
Single-Phase Tangent Pole Top Assembly

1. Scope

This standard provides the information necessary to construct the pole top assembly for single-phase tangent poles supporting #4 AWG copper primary conductors on the 26 kV primary distribution system. Requirements for vertical spacing, hardware, and installation instructions to connect the primary conductor to the pole are included.

Criteria for pole top assemblies covered under this standard include the following:

Grade of construction	C
Pole class	3 or stronger
Pole length	50 ft
Soil condition	Average
Allowable line angle	0°–8°

For line angles greater than the allowable line angle described above, refer to SCL 0121.03.

Composite, steel, laminated and other non-wood poles are outside the scope of this standard.

2. Application

This standard provides direction to Seattle City Light (SCL) engineers, crews, and contractors for the installation of single-phase tangent pole top assemblies on 26 kV distribution poles with #4 AWG copper primary conductors.

3. General Requirements

The allowable line angle for a single-phase tangent pole top assembly is 8 degrees as shown in Figure 3a.

Assemblies shall be constructed according to the single-phase tangent assembly as shown in Figure 3b.





Figure 3a. Allowable Line Angle Range

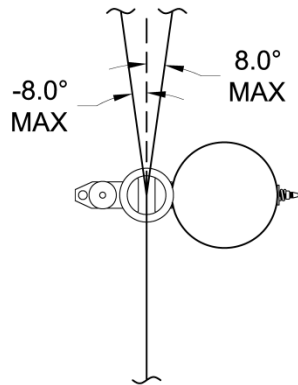
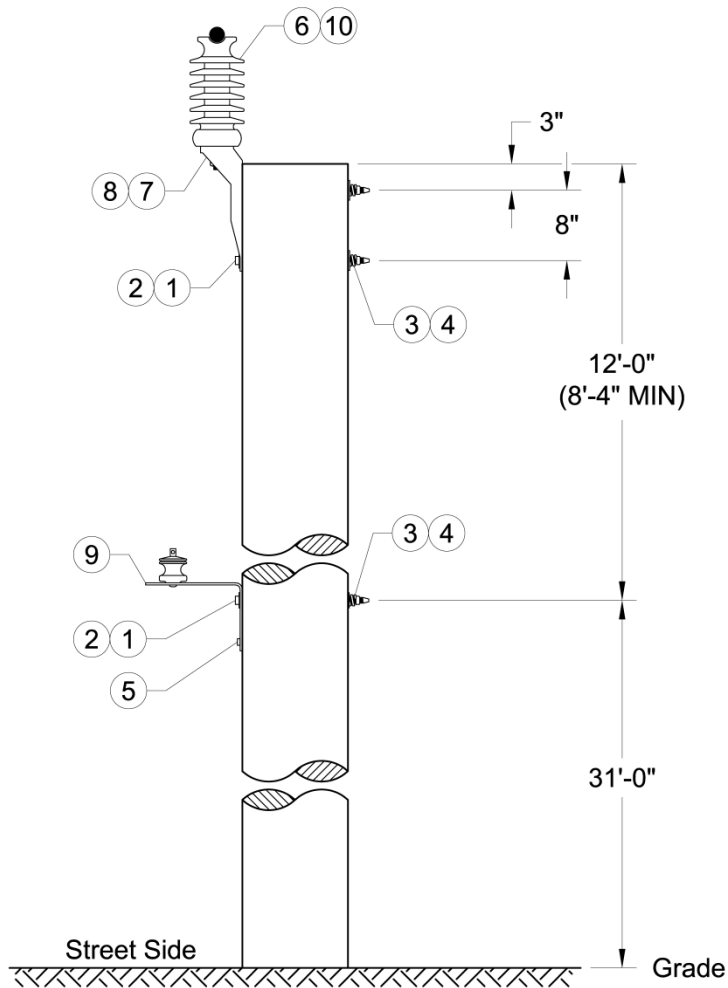


Figure 3b. Single-Phase Tangent Pole Top Assembly



4. Construction Notes

The headpin and LR bracket are installed on the street side of the pole.

If two neutrals are required, mount the second neutral on the street side 1 ft below the top bolt hole of the original neutral (typically at 30 ft).

If poor soil is found in the field, contact the SCL Design Engineer.

If there are avian and wildlife concerns, contact the SCL Design Engineer.

If there are salt spray concerns, contact the SCL Design Engineer.

5. Material List

Table 5. Materials for Single-Phase Tangent Pole Top Assembly

Fig	Compatible Unit	ID	Qty
3b	Single-Phase #4 AWG Tangent	PLT#4-1TANHP	
#	Material Description	ID	Qty
1	Bolt, Machine, Galvanized, 5/8 in x 14 in	780846	3
2	Washer, Round, Flat, 5/8 in	585030	3
3	Washer, Square, Flat, 2-1/4 in x 2-1/4 in	585135	3
4	Washer, Coil Spring Lock, 5/8 in	584261	3
5	Screw, Lag, 1/2 in x 4 in	785261	1
6	Insulator, Post Top 34.5 kV	014304	1
7	Stud, Short	696826	1
8	Bracket, Pole Top	563253	1
9	LR Bracket	690404	1
10	Wire, Tie, Insulator, #6 AWG SD Solid Cu (ft)	610210	3

6. References

SCL Construction Standard 0121.03; "Single-Phase Angle Pole Top Assembly"

7. Sources

National Electrical Safety Code (NESC); C2-2012 Edition; Institute of Electrical and Electronics Engineers (IEEE) Inc., New York, NY, 2011

Hall, Alan; SCL Engineer and subject matter expert for 0121.01 (alan.hall@seattle.gov)

Lu, Curtis; SCL Standards Engineer and originator of 0121.01 (curtis.lu@seattle.gov)