STEEL STRAIN POLE NOTES

1) Designed in accordance with FDOT Structures Manual.

2) Performed in accordance with the American Welding Society Structural Welding Code (Sewell)/AWS D1.1 (current edition). The AWS welding is permitted on any part of the pole.

3) See Sheet 2 for grounding and splice wire details.

4) Foundation Materials:
   a. Reinforcing Steel: ASTM A615 Grade 60.
   b. Concrete: Class IV, (Drilled Shaft) 4,000 psi (f'c) minimum Compressive Strength at 28-days for all environmental classifications.
   c. Anchor Bolts: ASTM F1554 Grade 55 with ASTM A563 Grade A heavy-hex nuts and plate washers (all galvanized in accordance with ASTM F2329).

5) Strain Pole Specifications:
   a. Poles: ASTM A1011 Grade 50, 55, 60 or 65 (less than 1/2") or ASTM A572 Grade 50, 55, 60, or 65 (1/2" and over) or ASTM A364 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 Plates: Weld Diameter: anchor bolt diameter plus 1/2".
   f. Transverse: Frame: ASTM A572 Grade 50 or ASTM A36, Cover: ASTM A1011 Grade 50, 55, 60 or 65.
   g. Aluminum Caps and Covers: ASTM B-26 (319-F).
   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 SignalizationPlans for clamp spacing, cable sizes and forces, signal and sign mounting locations and details.
   b. Truncated with the diameter changing at a rate of 0.14 inch per foot.
   c. Traverses are allowed only at the base.
   d. Flat end bolts connections with unequal leg Welds with the long weld leg along the shaft. The angle of the long leg weld along the shaft at approximately a 30 degree angle.
   e. Poles constructed out of two or more sections with overlapping splices are not permitted.
   f. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   g. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
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   s. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   t. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   u. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   v. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   w. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   x. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   y. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.
   z. Locate the handhole 180 degrees from 2-inch wire entrance pipe. Terminate the long weld leg along the shaft at approximately a 30 degree angle.

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) Shop drawings are only required for additions, deletions, or modifications to the Design Standard.

9) Verify CSL access tube 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 2 feet below the base of the pile. When CSL access tube locations conflict with anchor bolt locations, move the CSL access tube location 2 feet below the base of the pile. When CSL access tube locations conflict with anchor bolt locations, move the CSL access tube location 2 feet below the base of the pile.

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**SECTION A-A**
(Number of bars shown is for illustration purposes only)

**SECTION B-B**

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<tr>
<th>POLE TYPE</th>
<th>MAXIMUM ALLOWABLE MOMENT (kip-ft)</th>
<th>J (in)</th>
<th>K (in)</th>
<th>No. of Bars</th>
<th>BA (in)</th>
<th>BC (in)</th>
<th>BD (in)</th>
<th>BE (in)</th>
<th>BF (in)</th>
<th>DA (FT)</th>
<th>DB (FT)</th>
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**NOTICE:** Number of bolts shown for illustration purposes only.

**Foundation Notes:**
The foundations for Steel Strain 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)
- Friction Angle = 30 Degrees (30°)
- Unit Weight = 50 pcf (assumed saturated)

In cases where the Designer considers the soil types at the specific site location to be of lesser strength properties than shown above, specific design and analysis shall be conducted to verify the assumed soil properties, and all necessary design criteria shall be met. For structures in areas that were previously designed for different purposes, the Designer may be required to confirm the assumed soil properties.