



Citizens
Electric Corporation

A Touchstone Energy® Cooperative

Electric Service Guidelines

JANUARY 2026 REVISION

Citizens Electric Corporation (CEC)

Instructions to landowner or developer when planning facilities on their property.

1. **Always Look Up!** When locating a site for a home, mobile home, cabin, garage, grain bin, or any type of structure, “always look up.” Safety to your life and property requires sufficient spacing from existing power lines to your new structure. This distance is provided for in the right-of-way easement agreement.

When there is a conflict or question pertaining to electric lines, contact Citizens Electric Corporation. An analysis of your specific circumstances should be performed prior to construction.

The following easement widths are dimensions that should be observed when planning your facilities. The electric pole line is located in the center of the easement. Buildings shall not be located within the easement corridor.

Type of Electric Line	Easement Width
Transmission (cross country long span)	100 feet
Transmission (urban short span)	50 feet
Distribution Overhead (single phase or three phase)	30 feet
Distribution Underground (single phase or three phase)	15 feet

2. Trees on and near the right of way – these trees endanger the electrical circuit and cause outages. They will be removed or trimmed on a cycle basis.
3. Service to a new facility: A **qualified electrician** should provide service equipment recommendations based on the maximum load to be served. Qualified individuals are responsible for supplying the appropriate service panel, conductor size and type, and also perform the installation of the service disconnect, service panel, meter socket, conduit and entrance head, wire, ground rods and clamps, etc.
 - A. Home, RV/Temp. Service:
 1. Meter on structure, mast type
 2. Meter on structure, attachment on structure
 3. Meter on structure, underground
 4. Meter on CEC pole, mobile home
 5. Meter on CEC pole, overhead
 6. Meter on CEC pole, underground
 - 7a. Meter on CEC pole, underground 400 Amp (2 panels)
 - 7b. Meter on CEC pole, underground 400 Amp (1 panel) - option
 8. Meter on CEC pole, structure & well
 9. Meter on CEC pole, recreational vehicles
 - 10a. Metering Pedestal, underground service
 - 10b. Metering Pedestal, underground service - option
 11. Metering Pedestal 320 Amp Meter Breaker, U/G

- B. Construction Power, or any other temporary connection:
 - 1. Meter on CEC pole, overhead
 - 2. Meter on post, underground
- 4. Underground Lines:
 - A. When digging or excavating, call Missouri One Call System to verify the location of any Citizens Electric owned underground electric lines. **1-800-Dig-Rite (1-800-344-7483) or 811. Citizens Electric Corporation does not locate and is not liable for privately owned underground facilities.**
 - B. On new installations, if customer requests underground electric, there is an additional charge. Contact CEC at 877.876.3511 - Option 5 for prices and specifications.

Thank you for your cooperation and help in addressing safety precautions for your electric service and preventing electrical contact accidents.

Service to New Residential Facilities

For inquiries related to service to new facilities, contact CEC's Engineering Department at 877-876-3511 – Option 5.

See the attached guides for examples of:

Home, RV/Temp. Service:

1. Meter on structure, mast type
2. Meter on structure, attachment on structure
3. Meter on structure, underground
4. Meter on CEC pole, mobile home
5. Meter on CEC pole, overhead
6. Meter on CEC pole, underground
- 7a. Meter on CEC pole, underground 400 Amp (2 panels)
- 7b. Meter on CEC pole, underground 400 Amp (1 panel) - option
8. Meter on CEC pole, structure & well
9. Meter on CEC pole, recreational vehicles
- 10a. Metering Pedestal, underground service
- 10b. Metering Pedestal, underground service - option
11. Metering Pedestal 320 Amp Meter Breaker, U/G

Construction Power, or any other temporary connection:

1. Meter on CEC pole, overhead
2. Meter on post, underground

1. Individual Overhead Service and Secondary Conductors

In the event that only overhead service and/or secondary facilities are required, the Corporation shall construct all overhead service and secondary facilities to a point on Customer's permanent facility as designated by the Corporation, utilizing generally accepted utility practices, at no charge to the Customer. When said Customer requests the service conductors to extend past a point on the permanent facility as designated by the Corporation, Customer shall pay in advance of construction an additional charge equal to the Corporation's then-current average standard construction cost of single phase overhead extension.

2. Individual Underground Service and Secondary Conductors

A. Residential structures located in areas served by an overhead primary distribution system:

Customer requesting underground service conductors shall pay the Corporation in advance of construction an amount equal to the Corporation's then-current average standard construction cost of single phase underground extension less the average standard construction cost of single phase overhead extension, for

installation of such service from the transformer or lift pole to a point on the Customer's permanent facility as designated by the Corporation.

Upon completion of construction, Customer shall pay the Corporation for any unforeseen costs not included in the Corporation's original cost for an individual service or secondary extension such as trenching through rock, special material used for backfilling, drilling under roads, driveways and sidewalks, right-of-way clearing, etc.

B. Residential structures located in a subdivision served by an underground distribution system:

At the request of Customer, the Corporation will install underground service conductors from a transformer or pedestal (located on or within the property line of said residential structure) to a point on the permanent facility as designated by the Corporation. When the length of such service conductors exceed 125 linear feet, or when said Customer requests the service conductors to extend past a point on the permanent facility as designated by the Corporation, Customer shall pay the Corporation in advance of construction an additional charge equal to the Corporation's then-current average standard construction cost of single phase underground service applicable to the additional length.

Customer shall pay the Corporation for any unforeseen costs not included in the Corporation's estimate for an individual underground service or secondary extension such as trenching through rock, special material used for backfilling, drilling under roads, driveways and sidewalks, right-of-way clearing, etc.

C. When Customer agrees to furnish such trench and/or conduit meeting the Corporation's specifications, the Corporation shall deduct from Customer's required advanced payment the Corporation's then-current average standard construction cost of trenching and/or installing conduit from the total cost of the line extension as outlined in Section 2.A and 2.B above.

Thank you for your cooperation and help in addressing safety precautions for your electric service and preventing electrical contact accidents.

Rural Missouri

10-Foot Rule – It's the Law!

It's just common sense for anyone who must work near an energized electric transmission line to check with the utility that owns the line to make sure all safety precautions are taken. Well, it's also the law in the state of Missouri.

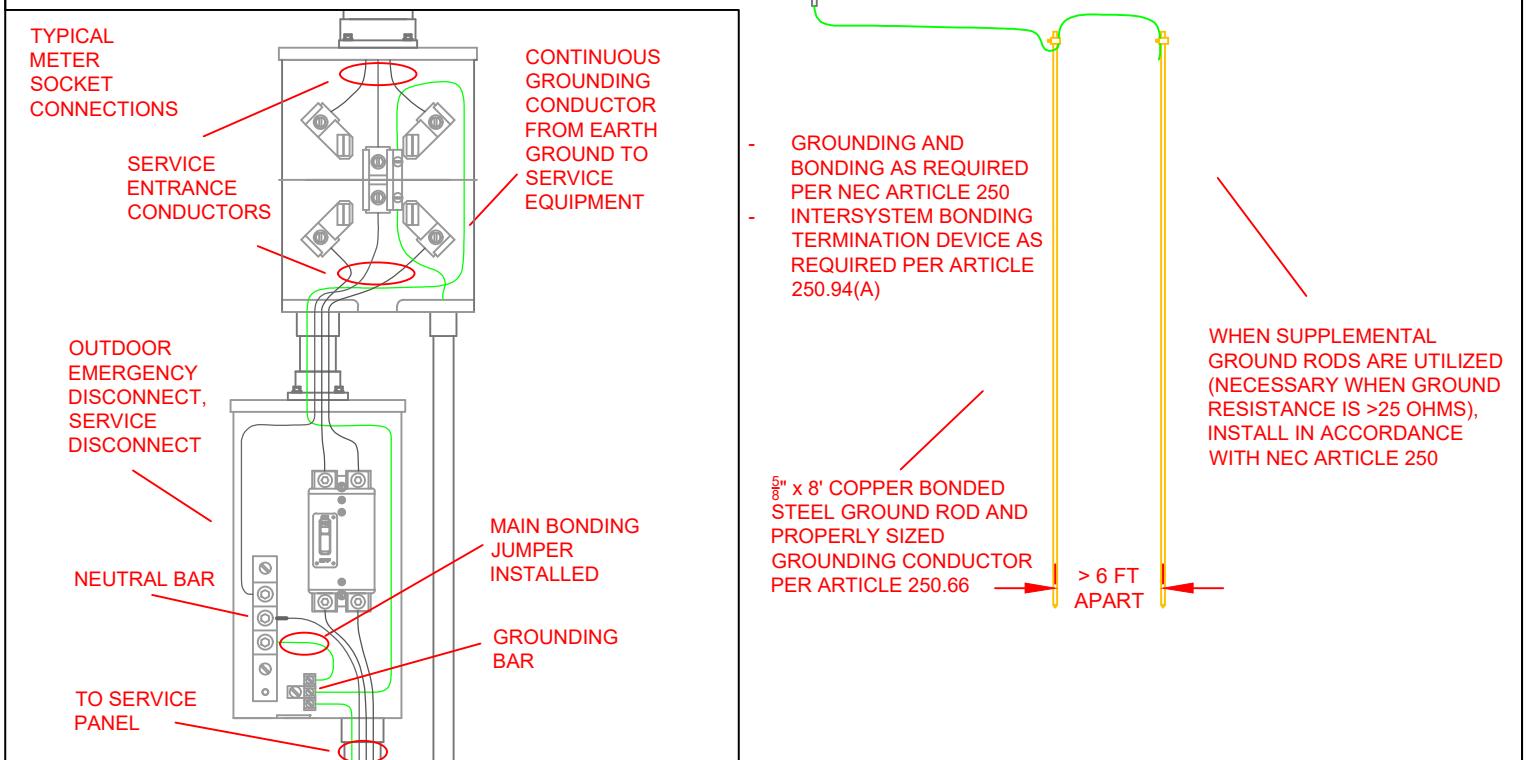
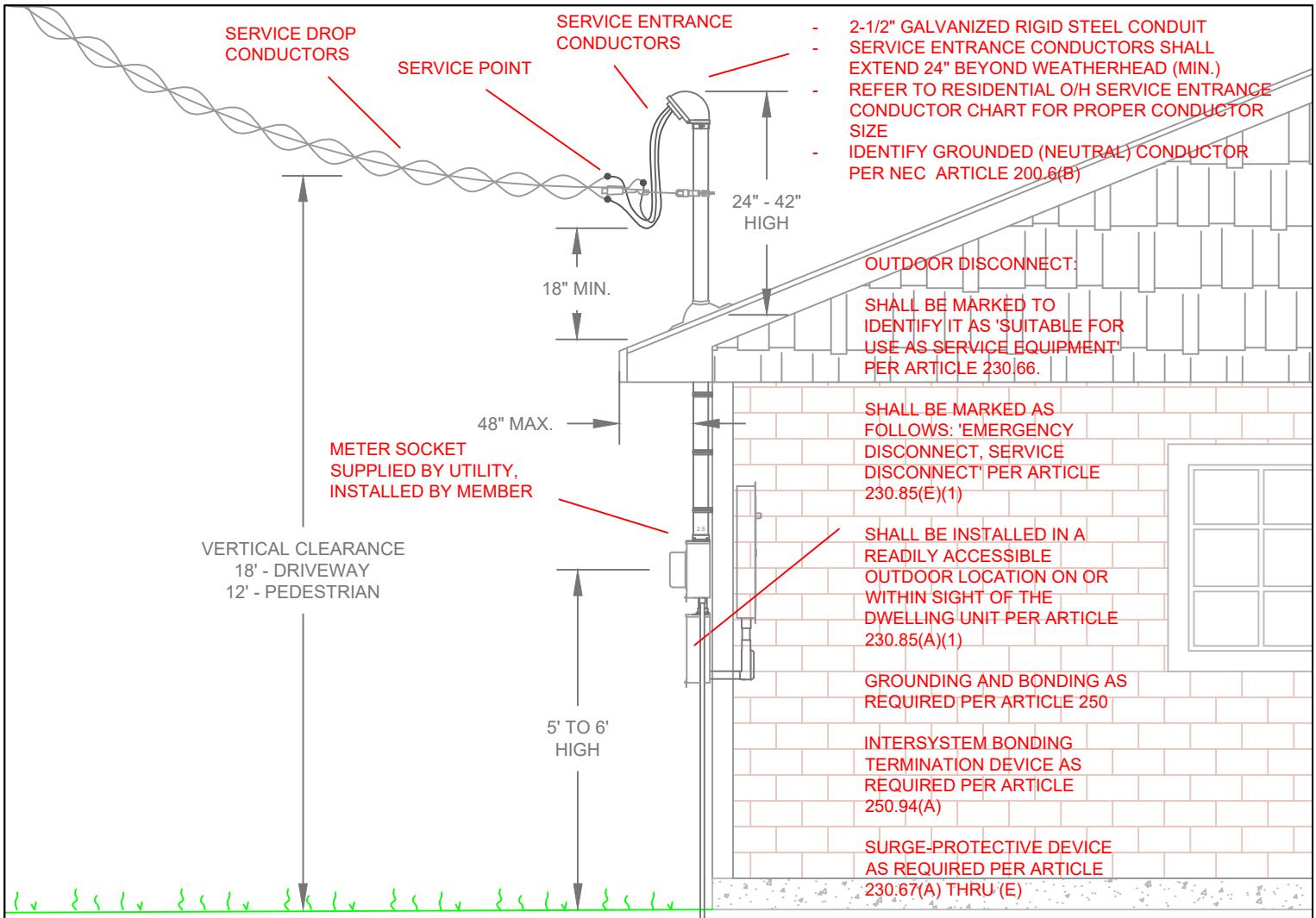
In 1991 the Missouri General Assembly passed the Overhead Power Line Safety Act, also called the 10-foot rule.¹ The law requires that anyone who must work within 10 foot of a power line must first notify the utility that owns the line so safety precautions can be taken to help avoid tragedy.

Precautions may mean simply having a utility employee check the work area for safe clearances or it may involve disconnecting the line to avoid possible electrocution.

Under the law any person who comes into contact with a power line and didn't contact the utility that owns the line will be presumed negligent. This means that if a contractor's employee comes into contact with a line and the contractor didn't notify the utility before work began, then the contractor bears the responsibility for the accident.

If work must be done within 10 foot of the power line, play it safe and call the utility first. It could save a life.

¹ Missouri Overhead Power Line Safety Act, RSMo §§ 319.075–319.090

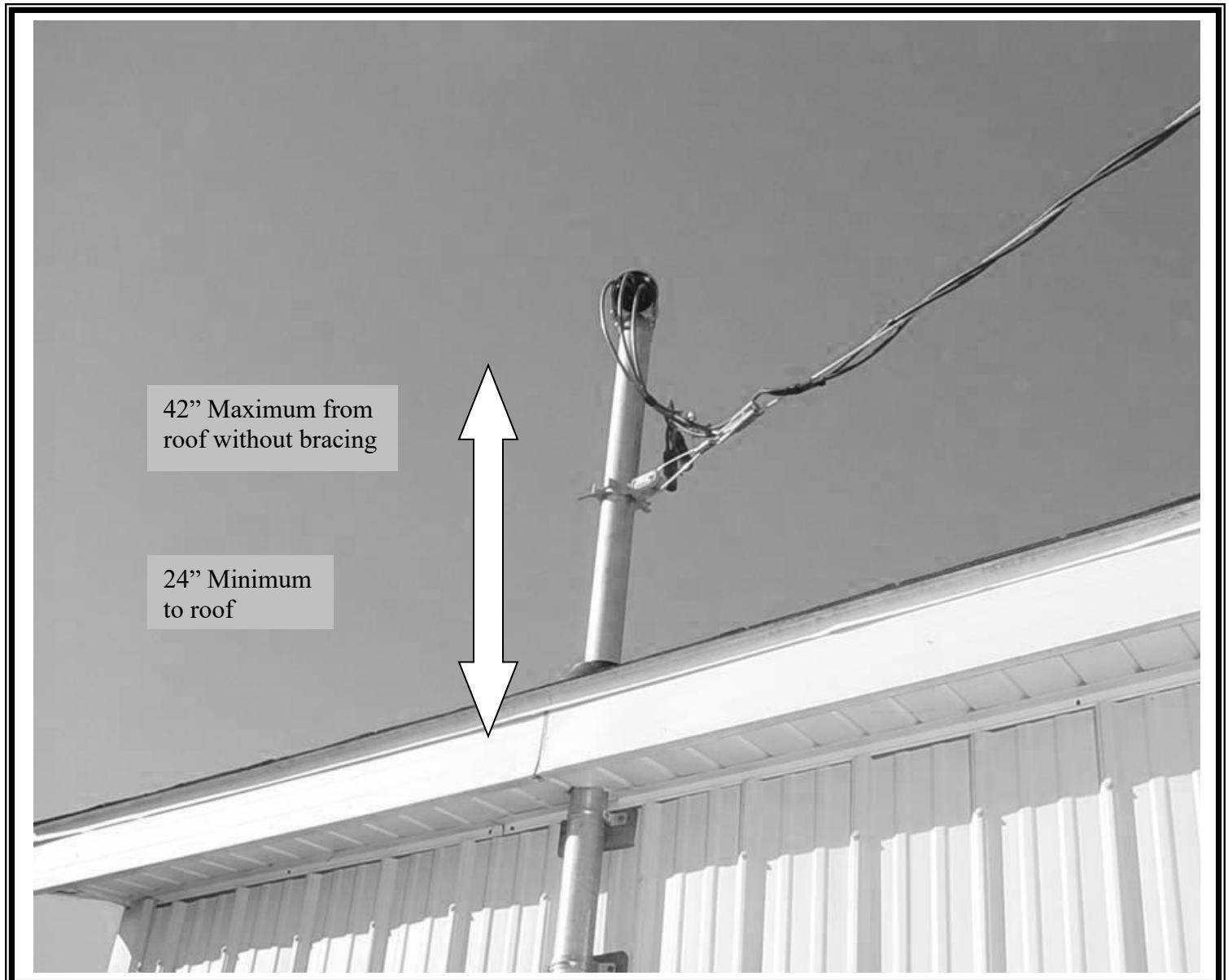


CITIZENS ELECTRIC CORPORATION
PERRYVILLE - STE. GENEVIEVE - FRUITLAND
877.876.3511 - Option 5

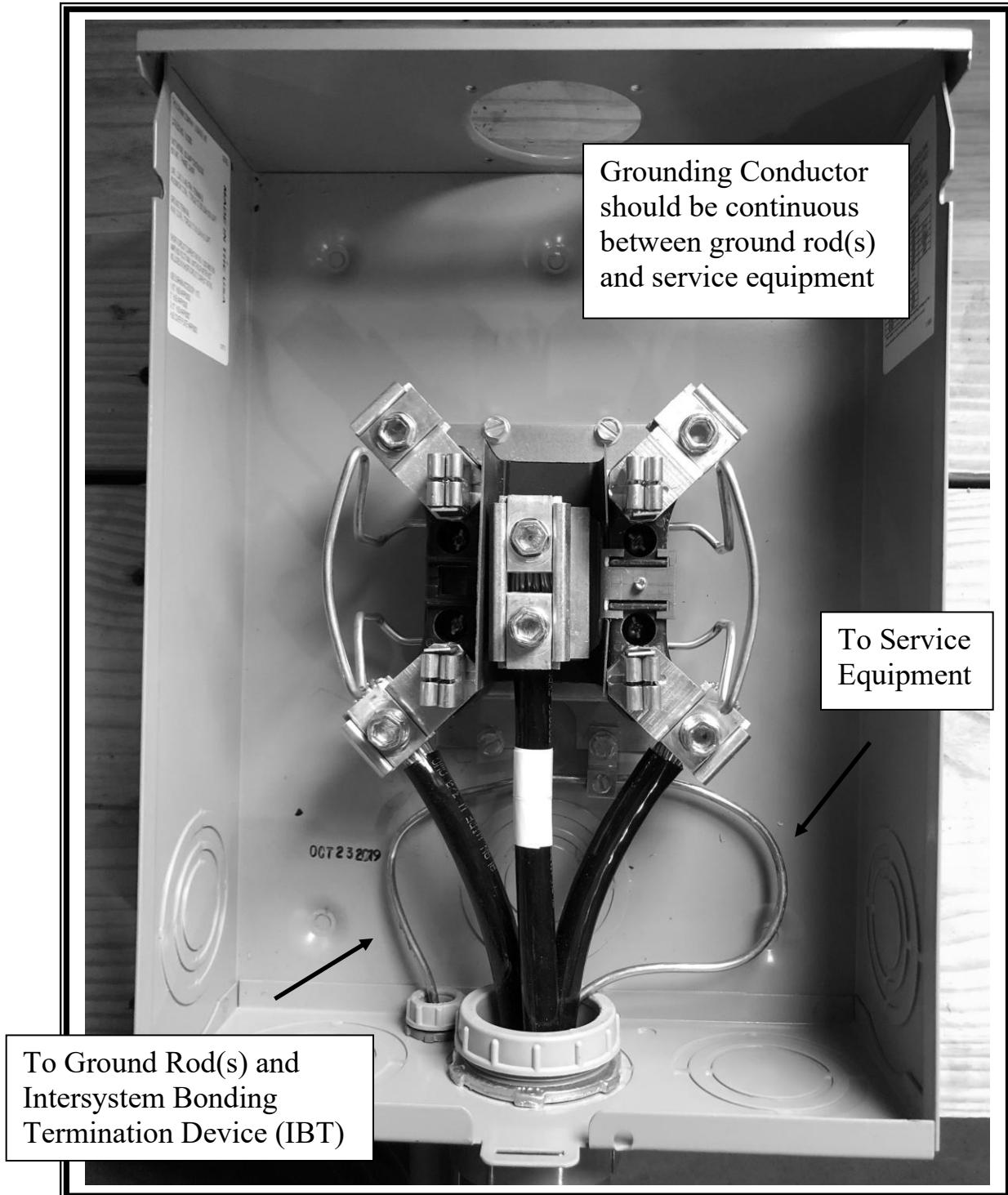
SERVICE GUIDELINES

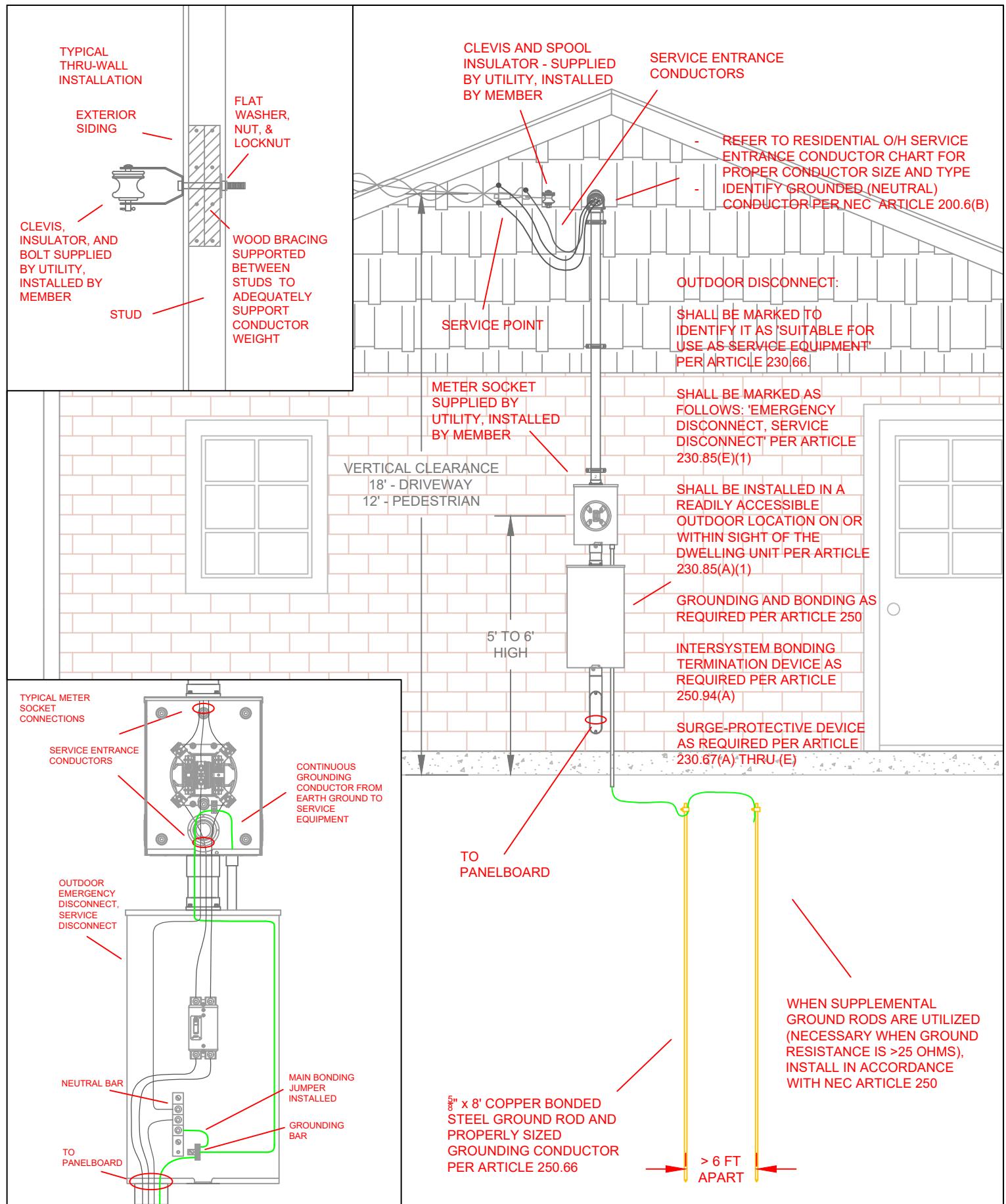
SERVICE (METER ON STRUCTURE-MAST)
100 AMPERE
STANDARD METER SOCKET

Meter on Structure, Mast Type 2½ inch Rigid Galvanized Conduit



Required Grounding Methods





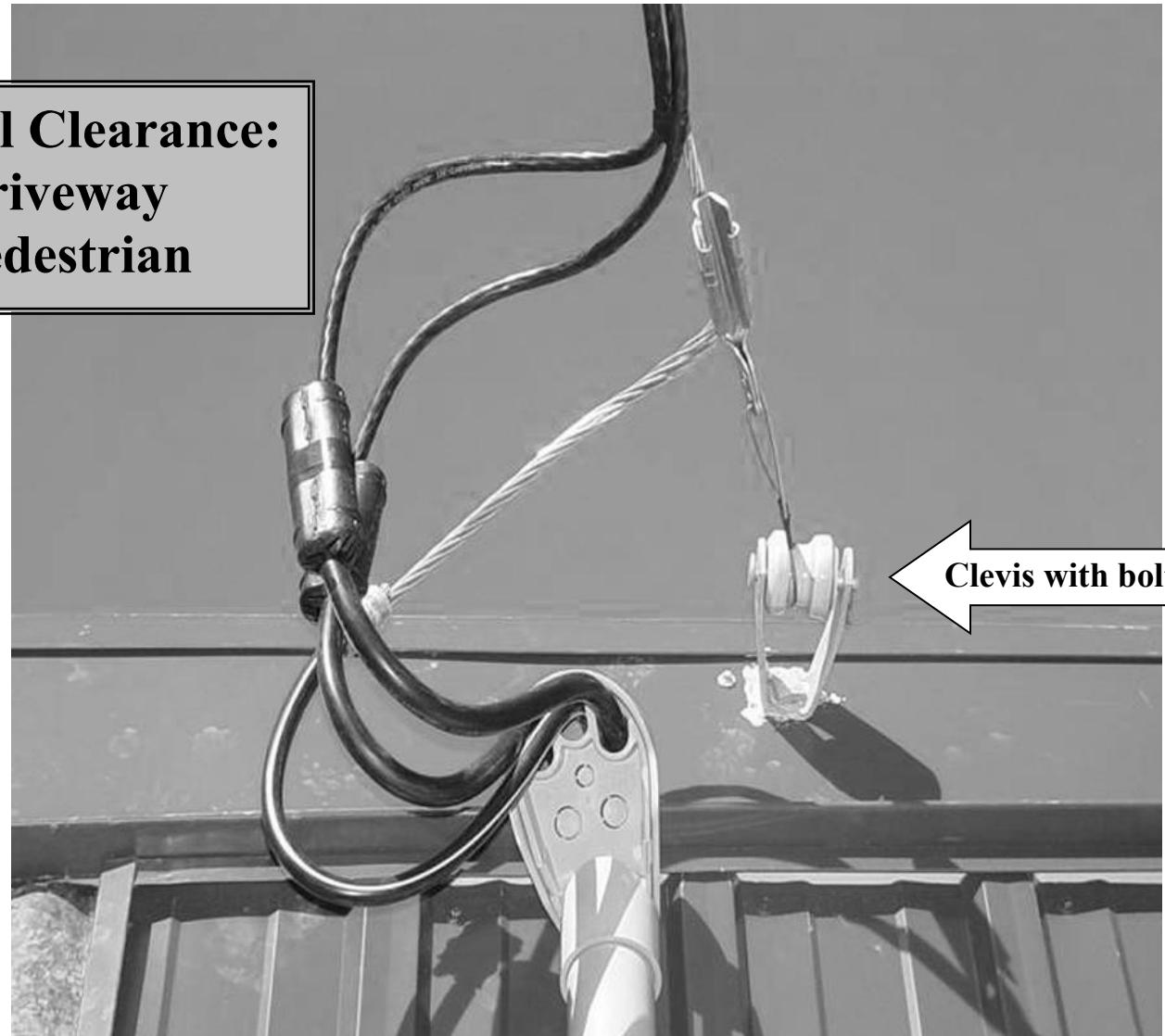
CITIZENS ELECTRIC CORPORATION
PERRYVILLE - STE. GENEVIEVE - FRUITLAND
877.876.3511 - Option 5

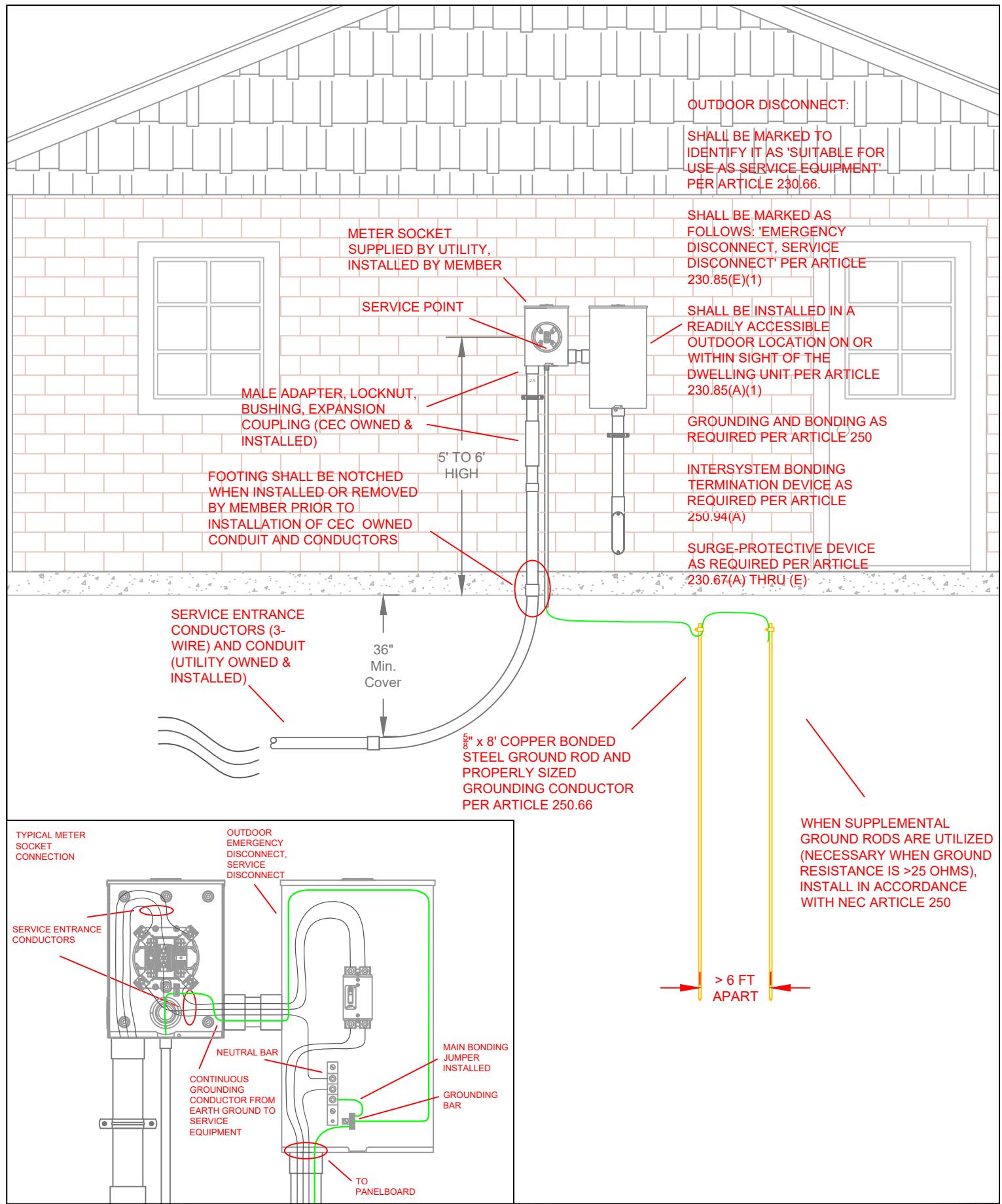
SERVICE GUIDELINES

SERVICE (METER ON STRUCTURE-CLEVIS)
200 AMPERE
STANDARD METER SOCKET

Attachment on Structure Service Clevis with Bolt

Vertical Clearance:
18' - Driveway
12' - Pedestrian





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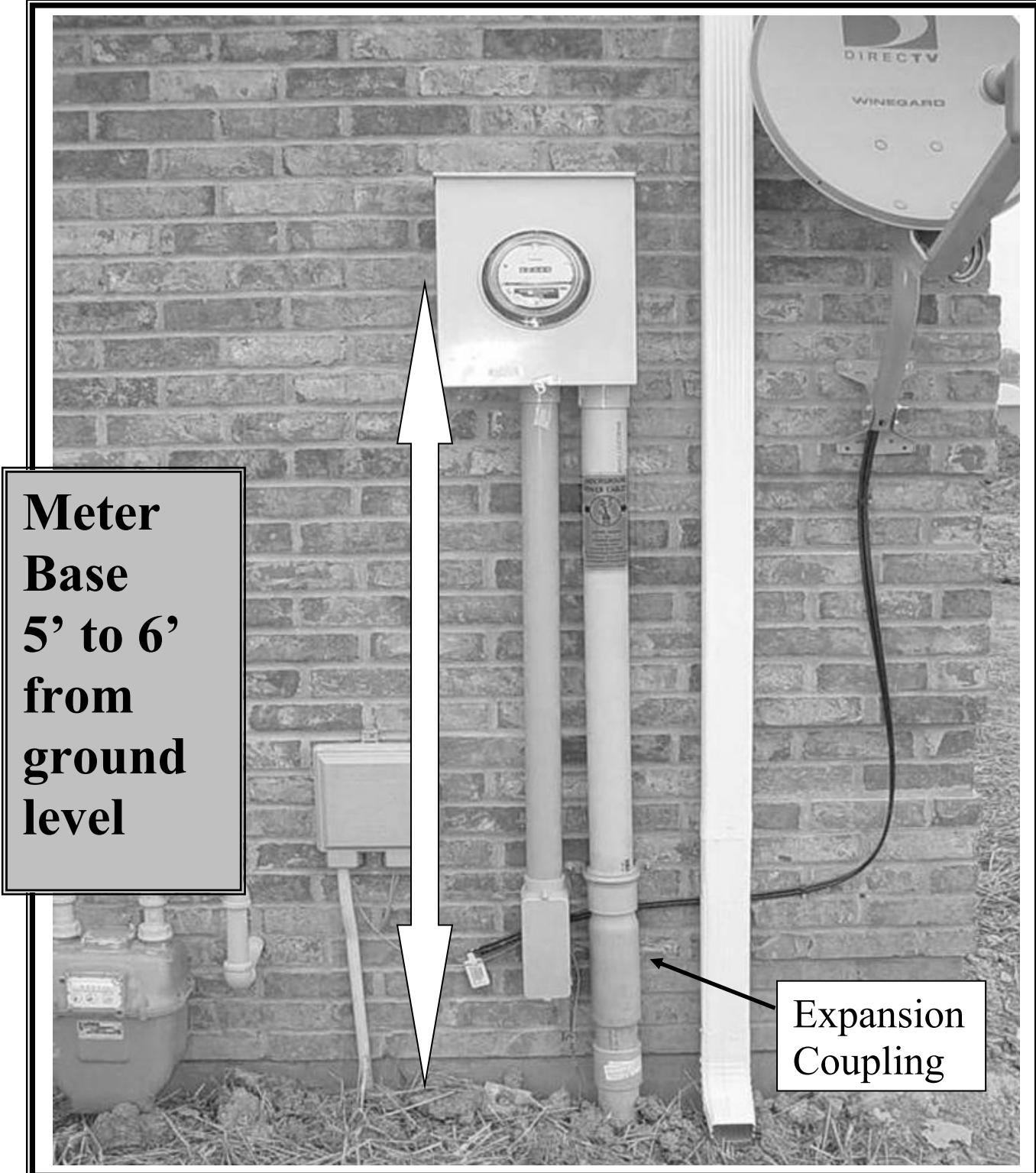
SERVICE GUIDELINES

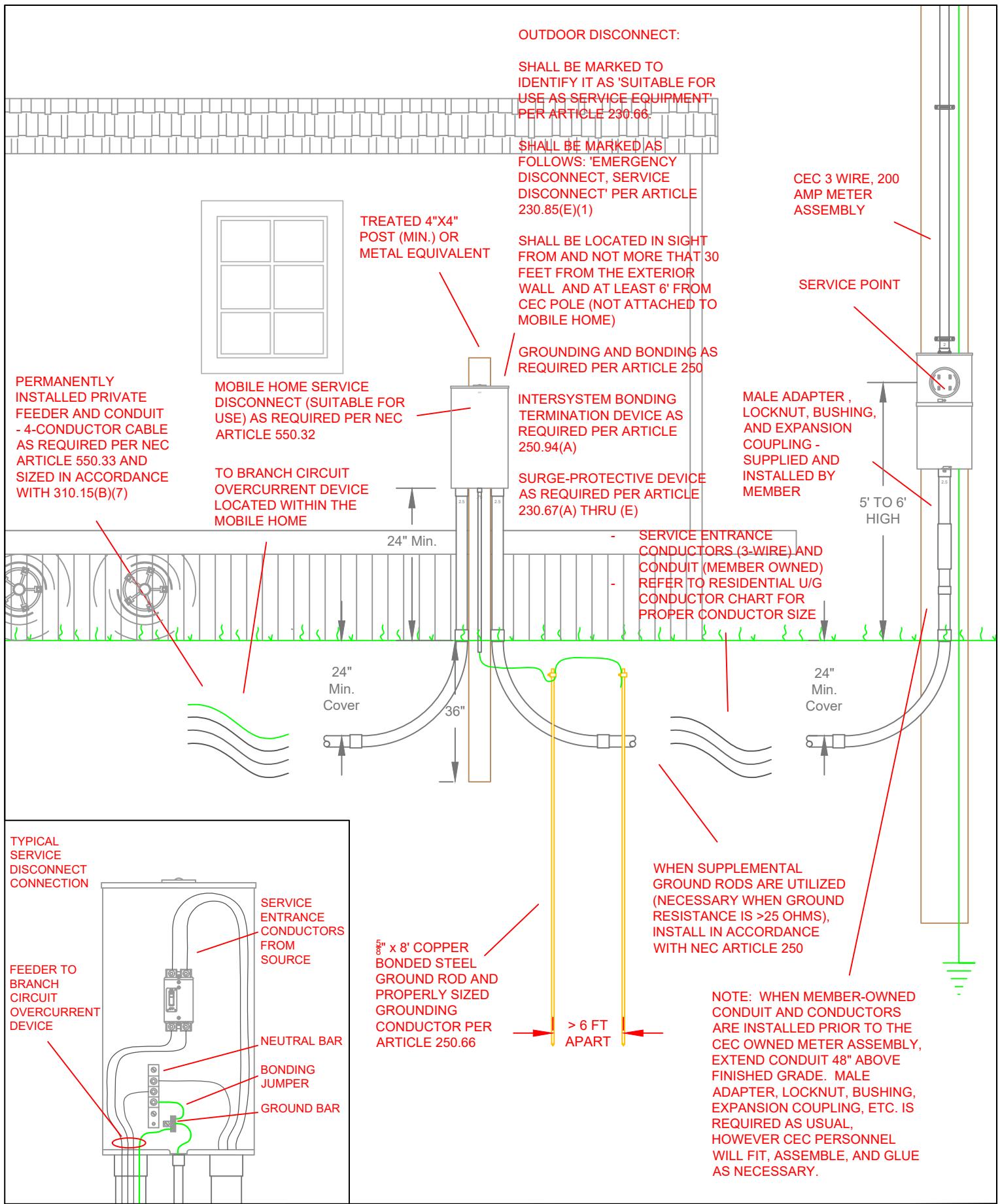
SERVICE (METER ON STRUCTURE-U/G)
200 AMPERE
STANDARD METER SOCKET

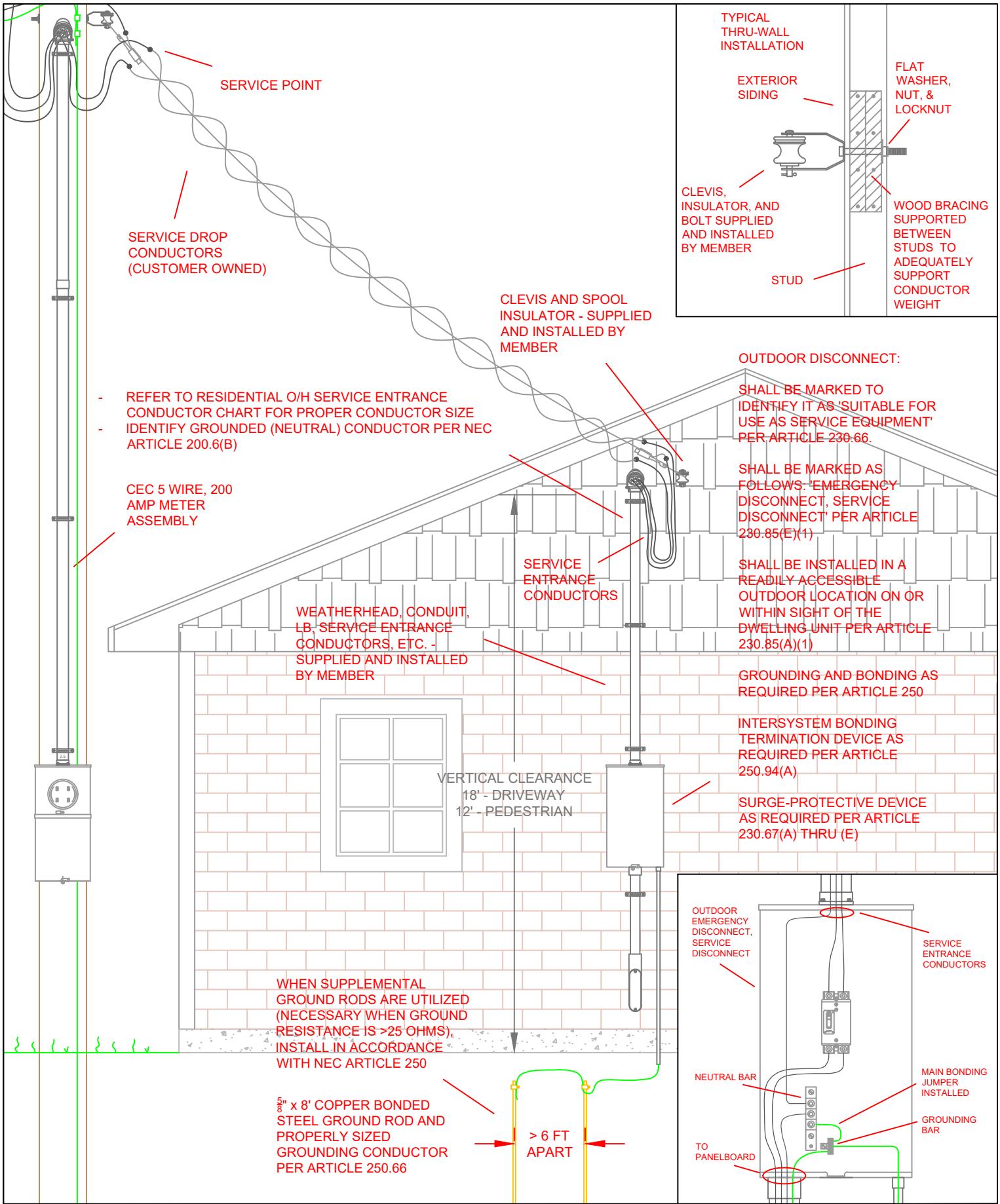
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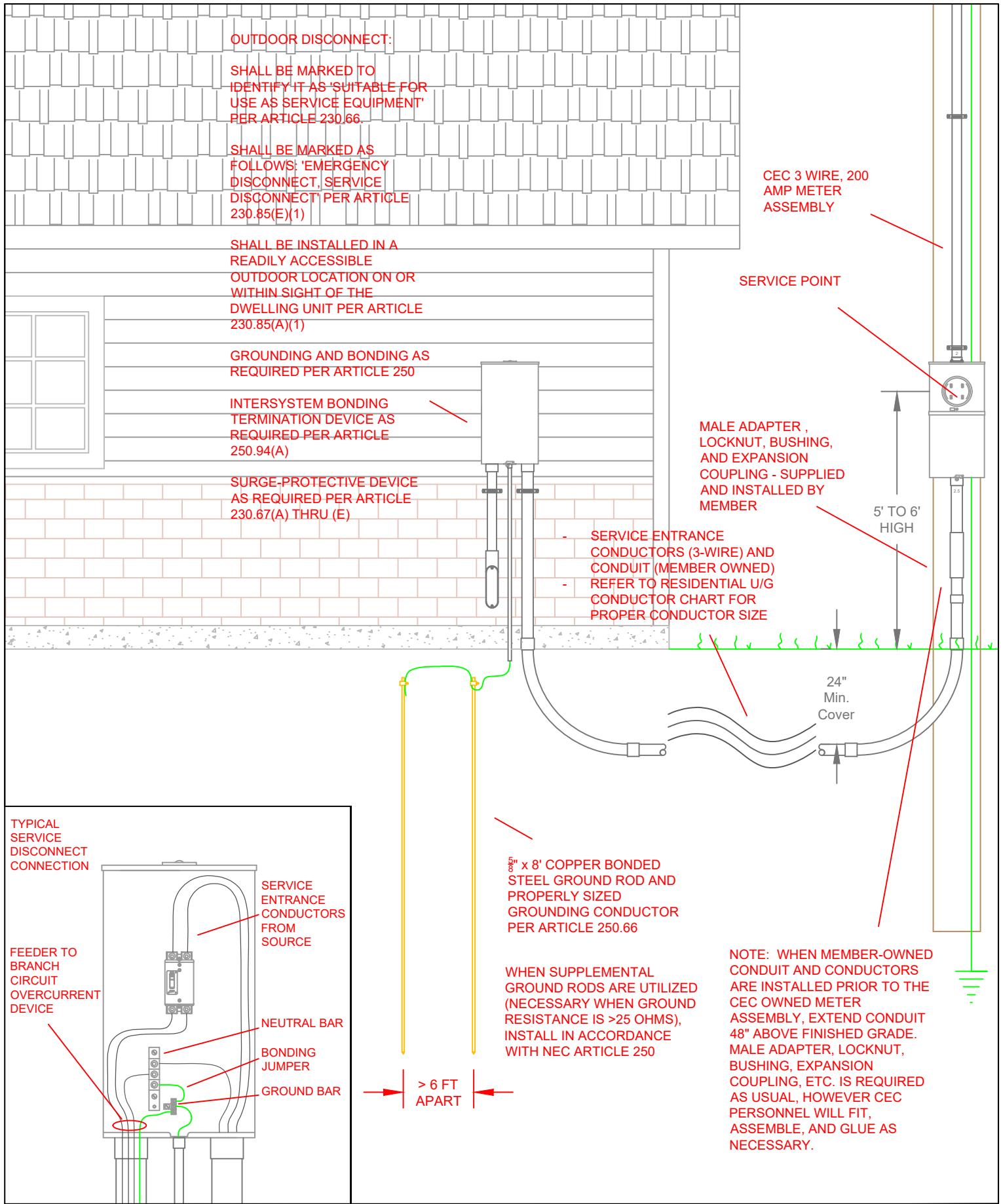
3.A.3

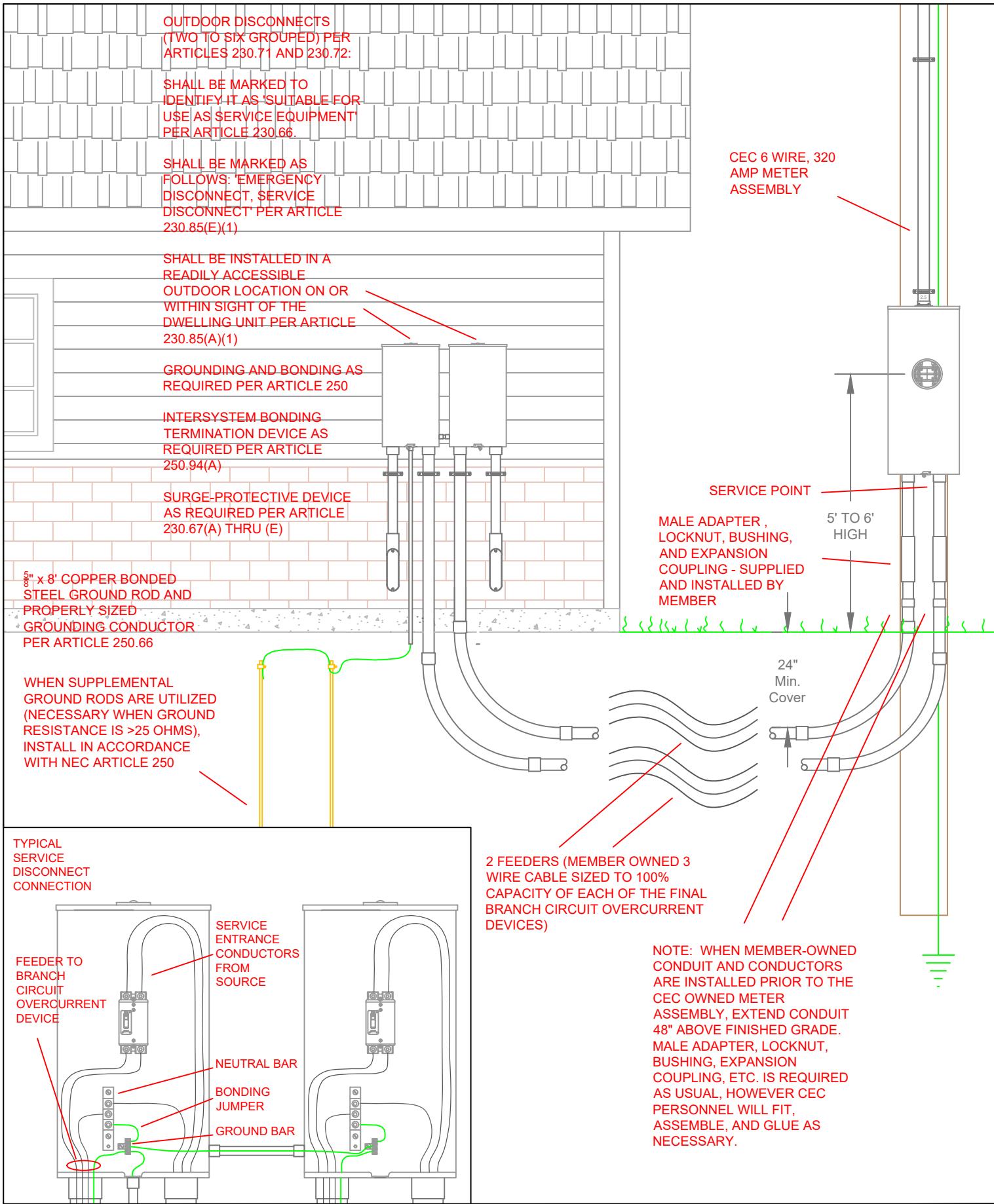
Meter on Structure, Underground

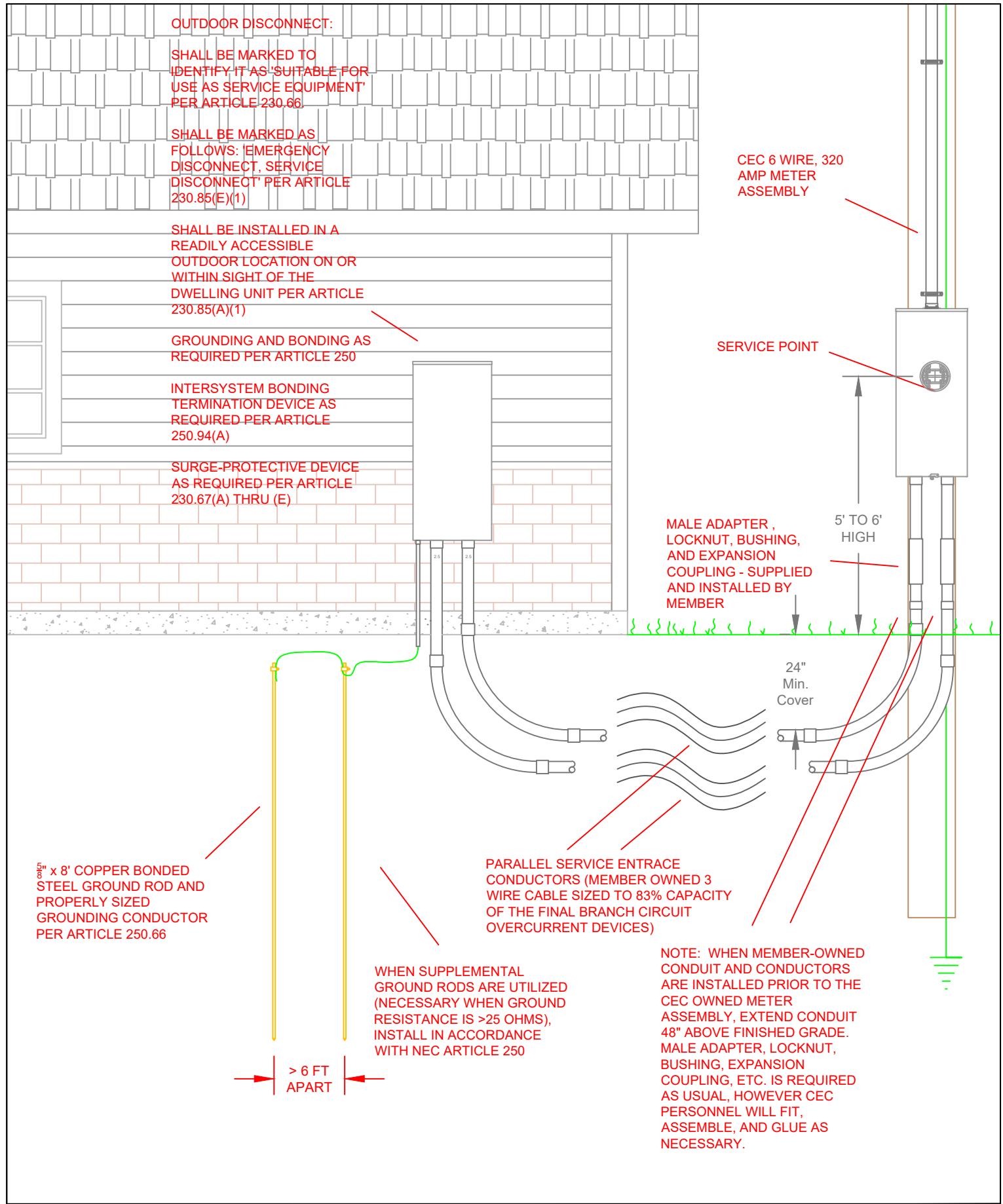


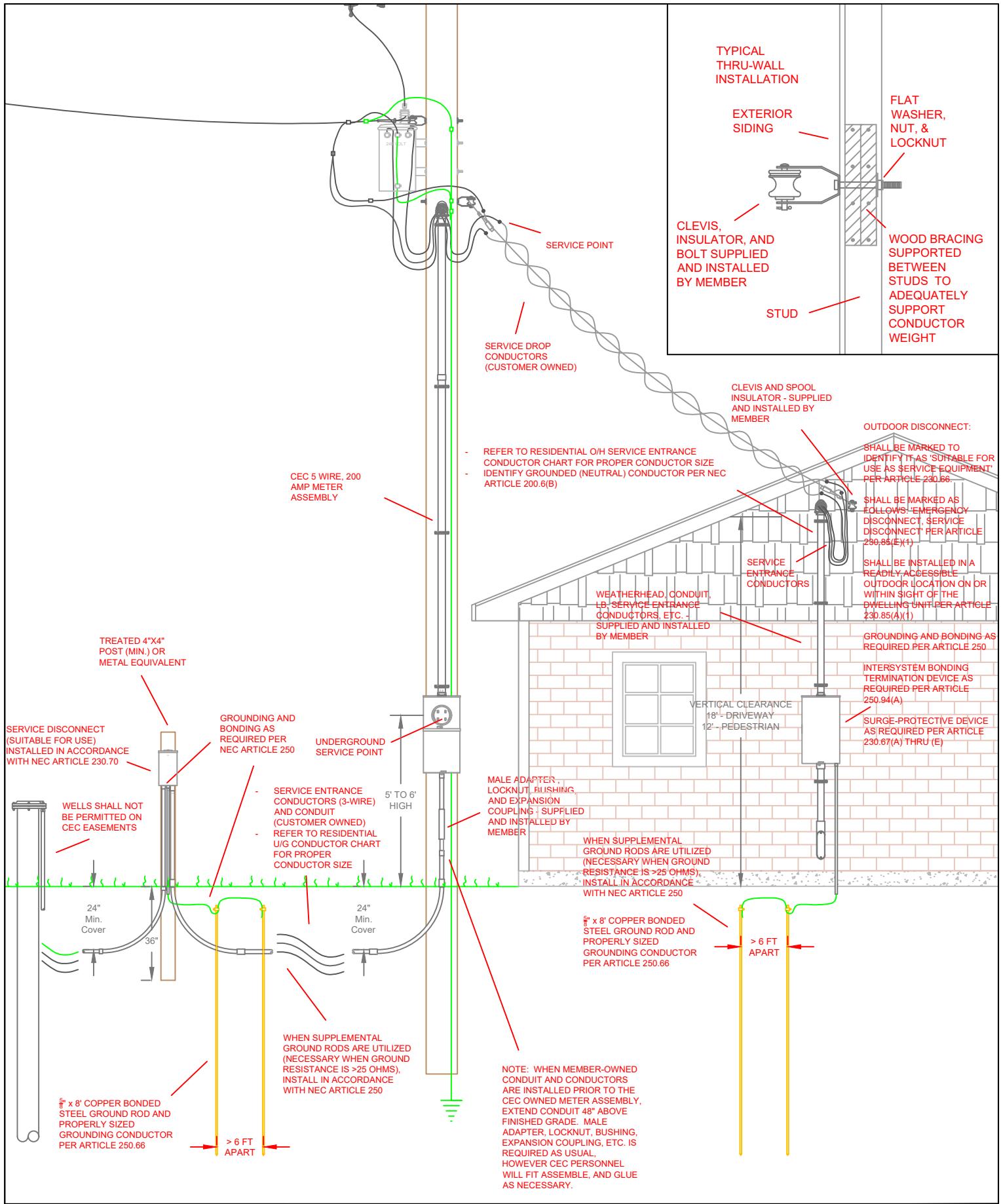












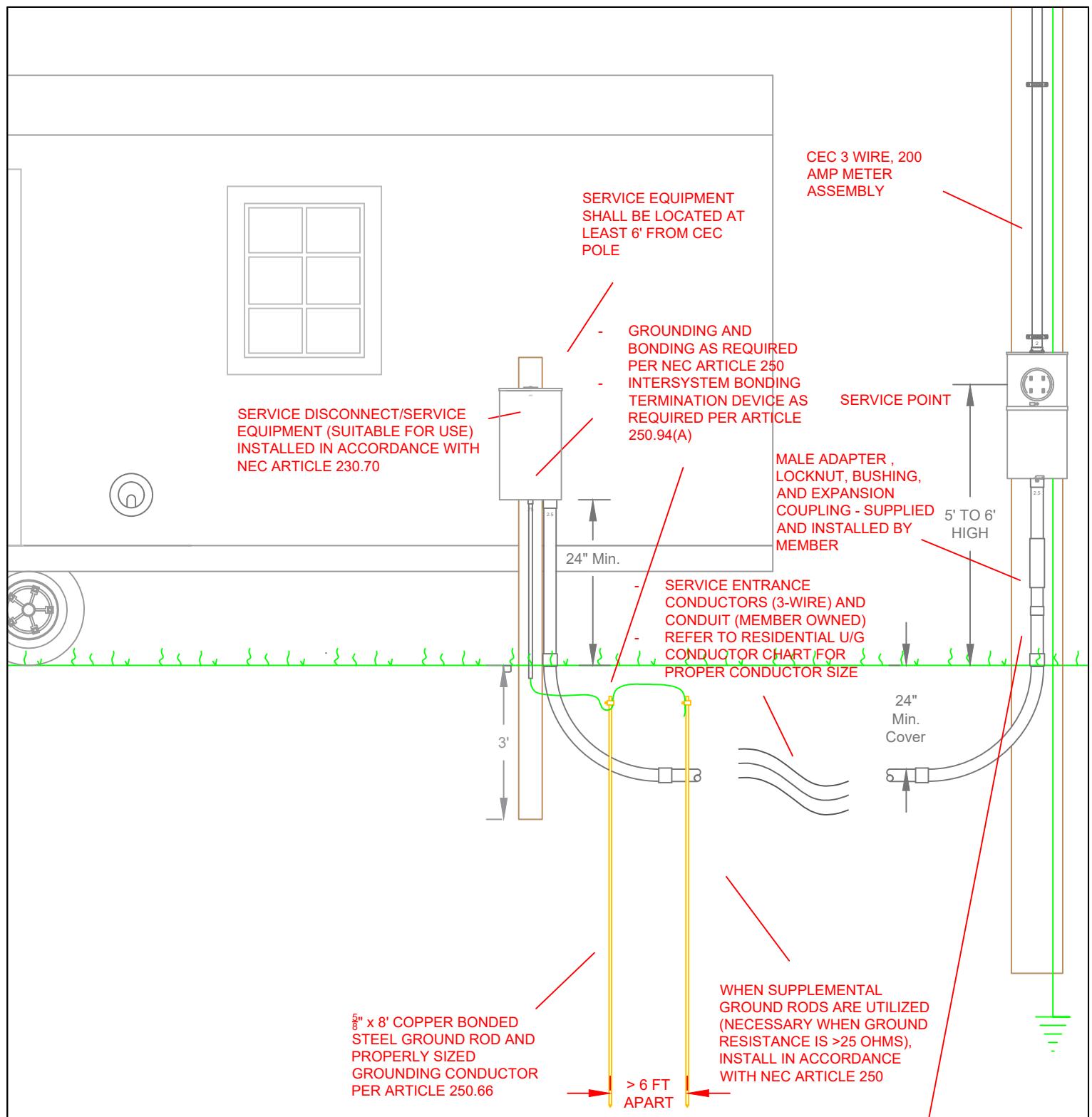
CITIZENS ELECTRIC CORPORATION
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877.876.3511 - Option 5

SERVICE GUIDELINES

SERVICE (METER ON POLE-STRUCT. & WELL)
200 AMPERE
METER/BREAKER COMBINATION

Drawing No.

3.A.8



NOTE: WHEN MEMBER-OWNED CONDUIT AND CONDUCTORS ARE INSTALLED PRIOR TO THE CEC OWNED METER ASSEMBLY, EXTEND CONDUIT 48" ABOVE FINISHED GRADE. MALE ADAPTER, LOCKNUT, BUSHING, EXPANSION COUPLING, ETC. IS REQUIRED AS USUAL, HOWEVER CEC PERSONNEL WILL FIT, ASSEMBLE, AND GLUE AS NECESSARY.

CITIZENS ELECTRIC CORPORATION
PERRYVILLE - STE. GENEVIEVE - FRUITLAND
877.876.3511 - Option 5

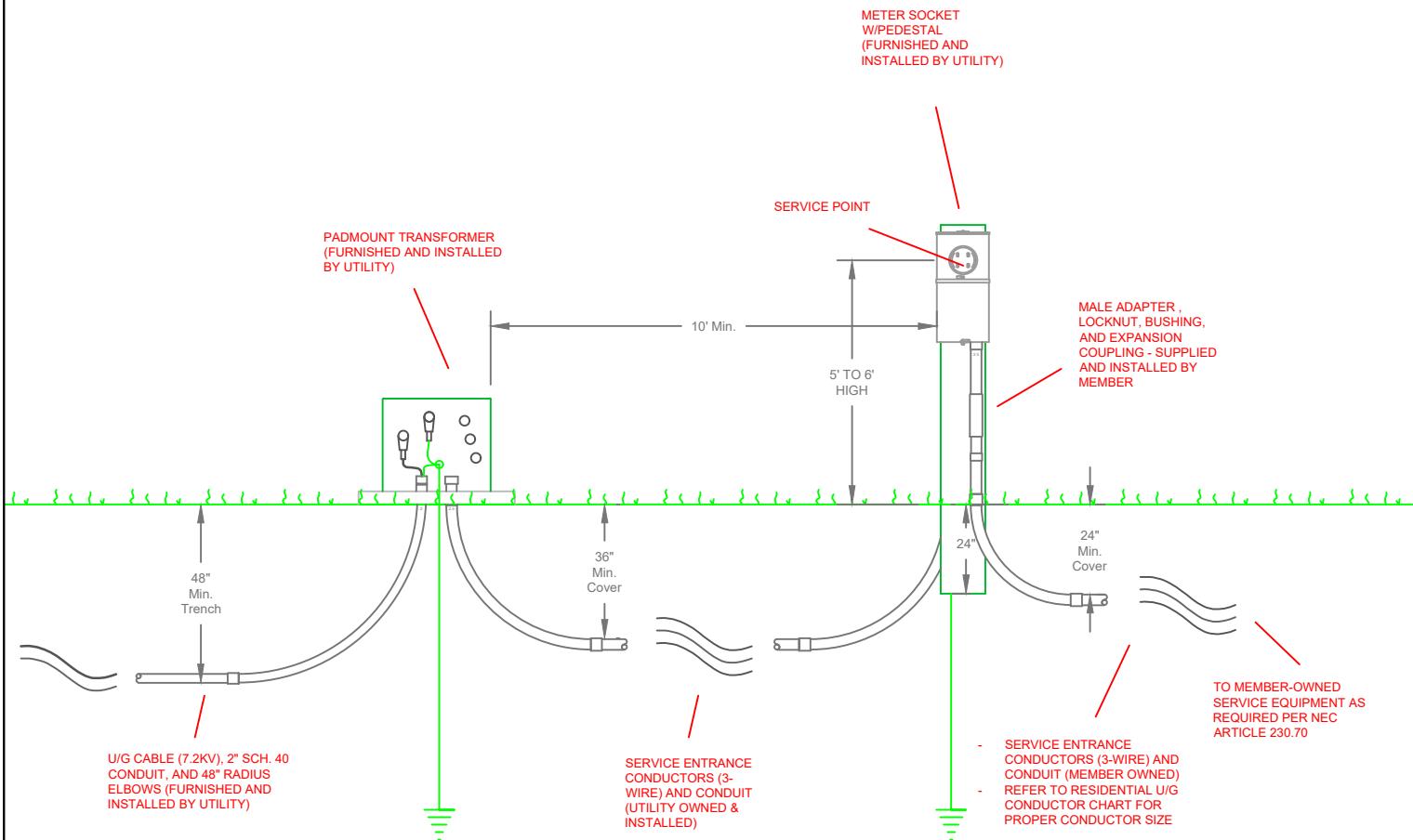
SERVICE GUIDELINES

SERVICE (METER ON POLE-RECREATIONAL)
200 AMPERE
METER/BREAKER COMBINATION

19

Drawing No.

3.A.9



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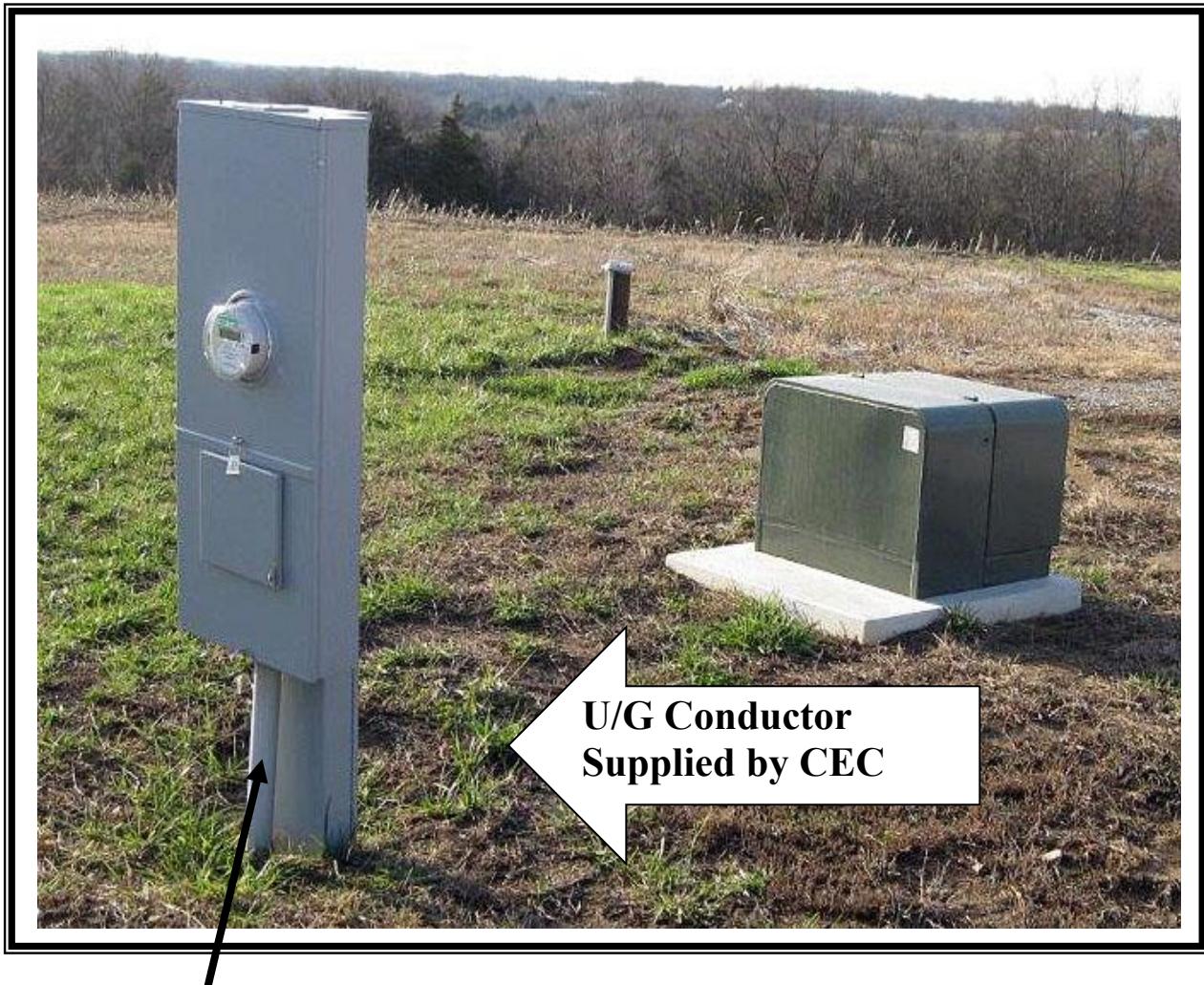
SERVICE GUIDELINES

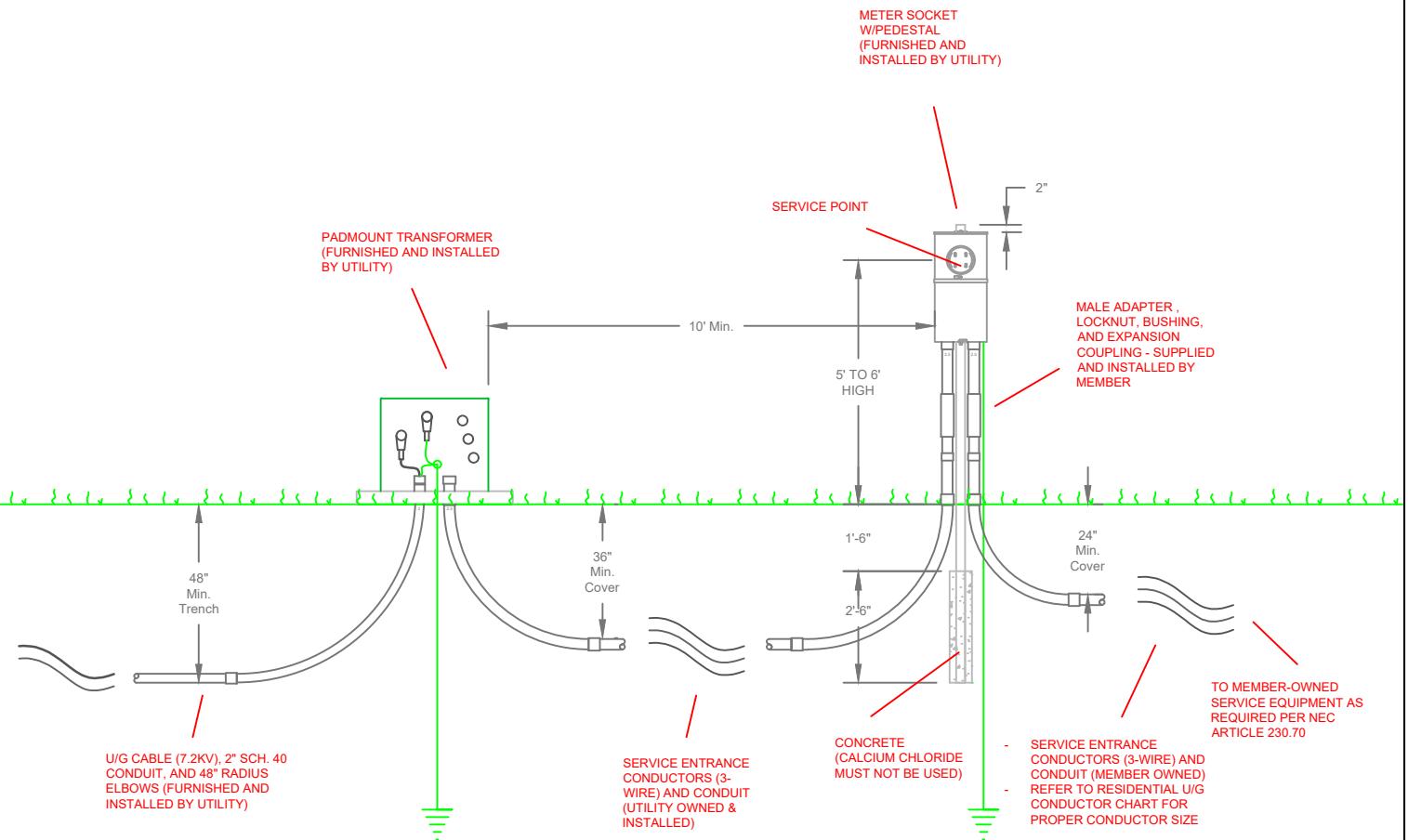
SERVICE (METERING PEDESTAL U/G SOURCE)
200 AMPERE
METER/BREAKER COMBINATION

Drawing No.

3.A.10a

Metering Pedestal, Underground





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877.876.3511 - Option 5

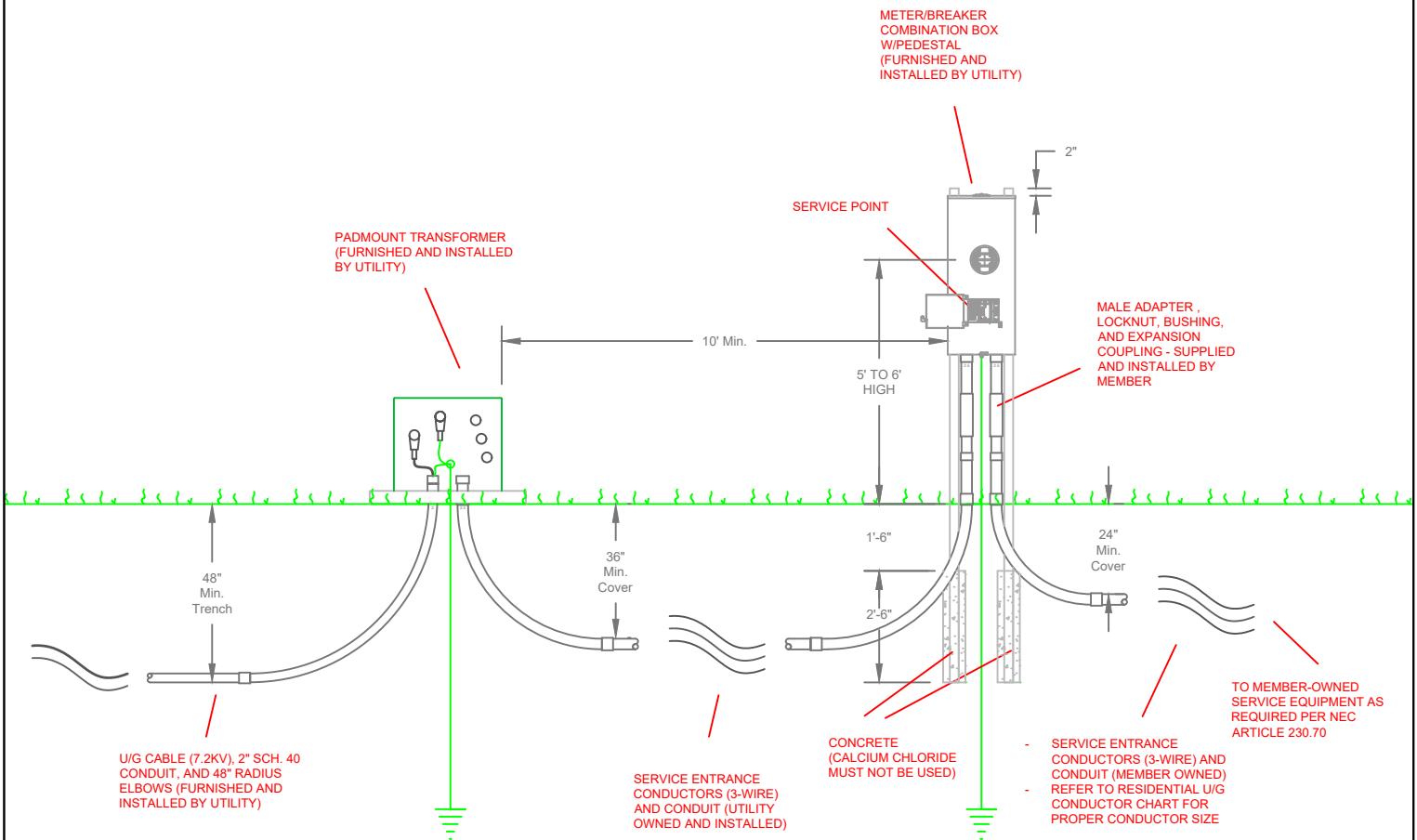
SERVICE GUIDELINES

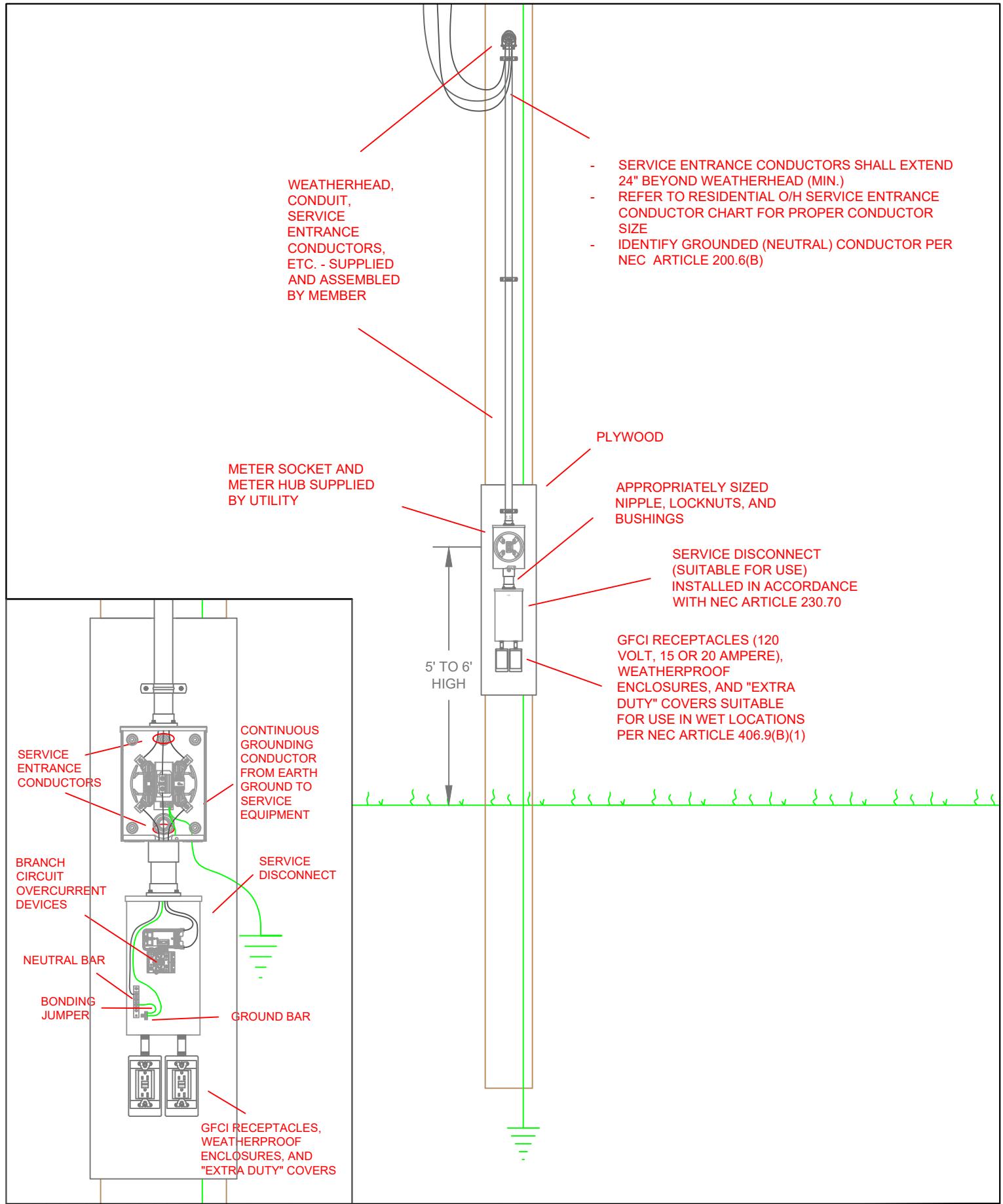
SERVICE (METERING PED. ALT. U/G SOURCE)
200 AMPERE
METER/BREAKER COMBINATION

22

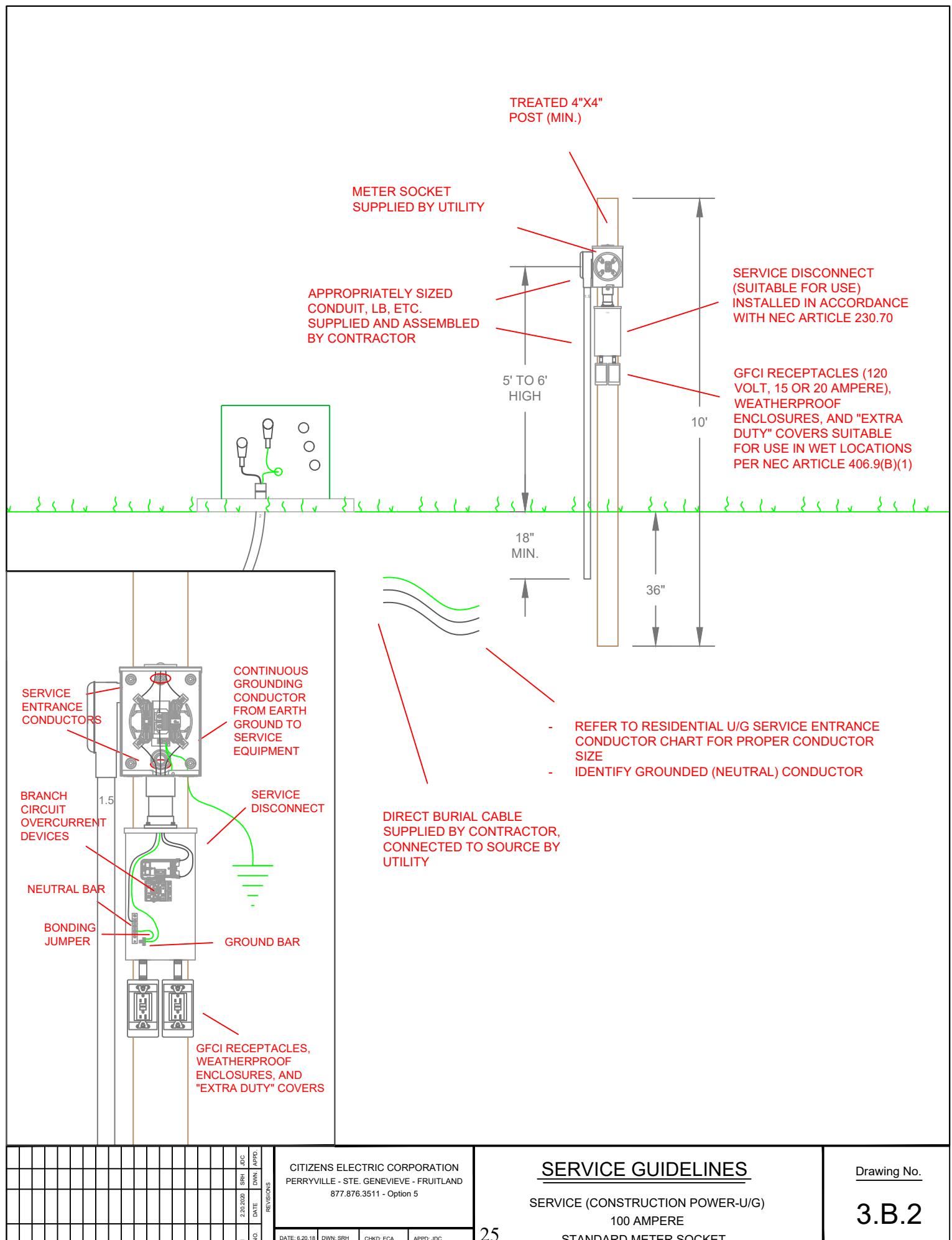
Drawing No.

3.A.10b





SERVICE GUIDELINES				Drawing No.
SERVICE (CONSTRUCTION POWER-O/H) 100 AMPERE STANDARD METER SOCKET				3.B.1
DATE: 6.20.18	DWN: SRH	CHKD: ECA	APPD: JDC	24



MEMBER-OWNED RESIDENTIAL UNDERGROUND SERVICE ENTRANCE CONDUCTOR SIZE - SINGLE PHASE, 120/240 VOLT SYSTEMS

Based on 2023 NEC Table 310.16 and sized in accordance with NEC Articles 310.15(C)(1) and 310.12(A).

Copper (THHN/THWN/THWN-2)

<u>Service Equipment Rating</u>	<u>Limiting Conductor Temperature Rating per NEC Article 110.14(C) or CEC Terminations</u>	<u>Required Ampacity per 310.12(A) (83%)</u>	<u>Minimum Conductor Size per Table 310.16</u>	<u>Conductor Ampacity per Table 310.16</u>	<u>Maximum Length @ Required Ampacity per 310.12(A) (Based on 83% & 3% Voltage Drop)</u>	<u>Maximum Length @ Full Ampacity (Based on 100% & 3% Voltage Drop)</u>	<u>Copper Conductor (THHN/THWN-2) Minimum Conduit Size @ 40% Fill per Chapter 9, Table 1 and Article 344/352</u>	<u>Minimum Size of Grounding Electrode Conductor (AWG) per Table 250.66</u>
100	<u>60°C</u>	83	3 - #3 3 - #2 (Option)	85 95	189 228	- -	1"(SCH. 40 PVC), 1.25"(SCH.80 PVC) 1.25"(SCH.40, SCH. 80 PVC)	#8 Copper
150	<u>75°C</u>	125	3 - #1 3 - #1/0 (Option)	130 150	181 222	- 185	1.25"(SCH.40, SCH. 80 PVC) 1.25"(SCH. 40 PVC), 1.5"(SCH.80 PVC)	#6 Copper
200	<u>75°C</u>	166	3 - #2/0 3 - #3/0 (Option)	175 200	197 246	- 205	1.5"(SCH.40, SCH.80 PVC) 2"(SCH.40, SCH.80 PVC)	#4 Copper
300	<u>75°C</u>	249	3 - 250 kcmil	255	219	182	2"(SCH. 40 PVC), 2.5"(SCH.80 PVC)	#2 Copper
400	<u>75°C</u>	332	3 - 400 kcmil	335	221	184	2.5"(SCH. 40 PVC), 3"(SCH.80 PVC)	#1/0 Copper

Aluminum (RHH/RHW/RHW-2)

<u>Service Equipment Rating</u>	<u>Limiting Conductor Temperature Rating per NEC Article 110.14(C) or CEC Terminations</u>	<u>Required Ampacity per 310.12(A) (83%)</u>	<u>Minimum Conductor Size per Table 310.16</u>	<u>Conductor Ampacity per Table 310.16</u>	<u>Maximum Length @ Required Ampacity per 310.12(A) (Based on 83% & 3% Voltage Drop)</u>	<u>Maximum Length @ Full Ampacity (Based on 100% & 3% Voltage Drop)</u>	<u>Aluminum Conductor (RHH/RHW/RHW-2) Minimum Conduit Size @ 40% Fill per Chapter 9, Table 1 and Article 344/352</u>	<u>Minimum Size of Grounding Electrode Conductor (AWG) per Table 250.66</u>
100	<u>60°C</u>	83	3 - #1 3 - #1/0 (Option)	85 100	181 228	- 189	2"(SCH.40, SCH.80 PVC) 2"(SCH.40, SCH.80 PVC)	#8 Copper
150	<u>75°C</u>	125	3 - #2/0 3 - #3/0 (Option)	135 155	181 222	- 185	2"(SCH.40, SCH.80 PVC) 2"(SCH. 40 PVC), 2.5"(SCH.80 PVC)	#6 Copper
200	<u>75°C</u>	166	3 - #4/0 3 - 250 kcmil (Option)	180 205	197 231	- 191	2.5"(SCH.40, SCH.80 PVC) 3"(SCH. 40, SCH.80 PVC)	#4 Copper
300	<u>75°C</u>	249	3 - 350 kcmil	250	198	164	3"(SCH. 40, SCH.80 PVC)	#2 Copper
400	<u>75°C</u>	332	3 - 600 kcmil	340	213	176	3.5"(SCH. 40 PVC), 4"(SCH.80 PVC)	#1/0 Copper

MEMBER-OWNED RESIDENTIAL **OVERHEAD** SERVICE ENTRANCE CONDUCTOR SIZE - SINGLE PHASE, 120/240 VOLT SYSTEMS

Based on 2023 NEC Table 310.16 and sized in accordance with NEC Articles 310.15(C)(1) and 310.12(A).

Copper (THHN/THWN/THWN-2)

<u>Service Equipment Rating</u>	<u>Limiting Conductor Temperature Rating per NEC Article 110.14(C) or CEC Terminations</u>	<u>Required Ampacity per 310.12(A)(83%)</u>	<u>Minimum Conductor Size per Table 310.16 & Table 310.15(B)(1)(1) Ambient Correction to 40°C</u>	<u>Conductor Ampacity per Table 310.16 & Table 310.15(B)(1)(1) Ambient Correction to 40°C</u>	<u>Copper Conductor (THHN/THWN/THWN-2) Minimum Conduit Size @ 40% Fill per Chapter 9, Table 1 and Article 344/352</u>	<u>Minimum Size of Grounding Electrode Conductor (AWG) per Table 250.66</u>
100	<u>60°C</u>	83	3 - #2	84	1"(RMC), 1.25"(SCH.40, SCH.80 PVC)	#8 Copper
150	<u>75°C</u>	125	3 - #1/0 3 - #2/0 (Option)	132 154	1.25"(RMC, SCH.40 PVC), 1.5"(SCH.80 PVC) 1.5"(RMC, SCH.40, SCH.80 PVC)	#6 Copper #4 Copper
200	<u>75°C</u>	166	3 - #3/0 3 - #4/0 (Option)	176 202	1.5"(RMC), 2"(SCH40, SCH.80 PVC) 2"(RMC, SCH.40, SCH.80 PVC)	#4 Copper #2 Copper
300	<u>75°C</u>	249	3 - 300 kcmil	251	2.5"(RMC, SCH. 40, SCH.80 PVC)	#2 Copper
400	<u>75°C</u>	332	3 - 500 kcmil	334	3"(RMC, SCH. 40, SCH.80 PVC)	#1/0 Copper

Aluminum (RHH/RHW/RHW-2)

<u>Service Equipment Rating</u>	<u>Limiting Conductor Temperature Rating per NEC Article 110.14(C) or CEC Terminations</u>	<u>Required Ampacity per 310.12(A)(83%)</u>	<u>Minimum Conductor Size per Table 310.16 & Table 310.15(B)(1)(1) Ambient Correction to 40°C</u>	<u>Conductor Ampacity per Table 310.16 & Table 310.15(B)(1)(1) Ambient Correction to 40°C</u>	<u>Aluminum Conductor (RHH/RHW/RHW-2) Minimum Conduit Size @ 40% Fill per Chapter 9, Table 1 and Article 344/352</u>	<u>Minimum Size of Grounding Electrode Conductor (AWG) per Table 250.66</u>
100	<u>60°C</u>	83	3 - #1/0	88	2"(RMC, SCH.40, SCH.80 PVC)	#8 Copper
150	<u>75°C</u>	125	3 - #3/0 3 - #4/0 (Option)	136 158	2"(RMC, SCH.40 PVC), 2.5"(SCH.80 PVC) 2.5"(RMC, SCH. 40, SCH.80 PVC)	#6 Copper #4 Copper
200	<u>75°C</u>	166	3 - 250 kcmil 3 - 350 kcmil (Option)	180 220	2.5"(RMC), 3"(SCH.40, SCH.80 PVC) 3"(RMC, SCH. 40, SCH.80 PVC)	#4 Copper #2 Copper
300	<u>75°C</u>	249	3 - 500 kcmil	273	3.5"(RMC, SCH. 40, SCH.80 PVC)	#2 Copper
400	<u>75°C</u>	332	3 - 750 kcmil	339	4"(RMC, SCH. 40, SCH.80 PVC)	#1/0 Copper

MEMBER-OWNED RESIDENTIAL **OVERHEAD TRIPLEX** SERVICE CONDUCTOR SIZE - SINGLE PHASE, 120/240 VOLT SYSTEMS

Based on 2023 NEC Table 310.20 and sized in accordance with NEC Article 310.112(A).

Aluminum (XHHW)*

<u>Service Equipment Rating</u>	<u>Limiting Conductor Temperature Rating</u>	<u>Required Ampacity</u>	<u>Minimum Conductor Size</u>	<u>Conductor Ampacity</u>	<u>Maximum Length @ 83% & 3% Voltage Drop</u>	<u>Maximum Length @ 100% & 3% Voltage Drop)</u>
100	<u>75°C</u>	83	#3 #2 (Option)	92 106	120 153	- 124
150	<u>75°C</u>	125	#1/0 #2/0 (Option)	143 165	152 191	- 155
200	<u>75°C</u>	166	#3/0 #4/0 (Option)	192 224	172 212	- 172
300	<u>75°C</u>	249	250 kcmil	251	155	-
400	<u>75°C</u>	332	400 kcmil	339	165	-

* XLP is XHHW equivalent NEC type