NOTES:
1. Work this Index in conjunction with SPAN SIGN STRUCTURE DATA TABLES in the Plan and Index 700-020.
2. Handholes at the pole base are required for DMS Structures. Refer to Index 700-090 for Handhole Details.
3. Shop Drawings are required.

Obtain Shop Drawing approval prior to Fabrication. Include the following:
A. Upright Pipe heights ('C' & 'B') and Foundation Elevations: Verify minimum clearance 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. Method to be used to provide the required parabolic camber (see Camber Diagram).
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 A500, Grade B (Min.), Steel Angles and Plates: ASTM A36, grade 36.
   b. Weld Material: E70XX
B. Bolts, Nuts and Washers:
   a. High Strength Bolts: ASTM F3123, Grade A325, Type 1.
   b. Nuts: ASTM A563, Grade DH Heavy-Hex
   c. Washers: ASTM F2329, Grade B Heavy-Hex, 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. Washers: ASTM A363 Grade A (5 per bolt)
D. Concrete: Class IV (Drilled Shaft)
E. Foundation:
   a. Drilled Shaft: Drilled to a depth of 10 feet below ground level.
   b. Concrete: Class IV (Drilled Shaft)

5. Fabrication:
A. Welding: Specification 460-6.4
B. Chord Splices: Minimum splice spacing is three truss panel lengths apart and three truss panel lengths from the uprights.
C. Upright Splice: Not allowed
D. Structural bolt hole diameters: Bolt diameter plus 1/16.
E. Anchor bolt hole diameters: Bolt diameter plus 1/8.
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 F3123
B. All other steel, including Plate Washers, hot dip galvanize: ASTM A500, Grade B (Min.)
C. Upright and Chords (Steel Pipe): API 5L X42 PSL2, 42 ksi yield or ASTM A500, Grade B (Min.).
D. Steel Angles and Plates: ASTM A709 grade 36.
E. Anchor bolts, Nuts and Washers:
   a. High Strength Bolts: ASTM F3123, Grade A325, Type 1.
   b. Steel Angles and Plates: ASTM A36, grade 36.
   c. Weld Material: E70XX

7. Construction:
A. Construct foundation in accordance with Specification 455 Drilled Shaft, 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. Provide a parabolic camber with the required upward deflection as shown in the Camber Diagram.
D. Tighten nuts and bolts in accordance with Specification 700.
E. Reinforcing Steel: Specification 415-6.4
F. Concrete: Class IV (Drilled Shaft)
G. Upright Pipe height ('C' & 'B') and Foundation Elevations: Verify minimum clearance of the sign panel over the roadway.
H. Handholes at pole base (when required).
NOTES:
1. See Traffic Plans for elevation at top of Foundation.
2. 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.
3. The shaft length is based on 2'-0" height above finished grade.
4. Wrap fillet weld around the stiffener termination on the tube wall (Typ.).
SPAN SIGN ASSEMBLY

Upright-Truss Connection

(See Note 1)

LEFT Upright

1.5 x 'F' OD

RIGHT Upright

1.5 x 'F' OD

TOP Truss Chord

Bottom Similar

TOP Truss Chord

Bottom Of Plate And TOP Chord

Gusset Plate

(Left) or (Right)

Gusset Plate

(Right) or (Left)

UPRIGHT-TRUSS CONNECTION DETAIL

(See Note 3)

DETAIL "C"

Front Elevation

SIDE ELEVATION

NOTES:

1. Wrap fillet weld around the stiffener termination on the tube wall.
2. Truss Chord Bolts: 'LB' or 'RB' Hex Head Bolts 'LA' or 'RA' Ø.
3. Right Upright Truss connection shown, Left Upright Truss connection similar.
### SPAN SIGN ASSEMBLY

**NOTES:**
1. Out-of-plane members are not shown for clarity.
2. Back truss chord and attached angles are not shown for clarity.
3. Wrap fillet weld around plate termination on the tube wall.

<table>
<thead>
<tr>
<th>Bolt Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
</tr>
<tr>
<td>EA Diameter</td>
</tr>
<tr>
<td>Distance (in.)</td>
</tr>
</tbody>
</table>

### DETAIL 'D'

See DETAIL 'D' (Sheet 3) (Typ.)

### DETAIL 'E'

See DETAIL 'E'

### DETAIL 'F'

See DETAIL 'F'

### DETAIL 'G'

See DETAIL 'G'

### DETAIL 'H'

See DETAIL 'H'

### DETAIL 'I'

See DETAIL 'I'

### DETAIL 'J'

See DETAIL 'J'

### DETAIL 'K'

See DETAIL 'K'

### DETAIL 'L'

See DETAIL 'L'

### FRONT ELEVATION

(See Note 3)

### SIDE ELEVATION

(See Note 2)

### BACK-SIDE SIGN MOUNTING

(See Note 1)

### TRUSS

See DETAIL 'K'

*Aluminum Zee Sign Hanger (See Index 700-030)*

*See DETAIL 'L'*

*For Sign luminaires Mounting Details*

### NOTES:
1. Wrap fillet weld around plate termination on the tube wall.
2. Back truss chord and attached angles are not shown for clarity.
3. Out-of-plane members are not shown for clarity.
4. 2-1/2" Ø U-Bolt With Double Nuts And Washers (Typ.)
5. Provide this Detail for all Back Mounted Signs at Sign Hanger

### SPAN SIGN STRUCTURE

**DESCRIPTION:**

**LAST REVISION:** 11/01/17

**REVOLUTION:**

**INDEX:** 700-041

**SHEET:** 4 of 5

**FY 2019-20 STANDARD PLANS**
**SPAN SIGN ASSEMBLY**

**UPRIGHT CAP DETAIL**

- **PLAN**
  - 9" OD/2
  - ½" Bar
  - ø Upright Pipe
  - ø Upright Pipe And Cap

- **SIDE ELEVATION**
  - ø16 x ø1½ x ⅛
  - ø Thick Neoprene, Gasket (Glued To The underside of the Cap)
  - ø ½" Head Bolt With Rubber Washer (Top Leg of L Shape)

**TRUSS PLUG DETAIL**

- **PLAN**
  - ø Upright Pipe
  - ø Upright 'J' OD + ø Upright 'H' OD + ø Upright Cap

- **SIDE ELEVATION**
  - ø16 x ø1½ x ⅛
  - ø Thick Neoprene, Gasket (Glued To The underside of the Cap)

**SPLICE CONNECTION DETAIL**

- **FRONT ELEVATION**
  - ø Splice
  - Gap Between Pipes ø Max

- **SIDE ELEVATION**
  - ø Truss Chord
  - ø Truss Chord

**SPLICE CONNECTION NOTE:**

1. Only 6 bolts are shown in detail for clarity.
   (One Half Each End Of Splice)

**ALTERNATE SPLICE CONNECTION DETAIL**

- **SECTION D-D**
  - ø Bolts Shown
  - PF Bolts Required
  - Evenly Spaced Similar

**SPAN SIGN STRUCTURE**

**FY 2019-20 STANDARD PLANS**