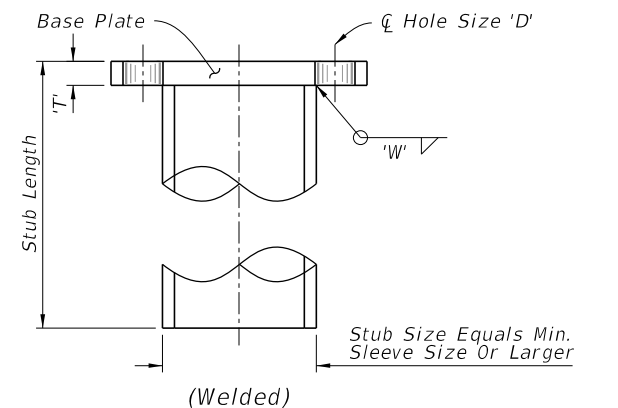
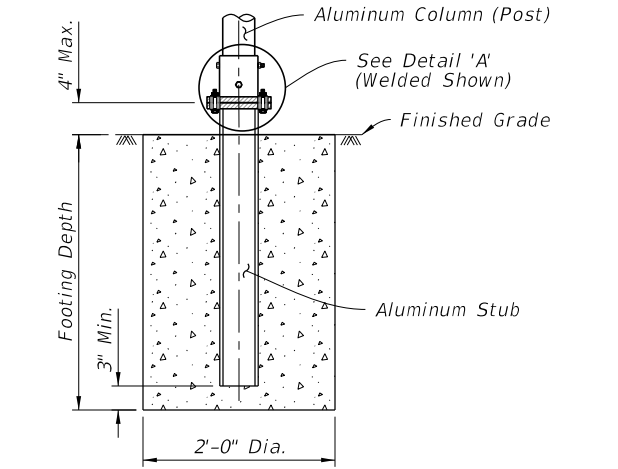


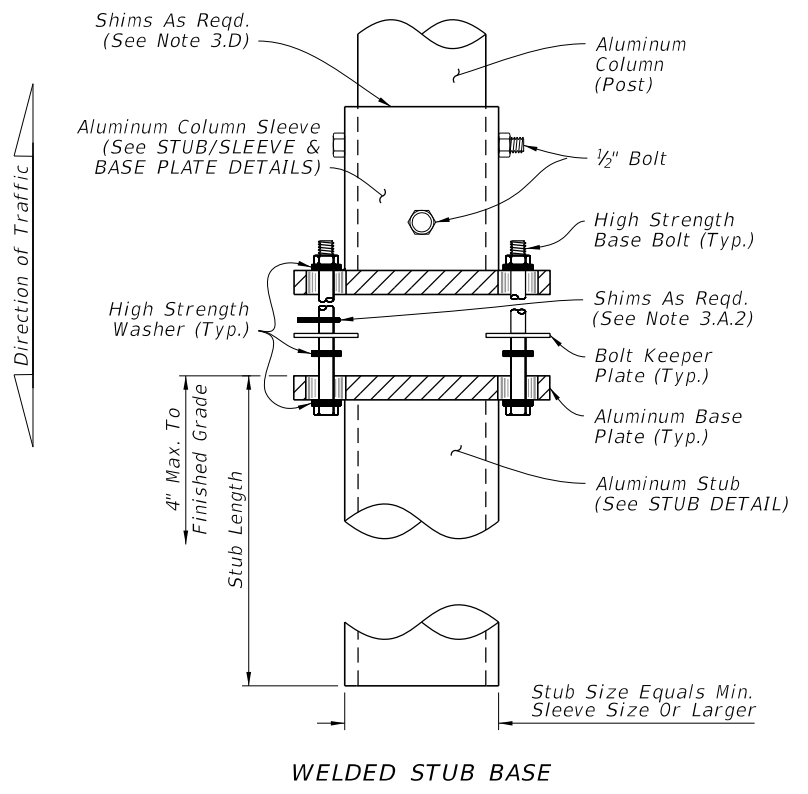
**STUB/SLEEVE & BASE PLATE DETAILS**  
(Welded Or Sandcast)



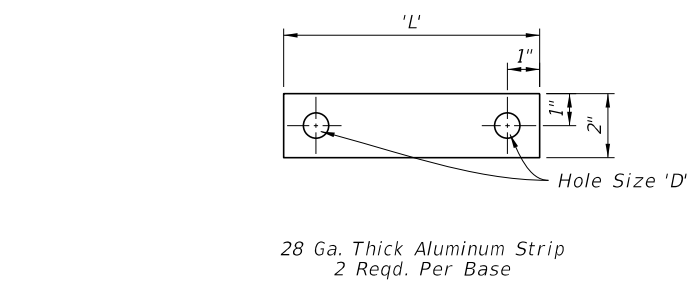
**STUB DETAIL**



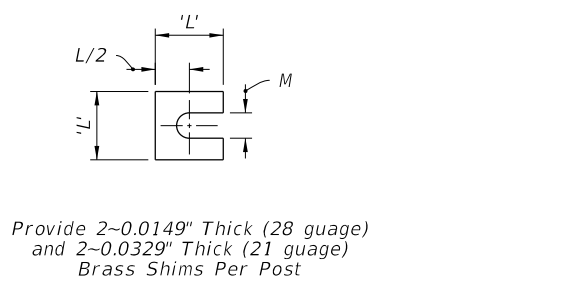
**SLIP BASE AND FOUNDATION DETAIL**  
(Non-Frangible Column, Typ.)



**WELDED STUB BASE**

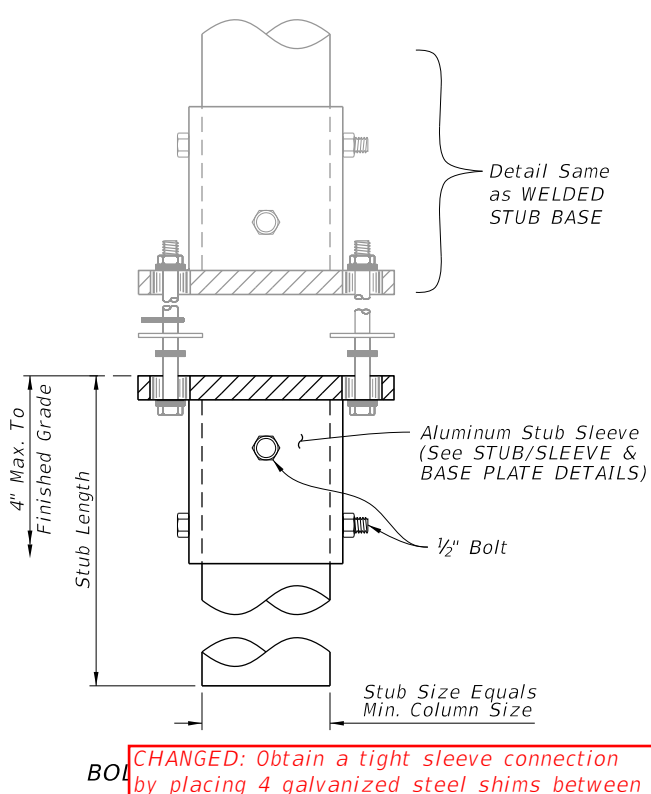


**BOLT KEEPER PLATE DETAIL**



**SHIM DETAIL**

Direction of Traffic

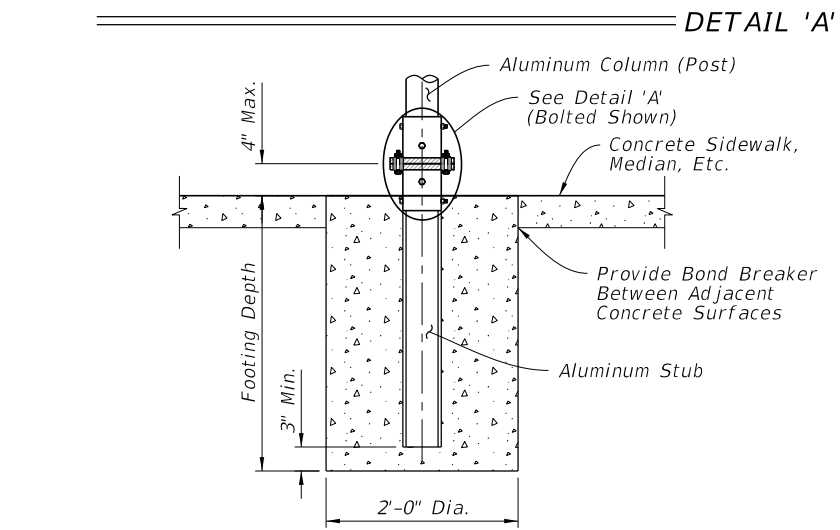


**CHANGED:** Obtain a tight sleeve connection by placing 4 galvanized steel shims between the column (post) and sleeve. Space the shims evenly around the perimeter of the column (1 between each bolt hole, 4 total). Use shims that are 1" shorter than the height of the sleeve.

**NOTES:**

- Foundation Notes for Frangible Slip Base:**
  - Place Stub into concrete to diameter and depth shown in POST AND FOUNDATION TABLE using Class 1 Concrete.
- Slip Base Fabrication Notes:**
  - The difference between the O.D. of the post and I.D. of the Sleeve must be 1/16" or less.
  - Either a Welded Stub Base or Bolted Stub/Sleeve Base may be used to fabricate the Slip Base.
  - For cast base plates bolted to foundation stubs, use a foundation stub the same size as the sign column (Post).
- Slip-Base Assembly Instructions:**
  - Assemble Slip Base connections in the following manner:
    - Insert Post into Sleeve and connect using 2 ~ 1/2" diameter Sleeve Bolts.
    - Assemble top base plate to bottom Base Plate using Base Bolts (High strength) with 3 washers per bolt. (See Detail 'A'):
      - Place one washer on each Base Bolt between the bottom Base Plate and the Base Bolt head.
      - Place the next washer between the Bottom Base Plate and the Bolt Keeper Plate.
      - Use brass shims to plumb the post.
      - Add the top base plate section.
      - Place the third washer between the Top Base Plate and the Nut.
  - Orient the Bolt Keeper Plates in the Direction of Traffic.
  - Tighten Base Bolts as follows:
    - Tighten Base Bolts to the maximum possible with a 12" to 15" wrench (this will bed the washers and shims and clear the bolt threads).
    - Loosen each Base Bolt one turn.
    - Under the supervision of the Engineer, use a calibrated wrench to tighten bolts to the torque prescribed in the SLIP BASE DETAILS Table. Over tightened Base Bolts are not permitted.
    - Distort bolt threads at the junction with nuts to prevent loosening. Repair damaged galvanizing.
  - ~~Place galvanized steel shims between the Sleeve and Post to obtain a tight fit between the Post and Sleeve.~~

Column (Post) Size		SLIP BASE DETAILS												
Outside Dia.	Wall Thickness	Sleeve I.D. (Max.)	Sleeve Height 'H'	Weld 'W'	Base Plate		Radius 'R'	Base Bolt		Base Plate Torque		Hole Size 'D'	SHIM	
					'L'	'T'		Size	Length	ft.-lbs	in.-lbs		L	M
4"	1/4"	4 1/16"	6"	5/8"	8"	3/4"	1 1/32"	5/8"	3"	29	345	1 1/16"	1 3/8"	1 1/16"
4 1/2"	1/4"	4 7/16"	6"	5/8"	8"	7/8"	1 1/32"	5/8"	3 1/4"	29	345	1 1/16"	1 3/8"	1 1/16"
5"	1/4"	5 1/16"	7"	5/8"	8"	7/8"	1 1/32"	5/8"	3 1/4"	29	345	1 1/16"	1 3/8"	1 1/16"
6"	1/4"	6 1/16"	8"	3/4"	9"	1"	1 3/32"	3/4"	3 1/2"	46	554	1 3/16"	1 3/4"	1 3/16"
8"	5/16"	8 1/16"	10"	3/4"	11"	1"	1 5/32"	7/8"	3 3/4"	53	640	1 5/16"	2 3/8"	1 1/16"



**SLIP BASE AND FOUNDATION DETAIL IN CONCRETE**  
(Non-Frangible Column In Crossovers, Medians & Sidewalks)

**SLIP BASE AND FOUNDATION DETAILS**

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