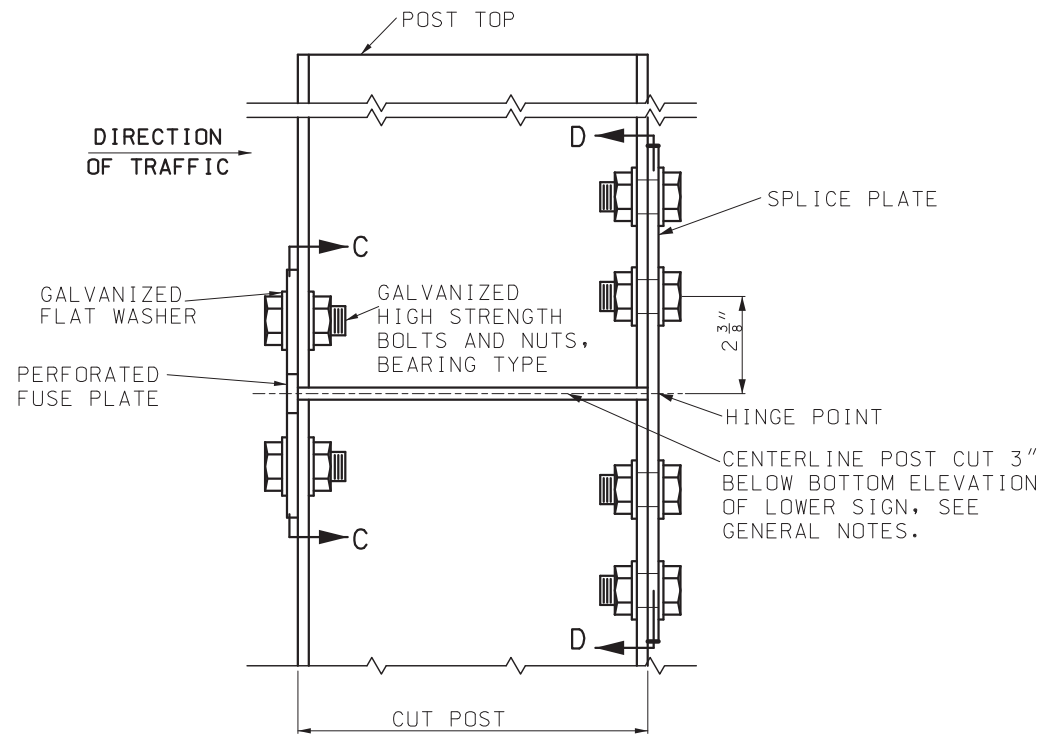
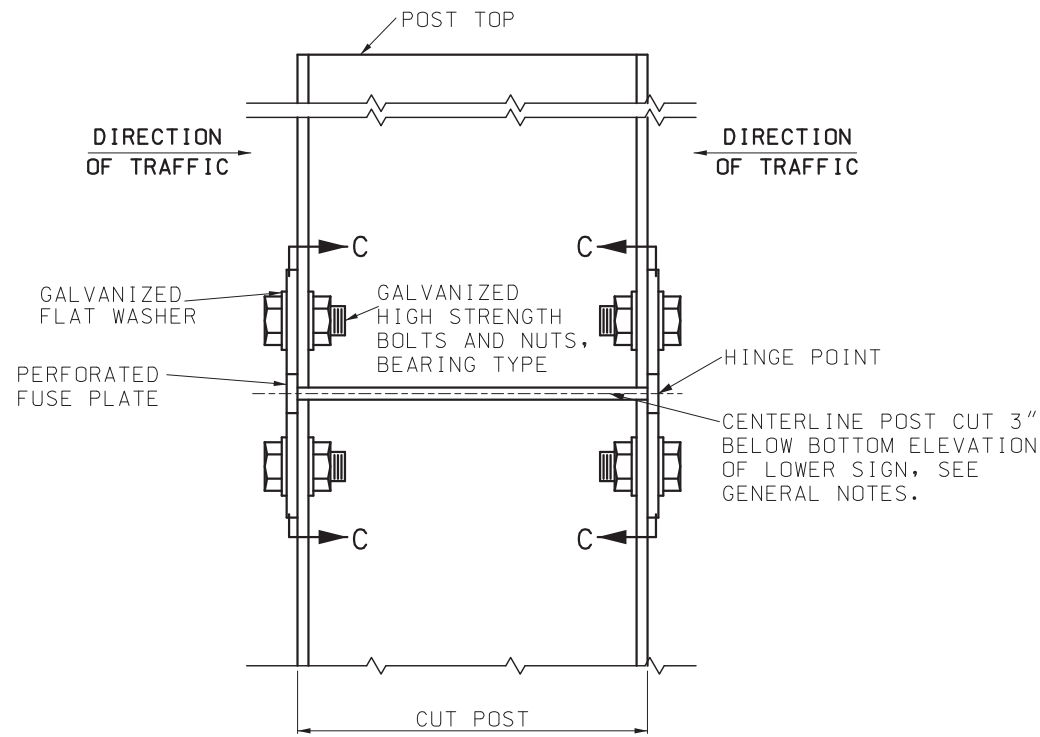


WIDE FLANGE STRUCTURAL STEEL POSTS DESIGN DATA								PERFORATED FUSE PLATE DATA TABLE																SPLICE PLATE DATA TABLE									
POST DES. NO.	NOM. SIZE (IN.)	WEIGHT		DEPTH (IN.)	FLANGE		WEB THICK (IN.)	POST DESIGN NO.	F (IN.)	G (IN.)	H (IN.)	J (IN.)	K (IN.)	L (IN.)	M (IN.)	N (IN.)	d1 (IN.)	d2 (IN.)	P (IN.)	BOLT DIA. (IN.)	WT. (EA.) (LBS.)	POST DESIGN NO.	J (IN.)	K (IN.)	L (IN.)	U (IN.)	d1 (IN.)	BOLT DIA. (IN.)	WT. (EA.) (LBS.)	WASHER			
		LB/FT	LB/IN		WIDTH (IN.)	THICK (IN.)																								OD IN.	ID IN.	THICK IN.	
1	W6	9	0.75	5 ⁷ / ₈	4	³ / ₁₆	³ / ₁₆	1	4 ¹ / ₄	1	1 ¹ / ₈	4	2 ¹ / ₄	⁷ / ₈	1	¹ / ₂	⁹ / ₁₆	³ / ₄	³ / ₁₆	¹ / ₂	0.76	1	4	2 ¹ / ₄	⁷ / ₈	³ / ₁₆	⁹ / ₁₆	¹ / ₂	2.45	1 ³ / ₁₆	⁵ / ₈	¹ / ₈	
2	W6	15	1.25	6	6	¹ / ₄	¹ / ₄	2	5	1 ¹ / ₄	1 ¹ / ₄	6	3 ¹ / ₂	1 ¹ / ₄	1 ¹ / ₂	³ / ₄	¹¹ / ₁₆	1 ¹ / ₄	¹ / ₄	⁵ / ₈	1.67	2	6	3 ¹ / ₂	1 ¹ / ₄	¹ / ₄	¹¹ / ₁₆	⁵ / ₈	4.89	1 ⁵ / ₁₆	¹¹ / ₁₆	¹ / ₈	
3	W8	18	1.50	8 ¹ / ₈	5 ¹ / ₄	⁵ / ₁₆	¹ / ₄	3	5	1 ¹ / ₄	1 ¹ / ₄	5 ¹ / ₄	2 ³ / ₄	1 ¹ / ₄	1 ¹ / ₄	³ / ₄	¹¹ / ₁₆	1 ¹ / ₁₆	¹ / ₄	⁵ / ₈	1.51	3	5 ¹ / ₄	2 ³ / ₄	1 ¹ / ₄	⁵ / ₁₆	¹¹ / ₁₆	⁵ / ₈	5.32	1 ¹⁵ / ₃₂	¹³ / ₁₆	¹ / ₈	
4	W10	22	1.83	10 ¹ / ₈	5 ³ / ₄	³ / ₈	¹ / ₄	4	6	1 ¹ / ₂	1 ¹ / ₂	5 ³ / ₄	2 ³ / ₄	1 ¹ / ₂	1 ³ / ₈	¹³ / ₁₆	¹³ / ₁₆	1 ¹ / ₈	⁵ / ₁₆	³ / ₄	2.52	4	5 ³ / ₄	2 ³ / ₄	1 ¹ / ₂	⁵ / ₁₆	¹³ / ₁₆	³ / ₄	5.75				
5	W10	26	2.17	10 ³ / ₈	5 ³ / ₄	⁷ / ₁₆	¹ / ₄	5	6	1 ¹ / ₂	1 ¹ / ₂	5 ³ / ₄	2 ³ / ₄	1 ¹ / ₂	1 ³ / ₈	¹³ / ₁₆	¹³ / ₁₆	1 ¹ / ₈	⁵ / ₁₆	³ / ₄	2.52	5	5 ³ / ₄	2 ³ / ₄	1 ¹ / ₂	⁷ / ₁₆	¹³ / ₁₆	³ / ₄	8.04				
6	W12	35	2.92	12 ¹ / ₂	6 ¹ / ₂	¹ / ₂	⁵ / ₁₆	6	6	1 ¹ / ₂	1 ¹ / ₂	6 ¹ / ₂	3 ¹ / ₂	1 ¹ / ₂	1 ⁵ / ₈	¹³ / ₁₆	¹³ / ₁₆	1 ⁵ / ₁₆	³ / ₈	³ / ₄	3.35	6	6 ¹ / ₂	3 ¹ / ₂	1 ¹ / ₂	¹ / ₂	¹³ / ₁₆	³ / ₄	10.47				

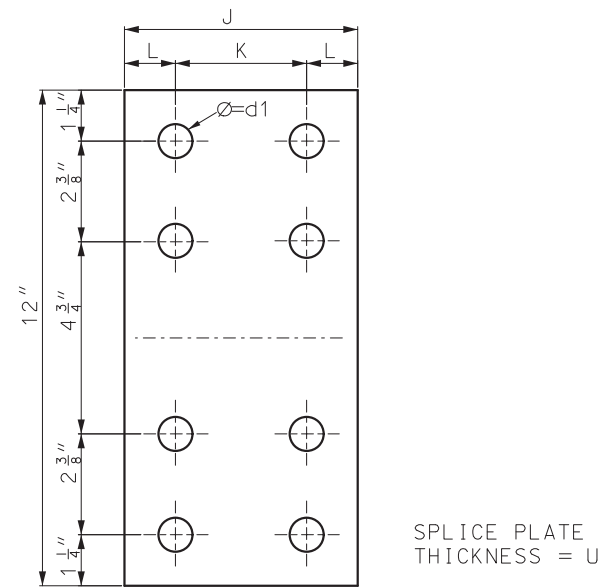
THE WEIGHT OF STRUCTURAL STEEL POSTS SHOWN IN THE CONTRACT HAS BEEN COMPUTED USING THE WEIGHTS SHOWN.



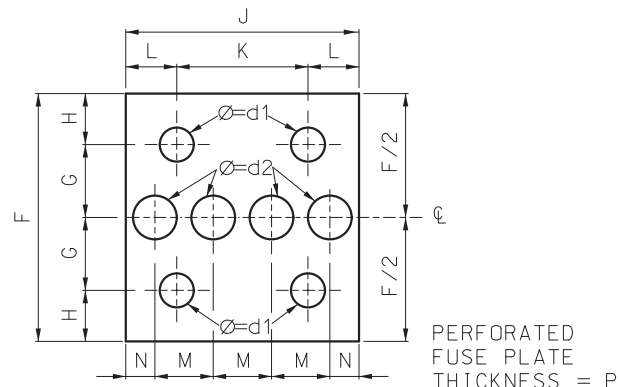
ONE DIRECTION BREAKAWAY



TWO DIRECTION BREAKAWAY



ELEVATION D-D



ELEVATION C-C



ALL HOLES SHALL BE DRILLED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER: FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND.

PERFORATED FUSE PLATE AND SPICE PLATE SHALL BE FABRICATED FROM ASTM A 36 STRUCTURAL STEEL.

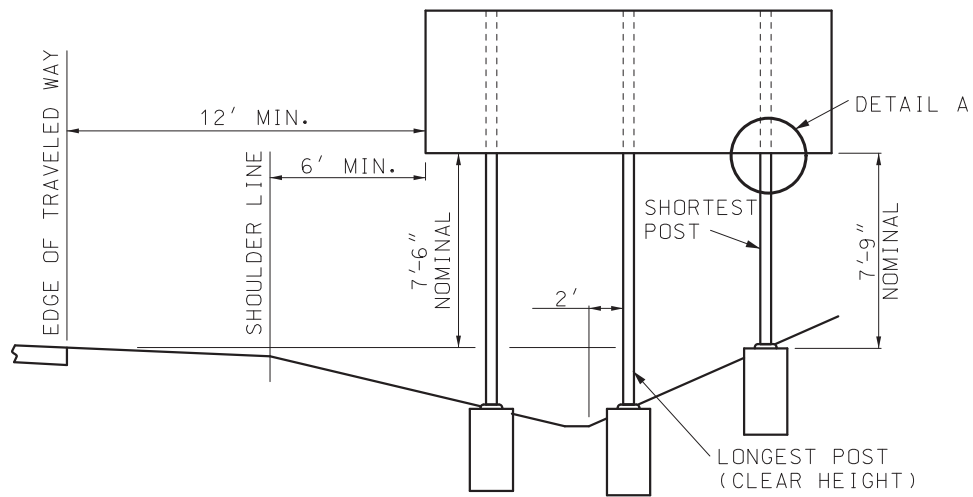
NOTES:

FOR GENERAL NOTES, SEE SHEET 1 OF 16.

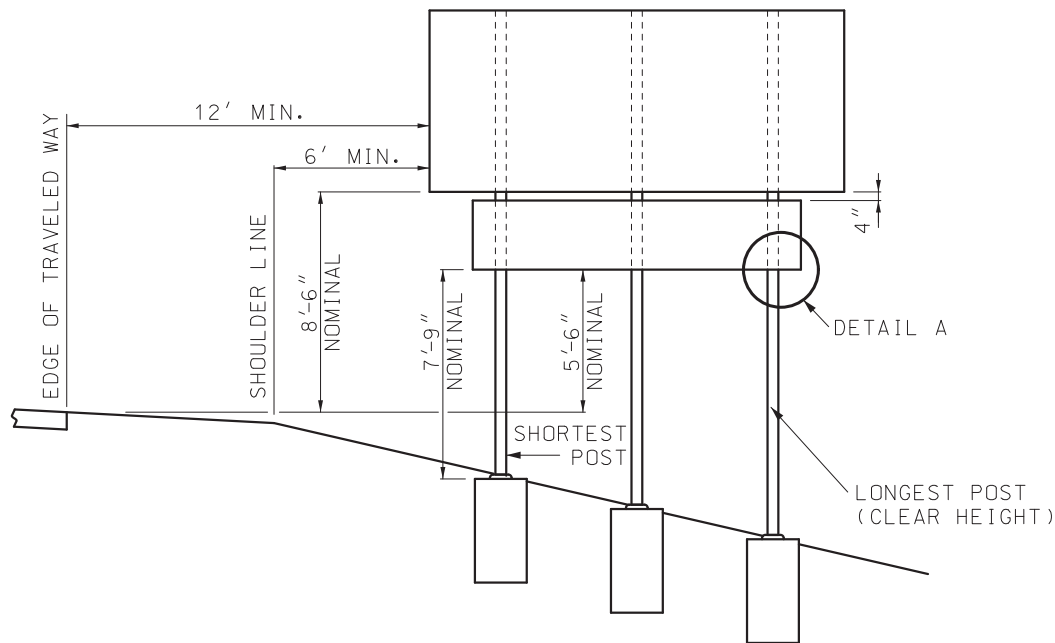
FOR ROADWAYS WHERE TRAFFIC MAY STRIKE THE BACKSIDE OF THE POST, PERFORATED FUSE PLATES SHALL BE INSTALLED ON BOTH SIDES OF THE POST.

 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)		
 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	POST INSTALLATION DETAILS HINGE DETAILS WIDE FLANGE (WF) POSTS	
	DATE EFFECTIVE: 4/1/2023 DATE PREPARED: 1/6/2023	903.03BR

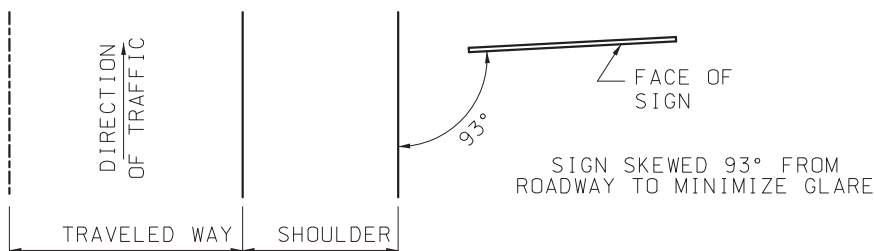
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



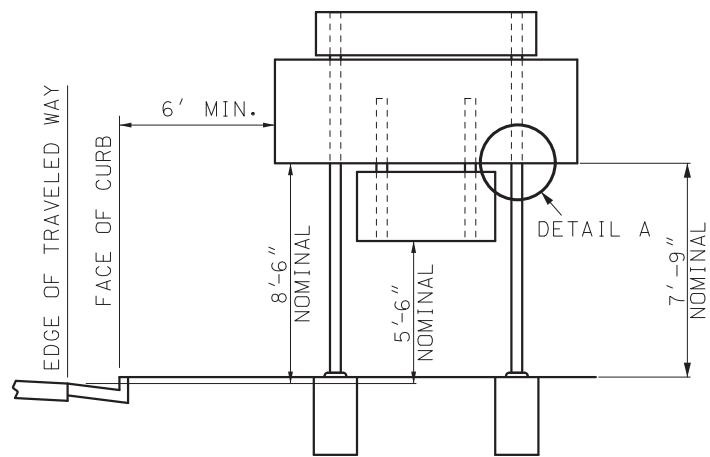
DITCH SECTION



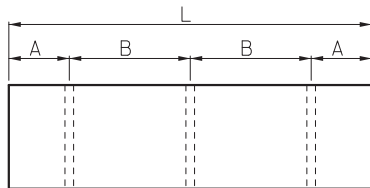
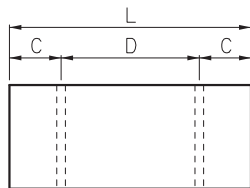
FILL SECTION



SIGN ORIENTATION



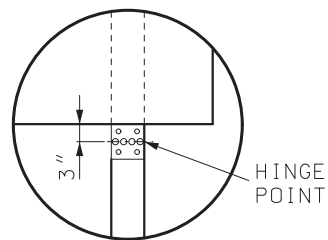
BARRIER CURB SECTIONS



$$A = 1/6(L) \quad C = 1/5(L)$$

$$B = 1/3(L) \quad D = 3/5(L)$$

POST SPACING



DETAIL A

NOTE: SEE SHEET 2 FOR FUSE PLATE DETAILS.

FOR POST DESIGNS NUMBERS 3, 4, 5 AND 6 HAVING WEIGHTS GREATER THAN 18LBS./FT., POSTS SHALL BE SPACED AT LEAST 7' APART.

FOR POST DESIGNS NUMBERS 1 AND 2, POSTS MAY BE SPACED LESS THAN 7' APART.

DO NOT USE THREE NUMBER 1 OR 2 POSTS FOR L LESS THAN 11'.

FOR L GREATER THAN 11' AND LESS THAN 17', 3 POSTS MAY BE USED DEPENDING ON SOIL CONDITIONS.

FOR L OF 6' TO 17' TYPICALLY USE 2 POSTS.



FOR L GREATER THAN 17' TYPICALLY USE 3 POSTS.

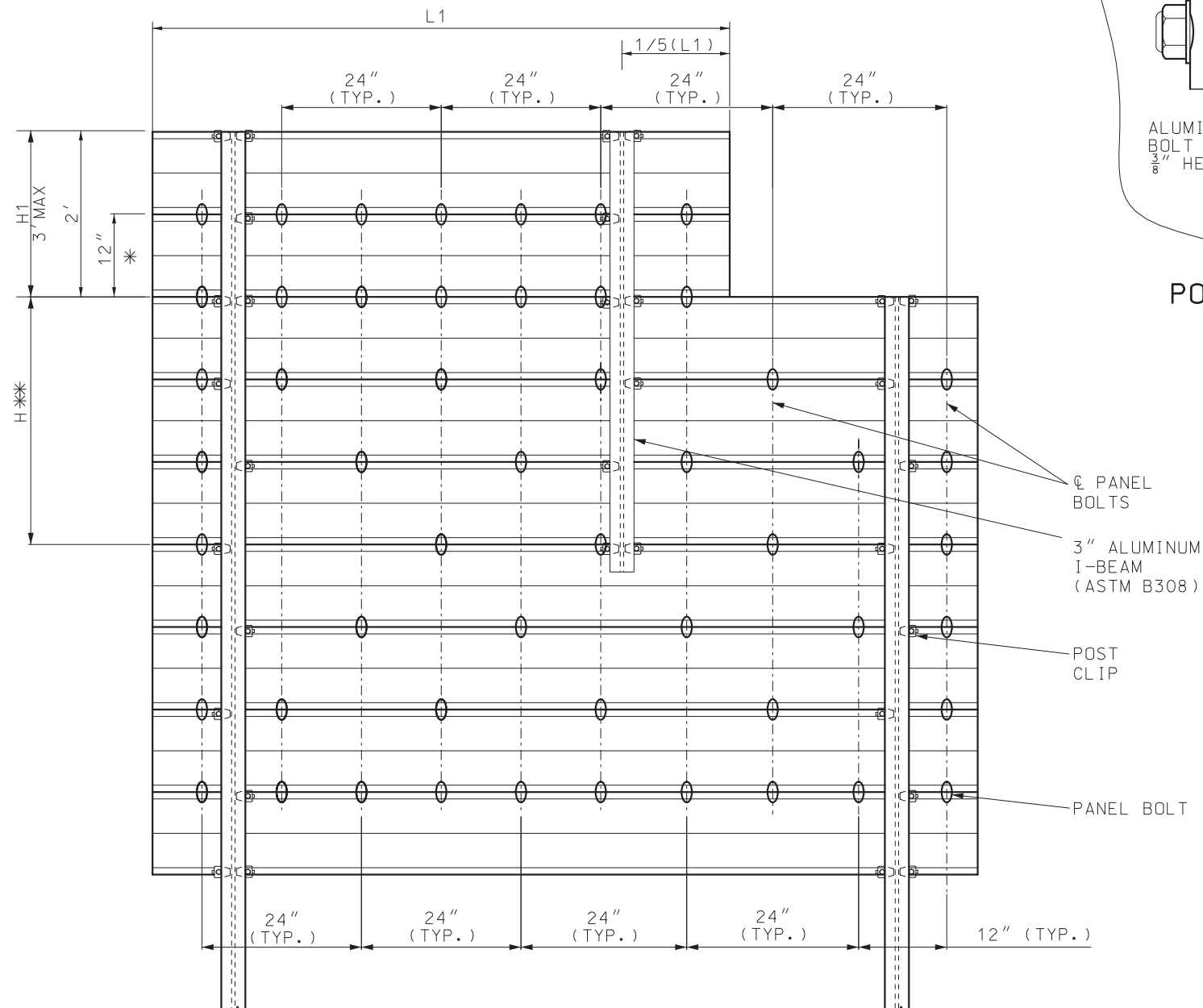
GENERAL NOTES:

FOR GENERAL NOTES, SEE SHEET 1 OF 16.

VERTICAL CLEARANCE FROM THE ROADWAY SHALL BE MET AND INCREASED ONLY TO MEET THE 7'9" MINIMUM VERTICAL CLEARANCE FROM THE GROUND.

POST SIZE IS DETERMINED USING SIGN HEIGHT, SIGN WIDTH AND CLEAR HEIGHT. THE CLEAR HEIGHT IS EQUAL TO THE LENGTH OF THE LONGEST POST MEASURED FROM THE GROUND TO THE BOTTOM OF THE SIGN.

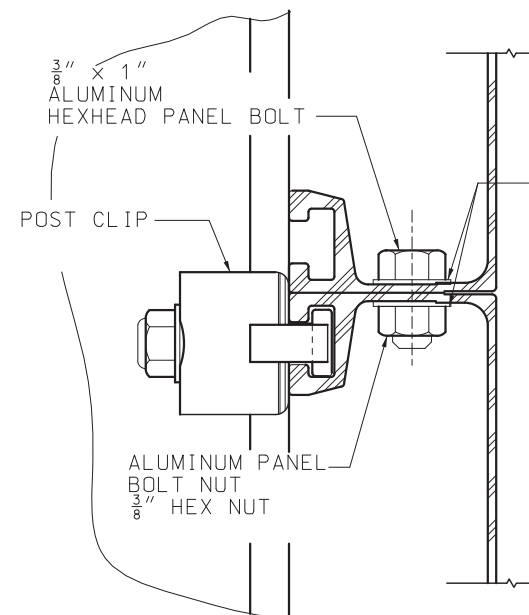
 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)		
	POST INSTALLATION DETAILS TYPICAL SECTION, MOUNTING HEIGHT AND POST SPACING WIDE FLANGE (WF) POSTS	
	DATE EFFECTIVE: 4/1/2023 DATE PREPARED: 1/6/2023	903.03BR



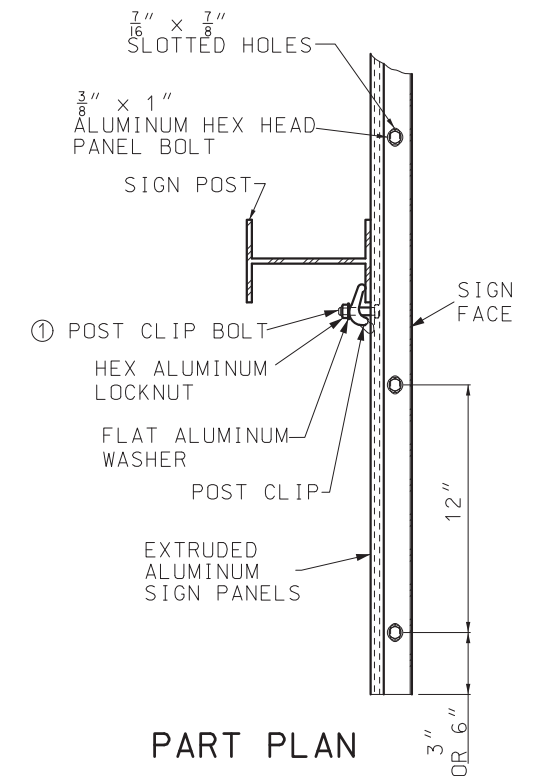
PANEL BOLT LOCATION

* EXTRUDED ALUMINUM PANEL.

** H = H1 + 12". H APPLIES TO SIGNS SUSPENDED ABOVE OR BELOW THE PRIMARY SIGN IF SECONDARY SIGN IS NOT ATTACHED TO THE MAIN SIGN POSTS.



POST CLIP DETAIL





PART PLAN

① SIGNS SHALL BE FIELD ATTACHED TO POSTS WITH POST CLIPS AND BOLTS, SEE POST CLIP DETAIL. THE SHANK OF THE POST CLIP BOLT SHALL FIT TIGHTLY AGAINST THE POST FLANGE AFTER THE LOCKNUTS ARE TORQUED. LOCKNUTS ON THE POST CLIP BOLTS SHALL BE TORQUED TO 225 INCH-POUNDS WHEN USING DRY, CLEAN, UNLUBRICATED THREADS.

NOTES:

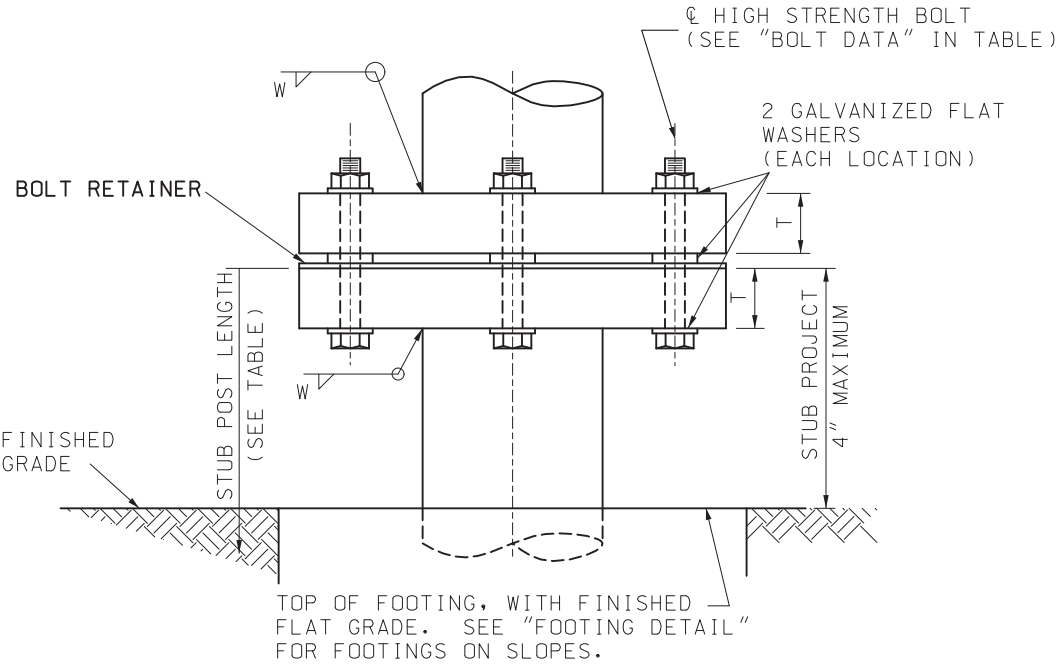
FOR GENERAL NOTES, SEE SHEET 1 OF 16.

FOR EXTRUDED ALUMINUM PANEL AND POST CLIP DETAILS, SEE STANDARD PLANS 903.02 SHEET 4 OF 7.

 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
 <p>STATE OF MISSOURI NICOLE A. KOLB HOOD NUMBER PE-2001018754 PROFESSIONAL ENGINEER</p> <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<p>SIGN MOUNTING DETAILS</p> <p>WIDE FLANGE (WF) POSTS</p>
DATE EFFECTIVE: 4/1/2023 DATE PREPARED: 1/6/2023	903.03BR
SHEET NO. 4 OF 16	

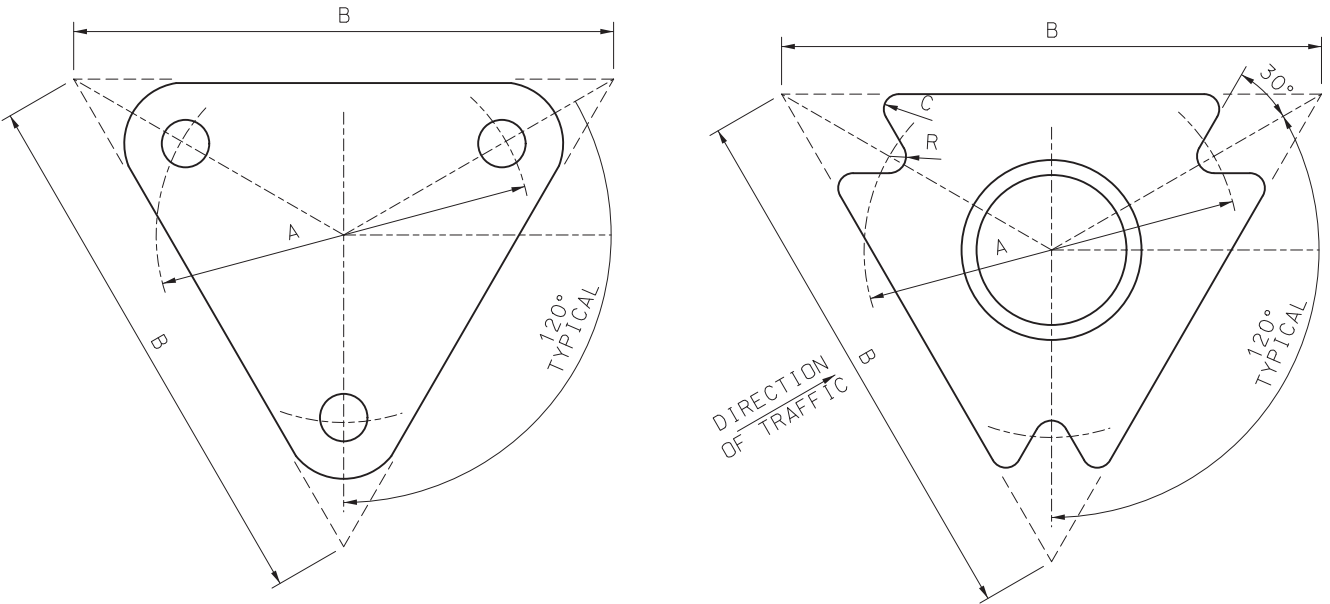
ROUND PIPE POST FOR GROUND MOUNTED SIGNS												
POST	BOLT			WASHER			BASE CONNECTION DATA TABLE (IN.)					
NOM SIZE (IN.-ID)	DIA IN.	LENGTH IN.	TORQUE IN.-LB.	OD IN.	ID IN.	THICK IN.	A	B	C	R	T	W
2 1/2	1/2	3 1/2	140	1 1/16	1 7/32	1/8	6 1/4	9	1/4	9/32	1	1/4
4	5/8	3 3/4	345	1 5/16	1 11/16	1/8	7 3/16	10	1/4	3/8	1	5/16

ROUND PIPE POST AND FOOTING DATA TABLE						
NOM. SIZE (IN.)	WEIGHT		STUB LENGTH	FOOTING		CONCRETE C.Y.
	LBS/FT	LBS/IN		DIA.	DEPTH	
2 1/2	5.79	0.48	4'-3 1/2"	12"	4'-6"	0.13
4	10.79	0.90	5'-3 1/2"	18"	5'-6"	0.36



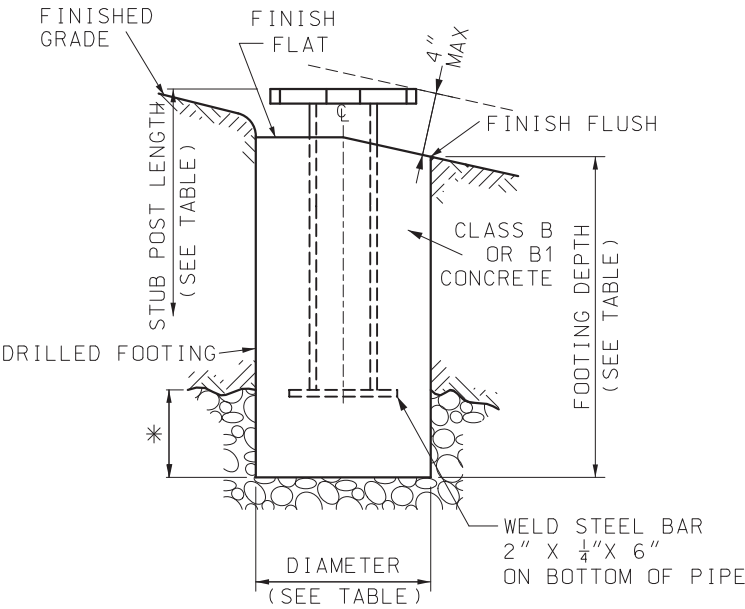
ELEVATION
(STEEL PIPE POST BASE CONNECTION)

MULTI-DIRECTION SLIP BASE



BOLT RETAINER

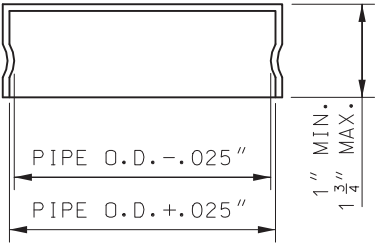
SHEET METAL BOLT RETAINER CUT FROM 30 GAUGE GALVANIZED SHEET METAL. PLACE BETWEEN BASE PLATES. SIZE VARIES TO FIT PLATE. BOLT HOLES SHALL BE 1/16" LARGER THAN REQUIRED BOLT SIZE.



* 2' MAXIMUM IN ROCK FOR 2" DIA. PIPE;
3' MAXIMUM IN ROCK FOR 4" DIA. PIPE.


FOOTING DETAIL

ROLLED CRIMP TO ENGAGE PIPE O.D.




FRICTION CAP

NOTE:
FOR GENERAL NOTES, SEE SHEET 1 OF 16.
FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE STANDARD PLANS SHEET 10 OF 16.



MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
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STATE OF MISSOURI
NICOLE A. KOLB HOOD
NUMBER
PE-2001018754
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

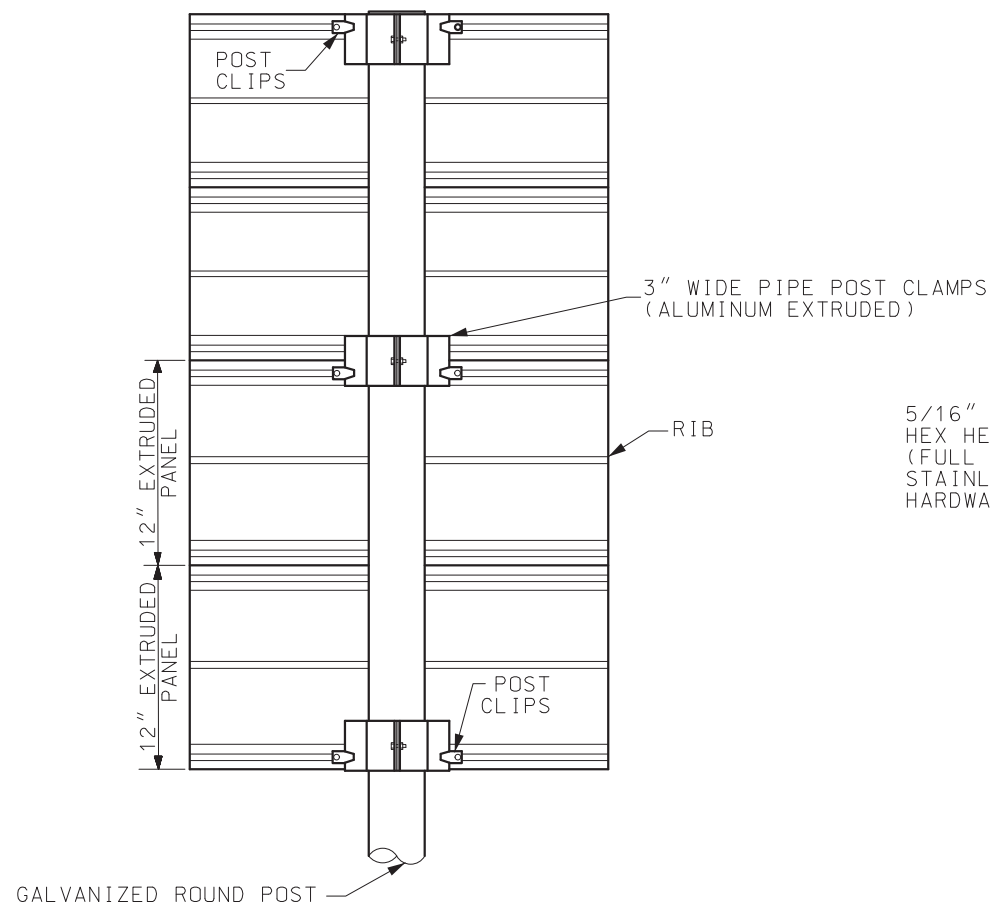
POST INSTALLATION
DETAILS

PIPE POST

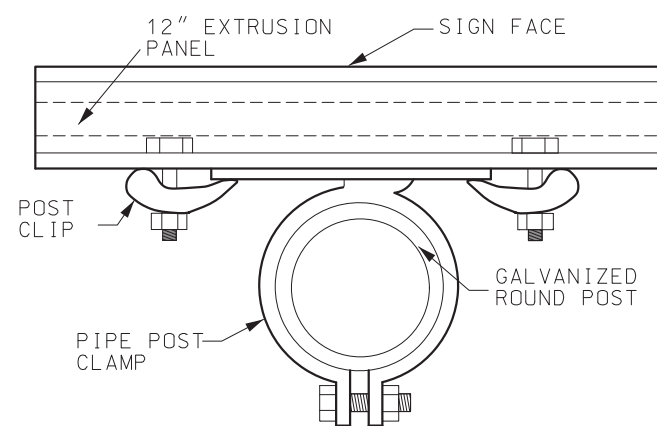
DATE EFFECTIVE: 4/1/2023
DATE PREPARED: 1/6/2023

903.03BR

SHEET NO.
5 OF 16

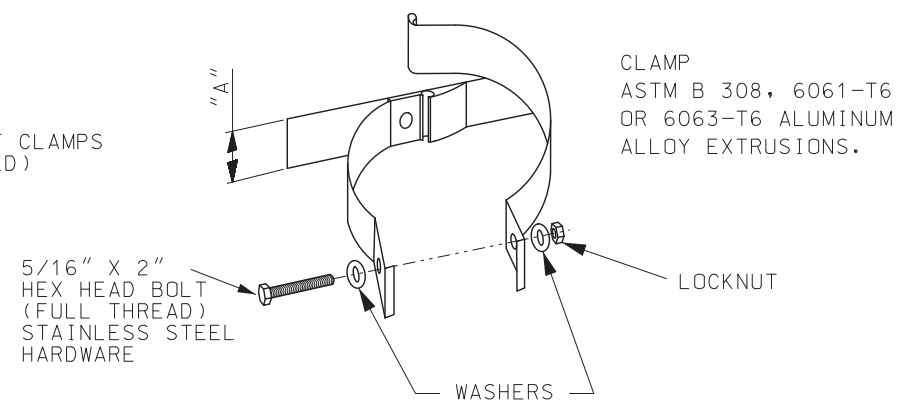


PROFILE VIEW



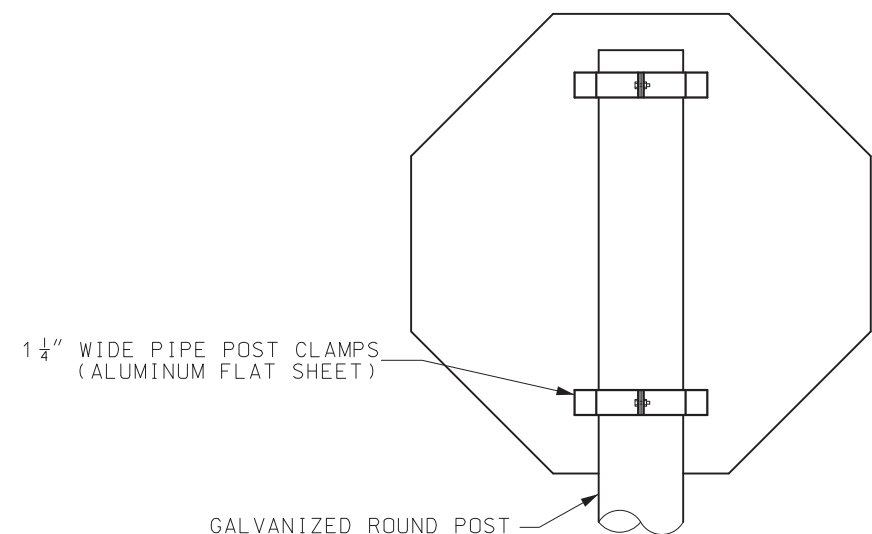
PLAN VIEW

MOUNTING DETAILS FOR EXTRUDED PANELS
ON PIPE POST

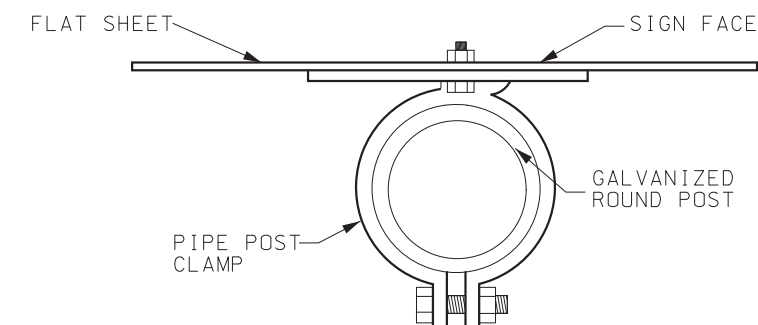


CLAMP TYPE SIGN SUPPORT
FOR PIPE POST

WIDTH OF PIPE POST CLAMP	
SIGN TYPE	MINIMUM "A"
FLAT	1 1/4"
STRUCTURAL	3"



PROFILE VIEW



PLAN VIEW

MOUNTING DETAILS
FOR FLAT SHEET ON PIPE POST

NOTES:

FOR GENERAL NOTES, SHEET 1 OF 16.

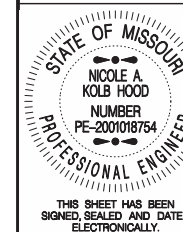
FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE
SHEET 10 OF 16.

FOR DETAILS OF EXTRUDED ALUMINUM PANEL AND
POST CLIP DETAILS, SEE STANDARD PLANS 903.02
SHEET 4 OF 7.



MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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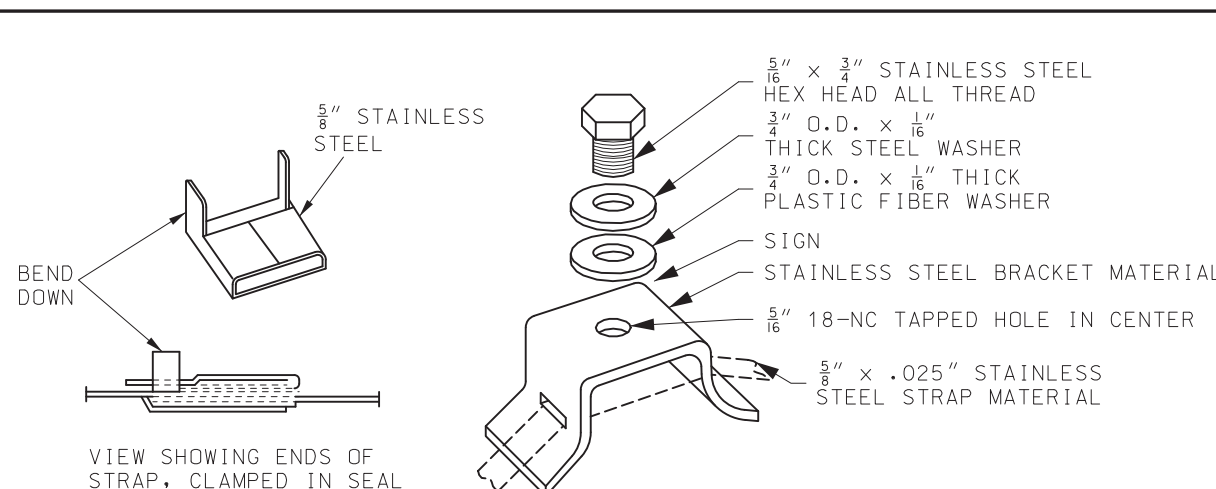


DATE EFFECTIVE: 4/1/2023
DATE PREPARED: 1/6/2023

903.03BR

SHEET NO.
6 OF 16

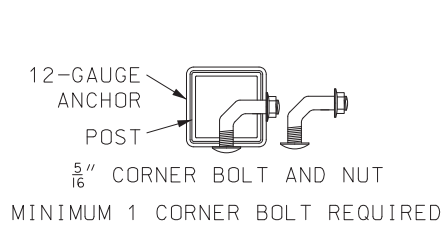
SIGN MOUNTING DETAILS
PIPE POST



STRAP SEAL

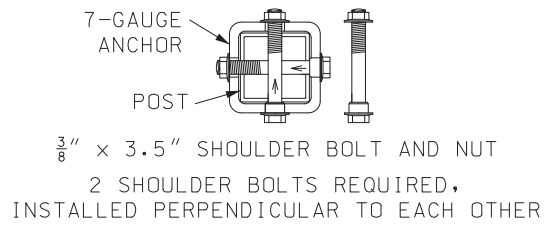
FLARED LEG SIGN BRACKET

MOUNTING DETAILS FOR FLAT SHEET SIGNS
ON ROUND STRUCTURES >4" PIPE POST

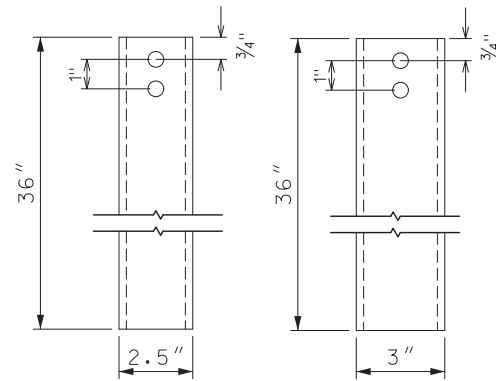


12-GAUGE ANCHOR

ANCHOR BOLT DETAIL



7-GAUGE ANCHOR



FOR 2" POST FOR 2.5" POST

BOLT HOLE DIAMETER - $1\frac{7}{32}$ "
2 PER SIDE ON ALL 4 SIDES

7-GAUGE ANCHOR
FABRICATION DETAIL

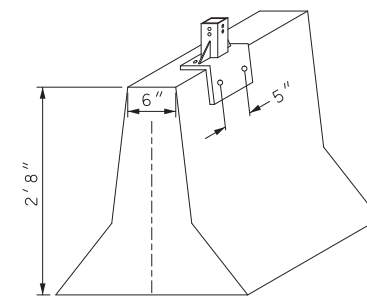
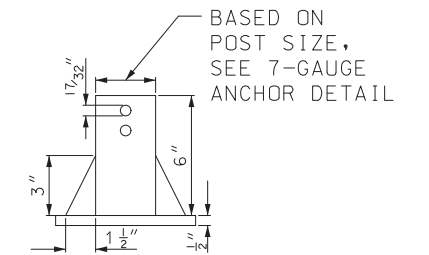
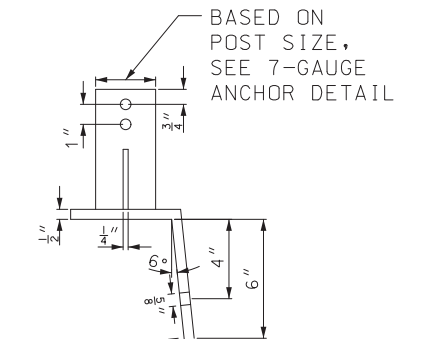
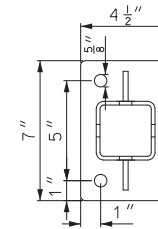
ANCHOR TUBE SHALL BE 7-GAUGE

$1\frac{1}{2}$ " X $4\frac{1}{2}$ " GALVANIZED MECHANICAL
FASTENERS SHALL BE USED TO ATTACH
ANCHOR TO BARRIER WALL

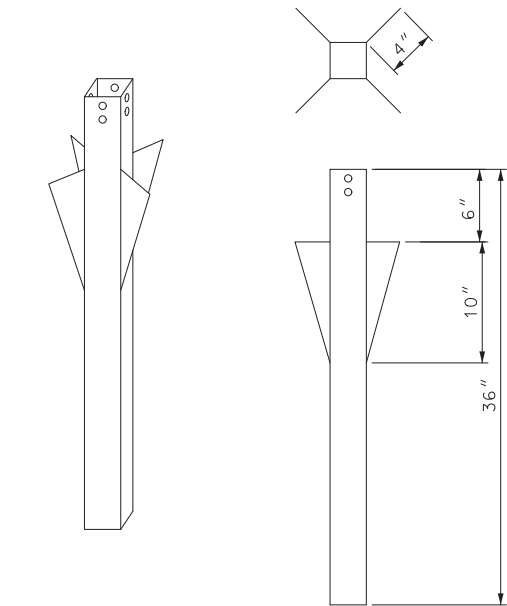
SHOULDER BOLTS SHALL BE USED
TO ATTACH PSST POST TO ANCHOR
(SEE ANCHOR BOLT DETAIL)

ANCHOR SHALL BE HOT DIPPED GALVANIZED
AFTER FABRICATION PER SECTION 1080

FURNISHING AND INSTALLATION
OF BARRIER WALL POST ANCHOR
FOR PSST SHALL BE PAID PER
EACH AS CONCRETE POST ANCHOR

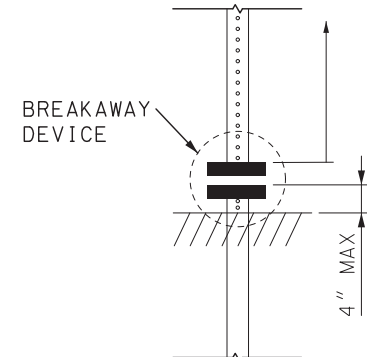


BARRIER WALL MOUNTING DETAIL



12-GAUGE (NOT SHOWN) OR 7-GAUGE

OMNIDIRECTIONAL/STABILIZED
DRIVEN ANCHOR DETAIL

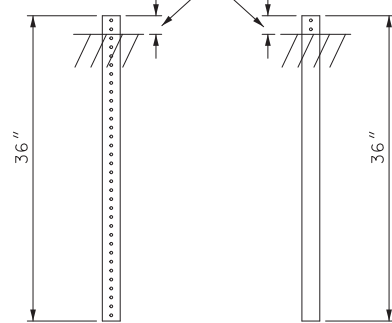


2.5" + 2.25" POST COMPRISED OF
2.5" PSST WITH 6-FT INSERT OF
2.25" PSST THAT RUNS UP FROM
THE BREAKAWAY DEVICE

THE BREAKAWAY DEVICE PORTION
FIXED TO THE GROUND ANCHOR
SHALL BE NO HIGHER THAN
4" ABOVE THE FINISHED GRADE

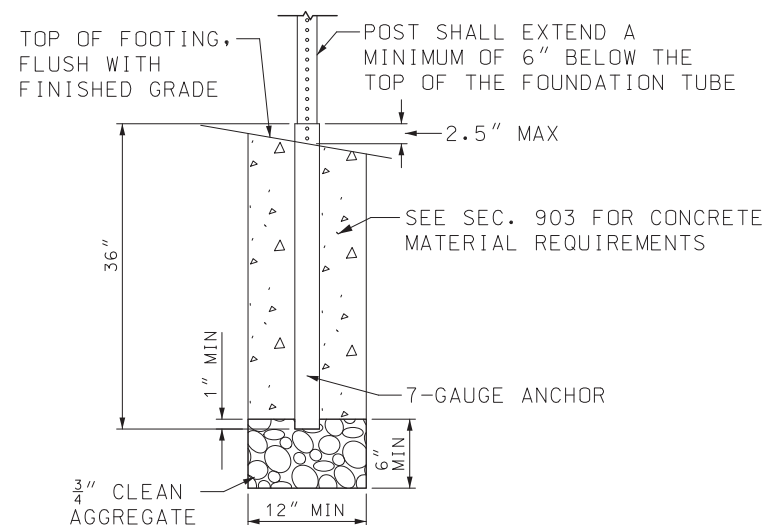
BREAKAWAY AND 2.5" + 2.25" POST DETAIL

THE ANCHOR SHOULD BE A MAXIMUM
OF 2.5" ABOVE THE GROUND LEVEL

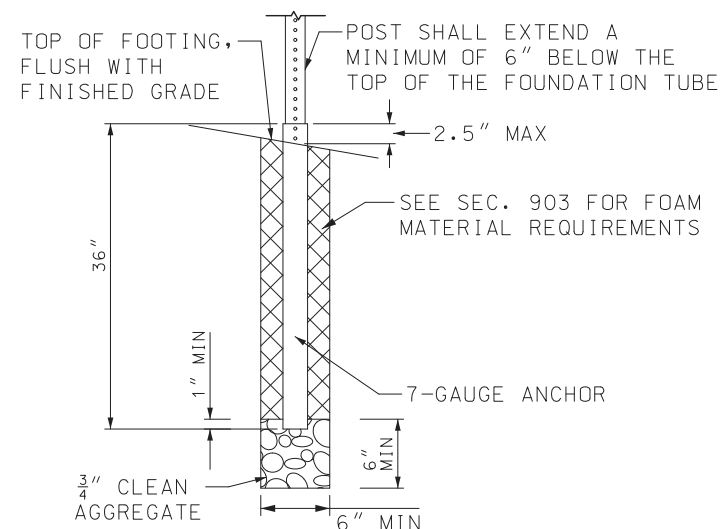


12-GAUGE 7-GAUGE

DRIVEN ANCHOR
INSTALLATION DETAIL



CONCRETE FOOTING DETAIL




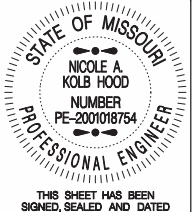
POLYURETHANE FOAM FOOTING DETAIL

NOTES:

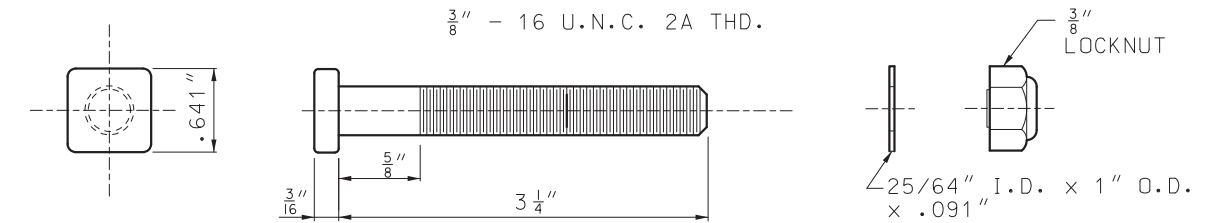
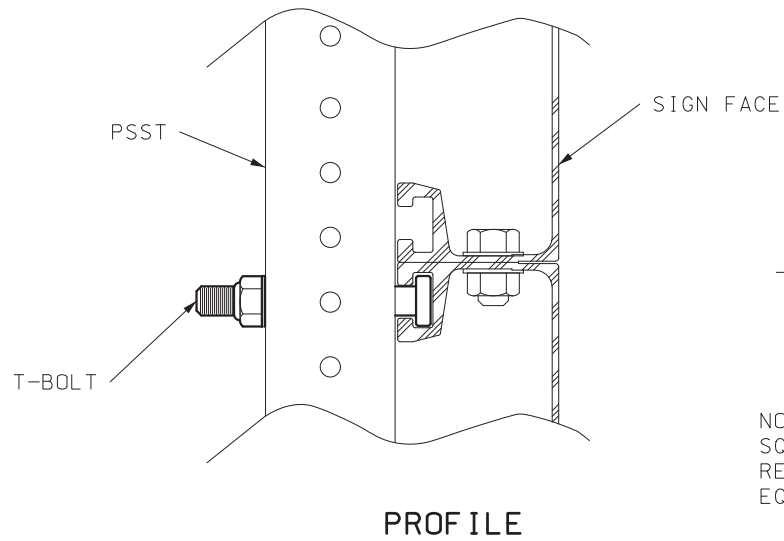
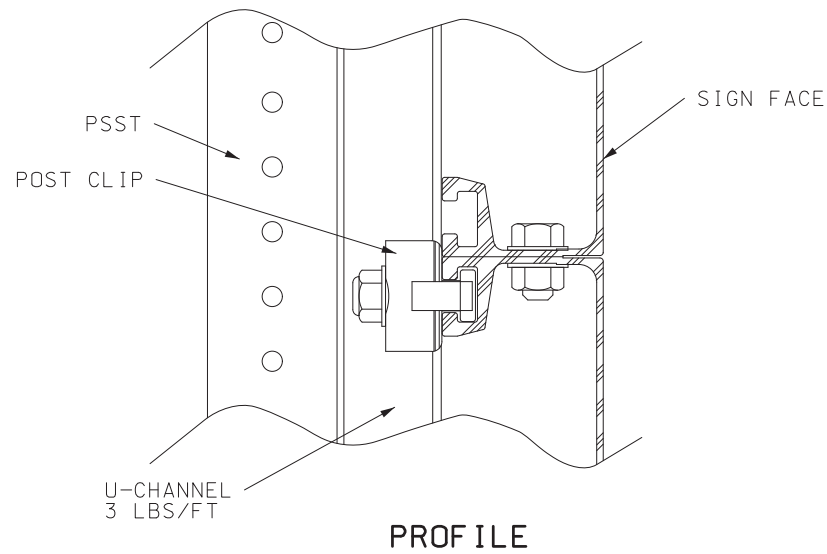
FOR GENERAL NOTES, SEE SHEET 1 OF 16.

FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE
SHEET 10 OF 16.

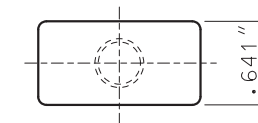
ALL BREAKAWAY DEVICES USED ON AN INSTALLATION
SHALL BE CERTIFIED NCHRP 350 COMPLIANT.

 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)		
 STATE OF MISSOURI NICOLE A. KOLB HOOD NUMBER PE-2001018754 PROFESSIONAL ENGINEER THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.	POST INSTALLATION DETAILS PERFORATED SQUARE STEEL TUBE (PSST)	
DATE EFFECTIVE: 4/1/2023 DATE PREPARED: 1/6/2023	903.03BR	SHEET NO. 7 OF 16

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



NOTE:
SQUARE BOLT HEAD SHOWN MAY BE REPLACED WITH
RECTANGULAR BOLT HEAD WITH THE NARROW DIMENSION
EQUAL TO .641".

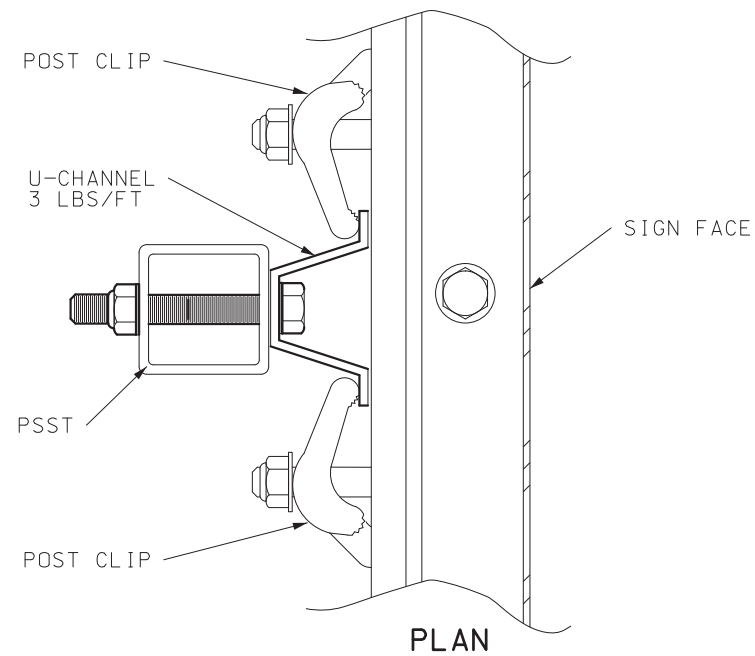


T-BOLT DETAIL

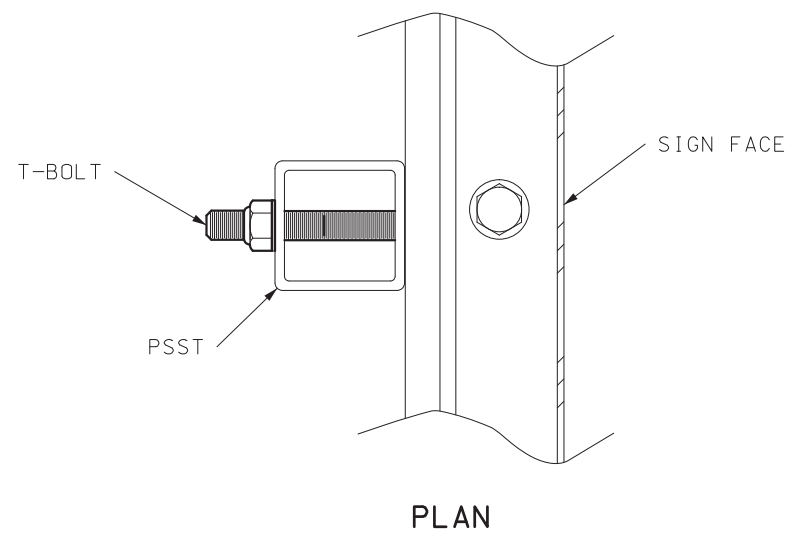
BOLT - $1\frac{3}{4}$ x $\frac{3}{8}$ ALUMINUM
BOLT - $3\frac{1}{4}$ x $\frac{3}{8}$ ALUMINUM
HEX LOCKNUT - $\frac{3}{8}$ " ALUMINUM
WASHER - ALUMINUM

NOTES:

- ALUMINUM BOLTS SHALL BE ASTM B 211, 2024-T4 OR 6061-T6
- ALUMINUM FLAT WASHERS SHALL BE ASTM B 209, ALCLAD 2024-T4 OR 2024-T4
- ALUMINUM LOCK NUTS (NYLON INSERT) SHALL BE ASTM B 211 OR 2017-T4



POST CLIP METHOD



T-BOLT METHOD

EXTRUDED PANEL MOUNTING DETAIL

NUMBER OF BOLTS TO ATTACH STEEL CHANNEL TO PSST POST	
SIGN HEIGHT	NO. OF BOLTS PER PSST POST USED
1'	2
2'	3
3'	4
4'	5
5'	6
6'	7
7'	8

NOTES:

FOR THE GENERAL NOTES, SEE SHEET 1 OF 16.

FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE
SHEET 10 OF 16.

FOR POST CLIP DETAILS, SEE STANDARD PLANS
903.02 SHEET 4 OF 7.

ALTERNATE PSST MOUNTING HARDWARE USE SHALL
BE ON APPROVED LIST.



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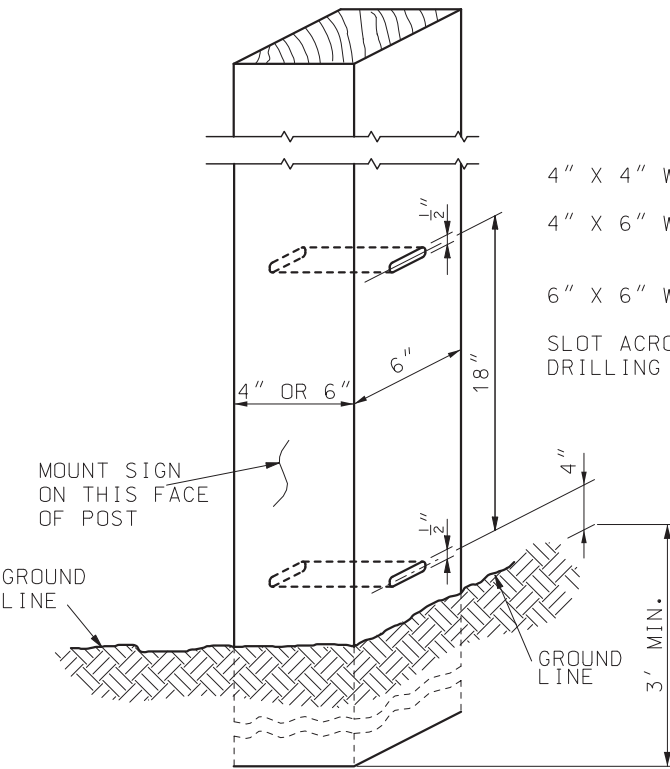
THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

SIGN MOUNTING DETAILS PERFORATED SQUARE STEEL TUBE (PSST)

DATE EFFECTIVE: 4/1/2023
DATE PREPARED: 1/6/2023

903.03BR

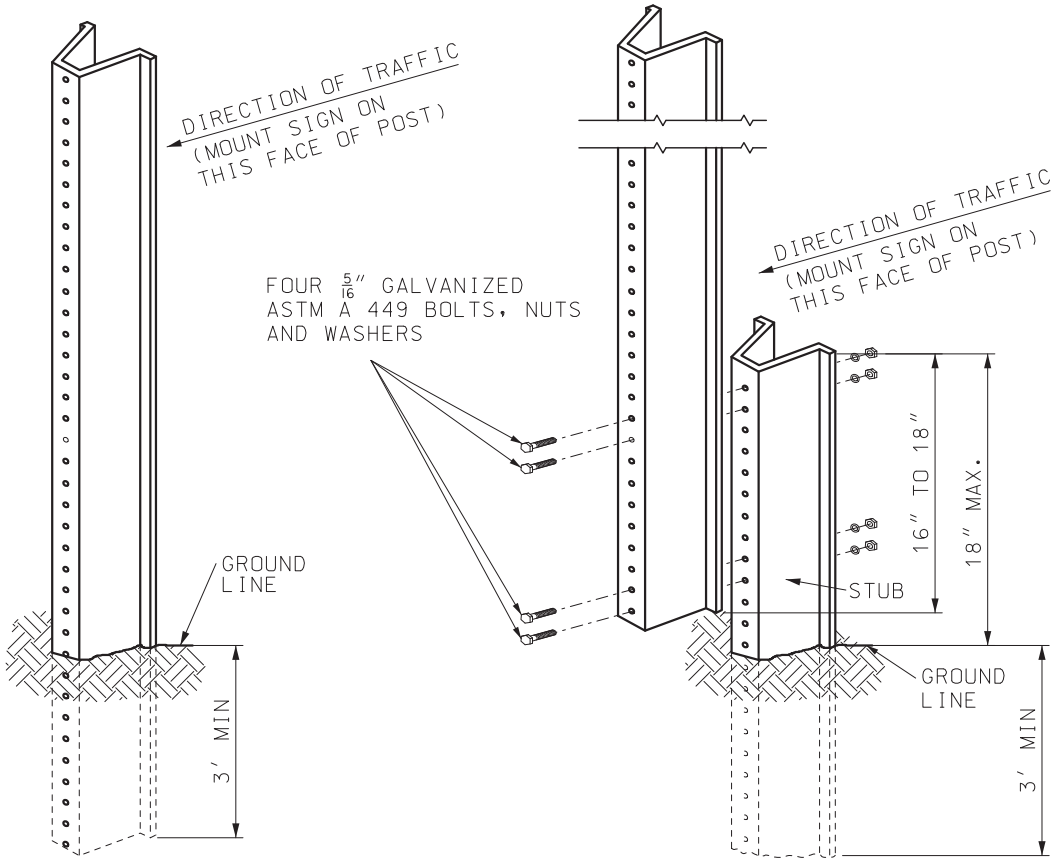
SHEET NO.
8 OF 16



WOOD POST DETAIL

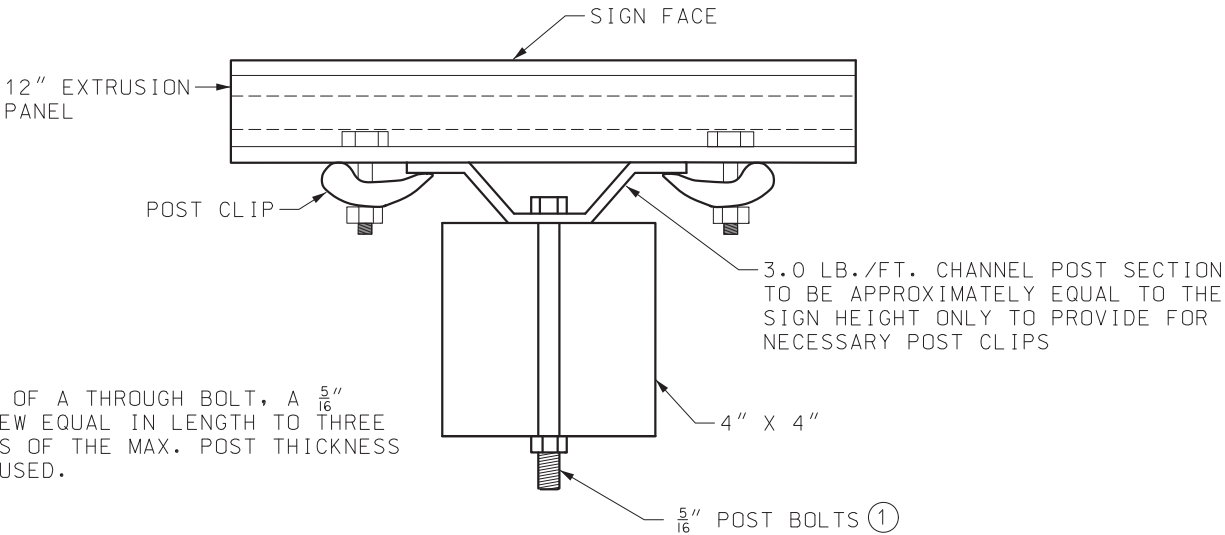
4" X 4" WOOD POST - NO SLOTS OR HOLES REQUIRED
4" X 6" WOOD POST - 1 1/2" X 1/2" SLOT ON 6" SIDE OR 1 1/2" DIA. HOLE ON 6" SIDE
6" X 6" WOOD POST - 2" X 1/2" SLOT OR 2" DIA. HOLE
SLOT ACROSS NEUTRAL AXIS FORMED BY SUCCESSIVE DRILLING WITH 1/2" BIT.

NUMBER OF BOLTS TO ATTACH STEEL CHANNEL TO WOOD POST	
SIGN HEIGHT	NO. OF BOLTS PER WOOD POST USED
1'	2
2'	3
3'	4
4'	5
5'	6
6'	7
7'	8



U-CHANNEL POST-STUB DETAIL

U-CHANNEL POST DETAIL
OPTIONAL INSTALLATION



PLAN VIEW
MOUNTING DETAILS FOR EXTRUDED
PANELS ON WOOD POST

① IN LIEU OF A THROUGH BOLT, A 5/16" LAG SCREW EQUAL IN LENGTH TO THREE QUARTERS OF THE MAX. POST THICKNESS MAY BE USED.

NOTES:
FOR GENERAL NOTES, SEE SHEET 1 OF 16.
ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 3 FEET INTO THE GROUND.
U-CHANNEL POST-STUB OVERLAP SHALL BE POSITIONED ENTIRELY BETWEEN GROUND LINE AND 18" ABOVE GROUND LINE.
FOR POST SIZING SEE ENGINEERING POLICY GUIDE.
FOR POST CLIP DETAILS, SEE STANDARD PLANS 903.02 SHEET 4 OF 7.
FOR MOUNTING HEIGHT AND OFFSET DETAILS, SEE SHEET 10 OF 16.

SIGN AREA (SQ.FT.)	POST TYPE	
	U-CHANNEL	WOOD
≤ 10	1 - 3.0 LB./FT.*	1 - 4" X 4"*
> 10 ≤ 16	2 - 3.0 LB./FT.	2 - 4" X 4" 1 - 4" X 6"*
> 16 ≤ 24	2 - 3.0 LB./FT.	2 - 4" X 6"
> 24 ≤ 30	3 - 3.0 LB./FT.	2 - 4" X 6"
> 30 ≤ 50	N/A	2 - 6" X 6"

* SIGNS GREATER THAN 4 FEET IN WIDTH REQUIRE TWO POSTS, EXCEPT DIAMOND SHAPED WARNING SIGNS, YIELD SIGNS, AND ONE WAY SIGNS.

POST SIZE REQUIREMENTS

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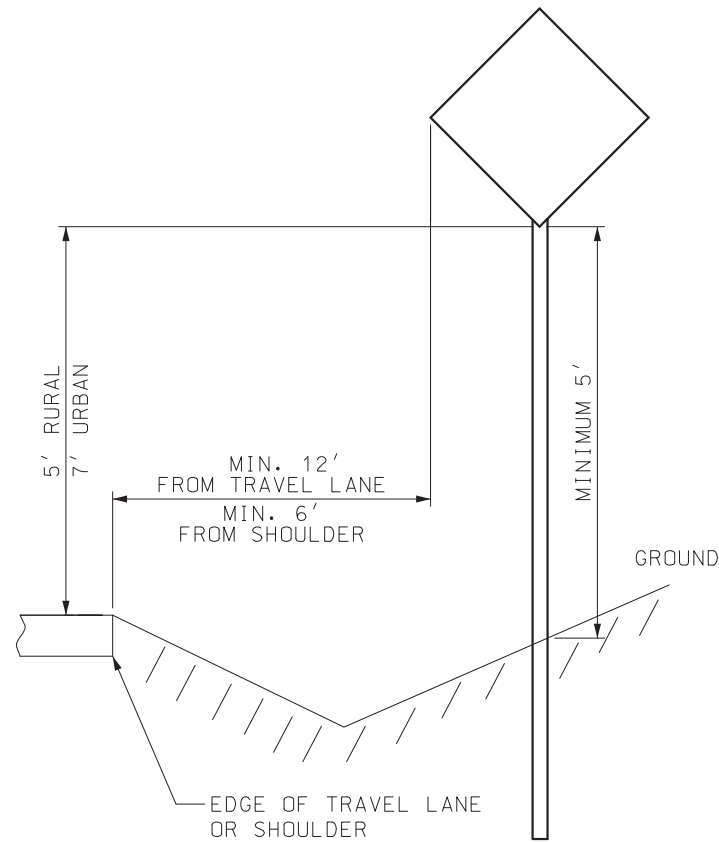
SIGN MOUNTING DETAILS
WOOD AND
U-CHANNEL POST

DATE EFFECTIVE: 4/1/2023
DATE PREPARED: 1/6/2023

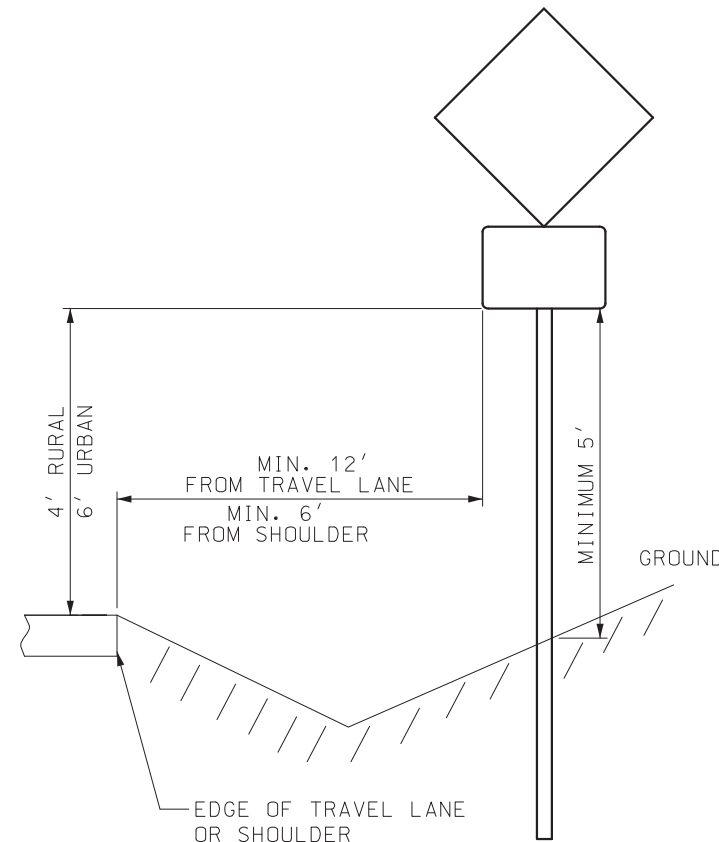
903.03BR

SHEET NO.
9 OF 16

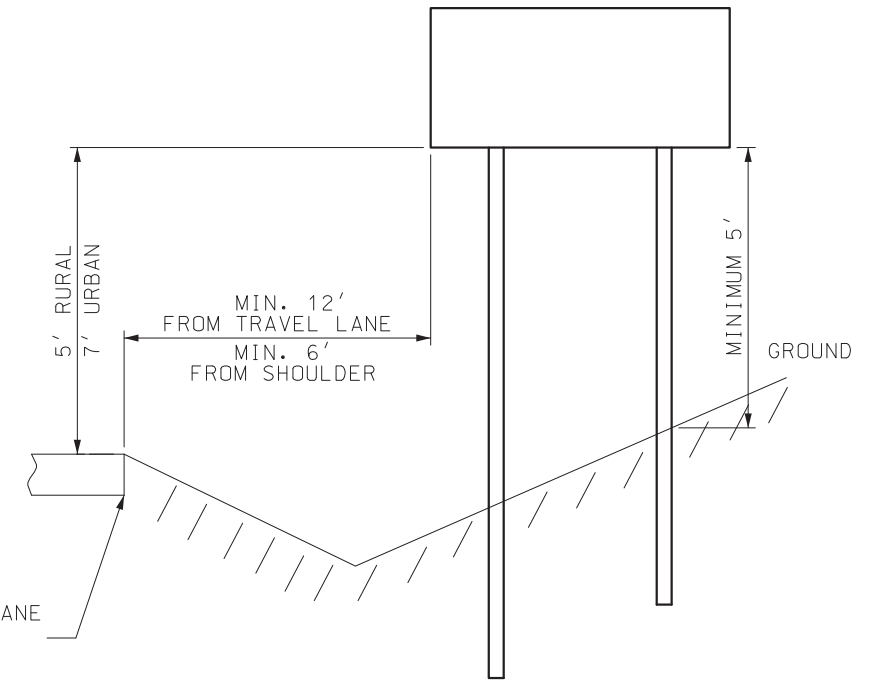
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



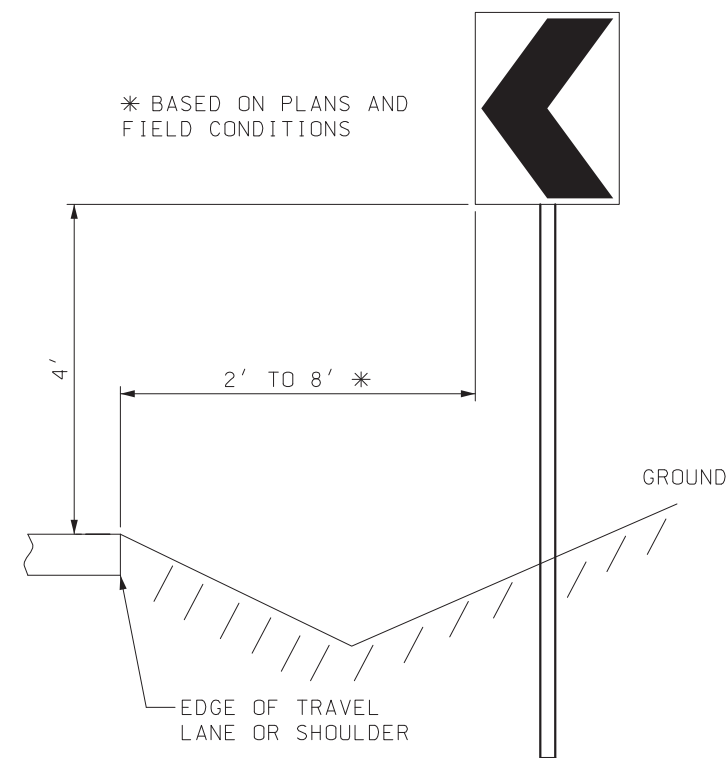
ONE POST - SINGLE SIGN



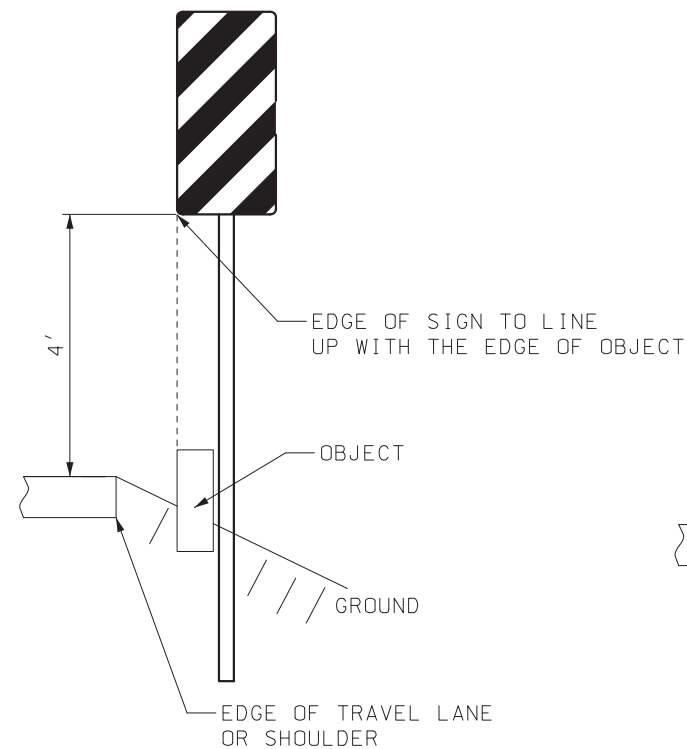
ONE POST - SINGLE SIGN WITH SUPPLEMENTAL PLAGUE



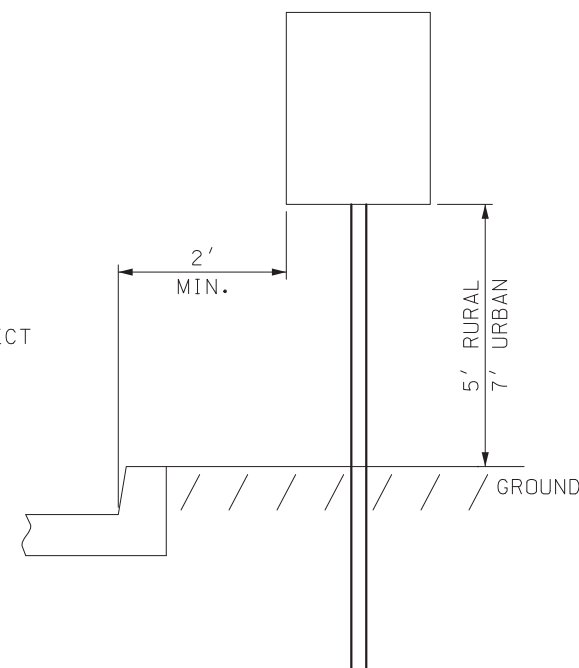
TWO POST



CHEVRON SIGN



TYPE III OBJECT MARKER



ADJACENT TO CURB



GENERAL NOTES:

SIGN MOUNTING BOLTS SHALL BE INSTALLED WITH A NYLON WASHER AGAINST THE SIGN FACE WITH A STEEL WASHER BETWEEN THE NYLON WASHER AND BOLT HEAD.

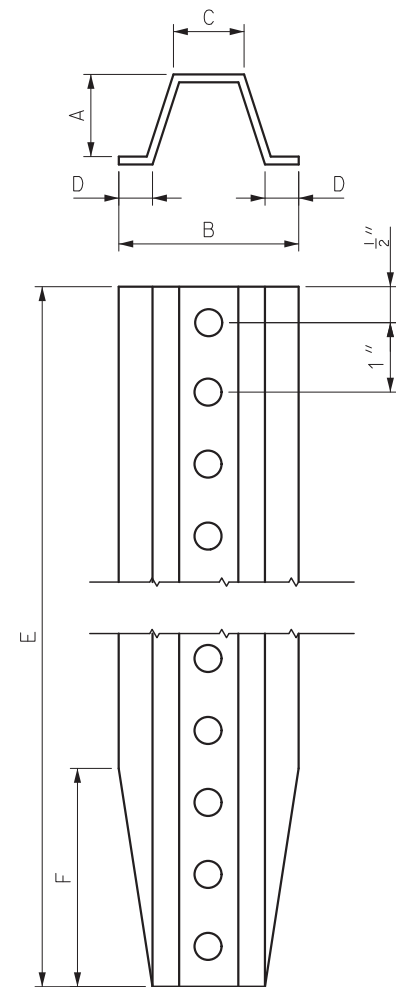
A LOCKNUT SHALL BE USED TO FASTEN THE SIGN TO THE POST.

VERTICAL CLEARANCE FROM THE ROADWAY SHALL BE MET AND INCREASED ONLY TO MEET THE 5' MINIMUM VERTICAL CLEARANCE FROM THE GROUND.

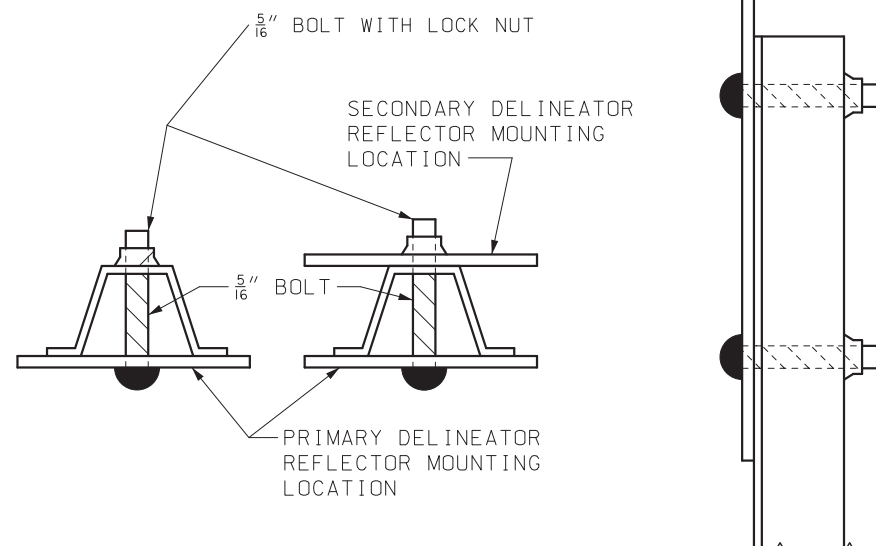
HORIZONTAL OFFSET MAY BE ADJUSTED BASED ON FIELD CONDITIONS.

 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	SIGN MOUNTING DETAILS MOUNTING HEIGHT & OFFSET PIPE POSTS, PSST, WOOD & U-CHANNEL POSTS
DATE EFFECTIVE: 4/1/2023 DATE PREPARED: 1/6/2023	903.03BR
SHEET NO. 10 OF 16	

MOUNTING HEIGHT DETAILS



GROUND MOUNT
U-CHANNEL



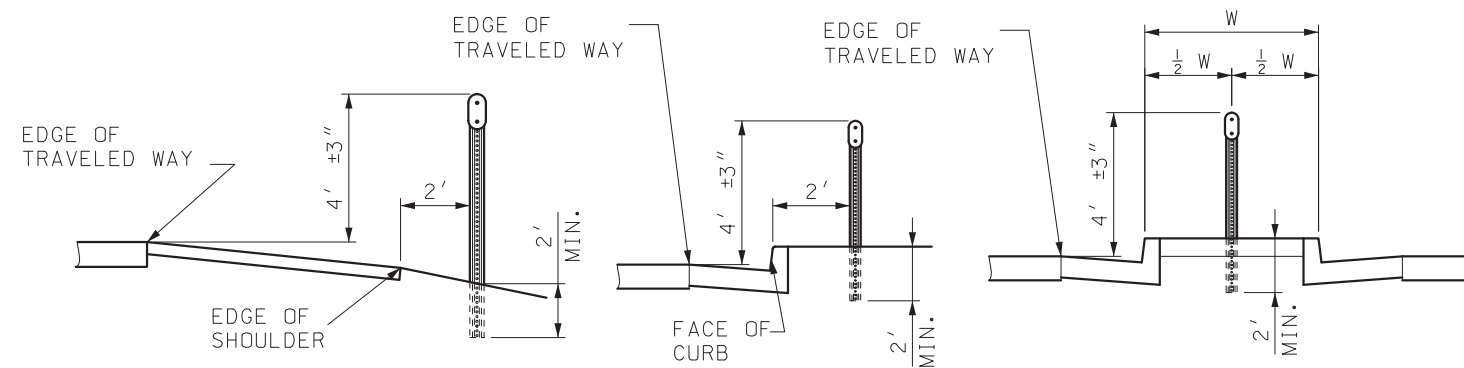
HOLE PUNCHING TO EQUAL $\frac{3}{8}$ " DIAMETER HOLES, ONE INCH CENTER TO CENTER, BEGINNING ONE-HALF INCH FROM THE END AND CONTINUING THE ENTIRE LENGTH OF THE POST.

CHANNEL POST DELINEATOR							
LIMITS	LBS/FT (2)	DIMENSIONS - INCHES					
		A	B	C	D	E	F
NOMINAL	1.12	1	$2\frac{1}{4}$	$\frac{7}{8}$	$\frac{3}{8}$	84	1
TOLERANCE	$\pm 5\%$	$\pm \frac{1}{8}$	$\pm \frac{1}{8}$	$\pm \frac{1}{8}$	$\pm \frac{1}{8}$	± 1	$\pm \frac{1}{4}$

(2) WEIGHT BEFORE GALVANIZING OR PUNCHING.

THE CHANNEL POST FOR DELINEATORS SHALL BE MANUFACTURED FROM DUCTILE ASTM A 36 OR ASTM A 1011 GR 60.

CHANNEL POST DELINEATOR AND FASTENER DETAILS

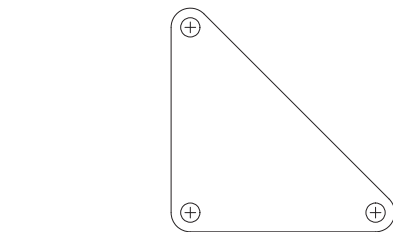


SHOULDER MOUNTED

OUTSIDE
BARRIER CURB

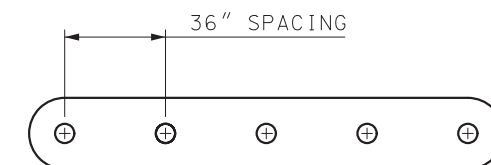
NARROW
PAVED MEDIAN

CHANNEL POST DELINEATOR MOUNTING DETAILS

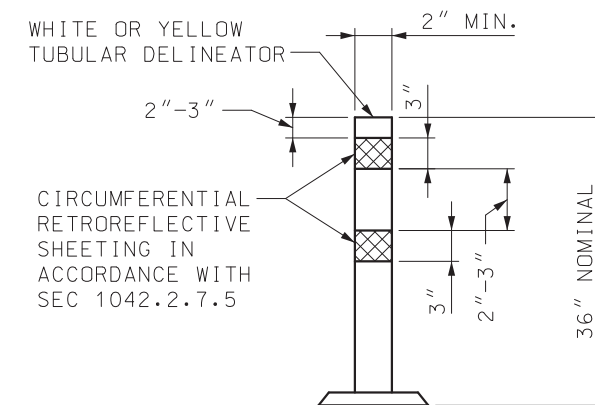


DELINEATOR PLACEMENT LOCATED
AT THE RADIUS POINTS

TUBULAR DELINEATOR PLACEMENT FOR ISLANDS



DELINEATOR PLACEMENT FOR MEDIAN STRIPS



36 INCH SURFACE-MOUNT DELINEATOR POST

TUBULAR DELINEATOR DETAIL

COLOR OF TUBULAR DELINEATOR AND REFLECTIVE SHEETING SHALL MATCH THE COLOR OF THE CLOSEST PAVEMENT MARKING OR CURB MARKING.

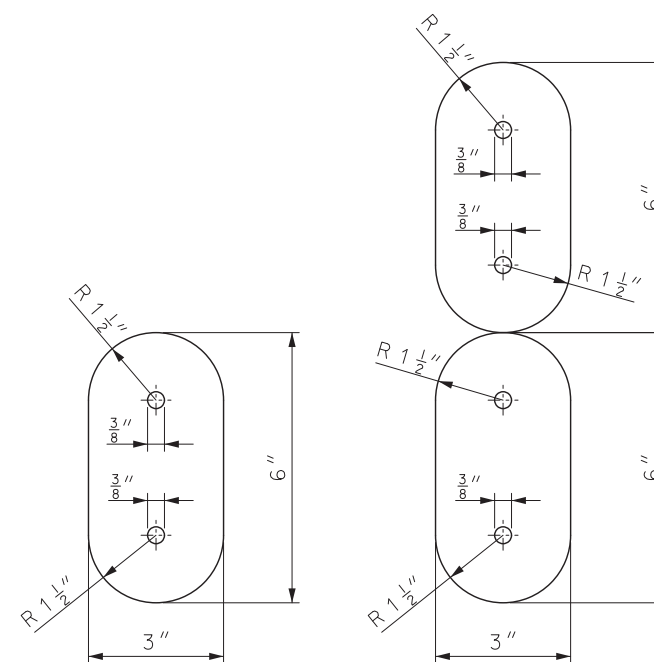
TUBULAR DELINEATOR SHAPE MAY BE ROUND OR T-SHAPED. TUBULAR DELINEATOR SHALL BE PERMANENTLY MOUNTED TO THE PAVEMENT SURFACE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

NOTES:

RETROREFLECTIVE YELLOW, WHITE OR RED SHEETING IN ACCORDANCE WITH SEC 1042.2.7.5 SHALL BE APPLIED TO ONLY ONE SIDE OF THE DELINEATOR REFLECTOR BODY.

THE COLOR OF THE SHEETING SHALL CORRESPOND TO THE CLOSEST ADJACENT PAVEMENT MARKING.



3" X 6" DELINEATOR BODY SHALL BE MADE FROM 0.080 INCH ALUMINUM.

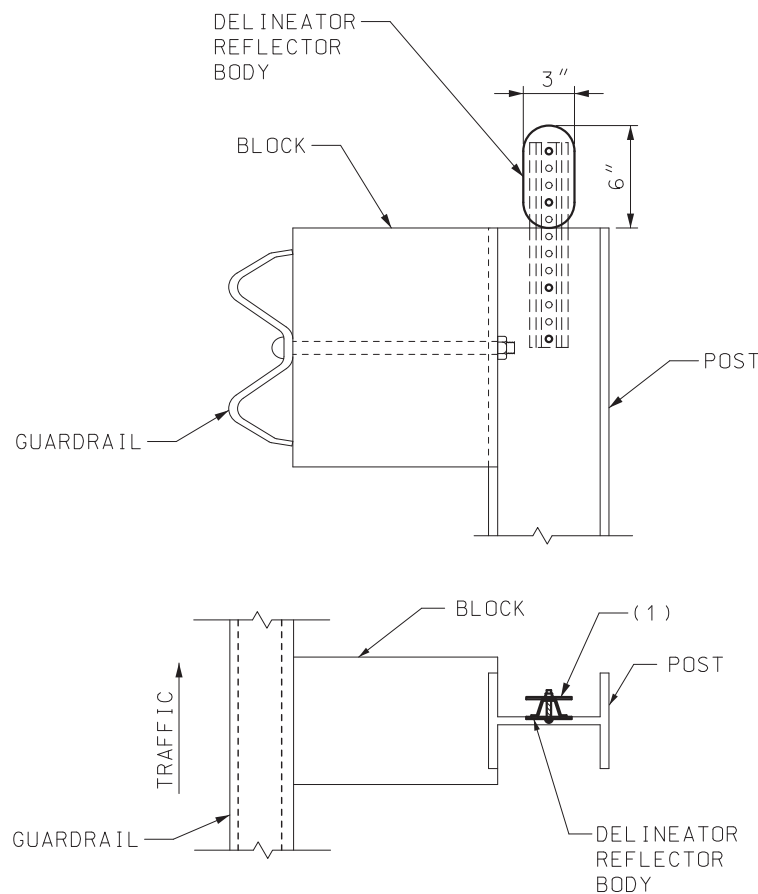


SINGLE

DOUBLE STACKED

CHANNEL POST DELINEATOR REFLECTOR

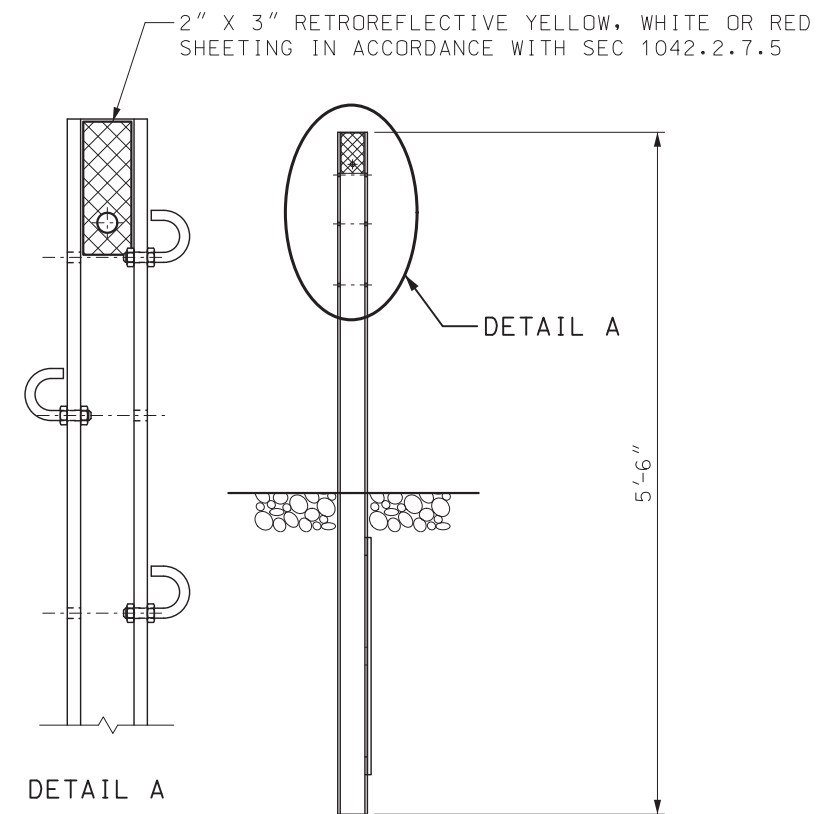
 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)		
 STATE OF MISSOURI NICOLE A. KOLB HOOD NUMBER PE-2001018754 PROFESSIONAL ENGINEER THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.	SIGN MOUNTING DETAILS DELINEATORS	
DATE EFFECTIVE: 7/1/2023 DATE PREPARED: 4/4/2023	903.03BR	SHEET NO. 11 OF 16



DELINEATORS ON GUARDRAIL

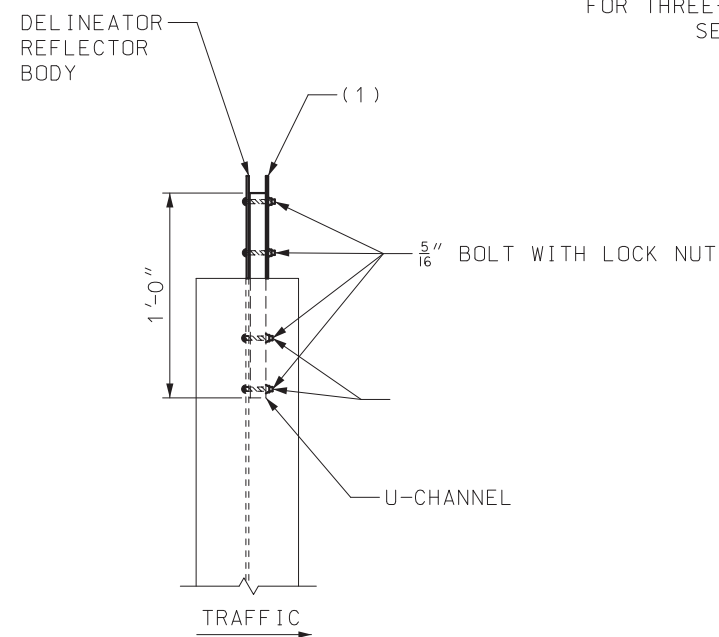
FOR GUARDRAIL DETAILS, SEE STD PLANS 606.00 AND 606.50.

(1) A SECONDARY DELINEATOR WITH RED SHEETING SHALL BE ATTACHED TO THE BACK SIDE OF THE CHANNEL WHEN THE DELINEATION IS PLACED ALONG AN INTERCHANGE RAMP AND COULD BE VIEWED BY WRONG WAY TRAFFIC.



DELINEATORS ON THREE-STRAND MEDIAN GUARD CABLE

FOR THREE-STRAND GUARD CABLE DETAILS SEE STD PLANS 606.41.

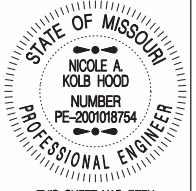


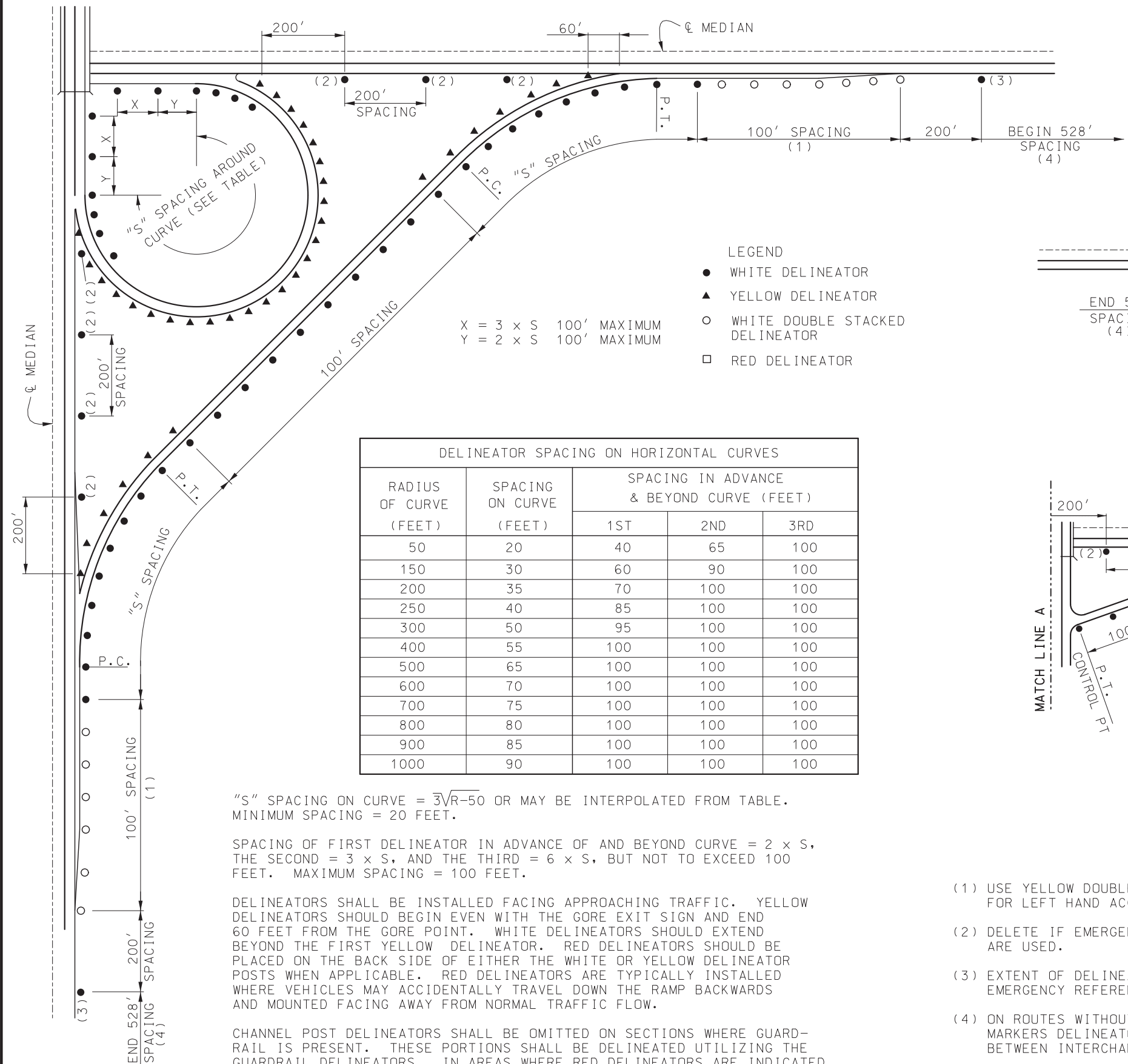
NOTES:

FOR GENERAL NOTES, SEE SHEET 1 OF 16.

RETROREFLECTIVE YELLOW, WHITE OR RED SHEETING IN ACCORDANCE WITH SEC 1042.2.7.5 SHALL BE APPLIED TO ONLY ONE SIDE OF THE DELINEATOR REFLECTOR BODY.

THE COLOR OF THE SHEETING SHALL CORRESPOND TO THE CLOSEST ADJACENT PAVEMENT MARKING.

 <p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</p> <p>105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)</p>	
 <p>STATE OF MISSOURI NICOLE A. KOLB HOOD NUMBER PE-2001018754 PROFESSIONAL ENGINEER</p> <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<p>SIGN MOUNTING DETAILS GUARDRAIL AND GUARDCABLE DELINEATORS</p>
<p>DATE EFFECTIVE: 7/1/2023</p> <p>DATE PREPARED: 4/4/2023</p>	<p>903.03BR</p>
<p>SHEET NO. 13 OF 16</p>	



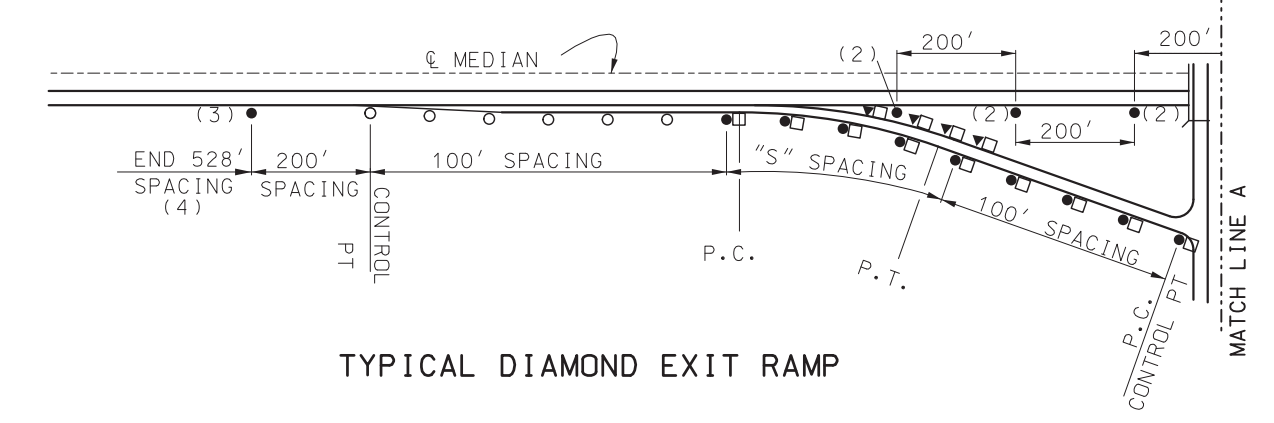
"S" SPACING ON CURVE = $\sqrt[3]{R-50}$ OR MAY BE INTERPOLATED FROM TABLE.
 MINIMUM SPACING = 20 FEET.

SPACING OF FIRST DELINEATOR IN ADVANCE OF AND BEYOND CURVE = $2 \times S$, THE SECOND = $3 \times S$, AND THE THIRD = $6 \times S$, BUT NOT TO EXCEED 100 FEET. MAXIMUM SPACING = 100 FEET.

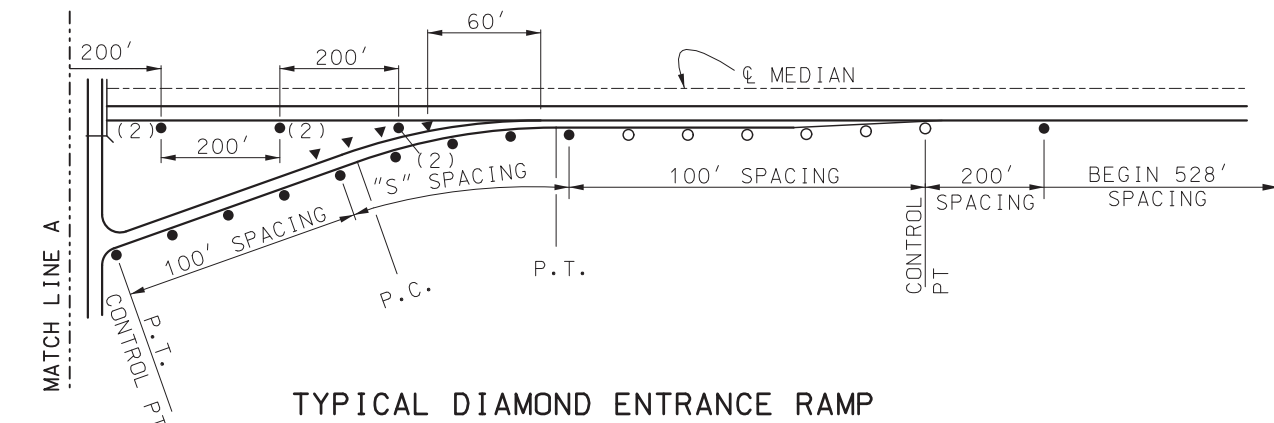
DELINEATORS SHALL BE INSTALLED FACING APPROACHING TRAFFIC. YELLOW DELINEATORS SHOULD BEGIN EVEN WITH THE GORE EXIT SIGN AND END 60 FEET FROM THE GORE POINT. WHITE DELINEATORS SHOULD EXTEND BEYOND THE FIRST YELLOW DELINEATOR. RED DELINEATORS SHOULD BE PLACED ON THE BACK SIDE OF EITHER THE WHITE OR YELLOW DELINEATOR POSTS WHEN APPLICABLE. RED DELINEATORS ARE TYPICALLY INSTALLED WHERE VEHICLES MAY ACCIDENTALLY TRAVEL DOWN THE RAMP BACKWARDS AND MOUNTED FACING AWAY FROM NORMAL TRAFFIC FLOW.

CHANNEL POST DELINEATORS SHALL BE OMITTED ON SECTIONS WHERE GUARD-RAIL IS PRESENT. THESE PORTIONS SHALL BE DELINEATED UTILIZING THE GUARDRAIL DELINEATORS. IN AREAS WHERE RED DELINEATORS ARE INDICATED. RED RETROREFLECTIVE SHEETING WILL BE PLACED ON THE BACK SIDE OF THE GUARDRAIL DELINEATOR.

RETROREFLECTIVE SHEETING SHALL BE IN ACCORDANCE WITH SEC 1042.2.7.5.



TYPICAL DIAMOND EXIT RAMP



TYPICAL DIAMOND ENTRANCE RAMP
 TYPICAL INTERCHANGE

- (1) USE YELLOW DOUBLE STACKED DELINEATORS FOR LEFT HAND ACCEL/DECEL LANES.
- (2) DELETE IF EMERGENCY REFERENCE MARKERS ARE USED.
- (3) EXTENT OF DELINEATION ON ROUTES WITH EMERGENCY REFERENCE MARKERS.
- (4) ON ROUTES WITHOUT EMERGENCY REFERENCE MARKERS DELINEATORS SHALL BE INSTALLED BETWEEN INTERCHANGES EVERY 528'.

NOTES:

FOR GENERAL NOTES, SEE SHEET 1 OF 16.

THE CONTRACT UNIT PRICE FOR EACH CHANNEL POST DELINEATOR SHALL INCLUDE THE REFLECTOR, FASTENERS AND POST.

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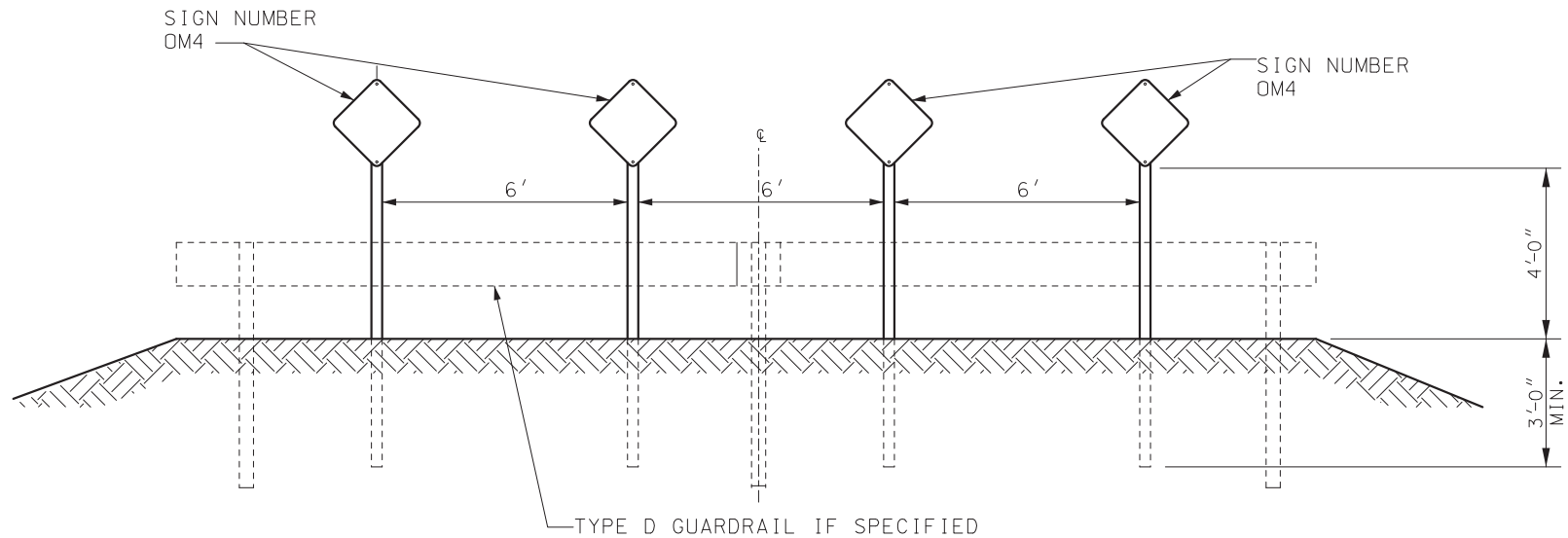
SIGN MOUNTING DETAILS

INTERCHANGE DELINEATION

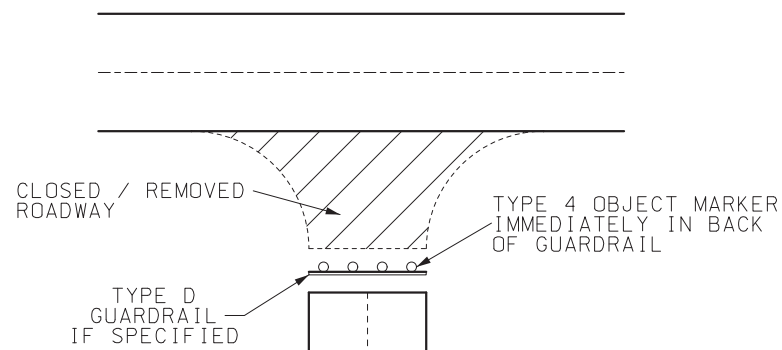
DATE EFFECTIVE: 7/1/2023
 DATE PREPARED: 4/4/2023

903.03BR

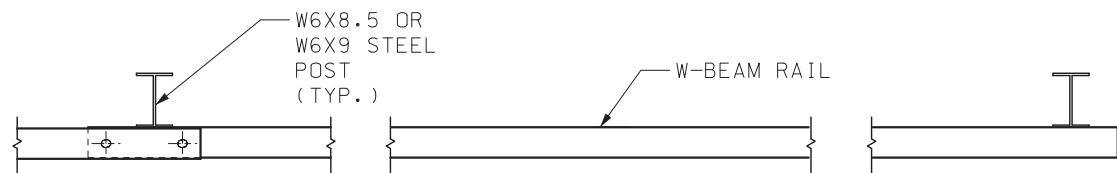
SHEET NO.
14 OF 16



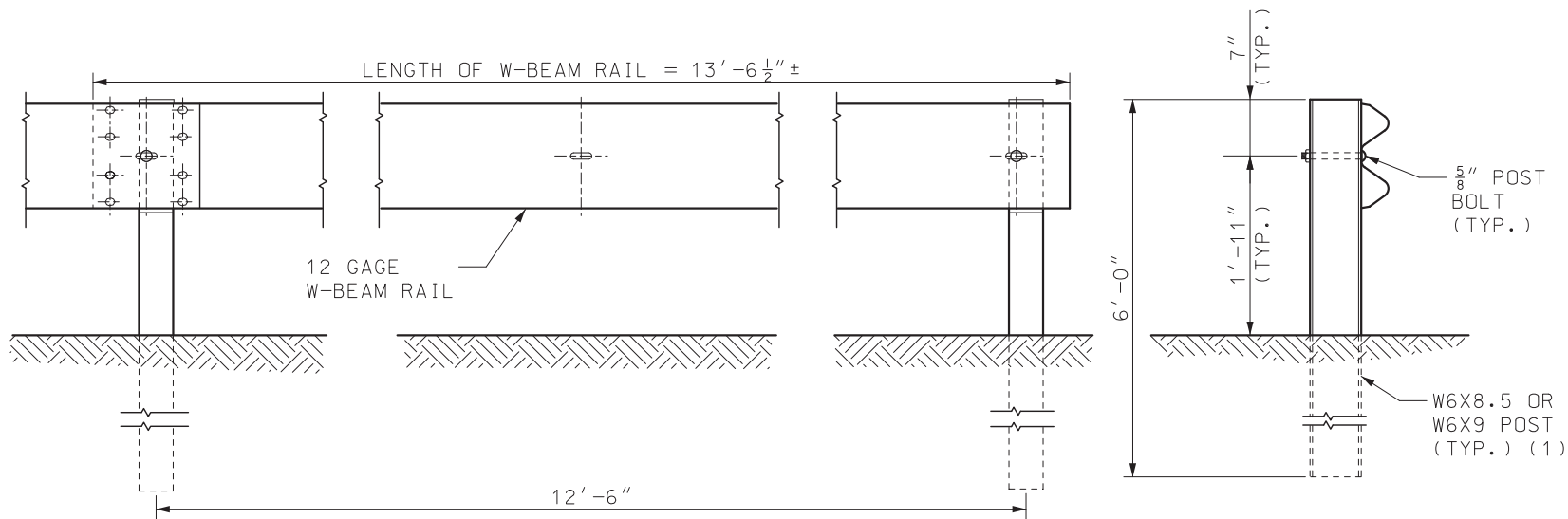
TYPE 4 OBJECT MARKER INSTALLATION



TYPICAL ROAD CLOSURE



PLAN

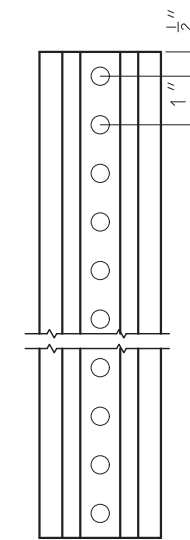


ELEVATION

STEEL POST

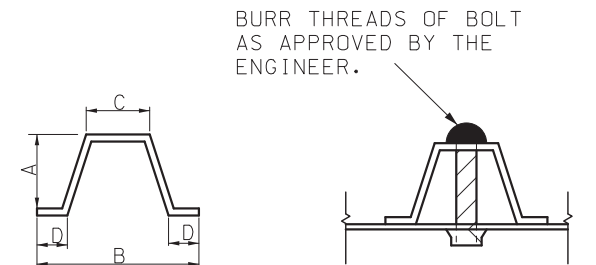
TYPE D GUARDRAIL

(1) THE CONTRACTOR MAY FURNISH EQUIVALENT SECTIONS FABRICATED FROM MATERIAL MEETING AND IN ACCORDANCE WITH SEC 1040.



STEEL OBJECT MARKER POST					
LIMITS	LBS/FT (2)	DIMENSIONS - INCHES			
		A	B	C	D
MIN.	2.40	1 ¹ / ₄	2 ¹ / ₂	1	1 ¹ / ₂
MAX.	2.80	1 ⁵ / ₈	3 ¹ / ₄	1 ³ / ₈	2 ³ / ₄

(2) WEIGHT BEFORE GALVANIZING OR PUNCHING. LIMITS SHOWN ARE ABSOLUTE. NO FURTHER WEIGHT, DIMENSIONAL OR COMMERCIAL TOLERANCE WILL BE ACCEPTABLE.





HOLE PUNCHING TO EQUAL $\frac{3}{8}$ " DIAMETER HOLES, ONE INCH CENTER TO CENTER, BEGINNING ONE-HALF INCH FROM THE END AND CONTINUING THE ENTIRE LENGTH OF THE POST.

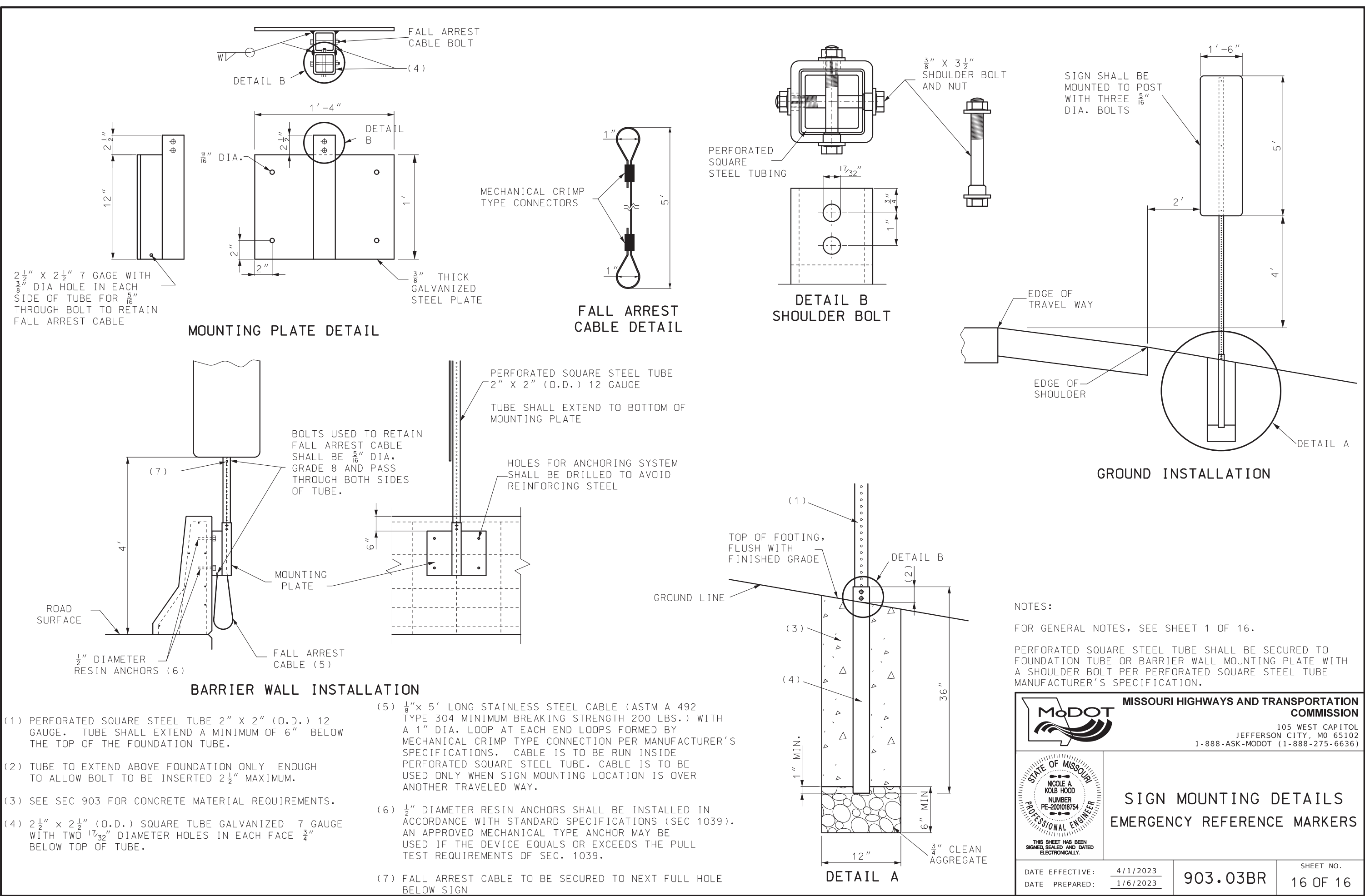
OBJECT MARKER POST AND FASTENER DETAILS

NOTES:

FOR GENERAL NOTES, SEE SHEET 1 OF 16.

TYPE D GUARDRAIL IS ACCESS RESTRAINT AND VISUAL TARGET VALUE ONLY. IT HAS NO REDIRECTIVE CAPABILITY.

 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	SIGN MOUNTING DETAILS OBJECT MARKERS FOR ROAD CLOSURE
DATE EFFECTIVE: 4/1/2023 DATE PREPARED: 1/6/2023	903.03BR SHEET NO. 15 OF 16



IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.