



- NOTES:
- A. REDUCTION OF MINIMUM HEIGHT REQUIRES APPROVAL OF SUPERVISOR METERING SERVICES.

RULES FOR ELECTRIC METER AND SERVICE	Rules: REMSI_S027.dwg
INSTALLATIONS	
PPL ELECTRIC UTILITIES	Date: 10/11/12 Engr: mv
CORPORATION	



REMSI Sketches 26-50 Sketch #28 6-51

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Sketch #28 Overhead or underground secondary service, indoor multi-meter installation for common service with instrument transformer cabinets and / or meter base

NOT TO SCALE

VOLTAGE: 1 Phase, 3 Wire 120/208V 1 Phase, 3 Wire 120/240V 3 Phase, 4 Wire Wye 120/208V 3 Phase, 4 Wire Delta 120/240V	<u>SERVICE TYPE:</u> Overhead Underground
AMPERAGE:	<u>CABINET LOCATION:</u>
**800 A Maximum	Indoor
*1200 A Maximum	Outdoor



CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. SERVICE ENTRANCE, HORIZONTAL AND VERTICAL SEALABLE WIRE BASE, INSTRUMENT TRANSFORMER CABINETS AND INDIVIDUAL METER BASE. SEE RULE 16.
- 2. SEALABLE METAL CABINET, MINIMUM SIZE 48" X 48"X 12" AND INSTALLS INSTRUMENT TRANSFORMERS AND METER MOUNTINGS FURNISHED BY PPL EU, RULE 15. SEE SKETCH #14 FOR DETAILS OF ARRANGEMENT OF INSTRUMENT TRANSFORMERS.
- 3. 1-1/4 INCH MINIMUM, THREADED, GALVANIZED, RIGID, OR INTERMEDIATE STEEL OR SCHEDULE 40 PVC CONDUIT AND FITTINGS BETWEEN INSTRUMENT TRANSFORMER CABINET AND METER MOUNTING. PPL EU FURNISHES AND INSTALLS WIRING BETWEEN INSTRUMENT TRANSFORMERS AND METER.
- 4. ALLOW 18 INCHES MINIMUM LENGTH OF CABLE IN BASE.

*REFERENCE CRS 6-19-134	, SKETCH #14 SKETCH #48, SKETCH #49, SKETCH #54 & SKETCH #54A
RULES FOR ELECTRIC METER AND SERVICE	Rules: 2 5 12 13 16 21 REMSL_S028P1.dwg
INSTALLATIONS	Nulles: 2, 0, 12, 10, 10, 21
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>10/11/12</u> Engr:



<u>Sketch #28 Overhead or underground secondary service, Indoor multi-meter installation for common</u> service with instrument transformer cabinets and / or meter base (cont.)

- A. POINT OF SERVICE. PPL EU MAKES CONNECTION BETWEEN SERVICE LATERAL CABLES AND CUSTOMER SERVICE ENTRANCE CABLES. SEE SKETCH #48 AND SKETCH #49 FOR MULTIPLE SERVICE ENTRANCE CONDUCTORS.
- B. VERTICAL SEALABLE WIRE TROUGH SHALL OPEN ON FRONT.
- C. SUB-SERVICE FROM A COMMON 3 PHASE, 4 WIRE, 208 VOLT SERVICE SHALL BE BALANCED (NOT SHOWN). SEE RULE 2.
- D. IDENTIFY THE HIGHEST VOLTAGE TO GROUND CONDUCTOR OF 3 PHASE, 4 WIRE, DELTA CONNECTED SERVICE. SEE RULE 5.
- E. CUSTOMER SHALL MAKE ALL SUB-SERVICE TAPS TO INDIVIDUAL METER BASES FROM CUSTOMER'S BUS IN HORIZONTAL WIRE BASE. SEE RULE 16. METERED CONDUCTORS SHALL NOT BE INSTALLED IN THIS WIRE BASE. SEE RULE 12.
- F. SERVICE ENTRANCE CONDUIT OR CABLE FOR OVERHEAD SERVICE. RULES 5 AND 16.
- G. UNDERGROUND SERVICE ENTRANCE CABLE OR 3 INCH RIGID CONDUIT. RULES 5 AND 16.
- H. SUB-SERVICES TO INDIVIDUAL CUSTOMER'S SERVICE DISCONNECTING EQUIPMENT. SEE RULE 21.
- I. SPACE TO SUIT.
- J. CUSTOMER RESPONSIBILITY
- K. PPL EU RESPONSIBILITY
- L. SKETCH DIMENSIONS ARE FOR ONE SET OF 3 OR ONE SET OF 4 #1/0, #4/0, OR 350 KCMIL ALUMINUM XLP CABLE.
- M. FOR ALL SETS OF 500 AND 750 KCMIL CABLE, CUSTOMER FURNISHES, INSTALLS, MAINTAINS SEALABLE METAL CABINET PER SKETCH #54 AND SKETCH #54A.
- N. OUTDOOR THE WIRE TROUGH MUST BE ABOVE THE METERING EQUIPMENT. PPL EU MAY REQUIRED CUSTOMER TO INSTALL BARRIERS TO PROTECT METERING FROM VEHICULAR TRAFFIC. IF REQUIRED SEE SKETCH 28 SHEET 3.
- O. INDOOR- THE WIRE TROUGH CAN BE LOCATED ABOVE OR BELOW THE METERING EQUIPMENT. BARRIERS ARE NOT REQUIRED INDOORS. 50" OF CLEAR SPACE IS REQUIRED IN FRONT OF EQUIPMENT.

*REFERENCE CRS 6-19-134	, SKETCH #14, SKETCH #48, SKETCH #49, SHETCH #54 & SKETCH #54A
RULES FOR ELECTRIC METER AND SERVICE	Rules: 2 5 12 13 16 21 REMSL_S028P2.dwg
INSTALLATIONS	Nulles: N, 0, 1N, 10, 10, NI
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>10/11/12</u> Engr: <u>JPM</u>



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<u>Sketch #28 Overhead or underground secondary service, Indoor multi-meter installation for common</u> service with instrument transformer cabinets and / or meter base(cont.)

NOT TO SCALE



*REFERENCE CRS 6-19-134	, SKETCH #14, SKETCH #48, SKETCH #49, SHETCH #54 & SKETCH #54A
RULES FOR ELECTRIC METER AND SERVICE	Rules: 2 5 12 13 16 21 REMSI_S028P3.dw
INSTALLATIONS	Nulles: <i>N</i> , <i>O</i> , <i>IN</i> , <i>IO</i> , <i>IO</i> , <i>N</i>
PPL ELECTRIC UTILITIES	Date: 10/11/12 Engr: IDV
CORPORATION	Ducc. 10/11/12 Digr



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<u>Sketch #30 High voltage service, overhead service drop to customers service disconnect on customer-</u> owned service pole, termination of customer-owned overhead distribution, 15kv or less





<u>Sketch #30 High voltage service, overhead service drop to customers service disconnect on customer-</u> owned service pole, termination of customer-owned overhead distribution, 15kv or less (cont.)

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. WOOD POLE (CLASS 3 MIN., SEE SKETCH 47), CROSS ARMS, HARDWARE, 15KV CLASS LOAD INTERRUPTER SWITCH, INCIDENTAL EQUIPMENT, WIRING AND GROUNDING SYSTEM.
- 2. OPERATING PLATFORM AND GROUNDING SYSTEM FOR OPERATING PLATFORM, SWITCH OPERATING LEVER AND SWITCH BASE.
- 3. LOAD SIDE LIGHTNING ARRESTERS.
- 4. SERVICE GROUND #2 MINIMUM BARE COPPER GROUND WIRE COVERED WITH MOLDING FULL LENGTH OR #2 MINIMUM HDPE COVERED COPPER GROUND WIRE WITHOUT MOLDING.

PPL EU FURNISHES, MAINTAINS; CUSTOMER INSTALLS:

5. LINE SIDE LIGHTNING ARRESTERS.

PPL EU FURNISHES, INSTALLS, MAINTAINS:

6. LINE SIDE DEAD END INSULATOR ASSEMBLY AND CONNECTS SERVICE WIRES TO LINE SIDE TERMINALS OF CUSTOMER'S DISCONNECT. MAXIMUM TENSION PER CONDUCTOR - 2000 LBS.

- 1. PPL EU CONNECTS GROUND LEAD TO NEUTRAL.
- 2 PPL EU SPECIFIES TYPE AND LOCATION OF METERING EQUIPMENT FOR EACH LOCATION. (NOT SHOWN)
- 3. POINT OF CONTACT (POC) IS CONTAINED IN THE PPL EU DOCUMENT "POINT OF CONTACT REQUIREMENTS FOR HIGH VOLTAGE CUSTOMER-OWNED FACILITIES. 12KV SUPPLY"

		*REFERENCE CRS 6-9-194, LB-12669
RULES FOR ELECTRIC METER AND SERVICE	Rules 7	REMSI_S030P2.dwg
INSTALLATIONS	Ruits.	
PPL ELECTRIC UTILITIES CORPORATION	Date: 3/22/16	Engr: <u>NAP</u>



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<u>Sketch #31 High voltage service, overhead service drop to customer's service disconnect on</u> <u>customer-owned service pole, termination of customer-owned underground distribution, 15kv or less</u>

NOT TO SCALE

VOLTAGE:	SERVICE TYPE:
3 Phase, 4 Wire Wye 7,200/12,470V	Underground
CUSTOMER LOAD: 4 MVA Maximum	





<u>Sketch #31 High voltage service, overhead service drop to customer's service disconnect on</u> <u>customer-owned service pole termination of customer-owned underground distribution, 15kv or less</u> (cont.)

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. WOOD POLE (CLASS 3 MIN., SEE SKETCH #47), CROSS ARMS, HARDWARE, GUY, 15KV CLASS LOAD INTERRUPTER SWITCH, 15KV CABLE, CABLE TERMINATION, INCIDENTAL EQUIPMENT, WIRING AND GROUNDING SYSTEM.
- 2. OPERATING PLATFORM AND GROUNDING SYSTEM FOR OPERATING PLATFORM SWITCH OPERATING LEVER, SWITCH BASE AND CONDUIT IN ACCORDANCE WITH PPL EU PRACTICE.
- 3. LOAD SIDE LIGHTNING ARRESTERS.
- 4. SERVICE GROUND #2 MINIMUM BARE COPPER GROUND WIRE COVERED WITH MOLDING FULL LENGTH OR #2 MINIMUM HDPE COVERED COPPER GROUND WIRE WITHOUT MOULDING.

PPL EU FURNISHES, MAINTAINS; CUSTOMER INSTALLS:

5. LINE SIDE LIGHTNING ARRESTERS.

PPL EU FURNISHES, INSTALLS, MAINTAINS:

6. LINE SIDE DEAD END INSULATOR ASSEMBLY AND CONNECTS SERVICE WIRES TO LINE SIDE TERMINALS OF CUSTOMER'S DISCONNECT. MAXIMUM TENSION PER CONDUCTOR - 2000 LBS.

- 1. PPL EU CONNECTS GROUND LEAD TO NEUTRAL.
- 2. PPL EU SPECIFIES TYPE AND LOCATION OF METERING EQUIPMENT FOR EACH LOCATION. (NOT SHOWN)
- 3. POINT OF CONTACT (POC) IS CONTAINED IN THE PPL EU DOCUMENT "POINT OF CONTACT REQUIREMENTS FOR HIGH VOLTAGE CUSTOMER-OWNED FACILITIES 12KV SUPPLY."

	*REFERENCE CRS 6-09-192, LB12669, SKETCH #47
RULES FOR ELECTRIC METER AND SERVICE	Rules: 7, 8 REMSL_S031P2.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>1/12/16</u> Engr: <u>NAP</u>



REMSI Sketches 26-50 Sketch #32 6-51

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Sketch #32 High voltage service, arrangement of customer's single phase service disconnect on customer-owned service and meter pole, 7.2kv or less

NOT TO SCALE





<u>Sketch #32 High voltage service, arrangement of customer's single phase service disconnect and</u> outdoor metering equipment on customer-owned service and meter pole, 7.2kv or less (cont.)

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. WOOD POLE (CLASS 4 MIN., SEE SKETCH #47), 15KV CLASS FUSED LOAD INTERRUPTER SWITCH, INCIDENTAL EQUIPMENT, WIRING AND GROUNDING SYSTEM, GUYING.
- 2. OPERATING PLATFORM AND GROUNDING SYSTEM FOR OPERATING PLATFORM, SWITCH OPERATING LEVER AND SWITCH BASE.
- 3. LOAD SIDE LIGHTNING ARRESTERS.
- 4. SERVICE GROUND #2 MINIMUM BARE COPPER GROUND WIRE COVERED WITH MOLDING FULL LENGTH OR #2 MINIMUM HDPE COVERED COPPER GROUND WIRE WITHOUT MOLDING.
- 5. 1–1/4 INCH MINIMUM, THREADED, GALVANIZED, RIGID OR INTERMEDIATE STEEL OR SCHEDULE 40 PVC CONDUIT AND FITTINGS BETWEEN 8 INCH BY 8 INCH BY 4 INCH WEATHER TIGHT JUNCTION BOX AND METER PANEL.
- 6. 1 INCH FLEXIBLE CONDUIT AND FITTINGS BETWEEN TRANSFORMERS AND 8 INCH BY 8 INCH BY 4 INCH TRANSFORMERS AND 8 INCH BY 8 INCH BY 4 INCH WEATHER TIGHT JUNCTION BOX.

PPL EU FURNISHES, MAINTAINS: CUSTOMER INSTALLS:

- 7. METER PANEL (SEE SKETCH #8C).
- 8. INSTRUMENT TRANSFORMERS AND MOUNTING STEEL
- 9. LINE SIDE LIGHTNING ARRESTERS.

PPL EU FURNISHES, INSTALLS, MAINTAINS:

- 10. SOURCE SIDE DEADEND INSULATOR ASSEMBLY (MAXIMUM TENSION PER CONDUCTOR 2000 LBS.) AND CONNECTS SERVICE WIRE TO LINE SIDE TERMINALS OF CUSTOMER'S DISCONNECT.
- 11. WIRING BETWEEN INSTRUMENT TRANSFORMERS AND METER PANEL

NOTES:

1. PPL EU'S DISTRIBUTION SYSTEM CAN SUPPORT FUSING UP TO 175E STANDARD SPEED POWER FUSES FOR POINT OF CONTACT APPLICATIONS. IF A 175E FUSE IS INADEQUATE FOR CUSTOMER LOADING, THEN AN ELECTRONIC FUSE OR A GROUP OPERATED TRIPPING DEVICE SUCH AS A RECLOSER OR RELAYED CIRCUIT BREAKER IS REQUIRED.

	•REFERENCE CRS 6-09-195, LB12669. SKETCH #8C, SKETCH #47
RULES FOR ELECTRIC METER AND SERVICE	Rules: 7 8 18 REMSI_S032P2.dwg
INSTALLATIONS	Nulles: 1, 0, 10
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>3/4/14</u> Engr: _{JCC}



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Sketch #33 High voltage service, typical arrangement of three phase outdoor metering equipment on customer-owned meter pole, overhead line to overhead distribution, 15kv or less





<u>Sketch #33 High voltage service, typical arrangement of three phase outdoor metering equipment on</u> customer-owned meter pole, overhead line to overhead distribution, 15kv or less (cont.)

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. WOOD POLE (CLASS 4 MIN., SEE SKETCH #47), INSULATORS, INCIDENTAL WIRING AND GROUNDING SYSTEM.
- 2. SOURCE AND LOAD SIDE LIGHTNING ARRESTERS.
- 3. OVERHEAD LINE FROM DISCONNECT ON CUSTOMER OWNED SERVICE POLE, SEE SKETCH #30. MAXIMUM ALLOWED TENSION PER CONDUCTOR 2000 LBS.
- 4. 1-1/4 INCH MINIMUM, THREADED, GALVANIZED, RIGID OR INTERMEDIATE STEEL OR SCHEDULE 40 PVC CONDUIT AND FITTINGS BETWEEN JUNCTION BOX AND METER BASE.
- 5. 1 INCH FLEXIBLE METAL REINFORCED WEATHER TIGHT CONDUIT AND FITTINGS BETWEEN TRANSFORMERS AND 8 INCH BY 8 INCH BY 4 INCH WEATHER TIGHT JUNCTION BOX.
- 6. SERVICE GROUND SIZED AND PROTECTED PER NEC ARTICLE 250 GROUNDING

PPL EU FURNISHES, MAINTAINS; CUSTOMER INSTALLS:

- 7. INSTRUMENT TRANSFORMERS AND MOUNTING STEEL.
- 8. METER BASE

PPL EU FURNISHES, INSTALLS, MAINTAINS:

9. WIRING BETWEEN INSTRUMENT TRANSFORMERS AND METER BASE.

NOTES:

1. POINT OF CONTACT (POC) IS CONTAINED IN THE PPL EU DOCUMENT "POINT OF CONTACT REQUIREMENTS FOR HIGH VOLTAGE CUSTOMER-OWNED FACILITIES 12KV SUPPLY."

	*REFERENCE CRS 6-09-196, SKETCH #30, SKETCH #47
RULES FOR ELECTRIC METER AND SERVICE	Rules: 7 8 18 REMSI_S033P2_R1.dwg
INSTALLATIONS	Kures. 7, 0, 10
PPL ELECTRIC UTILITIES	Date: $4/11/16$ Engr: NAP
CORPORATION	



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<u>Sketch #34 High voltage service, typical arrangement of three phase outdoor metering equipment on customer-owned pole, termination of customer-owned underground distribution, 15kv or less</u>



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Sketch #34 High voltage service, typical arrangement of three phase outdoor metering equipment on customer-owned pole, termination of customer-owned underground distribution, 15kv or less (cont.)

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. WOOD POLE (CLASS 4 MIN. SEE SKETCH #47), INSULATORS, 15KV CABLE TERMINATION, GUYING, INCIDENTAL WIRING AND GROUNDING SYSTEM.
- 2. SOURCE AND LOAD SIDE LIGHTNING ARRESTERS.
- 3. OVERHEAD LINE FROM DISCONNECT ON CUSTOMER OWNED SERVICE POLE SEE SKETCH #30. MAXIMUM ALLOWED TENSION PER CONDUCTOR 2000 LBS.
- 4. 1-1/4 INCH MINIMUM, THREADED, GALVANIZED, RIGID OR INTERMEDIATE STEEL OR SCHEDULE 40 PVC CONDUIT AND FITTINGS BETWEEN JUNCTION BOX AND METER MOUNTING.
- 5. 1 INCH FLEXIBLE CONDUIT AND FITTINGS BETWEEN TRANSFORMERS AND 8 INCH BY 8 INCH BY 4 INCH WEATHER TIGHT METAL JUNCTION BOX.
- 6. SERVICE GROUND SIZED AND PROTECTED PER NEC ARTICLE 250 GROUNDING.

PPL EU FURNISHES. MAINTAINS: CUSTOMER INSTALLS:

- 7. INSTRUMENT TRANSFORMERS AND MOUNTING STEEL
- 8. METER BASE
- PPL EU FURNISHES, INSTALLS, MAINTAINS:
- 9. WIRING BETWEEN INSTRUMENT TRANSFORMERS AND METER MOUNTING.

NOTES:

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1. POINT OF CONTACT (POC) IS CONTAINED IN THE PPL EU DOCUMENT "POINT OF CONTACT REQUIREMENTS FOR HIGH VOLTAGE CUSTOMER-OWNED FACILITIES 12KV SUPPLY."

	*REFERENCE CRS 6-09-196, CRS 6-09-197, SKETCH #30, SKETCH #47
ULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS	Rules: 7, 8, 18 REMSL_S034P2.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>4/11/16</u> Engr: <u>NAP</u>



REMSI Sketches 26-50 Sketch #39 6-51

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Sketch #39 High voltage service, 3 phase 4 wire one line diagram for typical arrangement of customer's service disconnect and metering instrument transformers in switch gear compartments, 12 kV



UNDERCONIND SERVI

- 1. UNDERGROUND SERVICE LATERAL FROM OVERHEAD DISTRIBUTION BY PPL EU. SEE REMSI RULE 8.
- 2. POINT OF DELIVERY (TERMINAL CONNECTORS BY CUSTOMER AS SPECIFIED BY PPL EU).
- 3. HIGH VOLTAGE SERVICE EQUIPMENT (EXTERNALLY OPERABLE LOAD INTERRUPTER SWITCH OR CIRCUIT BREAKER). SEE CRS 6-09-199.
- 4. SUPPLIER SHALL SUBMIT DETAILED CONSTRUCTION DRAWING AND ONE LINE DIAGRAM TO PPL EU FOR APPROVAL BEFORE CONSTRUCTING THE SWITCHGEAR. PPL EU FURNISHES DETAILED ELECTRICAL ARRANGEMENT OF TERMINATION AND METERING COMPARTMENTS. SEE CRS 6-09-199.
- 5. HIGH VOLTAGE SERVICE LATERAL TERMINATIONS BY PPL EU.
- 6. POINT OF CONTACT (POC) IS CONTAINED IN THE PPL EU DOCUMENT "POINT OF CONTACT REQUIREMENTS FOR HIGH VOLTAGE CUSTOMER-OWNED FACILITIES 12KV SUPPLY."

	*REFERENCE CRS 6-09-199
RULES FOR ELECTRIC METER AND SERVICE	Rules: 8. 18 REMSI_S039_R3.dwg
INSTALLATIONS	,
PPL ELECTRIC UTILITIES	Date: <u>1/12/16</u> Engr: <u>NAP</u>
COM ONATION	



ELEVATION VIEW

CUSTOMER IS RESPONSIBLE FOR INSTALLING STRUCTURAL FACILITIES AS NOTED ABOVE. THEY SHALL BE INSTALLED IN ACCORDANCE WITH PPL PLANS AND SPECIFICATIONS, SUBJECT TO PPL INSPECTION. UPON COMPLETION, OWNERSHIP OF ALL STRUCTURAL FACILITIES LOCATED OUTSIDE THE BUILDING ON THE SOURCE SIDE OF THE POINT OF DELIVERY SHALL VEST IN PPL IT IS THE CUSTOMER'S RESPONSIBILITY TO COMPLY WITH THE NATIONAL ELECTRIC CODE, LOCAL MUNICIPAL OR INSURANCE REGULATIONS REGARDING THE LOCATION OF AN OIL FILLED TRANSFORMER.

	•REFERENCE CRS 6-17-122 (CRS-1002), CRS 6-19-100
RULES FOR ELECTRIC METER AND SERVICE	REMSL_S040.dwg
INSTALLATIONS	Kules. 0
PPL ELECTRIC UTILITIES	Date: 6/25/04 Engr: Day
CORPORATION	Date: 0/25/04 Engl: RPV

Emergency (Stand-by) Generation Sketch Table

	Voltage	Transfer Method	Load	Sketch #
	Manual		Partial	<u>41P1</u>
		Manual	Full	<u>41P2</u>
Less than 600 V		Automotio	Partial	<u>41AP1</u>
		Automatic	Full	<u>41AP2</u>
		Manual	Partial	<u>41BP1</u>
	Dolo Mount	Ividitual	Full	<u>41BP2</u>
121/1		Automatia	Partial	<u>41CP1</u>
IZKV		Automatic	Full	<u>41CP2</u>
	Switchgoor	Manual	N/A	<u>41D</u>
	Switchgeal	Automatic	N/A	<u>41E</u>

SHEET 1 of 2



TRANSFERRED LOADS

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. EMERGENCY STANDBY GENERATOR MAY HAVE INTEGRAL OVERCURRENT PROTECTION
- 2. MANUAL DOUBLE THROW SWITCH (BREAK-BEFORE-MAKE) APPROPRIATELY SIZED FOR THIS APPLICATION. (N STANDS FOR NORMAL, E STANDS FOR EMERGENCY).

- A. INSTALLATION AND EQUIPMENT MUST ADHERE TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC).
- B. INDEPENDENT ELECTRICAL INSPECTION OF MANUAL DOUBLE THROW TRANSFER SWITCH MAY BE REQUIRED BY NEC OR ANY OTHER APPLICABLE CODE.
- C. PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- D. METERING EQUIPMENT-SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.

RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS	Rules: 12, 26	REMSI_S41P1.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>7/29/11</u> Engr: MDB	

SKETCH #41	Switch	Manual Double Throw Transfer Connection for Emergency (Stand-by) Generation Service	SKETCH #41
SHEET 2 of 2	PPL EU SERVICE AT LESS THAN 600 VOLTS)	Generation Service GENERATOR FEEDING FULL LOAD VOLTAGE: 1 Phase, 3 Wire Network 120/208V 1 Phase, 3 Wire 120/240V 3 Phase, 3 Wire Delta 480V 3 Phase, 4 Wire WYE 120/208V 3 Phase, 4 Wire Delta 120/240V 3 Phase, 4 Wire WYE 277/480V <u>AMPERAGE:</u> 4000 A Maximum E	SHEET 2 of SERVICE TYPE: Overhead Underground <u>METER BASE</u> LOCATION: Outdoor

LOAD CENTER

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. EMERGENCY STANDBY GENERATOR MAY HAVE INTEGRAL OVERCURRENT PROTECTION
- 2. BREAKER AND MANUAL DOUBLE THROW SWITCH (BREAK-BEFORE-MAKE) APPROPRIATELY SIZED FOR THIS APPLICATION. (N STANDS FOR NORMAL, E STANDS FOR EMERGENCY). NOTE:
- A. INSTALLATION AND EQUIPMENT MUST ADHERE TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. (NEC)
- B. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION OF MANUAL DOUBLE THROW TRANSFER SWITCH.
- C. THE INSPECTOR IS REQUIRED TO VERIFY THE OPERATION OF THE MANUAL DOUBLE THROW SWITCH WITHOUT LOAD.
- D. PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- E. METERING EQUIPMENT-SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.

RULES FOR ELECTRIC METER AND SERVICE	Rules: 12, 26	REMSI_S41P2.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>7/29/11</u> Engr: MDB	



- 1. EMERGENCY STANDBY GENERATOR MAY HAVE INTEGRAL OVERCURRENT PROTECTION.
 - 2. AUTOMATIC TRANSFER SWITCH (BREAK-BEFORE-MAKE) APPROPRIATELY SIZED FOR THE APPLICATION, OPEN TRANSITION. SEE APPROVED AUTOMATIC TRANSFER SWITCH TABLE. (N STANDS FOR NORMAL, E STANDS FOR EMERGENCY).

- A. INSTALLATION AND EQUIPMENT MUST ADHERE TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC).
- B. FOR AUTOMATIC TRANSFER SWITCH TYPES NOT ON APPROVED AUTOMATIC TRANSFER SWITCH TABLE, PLEASE CONTACT PPL EU BEFORE PROCEEDING WITH ENGINEERING AND MATERIAL/EQUIPMENT PURCHASE.
- C. INDEPENDENT ELECTRICAL INSPECTION AND WITNESS OF PERFORMANCE TEST OF AUTOMATIC TRANSFER SWITCH OPERATION RECOMMENDED BY PPL EU AND MAY BE REQUIRED BY THE NEC OR ANY OTHER APPLICABLE CODE.
- D. PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PADMOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- E. METERING EQUIPMENT-SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.

RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS	Rules: 12, 26	REMSI_S41AP1.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>7/29/11</u> Engr: M	1DB



LOAD CENTER

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. EMERGENCY STANDBY GENERATOR MAY HAVE INTEGRAL OVERCURRENT PROTECTION
- 2. AUTOMATIC TRANSFER SWITCH (BREAK-BEFORE-MAKE), APPROPRIATELY SIZED FOR THE APPLICATION, OPEN TRANSITION. SERVICE ENTRANCE RATED (OR WITH UPSTREAM PROTECTION TO MEET AUTOMATIC TRANSFER SWITCH EQUIPMENT SPECS). SEE APPROVED AUTOMATIC TRANSFER SWITCH TABLE. (N STANDS FOR NORMAL, E STANDS FOR EMERGENCY).

- A. INSTALLATION AND EQUIPMENT MUST ADHERE TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC).
- B. FOR AUTOMATIC TRANSFER SWITCH TYPES NOT ON APPROVED AUTOMATIC TRANSFER SWITCH TABLE, PLEASE CONTACT PPL EU BEFORE PROCEEDING WITH ENGINEERING AND MATERIAL/EQUIPMENT PURCHASE.
- C. WITNESS OF PERFORMANCE TEST OF AUTOMATIC TRANSFER SWITCH OPERATION RECOMMENDED BY PPL EU AND MAY BE REQUIRED BY THE NEC OR ANY OTHER APPLICABLE CODE.
- D. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION.
- E. PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- F. METERING EQUIPMENT-SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.

RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS	Rules: 12, 26	REMSI_S41AP2.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>7/29/11</u> Engr:	MDB



CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

- 1. EMERGENCY STANDBY GENERATOR MAY HAVE INTEGRAL OVERCURRENT PROTECTION.
- 2. MANUAL DOUBLE THROW SWITCH (BREAK-BEFORE-MAKE) APPROPRIATELY SIZED FOR THIS APPLICATION. (N STANDS FOR NORMAL, E STANDS FOR EMERGENCY).

- A. INSTALLATION AND EQUIPMENT MUST ADHERE TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC).
- B. INDEPENDENT ELECTRICAL INSPECTION OF MANUAL DOUBLE THROW TRANSFER SWITCH MAY BE REQUIRED BY THE NEC OR ANY OTHER APPLICABLE CODE.
- C. SEE REMSI SKETCH #30, SKETCH #31, SKETCH #33, SKETCH #34.
- D. PPL EU WILL INSTALL PERMANENT LABELING ON THE METER PANEL (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- E. METERING EQUIPMENT-SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.

	REFERENCE:	SKETCH	#30,	SKETCH	#31,	SKETCH	#33,	SKETCH	#34
RULES FOR ELECTRIC METER AND SERVICE	Rules: 12.	26					REMSI	_S41BP1	dwg
INSTALLATIONS	,								
PPL ELECTRIC UTILITIES	Date: 7/2	29/11	F	ngr:	Ν	1DB			
CORPORATION		/	_	•			•		

SHEET 2 of 2

SKETCH #41B

SHEET 2 of 2



CUSOMER FURNISHES, INSTALLS, MAINTAINS:

LOAD CENTER

1. EMERGENCY STANDBY GENERATOR MAY HAVE INTEGRAL OVERCURRENT PROTECTION.

2. BREAKER AND MANUAL TRANSFER SWITCH (BREAK-BEFORE-MAKE) APPROPRIATELY SIZED FOR THE APPLICATION. (N STANDS FOR NORMAL, E STANDS FOR EMERGENCY).

- A INSTALLATION AND EQUIPMENT MUST ADHERE TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC).
- B. PPL EU REQUIRES AN INDEPENDENT ELECTRICAL INSPECTION OF MANUAL DOUBLE THROW TRANSFER SWITCH.
- C. THE INSPECTOR IS REQUIRED TO VERIFY THE OPERATION OF THE MANUAL DOUBLE THROW SWITCH WITHOUT LOAD.
- D. SEE REMSI SKETCH #30, SKETCH #31, SKETCH #33, SKETCH #34.
- E. PPL EU WILL INSTALL PERMANENT LABELING ON THE METER BASE (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECEIPT OF INSPECTION.
- F. METERING EQUIPMENT-SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES.

	REFERENCE: SKETCH #30, SKETCH #31, SKETCH #33, SKETCH #34
RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS	Rules: 12, 26 REMSI_S41BP2.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>7/29/11</u> Engr: MDB



AUTOMATIC TRANSFER SWITCH TABLE. (N STANDS FOR NORMAL, E STANDS FOR EMERGENCY).

- A. INSTALLATION AND EQUIPMENT MUST ADHERE TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC).
- B. FOR AUTOMATIC TRANSFER SWITCH TYPES NOT ON APPROVED AUTOMATIC TRANSFER SWITCH TABLE BEFORE PROCEEDING WITH ENGINEERING AND MATERIAL/EQUIPMENT PURCHASE.
- C. INDEPENDENT ELECTRICAL INSPECTION AND WITNESS OF PERFORMANCE TEST OF AUTOMATIC TRANSFER SWITCH OPERATION RECOMMENDED BY PPL EU AND MAY BE REQUIRED BY THE NEC OR ANY OTHER APPLICABLE CODE.
- D. SEE REMSI SKETCH #30, SKETCH #31, SKETCH #33, SKETCH #34.
- E. PPL EU WILL INSTALL PERMANENT LABELING ON THE METER PANEL (PPL EU CATALOG #1012171) AND PAD MOUNT TRANSFORMER (#1012171) OR POLE MOUNT TRANSFORMER (#1013816) UPON RECIEPT OF INSPECTION.
- F. METERING EQUIPMENT-SEE APPROPRIATE SKETCH FOR SERVICE TYPE AND SIZE TO DETERMINE METERING RESPONSIBILITIES. REFERENCE: SKETCH #30, SKETCH #31, SKETCH #33, SKETCH #34

	Hereiten Billion #60, Billion #61, Billion #60, Billion #61
RULES FOR ELECTRIC METER AND SERVICE	Rules: 12, 26 REMSI_S41CP1.dwg
INSTALLATIONS	
PPL ELECTRIC UTILITIES	Date: 7/29/11 Engr: MDB
CORPORATION	v



Automatic Transfer Switch Connection for Emergency (Stand-By) Generating Service

SKETCH #41C

SHEET 2 of 2









 RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS
 Rules: 4, 5, 16, 27
 REMSI_S042.dwg

 PPL ELECTRIC UTILITIES CORPORATION
 Date: 7/28/04
 Engr: ____RPV

SKETCH #43

SHEET 43

Secondary Service Multi-Meter Installation for Underground Service Lateral Attachment for Mobile Home Court





 RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS
 Rules: 5, 6, 27
 Remsi_sous_findering

 PPL ELECTRIC UTILITIES CORPORATION
 Date: 11/04/04
 Engr: _____RPV____

SKETCH	#46
SHEET	46

Wiring Diagram To Provide Demand Pulses for Customer

SKETCH #46

SHEET 46

ONE METER INSTALLATION



TWO METER INSTALLATION



- 1. CONTACT OPTION BOARD IN PPL METER. MAXIMUM OUTPUT CONTACT RATING: 0.05 AMPS, 120 VOLTS AC 0.05 AMPS, 150 VOLTS DC
- 2. CONNECTION TIE BOX PROVIDED AND INSTALLED BY PPL.
- 3. DEMAND PULSE WIRES BY PPL (SIX FOOT MAXIMUM LENGTH).
- 4. THREE (SIX) POLE FUSED TERMINAL BLOCK BY PPL (ONE AMPERE FUSES). UPON INSTALLATION, THE CUSTOMER WILL BE SOLELY RESPONSIBLE FOR MAINTENANCE AND REPLACEMENT OF THE ONE (1) AMPERE FUSES.
- 5. CUSTOMER PULSE CABLE SUPPLIED, INSTALLED, AND CONNECTED BY CUSTOMER.

RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS	Rules: 25A REMSI_S046_R0.dwg
PPL ELECTRIC UTILITIES CORPORATION	Date: <u>3/11/05</u> Engr: <u>RGR</u>



Sketch #47 Customer wood pole

Dimensional details in accordance with American National Standards Institute (ANSI) 05.1

]	Minimum Pole '	Тор Сі	rcumference	, All Wood Sp	ecies	
				ANSI Class	1 ANSI Class	<u>s 2</u> <u>A</u>	NSI Class 3	ANSI Class	<u>4 ANSI</u>	Class 5	
		^			27 Inches	25 Inches	5	23 Inches	21 Inches 19 I		inches
			For Wood Species Douglas Fir And Southern Yellow Pine:								
					Pole		Minimum Circumference At				
					Length	Setting Depth	6 Feet From Pole Butt (Inches)			ANG	
					(Feet)	(Feet)	<u>ANS</u> Class	<u>I ANSI</u> 1 Class 2	<u>ANSI</u> Class 3	<u>ANSI</u> Class 4	ANSI Class 5
					20	4.0	<u>-</u>	<u> </u>	-	<u>25.0</u>	23.0
					25	4.5	33.5	31.5	29.5	27.5	25.5
				_	30	5.0	36.5	34.0	32.0	29.5	27.5
		H		35	5.5	39.0	36.5	34.0	31.5	29.0	
			NG1		40	6.0	41.0	38.5	36.0	33.5	31.0
			됨		45	6.5	43.0	40.5	37.5	35.0	32.0
		ĺ.	OLE		50	7.0	45.0	42.0	39.0	36.5	34.0
GROUND THE		****		PRESER To aid in length by TIMBER A pole m same setti 1. The v treate 2. Cann 3. The s 4. Cann 5. 6" x 6	EVATION preventing pro- a pressure pro- a pressure pro- COPTION ay be replaced ing depth as for vood species r d by a pressure of be less than ervice size mu ot cross over a 5" timber setti	emature deteriors becess approved b l by a minimum of or a wood pole. nust be either Do re process approve a 20 feet long or ust be #4/0 triple a public road. ng depth for a 20	ation, c by the A 6" x 6" buglas I ved by A more th x or sm) ft. Tin	ompany record merican Woo timber if the Fir or Souther American Wo an 25 feet lor aller and 100 ober is 4.0 ft.	nmends all wo od Preservers A following cond n Yellow Pine od Preservers A ng. feet or less in 1 A 25 ft. Timbe	od poles b ssociation litions are and must Associatio length. r setting d	e treated full met. Use the be full length n. epth is 4.5 ft.
V		1		POLE IN	STALLATI	UN he pole at the set	ting do	oth specified	above and core	fully tomr	the backfill

POLE BUTT

Customer shall install the pole at the setting depth specified above and carefully tamp the backfill earth and stone to stabilize the pole. Where the pole supports unguyed conductor tensions, the pole shall be further stabilized (keyed). The company will provide details of acceptable keying methods. Customer shall install the pole at a location designated by the company. The pole shall be accessible to company bucket trucks.

DE\/	APPROVED			RULES FOR ELECTRIC METER AND SERVICE	
	DAIL	DRAFTER	SPONSOR	REVIEW	INSTALLATIONS
0	10/12/12	-	JPM	-	PPL ELECTRIC UTILITIES CORPORATION
1	3/21/16	NAP	NAP	-	
2	8/15/16	NAP	NAP	-	NOLES. 47, 0, 7, 0



REMSI Sketches 26-50 Sketch #48 6-51

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Sketch #48 Vertical sealable wire trough, typical method of providing single point of connection, multiple service entrance conductors



SKETC	Н	#49	9
SHEET	1	OF	2

Typical Connectors to be Provided by the Customer for Serving a Single Point of Connection for Multiple Enclosed Service Entrance Conductors

SKETCH #49

SHEET 1 OF 2

NOT TO SCALE INSULATED TYPE DISTRIBUTION BLOCK





NO. OF CNDCT.	CNDCT. RANGE KC MIL
4	750-1/0

I-2



	CABLE	INSULATION OUTER DIAMETER		
DESCRIPTION	KCMIL	MIN.	MAX.	
4 POSITION	500-#4	350 KCMIL.	1.10 IN.	

BARE TYPE DISTRIBUTION BLOCK

B-1

B-2

THESE UNITS MAY BE USED FOR UNDERGROUND INSTALLATIONS ONLY WHEN INSULATING BARRIERS ISOLATE THE BARE CONNECTORS FROM OTHER PHASES, NEUTRAL, AND GROUND OR WHEN THE CONNECTORS ARE BOLTED TO A RIGID INSULATOR



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NO. OF MTG. HOLES	NO. OF CNDCT.	CNDCT. RANGE KCMIL
6	4	250-6
6	4	350-6
6	4	500-2
8	4	750-1/0
10	6	750-1/0
8	4	1000-350
12	6	1000-350

	CNDCT.
NO. OF	RANGE
CNDCT.	KCMIL
4	750-1/0
4	1000-350

 REFERENCE: SKETCH 8B, SKETCH 27, SKETCH 28, SKETCH 48

 RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS
 Rules: 5

 PPL ELECTRIC UTILITIES CORPORATION
 Date: 8/12/11
 Engr: MDB

SKETC	CH	#49	9
SHEET	2	OF	2

Typical Connectors to be Provided by the Customer for Serving a Single Point of Connection for Multiple Enclosed Service Entrance Conductors

SKETCH #49 SHEET 2 OF 2

NOT TO SCALE

PRE-ASSEMBLED DISTRIBUTION BLOCK WITH INSULATING BARRIERS



CONN	ECTOR	PPL	EU	CUSTO		
PPL EU (LINE SIDE)	CUSTOMER (LOAD SIDE)	WIRE RANGE KCMIL	OPENING PER CIRCUIT	WIRE RANGE KCMIL	OPENING PER CIRCUIT	NO. OF POLES
		350-#4 350-#4 500-#4	1 1 1	2/0-#12 2/0-#12 350-#4	2 2 2	2 3 2
	99	500-#4 1000-250	1	350-#4 350-#4	2	3
		1000-250 1000-250 1000-250 1000-250	1 1 1	350-#4 500-#4 500-#4	2222	2 3 2 3
		2/0-#12 2/0-#12	2 2	2/0-#12 2/0-#12	2 2	2 3
		350-#4 350-#4	2 2	350-#4 350-#4	2 2	2 3
		500-#4 500-#4	22	500-#4 500-#4	22	2 3
		500-#4 500-#4	22	2/0-#12 2/0-#12	6 6	2 3
	000	350-#4 350-#4	2 2	2/0-#12 2/0-#12	6 6	2 3
$\bullet \bullet$		1000-250 1000-250	1 1	2/0-#12 2/0-#12	6 6	2 3

NOTES: (APPLY TO INSULATED, BARE, AND PRE-ASSEMBLED DISTRIBUTION BLOCKS):

- A. TYPICAL MANUFACTURERS NUMBERS ARE SHOWN. EQUIVALENT CONNECTORS FROM OTHER MANUFACTURERS MAY BE USED.
- B. ELECTRIC SUPPLY HOUSES MAY NOT STOCK. ALLOW TIME TO ORDER CONNECTORS FROM MANUFACTURER.
- C. ONLY ONE CONDUCTOR PER POSITION PERMITTED.
- D. SEE TABLE "APPROVED DISTRIBUTION CONNECTOR BLOCK TABLE FOR SKETCH 49" FOR LISTS OF PPL EU APPROVED MANUFACTURERS.

REFERENCE: SKETCH 8B, SKETCH 27, SKETCH 28, SKETCH 48

RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS	Rules: 5
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Sketch #50 Underground 3 phase, 4 wire, 480/277 volt, service entrance arrangements

