GENERAL NOTES:

Materials:
Concrete: Class V Special or Class VI
5 ksi minimum at 28 days
4 ksi minimum at transfer
Prestressed Strands: ASTM A416 Grade 270
stress relieved or low relaxation
Spiral Reinforcing: ASTM A82 cold-drawn steel wire

Provide a minimum concrete cover of 1 inch.

For spiral reinforcing, one turn is required for splices and two turns are required at both the tip and butt ends of the pole.

The design front face and back face of poles may vary transversely from the section shown by ±4". To assist with removal from forms, balance addition and subtraction of face widths to maintain section areas shown.

Provide washers and coupler cover plates made of non-corrosive materials. Attach cover plates to poles using lead anchors or threaded inserts embedded in the poles in conjunction with round headed chrome plated screws.

Provide aluminum identification markings on the poles where indicated on the following sheets. Include the following information using inset numerals with 1" height or as approved in the producer’s quality control plan:

- Financial Project ID
- Pole Manufacturer
- Standard Pole Type Number
- Pole Length (L)

Pick-up and support locations shown may vary with a tolerance of ±3".

This design standard is considered fully detailed and no shop drawings are necessary. Submit shop drawings for minor modifications not detailed in the plans.

Cut the tip end of the prestressed strand first or simultaneously with the butt end.

INSTALLATION NOTES:

If a two point attachment is required by the plans, provide an eye bolt hole for the messenger wire or field-drill at the location indicated in the plans. When required, field-drill the eye bolt hole for the tether wire prior to installation.
SERVICE POLE P-II A (12 FT.) & P-IIB (36 FT.) ELEVATION
(STRANDS NOT SHOWN)

- **48" No. 6 Bare Copper Ground Wire**
- **Identification Markings**
- **Final Grade Location**
- **Butt End (Bottom)**

**SERVICE AND PEDESTAL POLE TYPE P-II**

**NOTES:**
- Work this Index with the Strain Pole Schedule in the plans.
- Strands shown are continuous from Tip End to Butt End.
- Elevation view scale is exaggerated vertically for clarity.
- For final erection, tilt pole upright with single point attachment located at a distance 4 ft. (for P-IIB) or 10 ft. (for P-IIB) from the Tip End face.
- Taper includes pole width, strands, reinforcing and void.
- Support locations are for strand release, storage, lifting and transport. Keep Back Face oriented downward until final erection.
- **Dimension may vary from 2" to 3" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2".**

**SERVICE AND PEDESTAL POLE TYPE P-IIC**

**NOTES:**
- Work this Index with the Strain Pole Schedule in the plans.
- Strands shown are continuous from Tip End to Butt End.
- Elevation view scale is exaggerated vertically for clarity.
- For final erection, tilt pole upright with single point attachment located at a distance 4 ft. (for P-IIB) or 10 ft. (for P-IIB) from the Tip End face.
- Taper includes pole width, strands, reinforcing and void.
- Support locations are for strand release, storage, lifting and transport. Keep Back Face oriented downward until final erection.
- **Dimension may vary from 2" to 3" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2".**

**SERVICE AND PEDESTAL POLE TYPE P-II**

**NOTES:**
- Work this Index with the Strain Pole Schedule in the plans.
- Strands shown are continuous from Tip End to Butt End.
- Elevation view scale is exaggerated vertically for clarity.
- For final erection, tilt pole upright with single point attachment located at a distance 4 ft. (for P-IIB) or 10 ft. (for P-IIB) from the Tip End face.
- Taper includes pole width, strands, reinforcing and void.
- Support locations are for strand release, storage, lifting and transport. Keep Back Face oriented downward until final erection.
- **Dimension may vary from 2" to 3" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2".**

**SERVICE AND PEDESTAL POLE TYPE P-II**

**NOTES:**
- Work this Index with the Strain Pole Schedule in the plans.
- Strands shown are continuous from Tip End to Butt End.
- Elevation view scale is exaggerated vertically for clarity.
- For final erection, tilt pole upright with single point attachment located at a distance 4 ft. (for P-IIB) or 10 ft. (for P-IIB) from the Tip End face.
- Taper includes pole width, strands, reinforcing and void.
- Support locations are for strand release, storage, lifting and transport. Keep Back Face oriented downward until final erection.
- **Dimension may vary from 2" to 3" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2".**
**Lighting and Traffic Monitoring Poles Type P-III**

### Concret Poles

**Description:**
- Pre-stressed Strand
- 0.081 In./Ft. taper (2% total taper)
- Minimum 31 ksi before transfer (4 strands total)

**Notes:**
- Taper includes pole width, strands, reinforcement and void.
- Support locations are for strand release, storage, lifting and transport. Keep back face oriented downward until final erection.
- Dimension may vary from 2" to 3% to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2".

**Elevation View:**
- 4 strands shown are continuous from Tip End to Butt End.
- Elevation view scale is exaggerated vertically for clarity.

**Support Locations:**
- Minimum 3" of concrete
- Plug void end with min. 2" of concrete

**Identification Markings:**
- Identification markings for final erection.

**Reinforcement:**
- #5 gauge spiral reinforcing
- 2" turn @ 2" pitch
- Identification markers

**Dimensions:**
- Front face: 15" x 28" x 180"
- Back face: 15" x 28" x 180"
- Minimum 31 ksi before transfer (4 strands total)

**Material:**
- 2" Ø Galv. Coupler with Cover
- 3" x 5" Conduit
- 48" No. 6 Bare Copper Ground Wire
- 24" No. 6 Bare Copper Ground Wire
- 48" No. 6 Bare Copper Ground Wire
- 2" Ø Galv. Coupler with Cover

**Design Standard Index 17900 and Specification 744 for Modifications to Type P-III Poles Used at Traffic Monitoring Sites**

**Support Locations:**
- Minimum 20% L

**Rev: 07/01/13**

**Index No.: 17725**

**Sheet No.: 3 of 8**
CONCRETE POLES

Page 4 of 8

DESCRIPTION:

FDOT 2014 DESIGN STANDARDS

INDEX NO. 17725

S I R A N  P O L E T Y P E P - I V

NOTES:

Work this Index with the Strain Pole Schedule in the plans.

Strands shown are continuous from Tip End to Butt End.

Elevation view scale is exaggerated vertically for clarity.

For final erection, tilt pole upright with single point attachment located a distance 20% L from the Tip End face.

* Taper includes pole width, strands, reinforcing and void.

(0.081 In./Ft. per face)

** Support locations are for strand release, storage, lifting and transport. Keep Back Face oriented downward until final erection.

*** Dimension may vary from 3" to 40" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 25".

STRAIN POLE TYPE P-IV
SPiral Reinforcing Elevation
(Strands, Holes, and Fixtures Not Shown)

Identification Markings

Final Grade Location

POLE ELEVATION
(Strands and Reinforcing Not Shown)

POLE ELEVATION

TIP END SECTION (TOP)
(For Dormant Strand Locations,
See Section A-A)

STRAND LEGEND

- Prestressed Strand
  0.5 In. Grade 270, LRS
  31 Kips Before Transfer
  8 Strands Total

- Dormant Strand
  0.5 In. Grade 270, LRS
  14 Strands Total
  One 24” Splice Allowed Per Strand

NOTES:

Work this Index with the Strain Pole Schedule in the plans.

Strands shown are continuous from Tip End to Butt End.
Elevation view scale is exaggerated vertically for clarity.

For final erection, tilt pole upright with single point attachment
located a distance 32.5% L from the Tip End face.

* Taper includes pole width, strands, reinforcing and void.
  (0.081 In./Ft. per face)

** Support locations are for strand release, storage, lifting
  and transport. Keep Back Face oriented downward until
  final erection.

*** Dimension may vary from 3抌 to 4抌 to accommodate
  smaller radius of optional stepped (PVC) void. The void
diameter shall not be less than 4”.

STRAIN POLE TYPE P-V
SPiral Reinforcing Elevation

(StRands, Holes, and Fixtures Not Shown)

Pole Elevation

(StRands and Reinforcing Not Shown)

STRAND LEGEND

- Prestressed Strand
  0.5 In. Grade 270, LRS
  31 Kips Before Transfer
  (8 strands total)

- Dormant Strand
  0.5 In. Grade 270, LRS
  (4 strands total)
  One 24" Splice Allowed
  Per Strand

NOTES:

Work this Index with the Strain Pole Schedule in the plans.

Strands shown are continuous from Tip End to Butt End.

Elevation view scale is exaggerated vertically for clarity.

For final erection, tilt pole upright with single point attachment
located a distance 10% L from Tip End Face.

* Taper includes pole width, strands, reinforcing and void.
  (0.081 In./Ft. per face)

** Support locations are for strand release, storage, lifting
and transport. Keep Back Face oriented downward until
final erection.

*** Dimension may vary from 3" to 4" to accommodate
smaller radius of optional stepped (PVC) void. The void
diameter shall not be less than 6".

STRAIN POLE TYPE P-VI
Spiral Reinforcing Elevation
(Strands, Holes, and Fixtures Not Shown)

Pole Elevation
(Strands and Reinforcing Not Shown)

Notes:

Work this Index with the Strain Pole Schedule in the plans. Strands shown are continuous from Tip End to Butt End. Elevation view scale is exaggerated vertically for clarity.

* For final erection, tilt pole upright with single point attachment located a distance 10% L from the Tip End face.

** Support locations are for strand release, storage, reinforcing and voided. 10.06 psi (lbf/ft. per face).

*** Dimension may vary from 3X to 5X to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 6/8".

Strain Pole Type P-VII
**CONCRETE POLES**

**SPRINT POLE TYPE P-VIII**

**SPRINT ELEVATION**

(Strands, Holes, and Fixtures Not Shown)

**POLE ELEVATION**

(Strands and Reinforcing Not Shown)

**NOTES:**

Work this Index with the Strain Pole Schedule in the plans. Strands shown are continuous from Tip End to Butt End. Elevation view scale is exaggerated vertically for clarity.

For final erection, tilt pole upright with single point attachment located a distance 10% L from the Tip End face.

* Taper includes pole width, strands, reinforcing and void.

** Support locations are for strand release, storage, reinforcing and void. Keep Back Face oriented downward until final erection.

*** Dimension may vary from 3" to 5" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 8".

**STRAND LEGEND**

- Prestressed Strand
  
  - 0.5 In. Grade 270
    
  - 35 Kips Before Transfer
    
  (12 strands total)

- Dormant Strand
  
  - 0.5 In. Grade 270
    
  - 16 strands total
    
  - 24 Splice Allowed Per Strand

---

**DESIGN STANDARDS**

FDOT 2014

CONCRETE POLES

INDEX NO. 17725

8 of 8