



CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
 48- 05 Van Dam Street  
 Long Island City, NY 11101

ELECTRIC METER SHOP  
 DEPARTMENT

METER ENGINEERING PROCEDURE – 1  
 REVISION 17

## Installation Requirements for Low Tension Interval and AMI Metering and AMI Communication Infrastructure

<b>PREPARED BY:</b>	<b>Adam Miller</b>
<b>TARGET AUDIENCE</b>	<b>ELECTRIC OPERATIONS    CUSTOMER OPERATIONS    AMI IMPLEMENTATION    ENERGY SERVICES    ELECTRIC METER    SHOP</b>
<b>REVIEWED BY:</b>	<b>METER ENGINEERING</b>
<b>NESC REFERENCE</b>	<b>NONE</b>
<b>FILING:</b>	<b>FIELD MANUAL NO. 16 – SEC 3 &amp; NO. 4 – SEC 6</b>
<b>APPROVER</b>	<b>Charles Feldman    SIGNATURE/DATE <u>Signature on File 12/10/2020</u></b>
<b>EFFECTIVE DATE:</b>	<b>DECEMBER 10, 2020</b>

## Table of Contents

1.0	Purpose .....	3
2.0	Application .....	3
3.0	Requirements .....	3
4.0	Customer Responsibilities .....	4
5.0	Company's Responsibilities .....	6
6.0	Metering Layout .....	7
7.0	Pulse Wiring .....	8
8.0	Power Supply .....	9
9.0	References .....	10
10.0	Revision Summary .....	10
11.0	Attachments .....	11
Figure 1 – Ringed Single Socket Meter Pan with Socket Access Point and Antenna Conduit .....		14
Figure 2 – Ringed Socket Meter Bank with example Socket Access Point locations and Conduit for Antennas .....		15
Figure 3 – Building Overview with Multiple Meter Rooms .....		16
Figure 4 – Antenna Conduits between Meter Rooms .....		18
Figure 5 – Antenna Conduits between Meter Rooms on Different Vertical Planes .....		19
Figure 6 – Single Meter Room with Antenna Conduit to Outside using “L” Bracket Mount .....		20
Figure 7 – Antenna Conduit to Outside from Meter Room closest to street grade & Multi Meter Rooms using PVC / Fiberglass / Non-Metallic Enclosure Mount .....		21
Figure 8 – Outdoor Termination Mount option 8” x 8” x 6”, NEMA 3, PVC / Fiberglass / Non-Metallic enclosure with accessible front cover .....		23
Figure 9 – Outdoor Termination Mount option 3/4" hole Trunk Groove "L" Bracket .....		24
Figure 10 – Demand Metering Layouts for Existing/New Installations with a Coincidental Demand Below 500 KW .....		25
Figure 11 – Typical Legacy Meter Layout for Coincidental Demand Customers with a Demand over 500 KW Using Landline (Telephone) Communication .....		26
Figure 12 – Typical Legacy Meter Layout for Coincidental Demand Customers with a Demand over 500 KW Using Wireless Communication .....		29
Figure 13 – 120 Volt Supply to Company Demand Meter at 265/460 Volt Installations		31

## 1.0 Purpose

This procedure covers the Company requirements for the installation of meter mounting equipment, wiring for legacy interval and AMI meters and associated communication devices in low tension service installations associated with demand, additive and coincidental demand billing.

## 2.0 Application

This procedure applies to all regions of Electric Operations M&T, Services groups, ELEC SVCS Project Management & Process, Energy Services, AMI implementation and the Electric Meter Shop involved with legacy interval metering and AMI metering of low-tension services in associated with demand, additive and coincidental demand billing.

## 3.0 Requirements

- 3.1. In adherence to PSC Tariff No. 10 leaf 93 section 10.11.d and 10.11.e, any account that has a coincidental demand equal to or greater than 500 kW shall require metering that records Kilo-Volt-Ampere-Hours (KVARH). This account shall be classified as a “complex billing” account and shall have meters that communicate to the Con Edison MV90 system or Head End System (HES for AMI).
- 3.2. For all new business customers that are classified as complex billing or customers enrolled in the Value Stack and/or demand response programs – an AMI meter(s) shall be installed. Also, if AMI metering is installed, communications with the HES shall be confirmed on site. If communications with the HES is not available, with the existing AMI network, access points shall be installed.
- 3.3. For existing complex billing customers, legacy meter(s) that records load profile data may have communications that use a landline, wireless device/card, or a combination of the two. Any legacy meter for complex billing shall have communication to the MV90 system maintained until replaced by AMI metering.
- 3.4. New installations will no longer require pulse wiring from meters to a totalizer or recorder for coincident demand billing. Demand billing will be generated by the billing system using the interval data from each meter.
- 3.5. Any installation for AMI metering shall meet provisions for a mesh network, meter to meter and meter to access point, that can communicate with the AMI’s Head End System (HES).

---

<b>Specification</b> MEP – 1	<b>Revision</b> Rev 17	<b>Rev Date</b> Dec 2020	<b>Effective Date</b> 12/10/2020	<b>Copyright Information</b> ©1937-2020 Consolidated Edison Co. of New York, Inc.	<b>Page 3/31</b>
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

## 4.0 Customer Responsibilities

- 4.1. The customer shall install mounting equipment (pans) for all watt-hour interval meter(s), AMI watt-hour interval meter(s), AMI network or legacy communication devices and other associated metering devices as required.
- 4.2. The customer shall install and maintain all wiring and conduits between meters and meter communication devices where applicable as shown in all figures and attachments.
- 4.3. All new customers that meet the criteria for new business complex billing, participating in the Value Stack program or demand response shall make the following provisions – for supporting an AMI communication infrastructure – if the building meets the criteria found in section 4.5.
- 4.4. Access by Con Edison personnel for the installation and replacement of radio frequency (RF) equipment for AMI and legacy communication.
- 4.5. For new customers installing AMI meters and customers (new construction) that meet the following criteria shall make the following provisions outlined in section 4.7.
  - 4.5.1. An indoor meter room(s) in a building(s) of a minimum of 50,000 Gross Square Feet
  - 4.5.2. Buildings that are at least 5 stories tall or any building that is constructed in a manner that impedes the communication of radio frequency (RF) equipment – refer to figures 3 & 4.
- 4.6. Any building or structure which is entirely below-grade must be reviewed by Con Edison's AMI Operations Center for a custom solution.
- 4.7. Special provisions provided by customer to facilitate the installation of (AMI) technology:
  - 4.7.1. Pathways of no greater than 50' for RF signal propagation without prior Company approval
  - 4.7.2. All conduit shall be roped twice (2 separate ropes) to assist with pulling operation.
  - 4.7.3. All conduits shall be rigid metallic, sealed, fire-rated and proofed by the customer, as applicable by local building, fire, and/or electrical code.

---

<b>Specification</b> MEP – 1	<b>Revision</b> Rev 17	<b>Rev Date</b> Dec 2020	<b>Effective Date</b> 12/10/2020	<b>Copyright Information</b> ©1937-2020 Consolidated Edison Co. of New York, Inc.	<b>Page 4/31</b>
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

4.7.4. Conduit cap: a temporary cap, of the same size as the conduit, shall be placed on the end of the conduit next to the meter panel.

4.7.5. Conduit bends: any bend shall have a bending radius of at least 4 inches and follow NEC requirements.

4.7.6. An electric meter bank/room configuration/layout drawing(s) for all meters including Parts Supplied for each meter pan and if a meter pan shall be assigned for AMI communication only:

- a. For each low tension 120V meter bank/room, a socket-type ringed meter pan without bypass switch (Form 1S, 12S, 16S) in the meter bank or separately mounted, as approved in the Con Edison Electric Blue Book with line-side power to accommodate Socket Access Point installation by the Company. Refer to MES-528 Space Requirements for Metering Closets. (see figures [1](#) & [2](#)).

4.7.7. At each vertical plane of meter rooms (refer to figures [4](#) & [5](#)), a 2" conduit from the closest to grade meter room to the outside of the building with one of the following two mounting apparatuses permanently installed on outside wall 8'-10' (see [figure 6](#)) above grade for the purpose of mounting external antennas.

- a. Minimum 8" x 8" x 6", NEMA 3, PVC/Fiberglass/Non-Metallic enclosure with conduit opening within and an accessible front cover ([figure 8](#))
- b.  $\frac{3}{4}$ " hole trunk groove "L" Bracket with a minimum 2" bending radius from bracket base to top of conduit opening ([figure 9](#))

4.7.8. Alternatively, installation of outside antenna mounting apparatuses on an accessible roof must be reviewed and approved by Con Edison's AMI Operations Center.

4.7.9. For Con Edison natural gas customers, a 2" conduit from the closest electric meter room to accessible location in the gas meter room.

4.7.10. Many of the buildings and situations where these provisions will be required are custom in nature, design plans must be submitted to your local service planner for review by the Energy Service Representative. Communicating early in the design process will allow for additional site-specific review and allow for integration of these provisions into the building plans.

4.7.11. The minimum requirements in this procedure should not preclude

Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 5/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

other Con Edison requirements/specifications or applicable building, fire, and/or electrical code requirements.

## 5.0 Company's Responsibilities

5.1. The Company shall install, connect and maintain all watt-hour meters and meter communication devices.

5.1.1. When installing AMI meter(s) refer to AMI Standard Operating Procedure for Electric Meter Installation.

a. [https://ceorg/sites/electricops/AMI/layouts/15/WopiFrame.aspx?source=doc={F970B2B8-EFF1-4E62-8184-9771C19BBD92}&file=FINAL\\_CECONY\\_AMI%20SOP\\_Electric%20Meter%20Installation%2020170315\\_v1.0.docx&action=default](https://ceorg/sites/electricops/AMI/layouts/15/WopiFrame.aspx?source=doc={F970B2B8-EFF1-4E62-8184-9771C19BBD92}&file=FINAL_CECONY_AMI%20SOP_Electric%20Meter%20Installation%2020170315_v1.0.docx&action=default)

5.2. The Company shall confirm communication to the HES and install AMI communication equipment for all new customers that meet the criteria for new business for complex billing, participating in the Value Stack program or demand response.

5.2.1. All Value Stack meter numbers shall have 7 digits to fit into the legacy LPDS system.

5.3. The company shall maintain communications to MV90 for existing complex billing customers.

5.4. The Company shall connect an unmetered AC supply to meter communication equipment and other associated metering devices.

5.4.1. The company may install meter communication equipment using customer power as per PSC Tariff No. 10 section 6.11 leaf 63.2.

5.5. The Company will perform all final wiring connections to the meters and metering devices such as a Selcom (telephone multiplexer) or equivalent telephone line sharing device, external wireless communication module, dummy meter pan, or any AMI auxiliary device.

5.5.1. The Company will install an external antenna as required.

5.6. The meters shall be ordered and coded in accordance with MEP 70.

5.7. For AMI metering, Con Edison shall furnish, install, and maintain the following:

Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 6/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

5.7.1. Placement of ancillary RF equipment (access point), as per AOP 1007

5.7.2. Placement and mounting of antennas (remote external antenna)

5.7.3. Reseal any conduits used for antenna with appropriate sealant (EO-100023)

## 6.0 Metering Layout

6.1. For a new (1) meter installations – install an AMI meter that conforms to the form and programming required.

6.2. For meter bank installations – install an AMI meter for every account and part supplied.

6.3. For all new business customers that are classified as complex billing (see section 3.1) or customers enrolled in the Value Stack and/or demand response programs – an AMI meter(s) and communication equipment, if the existing network does not communicate with the AMI meter(s), shall be installed.

6.3.1. All connection, wiring and hardware required for the installation of an access point shall adhere to the installation requirements outlined in [section 4](#).

6.4. For two (2) or more meters of existing installations using a totalizer (SRC) or recorder (SPB or SMD), refer to [figure 10](#).

6.4.1. If a totalizer malfunctions that is connected to multiple meters, legacy interval metering with communications shall be installed until phase 2 for AMI complex billing is implemented.

6.4.2. If a totalizer is connected to a single meter, the totalizer and meter shall be replaced with a single AMI meter.

6.5. If an existing account has legacy metering with remote communications, a wireless meter may be used if there is cell service at the meter location. If not, a dedicated landline will be required.

6.5.1. For multiple meters using a landline (POTS), a telephone multiplexer (such as Selcom) device may be used. A Selcom may connect up to 8 meters using a single landline.



6.6. For installations where wireless service is not available for single or multiple interval meters, landline (telephone) communications may be used, refer to [figure 11](#).

6.7. For installations where wireless service is available for single or multiple interval meters, wireless communications may be used, refer to [figure 12](#). An external antenna may be required to improve the communications. In general, meters located in basements in closed rooms with no windows will not have reliable wireless communications.

6.7.1. A cell service survey may be performed by Meter Shop Engineering or the region's Meter & Test personnel to determine availability of cell service at the meter location for AMI or legacy communications.

6.7.2. There will be customers that will require a combination of landline and wireless devices/meters for legacy metering. This will be determined based on meter locations and availability of cell service at these locations.

6.8. For all AMI communication installations, a single, unmetered, locked and sealed dummy meter pan may be installed with a locked and sealed SocketAP.

6.9. A technician may replace the meter pan cover on a 9S meter pan to accommodate the installation of a SocketAP for AMI communications.

6.10. Installations not addressed by this specification shall be directed to the Manager of the Electric Meter Shop for the required metering layout, equipment and installation requirements.

## 7.0 Pulse Wiring

7.1. Existing installations with a coincidental demand below 500 KW will have pulse wiring from the meter(s) to totalizers (SRC) or recorders (SPB, SMD) to provide coincidental demand billing.

7.2. For new installations of an account with a coincidental demand of 500 KW or above, pulse wiring will not be required since each AMI or legacy meter will have remote communication to the billing system. Pulses will be available, if requested – as a Meter Upgrade Electric (MUE) at the expense to the customer/representor of a customer, at each meter location terminated in a demarcation box. The customer is responsible for providing the conduit, wiring and connections to the demarcation box (the demark box is also at the expense to the customer/representor of a customer).



7.3. All existing pulse wiring will be solid copper, a minimum size of #14 AWG and rated for 600 volts. They will be installed in rigid conduit or electrical metallic tubing separate from all other wiring. The pulse circuit wiring shall be five conductors per meter being 3-active and 2-spare.

7.4. Pulse wiring may be requested by a customer or representative of the customer (with the presentation of a LOL letter), at the expense to the customer/representor of a customer, for account with a coincidental demand below 500KW. Pulses will be made available, if requested, at each meter location terminated in a demarcation box. The customer is responsible for providing the conduit, wiring and connections to the demarcation box (the demark box is also at the expense to the customer/representor of a customer).

## 8.0 Power Supply

8.1. For all legacy multi-meter installations, a single, unmetered, 120 volt, 4 wire (2 active, 2 spare), AC power supply shall be installed in a 104 pan or similar mounting equipment for operation of Company owned metering devices such as totalizers and recorders (SR, SRC, SPB, SMD, SSR6000) and meter communication devices (telephone multiplexers or external wireless devices). The 120V supply can be taken from the line side of a watt-hour meter, for CT rated meters the supply can be taken from the test switch.

8.2. In the case of 265/460V, for a legacy multi-meter installation, a 4-wire (2 active, 2 spare), fused, unmetered power supply shall be furnished in accordance with section 8.1 along with a control transformer which will be installed by M&T according to MES 547. If already present on electrical upgrades, the existing control transformers may be used if practical.

8.2.1. Control Transformers Type QB 265/120V with associated conduit and wiring in accordance with MES 547 and fused as per [figure 13](#), “may” have been installed at some existing 265/460-volt service installations. Please check your site. Transformers may be drawn directly out of stock. The class/stock number is 5004742.

8.2.2. Some 265/460V installations may have been installed in accordance with [figure 13](#). Figure 13 is not to be used for new installations and is only listed for reference.

8.3. For all AMI communication installations, a single, unmetered, 4-wire (2 active, 2 spare), fused, unmetered power supply shall be furnished in accordance with section 8.1 locked and sealed dummy meter pan may be installed with a locked and sealed SocketAP.

Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 9/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

- 8.4. AC power 120-volt wiring shall consist of 4 conductors (2 active and 2 spare), solid copper, a minimum size of #14, rated at 600 volts. They must be installed in rigid conduit or electrical metallic tubing separate from all other wiring.

## 9.0 References

[MES – 528 Space Requirements for Metering Closets](#)

[EO – 100023 Purchase Recommendation for Duct Sealing Compounds](#)

[MEP 47 – Ordering Electric Meters and Current Transformers for Metering](#)

[MEP 70 – Code Designations of Electric Meters and Devices](#)

[MES 104-A – Mounting equipment 24 inch X 27 inch for demand metering devices revenue metering](#)

[MES 547 – Control Step Down Transformers](#)

PSC Tariff No. 10 leaf 93 section 10.11.d and 10.11.e

PSC Tariff No. 10 section 6.11 leaf 63.2.

AMI SOP for Electric Meter Installation

## 10.0 Revision Summary

### REVISION 17:

- Updated format
- Updated Title
- Updated customer responsibilities with the inclusion of AMI communication installation requirements
- Removed requirements for the installation and maintenance of totalizers
- Update reference to the PSC tariffs
- Updated Metering requirements for legacy and AMI installations
- Added figures 1 to 9
- Renamed and reorganized Appendixes from A to E to figures 10 to 13
- Removed referenced to obsoleted Meter Engineering Specifications and Meter Engineering Procedures
- Added reference to AMI Standard Operating Procedure for Electric Meter Installation

Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 10/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

- Added meter number requirements for Value Stack customers.
- Updated Target Audience.
- Link to SOP for AMI Meter Installations
- Added all AMI related Tariffs

## 11.0 Attachments

Figure 1 – Ringed Single Socket Meter Pan with Socket Access Point and Antenna Conduit

Figure 2 – Ringed Socket Meter Bank with example Socket Access Point locations and Conduit for Antennas

Figure 3 – Building Overview with Multiple Meter Rooms

Figure 4 – Antenna Conduits between Meter Rooms

Figure 5 – Antenna Conduits between Meter Rooms on Different Vertical Planes

Figure 6 – Single Meter Room with Antenna Conduit to Outside using “L” Bracket Mount

Figure 7 – Antenna Conduit to Outside from Meter Room closest to street grade & Multi Meter Rooms using PVC / Fiberglass / Non-Metallic Enclosure Mount

Figure 8 – Outdoor Termination Mount option 8” x 8” x 6”, NEMA 3, PVC / Fiberglass / Non-Metallic enclosure with accessible front cover

Figure 9 – Outdoor Termination Mount option 3/4" hole Trunk Groove "L" Bracket

Figure 10 – Demand Metering Layouts for Existing/New Installations with a Coincidental Demand Below 500 KW

Figure 11 – Typical Legacy Meter Layout for Coincidental Demand Customers with a Demand over 500 KW Using Landline (Telephone) Communication

Figure 12 – Typical Legacy Meter Layout for Coincidental Demand Customers with a Demand over 500 KW Using Wireless Communication

Figure 13 – 120 Volt Supply to Company Demand Meter at 265/460 Volt Installations

**Prepared by:** Adam Miller

**Reviewed by:** Meter Engineering

Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 11/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

<p><b>Initial Issue: January 1937</b></p> <p><b>Revision 9: October 5, 1965</b> Added Sketch F</p> <p><b>Revision 10: September 1982</b> Procedure completely revised</p> <p><b>Revision 12: June 30, 1992 – Thomas Matonti</b> Rewrite section 4.50 (Meter Layout – Special Installs) change from 3 to 5 meters Rewrite section 5.10 (Pulse Wiring) change from 4 to 5 conductors Rewrite section 5.80 (Pulse Wiring) change paragraph to include, per MEP 56 (Determination of Condition of Metering Transformer Secondary Wiring and Impulse Wiring) Rewrite section 6.20 (Power Supply) change paragraph to include, if not readily available.</p> <p><b>Revision 13: September 1999 – HCM</b> Revision on environmental issues</p> <p><b>Revision 14: July 2005 – Artem Nekrasov</b> Reviewed and reformatted all sections Removed references to DSU Revised paragraph 6.0 (Metering Layout)</p> <p><b>Revision 16: July 17, 2015 – Michael Parobek</b> Rephrased Paragraphs 4.2, 5.3, 6.2.1, 6.2.3, 7.1, 7.9, 8.1, 8.2, 8.2.1 Added Paragraph 8.2.2</p>	<p><u>File:</u></p> <p>Field Manual NO. 16 – SEC 3 Field Manual NO. 4 – SEC 6</p>
---	---

**Revision 17:**

Updated format

Updated Title

Updated customer responsibilities with the inclusion of AMI communication installation requirements

Removed requirements for the installation and maintenance of totalizers

Update reference to the PSC tariffs

Updated Metering requirements for legacy and AMI installations

Added figures 1 to 9

Renamed and reorganized Appendixes from A to E to figures 10 to 13

Removed referenced to obsoleted Meter Engineering Specifications and Meter Engineering Procedures

Added reference to AMI Standard Operating Procedure for Electric Meter Installation

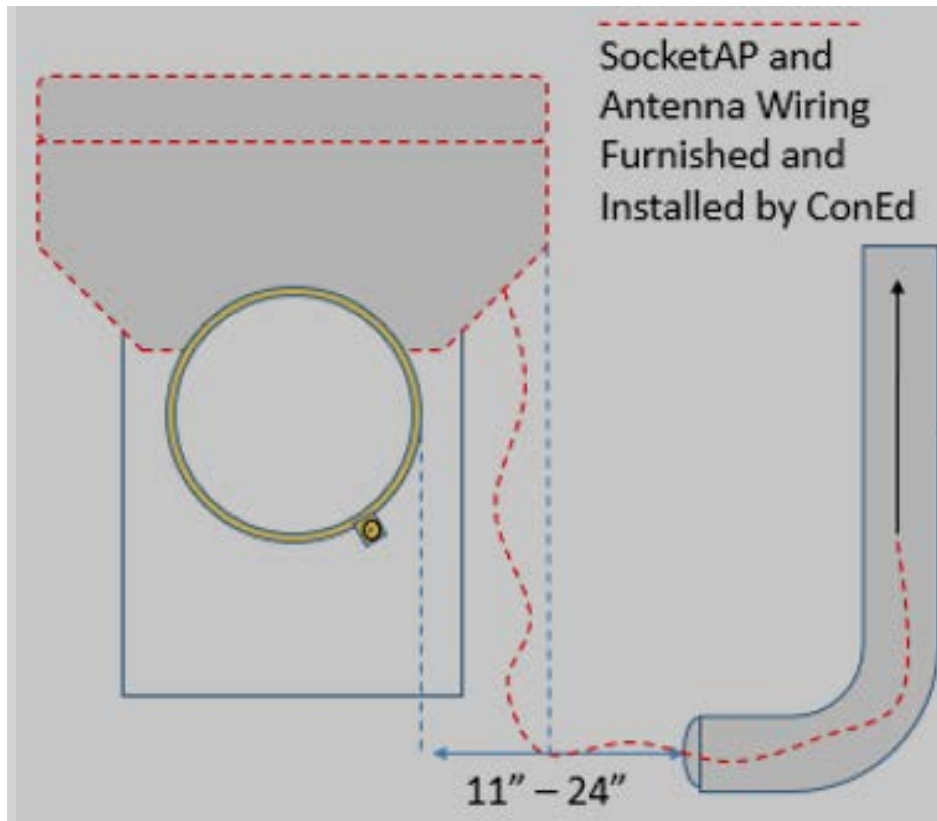
Added meter number requirements for Value Stack customers.

Changed Target Audience.

Link to SOP for AMI Meter Installations

Added all AMI related Tariffs

## Figure 1 – Ringed Single Socket Meter Pan with Socket Access Point and Antenna Conduit



### Figure 1 & 2 Requirements:

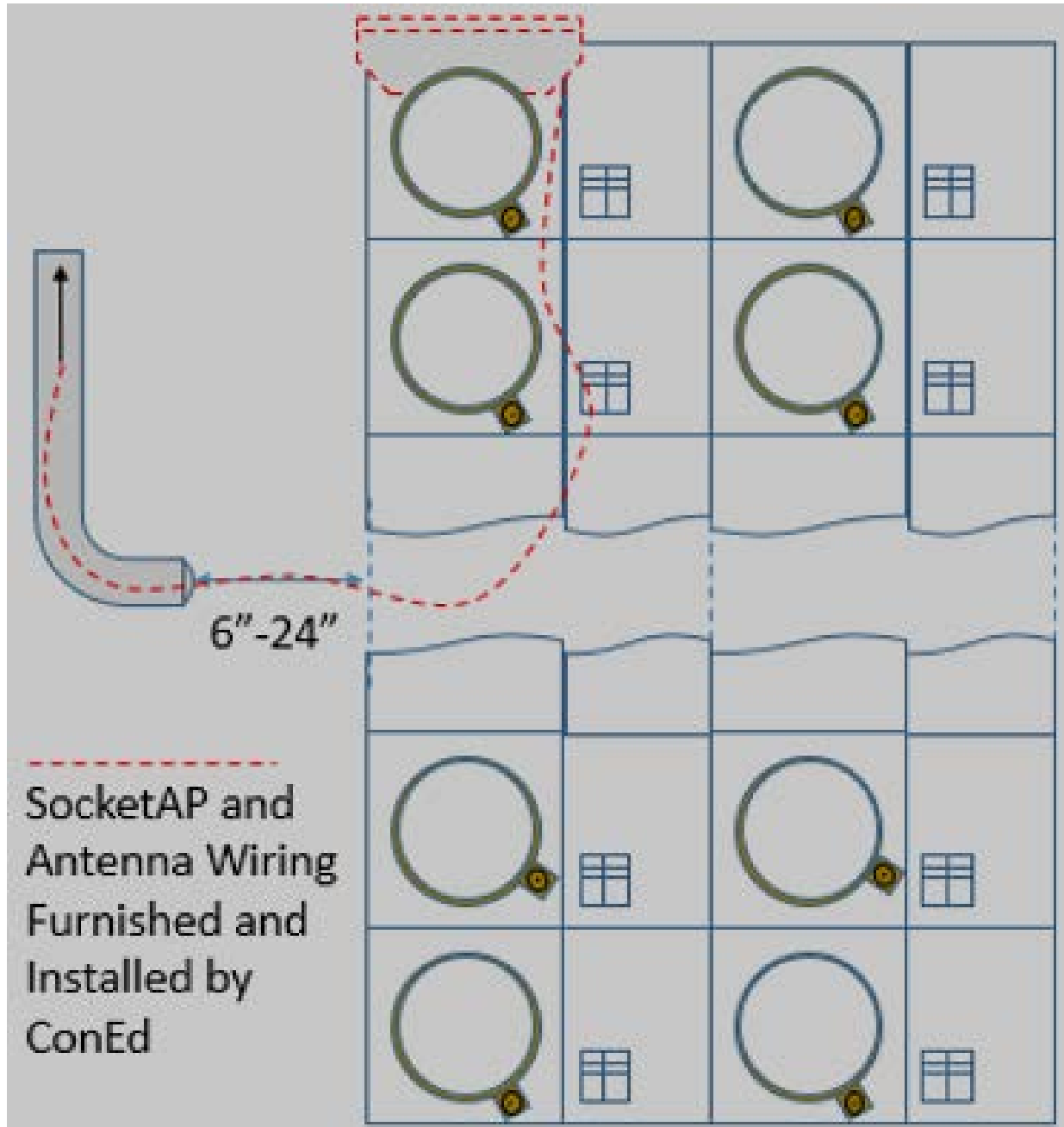
1. Conduit Size: 2" diameter minimum
2. Conduit Caps: Caps, of the same conduit size, must be placed on both ends of the conduit. Cap ends should be flush with surface
3. Conduit Placement: 11-24" from center of meter pan to side, 6" from either side of meter bank enclosure. Conduit shall be in front of face of meter pan. Closets shall include conduit in design to meet all requirements

**Important Note:** Each 120V meter room requires a ringed socket meter pan without bypass switch (Form 1S, 12S, 16S) as described in line 8 under Information. The meter pan must have line-side power and will be plated by Con Edison if a meter is not required, also known as a "dummy meter pan." Dummy meter pans shall be labeled with Parts Supplied "AMI" by the customer if they are being reserved for SocketAP installation only. Many CT meters do not qualify to meet this requirement because they cannot accept a locking ring, therefore a dummy meter pan shall be installed in meter rooms that do not have an approved ringed socket meter pan.

Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 14/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

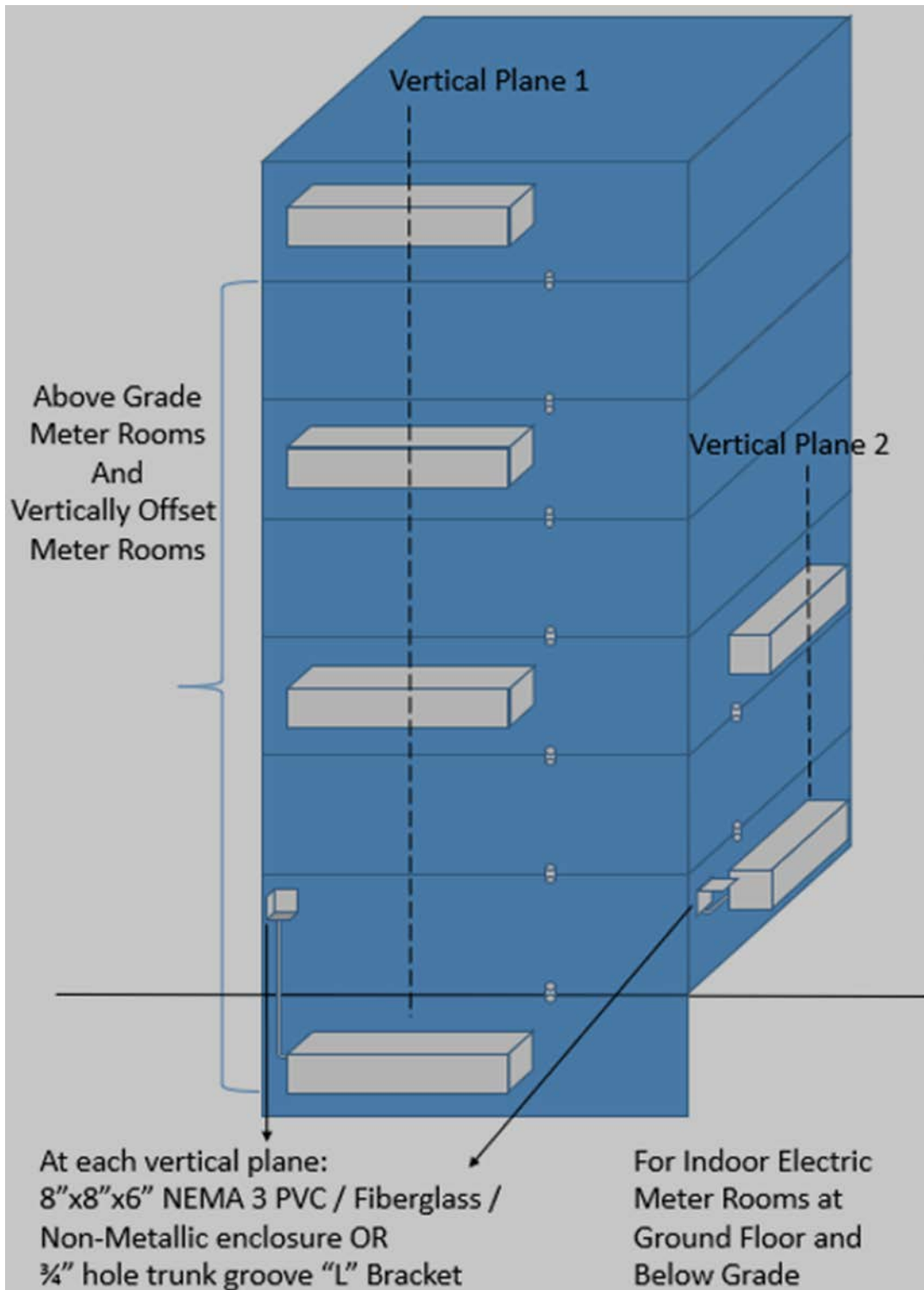
Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

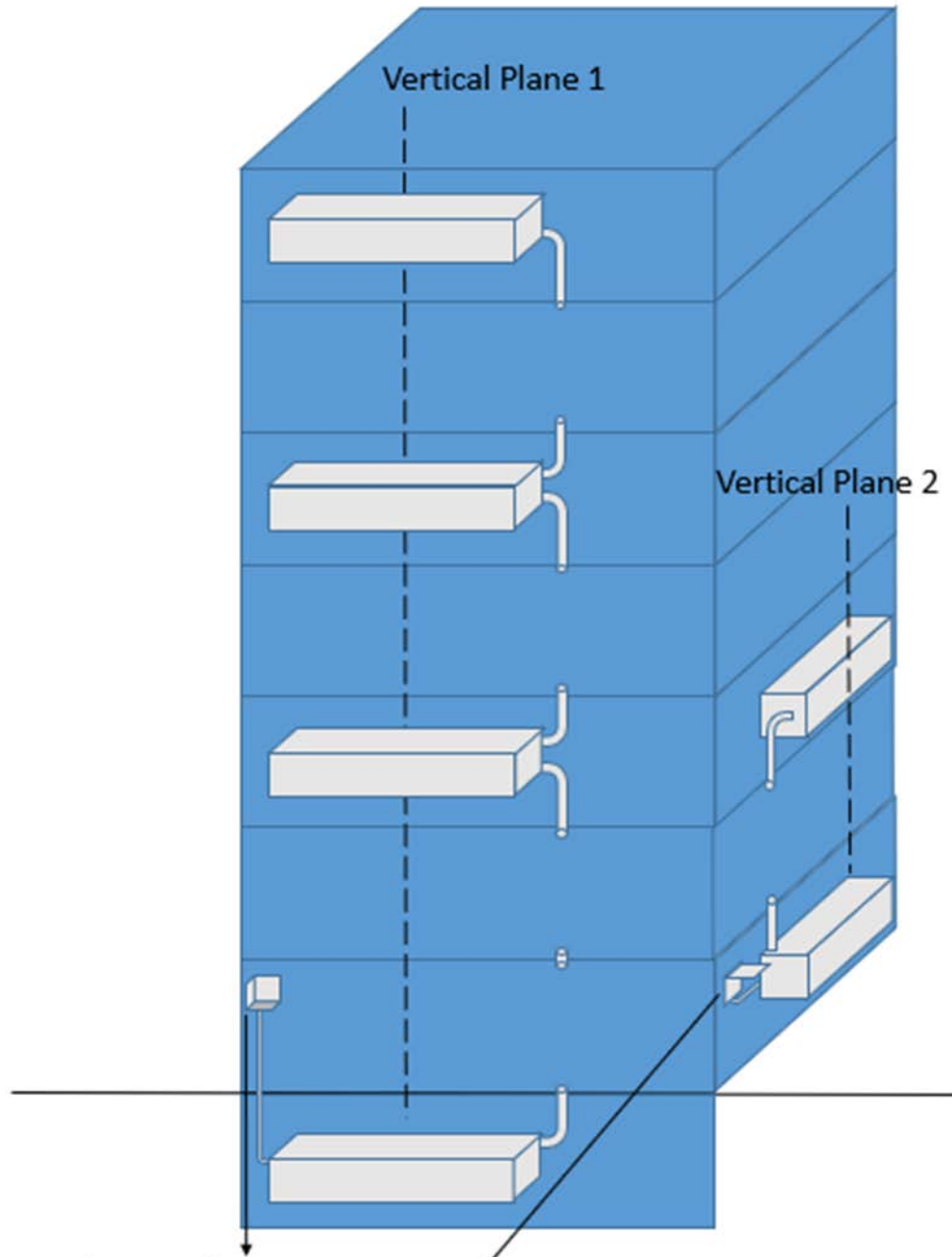
**Figure 2 – Ringed Socket Meter Bank with example Socket Access Point locations and Conduit for Antennas**





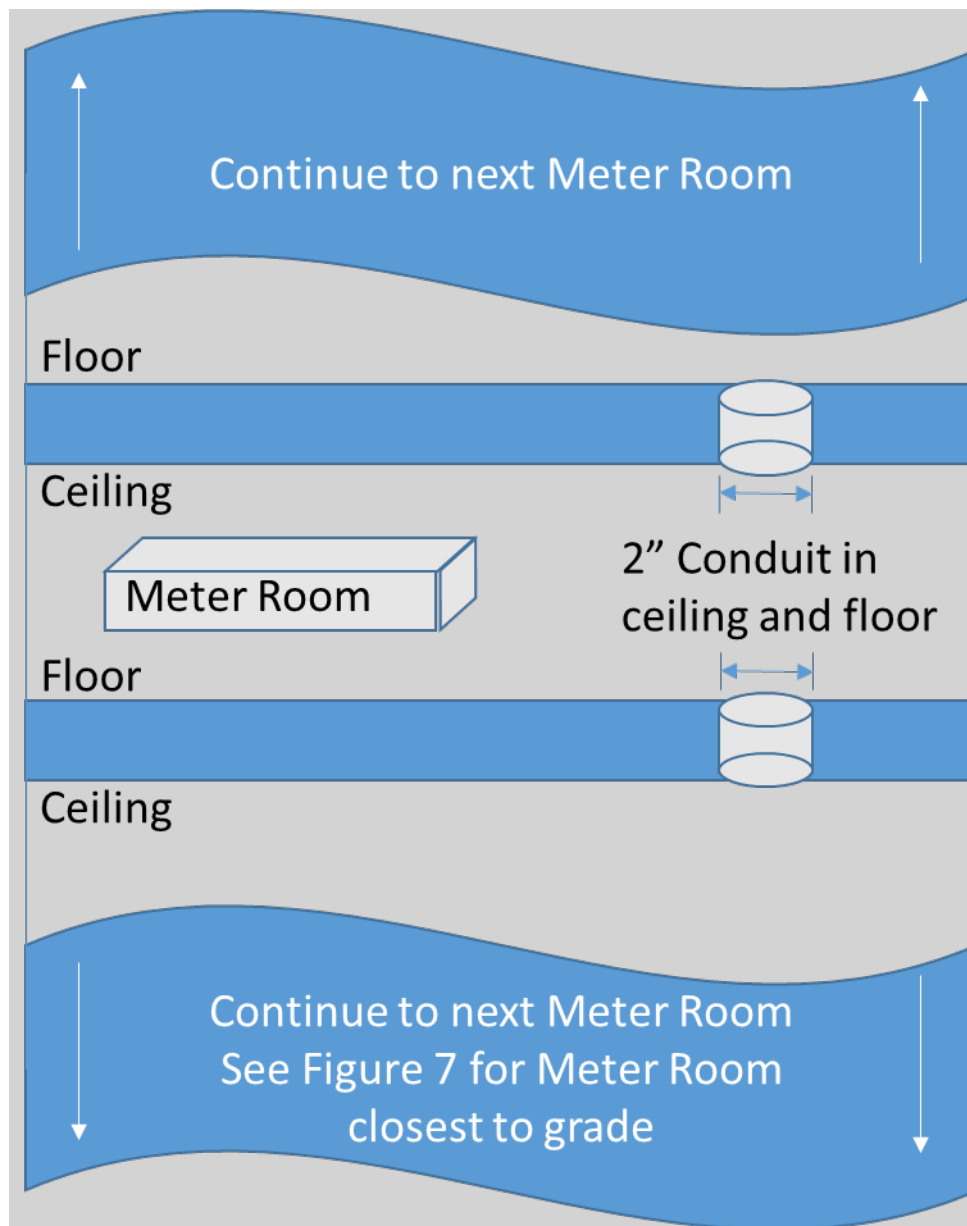
**Figure 3 – Building Overview with Multiple Meter Rooms**





At each vertical plane:  
 8"x8"x6" NEMA 3 PVC / Fiberglass /  
 Non-Metallic enclosure OR  
 ¾" hole trunk groove "L" Bracket

**Figure 4 – Antenna Conduits between Meter Rooms**



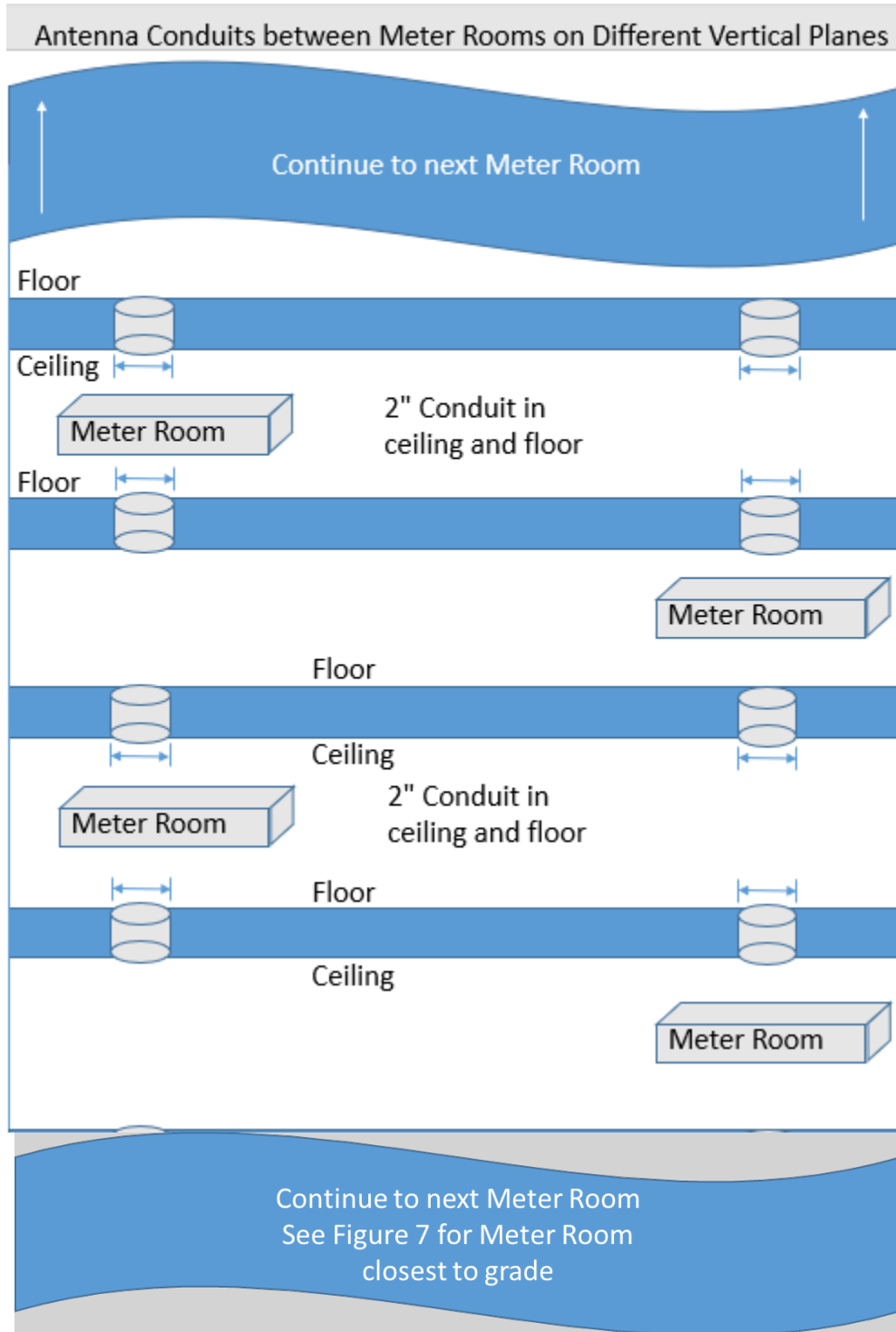
**Figure 4 and 5 Requirements:**

Conduit Size: 2" diameter minimum

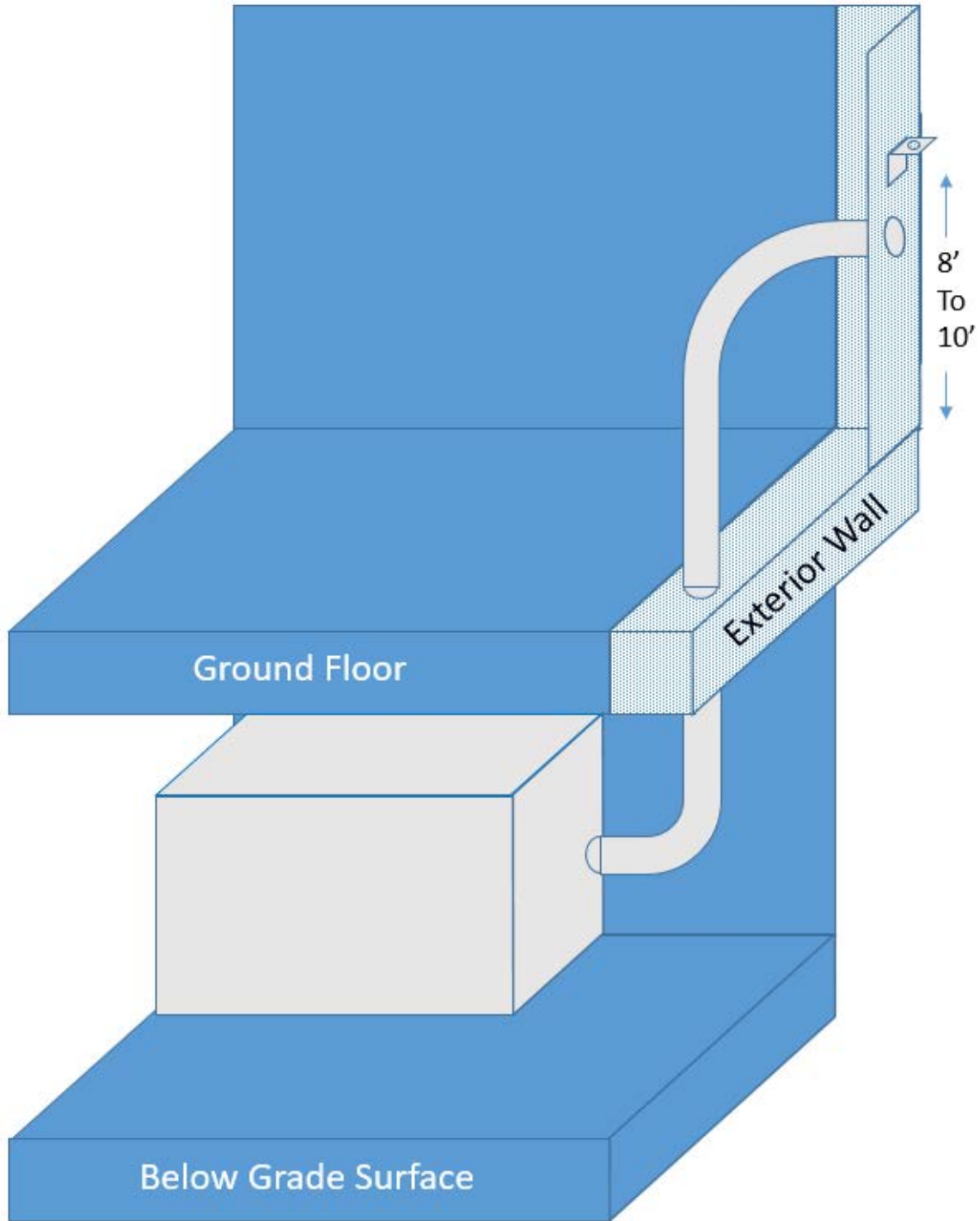
Conduit Caps: Caps, of the same conduit size, must be placed on both ends of the conduit.

For meter room closest to grade, refer to figures 6 & 7

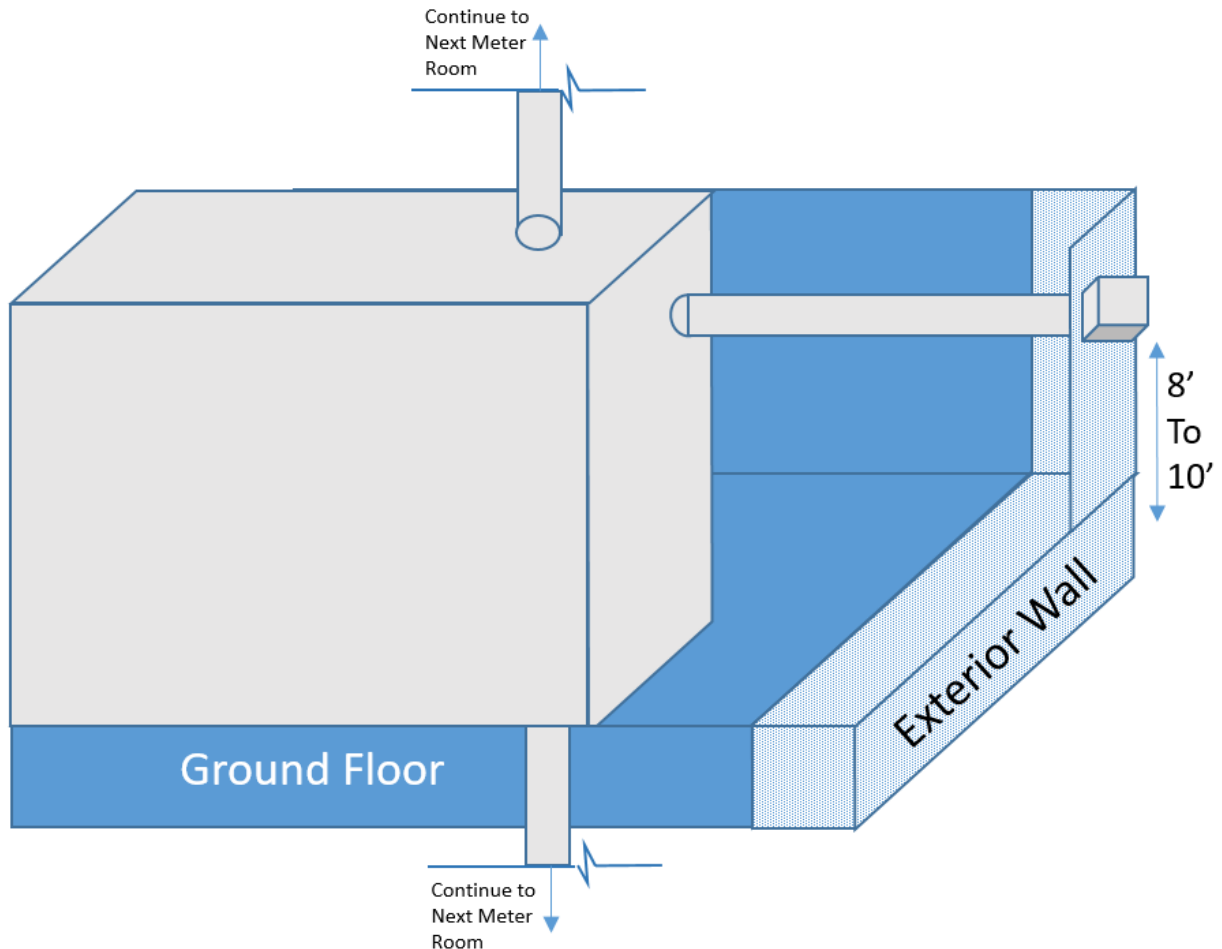
**Figure 5 – Antenna Conduits between Meter Rooms on Different Vertical Planes**



**Figure 6 – Single Meter Room with Antenna Conduit to Outside using “L” Bracket Mount**



**Figure 7 – Antenna Conduit to Outside from Meter Room closest to street grade & Multi Meter Rooms using PVC / Fiberglass / Non-Metallic Enclosure Mount**



**Figure “6” and “7” Requirements:**

Conduit Size: 2” diameter minimum

Conduit Caps: Caps, of the same conduit size, must be placed on both ends of the conduit. Cap ends should be flush with surface and conduits should be sealed to prevent water intrusion

Termination Mount: One of the following two mounting apparatuses permanently installed on outside wall 8’-10’ above grade for the purpose of mounting external antennas

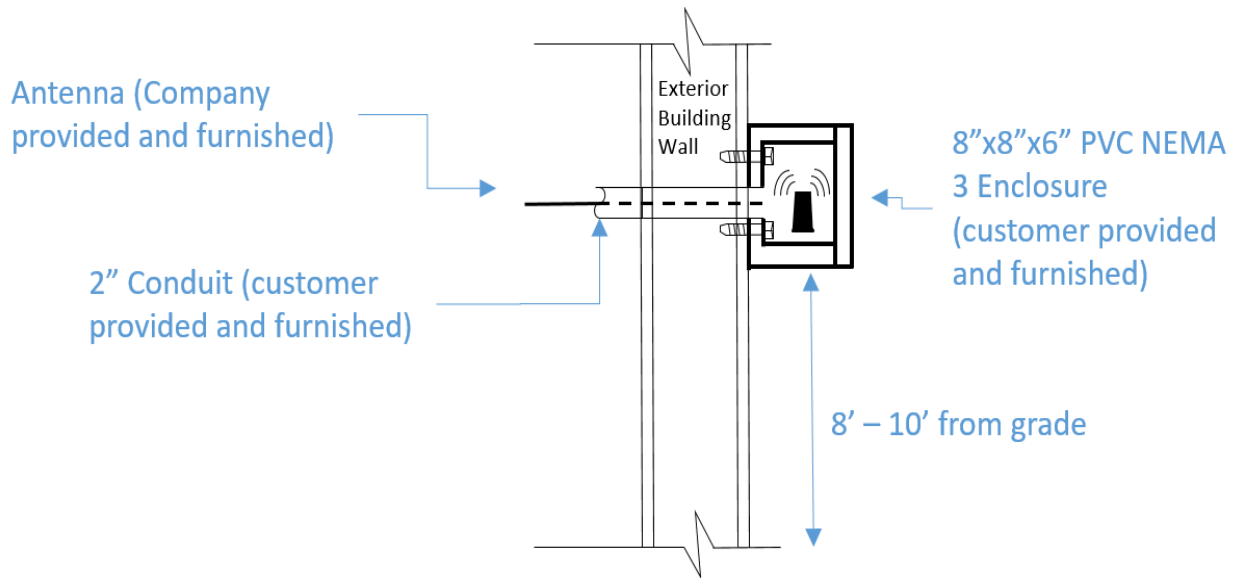
- i. Figure 8 - Minimum 8” x 8” x 6”, NEMA 3, PVC / Fiberglass / Non-Metallic enclosure with conduit opening within and accessible front cover

- ii. Figure 9 - 3/4" hole trunk groove "L" Bracket with a minimum 2" bending radius from bracket base to top of conduit opening

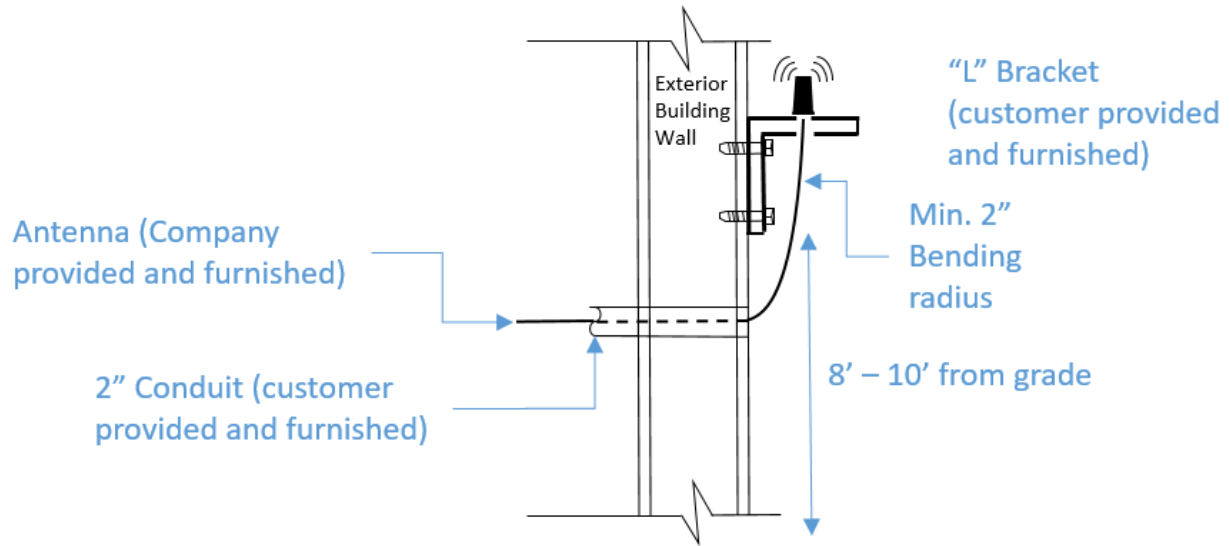
Alternatively, installation of outside antenna mounting apparatuses on an accessible roof must be reviewed and approved by Con Edison's AMI Operations Center



**Figure 8 – Outdoor Termination Mount option 8” x 8” x 6”, NEMA 3, PVC / Fiberglass / Non-Metallic enclosure with accessible front cover**



## Figure 9 – Outdoor Termination Mount option 3/4" hole Trunk Groove "L" Bracket

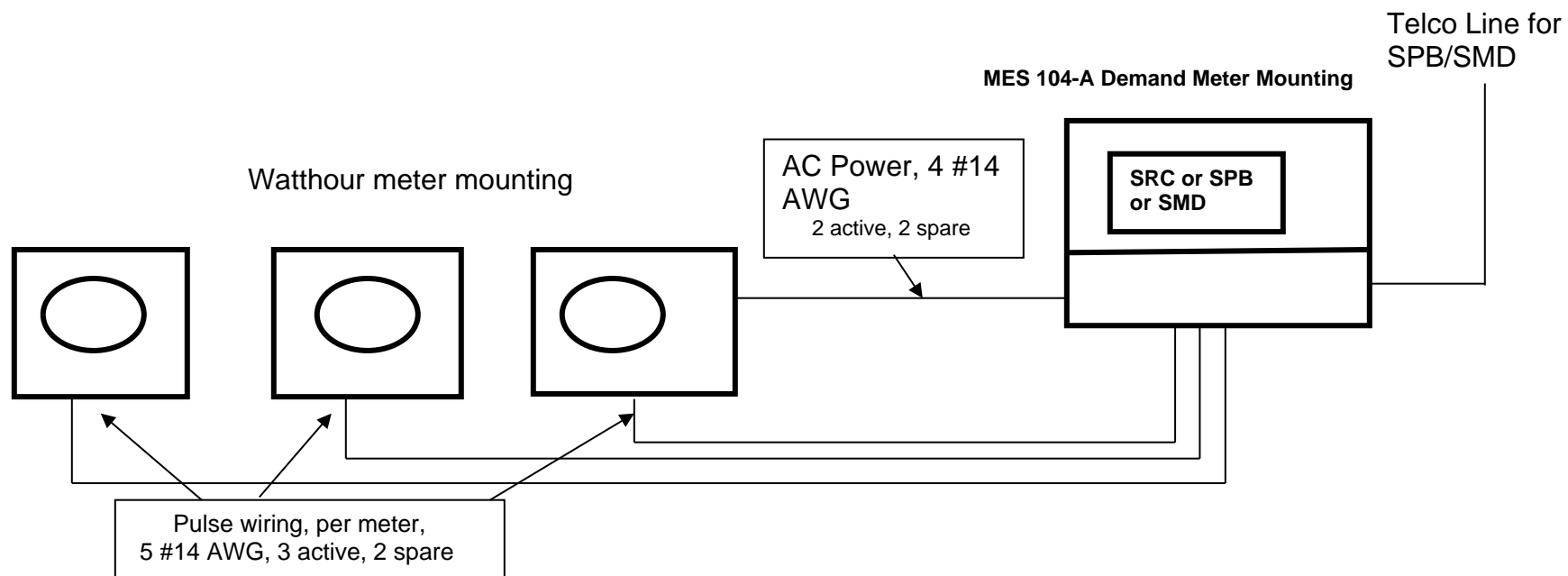


Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 24/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.

# Figure 10 – Demand Metering Layouts for Existing/New Installations with a Coincidental Demand Below 500 KW

Demand Metering Layouts for Multiple Meter Installations  
Using 120/208, 120/240 and 265/460 Volts

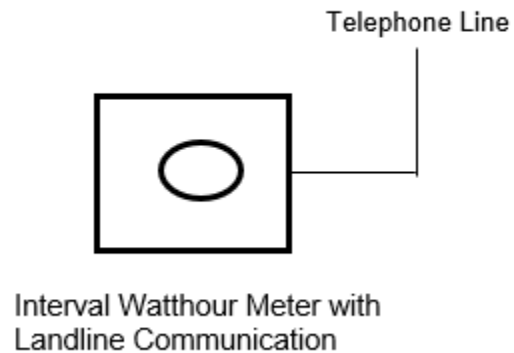


Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.



## Figure 11 – Typical Legacy Meter Layout for Coincidental Demand Customers with a Demand over 500 KW Using Landline (Telephone) Communication

One (1) AC Meter



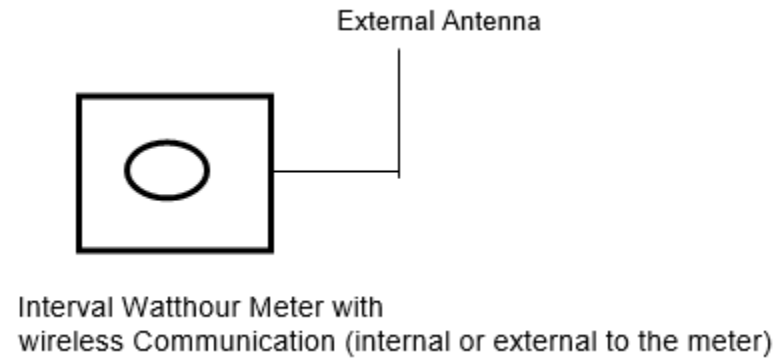
Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 27/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.



## Figure 12 – Typical Legacy Meter Layout for Coincidental Demand Customers with a Demand over 500 KW Using Wireless Communication

One (1) AC Meter



Specification	Revision	Rev Date	Effective Date	Copyright Information	Page 29/31
MEP – 1	Rev 17	Dec 2020	12/10/2020	©1937-2020 Consolidated Edison Co. of New York, Inc.	
<b>Filing Information</b>	Field Manual			Manual NO. 16 – SEC 3 & Manual NO. 4 – SEC 6	

Paper copies of procedures and instructions are uncontrolled and therefore may be outdated. Please consult Distribution Engineering Intranet Site [Distribution Engineering](#) or <http://distribution>, for the current version prior to use.



## Multiple Meters

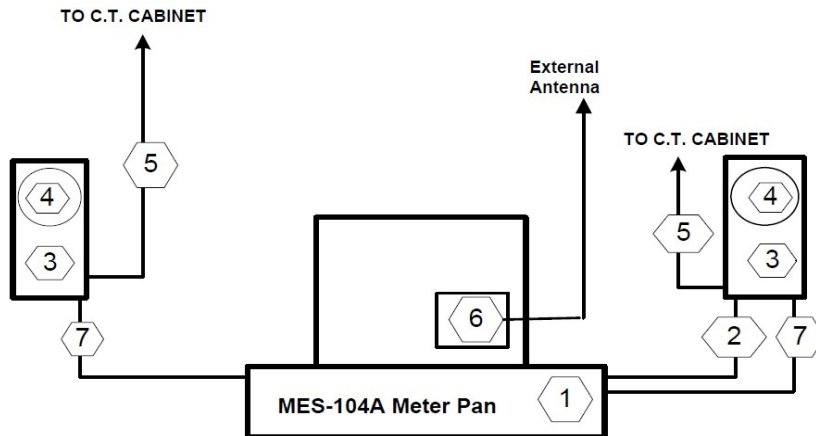
ITEM	QUANT.	DESCRIPTION	CON ED SPEC.
------	--------	-------------	--------------

*To be Furnished & Installed by the Customer's Contractor, unless indicated by Con Edison*

1	1	104A meter pan for meter equipment	EO-15934-B (MES-104A)
2	1	4- #14 AWG Solid Copper Wires in code size conduit for 120V supply	
3	2	10-Point A or S-base meter enclosure from approved manufacturers	Tables VII or VIIA in EBB
4	2	Con Ed to furnish and install A or S-base CT meter	
5	4	#10 Solid copper or #9 Stranded wires harness in code size conduit	
6	1	Con Ed to furnish & install external wireless communication device	
7	2	1" conduit with Cat 6 cable	

### NOTES:

- A. All work shall be done in accordance with Con Edison requirements and Customer shall obtain all necessary approvals from authorities having jurisdiction before service will be supplied.
- B. The location of items 1, 2, 3, 7 shall be determined in the field by Con Edison Representative.
- C. The Company will perform all final wiring connections to the meters and metering devices.
- D. All # 14 AWG solid copper wires shall be color coded, continuous and free of any splices.
- E. The following specs shall be adhered to:  
MEP-1, EO-15934-B (MES-104A)



**Figure 13 – 120 Volt Supply to Company Demand Meter at 265/460 Volt Installations**

**For Reference Only**  
**Not to be used for new installations**

