

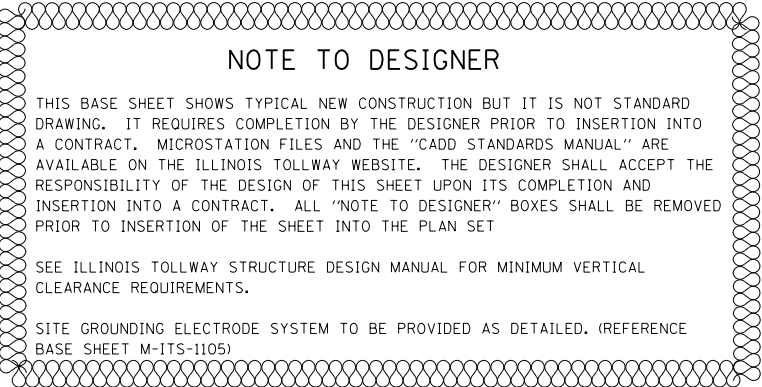
Illinois Tollway Base Sheet Revisions			
Section M	Base Sheet Drawings		
	Drawing	Modification Summary	Effective: 03-31-2016
	All	The electronic (pdf) version of the Standard Drawing are now made searchable (text).	
Erosion Sediment Control (ESC)-Series 200			
M-ESC-205	Sediment Basin Dewatering Device		
	Revised Note 7, removed proprietary name from skimmer device.		
Roadway (RDY)-Series 400			
M-RDY-408	Approach Slab, Mainline		
All	Changed Transverse Reinforcement size and spacing in the bottom mat of the bridge approach slab and transition approach shoulder slabs from #6@9" to #8@4" to be in conformance with IDOT ABD Memo 15.8.		
All	Changed Transverse Reinforcement size and spacing in the top mat of the bridge approach slab and transition approach shoulder slabs from #5@12" to #5@6" to be in conformance with IDOT ABD Memo 15.8.		
All	Changed Longitudinal Reinforcement size and spacing in the top mat of the bridge approach slab and transition approach shoulder slabs from #4@15" to #5@6" to be in conformance with IDOT ABD Memo 15.8.		
All	Added note *** to clarify that base sheet reinforcement is for approach slabs not located on retaining walls. If approach slab is placed on retaining wall, reinforcement shall be designed for TL-5 crash loading.		
All	Changed spacing and shape of both dxv vertical bars in the barrier on the bridge approach slab and transition approach shoulder slab to match the vertical bars in the bridge parapet and moment slab barrier.		
All	Changed top mat reinforcement cover to 2.25" to be consistent with deck and moment slab clearances.		
Sheets 1,2	Updated Note to Designer for Drainage Structures. Designer to determine size, type and location.		
Sheets 1,2	Changed approach slab shoulder width requirements to match Structures Design Manual.		
Sheet 3	Added option of using subgrade aggregate, special under the transition approach slab.		
Sheet 3	Added additional Approach Slab Barrier Elevation to distinguish between non-integral and integral/semi-integral abutments.		
Sheet 3	Eliminated Optional Longitudinal Joint Within a Traffic Lane detail.		
Sheet 4	Changed Neoprene Sheet to Elastomeric Sheet to keep call out generic and not specific.		
Sheet 5	Revised Bill of Material to clarify Pay Items and Pay Item Numbers to be included.		
Sheet 5	Added note to Typical Barrier Transition Detail to clarify where the 1'-9" dimension should be measured.		
M-RDY-409	Approach Slab, Ramp		
All	Changed Transverse Reinforcement size and spacing in the bottom mat of the bridge approach slab and transition approach shoulder slabs from #6@9" to #8@4" to be in conformance with IDOT ABD Memo 15.8.		
All	Changed Transverse Reinforcement size and spacing in the top mat of the bridge approach slab and transition approach shoulder slabs from #5@12" to #5@6" to be in conformance with IDOT ABD Memo 15.8.		
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Sheet 5	Revised Bill of Material to clarify Pay Items and Pay Item Numbers to be included.		
Sheet 5	Added note to Typical Barrier Transition Detail to clarify where the 1'-9" dimension should be measured.		
M-RDY-410	Reserved		
M-RDY-411	Emergency Turnaround Median Width ≥ 35 Ft		
Bridge (BRG)-Series 500			
M-BRG-506	Expansion Joint Repair		
	Base Sheet was removed since details did not match Special Provision.		
M-BRG-507	Crash Wall Modifications Median Piers		
	Note 4 - Changed Reinforcing bars to Reinforcement Bars.		
M-BRG-508	Crash Wall Modifications Shoulder Piers		
	Note 4 - Changed Reinforcing bars to Reinforcement Bars.		
M-BRG-525	Slopedwall Details		
Drainage (DRN)-Series 600			
M-DRN-601	Slope Drain		
	Revised storm sewer to "Class B, 12".		
M-DRN-602	Bioswale		

Tollway Base Sheet Revisions		
Section M	Base Sheet Drawings	
	Drawing	Modification Summary Effective: 03-31-2016
	Maintenance of Traffic (MOT)-Series 700	
	M-MOT-700	Temporary Concrete Barrier "Y" Connector Segment
		Revised Barrier Details Notes.
		Changed barrier edges chamfered from 1/2" to 1" on all edges (optional).
	Overhead Sign (OHS)-Series 720	
	M-OHS-720	Overhead Sign Structure Span Type Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
	M-OHS-721	Overhead Sign Structure Cantilever Type Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
	M-OHS-722	Overhead Sign Structure Entrance Monotube Type (Steel) Mainline Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
		Clarified Concrete Structures is for Single Face Barrier and included in Summary Table and Total Bill of Material.
	M-OHS-723	Overhead Sign Structure Exit Monotube Type (Steel) Mainline Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
		Clarified Concrete Structures is for Single Face Barrier and included in Summary Table and Total Bill of Material.
	M-OHS-724	Overhead Sign Structure Butterfly Type (Steel) Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
		Removed Truss Extension for Mounting Walkway detail and references
		Added "L" column and removed TGL and TGL1 from the Summary Table
	M-OHS-725	Overhead Sign Structure Entrance Monotube Type (Steel) AET Ramp Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
		Clarified Concrete Structures is for Single Face Barrier and included in Summary Table.
	M-OHS-726	Overhead Sign Structure Exit Monotube Type (Steel) AET Ramp Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
		Clarified Concrete Structures is for Single Face Barrier and included in Summary Table.
	M-OHS-727	Overhead Sign Structure Exit Monotube Type (Steel) Cash-IPO Ramp Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
		Clarified Concrete Structures is for Single Face Barrier and included in Summary Table.
	M-OHS-728	Overhead Sign Structure Span Type (Steel) Summary and Total Bill of Material
		Added Protective Coat (SQ YD) to Summary Table
		Clarified Class SI and Class DS Concrete are included in Foundation For Overhead Sign Structure.
	M-OHS-729	Overhead Sign Structure ITS Gantry Frame (Steel) Single Span Structure Details
	Sheet 1	Revised Material Specification Table to specify ASTM A500 Gr C & B for Frame & Mounting Beam HSS, respectively.
	Sheet 4	Removed Note 6, referring to ASTM requirements of HSS members.
	Sheet 5	Revised Note 1 to clarify requirements for Contractor when soil conditions are not met in the field.
	Sheet 5	Removed Protective Coat quantity since not required to be applied to shoulder foundation.
	Sheet 5	Updated anchor bolt note to allow ASTM F1554 bolts.
	Sheet 6	Revised Note 1 to clarify requirements for Contractor when soil conditions are not met in the field.
	Sheet 6	Removed Protective Coat quantity since not required to be applied to shoulder foundation.
	Sheet 7	Added note 5 to clarify limits of protective coat and revised protective coat quantity in Median Foundation Schedule.
	M-OHS-730	Overhead Sign Structure ITS Gantry Frame (Steel) Two-Span Structure Details
	Sheet 1	Revised Material Specification Table to specify ASTM A500 Gr C & B for Frame & Mounting Beam HSS, respectively.
	Sheet 4	Removed Note 6, referring to ASTM requirements of HSS members.
	Sheet 6	Revised Note 1 to clarify requirements for Contractor when soil conditions are not met in the field.
	Sheet 6	Removed Protective Coat quantity since not required to be applied to shoulder foundation.
	Sheet 6	Updated anchor bolt note to allow ASTM F1554 bolts.
	Sheet 7	Revised Note 1 to clarify requirements for Contractor when soil conditions are not met in the field.
	Sheet 7	Removed Protective Coat quantity since not required to be applied to shoulder foundation.
	Sheet 8	Added note 5 to clarify limits of protective coat and revised protective coat quantity in Median Foundation Schedule.
	Pole Assembly-Series 1000	
	M-ITS-1000	ELEVATION VIEWS POLE MOUNTED ITS ELEMENT ASSEMBLY
		Added 30A-2P NEMA 4X DISC MTD ON SUPPORT DETAIL.
	M-ITS-1001	GENERAL NOTES POLE MOUNTED ITS ELEMENT ASSEMBLY
		Added Note 16 regarding disconnect switch usage.
	M-ITS-1002	ITS STANDARD FOUNDATION: New Sheet
	Dynamic Message Sign (ITS) - Series 1100	
	M-ITS-1100	Revised conduit call-outs
	M-ITS-1103	Revised 30A-2P NEMA 4X DISC MTD ON SUPPORT DETAIL. Removed pad mounted transformer.
	M-ITS-1104	Revised 30A-2P NEMA 4X DISC MTD ON SUPPORT DETAIL. Revised Note 2 to eliminate 120/208V and pad mount.
	Cabinet Wiring-Series 1200	
	M-ITS-1200	Cabinet Wiring
	All	Added HOT3, NB, and GB to Duplex Receptacle.
	M-ITS-1255	Added HOT5 to Duplex Receptacle.
	M-ITS-1256	Deleted HOT5 from Video Distribution Panel.

Tollway Base Sheet Revisions

Section M	Base Sheet Drawings		
	Drawing	Modification Summary	Effective: 03-31-2016
	Weigh-In-Motion - Series 1600		
	M-WIM-1600	WEIGH-IN-MOTION CABINET AND FOUNDATION DETAILS	
	M-WIM-1601	WEIGH-IN-MOTION IP CAMERA DETAILS	
	M-WIM-1602	WEIGH-IN-MOTION LOOP DETECTOR DETAILS	
	M-WIM-1603	WEIGH-IN-MOTION DETECTOR LOOP AND QUARTZ SENSOR DETAIL	
	M-WIM-1604	INSTALLATION DETAIL DETECTOR HOUSING & DETECTOR HOUSING ADAPTER	
	M-WIM-1605	WEIGH-IN-MOTION DETECTOR HOUSING DETAIL	
	Flashing Sign Beacon - Series 1700		
	M-ITS-1700	FLASHING SIGN BEACON INSTALLATION BREAKAWAY ELECTRICAL DETAIL	
	M-ITS-1701	FLASHING SIGN BEACON INSTALLATION WIRING DIAGRAM	
	Conduit Details at Integral Abutment-Series 1900		
	M-ITS-1900	CONDUIT DETAILS AT INTEGRAL ABUTMENT BRIDGE STANDARD SLOPE WALL	
	Business Systems (BUS)- Series 2500		
	M-BUS-2500	CABLE CONDUIT SCHEDULE AND GENERAL NOTES	
	M-BUS-2501	LEGEND SYMBOL LIST, ABBREVIATIONS AND EQUIPMENT SCHEDULES	
	M-BUS-2502	SINGLE LINE DIAGRAM AND UTILITY POWER CABLE/CONDUIT SCHEDULE	
	M-BUS-2503	CONTROL BUILDING LIGHTING PLAN AND MISCELLANEOUS DETAILS - MAIN PLAZA	
	M-BUS-2504	CONTROL BUILDING LIGHTING PLAN AND MISCELLANEOUS DETAILS - REMOTE PLAZA	
	M-BUS-2505	CONTROL BUILDING GROUNDING DETAILS - MAIN PLAZA	
	M-BUS-2506	CONTROL BUILDING GROUNDING DETAILS - REMOTE PLAZA	
	M-BUS-2507	GROUNDING SCHEMATIC	
	M-BUS-2508	CONTROL BUILDING MISCELLANEOUS DETAILS	
	M-BUS-2509	UPS SINGLE LINE AND WIRING DIAGRAM	
	M-BUS-2510	MISCELLANEOUS SCHEMATIC DIAGRAMS	
	M-BUS-2511	VIDEO POWER JUNCTION BOX DETAIL - MAIN PLAZA	
	M-BUS-2512	VIDEO POWER JUNCTION BOX DETAIL - REMOTE PLAZA	
	M-BUS-2513	VIDEO WATCHDOG CAMERA DETAILS	
	M-BUS-2514	RAMP PLAZA MONOTUBE DETAILS ACM AND IPO LANES	
	M-BUS-2515	LOOP JUNCTION BOX DETAIL	
	M-BUS-2516	CONTROL BUILDING LIGHTING AND RECEPTACLE PLAN - MAIN PLAZA	
	M-BUS-2517	CONTROL BUILDING LIGHTING AND RECEPTACLE PLAN -REMOTE PLAZA	
	M-BUS-2518	MISCELLANEOUS CROSS SECTION DETAILS	
	M-BUS-2519	COMED TRANSFORMER PAD DETAIL	
	M-BUS-2520	ELECTRICAL SITE PLAN - ACM AND IPO LANES	
	M-BUS-2521	UNDERGROUND ELECTRICAL PLAN - ACM AND IPO LANES - MAIN PLAZA	
	M-BUS-2522	PLAZA I-PASS PLANS - ACM AND IPO LANES	
	M-BUS-2523	UNDERGROUND ELECTRICAL PLAN - ACM AND IPO LANES - REMOTE PLAZA	
	M-BUS-2524	AUTOMATIC LANE ISLAND PLAN AND DETAILS 12 FOOT WIDE LANE	
	M-BUS-2525	IPASS ONLY (IPO) LANE ISLAND PLAN AND DETAILS 12 FOOT WIDE LANE	
	M-BUS-2526	TOLL EQUIPMENT WIRING DIAGRAM - ACM AND IPO LANES	
	M-BUS-2527	LOOP AND TREADLE INSTALLATION DETAILS - ACM AND IPO LANES	
	M-BUS-2528	CONTROL BUILDING TSIC - ACM AND IPO LANES - MAIN PLAZA	
	M-BUS-2529	CONTROL BUILDING TSIC - ACM AND IPO LANES - REMOTE PLAZA	
	M-BUS-2530	TSIC TERMINAL BLOCK LAYOUT - ACM AND IPO LANES	
	M-BUS-2531	CONTROL BUILDING EQUIPMENT LAYOUT - ACM AND IPO LANES - MAIN PLAZA	
	M-BUS-2532	CONTROL BUILDING EQUIPMENT LAYOUT - ACM AND IPO LANES - REMOTE PLAZA	
	M-BUS-2533	CONTROL BUILDING R3 RACK - MAIN PLAZA	
	M-BUS-2534	CONTROL BUILDING R3 RACK - REMOTE PLAZA	
	M-BUS-2535	MISCELLANEOUS DETAILS -ACM AND IPO LANES	
	M-BUS-2536	PANELBOARD SCHEDULES FOR TP1 AND TP2 - ACM AND IPO LANES	
	M-BUS-2537	PANELBOARD SCHEDULES FOR MDP AND UPS UNITS - ACM AND IPO LANES	
	M-BUS-2538	FIBER INTERCONNECTIONS BETWEEN MAIN AND REMOTE PLAZAS - ACM AND IPO LANES	
	M-BUS-2539	PLAZA LANE CONTROL SIGNAL - ACM AND IPO LANES	
	M-BUS-2540	TRAFFIC LIGHT DETAILS - ACM LANES	
	M-BUS-2541	TRAFFIC LIGHT DETAILS - IPO LANES	
	M-BUS-2542	ELECTRICAL SITE PLAN AET LANES	
	M-BUS-2543	UNDERGROUND CONDUIT PLAN - MAIN PLAZA	
	M-BUS-2544	UNDERGROUND CONDUIT PLAN - MAIN PLAZA PLAN - REMOTE PLAZA	
	M-BUS-2545	CONTROL BUILDING EQUIPMENT LAYOUT - REMOTE PLAZA	
	M-BUS-2546	CONTROL BUILDING EQUIPMENT LAYOUT - MAIN PLAZA	
	M-BUS-2547	CONTROL BUILDING TSIC - MAIN AND REMOTE PLAZAS - AET LANES	
	M-BUS-2548	TSIC TERMINAL BLOCK LAYOUT - ACM AND IPO LANES REMOTE PLAZAS - AET LANES	
	M-BUS-2549	PANELBOARD SCHEDULES - MAIN PLAZA AET LANES	
	M-BUS-2550	PANELBOARD SCHEDULES - REMOTE PLAZA AET LANES	
	M-BUS-2551	WIRING DIAGRAM - AET 1-LANE LAYOUT	
	M-BUS-2552	WIRING DIAGRAM - AET 3-LANE LAYOUT	
	M-BUS-2553	LOOP PLAN - AET 1-LANE LAYOUT	
	M-BUS-2554	LOOP PLAN - AET 3-LANE LAYOUT	
	M-BUS-2555	VES WASH SYSTEM ENCLOSURE DETAIL	
	M-BUS-2556	VES WASH SYSTEM PANEL DETAIL	
	M-BUS-2557	VES WASH SYSTEM FLOW DIAGRAM AND MECHANICAL DETAIL	
	M-BUS-2558	VES WASH SYSTEM SUGGESTED CONDUIT ROUTING	
	M-BUS-2559	VES WASH SYSTEM MISCELLANEOUS POWER WIRING DIAGRAM	
	M-BUS-2560	VES WASH SYSTEM CONTROL SWITCH SCHEMATIC	

New Sheet



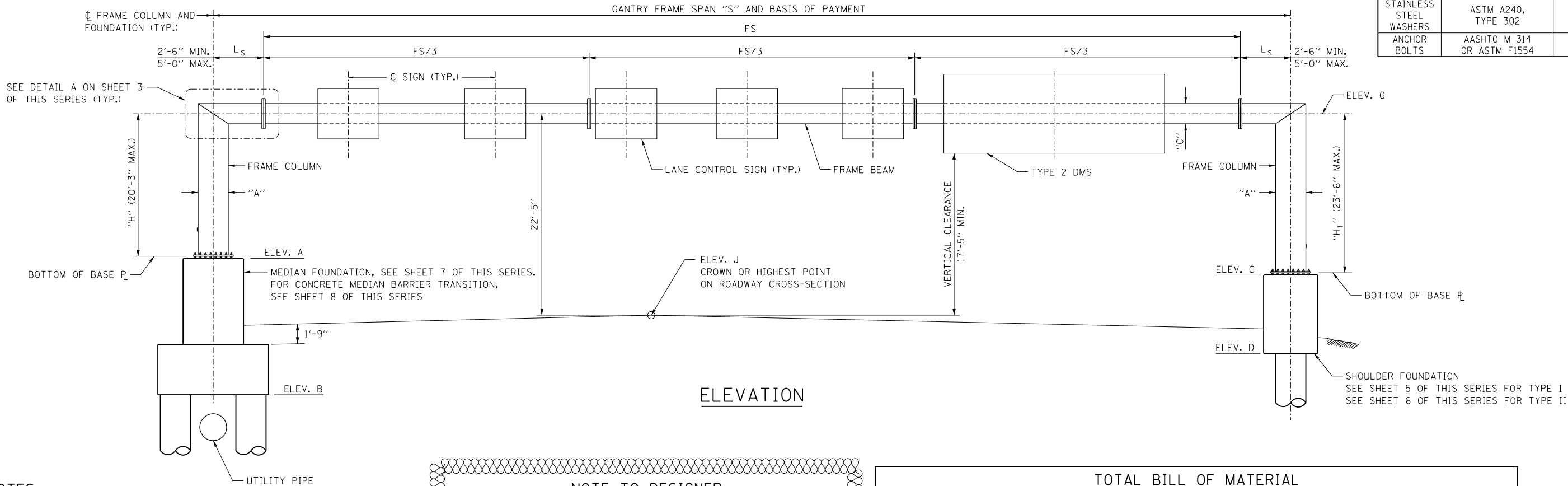
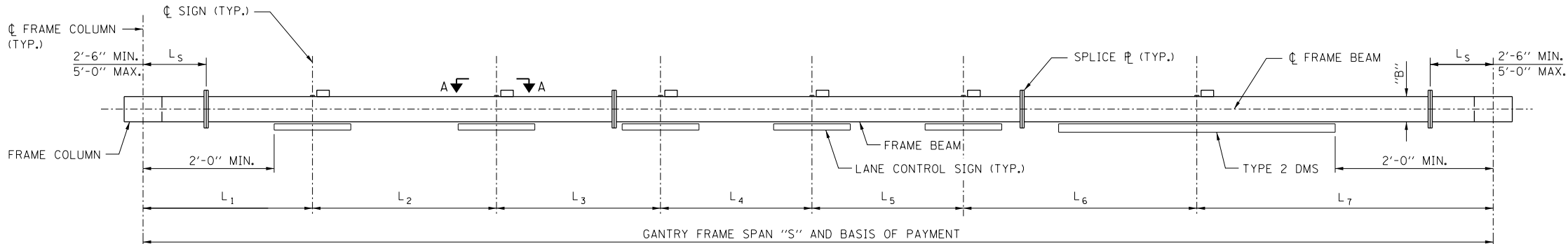
TOTAL BILL OF MATERIAL			
PAY ITEM	DESCRIPTION	UNIT	TOTAL
	OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE (STEEL)	FOOT	
	OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE (STEEL)	FOOT	
	OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE (STEEL)	FOOT	
	FOUNDATION FOR OVERHEAD SIGN STRUCTURE, BUTTERFLY TYPE	CU YD	
	REINFORCEMENT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

NOTE:
WORK THIS SHEET WITH STANDARD F14

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MATERIAL SPECIFICATIONS FOR
STRUCTURAL STEEL AND FASTENERS

ELEMENT OF STRUCTURE	SPECIFICATION	F _y (KSI)	F _u (KSI)
STRUCTURAL STEEL TUBE FRAME (HSS)	ASTM A500 GRADE C	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:

- SEE SHEET 2 OF THIS SERIES FOR VIEW A-A AND DESIGN SUMMARY TABLE.
- CAMBER IS PROVIDED AT MIDSPAN OF STRUCTURE.
- PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L₁ THROUGH L₇)
- FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 2 COLUMNS AND 3 FIELD SECTIONS.
- PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO 1/4" 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 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

PROVIDE APPROPRIATE PROTECTION FOR SHOULDER FOUNDATION.

USE SHOULDER FOUNDATION TYPE I WHEN FOUNDATION IS PLACED ADJACENT TO RDWY. SHOULDER. USE SHOULDER FOUNDATION TYPE II 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
JST34G10	FOUNDATION FOR ITS GANTRY FRAME	CU YD	
JT740110	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	
JT740130	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	
JT740150	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	
42001300	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	3/2"	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	5 1/2"	2'-6"	2'-6"	2'-6"

BASE DRAWING M-OHS-729
SHEET 1 OF 8



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

DATE
3-31-2016

ALL EXPOSED CONCRETE EDGES SHALL HAVE A $\frac{3}{4}" \times 45^\circ$ CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

- REINFORCEMENT BARS, INCLUDING REINFORCEMENT BARS, EPOXY-COATED SHALL CONFORM TO THE REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 508 AND ARTICLE 1006.10.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
- 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.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2015.

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



1. CONDUITS SHALL BE LOCATED IN THE NORTHERN MOST GANTRY FOUNDATION, EXCEPT FOR THE HALF GANTRIES JUST WEST OF IL-31 AND JUST EAST OF DEVON TOLL PLAZA 17. AT THESE TWO LOCATIONS THE CONDUITS SHALL BE IN THE SOUTHERN MOST GANTRY FOUNDATION.
2. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
3. 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.
4. 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.
5. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
6. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.



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

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.

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.

- ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ISSUED MARCH, 2015, WITH LATEST DESIGN BULLETINS.
- AASHTO STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, SIXTH EDITION.
- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION WITH CURRENT INTERIMS.
- ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL, JANUARY 2012.
- ILLINOIS TOLLWAY GEOTECHNICAL ENGINEER MANUAL DATED MARCH 2014.



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

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				

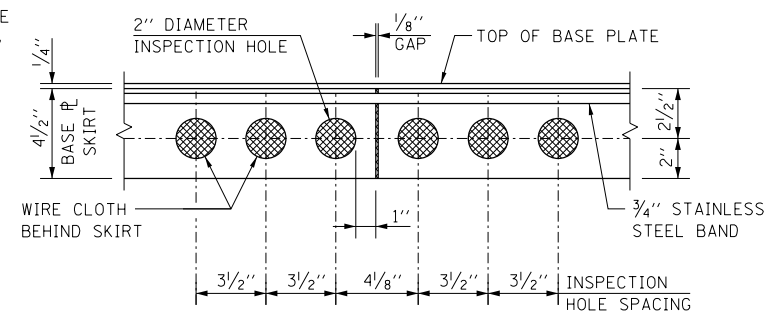
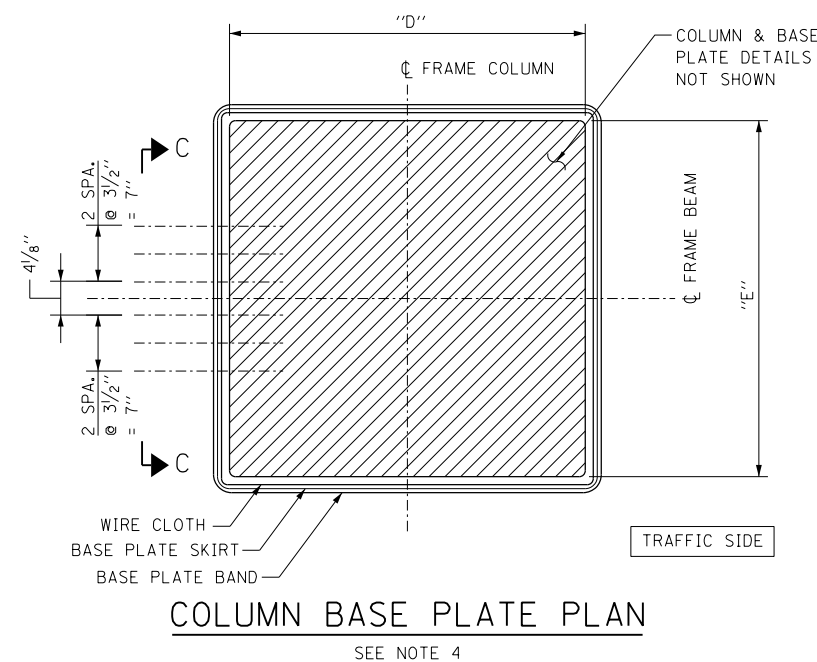
[illegible]

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"	1 $\frac{3}{4}$ "	18
110'<"S"<=130'	3'-5"	3'-6"	5	7"	6	6"	1 $\frac{3}{4}$ "	22
130'<"S"<=150'	3'-7 $\frac{1}{2}$ "	3'-6"	5	7 $\frac{1}{2}$ "	6	6"	1 $\frac{3}{4}$ "	22



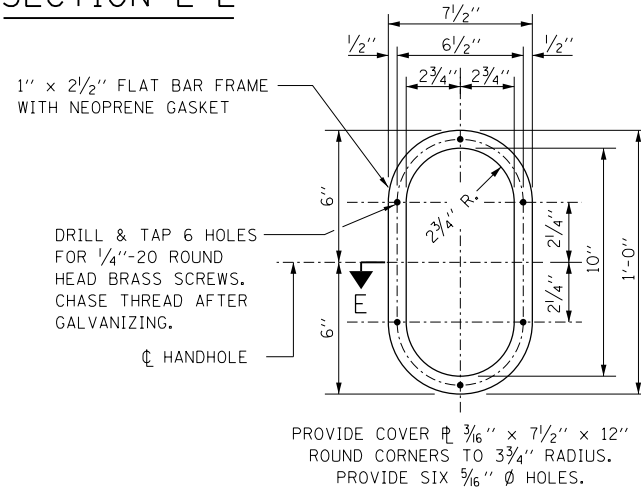
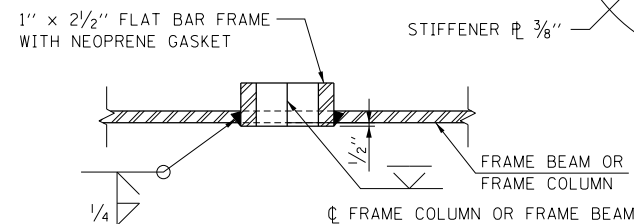
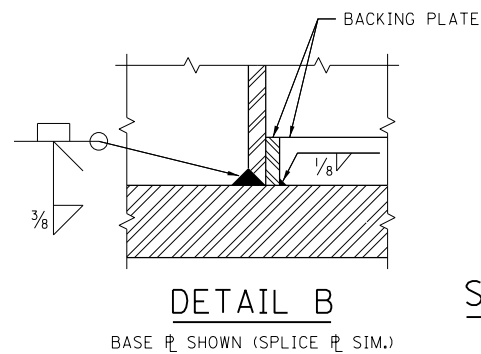
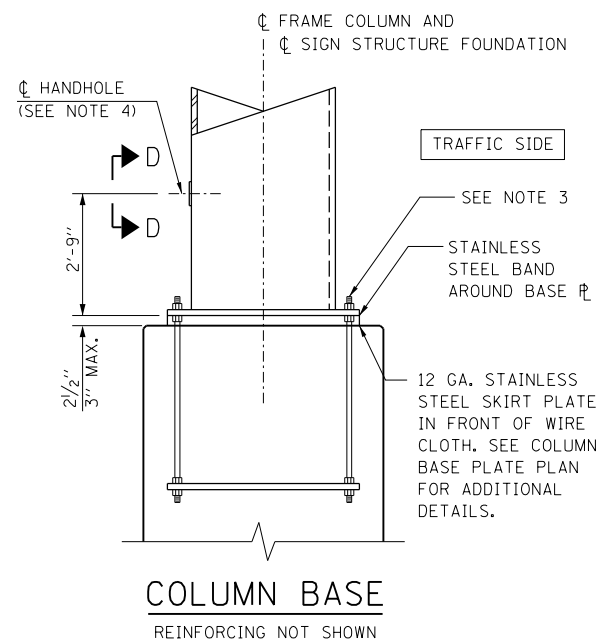
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN
STRUCTURE DETAILS

DATE
3-31-2016

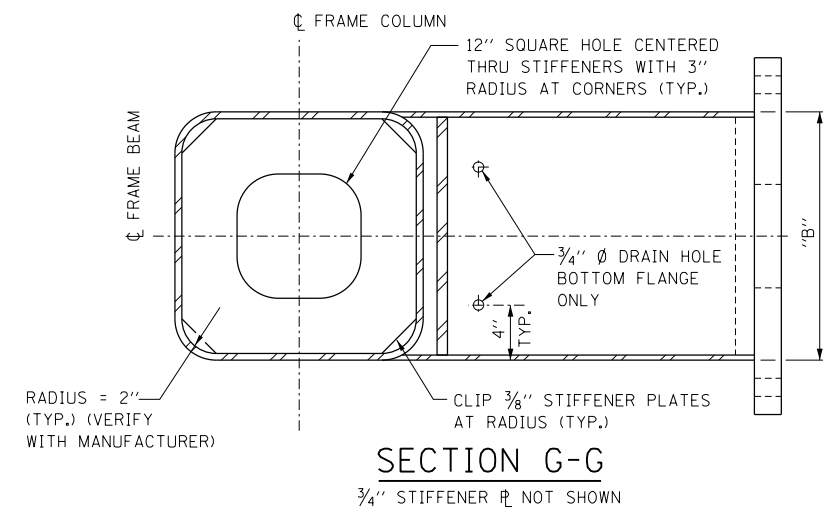
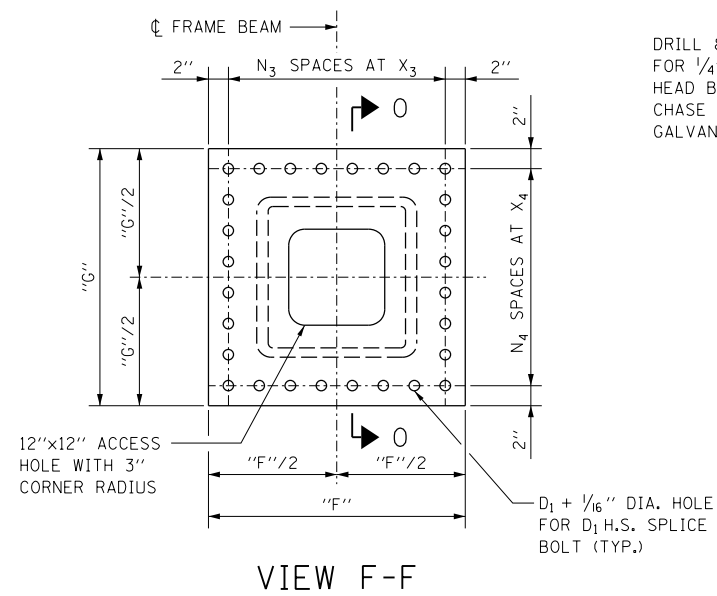
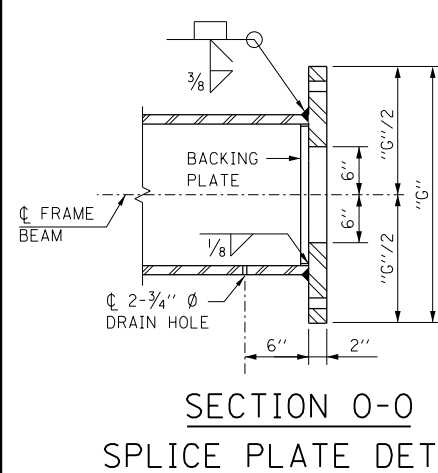
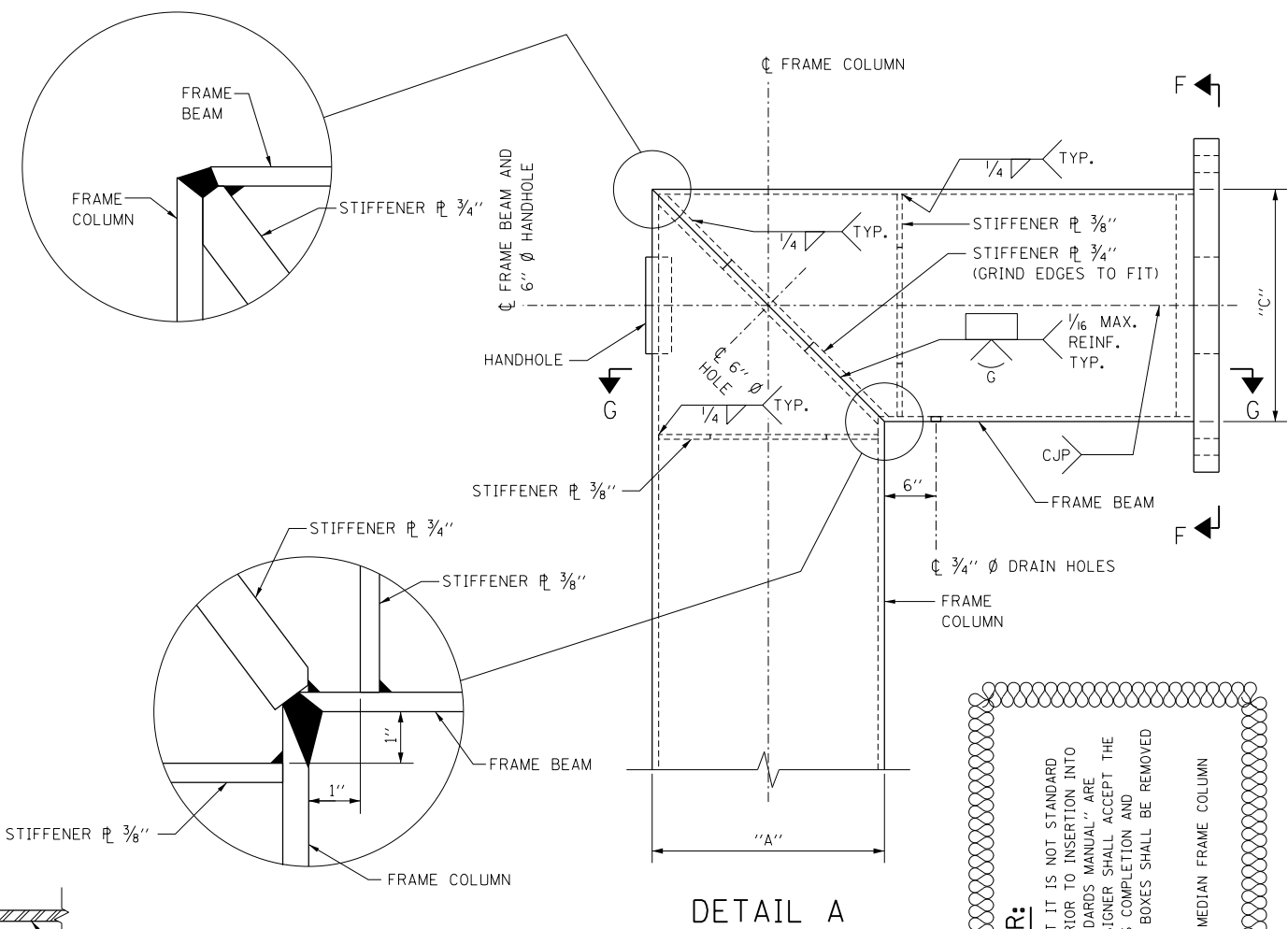


NOTE:

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. AFTER ADJUSTMENTS TO LEVEL FRAME BEAM AND ENSURE ADEQUATE VERTICAL CLEARANCE, TIGHTEN ALL TOP AND LEVELING NUTS AGAINST THE BASE PLATE WITH A MINIMUM TORQUE OF 200 LB.-FT. THEN PLACE STAINLESS STEEL MESH AROUND THE PERIMETER OF THE BASE PLATE. SECURE TO BASE PLATE WITH STAINLESS STEEL BANDING.
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.



VIEW D-D
HANDHOLE DETAIL



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

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

BASE DRAWING M-OHS-729
SHEET 3 OF 8

SHEET 3 OF 8

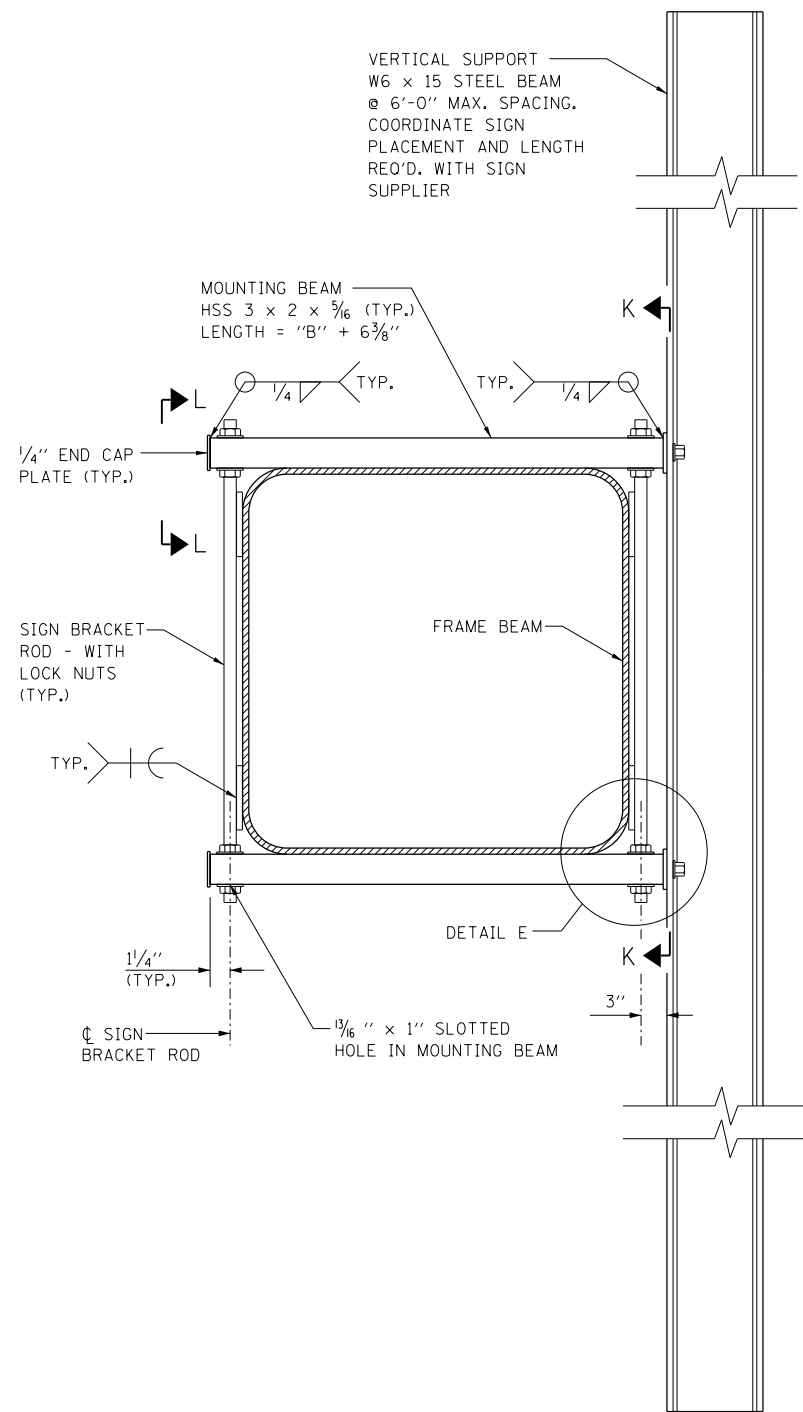


OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN
STRUCTURE DETAILS

DATE
3-31-2016

SPLICE PLATE TABLE

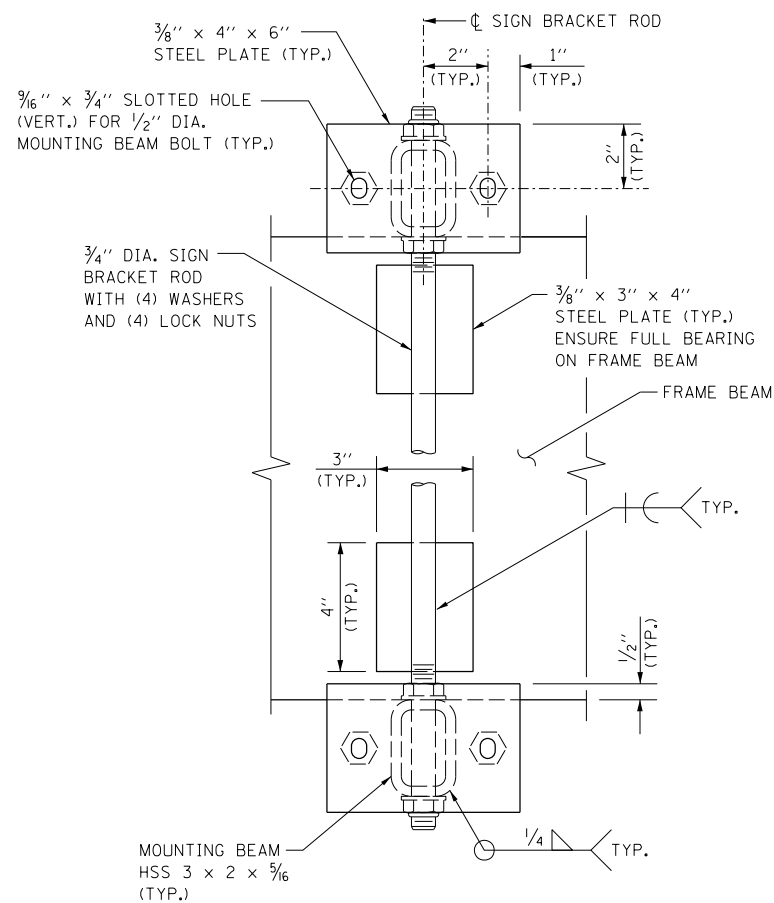
SPAN "S"	"F"	"G"	N ₃	X ₃	N ₄	X ₄	SPLICE BOLT DIAMETER (D ₁)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8½"	6	5½"	6	4¾"	1"	24
110'<"S"<=130'	3'-0½"	2'-10"	5	6½"	5	6"	1¼"	20
130'<"S"<=150'	3'-4"	3'-4"	6	6"	6	6"	1¼"	24



CONNECTION SIDE VIEW

NOTE TO DESIGNER:

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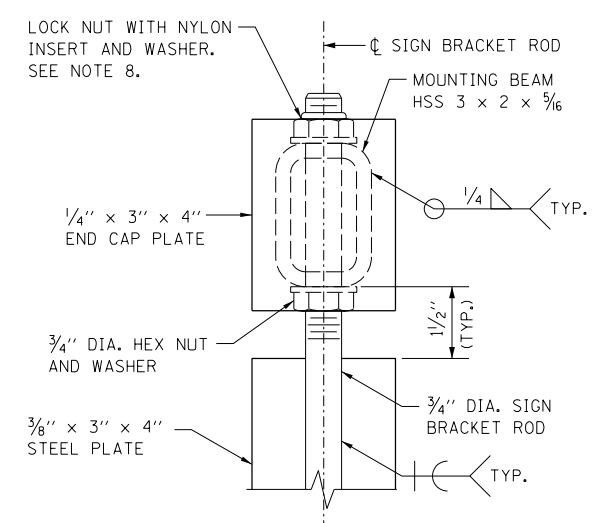
SECTION K-K

VERTICAL SUPPORT TABLE

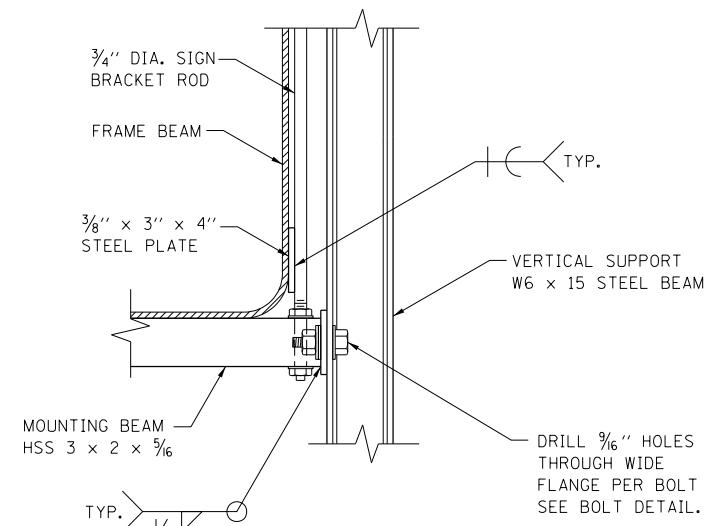
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

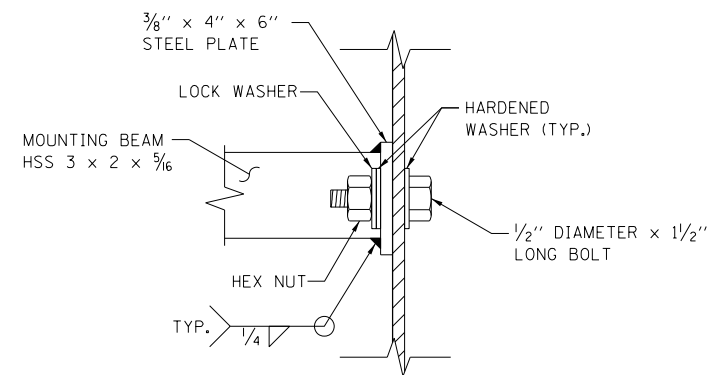
1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED 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

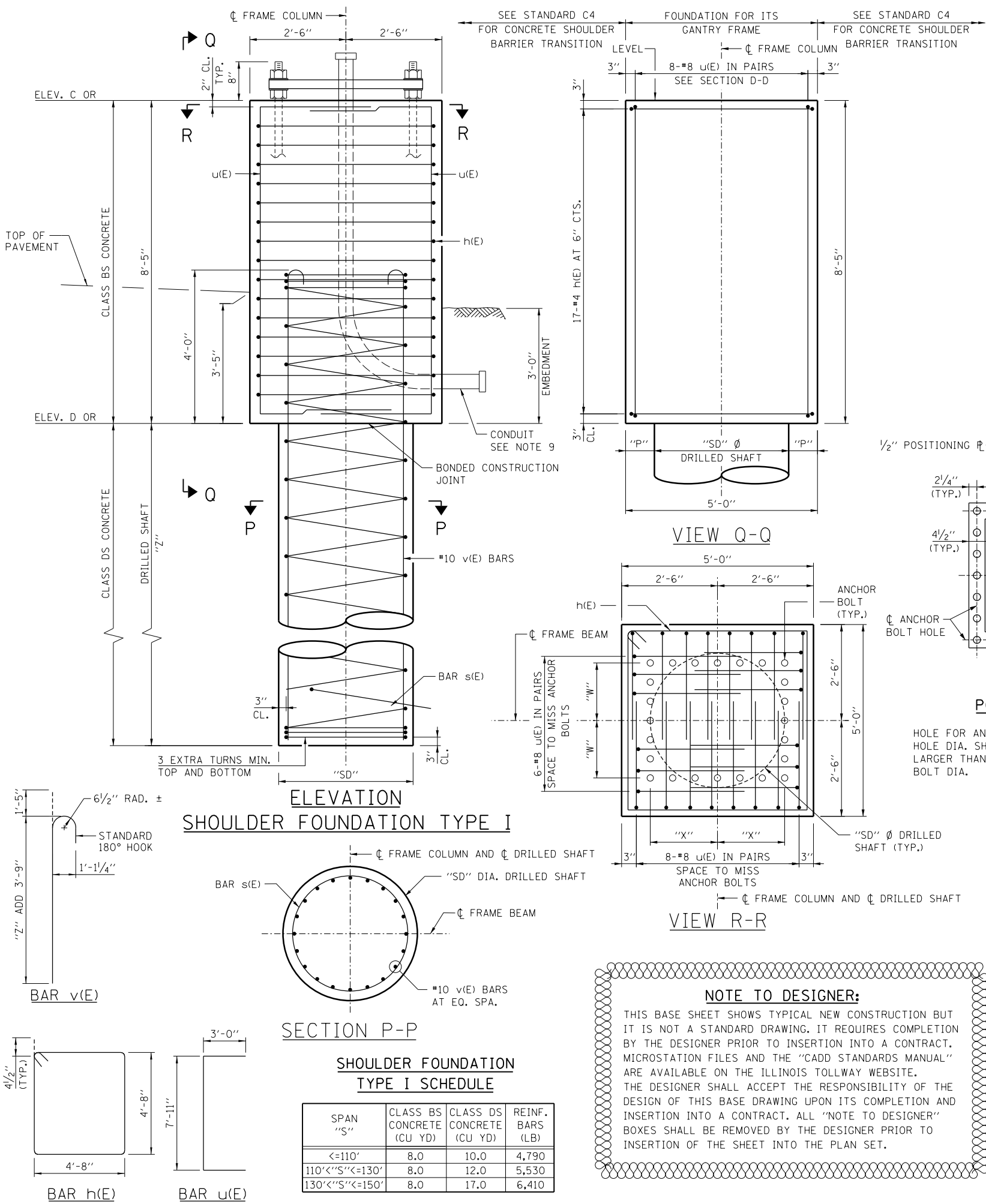
SIGN BRACKET ROD NOT SHOWN FOR CLARITY

BASE DRAWING M-OHS-729
SHEET 4 OF 8



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

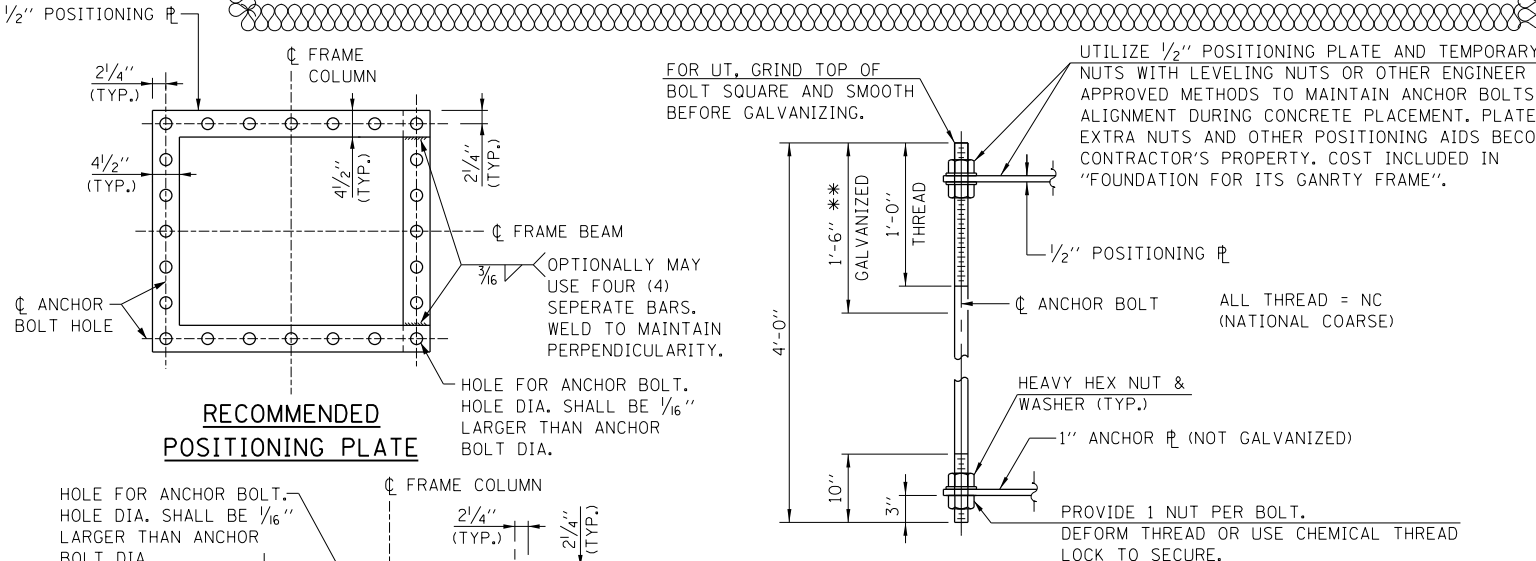
DATE
3-31-2016



- 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 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.



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

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

SHOULDER FOUNDATION TYPE I TABLE

SPAN "S"	"W"	"X"	"Z"	"SD"	"P"	BAR s(E) PITCH	NO. ANCHOR BOLT
<=110'	1'-5 1/2"	1'-4"	28'-0"	3'-6"	9"	6"	18
110'<"S"<=130'	1'-8"	1'-5 1/2"	32'-0"	3'-6"	9"	6"	22
130'<"S"<=150'	1'-8"	1'-6 3/4"	35'-0"	4'-0"	6"	6"	22

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"	

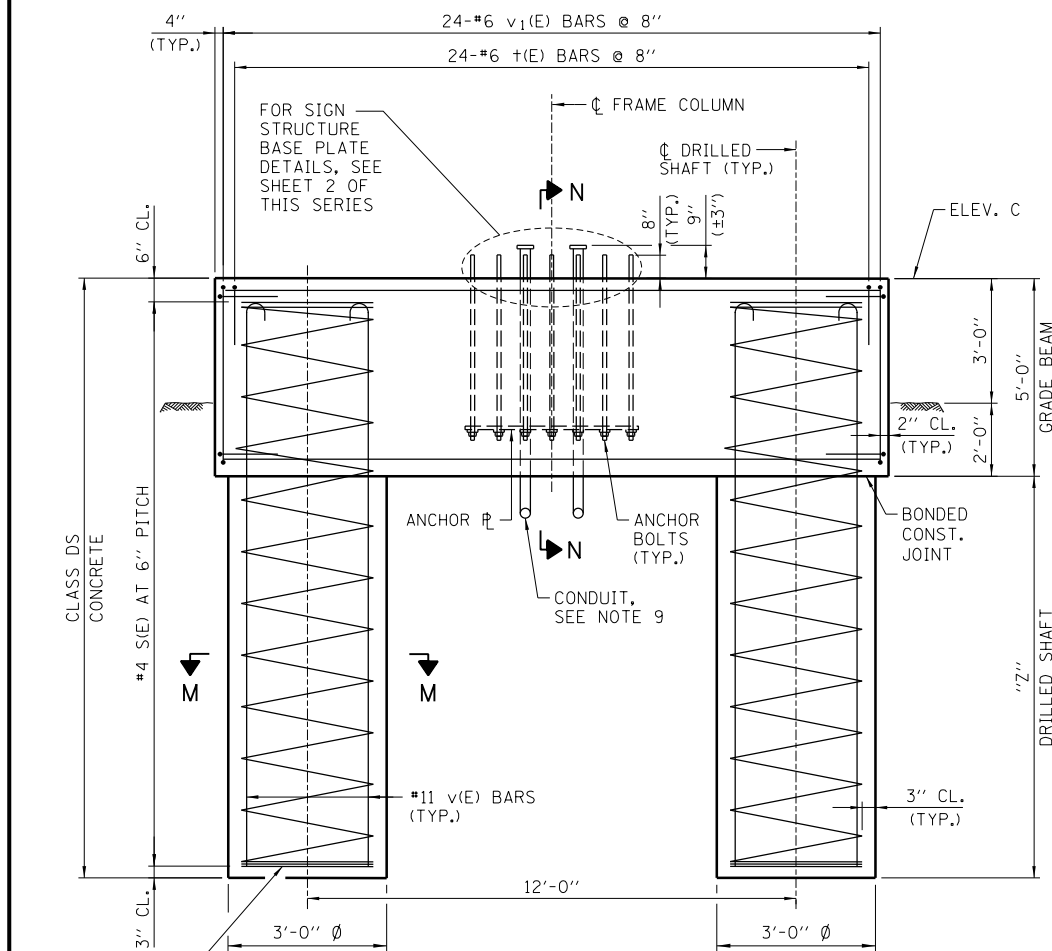
* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.

BASE DRAWING M-OHS-729
SHEET 5 OF 8



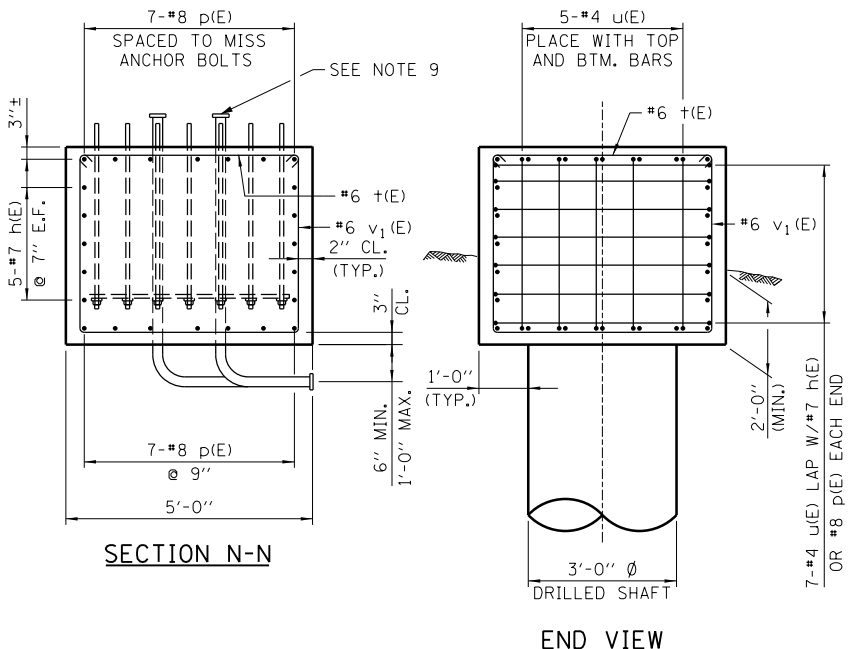
OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN
STRUCTURE DETAILS

DATE
3-31-2016



ELEVATION
SHOULDER FOUNDATION TYPE II

3 EXTRA TURNS
MINIMUM TOP AND
BOTTOM (TYP.)



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:

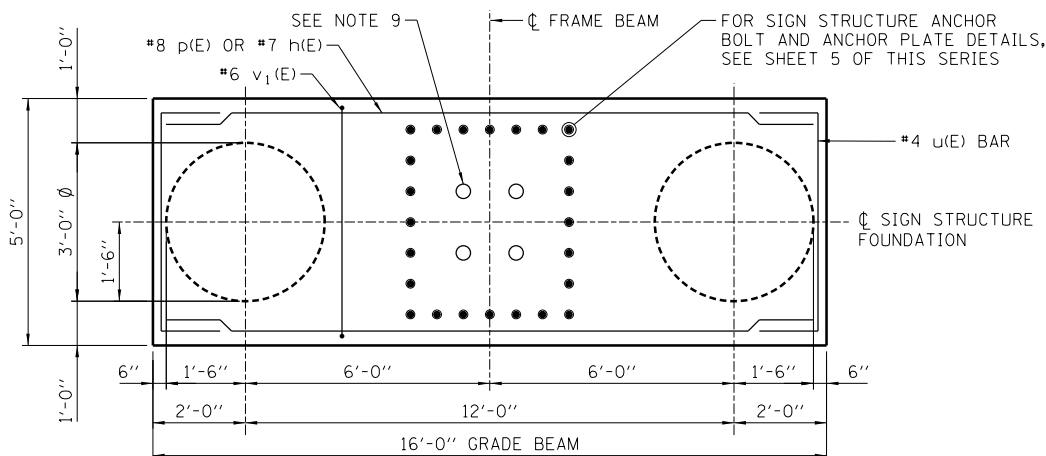
DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY. REMOVE THIS "NOTE TO DESIGNER" PRIOR TO INSERTION INTO THE PLAN SET.

NOTE TO DESIGNER:

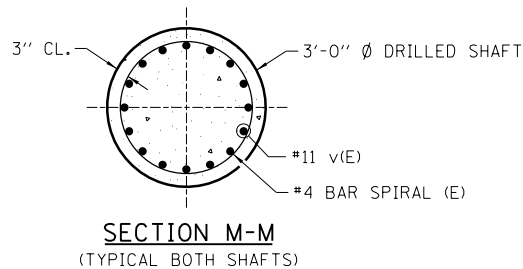
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SHOULDER FOUNDATION TYPE II SCHEDULE

SPAN "S"	"Z"	"W"	"X"	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)
<=110'	38'-0"	1'-5 1/2"	1'-4"	35.0	10,190
110'<"S"<=130'	42'-0"	1'-8"	1'-5 1/2"	37.0	10,950
130'<"S"<=150'	46'-0"	1'-8"	1'-6 3/4"	39.0	11,720

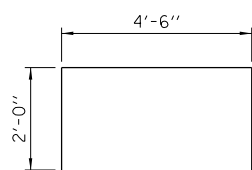


PLAN
SHOULDER FOUNDATION TYPE II

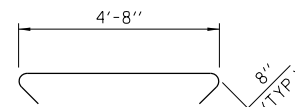


SECTION M-M

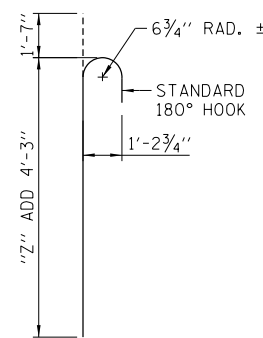
(TYPICAL BOTH SHAFTS)



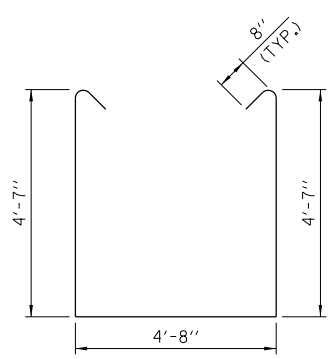
BAR U(E)



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"	
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"	
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"	

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

BASE DRAWING M-OHS-729

SHEET 6 OF 8



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

DATE

3-31-2016



MAX. SPAN "S ₁ " OR "S ₂ "	BAR	NO.	SIZE	LENGTH	SHAPE
"S" \leq 110'	h ₁ (E)	6	#6	12'-8"	—
	p(E)	12	#8	12'-8"	—
	t(E)	23	#7	6'-2"	↪
	s(E)	2	#4	33'-3"	MMMM
	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"	—
	t(E)	27	#7	6'-2"	↪
	s(E)	2	#4	31'-3"	MMMM
	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"	—
	t(E)	31	#7	6'-2"	↪
	s(E)	2	#4	31'-3"	MMMM
	v(E)	40	#10	32'-8"	↪
	v ₁ (E)	31	#7	13'-4"	↪

CL DRILLED SHAFT





"SD" Ø DRILLED SHAFT

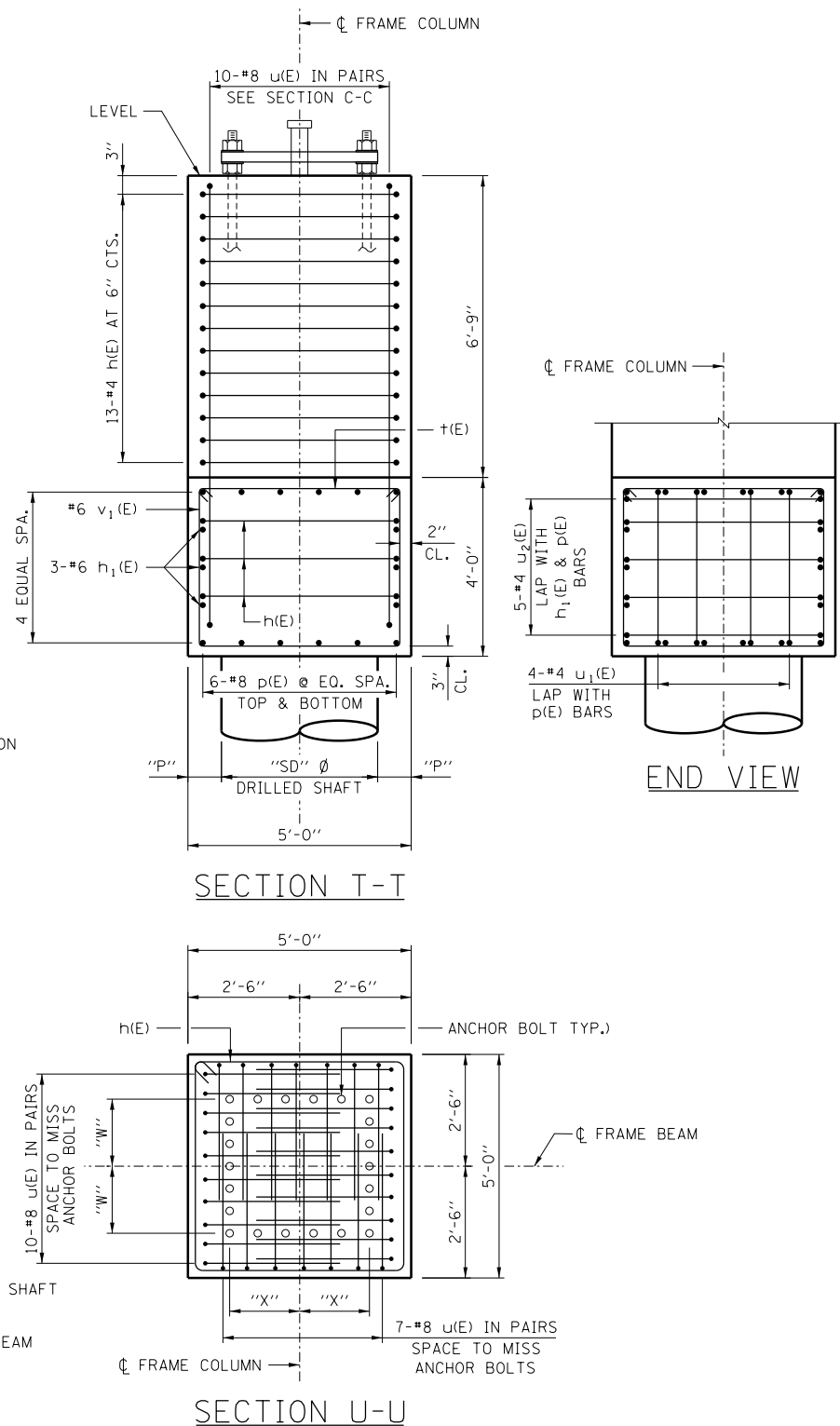
CL FRAME BEAM

#4 s(E) AT 6" PITCH

#10 v(E) BARS AT EQ. SPA.

SECTION S-S

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-1"	
u(E)	34	#8	16'-2"	
u ₁ (E)	8	#4	4'-11"	
u ₂ (E)	10	#4	5'-10"	

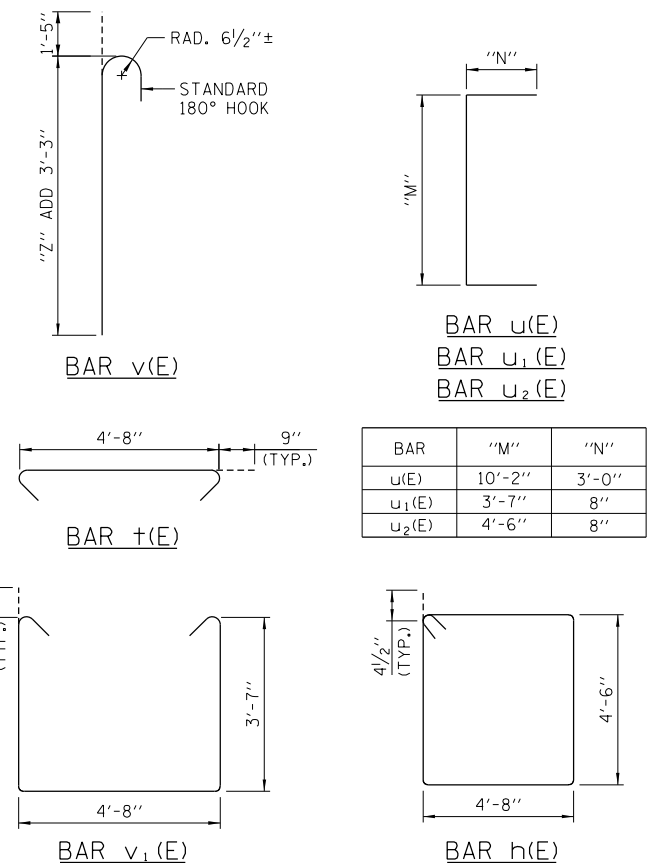


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1. SEE SHEET 5 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
2. PROVIDE NORMAL SURFACE FINISH, FOLLOWED BY PROTECTIVE COAT APPLICATION ON ALL CONCRETE SURFACES ABOVE TOP OF GRADE BEAM. COST INCLUDED 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.

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.

SPAN "S"	"Z"	"SD"	"P"	"W"	"X"	"Y"	NO. ANCHOR BOLT
<=110'	30'-0"	3'-0"	1'-0"	1'-5 $\frac{1}{2}$ "	1'-4"	6"	18
110'<"S"<=130'	28'-0"	3'-6"	9"	1'-8"	1'-5 $\frac{1}{2}$ "	6"	22
130'<"S"<=150'	28'-0"	3'-6"	9"	1'-8"	1'-6 $\frac{3}{4}$ "	5"	22



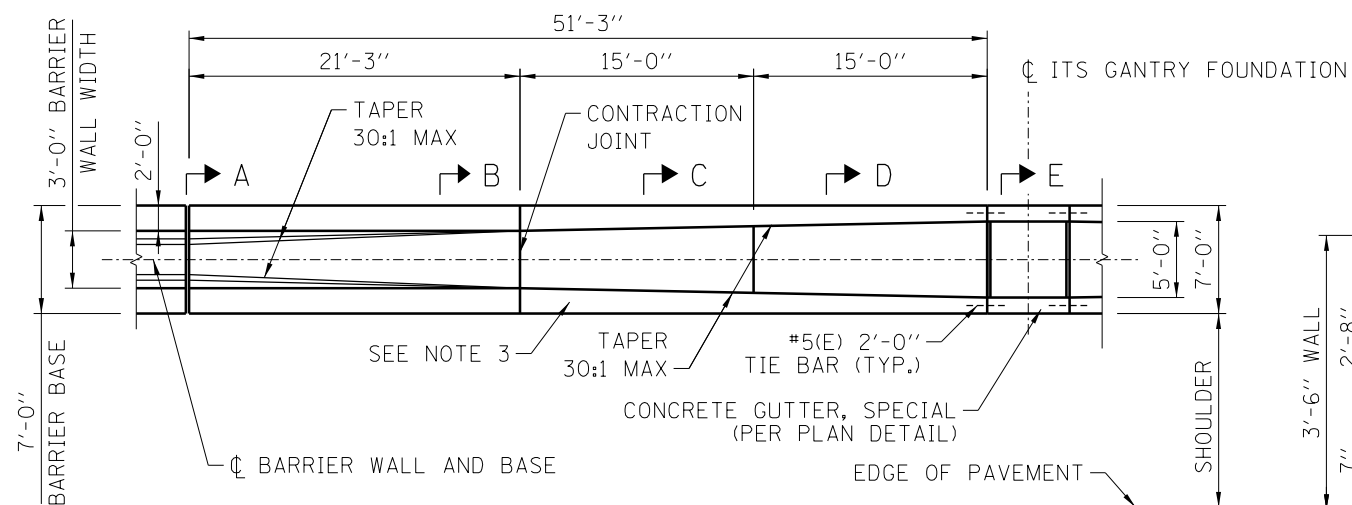
SPAN "S"	CLASS BS CONCRETE (CU YD)	CLASS DS CONCRETE (CU YD)	REINF. BARS (LB)	PROTECTIVE COAT (SQ YD)
<=110'	7.0	26.0	8,690	9
110'<"S"<=130'	7.0	32.0	8,760	9
130'<"S"<=150'	7.0	32.0	10,050	9

BASE DRAWING M-OHS-729
SHEET 7 OF 8

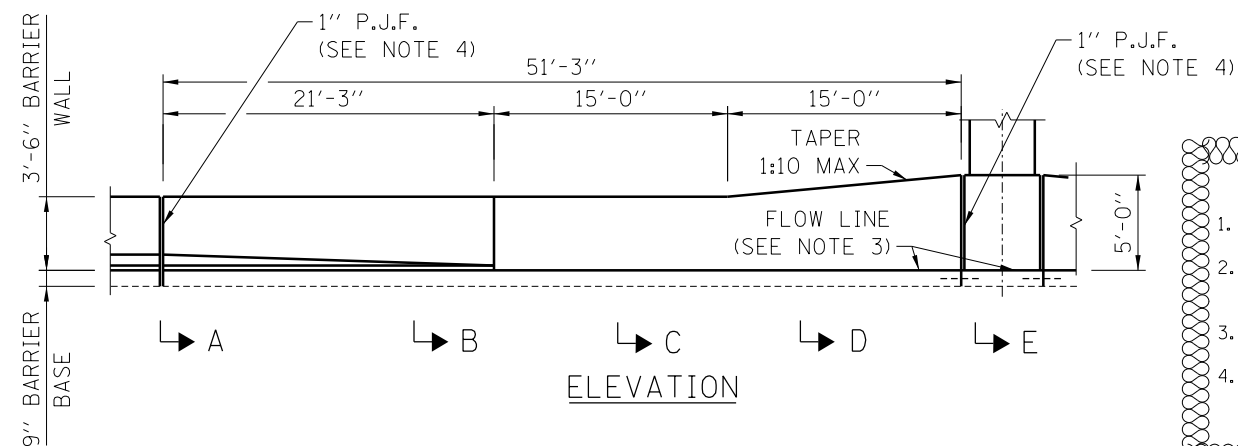


OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
SINGLE SPAN
STRUCTURE DETAILS

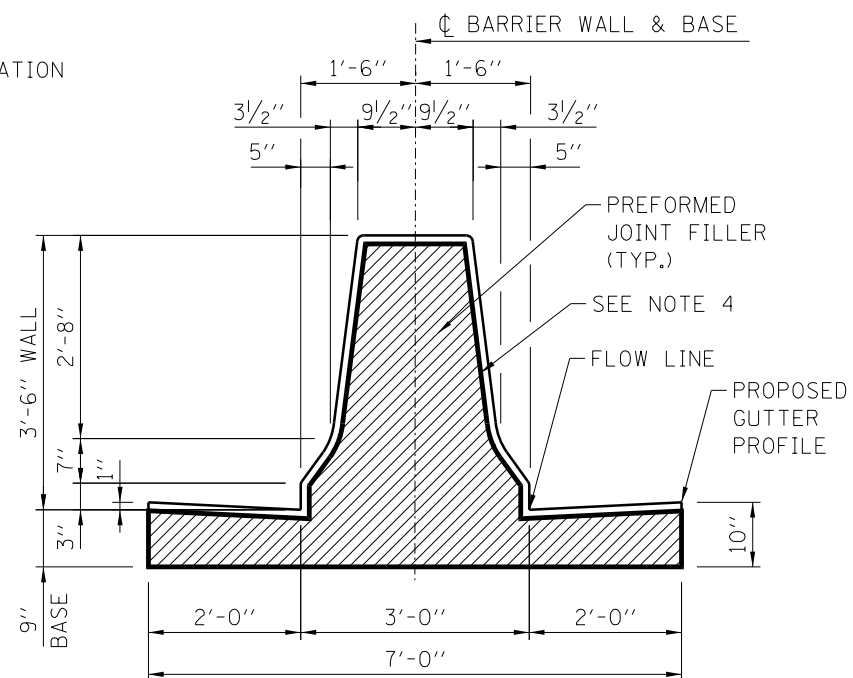
DATE
3-31-2016



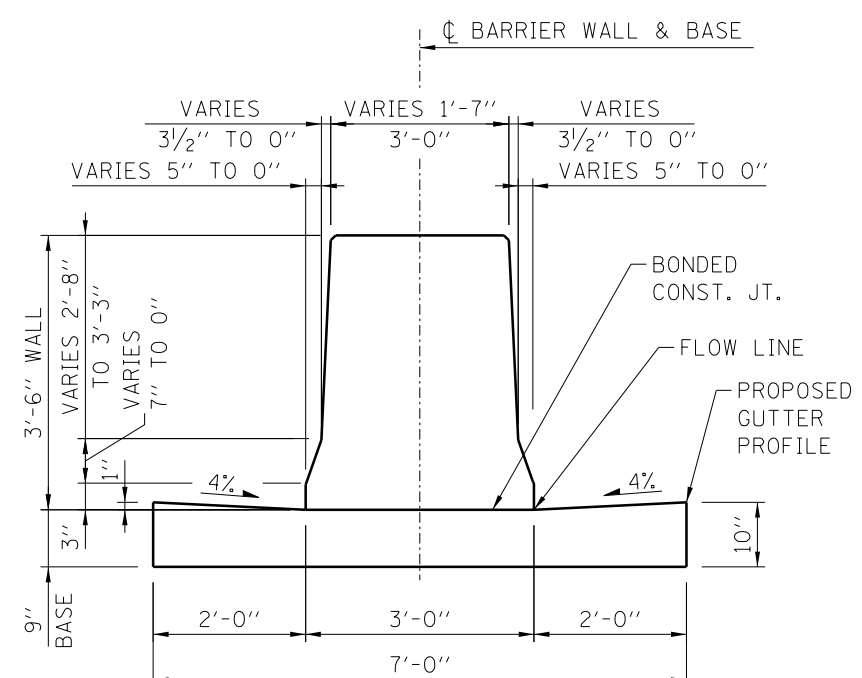
PLAN



ELEVATION



SECTION A-A

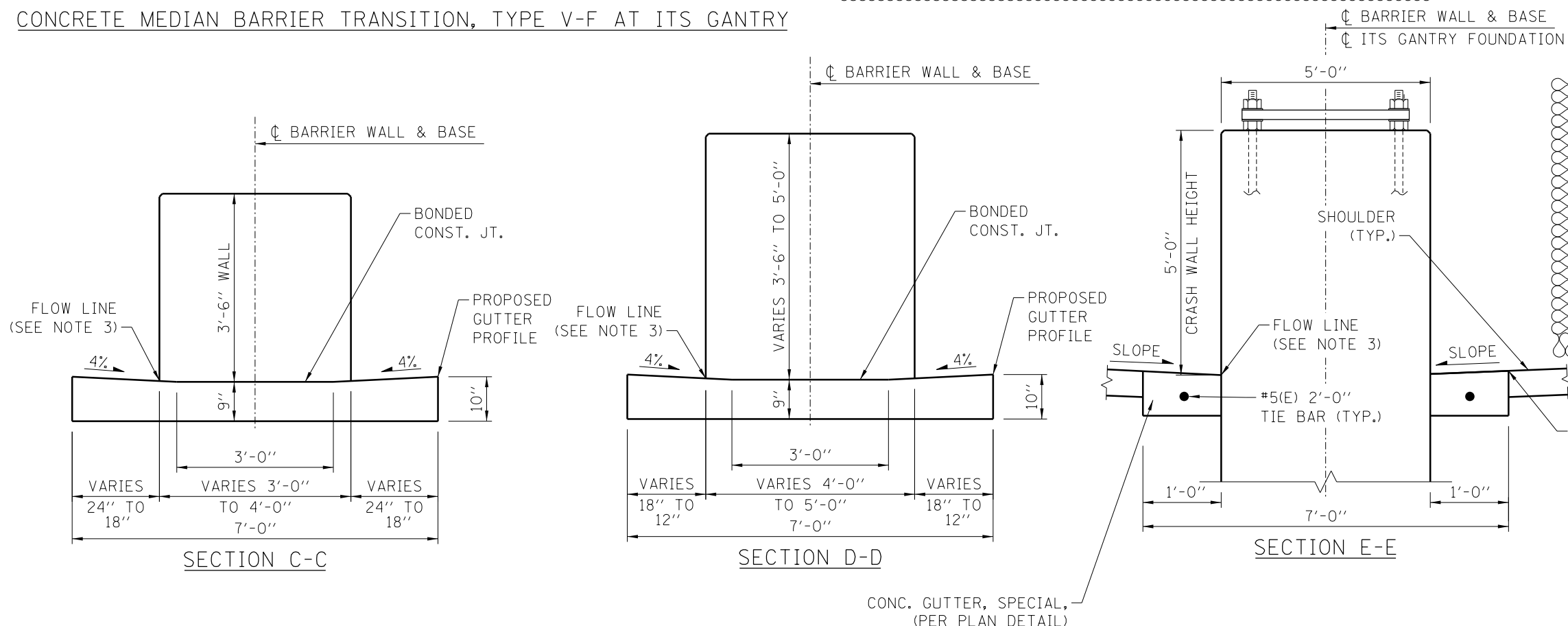


SECTION B-B

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 42", THIS ALLOWS THE PLACEMENT OF LIGHT POLE FOUNDATIONS WITHIN THIS AREA.
4. WITHIN SECTION D-D, THE BARRIER HEIGHT IS INCREASING FROM 42" TO 60", THE LIGHT POLE FOUNDATIONS SHALL NOT BE PLACED WITHIN THIS AREA.

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



- 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.

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



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

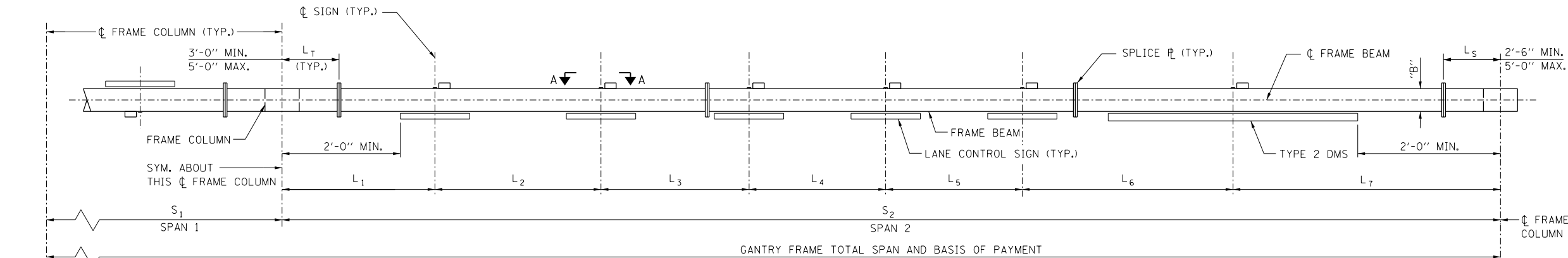
DATE
3-31-2016

MATERIAL SPECIFICATIONS FOR
STRUCTURAL STEEL AND FASTENERS

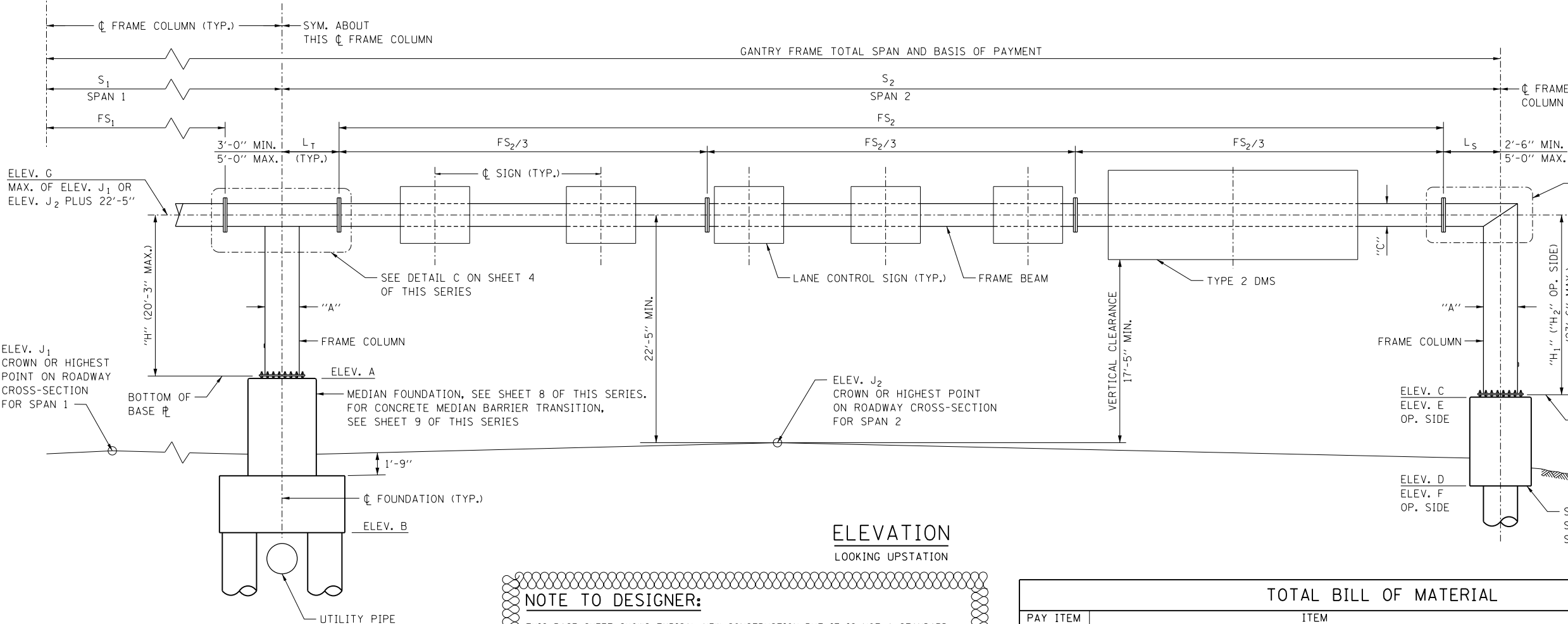
ELEMENT OF STRUCTURE	SPECIFICATION	F _y (KSI)	F _u (KSI)
STRUCTURAL STEEL TUBE FRAME (HSS)	ASTM A500 GRADE C	50	62
STRUCTURAL STEEL TUBE MOUNTING BEAMS (HSS)	ASTM A500 GRADE B	46	58
STEEL SHAPES	ASTM A709 GRADE 50	50	65
STEEL PLATES	ASTM A572 GR. 50 OR ASTM A709 GR. 50	50	65
STEEL BOLTS	ASTM 325 TYPE 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'	3/4"
110'<"S"<=130'	4/2"
130'<"S"<=150'	5"



PLAN



ELEVATION

LOOKING UPSTATION

TOTAL BILL OF MATERIAL

PAY ITEM	ITEM	UNIT	TOTAL
JS734G10	FOUNDATION FOR ITS GANTRY FRAME	CU YD	
JT740I10	ITS GANTRY FRAME (STEEL), SPANS LESS THAN OR EQUAL TO 110'	FOOT	
JT740I30	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 110' AND LESS THAN OR EQUAL TO 130'	FOOT	
JT740I50	ITS GANTRY FRAME (STEEL), SPANS GREATER THAN 130' AND LESS THAN OR EQUAL TO 150'	FOOT	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	
42001300	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



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

DATE
3-31-2016

NOTES:

- SEE SHEET 2 OF THIS SERIES FOR VIEW A-A AND DESIGN SUMMARY TABLE.
- CAMBER IS PROVIDED AT MIDSPAN OF EACH SPAN OF STRUCTURE.
- PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL VERIFY LOCATIONS OF LANE CONTROL SIGNS AND TYPE 2 DMS WITH ENGINEER. (DIMENSIONS L₁ THROUGH L₇)
- FRAME SPAN SHALL BE IN THE CONFIGURATION SHOWN WITH 3 COLUMNS AND 6 FIELD SECTIONS.
- PRIOR TO FABRICATING GANTRY FRAME, THE CONTRACTOR SHALL FIELD VERIFY LOCATION OF EACH FOUNDATION, ANCHOR BOLTS AND DETAILS AFFECTING GANTRY FRAME FABRICATION AND CONSTRUCTION. NOTIFY THE ENGINEER OF ANY VARIATIONS FROM CONTRACT PLANS AND MAKE NECESSARY APPROVED ADJUSTMENTS. SUCH VARIATIONS DO NOT CONSTITUTE ADDITIONAL COMPENSATION FOR CHANGE IN SCOPE OF WORK. CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- WHEN REQUIRED FOR ADJUSTMENT, A MAX. OF TWO 1/4" 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 TYPE I WHEN FOUNDATION IS PLACED ADJACENT TO RDWY. SHOULDER. USE SHOULDER FOUNDATION TYPE II 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".

ALL EXPOSED CONCRETE EDGES SHALL HAVE A $\frac{3}{4}$ " x 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

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

REINFORCEMENT BARS DESIGNATED "E" SHALL BE EPOXY-COATED.

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

REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.

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.



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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.

1. CONDUITS SHALL BE LOCATED IN THE NORTHERN MOST GANTRY FOUNDATION, EXCEPT FOR THE HALF GANTRIES JUST WEST OF IL-31 AND JUST EAST OF DEVON TOLL PLAZA 17. AT THESE TWO LOCATIONS THE CONDUITS SHALL BE IN THE SOUTHERN MOST GANTRY FOUNDATION.
2. A BORING IS REQUIRED AT EACH FOUNDATION LOCATION.
3. 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.
4. 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.
5. DESIGNER TO ENSURE ALL LATEST CODE REQUIREMENTS ARE MET.
6. DESIGNER TO DETERMINE THAT APPLIED LOADS DO NOT EXCEED DESIGN VALUES.



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

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			

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

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

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.

1. ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL ISSUED MARCH, 2015, WITH LATEST DESIGN BULLETINS.
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 2014.

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" \leq 130'	3'-5"	3'-6"	5	7"	6	6"	1¾"	22
130'<"S" \leq 150'	3'-7½"	3'-6"	5	7½"	6	6"	1¾"	22



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					

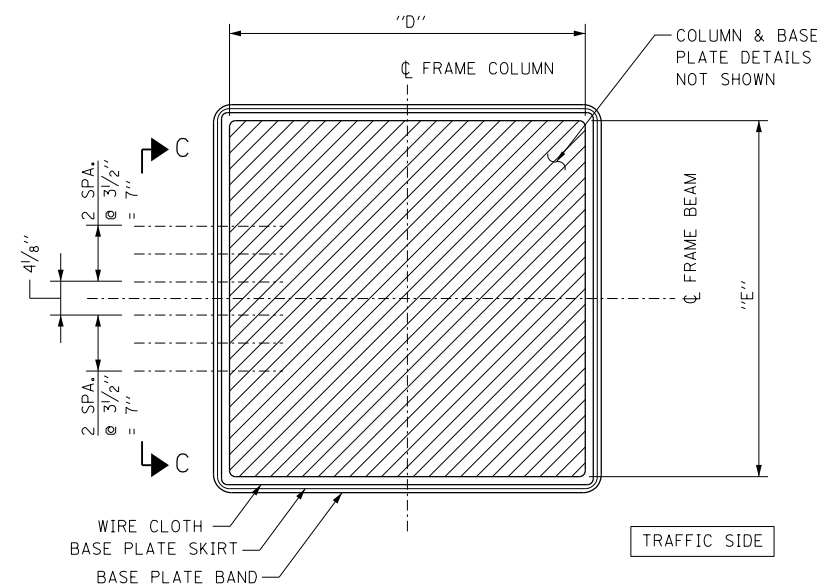
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BASE ϕ TYPE E IS ONLY APPLICABLE TO I-90 GANTRY LOCATION AT STATIONS 3290+35.00, 3315+00, 3341+00, 3358+60, 3617+00, 3728+45, 3785+95, 3904+08.00, 3933+50.00, 3966+92.00 AND 4009+33.00. OTHERWISE, USE BASE ϕ TYPE N. FIELD VERIFY DIMENSIONS AND BOLT SPACING PRIOR TO FABRICATING BASE ϕ . DESIGNED FOR 1-TYPE 2 DMS AND 5 LANE CONTROL SIGNS, IN EACH SPAN. DESIGNER SHALL PROVIDE ANALYSIS VERIFICATION PRIOR TO MOUNTING ADDITIONAL EQUIPMENT. REMOVE THIS TABLE AND NOTE IF NOT USED.

[illegible]

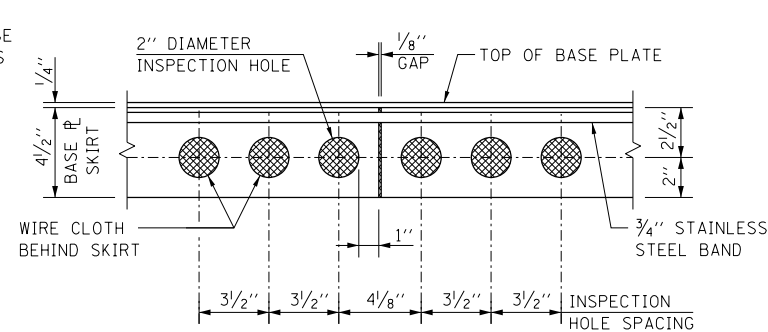
OVERHEAD SIGN STRUCTURE ITS GANTRY FRAME (STEEL) TWO-SPAN STRUCTURE DETAILS

DATE
3-31-2016



COLUMN BASE PLATE PLAN

SEE NOTE 4



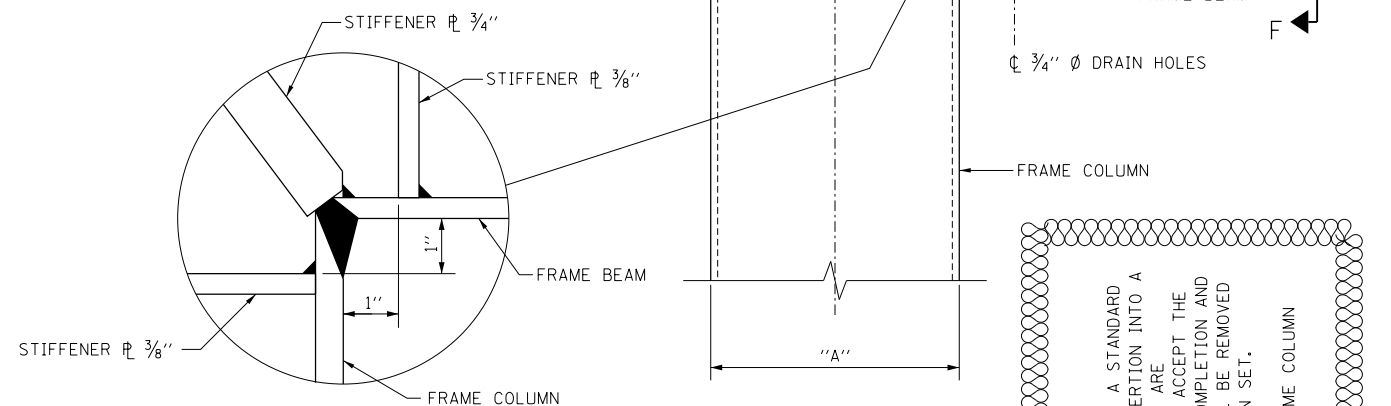
VIEW C-C (BASE PLATE SKIRT)

NOTE:

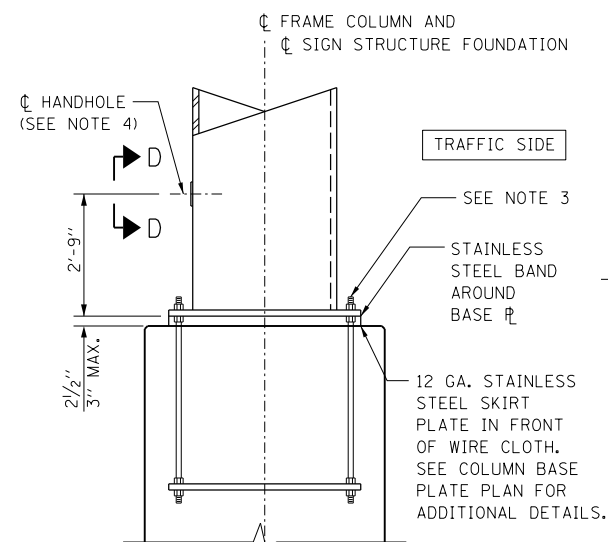
1. SEE SHEET 1 OF THIS SERIES FOR DIMENSIONS "A", "B" AND "C".
2. SEE SHEET 2 OF THIS SERIES FOR DIMENSIONS "D" AND "E".
3. AFTER ADJUSTMENTS TO LEVEL FRAME BEAM AND ENSURE ADEQUATE VERTICAL CLEARANCE, TIGHTEN ALL TOP AND LEVELING NUTS AGAINST THE BASE PLATE WITH A MINIMUM TORQUE OF 200 LB.-FT. THEN PLACE STAINLESS STEEL MESH AROUND THE PERIMETER OF THE BASE PLATE. SECURE TO BASE PLATE WITH STAINLESS STEEL BANDING.
4. SHOULDER FOUNDATION SHOWN. VERIFY HANDHOLE AND INSPECTION HOLES PLACEMENT ON MEDIAN FRAME COLUMN WITH THE ENGINEER.

NOTE TO DESIGNER:

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

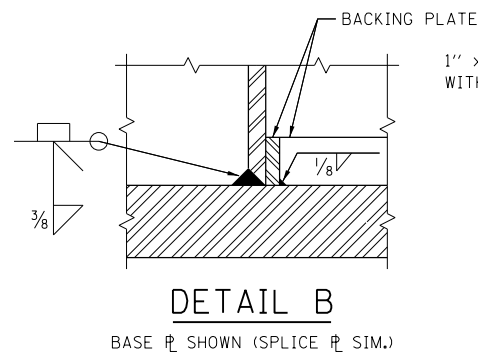


DETAIL A



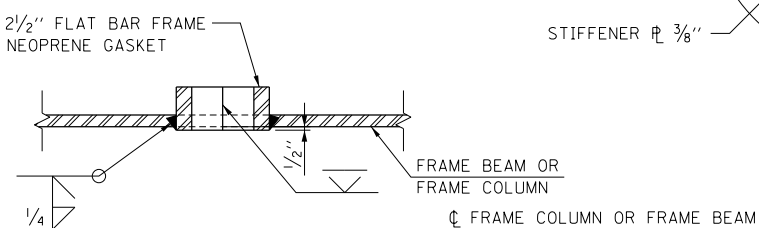
COLUMN BASE

REINFORCING NOT SHOWN



DETAIL B

BASE PLATE SHOWN (SPLICE PLATE SIM.)



SECTION E-E

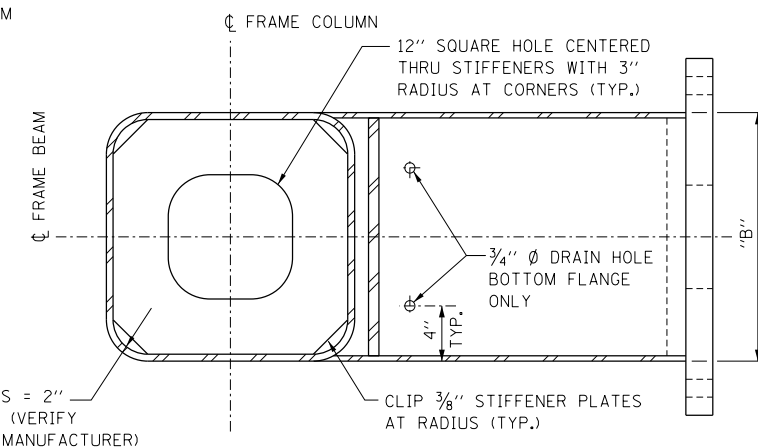
1" x 2 1/2" FLAT BAR FRAME WITH NEOPRENE GASKET

DRILL & TAP 6 HOLES FOR 1/4"-20 ROUND HEAD BRASS SCREWS. CHASE THREAD AFTER GALVANIZING.

HANDHOLE

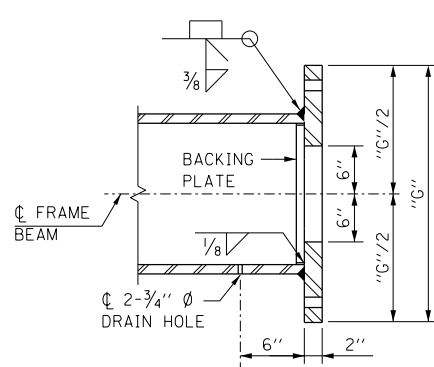
PROVIDE COVER PLATE 3/16" x 7 1/2" x 12" ROUND CORNERS TO 3 3/4" RADIUS. PROVIDE SIX 5/16" Ø HOLES.

**VIEW D-D
HANDHOLE DETAIL**

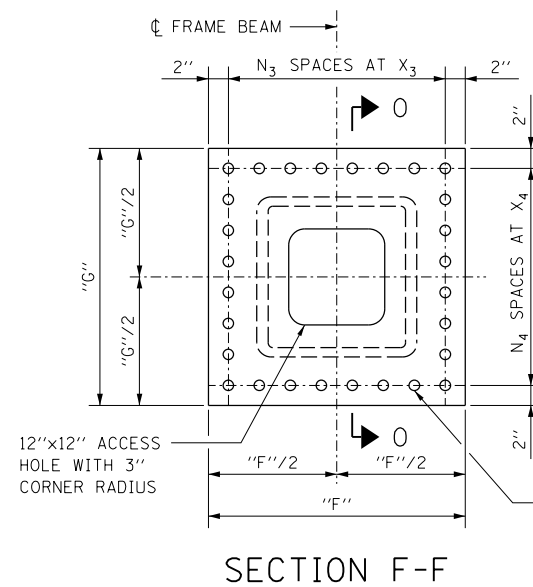


SECTION G-G

3/4" STIFFENER PLATE NOT SHOWN



**SECTION O-O
SPLICE PLATE DETAIL**



SECTION F-F

SPLICE PLATE TABLE

MAX. SPAN "S1" OR "S2"	"F"	"G"	N3	X3	N4	X4	SPLICE BOLT DIAMETER (D1)	NO. SPLICE BOLT
<=110'	3'-1"	2'-8 1/2"	6	5 1/2"	6	4 3/4"	1"	24
110'<"S"<=130'	3'-0 1/2"	2'-10"	5	6 1/2"	5	6"	1 1/4"	20
130'<"S"<=150'	3'-4"	3'-4"	6	6"	6	6"	1 1/4"	24

BASE DRAWING M-OHS-730
SHEET 3 OF 9

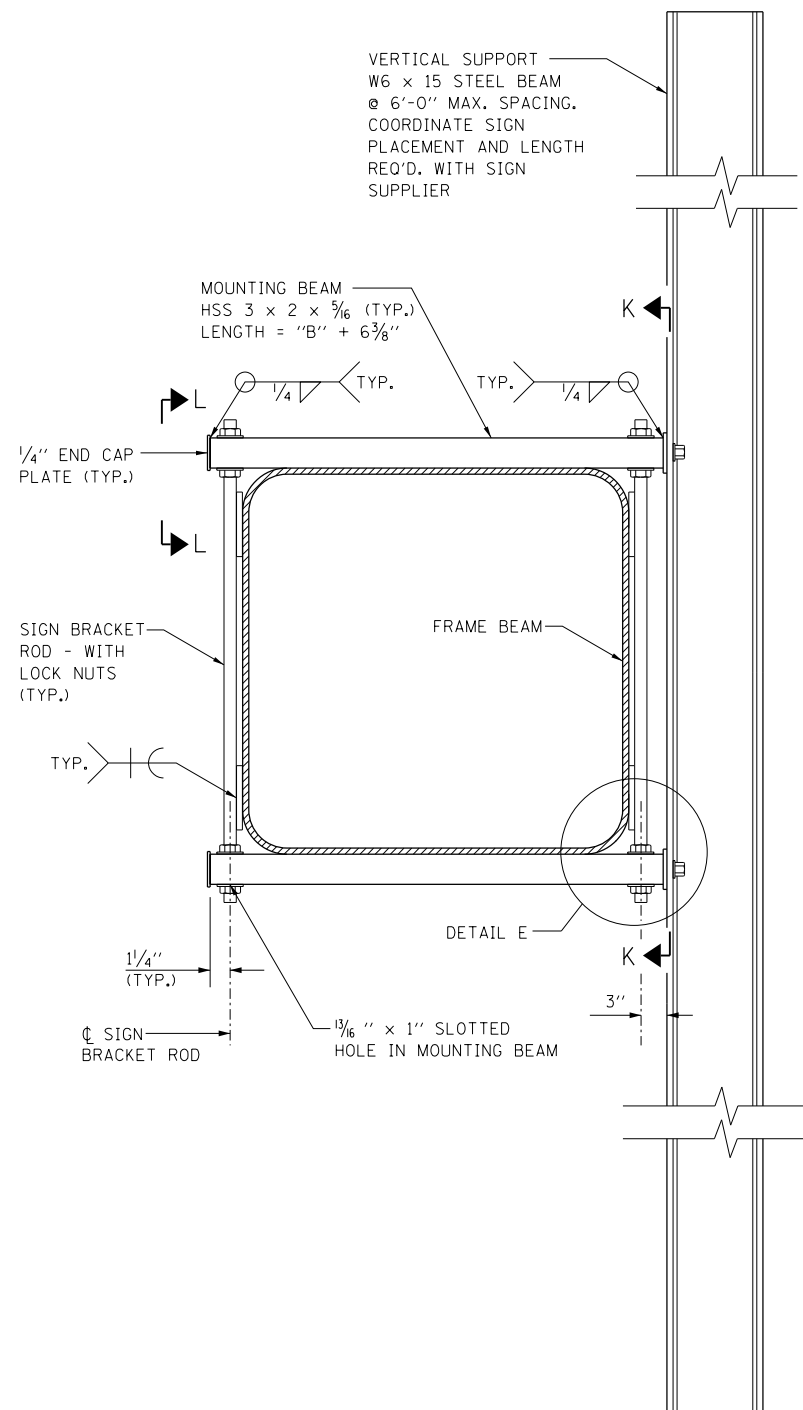


OVERHEAD SIGN STRUCTURE
ITS GANTRY FRAME (STEEL)
TWO-SPAN
STRUCTURE DETAILS

DATE
3-31-2016

NOTE TO DESIGNER:

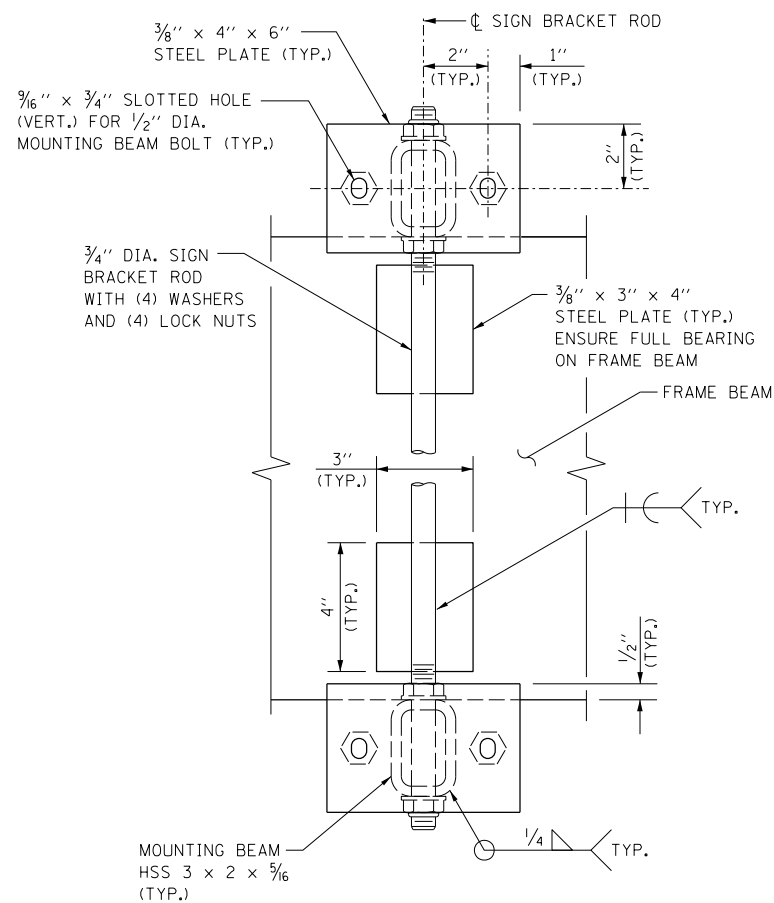
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CONNECTION SIDE VIEW

NOTE TO DESIGNER:

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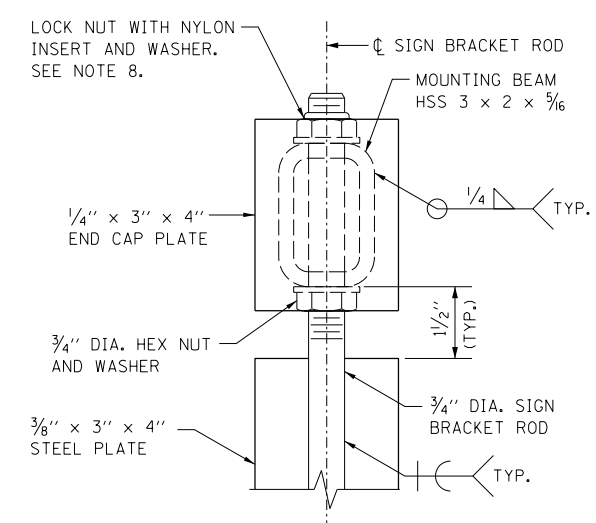
SECTION K-K

VERTICAL SUPPORT TABLE

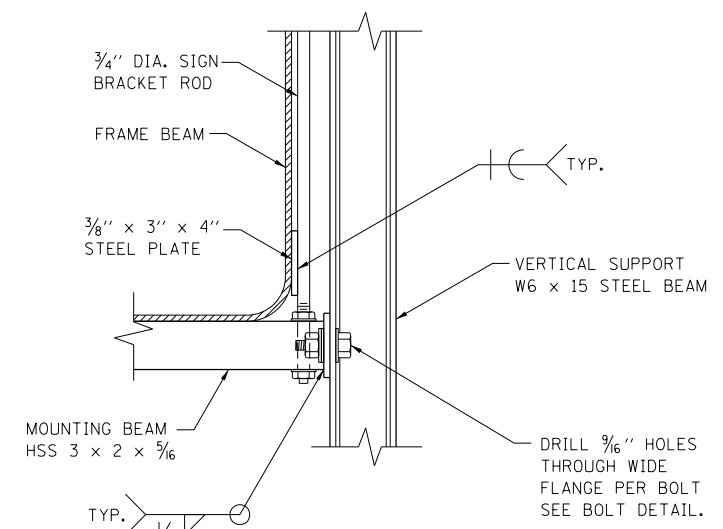
W6x15		
SIGN WIDTH		NUMBER OF VERTICAL SUPPORTS REQUIRED
GREATER THAN	LESS THAN OR EQUAL TO	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5

NOTES:

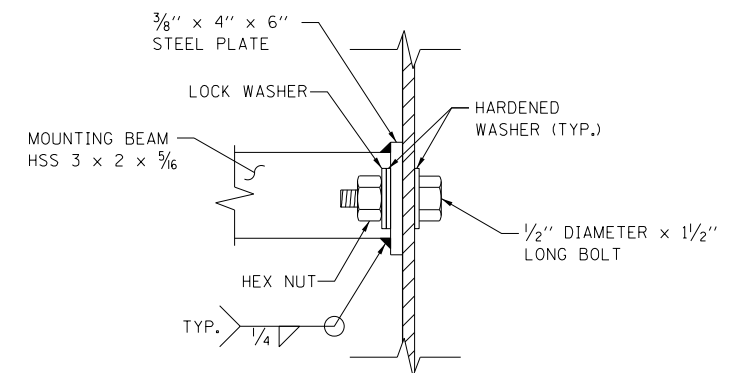
1. CONNECTION DETAIL IS APPLICABLE TO DMS AND LANE CONTROL SIGN.
2. VERIFY VERTICAL SUPPORT MEMBER LENGTH PRIOR TO FABRICATION.
3. DMS MANUFACTURER AND LANE CONTROL SIGN MANUFACTURER SHALL DESIGN, PROVIDE AND INSTALL HORIZONTAL MOUNTING MEMBERS. VERTICAL SPACING OF HORIZONTAL MEMBERS SHALL BE DESIGNED 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

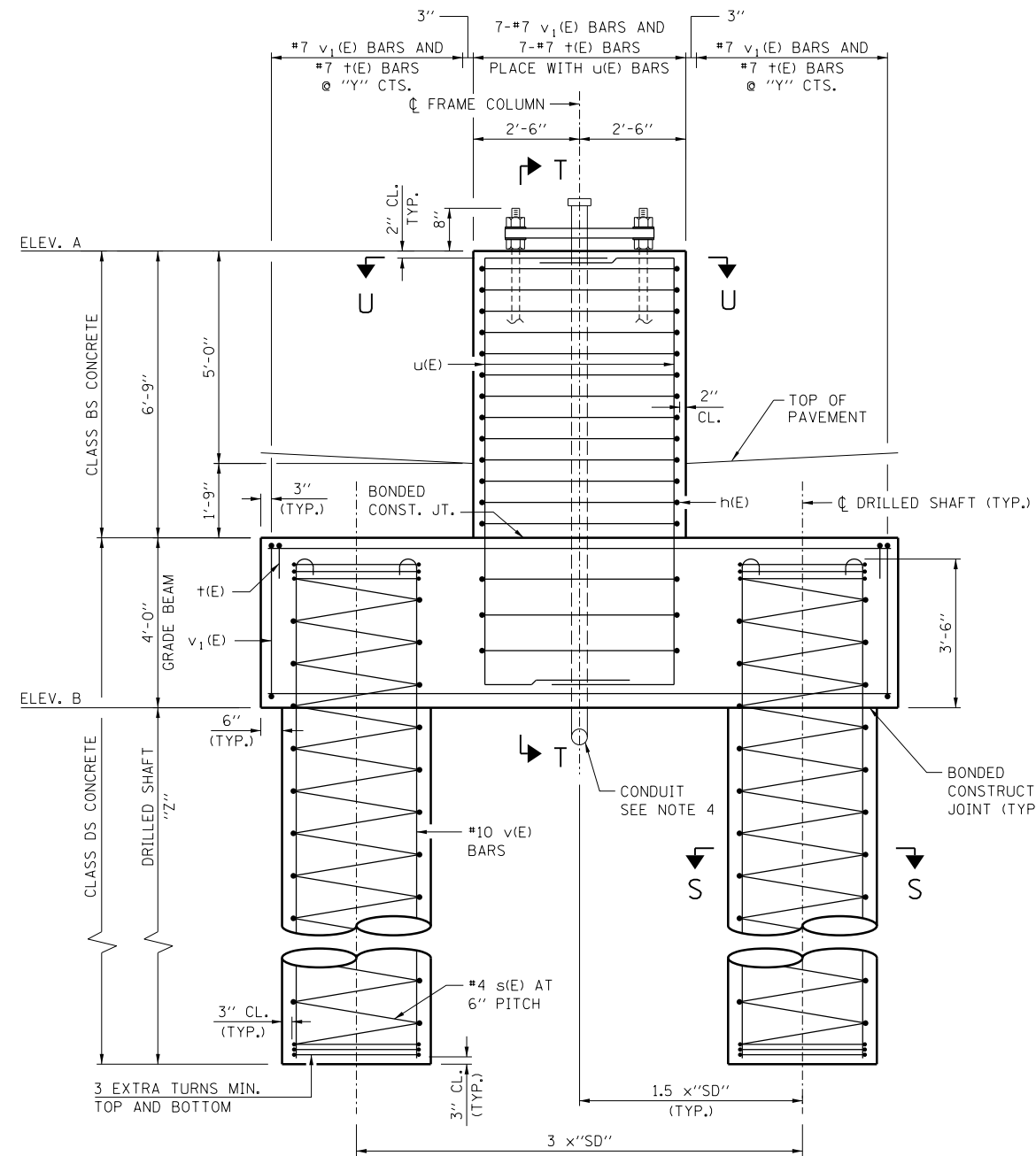
SIGN BRACKET ROD NOT SHOWN FOR CLARITY

BASE DRAWING M-OHS-730
SHEET 5 OF 9



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

DATE
3-31-2016

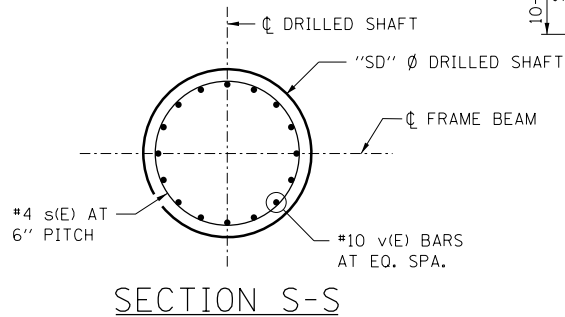


ELEVATION
MEDIAN FOUNDATION

REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

MAX. SPAN "S ₁ " OR "S ₂ "	BAR	NO.	SIZE	LENGTH	SHAPE
<=110'	h ₁ (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"	
110'<"S"<=130'	v ₁ (E)	23	#7	13'-4"	
	h ₁ (E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	27	#7	6'-2"	
	s(E)	2	#4	31'-3"	
130'<"S"<=150'	v(E)	32	#10	32'-8"	
	v ₁ (E)	27	#7	13'-4"	
	h ₁ (E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	
	t(E)	31	#7	6'-2"	
>150'	s(E)	2	#4	31'-3"	
	v(E)	40	#10	32'-8"	
	v ₁ (E)	31	#7	13'-4"	
	h ₁ (E)	6	#6	14'-8"	
	p(E)	12	#8	14'-8"	

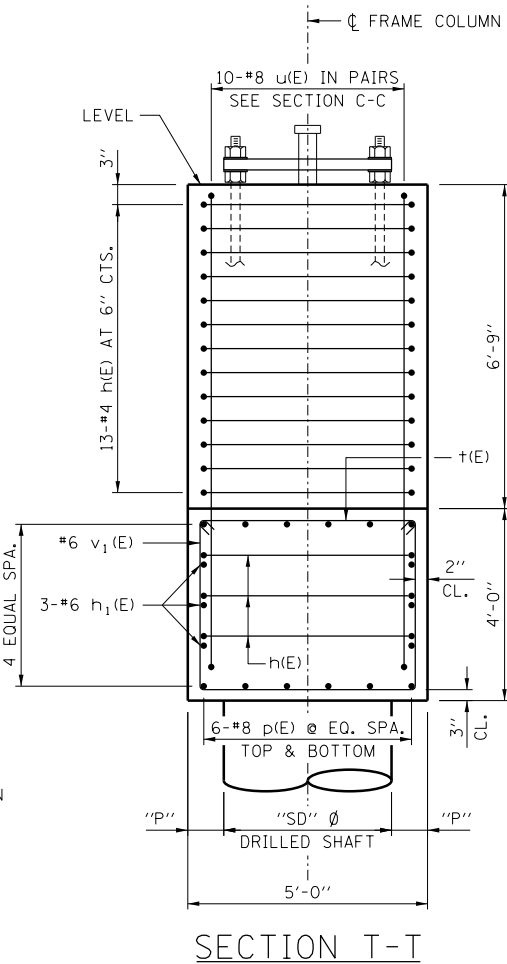
* THE LENGTH OF SPIRAL SHOWN IS THE HEIGHT OF SPIRAL.



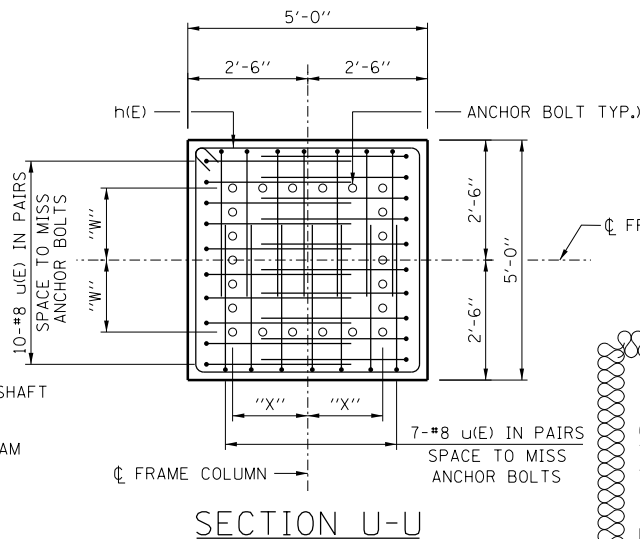
SECTION S-S

REINFORCEMENT BAR SCHEDULE
FOR ONE FOUNDATION

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	19'-1"	
u(E)	34	#8	16'-2"	
u ₁ (E)	8	#4	4'-11"	
u ₂ (E)	10	#4	5'-10"	



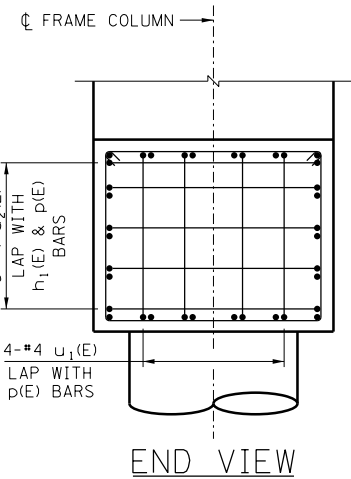
SECTION T-T



SECTION U-U

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	8,690	9
110'<"S"<=130'	7.0	32.0	8,760	9
130'<"S"<=150'	7.0	32.0	10,050	9



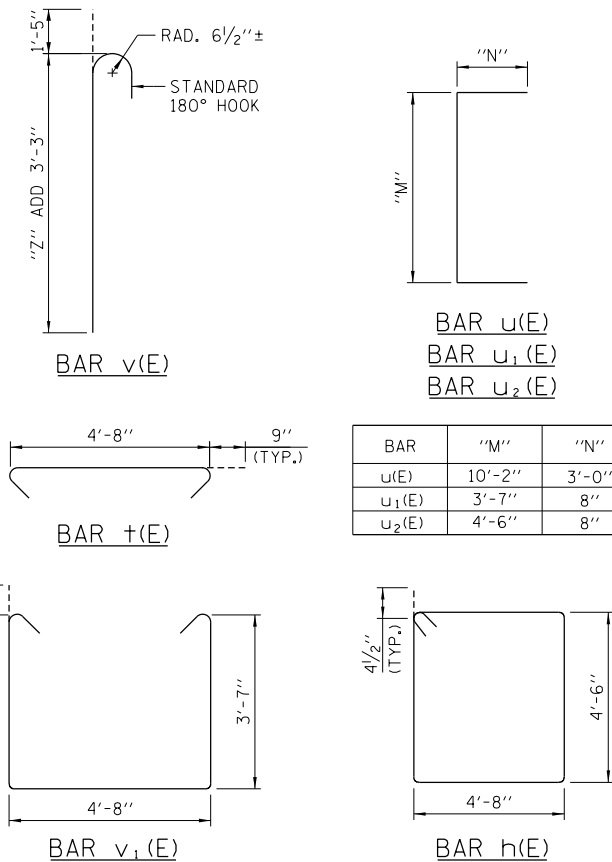
END VIEW

NOTES:

- SEE SHEET 6 OF THIS SERIES FOR FOUNDATION NOTES, DESIGN CRITERIA, ANCHOR BOLT DETAIL AND ANCHOR PLATE DETAIL.
- 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 GENTRY FRAME".
- 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".
- 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.
- 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.



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.

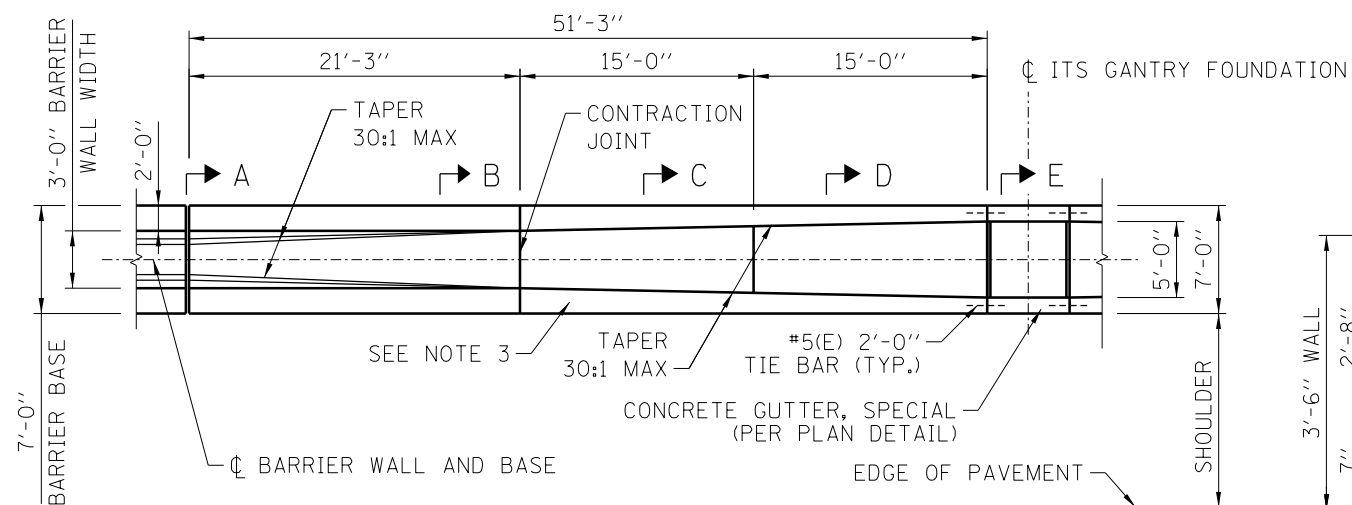
DESIGNER TO COORDINATE CONDUIT SIZE, LOCATION AND QUANTITY WITH ELECTRICAL AND ITS PLANS. MODIFY DRAWING AS NECESSARY.

BASE DRAWING M-OHS-730
SHEET 8 OF 9

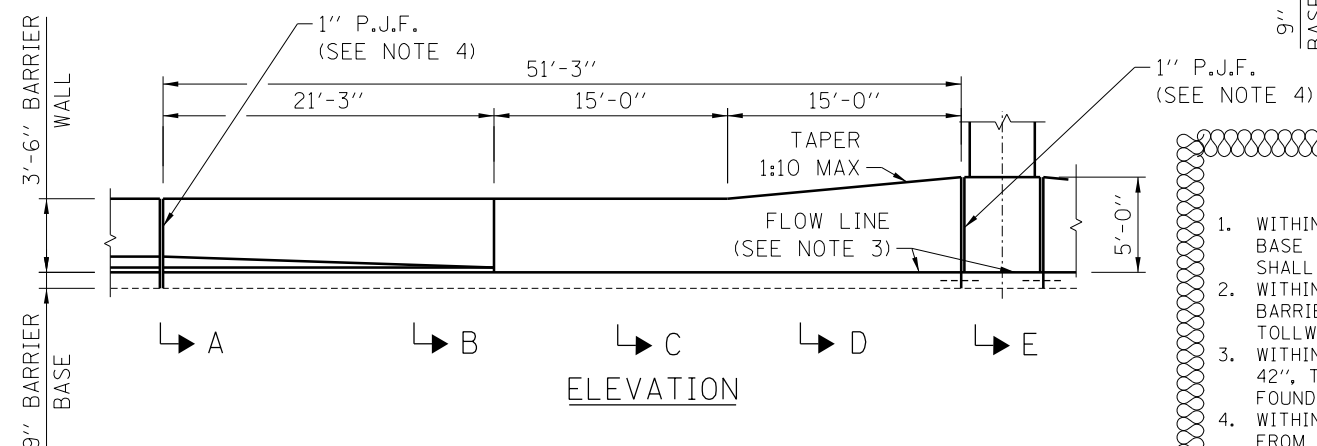


OVERHEAD SIGN STRUCTURE
ITS GENTRY FRAME (STEEL)
TWO-SPAN
STRUCTURE DETAILS

DATE
3-31-2016

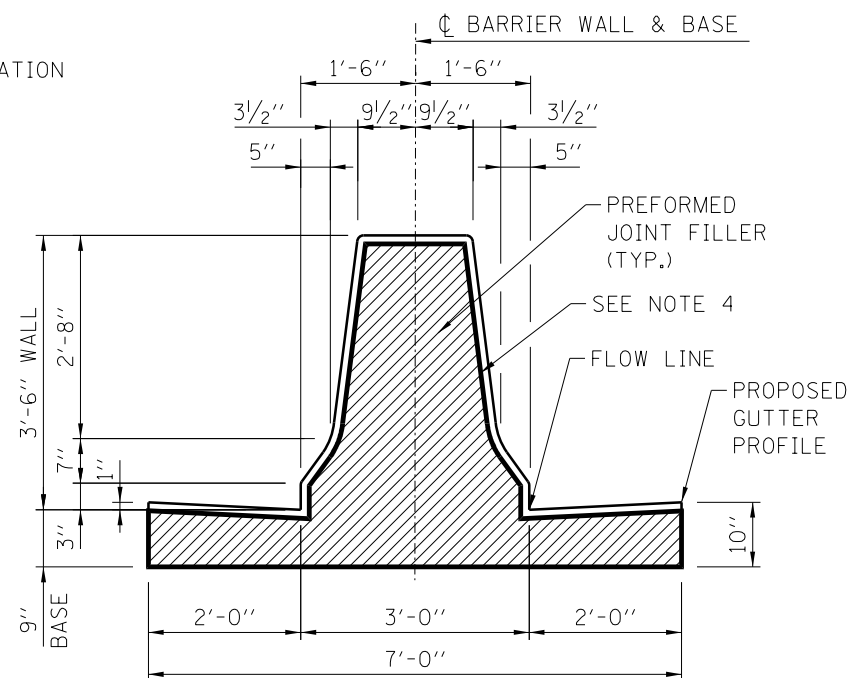


PLAN



ELEVATION

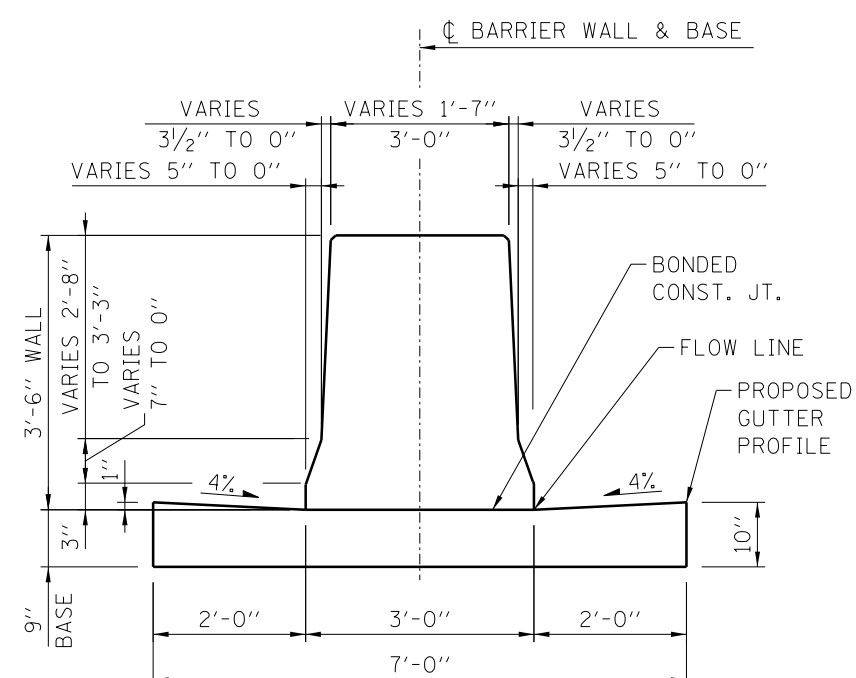
CONCRETE MEDIAN BARRIER TRANSITION, TYPE V-F AT ITS GANTRY



SECTION A-A

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 42", THIS ALLOWS THE PLACEMENT OF LIGHT POLE FOUNDATIONS WITHIN THIS AREA.
4. WITHIN SECTION D-D, THE BARRIER HEIGHT IS INCREASING FROM 42" TO 60", THE LIGHT POLE FOUNDATIONS SHALL NOT BE PLACED WITHIN THIS AREA.



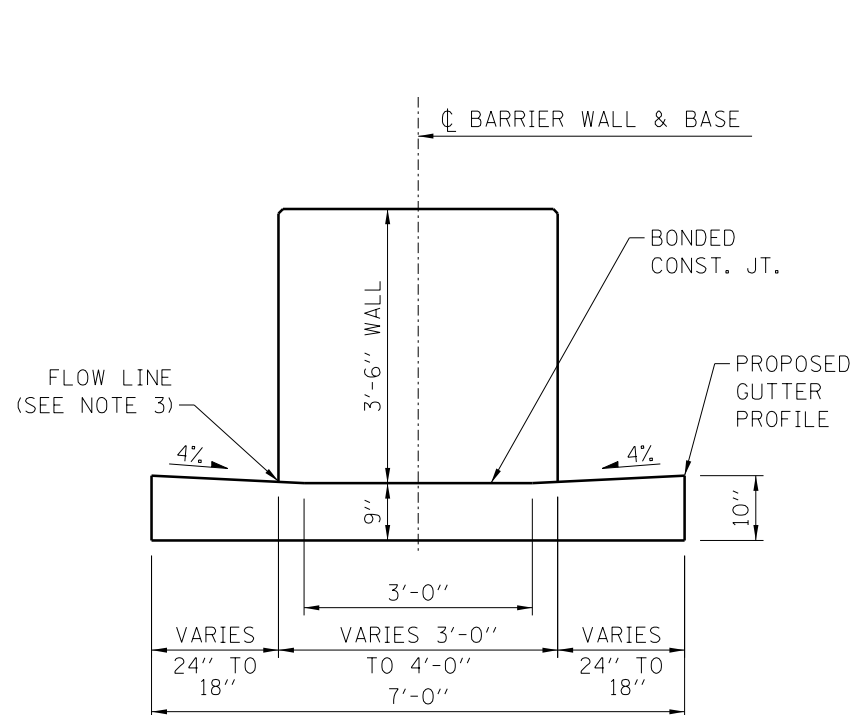
SECTION B-B

NOTE TO DESIGNER:

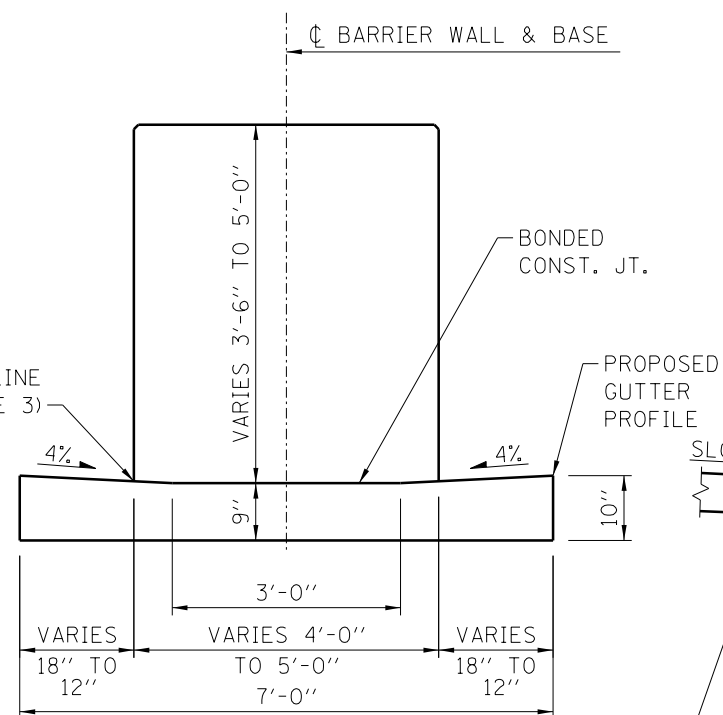
THIS BASE SHEET SHOWS TYPICAL NEW CONSTRUCTION BUT IT IS NOT A STANDARD DRAWING. IT REQUIRES COMPLETION BY THE DESIGNER PRIOR TO INSERTION INTO A CONTRACT. MICROSTATION FILES AND THE "CADD STANDARDS MANUAL" ARE AVAILABLE ON THE ILLINOIS TOLLWAY WEBSITE. THE DESIGNER SHALL ACCEPT THE RESPONSIBILITY OF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

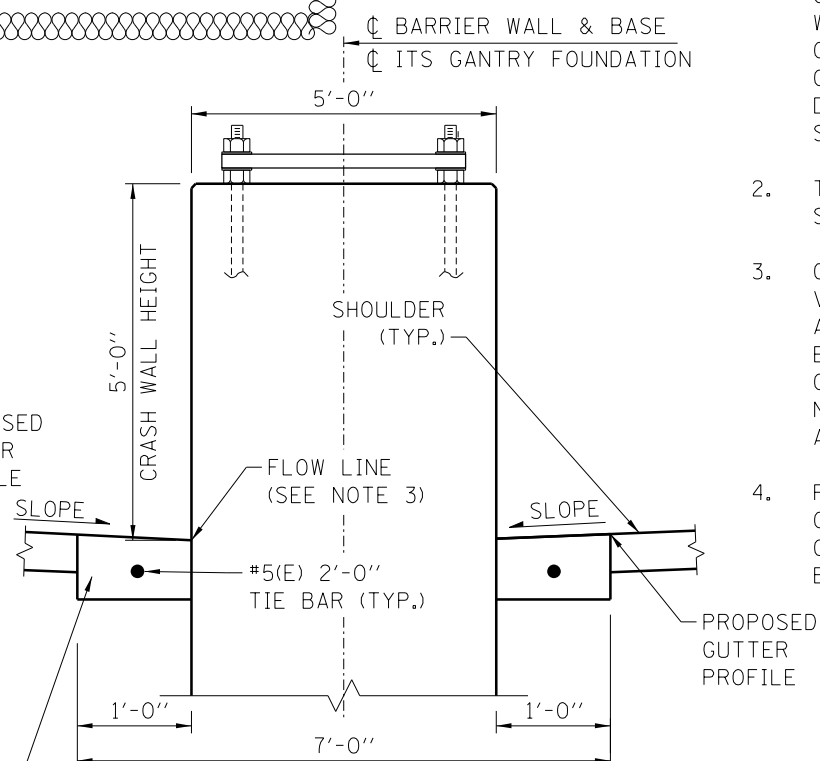
1. 2" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL AND IN THE CONCRETE BARRIER BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30'.
2. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE BY SAWING.
3. 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.



SECTION C-C



SECTION D-D



SECTION E-E

CONC. GUTTER, SPECIAL,
(PER PLAN DETAIL)

BASE DRAWING M-OHS-730
SHEET 9 OF 9



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

DATE
3-31-2016