



Metering
Customer Reference Specification
7.2kV Single Phase Service Metering
on Customer-Owned Pole
6-09-200

0000-000-ST-6009
Custom ID: DCS 6-09
Revision: 04
Effective Date: 01/16/2017
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6-09-200 - Customer Reference Specification - 7.2kV Single Phase Service Metering on Customer-Owned Pole

Overhead Supply to Overhead or Underground

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



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This specification defines the customer's responsibilities and requirements necessary for 7.2kV single phase service metering, overhead supply to overhead or underground. All details of this specification must 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 6-09-195 for 7.2kV Single Phase Service Interrupter Switch on Customer-Owned Pole.

Notes:

1. All facilities, except bill of material item #1, are provided, installed, and maintained by customer. PPL will make metering connections 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.
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.

C. 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 -

D. 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.

5. 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 opposite of the metering equipment must be kept clear for climbing.



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7. Customer's primary neutral, 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 cable-to-flat or stem connectors as appropriate.
8. Coil approximately 6 feet of the #2/0 copper ground wire under platform and connect at two 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."

Item	Qty.	Bill of Material	CID No. or Drawing No.
Material Supplied by PPL			
1	1	Steel, mounting, for instrument transformers	1018397
	1	Transformer, voltage	Meter Dept.
	1	Transformer, current	Meter Dept.
	*	Meter mounting and material	Meter Dept.
	*	Ft., wire, from meter to inst. transf.	Meter Dept.
	2	Brace, crossarm, flat, 28" long, galv.	
	1	Screw, lag, 1/2" x 4" long, galv.	
	2	Bolt, machine, 3/8" x 1-1/2" long, galv.	
	1	Bolt, machine, 5/8" x length to suit, galv.	
	*	Washer, 2-1/4" sq. for 5/8" bolt, galv.	
	2	Bolt, machine, 5/8" x 1-1/2" long	
*	Bolt, machine, 3/8" x 1-1/2" long		
Material Supplied by Customer			
2	1	Pole, (class 4 min.) length as specified (40' min.)	
3	1	Bracket, tee	
	1	Arrester, lightning	(Note 3)
	1	Hot-line clamp	
	2	Connector, compression	
	*	Ft., wire, #6 CU, bare	
	1	Connector, hot-line clamp, bronze	
4	*	Deadend assembly, 12 KV	
5	1	Pin, insulator, steel	
	1	Insulator, pin type, 12 KV	
	*	Ft., wire, #6 CU, S.D., tie	
6	*	Bracket, tee	
	*	Bolt, machine, 5/8" x length to suit, galv.	
	*	Washer, 2-1/4" sq. for 5/8" bolt, galv.	
	*	Screw, lag, 3/8" x 4-1/2" long	

* As Required



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Item	Qty.	Bill of Material	CID No. or Drawing No.
Material Supplied by Customer			
7	*	Arrester, lightning, for 12 KV, 4 wire system	(Note 3)
	*	Bracket, lightning arrester mounting	
8	*	Terminator, cable, outdoor, 15 KV	
	*	Ft. wire, #2 CU, solid, bare; connectors as required	
	*	Connector, terminal, size and type as required	
9	*	Deadend assembly, neutral	
10	*	Ft. wire, #2. CU (min.) HDPE or bare with molding	
	*	Connectors as required	
11	*	Aerial cable neutral clamp	
12	*	Ft., wire, #2 CU. (min.), strand, bare	
	*	Connectors, terminal, size and type as required	
13	*	Ft., wire, #2/0 CU, Str, bare	
	*	Connectors as required	
14	1	Rod, ground, 1/2" dia. x 8' long, steel, copper clad	
15	1	Lot, 1-1/4" and 1" rigid metal conduit, 1-1/4" and 1" flexible metal weatherproof conduit, junction boxes and fittings	(Detail "A" or Detail "B")
16	1	Grip, cable supporting	
	1	Bushing, grounding size to suit conduit	
17	1	Cap, conduit	
18	*	Conduit, 4" or 5"	
	*	Straps, conduit, with screw lags	
19	*	Bend, 90°, 4" or 5", steel, galvanized	
20	*	Guy, 3/8" H.S. steel, 7 strand, with attachment hardware	

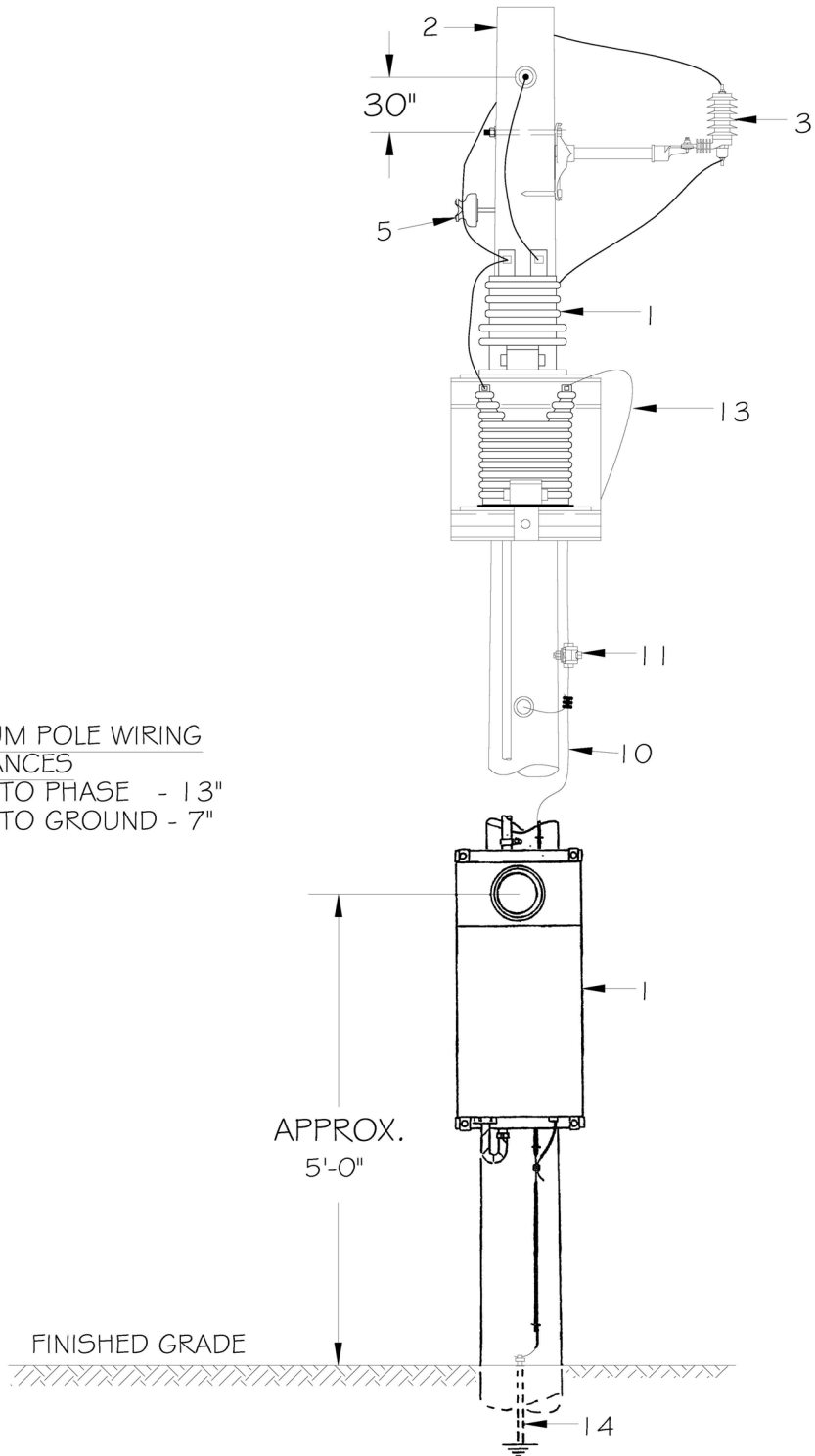
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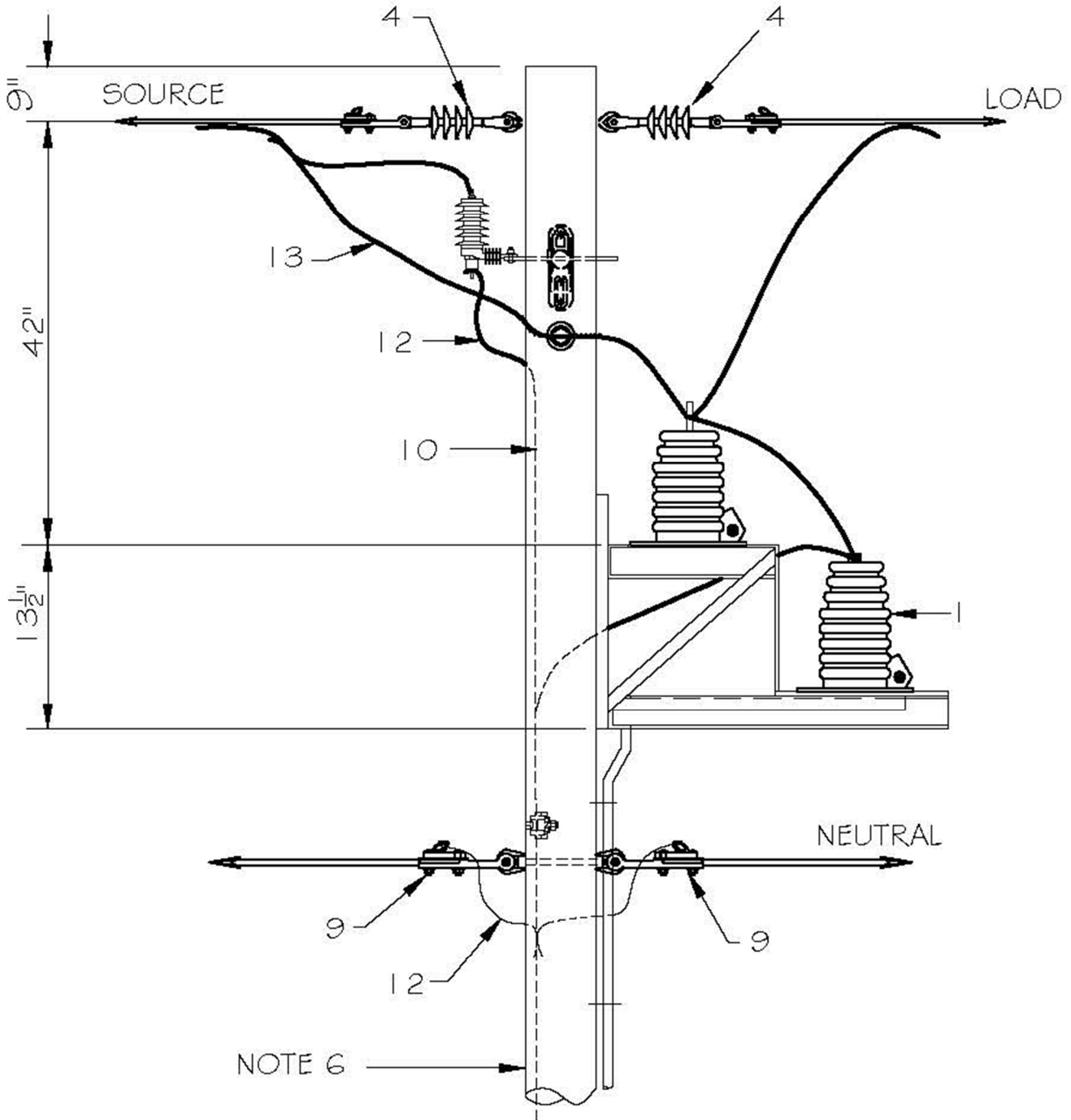
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Overhead Service



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Overhead Service



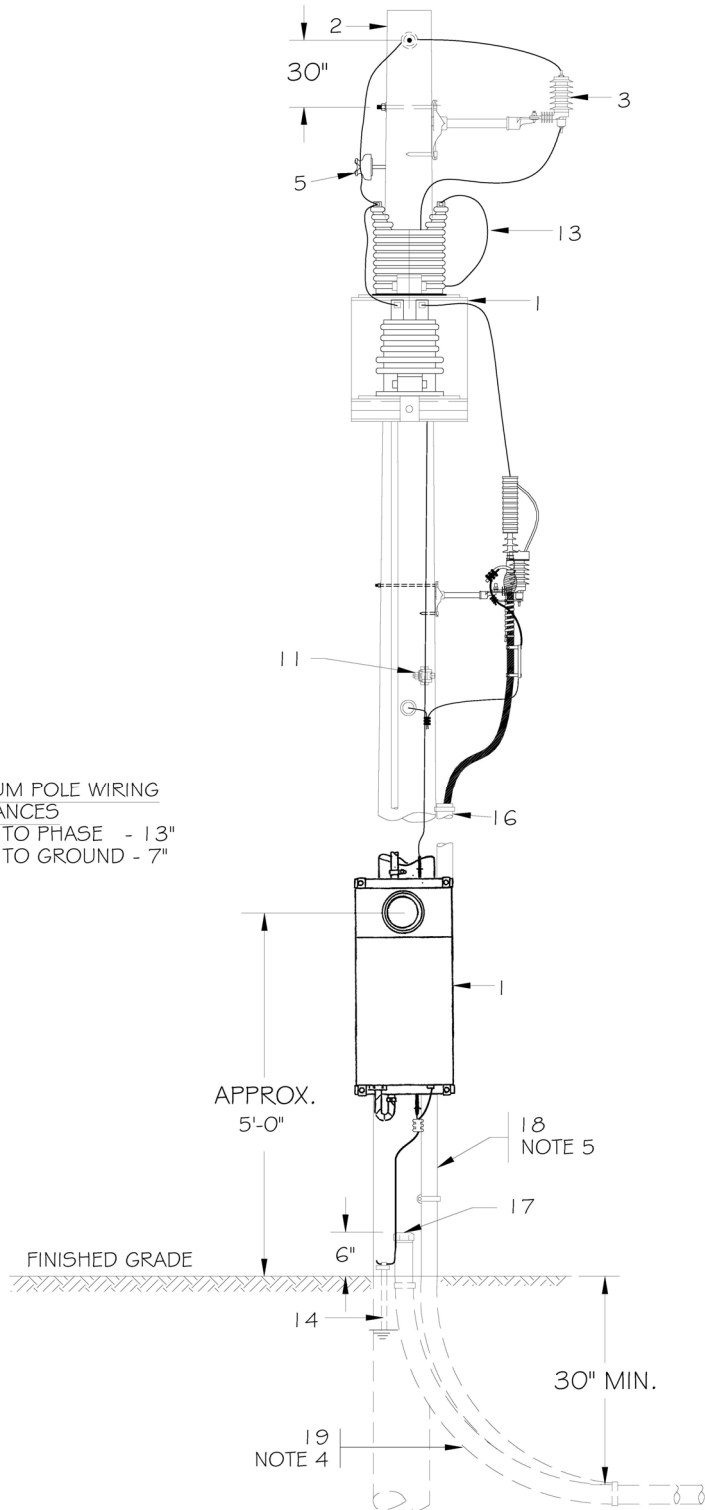
6-09-200-B



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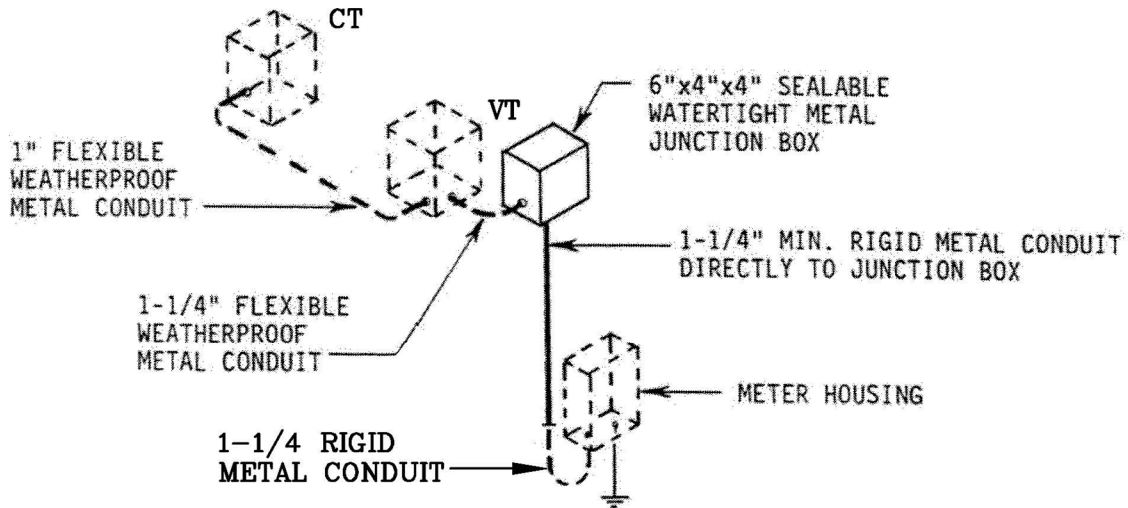
Underground Service



MINIMUM POLE WIRING
CLEARANCES
PHASE TO PHASE - 13"
PHASE TO GROUND - 7"

6-09-200-C

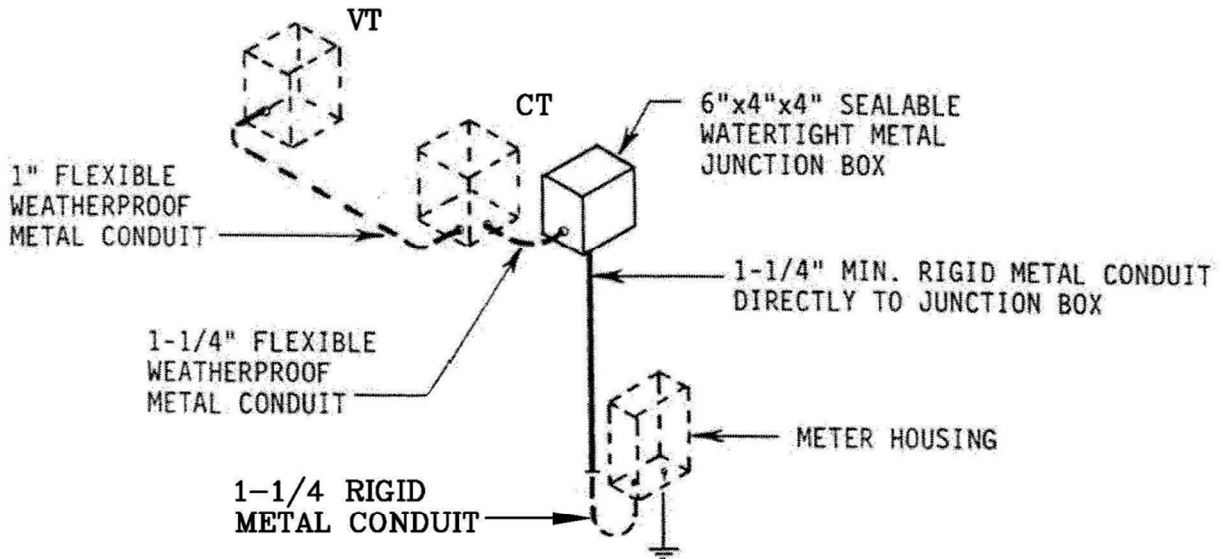
Overhead Service



DETAIL "A"
METERING SECONDARY CONDUIT ARRANGEMENT

6-09-200-E

Underground Service



DETAIL "B"
METERING SECONDARY CONDUIT ARRANGEMENT

6-09-200-F