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 A 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)
   D. Concrete:
      a. Anchor Bolts: ASTM A325 Type 1
      b. Structural bolt hole diameters: Bolt diameter plus 3/8"
   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 3/8"
   E. Anchor bolt hole diameters: Bolt diameter plus 3/8"
   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 A523

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 100. Split-Lock Washers are not permitted.
   E. Install Aluminum Sign Panels as shown on the Elevation drawing.
   F. Place structural prior pad with drain between top of foundation and bottom of baseplate in accordance with Specification Section 649-7.

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

CANTILEVER SIGN STRUCTURE

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

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

NOTE:
Abbreviation
GD = Outside Diameter
CANTILEVER SIGN STRUCTURE

FOR TRUSS ELEVATION

(Back Truss Chord and attached Angles not shown for clarity)

NOTE:
Abbreviation
OD = Outside Diameter

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