
2) Perform all welding in accordance with the American Welding Society Structural Welding Code (Steel) AWS/AWS D1.1 (current edition). No field welding is permitted on any part of the pole.

3) See Standard Index No. 17727 for grounding and span wire details.

4) See Standard Index No. 17727 for grounding and span wire details.

5) Strain Pole Specifications:
   a. Poles: ASTM A1011 Grade 50, 55, 60 or 65 (less than 1") or ASTM A572 Grade 50, 55, 60, or 65 (1" and over) or ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield).
   b. Steel Plates: ASTM A36.
   c. Weld Metal: E70XX.
   d. Bolts: A325, Type 1, Hole Diameter: Bolt diameter plus 1/8".
   e. Base Plate: Hole Diameter: Anchor bolt diameter plus 1/8".
   f. Handhole: Frame: ASTM A709 Grade 36 or ASTM A36, Cover: ASTM A1011 Grade 50, 55, 60 or 65.
   g. Stainless Steel Screws: AISI Type 316.
   h. Stainless Steel Screws: AISI Type 316.
   i. Galvanization: All nuts, bolts and washers: ASTM F2329. All other steel: ASTM A123.

6) Pole Notes:
   a. See the Signalization Plans for clamp spacing, cable sizes and forces, signal and sign mounting locations and details.
   b. Tapered with the diameter changing at a rate of 0.14 inch per foot.
   c. Transverse welds are allowed only at the base.
   d. Poles constructed out of two or more sections with overlapping splices are not permitted.
   e. Locate the handhole 180 degrees from 2-inch wire entrance pipe.
   f. Furnish each pole with a 2"x4" (max) aluminum identification tag. Submit details for approval.
   g. Stainless Steel Screws: AISI Type 316.
   h. Stainless Steel Screws: AISI Type 316.
   i. Galvanization: All nuts, bolts and washers: ASTM F2329. All other steel: ASTM A123.

7) One hundred percent of full-penetration groove welds and a random 25 percent of partial penetration groove welds shall be inspected. Full-penetration groove weld inspection shall be performed by nondestructive methods of radiography or ultrasonics.

8) Manufacturers seeking approval of a steel strain pole assembly for inclusion on the Qualified Products List must submit a QPL Product Evaluation Application along with drawings showing the product meets all specified requirements of this Standard.

9) Verify CSL access tubes will not interfere with anchor bolt installation before excavating the shaft. When CSL access tube locations conflict with anchor bolt locations, move the CSL access tube location a two inches along the inner circumference of 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.

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For Single Point Connection

(For Two Point Connection)

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2'-6" W ind Entry C onduit (See Details)

Drilled Shaft (see Signalization Plans)

Identification Tag - See Note 6.

Top of Finished Grade

(Steel) ANSI/AWS D1.1 (current edition). No Field welding is permitted on any part of the pole.

ELEVATION AND NOTES

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2'-0" (Min.)

To Roadway

---

(For Single Point Connection)

Catenary Wire Clamp

(See Details)

2' Pipe For Wire Entrance

(See Wire Entrance Details on Sheet 3 of 3)

(For Two Point Connection)

Identification Tag - See Note 6.

Top of Cap

---

(For Single Point Connection)

Catenary Wire Clamp

(See Details)

2' Pipe For Wire Entrance

(See Wire Entrance Details on Sheet 3 of 3)

(For Two Point Connection)

Identification Tag - See Note 6.

Top of Cap

---

(For Single Point Connection)

Catenary Wire Clamp

(See Details)

2' Pipe For Wire Entrance

(See Wire Entrance Details on Sheet 3 of 3)

(For Two Point Connection)
**BASE AND FOUNDATION DETAILS AND TABLE OF VARIABLES**

**TABLE OF STRAIN POLE VARIABLES**

<table>
<thead>
<tr>
<th>POLE TYPE</th>
<th>MAXIMUM ALLOWABLE MOMENT (kip-ft)</th>
<th>POLE CONNECTION</th>
<th>SHAFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS-I</td>
<td>95.4</td>
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<td>PS-II</td>
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<td>PS-III</td>
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<td>PS-IV</td>
<td>269.1</td>
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<td>PS-V</td>
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<td>PS-VI</td>
<td>400.9</td>
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<td>PS-VII</td>
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**BASE CONNECTION**

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<tr>
<th>J (in)</th>
<th>K (in)</th>
<th>No. of Bars</th>
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**SHAFT**

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<th>DB (ft)</th>
<th>No. of #11 bars</th>
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<tr>
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</tbody>
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**FOUNDATION NOTES**

The foundations for SteelStrain Poles are designed based upon the following conservative soil criteria which covers the great majority of soil types found in Florida:

- **Classification**: Cohesionless (Fine Sand)
- **Unit Weight**: 50 lbs./cu. ft (assumed saturated)
- **Friction Angle**: 30 Degrees (30°)
- **Minimum break radius**: 0.2 ft (Inside radius)
- **Inside radius required center to flat**: 0.6 x 'J'
- **Wall Thickness**: 1"

Only in cases where the Designer considers the soil types at the specific site location to be of lesser strength properties should an analysis be required. Auger borings, SPT borings or CPT soundings may be utilized as needed to verify the assumed soil properties, and at relatively uniform sites, a single boring or sounding may cover several foundations. Furthermore, borings in the area that were performed shall be complete penetration walls.

**BASE AND FOUNDATION DETAILS AND TABLE OF VARIABLES**

<table>
<thead>
<tr>
<th>Sheet No.</th>
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<tbody>
<tr>
<td>Index No.</td>
<td>2010 Interim Design Standard</td>
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**2012 Interim Design Standard**

**STEEL STRAIN POLE**