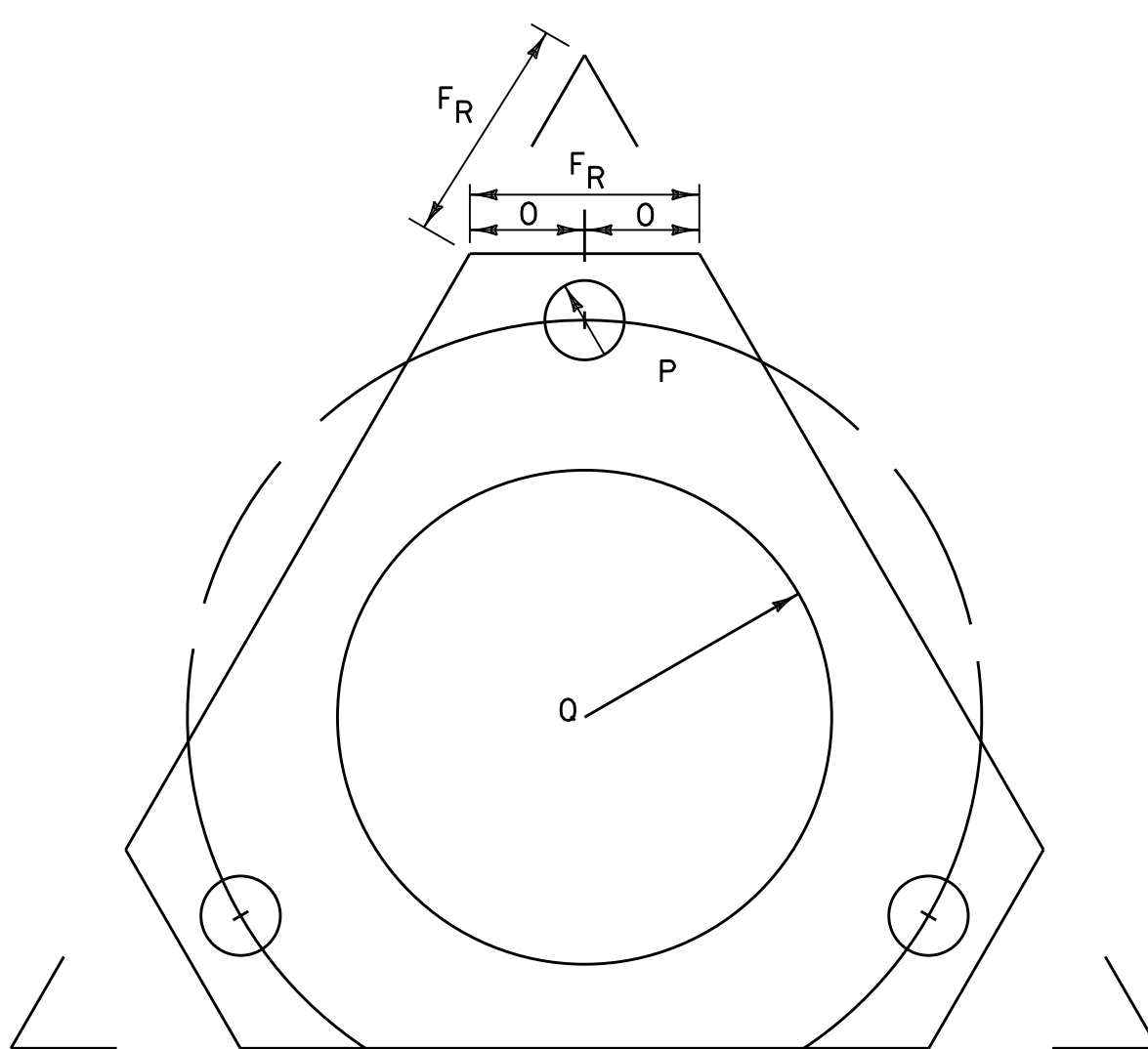
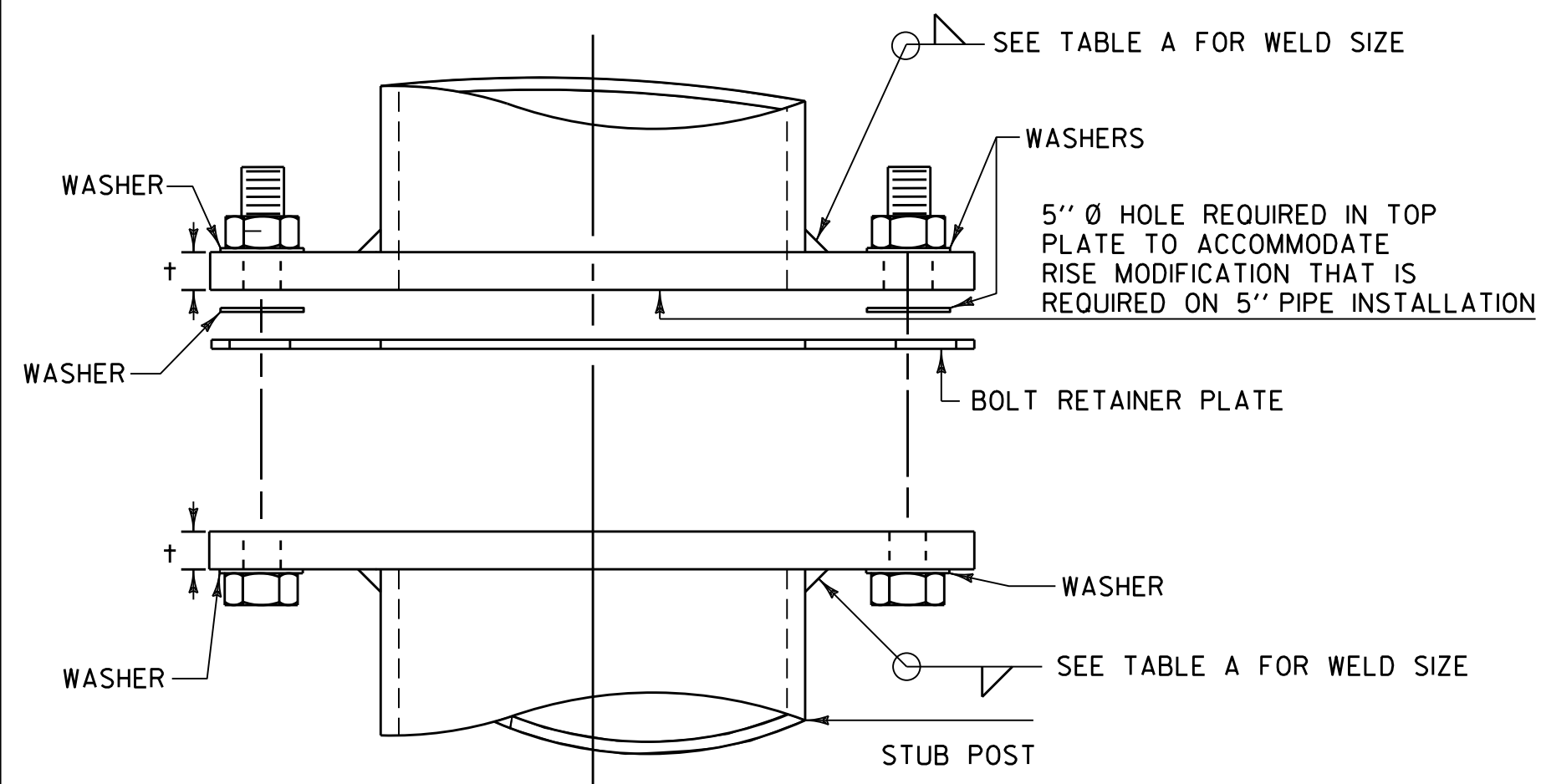


**DETAILS OF MULTI-DIRECTIONAL SLIP BASE**

TABLE A

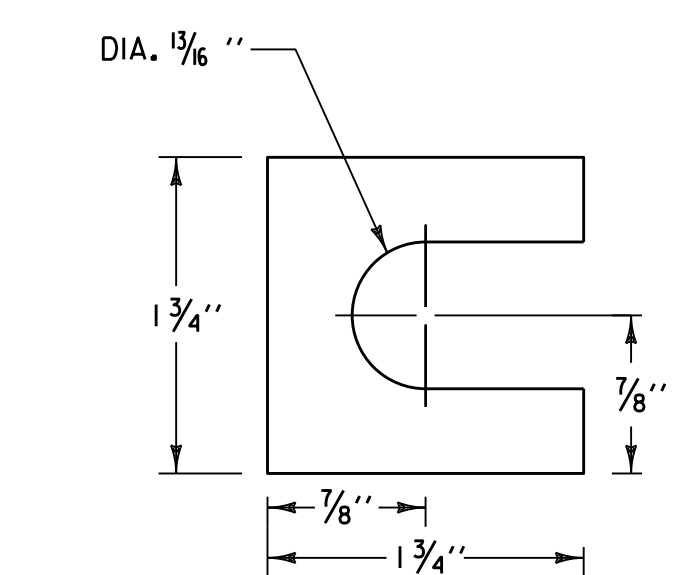
DIMENSIONS NOMINAL PIPE SIZES	BOLT SIZE & TORQUE	WELD SIZE	t	Y	A	B	C	D	E	F	G	K	L	M	U	N
3" DIA.	5/8" x 3/4"	3/8"	5/8"	7"	7"	3 1/2"	1 3/4"	1 1/4"	3"	2 5/8"	2"	10 3/8"	9"	1/2"	1/2"	6"
3 1/2" DIA.	T=450" LBS.															
4" DIA.	3/4" x 3 3/4"	7/16"	7/8"	8 3/16"	9"	4 1/2"	2 1/4"	1 1/2"	3 3/8"	2 7/8"	2 1/2"	13"	11 1/4"	5/8"	1/2"	7 1/2"
5" DIA.	T=750" LBS.															



**BOLT RETAINER PLATE**

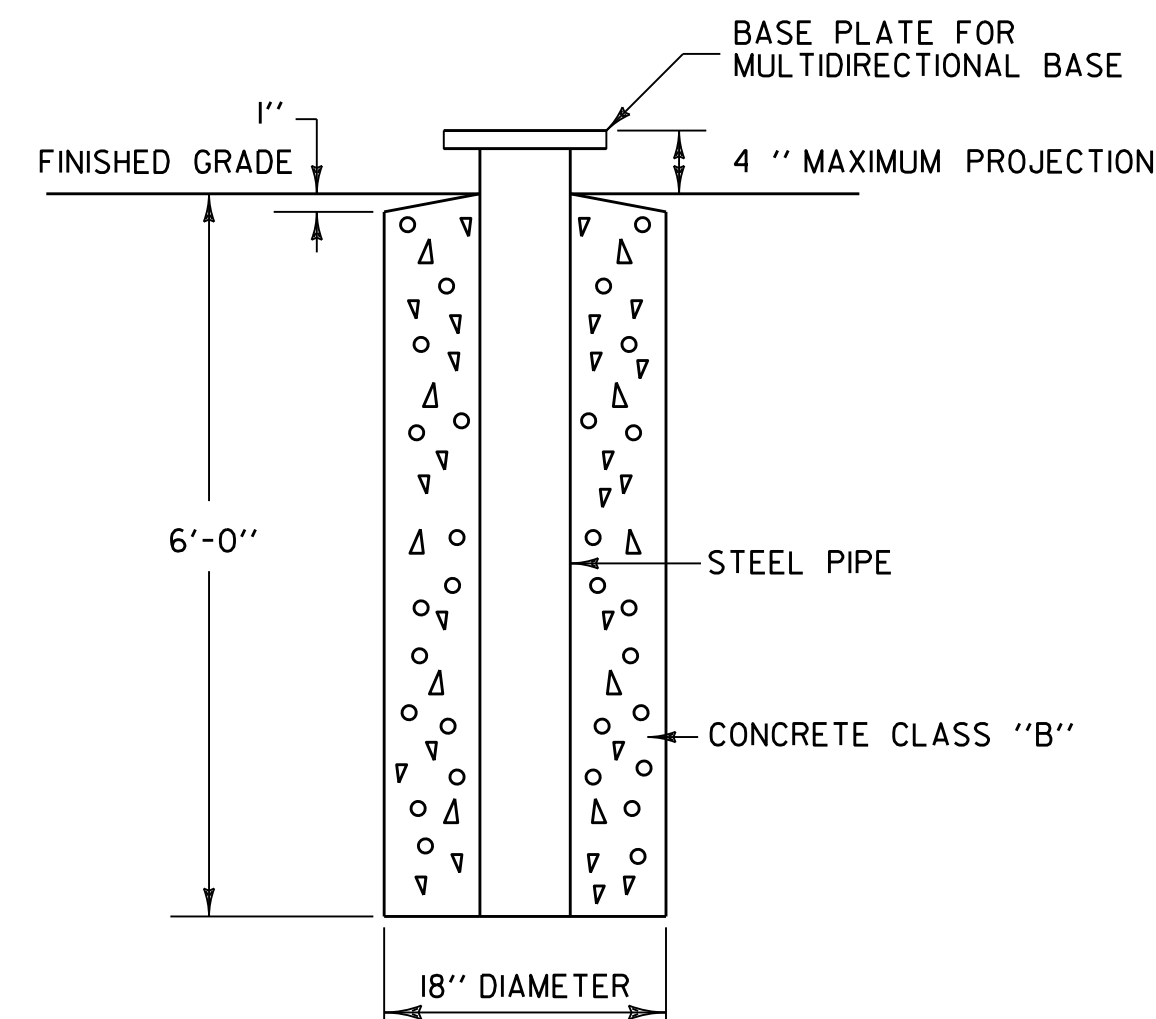
25 GAUGE (0.0247") OR THINNER GALVANIZED STEEL  
 BOLT RETAINER PLATE SIMILAR IN DETAIL TO THE BASE PLATES WITH THE FOLLOWING EXCEPTIONS

DIMENSIONS NOMINAL PIPE SIZES	FR	O	P	Q
3" DIA.	2 1/8"	1 1/16"	1 1/16"	2 1/2"
3 1/2" DIA.				
4" DIA.	2 5/8"	1 5/16"	1 5/16"	2 7/8"
5" DIA.				

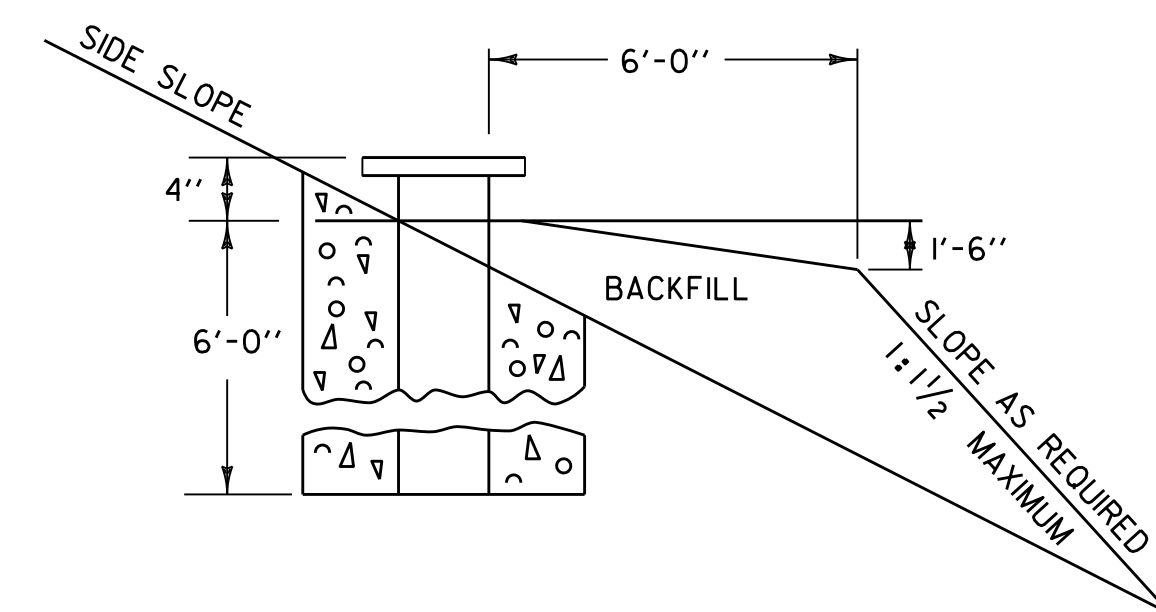


**SHIM DETAIL**

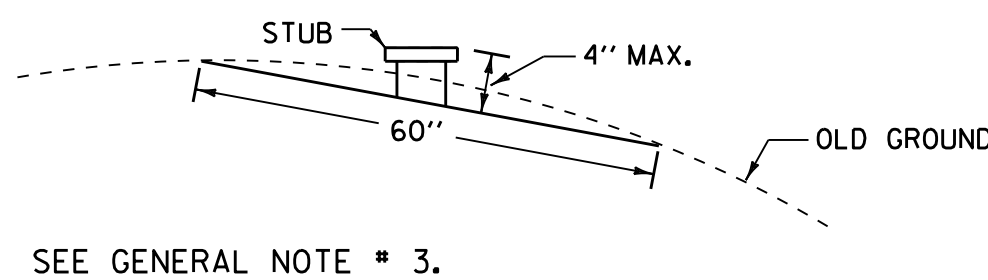
FURNISH 2-0.012" THICK AND 2-0.032" THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM 836



**FOUNDATION DETAIL**



**SIDE SLOPE TREATMENT**



SEE GENERAL NOTE # 3.

**GENERAL NOTES**

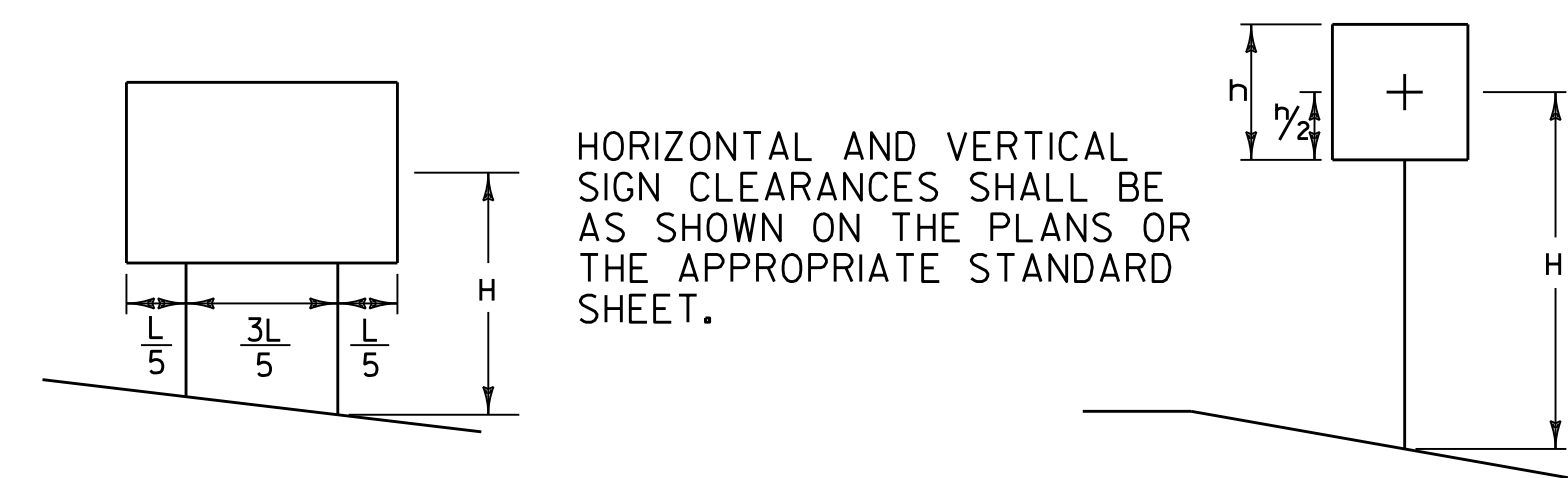
1. THE MATERIAL FOR THE MULTI-DIRECTIONAL SLIP BASE ASSEMBLY SHALL CONFORM TO AASHTO M-270, GRADE 36 STEEL, AND BE GALVANIZED AS PER ASTM A-123.
2. THE BOLTS, NUTS AND CIRCULAR WASHERS SHALL CONFORM TO ASTM SECTION 15 A-325, "HIGH STRENGTH CARBON STEEL BOLTS FOR STRUCTURAL STEEL JOINTS". ALL BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED AS PER ASTM A-153.
3. ALL DIMENSIONS REFERRING TO STUB HEIGHT IN THE VARIOUS TABLES AND FOUNDATION DETAILS SHALL BE ADJUSTED AS REQUIRED TO RESULT IN A TOTAL STUB HEIGHT WHICH IS NOT MORE THAN FOUR INCHES ABOVE A 60- INCH CHORD ALIGNED RADIALY TO THE CENTERLINE OF THE HIGHWAY AND CONNECTING ANY POINT, WITHIN THE LENGTH OF THE CHORD, ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE.

**BOLTING PROCEDURE**

1. SHIM AS REQUIRED TO PLUMB POST.
2. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 13 TO 16" WRENCH TO BED WASHERS AND SHIMS AND TO CLEAN BOLT THREADS. THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. DO NOT OVERTIGHTEN.
3. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

**CONSTRUCTION METHOD**

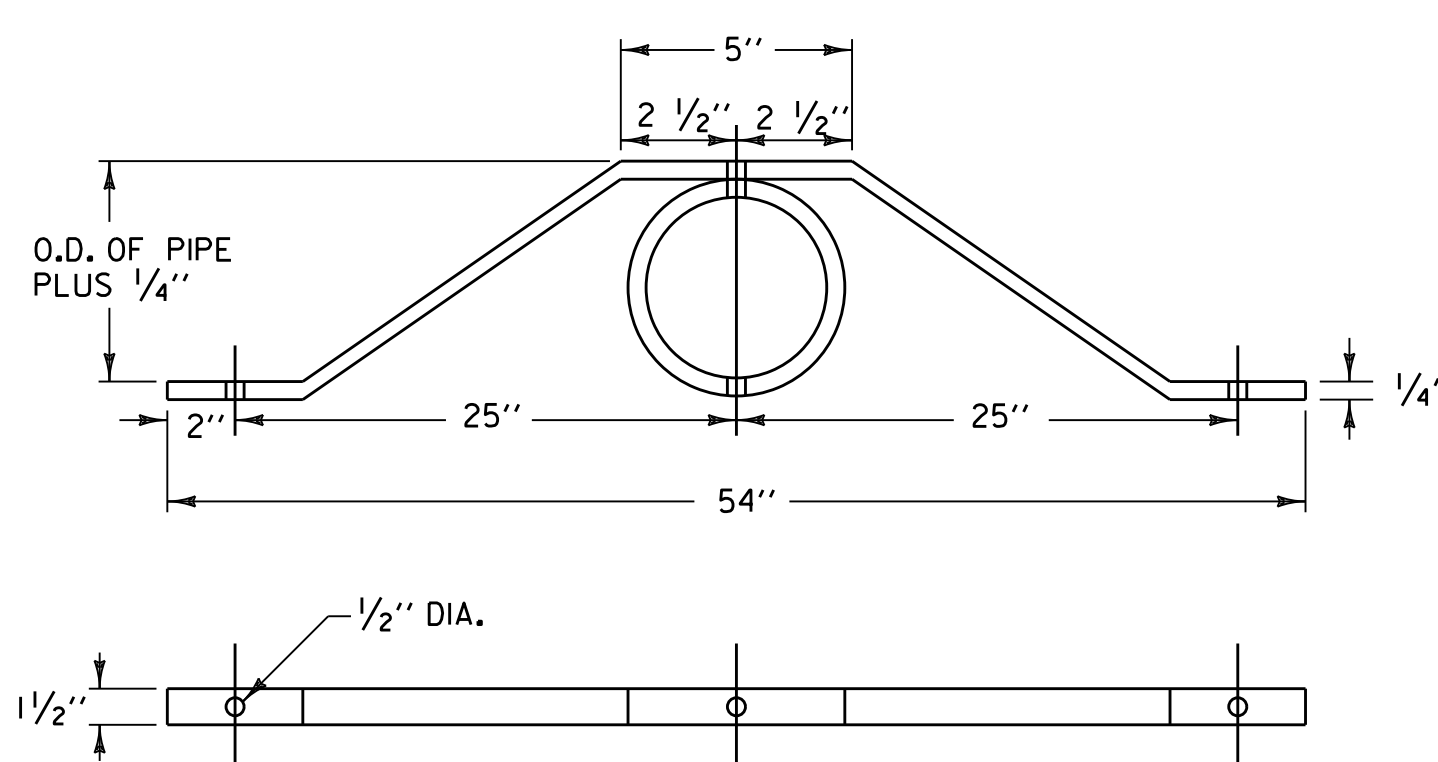
HOLES FOR POST FOOTINGS MAY BE AUGERED OR DUG, IF THE MATERIAL IS FIRM AND IF ALL DISTURBED SOIL AROUND THE CIRCUMFERENCE OF THE THE AUGERED HOLE IS REMOVED. THE HOLES MAY BE LEFT WITH EARTH SIDES. IF NOT, A SUITABLE FORM APPROVED BY THE ENGINEER SHALL BE USED. CORRUGATED METAL CULVERT PIPE OR PAPER FORMS, MANUFACTURED FOR USE AS CONCRETE COLUMN FORMS, WILL BE ACCEPTABLE. THE STUB SHALL BE EXTENDED TO THE BOTTOM OF THE HOLE AND SET ON THE CONCRETE PAD FOOTING TO SUPPORT THE POST SO THE POST SHALL BE HELD SECURELY IN PLACE AT THE BOTTOM. THIS MAY BE DONE BY EMBEDDING THE POST AND CONCRETE BLOCK FOOTING IN WET CONCRETE, AND ALLOWING TO SET WITH THE POST SECURED IN POSITION; PLUMBED AND PROPERLY BRACED. THE REMAINDER OF THE FOOTING MAY THEN BE POURED. THE TIME BETWEEN POURS FOR THE CURING OF THE CONCRETE SHALL BE AS DETERMINED BY THE ENGINEER. THE FORM SHALL BE LEFT IN PLACE AND THE HOLE BACKFILLED AND COMPACTED AS DIRECTED BY THE ENGINEER. NO PART OF THE FORM SHALL SHOW ABOVE THE GROUND LINE WHEN THE WORK IS COMPLETED.



HORIZONTAL AND VERTICAL SIGN CLEARANCES SHALL BE AS SHOWN ON THE PLANS OR THE APPROPRIATE STANDARD SHEET.

**POST SELECTION CHART DETAIL**

SIGN AREA (FT <sup>2</sup> ) x H (FT) ≤ SV (SELECTION VALUE)			
POST DIA. INCHS	WEIGHT LB/FT	Sv	DESIGN CRITERIA
3	7.6	318	WIND SPEED = 60 MPH (10-YEAR MEAN RECURRENCE INTERVAL) WIND PRESSURE = 15 PSF STEEL MIN YIELD Fy = 36,000 PSI ALLOWABLE STRESS = (1.4) 0.66 Fy
3 1/2	9.0	442	
4	10.8	593	
5	14.6	1007	



**SIGN SUPPORT BRACE**

(REQUIRED WHEN INSTALLING 3 ASSEMBLY FRAME)

REV.	DATE	DESCRIPTION
0	SEPT. 26, 1987	ORIGINAL APPROVAL
1	AUG. 18, 1995	REVISED TITLE BLOCK
2	MAR. 11, 1996	REVISED POST SELECTION CHART
4	APR. 7, 2020	REVISED SLIP BASE DETAIL, ADDED SHIM DETAIL, ADDED BOLTING PROCEDURE

OTHER STANDARDS REQUIRED:  
 VTRANS AND FHWA APPROVAL ON FILE WITH CONTRACT ADMINISTRATION

**TUBULAR STEEL SIGN POST**

