Crossarm Braces

1. Scope

This standard covers the information necessary to install braces for tangent fiberglass and wood crossarms on 26 kV primary distribution system wood poles.

Deadend assemblies are outside the scope of this standard and do not require a brace.

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 braces for crossarms on 26 kV distribution poles.

3. Requirements

All tangent crossarms require a brace, even if they are installed using a two-hole mounting bracket.

Pole top-compatible units already include brace and mounting hardware.

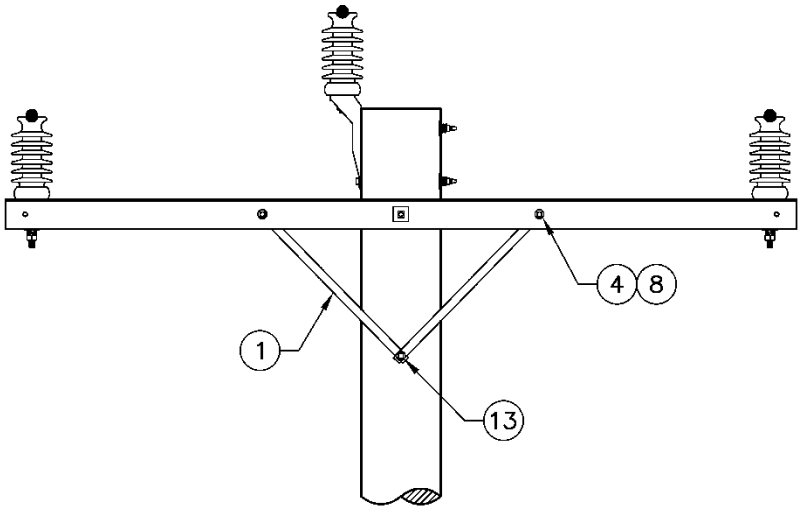
3.1 Tangent Crossarms

Fiberglass and 26 kV wood tangent crossarms require two steel flat braces installed in a "V" configuration as shown in Figure 3.1.

Braces shall be attached to the crossarm using 1/2-inch bolts and washers.

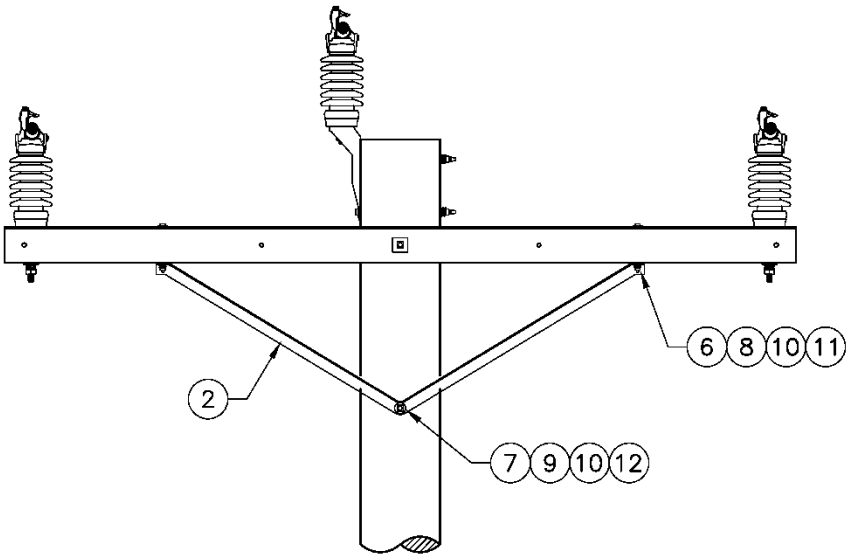
Braces shall be attached to the pole using a 1/2-inch lag screw.

Figure 3.1a Flat Brace for Tangent Crossarms



Primary wood tangent crossarms require a steel angle (v-shape) brace. The brace shall be attached to the crossarm using a 1/2" bolt with round, square, and lock washers. The brace shall be attached to the pole using a 5/8” bolt with round, square, and lock washers.

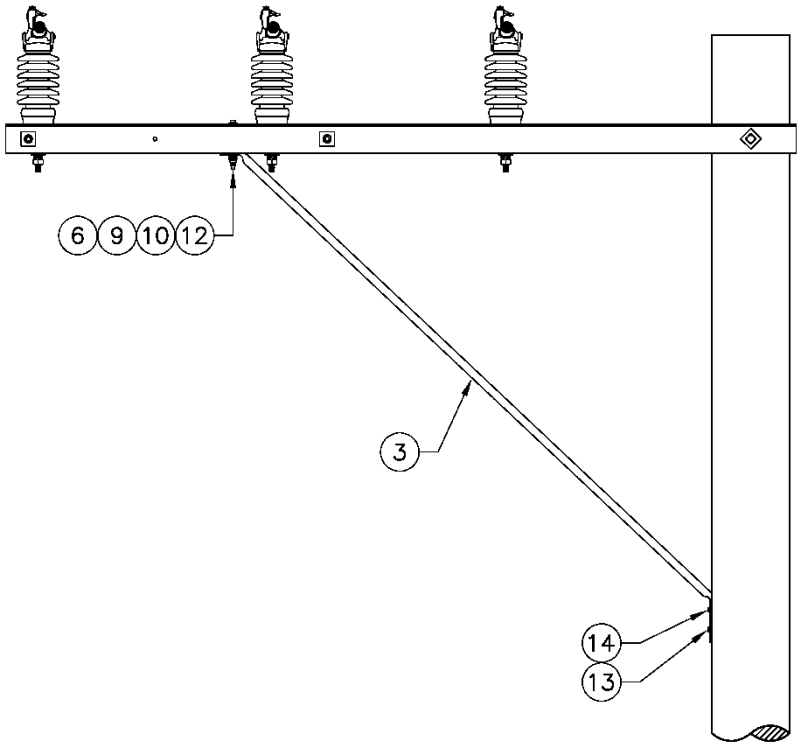
Figure 3.1b Angle Brace for Tangent Crossarms



3.2 Wing Arms

The standard 11-foot wing arms require one steel pipe brace. The brace shall be attached to the crossarm using a 5/8” bolt with round, square and lock washers. The brace shall be attached to the pole using two (2) 1/2” lag screws.

Figure 3.2 Pipe Brace for Wing Arms



4. Material List

Fig	Compatible Unit	ID
3d	Flat Crossarm Brace	PLT-FLATBRACE
3d	Angle Crossarm Brace	PLT-VBRACE
3g	Wing Arm Brace	PLT-WINGBRACE

#	Material Description	ID			Quantity
1	Brace, Flat	563005	–	–	2
2	Brace, V	563010	-	1	–
3	Brace, Steel Pipe, 1-1/4" x 9'-1"	563015	1	–	–
4	Bolt, Machine, Galvanized, 1/2" x 5"	780804	–	–	2
5	Bolt, Machine, Galvanized, 1/2" x 7"	780808	-	2	–
6	Bolt, Machine, Galvanized, 5/8" x 7"	780838	1	-	-
7	Bolt, Machine, Galvanized, 5/8" x 16"	780847	-	1	-
8	Washer, Round, Flat - 1/2"	585025	-	2	2
9	Washer, Round, Flat - 5/8"	585030	1	1	-
10	Washer, Square, Flat - 2-1/4" x 2-1/4"	585135	1	3	-
11	Washer, Double Coil, Helical Spring, Lock - 1/2"	584257	-	2	-
12	Washer, Double Coil, Helical Spring, Lock - 5/8"	584261	1	1	-
13	Screw, Lag, Fetter - 1/2" x 4"	785261	1	-	1
14	Screw, Lag, Fetter - 1/2" x 6"	785265	1	-	-

5. References

SCL Material Standard 5630.1; “Brace, Crossarm”

SCL Material Standard 5630.3; “Braces, 5-Foot (Nom.) Aluminum Special”

SCL Material Standard 5630.5; “Braces, Steel 9-Foot And 12-Foot Special Pipe”

6. Sources

Lu, Curtis; SCL Standards Engineer and originator of 0100.

SCL Construction Standard 0123.01; “Three-Phase Tangent Pole Top Assemblies”

SCL Construction Standard 0123.13; “Three-Phase Tangent and Angle Wing Arm Pole Top Assemblies”

SCL Construction Standard D4-4;” Braces” (canceled)