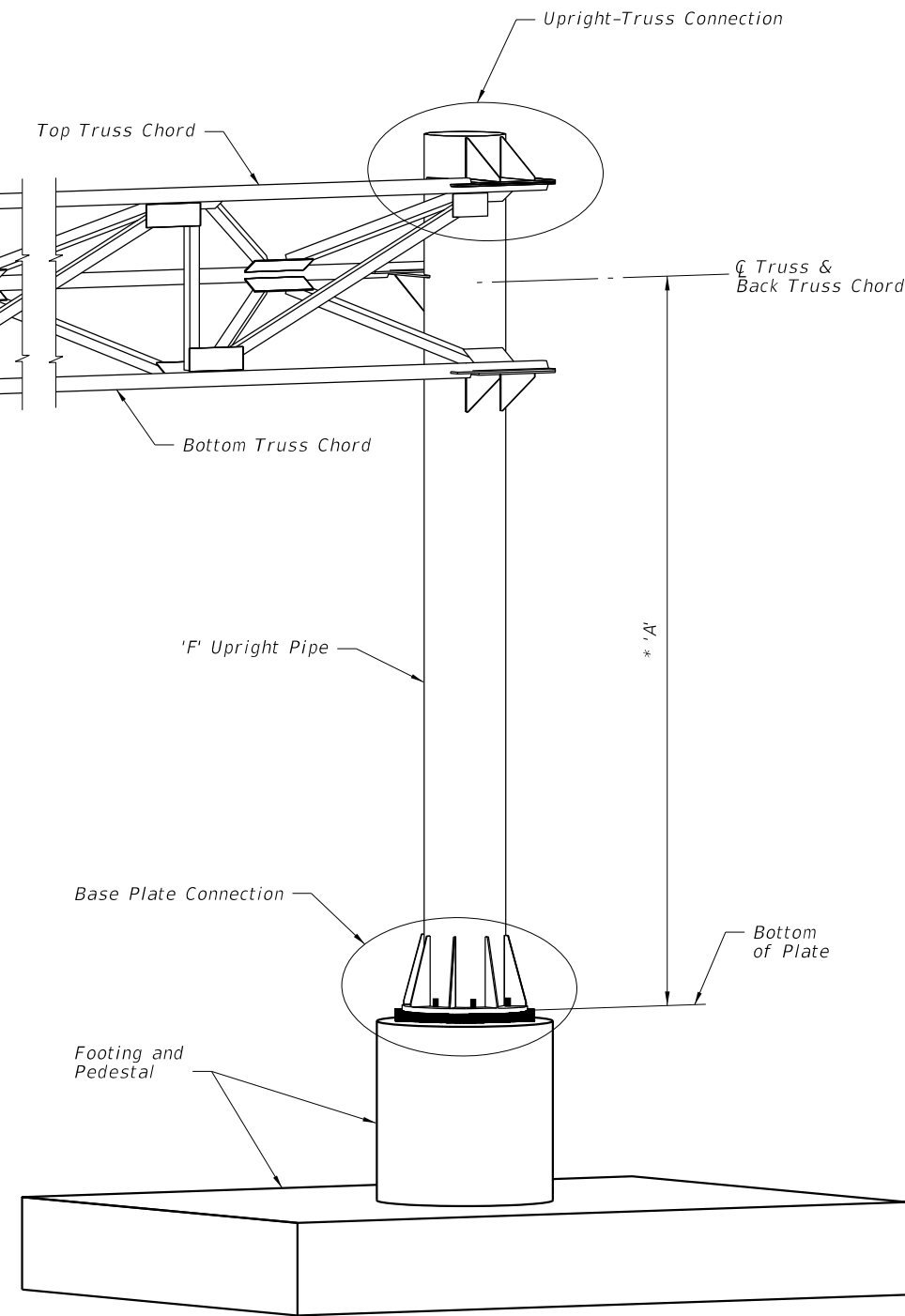


CANTILEVER SIGN STRUCTURE NOTES


1. Work this Index in conjunction with CANTILEVER SIGN STRUCTURE DATA TABLES in the Plans and Index 11300.
2. Handholes are required at pole base for DMS Structures. Refer to Index 18300 for Handhole Details.
3. Shop Drawings are required. Obtain Shop Drawing approval prior to fabrication. Include the following:
 - A. Field verification of all upright heights.
 - B. Foundation elevations: Ensure minimum vertical clearances of the sign panel over the roadway.
 - C. Height of the foundation above adjacent ground.
 - D. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
 - E. Chord Splices
 - F. Handholes at pole base (when required).
4. Materials:
 - A. Sign Structure:
 - a. Upright and Chords (Steel Pipe): API-5L-X42, 42 ksi yield or ASTM A500, Grade B (Min.)
 - b. Steel Angles and Structural Plates and Bars: ASTM A709 Grade 36
 - c. Weld Material: E70XX
 - B. Bolts, Nuts and Washers:
 - a. High Strength Bolts: ASTM A325 Type 1
 - b. Nuts: ASTM A563 Grade DH Heavy-Hex
 - c. Washers: ASTM F436 Type 1, one under turned element
 - C. Anchor Bolts, Nuts and Washers
 - a. Anchor Bolts: ASTM F1554 Grade 55
 - b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per bolt)
 - c. Plate Washers: ASTM A36 (2 per bolt)
 - D. Concrete:
 - a. Spread Footing Concrete: Class IV
 - b. Drilled Shaft concrete: Class IV (Drilled Shaft)
 - E. Reinforcing Steel: Specification Section 415
5. Fabrication:
 - A. Welding: Specification Section 460-6.4
 - B. Chord Splices: "SD" Panel from upright is the closest panel in which a chord splice may be used. See Plans for CANTILEVER SIGN STRUCTURE DATA TABLE. Minimum splice spacing is two truss panel lengths apart.
 - C. Upright splices: Not allowed
 - D. Structural bolt hole diameters: Bolt diameter plus 1/16"
 - E. Anchor bolt hole diameters: Bolt diameter plus 1/2"
 - F. Hot Dip Galvanize after fabrication.
 - G. Shop assemble the entire structure after galvanizing to validate/document alignment and clearance for bolted connections as well as contact between connecting plates. Take remedial action, if necessary, prior to shipment.
 - H. Disassemble, as necessary, and secure components for shipment.
6. Coatings:
 - A. Bolts, Nuts and Washers: ASTM F2329
 - B. All other steel, including Plate Washers, hot dip galvanize: ASTM A123
7. Construction:
 - A. Construct foundation in accordance with Specification Section 455, except payment is included in the cost of the structure.
 - B. Prior to erection, record the as-built anchor locations and submit to the Engineer.
 - C. Place backfill above spread footings prior to installation of the sign panels. Do not remove or reduce backfill without prior approval of the Engineer.
 - D. Tighten nuts and bolts in accordance with Specification Section 700. Split-Lock Washers are not permitted.
 - E. Install Aluminum Sign Panels as shown on the Elevation drawing.
 - F. Place structural grout pad with drain between top of foundation and bottom of baseplate in accordance with Specification Section 649-7.

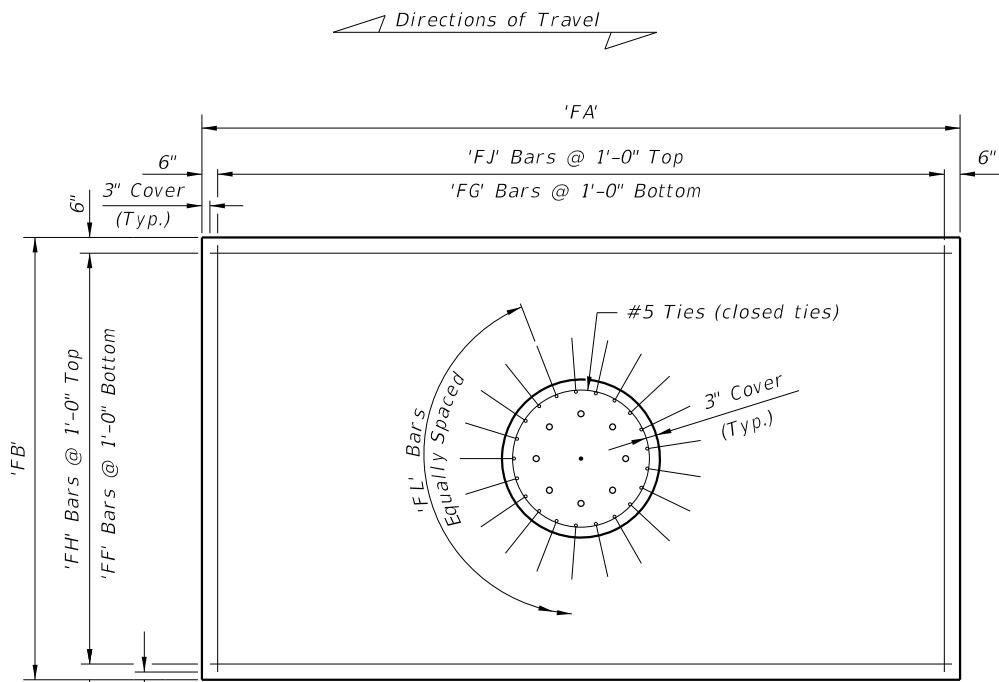


ISOMETRIC VIEW

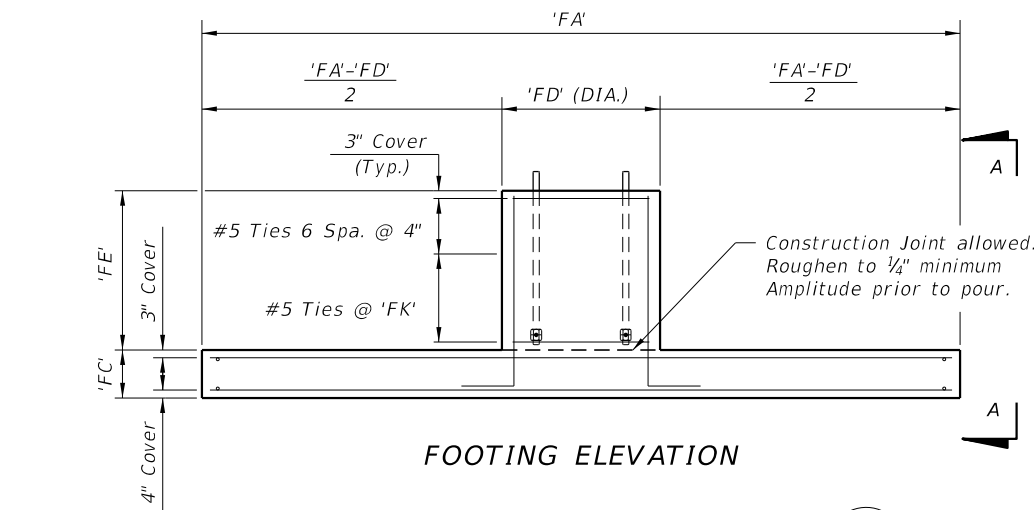
* NOTE: Verify these Dimensions prior to fabrication of Upright.

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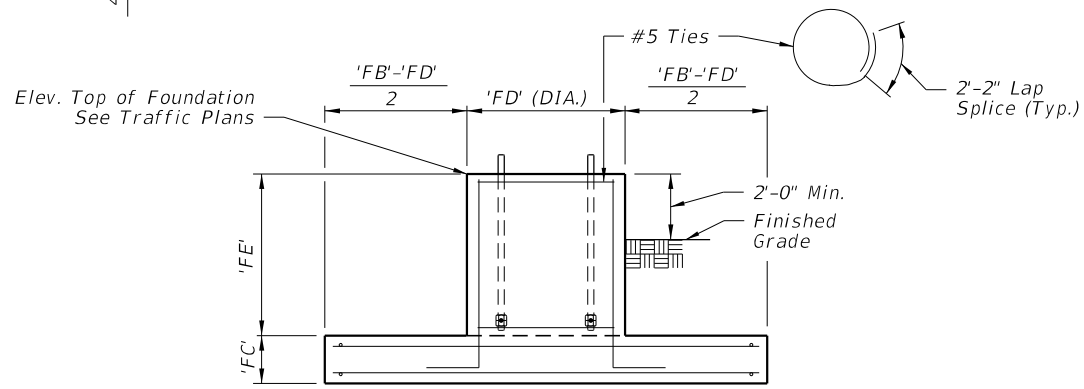
LAST REVISION 07/01/15	REVISION	DESCRIPTION:	 2016 DESIGN STANDARDS	CANTILEVER SIGN STRUCTURE	INDEX NO. 11310	SHEET NO. 1 of 5
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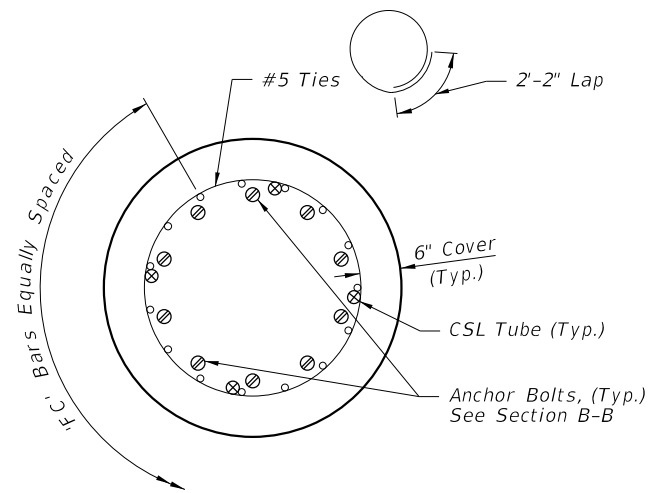
FOOTING PLAN



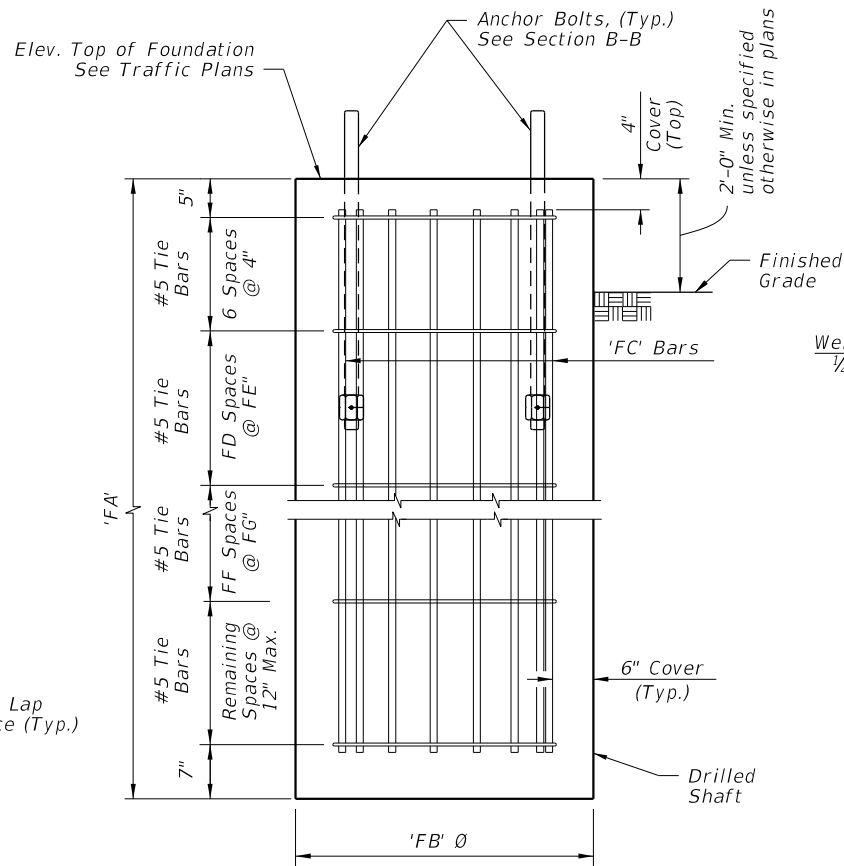
FOOTING ELEVATION



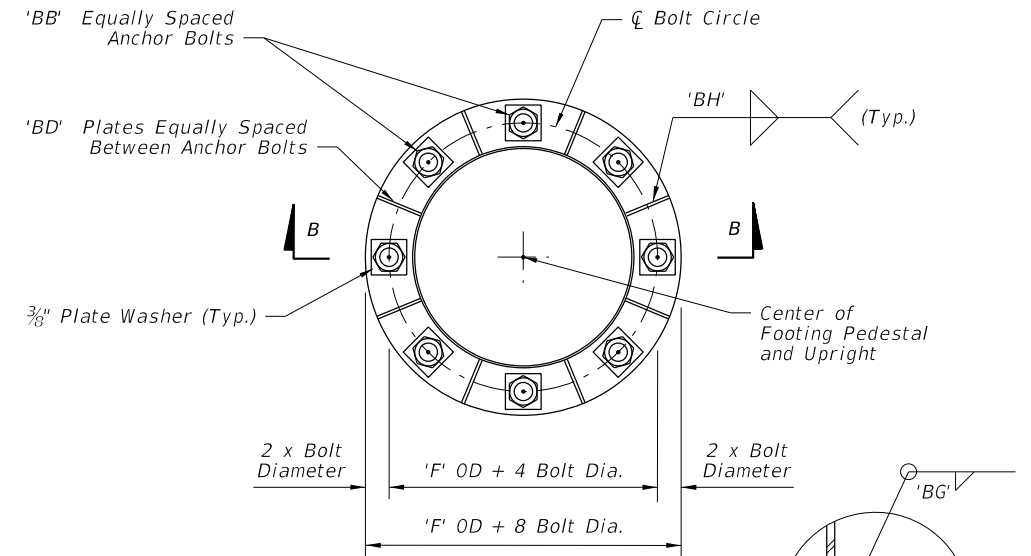
VIEW A-A



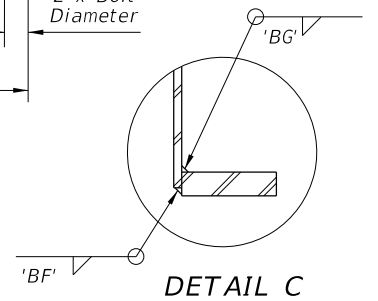
PLAN VIEW DRILLED SHAFT



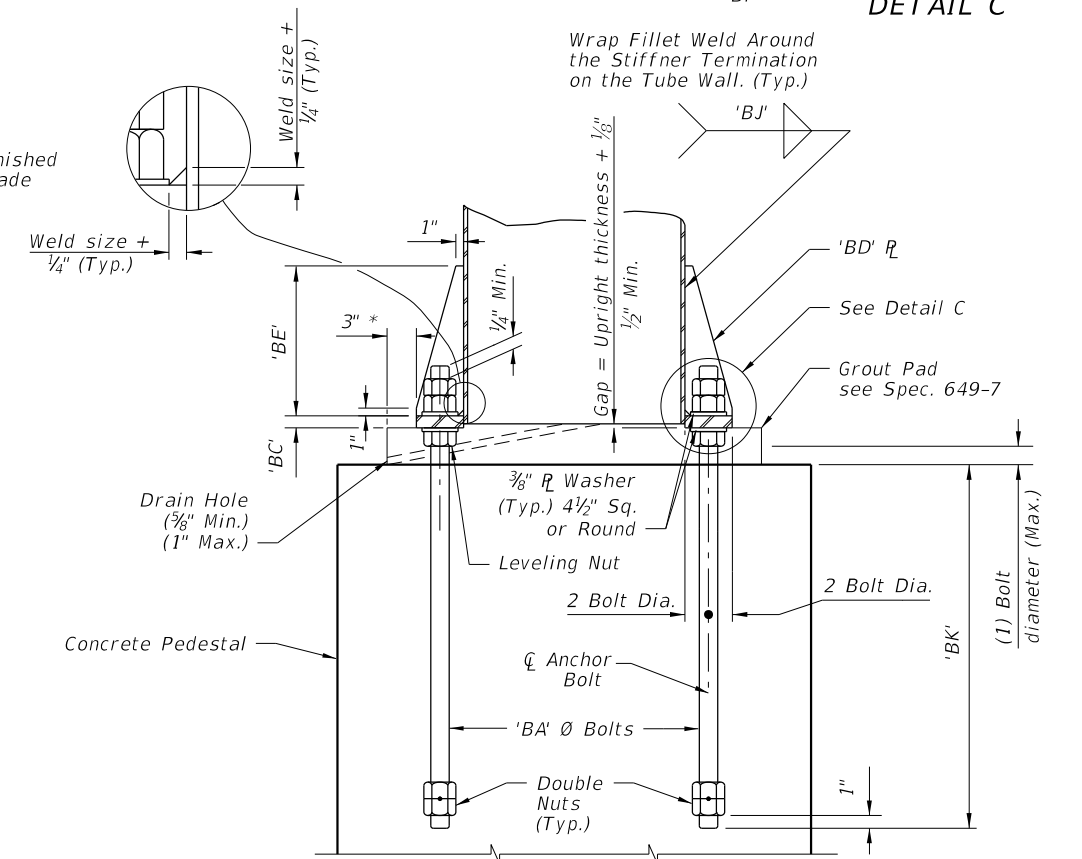
ELEVATION DRILLED SHAFT (Alternate Foundation)



PLAN VIEW (Base Plate)



DETAIL C

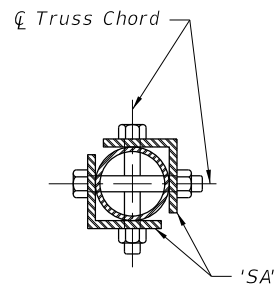


SECTION B-B

* This dimension may be modified to be less than 3" where the footprint of the grout pad does not provide adequate clearance for accessibility considerations.

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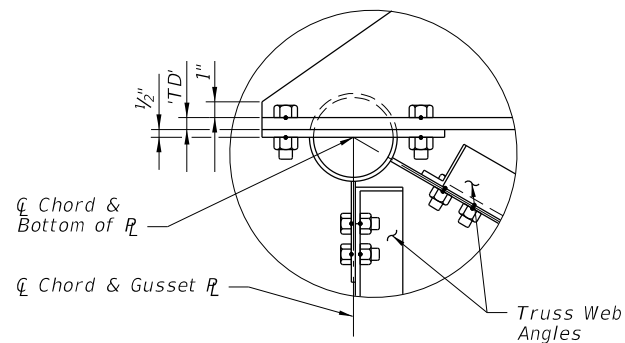
SECTION D-D

'SC' Ø Bolts 'SB' Required
(One Half Each Side of Splice)

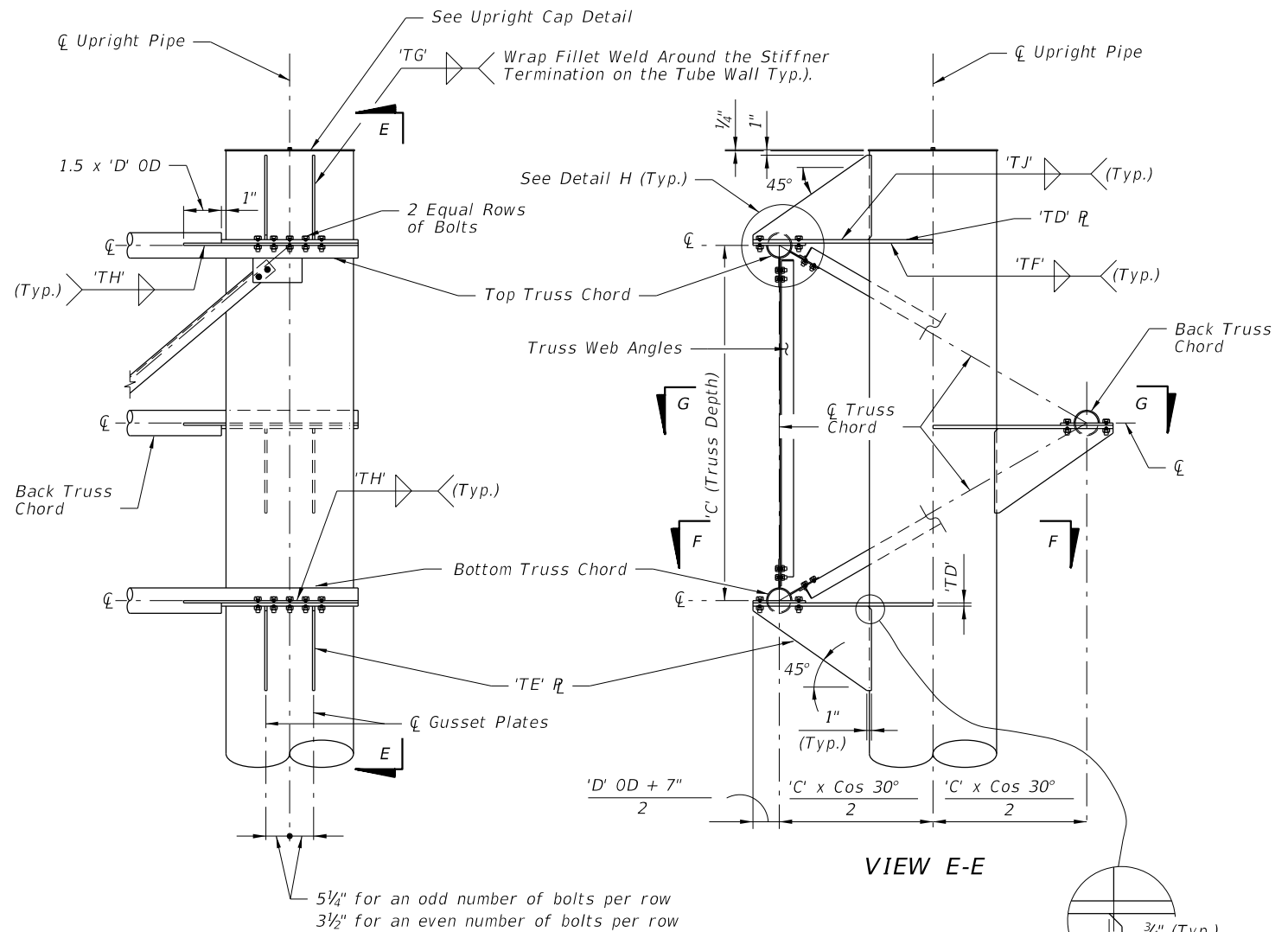
3 1/2" for 1" Ø Bolts
3" for 7/8" Ø Bolts
2 1/2" for 3/4" Ø Bolts

1 3/4" for 1" Ø Bolts
1 1/2" for 7/8" Ø Bolts
1 1/4" for 3/4" Ø Bolts

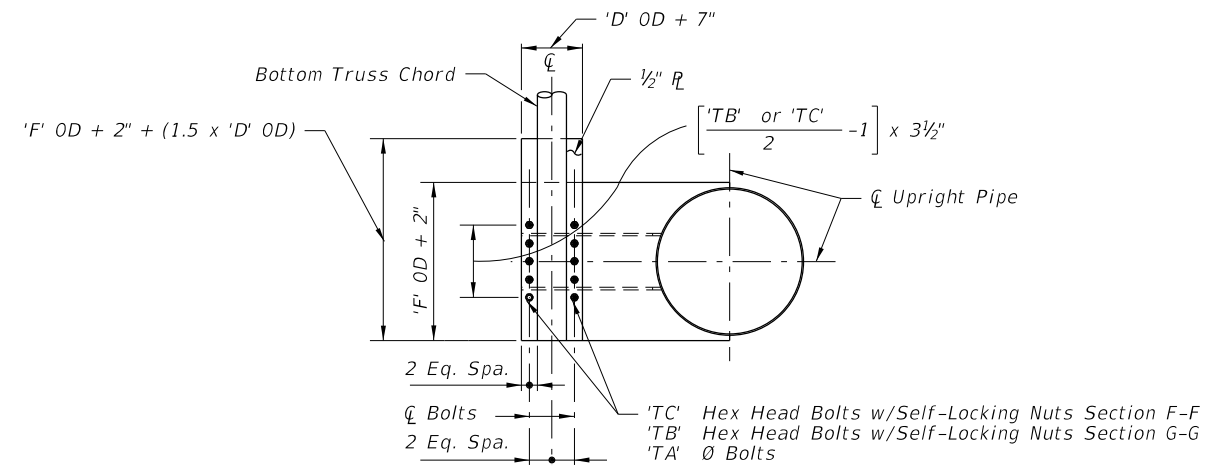
SPLICE CONNECTION DETAIL
(Splice not allowed for trusses ≤ 40'
Splice optional for trusses > 40')



DETAIL H



UPRIGHT-TRUSS CONNECTION DETAIL
(Web Members from back Truss Chord omitted for clarity)

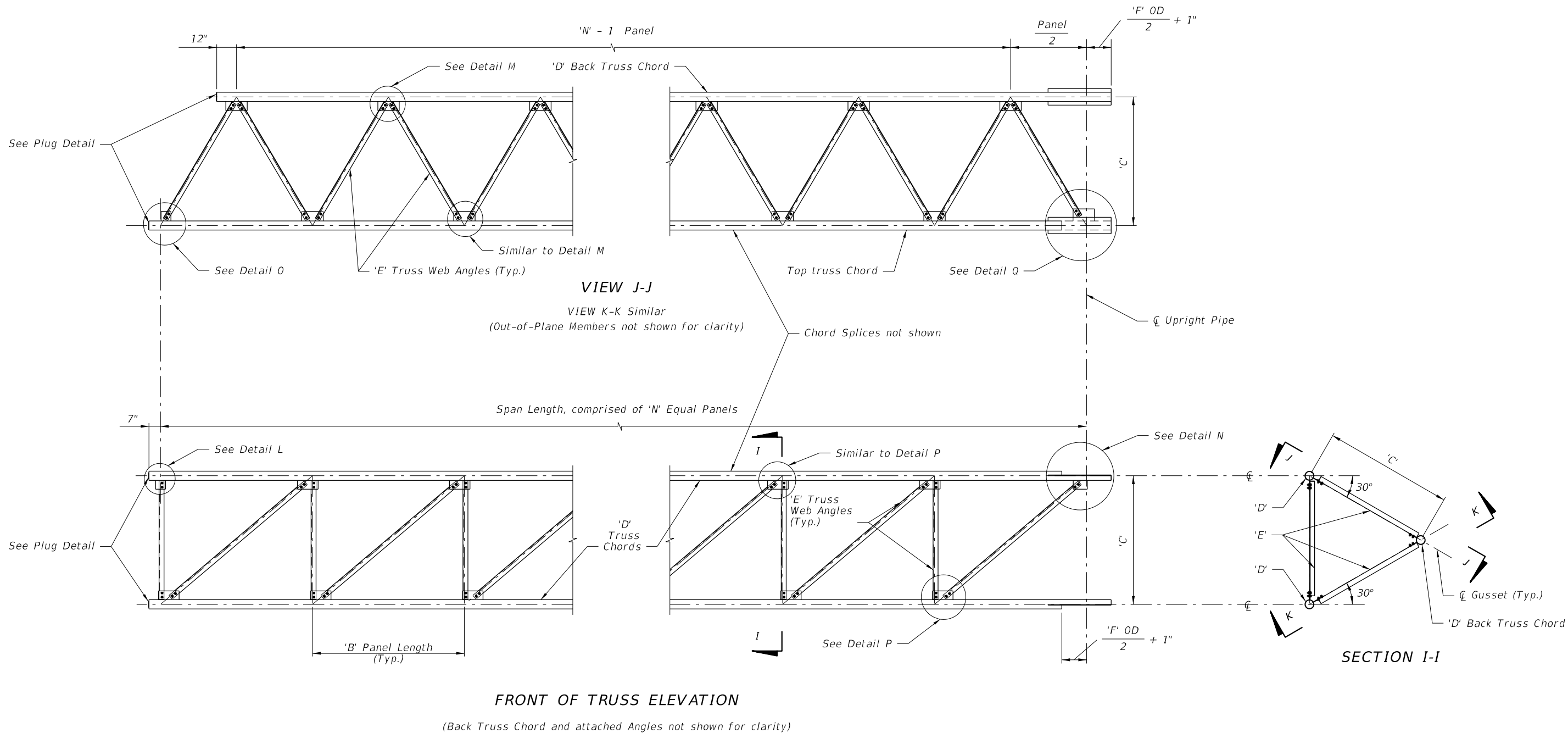


SECTION F-F, SECTION G-G SIMILAR
(With Gusset Plate & Angles omitted for clarity)

NOTE:
Abbreviation
OD ~ Outside Diameter

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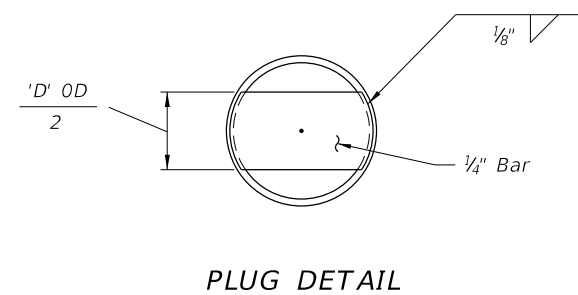
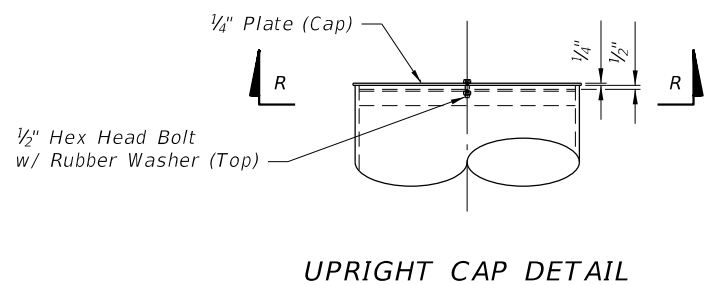
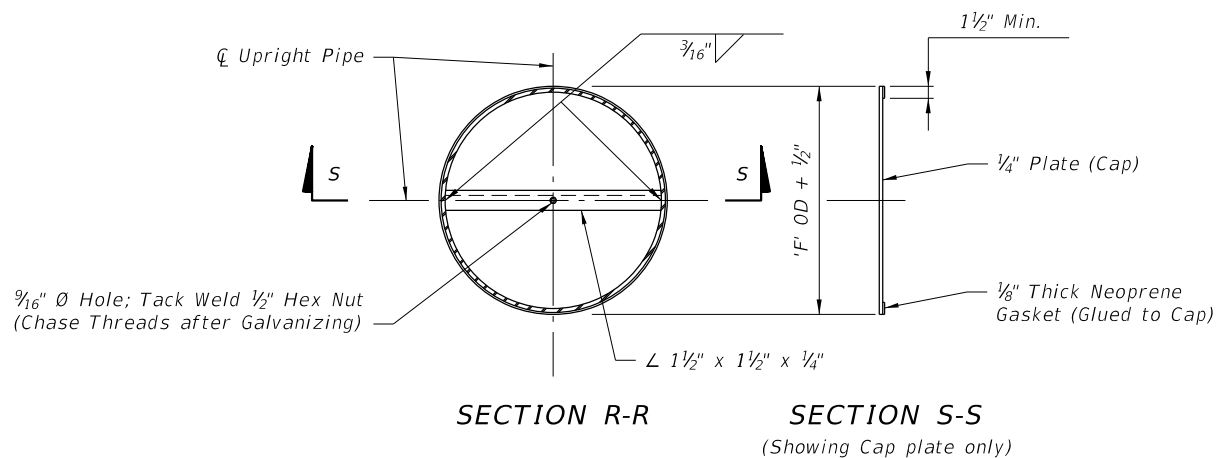
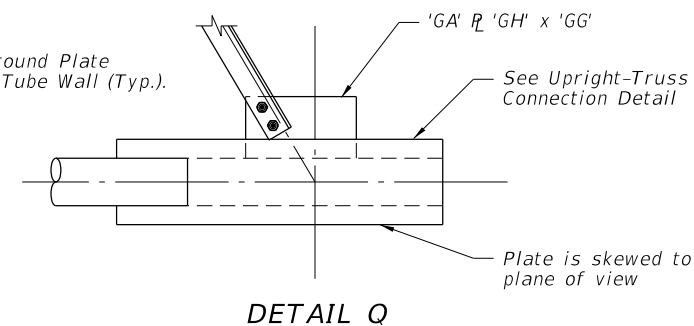
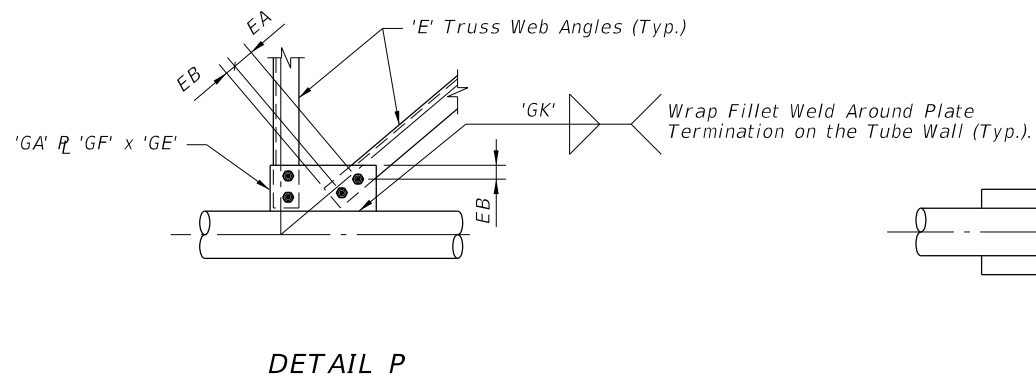
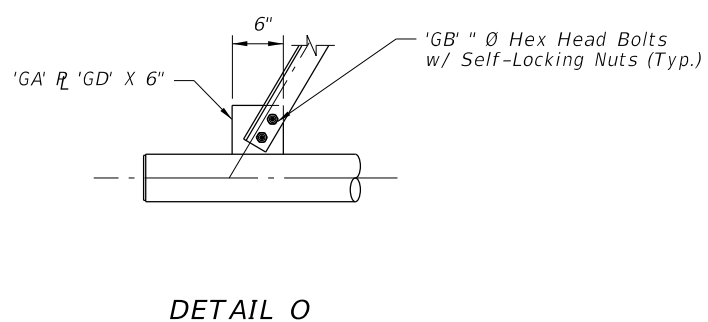
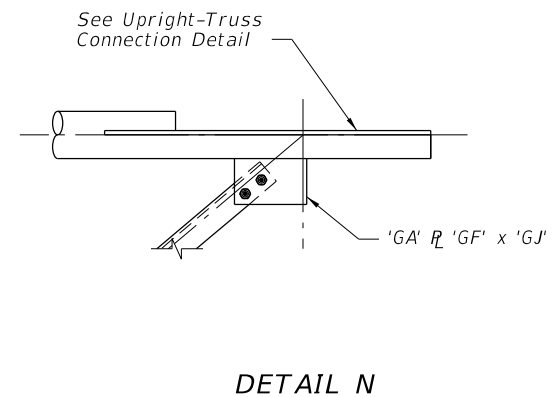
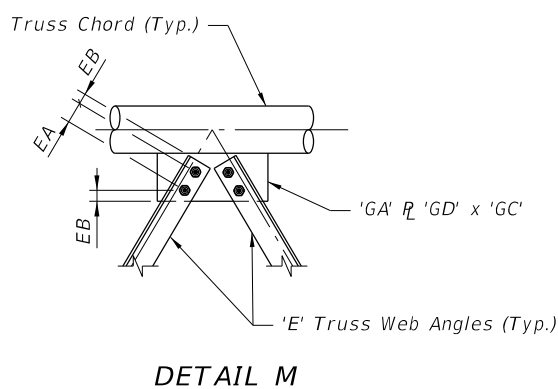
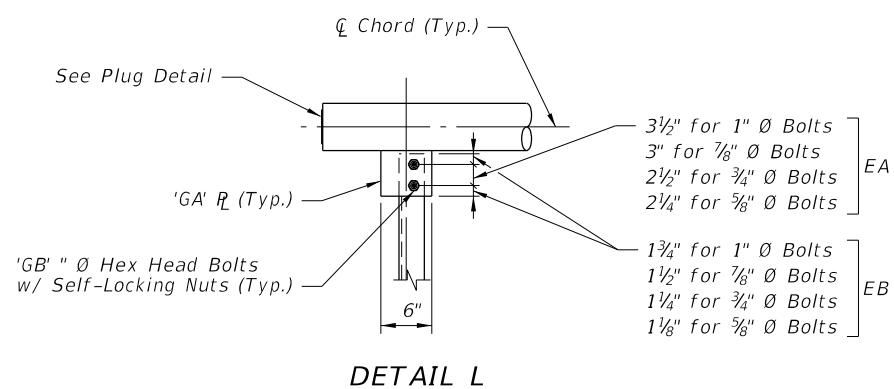
LAST REVISION	DESCRIPTION:
07/01/14	



NOTE:
Abbreviation
OD ~ Outside Diameter

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LAST REVISION 07/01/05	DESCRIPTION:
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NOTE:
Abbreviation
OD ~ Outside Diameter

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LAST REVISION 07/01/14	DESCRIPTION:
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