

1. Scope

This specification applies to the District's requirements for composite, non-ceramic, polymeric vertical post insulators for conductors on a 115kV electrical transmission system. The polymeric covering, including the weathersheds, shall be made of silicone rubber.

2. Reference Standards

Insulators shall meet the applicable requirements of the latest revisions of the following standards.

Industry Standards	
ANSI C29.7-2002	Wet Process Porcelain Insulators - High Voltage Line - Post Type
ANSI C29.17-2002	Insulators - Composite Line Post Type
ASTM-153-09	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
District Standards	
Compatible Unit I0703	115kV Polymer Vertical Post Insulator w/ o Bracket

3. Material ID Number

This specification applies to the following District Material ID number: 937774.

4. Ratings

Physical Specifications	
Length (Conductor to Pole)	38" min - 42" max
Core Diameter	2.5" min
Color	Sky Gray, ANSI 70
Minimum Mechanical Specifications	
Design Cantilever Load (DCL)	1500 lb
Minimum Electrical Specifications	
Arcing Distance	30"
Leakage Distance	68"
Dry Flashover 60 Hz (kV RMS)	290 kV
Wet Flashover 60 Hz (kV RMS)	260 kV

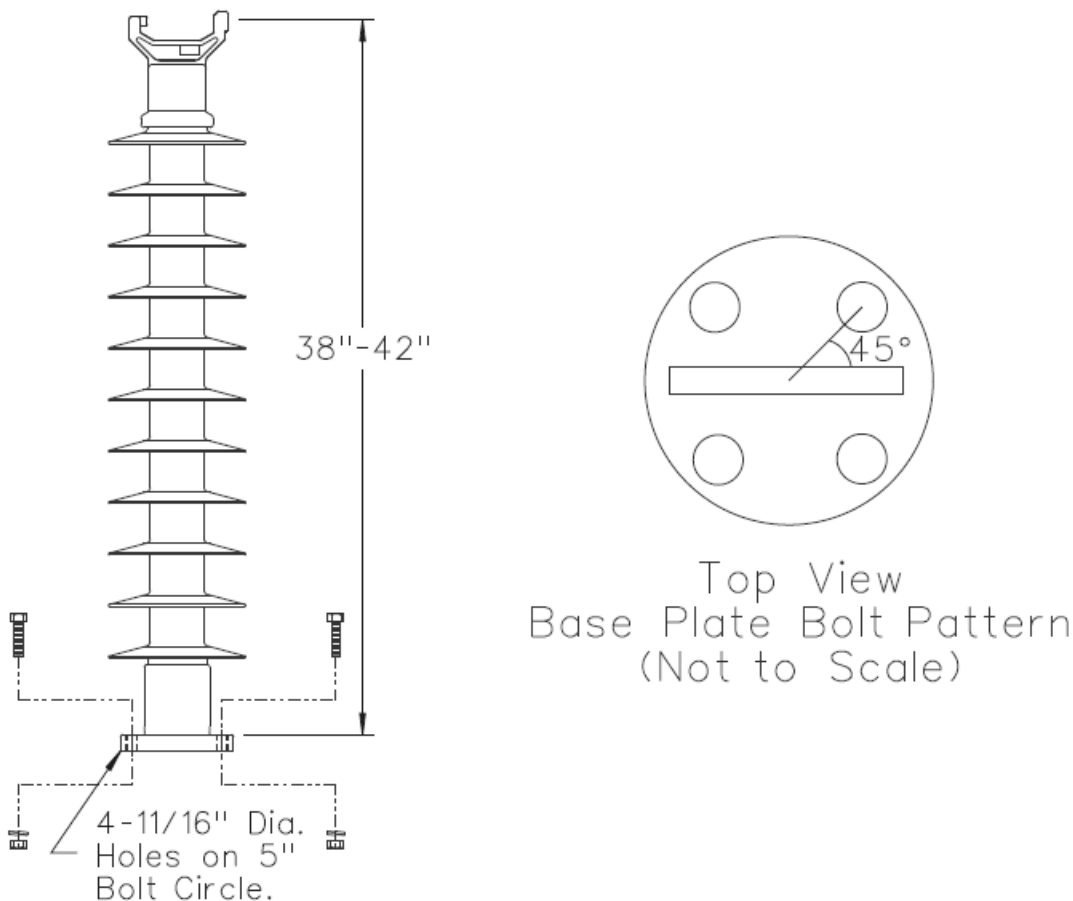
Upon request, manufacturers shall provide a combined loading chart for review by the District.

5. Construction

Insulator strength member shall be made of fiberglass rod. All parts of the fiberglass rod shall be completely covered with the same silicone rubber polymeric material as the weathersheds. The entire length of the polymeric covering, including the weathersheds, shall be one continuous, seamless piece of material. Weathersheds shall retain their original shape after severe deformation. Weathersheds shall shed water and be self-cleaning with rain.

6. Corona Ring

All insulators shall have the ability to be easily retrofitted with a corona ring.



7. End Fittings

Each insulator shall be equipped with a vertical trunnion adapter for attaching a conductor clamp. The adapter shall be dimensioned per ANSI C29.7, latest revision. Base shall have a flange with 4-11/16" holes on a 5" bolt circle oriented as shown in the figure above.

End fittings may be constructed from high strength aluminum alloy or malleable or ductile iron, galvanized in accordance with ASTM A153, latest revision. End-fittings shall have sealant applied to protect against moisture penetration. Insulator, flange end-fitting, and vertical adapter clamp shall be shipped assembled.

8. Identification

Each insulator shall be permanently marked with the manufacturer's name or logo and the date of manufacture. Each insulator shall be marked with the designed cantilever load rating (DCL) with appropriate units. The markings shall be legible and durable. Packages containing multiple insulators shall be marked with the manufacturer's name, the type of insulator and the insulator part number.