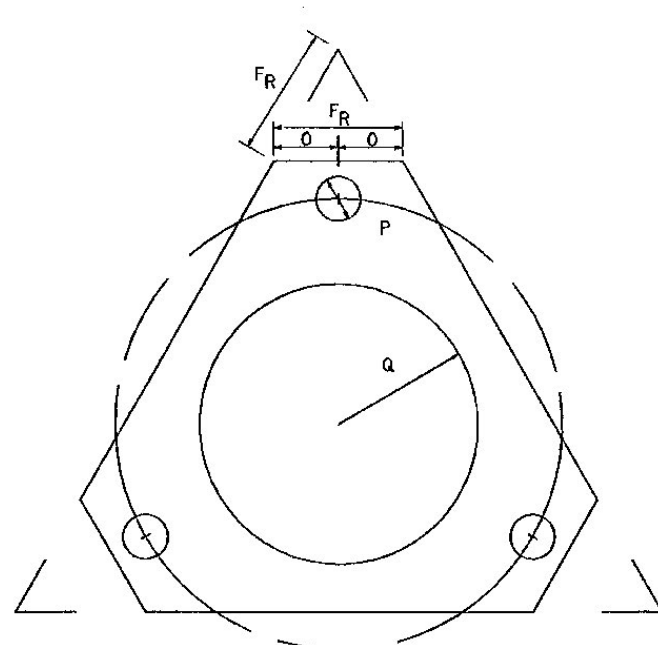


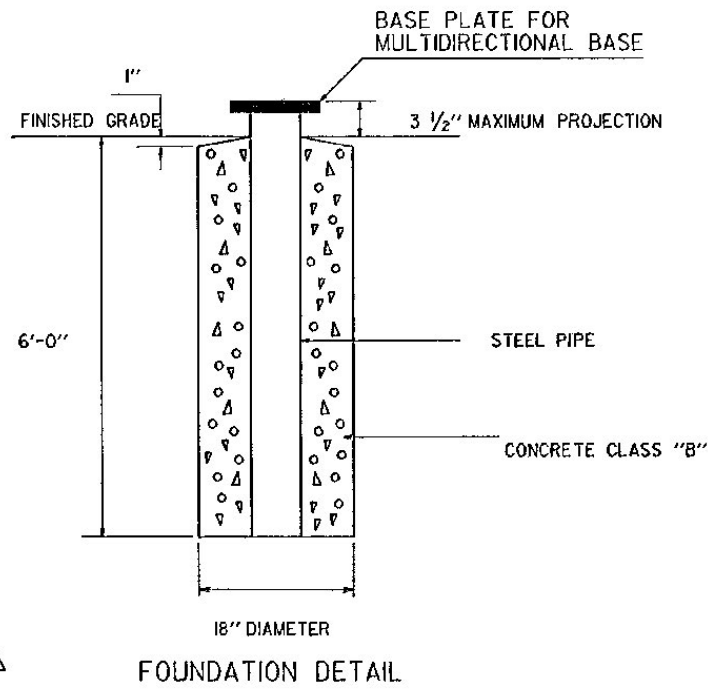
DETAILS OF MULTI-DIRECTIONAL SLIP BASE



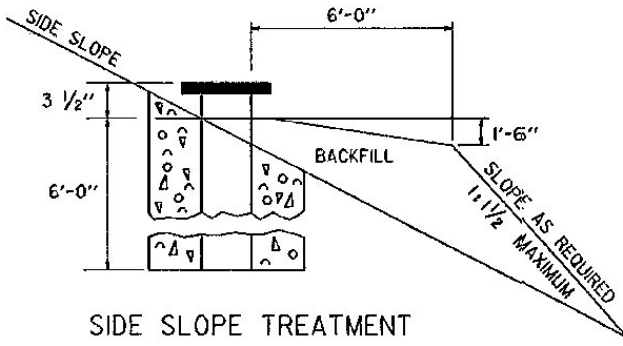
BOLT RETAINER PLATE  
11 GAUGE (0.1225") GALVANIZED STEEL

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 3/16"	2 7/8"
5" DIA.				



FOUNDATION DETAIL



SIDE SLOPE TREATMENT

GENERAL NOTES

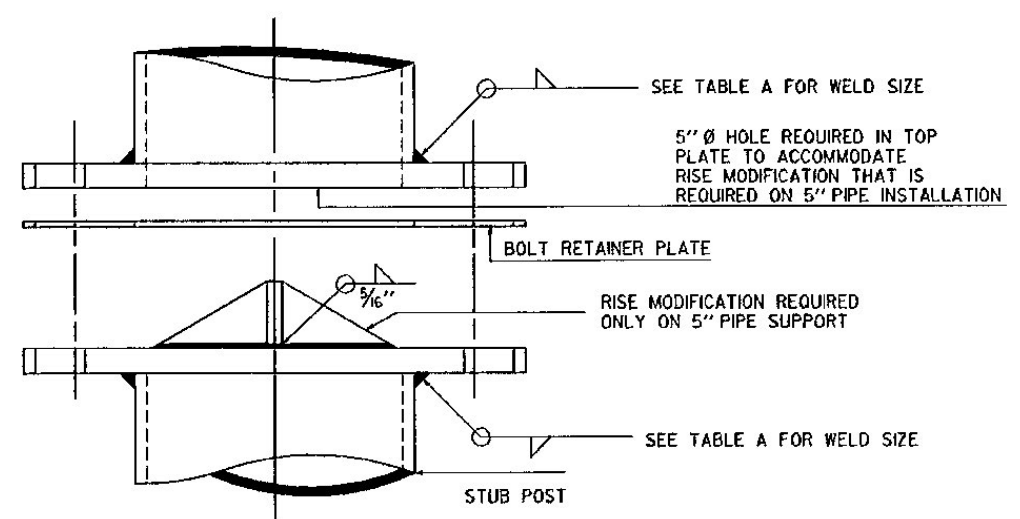
1. THE STEEL PIPE SHALL BE MANUFACTURED TO ASTM A501 OR ASTM A-53, TYPES E OR S, GRADE B AND SHALL BE GALVANIZED AS PER ASTM A-153.
2. THE MATERIAL FOR THE MULTIDIRECTIONAL SLIP BASE ASSEMBLY SHALL CONFORM TO ASTM A-36 STEEL, AND BE GALVANIZED AS PER ASTM A-153.
3. THE BOLTS, NUTS AND CIRCULAR WASHERS 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-123.
4. THE INSTALLATION AND INSPECTION OF THE BOLTED CONNECTION SHALL CONFORM TO SUBSECTION 506.19 (CONNECTIONS USING HIGH-STRENGTH BOLTS) OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION.

CONSTRUCTION METHOD

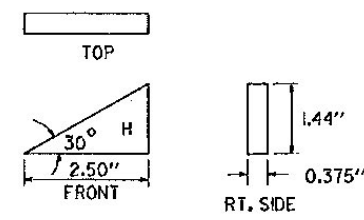
HOLES FOR POST FOOTINGS MAY BE AUGERED OR DUG, IF THE MATERIAL IS FIRM AND IF ALL DISTURBED SOIL AROUND THE CIRCUMFERENCE OF THE AUGERED HOLE IS REMOVED, THE HOLES MAY BE LEFT WITH EARTH SIDES. IF NOT, A SUITABLE FORM APPROVED BY THE ENGINEER SHALL BE USED. CORRUGATED METAL CULVERT PIPE OR PAPER FORMS, MANUFACTURED FOR USE AS CONCRETE COLUMN FORMS, WILL BE ACCEPTABLE. THE STUB SHALL BE EXTENDED TO THE BOTTOM OF THE HOLE AND SET ON A 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.

TABLE A

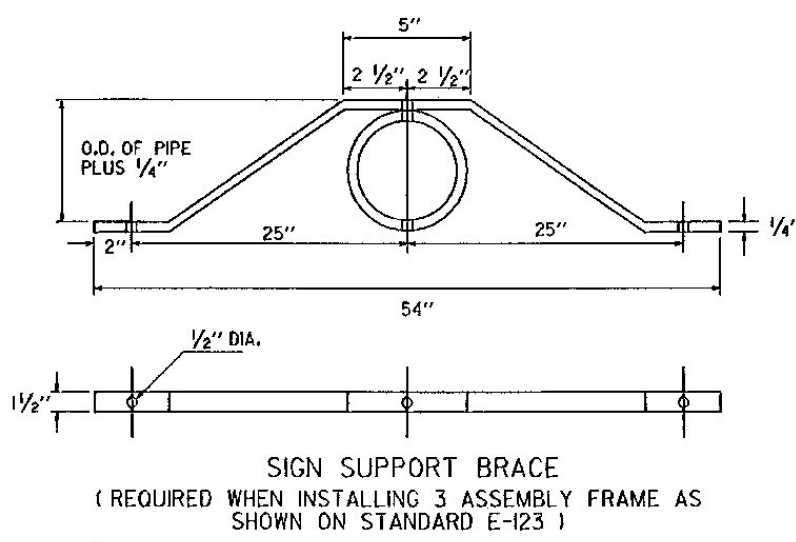
DIMENSIONS NOMINAL PIPE SIZES	BOLT SIZE & TORQUE	WELD SIZE	t	Y	A	B	C	D	E	F	G	K	L	M	U	N
3" DIA.	5/8" x 3/4"	3/8"	5/8"	7"	7"	3 1/2"	1 3/4"	1 1/4"	3"	2 5/16"	2"	10 3/8"	9"	1/2"	1/2"	6"
3 1/2" DIA.	T=450" LBS.															
4" DIA.	3/4" x 3/4"	7/16"	7/8"	8 9/16"	9"	4 1/2"	2 1/4"	1 1/2"	3 3/8"	2 7/8"	2 1/2"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



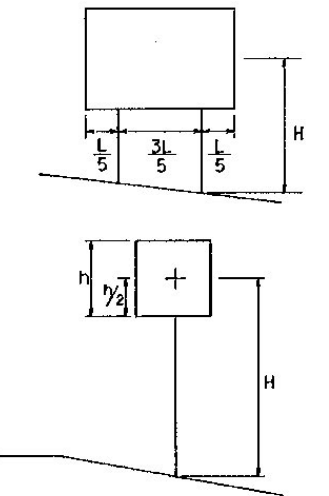
SEE TABLE A FOR WELD SIZE  
5" Ø HOLE REQUIRED IN TOP PLATE TO ACCOMMODATE RISE MODIFICATION THAT IS REQUIRED ON 5" PIPE INSTALLATION  
BOLT RETAINER PLATE  
RISE MODIFICATION REQUIRED ONLY ON 5" PIPE SUPPORT  
SEE TABLE A FOR WELD SIZE  
STUB POST



DETAIL "H"  
3 REQUIRED MOUNTED 120° APART  
RISE MODIFICATION REQUIRED ONLY FOR 5" PIPE SUPPORT



SIGN SUPPORT BRACE  
(REQUIRED WHEN INSTALLING 3 ASSEMBLY FRAME AS SHOWN ON STANDARD E-123)



POST SELECTION CHART DETAIL

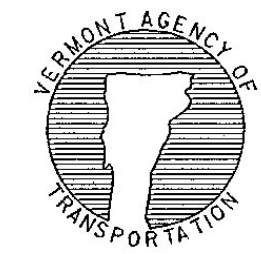
POST SELECTION CHART			
SIGN AREA (FT <sup>2</sup> ) x H (FT) ≤ SV (SELECTION VALUE)			
POST DIA. INCHES	WEIGHT LB/FT	SV	DESIGN CRITERIA
3	7.6	265	WIND SPEED = 60 MPH (10-YEAR MEAN RECURRENCE INTERVAL) WIND PRESSURE = 15 PSF STEEL MIN YIELD F <sub>y</sub> = 36,000 PSI ALLOWABLE STRESS = (1.4) 0.55 F <sub>y</sub>
3 1/2	9.0	368	
4	10.8	494	
5	14.6	839	

REVISIONS AND CORRECTIONS

APPROVED

SEPT. 10, 1987  
DATE  
*David B. Kelley*  
CHIEF ENGINEER  
*Arthur Stone*  
DIRECTOR OF PLANNING AND PRE-CONSTRUCTION  
*S. B. MacArthur*  
TRAFFIC AND SAFETY ENGINEER

TUBULAR STEEL SIGN POST



STANDARD  
E-163