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6-09-195 - Customer Reference Specification - 7.2kV Single Phase Service Interrupter Switch on Customer-Owned Pole

Overhead Supply to Overhead or Underground

<u>A-188075</u>

THIS CUSTOMER REFERENCE SPECIFICATION (CRS) IS PART OF THE RULES FOR ELECTRIC METER AND SERVICE INSTALLATION (REMSI) WEBSITE.



This specification defines the customer's responsibilities and requirements necessary for 7.2 KV single phase service, overhead supply to overhead or underground. All details of this specification <u>must</u> be strictly followed.

The pole location and equipment installation must be approved by the PPL Supervisor- Commercial & Industrial Metering Services and PPL Design Supervisor. Any deviation from this specification must be approved. Unapproved deviations are usually costly for the customer to correct and can result in delays or possible refusal to connect service.

Refer to CRS 6-09-200 for 7.2kV Single-Phase Service Metering on Customer-Owned Pole.

Notes:

- 1. All facilities, except bill of material items #1, 2, and 3 are provided, installed, and maintained by customer. PPL will make connections to source side of switch and all connections to the system neutral.
- 2. Customer must install and maintain guy designed to hold deadend load of PPL conductors. The maximum tension in each conductor is 2000 pounds (total 4000 pounds, 1 phase and neutral).
- 3. Customer to furnish and install lightning arresters on load side.
- 4. Conduit(s) for primary cable may approach from any direction, but cable riser must be attached to pole in position shown.

The customer should install underground conduit(s) by one of these methods. A spare conduit is recommended, but optional.

A. Use 4 or 5 inch hot-dipped galvanized steel conduits (rigid or intermediate grade) directly buried in the earth. All threaded couplings should be tightly joined using plumbers teflon tape or similar joint compound designed to stop water leaks. All bends must be at least 36-inch radius. All steel conduits must have grounding bushings at the switchgear and terminal pole.

- or —

B. Use 4 or 5 inch type EB or DB PVC conduit encased in a concrete envelope as specified in PPL drawing A-168735. All joints should be tightly sealed using the appropriate contact cement or joint compound. All 90° bends must be hot-dipped galvanized steel (rigid or intermediate grade) with at least 36 inch radius. Concrete must also encase steel bends to prevent breakage at steel-to-plastic adaptors resulting from cable pulling tensions.

After installation, the contractor should clean debris from the conduits. Temporarily plug conduits to keep them clean and dry.

- Conduit riser should fit snug against pole. Riser can be hot-dipped galvanized steel or schedule 80 PVC. Attach riser to pole using two-hole pipe straps at 5-foot intervals. Both the cable riser conduit and spare should be watersealed.
- 6. The side of pole below fuses must be kept clear for climbing.



- 7. Customer's primary neutral, fused interrupter switch base, instrument transformer cases, lightning arresters, conduit, and secondary neutral of instrument transformers must be grounded. Customer must make all grounding connections using compression connectors, and all primary connections using cableto-flat or stem connectors as appropriate.
- 8. Coil approximately 6 feet of the #2/0 copper ground wire under platform and connect attwo points. The platform should be chained to the pole to prevent removal.
- 9. Point of Contact (POC) is contained in the PPL EU document "Point of Contact Requirements for High Voltage Customer-Owned Facilities 12kV Supply."
- 10. Switch handle is to have provision for 2 locks (customer lock & PPL EU lock) so that either customer or PPL EU may operate switch independently.
- 11. Customer Main Switch shall meet the following criteria:
 - a. Incorporate a single pole loadbreak design
 - b. Rated for minimum 14.4kV
 - c. Minimum 110 kV BIL
 - d. Minimum 600A continuous and interrupting current
 - e. Have a visual break when switch is in the open position
 - f. Operable from ground level. Operating handle should be 42" from ground level.
 - g. Fuses holder and fuses are not required

ltem	Qty.	Bill of Material	CID No. or Drawing No.
		Material Supplied by PPL	
1	1	Deadend assembly, 12 KV	6-13-18
2	1	Deadend assembly, neutral	6-13-18
	1	Bracket, crossarm mounting	139506
	1	Arrester, lightning	139110
3	2	Connector, compression	6-12-11
3	*	Ft., wire, #6 CU, bare	147474
	1	Connector, hot line, aluminum, #6 - #4/0	1021522
		Connector, hot line, aluminum, #2-556 kcmil	912529
4	-	-	
		Material Supplied by Customer	
5	1	Pole, (class 4 min.) length as specified (40' min.)	
6	1	Deadend assembly, 12 KV	
	2	Pin, insulator, steel	
7	2	Insulator, pin type, 12 KV	
	*	Ft., wire, #6 CU, S.D., tie	

* As Required



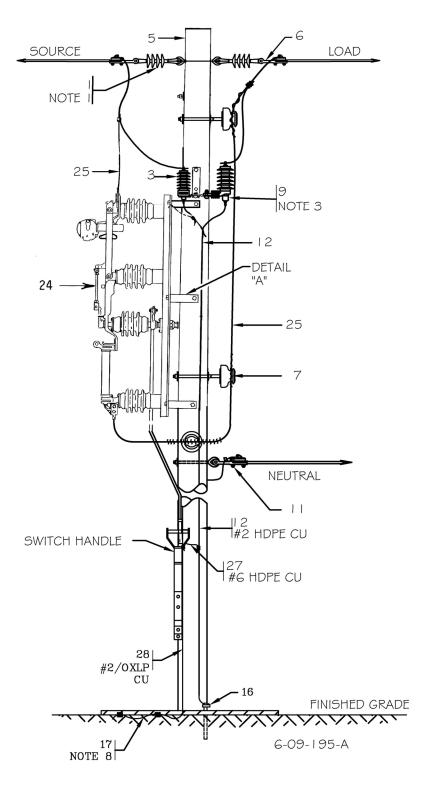
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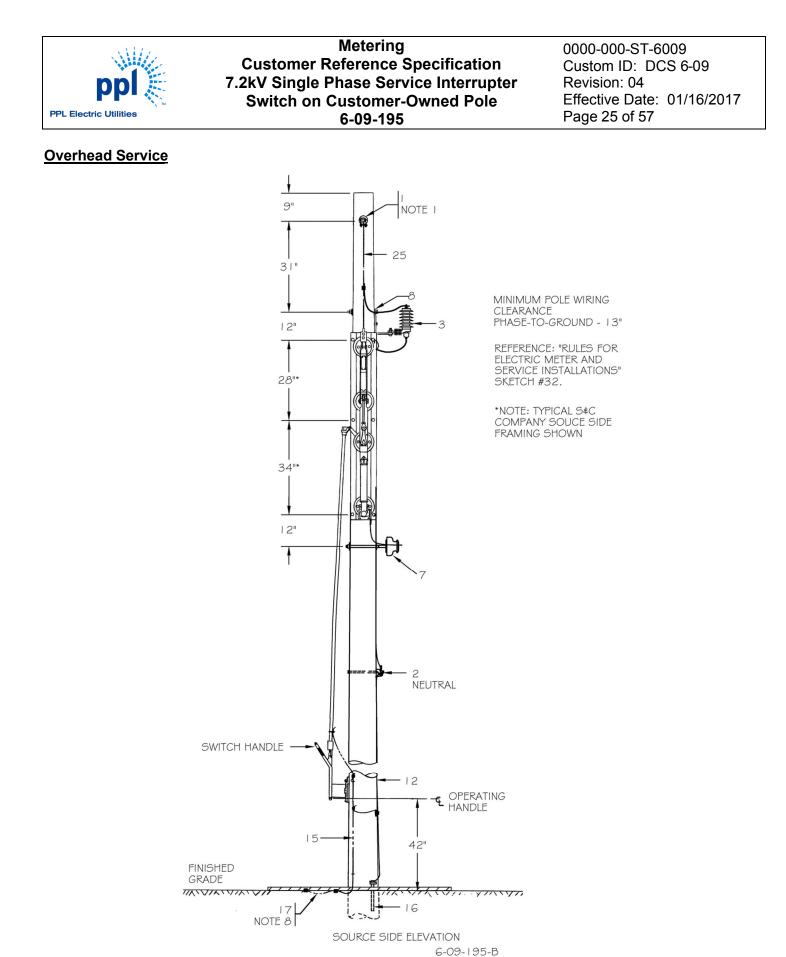
ltem	Qty.	Bill of Material	CID No. or Drawing No.
		Material Supplied by Customer	
0	*	Bracket, tee	
	*	Bolt, machine, 5/8" x length to suit, galv.	
8	*	Washer, 2-1/4" sq. for 5/8" bolt, galv.	
	*	Screw, lag, 3/8" x 4-1/2" long	
9	*	Arrester, lightning, for 12 KV, 4 wire system	(Note 3)
	1	Terminator, cable, outdoor, 15 KV	
10	*	Ft. wire, #2 CU, solid, bare; connectors as required	
	3	Connector, terminal, size and type as required	
11	1	Deadend assembly, neutral	
10	*	Ft. wire, #2. CU (min.) HDPE or bare with molding	
12	*	Connectors as required	
10	*	Ft., wire, #6 CU, solid	
13	*	Connectors as required	
14	*	Ft., wire, #4 CU (min.) solid; connectors as required	
15	*	Ft., wire, #2/0 CU, Str, bare; connectors as required	
16	1	Rod, ground, 1/2" dia. x 8' long, steel, copper clad	
17	1	Grounded Platform 3' x 5'	LB-12669
18	-	-	
10	1	Grip, cable supporting	
19	1	Bushing, grounding size to suit conduit	
20	1	Cap, conduit	
21	*	Conduit, 4" or 5"	
21		Straps, conduit, with screw lags	
22	*	Bend, 90°, 4" or 5", steel, galvanized	
23	1	Guy, 3/8" H.S. steel, 7 strand, with attachment hardware	
24	1	Customer Main Switch	(Note 11)
25	*	Ft., wire, #2 CU. (min.), strand, bare	
20	*	Connectors, terminal, size and type as required	

* As Required



Overhead Service



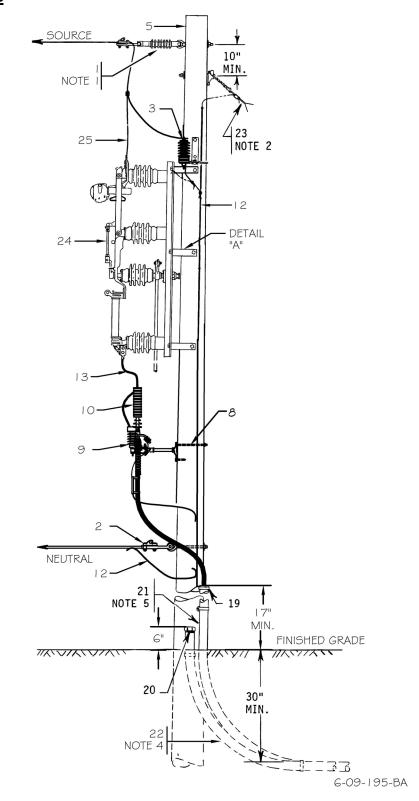


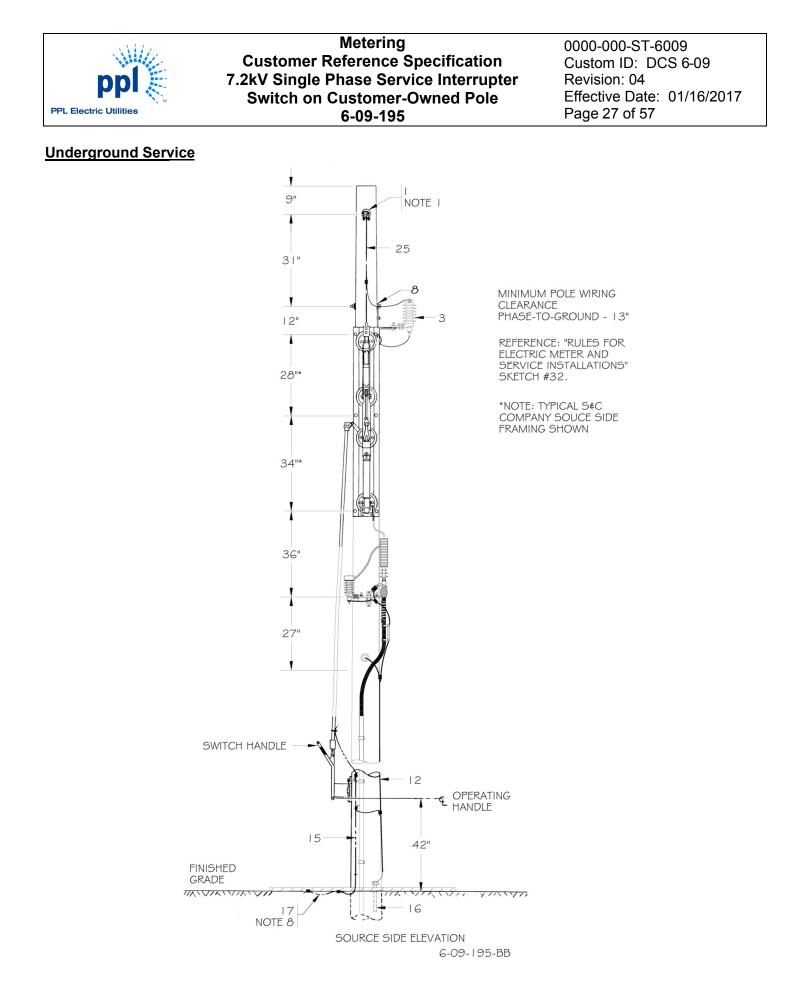
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Underground Service

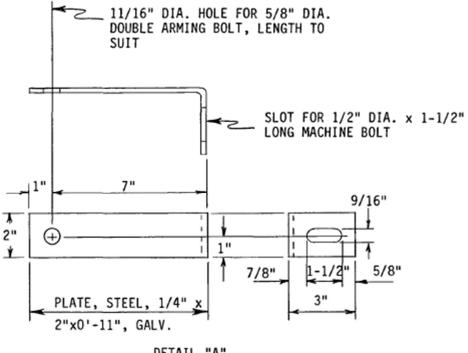




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DETAIL "A" INTERRUPTER SWITCH MOUNTING STRAPS 6-09-195-C