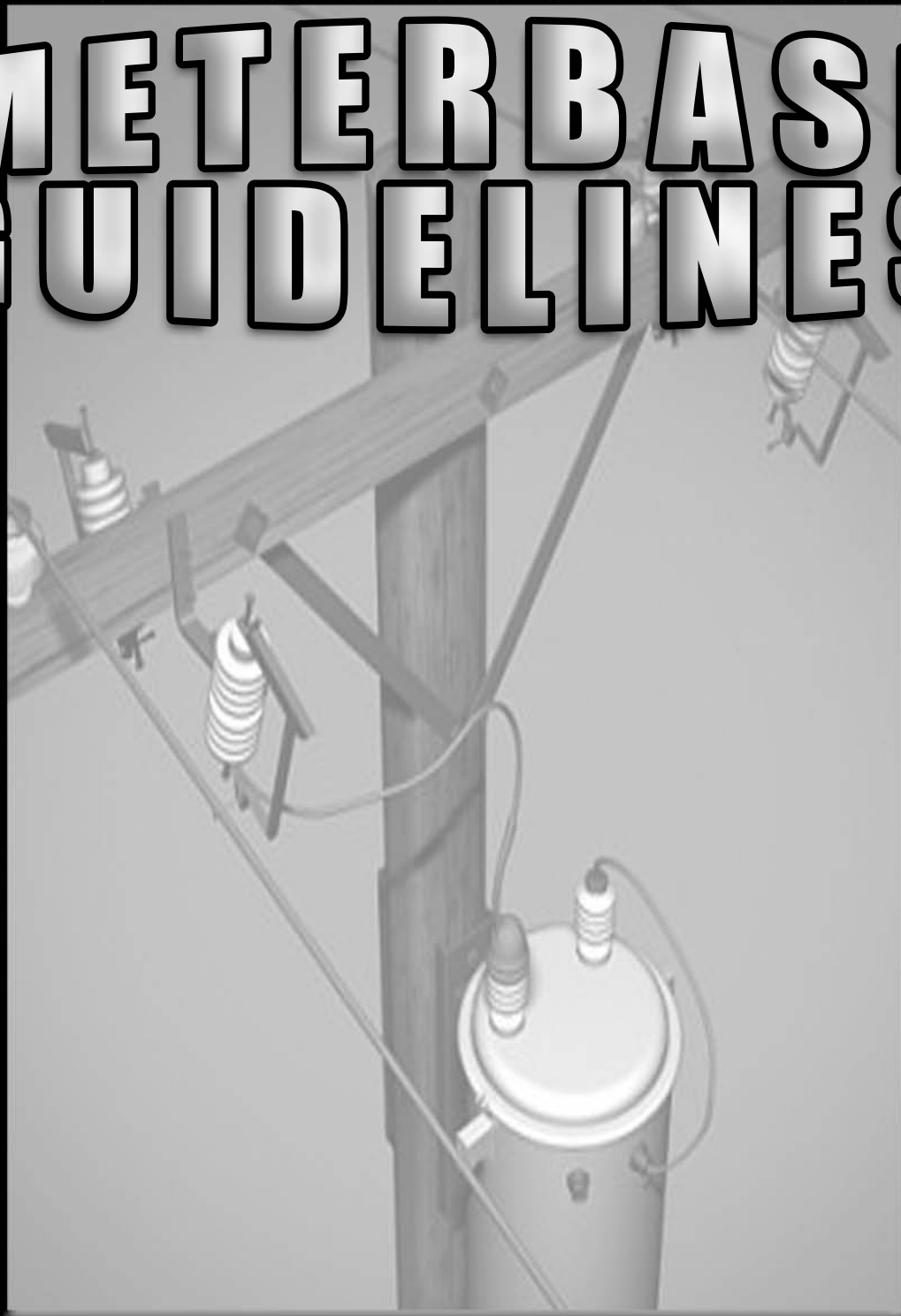




COPPER VALLEY ELECTRIC ASSOCIATION, INC.

METERBASE GUIDELINES



OVERHEAD TO UNDERGROUND

New Service Installation Steps:

This is a step-by-step guide to the process CVEA will take to fulfill your service installation request. Please review the steps, familiarize yourself with the key milestones of the process, and identify common issues that can arise. We look forward to providing you with a new service. If you have any questions, concerns, or comments about the process, please call the CVEA Glennallen office at (907) 822-3211 or the Valdez office at (907) 835-4301.

Step #1: Apply for Service

Please stop by one of CVEA's office buildings to complete an application for service. The applications can also be found at www.cvea.org. Please be sure to fill this document out as completely and specifically as possible to prevent any future delays. The Customer Service Representative (CSR) will put you in contact with the Field Services Representative (FSR) in order to meet you for a site visit.

Step #2: Complete a Site Visit

Once an application is complete, your request is forwarded directly to the Engineering Department. The FSR will set up a time to perform a site visit, usually within one week. The purpose of the visit will be to determine the best location for your meterbase, the most efficient direction to route the service, whether a standard offering is applicable, and where to set electrical equipment (i.e. poles, transformers, pedestals). It will also be determined whether locates from other utilities will be required. After the visit, the Engineering Department will provide you with an estimate within one to three days. If accepted, the estimate must be signed and returned to CVEA accompanied by payment or a loan application.

Step #3: Gathering Necessities

After the site visit, the FSR may need additional information from you. Additional fees, city inspections, and right-of-way easements may be requested. Also, permits may be needed from adjoining property owners, highway departments, or other entities. We will contact you by phone if more information is needed. Your service request cannot move beyond this step until you have installed your meterbase correctly and the requested information and payment have been received.

If a delay seems apparent in getting your service, please call the FSR for an update. When this step is completed, your work order gets forwarded to the Operations Manager.

Step #4: Installation of Service

The Operations Manager will issue your work order to a line crew that will install the service. Then the Operations Manager will contact you to schedule a time for construction. The time it takes to complete this step can vary. The construction will include all the equipment and structures presented to you by the FSR in step 2, with the possibility of some minor changes. The line crew will complete everything up to CVEA's side of the meterbase, but are not permitted to do any work to your side of the meterbase.

Common Slow Downs:

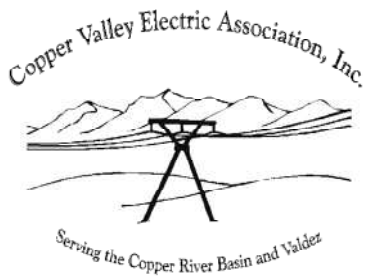
1. **Alaskan Weather** can hamper, or even cancel, the construction process. It is important to contact CVEA about a new service long before the winter months. We will do our best to give you an estimated date of completion. The date of completion is always subject to change.
2. Be sure to have your **meterbase correctly installed** prior to the construction date.
3. If in Valdez, be sure that the city **inspects** your meterbase prior to the construction date.
4. **Right-of-way easements** are often required in order to begin construction. This will require you to provide a recorded deed to the Engineering Department. After the information is received, CVEA will require you to sign the easement in the presence of a notary. Notaries are available, free of charge, at both CVEA offices (call in advance to make sure a notary is available).
5. Make sure that your application for service is completed with current and accurate **contact information**. Communication is essential in assuring the process moves forward.

Other Possible Steps:

1. If you are requesting **temporary service for new construction**, your lot needs to be cleared and the structures need to be clearly staked. Also, the temporary meterbase will need to be properly installed and possibly inspected. A CVEA representative will perform a site visit before the temporary service is activated.
2. If you are requesting to change from an existing **temporary service to a permanent service** you should immediately have all inspections completed. A site visit will be required by CVEA to approve meterbase location. Be sure to do this step before pouring any concrete between the temporary service and the permanent service areas. A new application is not required, but you should notify CVEA when the work is ready to be completed.
3. **Mobile home lots** should be graded and the mobile home set up before installation of service. If this is not possible then the location should be staked off, indicating the four corners of the structure. You should also indicate where you want the meter post to be located. The meter post must meet CVEA specifications. In some instances, double wide mobile homes may have the meterbase installed directly to the home. To inquire about service to a mobile home, please contact the Engineering Department.

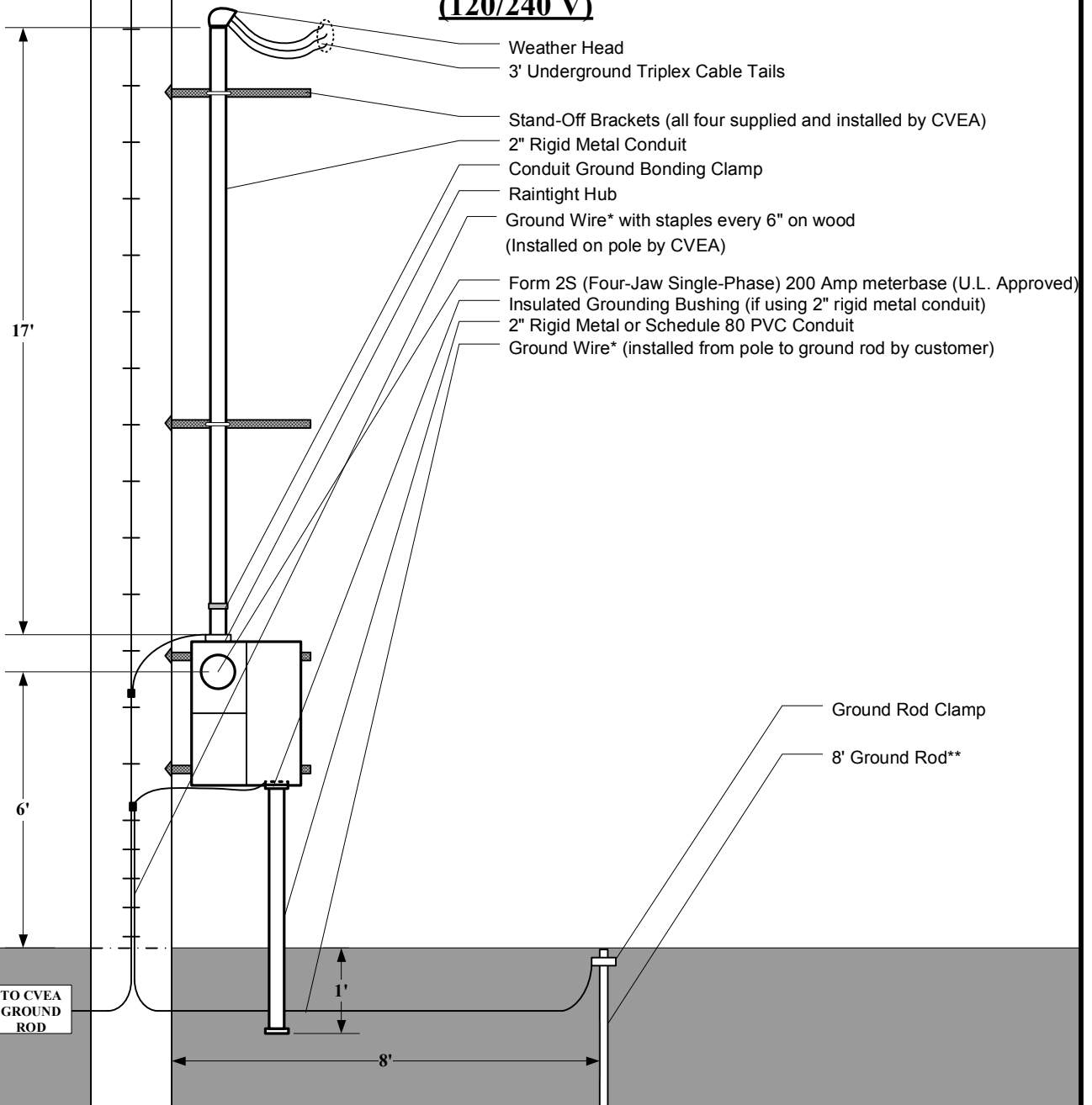
Notes:

1. Meter locations need to be approved by CVEA's Engineering Department.
2. In addition to CVEA's requirements, the installation must meet all current National Electric Code requirements and any other state or local codes.

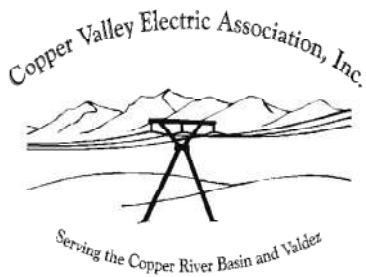


Copper Valley Electric Association, Inc.
P.O. Box 927 Valdez, AK 99686
907-835-4301 (Phone) 907-835-4328 (Fax)
Engineering Department

SINGLE-PHASE SERVICE 200 AMPS or Less
(120/240 V)

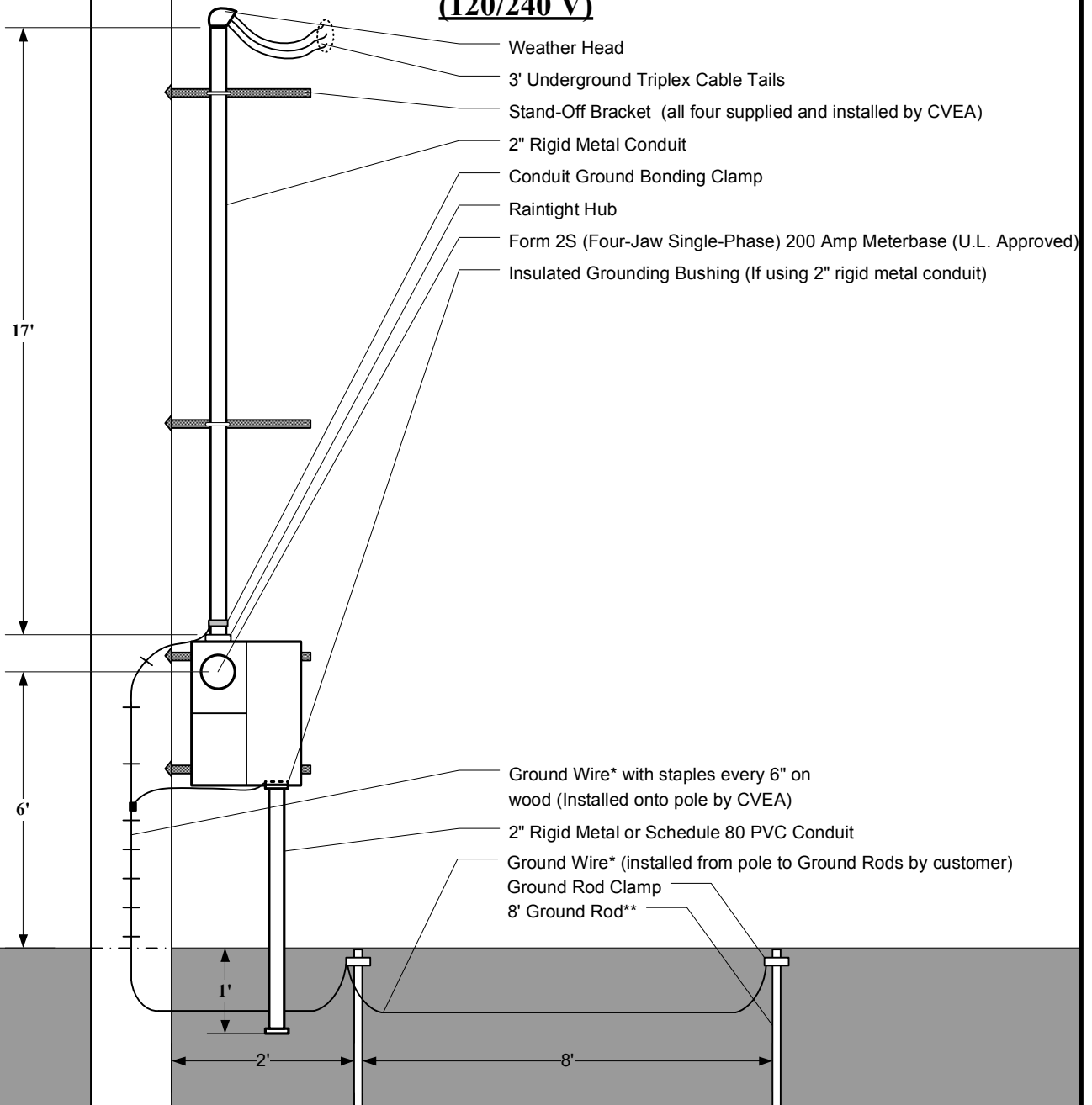


*Size of Ground Wire shall be #6 A.W.G. solid copper (minimum).
 **Size of Ground Rod shall be 5/8" x 8' (minimum). Top of Ground Rod shall be flush with ground.
DIAGRAM NOT TO SCALE
OVERHEAD SERVICE TO METERBASE ON TRANSFORMER POLE DIMENSIONAL DIAGRAM
REVISION 2008



Copper Valley Electric Association, Inc.
P.O. Box 927 Valdez, AK 99686
907-835-4301 (Phone) 907-835-4328 (Fax)
Engineering Department

SINGLE-PHASE SERVICE 200 AMPS or Less
(120/240 V)



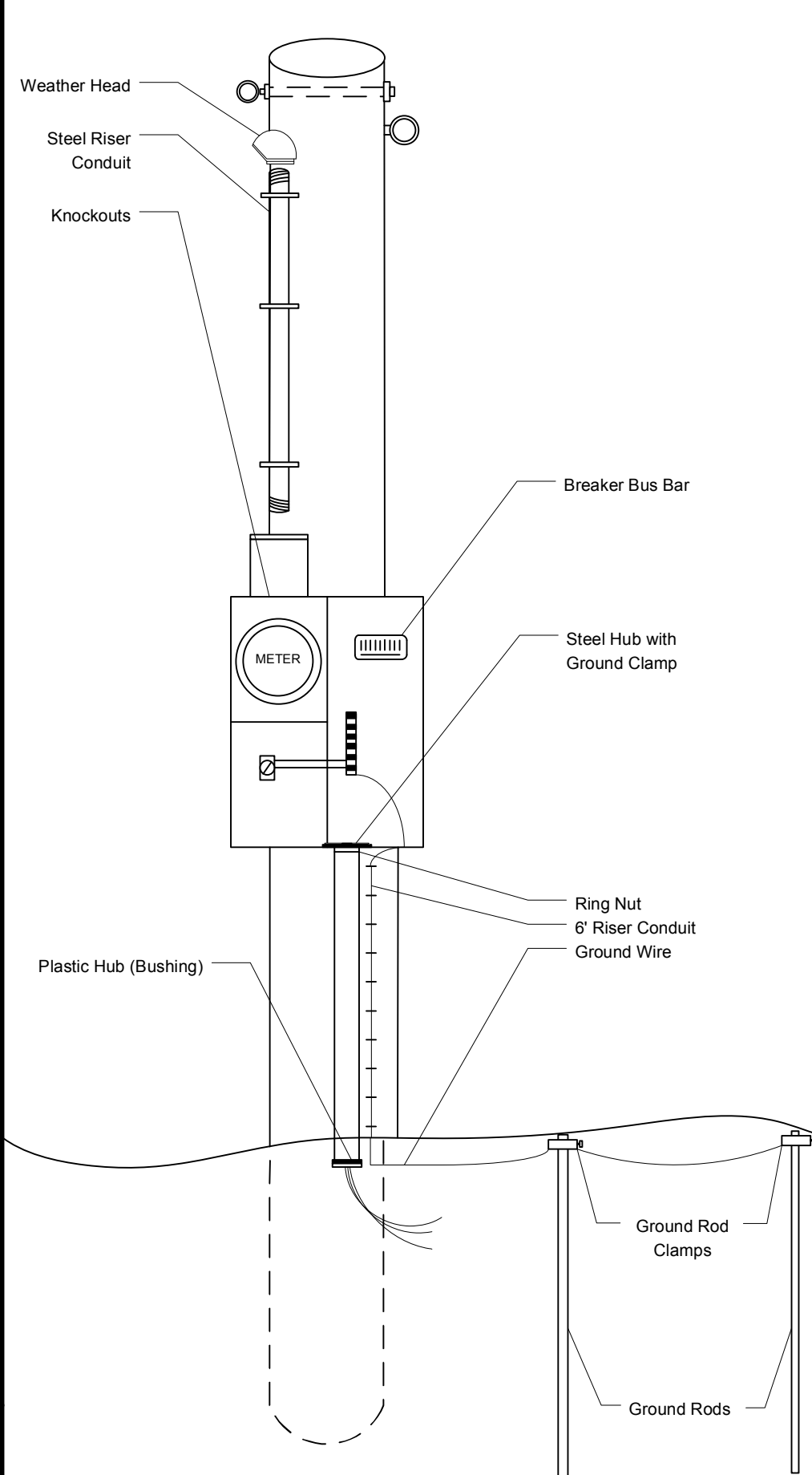
*Size of Ground Wire shall be #6 A.W.G. solid copper (minimum).
 **Size of Ground Rods shall be 5/8" x 8' (minimum). Top of Ground Rod shall be flush with ground.
DIAGRAM NOT TO SCALE

OVERHEAD SERVICE TO METERBASE ON SERVICE POLE DIMENSIONAL DIAGRAM

REVISION 11-15-2007

OVERHEAD SERVICE TO METERBASE ON POLE UNDERGROUND SERVICE TO RESIDENCE

Copper Valley Electric Association, Inc. ~ P.O. Box 927 Valdez, AK 99686 ~ 907-835-4301 (Phone) 907-835-4328 (Fax) ~ Engineering Department



Overhead Meterbase Assembly Instructions:

1. Remove the riser knockout on the top left side of the meterbase, then remove the small & the 2" knockouts on the bottom right side (consumer's side) of the meterbase. (This is for the ground wire & riser installation) ***See wiring diagram
2. Place the raintight hub for 2" conduit over the knockout hole and secure it with the four screws provided.
3. Thread the riser into the raintight hub, and tighten to a snug fit. Thread the steel hub with grounding connection on the 6' steel riser into the knockout hole and tighten it down with the 2" ring nut. Thread the 2" plastic hub on the bottom of the 6' riser.
4. Secure conduit ground bonding clamp to 2" rigid metal conduit above the raintight hub.
5. Snap the breaker on to the bus bar (see meterbase wiring diagram).
6. Complete the meterbase wiring as per the meterbase wiring diagram.
7. Install the weather head on top of the riser by inserting the conductors through the holes on the inside of the weather head, then sliding the weather head to the top of the rigid steel riser. Tighten down the clamp on the weather head.
8. Install two ground rods next to the pole. The first ground rod shall be at least 2' from the pole. The second ground rod shall be at least 8' from the first ground rod. Attach ground rod clamp to each rod and connect ground wire to each rod via a single continuous ground wire.
9. CVEA will install assembled meterbase on pole and will bond the conduit ground bonding clamp to the ground wire.
10. Attach ground wire to neutral bus bar connector.

Note: The consumer needs to talk to an electrician or engineer prior to installation of their service.

**Last Revised:
2008**

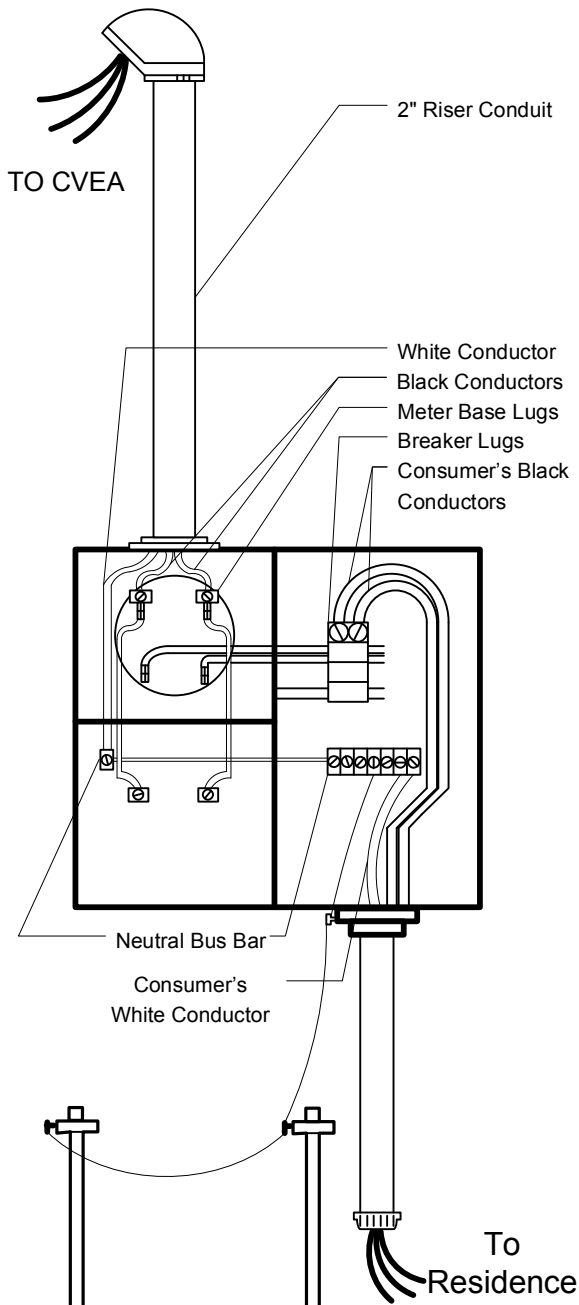
METER BASE WIRING DIAGRAM OVERHEAD TO UNDERGROUND

Copper Valley Electric Association, Inc. ~ P.O. Box 927 Valdez, AK 99686 ~ 907-835-4301 (Phone) 907-835-4328 (Fax) ~ Engineering Department

To install the conductors to the meter base lugs:

1. Run the three conductors down the riser into the meter base.
2. Cut and remove the polyethylene conductor coating back 1" from the ends of the three conductors.
3. Apply a coating of corrosion inhibitor to the bare aluminum conductors.
4. Take the black conductors and place them into the meter base lugs and tighten down.
5. Take the white (or black with white stripe) conductor and place it in the neutral bus bar and tighten down.

Note: Install the weather head on top of the riser after the conductors have been installed in the riser and the meter base. Conductors to be installed into the meter base by consumer.



To install the conductors to the breaker switch in the consumer's side of the meter base:

1. Run the three conductors up the 6' riser and into the meterbase.
2. Cut and remove the polyethylene conductor coating back 1" from the ends of the three conductors.
3. Apply a coating of corrosion inhibitor to the bare aluminum conductors.
4. Take the 2 black conductors and place them in the breaker lugs, and tighten them down.
5. Take the white conductor and place it in the neutral bus bar and tighten down the lug.

This step is to be done after the meter base is installed on the meter pole:

6. Insert the bare copper wire through the grounding hub connection then into the knockout hole, and into the neutral bus bar. Tighten the lugs down at both points. Next insert the bare copper ground wire into the ground rod clamps on the ground rods and tighten it down.

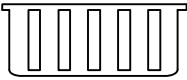
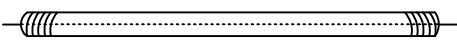
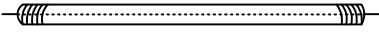

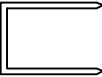
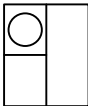
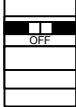
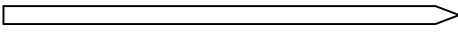



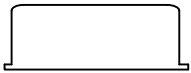
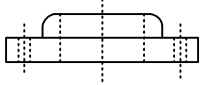
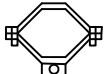


Note: The consumer's conductors may be installed after the CVEA service is installed.

Note: Services in Valdez must be approved by the city inspector prior to CVEA's service installation.

Parts List For Overhead To Underground Service

NOTE: Parts list is provided as a consumer aid to identify required parts.

Copper Valley Electric Association, Inc. ~ P.O. Box 927 Valdez, AK 99686 ~ 907-835-4301 (Phone) 907-835-4328 (Fax) ~ Engineering Department

Check if needed	Cost	Item	Description
1. _____ (1)	\$ _____		Plastic Hub for bottom of 2" riser conduit
2. _____ (1)	\$ _____		17' of 2" conduit rigid steel galvanized – threaded both ends
3. _____ (1)	\$ _____		6' of 2" conduit rigid steel galvanized – threaded both ends
4. _____ (1)	\$ _____		Weather Head for 2" galvanized rigid steel
5. _____ (10)	\$ _____		Ground Wire Staples
6. _____ (1)	\$ _____		U.L. Approved Meter Base
7. _____ (1)	\$ _____		100 or 200 Amp Main Breaker
8. _____ (2)	\$ _____		5/8" x 8' Copper Clad Steel Ground Rod
9. _____ (2)	\$ _____		Ground Rod Clamp
10. _____ (1)	\$ _____		21' Triplex Conductor (See conductor sizes listed below)
11. _____ (1)	\$ _____		20' #4 Bare Solid Copper Ground Wire
12. _____ (2)	\$ _____		Steel hub for consumers riser with ground clamp assembly for riser
13. _____ (1)	\$ _____		Raintight Hub for 2" Conduit
14. _____ (1)	\$ _____		Conduit Ground Bonding Clamp
15. _____ (1)	\$ _____		Ring Nut for 2" Conduit with Grounding Lug
16. _____ (1)	\$ _____		Tube of Corrosion Inhibitor

FEEDER AND SERVICE ENTRANCE CONDUCTOR SIZES

SERVICE AMPACITY

ALUMINUM

COPPER

(Breaker Size)

(AWG)

(AWG)

100 Amp

2

4

125 Amp

1/0

2

175 Amp

3/0

1/0

200 Amp

4/0

2/0

400 Amp or Greater

(See Engineering Dept.)

(See Engineering Dept.)

Updated
2008