
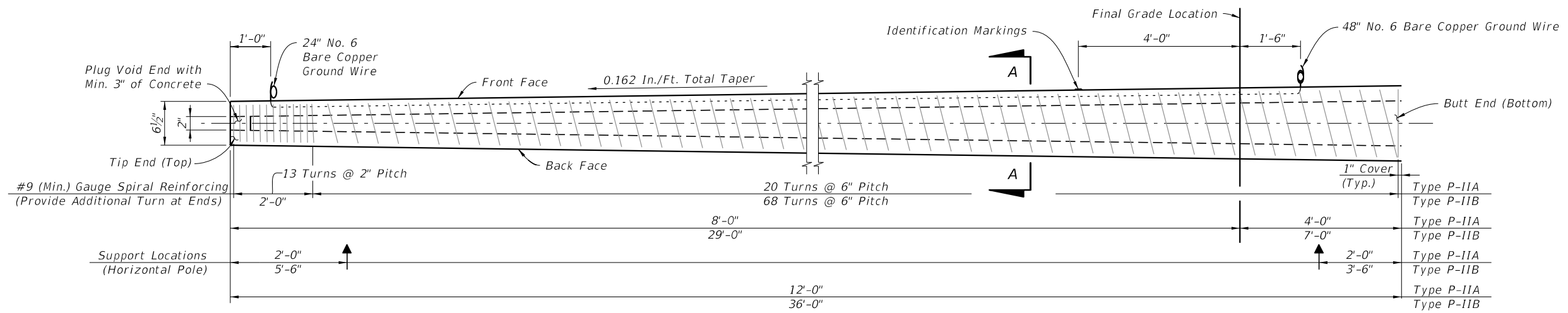


GENERAL NOTES:

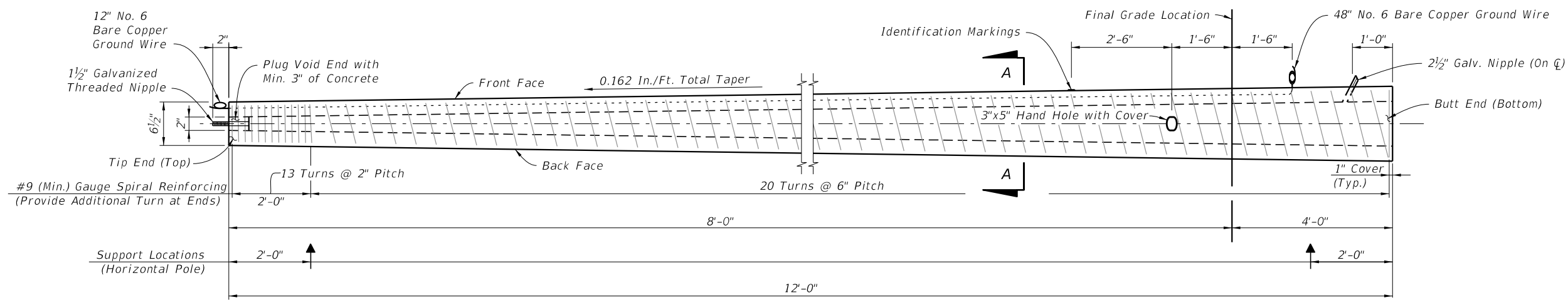
1. Work these Index drawings with the Strain Pole Schedule in the Plans.
2. Shop Drawings: This Design Standard is considered fully detailed and no shop drawings are necessary. Submit shop drawings for minor modifications not detailed in the plans.
3. Materials:
 - A. Concrete: Class V Special or Class VI
 - B. Prestress Strands & Spiral Reinforcing: Specification Section 641
 - C. Hand and coupler cover plates: Non-corrosive material
 - D. Screws: Round headed, chrome plated
4. Fabrication:
 - A. Pole Taper for pole width, strands, reinforcing and void: 0.081 in/ft per face.
 - B. Concrete Cover: 1" 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 $\pm \frac{1}{4}$ " 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)
5. Support locations are for strand release, storage, lifting and transport. Keep BF oriented downward until final erection.
6. Pick-up and support locations shown may vary within a tolerance of ± 3 ".
7. Two point attachment: provide an eye bolt hole for the messenger wire.
8. Tether Wire: When required, field-drill the eyebolt hole prior to installation

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SERVICE POLE P-IIA (12 Ft.) & P-IIB (36 Ft.) ELEVATION
(Strands Not Shown)



PEDESTAL POLE P-IIC (12 Ft.) ELEVATION
(Strands Not Shown)

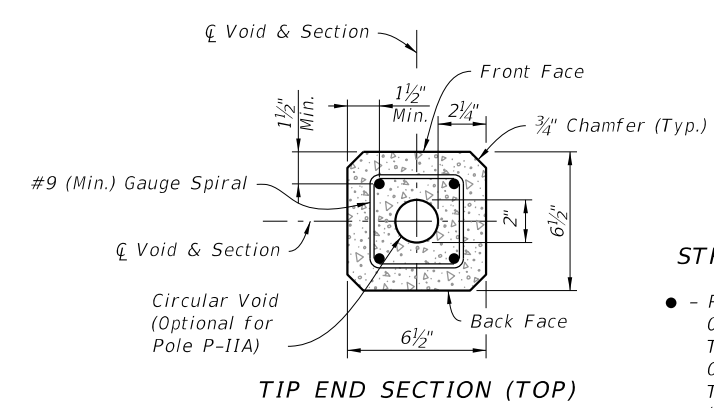
NOTES:

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 of 4 Ft. (for P-IIA & P-IIC) or 10 Ft. (for P-IIB) from the Tip End.

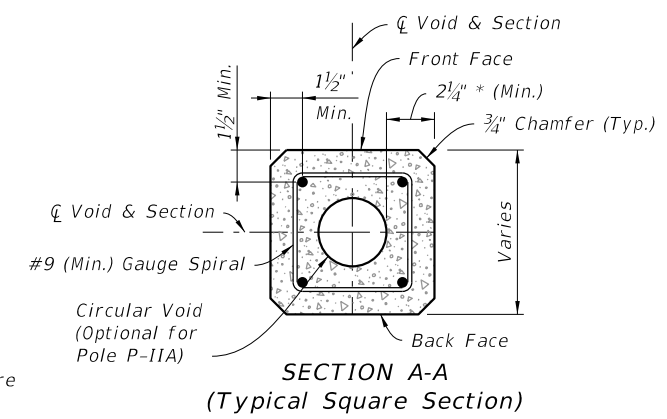
* Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2".



TIP END SECTION (TOP)

STRAND LEGEND

- - Prestressed Strand:
0.5 in. ~ 24 kips Before Transfer or
0.375 in. ~ 14 kips Before Transfer
(4 strands total)

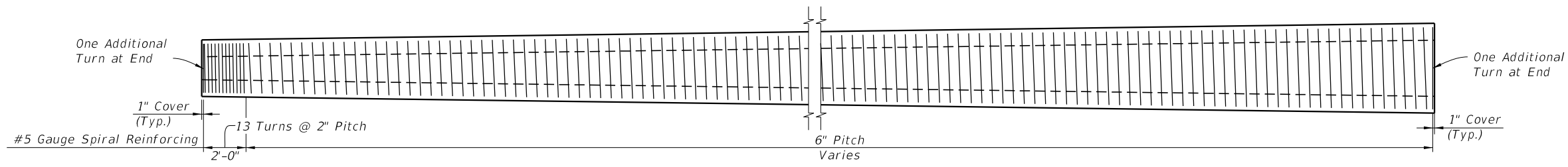


SECTION A-A
(Typical Square Section)

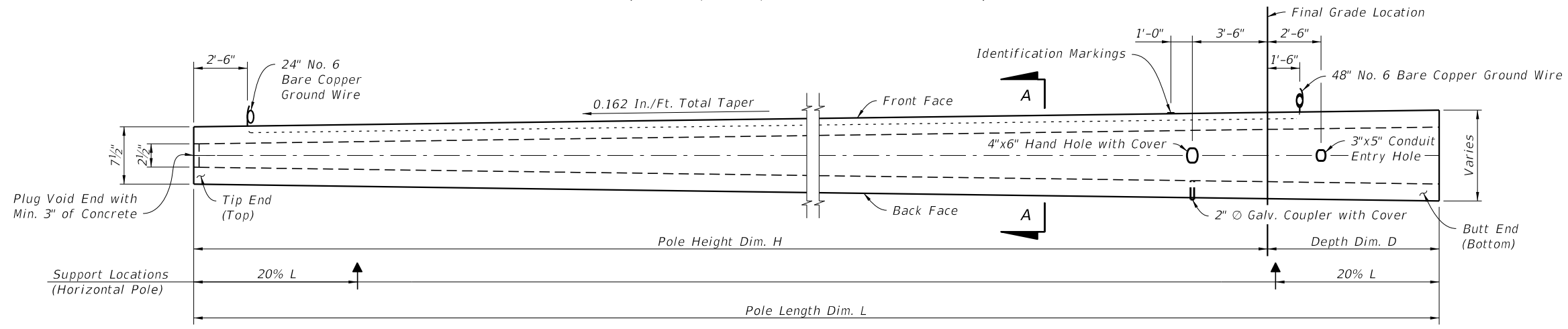
SERVICE AND PEDESTAL POLE TYPE P-II

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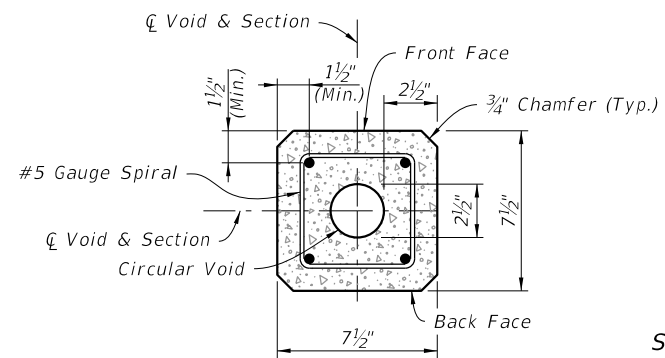
LAST REVISION 07/01/15	DESCRIPTION:		FY 2016-17 DESIGN STANDARDS	CONCRETE POLES	INDEX NO. 17725	SHEET NO. 2 of 8
REVISION						



SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)

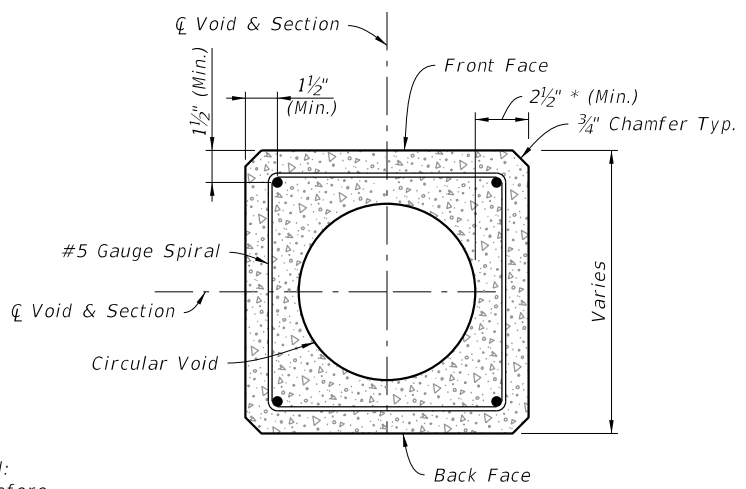


POLE ELEVATION
(Strands and Reinforcing Not Shown)
(See Design Standard Index 17900 and Specification 744 for Modifications to Type P-III Poles Used at Traffic Monitoring Sites)



TIP END SECTION (TOP)

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



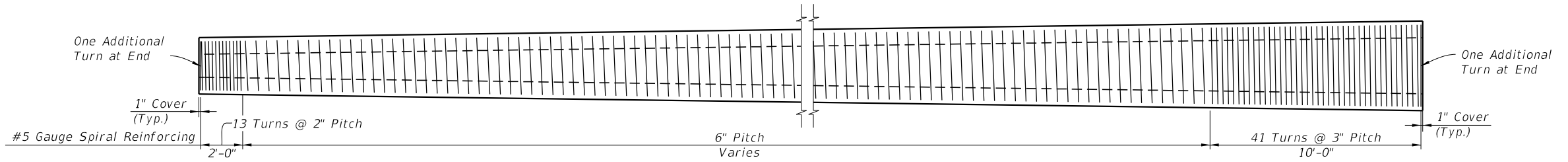
SECTION A-A
(Typical Square Section)

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 33.3% L from Tip End.
* Dimension may vary from 2 1/2" to 3 3/4" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 2 1/2".

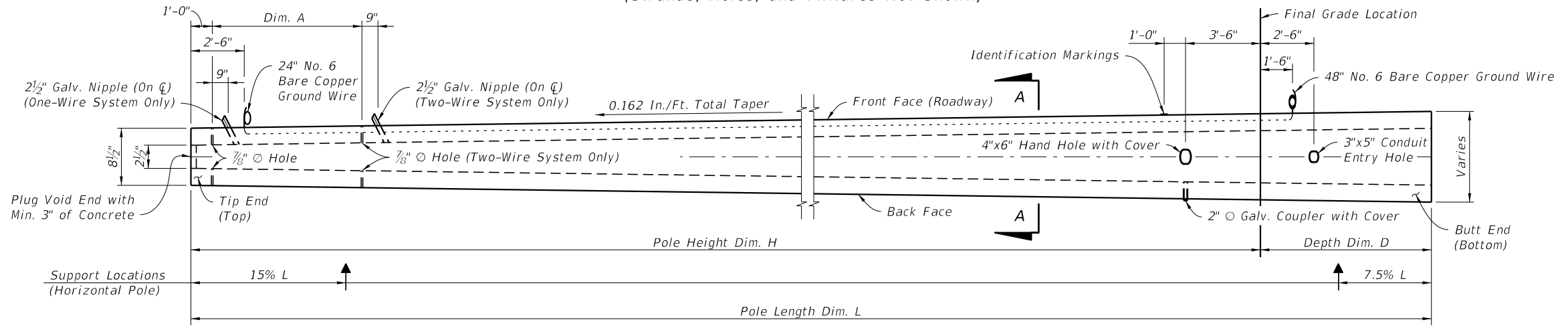
LIGHTING AND TRAFFIC MONITORING POLES TYPE P-III

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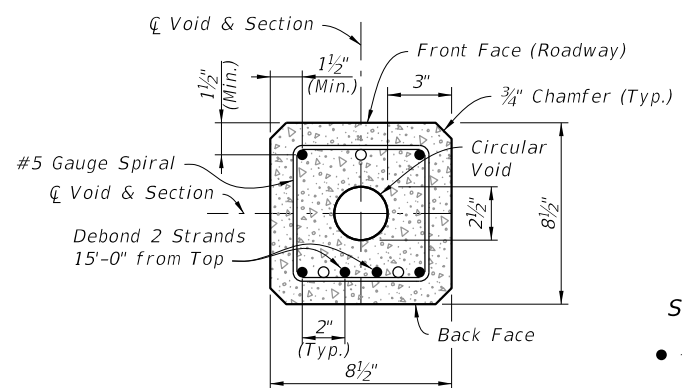
LAST REVISION 07/01/15	REVISION	DESCRIPTION:	FY 2016-17 DESIGN STANDARDS	CONCRETE POLES	INDEX NO. 17725	SHEET NO. 3 of 8
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SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



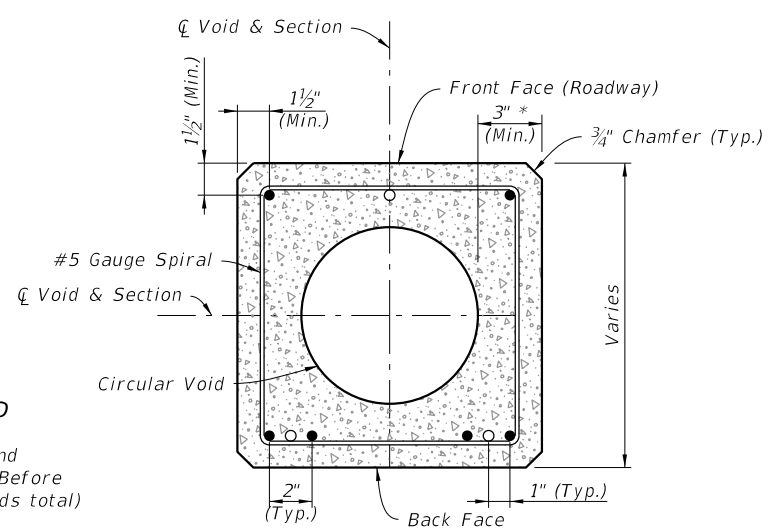
POLE ELEVATION
(Strands and Reinforcing Not Shown)



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

STRAND LEGEND

- - Prestressed Strand
0.5 in. ~ 31 kips Before Transfer (6 strands total)
- - Dormant Strand
0.5 in. (3 strands total)
One 24\"/>



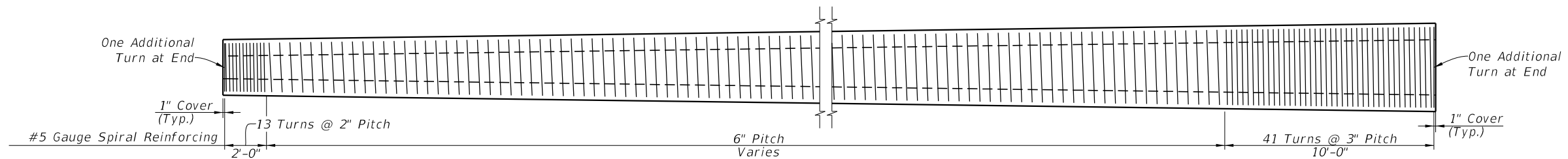
SECTION A-A
(Typical Square Section)

NOTES:

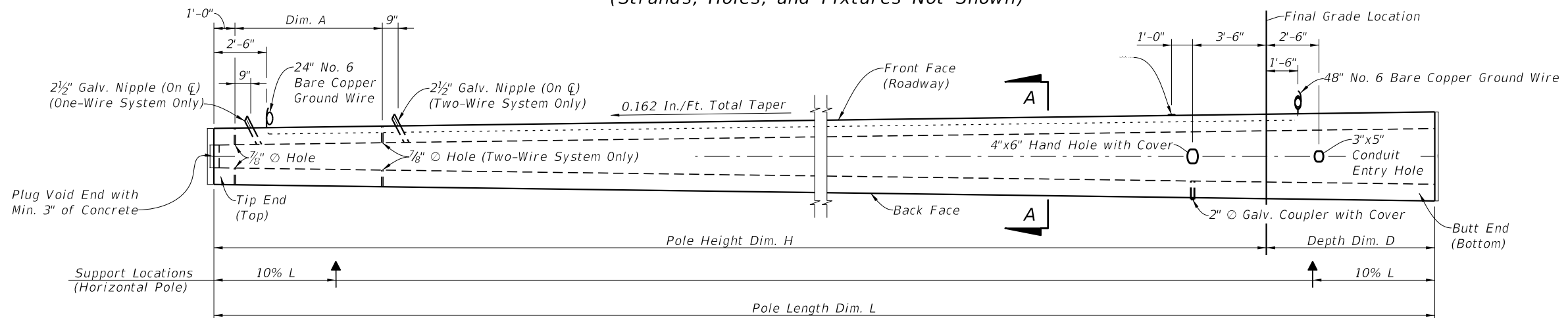
- Strands shown are continuous from Tip End to Butt End.
- Elevation view scale is exaggerated vertically for clarity.
- For final erection, tilt pole upright with single point attachment located a distance 20% L from the Tip End.
- * Dimension may vary from 3\"/>

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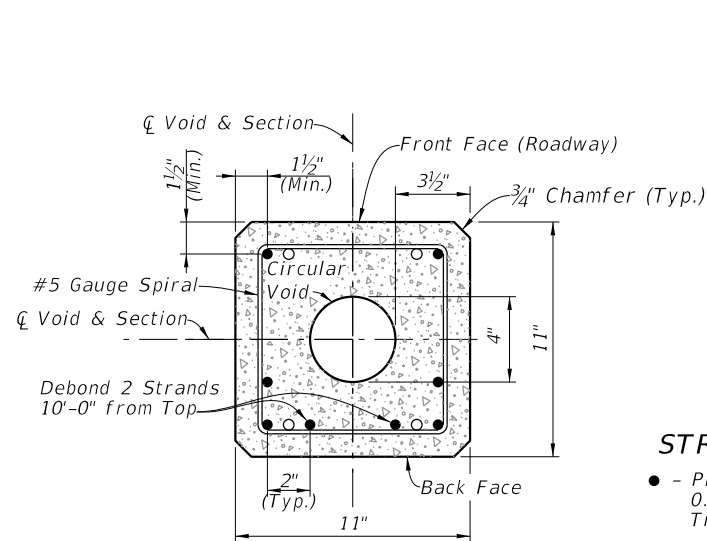
LAST REVISION 07/01/14	REVISION	DESCRIPTION:	FY 2016-17 DESIGN STANDARDS	CONCRETE POLES	INDEX NO. 17725	SHEET NO. 4 of 8
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SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



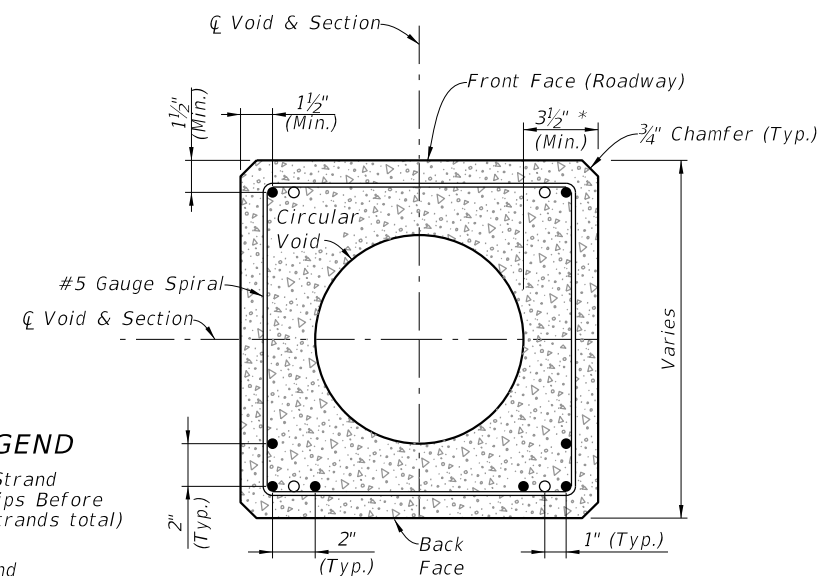
POLE ELEVATION
(Strands and Reinforcing Not Shown)



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

STRAND LEGEND

- - Prestressed Strand
0.5 in. ~ 31 kips Before Transfer (8 strands total)
- - Dormant Strand
0.5 in. (4 strands total)
One 24" Splice Allowed Per Strand



SECTION A-A
(Typical Square Section)

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 3 1/2" to 4 3/4" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 4".

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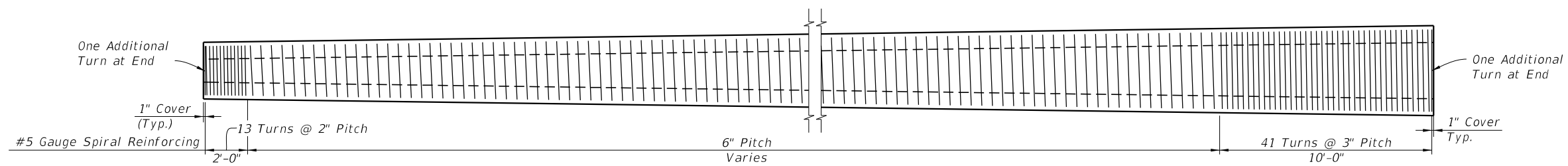
FY 2016-17
DESIGN STANDARDS

CONCRETE POLES

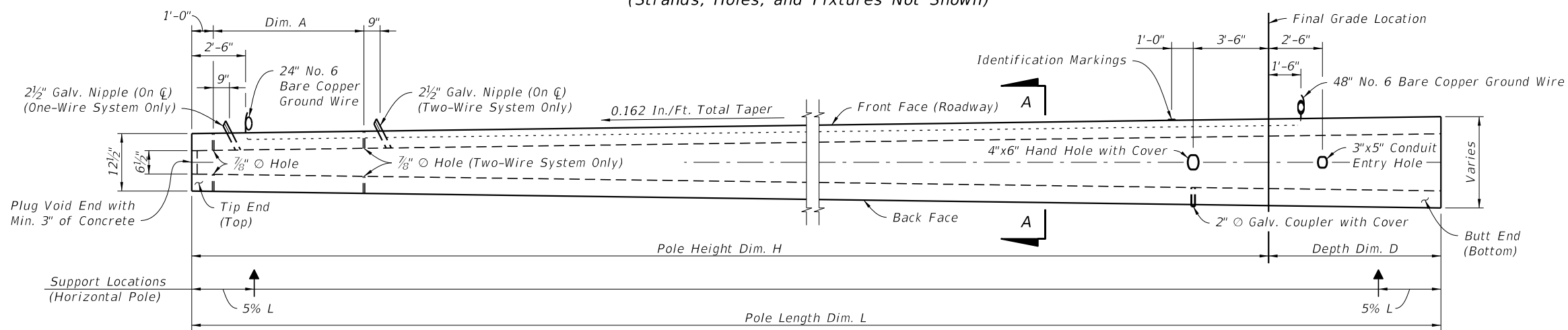
STRAIN POLE TYPE P-V

INDEX NO.
17725

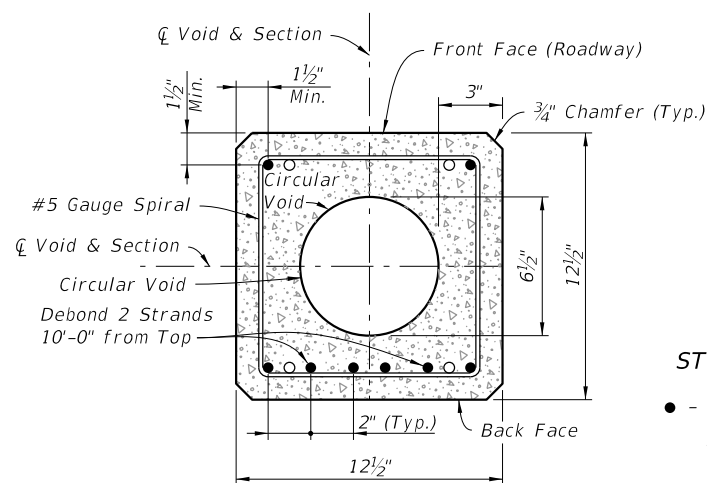
SHEET NO.
5 of 8



SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



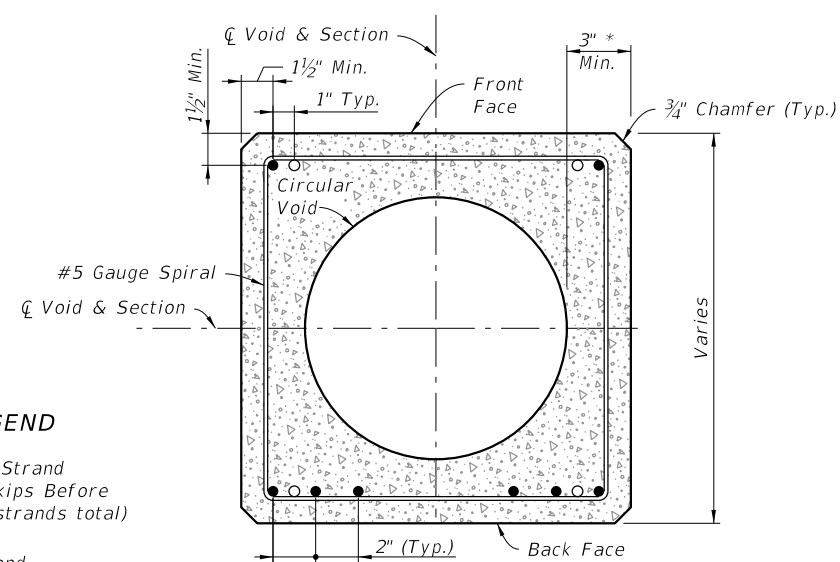
POLE ELEVATION
(Strands and Reinforcing Not Shown)



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

STRAND LEGEND

- - Prestressed Strand
0.5 in. ~ 31 kips Before Transfer (8 strands total)
- - Dormant Strand
0.5 in. (4 strands total)
One 24" Splice Allowed Per Strand



SECTION A-A
(Typical Square Section)

NOTES:

Strands shown are continuous from Tip End to Butt End.

Elevation view scale is exaggerated vertically for clarity.

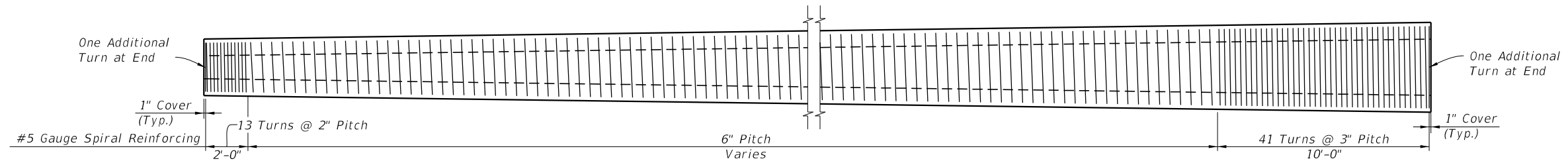
For final erection, tilt pole upright with single point attachment located a distance 10% L from Tip End.

* Dimension may vary from 3" to 4 1/4" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 6 1/2".

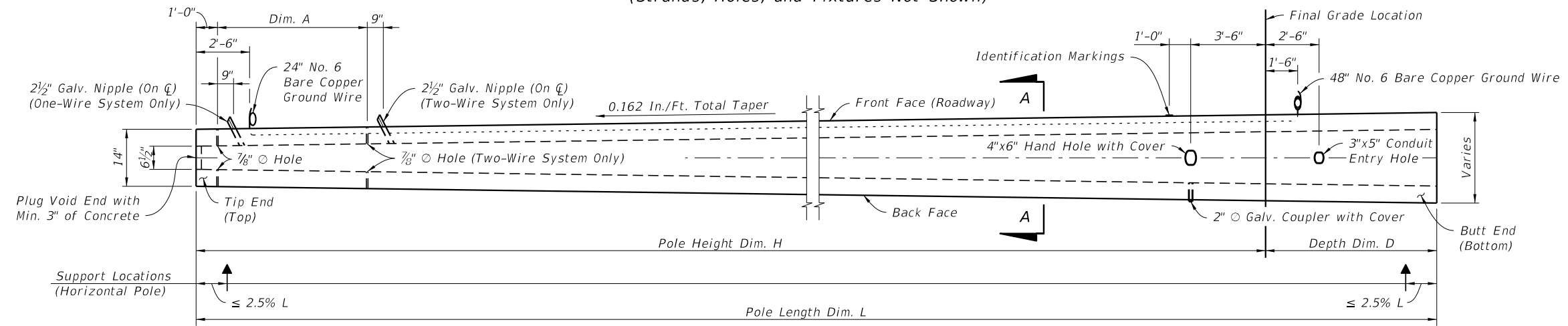
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STRAIN POLE TYPE P-VI

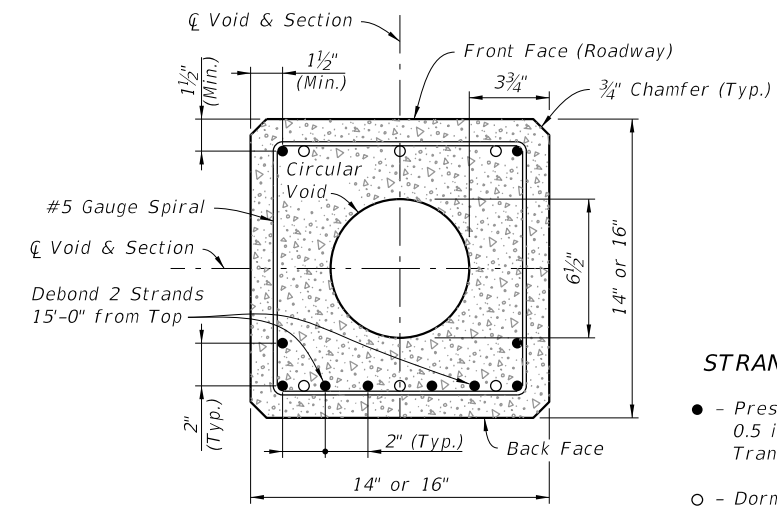
LAST REVISION 07/01/15	REVISION	DESCRIPTION:	FY 2016-17 DESIGN STANDARDS	CONCRETE POLES	INDEX NO. 17725	SHEET NO. 6 of 8
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SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



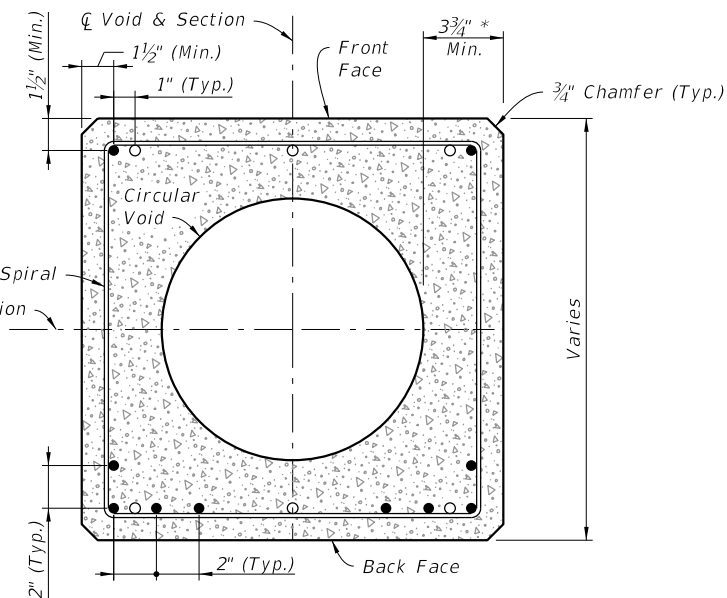
POLE ELEVATION
(Strands and Reinforcing Not Shown)



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

STRAND LEGEND

- - Prestressed Strand
0.5 in. ~ 31 kips Before Transfer (10 strands total)
- - Dormant Strand
0.5 in. (6 strands total)
One 24" Splice Allowed Per Strands



SECTION A-A
(Typical Square Section)

NOTES:

Strands shown are continuous from Tip End to Butt End.

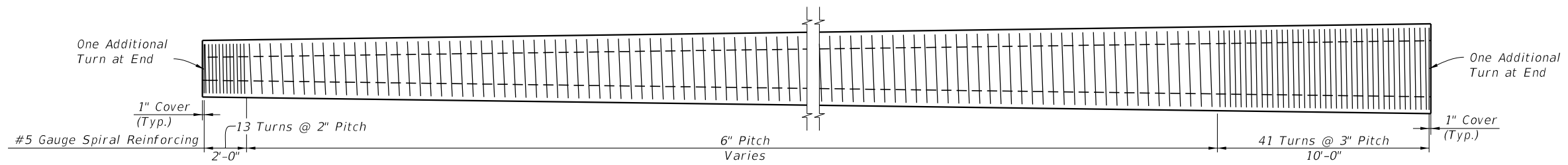
Elevation view scale is exaggerated vertically for clarity.

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

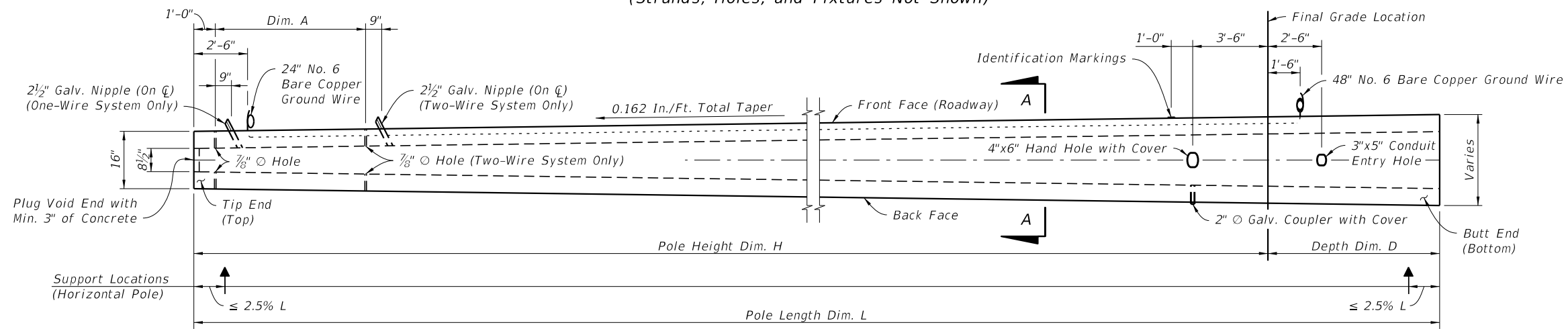
* Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 6 1/2".

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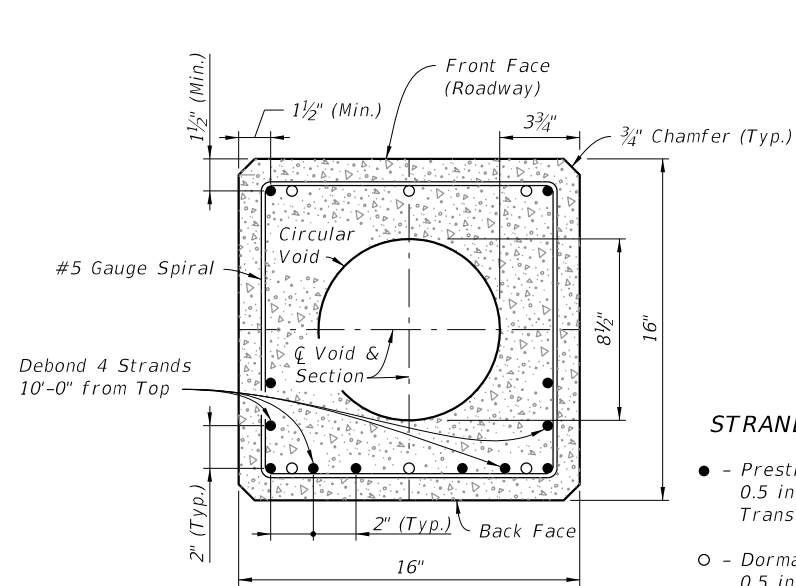
LAST REVISION 07/01/15	DESCRIPTION:
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SPIRAL REINFORCING ELEVATION
(Strands, Holes, and Fixtures Not Shown)



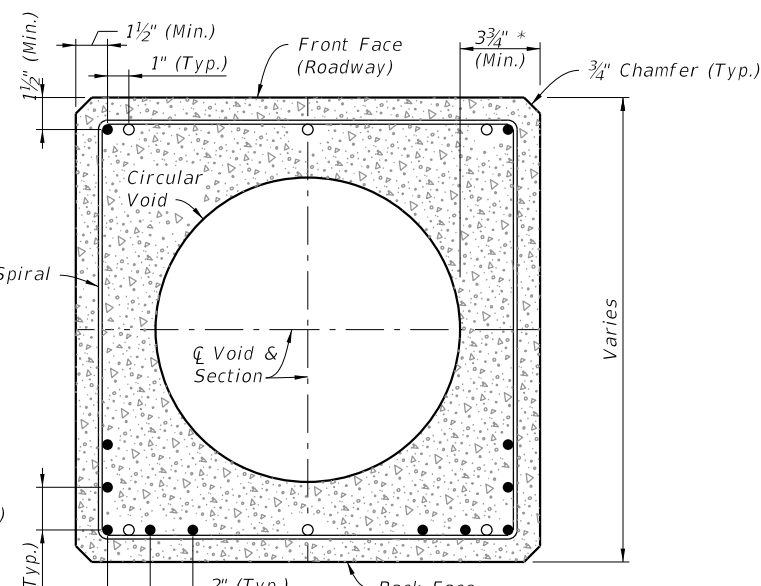
POLE ELEVATION
(Strands and Reinforcing Not Shown)



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

STRAND LEGEND

- - Prestressed Strand
0.5 in. ~ 31 kips Before Transfer (12 strands total)
- - Dormant Strand
0.5 in. (6 strands total)
One 24" Splice Allowed Per Strand



SECTION A-A
(Typical Square Section)

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 the Tip End.
- * Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The void diameter shall not be less than 8 1/2".

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STRAIN POLE TYPE P-VIII