CANTILEVER SIGN STRUCTURE NOTES

1) Design according to FDOT Structures Manual. Alternate Designs are not allowed.

2) Submit shop drawings for all work. Include:
   a. Field verification of all upright heights.
   b. Foundation elevations necessary to ensure minimum vertical clearances as per traffic plans.
   c. Orientation of the sign structure with respect to centerline of the road and the direction of traffic.
   d. Shear chord splice lengths and the closest panel in which a chord splice may be used. See plans for Cantilever Sign Structure Data Table. Upright splices are not allowed.
   e. Shop fabrication after galvanizing and prior to shipment.
   f. If necessary, disassemble and secure components for shipment.

3) Sign Structure Materials:
   a. Upright and Chords (Steel Pipe): API 5L- X42 (42 ksi A500, Grade B, Class 2)
   b. Steel Angles: ASTM A 36, Grade 36.
   c. Steel Plates: ASTM A 382, Grade 36.
   d. Weld Metal: E70XX
   e. Bolts: ASTM A325 Type 1 (Installper Specification Section 7000) with single, self-locking nuts.
   f. Anchor Bolts: ASTM F 1554, Grade 55 with ASTM A490 Grade A heavy-duty double nuts.
   g. Installs nuts per manufacturer’s instructions.
   h. Bolt hole diameters equal to the bolt diameter plus 0.34".
   i. Anchor bolt hole diameters equal to the bolt diameter plus 0.34".
   k. Sign Panels: Aluminum. See Elevation drawing for sizes and locations.

4) Foundation Materials:
   a. Reinforcing Steel: ASTM A416, Grade 60.
   b. Concrete: Class IV, minimum 5.5 ksi compressive strength at 28-days. For all environmental classifications for Spread Footing Class IV (Drilled Shafts), minimum 4.0 ksi compressive strength at 28-days for all environmental classifications for Drilled Shafts.
   c. Prior to erection, record the as-built anchor locations and provide to the Engineer.
   d. After placement of the upright and prior to installation of the sign panels, adjust the leveling nuts beneath the base plate to achieve the back rake shown on the Camber Diagram.
   e. Place back-rake above the footing prior to installation of the sign panel. Do not remove or reduce height without prior approval of the Engineer.
   f. Install sign panels as shown on the Elevation drawing.

11) Payment: All costs associated with the Sign Structure, Sign Panels, Foundation and all incidental items will be paid for under the Sign Structure pay item. Verify CSL access tube locations with anchor bolt locations, move the CSL access tube location 12 inches away from the reinforcing cage. Notify the Engineer before excavating the shaft if the CSL access tube locations cannot be moved out of conflict with anchor bolt locations.

NOTE: See Plans for Cantilever Sign Structure Data Table.
**SECTION D-D**

**SPLICE CONNECTION DETAIL**

- Only 6 bolts shown for clarity
- Maximum gap between pipes is \( \frac{3}{8} \)" for 1" bolts
- \( \frac{1}{2} \)" for 1 1/8" bolts
- \( \frac{3}{8} \)" for 1 1/4" bolts
- For 1 1/2" bolts, use 1 1/8" bolts

**UPRIGHT-TRUSS CONNECTION DETAIL**

(Web Members from back Truss Chord omitted for clarity)

**DETAIL H**

**SECTION F-F, SECTION G-G SIMILAR**

(With Gusset Plate & Angles omitted for clarity)

**NOTE**

Abbreviation

OD ~ Outside Diameter
VIEW J-J
VIEW K-K Similar
(Out-of-Plane Members not shown for clarity)

Chord Splices not shown

Span Length, comprised of W Equal Panels

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