



DPU-E ELECTRIC SERVICE REQUIREMENTS AND REFERENCE STANDARDS



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1. Overview and Purpose

The City of Naperville owns and operates its municipal electric utility and establishes standards governing the design, construction, and operation of the City's electrical system. These standards, maintained by the Department of Public Utilities–Electric (DPU-E), promote safety, reliability, operational efficiency, and cost-effective service for both utility personnel and customers. Standardization of electrical infrastructure and installation practices reduces operational costs, promotes system reliability, enhances worker and public safety, and ultimately provides cost savings to ratepayers.

This document provides a focused summary of the DPU-E service requirements for electric service installations. It consolidates key points from the DPU-E Service Rules and Policies, along with relevant engineering and construction standards, to detail utility and customer ownership demarcation and outline essential requirements for residential and commercial services. Additionally, it incorporates commonly applied DPU-E standards to a wide range of projects that customers and developers can use for reference.

Users should note that while this summary outlines key requirements, it is not a complete comprehensive list of all potential requirements for every project. Refer to the DPU-E Service Rules and Policies for the complete set of requirements set forth by DPU-E.

2. Table Of Contents For DPU-E Standards

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- 17 C10-2130 – Padmount Equipment Clearance Requirements
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- 31 C50-5100 – Customer Requirements for Permanent Standby Generator.
- 32-33 C50-5200 – Customer Requirements for Net Metering
- 34 C50-6010 – Meter Socket for Instrument Transformer Installations 1-PH, 3 Wire, 6 Terminal over 200A.
- 35 C50-6310 – Meter Socket for Instrument Transformer Installations 3-PH, 4 Wire, 13 Terminal.
- 36-37 C50-6330 – Instrument Transformer Cabinet Up to 800A.
- 38-39 C50-6335 – Instrument Transformer Cabinet Over 800A.

E20 – Load & Voltage

- 40-41 E20-3020 – Distribution Transformer Fault Current Secondary Side

E50 – Metering

- 42-43 E50-0020 – Meter Socket Requirements
- 44-49 E50-0025 – Approved Meter Sockets And CT/PT Cabinets List
- 50-51 E50-5200 – Customer Requirements for Net Metering – Renewable Energy

3. Glossary: Common Terms, Definitions & Abbreviations

AMI (Advance Metering Infrastructure): Communication equipment, network system, and software used for remote meter reading data exchange.

Bollards: Physical barriers installed to protect electrical equipment from impact.

Current Transformer (CT): The utility-owned equipment used to step down the customer's current to allow the utility-owned meter to register customer electricity usage.

DPU-E: Department of Public Utilities – Electric.

Free-Standing Service: A service installation not attached to a building.

Grounding system: Equipment and conductors used to connect electrical systems to earth for safety.

Instrument Transformer Cabinet: The customer-owned cabinet where utility-owned CTs/PTs are mounted for metering customer load.

Line Disconnect: The customer-owned device used by utility personnel to isolate the electricity from the utility transformer. (This is used on 200Amp/480Volt services.)

Line Side: The top side in the customer-owned instrument transformer cabinet where utility-owned CTs and customer service cables from the utility transformer are mounted.

Load Disconnect: The customer-owned device used to disconnect the customer's individually metered load.

Load Side: The bottom side in the customer-owned instrument transformer cabinet where utility-owned CTs and customer service cables going to the customer's facility are mounted.

Main Disconnect: The customer-owned device used to isolate the customer's entire load.

Meter Bank: A group of meter sockets installed together for multi-unit or commercial applications.

Meter Socket/Trough: The customer owned enclosure where the utility meter is installed.

Meter: The utility-owned device used to measure the amount of electricity the customer uses.

MSP (Main Service Panel): The primary electrical panel in a building that distributes power.

NEC (National Electrical Code): The latest revision of the National Electric Code of the National Fire Protection Association (NFPA 70) as approved by the American National Standards Institute and adopted by the City of Naperville.

Net Metering: A system allowing renewable energy customers to send excess power back to the grid.

Potential Transformer (PT): The utility-owned equipment used to step down the customer's voltage to allow the meter to register customer usage.

Primary Metering: Measurement of customer consumed electricity at primary voltage using a metering cabinet equipped with instrument transformers and a utility meter.

Primary Voltage: Voltage level of service 34.5kV & 12.47kV.

Secondary Voltage: Voltage level of service (480/277V, 208/120V, & 240/120V).

Service Drop: The overhead conductors connecting the utility distribution system to the customer's premises.

Service Entrance Equipment: The customer-owned equipment used for metering and disconnection at the customer's service location.

Service Point: Point of connection of DPU-E service to the customer's equipment, and the limit of DPU-E responsibility.

Service Rules and Policies: The governing document for utility service requirements.

TED: Transportation, Engineering and Development Business Group, the permitting department in the city.

Transformer: The utility-owned equipment used to provide electricity to the customer.

4. Service Point

The service point is the point of connection of DPU-E service to the customer's equipment, and the limit of utility responsibility. The following are the typical service points for all service types, there may be existing grandfathered services that may have a distinct service point from those defined below, but all new services will be one of the following.

4.1 Residential Services

The service points are at the following locations:

- a) Overhead – At the service drip loop, where the utility service conductors connect to the customer's service entrance conductors at the weather head.
- b) Underground – At the meter trough/socket, where the utility service conductors connect to the customer's meter trough/socket.

4.2 Commercial Services

The service points are the following locations:

- a) Overhead Secondary Voltage: At the service drop, where the utility service conductors connect to the customer's service entrance conductors at the drip loop.
- b) Underground Secondary Voltage: On the transformer's secondary side where the customer conductors are connected to the utility transformer.
- c) Overhead Primary Voltage: Overhead primary metering services are obsolete and are not available for new or revised services.
- d) Underground Primary Voltage: Where the utility's high-voltage wires or cables connect to the customer's primary metering cabinet.

5. Ownership: What the Utility Owns vs. What the Customer Owns

The main division of ownership is at the service point with a few exceptions. Ownership in this context is defined as the responsible party for installing and maintaining a particular device, equipment, or any other supporting material. Note that any new services, service upgrades or modifications requested by the customer, the customer will be responsible for all material and labor associated with the customer's project, this may include upgrades and modifications to any utility infrastructure needed to meet the customer's needs.

5.1 Residential Services

Utility Owned Equipment:

- a) All facilities upstream of the service point.
- b) Electric meter that measures the amount of electricity consumed by the customer.
- c) Current Transformers (CTs) and Potential Transformers (PTs). When instrument metering is required.
- d) Service drop conductors (overhead).
- e) Service drop dead end that attaches the utility conductors to the customer's anchoring attachment that will support the utility service drop conductors (overhead).
- f) Connectors that connect utility conductors to customer conductors at the service drip loop (overhead).
- g) Underground service conductors and conduit from the transformer to the meter socket.

Customer Owned Equipment:

- h) All equipment downstream of the service point.
- i) Service entrance equipment (meter socket/trough, instrument transformer cabinets, mast, weather head, attachments, etc.).
- j) Main disconnect and load-side disconnects if needed.
- k) Grounding system at the entrance equipment and in the structure.

5.2 Commercial Services

Utility Owned Equipment (Secondary Voltage):

- a) All facilities upstream of the service point, with a few exceptions.
- b) Electric meter that measures the amount of electricity consumed by the customer.
- c) Current Transformers (CTs) and Potential Transformers (PTs). When instrument metering is required.
- d) Service drop conductors (overhead).
- e) Service drop dead end that attaches the utility conductors to the customer's anchoring attachment that will support the utility service drop conductors (overhead).

- f) Connectors that connect utility conductors to customer conductors at the utility pole transformer (Overhead).
- g) AMI communication equipment.
- h) Grounding system at the transformer location. (Utility & customer grounding systems must be isolated from each other).

Customer Owned Equipment (Secondary Voltage):

- i) All equipment downstream of the service point (meter socket/trough, instrument transformer cabinets, mast, weather head, attachments, etc.).
- j) Main disconnect and load-side disconnects if needed.
- k) Grounding system at the entrance equipment and in the structure.
- l) Protection bollards, when required.
- m) Underground service conductors & conduit from the transformer to the entrance equipment. The utility makes the final connection between customer conductors and the transformer.
- n) Transformer concrete vault per DPU-E standard C30-6330.

Utility Owned Equipment (Primary Voltage):

- o) All facilities upstream of the service point, with a few exceptions.
- p) Electric meter that measures the amount of electricity consumed by the customer.
- q) Current Transformers (CTs) and Potential Transformers (PTs).
- r) Primary conductors, elbows/terminations, and conduit that connect to the customer's primary metering cabinet on the line side.
- s) AMI communication equipment.
- t) Grounding system at the primary metering cabinet.

Customer Owned Equipment (Primary Voltage):

- u) All equipment downstream of the service.
- v) Primary meter cabinet & vault.
- w) Grounding system at the primary metering cabinet and downstream.
- x) Protection bollards, when required.

6. Entrance Equipment Requirements

Entrance equipment must comply with the NEC adopted by the City of Naperville, and DPU-E standards and service rules and policies.

Meter Socket/Trough Requirements:

- a) All meters must be mounted outside of the structure.
- b) For commercial structures, metering equipment must be in a single location within 50ft of the service transformer. DPU-E gets final approval in meter location.
- c) For residential structures, DPU-E designates the location of the meter during the permitting process.
- d) For free standing and temporary services, the metering equipment must be in a single location 5ft-15ft from the service transformer or pedestal.
- e) Meters may not be placed in locked or obstructed areas.
- f) Operable components such as doors or gates must be installed with sufficient clearance or travel-stops to prevent contact with the meter assembly throughout their intended range of motion.
- g) Meters must have a minimum of 4ft front and 2ft side clearance.
- h) All meters must be labeled with the complete address of the location served with 1" permanent outdoor-rated labeling. No marker labeling will be accepted.
- i) Meter sockets must meet DPU-E Standard E50-0020 requirements.
- j) DPU-E standard E50-0025 may be referenced for approved models of meter sockets.
- k) Meter mounting height requirements:
 - o Standard Height (Single Meters – No CTs or PTs)
 - 36" Min. - 60" Max.
 - o Meter Banks (No CTs or PTs)
 - 30" Min. - 72" Max.
 - o Meters with CTs/PTs
 - 54" Min. - 66" Max.
- l) Meter sockets/troughs and supporting equipment must be rated for the intended use.
- m) All meter sockets/troughs/banks that are not on the approved list must be submitted for approval prior to ordering.

Instrument Transformer Cabinet (CT & PT) Requirements:

- n) Current transformer cabinet must meet DPU-E Standards:
 - o C50-6330 – Instrument Transformer Cabinet Up To 800A
 - o C50-6335 – Instrument Transformer Cabinet Over 800A
- o) Instrument transformer cabinets may contain provisions for both CTs & PTs inside one cabinet or may also be in separate cabinets.
- p) CT/PT cabinet(s) must be rated for their intended use.
- q) CT/PT cabinet(s) must be mounted outdoors unless permitted by section 11.7 of the DPU-E service rules and policies.
- r) PTs are required for all 277/480V services, with the exception of 200A and smaller services that have a disconnect on the line side and on the load side.
- s) DPU-E standard E50-0025 may be referenced for approved models of instrument transformer cabinets.
- t) All instrument transformer cabinets need to be submitted for approval prior to ordering.
- u) CT/PT Cabinets must have proper working clearance per NEC requirements.
- v) Operable components such as doors or gates must be installed with sufficient clearance or travel-stops to prevent contact with the CT/PT cabinet throughout their intended range of motion.

Requirements for Permanent Standby Generator & Net Metering (Renewable Energy Generation):

- w) Permanent standby generators must meet DPU-E standard:
 - o C50-5100 – Customer Requirements For Permanent Standby Generator.
- x) Net Metering must meet the following DPU-E standards:
 - o E50-5200 – Customer Requirements For Net Metering – Renewable Energy
 - o C50-5200 – Customer Requirements For Net Metering System

7. Temporary and Telecommunication Services

This section will cover requirements for temporary and telecommunication services that are in a PU&DE easement or on the right of way (R.O.W).

- a) Temporary services are valid for up to one year. When the temporary service is no longer needed the following step must be taken.
 - o Customers must submit a “Start Or Stop A Utility Service” online request through the City of Naperville’s webpage or by calling customer services at 630-420-6059.
- b) Temporary and telecommunication services are typically limited to the available service voltages available at the requested location.
 - o Meter socket requirements must be met for the available voltage.
 - o Single leg taps to 3-PH transformers are not allowed. All three phases must be pulled from the transformer to the meter socket/trough.
- c) Customers must follow the appropriate DPU-E standard for their temporary or free-standing service for telecommunication services:
 - o C50-2110 – 200A Max 1-Phase Overhead Temporary Service
 - o C50-2100 – 800A Max 1-Phase Overhead Temporary Service
 - o C50-3320 – Residential/Commercial & Temporary Free Standing Meter Trough 100-200 Amp Service

8. Disconnect Requirements

The ability to disconnect the utility grid from customer loads is required for all services. The means and requirements of a main mechanical load-breaking device (disconnect or circuit breaker) change depending on customer type, customer facilities, service type and service size. Load-breaking devices may be built into meter sockets/troughs, in combination with CT cabinets, or a stand-alone device (fused or unfused). The load-breaking device must be rated for the service size.

8.1 Residential Services:

Services 200A and below:

- a) The main service panel (MSP) breaker is considered the means of disconnecting when the meter is located within 5ft of the MSP. An additional outdoor disconnect within 2ft of the meter is required for distances greater than 5ft between the meter and the MSP.

Services Greater than 200A:

- b) An outdoor disconnect within 2ft of the meter is required. The disconnect may be built into the meter socket/trough or a standalone device.

8.2 Commercial Services:

All Service Sizes:

- a. All commercial services must include a main mechanical load-breaking device.
- b. For multiple-meter installations, a main disconnect is required in addition to each meter's disconnecting means.
- c. Fire pump services shall be per NEC Article 695 for all electrical requirements.
- d. Services 1200A and below;
 - o The main load-breaking device must be located outside of the structure served, adjacent to the meter socket and instrument cabinet.
- e. Services greater than 1200A;
 - o The main disconnect and instrument cabinet may be installed inside the building. The meter socket(s) must remain outside and within 50ft from the instrument cabinet.
- f. Meter banks with 200A and below with 277/480V services require one disconnect on the line side and one on the load side of the meter.

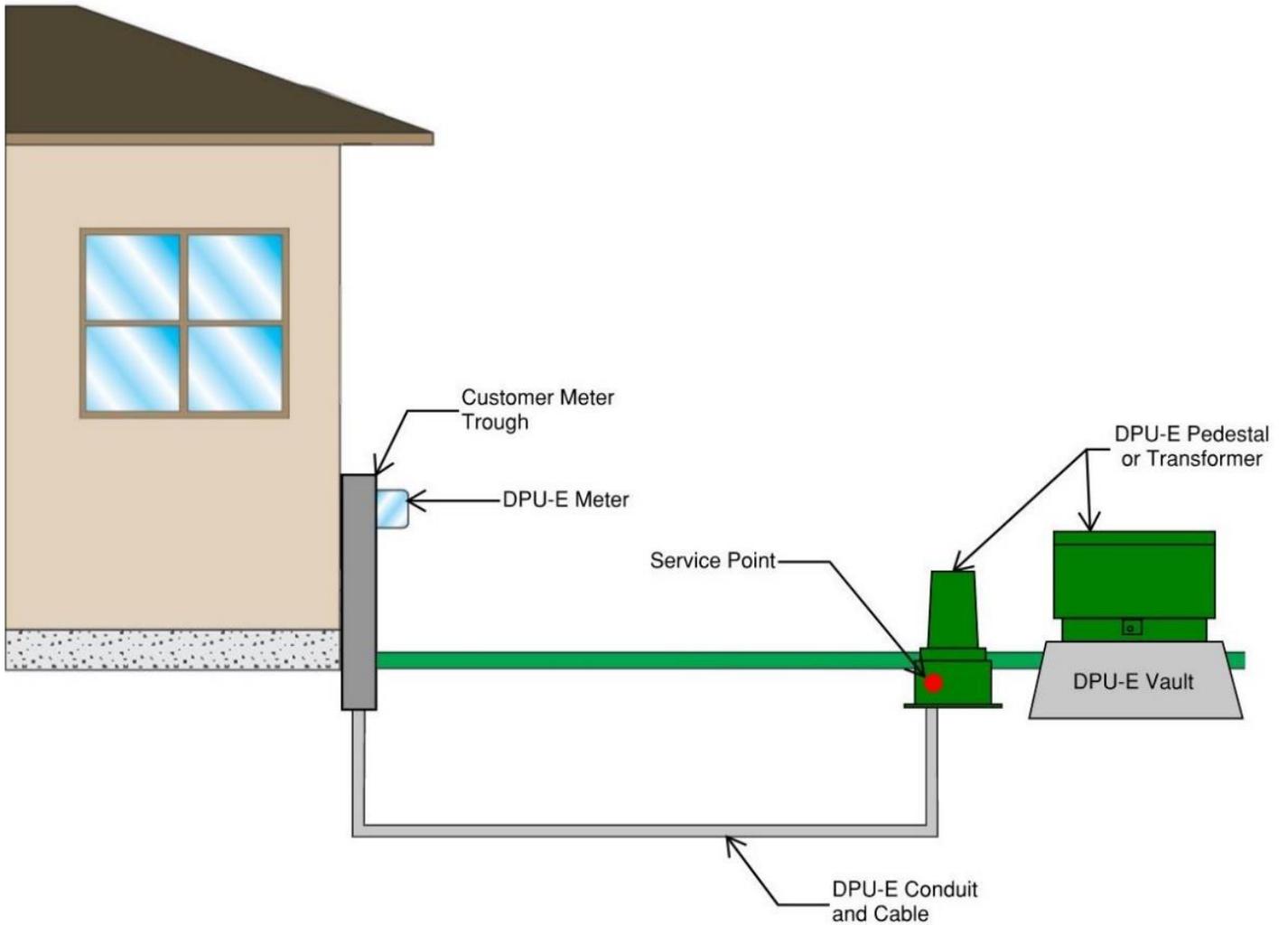
9. Additional Requirements, Notes and Reminders

- a) DPU-E does not allow any non-utility devices or equipment located between the meter socket and the meter. This is considered to be utility space and under the control of the utility and is to be treated the same as any other unmetered wire or bus. DPU-E will, however, allow devices or equipment to be mounted on the load side of the meter adjacent to the meter enclosure for customer monitoring of their systems for quality and generation purposes.
- b) All installations must comply with applicable NEC requirements, DPU-E standards and Service rules and policies.
- c) DPU-E must always have full access to metering equipment and utility facilities.
- d) Only one service and one class of service per structure is allowed.
- e) Submetering is not permitted in DPU-E's service territory.
- f) Any project that will be installing, upgrading or modifying the electrical service, the building plans submitted to the Transportation, Engineering and Development Business Group (TED) must include electrical drawings with a minimum of a site plan and a 1-line for the electrical facilities. Catalog cuts of the metering equipment must be submitted to DPU-E for approval prior to the contractor ordering the equipment. Although your electrical contractor may not be hired until later in the project, it is important to consider these requirements early on during the plan review process. This will help avoid unnecessary delays and expenses to your project.

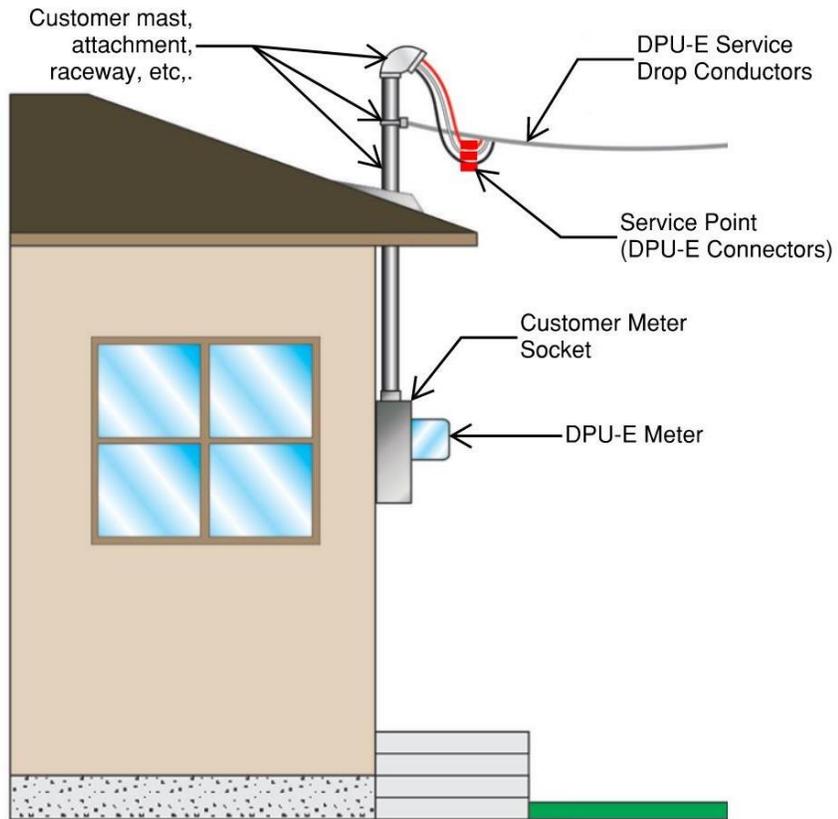
10. Appendix B: Service Point Diagrams

Note the following diagrams are for graphical interpretation only and are not complete and do not show all required components. The purpose of these images is to show a visual representation of the service point.

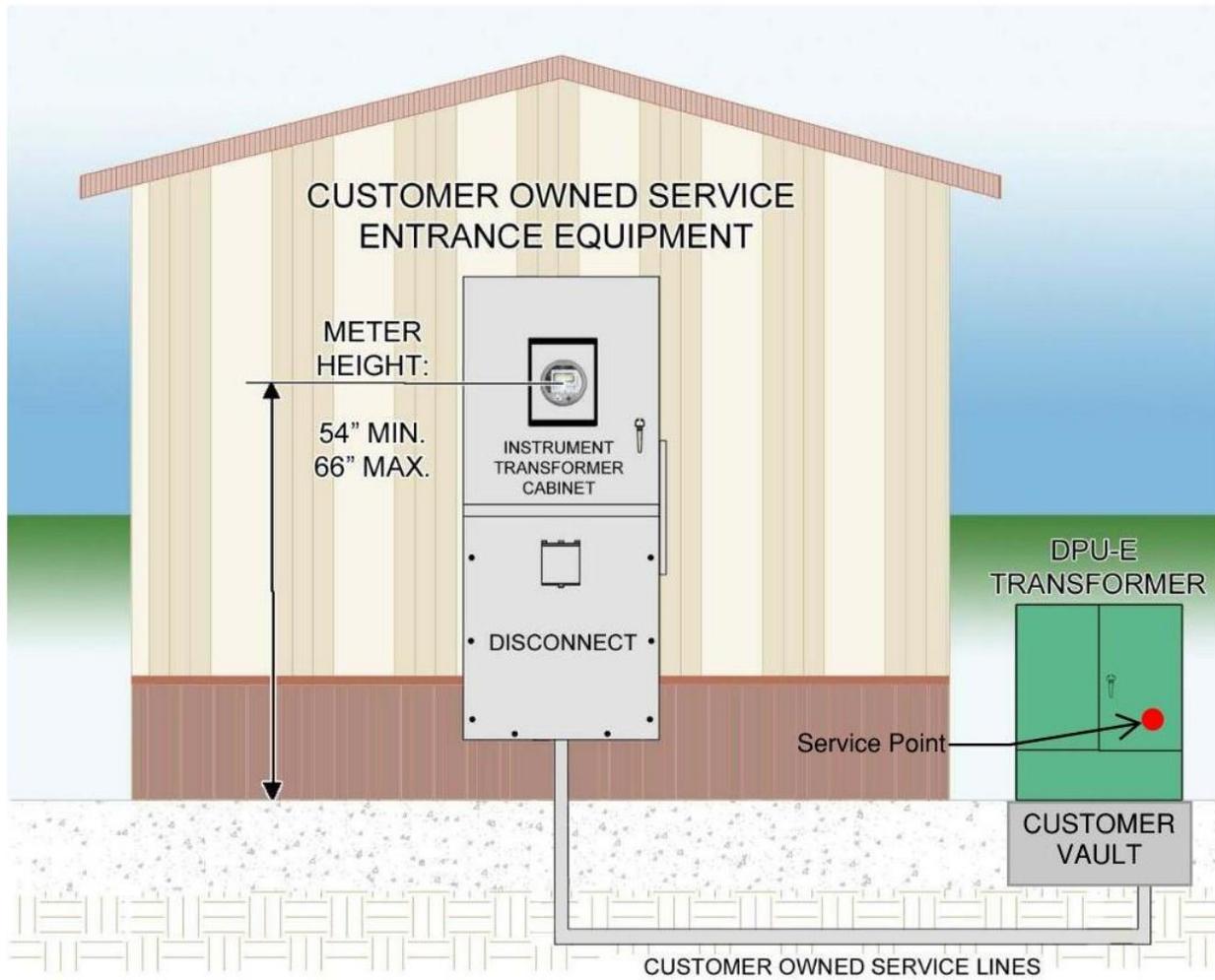
10.1 Service Point - Residential Underground Service



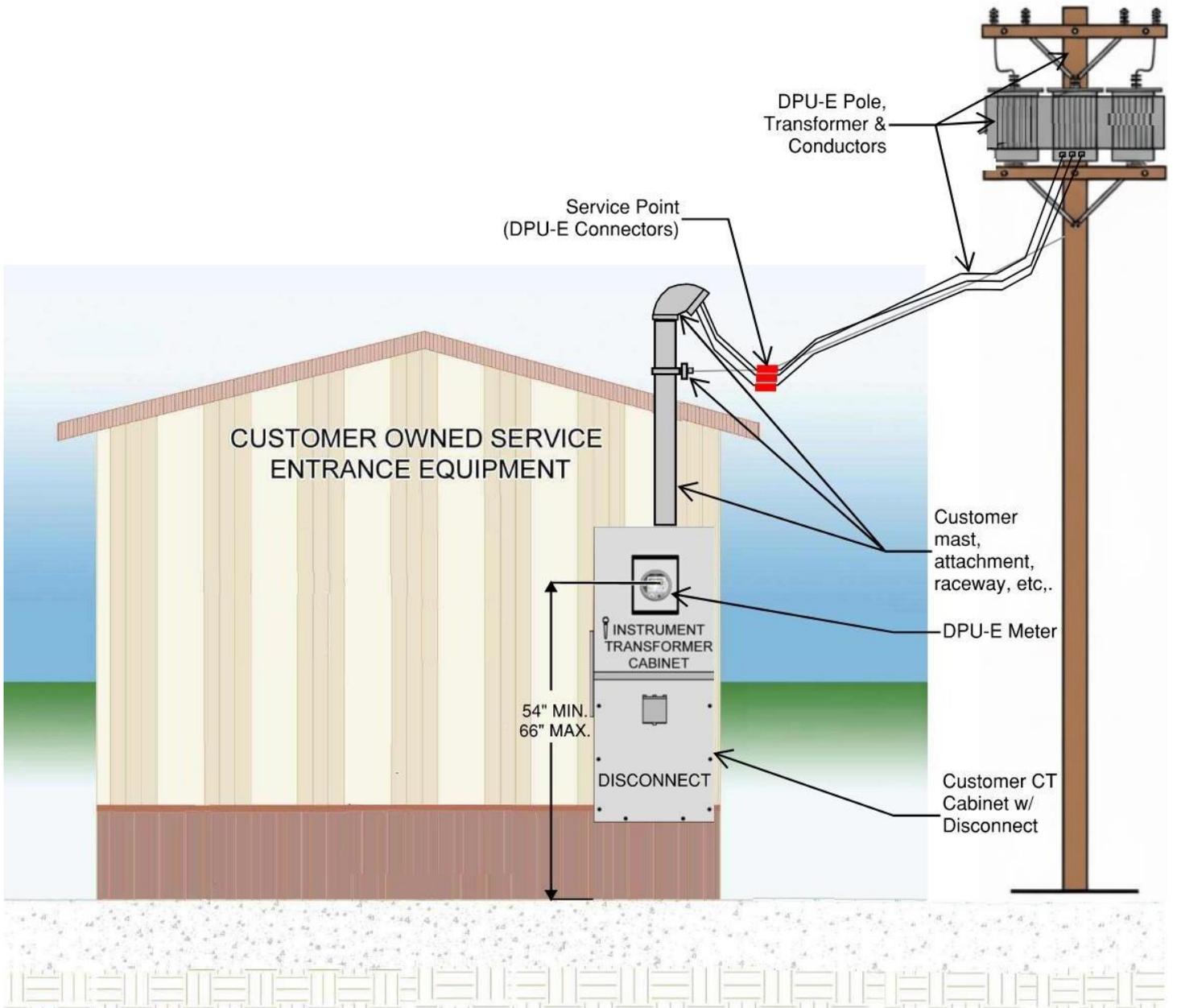
10.2 Service Point - Residential Overhead Service



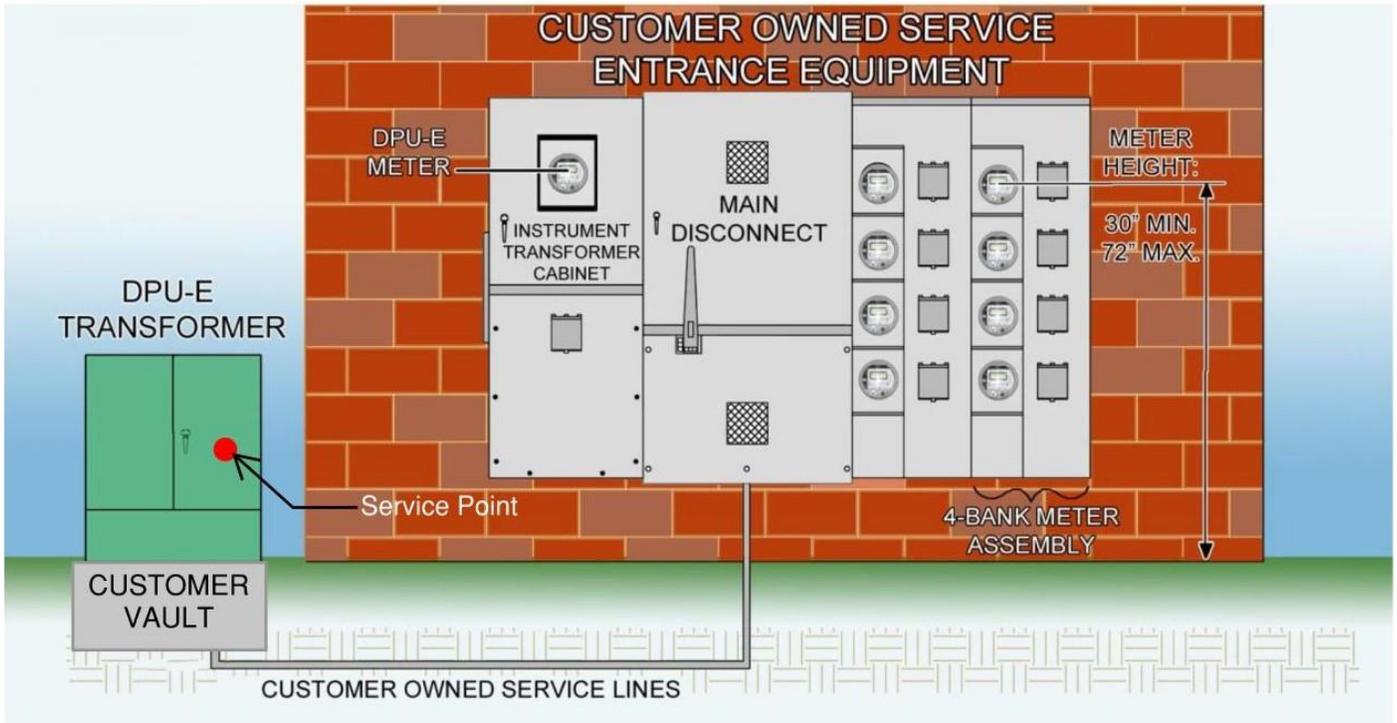
10.3 Service Point – Commercial Underground Single Service



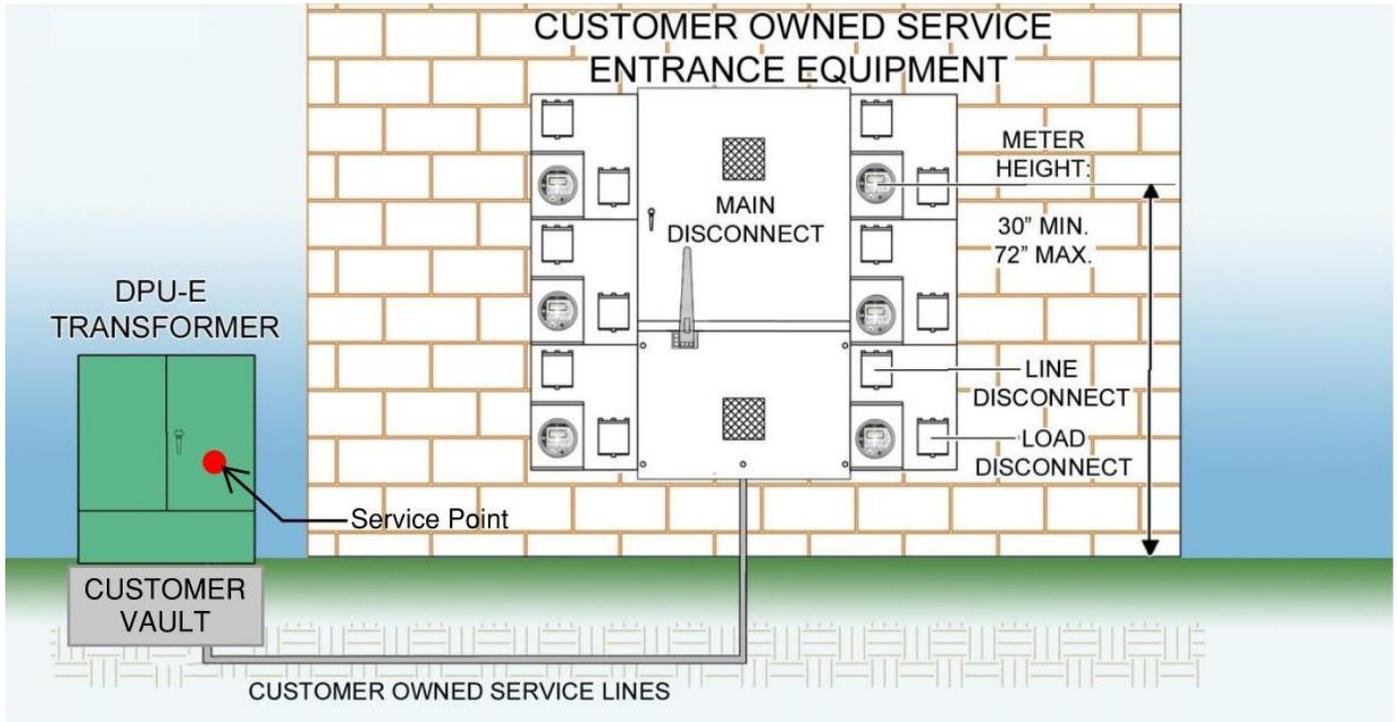
10.4 Service Point – Commercial Overhead Single Service



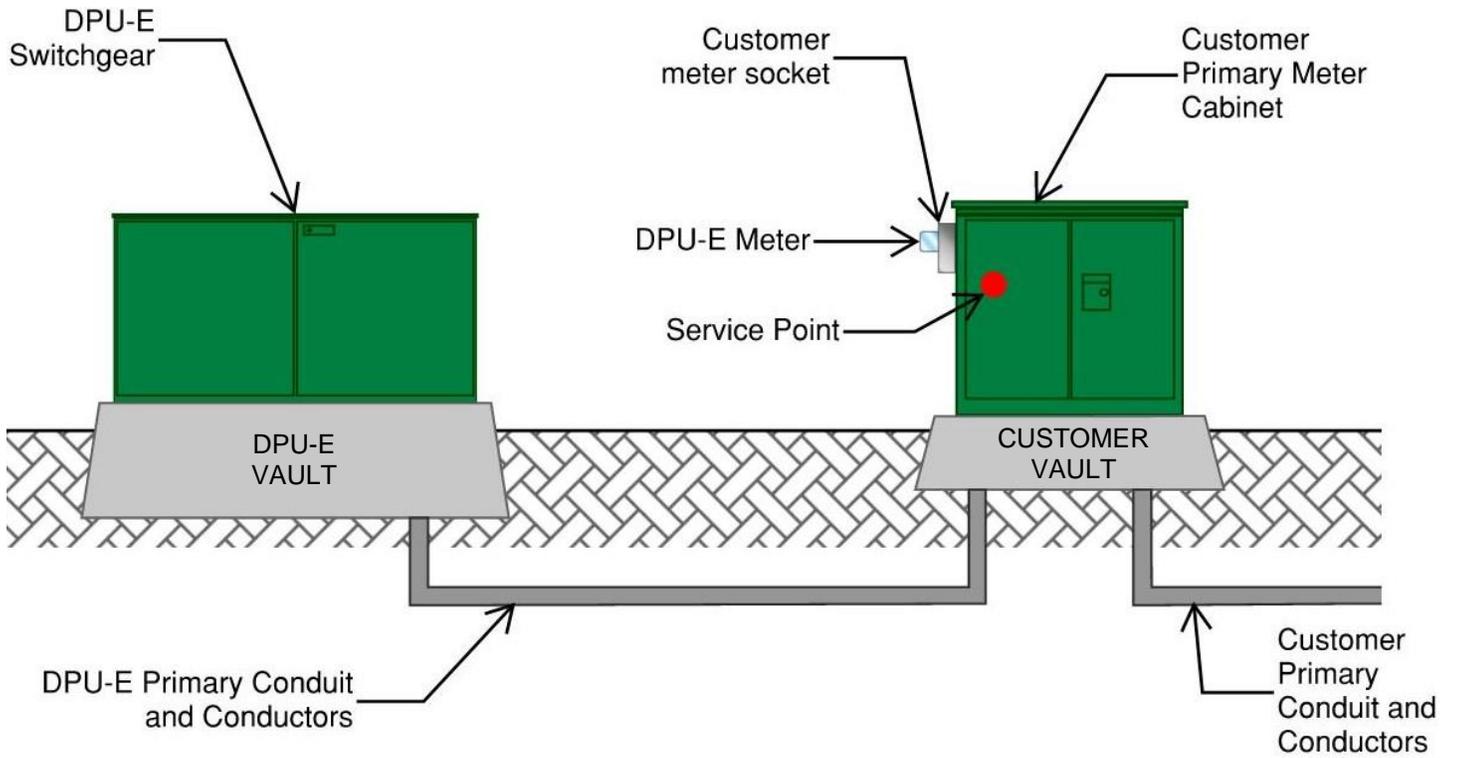
10.5 Service Point – Commercial Primary Underground Multi-Service (208/120V)

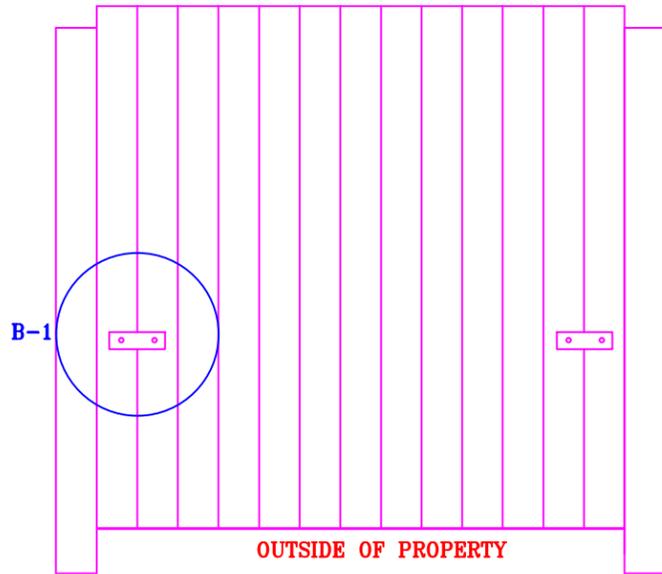
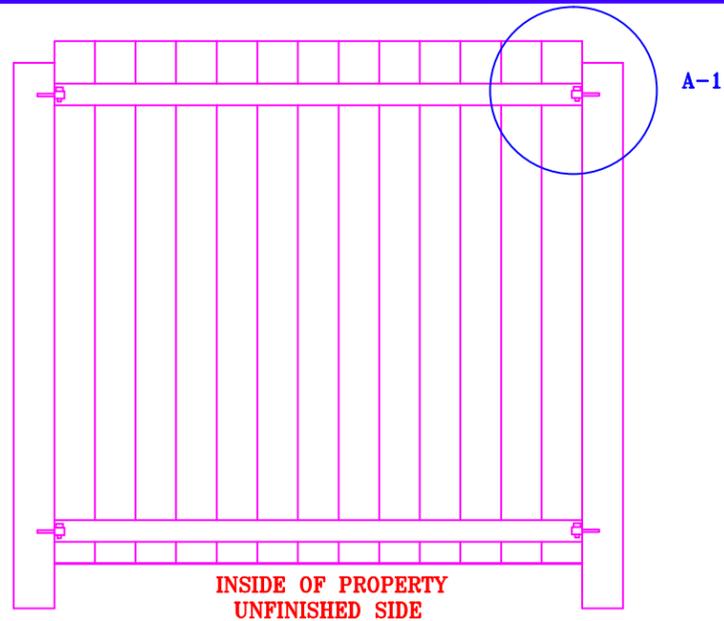


10.6 Service Point – Commercial Primary Underground Multi-Service (480/277V)

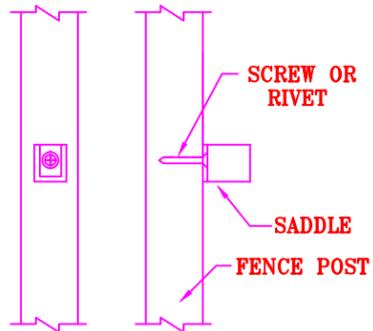


10.7 Service Point – Primary Metering Service (12,470/7,200V)

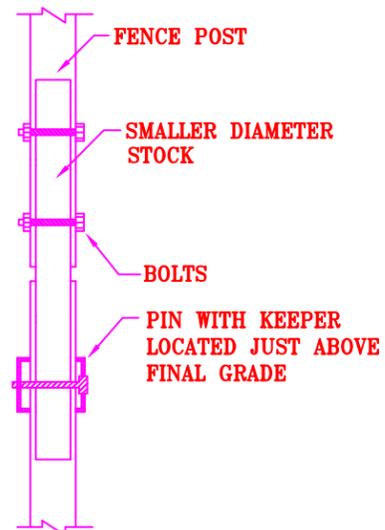




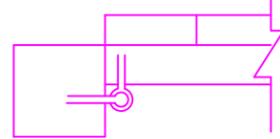
C-1
SECTION DETAIL FOR
REMOVABLE SECTION HANGER



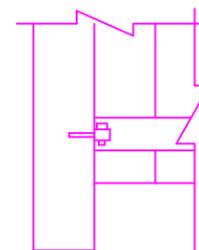
SECTION DETAIL FOR
REMOVABLE POST
FOR ALL FENCE POSTS



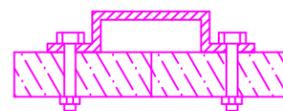
A-1
HINGE PIN
TOP VIEW



A-1
HINGE PIN
SIDE VIEW



B-1
HANDLE



DPU-E RULES AND REGULATIONS:

TRANSFORMER FRONTS MUST HAVE AT LEAST 5' OF CLEARANCE AND ACCESSIBLE TO 10' FOR DPU-E WORKERS. THE SIDES MUST MAINTAIN A 5' CLEARANCE. IF CLEARANCES CAN NOT BE MET THEN THE STANDARDS ABOVE APPLY.

ALL PEDESTALS MUST HAVE AT LEAST 3' FEET OF CLEARANCE. IF CLEARANCES CAN NOT BE MET THEN THE STANDARDS ABOVE APPLY.

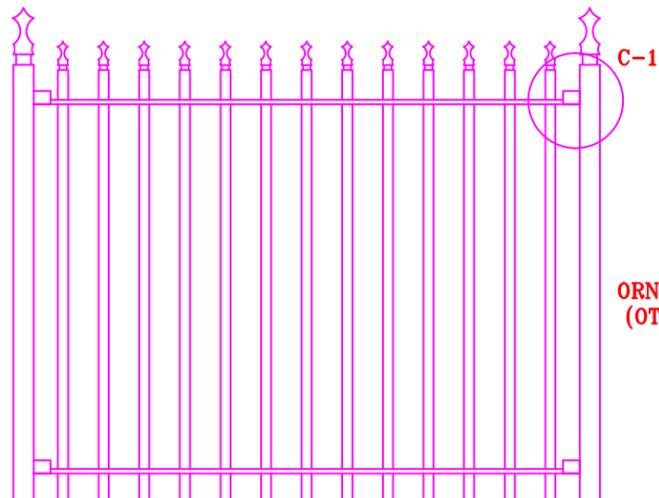
UTILITY POLES MUST HAVE AT LEAST A 5' RADIUS CLEARANCE AROUND THE POLE, AND ACCESSIBLE TO A 10' RADIUS CLEARANCE FOR DPU-E WORKERS. ALL PARTS FOR FENCE MUST BE REMOVABLE IN THIS WORK ZONE.

REMOVABLE SECTIONS OF FENCE MUST BE INSTALLED WITH HINGE PINS AT ALL FOUR CORNERS OF THE FENCE. AN ALTERNATE METHOD COULD BE THE USE OF A "SADDLE" CONSTRUCTED OF MATERIALS SIMILAR TO THE MATERIAL OF WHICH THE FENCE IS CONSTRUCTED. ALL HARDWARE MUST BE EITHER GALVANIZED OR STAINLESS STEEL TO EXTEND LIFE OF STRUCTURE.

HANDLES MUST BE INSTALLED ON BOTH ENDS OF THE FENCE SECTION. THIS REQUIREMENT IS ONLY FOR WOOD FENCES.

SHOULD A GATE BE DESIRED RATHER THAN A REMOVABLE SECTION, THEN THE SAME CLEARANCES APPLY AS WELL AS CONSTRUCTION STANDARDS.

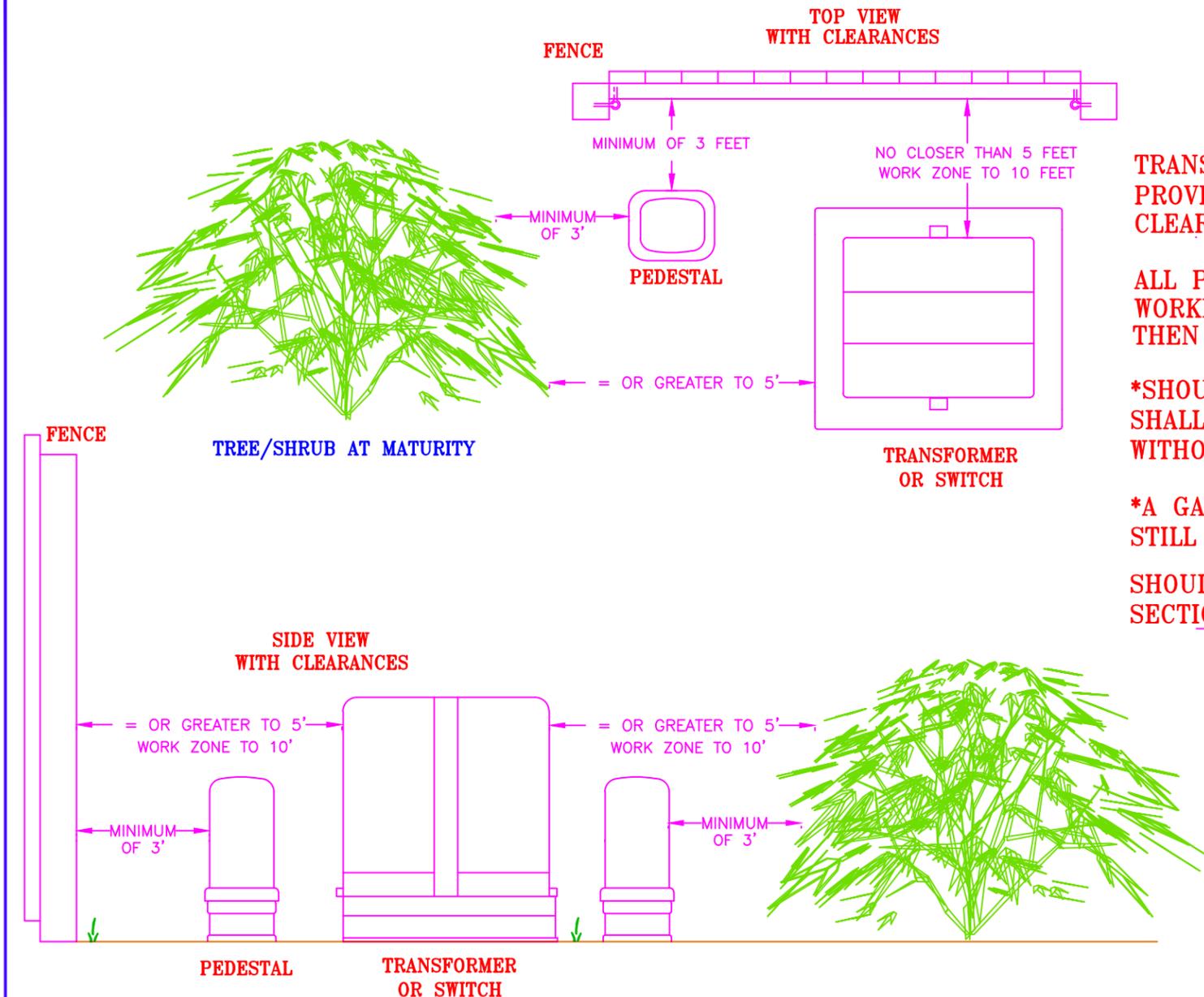
SHOULD YOU WANT TO SECURE YOUR PROPERTY DPU-E WILL PROVIDE A LOCK ONLY FOR DPU-E ACCESS.



ORNAMENTAL FENCING
(OTHER THAN WOOD)

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		REMOVABLE SECTION CONSTRUCTION REQUIRMENTS				DATE: 02-28-97			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO. C10-2110			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY

DPU-E CLEARANCE REQUIREMENTS:



TRANSFORMER AND SWITCHGEAR FRONTS MUST HAVE AT LEAST 10' OF CLEARANCE TO PROVIDE A SAFE WORK ZONE FOR DPU-E WORKERS. THE SIDES MUST MAINTAIN 5' OF CLEARANCE. THIS INCLUDES FENCES*, TREES, SHRUBS, POSTS, SHEDS, OR OBSTACLES.

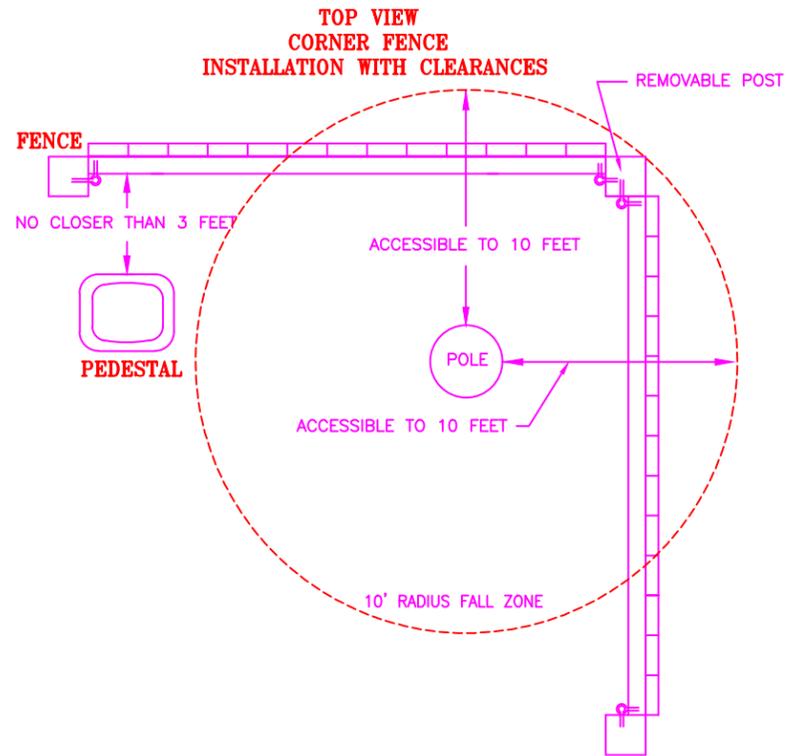
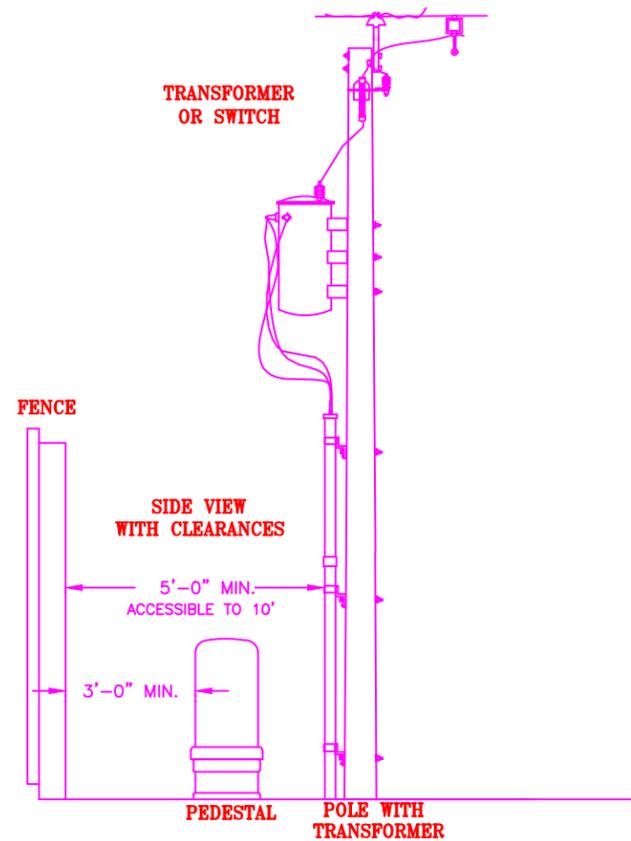
ALL PEDESTALS MUST MAINTAIN AT LEAST 3' OF CLEARANCE AROUND IT FOR DPU-E WORKERS. IN THE EVENT THESE CLEARANCES CAN NOT BE MET BY THE CUSTOMER THEN THE STANDARD ABOVE WILL APPLY AND DPU-E WILL MAINTAIN THIS CLEARANCE.

*SHOULD A PORTION OF THE FENCE FALL INTO THE 10' WORK ZONE THEN THE FENCE SHALL BE CONSTRUCTED IN A MANNER SO A PORTION OF THE FENCE CAN BE REMOVED WITHOUT THE USE OF TOOLS. (SEE DPU-E STANDARD C10-2110 FOR DESIRED METHOD).

*A GATE MAY BE USED RATHER THAN A REMOVABLE SECTION. THE SAME CLEARANCES STILL APPLY IN THIS APPLICATION AS WELL AS THE CONSTRUCTION STANDARDS.

SHOULD YOU WANT TO SECURE YOUR PROPERTY (ONLY ON THESE REMOVABLE FENCE SECTIONS & GATES), DPU-E WILL PROVIDE A LOCK TO ALLOW FOR DPU-E ACCESS ONLY.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT	PADMOUNT EQUIPMENT						DATE: 07-14-08		
	CLEARANCE REQUIREMENTS						PAGE 1 OF 1		
	ELECTRIC STANDARDS						STD. NO. C10-2130		
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY



DPU-ELECTRIC RULES AND REGULATIONS:

UTILITY POLES MUST HAVE AT LEAST A 5' RADIUS CLEARANCE WITH ACCESSIBILITY TO A 10' RADIUS CLEARANCE FOR DPU-E WORKERS. ALL PEDESTALS MUST HAVE AT LEAST 3 FEET OF CLEARANCE.

SHOULD A PORTION OF THE FENCE FALL INTO THE 10' WORK ZONE THEN THE FENCE MUST BE CONSTRUCTED IN A MANNER SO THAT PORTION OF FENCE CAN BE REMOVED WITHOUT THE USE OF TOOLS. (SEE DPU-E STANDARD C10-2110 FOR DESIRED CONSTRUCTION METHOD).

A GATE MAY BE CONSTRUCTED RATHER THAN A REMOVABLE SECTION. THE SAME CLEARANCES STILL APPLY IN THIS APPLICATION AS WELL AS CONSTRUCTION STANDARDS.

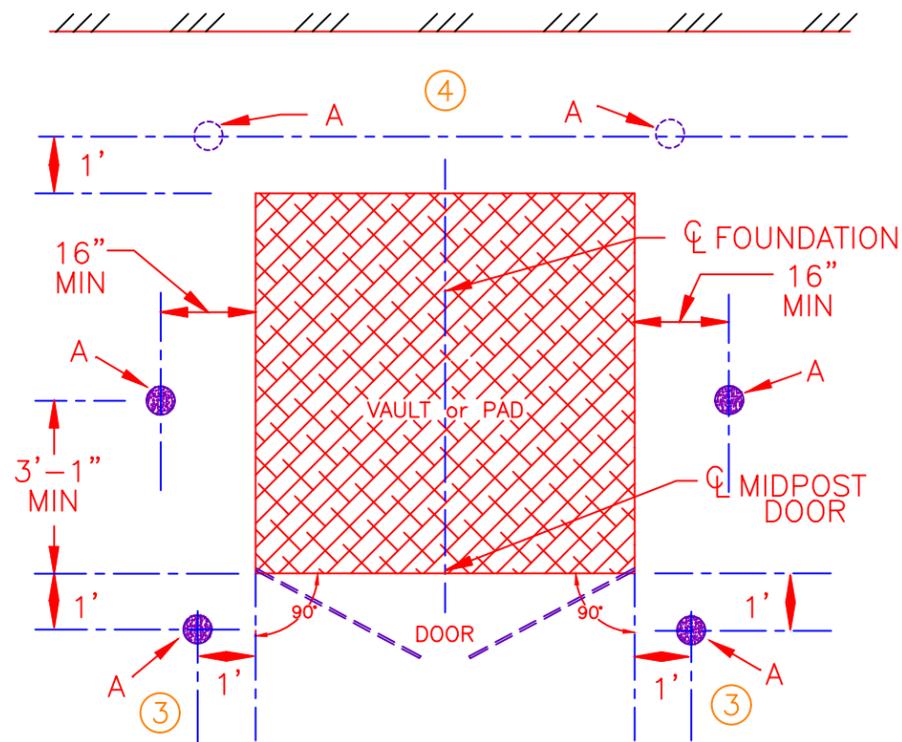
SHOULD YOU WANT TO SECURE YOUR PROPERTY (ONLY ON THESE REMOVABLE SECTIONS AND GATES) DPU-E WILL PROVIDE A LOCK FOR DPU-E ACCESS ONLY.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		FENCE CLEARANCE REQUIRED FOR UTILITY POLES				DATE: 08-11-11			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C10-2140			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	MADE THE ACCESSIBLE ZONE MORE VISIBLE.	FCA	PPC					

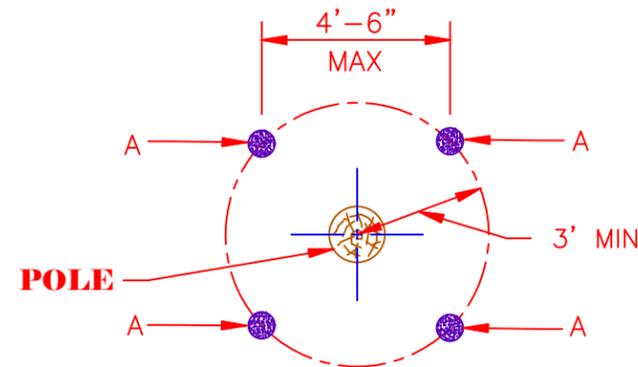
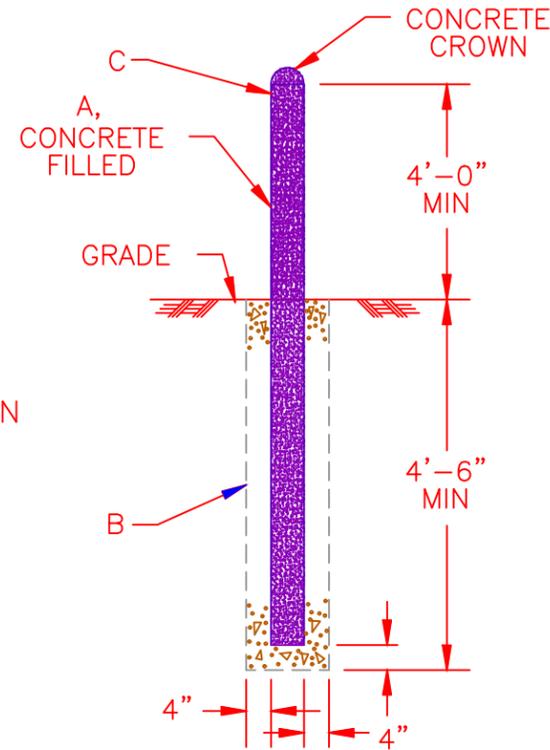
APPLICATION

- THIS STANDARD SHALL BE USED BY THE CUSTOMER/CONTRACTOR FOR THE INSTALLATION OF VEHICLE BARRIERS.

Item	* MATERIAL SHOWN FOR INSTALLING ONE BARRIER *	Unit	Qty
A	Conduit, Rigid, Steel; 8 In. Ips X 10 Ft. Long, Hot Dipped Galvanized, Threaded	EA	1
B	Concrete, Mixture; 80 Lb. Bag, Dry, 1 Part Cement, 2-1/4 Parts #2 Pea Gravel	BG	8
C	Cover, Plastic, Removable; Safety Yellow Color for 8 Inch Rigid Steel Pipe	EA	1



PLAN FOR FOUNDATION



PLAN FOR POLE

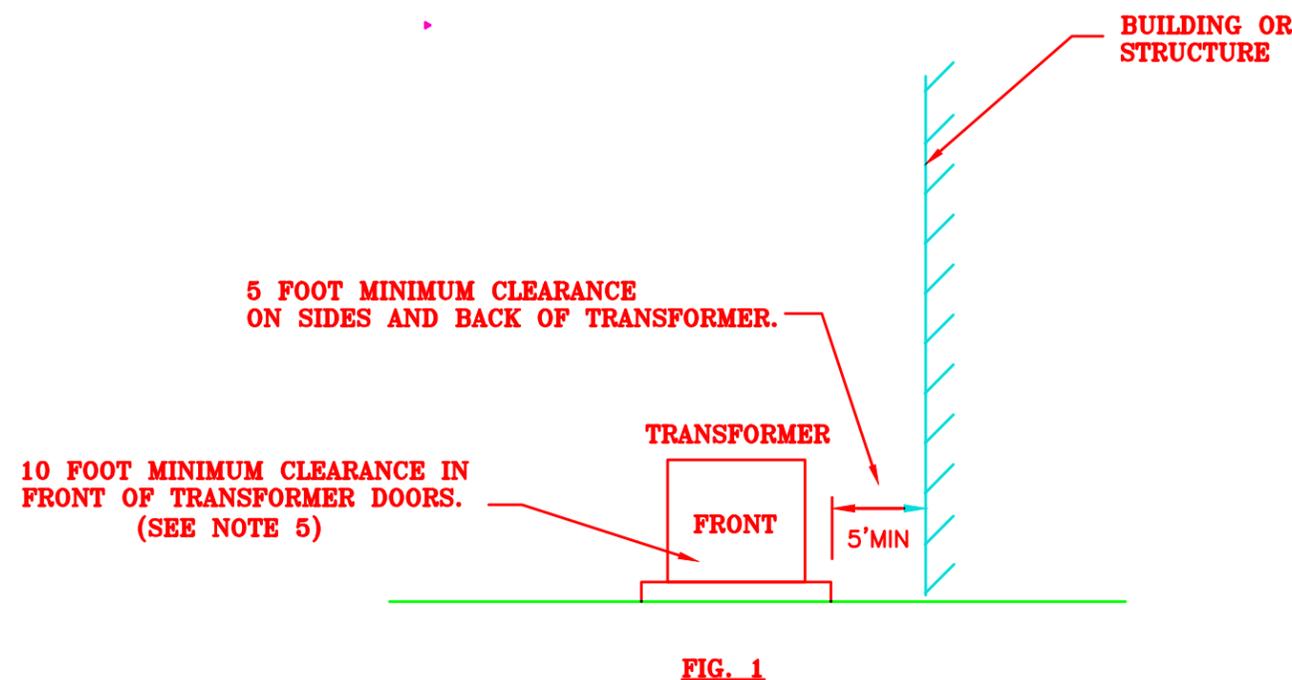
INFORMATION

- ① THIS TYPE OF BARRIER SHOULD BE USED WHERE DAMAGE TO EQUIPMENT, CUBICLES, OR POLES, BY A VEHICLE IS PROBABLE.
- ② OTHER TYPES OF BARRIERS MAY BE USED UPON APPROVAL OF THE CITY OF NAPERVILLE, DPU – ELECTRIC.
- ③ PROVIDE ADEQUATE CLEARANCE FOR OPENING EQUIPMENT DOORS AND FOR PULLING CABLE BY PLACING BARRIERS AT 45 DEGREE ANGLE FROM VAULT OR PAD AND NO LESS THAN 1 FOOT AWAY.
- ④ BARRIERS NOT REQUIRED ON SIDE WHERE EQUIPMENT FACES A BUILDING OR OTHER STRUCTURE WHICH RESTRICTS TRAFFIC.
- ⑤ SMALLER TRANSFORMER & SECTIONALIZER FOUNDATIONS MAY REQUIRE FEWER BARRIERS BUT SPACING SHOULD BE AS SHOWN.

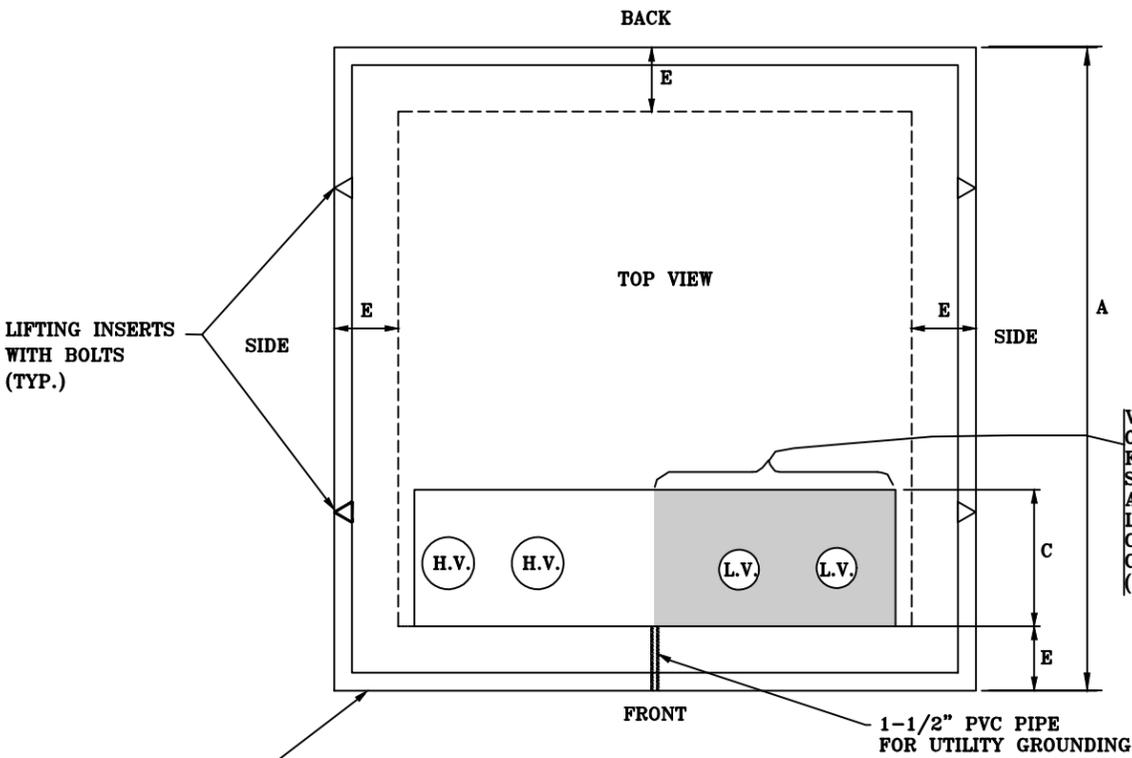
	NAPERVILLE PUBLIC UTILITIES DEPARTMENT	VEHICULAR BARRIER (CUSTOMER/CONTRACTOR ONLY)				DATE: 04-22-06			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C10-2222			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
0	11/30/25	MINOR TEXT EDITS	FCA	PPC					

INSTALLATION REQUIREMENTS SINGLE & THREE PHASE PAD MOUNT TRANSFORMERS

1. THE INFORMATION IN THIS STANDARD COVERS GENERAL CONDITIONS AND REQUIREMENTS FOR THE INSTALLATION OF 1PH AND 3PH PAD MOUNT TRANSFORMERS.
2. THE FOUNDATION SHOULD BE LOCATED AS FAR AS PRACTICAL FROM WINDOWS, DOORS, FIRE ESCAPES, ENTRANCES, AND VENTILATING DUCTS SO AS NOT TO PRESENT A PHYSICAL OBSTRUCTION. IT SHALL BE THE CUSTOMER'S RESPONSIBILITY TO COMPLY WITH ANY INSURANCE REGULATIONS AFFECTING THE INSTALLATION. FIGURE 1 SHOWS THE RECOMMENDED MINIMUM CLEARANCES BETWEEN THE TRANSFORMER FOUNDATION AND WINDOWS, DOORS, FIRE ESCAPES, ENTRANCES, AND VENTILATING DUCTS. CLEARANCES ARE MEASURED TO THE TRANSFORMER RADIATORS IF THEY ARE WITHIN THESE DIMENSIONS.
3. WHERE A TRANSFORMER IS ACCESSIBLE TO DPU-E TRUCKS, TRANSFORMERS SHALL BE TRANSPORTED TO THE JOB LOCATION. WHERE SUCH JOB LOCATION IS NOT ACCESSIBLE, ANY ADDITIONAL MOVING EXPENSE, WHICH MAY BE NECESSARY TO PLACE TRANSFORMERS IN POSITION FOR INSTALLATION, WILL BE THE CUSTOMER'S RESPONSIBILITY.
4. MAINTAIN A 5' MINIMUM CLEARANCE FROM BUILDING STRUCTURE ON SIDES AND REAR OF TRANSFORMER.
5. MAINTAIN 10' MINIMUM CLEARANCE FROM FRONT OF TRANSFORMER DOOR. NO OBSTRUCTIONS SUCH AS TREES, BUSHES OR SHRUBS THAT WOULD PREVENT SAFE OPERATION OR INSTALLATION/REMOVAL IS PERMITTED.
6. TRANSFORMER TO MAINTAIN A MINIMUM DISTANCE OF 20' FROM DOORS OR FIRE-ESCAPES.
7. TRANSFORMER MUST BE ACCESSIBLE TO DPU-E TRUCKS AND EQUIPMENT.



 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		INSTALLATION REQUIREMENT FOR PAD				DATE: 01-26-03			
		MOUNTED TRANSFORMERS-1PH & 3PH				PAGE 1 OF 1			
ELECTRIC STANDARDS				STD. NO.		C30-0016			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY



TRANSFORMER KVA	ASSEMBLY CODE	DIMENSIONS (INCHES)							APPROX. WEIGHT IN (POUNDS)		
		A	B	C	D	E	F	G	PAD	VAULT	TOTAL
75-150	DEVT 150	70	70	15	46	8	12	12	4,385	6,200	10,585
225-1000	DEVT 1000	76	96	17	60	8	18	12	6,535	7,780	14,315
1500 & UP	DEVT 1500	85	85	17	59	8	13	12	6,480	7,700	14,180

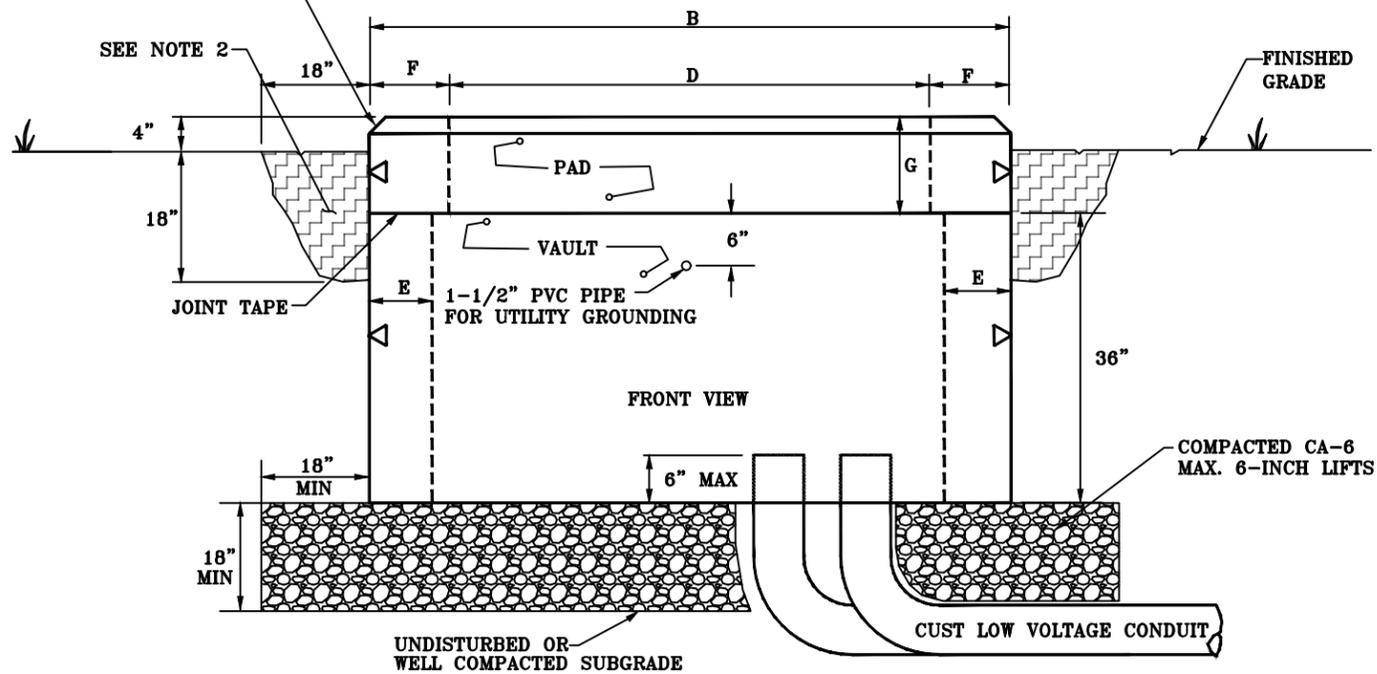
VAULT SECONDARY SIDE - OWNER IS RESPONSIBLE FOR INSTALLATION OF SECONDARY CONDUITS AND A MIN. OF 8FT LENGTH FOR EACH CABLE OUT OF THE CONDUITS. (SEE NOTE 1)

NOTES:

1. CUSTOMER CONDUIT AND CABLES TO BE INSTALLED IN DESIGNATED AREA AND NOT CROSS PATHS OR CAUSE INTERFERENCE WITH PRIMARY CABLES. COORDINATE VAULT AND CONDUIT PLACEMENT WITH DPU-E ENGINEER BEFORE INSTALLATION
2. KEEP PERIMETER ZONE OPEN FOR UTILITY GROUND GRID INSTALLATION WHEN POSSIBLE. PLACE WARNING TAPE AROUND OPENING WHEN APPLICABLE. SUFFICIENT BACKFILL MATERIAL MUST BE AT THE WORK SITE.

SEE C30-6330 PAGE TWO FOR NOTES
SEE C30-0012 FOR GROUNDING SYSTEM

DETAIL 1 - TOP VIEW



DETAIL 2 - FRONT VIEW

		NAPERVILLE PUBLIC UTILITIES DEPARTMENT		3 PHASE TRANSFORMER PAD & VAULT				DATE: 11-28-07	
								PAGE 1 OF 2	
ELECTRIC STANDARDS		REV# DATE DESCRIPTION REV BY APPVD BY		REV# DATE DESCRIPTION REV BY APPVD BY		STD. NO.			
						C30-6330			
1	04/29/13	STD FORMATING, INSTALLATION NOTES TO REFERENCE C10-2222 & REQ. COMPACTED CRUSHED GRAVEL	NS	SK	4	10/28/24	REMOVED WINDOW REQUIREMENTS & UPDATED COMPACTED GRAVEL TO BE CA-6.	FCA	PPC
2	05/14/13	CHGD WORDING ON PERIMETER GRAVEL & ADDED THE WORD MINIMUM.	NS	SK					
3	05/21/15	CHGD WORDING ON PERIMETER GRAVEL & REVISED VAULT DIM. ON 225-1000KVA SIZE.	MAD	MAD					

INSTALLATION NOTES:

1. THE TRANSFORMER PAD AND VAULT SHALL BE SUPPLIED BY THE CUSTOMER AND INSTALLED ON A COMPACTED CA-6 CRUSHED STONE BASE EXTENDED TO A MINIMUM OF 18 INCH BELOW THE VAULT AND ALONG THE PERIMETER AS WELL (SEE DETAIL 2 ON PAGE 1 OF 2).
2. SECONDARY CONDUITS SHALL NOT EXTEND MORE THAN 6 INCH INTO THE VAULT FROM THE BOTTOM OF THE VAULT; THEY SHALL NOT PENETRATE THROUGH THE VAULT WALLS. ALL SECONDARY CONDUITS SHALL ALL BE WITHIN THE VAULT OPENING'S SECONDARY SIDE (SEE DETAIL 1 ON PAGE 1 OF 2).
3. PROTECTION POSTS IN THE FORM 8 INCH CONCRETE FILLED STEEL PIPES, ARE REQUIRED IN AREAS OF VEHICULAR TRAFFIC. POSTS SHALL BE 4 FEET MINIMUM BELOW GRADE WITH 4 FEET EXTENDING ABOVE GRADE. EACH POST SHALL BE INSTALLED IN A 16 INCH DIAMETER HOLE FILLED WITH CONCRETE AND SET OFF THE EXPOSED CORNERS AND AT THE MIDPOINTS OF EACH SIDE. FOLLOW CONSTRUCTION STANDARD C10-2222 FOR DETAILED POST PLACEMENT INSTRUCTIONS.
4. CUSTOMER CONTRACTOR/ELECTRICIAN TO LEAVE AN 18 INCH PERIMETER THAT IS 18 INCH DEEP UNFILLED GAP (SEE DETAIL 2 ON PAGE 1 OF 2).

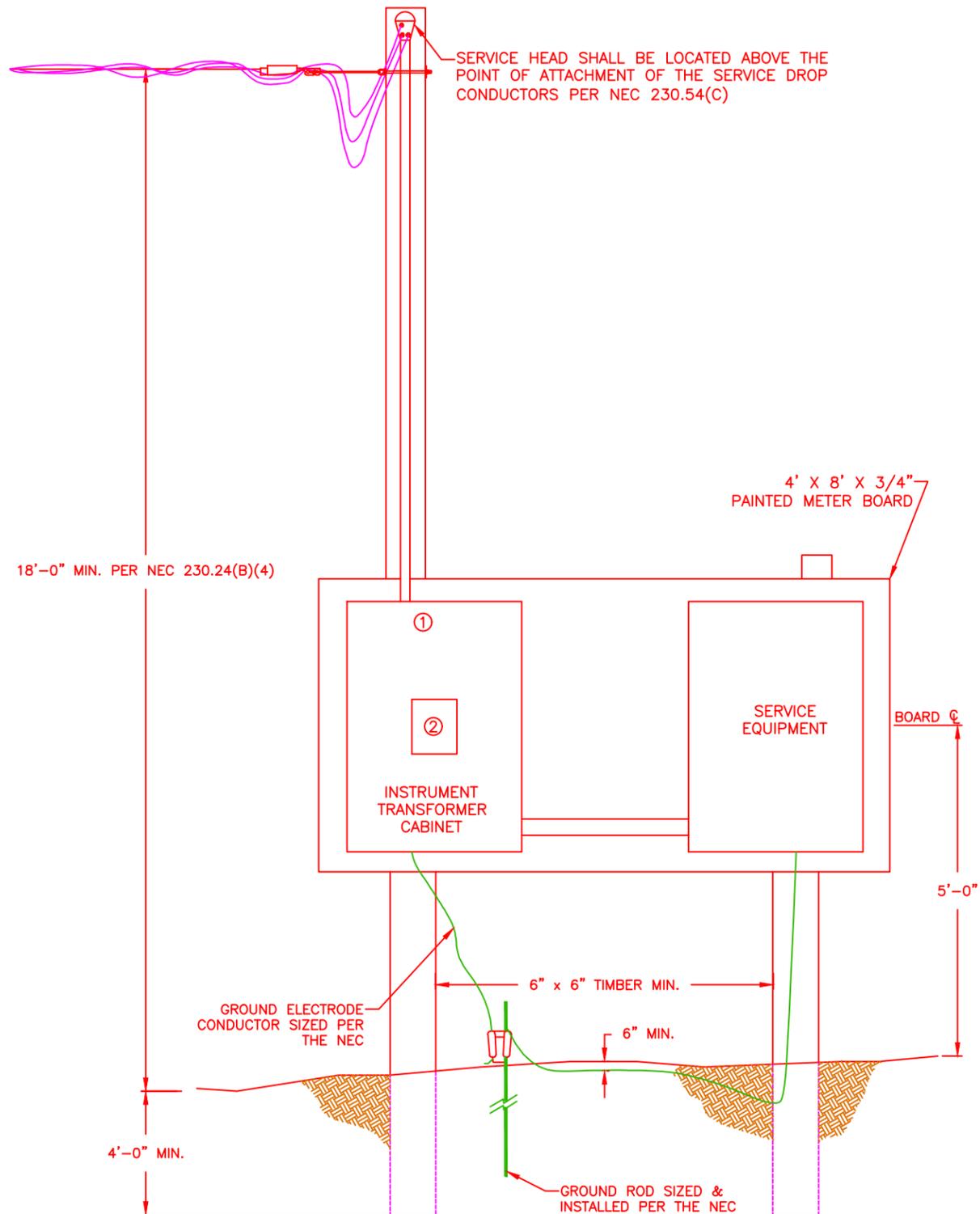
PAD & VAULT CONSTRUCTION REQUIREMENTS:

1. THE PAD (LID) MUST BE REMOVABLE FROM THE VAULT FOR FUTURE MAINTENANCE.
2. CONCRETE SHALL BE 4,000 PSI AT 28 DAYS MINIMUM.
3. REINFORCING BARS SHALL BE NO. 4, ASTM A615 GRADE 60. PAD AND VAULT REBAR ARE TO BE PLACED AT 12" INTERVALS, CENTER TO CENTER, IN BOTH DIRECTIONS, AND BE TIED AT POINTS OF CROSSING. VAULT REINFORCING IS TO BE CONTINUOUS IN THE FOUR SIDES OF THE VAULT, AND OVERLAP 12" AND TIED AT REBAR ENDS.
4. PAD AND VAULT MUST HAVE FOUR 1" PLASTIC LIFTING INSERTS.
5. EACH VAULT MUST HAVE ONE 1½ INCH DIAMETER HOLE, 6 INCHES FROM THE TOP OF THE VAULT.
6. JOINT TAPE SHALL BE 1IN BUTYL RUBBER JOINT SEALANT.
7. THE MANUFACTURER SHALL CERTIFY, IN WRITING, THAT THE VAULT AND PAD MEET OR EXCEED THE CITY OF NAPERVILLE STANDARDS. FOR FIELD POURS, A 48 HOUR ADVANCE NOTICE SHALL BE PROVIDED TO NAPERVILLE DPU-E AT 630-420-6185 OF THE PROPOSED CONCRETE POURS, SO THAT AN INSPECTOR MAY DETERMINE THAT CITY STANDARDS HAVE BEEN MET.

DEVTn: 3Ø TRANSFORMER PAD AND VAULT

Assembly Code	Item Code	Description 1	Description 2
DEVT150	N/A	PAD & VAULT, 75-150kVA TRF	SUPPLIED BY CUSTOMER
DEVT1000	N/A	PAD & VAULT, 225-1000kVA TRF	SUPPLIED BY CUSTOMER
DEVT1500	N/A	PAD & VAULT, 1500kVA & UP	SUPPLIED BY CUSTOMER
DEVT150C	284 102 00110	PAD & VAULT, 75-150kVA TRF	SUPPLIED BY DPU-E
DEVT1000C	284 102 00120	PAD & VAULT, 225-1000kVA TRF	SUPPLIED BY DPU-E
DEVT1500C	284 102 00130	PAD & VAULT, 1500kVA & UP	SUPPLIED BY DPU-E

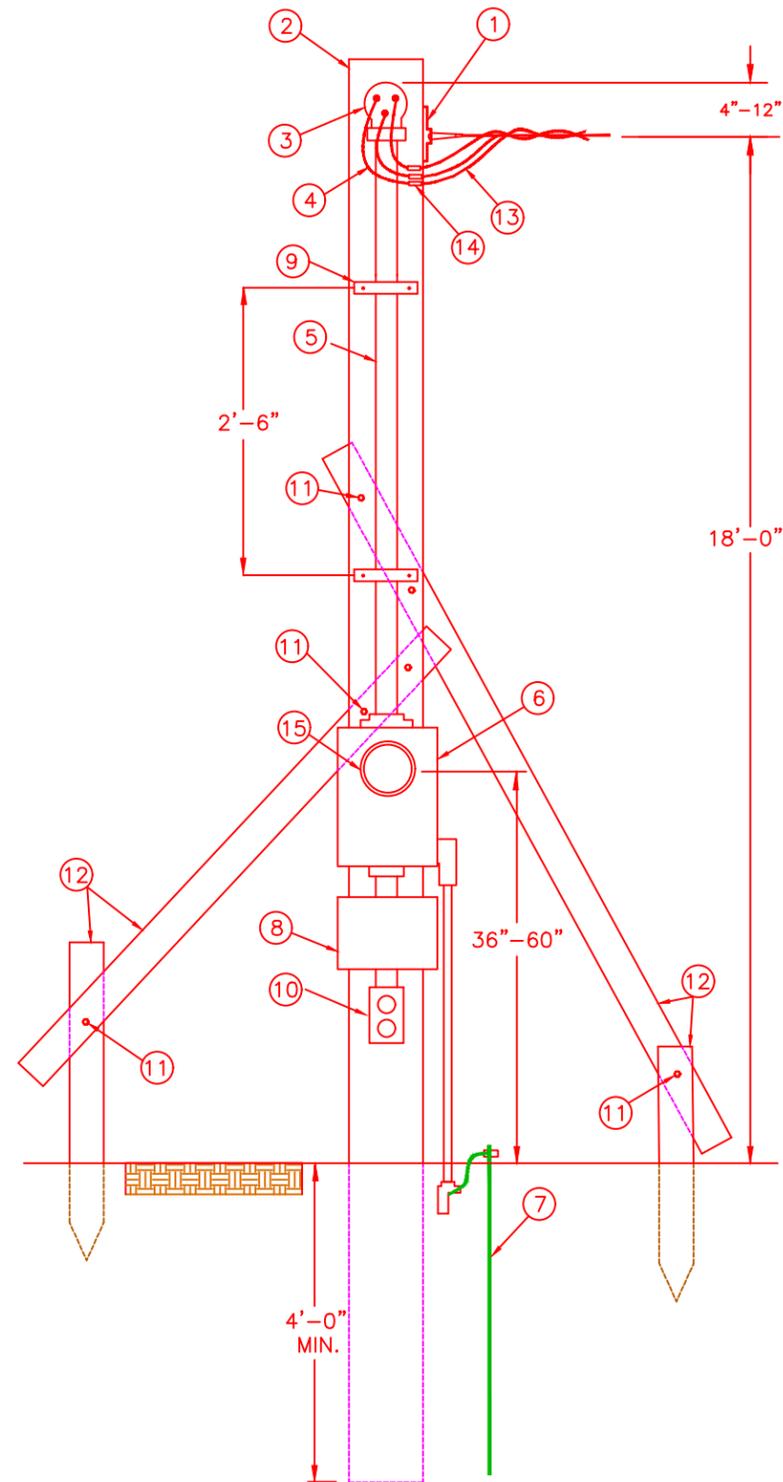
 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		3 PHASE TRANSFORMER PAD & VAULT				DATE: 11-28-07			
						PAGE 2 OF 2			
ELECTRIC STANDARDS						STD. NO.			
						C30-6330			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	04/29/13	STD FORMATING, INSTALLATION NOTES TO REFERENCE C10-2222 & REQ. COMPACTED CRUSHED GRAVEL	NS	SK	4	10/28/24	REMOVED WINDOW REQUIREMENTS & UPDATED COMPACTED GRAVEL TO BE CA-6.	FCA	PPC
2	05/14/13	CHGD WORDING ON PERIMETER GRAVEL & ADDED THE WORD MINIMUM.	NS	SK					
3	05/21/15	CHGD WORDING ON PERIMETER GRAVEL & REVISED VAULT DIM. ON 225-1000KVA SIZE.	MAD	MAD					



NOTES:

1. SEE DPU-E STANDARD C50-6330 FOR INSTRUMENT TRANSFORMER CABINET REQUIREMENTS.
2. METER SOCKET W/ TEST SWITCHES TO BE PER DPU-E STANDARD C50-6010.
3. METER CENTERLINE HEIGHT (54" MIN. - 66" MAX.)
4. TEMPORARY ELECTRICAL SERVICES ARE REQUIRED TO OBTAIN A CITY OF NAPERVILLE PERMIT.
5. A SERVICE DISCONNECTING MEANS IS REQUIRED AND MUST COMPLY WITH NEC ARTICLE 230.70. THE MAIN BREAKER IN THE SERVICE EQUIPMENT IS ACCEPTABLE AS THE DISCONNECT PROVIDED THE ENTIRE ASSEMBLY IS:
 - 5.1. READILY ACCESSIBLE (PER NEC 230.70(A)(1)).
 - 5.2. SUITABLY IDENTIFIED AS THE SERVICE DISCONNECT (PER NEC 230.70(B)).
 - 5.3. INSTALLED ON THE METER BOARD.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		800A MAX 1-PHASE OVERHEAD TEMPORARY SERVICE				DATE: 04-04-07			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C50-2100			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	08/01/18	REVISED VERBIAGE AND DIMENSIONS	PPC	S. KHAN					
2	11/26/25	UPDATED NOTES & CALLOUTS.	FCA	PPC					



NOTES:

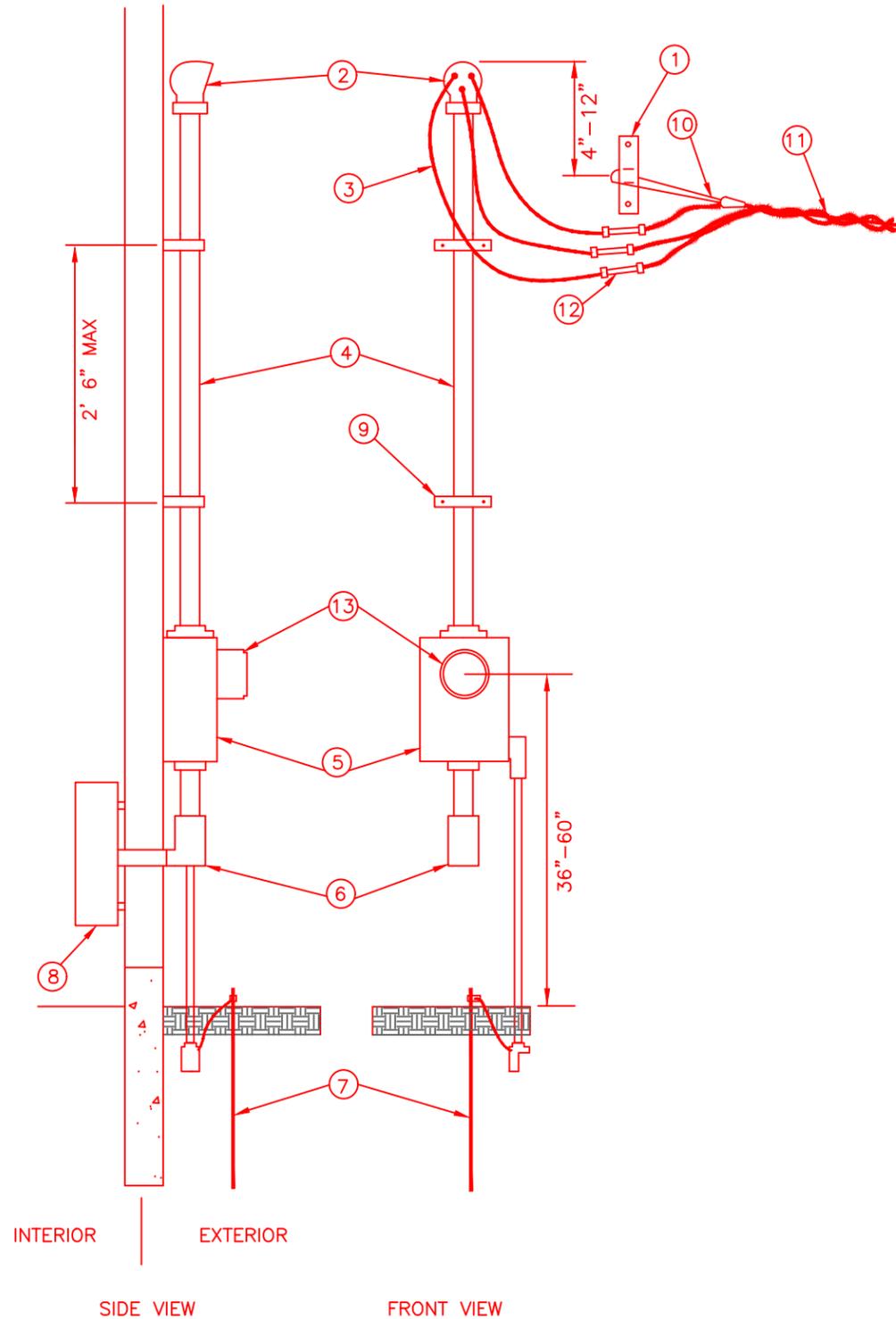
CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. SERVICE ATTACHMENT: TYPICALLY AN EYEPLATE, EYEBOLT, OR A FORK BOLT THAT SUPPORTS THE SERVICE WIRES TO THE BUILDING. YOU MAY INSTALL A RISER TO MAINTAIN CLEARANCES FOR THE SERVICE WIRES. SEE C50-3220 FOR SERVICE DROP ATTACHMENT DETAILS.
2. 6"x6" PRESSURE TREATED TIMBER. MUST BE BRACED. ALL NON-UTILITY SOURCES AND LOADS.
3. SERVICE HEAD: A WEATHER-TIGHT FITTING THAT IS ATTACHED TO THE END OF THE SERVICE RUN TO PREVENT WATER FROM ENTERING THE PIPE.
4. SERVICE ENTRANCE CONDUCTORS: ALLOW A MINIMUM OF 18" BEYOND THE SERVICE HEAD FOR DPU-E TO MAKE THE CONNECTIONS TO THE SERVICE DROP WIRES.
5. RIGID STEEL CONDUIT: MUST BE SIZED APPROPRIATELY FOR THE SERVICE SIZE AND NEC REQUIREMENTS.
6. METER SOCKET: A DEVICE THE METER PLUGS INTO.
7. GROUND ROD AND GROUNDING SYSTEM SIZED & INSTALLED PER NEC REQUIREMENTS.
8. SERVICE DISCONNECT: THE MAIN BREAKER THAT DISCONNECTS THE LOAD SIDE TO THE METER. IF THE MAIN BREAKER WILL BE LOCATED FURTHER THAN 2FT FROM THE METER A SEPARATE DISCONNECT IS REQUIRED.
9. GALVANIZED BACKS AND STRAPS (MINI'S NOT ACCEPTED). GALVANIZED LAG BOLTS AND WASHERS (NO ZINC LAG BOLTS PERMITTED).
10. WEATHER PROOF RECEPTACLE(S), GFCI PROTECTED.
11. GALVANIZED 5/8" BOLTS AND WASHERS.
12. 2"x4" WOODEN BRACES AND STAKES.

DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

13. SERVICE DROP WIRES.
 14. SERVICE DROP CONNECTORS FOR CONNECTING CUSTOMER WIRE TO SERVICE DROP.
 15. METER: A DEVICE THAT MEASURE THE AMOUNT OF ELECTRICITY USED BY THE CUSTOMER.
- ADDITIONAL NOTES:
16. METERING ASSEMBLY SHALL HAVE 5'-0" MIN. CLEARANCE FROM ANY EXCAVATION.
 17. METERING ASSEMBLY SHALL BE 5'-15' FROM THE UTILITY CONNECTION POINT.
 18. ALL OUTDOOR EQUIPMENT MUST BE RATED FOR OUTDOOR USE.
 19. THE INSTALLATION MUST ABIDE BY CITY OF NAPERVILLE SERVICE RULES AND POLICIES, AND THE NATIONAL ELECTRICAL CODE VERSION ADOPTED BY THE CITY.
 20. AN ELECTRICAL PERMIT FROM THE TRANSPORTATION, ENGINEERING AND DEVELOPMENT (TED) BUSINESS GROUP IS REQUIRED FOR THE INSTALLATION OF A GENERATOR.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		200A MAX 1-PHASE OVERHEAD TEMPORARY SERVICE				DATE: 04-04-07			
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						C50-2110			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	REMOVED TABLES, UPDATED NOTES.	FCA	PPC					



NOTES:

CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. SERVICE ATTACHMENT HARDWARE: A SERVICE DROP PLATE , EYEBOLT, OR FORKBOLT TO SUPPORT THE SERVICE DROP WIRES. SEE C50-3220 FOR OVERHEAD SERVICE DROP ATTACHMENTS.
2. SERVICE WEATHER HEAD. A WEATHER-TIGHT FITTING ATTACHED TO THE END OF THE RISER TO PREVENT WATER FROM ENTERING THE RACEWAY.
3. SERVICE RUN WIRES. ALLOW A MIN. OF 18" BEYOND THE SERVICE HEAD FOR DPU-E TO MAKE CONNECTIONS TO THE SERVICE DROP WIRES.
4. GALVANIZED RIGID STEEL CONDUIT.
 - 4.1. USE 2½" RIGID STEEL FOR FOR ≤100A SERVICES.
 - 4.2. USE 3" RIGID STEEL FOR 200A SERVICES.
 - 4.3. OTHER METALLIC RACEWAY MAY BE USED, PROVIDED THEY ARE OF EQUIVALENT STRUCTURAL STRENGTH AND DURABILITY TO RIGID STEEL CONDUIT.
 - 4.4. RISER MUST BE CONTINUOUS (NO COUPLINGS) BETWEEN THE TOP OF THE RISER AND THE LOWEST POINT OF SUPPORT.
5. METER SOCKET: A DEVICE THE METER PLUGS INTO. REFER TO STANDARD E50-0020 FOR METER SOCKET REQUIREMENTS.
6. SERVICE ENTRANCE WIRES: THE WIRES INSTALLED BETWEEN THE METER SOCKET CONNECTION AND THE DISCONNECTING MEANS (MAIN BREAKER). IF THIS DISTANCE IS GREATER THAN 5', AN EXTERNAL DISCONNECT IS REQUIRED TO BE WITHIN 2FT FROM THE METER.
7. GROUND ROD AND GROUNDING SYSTEM SIZED & INSTALLED PER NEC REQUIREMENTS.
8. DISCONNECTING MEANS: TYPICALLY THE MAIN SERVICE PANEL BREAKER OR FUSE BOX.
9. GALVANIZED BACKS AND STRAPS (MINI'S NOT ACCEPTED). GALVANIZED LAG BOLTS AND WASHERS (NO ZINC LAG BOLTS PERMITTED).

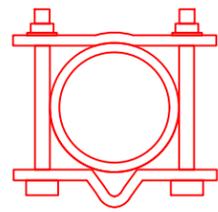
DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

10. SERVICE DROP DEAD END.
11. OVERHEAD SERVICE WIRES: THE WIRE FROM THE POLE THAT ATTACHES TO THE HOUSE.
12. CONNECTORS FOR CONNECTING CUSTOMER WIRES TO SERVICE DROP.
13. METER: A DEVICE THAT MEASURES THE AMOUNT OF ELECTRICITY CONSUMED BY THE CUSTOMER.

ADDITIONAL NOTES & REQUIREMENTS:

14. ALL MATERIALS AND HARDWARE MUST BE RATED FOR OUTDOOR USE AND BE CORROSION RESISTANT. ZINC HARDWARE IS NOT PERMITTED.
15. IT IS THE CUSTOMER'S SOLE RESPONSIBILITY TO ENSURE THAT ALL EQUIPMENT, HARDWARE, ATTACHMENTS PROVIDED BY THE CUSTOMER MEET APPLICABLE CODES AND GOVERNING JURISDICTION REQUIREMENTS.

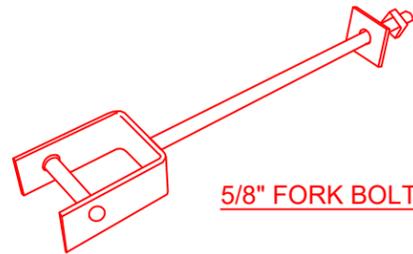
 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		RESIDENTIAL OVERHEAD ATTACHED TO HOUSE 100-200 AMP SERVICE				DATE: 11-06-02			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C50-3210			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	REMOVED TABLES AND UPDATED NOTES.	FCA	PPC					



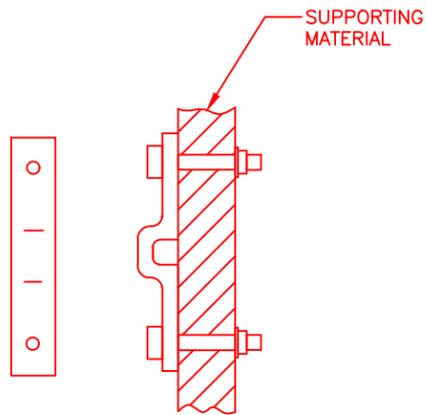
SERVICE MAST BRACKET



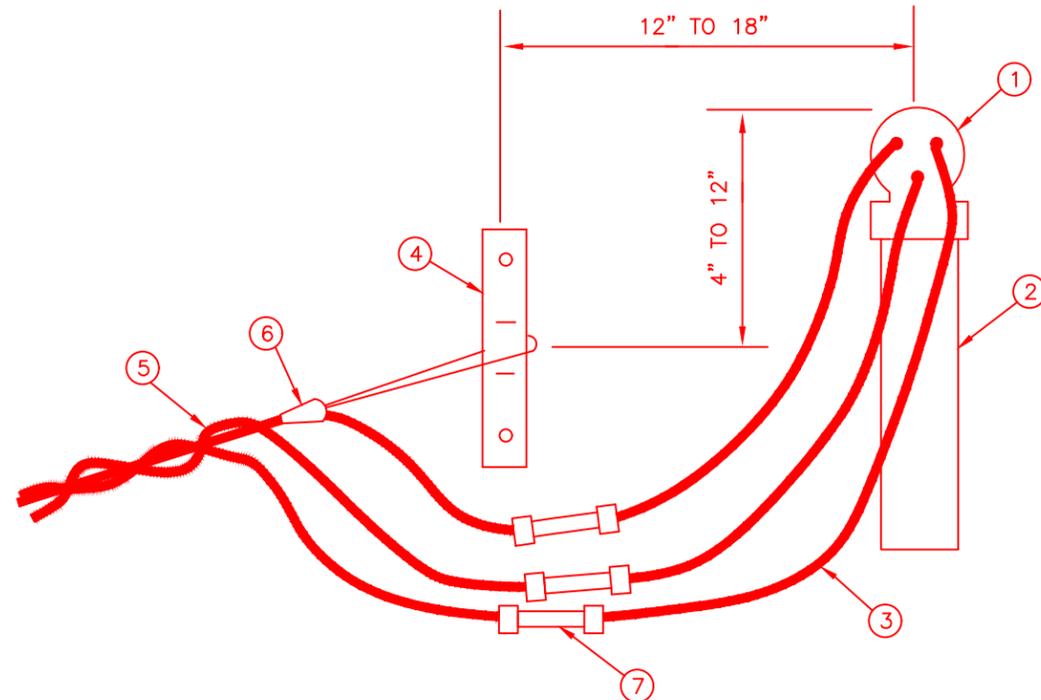
5/8" EYEBOLT



5/8" FORK BOLT



SERVICER DROP PLATE



NOTES:

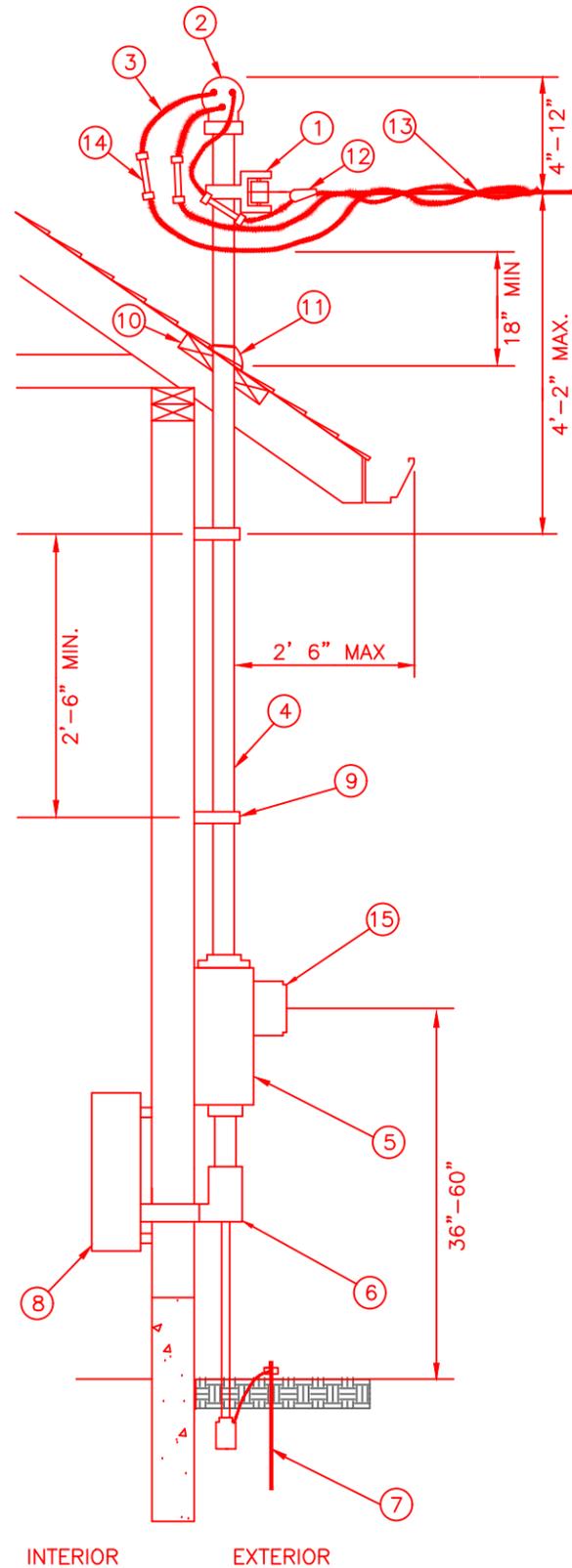
CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. SERVICE WEATHER HEAD.
2. GALVANIZED RIGID STEEL CONDUIT (RISER).
 - 2.1. USE 2½" RIGID STEEL FOR FOR ≤100A SERVICES.
 - 2.2. USE 3" RIGID STEEL FOR ≥200A SERVICES.
 - 2.3. OTHER METALLIC RACEWAY MAY BE USED, PROVIDED THEY ARE OF EQUIVALENT STRUCTURAL STRENGTH AND DURABILITY TO RIGID STEEL CONDUIT.
 - 2.4. RISER MUST BE CONTINUOUS (NO COUPLINGS) BETWEEN THE TOP OF THE RISER AND THE LOWEST POINT OF SUPPORT.
3. SERVICE RUN WIRES (ALLOW A MIN. OF 18" BEYOND THE SERVICE HEAD FOR DPU-E TO MAKE CONNECTIONS TO SERVICE DROP WIRES.
4. SERVICE ATTACHMENT HARDWARE.
 - 4.1. HEAVY-DUTY SERVICE DROP PLATES, BRACKETS, EYEBOLTS, FORK BOLTS OR EQUIVALENT HARDWARE.
 - 4.2. ALL ATTACHMENTS MUST BE SECURED TO A RIGID MATERIAL THAT IS CAPABLE OF WITHSTANDING WORST-CASE TENSION LOADING CONDITIONS. AT A MINIMUM A 1250 LB TENSION FORCE FOR ≤200A AT ≤150FT LENGTH.

DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

5. SERVICE DROP WIRES.
 6. SERVICE DROP DEAD END.
 7. CONNECTORS FOR CONNECTING CUSTOMER WIRES TO SERVICE DROP.
- ADDITIONAL NOTES & REQUIREMENTS:**
8. ALL MATERIALS AND HARDWARE MUST BE RATED FOR OUTDOOR USE AND BE CORROSION RESISTANT. ZINC HARDWARE IS NOT PERMITTED.
 9. SERVICE DROP ATTACHMENTS SHOULD BE INSTALLED USING A THROUGH-BOLT CONNECTION INTO THE SUPPORTING MATERIAL RATHER THAN A SCREW-ON CONNECTION.
 10. SCREW-ON CONNECTIONS ARE NOT RECOMMENDED BUT MAY BE USED ONLY WHEN A THROUGH-BOLT CONNECTION STYLE IS NOT POSSIBLE.
 11. IT IS THE CUSTOMER'S SOLE RESPONSIBILITY TO ENSURE THAT ALL EQUIPMENT, HARDWARE, ATTACHMENTS PROVIDED BY THE CUSTOMER MEET APPLICABLE CODES AND GOVERNING JURISDICTION REQUIREMENTS.
 12. DPU-E IS NOT RESPONSIBLE FOR ANY DAMAGE RESULTING FORM THE INSTALLATION.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		OVERHEAD SERVICE DROP ATTACHMENTS				DATE: 12-20-02			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C50-3220			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	REMOVED TABLES, ADDED ADDITIONAL ATTACHMENTS, RENAMED STANDARD.	FCA	PPC					



NOTES:

CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. SERVICE ATTACHMENT HARDWARE: A MAST SERVICE DROP BRACKET TO SUPPORT THE SERVICE DROP WIRES. SEE C50-3220 FOR OVERHEAD SERVICE DROP ATTACHMENTS.
2. SERVICE WEATHER HEAD. A WEATHER-TIGHT FITTING ATTACHED TO THE END OF THE RISER TO PREVENT WATER FROM ENTERING THE RACEWAY.
3. SERVICE RUN WIRES. ALLOW A MIN. OF 18" BEYOND THE SERVICE HEAD FOR DPU-E TO MAKE CONNECTIONS TO THE SERVICE DROP WIRES.
4. GALVANIZED RIGID STEEL CONDUIT.
 - 4.1. USE 2½" RIGID STEEL FOR FOR ≤100A SERVICES.
 - 4.2. USE 3" RIGID STEEL FOR 200A SERVICES.
 - 4.3. OTHER METALLIC RACEWAY MAY BE USED, PROVIDED THEY ARE OF EQUIVALENT STRUCTURAL STRENGTH AND DURABILITY TO RIGID STEEL CONDUIT.
 - 4.4. RISER MUST BE CONTINUOUS (NO COUPLINGS) BETWEEN THE TOP OF THE RISER AND THE LOWEST POINT OF SUPPORT.
5. METER SOCKET: A DEVICE THE METER PLUGS INTO. REFER TO STANDARD E50-0020 FOR METER SOCKET REQUIREMENTS.
6. SERVICE ENTRANCE WIRES: THE WIRES INSTALLED BETWEEN THE METER SOCKET CONNECTION AND THE DISCONNECTING MEANS (MAIN BREAKER). IF THIS DISTANCE IS GREATER THAN 5', AN EXTERNAL DISCONNECT IS REQUIRED TO BE WITHIN 2FT FROM THE METER.
7. GROUND ROD AND GROUNDING SYSTEM SIZED & INSTALLED PER NEC REQUIREMENTS.
8. DISCONNECTING MEANS: TYPICALLY THE MAIN SERVICE PANEL BREAKER OR FUSE BOX.
9. GALVANIZED BACKS AND STRAPS (MINI'S NOT ACCEPTED). GALVANIZED LAG BOLTS AND WASHERS (NO ZINC LAG BOLTS PERMITTED).
10. 2"x4" BLOCKING, SOLIDLY INSTALLED BETWEEN RAFTERS.
11. MAST ROOF KIT FOR WATERPROOFING.

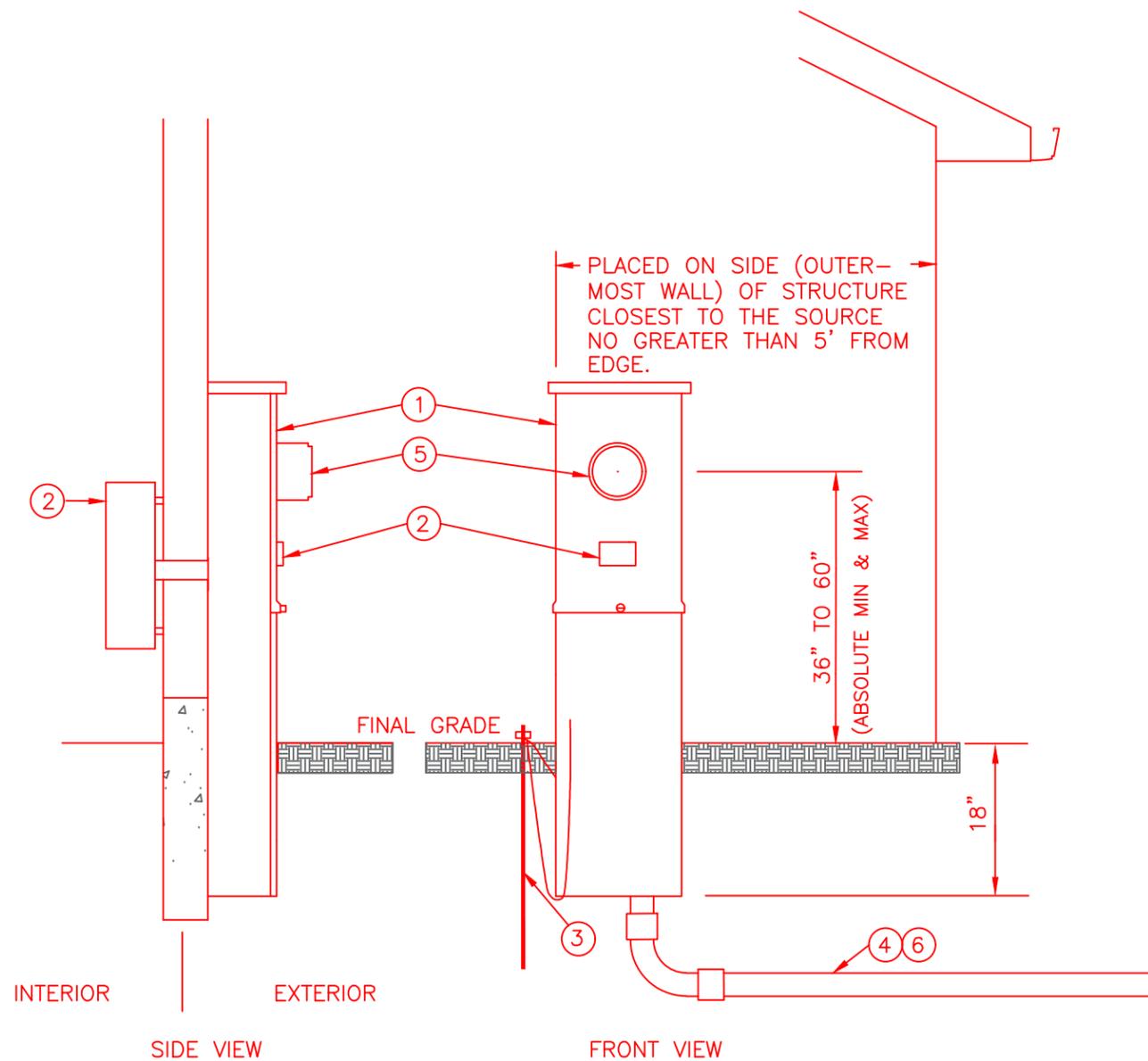
DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

12. SERVICE DROP DEAD END.
13. OVERHEAD SERVICE WIRES: THE WIRE FROM THE POLE THAT ATTACHES TO THE HOUSE.
14. CONNECTORS FOR CONNECTING CUSTOMER WIRES TO SERVICE DROP.
15. METER: A DEVICE THAT MEASURES THE AMOUNT OF ELECTRICITY CONSUMED BY THE CUSTOMER.

ADDITIONAL NOTES & REQUIREMENTS:

16. 2"x4" BLOCKING, SOLIDLY INSTALLED BETWEEN RAFTERS.
17. ALL MATERIALS AND HARDWARE MUST BE RATED FOR OUTDOOR USE AND BE CORROSION RESISTANT. ZINC HARDWARE IS NOT PERMITTED.
18. IT IS THE CUSTOMER'S SOLE RESPONSIBILITY TO ENSURE THAT ALL EQUIPMENT, HARDWARE, ATTACHMENTS PROVIDED BY THE CUSTOMER MEET APPLICABLE CODES AND GOVERNING JURISDICTION REQUIREMENTS.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT	RESIDENTIAL OVERHEAD SERVICE				DATE: 11-06-02				
	MAST THROUGH ROOF				PAGE 1 OF 1				
ELECTRIC STANDARDS				100-200 AMP SERVICE				STD. NO.	
C50-3230								C50-3230	
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	REMOVED TABLES, UPDATED NOTES, AND FIXED DIMENSIONS.	FCA	PPC					



NOTES:

CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. METER TROUGH/SOCKET: A DEVICE THE METER PLUGS INTO. REFER TO STANDARD E50-0020 FOR METER SOCKET REQUIREMENTS.
2. DISCONNECTING MEANS:
 - 2.1. RESIDENTIAL UP TO 200A SERVICES – IF THE DISTANCE BETWEEN THE METER SOCKET AND THE MAIN BREAKER IS GRATER THAN 5FT, AN EXTERNAL LOAD-BREAK DISCONNECT IS REQUIRED AND LOCATED WITHIN 2FT FORM THE METER.
 - 2.2. COMMERCIAL SERVICES – AN EXTERNAL LOAD-BREAK DISCONNECT IS REQUIRED AND LOCATED WITHIN 2FT FROM THE MAIN DISCONNECT.
3. GROUND ROD AND GROUNDING SYSTEM SIZED & INSTALLED PER NEC REQUIREMENTS.
4. CONDUIT & SERVICE CABLE – CUSTOMER OWNED AND INSTALLED FOR COMMERCIAL SERVICES.

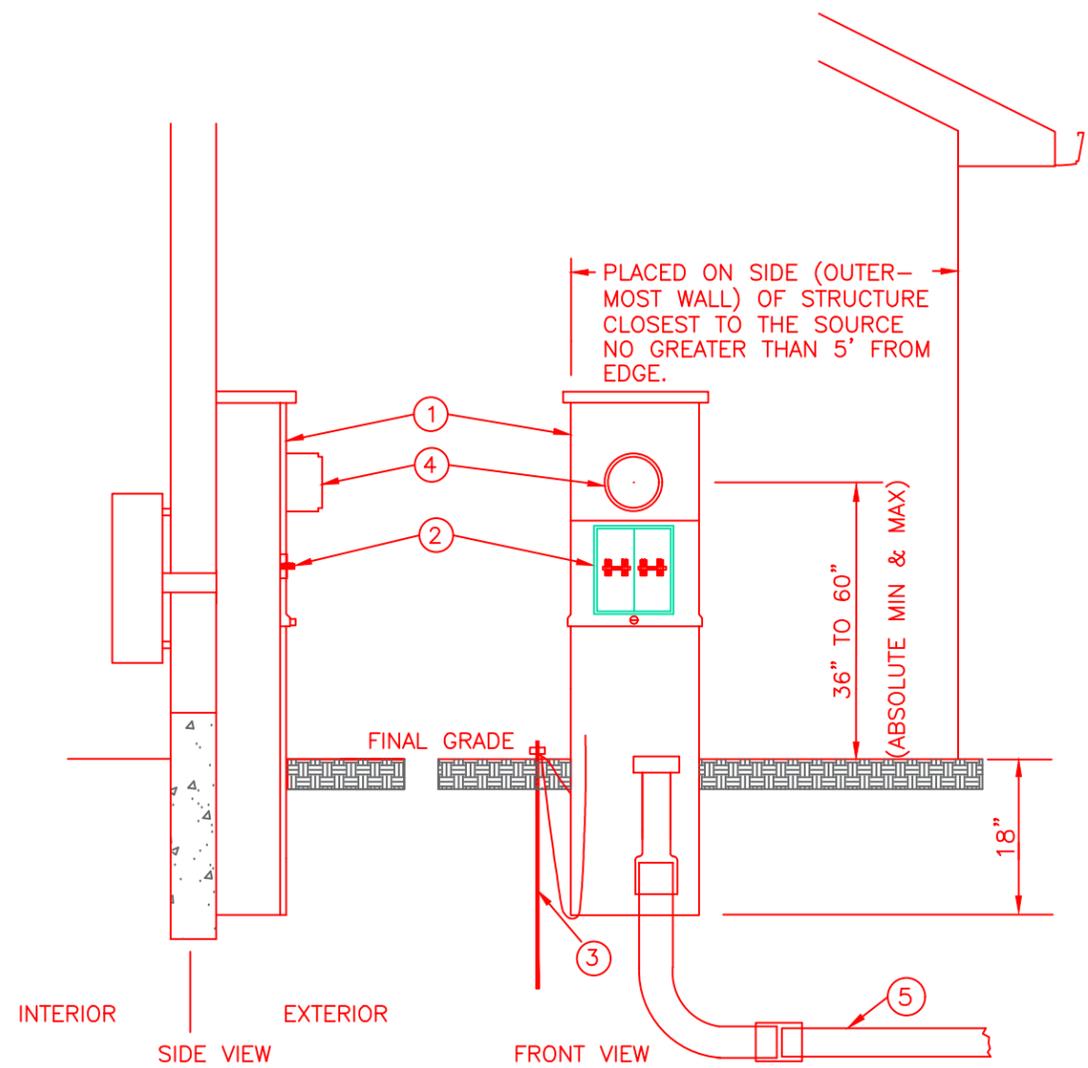
DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

5. METER: A DEVICE THAT MEASURES THE AMOUNT OF ELECTRICITY CONSUMED BY THE CUSTOMER.
6. CONDUIT AND SERVICE CONDUCTORS – DPU-E OWNS AND INSTALLS THE CONDUIT AND SERVICE CABLE FOR RESIDENTIAL SERVICES. ALL ASSOCIATED COSTS ARE THE RESPONSIBILITY OF THE CUSTOMER.

ADDITIONAL NOTES & REQUIREMENTS:

7. FOR MULTI-METER INSTLLATIONS AT A SINGLE LOCATION, CUSTOMER MUST PROVIDE METER BANKS WITH A MAIN DISCONNECT.
8. ONLY A FULL SIZE NEUTRAL CONDUCTORS IS ALLOWED.
9. NO CUSTOMER GROUND WIRES ALLOWED IN DPU-E EQUIPMENT.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		RESIDENTIAL/COMMERCIAL UNDERGROUND				DATE: 04-08-07			
						PAGE 1 OF 1			
ELECTRIC STANDARDS		SERVICE 100-200 AMP SERVICE				STD. NO.			
						C50-3310			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	REMOVED TABLES AND UPDATED NOTES.	FCA	PPC					



NOTES:

CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. METER TROUGH/SOCKET: A DEVICE THE METER PLUGS INTO. REFER TO STANDARD E50-0020 FOR METER SOCKET REQUIREMENTS.
2. DISCONNECTING MEANS: A FACTORY INSTALLED OR EXTERNAL LOAD-BREAK DISCONNECT CAPABLE OF SAFELY INTERRUPTING 400 AMPS. THE DISCONNECT MUST BE AT A READILY ACCESSIBLE LOCATION OUTSIDE OF THE BUILDING OR STRUCTURE, WITHIN 2FT FROM THE METER.
3. GROUND ROD AND GROUNDING SYSTEM SIZED & INSTALLED PER NEC REQUIREMENTS.

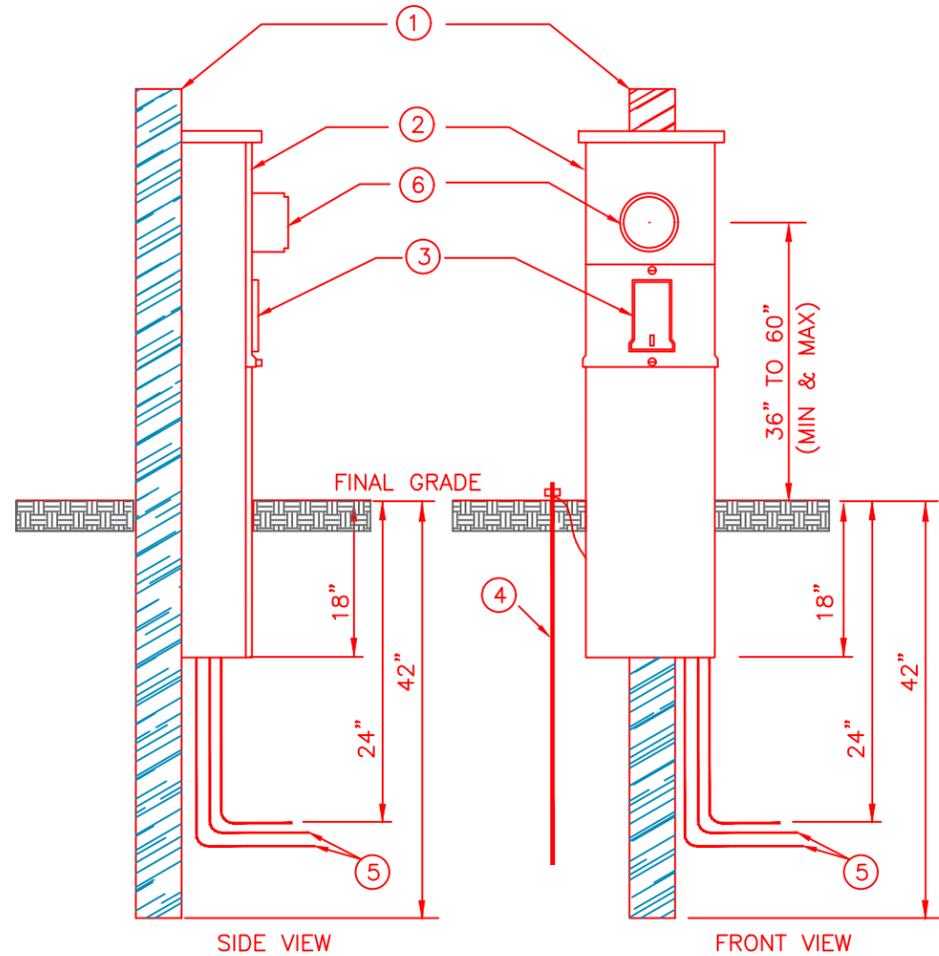
DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

4. METER: A DEVICE THAT MEASURES THE AMOUNT OF ELECTRICITY CONSUMED BY THE CUSTOMER.
5. CONDUIT AND SERVICE CONDUCTORS - DPU-E OWNS AND INSTALLS THE CONDUIT AND SERVICE CABLE FOR RESIDENTIAL SERVICES. ALL ASSOCIATED COSTS ARE THE RESPONSIBILITY OF THE CUSTOMER.

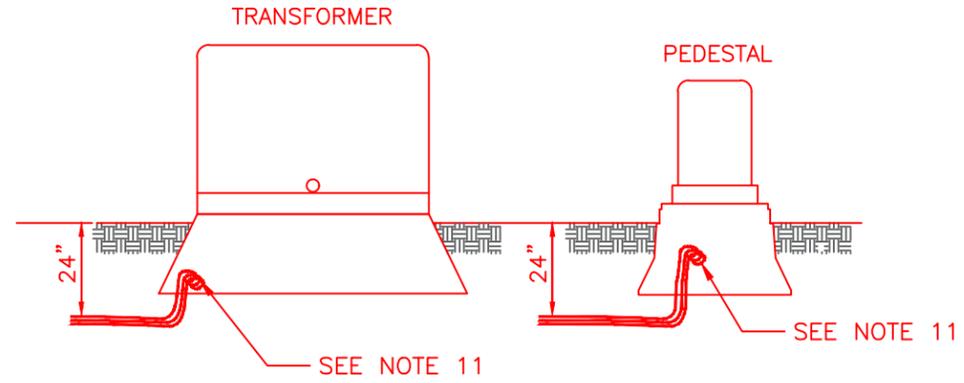
ADDITIONAL NOTES & REQUIREMENTS:

6. ONLY A FULL SIZE NEUTRAL CONDUCTOR IS ALLOWED.
7. NO CUSTOMER GROUND WIRES ALLOWED IN DPU-E EQUIPMENT.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT	RESIDENTIAL UNDERGROUND SERVICE				DATE: 05-31-06				
	400A MAX. 320A CONT. WITH LOAD-BREAK DISCONNECT				PAGE 1 OF 1				
ELECTRIC STANDARDS				LOAD-BREAK DISCONNECT				STD. NO.	
C50-3311									
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	REMOVED TABLES AND UPDATED NOTES.	FCA	PPC					



METER TROUGH WITH MAIN DISCONNECT FACTORY INSTALLED



NOTES:

CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. 4"x4" PRESSURE TREATED POST.
2. METER TROUGH/SOCKET: A DEVICE THE METER PLUGS INTO. REFER TO STANDARD E50-0020 FOR METER SOCKET REQUIREMENTS.
3. DISCONNECTING MEANS: A FACTORY INSTALLED OR EXTERNAL LOAD-BREAK DISCONNECT CAPABLE OF SAFELY INTERRUPTING THE FULL SERVICE CAPACITY. THE DISCONNECT MUST BE AT A READILY ACCESSIBLE LOCATION, WITHIN 2FT FROM THE METER.
4. GROUND ROD AND GROUNDING SYSTEM SIZED & INSTALLED PER NEC REQUIREMENTS.
5. CONDUIT AND SERVICE CONDUCTORS (CONTRACTOR INSTALLED) PER NEC REQUIREMENTS.

DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

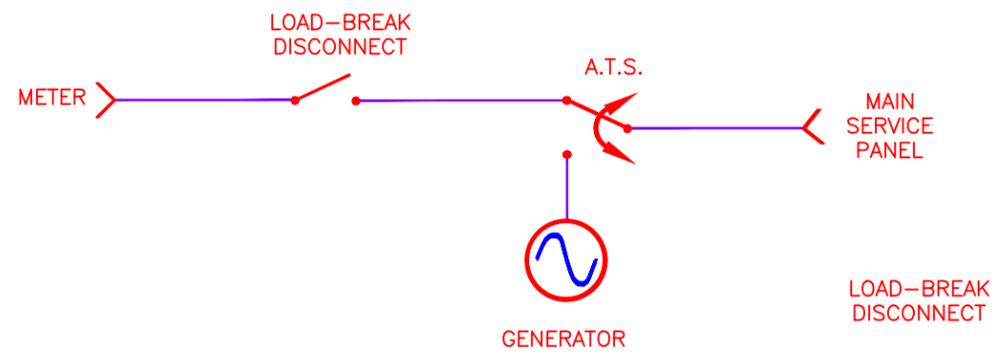
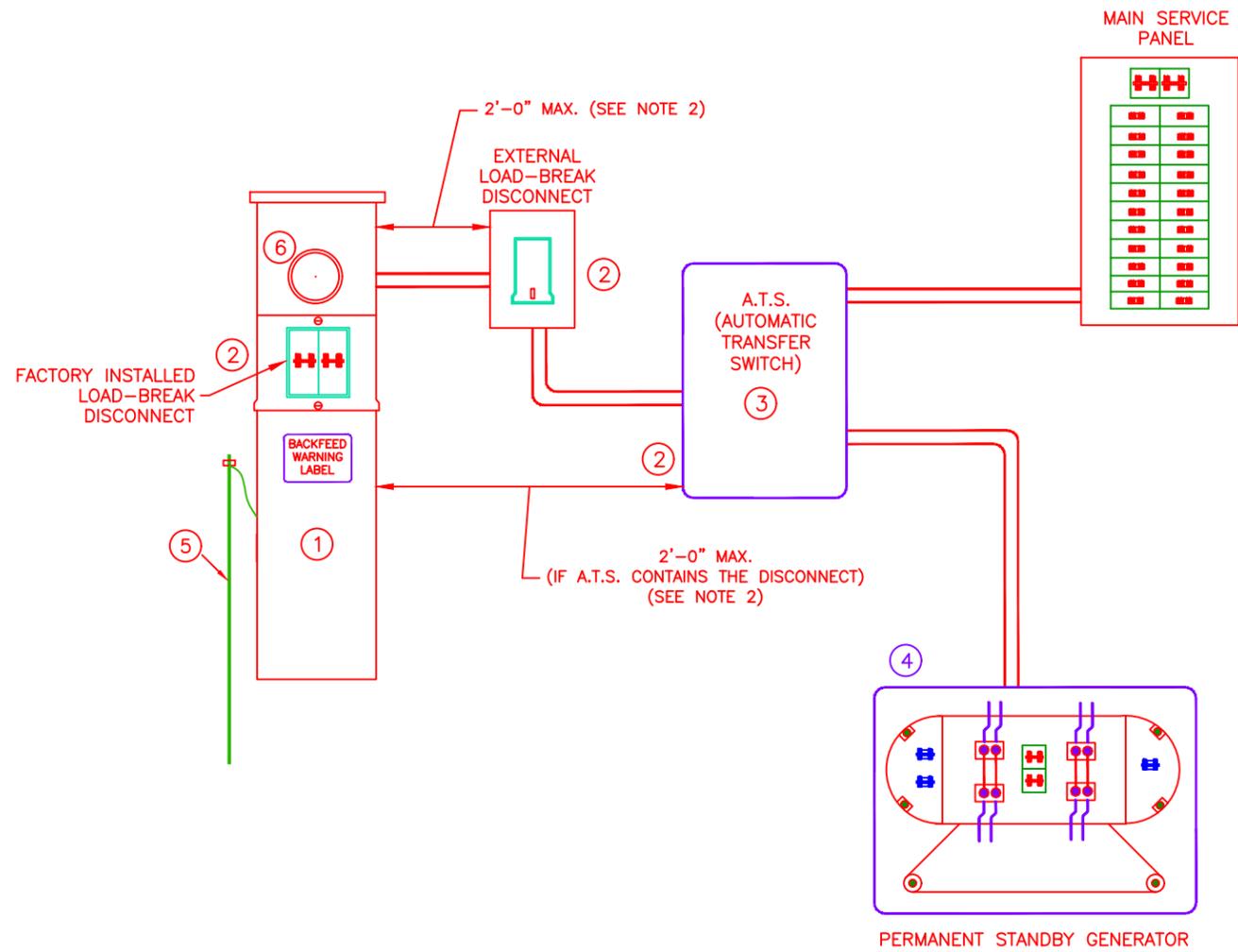
6. METER: A DEVICE THAT MEASURES THE AMOUNT OF ELECTRICITY CONSUMED BY THE CUSTOMER.

ADDITIONAL NOTES & REQUIREMENTS:

7. ONLY A FULL SIZE NEUTRAL CONDUCTOR IS ALLOWED.
8. NO CUSTOMER GROUND WIRES ALLOWED IN DPU-E EQUIPMENT.
9. ALL HARDWARE MUST BE RATED FOR OUTDOOR USE, TYPICALLY GALVANIZED OR STAINLESS STEEL

10. SERVICE MUST BE TRENCHED IN AT A DEPTH OF 24" AND A TRENCH INSPECTION MUST BE DONE BEFORE BACKFILL IS COMPLETED. CALL 630-420-6080 TO SCHEDULE AND INSPECTION WITH TED (TRANSPORTATION, ENGINEERING AND DEVELOPMENT BUSINESS GROUP).
11. CONTRACTOR TO UNDERDIG THE TRANSFORMER VAULT OR PEDESTAL TO LEAVE AN 8FT COIL OF WIRE FOR DPU-E TO CONNECT. CORE DRILLING, CUTTING, OR ANY OTHER METHOD THAT MAY DAMAGE THE DPU-E VAULT, PEDESTAL OR EXISTING CONDUCTORS IS STRICTLY PROHIBITED.
12. METER TROUGH ASSEMBLY SHALL BE AT LEAST 5FT-15FT FROM DPU-E POINT OF ATTACHMENT.
13. METER THROUGH ASSEMBLY SHALL BE AT LEAST 5FT FROM EXCAVATION.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		RESIDENTIAL/COMMERCIAL & TEMPORARY FREE STANDING METER TROUGH 100-200 AMP SERVICE				DATE: 04-11-07			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C50-3320			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/19/25	REMOVED TABLES AND UPDATED NOTES.	FCA	PPC					



NOTES:

CUSTOMER FURNISHES, INSTALLS AND MAINTAINS:

1. A METER TROUGH/SOCKET: A DEVICE THE METER PLUGS INTO.
2. A LOAD-BREAK DISCONNECT SWITCH THAT ISOLATES THE UTILITY GRID FROM ALL NON-UTILITY SOURCES AND LOADS. THE DISCONNECT MAY BE A FACTORY INSTALLED THAT IS BUILT INTO THE METER THROUGH/SOCKET, AN EXTERNAL DISCONNECT, OR THE A.T.S. HAS AN INTEGRATED LOAD-BREAK DISCONNECT. THE LOAD-BREAK DISCONNECT MUST BE WITHIN 2FT OF THE METER, LABELED APPROPRIATELY, AND MEET ALL APPLICABLE NEC REQUIREMENTS.
3. AN AUTOMATIC TRANSFER SWITCH (A.T.S.) TO SWITCH POWER SOURCES UTILITY OR GENERATOR TO THE CUSTOMER'S MAIN SERVICE PANEL.
4. A PERMANENT STANDBY GENERATOR TO PROVIDE AN ALTERNATE POWER SOURCE.
5. GROUNDING ROD AND SYSTEM TO MEET ALL APPLICABLE NEC REQUIREMENTS FOR THE INSTALLATION.

DPU-E FURNISHES, INSTALLS, AND MAINTAINS:

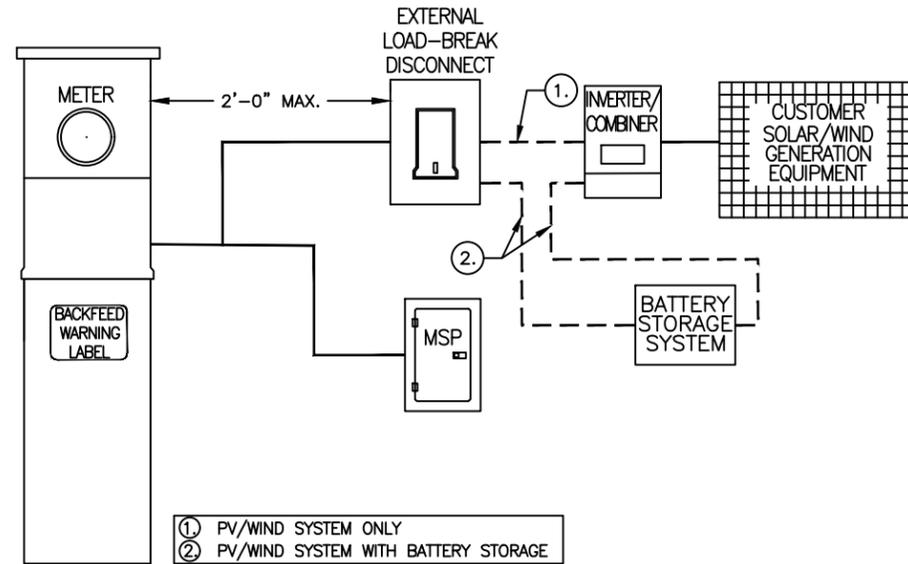
6. METER: A DEVICE THAT MEASURE THE AMOUNT OF ELECTRICITY USED BY THE CUSTOMER.

ADDITIONAL NOTES:

7. ALL OUTDOOR EQUIPMENT MUST BE RATED FOR OUTDOOR USE.
8. THE INSTALLATION MUST ABIDE BY CITY OF NAPERVILLE SERVICE RULES AND POLICIES, AND THE NATIONAL ELECTRICAL CODE VERSION ADOPTED BY THE CITY.
9. A GENERATOR PERMIT FROM THE TRANSPORTATION, ENGINEERING AND DEVELOPMENT (TED) BUSINESS GROUP IS REQUIRED FOR THE INSTALLATION OF A GENERATOR.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		CUSTOMER REQUIREMENTS FOR PERMANENT STANDBY GENERATOR				DATE: 11-10-09			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C50-5100			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	11/26/25	REMOVED TABLES, UPDATED ALL NOTES.	FCA	PPC					

FIGURE 1.) SUPPLY/LINE SIDE CONNECTION (RESIDENTIAL)



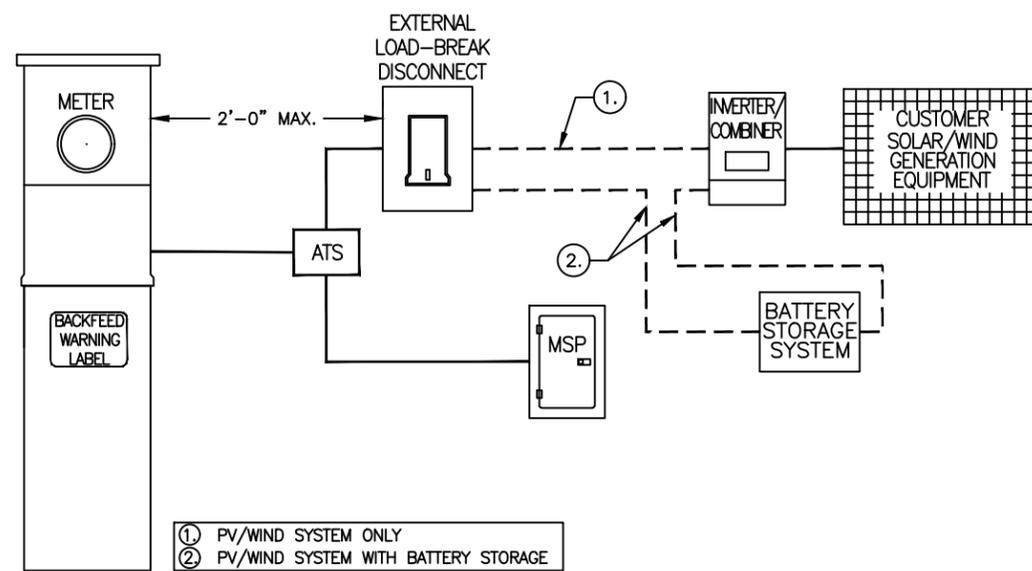
DEFINITIONS:

- A. DPU-E – DEPARTMENT OF PUBLIC UTILITIES ELECTRIC
- B. LINE/SUPPLY SIDE CONNECTION: A SUPPLY SIDE CONNECTION IS A TAP CONNECTION ON THE CONDUCTORS CARRYING METERED ENERGY, THAT IS LOCATED BETWEEN THE METER AND THE CUSTOMER MAIN BREAKER. ONLY RESIDENTIAL SERVICES (DETACHED OR DUPLEX SINGLE FAMILY HOUSING) MAY BE CONFIGURED IN A LINE/SUPPLY SIDE CONNECTION MANNER.
- C. LOAD SIDE CONNECTION: A LOAD SIDE CONNECTION IS A BREAKER CONNECTION THAT IS LOCATED AFTER THE CUSTOMER'S MAIN SERVICE PANEL BREAKER. COMMERCIAL AND RESIDENTIAL SERVICES MAY BE CONFIGURED IN A LOAD SIDE CONNECTION MANNER.
- D. ATS – AUTOMATIC TRANSFER SWITCH.
- E. MSP – MAIN SERVICE PANEL
- F. METER – A DEVICE THAT MEASURES THE AMOUNT OF ELECTRICITY CONSUMED AND GENERATED BY THE CUSTOMER (OWNED AND INSTALLED BY DPU-E).

NOTES:

1. RENEWABLE ENERGY GENERATION SYSTEM (SOLAR PHOTOVOLTAIC OR A WIND TURBINE SYSTEM) MUST ABIDE BY THE LATEST CITY OF NAPERVILLE APPROVED EDITION OF THE NATIONAL ELECTRICAL CODE AND DPU-E SERVICE RULES AND POLICIES. THE INSTALLATION MUST ALSO COMPLY WITH UL 1741 AND IEEE 1547 STANDARDS AND ALL SUBSEQUENT REVISIONS.
2. THE NET METERING SYSTEM MAY NOT EXCEED 1 MEGAWATT NAMEPLATE RATING OF ALTERNATING CURRENT (1MW AC).
3. FOR LINE/SUPPLY SIDE & LOAD SIDE CONNECTIONS, THE GENERATING SYSTEM'S OUTPUT CURRENT MUST NOT EXCEED THE AMPACITY OF THE SERVICE ENTRANCE CONDUCTORS OR THE RATING OF THE MAIN SERVICE PANEL BREAKER.
4. REFER TO FIGURES 1-6 FOR ACCEPTABLE SYSTEM CONFIGURATIONS. THESE FIGURES SERVE AS A CONCEPTUAL GUIDE FOR THE GENERATING SYSTEM'S POINT OF INTERCONNECTION WITH THE UTILITY METER. THEY ARE NOT COMPLETE SCHEMATICS. ADDITIONAL COMPONENTS, WIRE SIZING, AND PROTECTION DEVICES REQUIRED BY THE NEC AND OTHER APPLICABLE CODES AND STANDARDS MUST BE INCLUDED IN THE FINAL DESIGN.
5. REFER TO STANDARD E50-5200 FOR ADDITIONAL CUSTOMER REQUIREMENTS FOR RENEWABLE ENERGY SYSTEMS.
6. A DRIVEN GROUND: A SAFETY CONNECTION TO PROVIDE AN ELECTRICAL PATH BETWEEN THE EQUIPMENT AND EARTH GROUND (8' X 5/8" COPPER CLAD GROUND ROD). REFER TO THE NEC FOR PROPER GROUNDING WIRE SIZES FOR YOU INSTALLATION.
7. FOR RESIDENTIAL SERVICES, THE LOAD BREAK DISCONNECT MAY BE FACTORY INSTALLED BUILT INTO THE METER TROUGH OR A STAND-ALONE TYPE DISCONNECT INSTALLED WITHIN 2FT OF THE METER THROUGH ASSEMBLY.
8. FOR COMMERCIAL SERVICES, LOAD BREAK DISCONNECTS MUST BE WITHIN 2FT OF THE MAIN SERVICE DISCONNECT.

FIGURE 2.) SUPPLY/LINE SIDE CONNECTION (RESIDENTIAL, W/BATTERY, W/ATS)



 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		CUSTOMER REQUIREMENTS FOR NET METERING SYSTEM				DATE: 11-10-09			
						PAGE 1 OF 2			
ELECTRIC STANDARDS						STD. NO.			
						C50-5200			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/01/25	UPDATED APPROVED SYSTEM CONFIGURATIONS.	FCA	PPC					

FIGURE 3.) SUPPLY/LINE SIDE CONNECTION (RESIDENTIAL, W/BATTERY, W/ATS, W/GENERATOR)

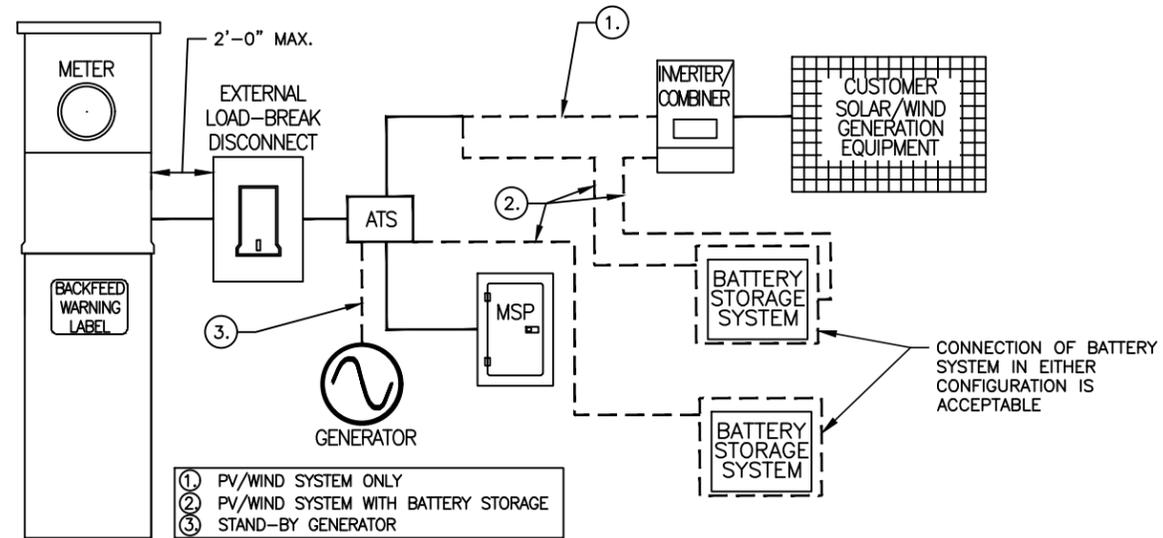


FIGURE 5.) LOAD SIDE CONNECTION (ALL COMMERCIAL & RESIDENTIAL, W/BATTERY)

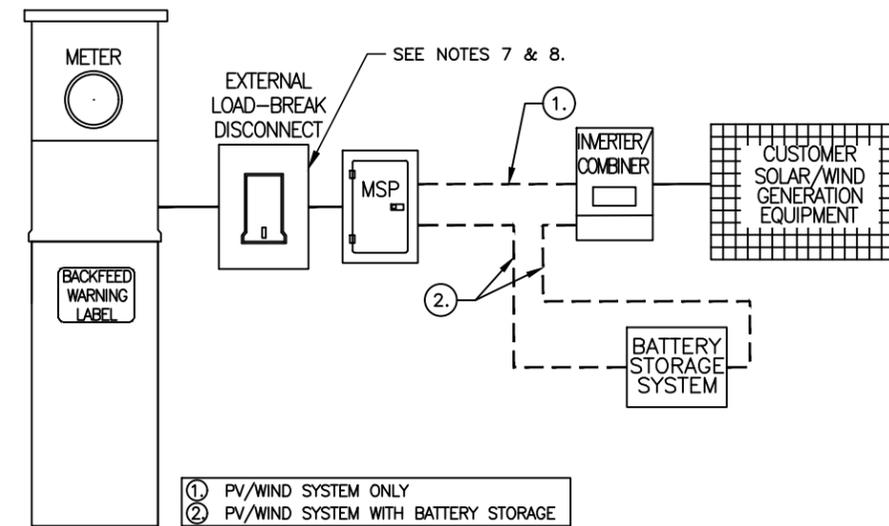


FIGURE 4.) LOAD SIDE CONNECTION (200A RESIDENTIAL, W/BATTERY)

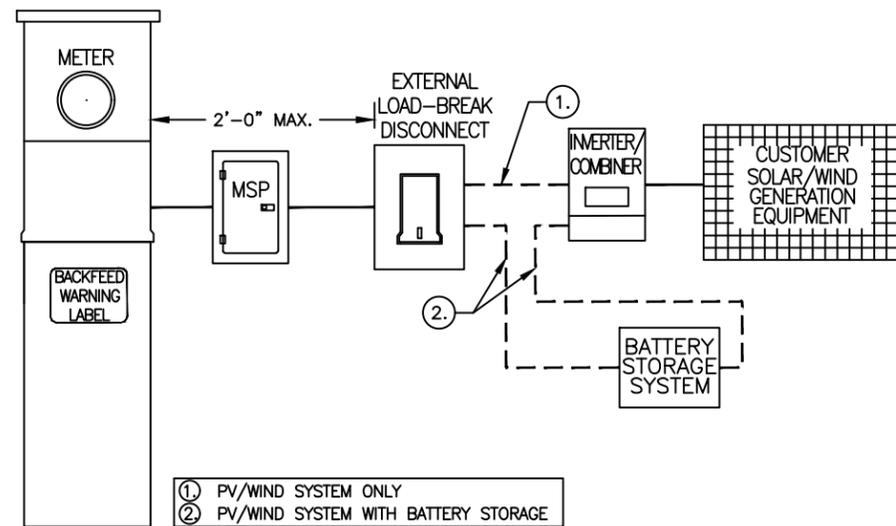
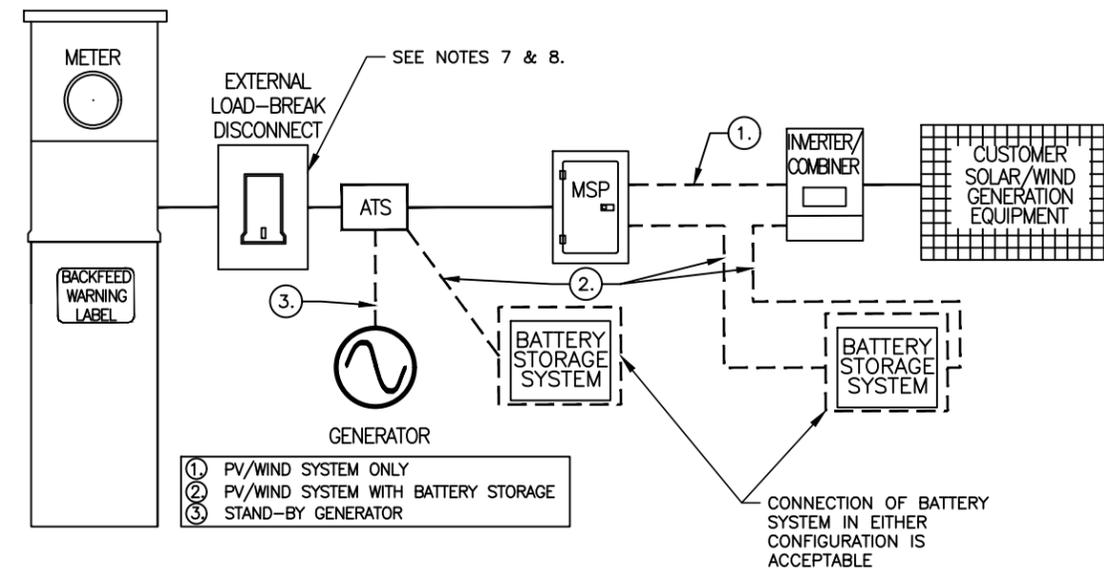
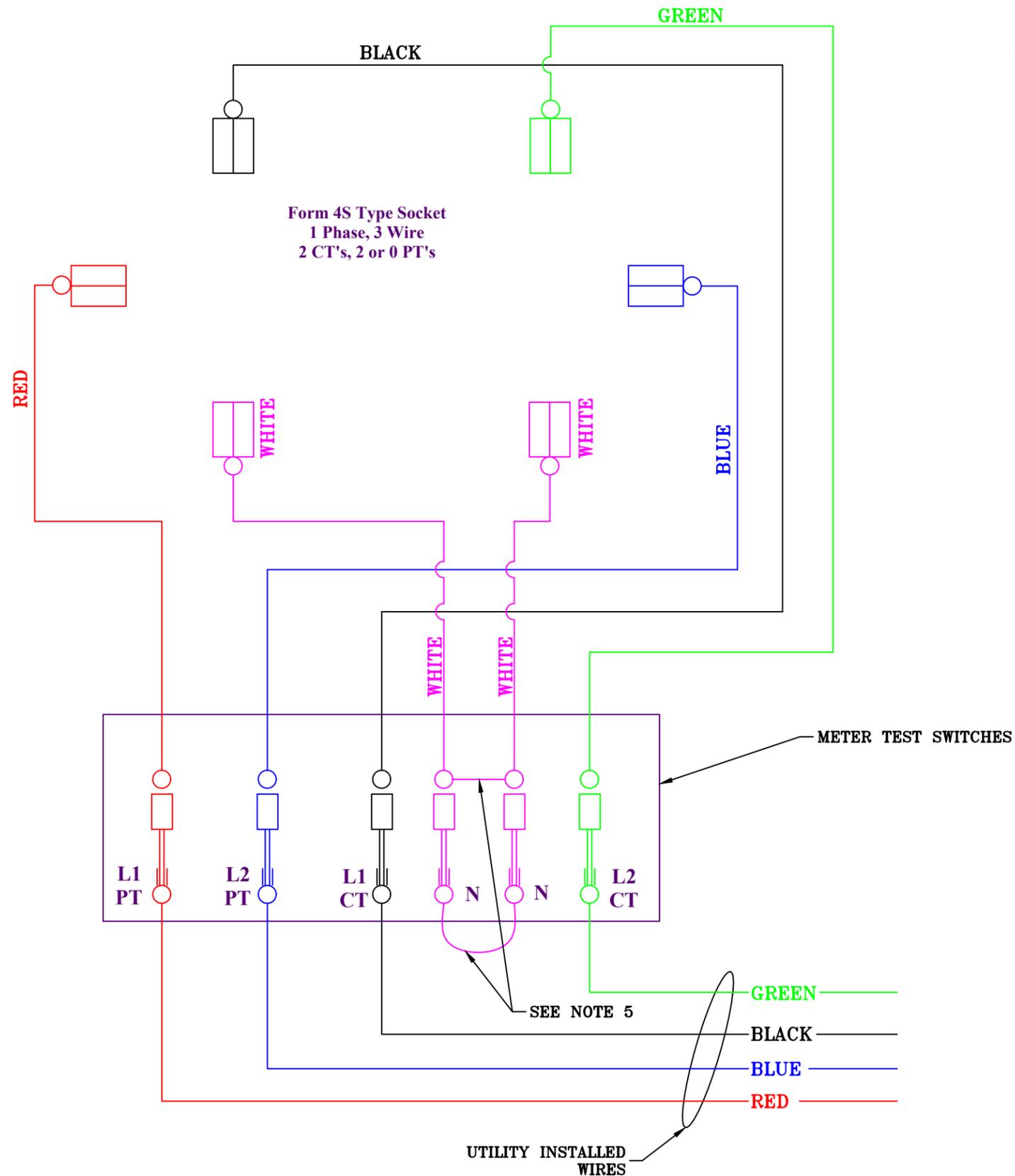


FIGURE 6.) LOAD SIDE CONNECTION (ALL COMMERCIAL & RESIDENTIAL, W/BATTERY, W/ATS, W/GENERATOR)



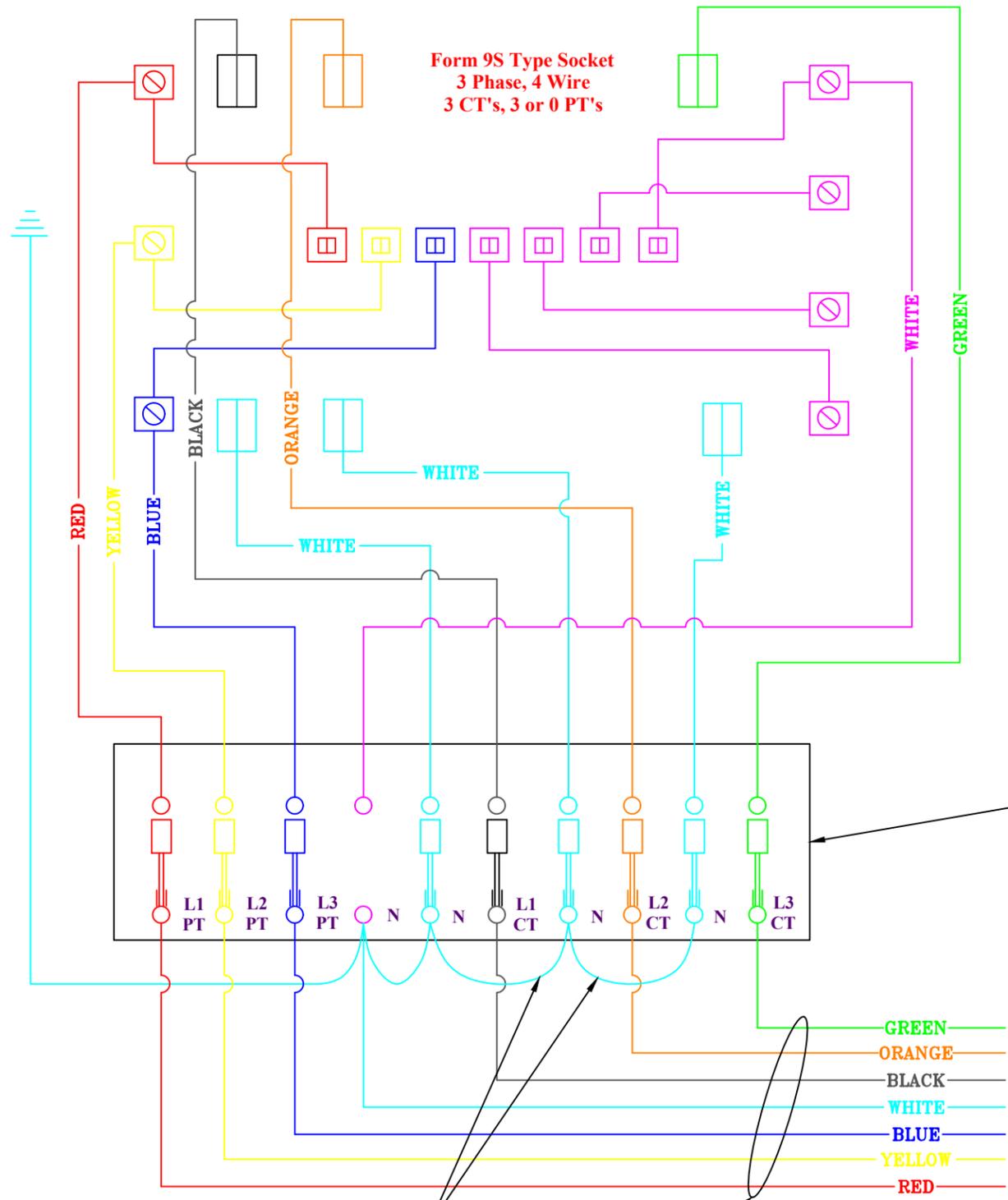
 NAPERVILLE PUBLIC UTILITIES DEPARTMENT	CUSTOMER REQUIREMENTS FOR NET METERING SYSTEM						DATE: 11-10-09		
							ELECTRIC STANDARDS		PAGE 2 OF 2
						STD. NO.			
						C50-5200			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	12/01/25	UPDATED APPROVED SYSTEM CONFIGURATIONS.	FCA	PPC					



NOTES:

1. HEIGHT TO CENTER OF METER MUST BE BETWEEN 54"-66".
2. METER SOCKET MUST BE LABELED WITH ADDRESS (INCLUDING SUITE #) WITH 1" PERMANENT LABELS (NO MARKERS).
3. 1" CONTINUOUS CONDUIT TO METER SOCKET FROM CT/PT CABINET (NO CONDULETS).
4. ALL WIRING COLOR CODING & POSITIONING SHALL MATCH THIS STANDARD, NO EXCEPTIONS.
5. IN LIEU OF INDICATED SOLID NEUTRAL BAR, A NEUTRAL WIRE IS AN ACCEPTABLE ALTERNATIVE.
6. WIRES MUST BE 12 AWG, EITHER SOLID OR STRANDED. ALL CONNECTIONS AND TERMINATIONS MUST BE COMPATIBLE WITH THE SELECTED WIRE TYPE. IF USING STRANDED WIRE, ENSURE TERMINATIONS ARE SPECIFICALLY RATED FOR STRANDED CONDUCTORS.

 NAPERVILLE PUBLIC UTILITIES DEPARTMENT		METER SOCKET FOR INSTRUMENT TRANSFORMER INSTALLATIONS 1-PHASE, 3-WIRES, 6 TERMINAL, OVER 200A				DATE: 06-24-04			
						PAGE 1 OF 1			
ELECTRIC STANDARDS						STD. NO.			
						C50-6010			
REV#	DATE	DESCRIPTION	REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	08/01/18	REVISED DIMENSIONS	PPC	S. KHAN					
2	11/26/25	UPDATED FORMATTING AND NOTE 6	FCA	PPC					

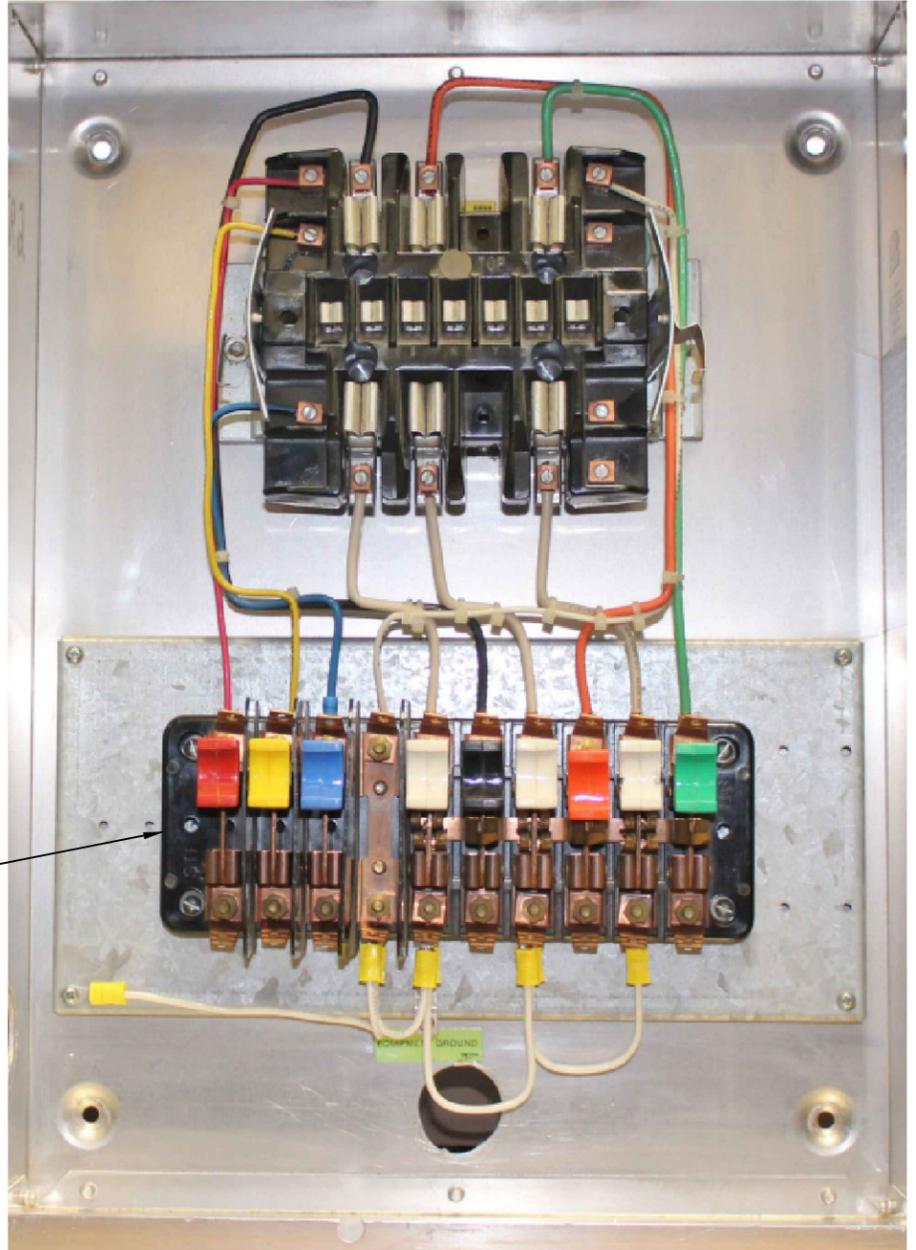


Form 9S Type Socket
3 Phase, 4 Wire
3 CT's, 3 or 0 PT's

METER TEST SWITCHES

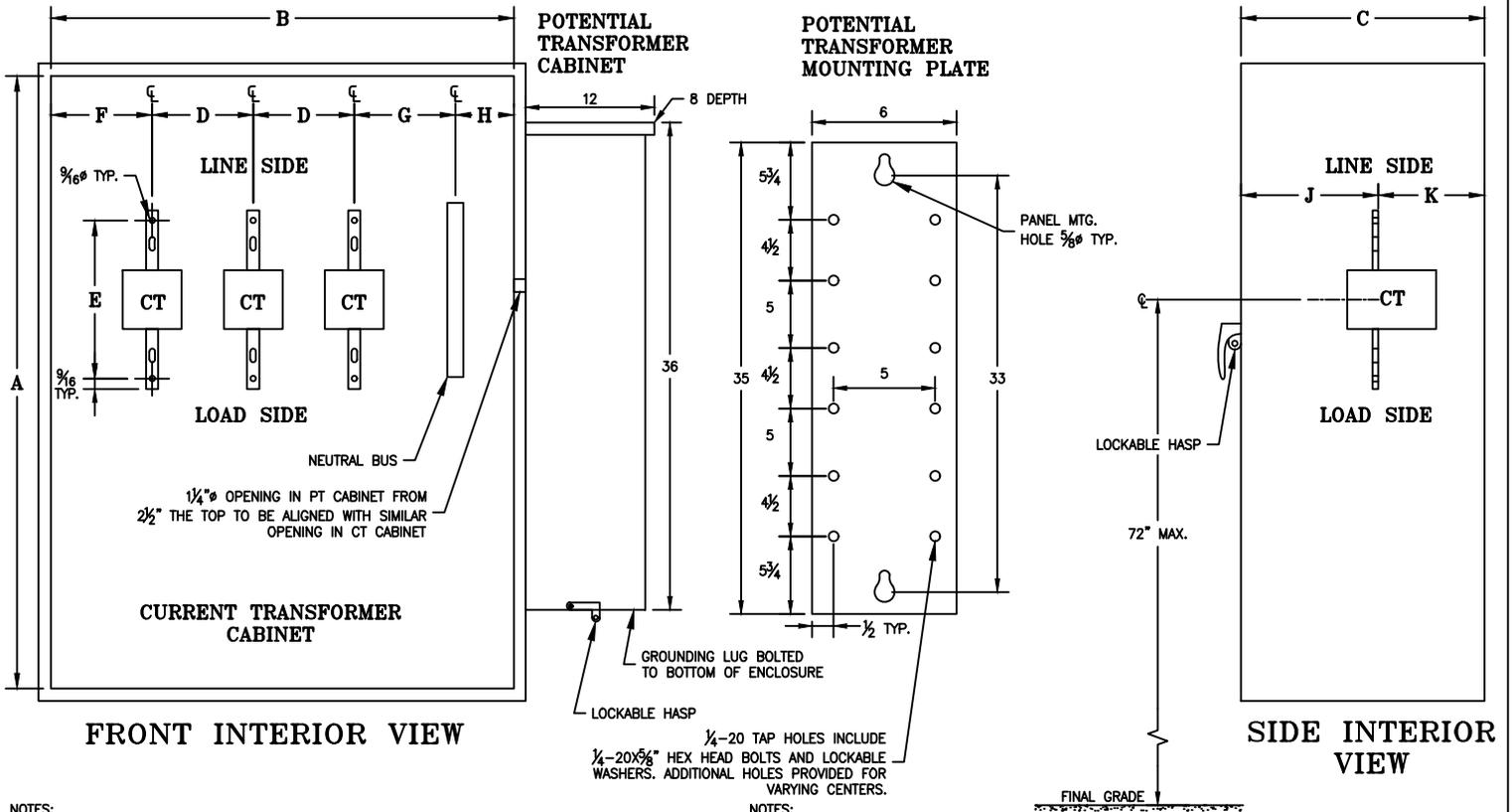
SEE NOTE 5
UTILITY INSTALLED WIRES

- NOTES:**
- HEIGHT TO CENTER OF METER MUST BE BETWEEN 54"-66".
 - METER SOCKET MUST BE LABELED WITH ADDRESS (INCLUDING SUITE #) WITH 1" PERMANENT LABELS (NO MARKERS).
 - 1" CONTINUOUS CONDUIT TO METER SOCKET FROM CT/PT CABINET (NO CONDULETS).
 - ALL WIRING COLOR CODING & POSITIONING SHALL MATCH THIS STANDARD, NO EXCEPTIONS.
 - IN LIEU OF INDICATED NEUTRAL WIRES, A SOLID NEUTRAL BAR IS AN ACCEPTABLE ALTERNATIVE.
 - WIRES MUST BE 12 AWG, EITHER SOLID OR STRANDED. ALL CONNECTIONS AND TERMINATIONS MUST BE COMPATIBLE WITH THE SELECTED WIRE TYPE. IF USING STRANDED WIRE, ENSURE TERMINATIONS ARE SPECIFICALLY RATED FOR STRANDED CONDUCTORS.



 NAPERVILLE PUBLIC UTILITIES DEPARTMENT	METER SOCKET FOR INSTRUMENT TRANSFORMER INSTALLATIONS 3-PHASE, 4-WIRES, 13 TERMINALS				DATE: 06-24-04					
					PAGE 1 OF 1					
					STD. NO. C50-6310					
ELECTRIC STANDARDS				REV BY	APPVD BY	REV#	DATE	DESCRIPTION	REV BY	APPVD BY
1	09/21/15	ADDED NEUTRAL JUMPER NOTE	M. DIAB	S. KHAN	4	06/15/24	ADDED NOTES 4, 5 & CALLOUTS	FCA	MMV/PPC	
2	08/03/18	REPLACED WITH CORRECT PICTURE AND DIMENSIONS	RA	TF	5	11/26/25	UPDATED NOTES 1, 2 & 6	FCA	PPC	
3	06/18/19	NEUTRAL CONNECTIONS	M. DIAB	TF						

INSTRUMENT TRANSFORMER CABINET



- NOTES:**
1. ALL ACCESSIBLE COMPARTMENTS WITH SERVICE ENTRANCE CABLES MUST BE LOCKABLE. ENCLOSURE MUST BE LOCKED BY DPU-E, NOT BY THE CUSTOMER.
 2. CABINETS MUST BE LABELED WITH LINE SIDE (TOP) AND LOAD SIDE (BOTTOM).
 3. ONE INCH CONTINUOUS CONDUIT (NO CONDULETS) RUN FROM CABINET TO THE METER SOCKET WITHIN 50FT.
 4. NEUTRAL CONNECTION REQUIRED (INDICATE LOCATION ON CATALOG CUT SHEET).
 5. NO SPLICING OF SERVICE ENTRANCE CONDUCTOR ALLOWED IN CABINET.
 6. FAULT CURRENT RATING MUST MEET NEC 110.10 REQUIREMENTS.
 7. ALL MOUNTING AND DIMENSIONS MUST BE PRE-APPROVED.
 8. ALL DIMENSIONS ARE IN INCHES (1 INCH = 2.54 CM).

- NOTES:**
9. CONDUCTORS INSIDE THE CABINET SHALL NOT BE PUSHING/TOUCHING THE CURRENT TRANSFORMERS (CTs).
 10. SIDE WIRING GUTTER OR SIMILAR MAY BE NECESSARY TO INSTALL LINE SIDE CONDUCTORS ON THE TOP.
 11. ALL 480/277 VOLTAGE SERVICES THAT ARE EQUAL TO OR GREATER THAN 400AMPS REQUIRE POTENTIAL TRANSFORMERS (PTs).
 12. PTs CAN BE MOUNTED ON A SIDE PT CABINET OR INSIDE THE CT CABINET. SEE TABLE 2 BELOW FOR UTILITY PROVIDED PT EQUIPMENT INFORMATION.
 13. REFER TO STANDARD C50-6310 FOR 3-PH 4-WIRE CURRENT TRANSFORMER METERING.
 14. REFER TO STANDARD C50-6010 FOR 1-PH 3-WIRE CURRENT TRANSFORMER METERING.
 15. ALL WIRING FROM CTs & PTs TO CUSTOMER PROVIDED METER TEST SWITCHES ARE INSTALLED BY THE UTILITY ONLY. CT/PT WIRING INSTALLED BY CUSTOMER WILL BE REMOVED AND REPLACED.
 16. MAXIMUM HEIGHT FROM FINAL GRADE TO CT CENTERLINE SHALL NOT EXCEED 72 INCHES.

Service Amp Rating	Voltage	MINIMUM DIMENSIONS - (INCH)									
		A	B	C	D	E	F	G	H	J	K
400	208/120	40	24	8	5	10 7/8	3 1/4	4 3/4	2 1/2	4 1/2	3 1/2
400	480/277										
600	208/120	40	24	8	6	10 7/8	3 1/4	6 1/4			
600	480/277										
800	208/120										
800	480/277										

SERVICE SIZE		CT SPECIFICATIONS						PT SPECIFICATIONS				
AMP	NO. PHASES	CT TYPE	CT CATALOG #	MFR	CT RATIO	CT QTY.	BUSBAR CATALOG NUMBER	PT QTY.	CT CATALOG #	MFR	PT Type	DIMENSIONS - (INCH) HxWxD
400	1	CBT-S	923A496G01	ABB	600:5	2	BB INCLUDED	2	7526A10G03	ABB	PPM	6x6 1/8x5 3/4
400	3					3		3				
600	1					2		2				
600	3					3		3				
800	3					3		3				

CT TYPE: CBT-S



PT TYPE: PPM



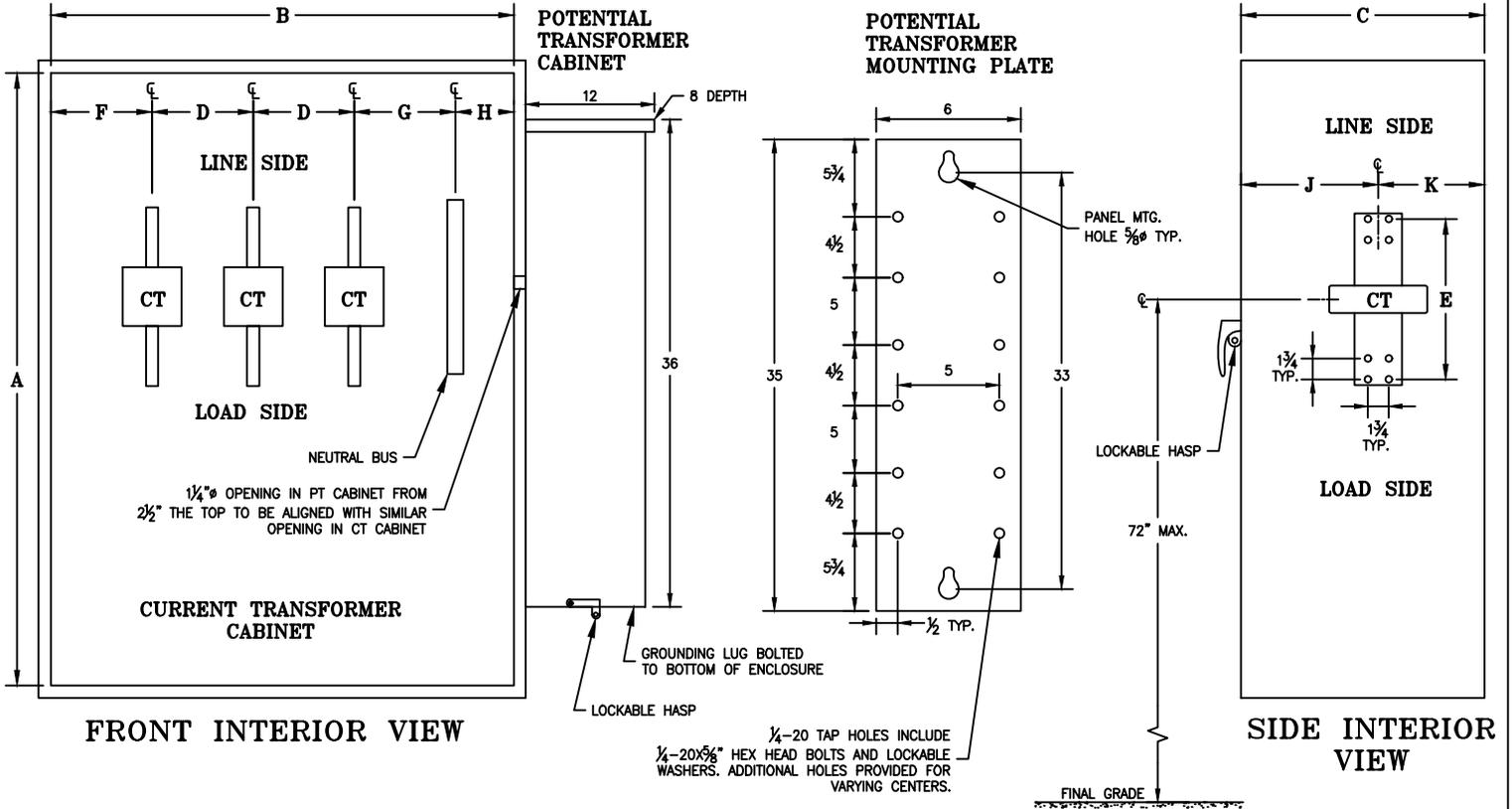
NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	INSTRUMENT TRANSFORMER CABINET UP TO 800A	DATE: 10-24-04
		PAGE 1 OF 2 C50-6330

STANDARD REVISION HISTORY

REVISION	DATE	DESCRIPTION	REVISED BY	CHECKED BY	APPROVED BY
1	9/8/2014	Updated Dimensions	M. Diab	M. Diab	S. Khan
2	1/23/2018	Updated CTs, PTs and Bus bar data	R. Arshed	S. Khan	T. Ferrebee
3	10/15/2018	Corrected/Formated Dimensions	S. Khan	L. Slate	T. Ferrebee
4	1/5/2019	Updated PT mounting plate and enclosure and dimensions	S. Khan	L. Slate	T. Ferrebee
5	4/22/2024	Update CT cabinet min. dimensions & CT model numbers.	FCA	MMV	PPC
6	7/15/2024	Updated dimensions "F" & "B" for 600Amp services.	FCA	MMV	PPC
7	2/20/2025	Added CT height requirements.	FCA	MMV	PPC
8	12/31/2025	Updated dim. "B,F,J, & K" for 800A, dim. "D & G" for 400A & CT model for 800A.	FCA	MMV	PPC

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	INSTRUMENT TRANSFORMER CABINET UP TO 800A	DATE: 10-24-04
		PAGE 2 OF 2 C50-6330

INSTRUMENT TRANSFORMER CABINET



- NOTES:**
- * DEPTH COULD BE 15 INCHES WITH SIDE GUTTERS.
 - ALL ACCESSIBLE COMPARTMENTS WITH SERVICE ENTRANCE CABLES MUST BE LOCKABLE. ENCLOSURE MUST BE LOCKED BY DPU-E, NOT BY THE CUSTOMER.
 - CABINETS MUST BE LABELED WITH LINE SIDE (TOP) AND LOAD SIDE (BOTTOM).
 - ONE INCH CONTINUOUS CONDUIT (NO CONDULETS) RUN FROM CABINET TO THE METER SOCKET WITHIN 50FT.
 - NEUTRAL CONNECTION REQUIRED (INDICATE LOCATION ON CATALOG CUT SHEET).
 - NO SPLICING OF SERVICE ENTRANCE CONDUCTOR ALLOWED IN CABINET.
 - FAULT CURRENT RATING MUST MEET NEC 110.10 REQUIREMENTS.
 - ALL MOUNTING AND DIMENSIONS MUST BE PRE-APPROVED.
 - ALL DIMENSIONS ARE IN INCHES (1 INCH = 2.54 CM).
 - CONDUCTORS INSIDE THE CABINET SHALL NOT BE PUSHING/TOUCHING THE CURRENT TRANSFORMERS (CTs).
 - ALL 480/277 VOLTAGE SERVICES THAT ARE EQUAL TO OR GREATER THAN 400AMPS REQUIRE POTENTIAL TRANSFORMERS (PTs).
 - PTs CAN BE MOUNTED ON A SIDE PT CABINET OR INSIDE THE CT CABINET. SEE TABLE 2 BELOW FOR UTILITY PROVIDED PT EQUIPMENT INFORMATION.

- NOTES:**
- REFER TO STANDARD C50-6310 FOR 3-PH 4-WIRE CURRENT TRANSFORMER METERING.
 - ALL WIRING FROM CTs & PTs TO CUSTOMER PROVIDED METER TEST SWITCHES ARE INSTALLED BY THE UTILITY ONLY. CT/PT WIRING INSTALLED BY CUSTOMER WILL BE REMOVED AND REPLACED.
 - BUSBARS & SPACERS ON EACH PHASE MUST BE SPACED 1/4" EQUIDISTANTLY (EQUAL TO THE THICKNESS OF ONE BUSBAR). SEE TABLE 3 FOR BUSBAR INFORMATION.
 - INSTALLED BUSBARS MUST BE IDENTICAL CATALOG NUMBER (MANUFACTURER, CONDUCTOR, LENGTH, AND CROSS SECTION SIZE).
 - CLC TYPE BUSBAR RATING IS 1950A.
 - FOR PARALLEL BUSBAR ARRANGEMENTS, THE AMPACITY WILL CHANGE AS FOLLOWS:
 - TWO BARS WILL BE 3200A
 - THREE BARS WILL BE 4200A
 - FOUR BARS WILL BE 5100A
 - ALL MOUNTING AND DIMENSIONS MUST BE PRE-APPROVED.
 - MAXIMUM HEIGHT FROM FINAL GRADE TO CT CENTERLINE SHALL NOT EXCEED 72 INCHES.

Service Amp Rating	MINIMUM DIMENSIONS - (INCH)									
	A	B	C	D	E	F	G	H	J	K
1000-1200	64	36	21*	9	13 1/2	5	7	3	7 1/2	6
1600	64	36	21*	9	13 1/2	5	7	3	7 1/2	6
2000	64	40	21*	9	13 1/2	5	7	3	7 1/2	6
2500	64	40	21	9	13 1/2	5	7	3	7 1/2	6
3000 and Above	64	40	21	10	13 1/2	5 1/2	7	3	7 1/2	6

SERVICE SIZE		CT SPECIFICATIONS					PT SPECIFICATIONS					
AMPS	NO. PHASES	CT TYPE	CT CATALOG #	MFR	CT RATIO	CT QTY.	BUSBAR CATALOG NUMBER	PT QTY.	CT CATALOG #	MFR	PT Type	DIMENSIONS - (INCH) HxWxD
1000 THRU 1950	3	CLC-S	923A533G02	ABB	1500:5	3	9628A05G23	3	7526A10G03	ABB	PPM	6x6 1/8x5 3/4
2000 THRU 3200												
>3200 THRU 4000												

SERVICE SIZE		BUSBAR SPECIFICATIONS						
AMPS	NO. PHASES	BUSBAR CATALOG #	MFR	MATERIAL	LENGTH (INCH)	THICKNESS (INCH)	WIDTH (INCH)	TOTAL BUSBARS
1000 THRU 1950	3	9628A05G2(3-6)	ABB	Cu	14 1/2	1/4	4	3
2000 THRU 3200								6
>3200 THRU 4000								9

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	INSTRUMENT TRANSFORMER CABINET OVER 800A	DATE: 10-24-04 PAGE 1 OF 2 C50-6335
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STANDARD REVISION HISTORY

REVISION	DATE	DESCRIPTION	REVISED BY	CHECKED BY	APPROVED BY
1	9/8/2014	Updated Dimensions	M. Diab	M. Diab	S. Khan
2	1/23/2018	Updated CTs, PTs and Bus bar data	R. Arshed	S. Khan	T. Ferrebee
3	10/15/2018	Corrected/Formatted Dimensions	S. Khan	L. Slate	T. Ferrebee
4	1/5/2019	Updated PT mounting plate and enclosure and dimensions	S. Khan	L. Slate	T. Ferrebee
5	2/20/2025	Added CT height requirements, notes & pt information.	FCA	MMV	PPC
6	12/31/2025	Updated dim. "A" from 66 to 64 inches min. & CT/PT information.	FCA	MMV	PPC

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	INSTRUMENT TRANSFORMER CABINET OVER 800A	DATE: 10-24-04
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WORST CASE FAULT CURRENT FOR DISTRIBUTION TRANSFORMERS SECONDARY SIDE

Fault currents for 120/208V and 277/480V 3Ø Transformers

***Worst case scenario**

***If transformer nameplate impedance is known, nominal fault current can be calculated using procedure on Page 2.**

TRF (KVA)	TRF % Z	SEC VOLT (L-G)	SEC VOLT (L-L)	PRIMARY VOLT	SYM FAULT CURRENT	TRF IMP (Ω)
75	1.00	120	208	12470	20,802	0.0058
150	1.20	120	208	12470	34,671	0.0035
225	1.20	120	208	12470	52,006	0.0023
300	1.20	120	208	12470	69,344	0.0017
500	1.50	120	208	12470	92,457	0.0013
750	5.30	120	208	12470	39,220	0.0031

150	1.20	277	480	12470	15,022	0.01844
225	1.20	277	480	12470	22,542	0.01224
300	1.20	277	480	12470	30,056	0.00922
500	1.50	277	480	12470	40,075	0.00691
750	5.30	277	480	12470	17,022	0.01636
1000	5.30	277	480	12470	22,680	0.01222
1500	5.40	277	480	12470	33,400	0.00837
2000	5.40	277	480	12470	44,522	0.00622
2500	5.75	277	480	12470	52,272	0.00529

Fault currents for 120/240V 1Ø Transformers

***Worst case scenario**

1Ø Overhead Transformers:

TRF (KVA)	TRF % Z	SEC VOLT (L-G)	SEC VOLT (L-L)	PRIMARY VOLT	SYM FAULT CURRENT	TRF IMP (Ω)
10	1.2	120	240	7200	3,472	0.0691
25	1.6	120	240	7200	6,511	0.0369
37	1.7	120	240	7200	9,069	0.0265
50	1.6	120	240	7200	13,022	0.0184
75	1.8	120	240	7200	17,361	0.0138
100	1.8	120	240	7200	23,144	0.0104
167	1.9	120	240	7200	36,622	0.0066

1Ø Underground Transformers:

TRF (KVA)	TRF % Z	SEC VOLT (L-G)	SEC VOLT (L-L)	PRIMARY VOLT	SYM FAULT CURRENT	TRF IMP (Ω)
10	1.6	120	240	7200	2,604	0.0922
25	1.6	120	240	7200	6,511	0.0369
37	1.6	120	240	7200	9,637	0.0249
50	1.5	120	240	7200	13,888	0.0173
75	1.5	120	240	7200	20,836	0.0115
100	1.5	120	240	7200	27,777	0.0086
167	2.0	120	240	7200	34,791	0.0069

NOTE: Above fault current values are worst-case symmetrical amps. Asymmetrical values are typically **25%** greater.

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Calculating 3Φ Fault Current at the Secondary
Transformer Terminals

Fault currents listed in the table are worst case values based on minimum transformer impedances. Actual transformer impedance may vary depending on manufacturer. If actual transformer impedance is known, a more realistic fault current can be determined. Use the following formulas to convert transformer nameplate impedance (%Z) to low side ohms (Ω). The phase to neutral voltage divided by the low side ohms will equal the available fault current at the secondary terminals.

$$Z_{\Omega \text{ low side}} = \frac{10 \times (\text{kV}_{\phi-\phi})^2 \times \%Z}{\text{KVA}} \quad \text{and} \quad I_{\text{fault}} = \frac{V_{\phi\text{-neutral}}}{Z_{\Omega \text{ low side}}}$$

Example A:

Calculate the secondary fault current for a 3Φ 225KVA - 277/480v transformer with a nameplate impedance of 2.3 percent.

$$Z_{\Omega \text{ low side}} = \frac{10 \times (0.48)^2 \times 2.3}{225} = 0.023552 \Omega$$

$$I_{\text{fault}} = \frac{277}{0.023552} = 11,761 \text{ amps}$$

Example B:

Calculate the secondary fault current for a 3Φ 300KVA - 120/208v transformer with a nameplate impedance of 1.64 percent.

$$Z_{\Omega \text{ low side}} = \frac{10 \times (0.208)^2 \times 1.64}{300} = 0.002365 \Omega$$

$$I_{\text{fault}} = \frac{120}{0.002365} = 50,740 \text{ amps}$$

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NAPERVILLE DEPARTMENT OF PUBLIC UTILITIES – ELECTRIC

TYPICAL ELECTRIC METER SOCKET DEVICE REQUIREMENTS

Voltage	Phases	Wires	Amp	Bypass	Type	Use	Term/ Jaws	Form	CT	PT	Disconnect Required	Notes
120/240	1	3	200	Horn or Lever	OH or UG	Res.	4	2S	NO	NO	*NO	*If main panel is more than 5ft away from meter, a disconnect is required.
120/240	1	3	400	Lever	OH or UG	Res.	4	2S	NO	NO	YES	
120/240	1	3	600	Switch	OH or UG	Res.	6	4s	YES	NO	YES	DPU-E Standard C50-6010 (CT cabinet required)
120/240	1	3	200	Horn or Lever	OH or UG	Com.	4	2S	NO	NO	YES	
120/240	1	3	>200	Switch	OH or UG	Com.	6	4S	YES	NO	YES	DPU-E Standard C50-6010 (CT cabinet required)
120/208	1	3	200	Horn or Lever	OH or UG	Res./Com.	5	12S	NO	NO	YES	Neutral Jaw at 9-O'-Clock position.
120/208	3	4	200	Lever	OH or UG	Com.	7	16S	NO	NO	Yes	
120/208	3	4	>200	Switch	OH or UG	Com.	13	9S	YES	NO	Yes	DPU-E Standard C50-6310 (CT cabinet required)
277/480	3	4	200	Lever	OH or UG	Com.	7	16S	NO	NO	YES	A disconnect is required on the line and load side of the meter.
277/480	3	4	>200	Switch	OH or UG	Com.	13	9S	YES	YES	YES	DPU-E Standard C50-6310 (CT/PT cabinet required)
Grandfathered Services - Not Available For New Services or Upgrades												
120/240	3	4	200	lever	OH/UG	com.	7	15S	NO	NO	YES	
120/240	3	4	>200	switch	OH	com.	13	8S	YES	NO	YES	DPU-E Standard C50-6310 (CT cabinet required)

Purpose and Scope

The purpose of this standard is to provide a comprehensive list of meter socket requirements for all secondary service classes DPU-E provides.

Definitions:

- DPU-E – Department of Public Utilities Electric
- TED – Transportation, Engineering and Development
- OH – Overhead
- UG – Underground
- Com. – Commercial
- Res. – Residential
- CT – Current Transformers (Instrument Transformer)
- PT – Potential Transformer (Instrument Transformer)
- SR&P - Service Rules & Policies (DPU-E)

NAPERVILLE PUBLIC UTILITIES DEPARTMENT		TYPICAL ELECTRIC METER SOCKET DEVICE REQUIREMENTS		DATE: 05/25/12	
ELECTRIC STANDARDS				Page 1 of 2 E50-0020	
REV #	DATE	DESCRIPTION		EE	SR/EE
1	11/28/2025	Condensed the table and added additional notes.		FCA	PPC

Notes:

1. The City of Naperville has adopted the 2017 NEC code book, in addition to DPU-E’s Service Rules and Policies. Refer to these documents for additional rules and regulations.
2. This list does not relieve the installer or contractor from the responsibility of meeting the rating requirements of NEC 110-9 & 110-10.
3. All commercial metering equipment must be submitted to DPU-E for approval prior to ordering.
4. Meter banks must be submitted for approval, and jaw configurations must match those indicated in this standard.
5. Instrument transformer meter sockets & test switches must meet DPU-E standards C50-6310 (3-PH, 4W, 13Term) or C50-6010 (1-PH, 3W, 6 Term) in combination with the CT/PT cabinet requirements per DPU-E standards C50-6330 (Up to 800A) & C50-6335 (Over 800A).
6. All meter sockets must be ringless. (SR&P 22.5.B)
7. All meters must maintain a suitable approach with no obstructions within 4 feet of the front and 2 feet of the sides of the meter. (SR&P 22.2.F)
8. Line conductors shall have adequate slack to prevent damage from thermal contraction. Expansion fittings must be used when applicable.
9. Commercial and industrial services require the meter, disconnect, and CT/PT cabinet (if required) to be mounted outside within 50 feet from the transformer and be accessible by truck. (SR&P 10.3)
10. CTs and PTs are to be provided by DPU-E. DPU-E performs the wiring from CTs/PTs to the test switches.
11. For services less than 200A, meter socket requirements must meet 200A socket requirements above for the respective voltage class.
12. All meter sockets must be rated for outdoor use and located outside the structure.
13. For residential services, an additional disconnect is required for services greater than 200A or when the main panel is more than 5 feet from the meter.
14. UG single-phase electric meters up to 240 volts, 200A (up to 320A residential) shall be installed with trough-type meter sockets. (SR&P 22.5.A(i)).
15. DPU-E determines and designates all meter locations for new, modified, or rehabilitated installations. Location will be designated during the permitting process.
16. Meter Heights: Height is measured from final grade to the center of the meter.
 - a. Residential OH & UG (Single Meters - No CTs or PTs):
 - i. 36” Min. – 60” Max.
 - b. Commercial/Industrial (Single Meters – No CTs or PTs):
 - i. 36” Min. – 60” Max.
 - c. Meter Banks (No CTs or PTs)
 - i. 30” Min. – 72” Max.
 - d. Meters with CTs/PTs
 - i. 54” Min. – 66” Max.
17. Fire pumps shall be per NEC Article 695 for all electrical requirements.
18. Meter sockets with imbedded protective load disconnects may be used, or an external disconnect may be added to meet disconnect requirements. Separate disconnects must be with 2’-0” of the meter trough assembly.
19. For a list of approved meter sockets and CT/PT cabinets, refer to the DPU-E Standard E50-0025 Approved Meter Sockets and CT/PT Cabinets List.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT		TYPICAL ELECTRIC METER SOCKET DEVICE REQUIREMENTS	DATE: 05/25/12	
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LIST OF APPROVED METER MOUNTING EQUIPMENT

Notes:

1. The meter socket devices listed in this standard are pre-approved for use but do not represent an exhaustive list. Customers may propose alternate meter sockets; however, **any device not listed must be submitted to DPU-E for review and approval** prior to purchasing.
2. Devices listed below may require additional components to fully comply with meter socket requirements outlined in DPU-E standard E50-0020 and the DPU-E Service Rules and Policies. It is the responsibility of the installer to ensure all components meet applicable standards.
3. Vendors interested in having their meter socket products considered for inclusion in this standard are encouraged to submit a complete list of proposed devices to the DPU-E Standards Engineer at AcvedoF@naperville.il.us.
4. The lists of approved equipment models are subject to periodic review and expansion. Additional manufacturers may be added in the future.

ABBREVIATIONS:

BKR - Breaker	MTS - Meter Test Switches	TR - Transformer Rated
CAB. - Cabinet	PROV. - Provisions	M.C.B. - Main Circuit Breaker
CT - Current Transformer	PT - Potential Transformer	P.C.M.S. - Pressure Contact Main Switch
DISC. - Disconnect	REQ. - Required	
EXT. - Extension	SEP. - Separate	

TABLE 1: APPROVED METER SOCKETS (200A-400A RESIDENTIAL & 200A COMMERCIAL)

120/240V 1-PHASE, 3-WIRE (SINGLE METER)					
Voltage	Type	Amp	Model No.	Manufacturer	Comments
120/240	OH	200	U8949-RL-TG-KK-CECHA	MILBANK	NO BRK
120/240	OH	100	U7375-RL-100-KK-CECHA	MILBANK	100A BKR
120/240	OH	100	U7607-RL-200-LL-CECHA	MILBANK	200A BKR
120/240	OH	320	U5059-X-2/200-K3L-IL	MILBANK	2-200A BKR
120/240	OH	200	UAT317-0PCH	SIEMENS/TALON	NO BRK
120/240	OH	320	48104-02	SIEMENS/TALON	NO BRK, SEP. DISC. REQ.
120/240	UG	200	U8436-O-CECHA+K5800 EXT.	MILBANK	NO BRK, EXT. REQ.
120/240	UG	100	U6689-O-100-KK	MILBANK	NO BRK, BRK PROV.
120/240	UG	200	U6689-O-200-KK	MILBANK	NO BRK, BRK PROV.
120/240	UG	320	U3849-O-2/200/-CECHA	MILBANK	2-200A BKR, S1848 EXT. MAY BE NEEDED
120/240	UG	200	UAP317-PPCH	SIEMENS/TALON	NO BRK, 5007718 EXT. MAY BE NEEDED
120/240	UG	200	UAPB317-PPCH	SIEMENS/TALON	100A OR 200A BRK, 5007718 EXT. MAY BE NEEDED
120/240	UG	320	47604PB-9CH	SIEMENS/TALON	2-200A BKR, EXT. MAY BE NEEDED
120/208V 1-PHASE, 3-WIRE (SINGLE METER)					
120/208	OH	200	U7607-RL-200-KK-CECHA+K5T EXT.	MILBANK	5TH JAW AT 9-O' CLOCK POS., 200A BKR
120/208	OH	200	MM0202B1200RJBX	SIEMENS/TALON	5TH JAW AT 9-O' CLOCK POS., 200A BKR
120/208	UG	100	U6689-O-100-KK+K5T	MILBANK	5TH JAW AT 9-O' CLOCK POS., NO BRK, BRK PROV., SEPT. DISC. REQ.

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120/208	UG	200	U6689-O-200-KK+K5T	MILKBANK	5TH JAW AT 9-O' CLOCK POS., NO BRK, BRK PROV., SEPT. DISC. REQ.
120/208	UG	200	UAPB317-PPCH+659-0121	SIEMENS/TALON	5TH JAW AT 9-O' CLOCK POS., 100A or 200A BKR, 5007718 EXT. MAY BE NEEDED
120/208V 3-PHASE, 4-WIRE (SINGLE METER)					
120/208	OH	200	U9701-RRL	MILKBANK	NO BRK, BRK PROV., SEP. DISC. REQ.
120/208	OH	200	40407-02CH	SIEMENS/TALON	NO BRK, BRK PROV., SEP. DISC. REQ.
120/208	UG	200	U9701-O-CECHA+S3488	MILKBANK	NO BRK, BRK PROV., SEP. DISC. REQ.
120/208	UG	200	40407P-9CH+5007720	SIEMENS/TALON	NO BRK, BRK PROV., SEP. DISC. REQ.

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METER SOCKET FOR INSTRUMENT TRANSFORMER

Notes:

1. Instrument transformer rated meter sockets must comply with DPU-E Standards C50-6010 and C50-6310, as applicable.
2. Transformer-rated meter sockets that meet DPU-E standards C50-6010 or C50-6310 with integrated test switches for CTs/PTs often have extended lead times due to limited commercial availability. Some manufacturers can supply these units via special order. Alternatively, the meter socket and test switches may be assembled separately, provided all components comply with applicable codes, DPU-E standards, and Service Rules & Policies (SR&P).
3. A cover is not required for meter test switches.

TABLE 2: APPROVED METER SOCKETS (600A RESIDENTIAL & >200A COMMERCIAL)

120/240V & 120/208V 1-PHASE, 3-WIRE, 6-TERMINAL (SINGLE METER)					
120/240V 120/208V	OH & UG	600A >200A	UC7478-RL-71	MILKBANK	NO BRK, SEP. DISC. REQ., CT CAB. REQ.
120/240V 120/208V	OH & UG	600A >200A	N-130	Erickson Electrical EQ. CO.	NO BRK, SEP. DISC. REQ., CT CAB. REQ.

TABLE 3: APPROVED METER SOCKETS (>200A COMMERCIAL)

120/480 & 277/480V 3-PHASE, 4-WIRE, 13-TERMINAL (SINGLE METER)					
120/208V 277/480V	OH & UG	>200	UC4927-O-21	MILKBANK	NO BRK, SEP. DISC. REQ., CT CAB. REQ. (PT CAB. REQ. for 277/480V)
120/208V 277/480V	OH & UG	>200	N-340	Erickson Electrical EQ. CO.	NO BRK, SEP. DISC. REQ., CT CAB. REQ. (PT CAB. REQ. for 277/480V)

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0	01/19/2026	Original standard creation.	FCA	PPC

APPROVED CT/PT CABINETS

Notes:

1. Current transformer cabinets shall comply with DPU-E standards C50-6330 (Up to 800A) & C50-6335 (Over 800A).
2. Cabinets may have provisions for both CTs & PTs in the same enclosure or separate enclosures.
3. Meter socket must be attached to the current transformer cabinet.
4. Load break devices may be in combination with the current transformer cabinet or separately.
5. CT cabinets designed for 3-phase, 4-wire (3Ø/4W) systems may also be used for single-phase, 3-wire (1Ø/3W) applications; however, single-phase cabinets may not be suitable for 3-phase systems.

TABLE 4: APPROVED CURRENT TRANSFORMER CABINETS

Manufacturer	Service Size	Phases/Wires/Voltage	Catalog No./Drawing No.	Notes
Kinney Electrical MFG. CO.	400A	3-PH / 4-WIRE/ (120/208V, 277/480V)	CTMB400NSVQ / 173579	W/M.C.B. & TR Meter Socket
	600A	3-PH / 4-WIRE/ (120/208V, 277/480V)	CTMB600NSVQ / 173580	W/M.C.B. & TR Meter Socket
	800A	3-PH / 4-WIRE/ (120/208V, 277/480V)	CTMB800NSVQ / 173581	W/M.C.B. & TR Meter Socket
	400A & 600A	3-PH / 4-WIRE/ (120/208V, 277/480V)	NACT468 / 172893	W/TR Meter Socket *Multiple devices on one drawing
	600A	1-PH / 3-WIRE/ (120/240V)	NACT468 / 172893	W/TR Meter Socket *Multiple devices on one drawing
	1200A & 1600A	3-PH / 4-WIRE/ (120/208V, 277/480V)	NACT1216 / 173436	W/TR Meter Socket *Multiple devices on one drawing
Erickson Electrical EQ. CO.	400A	3PH-4W & 1PH-3W (120/208V, 277/480V)	N-CTA*/CT-12100	W/M.C.B. & TR Meter Socket *Multiple devices on one drawing
	400A	3PH-4W (120/208V, 277/480V)	NCTA*425N-CM/ CMDOC- 01220.10(208) CMDOC-01220.11(480)	W/M.C.B. & TR Meter Socket *Multiple devices on one drawing
	400A	3PH-4W (120/208V)	NCTAT425N-CM/CMDOC- 01220.14	W/P.C.M.S. & TR Meter Socket *Multiple devices on one drawing
	400A	3PH-4W (120/208V, 277/480V)	N-CTMS465*/CT-12111	W/P.C.M.S. & TR Meter Socket *Multiple devices on one drawing
	400A	3PH-4W (277/480V)	NCTA"X"46"X"NPT-6CM/ CMDOC-01220.11	W/M.C.B. & TR Meter Socket *Multiple devices on one drawing
	400A	3PH-4W (277/480V)	NCTAT465NPT-CM/ CMDOC-01220.15	W/P.C.M.S. & TR Meter Socket *Multiple devices on one drawing
	400A	3PH-4W (120/208V, 277/480V)	CT44MF-NAP(-PT)/ CT- 01220.03	W/TR METER SOCKET (-PT) = 277/480V (PT ENCLOSURE)
	600A	3PH-4W (120/208V, 277/480V)	CT84MF-NAP(-PT)/ CT- 01230.03	W/TR METER SOCKET (-PT) = 277/480V (PT ENCLOSURE)
	600A	3PH-4W (277/480V)	NCTALD466NTP-6CM/ CMDOC-01220.11	W/M.C.B. & TR Meter Socket
	600A	3-PH / 4-WIRE/ (277/480V)	NCTAT466NPT-6CM/ CMDOC-01220.15	W/P.C.M.S. & TR Meter Socket
600A	3-PH / 4-WIRE/ (120/208V)	NCTAT426N-CM/ CMDOC- 01220.14	W/P.C.M.S. & TR Meter Socket	
600A	3-PH / 4-WIRE/ (120/208V)	NCTALD426N-CM/ CMDOC- 01220.10	W/M.C.B. & TR Meter Socket	

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	600A	3-PH / 4-WIRE/ (120/208V, 277/480V)	N-CTMS466*/CT-12116	W/P.C.M.S. & TR Meter Socket *Multiple devices on one drawing
	800A	3-PH / 4-WIRE/ (120/208V)	NCTAT427N-CM/ CMDOC-01220.14	W/P.C.M.S. & TR Meter Socket
	800A	3-PH / 4-WIRE/ (120/208V)	NCTAMD427N-CM/ CMDOC-01220.10	W/M.C.B. & TR Meter Socket
	800A	3-PH / 4-WIRE/ (120/208V, 277/480V)	N-CTMS467*/CT-12121	W/P.C.M.S. & TR Meter Socket *Multiple devices on one drawing
	800A	3PH-4W (277/480V)	NCTAMD467NTP-6CM/ CMDOC-01220.11	W/M.C.B. & TR Meter Socket
	800A	3-PH / 4-WIRE/ (277/480V)	NCTAT467NPT6CM/ CMDOC-01220.15	W/P.C.M.S. & TR Meter Socket
	1200A	3PH-4W (120/208V, 277/480V)	CT124-NAP(-PT)-SG/ CT-01240.03	W/TR METER SOCKET (-PT) = 277/480V (PT ENCLOSURE)
	1600A	3PH-4W (120/208V, 277/480V)	CT124-NAP(-PT)-SG/ CT-01250.03	W/TR METER SOCKET (-PT) = 277/480V (PT ENCLOSURE)
	2000A	3PH-4W (120/208V, 277/480V)	CT204-NAP(-PT)-SG/ CT-01260.03	W/TR METER SOCKET (-PT) = 277/480V (PT ENCLOSURE)

TABLE 5: APPROVED POTENTIAL TRANSFORMER CABINETS

Manufacturer	Size (HxWxD)	Catalog No./Drawing No.	Notes
Kinney Electrical MFG. CO.	36"x12"x8"	NAPV PT BOX / 113192	
Erickson Electrical EQ. CO.	36"x12"x8"	PTENCLOSURE36 / CT-01230.08	

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TABLE 6: MANUFACTURER & LOCAL REPRESENTATIVE CONTACT INFORMATION

Manufacturer	LOCATION	LOCAL REPRESENTATIVE
Kinney Electrical MFG. CO.	678 BUCKEYE ST, ELGIN, IL 60123 847-742-9600	
Erickson Electrical EQ. CO.	475 BONNIE LN, ELK GROVE VILLAGE, IL 60007 847-640-7701	MARK FRANZEN CHICAGO SALES AGENCY PH: 708-223-5900 CE: 847-302-2509
MILKBANK MFG. CO.	4801 DERAMUS AVE, KANSAS CITY, MO 64120 816-483-5314	REGIONAL SALES MANAGER: CHAD PALMER PH: 952-486-1842 EMAIL: CPALMER@MILBANKWORKS.COM

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RENEWABLE ENERGY GENERATOR

1. Purpose

To define the requirements for customers installing renewable energy systems (e.g., solar PV or a wind turbine system) that will be interconnected with the utility grid under a net metering arrangement. This standard applies to residential & commercial customers. This standard outlines only the requirements of the City of Naperville Department of Public Utilities Electric (DPU-E) and does not address National Electric Code (NEC) requirements for renewable energy systems.

2. Equipment

All equipment needed for a renewable energy generator is installed, owned, and maintained by the customer. All equipment must be recognized by an NRTL (Nationally Recognized Testing Laboratory).

NRTL List Link: (If link is not working, visit <https://www.osha.gov/> and search for NRTL current list) [OSHA's Nationally Recognized Testing Laboratory \(NRTL\) Program - Current List of NRTLs | Occupational Safety and Health Administration](#)

DPU-E provides, installs and owns the electric meter.

3. Installation

Renewable energy generation must abide by the latest City of Naperville approved edition of the National Electrical Code (NEC) and DPU-E service rules and policies. The installation must also comply with UL 1741 and IEEE 1547 standards and all subsequent revisions.

Renewable energy facilities may not be sized to exceed 1 megawatt nameplate rating of alternating current (1MW AC).

If an installation requires DPU-E to upgrade any of its facilities, all associated upgrade costs shall be the sole responsibility of the requesting party.

4. Permitting

A renewable energy generator must be installed under a building permit issued by the City of Naperville. All Equipment cutsheets must be submitted with the permit application.

To get credit for net metering, the customer must complete, sign, and submit an Interconnection Agreement. Refer to the City of Naperville website for additional guidelines.

Link: [Solar Panel Guidelines | The City of Naperville](#)

If the link is not working, visit the City of Naperville website at <https://www.naperville.il.us/>.

5. Supply/Line Side Connections (Residential)

- A supply/line side connection is a tap connection on the conductor carrying metered energy, that is located between the meter and the customer's main breaker. See Figure 1 for reference.
- Supply side connections are limited to detached or duplex single-family housing.
- For supply side tap connections, the generating system's output current must not exceed the ampacity of the service entrance conductors or the rating of the main service panel breaker.
- Supply side connections can only be made using approved connections. Connector must be insulated or come with an insulated cover. Lug adapters may be used but must be permanently secured onto the meter socket. Any wire insulation piercing connection is not allowed.
 - o Approved Manufacturer Tap Connections:
 - Milbank K4977 lug adaptor.
 - Polaris multitap insulated connectors.
 - Burndy multitap connectors.
 - NSi Industries, LLC T-Tap Connectors w/ cover.

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- ILSCO parallel tap connectors.

- A load-break disconnect is required and may be either factory-installed within the meter trough or provided as a stand-alone unit. The AC disconnect must be installed outdoors and be located within 2 feet of the utility electric meter.
- Refer to DPU-E standard C50-5200 for approved system configurations.

6. Load Side Connections (Commercial & Residential)

- A load side connection is a breaker connection that is located after the customer’s main service panel breaker. See Figure 2 for reference.
- All commercial services must be configured as a load side connection. Residential services may be configured in a load side connection.
- A load-break AC disconnect is required and must be outside within 2 feet of the main service disconnect.
- Refer to DPU-E standard C50-5200 for approved system configurations.

7. Supply & Load Side Connection Diagrams.

FIGURE 1. SUPPLY/LINE SIDE CONNECTION

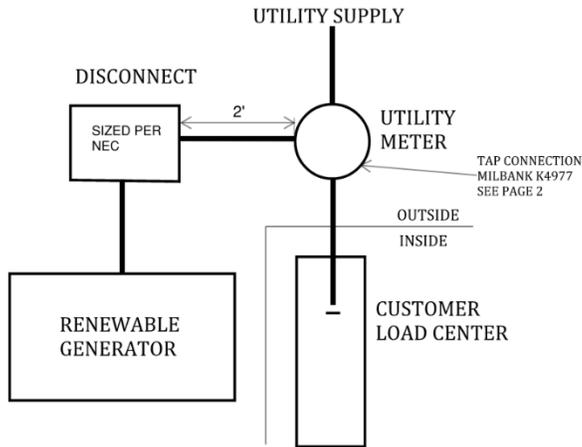
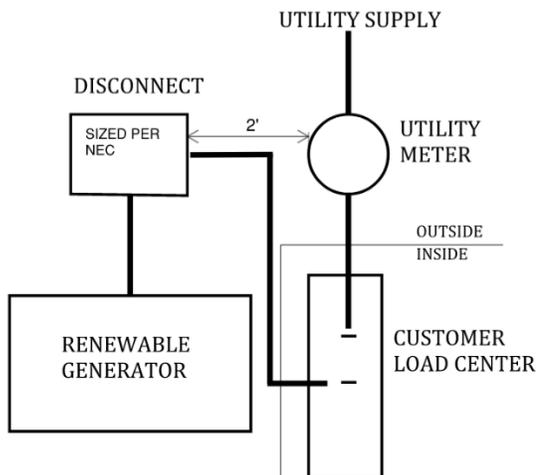


FIGURE 2. LOAD SIDE CONNECTION



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