

SERVICE AND METER-RELATED DOCUMENTS

**BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA**

TABLE OF CONTENTS

Document	Page(s)
CT & PT Cabinet Rated Overhead/Underground	2-3
Self-Contained Meter Service Overhead	4-5
Transformer-Rated Meter Service Overhead	6-7
Small Purpose Meter Service Underground	8-9
Self-Contained Meter Service Underground	10-11
Transformer-Rated Meter Service Underground	12-13
Available Fault Current	14
Wiring Diagrams	15-16

BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Nov 16
888-267-2726

CT & PT CABINET RATED METER SERVICE
OVERHEAD/UNDERGROUND

Page 1/2

Subject to Change Without Notice

RESPONSIBILITY OF REC:

1. Provide meter and meter socket.
2. Provide appropriate current transformers and potential transformers for application.
3. Provide color-and size-coded meter wiring along with wiring diagram.
4. Provide and record an easement for the REC underground wires where necessary. Please call toll free 888-267-2726 for any questions about this underground.
5. Provide secondary underground wire from overhead transformer location to meter location; the REC will leave an adequate length of UG service to reach the meter socket termination.
6. Specification sheet will be available for job-specific situations providing fault current.
7. Make all connections to the overhead or pad-mounted transformer.
8. Energize the new or uprated service only if state or local inspection provides the release and posting on the premises.

RESPONSIBILITY OF CUSTOMER OR CUSTOMER'S ELECTRICAL CONTRACTOR:

1. Permitting shall be completed by the state or local authorities prior to construction by REC crews. It will be the responsibility of the customer/contractor to investigate whether the work needs permitting and inspection. The contact information for the State Electrical Inspection program is found by going to <https://iowaelectrical.gov> or call 866-923-1082. For permitting and inspection in Bremer County, go to www.co.bremer.ia.us, then click on "Building, Zoning & Sanitation," or call 319-352-0332.
2. Provide complete information for REC easement form along with proper signatures and notarization. The completed easement form must be returned to the REC office or to REC personnel before any construction can be started.
3. All new services and existing services with New Account Name - before service can be energized, customer must call 888-267-2726 and ask for billing to provide billing information.
4. Provide and install the treated posts (4" X 6" minimum) and planks (1 ¼" minimum lumber) for the meter stand.
5. All electrical equipment installations shall be according to National Electrical Code.
6. Install the meter socket and, when required, install current transformers.
7. When a pad-mounted transformer is present, customer or customer's electrical contractor will provide and install underground secondary wire from the pad-mounted transformer to the meter location; customer or customer's electrical contractor will leave an adequate length of UG service to reach the transformer secondary terminations.
8. All connectors must be compression type.
9. All other responsibilities by customer or customer's electrical contractor shall be in accordance to the current National Electrical Code.

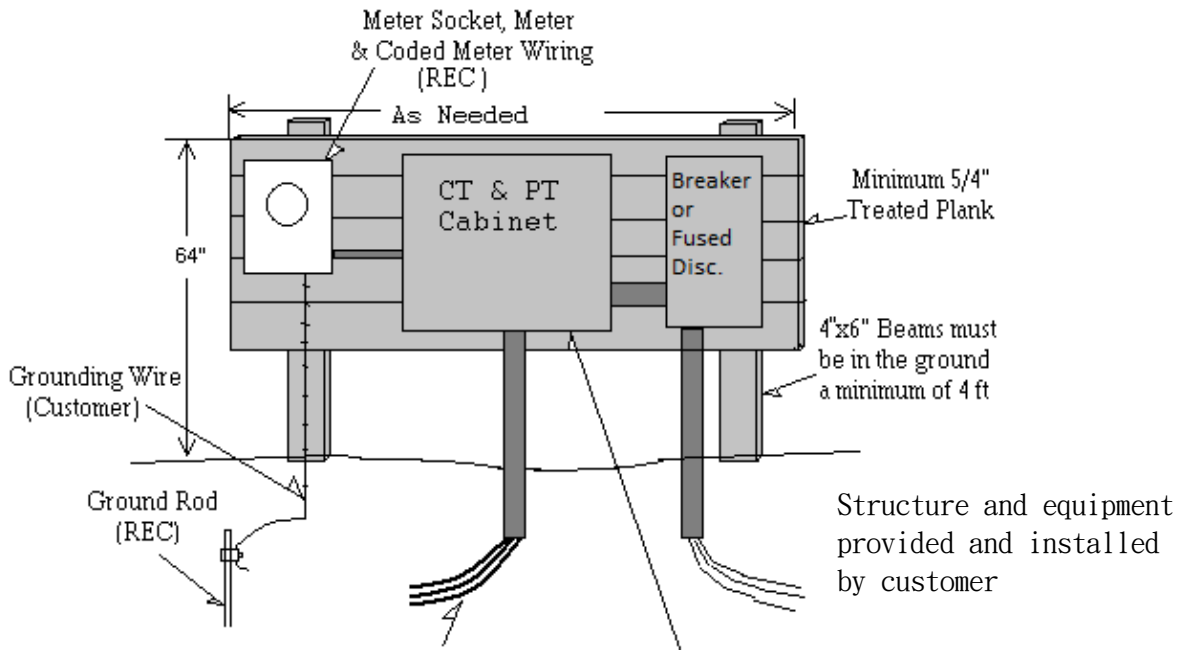
(Please see drawing on the back of this sheet.)

BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – MAR 15
888-267-2726

CT & PT CABINET RATED METER SERVICE
OVERHEAD/UNDERGROUND

Page 2/2

Subject to Change Without Notice



Line side conductors provided by customer unless required by REC Personnel

CT Cabinet
Single Phase 24"x 24"x 12"
Three Phase 36"x 36"x 12"
Or size recommended by REC Personnel

BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Nov 16
888-267-2726

SELF-CONTAINED METER SERVICE
OVERHEAD

200 Amp Minimum Unless Approved by REC Personnel

Page 1/2

Subject to Change Without Notice

RESPONSIBILITY OF REC:

1. Provide meter pole.
2. Provide meter and meter socket.
3. Provide pole ground and ground rod.
4. Energize the new or uprated service only if state or local inspection provides the release and posting on the premises.

RESPONSIBILITY OF CUSTOMER OR CUSTOMER'S ELECTRICAL CONTRACTOR:

1. Permitting shall be completed by the state or local authorities prior to construction by REC crews. It will be the responsibility of the customer/contractor to investigate whether the work needs permitting and inspection. The contact information for the State Electrical Inspection program is found by going to <https://iowaelectrical.gov> or call 866-923-1082. For permitting and inspection in Bremer County, go to www.co.bremer.ia.us, then click on "Building, Zoning or Sanitation," or call 319-352-0332.
2. All new services and existing services with New Account Name - before service can be energized, customer must call 888-267-2726 and ask for Billing to provide billing information.
3. Meter loop installations shall be according to National Electrical Code.
4. The length of line-side conduit above meter socket shall be 15 feet for 30-foot poles and 20 feet for 35-foot poles.
5. Bond the breaker panel to the pole ground wire with a minimum of #6 copper.
6. Make all load-side connections.
7. All connectors shall be compression type.
8. All other responsibilities by the customer or customer's electrical contractor shall be in accordance to the current National Electrical Code.

(Please see drawing on the back of this sheet.)

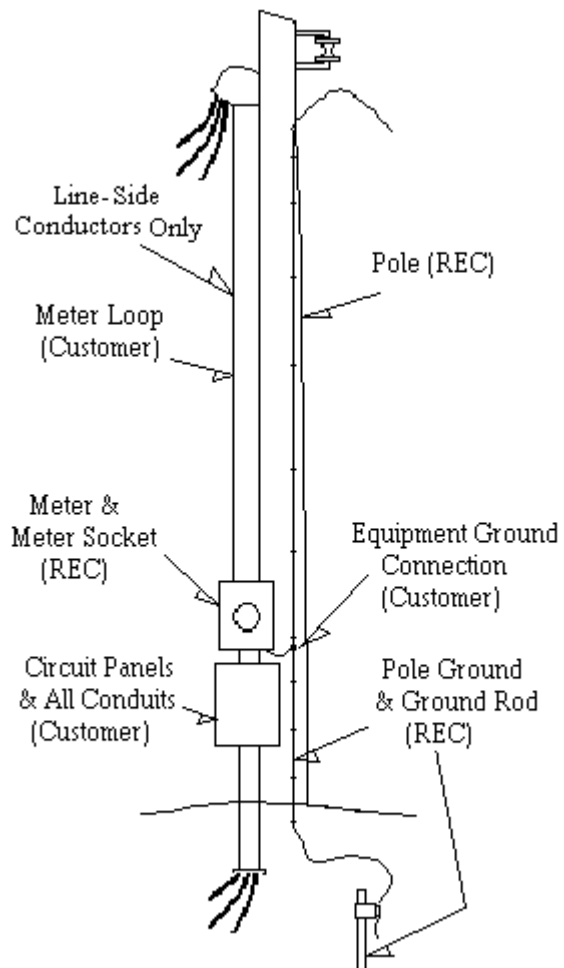
BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Mar 14
888-267-2726

SELF-CONTAINED METER SERVICE
OVERHEAD

200 Amp Minimum Unless Approved by REC Personnel

Page 2/2

Subject to Change Without Notice



BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Nov 16
888-267-2726

TRANSFORMER-RATED METER SERVICE
OVERHEAD

Page 1/2

Subject to Change Without Notice

Note: All meter services greater than 200 amps will be transformer metered.

RESPONSIBILITY OF REC:

1. Provide meter pole.
2. Provide meter equipment and meter installation.
3. Provide pole ground and ground rod.
4. Specification sheet will be available for job-specific situations providing fault current.
5. Energize the new or uprated service only if state or local inspection provides the release and posting on the premises.

RESPONSIBILITY OF CUSTOMER OR CUSTOMER'S ELECTRICAL CONTRACTOR:

1. Permitting shall be completed by the state or local authorities prior to construction by REC crews. It will be the responsibility of the customer/contractor to investigate whether the work needs permitting and inspection. The contact information for the State Electrical Inspection program is found by going to <https://iowaelectrical.gov> or call 866-923-1082. For permitting and inspection in Bremer County, go to www.co.bremer.ia.us, then click on "Building, Zoning & Sanitation," or call 319-352-0332.
2. All new services and existing services with New Account Name - before service can be energized, customer must call 888-267-2726 and ask for Billing to provide billing information.
3. Install any transfer switching if applicable.
4. All electrical equipment installations shall be according to National Electrical Code. (No U-guard allowed.)
5. Install fused disconnect(s) at one location.
6. All connectors shall be compression type.
7. All other responsibilities of customer or customer's electrical contractor shall be in accordance to the current National Electrical Code.

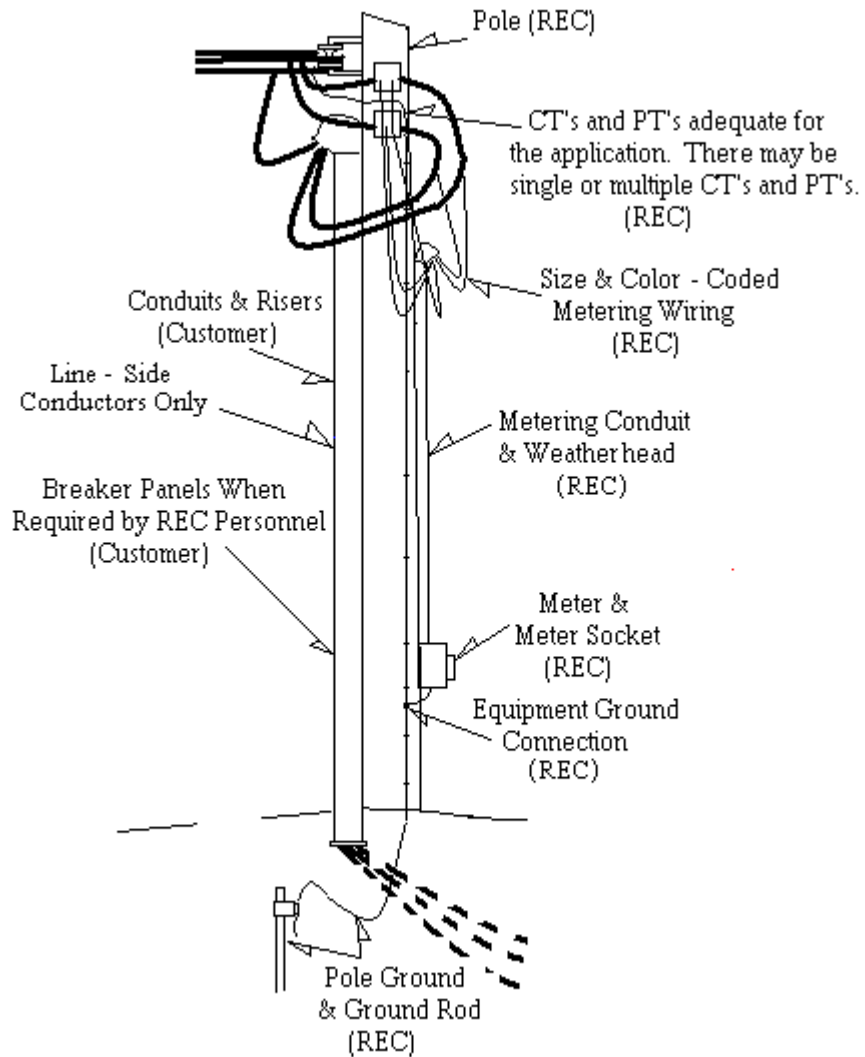
(Please see drawing on the back of this sheet.)

BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Mar 14
888-267-2726

TRANSFORMER-RATED METER SERVICE
OVERHEAD

Page 2/2

Subject to Change Without Notice



BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Nov 16
888-267-2726

SMALL PURPOSE METER SERVICE
UNDERGROUND

Page 1/2

Subject to Change Without Notice

RESPONSIBILITY OF REC:

1. Provide meter and meter socket.
2. Provide ground rod.
3. Provide and record an easement for the REC underground wires where necessary. Please call toll-free, 888-267-2726, for any questions about this underground.
4. Make connections to the transformer.
5. Energize the new or uprated service only if state or local inspection provides the release and posting on the premises.

RESPONSIBILITY OF THE CUSTOMER OR CUSTOMER'S ELECTRICAL CONTRACTOR:

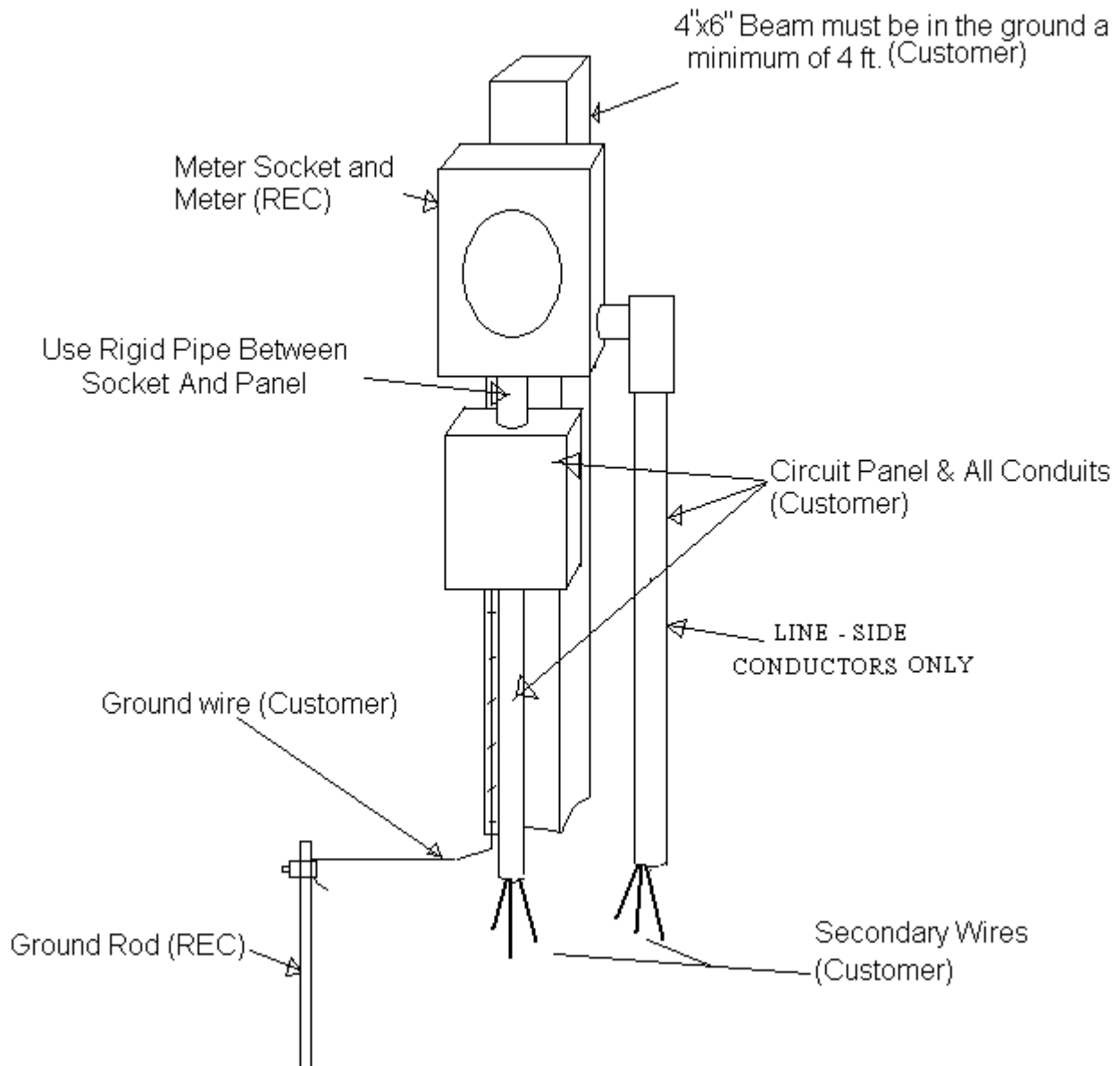
1. Permitting shall be completed by the state or local authorities prior to construction by REC crews. It will be the responsibility of the customer/contractor to investigate whether the work needs permitting and inspection. The contact information for the State Electrical Inspection program is found by going to <https://iowaelectrical.gov> or call 866-923-1082. For permitting and inspection in Bremer County, go to www.co.bremer.ia.us, then click on "Building, Zoning & Sanitation," or call 319-352-0332.
2. Provide complete information for REC easement form along with proper signatures and notarization. The completed easement form must be returned to the REC office or to REC personnel before any construction can be started.
3. All new services and existing services with New Account Name - before service can be energized, customer must call 888-267-2726 and ask for Billing to provide billing information.
4. Provide and install the treated beam (4" X 6" minimum) and must be installed at a minimum depth of 4 feet.
5. Meter equipment installations shall be according to National Electrical Code.
6. Install meter socket, breaker panel, and ground rod.
7. Install conductors, including the adequate length of conductors for REC to make connections from the meter location to the pole or pad-mounted transformer.
8. Connect all conductors in the meter socket.
9. All other responsibilities by the customer or customer's electrical contractor shall be in accordance with the current National Electrical Code.

(Please see drawing on the back of this sheet.)

SMALL PURPOSE METER SERVICE
UNDERGROUND

Page 2/2

Subject to Change Without Notice



BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Nov 16
888-267-2726

SELF-CONTAINED METER SERVICE
UNDERGROUND

Page 1/2

Subject to Change Without Notice

RESPONSIBILITY OF REC:

1. Provide meter and meter socket.
2. Provide ground rod.
3. Provide and record an easement for the REC underground wires where necessary. Please call toll free, 888-267-2726, for any questions about this underground.
4. Provide secondary underground wire from overhead transformer location to meter location. When a pad-mounted transformer is present, customer or customer's electrical contractor will provide underground secondary wire from the pad-mounted transformer to the meter location.
5. REC will leave an adequate length of UG service wire to reach meter socket termination.
6. REC will energize the new or uprated service only if state or local inspection provides the release and posting on the premises.

RESPONSIBILITY OF CUSTOMER OR CUSTOMER'S ELECTRICAL CONTRACTOR:

1. Permitting shall be completed by the state or local authorities prior to construction by REC crews. It will be the responsibility of the customer/contractor to investigate whether the work needs permitting and inspection. The contact information for the State Electrical Inspection program is found by going to <https://iowaelectrical.gov> or call 866-923-1082. For permitting and inspection in Bremer County, go to www.co.bremer.ia.us, then click on "Building, Zoning & Sanitation," or call 319-352-0332.
2. All new services and existing services with New Account Name - before service can be energized, member must call 888-267-2726 and ask for Billing to provide billing information.
3. Provide complete information for REC easement form along with proper signatures and notarization. The completed easement form must be returned to the REC office or to REC personnel before any construction can be started.
4. Provide and install the treated beams (4" X 6" minimum). Must be installed at a minimum depth of 4 feet.
5. Provide and install lumber planks (1 ¼" minimum lumber) on the 4" X 6" beams for the meter stand.
6. Meter equipment installations shall be according to National Electrical Code.
7. Mount the meter socket and install ground rod.
8. Furnish secondary underground wire from pad-mounted transformer to meter location.
9. Connect all conductors to meter socket.
10. All connectors must be compression type.
11. All other responsibilities by customer or customer's electrical contractor shall be in accordance of the current National Electrical Code.

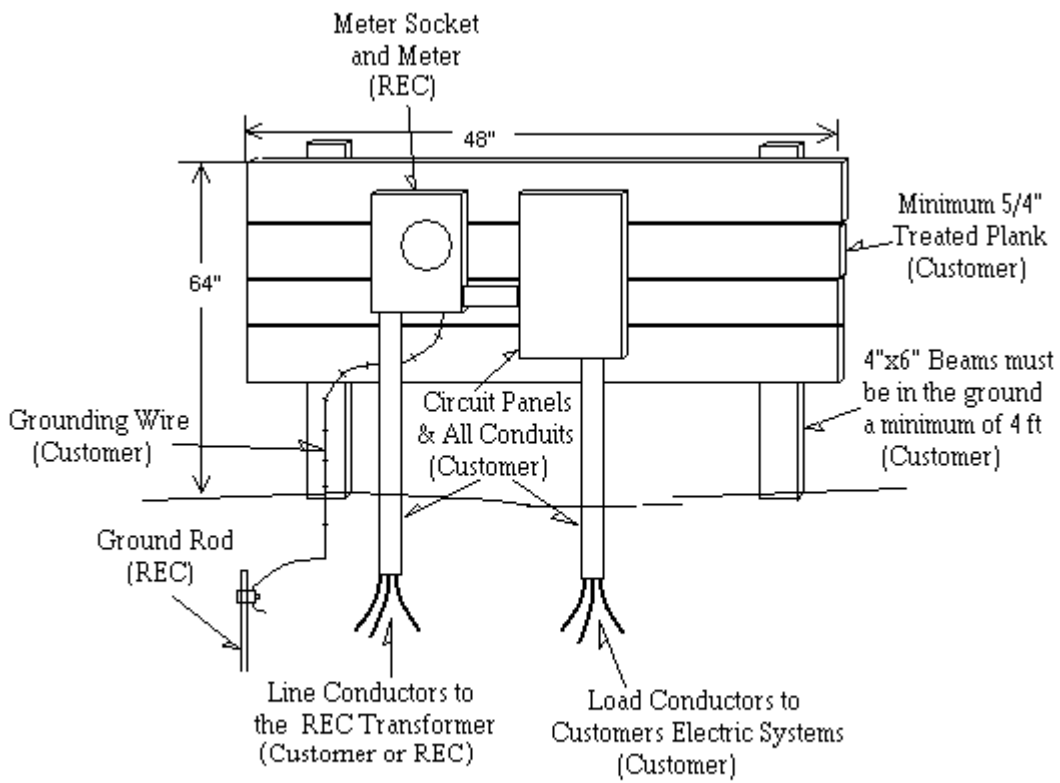
(Please see drawing on the back of this sheet.)

BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Mar 14
888-267-2726

SELF-CONTAINED METER SERVICE
UNDERGROUND

Page 2/2

Subject to Change Without Notice



BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Nov 16
888-267-2726

TRANSFORMER RATED METER SERVICE
UNDERGROUND

Page 1/2

Subject to Change Without Notice

RESPONSIBILITY OF REC:

1. Provide meter and meter socket.
2. Provide appropriate current transformers and potential transformers for application.
3. Provide color-and size-coded meter wiring along with wiring diagram.
4. Provide and record an easement for the REC underground wires where necessary. Please call toll free 888-267-2726 for any questions about this underground.
5. Provide secondary underground wire from overhead transformer location to meter location; the REC will leave an adequate length of UG service to reach the meter socket termination.
6. Specification sheet will be available for job-specific situations providing fault current.
7. Make all connections to the overhead or pad-mounted transformer.
8. Energize the new or uprated service only if state or local inspection provides the release and posting on the premises.

RESPONSIBILITY OF CUSTOMER OR CUSTOMER'S ELECTRICAL CONTRACTOR:

1. Permitting shall be completed by the state or local authorities prior to construction by REC crews. It will be the responsibility of the customer/contractor to investigate whether the work needs permitting and inspection. The contact information for the State Electrical Inspection program is found by going to <https://iowaelectrical.gov> or call 866-923-1082. For permitting and inspection in Bremer County, go to www.co.bremer.ia.us, then click on "Building, Zoning & Sanitation," or call 319-352-0332.
2. Provide complete information for REC easement form along with proper signatures and notarization. The completed easement form must be returned to the REC office or to REC personnel before any construction can be started.
3. All new services and existing services with New Account Name - before service can be energized, customer must call 888-267-2726 and ask for Billing to provide billing information.
4. Provide and install the treated posts (4" X 6" minimum) and planks (1 ¼" minimum lumber) for the meter stand.
5. All electrical equipment installations shall be according to National Electrical Code.
6. Install the meter socket and, when required, install current transformers.
7. When a pad-mounted transformer is present, customer or customer's electrical contractor will provide and install underground secondary wire from the pad-mounted transformer to the meter location; customer or customer's electrical contractor will leave an adequate length of UG service to reach the transformer secondary terminations.
8. When a pad-mounted transformer is present, customer or customer's electrical contractor shall provide and install the conduit for metering from the meter into the transformer.
9. All connectors must be compression type.
10. All other responsibilities by customer or customer's electrical contractor shall be in accordance to the current National Electrical Code.

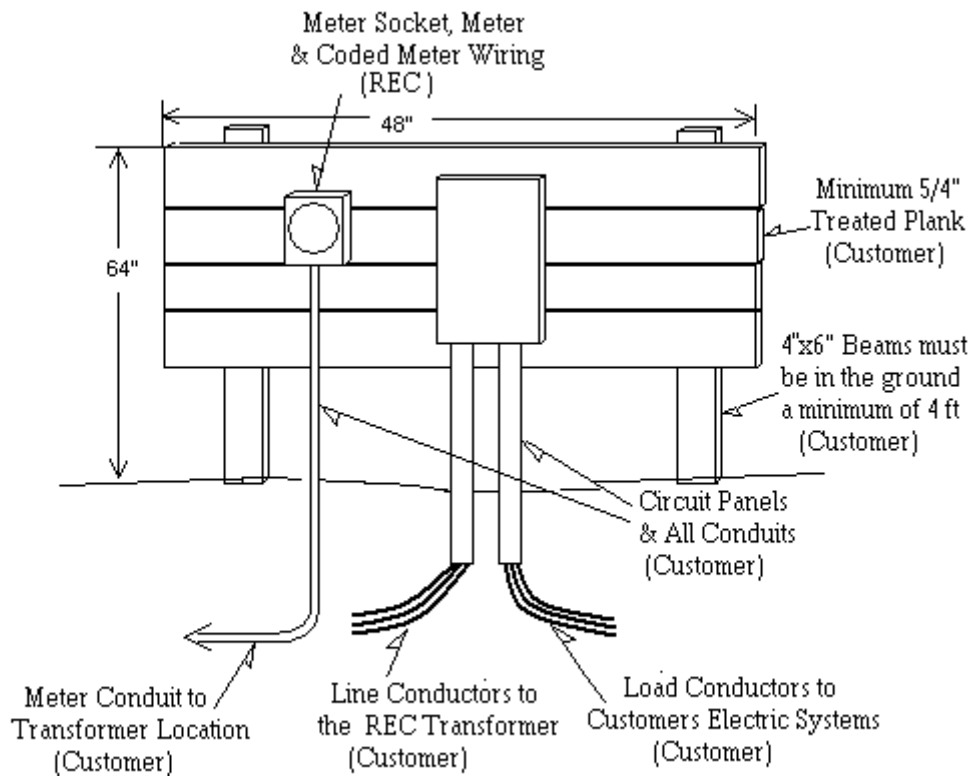
(Please see drawing on the back of this sheet.)

BUTLER COUNTY RURAL ELECTRIC COOPERATIVE
ALLISON, IOWA – Mar 14
888-267-2726

TRANSFORMER RATED METER SERVICE
UNDERGROUND

Page 2/2

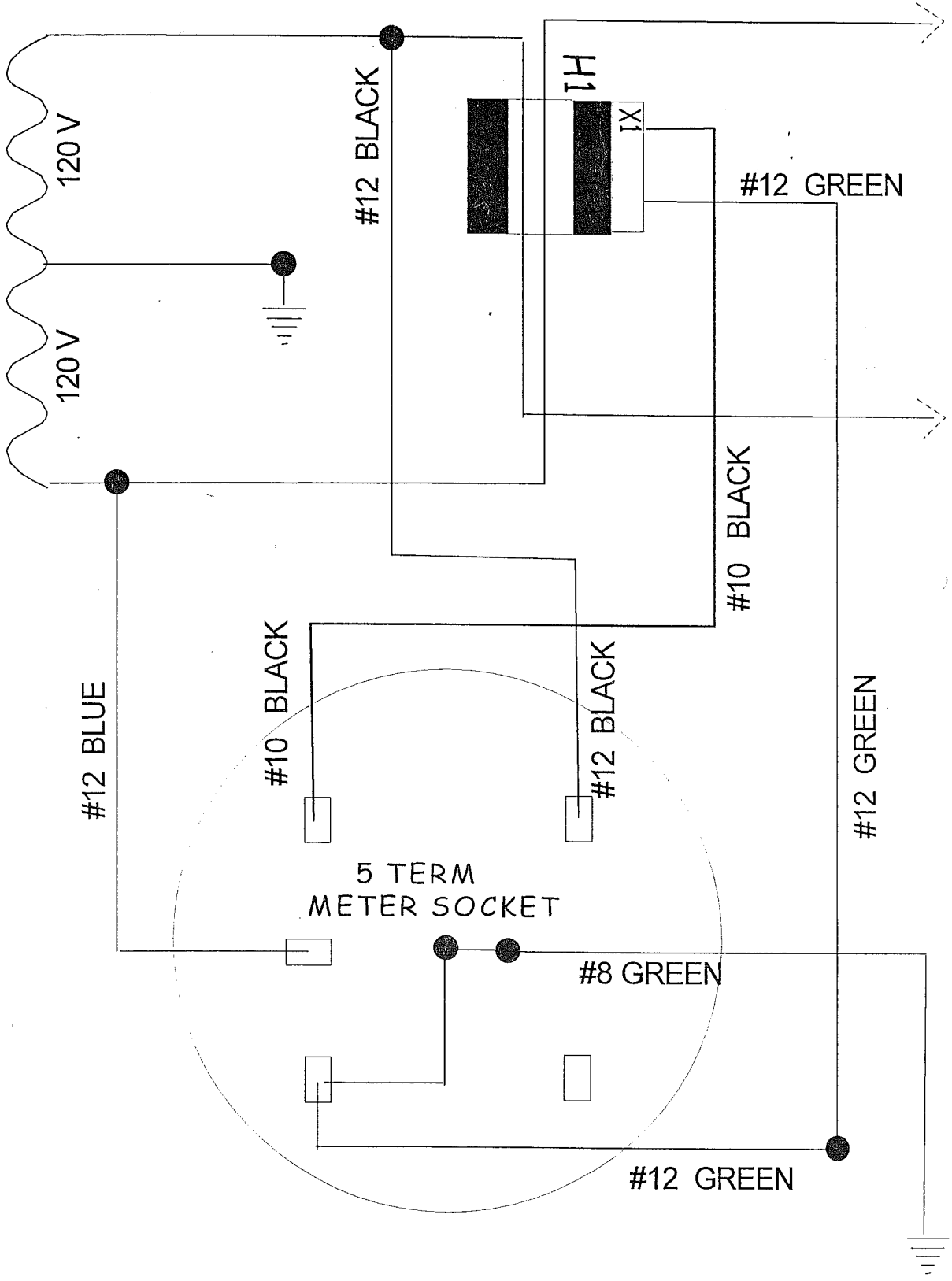
Subject to Change Without Notice



Available Fault Current

120/240			120/240		1 phase formula
1 phase			3 phase		KVA/Sec KV/IZ of transformer = Fault Current
					Ex: 25/240/.012 x 1000=8681 amps
KVA	Amps		KVA	Amps	
3	1042		20	4014	1.20%
5	1736		35	7025	1.20%
10	3472		55	11039	1.20%
15	5208		87.5	17562	1.20%
25	8681		125	25088	1.20%
37.5	13021		175	35124	1.20%
50	17361				1.20%
75	26042				1.20%
100	34722				1.20%
120/208			277/480		3 phase formula
3 phase			3 phase		KVA/1.73/Sec KV/IZ of transformer = Fault Current
					150/1.73/208/.012 x1000=34738
KVA	Amps		KVA	Amps	
30	6948		30	3011	1.20%
45	10421		45	4516	1.20%
75	17369		75	7526	1.20%
112.5	26053		112.5	11290	1.20%
150	34738		150	15053	1.20%
225	52106		225	22579	1.20%
300	55580		300	24085	1.50%
500	55580	2.50%	500	43008	1.40%
750	52106		750	22579	4.00%
1000	55580		1000	24085	5.00%
1500	83370		1500	36127	5.00%
			2000	48170	5.00%
			2500	60212	5.00%

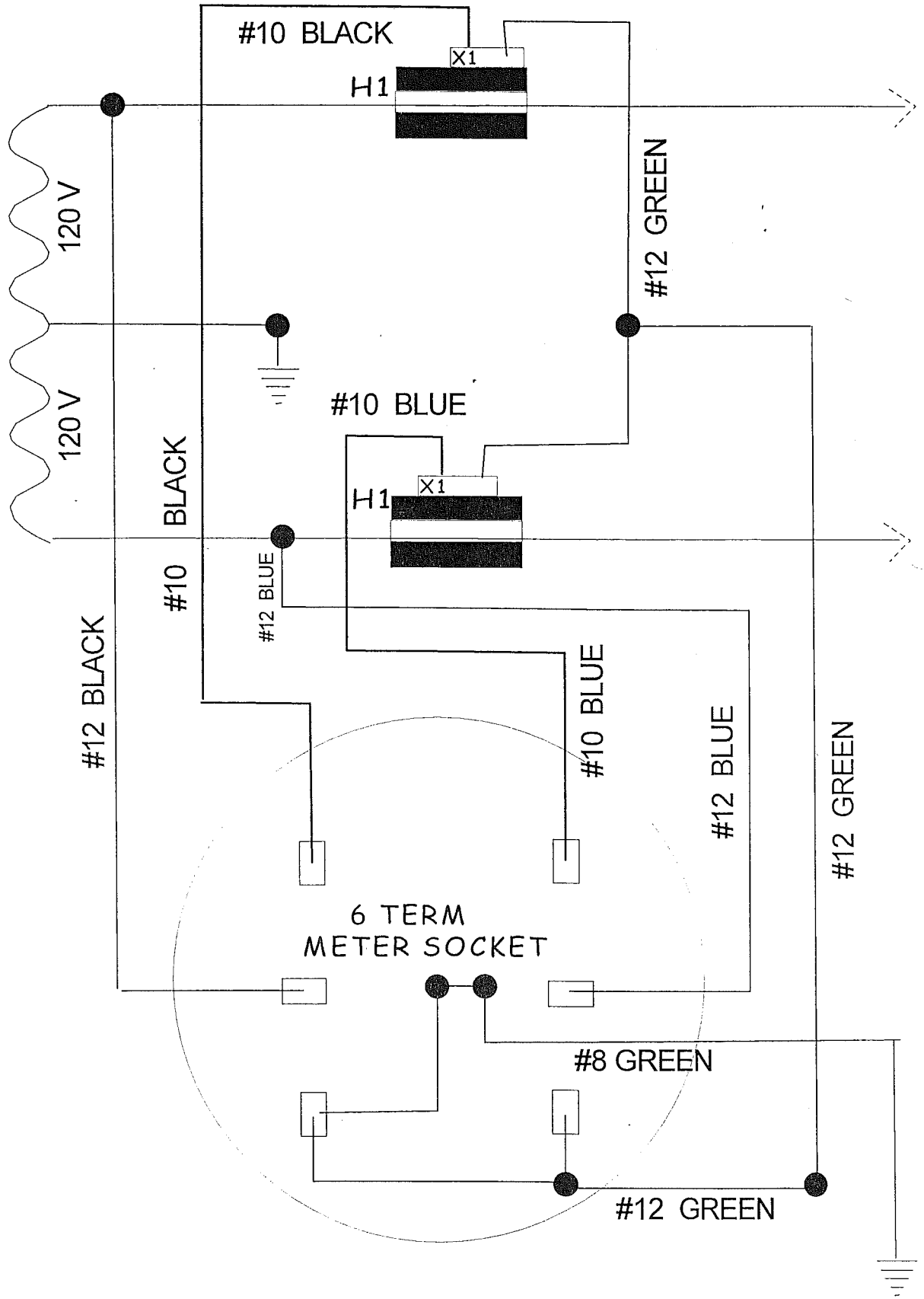
LINE



LOAD

The Register Multiplier Equals 1/2 times the CT Ratio for Secondary Rated Meters

LINE



LOAD

The Register Multiplier Equals the
CT Ratio for Secondary Rated Meters