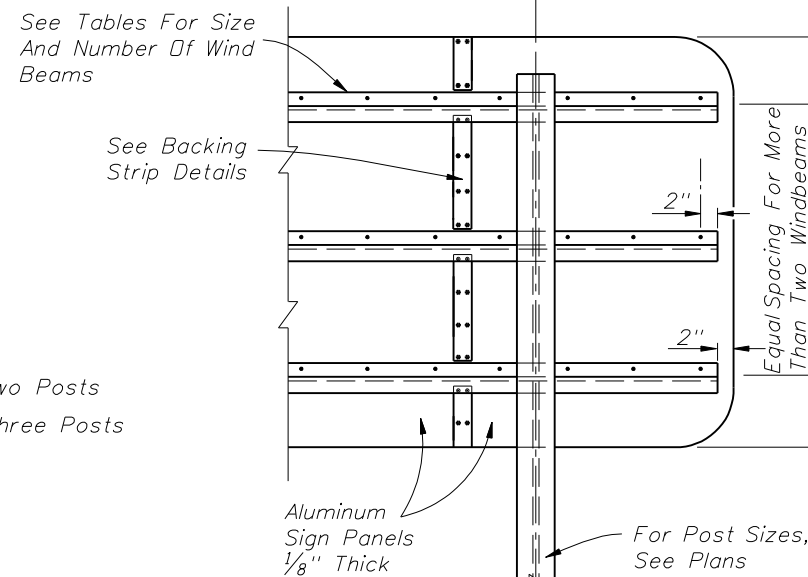


TYPICAL ELEVATION

( For Notes And Dimensions Not Shown, See Plans )



PARTIAL REAR ELEVATION

Two Wind Beams - 21% D  
 Three Wind Beams - 14.5% D  
 Four Wind Beams - 10.7% D  
 Five Wind Beams - 8.5% D

Mass Of Post Above Base Plate And Below Hinge Should Not Exceed 600 lb

See Detail To Right 'Z Type Wind Beam'

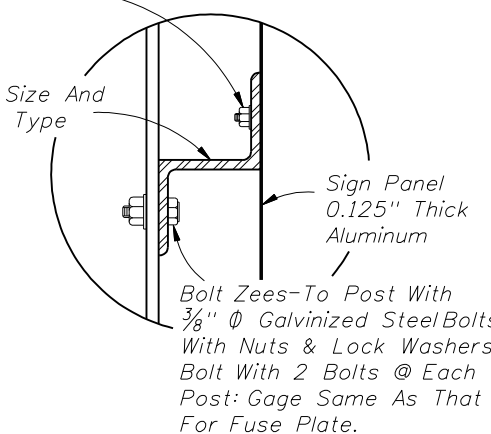
SIDE VIEW

1/4" Ø Aluminum Flat Head Machine Screws With Nuts And Lock Washers, Bolts Shall Be Spaced @ 12" Centers Maximum.

See Table For Size And Number Of Zee Type Wind Beams

Post Hinge @ Bottom Of Sign ± 1"

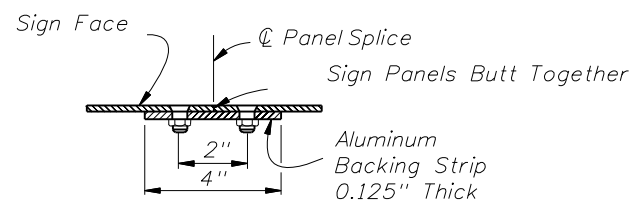
For Support Hinge See DETAIL B on Sheet 3 of 3.



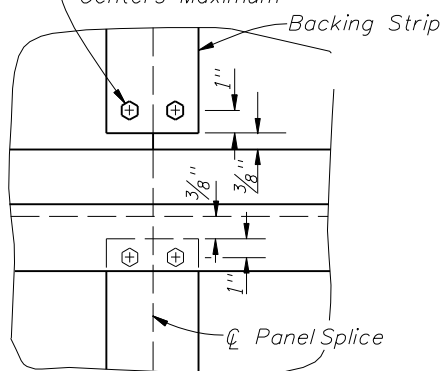
Z TYPE WIND BEAM

Note: It shall be the contractors responsibility to determine the length of the column supports in the field prior to fabrication.

Note: If the sign panels are deeper than 10', a Horizontal Panel Splice is allowed at an interior Z bar support, shop drawings shall be required. Minimum panel section width = 2'-6".



Pairs Of 1/4" Ø Aluminum Flat Head Machine Screws With Nuts And Lock Washers Spaced At 1'-0" Centers Maximum



BACKING STRIP DETAIL

NUMBER OF WIND BEAMS FOR GIVEN DEPTH & WIND					
Wind	No. Beams	Max. Depth	Wind	No. Beams	Max. Depth
110	2	7'-0"	150	2	6'-0"
110	3	12'-0"	150	3	10'-4"
110	4	16'-4"	150	4	14'-0"
110	5	20'-8"	150	5	17'-8"
130	2	6'-8"			
130	3	11'-4"			
130	4	15'-4"			
130	5	19'-0"			

DESIGN WIND SPEEDS BY COUNTY

110 mph

Alachua, Baker, Bradford, Clay, Columbia, Gadsden, Gilchrist, Hamilton, Hardee, Jackson, Jefferson, Lafayette, Lake, Leon, Madison, Marion, Polk, Putnam, Sumter, Suwannee, and Union Counties.

130 mph

Bay, Brevard, Calhoun, Charlotte, Citrus, DeSoto, Dixie, Duval, Flagler, Franklin, Glades, Gulf, Hendry, Hernando, Highlands, Hillsborough, Holmes, Lee, Levy, Liberty, Manatee, Nassau, Okaloosa, Okeechobee, Orange, Osceola, Pasco, Pinellas, Sarasota, Seminole, St. Johns, Taylor, Volusia, Wakulla, Walton, and Washington Counties.

150 mph

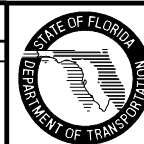
Broward, Collier, Escambia, Indian River, Martin, Miami-Dade, Monroe, Palm Beach, Santa Rosa, and St. Lucie Counties.

SIZE OF WIND BEAMS		
Size Of Zee*	Length Of Sign (Feet)	
	2 Posts	3 Posts
Z 1.75 x 1.75 x 1.08	0 - 11'-0"	0 - 17'-4"
Z 3 x 2.69 x 2.33	11'-1"-19'-0"	17'-5"-29'-6"
Z 3 x 2.69 x 3.38	19'-1"-20'-8"	29'-7"-31'-6"

\*Note: Zees Are Aluminum - No Steel Equivalent Available Designation Gives (Member Depth) x (Flange=Width) x (lb/ft)

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
07/01/07	L.W.	Deleted High Strength Bolt Table A-325. Note revised to 10' instead of 12' in BACKING STRIP DETAIL.			



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MULTI-COLUMN GROUND SIGN

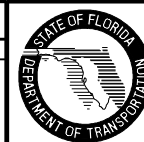
Interim Date	Sheet No.
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**GENERAL NOTES**

- DESIGN SPECIFICATION**      *Design according to FDOT Structures Manual (current edition).  
Standard Specification for Structural Supports for Highway Signs, Luminaries and Traffic Signals, AASHTO 2001.  
For welding refer to the latest editions of the AWS Structural Welding Codes for Steel and Aluminum, the AASHTO  
Standard Specifications for Welding Structural Steel Highway Bridges.*
- ALUMINUM MATERIALS**      *All aluminum materials shall meet the requirements of the Aluminum Association's Alloy 6061-T6 and also the following  
ASTM specifications: Sheets and plates, B209; extruded tube, bars, rods & shapes, B221; and standard structural shapes,  
B308. Sheets are to be degreased, etched, neutralized and treated with Alodine 1200, Iridite 14-2, Bonderite 721, or  
equal. No stenciling permitted on sheets. Aluminum welding rods shall meet the requirements of Aluminum Association  
Alloy No. 5556 filler wire.*
- STRUCTURAL STEEL**      *All structural steel shall meet the requirements of ASTM A36.*
- ALUMINUM BOLTS, NUTS,  
& LOCKWASHERS**      *Aluminum bolts shall meet the requirements of Aluminum Association Alloy 2024-T4 (ASTM F468). The bolts shall have  
an anodic coating at least 0.0002" thick and be Chromate sealed. Lock washers shall meet the requirements of Aluminum  
Association Alloy 7075-T6 (ASTM B221). Nuts shall meet the requirements of Aluminum Association Alloy 6061-T6 or  
6262-T9 (ASTM F467).*
- STEEL BOLTS, NUTS,  
& WASHERS**      *All steel bolts, nuts and washers shall meet the requirements of ASTM A325.*
- ALTERNATE MATERIAL**      *Material meeting the requirements of ASTM B209 or Aluminum Association Alloys 5154-H38 or 5052-H38 may be used  
for sheet and plate. Material meeting the requirements of Aluminum Association Alloy 6351-T5 and ASTM B221 may be  
used for extruded bars, rods, shapes and tubes.*
- TOLERANCES**      *All above materials shall be in accordance with the governing ASTM specifications.*
- GALVANIZING**      *All steel shapes, angles, tees, plates, bolts, nuts and washers shall be galvanized in accordance with Standard Specifications  
962-7.*
- BASE CONNECTION**      *High strength bolts L<sub>2</sub> in the base connection shall be tightened only to the torque shown in the table on sheets 3 of 3.  
Overtightened base connections will not be accepted.*
- FUSE PLATES**      *All holes in fuse plates shall be drilled. All plate cuts shall, preferably, be saw cuts; however, flame cutting will be permitted  
provided all edges are ground. Metal projecting beyond the plane of the plate face will not be tolerated.*
- SIGN FACE**      *All sign face corners shall be rounded. See Sign Layout Sheet.*
- SHOP DRAWINGS**      *When ground sign supports are fabricated in accordance with these plans no shop drawings are required. Shop drawings  
will be required for approval when the column length exceeds the length shown in the plans by more than 2'-0". However,  
shop drawings for sign panels, messages, lettering and quantities shall be submitted to the Engineer of Record for approval.*
- FABRICATOR NOTE**      *All bolts shall be high strength bolts. All bolts, except L<sub>2</sub> bolts and zee to post bolts, shall be tightened in the  
shop following a method approved by the engineer. Tightening shall be to such a degree so as to attain in each bolt the  
residual tension specified in the tabulation on sheet 1 of 3.*
- FOUNDATION**      *Contractor may use precast foundations in pre-drilled holes a minimum of 12" larger than the foundation indicated on  
the plans in either wet or dry conditions. The holes shall be clean and without loose material. Temporary casing shall be  
required if the soil is unstable. Fill the void around the precast foundation with flowable fill meeting the requirements of  
Section 121 or clear sand placed using hydraulic methods. The cost of flowable fill, installing and removal of casing shall  
be included in the unit price of Sign Multi-Post.*

**REVISIONS**

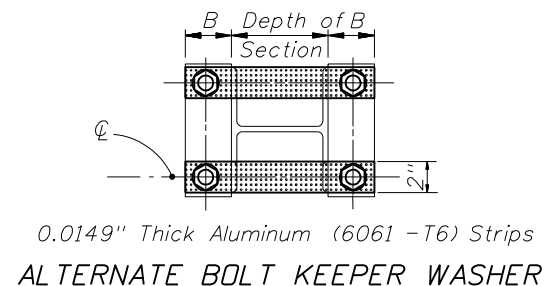
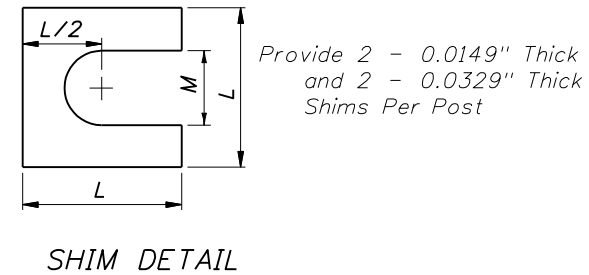
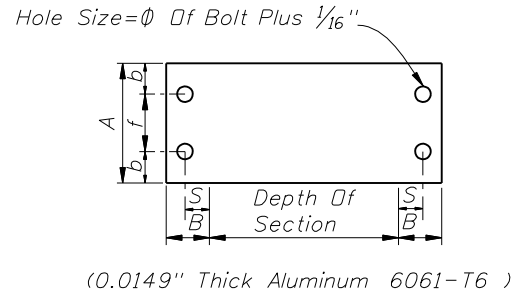
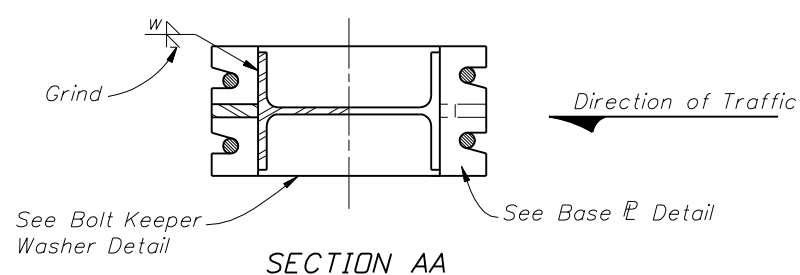
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
09/05/07	L.W.	Foundation note revised			



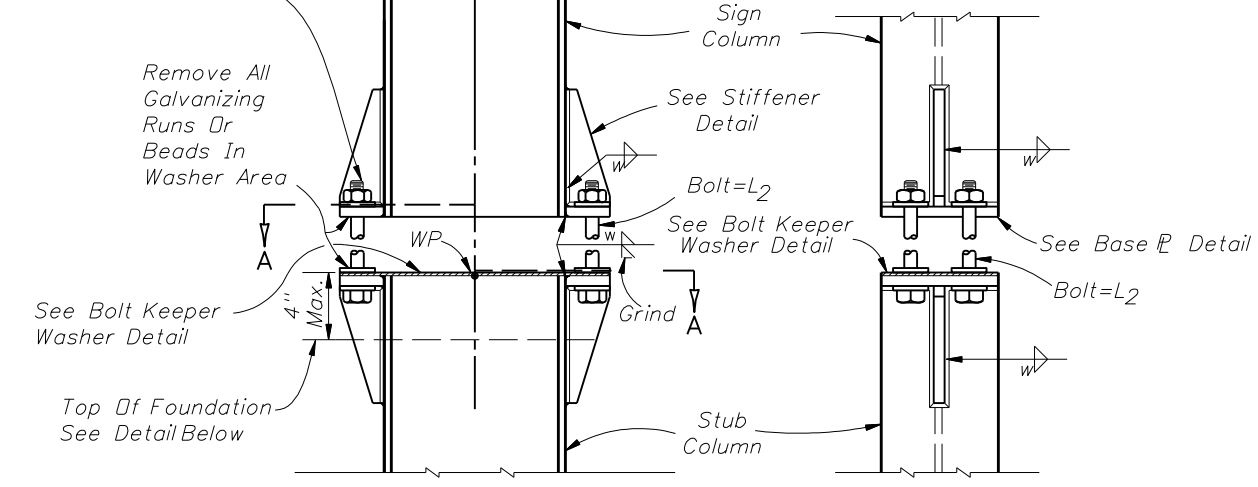
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**MULTI-COLUMN GROUND SIGN**

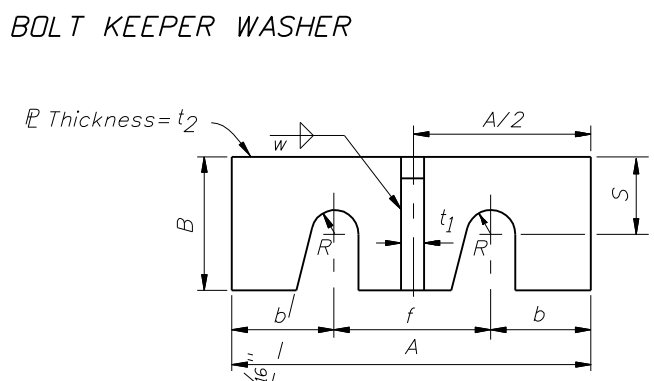
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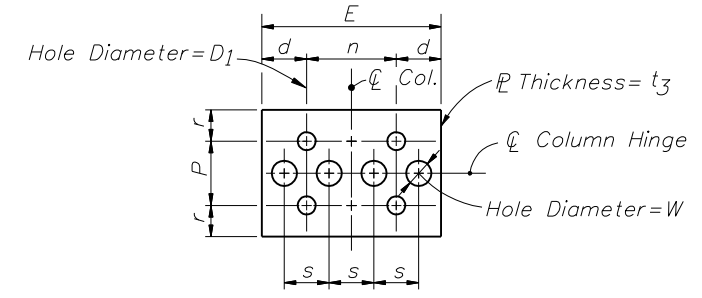
H. S. Bolt With Hex Head, Hex Nut & 3 Washers With Each Bolt. See Table For Bolt Diameter And Torque. See Bolting Procedure.



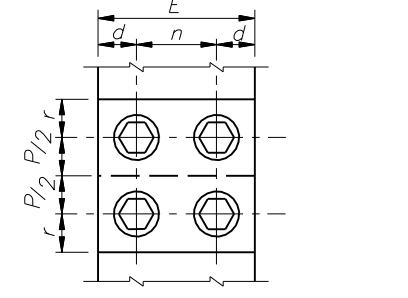
SIGN COLUMN & STUB COLUMN ELEVATION  
BASE CONNECTION



BASE PLATE

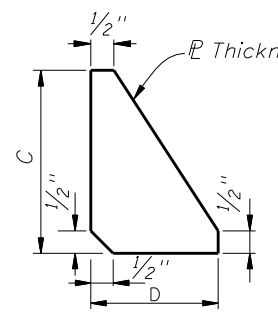


FUSE PLATE

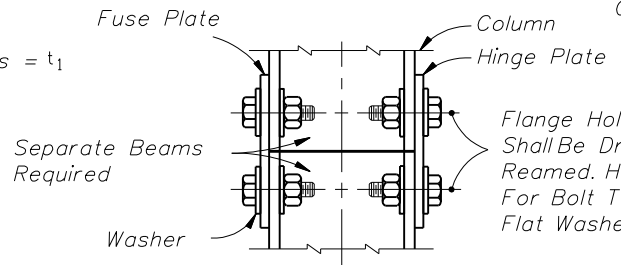


HINGE PLATE  
(Match Post Flange Thickness)

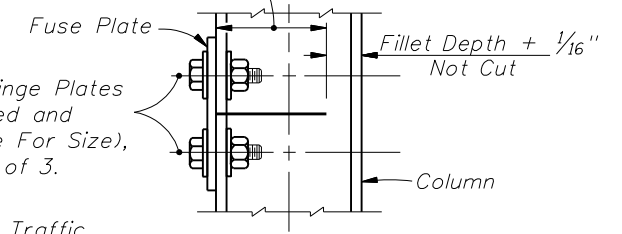
Cut Flange And Web, Post Shall Be Saw Cut After Galvanizing And The Cut Surface Treated With A Galvanizing Compound Code G-C



STIFFENER PLATE

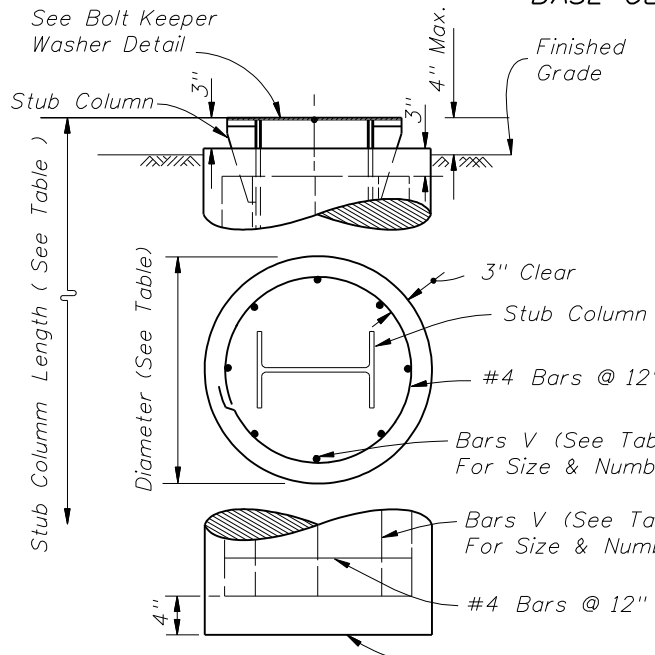


SIDE VIEW  
OPTIONAL HINGE



SIDE VIEW  
TYPICAL HINGE

FUSE & HINGE PLATES  
DETAIL B



FOUNDATION DETAIL

NOTE: All Reinforcing To Be Grade 60.

FOUNDATION DATA				SHIM	
Dia.	Depth	Stub Length	Reinf. Bars V	L	M
2'-0"	5'-6"	2'-4"	10-#6	1 3/8"	1 1/16"
2'-0"	7'-6"	2'-10"	10-#6	1 3/4"	1 3/16"
2'-4"	8'-6"	3'-4"	8-#8	2"	1 5/16"
2'-4"	10'-3"	4'-0"	8-#8	2 3/8"	1 3/16"
2'-8"	11'-3"	4'-8"	10-#8	2 3/8"	1 3/16"

Section *	BASE CONNECTION DATA											FUSE (HINGE) PLATE DATA										
	A	B	C	D	Bolt Size (L2) & Torque (in-lb)	R	b	f	S	t1	t2	w	Bolt Size	E	P	D1	d	n	r	s	t3	W
W 6x12	4 3/4"	2"	5 1/8"	2"	5/8" Ø 345	3/8"	1 1/8"	2 1/2"	1 3/16"	1/2"	1/2"	1/4"	5/8"	4 1/4"	3"	1 1/16"	1 1/8"	2"	1 3/16"	1"	1/4"	1 3/16"
W 8x18	5 3/4"	2 3/16"	6 1/4"	2 3/16"	3/4" Ø 550	7/16"	1 1/2"	2 3/4"	1 3/8"	1/2"	5/8"	1/4"	7/8"	5 1/2"	3 3/4"	1 5/16"	1 1/2"	2 1/2"	1 3/8"	1 5/16"	3/8"	1 1/16"
W 10x22	6 1/8"	2 3/8"	8"	2 3/8"	7/8" Ø 640	1/2"	1 9/16"	3"	1 3/8"	1/2"	3/4"	5/16"	1"	6 3/8"	4 5/16"	1 1/16"	1 3/4"	2 7/8"	1 3/4"	1 1/2"	3/8"	1 3/16"
W 10x33	8"	2 3/4"	8"	2 3/4"	1 1/8" Ø 780	5/8"	2"	4"	1 9/16"	1/2"	3/4"	5/16"	1 1/8"	7 7/8"	5 5/16"	1 3/16"	2 1/4"	3 3/8"	2"	1 7/8"	1/2"	1 9/16"
W 12x40	8"	3"	8"	3"	1 1/8" Ø 780	5/8"	2"	4"	1 9/16"	1/2"	3/4"	5/16"	1 1/4"	8 3/8"	5 3/4"	1 5/16"	2 1/4"	3 3/8"	2 3/16"	2"	1/2"	1 11/16"

\* Designations Give (Nominal Depth) x (lb/ft)

\*\* At the Option of the Contractor, D10 Spiral Wire @ 6" Pitch, Three Flat Turns Top and One Flat Turn Bottom may be Utilized in Lieu of Specified.

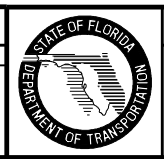
Shop-weld assemblies of foundation stirrup reinforcing bars are permitted in reinforced concrete foundation provided that:  
 1. The reinforcing bars conform to ASTM Specification A706/706M.  
 2. The holding wires conform to ASTM Specification A82 or A496.  
 3. The Shop welding is performed by machines under a continuous, controlled process, approved by the Engineer.  
 4. Quality control test are performed on shop-welded specimens and the test results are available, upon request, to the Engineer.

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION

1. Assemble post to stub with bolts and with one flat washer on each end bolt between plates.
2. Shim as required to plumb post (see shim detail).
3. Tighten all bolts the maximum possible with 1'-0" to 1'-3" wrench to bed washers and shims and to clean bolt threads then loosen each bolt in turn and retighten in a systematic order to the prescribed torque (see table).
4. Burr threads at junction with nut using a center punch to prevent nut loosening.
5. Sections shown are for installation on right shoulder. For left shoulder plate slot bevels are opposite hand from that shown.

STEEL POST, BASE, FOUNDATION & FUSE PLATE DETAILS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
11/27/07	L.W.	Notes added to FOUNDATION DETAIL.			



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**MULTI-COLUMN GROUND SIGN**

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