NOTES:
1. For additional notes, details and data for Type 15TS and Type 21TS Standards, see Standard Plan ES-6A.
2. Handhole shall be located on the downstream side of traffic.

<table>
<thead>
<tr>
<th>POLE TYPE</th>
<th>A HEIGHT</th>
<th>WALL THICKNESS</th>
<th>C</th>
<th>BC = BOLT CIRCLE THICKNESS</th>
<th>ANCHOR BOLT SIZE</th>
<th>CIDH</th>
</tr>
</thead>
<tbody>
<tr>
<td>15TS</td>
<td>30'-0&quot;</td>
<td>3%&quot;</td>
<td>6&quot;</td>
<td>1'1&quot;-1/2&quot;</td>
<td>1'-0&quot;</td>
<td>2'-6&quot;</td>
</tr>
<tr>
<td>21TS</td>
<td>35'-0&quot;</td>
<td>3%&quot;</td>
<td>6&quot;</td>
<td>1'-3&quot;</td>
<td>1'-2&quot;</td>
<td>2'-6&quot;</td>
</tr>
</tbody>
</table>

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, TYPE TS, AND PUSH BUTTON ASSEMBLY POST)
NO SCALE

ES-7A
**HANDBOLE AND ANCHORAGE**

**TYPICAL DETAIL**

- WELD WALL SIZE THICKNESS
- 3/8" 0.1196"
- 3/16" 0.1793" 0.2391" 0.3125"
- HANDHOLE REINFORCEMENT RING
- 1/16" BOLT
- TAPPED HOLE IN STEEL STRAP
- COVER

**ALTERNATIVE DETAIL**

- BUTTON HEAD SOCKET FLAT HEAD SCREW
- INSET WITH COVER
- ALLEN WRENCH SIZE 5/8"

**SECTION A-A**

- PIPE TENONS
- WALL SIZE THICKNESS
- 1/4" 0.1196"
- 5/32" 0.1793"
- 7/32" 0.2391"
- 1/8" 0.3125"
- SIGNAL MAST ARM
- 4"

**TIP TENON DETAIL T1**

- 2 NPS PIPE, CHASED FOR WIRE PROTECTION
- SEE DETAIL S 1

**TIP TENON DETAIL T5S**

- 2 NPS PIPE, CHASED FOR WIRE PROTECTION
- SEE DETAIL S 1

- ANCHOR PLATE

- ANCHOR BOLTS
- SIDE OF ANCHOR BOLTS IS "O x O x O" = REFER TO TABLES ON STANDARD PLANS
- ANCHOR BOLT-THREAD TOP 8" AND 10" AND GALVANIZED 11/2"-

- IDENTIFICATION NUMBER

1. Attach a stamped metal tag with pole's identification number above the handhole, 1/8" high number, minimum.

2. Attach a stamped metal tag with mast arm's identification number to the bottom of the signal mast arm near the pole plate. 1/8" high number, minimum.

**SAMPLE IDENTIFICATION NUMBER**

- 26A-3-100-45-10-F or FS

**NOTES**

1. Provide a hex nut, leveling nut and 2 washers for each bolt.

2. Luminaires mast arms shall be round, tapered steel tubes, taper of 0.135" to 0.145" per foot with an end section 26A-3-00 for mounting hardware. Extensions of 2 NPS standard pipe and 1/2" long may be used at the option of the manufacturer. When low pressure sodium luminaires are required, the extension shall be 1-1/2".

3. Signal mast arms shall be round, tapered steel tubes, maximum taper 0.143" per foot.

4. Handhole reinforcement ring shall be 1/4" x 2" for 0.1939" to 0.2391" thick poles, 3/8" x 2" for 0.3125" thick poles.

5. Handholes shall be located on the downstream side of traffic.

6. Detail F, fatigue resistant weld, is required at socket welded signal mast arm plate and pole base plate.

7. Cap screws shall be tightened by the turn-of-nut method 1/2 turn from a snug tightening condition. No washer will be required.

8. Outside diameter, wall thickness, and corresponding section properties of poles and mast arms as shown in the Standard Plans are minimums. Unless otherwise specified, alternative sections shall require approval by the Engineer.

9. Wind Loading (3 seconds gust): 100 mph

10. Unit Stresses (Structural steel):
- Fy = 55,000 psi (tapered steel tube and anchor bolts)
- Fy = 50,000 psi (unless otherwise noted)

11. Unit Stresses (Reinforced concrete):
- Fc = 3,625 psi
- Fy = 60,000 psi

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD, DETAIL NO. 1)
NO SCALE