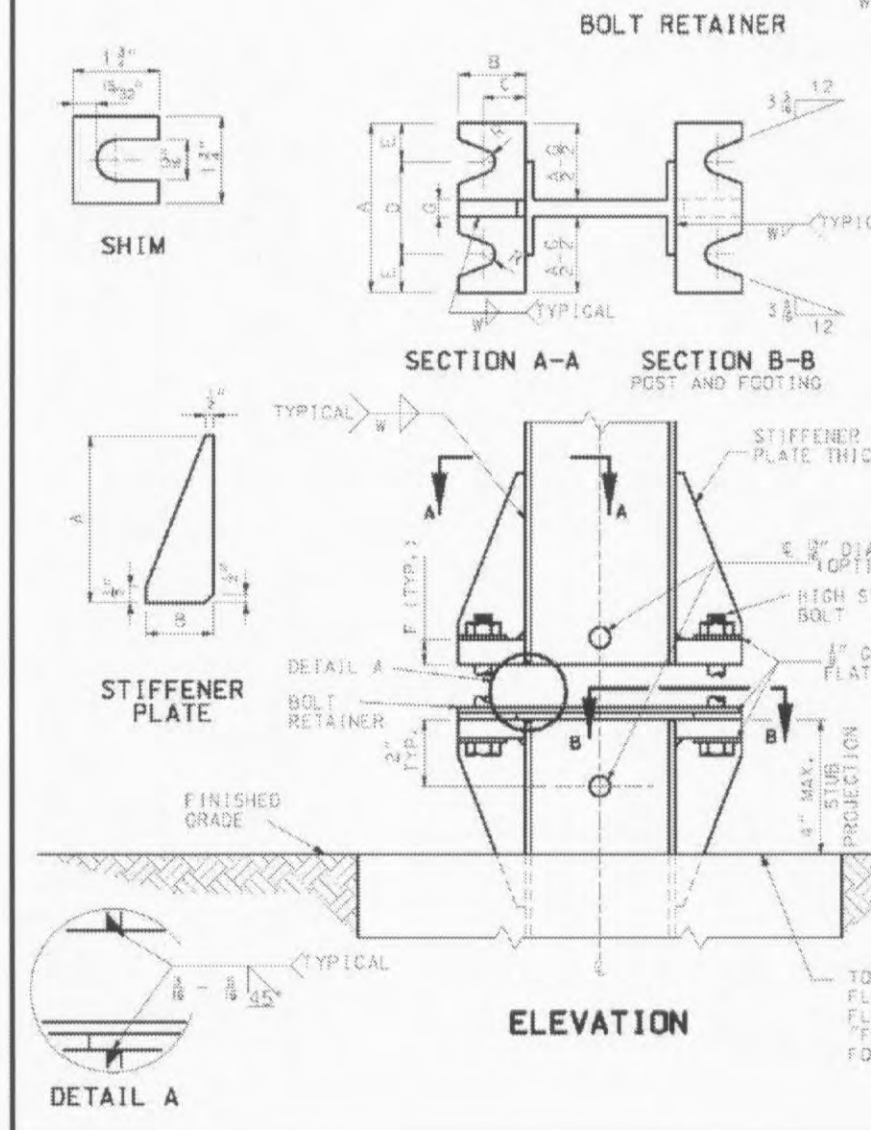


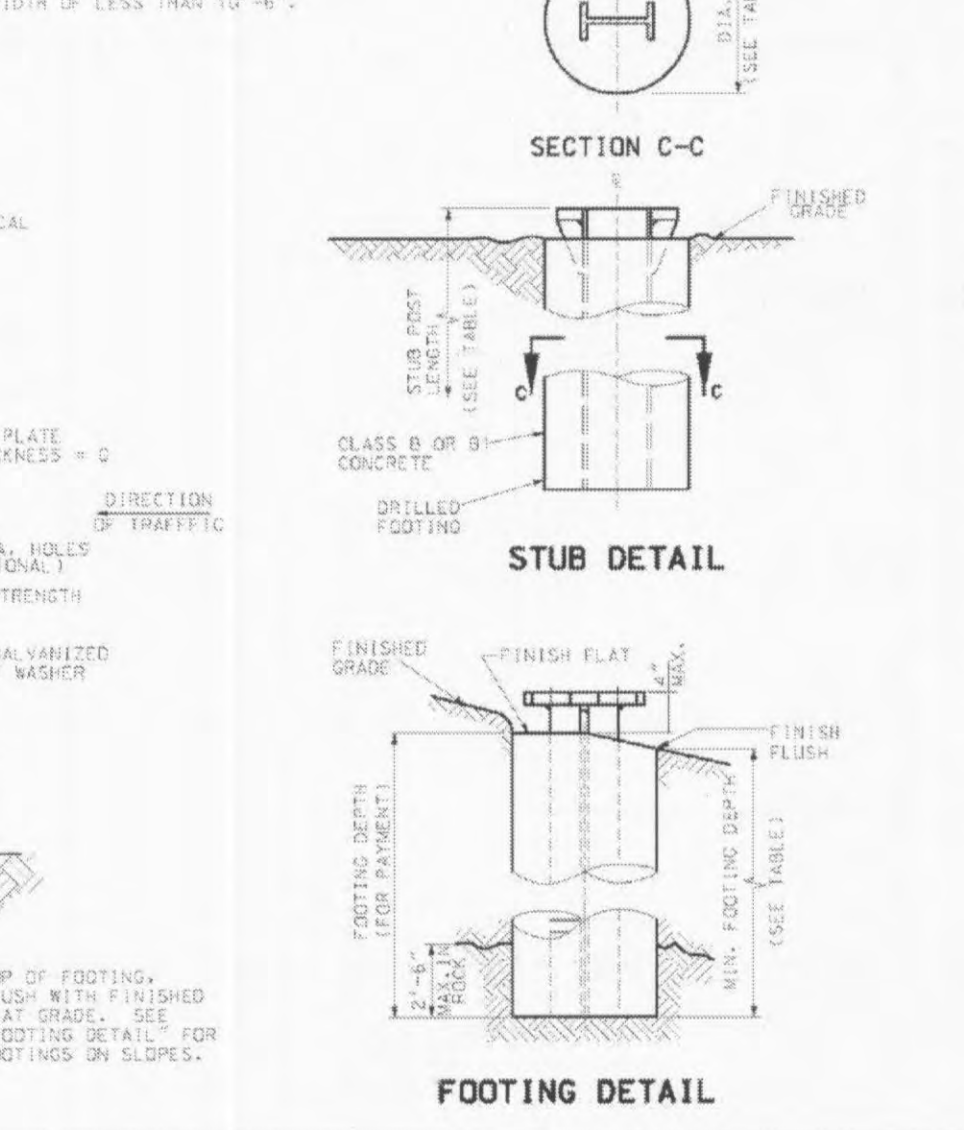
STRUCTURAL STEEL POST FOR GROUND MOUNTED SIGNS											
POST NO.	NOM. SIZE	TORQUE AND HIGH STRENGTH BOLTS	BASE CONNECTION DATA TABLE (IN.)								
			A	B	C	D	E	F	G	H	I
1	W6x8	1" ROUND	5	2	1 1/2	2 1/2	1 1/2	3	3	1/2	1/2
2	W6x10	1" ROUND	5	2	1 1/2	2 1/2	1 1/2	3	3	1/2	1/2
3	W6x12	1" ROUND	5	2	1 1/2	2 1/2	1 1/2	3	3	1/2	1/2
4	W10x22	1" ROUND	6	3 1/2	1 1/2	3 1/2	1 1/2	4	4	1/2	1/2
5	W10x26	1" ROUND	6	3 1/2	1 1/2	3 1/2	1 1/2	4	4	1/2	1/2
6	W12x35	1" ROUND	6	3 1/2	1 1/2	3 1/2	1 1/2	4	4	1/2	1/2

SHEET METAL BOLT RETAINER CUT FROM 30 GAUGE GALVANIZED SHEET METAL. PLACE BETWEEN BASE PLATE AND SLIP PLATE TO FIT. HOLE DIMENSIONS TO BE LARGER THAN REQUIRED BOLT SIZE.



POST AND FOOTING DATA TABLE												
POST NO.	NOM. SIZE	WEIGHT (LB/FT)	STUB LENGTH (FT)	FOOTING								
				6:1 GRADE	4:1 GRADE	3:1 OR 2:1 GRADE	CONCRETE	DEPTH (FT)	DIAMETER (IN.)	DIAMETER (IN.)	DIAMETER (IN.)	
1	W6	9.0	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	W6	13.0	4'-0"	24"	4'-0"	0.47	4'-2"	0.50	4'-3"	0.51	4'-6"	0.54
3	W6	18.0	4'-0"	28"	4'-0"	0.71	4'-2"	0.73	4'-3"	0.74	4'-6"	0.78
4	W10	22.0	5'-0"	36"	5'-0"	1.31	5'-2"	1.35	5'-3"	1.36	5'-6"	1.43
5	W10	26.0	5'-0"	36"	5'-0"	1.31	5'-2"	1.35	5'-3"	1.36	5'-6"	1.43
6	W12	35.0	5'-6"	36"	5'-6"	1.44	5'-8"	1.52	5'-11"	1.56	6'-3"	1.65

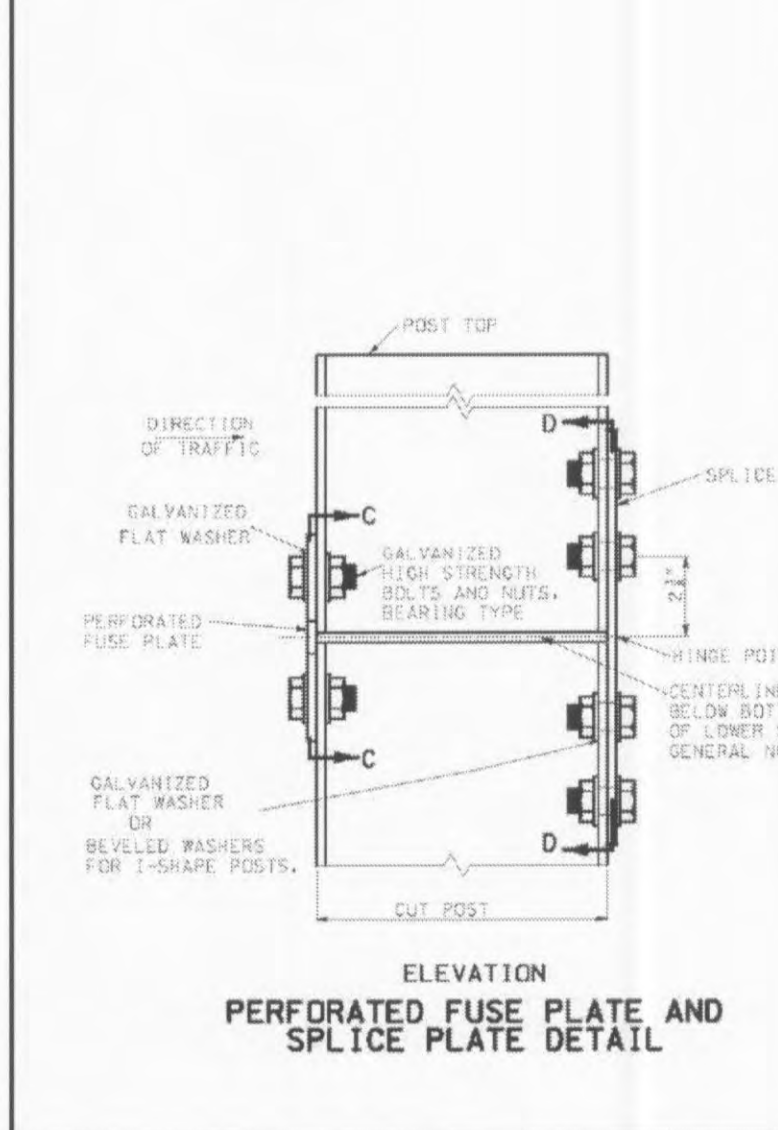
GENERAL NOTES:
DESIGN SPECIFICATIONS STANDARD SPECIFICATIONS FOR STRUCTURAL STEEL FOR HIGHWAY SIGNS, ALTERNATIVES AND TRAFFIC SIGNALS - 1989 (EXCEPT 2001 AND LATEST INTERIMS FOR STRUCTURAL STEEL POSTS).
POSTS, PERFORATED FUSE PLATE AND SPLICE PLATE TO BE GALVANIZED AFTER FABRICATION.
METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE ALLOWED.
REMOVE ALL GALVANIZING RUNG OR BEADS IN THE WASHER AREA.
ALL STRUCTURAL STEEL STIFFENER PLATES AND BASE PLATES FOR GROUND MOUNTED SIGNS SHALL MEET THE REQUIREMENTS OF ASTM A 36 OR A572M M 270 GRADE 50, MINIMUM YIELD 50,000 PSI.
IN THE EVENT THE DISTANCE BETWEEN THE TOP OF THE FOOTING AND THE BOTTOM OF THE SIGN IS LESS THAN 1'-0", THE SIGN HEIGHT AND POST LENGTH IS TO BE INCREASED SUFFICIENTLY TO ACCOMMODATE THIS MINIMUM SPACING.
HINGE PLATES NOT REQUIRED ON SINGLE POST SIGNS OR ANY SIGNS USING PIPE POSTS.
NUTS ON HINGE PLATE BOLTS SHALL BE TIGHTENED TO THE REQUIRED MINIMUM BOLT TENSION VALUES SHOWN IN TABLE 1.5.4 - 1000 OF THE STANDARD SPECIFICATIONS.
THE NUT SHALL BE FREE TURNING. IF THE NUT WILL NOT SPIN ON THE BOLT BECAUSE OF GALVANIZING IRREGULARITIES, A LUBRICANT SHALL BE APPLIED.
ALL BREAKAWAY ASSEMBLY BOLTS SHALL BE TIGHTENED IN A SYSTEMATIC MANNER TO THE PRESCRIBED TORQUE SHOWN ON THIS DRAWING.
EACH BREAKAWAY ASSEMBLY BOLT SHALL BE LOOSENED AND RE-TIGHTENED TO THE REQUIRED TORQUE IN THE SAME ORDER AS THE INITIAL TIGHTENING.
THE THREADS SHALL BE BURIED AT THE NUT USING A CENTER PUNCH TO PREVENT NUT FROM LOOSENING.
POST LENGTH QUANTITY SHOWN ON PLANS INCLUDES STUB.
1" x 2 1/2" HIGH STRENGTH BOLTS FOR PIPE POSTS SHALL BE OF THE DESIGNATION ASSIGNED IN 164 OR ASTM A 449. ALL OTHER H.S. BOLTS SHALL BE OF THE DESIGNATION ASSIGNED IN 164.
FURNISH TWO 0.0125" AND TWO 0.00375" THICK SHIMS PER POST FROM BRASS SHIM STOCK OR STAIN. DESIGNATION ASTM B 36. SHIM AS REQUIRED TO PLUMB POST.
HIGH STRENGTH BOLTS WITH HEX NUT AND THREE WASHERS WITH EACH BOLT ARE TO BE GALVANIZED.
OPTIONAL HOLES 1/2" ROUND FOR 1/2" SHARP POSTS AND 1" ROUND FOR PIPE POSTS (BASE PLATES) AS SHOWN IN "ELEVATIONS" ARE TO BE USED AS AID FOR GALVANIZING ONLY.
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



SIGN MOUNTING DETAILS BREAKAWAY ASSEMBLIES FOR GROUND MOUNTED SIGNS			
DATE	EFFECTIVE 08-01-2001	903.03BE	1/11

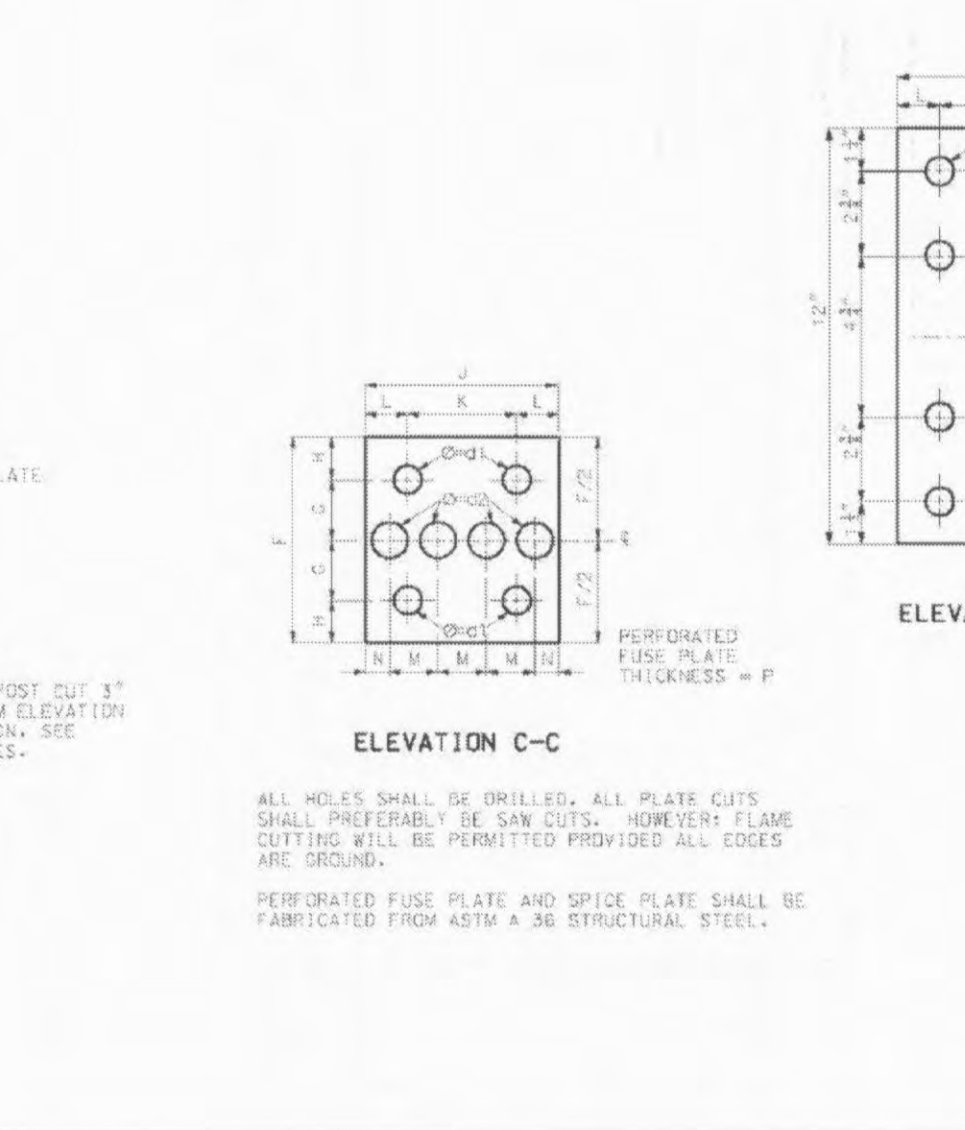
WIDE FLANGE STRUCTURAL STEEL POSTS DESIGN DATA					
POST DES. NO.	NOM. SIZE	WEIGHT (LB/FT)	FLANGE		
			DEPTH (IN.)	WIDTH (IN.)	THICK (IN.)
1	W6	9	0.75	5 1/2	4
2	W6	15	1.25	6	6
3	W6	18	1.50	6 1/2	6 1/2
4	W10	22	1.83	10 1/2	5 1/2
5	W10	26	2.17	10 1/2	5 1/2
6	W12	30	2.92	12 1/2	6 1/2

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



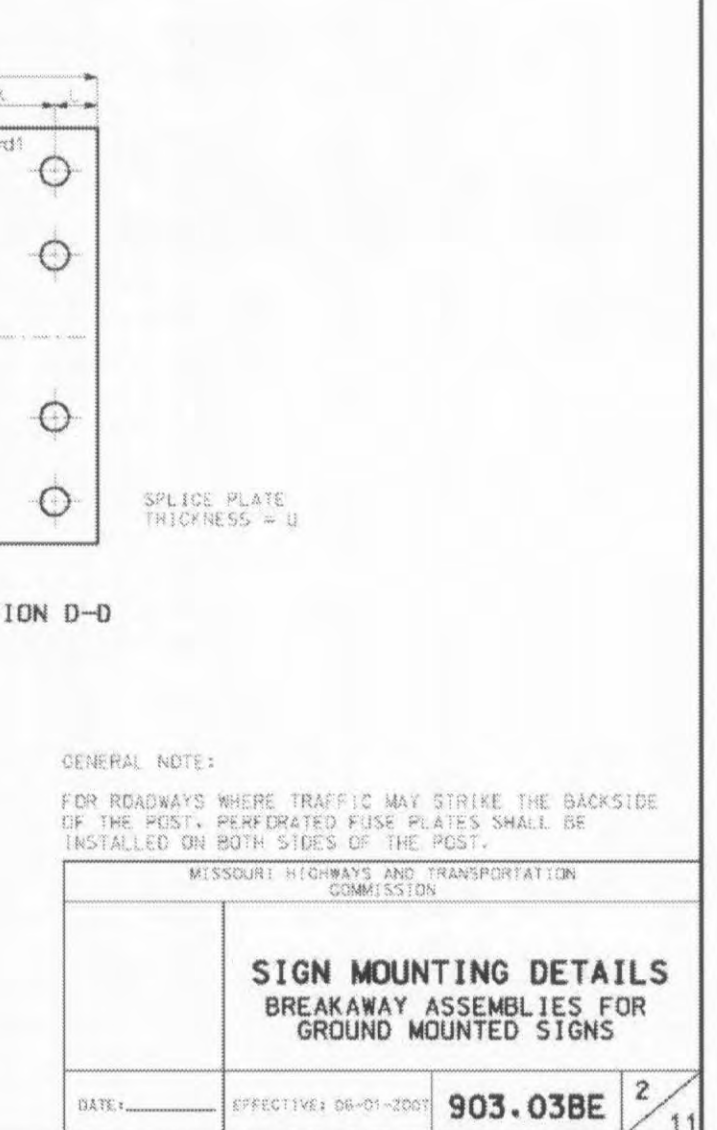
PERFORATED FUSE PLATE DATA TABLE															
POST DES. NO.	F	D	H	K	L	M	N	O	P	Q	R	S	T	U	V
1	4 1/2	1 1/2	4	7 1/2	1	1	1	1	1	1	1	1	1	1	1
2	5	1 1/2	4	8	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	
3	5 1/2	1 1/2	4	8 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	
4	6	1 1/2	5 1/2	10	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	
5	6 1/2	1 1/2	5 1/2	10 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	
6	6 1/2	1 1/2	5 1/2	10 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	

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



SPLICE PLATE DATA TABLE											
POST DES. NO.	J	K	L	M	N	O	P	Q	R	S	T
1	4	2 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
2	6	3 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
3	5 1/2	2 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
4	8	3 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5	8 1/2	3 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
6	8 1/2	3 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

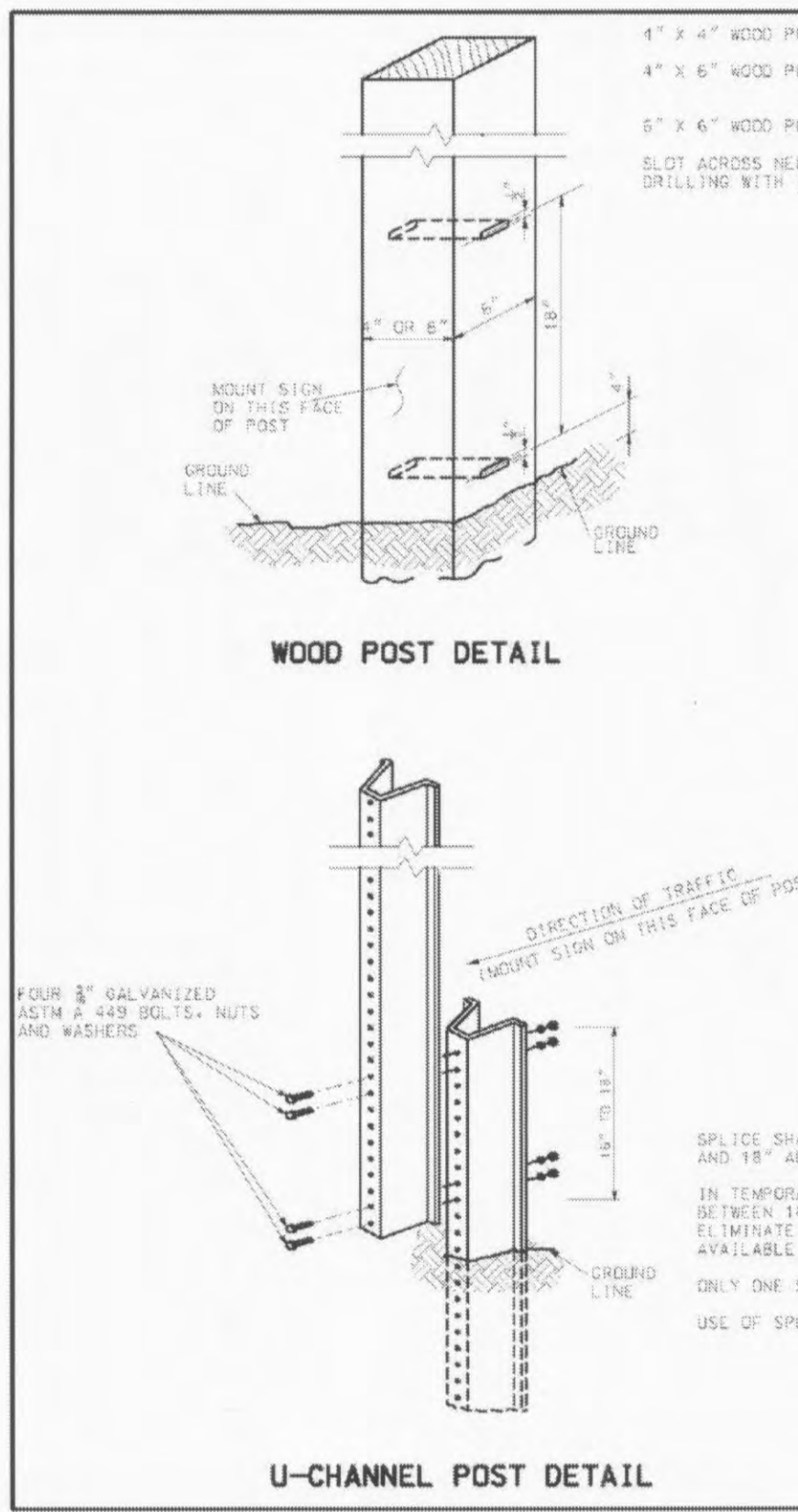
GENERAL NOTE:
FOR ROADWAYS WHERE TRAFFIC MAY STRIKE THE BACKSIDE OF THE POST, PERFORATED FUSE PLATES SHALL BE INSTALLED ON BOTH SIDES OF THE POST.



SIGN MOUNTING DETAILS BREAKAWAY ASSEMBLIES FOR GROUND MOUNTED SIGNS			
DATE	EFFECTIVE 08-01-2001	903.03BE	2/11

FOR INFORMATION ONLY

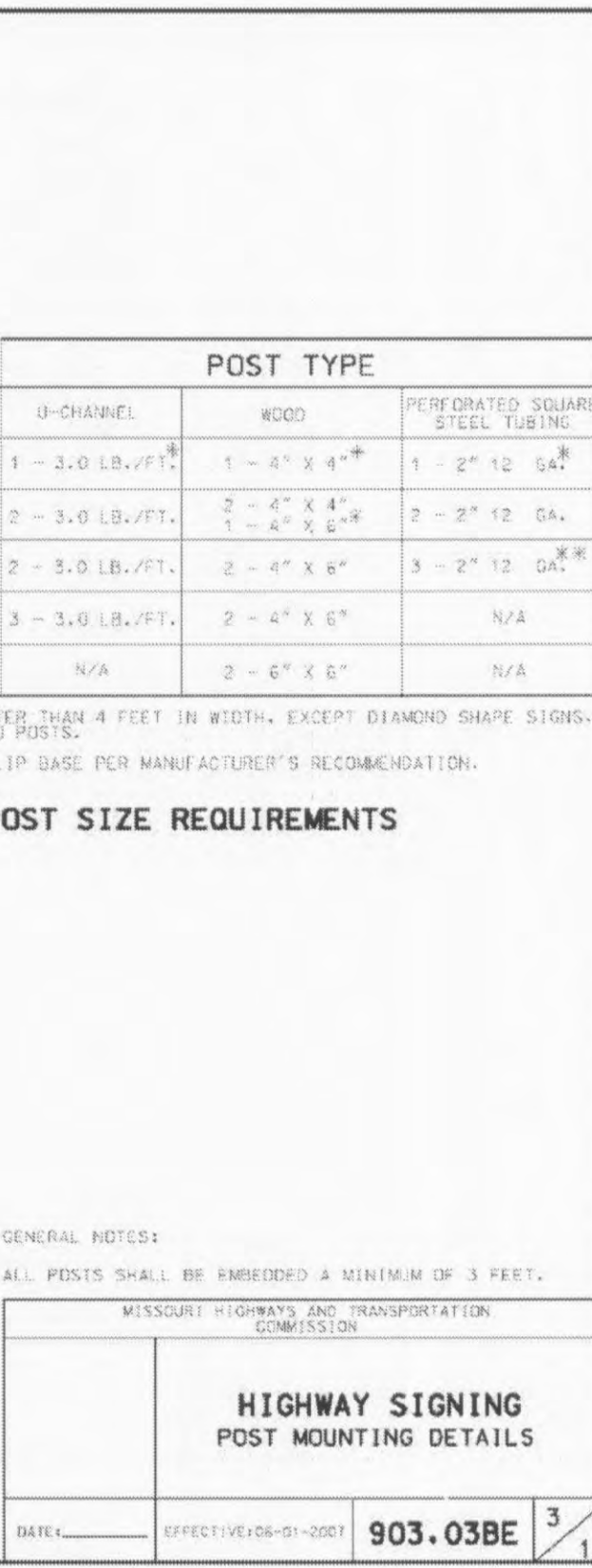
IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE CURRENT EDITION OF MoDOT'S STANDARD DRAWINGS



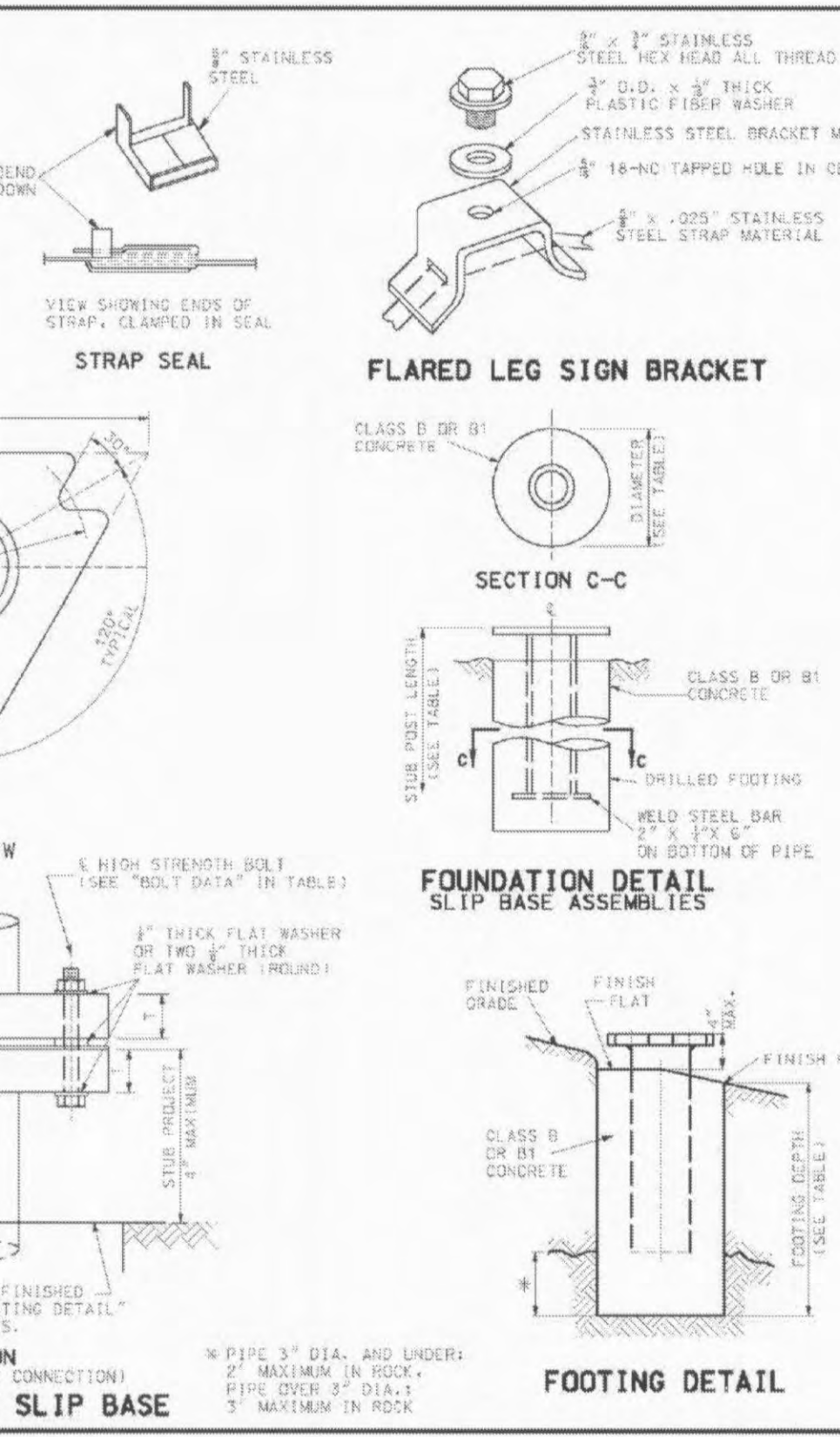
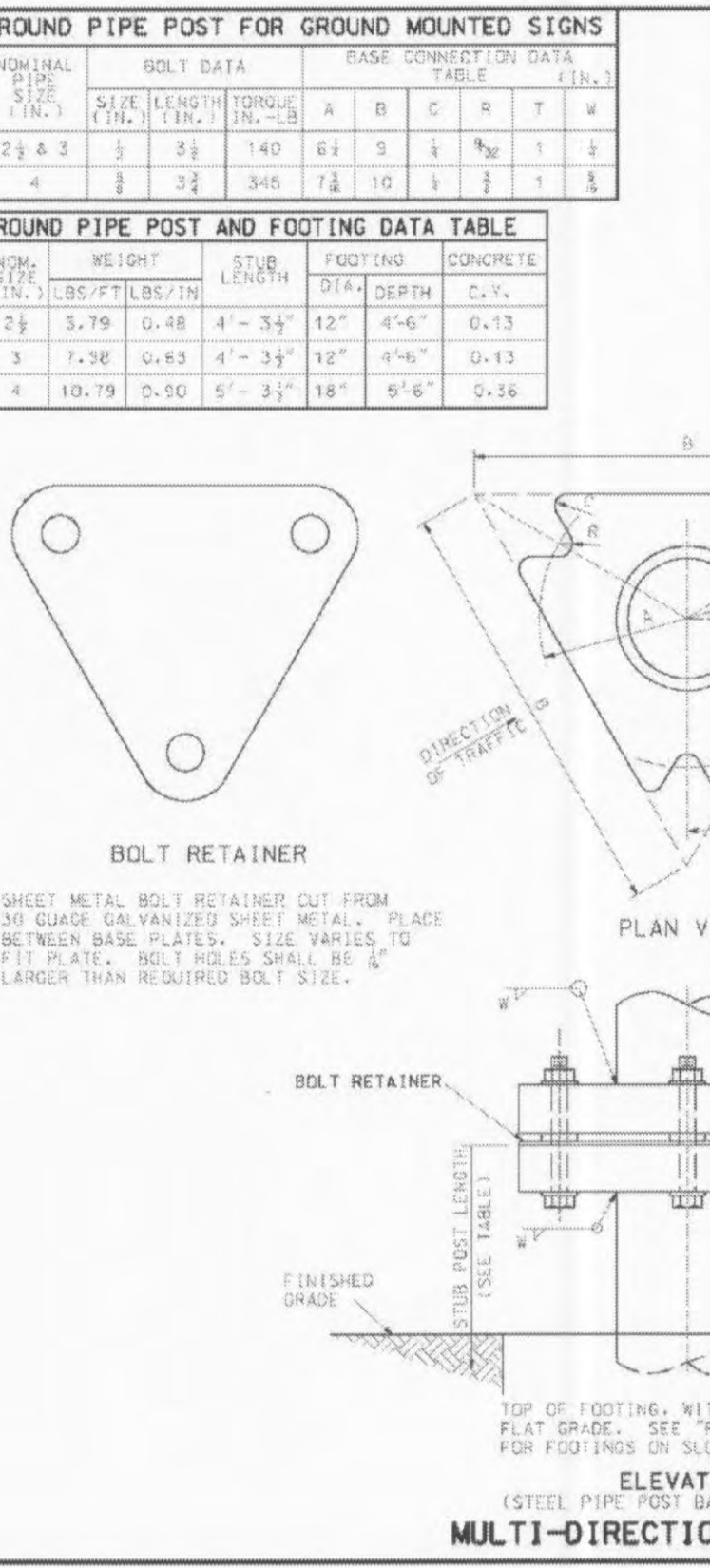
WOOD POST TYPE			
SIGN AREA (SQ. FT.)	U-CHANNEL	WOOD	PERFORATED SQUARE STEEL TUBING
< 10	1 - 3.0 LB./FT.	1 - 4" x 4"	1 - 2" x 12 GA.
> 10 < 16	2 - 3.0 LB./FT.	2 - 4" x 4"	2 - 2" x 12 GA.
> 16 < 24	2 - 3.0 LB./FT.	2 - 4" x 6"	3 - 2" x 12 GA.
> 24 < 30	3 - 3.0 LB./FT.	2 - 4" x 6"	N/A
> 30 < 50	N/A	3 - 6" x 6"	N/A

GENERAL NOTES:
ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 3 FEET.
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HIGHWAY SIGNING POST MOUNTING DETAILS			
DATE	EFFECTIVE 08-01-2001	903.03BE	3/11



ROUND PIPE POST AND FOOTING DATA TABLE												
POST NO.	NOM. SIZE	WEIGHT (LB/FT)	STUB LENGTH (FT)	FOOTING								
				6:1 GRADE	4:1 GRADE	3:1 OR 2:1 GRADE	CONCRETE	DEPTH (FT)	DIAMETER (IN.)	DIAMETER (IN.)	DIAMETER (IN.)	
1	4"	3.2	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
2	4"	3.2	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
3	4"	3.2	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17
4	4"	3.2	3'-0"	15"	3'-0"	0.14	3'-2"	0.15	3'-3"	0.16	3'-6"	0.17



SIGN MOUNTING DETAILS POST FOR SIGNS 30 SQUARE FEET OR SMALLER			
DATE	EFFECTIVE 08-01-2001	903.03BE	4/11

SHEET NO. **22**

Job No. 157-07
Date: 1/16/08
Scale: NTS
Drawn by: BEC
Design by: BEC
Approved by: CMB
File Name: PLN

REVISIONS

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