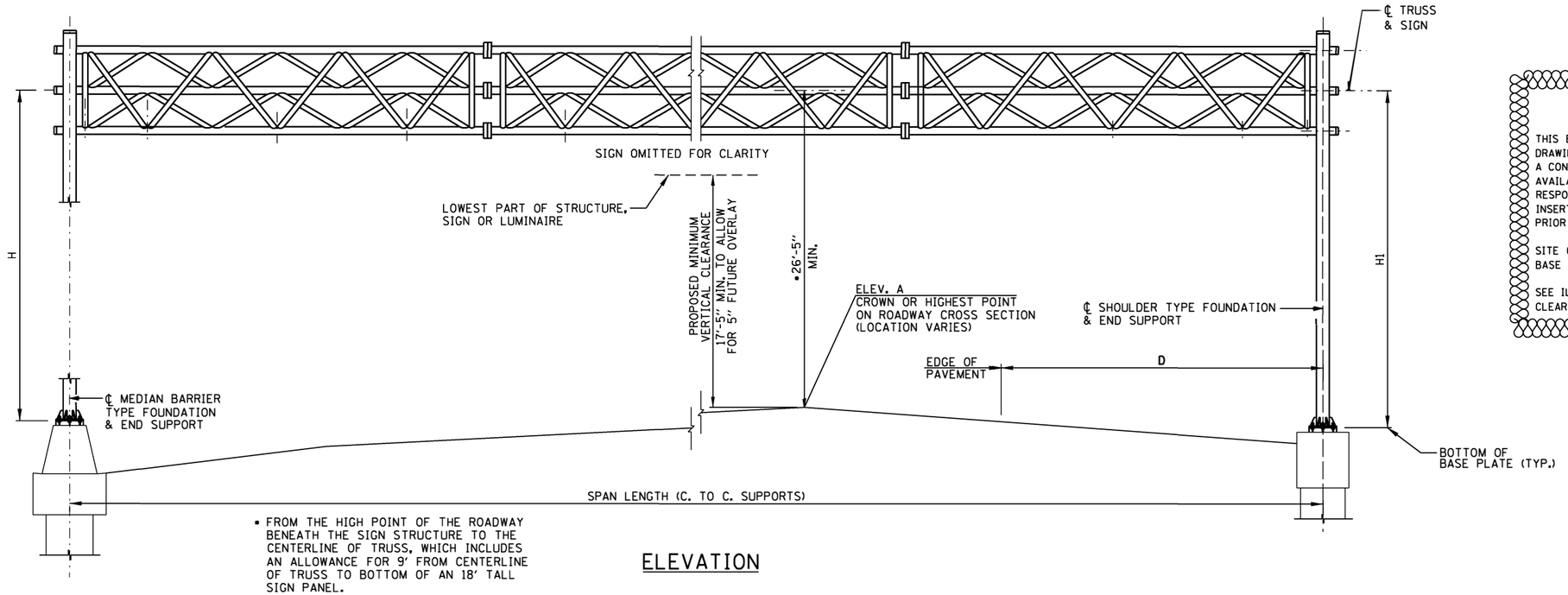
Illinois Tollway Base Sheet Revisions

Section M	Base Sheet Drawings	
	Drawing	Modification Summary Effective: 03-01-2019
		Overhead Sign (OHS)-Series 720
	M-OHS-720	**OVERHEAD SIGN STRUCTURE SPAN TYPE SUMMARY AND TOTAL BILL OF MATERIAL**
		Update barrier shape to constant slope
	M-OHS-722	**OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND TOTAL BILL OF**
		Update barrier shape to constant slope
	M-OHS-723	**OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) MAINLINE SUMMARY AND TOTAL BILL OF MATERIAL**
		Update barrier shape to constant slope
	M-OHS-725	**OVERHEAD SIGN STRUCTURE ENTRANCE MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF**
		Update barrier shape to constant slope
	M-OHS-726	**OVERHEAD SIGN STRUCTURE EXIT MONOTUBE TYPE (STEEL) AET RAMP SUMMARY AND TOTAL BILL OF MATERIAL**
		Update barrier shape to constant slope
	M-OHS-727	**OVERHEAD SIGN STRUCTURE MONOTUBE TYPE (STEEL) CASH-IPO RAMP SUMMARY AND TOTAL BILL OF**
		Update barrier shape to constant slope
	M-OHS-729	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 2**
		Increase base plate opening so that the 6" typ. Dimension in the Base Plate Plan is now 3" typ.
		Increase base plate thickness to 3" to accommodate a larger opening
		Revised Structure Design Manual and Geotechnical Engineering Manual to the latest editions
	M-OHS-729	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 3**
		Increase the opening in the splice plate so that the bottom is in line with the bottom of the horizontal frame beam
		Increase opening of corner stiffener plate from 12" to 18" square hole and thickness from 3/4" to 1"
		Increase opening of horizontal and vertical stiffener plate from 12" to 16" square hole and thickness from 3/8" to 1/2"
		Increase handhole detail size from 7.5"x12" to 9"x12"
	M-OHS-729	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 5**
		Added IDOT to reference to the Standard Specification in note 4
	M-OHS-729	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 6**
		Added IDOT to reference to the Standard Specification in note 4
	M-OHS-729	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) SINGLE-SPAN STRUCTURE DETAILS SHEET 8**
		Update barrier shape and details for constant slope
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 2**
		Increase base plate opening so that the 6" typ. Dimension in the Base Plate Plan is now 3" typ.
		Increase base plate thickness to 3" to accommodate a larger opening
		Revised design specifications to the latest editions
		Added IDOT to reference to the Standard Specification in reinforcement bars note 1
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 3**
		Increase the opening in the splice plate so that the bottom is in line with the bottom of the horizontal frame beam
		Increase opening of corner stiffener plate from 12" to 18" square hole and thickness from 3/4" to 1"
		Increase opening of horizontal and vertical stiffener plate from 12" to 16" square hole and thickness from 3/8" to 1/2"
		Increase handhole detail size from 7.5"x12" to 9"x12"
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 4**
		Increase opening of vertical stiffener plate from 12" to 16" square hole and thickness from 3/8" to 1/2"
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 6**
		Added IDOT to reference to the Standard Specification in note 4
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 7**
		Added IDOT to reference to the Standard Specification in note 4
	M-OHS-730	**OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS SHEET 9**
		Update barrier shape and details for constant slope

PLAN



• FROM THE HIGH POINT OF THE ROADWAY BENEATH THE SIGN STRUCTURE TO THE CENTERLINE OF TRUSS, WHICH INCLUDES AN ALLOWANCE FOR 9' FROM CENTERLINE OF TRUSS TO BOTTOM OF AN 18' TALL SIGN PANEL.

ELEVATION

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT 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 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.

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	C. TO C. SUPPORTS	ELEV. A	PROPOSED MINIMUM VERTICAL CLEARANCE	D	MEDIAN BARRIER END SUPPORT		SHOULDER END SUPPORT		HEIGHT OF TALLEST SIGN	TOTAL SIGN AREA (SQ FT)	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ. YD.)
							H	PIPE COLUMN (NOMINAL DIAMETER) (INCH)	H1	PIPE COLUMN (NOMINAL DIAMETER) (INCH)			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
											TOTAL					

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, SPAN TYPE (ALUMINUM)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU YD	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ YD	

NOTE:

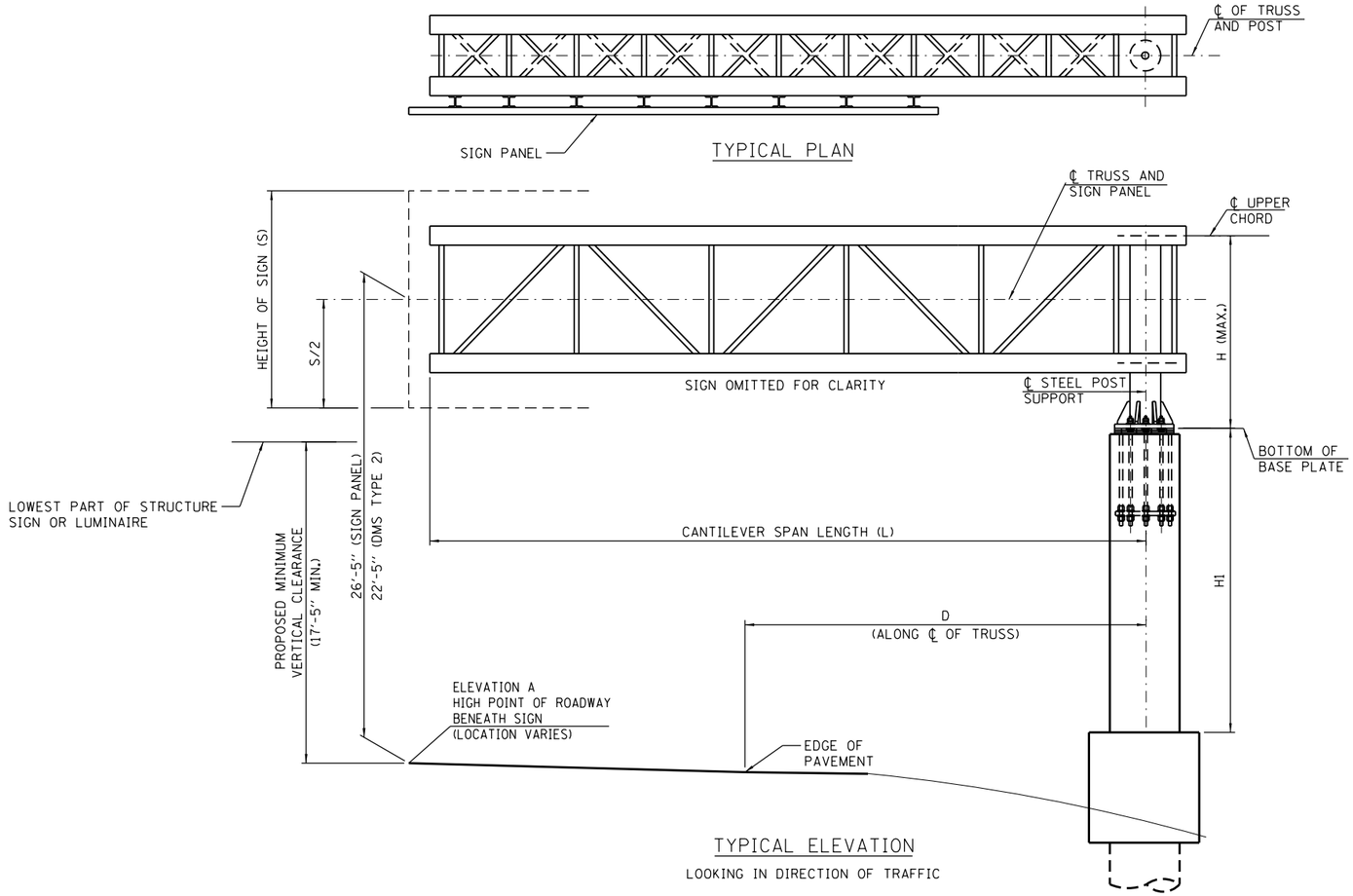
WORK THIS SHEET WITH STANDARD F1

M-OHS-720

Illinois Tollway

OVERHEAD SIGN STRUCTURE
SPAN TYPE SUMMARY
AND
TOTAL BILL OF MATERIAL

DATE
2-13-2020



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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1105)

INSTALLATIONS NOT WITHIN DIMENSIONAL LIMITS SHOWN REQUIRE SPECIAL ANALYSIS FOR ALL COMPONENTS.

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

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	L	ELEV. A	PROPOSED MINIMUM VERTICAL CLEARANCE	D	H	H1	HEIGHT OF TALLEST SIGN	TOTAL SIGN AREA (SQ FT)	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ. YD.)
											CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
										TOTAL				

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, CANTILEVER TYPE	CU YD	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ YD	
	SIGN STRUCTURE WALKWAY	FOOT	

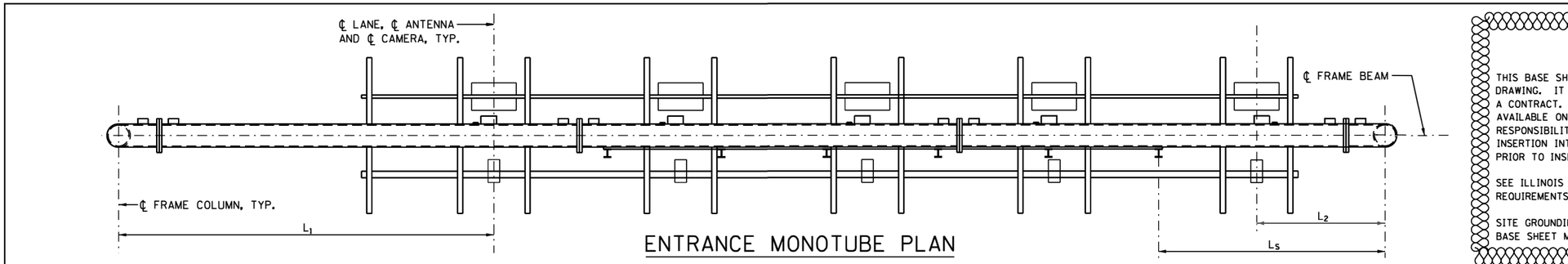
NOTE:
WORK THIS SHEET WITH STANDARD F4

M-OHS-721

Illinois Tollway

OVERHEAD SIGN STRUCTURE
CANTILEVER TYPE
SUMMARY AND TOTAL BILL OF MATERIAL

DATE
3-31-2017



ENTRANCE MONOTUBE PLAN

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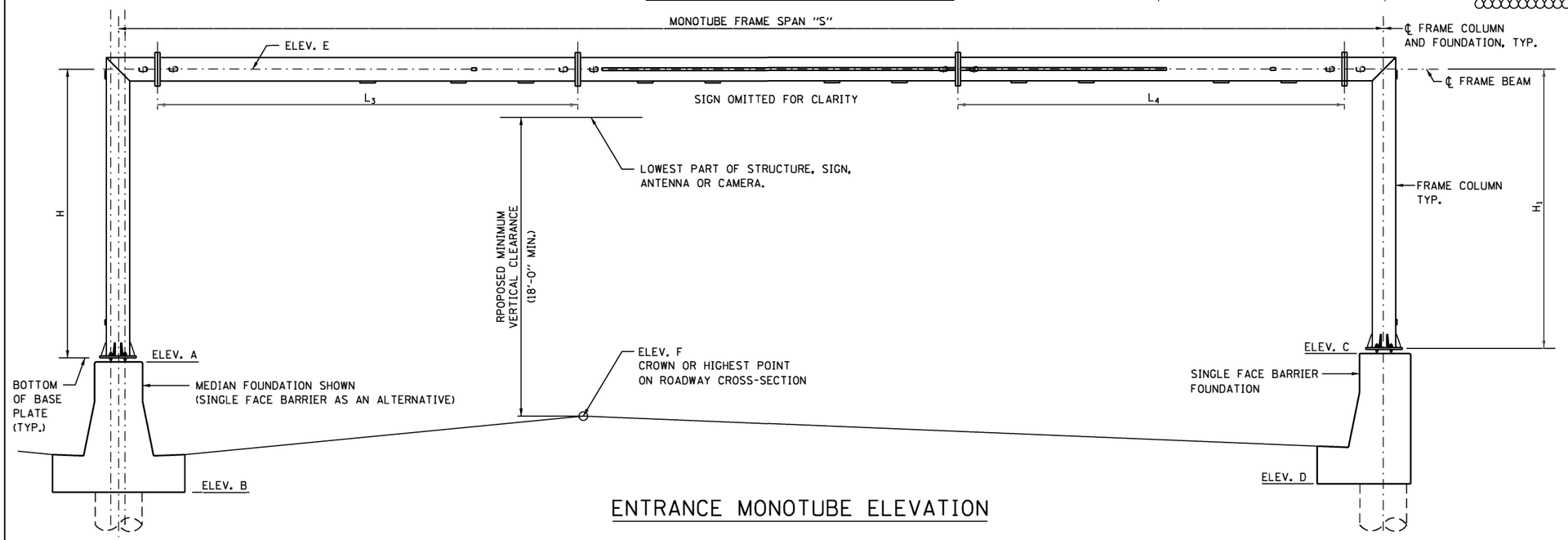
SEE ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

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



ENTRANCE MONOTUBE ELEVATION

SUMMARY

STRUCTURE NUMBER	STATION	MONOTUBE FRAME TYPE	SPAN "S"	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F13							SHEETS 6 AND 7 OF STANDARD F13	SIGN AREA (SQ FT)	SIGN LENGTH	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
											L_S	L_1	L_2	L_3	L_4	H	H_1	"C"			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	CONCRETE STRUCTURES (CU YD)		
TOTAL																									

M-OHS-722

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, MAINLINE ENTRANCE MONOTUBE TYPE (STEEL)	FOOT	
	CONCRETE STRUCTURES	CU YD	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, MAINLINE MONOTUBE TYPE	CU YD	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ YD	

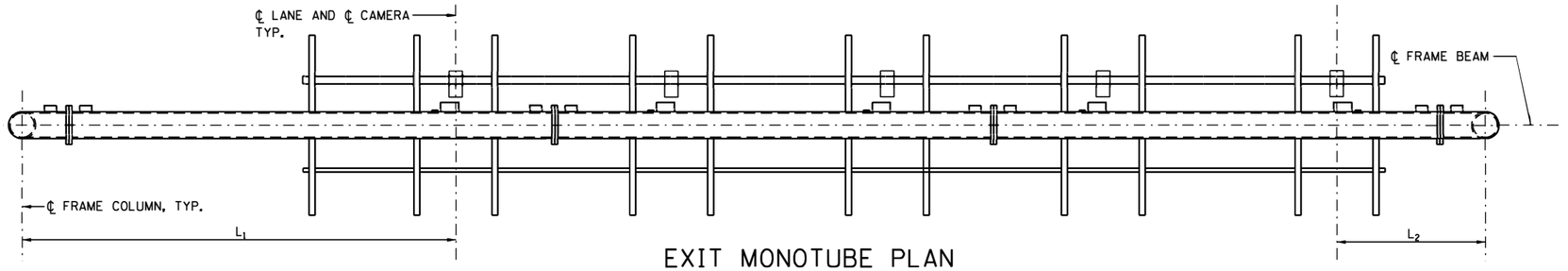
NOTE:

WORK THIS SHEET WITH STANDARD F13

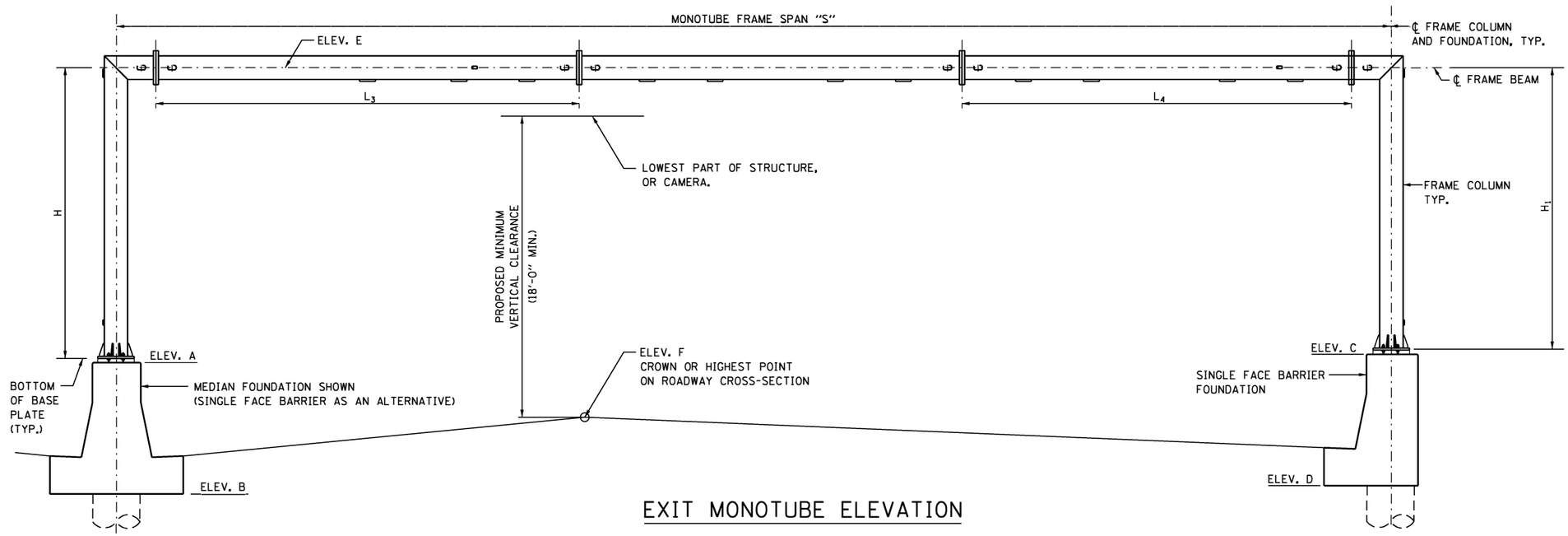
Illinois Tollway

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

DATE
2-13-2020



EXIT MONOTUBE PLAN



EXIT MONOTUBE ELEVATION

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

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

SUMMARY

STRUCTURE NUMBER	STATION	MONOTUBE FRAME TYPE	SPAN "S"	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F13							SHEETS 6 AND 7 OF STANDARD F13	SIGN AREA (SQ FT)	SIGN LENGTH	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
											L_S	L_1	L_2	L_3	L_4	H	H_1	"C"			CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	CONCRETE STRUCTURES (CU YD)		
																				TOTAL					

M-OHS-723

TOTAL BILL OF MATERIAL

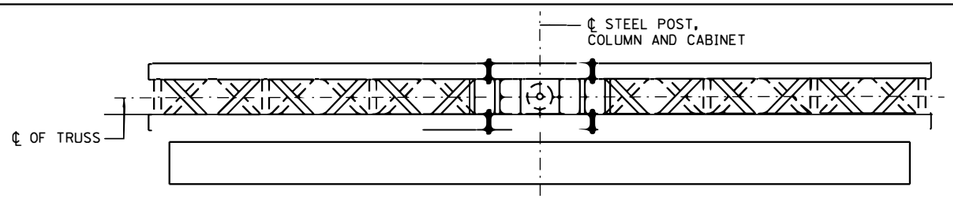
PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, MAINLINE EXIT MONOTUBE TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, MAINLINE MONOTUBE TYPE	CU YD	
	CONCRETE STRUCTURES	CU YD	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ YD	

NOTE:
WORK THIS SHEET WITH STANDARD F13

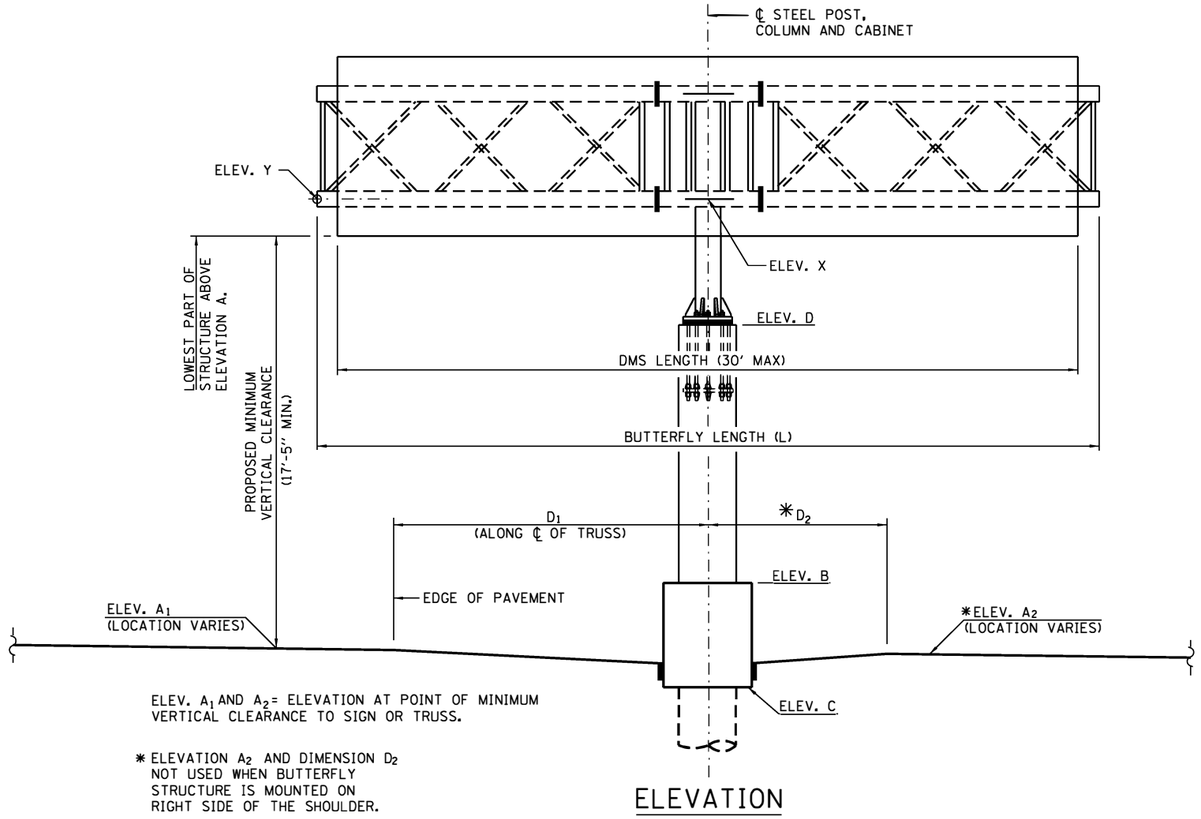
Illinois Tollway

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

DATE
2-13-2020



PLAN



ELEVATION

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SITE GROUNDING ELECTRODE SYSTEM TO BE PROVIDED AS DETAILED. (REFERENCE BASE SHEET M-ITS-1105)

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE	CU YD	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ YD	

NOTE:
WORK THIS SHEET WITH STANDARD F14

SUMMARY

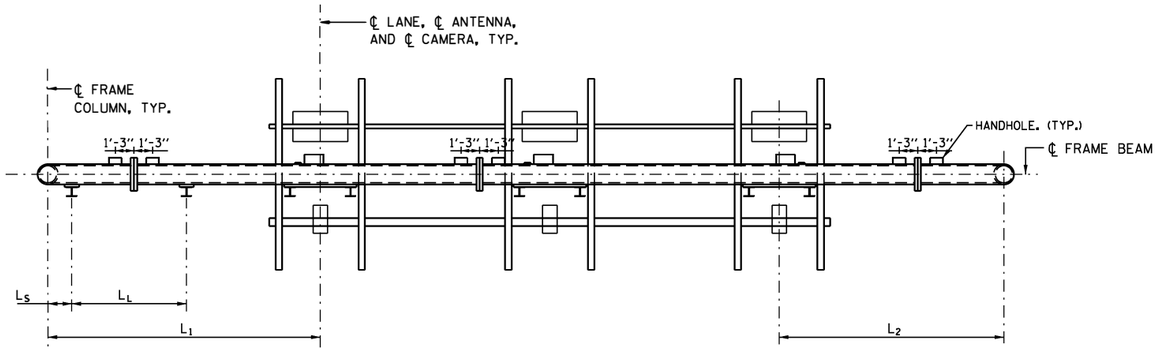
STRUCTURE NUMBER	STATION	ELEV. A_1	ELEV. A_2	ELEV. B	ELEV. C	ELEV. D	ELEV. X	ELEV. Y	PROPOSED MINIMUM VERTICAL CLEARANCE	D_1	D_2	L	SHEET 2 OF STANDARD F14				SHEET 8 OF STANDARD F14			DMS CABINET		FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUND)	PROTECTIVE COAT (SQ YD)
													L_1	L_2	P_1	P_2	I	J	K	TOTAL AREA (SQ FT)	TOTAL WEIGHT (POUND)	CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
TOTAL																									

M-OHS-724

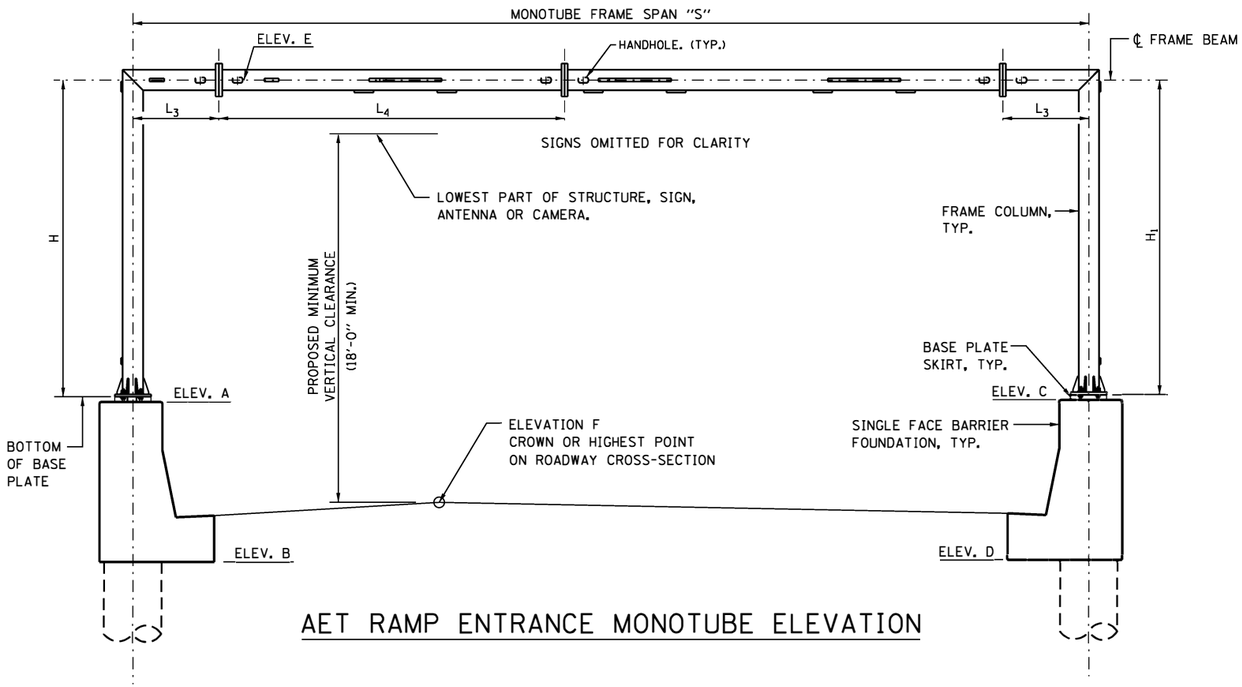
Illinois Tollway

OVERHEAD SIGN STRUCTURE
BUTTERFLY TYPE (STEEL)
SUMMARY AND
TOTAL BILL OF MATERIAL

DATE
2-13-2020



AET RAMP ENTRANCE MONOTUBE PLAN



AET RAMP ENTRANCE MONOTUBE ELEVATION

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REPLACE THIS "NOTE TO DESIGNER" WITH SITE GROUNDING ELECTRODE SYSTEM DETAIL.

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

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

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, AET RAMP ENTRANCE MONOTUBE TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU. YD.	
	CONCRETE STRUCTURES	CU. YD.	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ. YD.	

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	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.)
										L_S	L_L	L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
																		TOTAL					

NOTE:

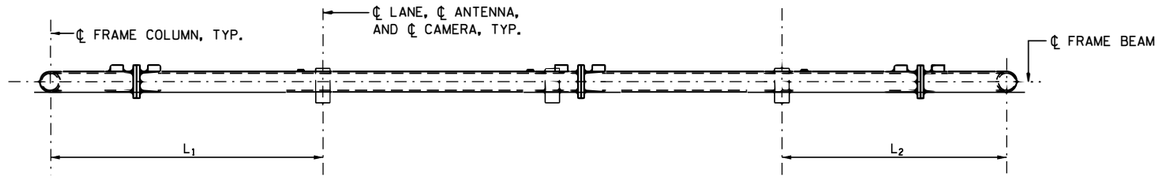
WORK THIS SHEET WITH STANDARD F15

M-OHS-725

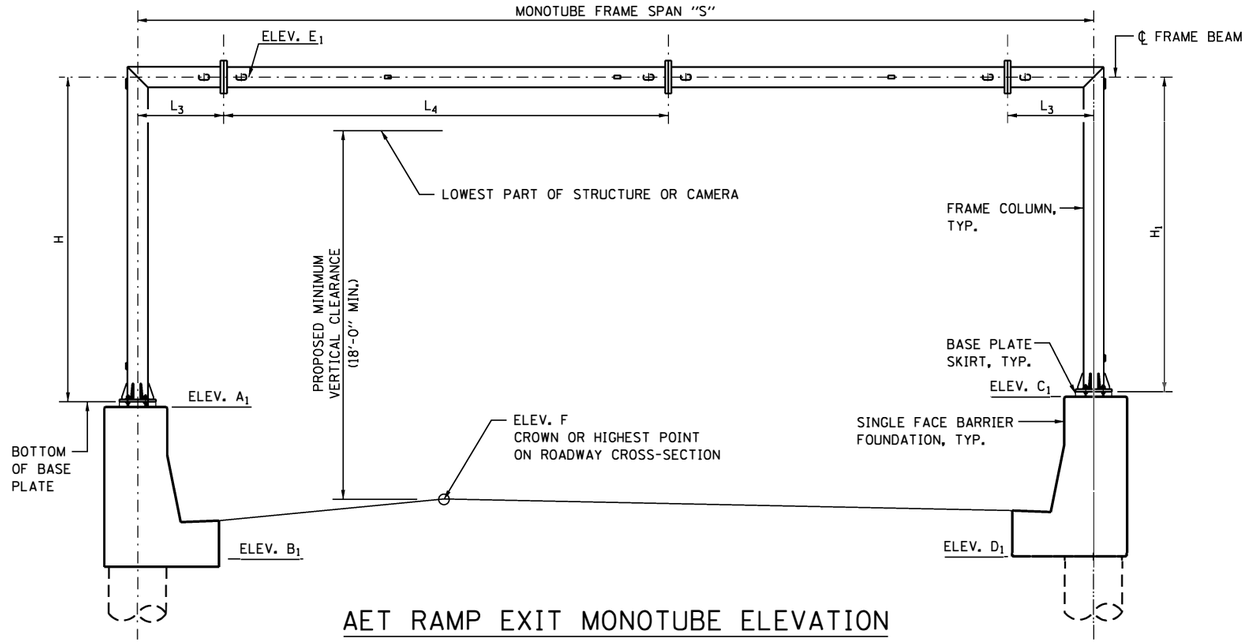
Illinois Tollway

OVERHEAD SIGN STRUCTURE
ENTRANCE MONOTUBE TYPE (STEEL) AET RAMP
SUMMARY AND TOTAL
BILL OF MATERIAL

DATE
2-13-2020



AET RAMP EXIT MONOTUBE PLAN



AET RAMP EXIT MONOTUBE ELEVATION

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

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

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, AET RAMP EXIT MONOTUBE TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU. YD.	
	CONCRETE STRUCTURES	CU. YD.	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ. YD.	

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEV. A_1	ELEV. B_1	ELEV. C_1	ELEV. D_1	ELEV. E_1	ELEV. F	PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 3 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.)
										L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
TOTAL																					

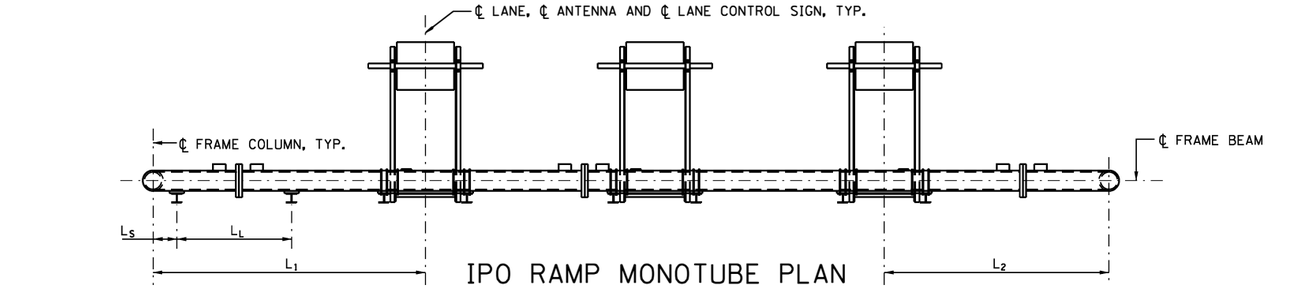
M-OHS-726

NOTE:
WORK THIS SHEET WITH STANDARD F15

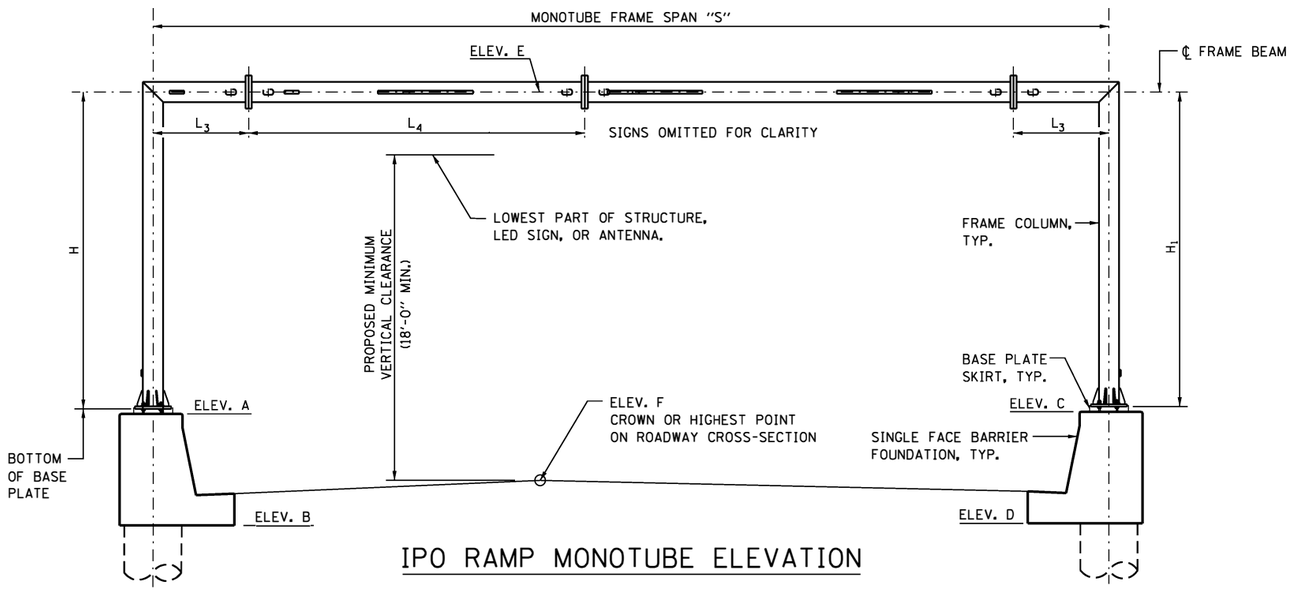
Illinois Tollway

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

DATE
2-13-2020



IPO RAMP MONOTUBE PLAN



IPO RAMP MONOTUBE ELEVATION

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REPLACE THIS "NOTE TO DESIGNER" WITH SITE GROUNDING ELECTRODE SYSTEM DETAIL.

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

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

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, CASH-IPO RAMP MONOTUBE TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, RAMP MONOTUBE TYPE	CU. YD.	
	CONCRETE STRUCTURES	CU. YD.	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ. YD.	

SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT.)	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E	ELEV. F	PROPOSED MINIMUM VERTICAL CLEARANCE	SHEET 2 OF STANDARD F16								SHEET 6 OF STANDARD F16	FOUNDATION FOR OVERHEAD SIGN STRUCTURE		SINGLE FACE BARRIER	REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (SQ. YD.)
										L_S	L_L	L_1	L_2	L_3	L_4	H	H_1	"C"	CLASS SI CONCRETE (CU. YD.)	CLASS DS CONCRETE (CU. YD.)	CONCRETE STRUCTURES (CU. YD.)		
																		TOTAL					

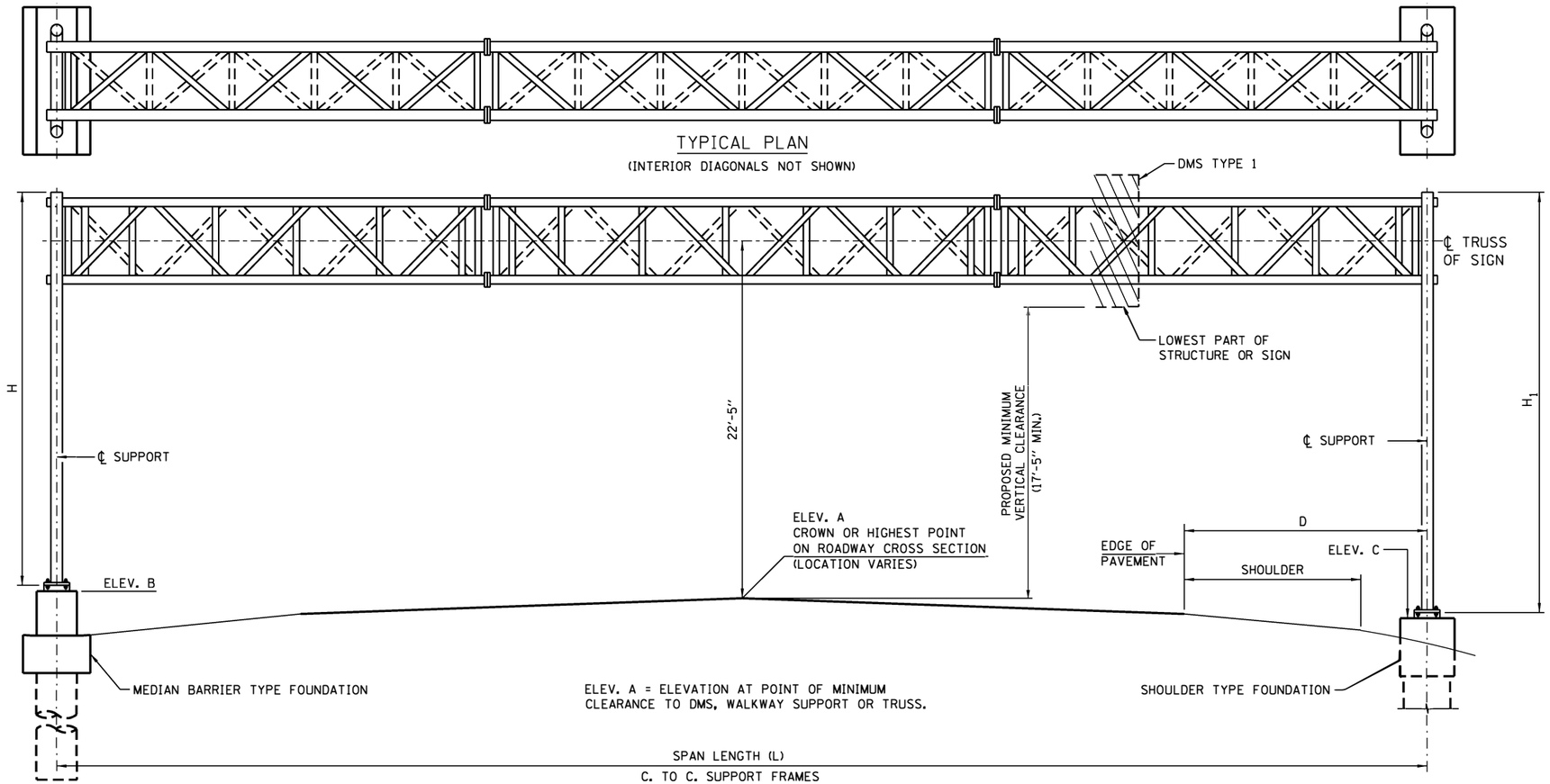
M-OHS-727

NOTE:
WORK THIS SHEET WITH STANDARD F16

Illinois Tollway

OVERHEAD SIGN STRUCTURE
MONOTUBE TYPE (STEEL)
CASH-IPO RAMP
SUMMARY AND TOTAL
BILL OF MATERIAL

DATE
2-13-2020



TYPICAL PLAN
(INTERIOR DIAGONALS NOT SHOWN)

TYPICAL ELEVATION
(LOOKING AT FACE OF SIGN)

NOTE TO DESIGNER

THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT 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 PRIOR TO INSERTION OF THE SHEET INTO THE PLAN SET.

PAYITEM USED IS BASED ON THE DESIGN LENGH, NOT THE CONSTRUCTED LENGTH.

SEE THE ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL FOR MINIMUM VERTICAL CLEARANCE.

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

SUMMARY

STRUCTURE NUMBER	STATION	DESIGN TRUSS TYPE	SPAN LENGTH (FT)	ELEV. A	ELEV. B	ELEV. C	PROPOSED MINIMUM VERTICAL CLEARANCE	FOUNDATION TYPE		D	H	H_1	SHEET 5 OF STANDARD F15	SHEET 10 OF STANDARD F15				SHEET 11 OF STANDARD F15		DMS TYPE 1		FOUNDATION FOR OVERHEAD SIGN STRUCTURE		REINFORCEMENT BARS, EPOXY COATED (POUNDS)	PROTECTIVE COAT (CU YD)
								LT.	RT.				A	a	b	c	L_S	B	C	TOTAL AREA (SQ. FT.)	TOTAL WEIGHT (LBS.)	CLASS SI CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)		
TOTAL																									

TOTAL BILL OF MATERIAL

PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE - SPAN TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, SPAN TYPE	CU. YD.	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ. YD.	
	SIGN STRUCTURE WALKWAY	FOOT	

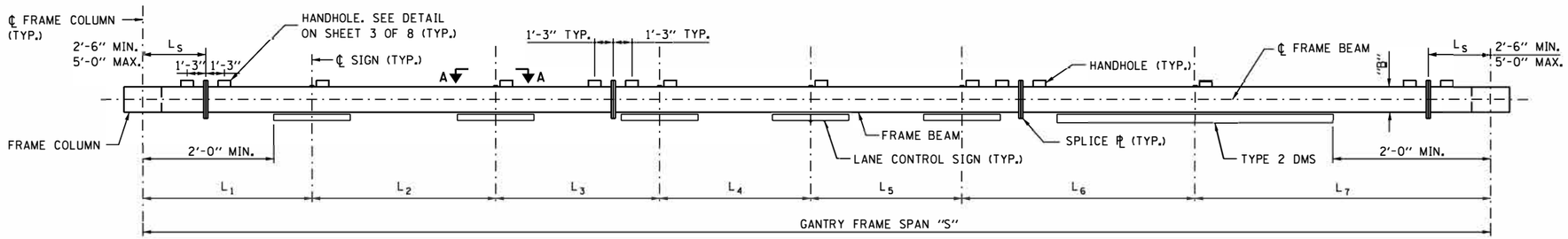
NOTE:
WORK THIS SHEET WITH STANDARD F17

M-OHS-728

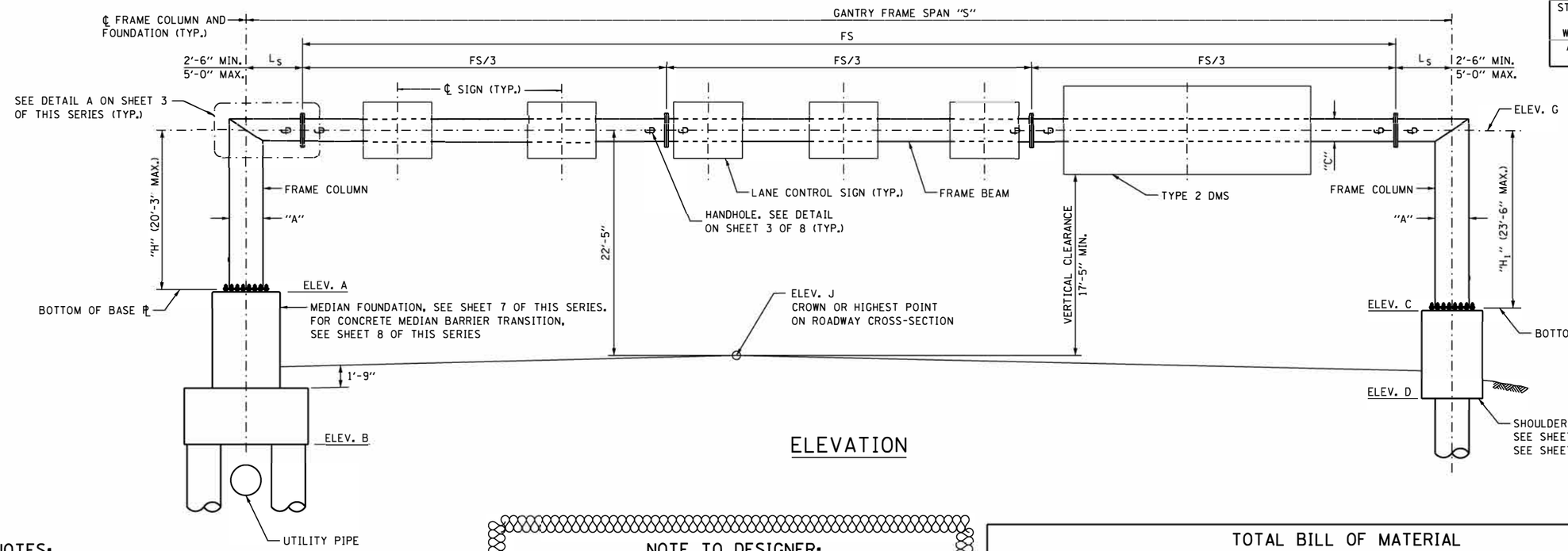
Illinois Tollway

OVERHEAD SIGN STRUCTURE
SPAN TYPE (STEEL)
SUMMARY AND TOTAL
BILL OF MATERIAL

DATE
2-13-2020



PLAN



ELEVATION

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F_y (KSI)	F_u (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

NOTES:

1. SEE SHEET 2 OF THIS SERIES FOR VIEW A-A AND DESIGN SUMMARY TABLE.
2. CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
3. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L_1 THROUGH L_7)
4. FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 2 COLUMNS AND 3 FIELD SECTIONS.
5. 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.
6. WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO 1/4" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.

NOTE TO DESIGNER:

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PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.

USE SHOULDER FOUNDATION WITH SAFETY SHAPE WHEN FOUNDATION IS PLACED ADJACENT TO THE ROADWAY. USE SHOULDER FOUNDATION WITH VERTICAL FACE 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".

TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
	FOUNDATION FOR ITS GANTRY FRAME	CU YD	
	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	
	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	
	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	
	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12"x12"x6"	EACH	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ YD	

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

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

BASE DRAWING M-OHS-729
SHEET 1 OF 8

Illinois Tollway

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

DATE
2-13-2020

GENERAL NOTES:

1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS:

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.

CONSTRUCTION SPECIFICATIONS:

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.

NOTE TO DESIGNER:

1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESIONLESS 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 COHESIONLESS 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.

DESIGN LOADING:

WIND LOAD CRITERIA

SIGN PANEL	40 P.S.F.	BASIC WIND SPEED	90 M.P.H.
COLUMN/BEAM	40 P.S.F.	G	1.14
TYPE 2 DMS	42 P.S.F.	I_r (WIND IMPORTANCE FACTOR)	1.0
		K_z	1.0

TL-5 DESIGN REQUIREMENTS, WHERE APPLICABLE FOR FOUNDATION ONLY, PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION WITH CURRENT INTERIMS

EQUIPMENT LOADS:

LANE CONTROL SIGNS	460 LB. MAX. (5'-0" H. X 6'-1" W. X 1'-2" D. MAX.)
TYPE 2 DMS	1,800 LB. MAX. (8'-0" H. X 22'-0" W. X 1'-2" D. MAX.)

ITS GANTRY FRAMES ARE DESIGNED FOR MAX. LOADING OF 2-TYPE 2 DMS AND 4-LANE CONTROL SIGNS.

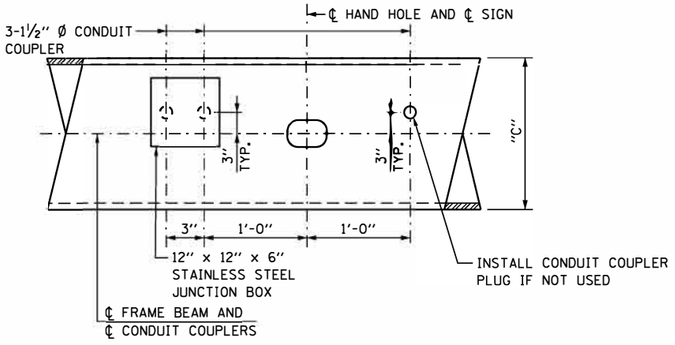
ITS GANTRY FOUNDATIONS ARE DESIGNED FOR MAX. LOADING OF 3-TYPE 2 DMS AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

DESIGN STRESSES FOR REINFORCED CONCRETE:

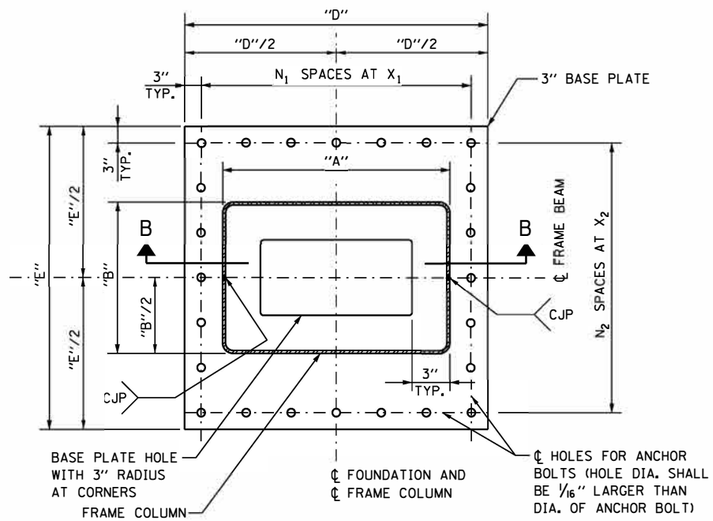
f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS BS) = 4,000 P.S.I.
f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS DS) = 4,000 P.S.I.
fy = YIELD STRENGTH OF REINFORCEMENT BARS (GRADE 60) = 60,000 P.S.I.

DESIGN SPECIFICATIONS:

1. ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ISSUED MARCH, 2019.
2. AASHTO STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, SIXTH EDITION.
3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION WITH CURRENT INTERIMS.
4. ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.
5. ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL DATED MARCH 2019.

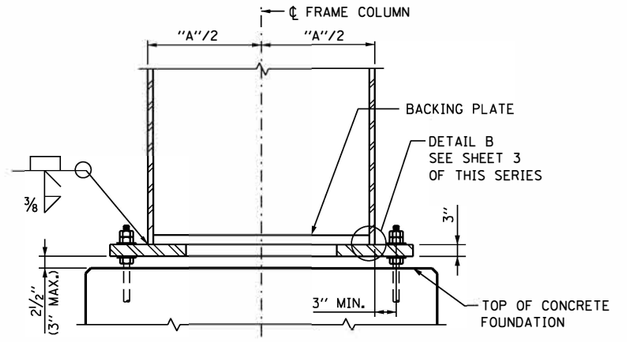


VIEW A-A



BASE PLATE PLAN

SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A" AND "B"



SECTION B-B

DESIGN SUMMARY

STRUCTURE NUMBER	STATION	SPAN "S" (FT)	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. J	ELEV. G	FOUNDATION TYPE	MINIMUM VERTICAL CLEARANCE	FS	L_S	L_1	L_2	L_3	L_4	L_5	L_6	L_7	H	H_1	CONCRETE (CU YD)		REINF. BARS, EPOXY COATED (LB)	PROTECTIVE COAT (SQ YD)
																						CLASS BS	CLASS DS		
																					TOTAL				

BASE PLATE TABLE - TYPE N

SPAN "S"	"D"	"E"	N_1	X_1	N_2	X_2	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1¾"	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1¾"	22
130'<"S"<=150'	3'-7½"	3'-6"	5	7½"	6	6"	1¾"	22

NOTE TO DESIGNER:

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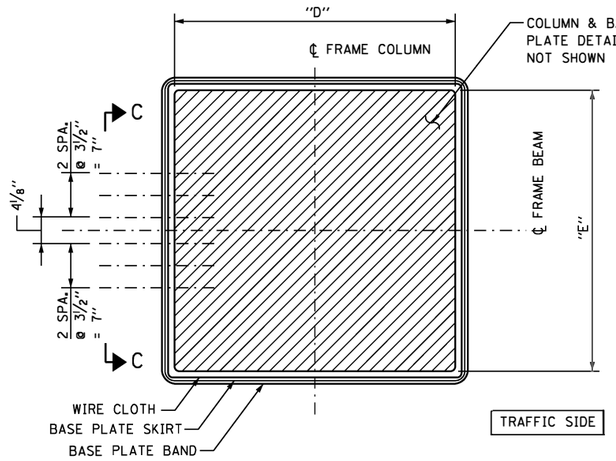
BASE DRAWING M-OHS-729
SHEET 2 OF 8

Illinois Tollway

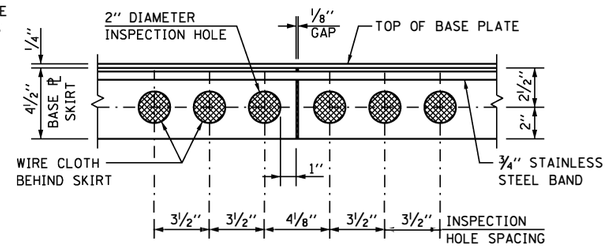
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN
STRUCTURE DETAILS

DATE
2-13-2020



COLUMN BASE PLATE PLAN

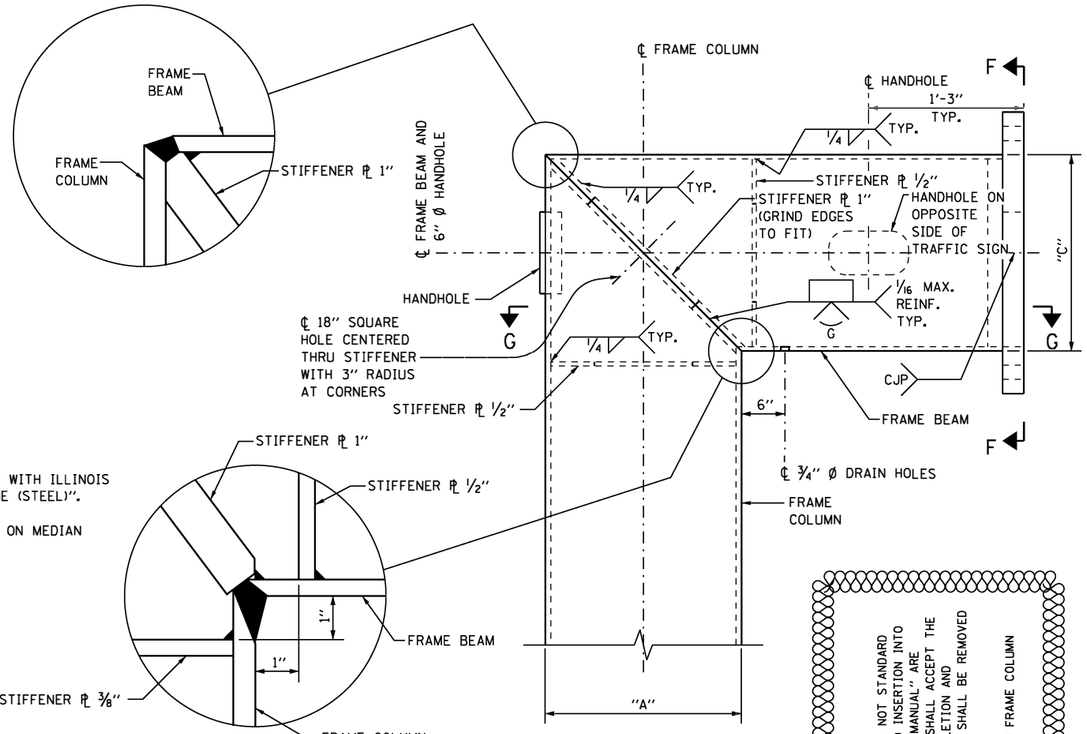
SEE NOTE 5



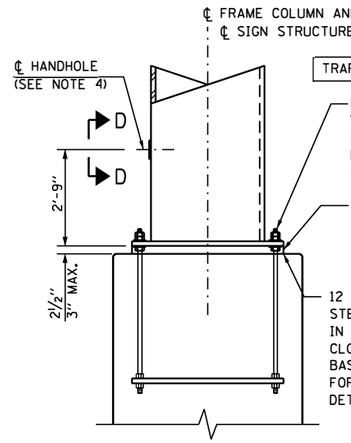
VIEW C-C (BASE PLATE SKIRT)

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.

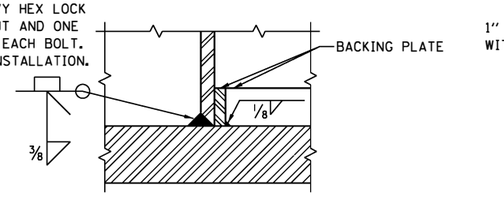


DETAIL A



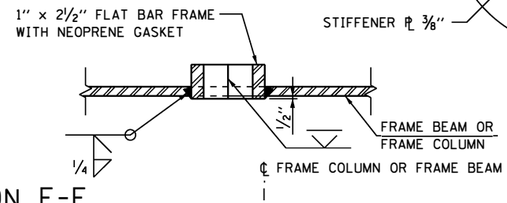
COLUMN BASE

REINFORCING NOT SHOWN

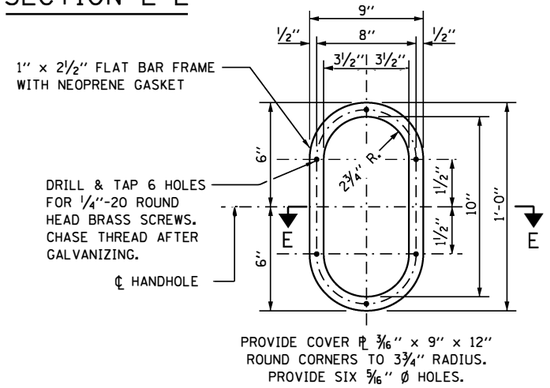


DETAIL B

BASE ℄ SHOWN (SPLICE ℄ SIM.)

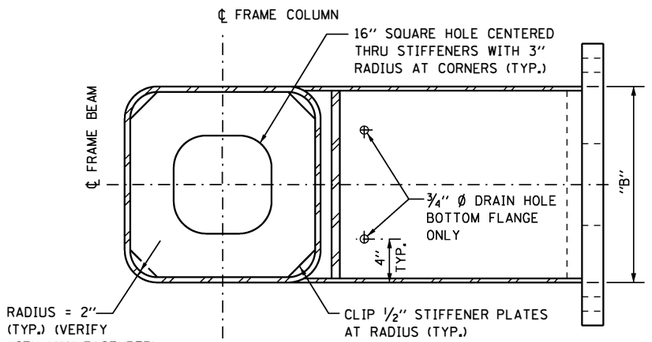


SECTION E-E



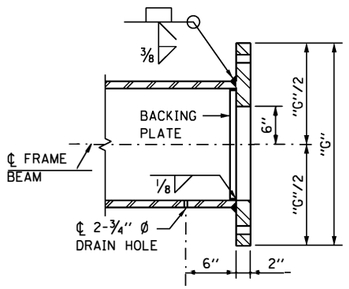
VIEW D-D

HANDHOLE DETAIL



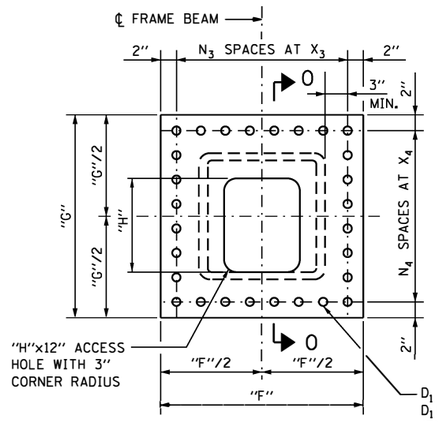
SECTION G-G

1" STIFFENER ℄ NOT SHOWN



SECTION O-O

SPLICE PLATE DETAIL



VIEW F-F

SPLICE PLATE TABLE

SPAN "S"	"F"	"G"	"H"	"J"	N_3	X_3	N_4	X_4	SPLICE BOLT DIAMETER (D_1)	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"	2⅜"	6	6"	6	6"	1¼"	24

NOTE TO DESIGNER:

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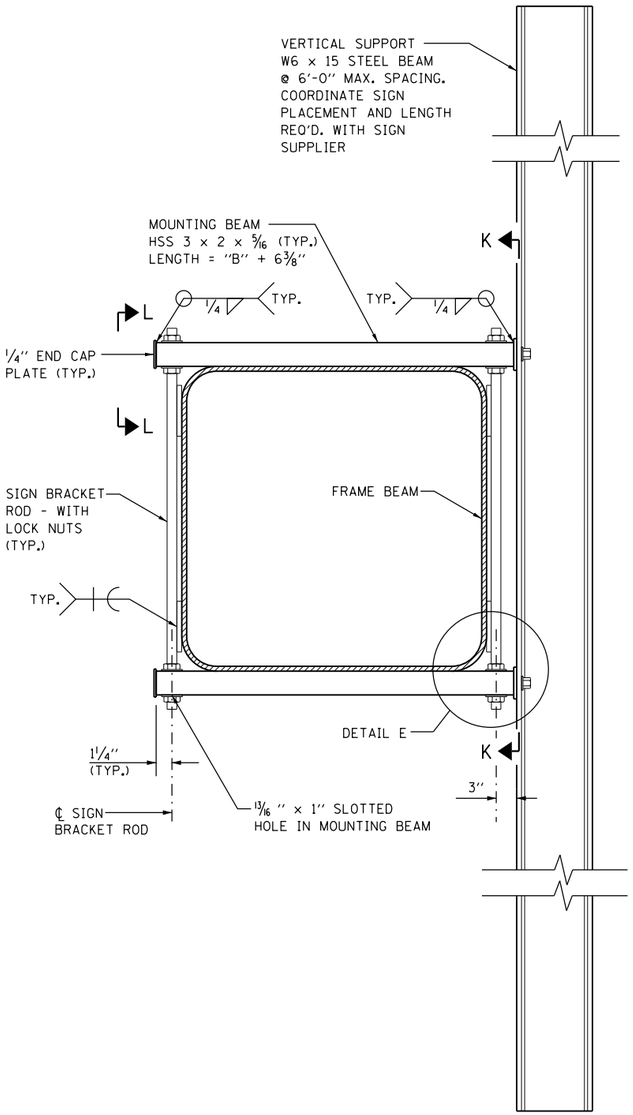
VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.

BASE DRAWING M-OHS-729
SHEET 3 OF 8

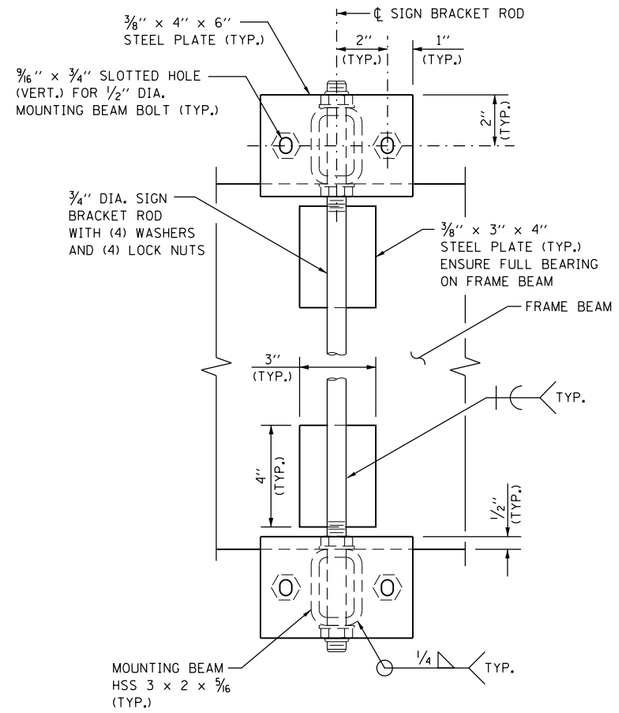
Illinois Tollway

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

DATE
2-13-2020



CONNECTION SIDE VIEW



SECTION K-K

VERTICAL SUPPORT TABLE

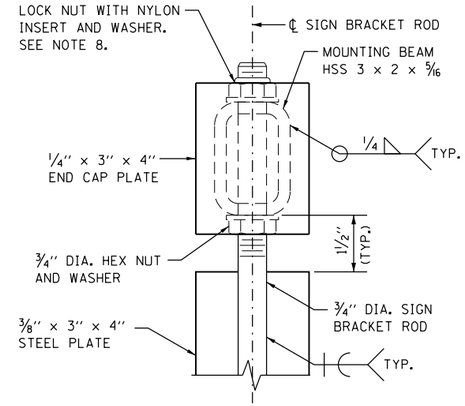
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

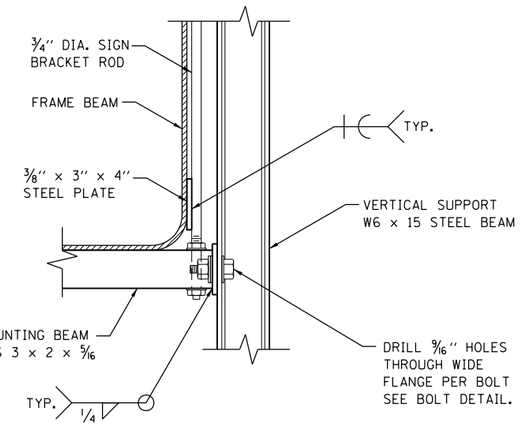
1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED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

NOTE TO DESIGNER:

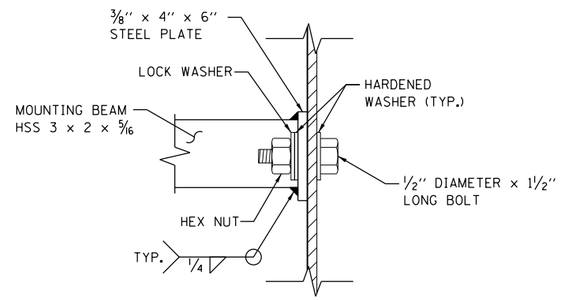
THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF THE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



VIEW L-L



DETAIL E



BOLT DETAIL

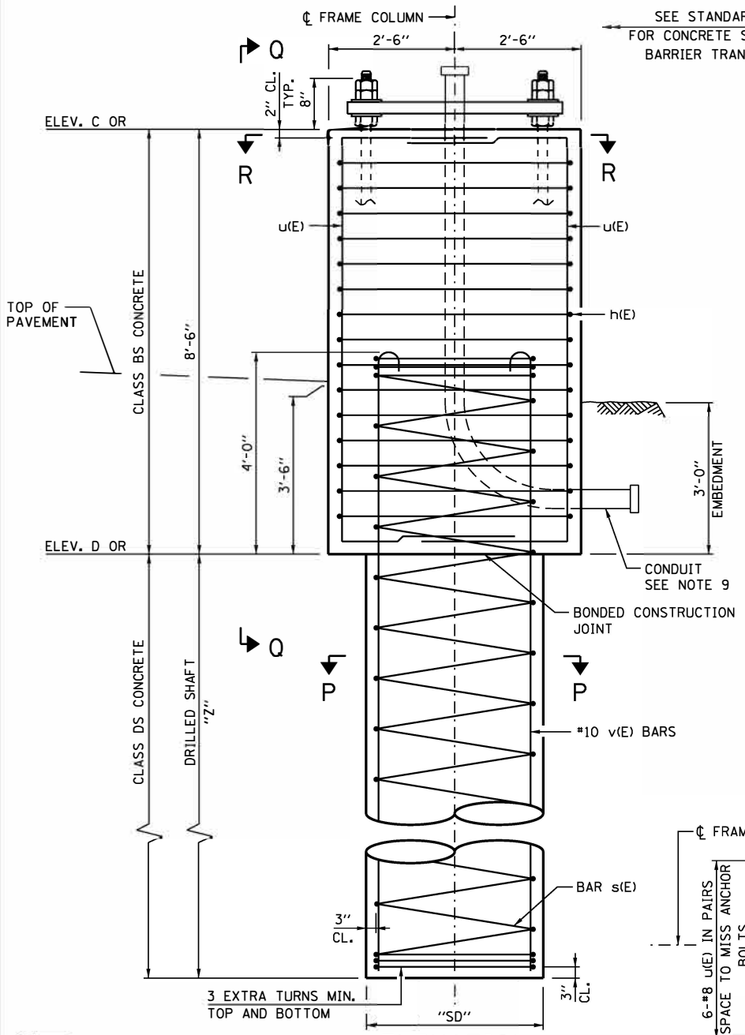
SIGN BRACKET ROD NOT SHOWN FOR CLARITY

BASE DRAWING M-OHS-729
SHEET 4 OF 8

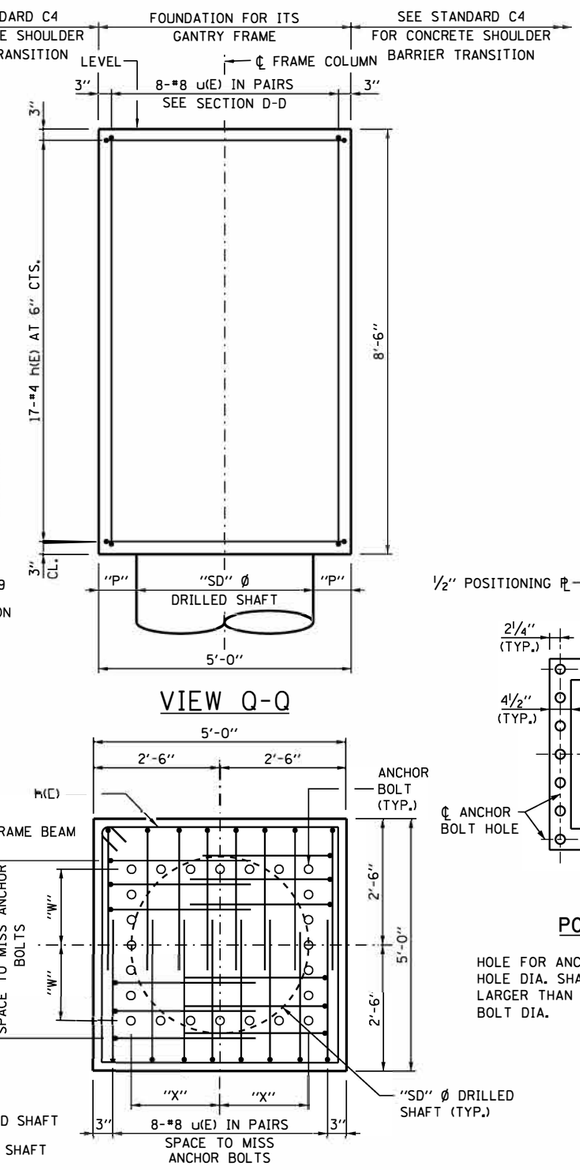
Illinois Tollway

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

DATE
3-31-2017



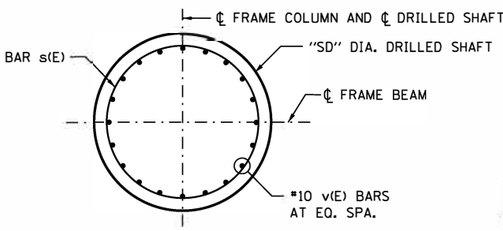
ELEVATION
SHOULDER FOUNDATION TYPE I



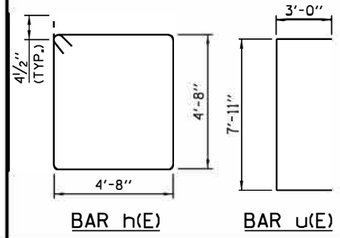
VIEW Q-Q

VIEW R-R

BAR v(E)



SECTION P-P



BAR h(E)

BAR u(E)

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	4,790
110'<"S"<=130'	8.0	12.0	5,530
130'<"S"<=150'	8.0	17.0	6,410

NOTE TO DESIGNER:

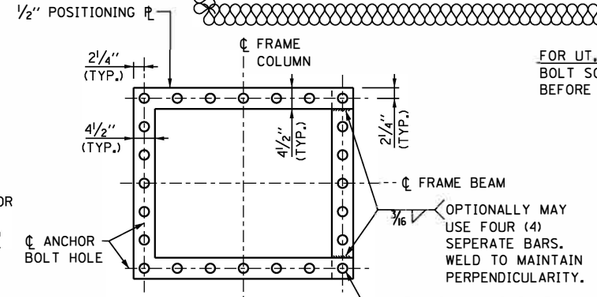
THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF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

NOTES:

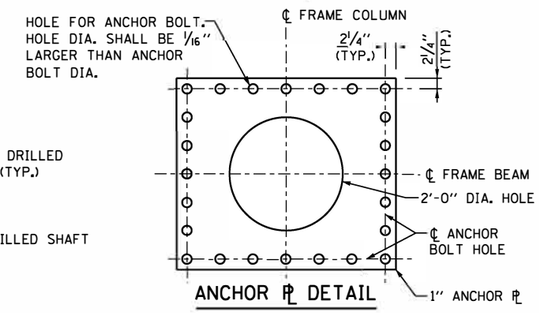
1. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COHESIVE SOIL CONDITIONS (SILTY OR SANDY CLAY), WITH AN AVERAGE UNCONFINED COMPRESSIVE STRENGTH (QU) > 1.25 TON/SQ. FT. WHICH MUST BE DETERMINED BY PREVIOUS SOIL INVESTIGATIONS AT THE JOBSITE. WHEN OTHER CONDITIONS ARE INDICATED, THE 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.
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. 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.

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.

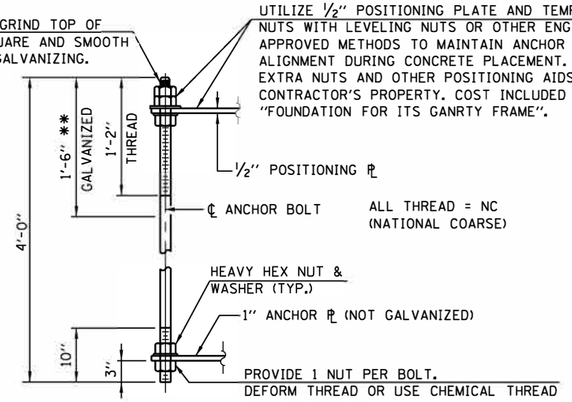


RECOMMENDED POSITIONING PLATE



ANCHOR ℄ DETAIL

UTILIZE ½" POSITIONING PLATE AND TEMPORARY NUTS WITH LEVELING NUTS OR OTHER ENGINEER APPROVED METHODS TO MAINTAIN ANCHOR BOLTS' ALIGNMENT DURING CONCRETE PLACEMENT. PLATE, EXTRA NUTS AND OTHER POSITIONING AIDS BECOME CONTRACTOR'S PROPERTY. COST INCLUDED IN "FOUNDATION FOR ITS GANRTY FRAME".



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 GALVANZIED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.

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)	20	#10	33'-2"		
	u(E)	28	#8	13'-11"		
110'<"S"<=130'	h(E)	17	#4	19'-5"		
	s(E)	1	#6	31'-9"		*
	v(E)	20	#10	37'-2"		
	u(E)	28	#8	13'-11"		
130'<"S"<=150'	h(E)	17	#4	19'-5"		
	s(E)	1	#6	38'-9"		*
	v(E)	22	#10	40'-2"		
	u(E)	28	#8	13'-11"		

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

SHOULDER FOUNDATION TYPE I TABLE

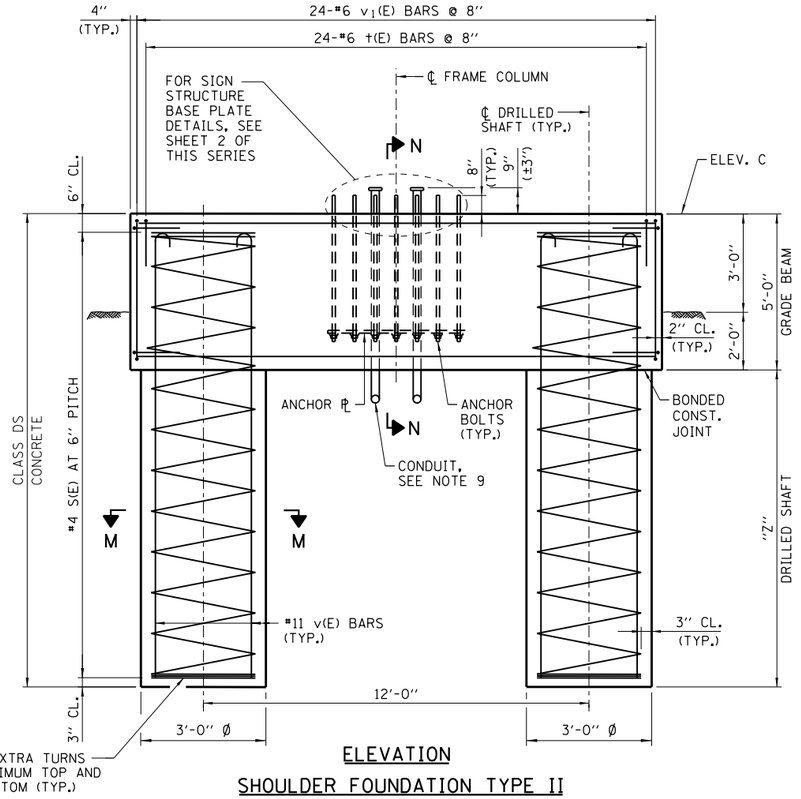
SPAN "S"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5½"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5½"	32'-0"	3'-6"	9"	6"	22
130'<"S"<=150'	1'-6"	1'-6¾"	35'-0"	4'-0"	6"	6"	22

BASE DRAWING M-OHS-729
SHEET 5 OF 8

Illinois Tollway

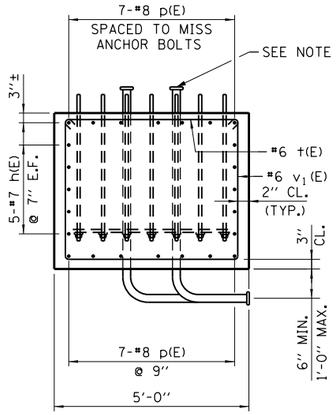
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN
STRUCTURE DETAILS

DATE
2-13-2020

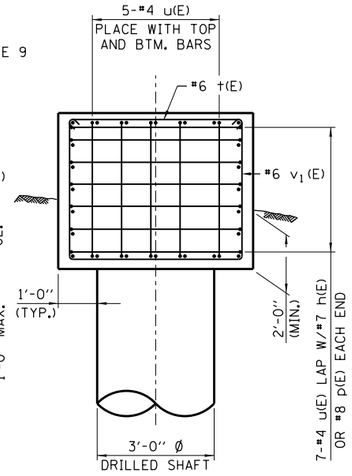


ELEVATION

SHOULDER FOUNDATION TYPE II



SECTION N-N



END VIEW

NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON COMMON 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.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATION 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 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. 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.

NOTE TO DESIGNER:

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

NOTE TO DESIGNER:

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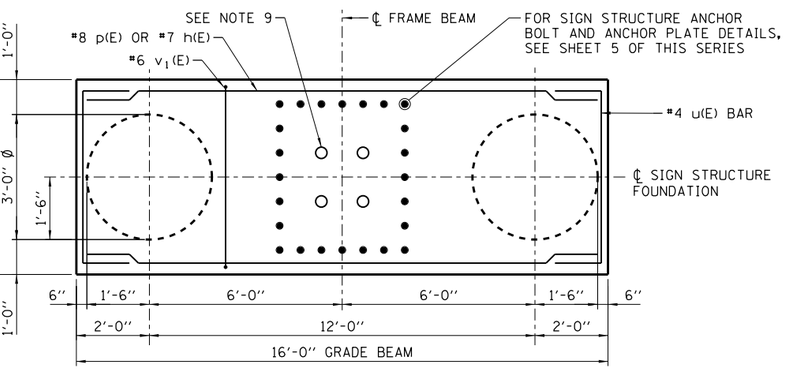
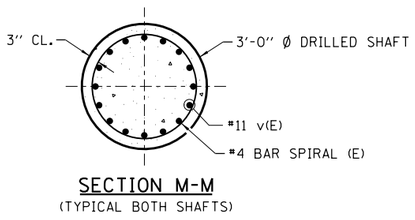


PLAN

SHOULDER FOUNDATION TYPE II

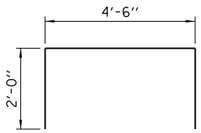


SECTION M-M

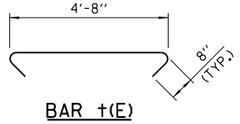
(TYPICAL BOTH SHAFTS)

SHOULDER FOUNDATION TYPE II SCHEDULE

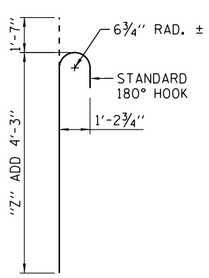
SPAN "S"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5½"	1'-4"	35.0	10,190
110'<"S"<=130'	42'-0"	1'-8"	1'-5½"	37.0	10,950
130'<"S"<=150'	46'-0"	1'-8"	1'-6¾"	39.0	11,720



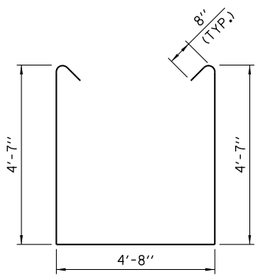
BAR u(E)



BAR t(E)



BAR v(E)



BAR v1(E)

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)	32	#11	43'-10"		
	v1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
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)	32	#11	47'-10"		
	v1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
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)	32	#11	51'-10"		
	v1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		

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

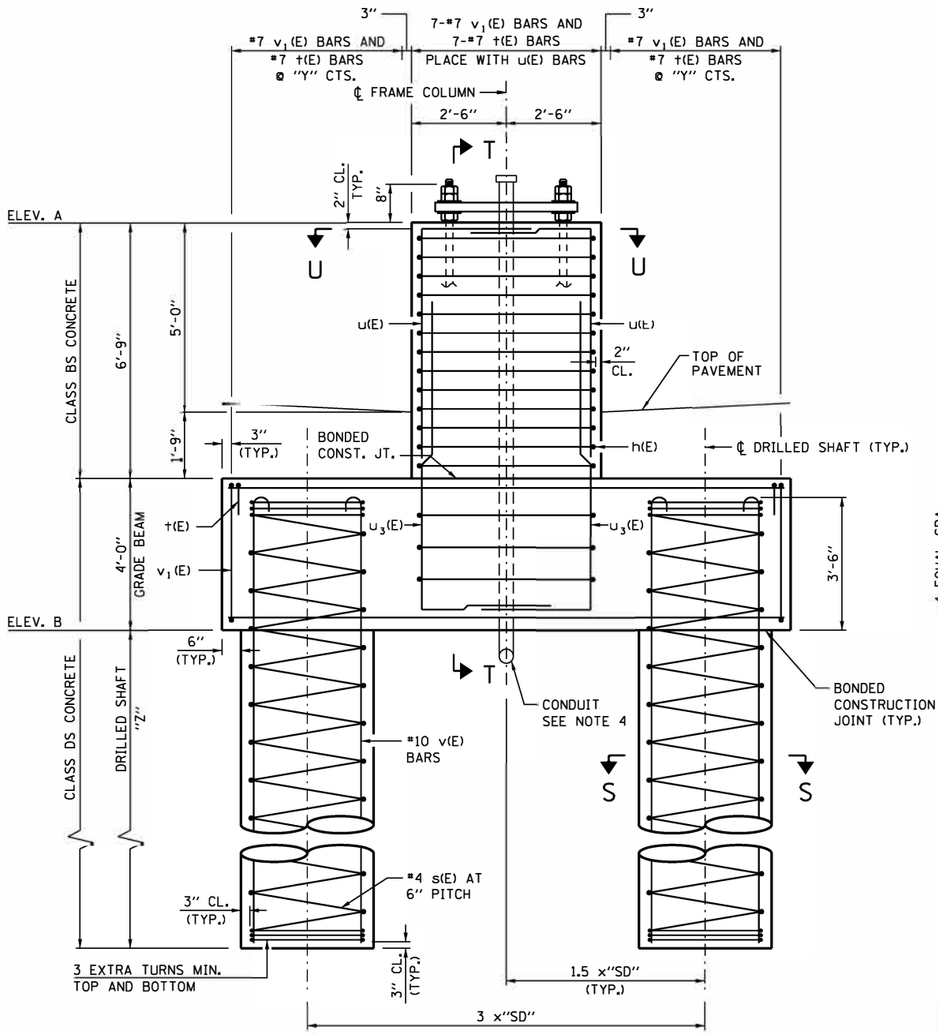
BASE DRAWING M-OHS-729

SHEET 6 OF 8

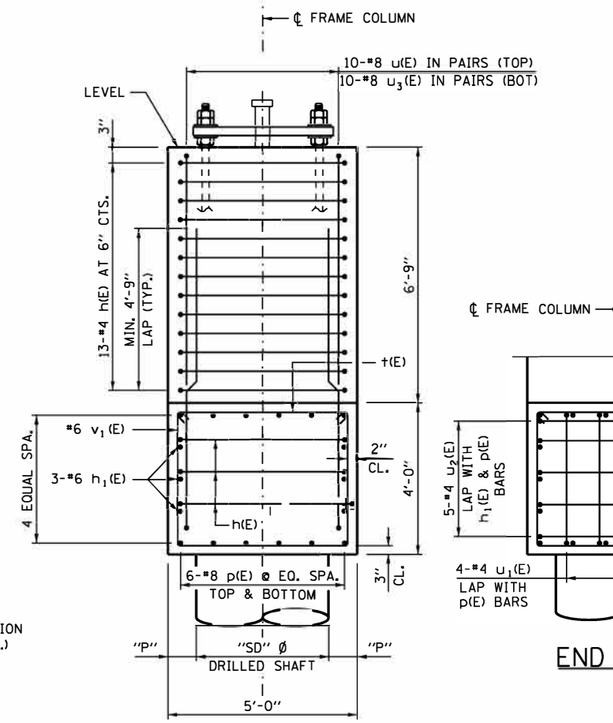
Illinois Tollway

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

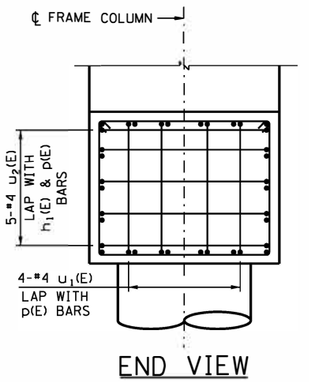
DATE
3-01-2019



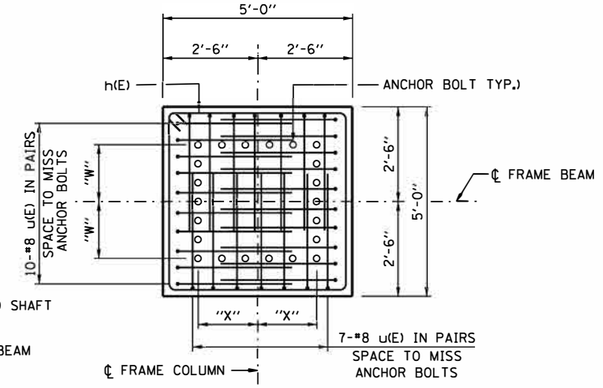
ELEVATION
MEDIAN FOUNDATION



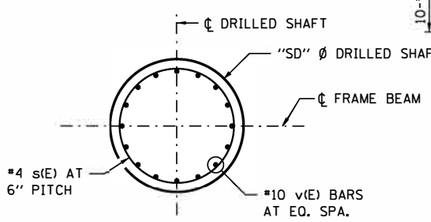
SECTION T-T



END VIEW



SECTION U-U



SECTION S-S

REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

MAX. SPAN "S1" OR "S2"	BAR	NO.	SIZE	LENGTH	SHAPE	
"S"<=110'	h1(E)	6	#6	12'-8"		
	p(E)	12	#8	12'-8"		
	t(E)	23	#7	6'-2"		
	s(E)	2	#4	33'-3"		*
	v(E)	32	#10	34'-8"		
	v1(E)	23	#7	13'-4"		
110'<"S"<=130'	h1(E)	6	#6	14'-8"		
	p(E)	12	#8	14'-8"		
	t(E)	27	#7	6'-2"		
	s(E)	2	#4	31'-3"		*
	v(E)	32	#10	32'-8"		
	v1(E)	27	#7	13'-4"		
130'<"S"<=150'	h1(E)	6	#6	14'-8"		
	p(E)	12	#8	14'-8"		
	t(E)	31	#7	6'-2"		
	s(E)	2	#4	31'-3"		*
	v(E)	40	#10	32'-8"		
	v1(E)	31	#7	13'-4"		

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

REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-1"	
u(E)	34	#8	9'-7"	
u1(E)	8	#4	4'-11"	
u2(E)	10	#4	5'-10"	
u3(E)	34	#8	11'-4"	

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 BASE DRAWING 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.

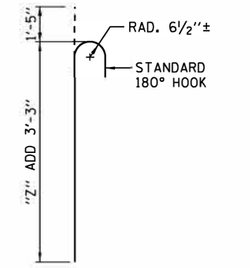
NOTES:
1. SEE SHEET 5 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
2. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM. COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
3. SEE SHEET 8 OF THIS SERIES FOR CONCRETE MEDIAN BARRIER TRANSITION. COST OF BARRIER TRANSITION INCLUDED IN COST OF "CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F".
4. 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.
5. PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASHWALL.

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

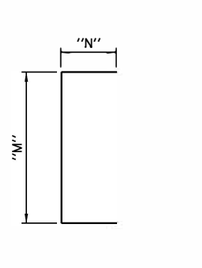
MEDIAN FOUNDATION TABLE

SPAN "S"	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<=110'	30'-0"	3'-0"	1'-0"	1'-5½"	1'-4"	6"	18
110'<"S"<=130'	28'-0"	3'-6"	9"	1'-6"	1'-5½"	6"	22
130'<"S"<=150'	28'-0"	3'-6"	9"	1'-6"	1'-6¾"	5"	22

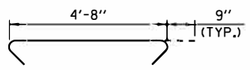
BAR u(E)
BAR u3(E)



BAR v(E)

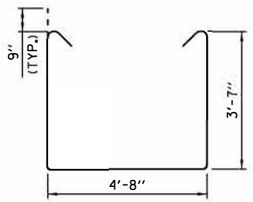


BAR u1(E)
BAR u2(E)

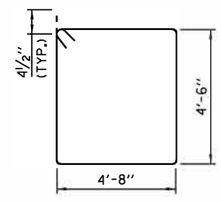


BAR t(E)

BAR	"M"	"N"
u1(E)	3'-7"	8"
u2(E)	4'-6"	8"



BAR v1(E)



BAR h(E)

MEDIAN FOUNDATION SCHEDULE

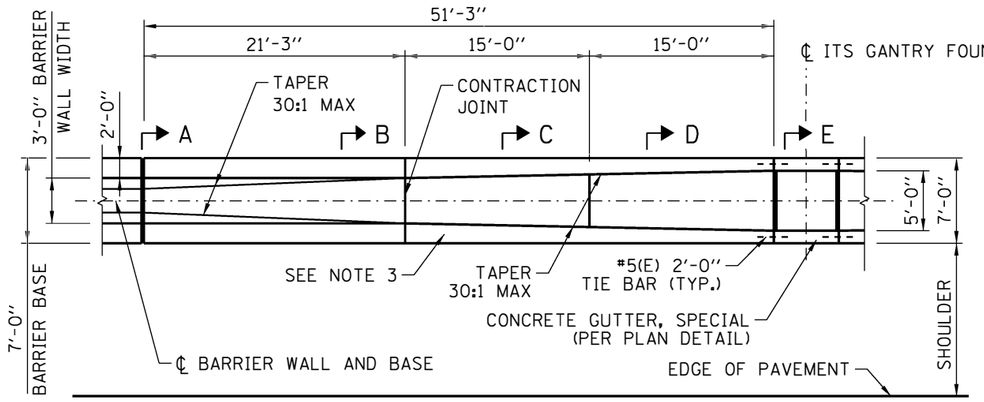
SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<=110'	7.0	26.0	9,120	9
110'<"S"<=130'	7.0	32.0	9,190	9
130'<"S"<=150'	7.0	32.0	10,480	9

BASE DRAWING M-OHS-729
SHEET 7 OF 8

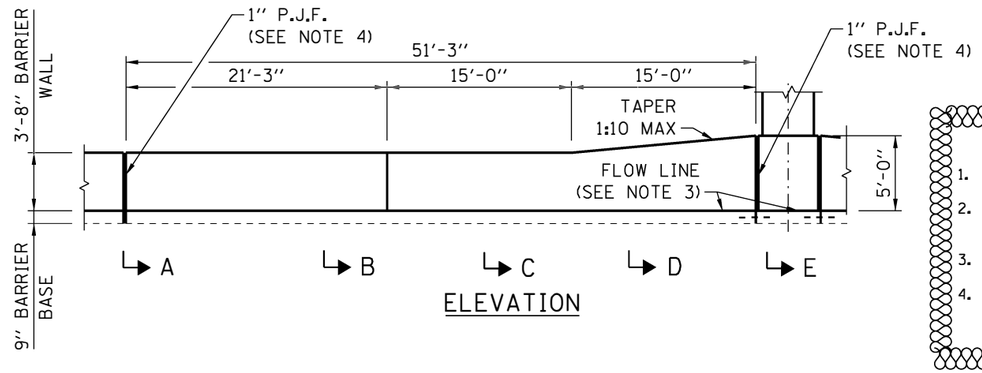
Illinois Tollway

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

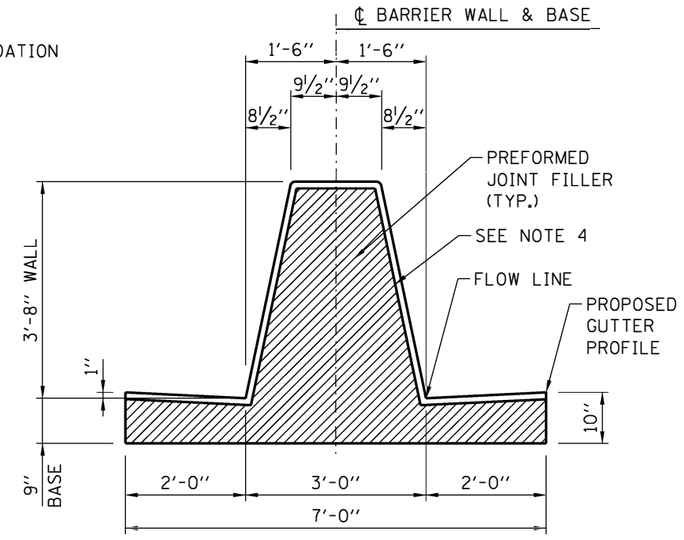
DATE
2-13-2020



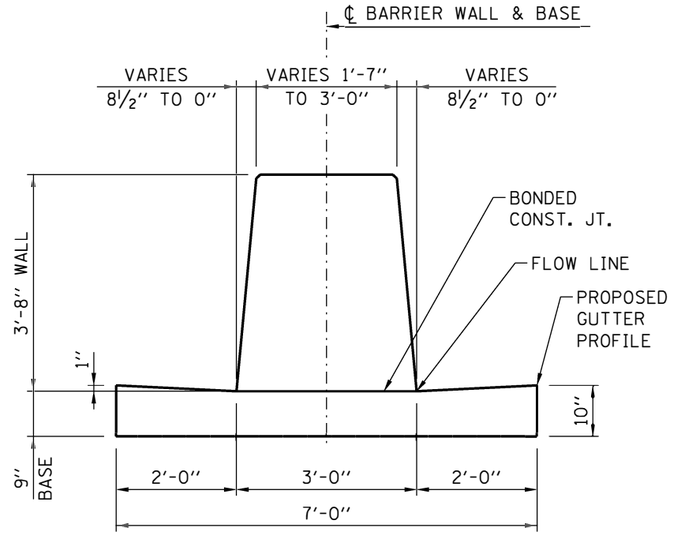
PLAN



ELEVATION



SECTION A-A



SECTION B-B

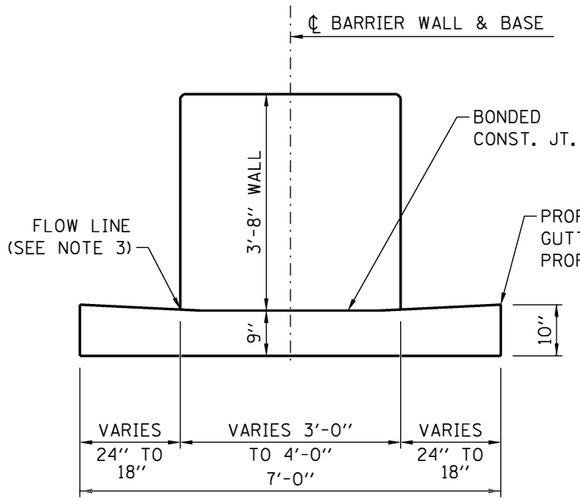
NOTE TO DESIGNER:

1. WITHIN SECTION B-B, THE GUTTER PORTION OF THE BARRIER BASE REMAINS 2'-0"; THEREFORE, 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.

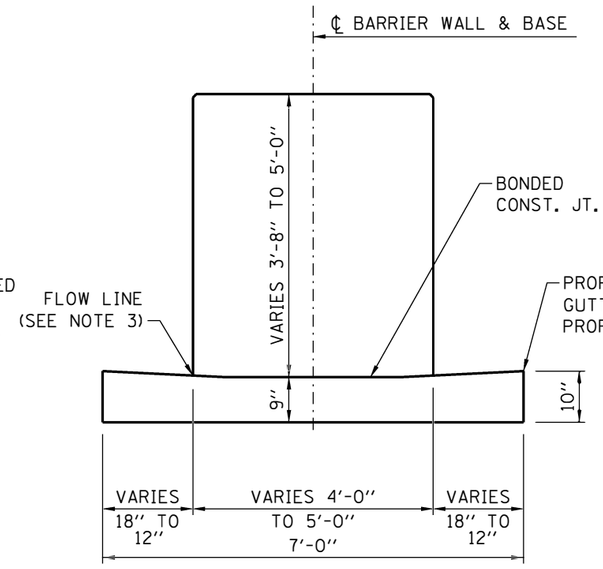
NOTES:

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 ELASTOMETRIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.

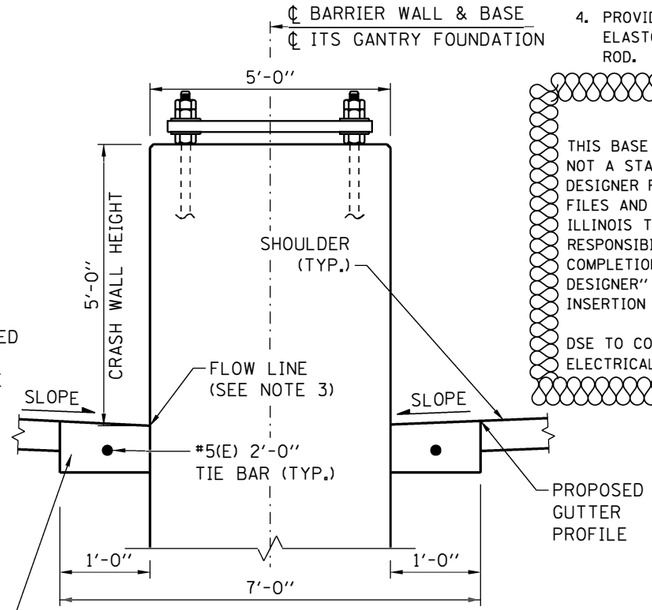
CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION C-C



SECTION D-D



SECTION E-E

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 BASE DRAWING 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.

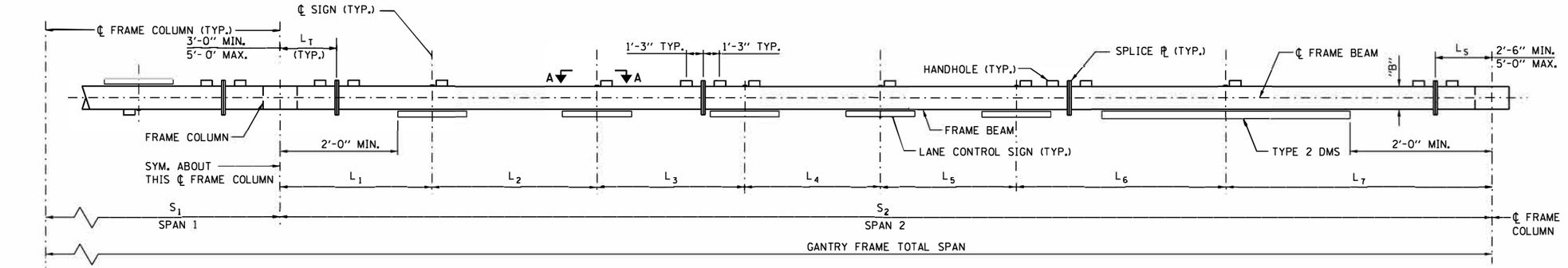
DSE TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.

BASE DRAWING M-OHS-729
SHEET 8 OF 8

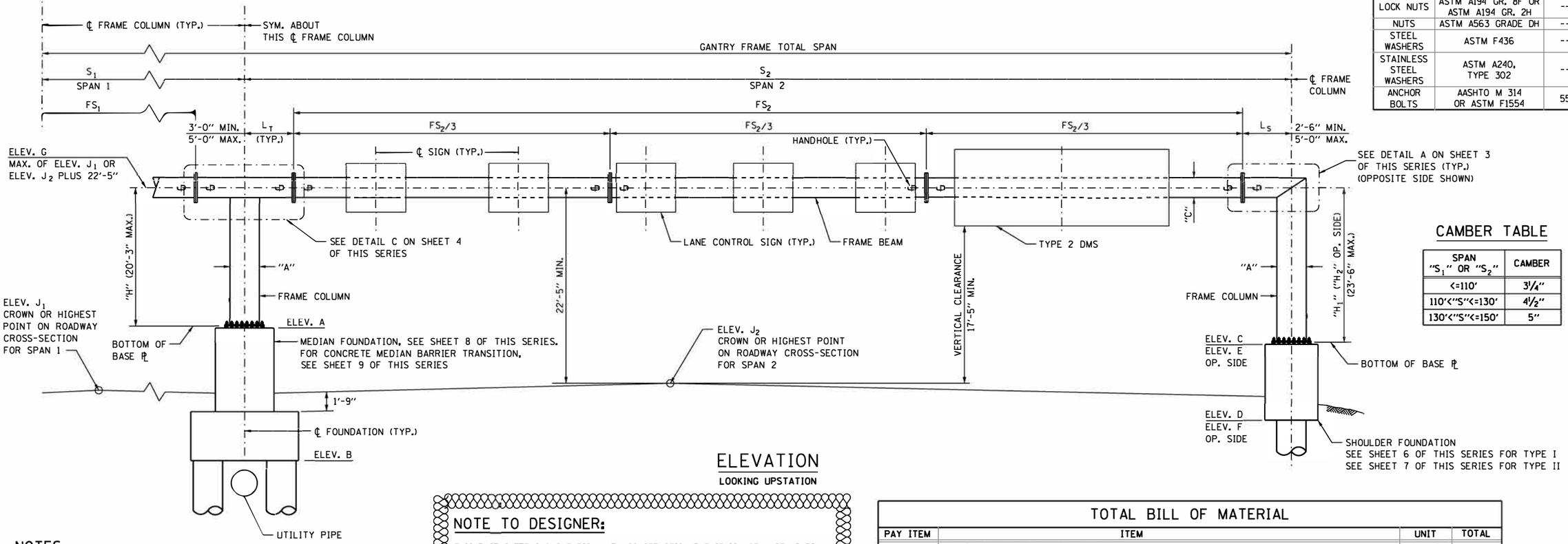
Illinois Tollway

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

DATE
2-13-2020



PLAN



ELEVATION

LOOKING UPSTATION

MATERIAL SPECIFICATIONS FOR STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F_y(KSI)	F_u(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

CAMBER TABLE

SPAN "S_1" OR "S_2"	CAMBER
<=110'	3¼"
110'<"S"<=130'	4½"
130'<"S"<=150'	5"

NOTES:

1. SEE SHEET 2 OF THIS SERIES FOR VIEW A-A AND DESIGN SUMMARY TABLE.
2. CAMBER IS PROVIDED AT MIDSPAN OF EACH SPAN OF STRUCTURE.
3. PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L_1 THROUGH L_7)
4. FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 3 COLUMNS AND 6 FIELD SECTIONS.
5. 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.
6. WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO ¼" SHIM PLATES SHALL BE PROVIDED AT EACH FIELD SPLICE LOCATION IN BETWEEN SPLICE PLATES.

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 BASE DRAWING 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.

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.

USE SHOULDER FOUNDATION WITH SAFETY SHAPE WHEN FOUNDATION IS PLACED ADJACENT TO ROADWAY. USE SHOULDER FOUNDATION WITH VERTICAL FACE 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.

PAY ITEM FOR ITS GANTRY FRAME SHALL BE BASED ON THE LONGER SPAN LENGTH.

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

TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
	FOUNDATION FOR ITS GANTRY FRAME	CU YD	
	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	
	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	
	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	
	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12"x12"x6"	EACH	
	REINFORCEMENT BARS, EPOXY COATED	POUND	
	PROTECTIVE COAT	SQ YD	

STRUCTURAL STEEL TUBE (HSS) FRAME TABLE

MAX. SPAN "S_1" OR "S_2"	FRAME COLUMN	FRAME BEAM	"A"	"B"	"C"
<=110'	HSS 28x24x0.625	HSS 28x24x0.500	2'-0"	2'-4"	2'-0"
110'<"S"<=130'	HSS 28x28x0.625	HSS 28x24x0.625	2'-4"	2'-4"	2'-0"
130'<"S"<=150'	HSS 30x30x0.625	HSS 30x30x0.625	2'-6"	2'-6"	2'-6"

BASE DRAWING M-OHS-730
SHEET 1 OF 9

Illinois Tollway

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

DATE
2-13-2020

GENERAL NOTES:

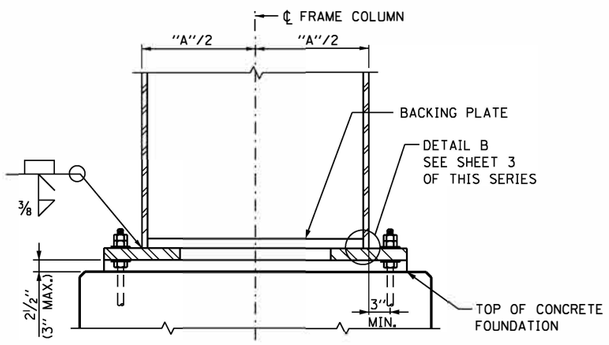
1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A ¾" x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS:

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.

CONSTRUCTION SPECIFICATIONS:

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.



SECTION B-B

NOTE TO DESIGNER:

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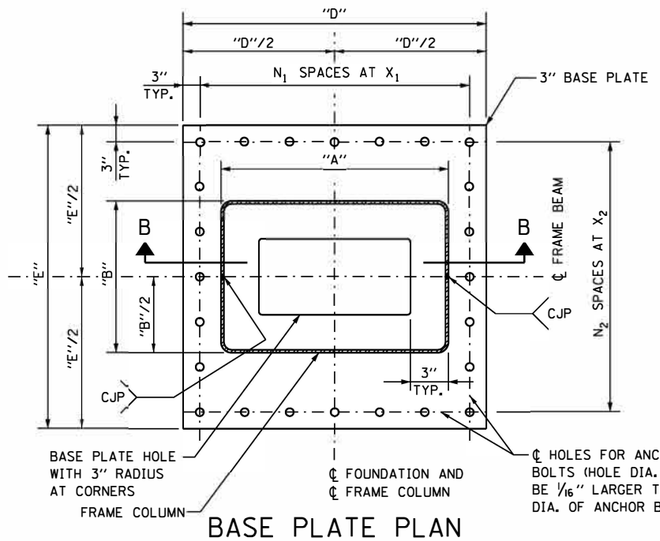
1. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
2. NO STANDARD DRILLED SHAFT FOUNDATIONS WERE DESIGNED OR DETAILED FOR COHESIONLESS SOIL CONDITIONS. REGARDLESS, THE DESIGNER MUST CONDUCT A SUBSURFACE INVESTIGATION AT EACH OVERHEAD SIGN STRUCTURE FOUNDATION TO DETERMINE THE ACTUAL SOIL PROPERTIES. SHOULD THE INVESTIGATION REVEAL THE PRESENCE OF COHESIONLESS 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.



BASE PLATE PLAN

SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A" AND "B"

DESIGN LOADING:

WIND LOAD CRITERIA

SIGN PANEL	40 P.S.F.	BASIC WIND SPEED	90 M.P.H.
COLUMN/BEAM	40 P.S.F.	G	1.14
TYPE 2 DMS	42 P.S.F.	I_r (WIND IMPORTANCE FACTOR)	1.0
		K_z	1.0

TL-5 DESIGN REQUIREMENTS, WHERE APPLICABLE FOR FOUNDATION ONLY, PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION WITH CURRENT INTERIMS.

EQUIPMENT LOADS:

LANE CONTROL SIGN	460 LB. MAX. (5'-0" H. X 6'-1" W. X 1'-2" D. MAX.)
TYPE 2 DMS	1,800 LB. MAX. (8'-0" H. X 22'-0" W. X 1'-2" D. MAX.)

ITS GANTRY FRAMES ARE DESIGNED FOR MAX. LOADING IN EACH SPAN OF 2-TYPE 2 DMS AND 4-LANE CONTROL SIGNS.

ITS GANTRY FOUNDATIONS ARE DESIGNED FOR MAX. LOADING IN EACH SPAN OF 3-TYPE 2 DMS AND 1-LANE CONTROL SIGN IN EACH ADDITIONAL 12' LANE.

DESIGN STRESSES FOR REINFORCED CONCRETE:

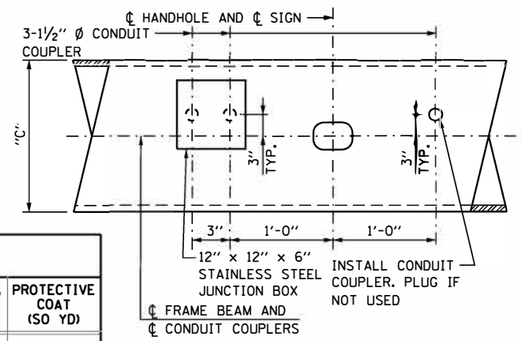
f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS BS) = 4,000 P.S.I.
f'c = COMPRESSIVE STRENGTH OF CONCRETE (CLASS DS) = 4,000 P.S.I.
fy = YIELD STRENGTH OF REINFORCEMENT BARS (GRADE 60) = 60,000 P.S.I.

DESIGN SPECIFICATIONS:

1. ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ISSUED MARCH, 2019.
2. AASHTO STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, SIXTH EDITION.
3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION WITH CURRENT INTERIMS.
4. ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.
5. ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL DATED MARCH 2019.

BASE PLATE TABLE - TYPE N

MAX. SPAN "S_1" OR "S_2"	"D"	"E"	N_1	X_1	N_2	X_2	ANCHOR BOLT DIAMETER	NO. ANCHOR BOLT
<=110'	3'-2"	3'-5"	4	8"	5	7"	1¾"	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1¾"	22
130'<"S"<=150'	3'-7½"	3'-6"	5	7½"	6	6"	1¾"	22



VIEW A-A

DESIGN SUMMARY

STRUCTURE NUMBER	STATION	S_1 (FT)	S_2 (FT)	TOTAL SPAN (FT)	ELEVATION									FOUNDATION TYPE	MINIMUM VERTICAL CLEARANCE	FS_1	FS_2	L_S	L_T	H	H_1	H_2	CONCRETE (CU YD)		REINF. BARS, EPOXY COATED (LB)	PROTECTIVE COAT (SQ YD)
					A	B	C	D	E	F	G	J_1	J_2										CLASS BS	CLASS DS		
																						TOTAL				

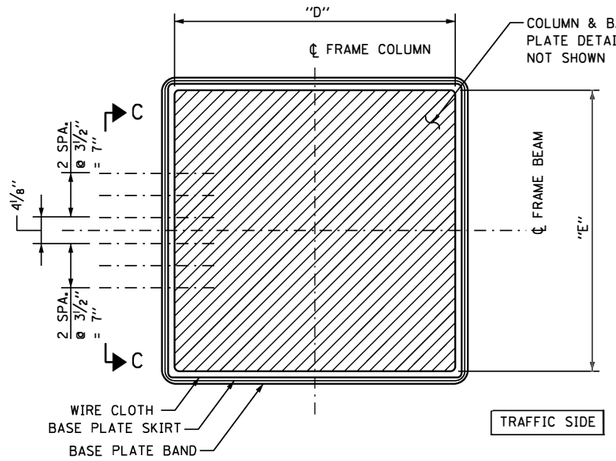
STRUCTURE NUMBER	STATION	SPAN 1							SPAN 2						
		L_7	L_6	L_5	L_4	L_3	L_2	L_1	L_1	L_2	L_3	L_4	L_5	L_6	L_7

BASE DRAWING M-OHS-730
SHEET 2 OF 9

Illinois Tollway

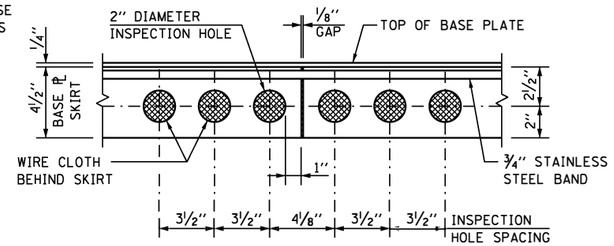
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN
STRUCTURE DETAILS

DATE
2-13-2020

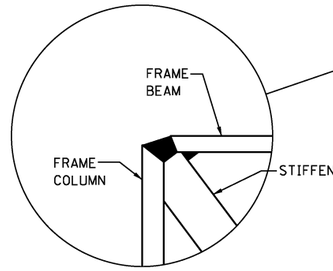


COLUMN BASE PLATE PLAN

SEE NOTE 5



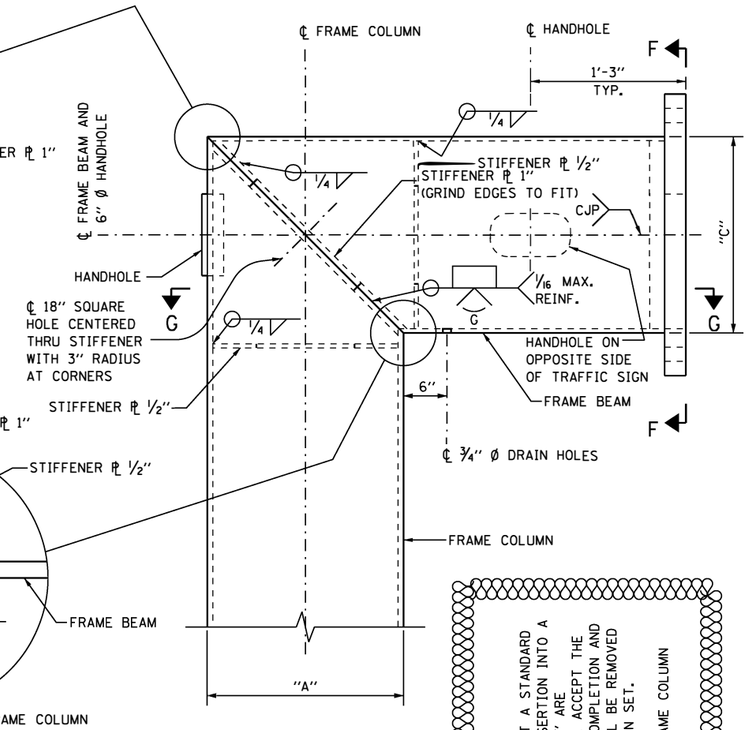
VIEW C-C (BASE PLATE SKIRT)



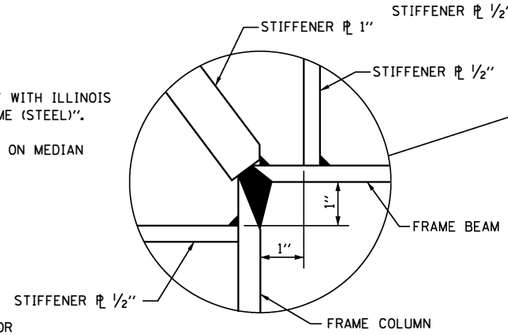
NOTE TO DESIGNER:
VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH ILLINOIS TOLLWAY ITS.

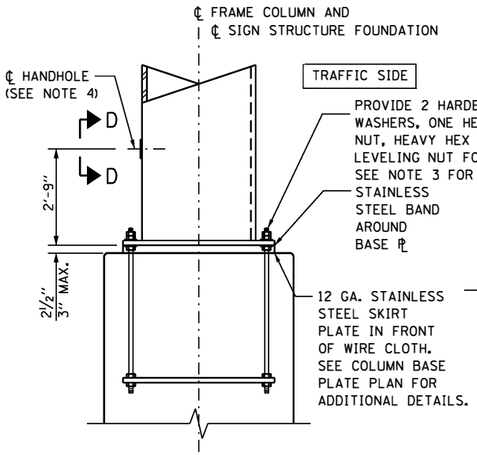
NOTE:

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 "INTELLEGENT TRANSPORTATION SYSTEMS GANTRY FRAME (STEEL)".
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.



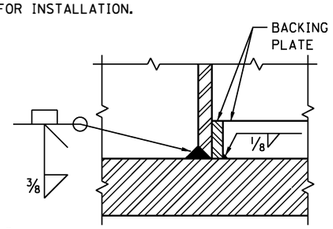
DETAIL A





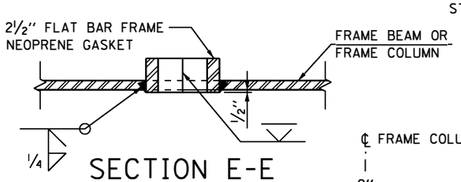
COLUMN BASE

REINFORCING NOT SHOWN

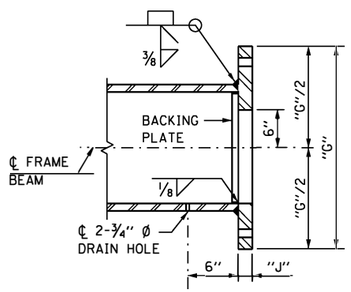


DETAIL B

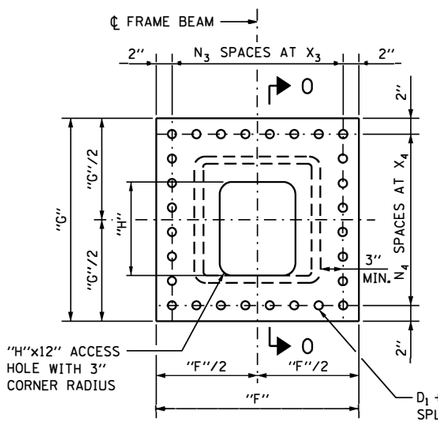
BASE ℄ SHOWN (SPLICE ℄ SIM.)



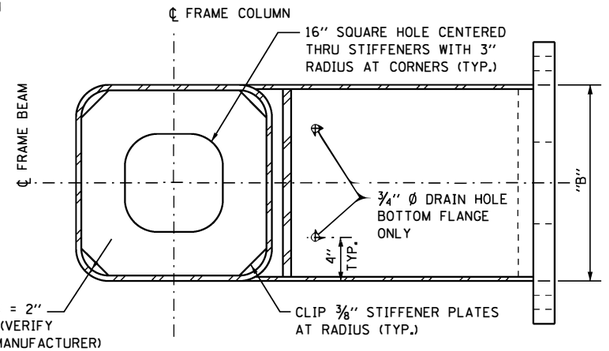
VIEW D-D HANDHOLE DETAIL



SECTION O-O SPLICE PLATE DETAIL



SECTION F-F



SECTION G-G

1" STIFFENER ℄ 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 BASE DRAWING 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

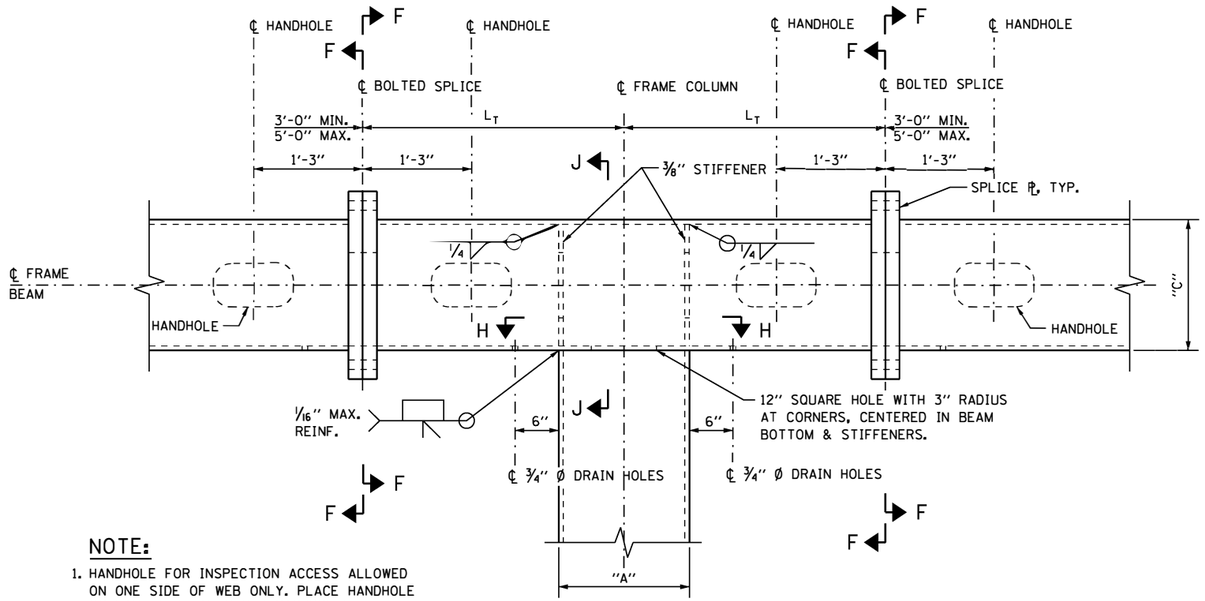
MAX. SPAN "S1" OR "S2"	"F"	"G"	"H"	"J"	N3	X3	N4	X4	SPLICE BOLT DIAMETER (D1)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8½"	1'-6"	2¼"	6	5½"	6	4¾"	1"	24
110'<"S"<=130'	3'-0½"	2'-10"	1'-6"	2¼"	5	6½"	5	6"	1¼"	20
130'<"S"<=150'	3'-4"	3'-4"	1'-9"	2⅜"	6	6"	6	6"	1¼"	24

BASE DRAWING M-OHS-730
SHEET 3 OF 9

Illinois Tollway

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

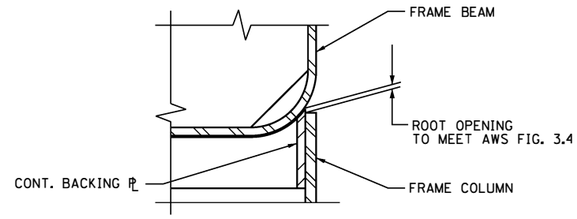
DATE
2-13-2020



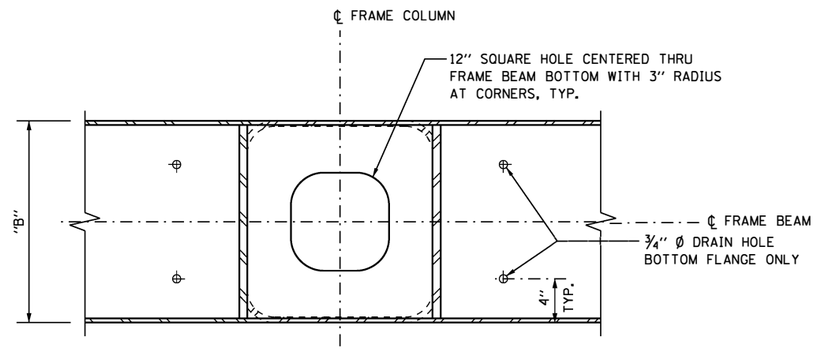
DETAIL C

NOTE:

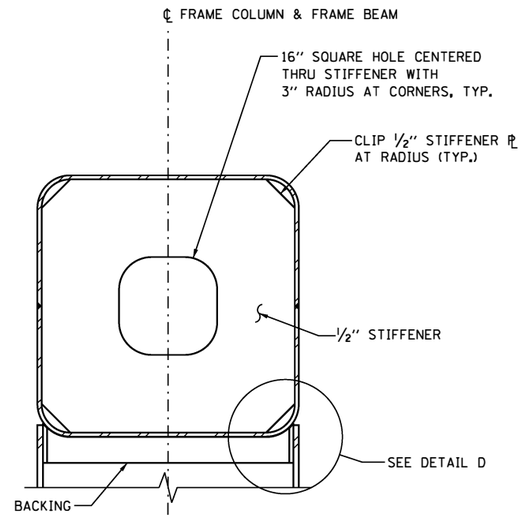
1. HANDHOLE FOR INSPECTION ACCESS ALLOWED ON ONE SIDE OF WEB ONLY. PLACE HANDHOLE ON SAME SIDE AS OTHER HANDHOLES.
2. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
3. SEE SHEET 3 OF THIS SERIES FOR SECTION F-F.



DETAIL D



SECTION H-H



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.

NOTE TO DESIGNER:

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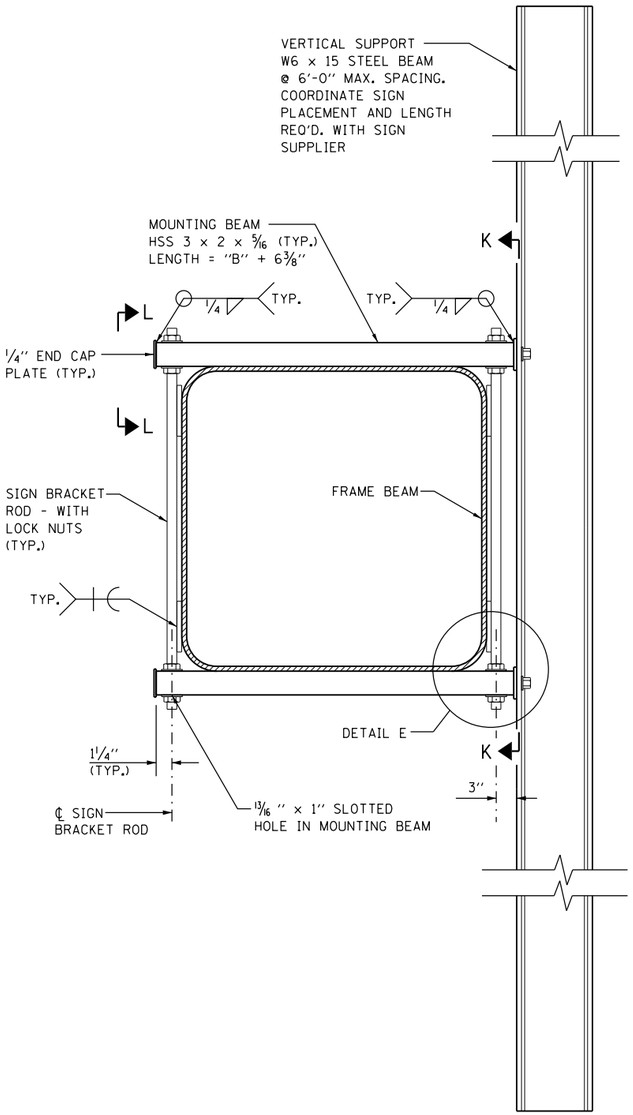
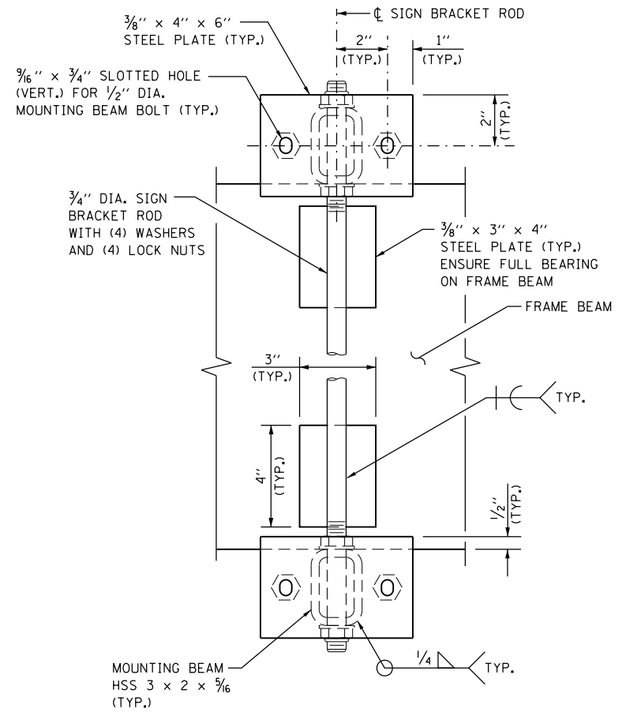
Illinois Tollway

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

DATE
2-13-2020



CONNECTION SIDE VIEW



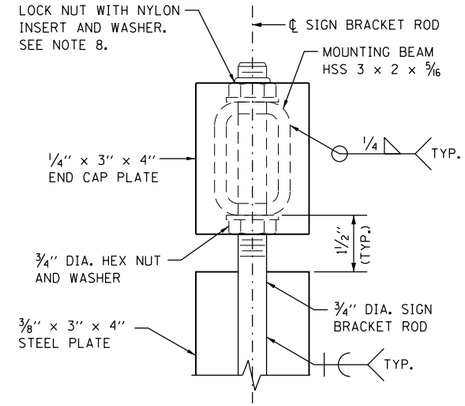
SECTION K-K

VERTICAL SUPPORT TABLE

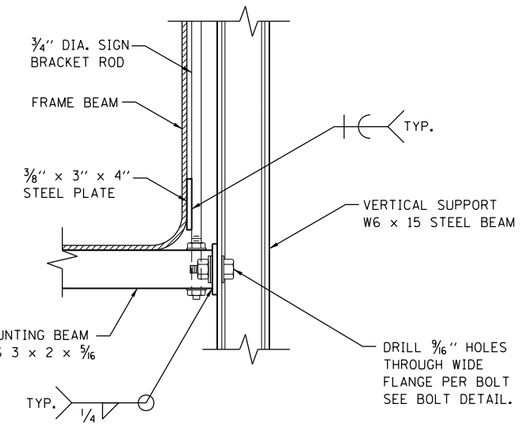
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

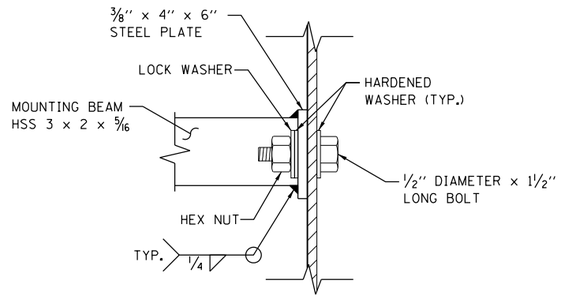
1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED BY MANUFACTURER. VERIFY VERTICAL SPACING WITH HOLES ON W6x15 VERTICAL SUPPORT.
4. PROVIDE HIGH STRENGTH BOLTS WITH WASHERS AND LOCK NUTS TO FASTEN DMS AND LANE CONTROL SIGN TO VERTICAL SUPPORT MEMBERS.
5. GALVANIZE ALL NON-STAINLESS STEEL PARTS.
6. SIGN BRACKET RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307.
7. 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

NOTE TO DESIGNER:

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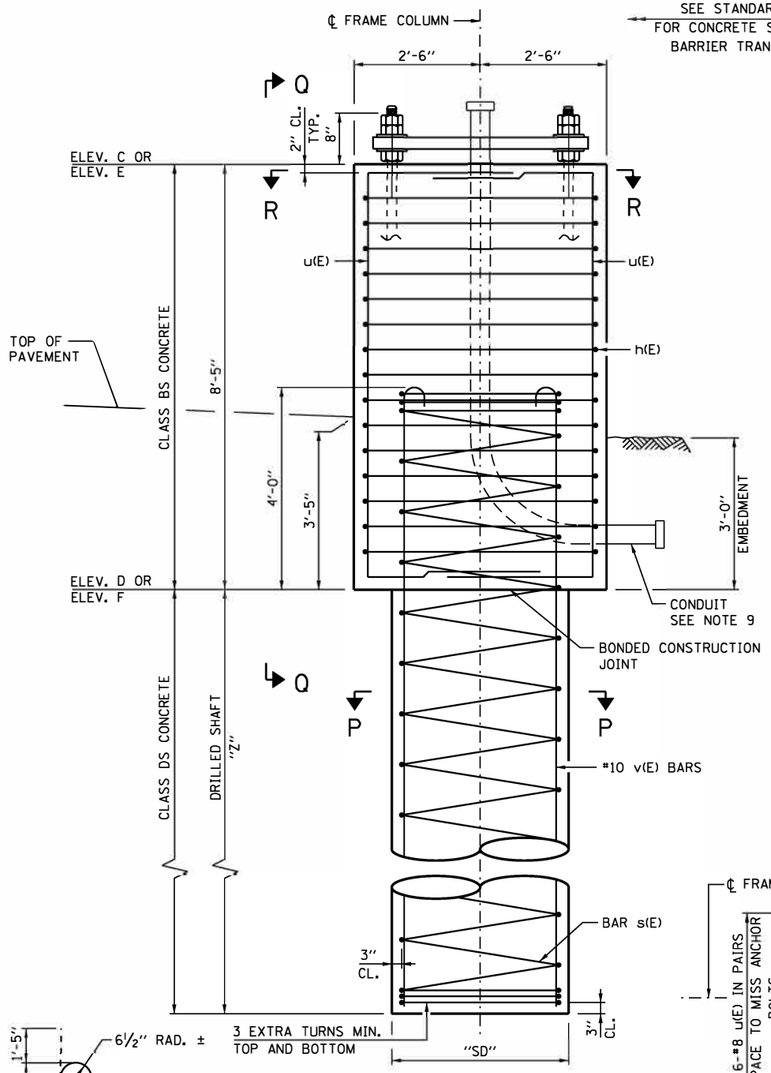
Illinois Tollway

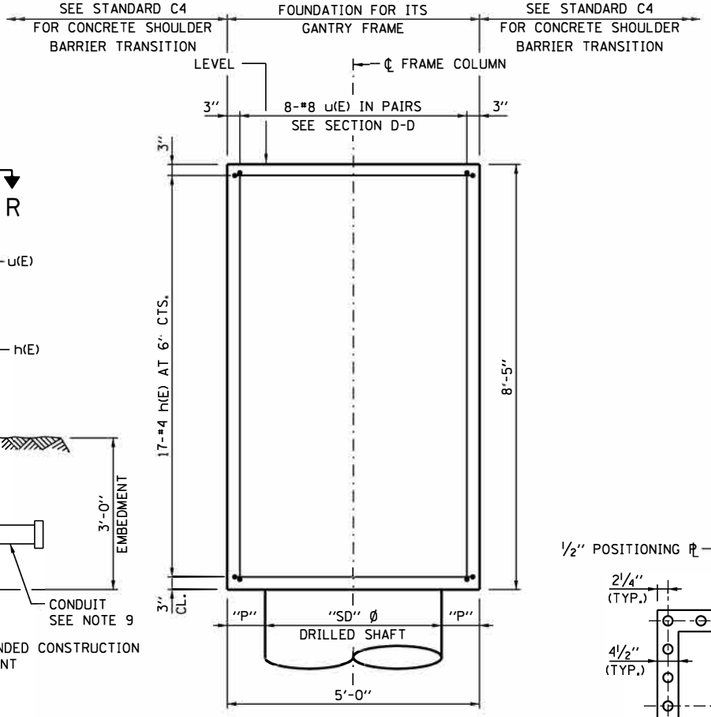
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN
STRUCTURE DETAILS

DATE
3-31-2017

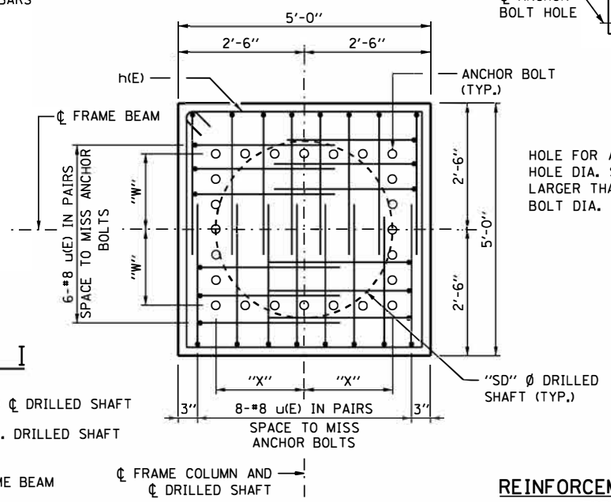


ELEVATION

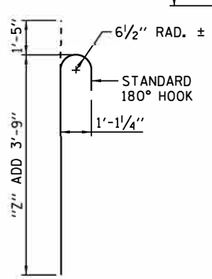
SHOULDER FOUNDATION TYPE I



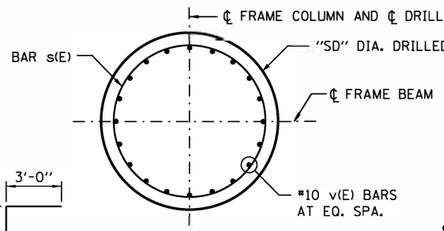
VIEW Q-Q



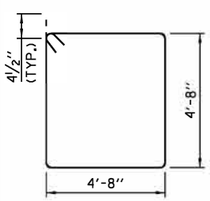
VIEW R-R



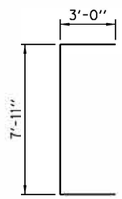
BAR v(E)



SECTION P-P



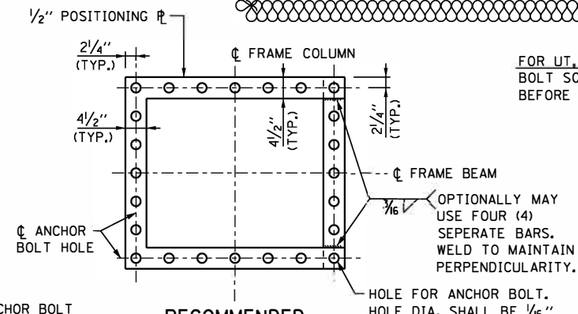
BAR h(E)



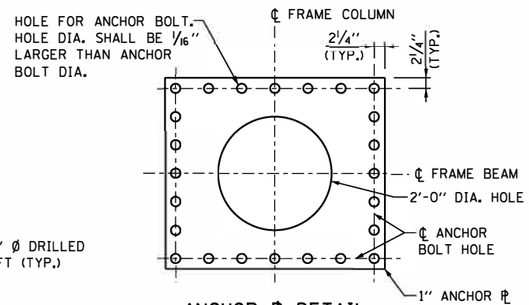
BAR u(E)

SHOULDER FOUNDATION TYPE I SCHEDULE

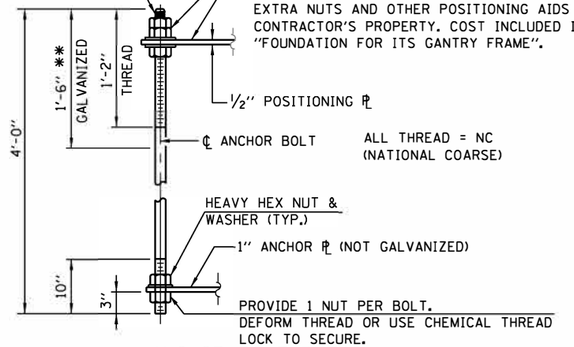
SPAN "S_1" OR "S_2"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	8.0	10.0	4,790
110'<"S"<=130'	8.0	10.0	4,910
130'<"S"<=150'	8.0	17.0	6,190



RECOMMENDED POSITIONING PLATE



ANCHOR ℄ 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 GALVANZIED. ENTIRE BOLT MAY BE GALVANIZED AT CONTRACTOR'S OPTION.

REINFORCEMENT BAR SCHEDULE

FOR ONE FOUNDATION

SPAN "S_1" OR "S_2"	BAR	NO.	SIZE	LENGTH	SHAPE	
<=110'	h(E)	17	#4	19'-5"		
	s(E)	1	#4	31'-9"		*
	v(E)	20	#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)	20	#10	33'-2"		
	u(E)	28	#8	13'-11"		
130'<"S"<=150'	h(E)	17	#4	19'-5"		
	s(E)	1	#5	38'-9"		*
	v(E)	22	#10	40'-2"		
	u(E)	28	#8	13'-11"		

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

SHOULDER FOUNDATION TYPE I TABLE

SPAN "S_1" OR "S_2"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5½"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-6"	1'-5½"	28'-0"	3'-6"	9"	5"	22
130'<"S"<=150'	1'-6"	1'-6¾"	35'-0"	4'-0"	6"	5"	22

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 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.
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.

NOTE TO DESIGNER:

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

NOTE TO DESIGNER:

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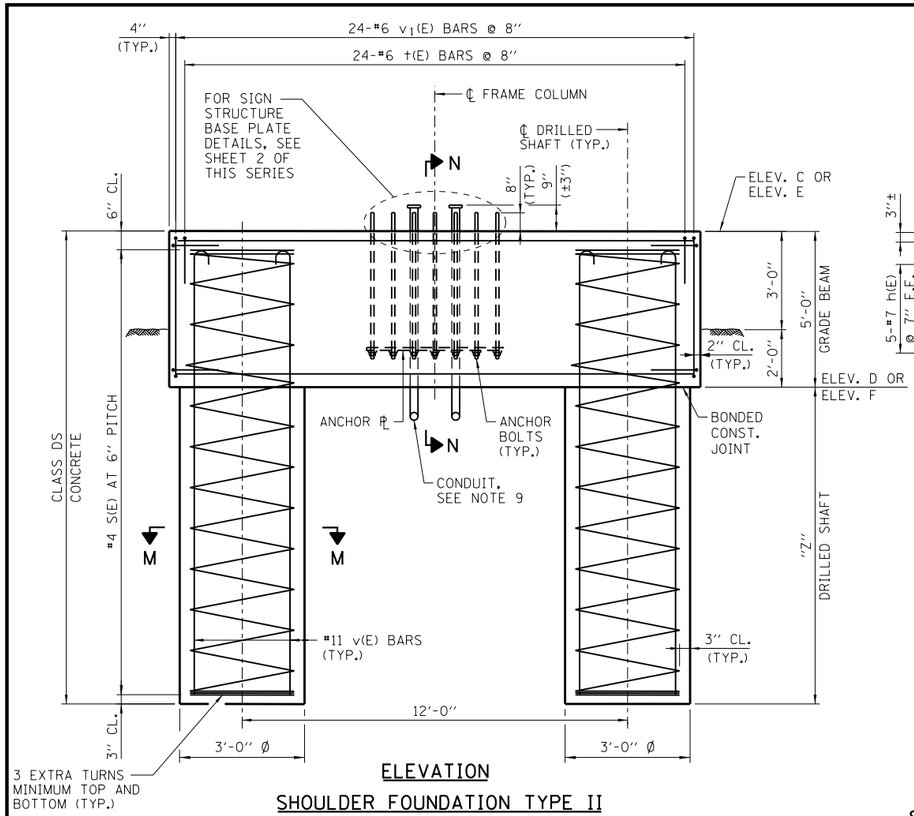
BASE DRAWING M-OHS-730

SHEET 6 OF 9

Illinois Tollway

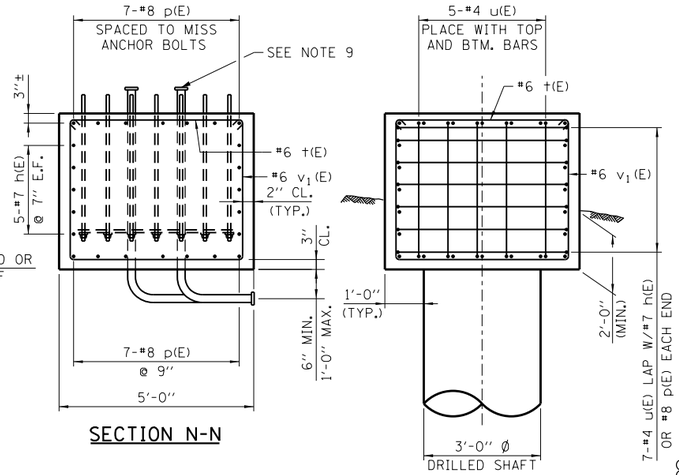
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN
STRUCTURE DETAILS

DATE
2-13-2020



ELEVATION

SHOULDER FOUNDATION TYPE II



SECTION N-N

END VIEW

NOTES:

1. THE FOUNDATION DETAILS SHOWN ARE BASED ON COMMON 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.
2. ALL MATERIAL, FABRICATION, AND CONSTRUCTION REQUIREMENTS FOR THE FOUNDATION 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.

NOTE TO DESIGNER:

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

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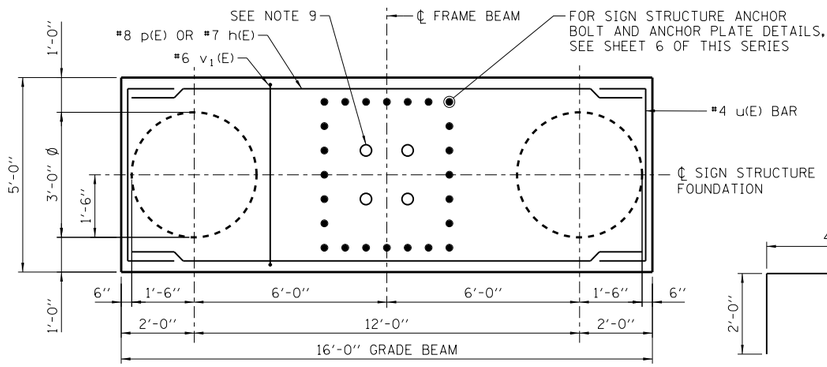
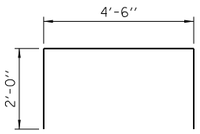
SHOULDER FOUNDATION TYPE II SCHEDULE

SPAN "S1" OR "S2"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5½"	1'-4"	35.0	10,190
110'<"S"<=130'	42'-0"	1'-8"	1'-5½"	37.0	10,950
130'<"S"<=150'	46'-0"	1'-8"	1'-6¾"	39.0	11,720

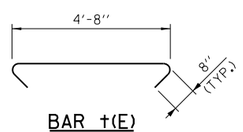


PLAN

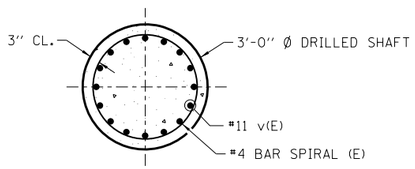
SHOULDER FOUNDATION TYPE II



BAR u(E)

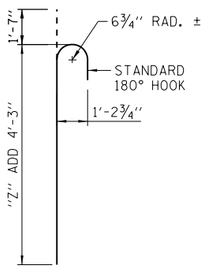


BAR †(E)

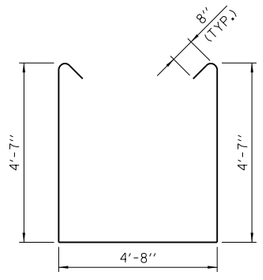


SECTION M-M

(TYPICAL BOTH SHAFTS)



BAR v(E)



BAR v1(E)

REINFORCEMENT BAR SCHEDULE

(2 DRILLED SHAFTS AND 1 GRADE BEAM)

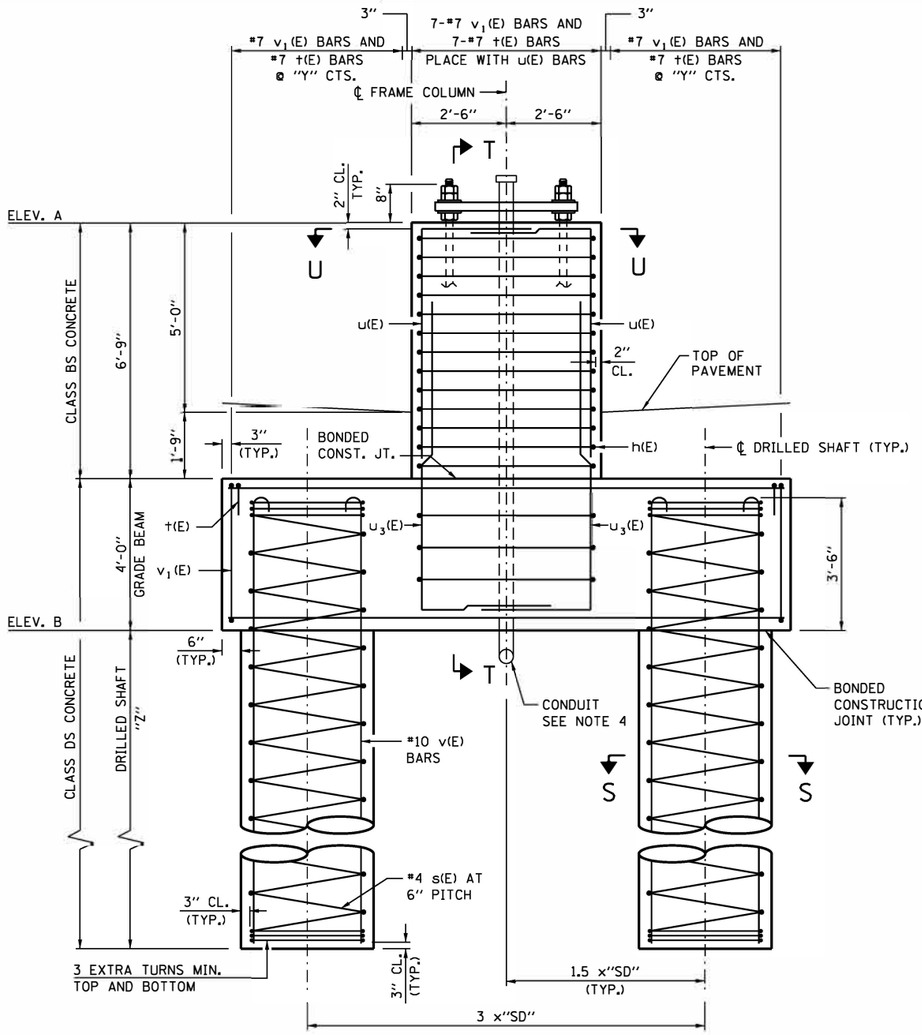
MAX. SPAN "S1" OR "S2"	BAR	NO.	SIZE	LENGTH	SHAPE	
"S"<=110'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	†(E)	24	#6	6'-0"		
	s(E)	2	#4	42'-3"		*
	v(E)	32	#11	43'-10"		
	v1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
110'<"S"<=130'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	†(E)	24	#6	6'-0"		
	s(E)	2	#4	46'-3"		*
	v(E)	32	#11	47'-10"		
	v1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		
130'<"S"<=150'	h(E)	10	#7	15'-8"		
	p(E)	14	#8	15'-8"		
	†(E)	24	#6	6'-0"		
	s(E)	2	#4	50'-3"		*
	v(E)	32	#11	51'-10"		
	v1(E)	24	#6	15'-2"		
	u(E)	24	#4	8'-6"		

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

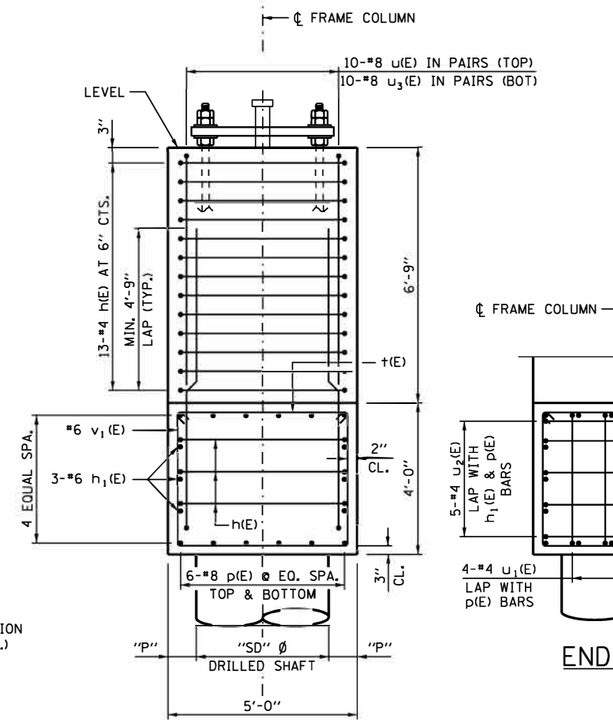
Illinois Tollway

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

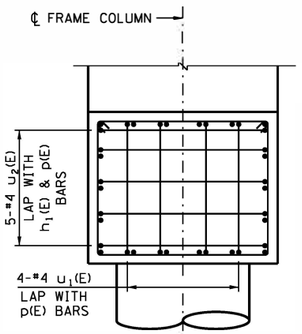
DATE
3-01-2019



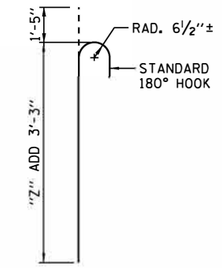
ELEVATION
MEDIAN FOUNDATION



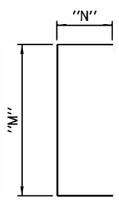
SECTION T-T



END VIEW



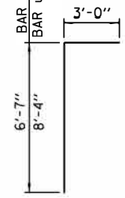
BAR v(E)



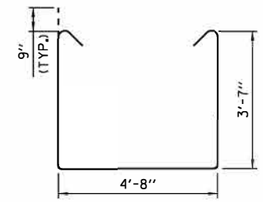
BAR u_1(E)
BAR u_2(E)

BAR †(E)

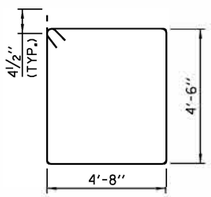
BAR	"M"	"N"
u_1(E)	3'-7"	8"
u_2(E)	4'-6"	8"



BAR u(E)
BAR u_3(E)



BAR v_1(E)



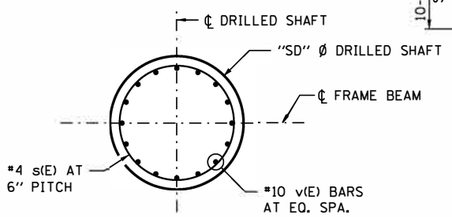
BAR h(E)

NOTES:

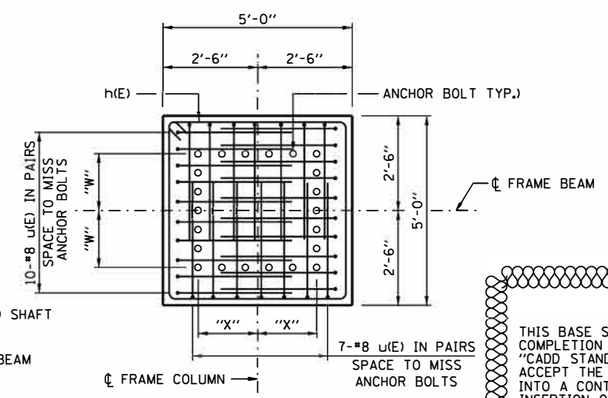
1. SEE SHEET 6 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
2. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM. COST INCLUDED IN THE COST OF "FOUNDATION FOR ITS GANTRY FRAME".
3. SEE SHEET 9 OF THIS SERIES FOR CONCRETE MEDIAN BARRIER TRANSITION. COST OF BARRIER TRANSITION INCLUDED IN COST OF "CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F".
4. 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.
5. PROTECTIVE COAT SHALL BE APPLIED TO TRAFFIC AND TOP FACES OF CONCRETE CRASHWALL.

NOTE TO DESIGNER:

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



SECTION S-S



SECTION U-U

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 BASE DRAWING 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.

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

REINFORCEMENT BAR SCHEDULE

FOR ONE FOUNDATION

MAX. SPAN "S_1" OR "S_2"	BAR	NO.	SIZE	LENGTH	SHAPE	
"S"<=110'	h_1(E)	6	#6	12'-8"		
	p(E)	12	#8	12'-8"		
	†(E)	23	#7	6'-2"		
	s(E)	2	#4	33'-3"		*
	v(E)	32	#10	34'-8"		
	v_1(E)	23	#7	13'-4"		
110'<"S"<=130'	h_1(E)	6	#6	14'-8"		
	p(E)	12	#8	14'-8"		
	†(E)	27	#7	6'-2"		
	s(E)	2	#4	31'-3"		*
	v(E)	32	#10	32'-8"		
	v_1(E)	27	#7	13'-4"		
130'<"S"<=150'	h_1(E)	6	#6	14'-8"		
	p(E)	12	#8	14'-8"		
	†(E)	31	#7	6'-2"		
	s(E)	2	#4	31'-3"		*
	v(E)	40	#10	32'-8"		
	v_1(E)	31	#7	13'-4"		

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

REINFORCEMENT BAR SCHEDULE

FOR ONE FOUNDATION

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-1"	
u(E)	34	#8	9'-7"	
u_1(E)	8	#4	4'-11"	
u_2(E)	10	#4	5'-10"	
u_3(E)	34	#8	11'-4"	

MEDIAN FOUNDATION SCHEDULE

MAX. SPAN "S_1" OR "S_2"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<=110'	7.0	26.0	9,120	9
110'<"S"<=130'	7.0	32.0	9,190	9
130'<"S"<=150'	7.0	32.0	10,480	9

MEDIAN FOUNDATION TABLE

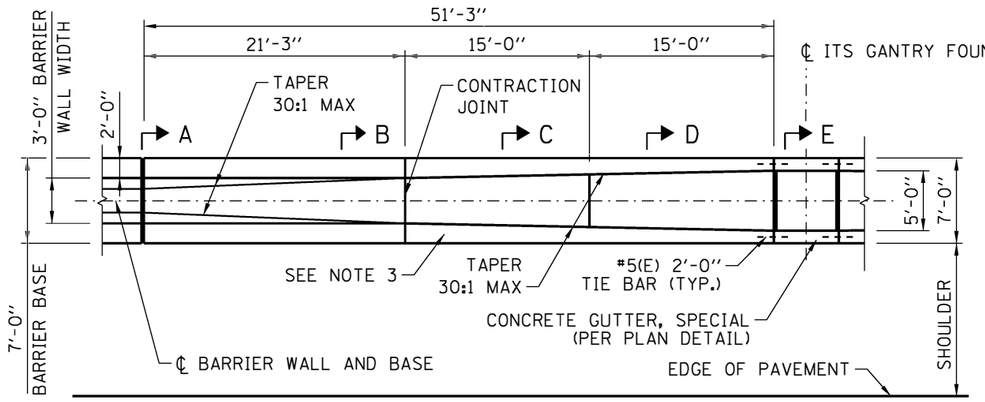
MAX. SPAN "S_1" OR "S_2"	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<=110'	30'-0"	3'-0"	1'-0"	1'-5½"	1'-4"	6"	18
110'<"S"<=130'	28'-0"	3'-6"	9"	1'-6"	1'-5½"	6"	22
130'<"S"<=150'	28'-0"	3'-6"	9"	1'-6"	1'-6¾"	5"	22

BASE DRAWING M-OHS-730
SHEET 8 OF 9

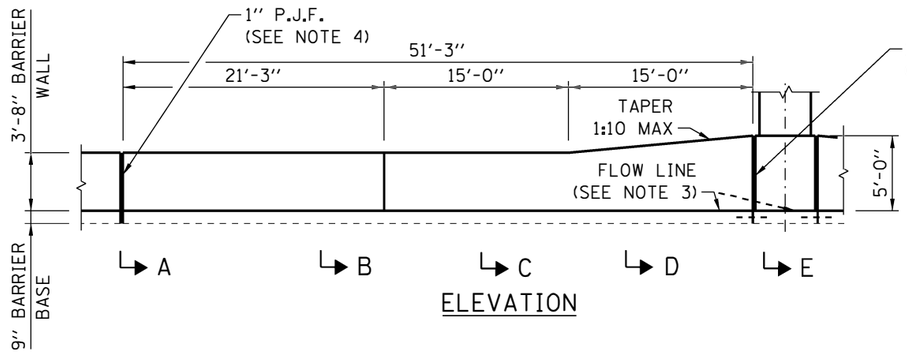
Illinois Tollway

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

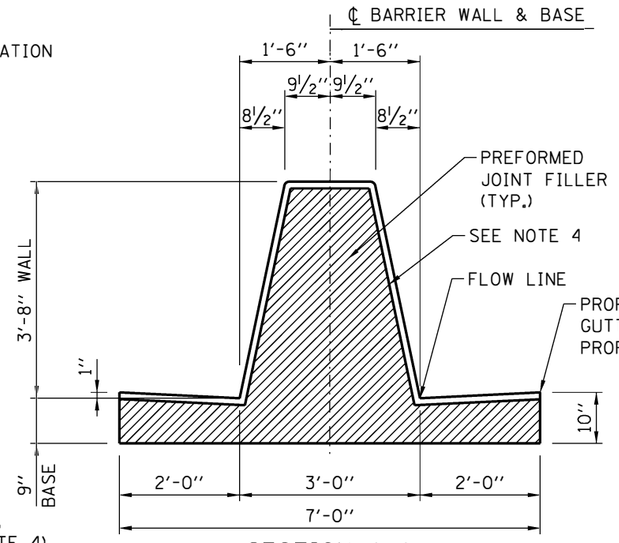
DATE
2-13-2020



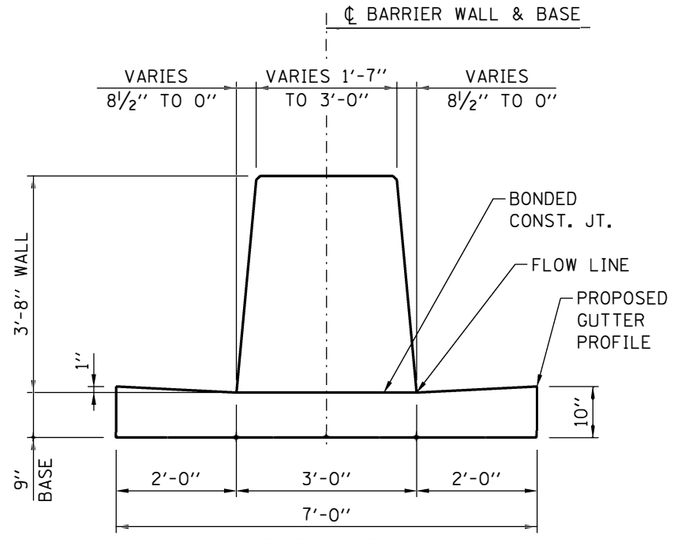
PLAN



ELEVATION



SECTION A-A



SECTION B-B

NOTE TO DESIGNER:

1. WITHIN SECTION B-B, THE GUTTER PORTION OF THE BARRIER BASE REMAINS 2'-0"; THEREFORE, 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.

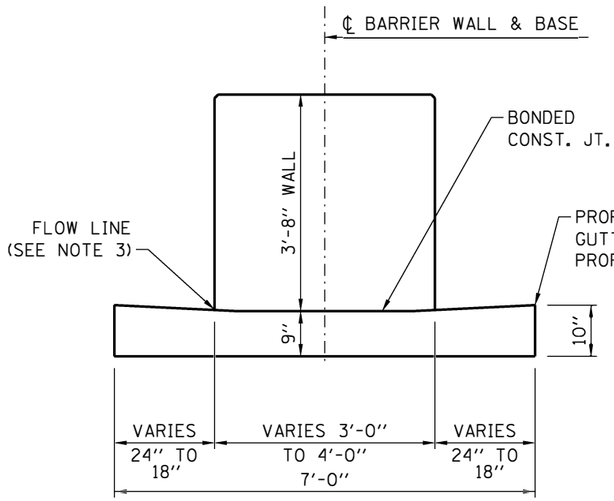
NOTE TO DESIGNER:

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 BASE DRAWING 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.

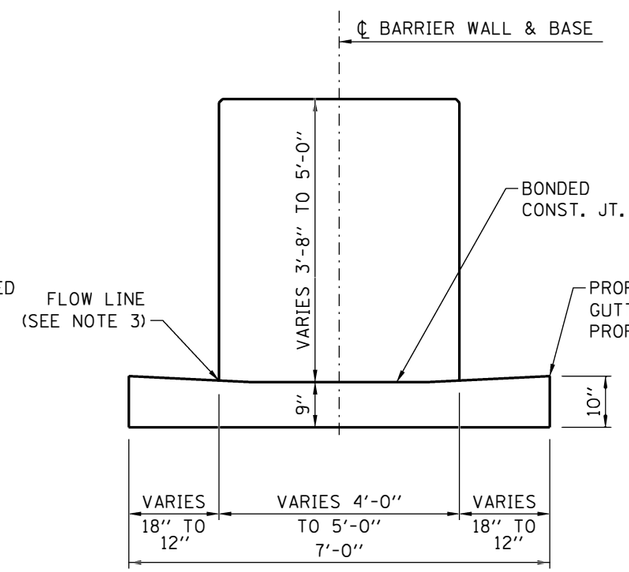
NOTES:

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 ELASTOMETRIC GUN GRADE POLYURETHANE SEALANT WITH BACKER ROD.

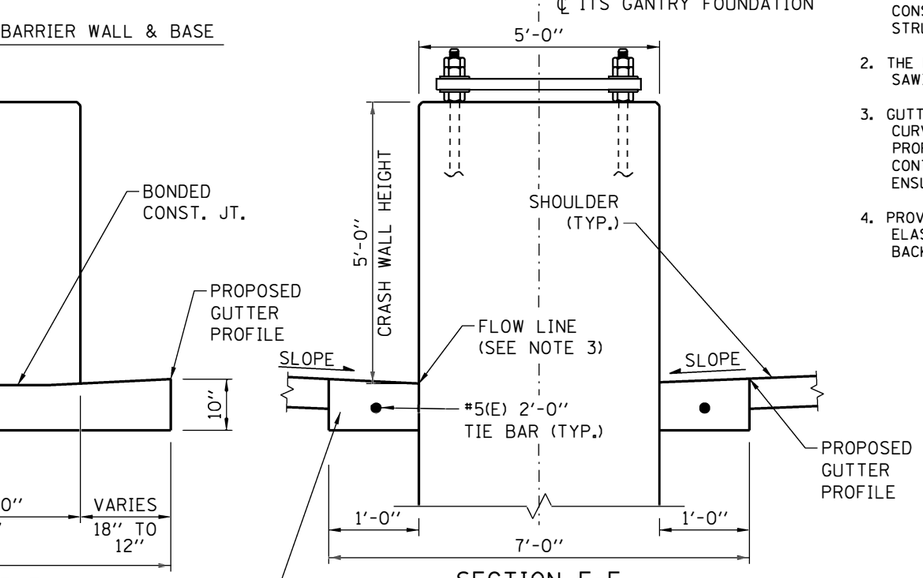
CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-DF AT ITS GANTRY



SECTION C-C



SECTION D-D



SECTION E-E

BASE DRAWING M-OHS-730
SHEET 9 OF 9

Illinois Tollway

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

DATE
2-13-2020