NOTES:
1. Work this Index in conjunction with CANTILEVER SIGN STRUCTURE DATA TABLES in the Plans and Index 700-030.
2. Handholes are required at pole base for DMS Structures. Refer to Index 700-050 for Handhole Details.
3. Shop Drawings are required.

Obtain Shop Drawing approval prior to fabrication. Include the following:
A. Upright Pipe height ('A') and Foundation elevations. Verify dimension in the field prior to submittal to ensure minimum vertical clearances of the sign panel over the roadway.
B. Height of the foundation above adjacent ground.
C. Anchor bolt orientation with respect to centerline of truss and the direction of traffic.
D. Chord Splices
E. Handholes at pole base (when required).

4. Materials:
A. Sign Structure:
   a. Upright and Chords (Steel Pipe): API 5L X42 PSL2, 42 ksi yield or ASTM A36, Grade B (Min.)
   b. Steel Angles and Structural Plates and Bars: ASTM A709 Grade 36
   c. Wood Material: ETFSX
B. Bolts, Nuts and Washers:
   a. High Strength Bolts: ASTM F3125, Grade A325 Type 1
   b. Nuts: ASTM AS83 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 AS83 Grade A Heavy-Five (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 415

5. Fabrication:
A. Welding: Specification 460 6.4
B. Chord Splices:
   a. "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.
   b. Upright Splices: Not allowed
   c. Structural bolt hole diameters: Bolt diameter plus 1/2".
D. Anchor bolt hole diameters: Bolt diameter plus 1/2".
E. Welding: Specification 460 6.4
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 F3125
B. All other steel, including Plate Washers, hot dip galvanize: ASTM A123

7. Construction:
A. Construct foundation in accordance with Specification 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 700.
E. Hot-Dip Washers are not permitted.
F. Upright and Chords: Grouted with drain pipes as shown in the Plans.
G. Place structural grout pad with drain between top of foundation and bottom of baffle plate in accordance with Specification 649-7.
H. Disassemble, as necessary, and secure components for shipment.

CANTILEVER SIGN STRUCTURE
FY 2019-20
STANDARD PLANS
INDEX 700-040
SHEET 1 of 5
NOTES:
1. Construction joint allowed, roughen surface to 1/8" minimum amplitude prior to pour.
2. See Traffic Plans for elevation at top of Foundation.
3. Install Drilled Shaft with a 2'-0" minimum from top elevation of the drill shaft to the finished grade, unless specified otherwise in the plans.
4. The shaft length is based on 2'-0" height above finished grade.
5. Structural Grout Pad dimension may be modified to be less than 3" where the footprint of the Structural Grout Pad does not provide adequate clearance for accessibility considerations.
6. Wrap fillet weld around the stiffener termination on the tube wall.

1. Construction joint allowed, roughen surface to 1/8" minimum amplitude prior to pour.
2. See Traffic Plans for elevation at top of Foundation.
3. Install Drilled Shaft with a 2'-0" minimum from top elevation of the drill shaft to the finished grade, unless specified otherwise in the plans.
4. The shaft length is based on 2'-0" height above finished grade.
5. Structural Grout Pad dimension may be modified to be less than 3" where the footprint of the Structural Grout Pad does not provide adequate clearance for accessibility considerations.
6. Wrap fillet weld around the stiffener termination on the tube wall.
NOTE:

1. Wrap fillet weld around the stiffener termination on the tube wall.

2. Truss Chord Bolts:
   - For odd numbers of bolts per row: Truss Chord Bolts Install ‘TC’ hex head bolts.
   - For even numbers of bolts per row: Install ‘TE’ hex head bolts.

3. For even numbers of bolts per row, install ‘TB’ hex head bolts.
CANTILEVER ASSEMBLY

TRUSS NOTES:
1. Out-of-plane members are not shown for clarity.
2. Wrap fillet weld around plate termination on the tube wall.
3. Chord Splices not shown.

TRUSS:

<table>
<thead>
<tr>
<th>Bolt Size</th>
<th>Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot;</td>
<td>0.125&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>1/8&quot;</td>
<td>0.125&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>3/16&quot;</td>
<td>0.188&quot;</td>
<td>2.5&quot;</td>
</tr>
<tr>
<td>5/32&quot;</td>
<td>0.156&quot;</td>
<td>3&quot;</td>
</tr>
</tbody>
</table>

DETAIL 'D' 
Truss Plug (Typ.)
See Upright-Truss Connection Detail (Sheet 3)
Truss Web Angles (Typ.)

DETAIL 'E' 
Truss Plug (Typ.)
See Detail Sheet 5
Truss Web Angles (Typ.)

DETAIL 'F' 
Truss Plug (Typ.)
See Upright-Truss Connection Detail (Sheet 3)
Truss Web Angles (Typ.)

DETAIL 'G' 
Plate Is Skewed To Plane Of View

DETAIL 'H' 
Truss Web Angles (Typ.)

DETAIL 'I' 
Truss Web Angles (Typ.)

INTERNAL TRUSS NOTES:

*DESCRIPTION:
CANTILEVER SIGN STRUCTURE

FY 2019-20
STANDARD PLANS

REVISION DESCRIPTION:
01/01/17 700-040 4 of 5
SPLICE CONNECTION NOTES:
1. Only 6 bolts are shown in detail for clarity. (One Half Each Side Of Splice)
2. Splices are not permitted for trusses less than or equal to 40', Splice optional for trusses greater than 40'.

TRUSS PLUG DETAIL

UPRIGHT CAP DETAIL