GENERAL NOTES:

1. Work these Index drawings with the Strain Pole Schedule in the Plans.
2. Shop Drawings: This Design Standard is considered fully detailed and no shop drawings are necessary.
3. Submit shop drawings for minor modifications not detailed in the plans.
4. Materials:
   A. Concrete: Class V Special or Class VI
   B. Prestress Strands & Spiral Reinforcing: Specification Section 641
   C. Hand and coupler cover plates: Non-corrosive material
   D. Screws: Round headed, chrome plated
5. Fabrication:
   A. Pole Taper for pole width, strands, reinforcing and void: 0.001 inch per face.
   B. Prestress Super-T Minimum
   C. Spiral Reinforcing: As shown, plus one turn for splices and two turns at both the tip and butt ends of the pole.
   D. The design dimensions for Front Face (FF) and Back Face (BF) of the poles may vary transversely from the section shown by ± ¼" to assist with removal from forms. Balance addition and subtraction of the face widths to maintain section areas shown.
   E. Tie ground wires to the interior of reinforcing steel to prevent displacement during concreting operations.
   F. Cut the tip end of the prestressed strand first or simultaneously with the butt end.
   G. Provide cover plates and screws for hand hole and couplers. Attach cover plates to the poles using lead anchors or embedded threaded inserts.
   H. Provide Aluminum Identification Tags on the poles with the following information:
      a. Financial Project ID:
      b. Pole Manufacturer
      c. Standard Pole Type Number
      d. Pole Length (L)
6. Support locations are for strand release, storage, lifting and transport. Keep BF oriented downward until final erection.
7. Pick-up and support locations shown may vary within a tolerance of ±3".
8. Two point attachment: provide an eye bolt hole for the messenger wire.
9. Tether Wire: When required, field-drill the eyebolt hole prior to installation.
LIGHTING AND TRAFFIC MONITORING POLES TYPE P-III

Pole Length Dim. L
20% L

Diameter shall not be less than 2½".

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 33.3% L from Tip End.

* Dimension may vary from 2½" to 3¾" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2½".

Transfer (4 strands total)
0.5 in. ~ 31 kips Before
- Prestressed Strand:

0.162 in./ft. Total Taper

Modifications to Type P-III Poles Used at Traffic Monitoring Sites)

CONCRETE POLES

STRAND LEGEND

- Prestressed Strand:
0.5 in. ~ 31 kips Before
Transfer (4 strands total)
Spiral Reinforcing Elevation

(STRANDS, HOLES, AND FIXTURES NOT SHOWN)

Pole Elevation

(STRANDS AND REINFORCING NOT SHOWN)

STRAIN POLE TYPE P-IV

POLE ELEVATION

(Typical Square Section)

SECTION A-A

(Typical Square Section)

STRAND LEGEND

- Prestressed Strand
- 0.5 in. - 31 kips Before Transfer (6 strands total)
- Dormant Strand
- 0.5 in. (3 strands total)
- One 24" Splice Allowed Per Strand

NOTES:

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.

* Dimension may vary from 3" to 4½" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2½".

Support Locations

(Monolithic Pole)

15% L

Pole Length Dim. L

7.5% L

Pole Height Dim. H

Depth Dim. D

STRAIN POLE TYPE P-IV

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

1" Cover

6" Pitch

1" Cover

4½ Turns @ 3" Pitch

One Additional Turn at End

#5 Gauge Spiral Reinforcing

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

3" x 5" Conduit

48" No. 6 Bare Copper Ground Wire

Identification Markings

4" x 6" Hand Hole with Cover

Ground Wire

Bare Copper

24" No. 6

9"

9"

Dim. A

3'-6"

1'-0"

2'-6"

1'-6"

Final Grade Location

Pole Height Dim. H

3' - 4' Taper

0.162 In./Ft. Total Taper

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)

2½" Galv. Nipple (On Tip)

1½" Hole (Two-Wire System Only)
STRAIN POLE TYPE P-V

NOTES:
- 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 12.5% L from the Tip End.
- Dimension may vary from 3½" to 4½" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 4".
SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)

POLE ELEVATION
(Strands and Reinforcing Not Shown)

NOTES:
- 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.
- Dimension may vary from 3' to 4½" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 6½".

STRAND LEGEND
- Prestressed Strand
  - 0.5 in. = 31 kips
  - 0.5 in. (8 strands total)
- Dormant Strand
  - 0.5 in. (4 strands total)
  - One 24" Splice Allowed Per Strand

STRAIN POLE TYPE P-VI