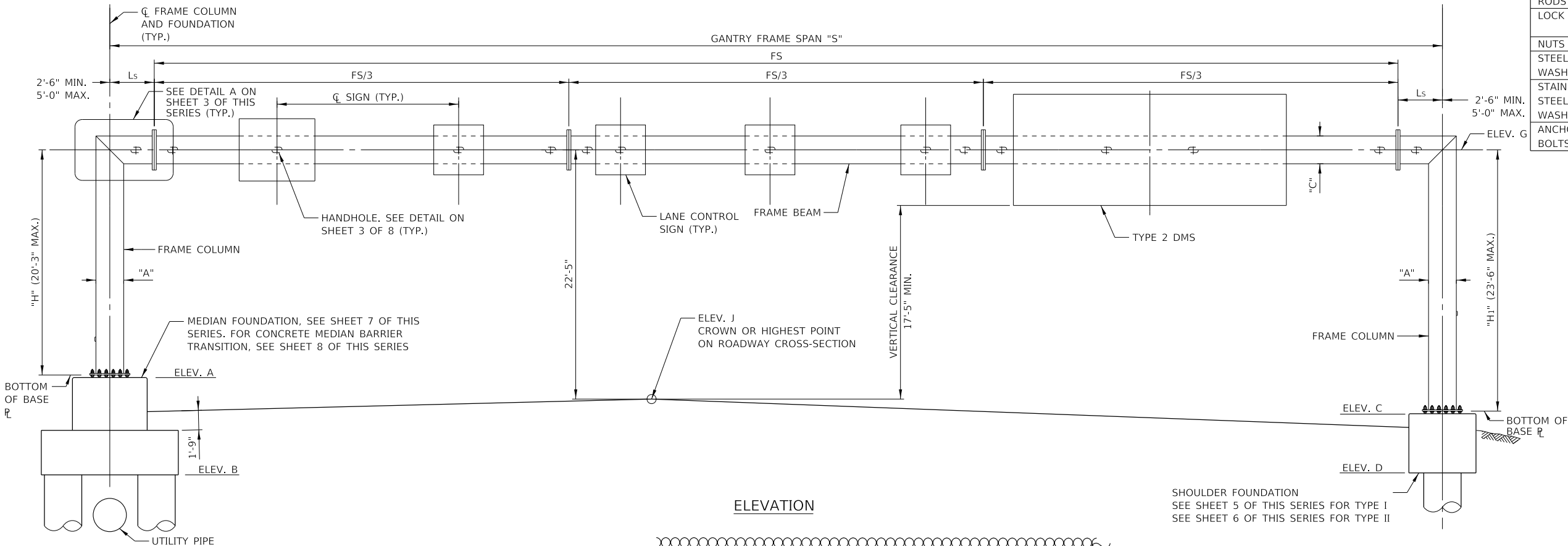
NOTES:

- SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
- CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
- PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L<sub>1</sub> THROUGH L<sub>7</sub>)
- FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 2 COLUMNS AND 3 FIELD SECTIONS.
- PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO ¼" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
- IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
- IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLE SHALL BE ELIMINATED, AND THE HANDHOLE ADJACENT TO THE SPLICE SHALL BE USED INSTEAD. THE CONDUIT COUPLERS SHALL BE INCLUDED AT THE HANDHOLE ADJACENT TO THE SPLICE IF THE TYPE 2 DMS SIGN HANDHOLE IS ELIMINATED.
- LIMIT DMS TO THE FACE OF COLUMN WITH 1'-0" MAXIMUM OVERHANG FROM THE SUPPORT BRACKET. MAINTAIN 9" MINIMUM DISTANCE BETWEEN SPLICE AND SUPPORT BRACKET.

PLAN



ELEVATION



NOTE TO DESIGNER

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED IN LINE WITH SINGLE FACE CONCRETE BARRIER. THIS FOUNDATION REQUIRES MINIMUM 35 FT OF BARRIER ON EACH SIDE OF THE FOUNDATION TO RESIST LONGITUDINAL FORCE FROM THE GANTRY COLUMN.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED OUTSIDE CLEAR ZONE OR BEHIND GUARDRAIL.

PROVIDE SITE GROUNDING ELECTRODE SYSTEM DETAIL ACCORDING TO THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 734.

REFERENCE BASE SHEET M-ITS-1101.

DIFFERENCE BETWEEN ELEV. A AND ELEV. C SHOULD NOT EXCEED 5'-0".

NOTE TO DESIGNER

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MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)
STRUCTURAL STEEL TUBE FRAME (HSS)	ASTM A618 GRADE III	50	62
STRUCTURAL STEEL TUBE MOUNTING BEAMS (HSS)	ASTM A500 GRADE B	46	58
STEEL SHAPES	ASTM A709, GRADE 50	50	65
STEEL PLATES	ASTM A572 GR. 50 OR ASTM A709 GR. 50	50	65
STEEL BOLTS	ASTM 325 TYPE 1	--	105
SIGN BRACKET RODS	ASTM A307	--	60
LOCK NUTS	ASTM A194 GR. 8F OR ASTM A194 GR. 2H	--	--
NUTS	ASTM A563 GRADE DH	--	--
STEEL WASHERS	ASTM F436	--	--
STAINLESS STEEL WASHERS	ASTM A240, TYPE 302	--	--
ANCHOR BOLTS	AASHTO M 314 OR ASTM F1554	55	75

TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
XXX-XXXX	FOUNDATION FOR ITS GANTRY FRAME	CU YD	XXX.XX
XXX-XXXX	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	XXX'.XX"
XXX-XXXX	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	XXX'.XX"
XXX-XXXX	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	XXX'.XX"
XXX-XXXX	REINFORCEMENT BARS, EPOXY COATED	POUND	XXX.XX
XXX-XXXX	PROTECTIVE COAT	SQ YD	XXX.XX

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

SPAN "S"	FRAME COLUMN	FRAME BEAM	CAMBER	"A"	"B"	"C"	"O"
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	3½"	2'-0"	2'-4"	2'-0"	1'-0"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	5"	2'-4"	2'-4"	2'-0"	1'-2"
130'<"S"<=150'	HSS 30x30x0.625	HSS 30x30x0.625	5½"	2'-6"	2'-6"	2'-6"	1'-3"



OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

VERSION: 2023-03	STANDARD: M-OHS-729	SHEET: 1 OF 8
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1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A  $\frac{3}{4}$ " x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

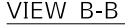
1. REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.

3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".

5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

1. ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED MARCH, 2015 TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

3. ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012.



STRUCTURE NUMBER	STATION	SPAN "S" (FT)	ELEVATIONS						FOUNDATION TYPE	PROPOSED MINIMUM VERTICAL CLEARANCE	F <sub>s</sub>	L <sub>s</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	H	H <sub>1</sub>	FOUNDATION		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
			A	B	C	D	J	G														CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
XXX-XXXX	XXXXX+XX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXXXX	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XX'-XX"	XXX.XX	XXX.XX	X,XXX	XXX.XX
																					TOTAL				

1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESION LESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE FOUNDATION TO DETERMINE THE ACTUAL SOIL PROPERTIES. SHOULD THE INVESTIGATION REVEAL THE PRESENCE OF COHESION LESS SOIL OR COHESIVE SOILS WITH PROPERTIES LESS THAN THE AVERAGES INDICATED IN THIS STANDARD, THE DESIGNER SHALL DESIGN AND DETAIL THE DRILLED SHAFT FOUNDATIONS TO MEET THE ACTUAL SOIL CONDITIONS.
3. DESIGN AND CONSTRUCTION SPECIFICATIONS: THE DESIGNER IS RESPONSIBLE FOR UPDATING THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION TO THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION USED IN DESIGN.
4. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
5. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

WHERE THE DISTANCE BETWEEN SIGN ACCESS HOLE(S) AND THE ACCESS HOLES ADJACENT TO THE SPLICE ARE LESS THAN 6'-0", THE SIGN ACCESS HOLE SHALL BE ELIMINATED AND THE HOLE ADJACENT TO THE SPLICE IS USED INSTEAD. CONDUIT COUPLERS SHALL BE INCLUDED AT THE ACCESS HOLE ADJACENT TO THE SPLICE IF SIGN ACCESS HOLE IS ELIMINATED.

BASE PLATE TABLE - TYPE N								
SPAN "S"	"D"	"E"	N <sub>1</sub>	X <sub>1</sub>	N <sub>2</sub>	X <sub>2</sub>	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1 3/4"	18
110' < "S" <= 130'	3'-5"	3'-6"	5	7"	6	6"	1 3/4"	22
130' < "S" <= 150'	3'-7 1/2"	3'-6"	5	7 1/2"	6	6"	1 3/4"	22

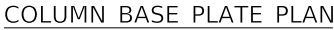


# OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE SPAN STRUCTURE DETAILS

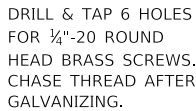
VERSION:  
2023-03

STANDARD:  
M-OHS-729

SHEET  
2 OF 8



1. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
2. SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
3. INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.



PROVIDE COVER PLATE  $\frac{3}{16}$ " x 9" x 12"  
ROUND CORNERS TO  $4\frac{1}{2}$ " RADIUS.  
PROVIDE SIX  $\frac{5}{16}$ "  $\varnothing$  HOLES.

VIEW D-D  
HANDHOLE DETAIL



SPLICE PLATE TABLE										
SPAN "S"	F	G	H	J	N <sub>3</sub>	X <sub>3</sub>	N <sub>4</sub>	X <sub>4</sub>	SPLICE BOLT DIAMETER (D <sub>1</sub> )	NO. SPLICE BOLT
<= 110'	3'-1"	2'-8½"	1'-6"	2¼"	6	5½"	6	4¾"	1"	24
110' < "S" <= 130'	3'-0½"	2'-10"	1'-6"	2¼"	5	6½"	5	6"	1¼"	20
130' < "S" <= 150'	3'-4"	3'-4"	1'-9"	2⅝"	6	6"	6	6"	1¼"	24

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "*CADD STANDARDS MANUAL*" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

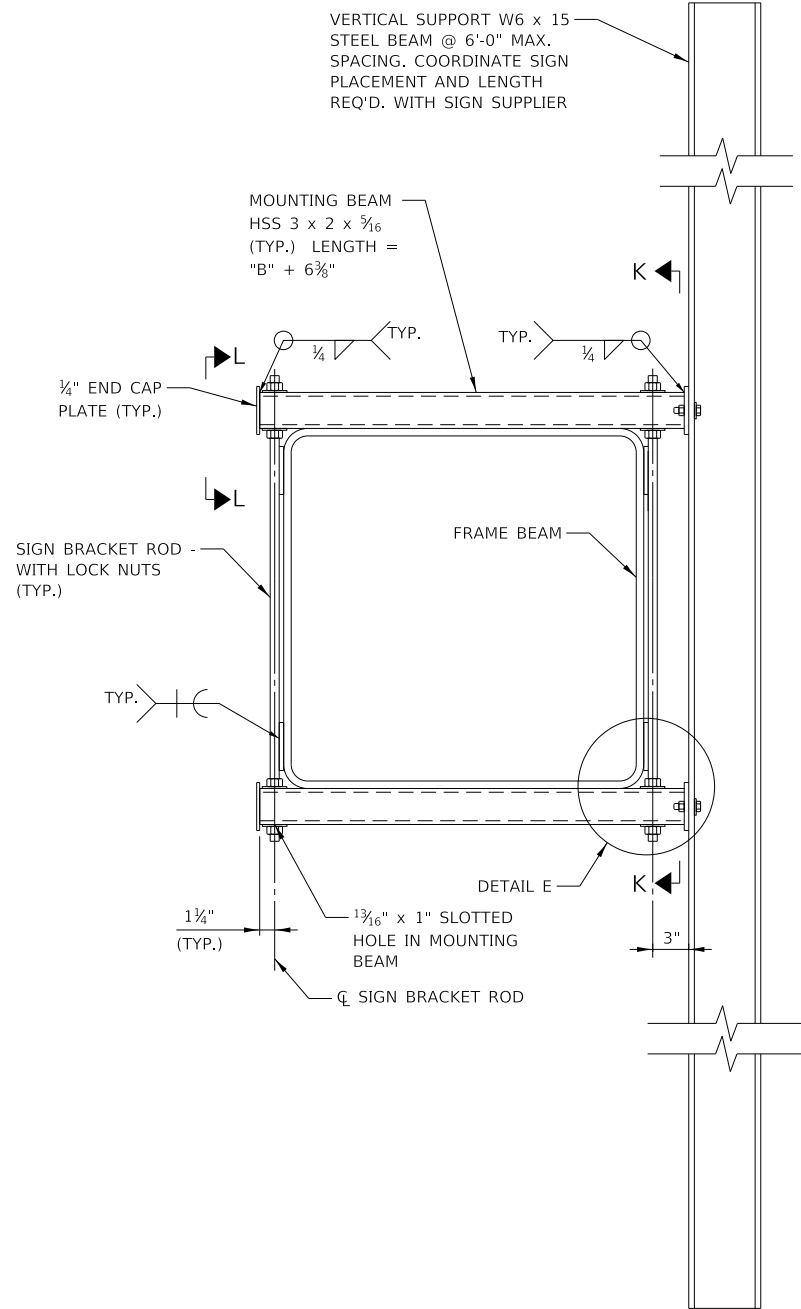
VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON  
MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.

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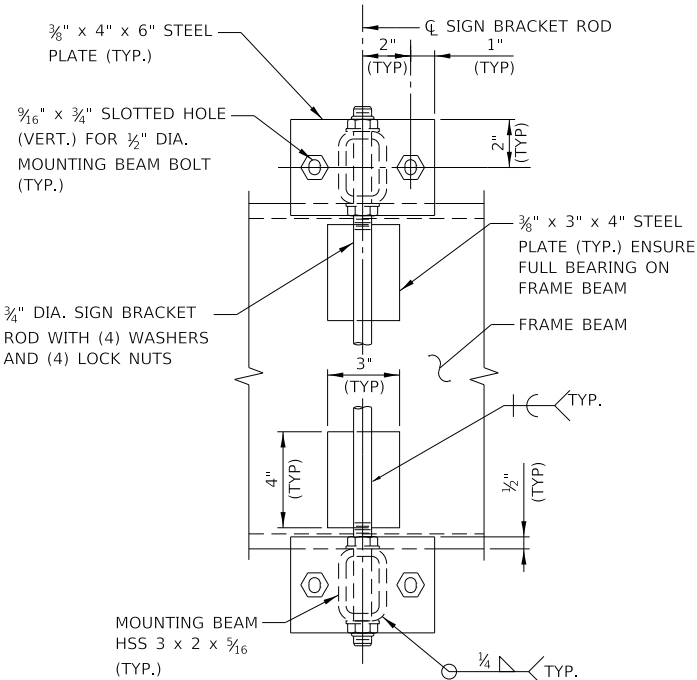
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**NOTE TO DESIGNER**

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CONNECTION SIDE VIEW

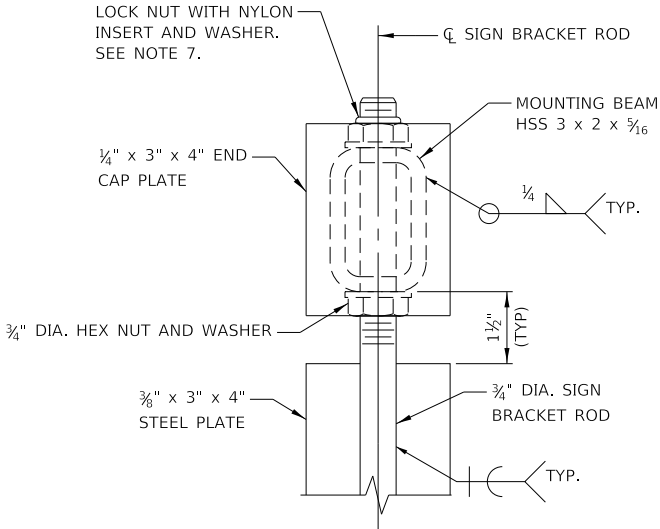


SECTION K-K

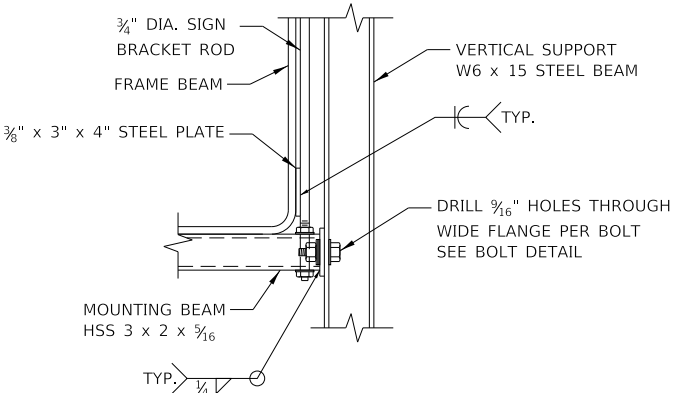
VERTICAL SUPPORT TABLE		
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

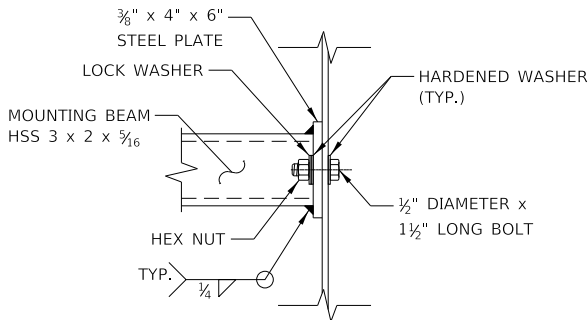
- CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
- VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
- DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH HOLES ON W6x15 VERTICAL SUPPORT.
- PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
- GALVANIZE ALL NON-STAINLESS STEEL PARTS.
- SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
- LOCK NUTS SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H.



VIEW L-L



DETAIL E



BOLT DETAIL

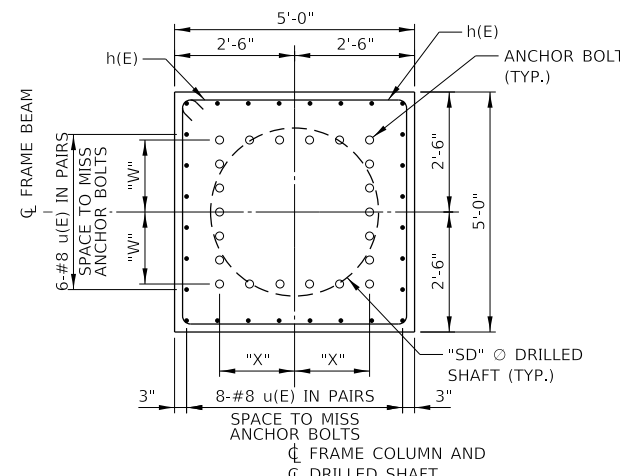
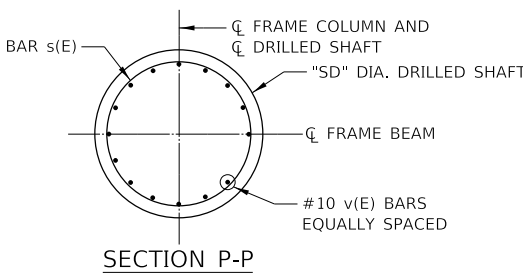
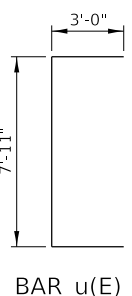
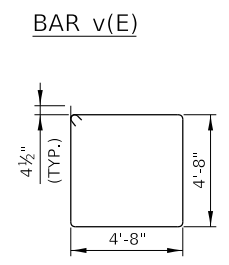
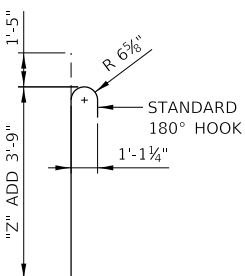
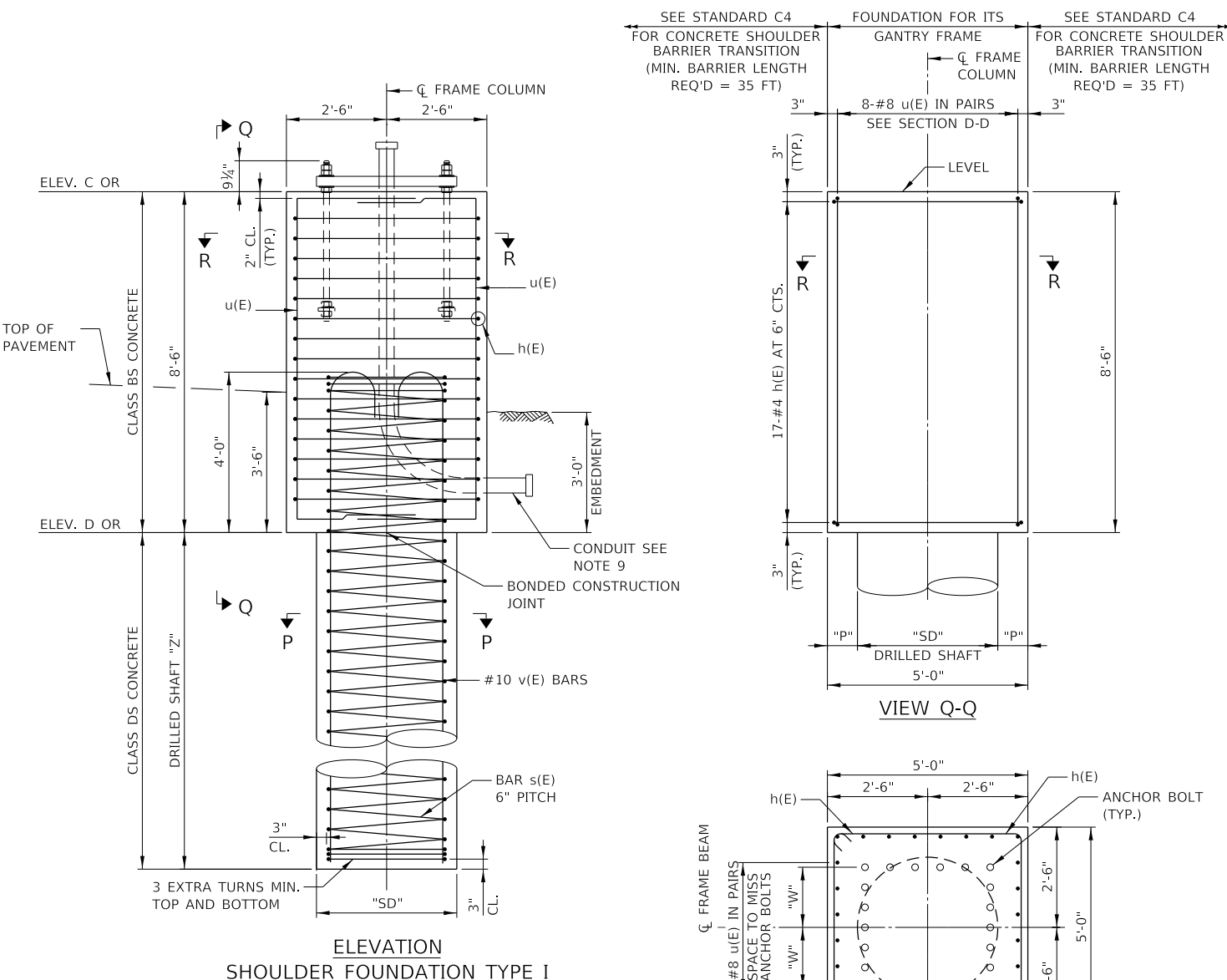
SIGN BRACKET ROD NOT SHOWN FOR CLARITY



OVERHEAD SIGN STRUCTURE  
ITS GANTRY FRAME (STEEL)  
SINGLE SPAN STRUCTURE  
DETAILS

VERSION: 2023-03	STANDARD: M-OHS-729	SHEET: 4 OF 8
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SECTION R-R

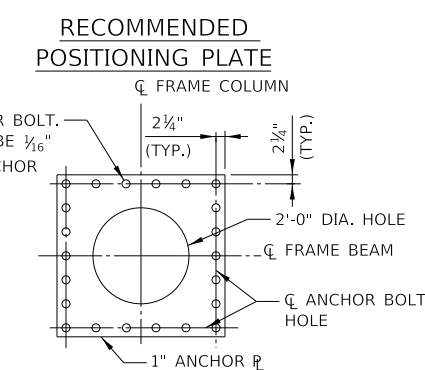
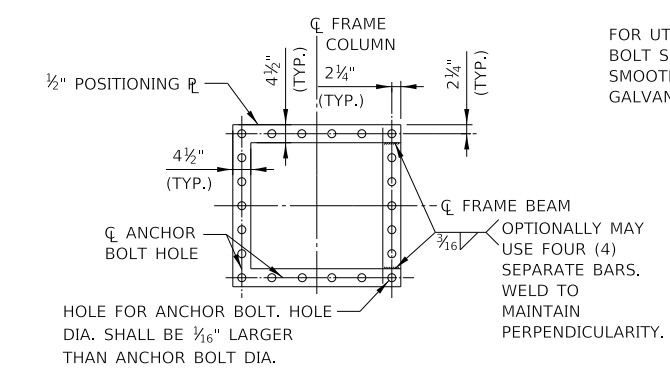
REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION					
SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
<= 110'	h(E)	17	#4	19'-5"	
	h <sub>1</sub> (E)	17	#4	12'-9"	
	s(E)	1	#4	31'-9"	
	v(E)	16	#10	33'-2"	
110' < "S" <= 130'	u(E)	28	#8	13'-11"	
	h(E)	17	#4	19'-5"	
	h <sub>1</sub> (E)	17	#4	12'-9"	
	s(E)	1	#6	31'-9"	
130' < "S" <= 150'	v(E)	16	#10	37'-2"	
	u(E)	28	#8	13'-11"	
	h(E)	17	#4	19'-5"	
	h <sub>1</sub> (E)	17	#4	12'-9"	

\* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

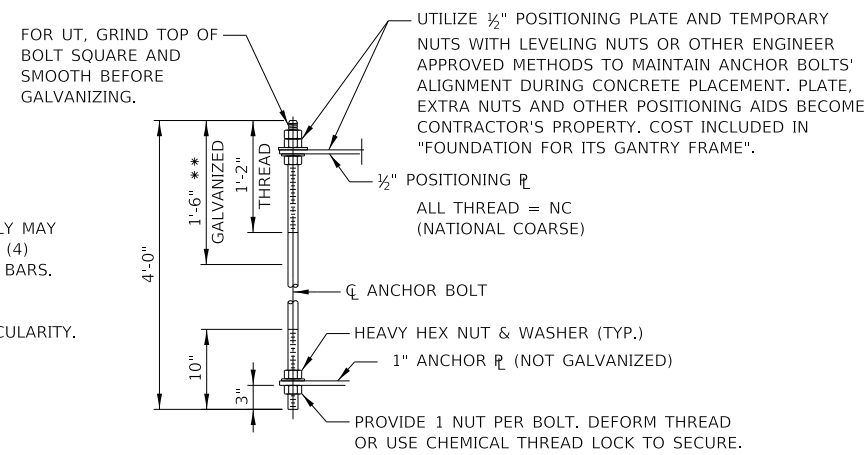
SHOULDER FOUNDATION TYPE I SCHEDULE			
SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<= 110'	8.0	10.0	4,130
110' < "S" <= 130'	8.0	12.0	4,930
130' < "S" <= 150'	8.0	17.0	6,050

NOTES:

- THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
- ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
- CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
- BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
- PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D. COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
- ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
- FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
- NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
- COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.



ANCHOR PLATE DETAIL



ANCHOR BOLT DETAIL

ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 OR ASTM F1554 GRADE 55 AND MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. GALVANIZE UPPER 18" PER AASHTO M 232. NO WELDING SHALL BE PERMITTED ON ANCHOR BOLTS.

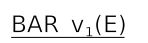
\*\* 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.

SHOULDER FOUNDATION TYPE I TABLE							
SPAN "S"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<= 110'	1'-5 1/2"	1'-4"	28'-0"	3'-6"	9"	6"	18
110' < "S" <= 130'	1'-6"	1'-5 1/2"	32'-0"	3'-6"	9"	6"	22
130' < "S" <= 150'	1'-6"	1'-6 3/4"	35'-0"	4'-0"	6"	6"	22



OVERHEAD SIGN STRUCTURE  
ITS GANTRY FRAME (STEEL)  
SINGLE SPAN STRUCTURE  
DETAILS







\* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

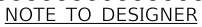


FOR ONE FOUNDATION



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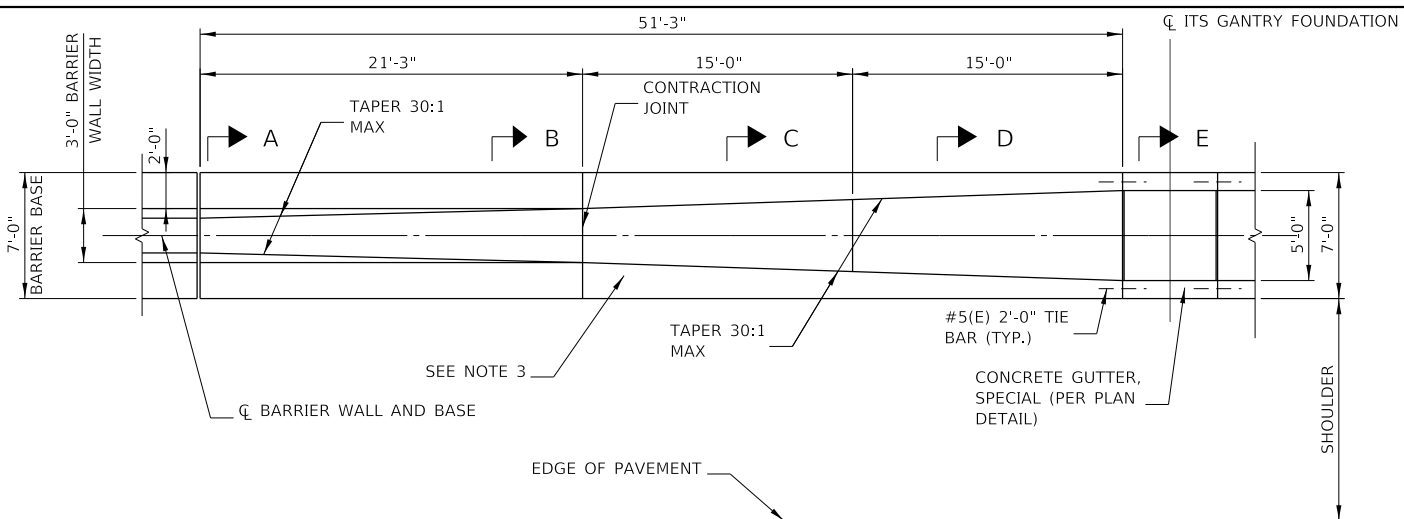
## MEDIAN FOUNDATION SCHEDULE

$$\frac{\text{BAR } u(E)}{\text{BAR } u_3(E)}$$


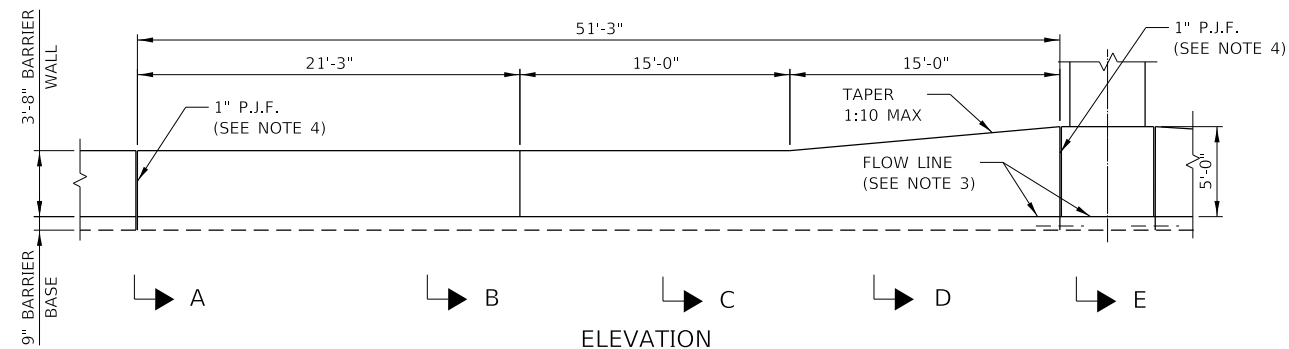
## MEDIAN FOUNDATION TABLE


$$\frac{\text{BAR } u_1(E)}{\text{BAR } u_2(E)}$$


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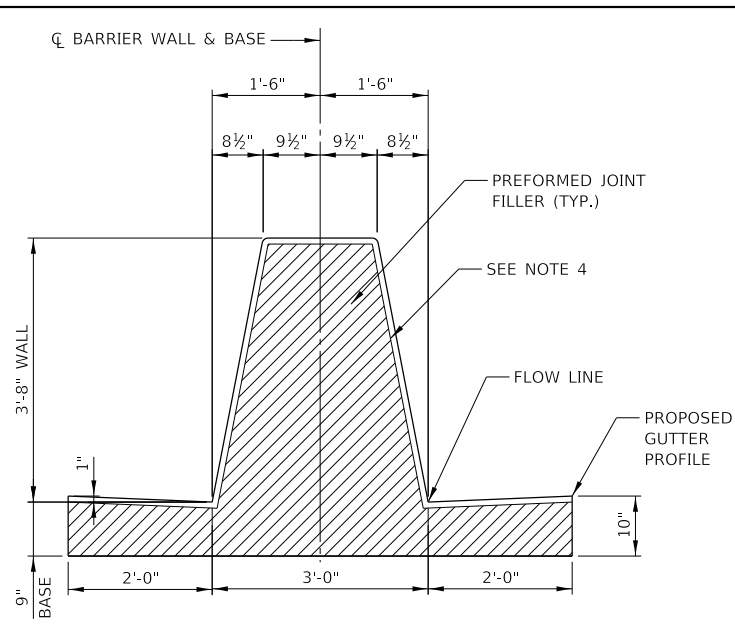


PLAN



ELEVATION

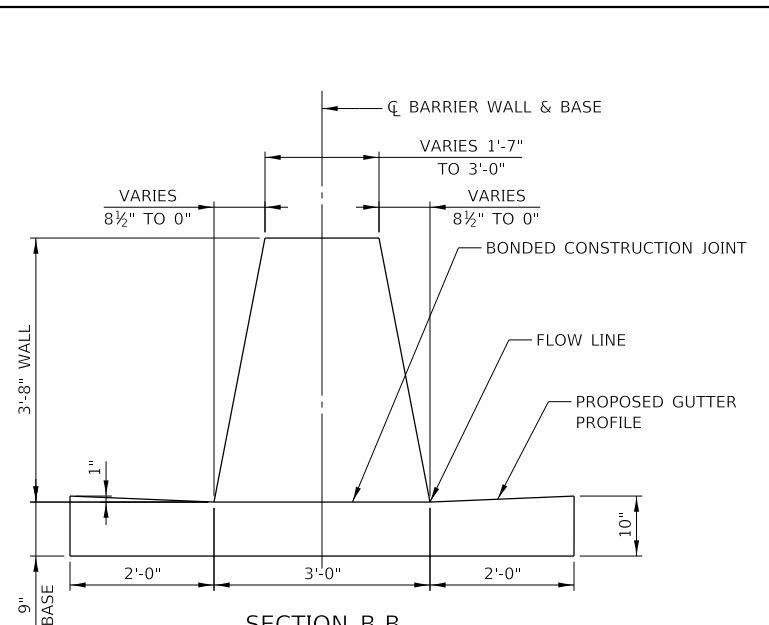
CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION A-A

**NOTE TO DESIGNER**

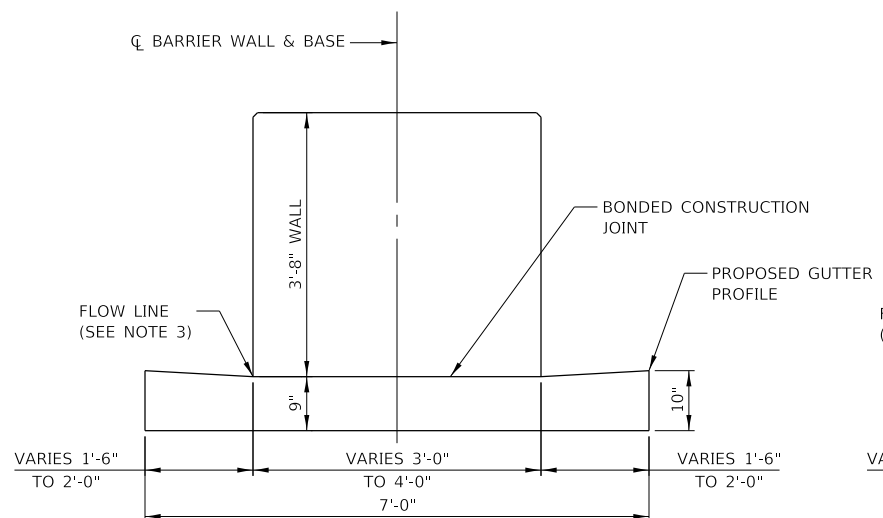
1. WITHIN SECTION B-B, THE GUTTER PORTION OF THE BARRIER BASE REMAINS 2'-0"; HERETOFORE, STANDARD TYPE 20A F&G SHALL BE USED.
2. WITHIN SECTION C-C & D-D, THE GUTTER PORTION OF THE BARRIER BASE IS LESS THAN 2'-0"; THEREFORE, NON-ILLINOIS TOLLWAY STD. F&G SHALL BE USED.
3. WITHIN SECTION B-B & C-C, THE BARRIER HEIGHT REMAINS 44". THIS ALLOWS THE PLACEMENT OF LIGHT POLE FOUNDATIONS WITHIN THIS AREA.
4. WITHIN SECTION D-D, THE BARRIER HEIGHT IS INCREASING FROM 44" TO 60", THE LIGHT POLE FOUNDATIONS SHALL NOT BE PLACED WITHIN THIS AREA.



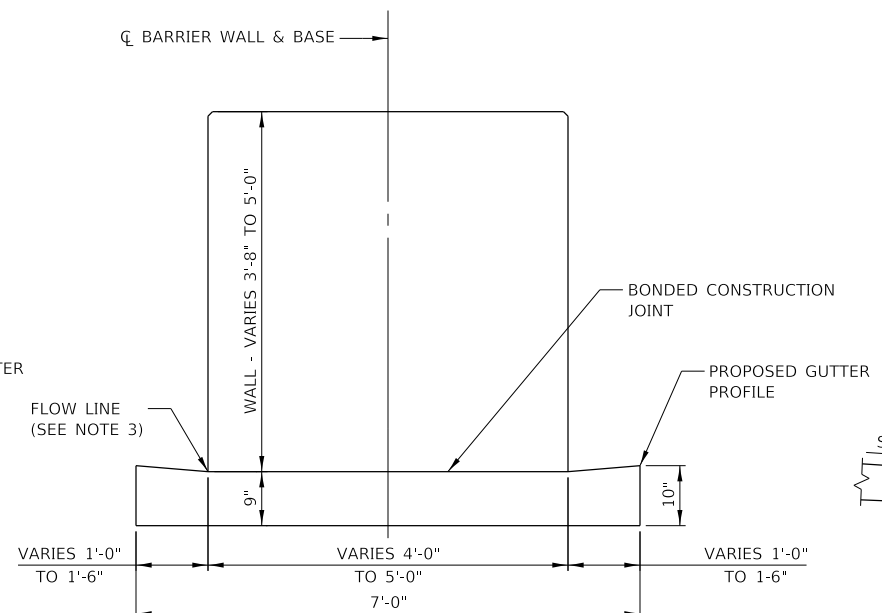
SECTION B-B

**NOTES:**

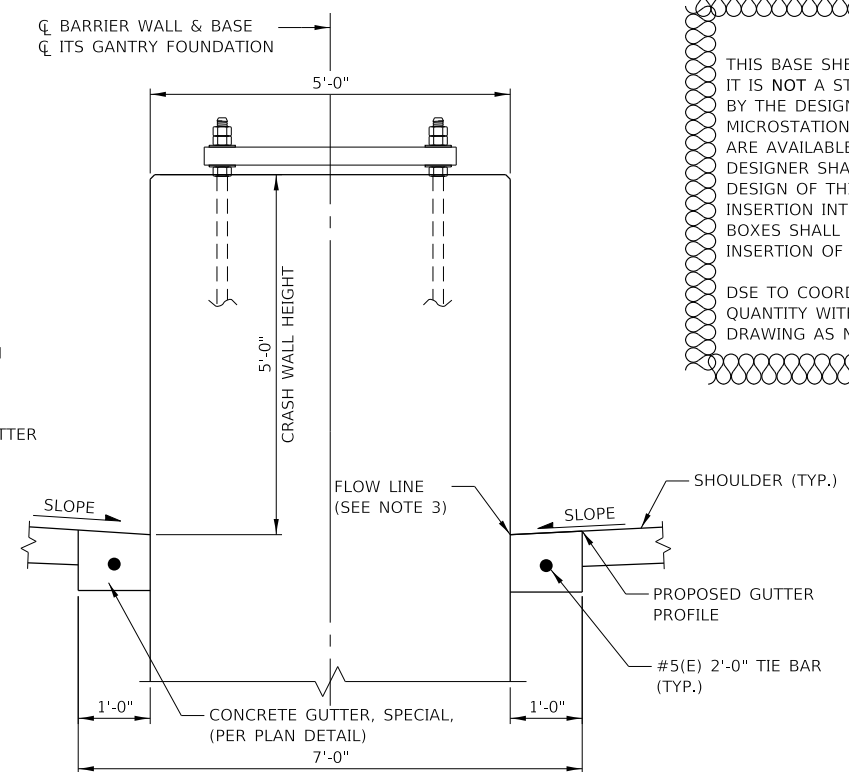
1. 2" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.
2. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE BY SAWING.
3. GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
4. PROVIDE NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.



SECTION C-C



SECTION D-D



SECTION E-E

**NOTE TO DESIGNER**

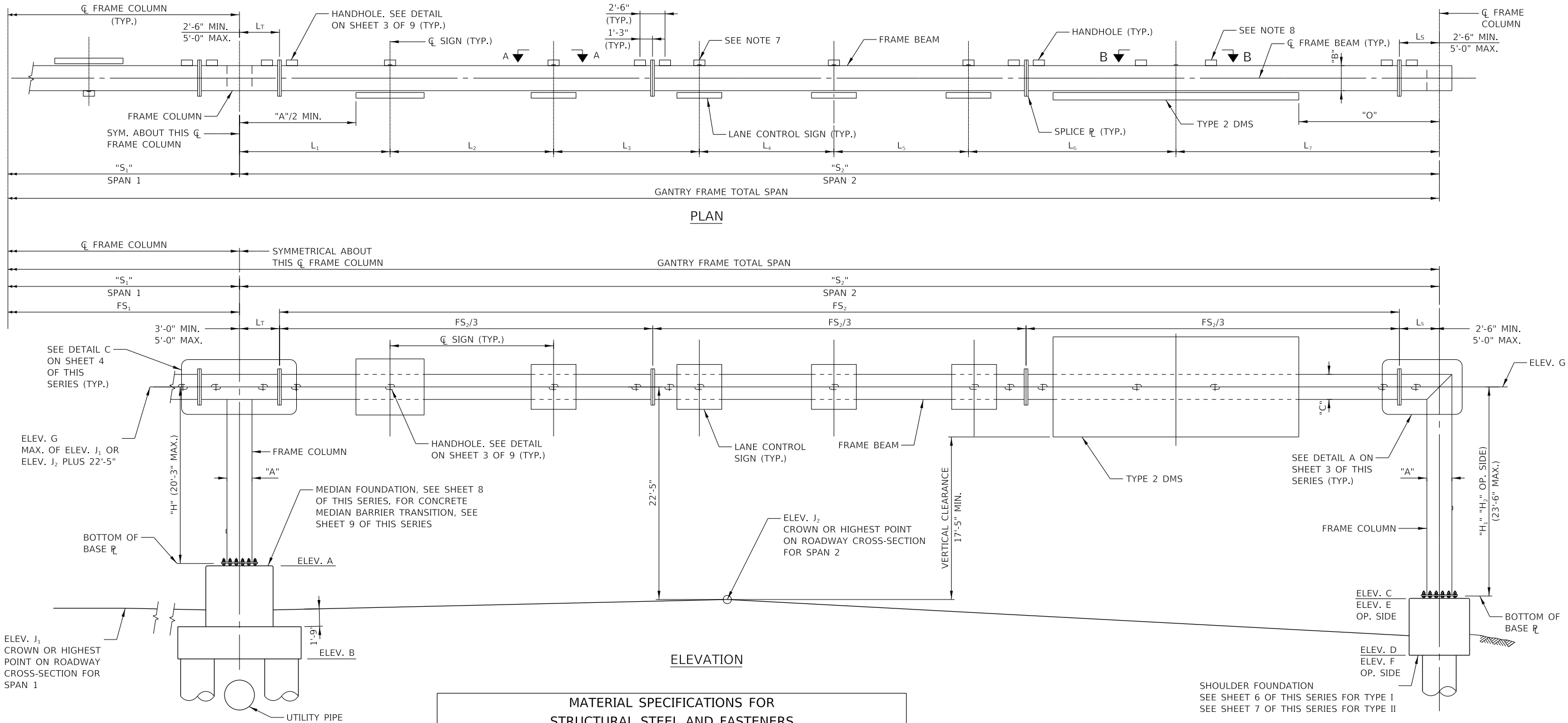
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DSE TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.



**OVERHEAD SIGN STRUCTURE  
ITS GANTRY FRAME (STEEL)  
SINGLE SPAN STRUCTURE  
DETAILS**





- NOTES:**
- SEE SHEET 2 OF THIS SERIES FOR VIEW A-A, VIEW B-B AND DESIGN SUMMARY TABLE.
  - CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
  - PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L<sub>1</sub> THROUGH L<sub>7</sub>)
  - FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 3 COLUMNS AND 6 FIELD SECTIONS.
  - PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
  - WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO ¼" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.
  - IF THE DISTANCE BETWEEN AN LCS TYPE 1 OR LCS TYPE 2 CENTERLINE HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SPLICE HANDHOLE SHALL BE ELIMINATED.
  - IF THE DISTANCE BETWEEN A TYPE 2 DMS SIGN HANDHOLE AND THE HANDHOLE ADJACENT TO A SPLICE IS LESS THAN 6'-0", THE SIGN HANDHOLE SHALL BE ELIMINATED, AND THE HANDHOLE ADJACENT TO THE SPLICE SHALL BE USED INSTEAD. THE CONDUIT COUPLERS SHALL BE INCLUDED AT THE HANDHOLE ADJACENT TO THE SPLICE IF THE TYPE 2 DMS SIGN HANDHOLE IS ELIMINATED.
  - LIMIT DMS TO THE FACE OF COLUMN WITH 1'-0" MAXIMUM OVERHANG FROM THE SUPPORT BRACKET. MAINTAIN 9" MINIMUM DISTANCE BETWEEN SPLICE AND SUPPORT BRACKET.

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS			
ELEMENT OF STRUCTURE	SPECIFICATION	F <sub>y</sub> (ksi)	F <sub>u</sub> (ksi)
STRUCTURAL STEEL TUBE FRAME (HSS)	ASTM A618, GRADE III	50	62
STRUCTURAL STEEL TUBE MOUNTING BEAMS (HSS)	ASTM A500, GRADE B	46	58
STEEL SHAPES	ASTM A709, GRADE 50	50	65
STEEL PLATES	ASTM A572 GR. 50 OR ASTM A709 GR. 50	50	65
STEEL BOLTS	ASTM 325 TYPE 1	--	105
SIGN BRACKET RODS	ASTM A307	--	60
LOCK NUTS	ASTM A194 GR. 8F OR ASTM A194 GR. 2H	--	--
NUTS	ASTM A563 GRADE DH	--	--
STEEL WASHERS	ASTM F436	--	--
STAINLESS STEEL WASHERS	ASTM A240, TYPE 302	--	--
ANCHOR BOLTS	AASHTO M 314 OR ASTM F1554	55	75

**NOTE TO DESIGNER**

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION. USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED IN LINE WITH SINGLE FACE CONCRETE BARRIER. THIS FOUNDATION REQUIRES MINIMUM 35 FT OF BARRIER ON EACH SIDE OF THE FOUNDATION TO RESIST LONGITUDINAL FORCE FROM THE GANTRY COLUMN.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED OUTSIDE CLEAR ZONE OR BEHIND GUARDRAIL.

PROVIDE SITE GROUNDING ELECTRODE SYSTEM DETAIL ACCORDING TO THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS SECTION 734.

REFERENCE BASE SHEET M-ITS-1101.


DIFFERENCE BETWEEN ELEV. A AND ELEV. C (OR ELEV. E) SHOULD NOT EXCEED 5'-0".

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE								
MAX. SPAN "S <sub>1</sub> " OR "S <sub>2</sub> "	FRAME COLUMN	FRAME BEAM	"A"	"B"	"C"	"O"	SPAN "S <sub>1</sub> " OR "S <sub>2</sub> "	CAMBER
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	2'-0"	2'-4"	2'-0"	1'-0"	<=110'	3¼"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	2'-4"	2'-4"	2'-0"	1'-2"	110'<"S"<=130'	4½"
130'<"S"<=150'	HSS 30x30x0.625	HSS 30x30x0.625	2'-6"	2'-6"	2'-6"	1'-3"	130'<"S"<=150'	5"

TOTAL BILL OF MATERIAL			
PAY ITEM	ITEM	UNIT	TOTAL
XXX-XXXX	FOUNDATION FOR ITS GANTRY FRAME	CU YD	XXX.XX
XXX-XXXX	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	XXX'-XX"
XXX-XXXX	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	XXX'-XX"
XXX-XXXX	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	XXX'-XX"
XXX-XXXX	REINFORCEMENT BARS, EPOXY COATED	POUND	XXX.XX
XXX-XXXX	PROTECTIVE COAT	SQ YD	XXX.XX

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**OVERHEAD SIGN STRUCTURE  
ITS GANTRY FRAME (STEEL)  
TWO-SPAN STRUCTURE  
DETAILS**

VERSION: 2023-03	STANDARD: M-OHS-730	SHEET: 1 OF 9
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1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A  $\frac{3}{4}$ " x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

1. REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

1. ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS ISSUED MARCH, 2015 TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2015.
3. ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012.



## BASE PLATE TABLE - TYPE N

WHERE THE DISTANCE BETWEEN SIGN ACCESS HOLE(S) AND THE ACCESS HOLES ADJACENT TO THE SPLICE ARE LESS THAN 6'-0", THE SIGN ACCESS HOLE SHALL BE ELIMINATED AND THE HOLE ADJACENT TO THE SPLICE IS USED INSTEAD. CONDUIT COUPLERS SHALL BE INCLUDED AT THE ACCESS HOLE ADJACENT TO THE SPLICE IF SIGN ACCESS HOLE IS ELIMINATED.

## DESIGN SUMMARY

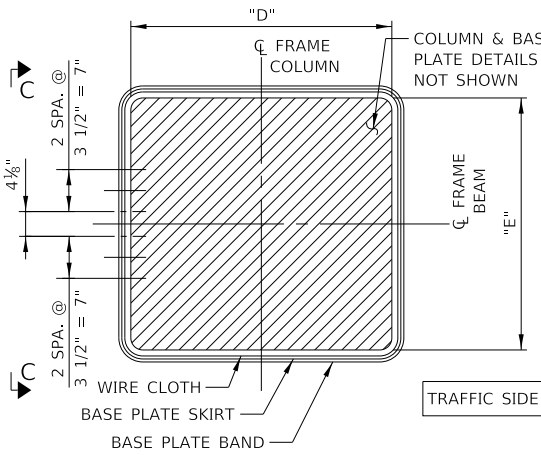


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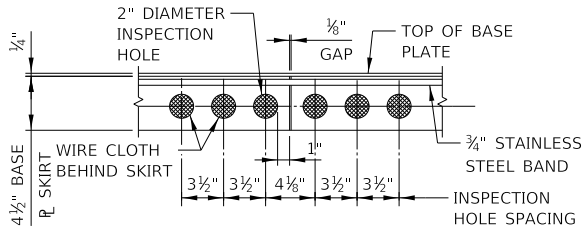
1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESION LESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE FOUNDATION TO DETERMINE THE ACTUAL SOIL PROPERTIES. SHOULD THE INVESTIGATION REVEAL THE PRESENCE OF COHESION LESS SOIL OR COHESIVE SOILS WITH PROPERTIES LESS THAN THE AVERAGES INDICATED IN THIS STANDARD, THE DESIGNER SHALL DESIGN AND DETAIL THE DRILLED SHAFT FOUNDATIONS TO MEET THE ACTUAL SOIL CONDITIONS.
3. DESIGN AND CONSTRUCTION SPECIFICATIONS: THE DESIGNER IS RESPONSIBLE FOR UPDATING THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION TO THE EDITION OF SPECIFICATIONS AND THE DATE OF PUBLICATION USED IN DESIGN.
4. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
5. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.

[illegible]

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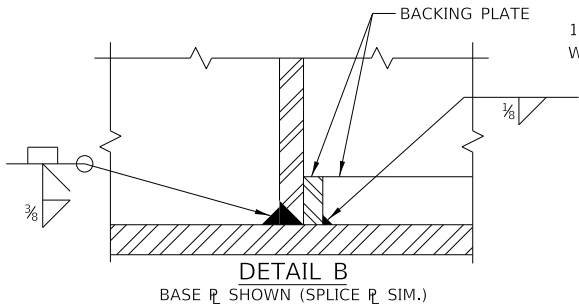
COLUMN BASE PLATE PLAN



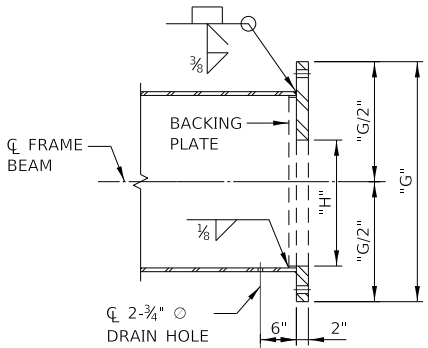
VIEW C-C (BASE PLATE SKIRT)

NOTE:

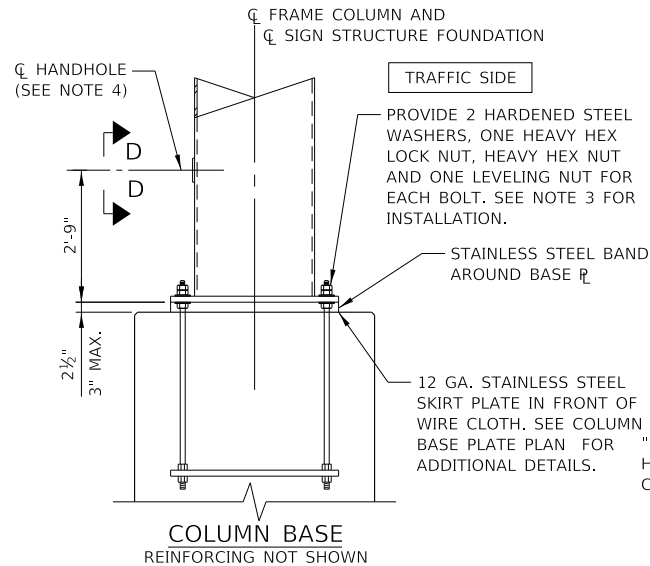
1. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
2. SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
3. INSTALLATION AND INSPECTION OF SPLICE BOLTS AND ANCHOR BOLTS SHALL COMPLY WITH ILLINOIS TOLLWAY SPECIAL PROVISION "INTELLIGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.



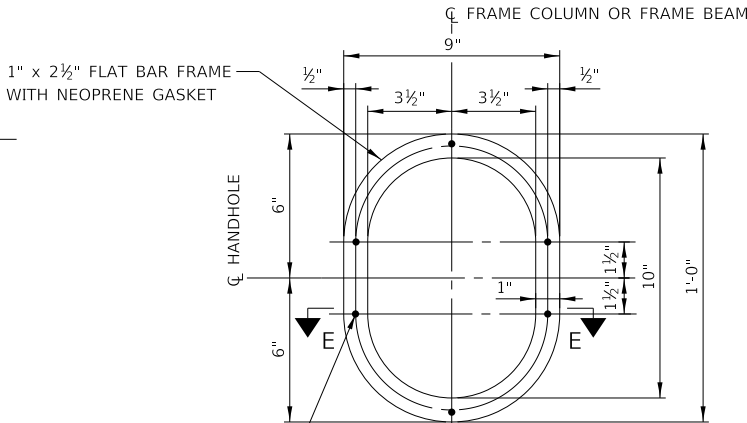
DETAIL B  
BASE PLATE SHOWN (SPLICE PLATE SIM.)



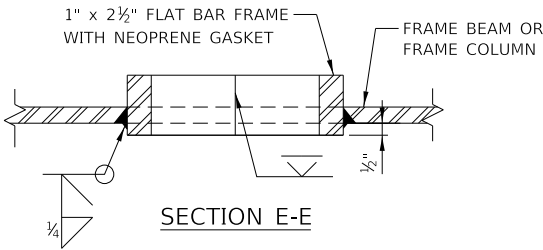
SECTION O-O  
SPLICE PLATE DETAIL



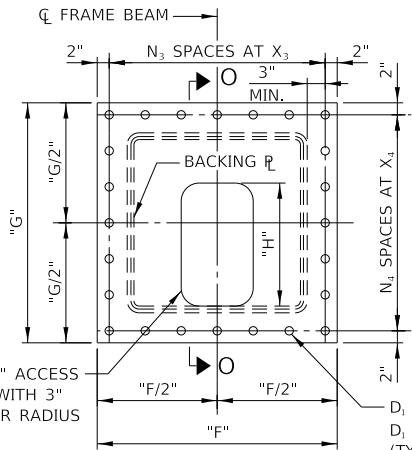
COLUMN BASE  
REINFORCING NOT SHOWN



VIEW D-D  
HANDHOLE DETAIL

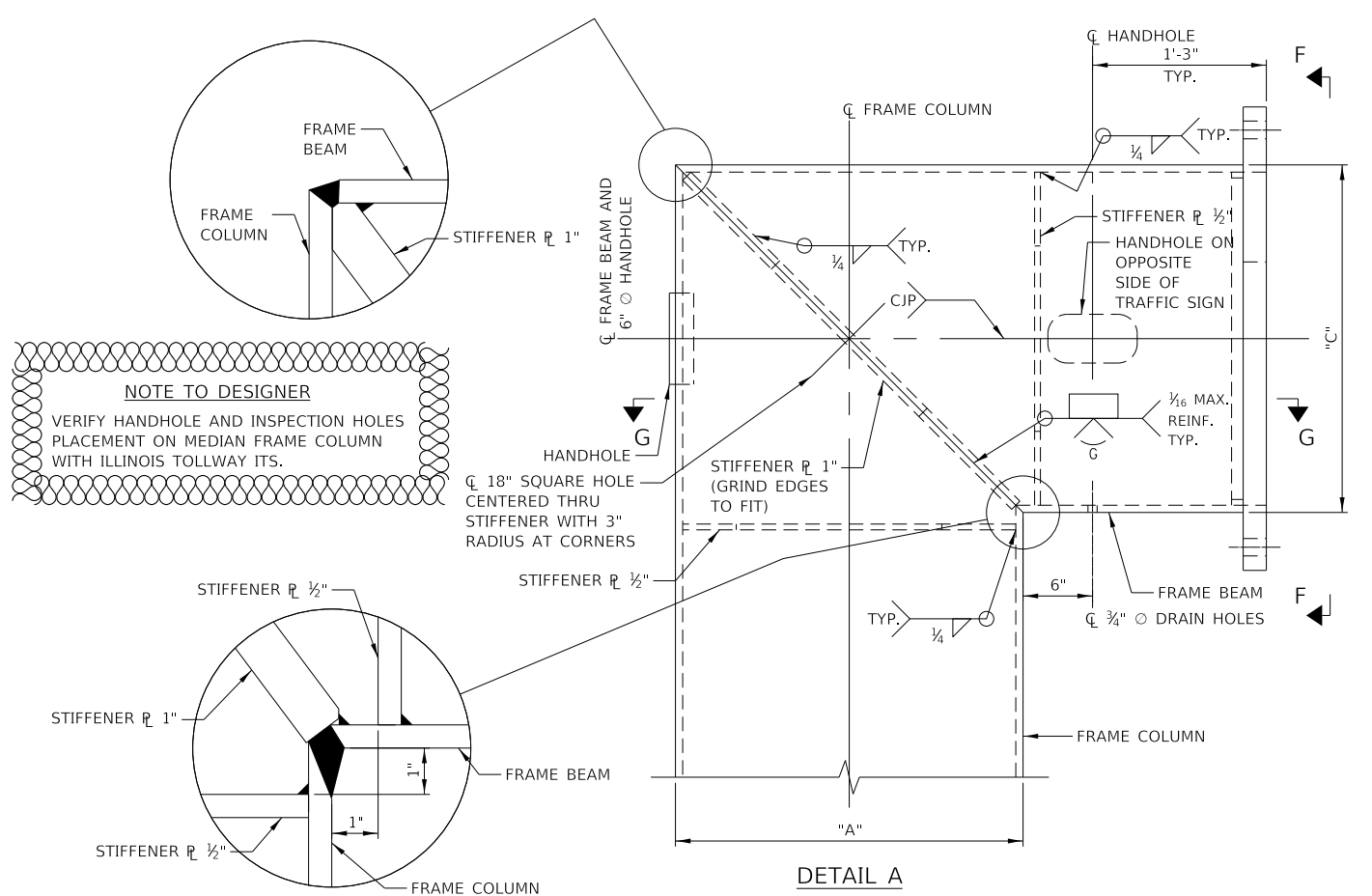


SECTION E-E



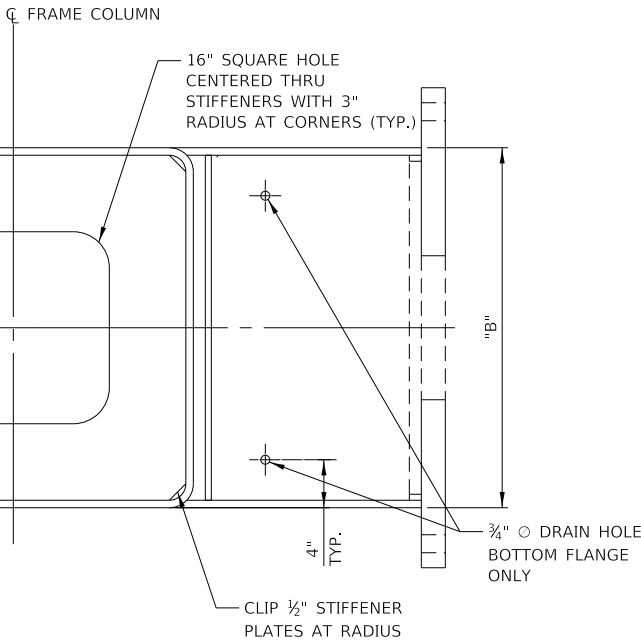
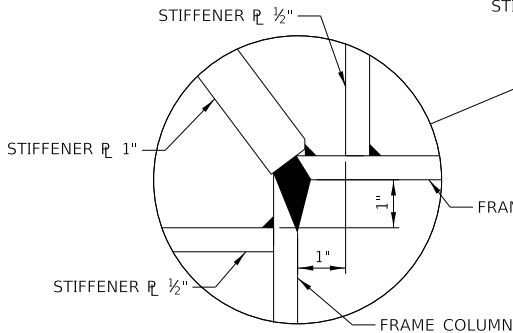
VIEW F-F

D<sub>1</sub> + 1/16" DIA. HOLE FOR D<sub>1</sub> H. S. SPLICE BOLT (TYP.). SEE NOTE 3 FOR SPLICE BOLT INSTALLATION.



NOTE TO DESIGNER

VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.



SECTION G-G  
1" STIFFENER PLATE NOT SHOWN

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.

SPLICE PLATE TABLE

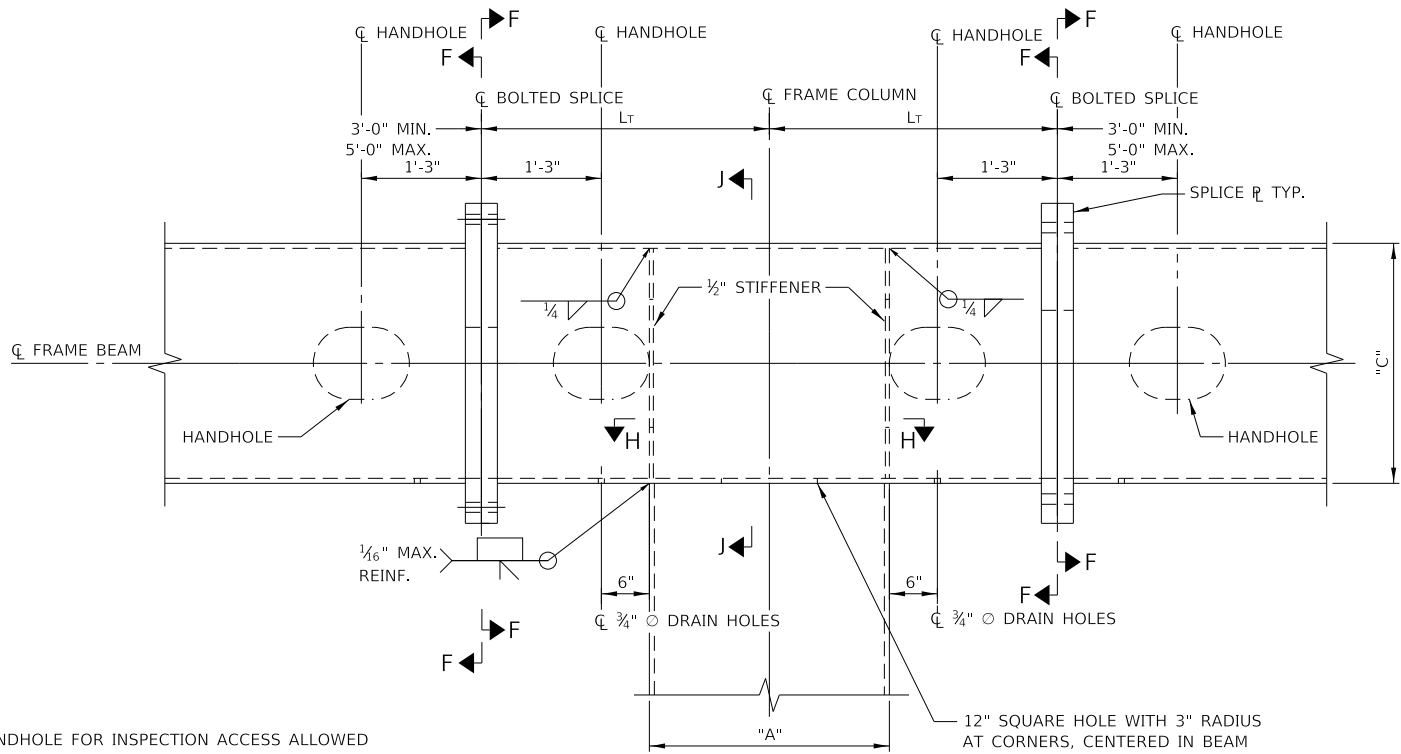
MAX. SPAN "S <sub>1</sub> " OR "S <sub>2</sub> "	"F"	"G"	"H"	"J"	N <sub>3</sub>	X <sub>3</sub>	N <sub>4</sub>	X <sub>4</sub>	SPLICE BOLT DIAMETER (D <sub>1</sub> )	NO. SPLICE BOLT
<=110'	3'-1"	2'-8 1/2"	1'-6"	2 1/4"	6	5 1/2"	6	4 3/4"	1"	24
110' < "S" <=130'	3'-0 1/2"	2'-10"	1'-6"	2 1/4"	5	6 1/2"	5	6"	1 1/4"	20
130' < "S" <=150'	3'-4"	3'-4"	1'-9"	2 3/8"	6	6"	6	6"	1 1/4"	24



OVERHEAD SIGN STRUCTURE  
ITS GANTRY FRAME (STEEL)  
TWO-SPAN STRUCTURE  
DETAILS

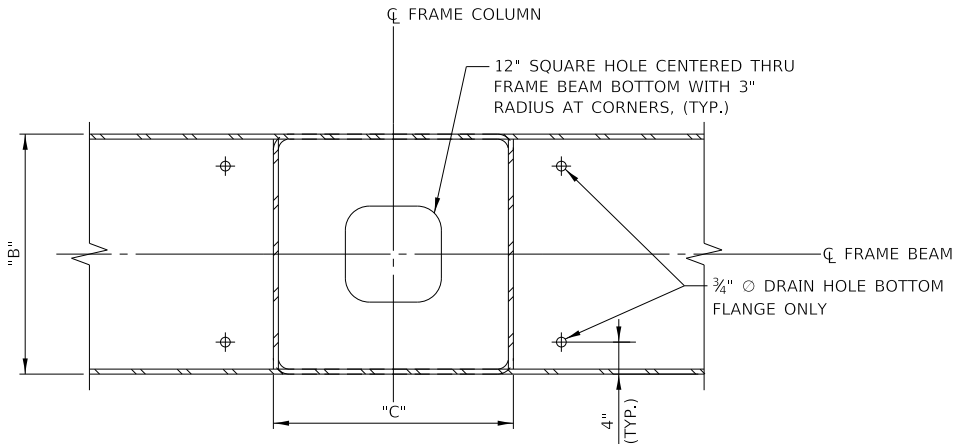
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DETAIL C

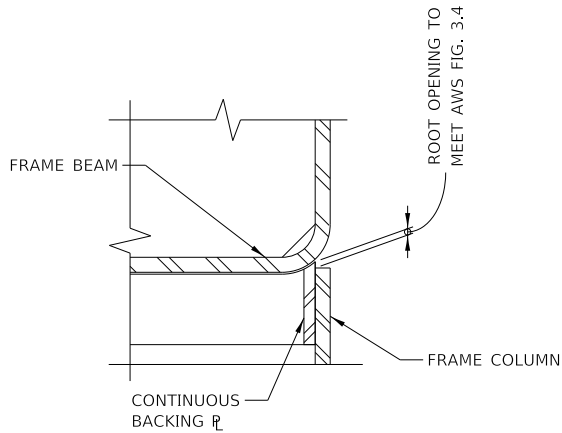
- NOTE**
- HANDHOLE FOR INSPECTION ACCESS ALLOWED ON ONE SIDE OF WEB ONLY. PLACE HANDHOLE ON SAME SIDE AS OTHER HANDHOLES.
  - SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
  - SEE SHEET 3 OF THIS SERIES FOR SECTION F-F.



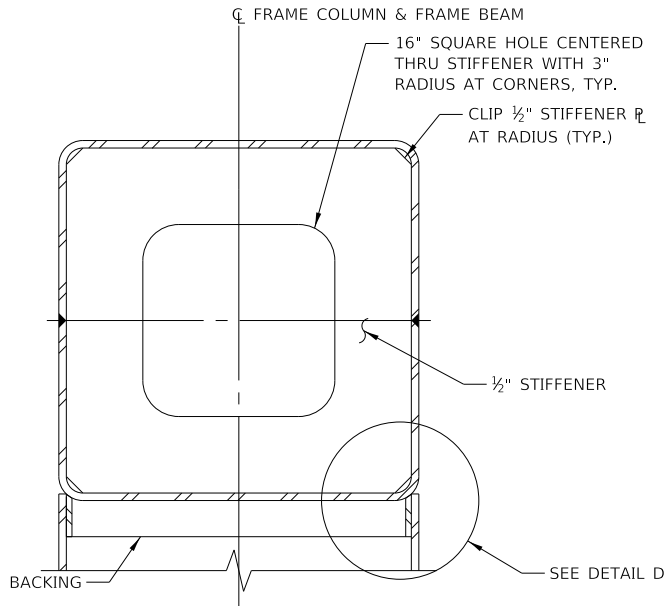
SECTION H-H

**NOTE TO DESIGNER**

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.



DETAIL D



SECTION J-J

AWS FIG. 3.6 MAY BE USED AT THE FABRICATOR'S OPTION.

WELDING SHALL NOT BEGIN UNTIL THE ENGINEER HAS INSPECTED AND APPROVED FIT-UP OF THE JOINT.



**OVERHEAD SIGN STRUCTURE  
ITS GANTRY FRAME (STEEL)  
TWO-SPAN STRUCTURE  
DETAILS**

VERSION:  
2023-03

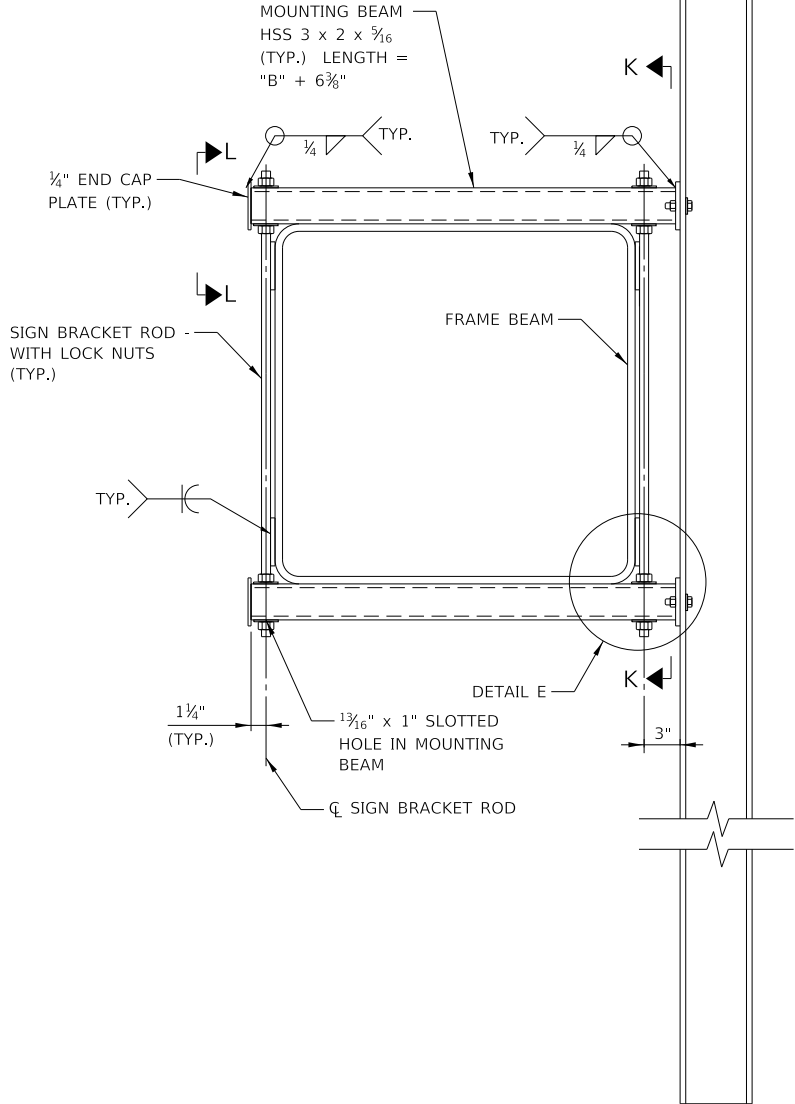
STANDARD:  
M-OHS-730

SHEET:  
4 OF 9



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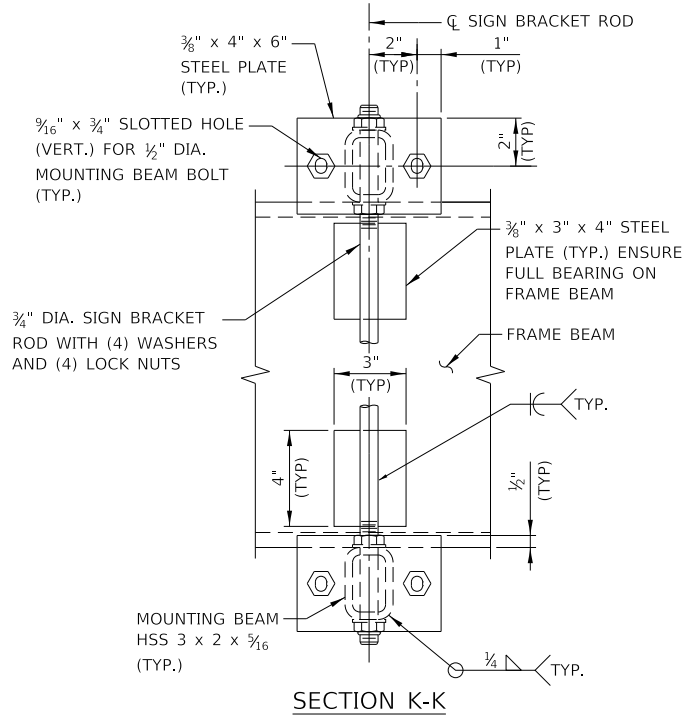
VERTICAL SUPPORT W6 x 15  
STEEL BEAM @ 6'-0" MAX.  
SPACING. COORDINATE SIGN  
PLACEMENT AND LENGTH  
REQ'D. WITH SIGN SUPPLIER



CONNECTION SIDE VIEW

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS **NOT** A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

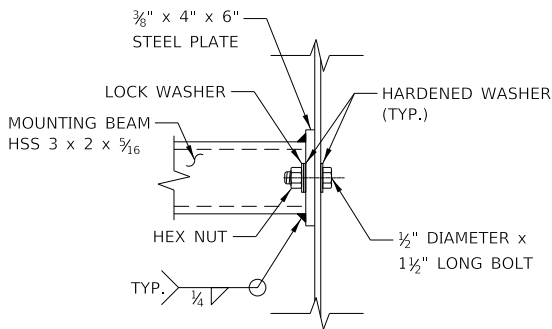
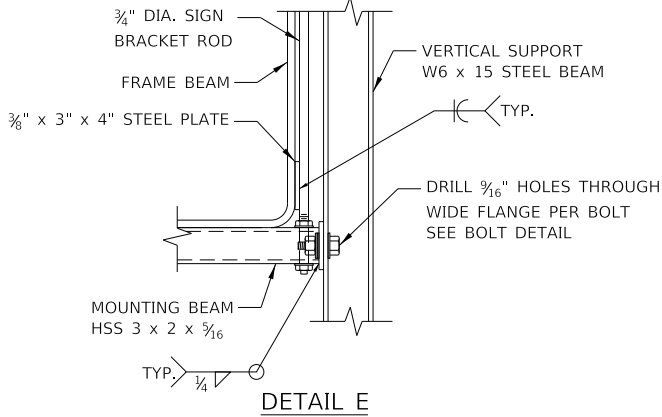
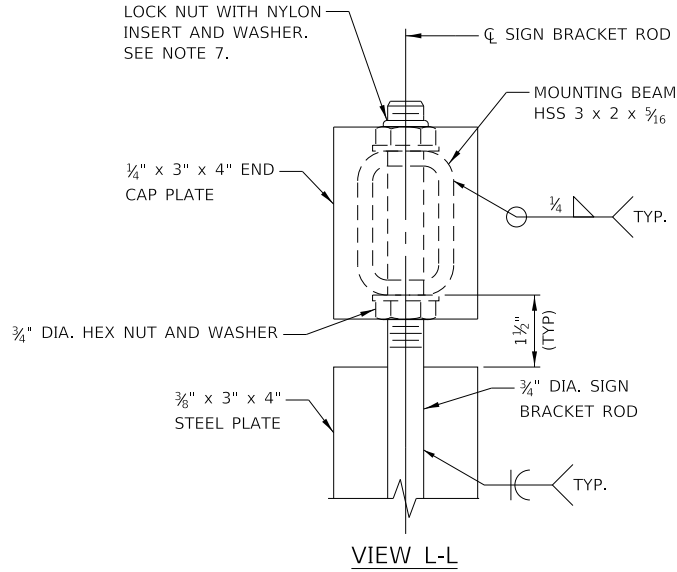


SECTION K-K

VERTICAL SUPPORT TABLE		
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

- CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
- VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
- DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH HOLES ON W6x15 VERTICAL SUPPORT.
- PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
- GALVANIZE ALL NON-STAINLESS STEEL PARTS.
- SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
- LOCK NUTS SHALL BE STAINLESS STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A194 GRADE 8F OR ASTM A194 GRADE 2H.



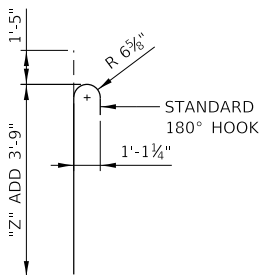
BOLT DETAIL  
SIGN BRACKET ROD NOT SHOWN FOR CLARITY



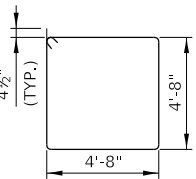
OVERHEAD SIGN STRUCTURE  
ITS GANTRY FRAME (STEEL)  
TWO-SPAN STRUCTURE  
DETAILS

VERSION:	STANDARD:	SHEET:
2023-03	M-OHS-730	5 OF 9

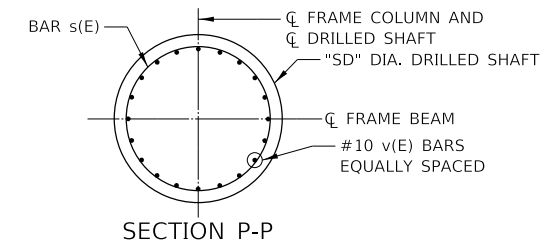
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BAR v(E)

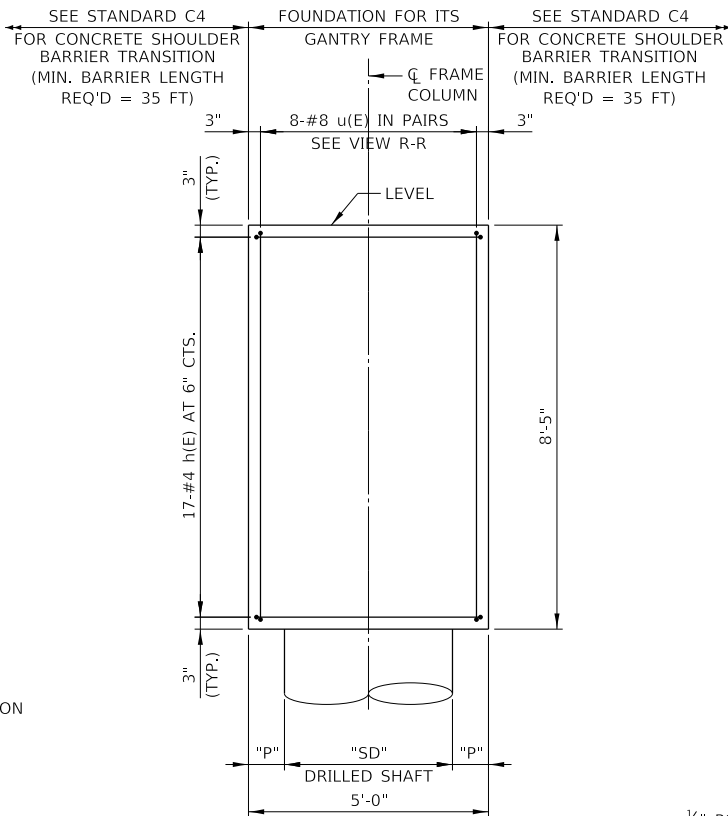
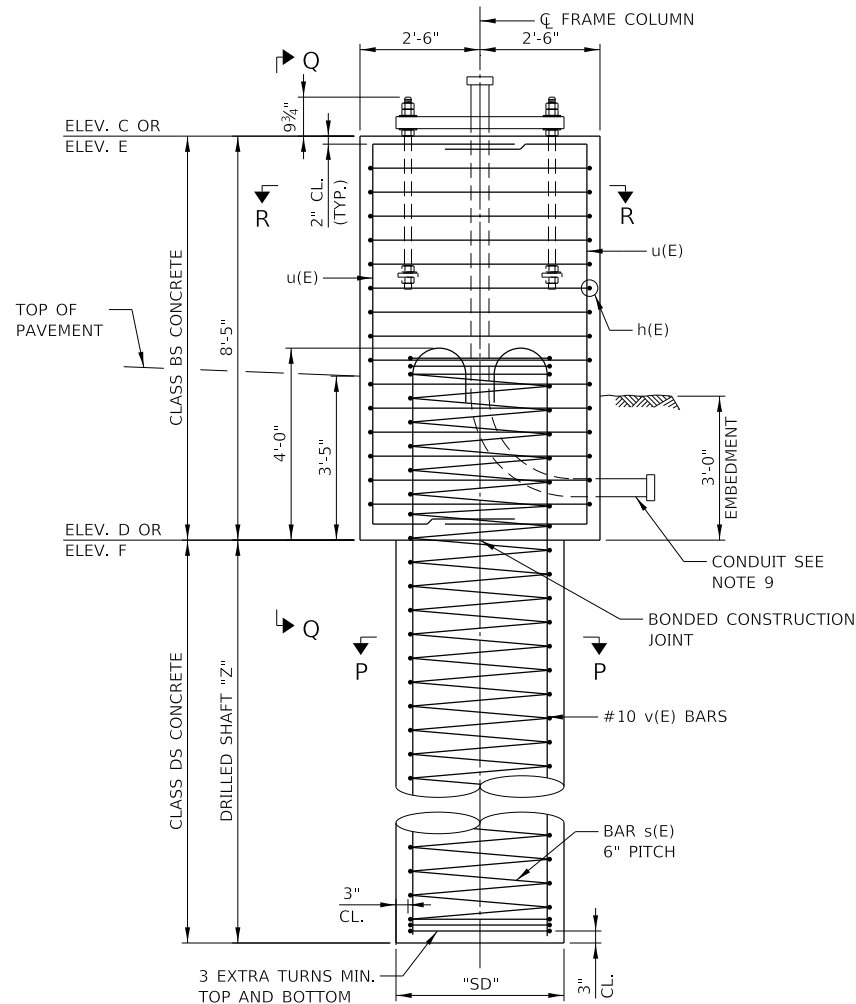


BAR h(E)

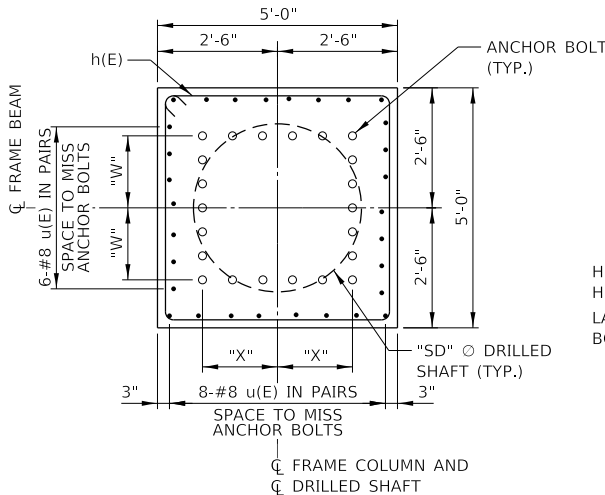


BAR u(E)

ELEVATION  
SHOULDER FOUNDATION TYPE I



VIEW Q-Q



SECTION R-R

REINFORCEMENT BAR SCHEDULE FOR ONE FOUNDATION					
SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
<=110'	h(E)	17	#4	19'-5"	*
	s(E)	1	#4	31'-9"	
	v(E)	17	#10	33'-2"	
	u(E)	28	#8	13'-11"	
110'<"S"<=130'	h(E)	17	#4	19'-5"	*
	s(E)	1	#5	31'-9"	
	v(E)	16	#10	37'-2"	
	u(E)	28	#8	13'-11"	
130'<"S"<=150'	h(E)	17	#4	19'-5"	*
	s(E)	1	#5	38'-9"	
	v(E)	20	#10	40'-2"	
	u(E)	28	#8	13'-11"	

\* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

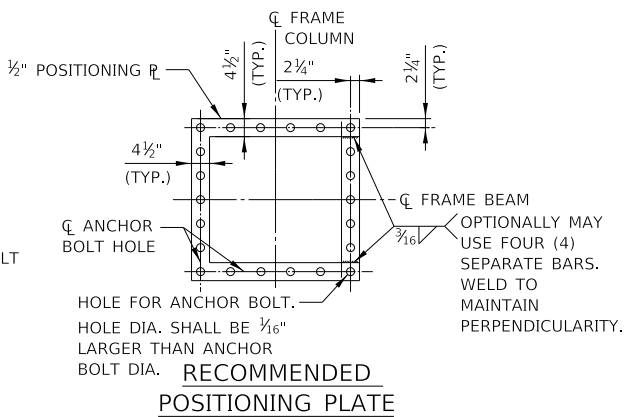
#### NOTES:

- THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
- ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
- CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
- BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
- PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D (OR ELEV. F). COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
- ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
- FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
- NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
- COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.

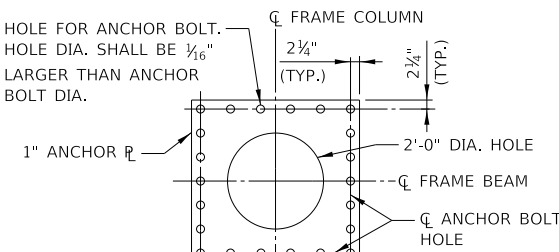


#### NOTE TO DESIGNER

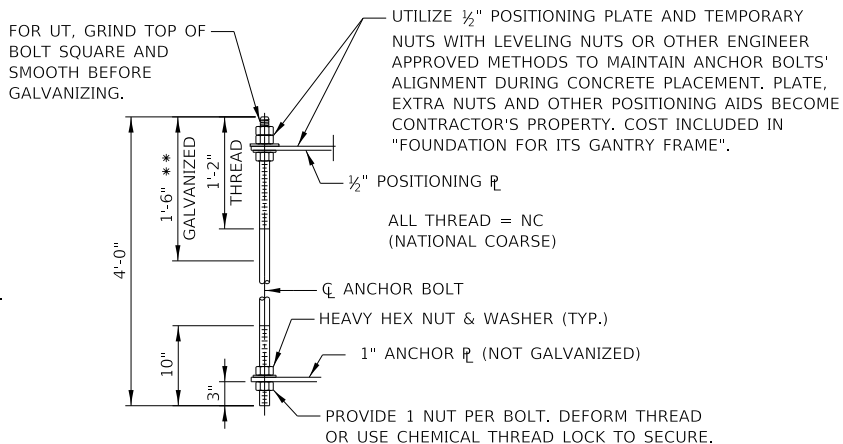
DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.



#### RECOMMENDED POSITIONING PLATE



ANCHOR PLATE DETAIL



ANCHOR BOLT DETAIL

ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 OR ASTM F1554 GRADE 55 AND MEET CHARPY V-NOTCH (CVN) ENERGY OF 15 LB.-FT. AT 40° F. GALVANIZE UPPER 18" PER AASHTO M 232. NO WELDING SHALL BE PERMITTED ON ANCHOR BOLTS.

\*\* 18" IS MINIMUM TO BE GALVANIZED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.

#### SHOULDER FOUNDATION TYPE I TABLE

MAX. SPAN "S1" OR "S2"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5 1/2"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5 1/2"	28'-0"	3'-6"	9"	5"	22
130'<"S"<=150'	1'-6"	1'-6 3/4"	35'-0"	4'-0"	6"	5"	22

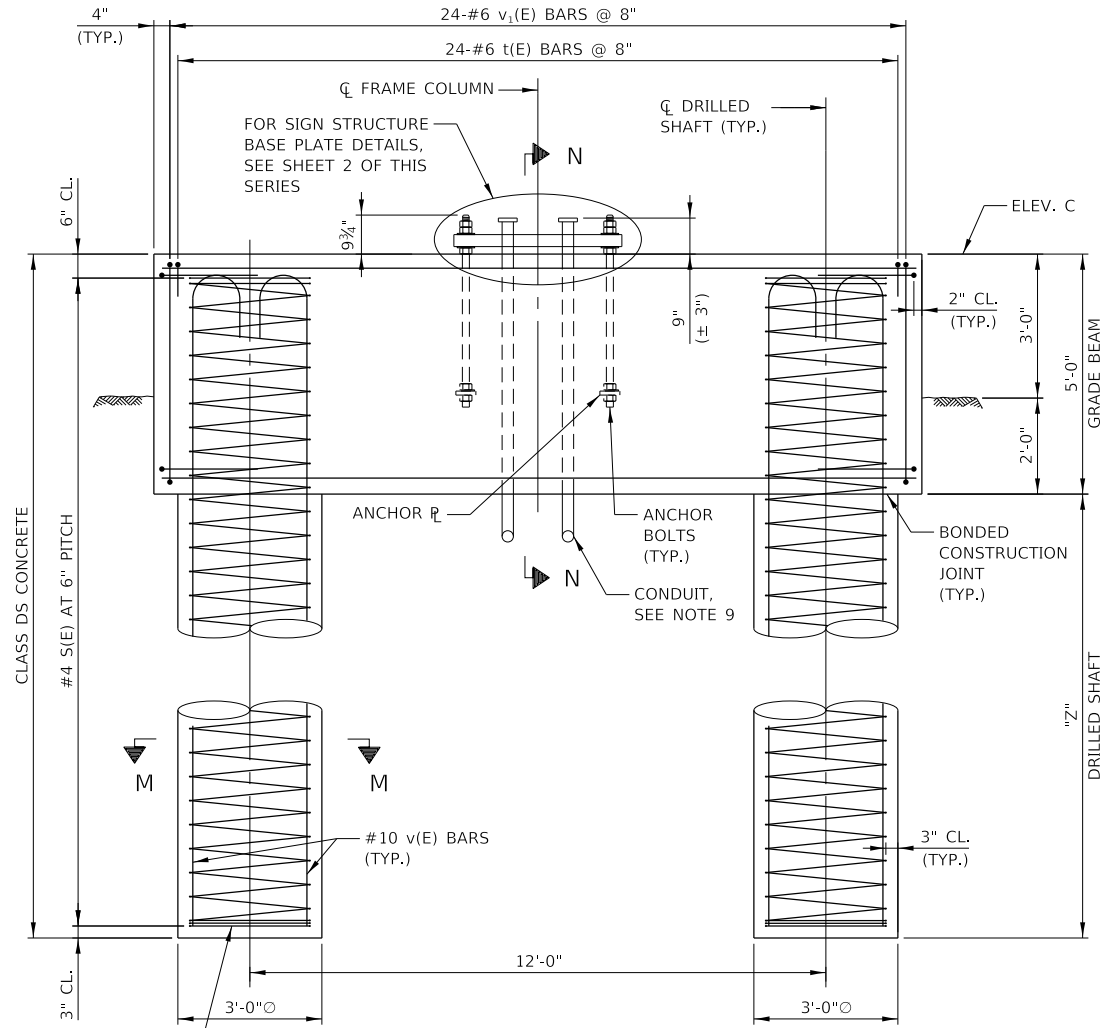
#### NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE DESIGN OF THIS SHEET UPON ITS COMPLETION AND INSERTION INTO A CONTRACT. ALL "NOTE TO DESIGNER" BOXES SHALL BE REMOVED BY THE DESIGNER PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

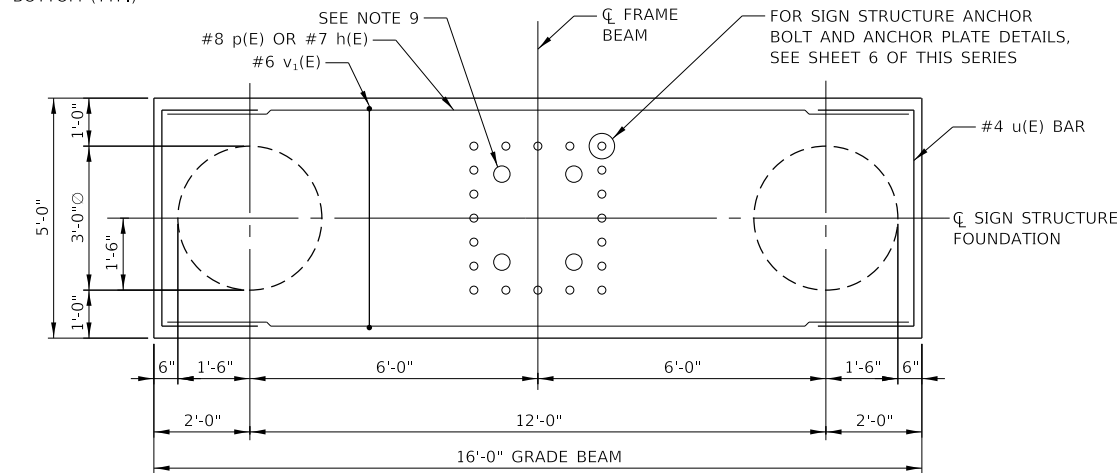


#### OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

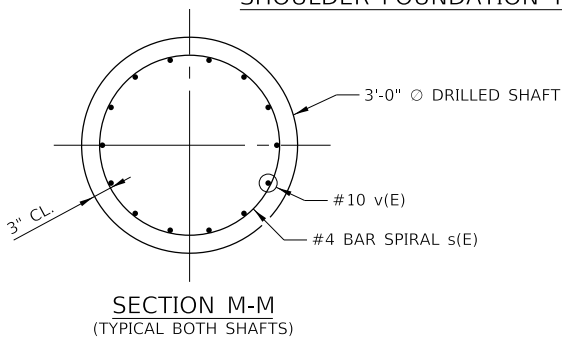
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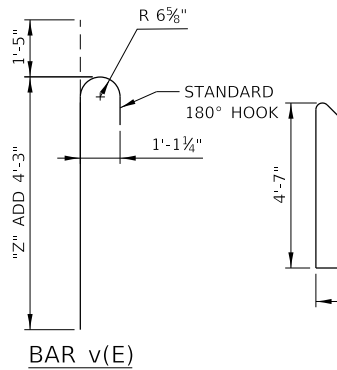
ELEVATION  
SHOULDER FOUNDATION TYPE II



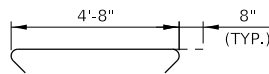
PLAN  
SHOULDER FOUNDATION TYPE II



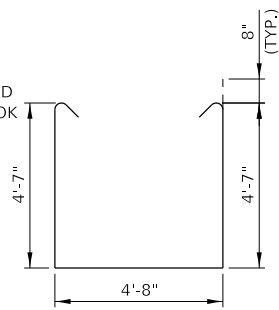
SECTION M-M  
(TYPICAL BOTH SHAFTS)



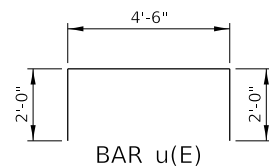
BAR v(E)



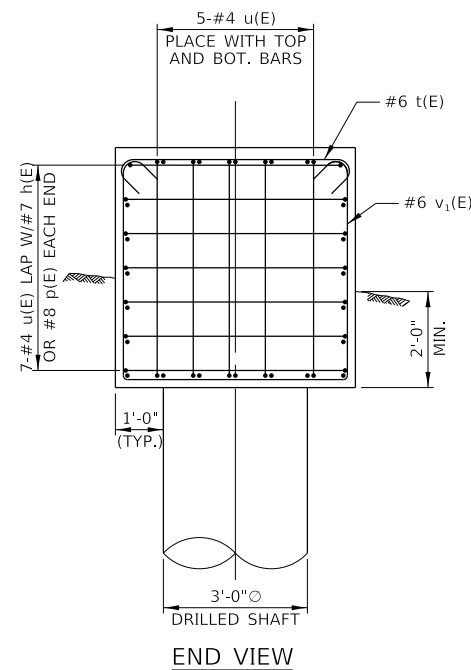
BAR t(E)



BAR v1(E)

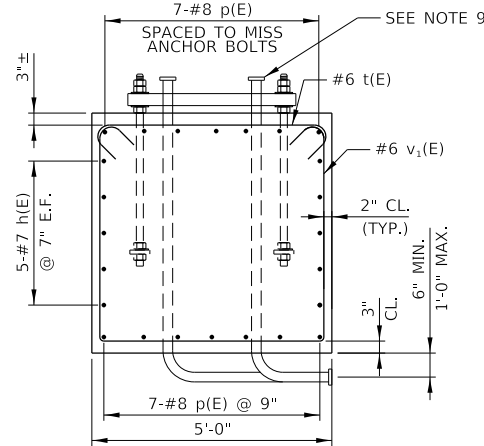


BAR u(E)



END VIEW

SECTION N-N



#### NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOB SITE. WHEN OTHER CONDITIONS ARE INDICATED, THE BORING DATA SHALL BE INCLUDED IN THE PLANS AND THE FOUNDATION DIMENSIONS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGNS. IF CONDITIONS ENCOUNTERED IN THE FIELD ARE DIFFERENT THAN THOSE INDICATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO DETERMINE IF THE FOUNDATION DIMENSIONS NEED TO BE MODIFIED.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION 734 OF THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
3. CONCRETE SHALL BE PLACED MONOLITHICALLY, WITHOUT CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
4. BACKFILL SHALL BE PLACED PER SECTION 502 OF THE IDOT STANDARD SPECIFICATION AND PRIOR TO ERECTION OF GANTRY FRAME.
5. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE ELEV. D (OR ELEV. F). COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
6. ALL REINFORCEMENT BAR DESIGNATED (E) SHALL BE EPOXY COATED. REINFORCEMENT BAR SHALL BE POSITIONED SO THAT THERE WILL BE NO INTERFERENCE BETWEEN VERTICAL REINFORCEMENT AND ANCHOR BOLTS.
7. FURNISHING AND INSTALLING ALL CONDUIT, FITTINGS AND GROUNDING SYSTEM ARE INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
8. NO SONOTUBES OR DECOMPOSABLE FORMS SHALL BE USED 1'-0" BELOW THE FINISHED GROUND LINE. PERMANENT METAL FORMS OR OTHER SHIELDING MAY NOT BE LEFT IN PLACE WITHOUT THE ENGINEER'S WRITTEN PERMISSION. EXCAVATIONS SHALL BE DEWATERED BEFORE CONCRETE PLACEMENT AT NO ADDITIONAL COST.
9. COORDINATE STAINLESS STEEL RIGID CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. CONDUITS SHALL BE PLACED TO MISS REINFORCEMENT BARS. DO NOT CUT REINFORCEMENT BARS.
10. SEE SHEET 6 FOR DIMENSIONS "W" AND "X".

#### NOTE TO DESIGNER

DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

#### SHOULDER FOUNDATION TYPE II SCHEDULE

MAX. SPAN "S1" OR "S2"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5 1/2"	1'-4"	35.0	8,030
110'<"S"<=130'	42'-0"	1'-8"	1'-5 1/2"	37.0	8,570
130'<"S"<=150'	46'-0"	1'-8"	1'-6 3/4"	39.0	9,140

#### NOTE TO DESIGNER

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#### REINFORCEMENT BAR SCHEDULE (2 DRILLED SHAFTS AND 1 GRADE BEAM)

SPAN "S"	BAR	NO.	SIZE	LENGTH	SHAPE
"S" <= 110'	h(E)	10	#7	15'-8"	—
	p(E)	14	#8	15'-8"	—
	t(E)	24	#6	6'-0"	—
	s(E)	2	#4	42'-3"	—
	v(E)	28	#10	43'-8"	—
	v1(E)	24	#6	15'-2"	—
110' < "S" <= 130'	h(E)	10	#7	15'-8"	—
	p(E)	14	#8	15'-8"	—
	t(E)	24	#6	6'-0"	—
	s(E)	2	#4	46'-3"	—
	v(E)	28	#10	47'-8"	—
	v1(E)	24	#6	15'-2"	—
130' < "S" <= 150'	h(E)	10	#7	15'-8"	—
	p(E)	14	#8	15'-8"	—
	t(E)	24	#6	6'-0"	—
	s(E)	2	#4	50'-3"	—
	v(E)	28	#10	51'-8"	—
	v1(E)	24	#6	15'-2"	—
	u(E)	24	#4	8'-6"	—
	u(E)	24	#4	8'-6"	—

\* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.



#### OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

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ELEVATION

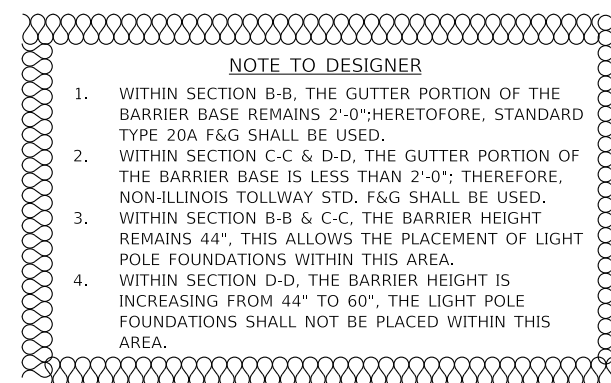
CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY

SECTION A-A

SECTION B-B

NOTES:

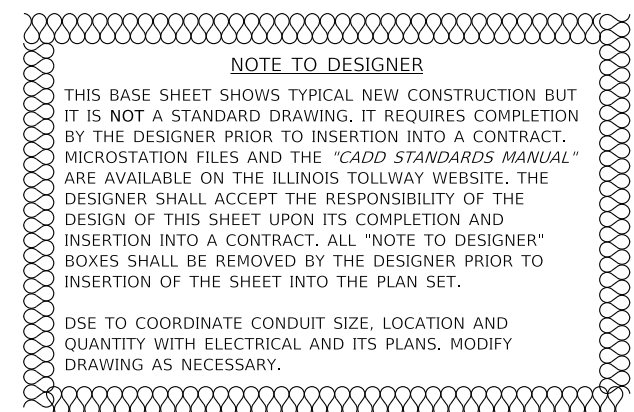
1. 2" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.
2. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE BY SAWING.
3. GUTTER PROFILE IN THE VICINITY OF SAG VERTICAL CURVES, ALONG FLAT GRADES AND AT THE MEETING OF PROPOSED AND EXISTING GUTTER, SHALL BE CAREFULLY CONTROLLED AND FIELD ADJUSTED IF NECESSARY TO ENSURE POSITIVE DRAINAGE AND AVOID PONDING.
4. PROVIDE NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.



SECTION C-C

SECTION D-D

SECTION E-E



## OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

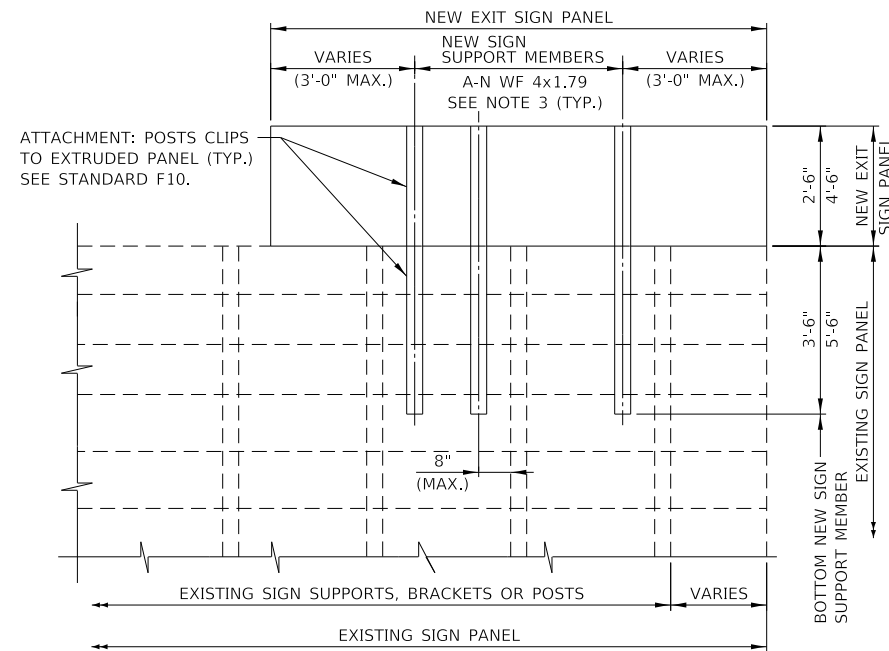
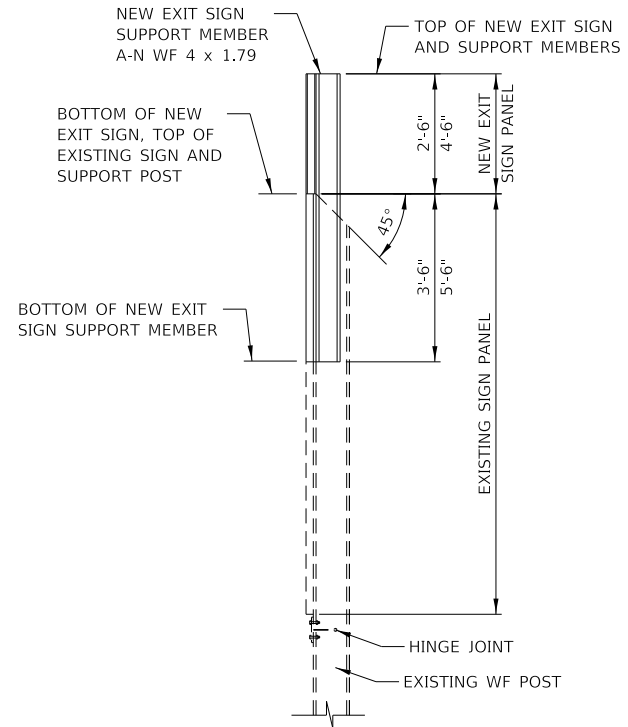
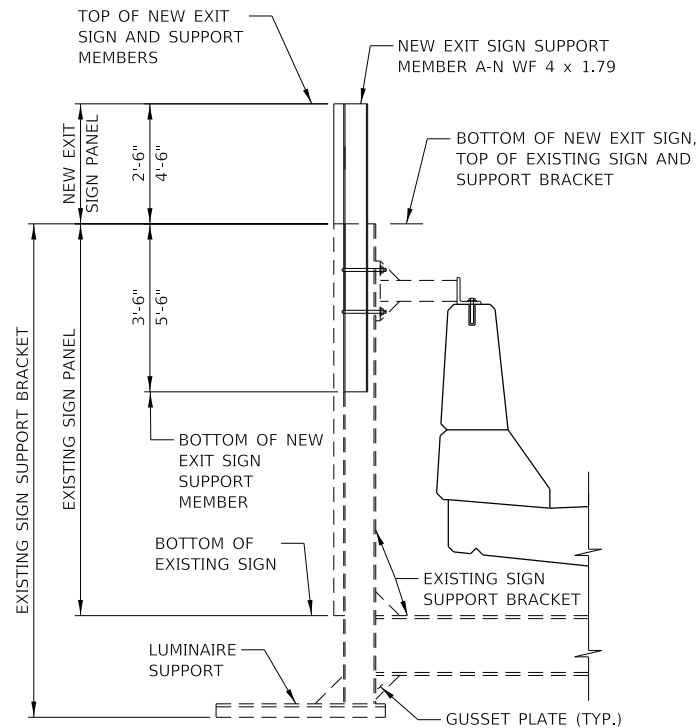
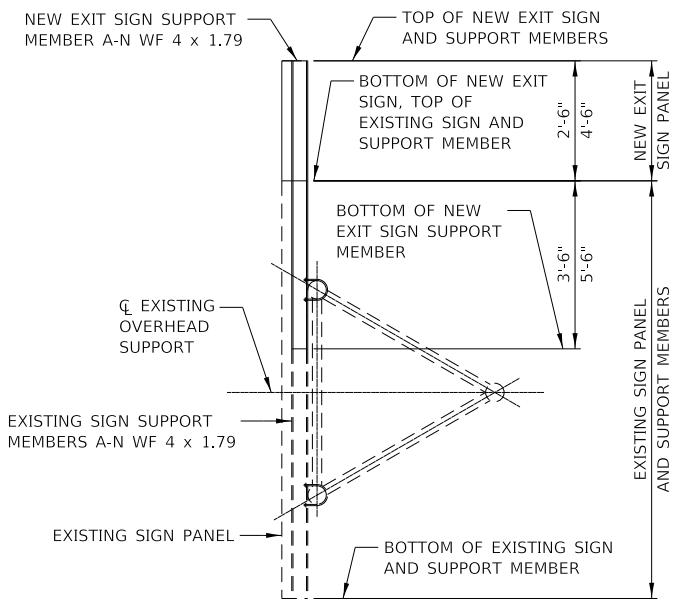
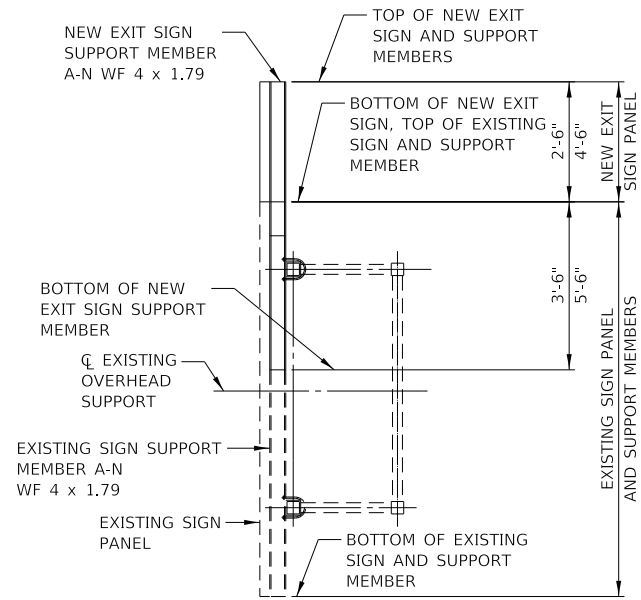
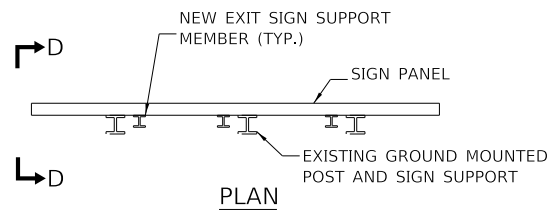
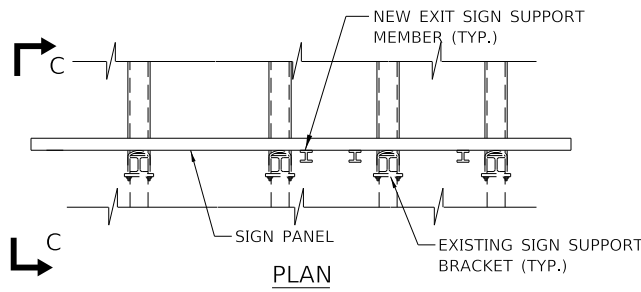
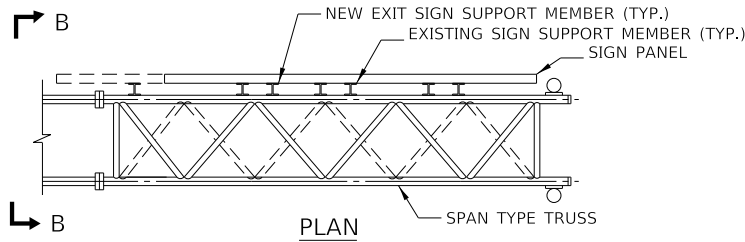
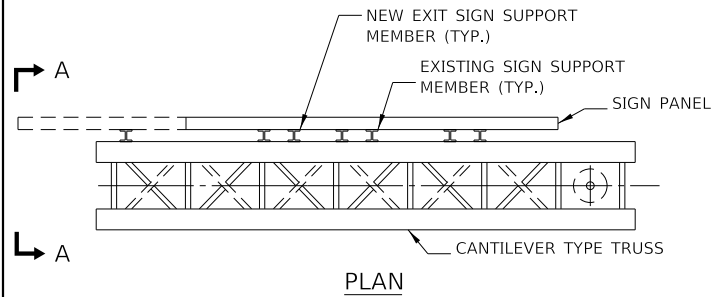
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2023-03

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M-OHS-730

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OF 9

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DETAILS FOR RETROFITTING NEW EXIT SIGN

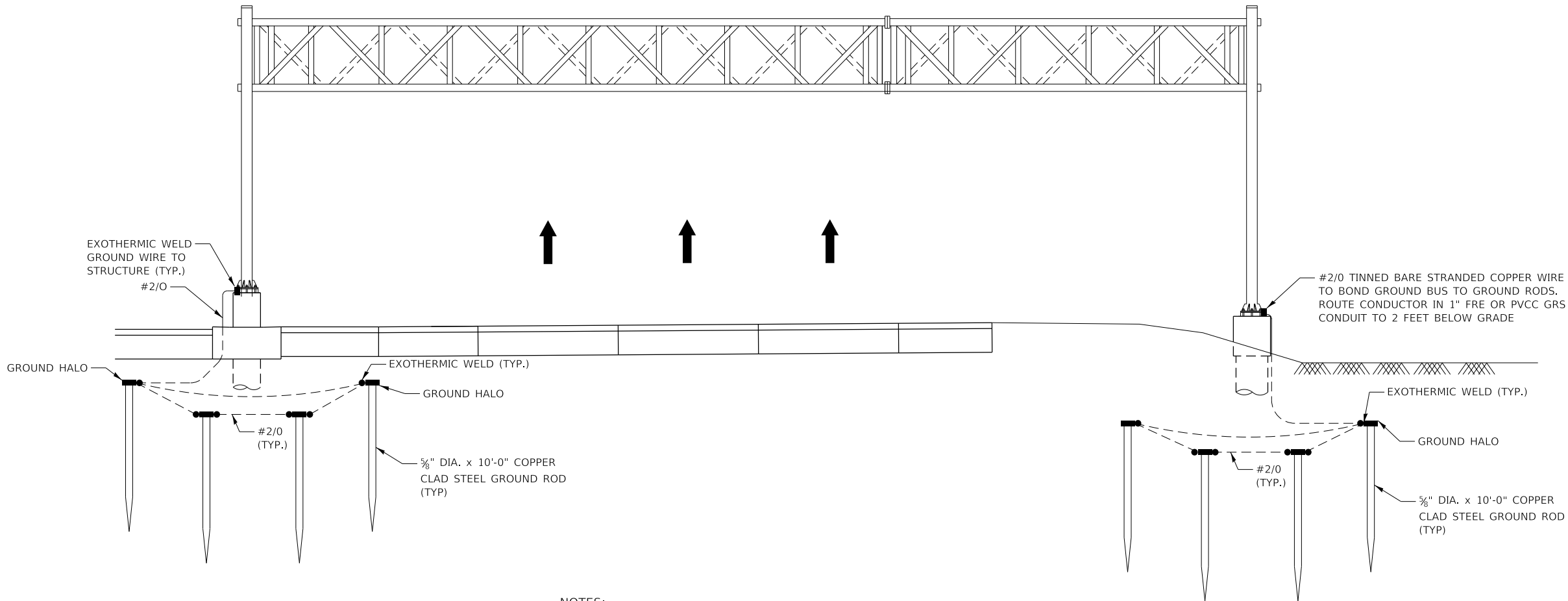
- NOTES:
- ALL MATERIAL IS ALUMINUM IN ACCORDANCE WITH SECTION 733 OF THE LATEST IDOT STANDARD SPECIFICATIONS. (UNLESS OTHERWISE NOTED).
  - NEW SIGN SUPPORT MEMBERS SHALL BE SPACED WITH EXISTING SIGN SUPPORTS. SPACING SHALL NOT EXCEED 6'-0".
  - STANDARD SHALL ALSO BE UTILIZED FOR RETROFITTING OTHER SIGN PANELS WITH EXISTING SIGN SUPPORTS THAT DO NOT CONFORM TO STANDARD F8. NEW SIGN SUPPORT MEMBERS SHALL BE TWICE THE UNSUPPORTED HEIGHT PLUS ONE FOOT.

**NOTE TO DESIGNER**  
EXISTING TRUSS AND SUPPORT MEMBERS SHALL BE CHECKED FOR STRUCTURAL ADEQUACY TO SUPPORT THE ADDITIONAL SIGN PANEL AREA.



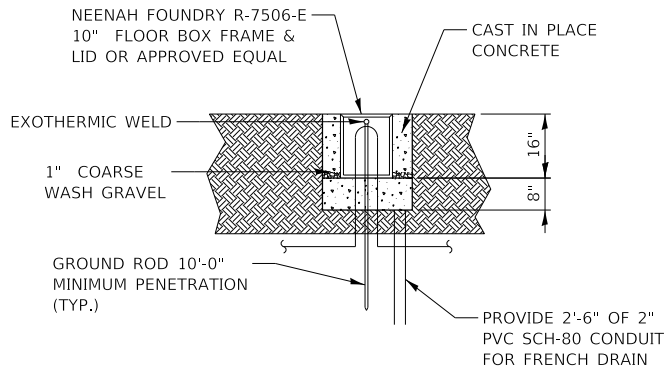
**MOUNTING DETAILS FOR RETROFITTING NEW EXIT SIGN PANELS**

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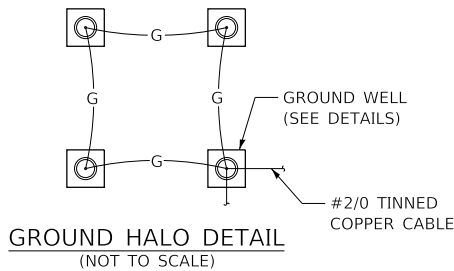


**NOTES:**

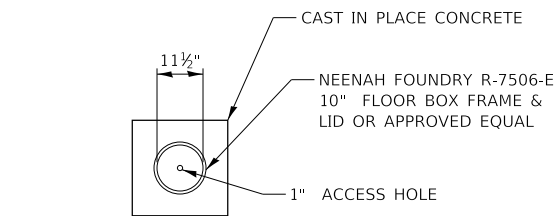
1. GROUNDING SYSTEM SHALL BE PLACED WITHIN ILLINOIS TOLLWAY RIGHT-OF-WAY.
2. INSTALL MARKER TAPE DIRECTLY ABOVE GROUNDING ELECTRODE CONDUCTORS.
3. THE COST OF ALL MATERIALS, EXOTHERMIC WELDING, GROUND WELL, GROUND RODS AND ALL OTHER ITEMS TO COMPLETE THE GROUNDING ELECTRODE SYSTEM SHALL BE INCLUDED IN THE COST OF THE SIGN STRUCTURE.
4. GROUND RODS SHALL BE INSTALLED IN GROUND WELLS IN FINISHED GRADE UNLESS INSTALLED UNDER SHOULDERS OR PAVEMENT.
5. CA-11, A QUALITY, IN ACCORDANCE WITH SSRBC 1004.



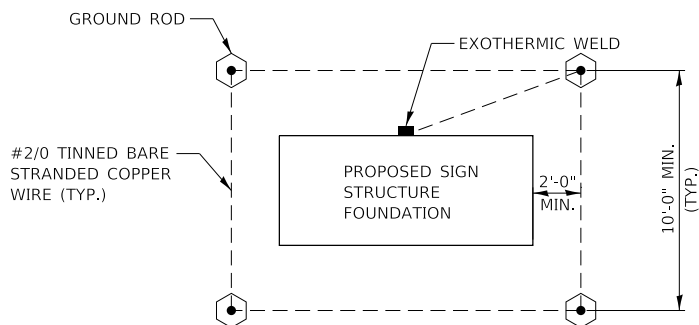
**GROUND WELL ELEVATION DETAIL**  
(NOT TO SCALE, NOTE 3)



**GROUND HALO DETAIL**  
(NOT TO SCALE)



**GROUND WELL PLAN DETAIL**  
(NOT TO SCALE, NOTE 3)



**GROUNDING SCHEMATIC**  
(NOT TO SCALE)

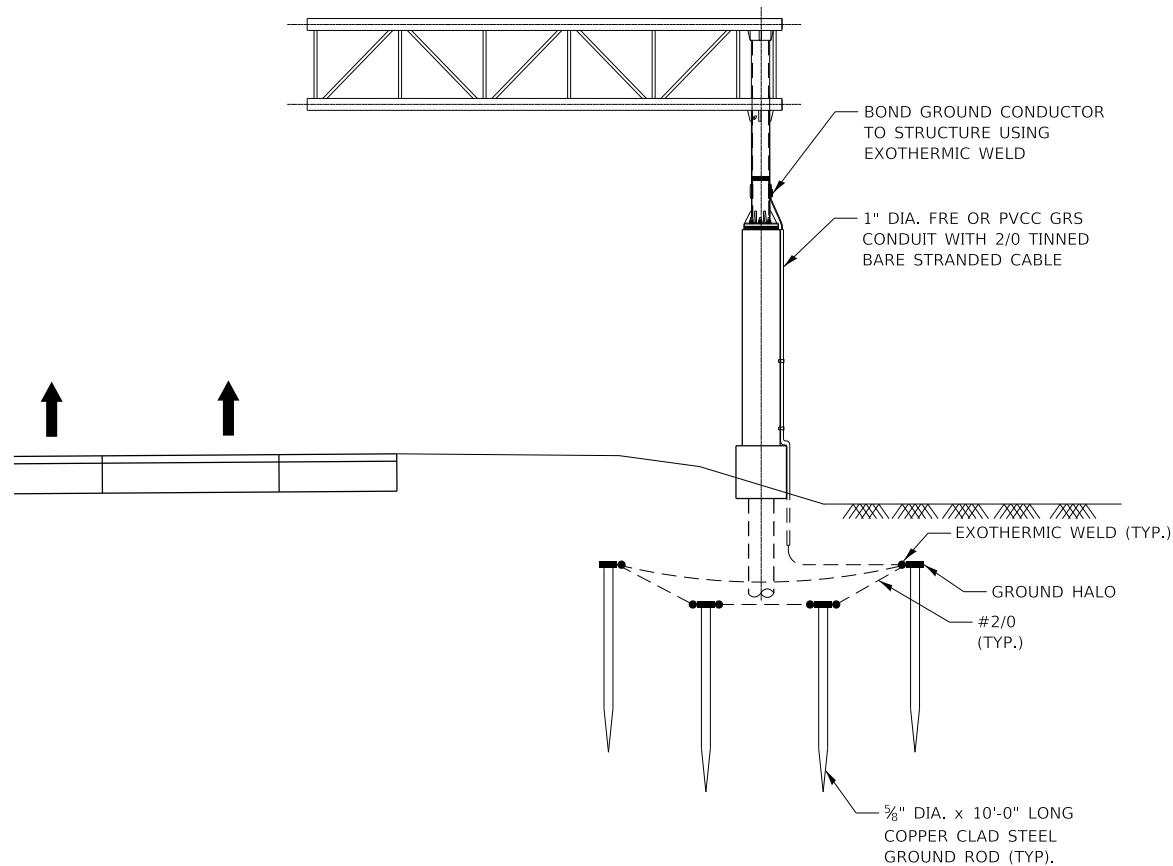
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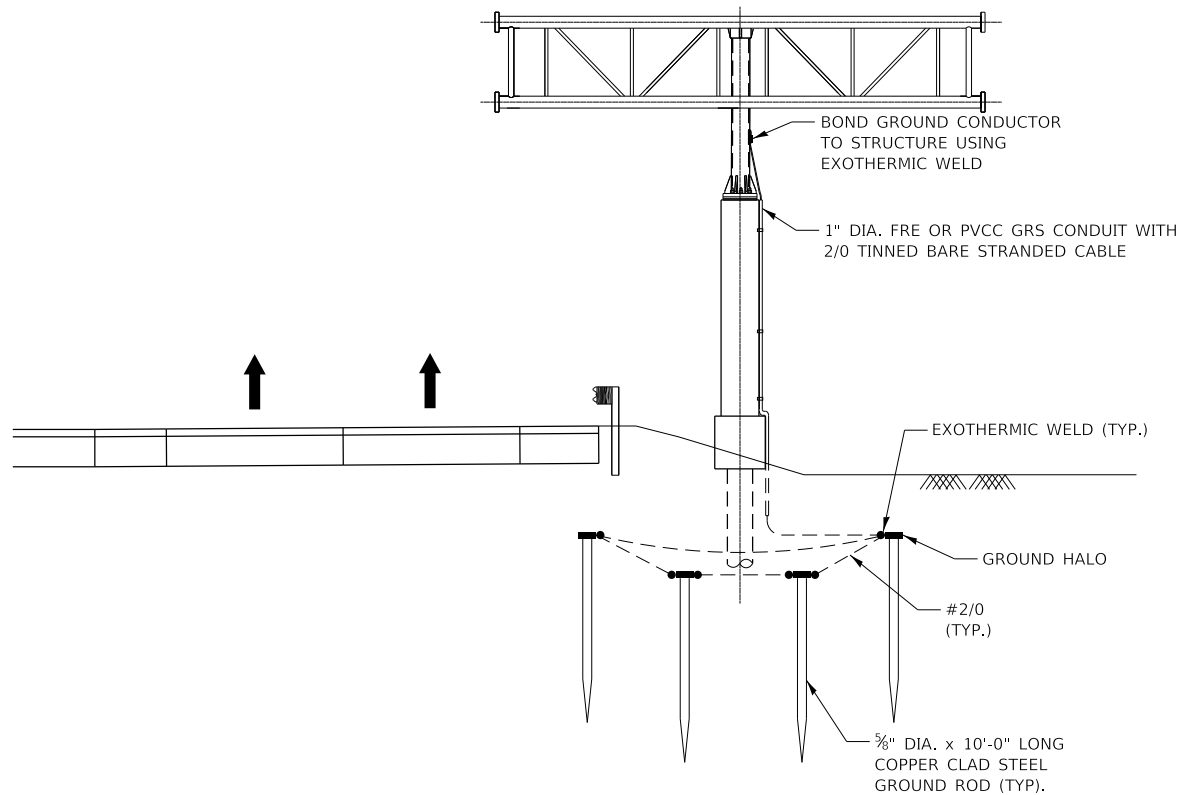


**SIGN STRUCTURE SPAN SITE  
GROUNDING PLAN**

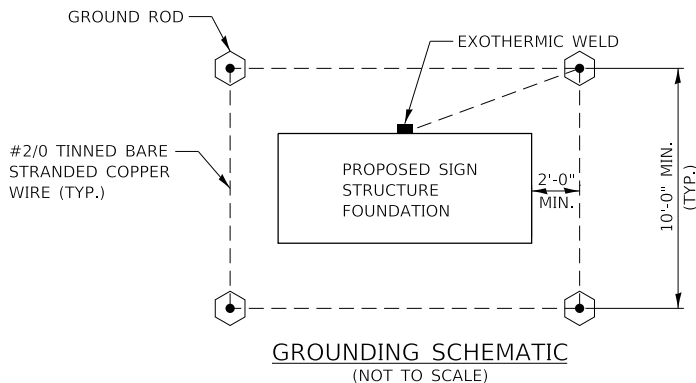
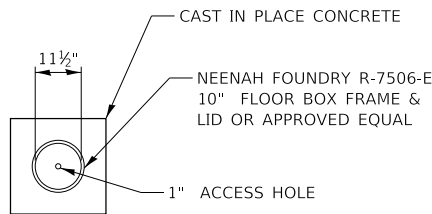
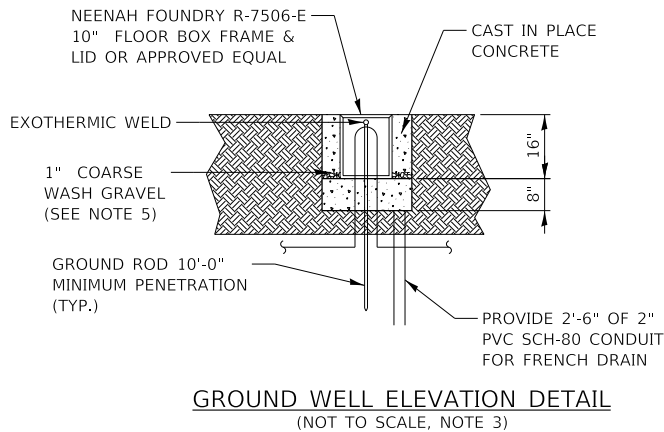
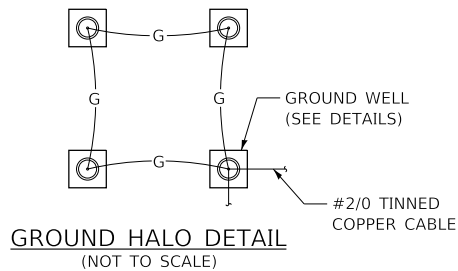
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CANTILEVER ELEVATION



BUTTERFLY ELEVATION



NOTES:

1. GROUNDING SYSTEM SHALL BE PLACED WITHIN ILLINOIS TOLLWAY RIGHT-OF-WAY.
2. INSTALL MARKER TAPE DIRECTLY ABOVE GROUNDING ELECTRODE CONDUCTORS.
3. THE COST OF ALL MATERIALS, EXOTHERMIC WELDING, GROUND WELL, GROUND RODS AND ALL OTHER ITEMS TO COMPLETE THE GROUNDING ELECTRODE SYSTEM SHALL BE INCLUDED IN THE COST OF THE SIGN STRUCTURE.
4. GROUND RODS SHALL BE INSTALLED IN GROUND WELLS IN FINISHED GRADE UNLESS INSTALLED UNDER SHOULDERS OR PAVEMENT.
5. CA-11, A QUALITY, IN ACCORDANCE WITH SSRBC 1004.

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SIGN STRUCTURE  
CANTILEVER AND BUTTERFLY  
SITE GROUNDING PLANS