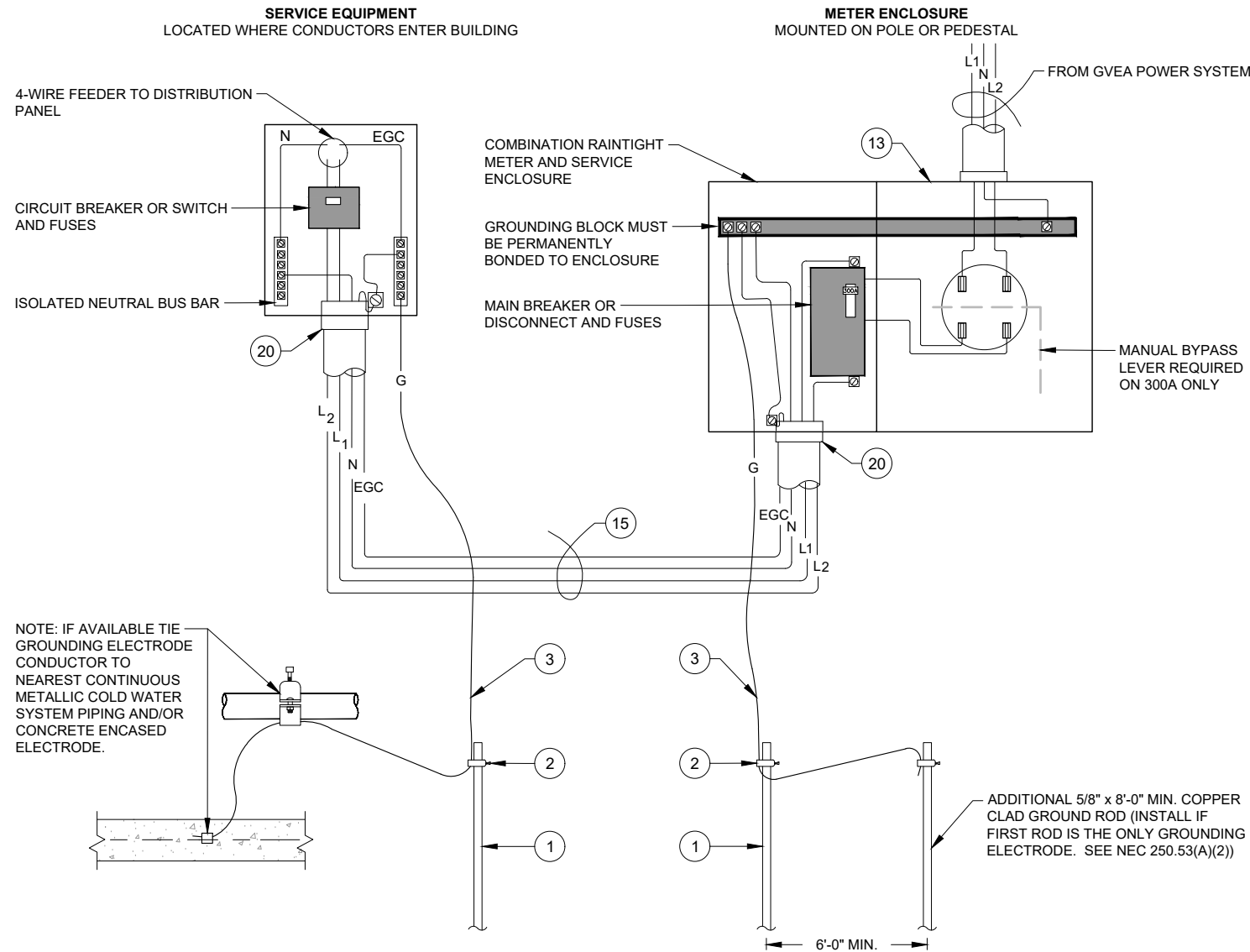


# Connection Detail - Meter Located On Pole

REVISED 03/2021



**LEGEND:**

EGC	Equipment Grounding Conductor	Green or Bare Wire
G	Grounding Electrode Conductor	Green or Bare Wire
L1,L2	Phases	Black Wires
N	Neutral	Bare Wire (in mast only) or Black Wire with White Tape Wrapped Around Ends

**WIRE/CONDUIT SIZE TABLE**

WIRE SHALL BE COPPER

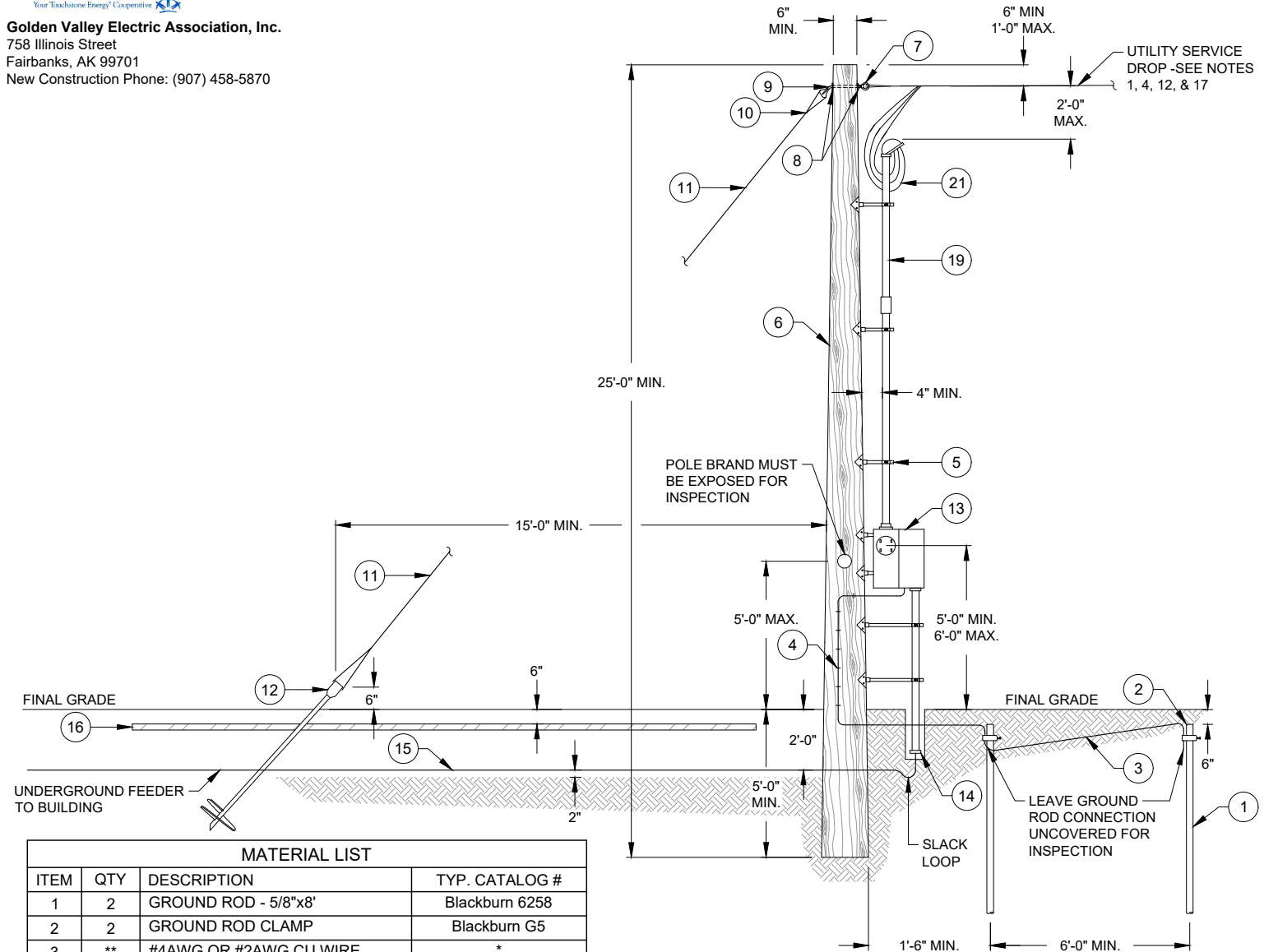
SERVICE SIZE	MINIMUM WIRE SIZE (XHHW OR RHW)	MINIMUM CONDUIT WIRE (RMC OR IMC)	MINIMUM GROUNDING ELECTRODE CONDUCTOR SIZE	MINIMUM EQUIPMENT GROUNDING CONDUCTOR SIZE
100 Amp	#2 Copper	1 1/4"	#4 Copper	#8 Copper
200 Amp	#3/0 Copper	2"	#4 Copper	#6 Copper
300 Amp	300 kcmil Copper	2"	#2 Copper	#4 Copper



**Golden Valley Electric Association, Inc.**  
 758 Illinois Street  
 Fairbanks, AK 99701  
 New Construction Phone: (907) 458-5870

# Construction Guide For Overhead Residential Service - Meter On Pole (Type C)

REVISED 07/2021



**MATERIAL LIST**

ITEM	QTY	DESCRIPTION	TYP. CATALOG #
1	2	GROUND ROD - 5/8"x8"	Blackburn 6258
2	2	GROUND ROD CLAMP	Blackburn G5
3	**	#4AWG OR #2AWG CU WIRE	*
4	**	COPPERCLAD STAPLE	Joslyn J6652(E)
5	4	STAND-OFF BRACKET	Size as Required
6	1	TREATED POLE-30" ILLUSTRATED	*
7	1	OVAL EYEBOLT	Joslyn J1092(E)
8	2	GALVANIZED SQUARE WASHER	*
9	1	ANGLE THIMBLE EYEBOLT - 5/8"	Joslyn 8051(E)
10	2	PREFORMED GRIP	Joslyn AWDE4116
11	**	GUY CABLE -1/4" OR LARGER	Porcelain 8714
12	1	SCREW ANCHOR	*
13	1	SERVICE ASSEMBLY	*100A, 200A, or 300A
14	1	CONDUIT BUSHING	*
15	**	CONDUCTOR (DIRECT BURIAL)	*
16	**	PLANK OR WARNING TAPE	*
17	*	2-HOLE CONDUIT STRAP	*
18	1	SERVICE DISCONNECT	*100A, 200A, or 300A
19	**	CONDUIT	*
20	2	LOCKNUT & BONDING BUSHING	*
21	**	COPPER CONDUCTOR	*

**NOTES:**

- The information in this booklet provides general guidelines for the installation of service equipment to meet the requirements of GVEA. It is the owner's responsibility to make sure that the service is also installed to meet all applicable city, borough, and State of Alaska codes, as well as the National Electrical Code (NEC) and National Electrical Safety Code (NESC).
- If service drop exceeds 50'-0", pole must be guyed. Service drop must not exceed 150'-0".
- Telephone drop must be more than 1'-0" (vertical clearance) below power cable at all points. See NESC 235C1.

\*See instruction on following pages.  
 \*\*Quantity/Length determined by installation requirements.

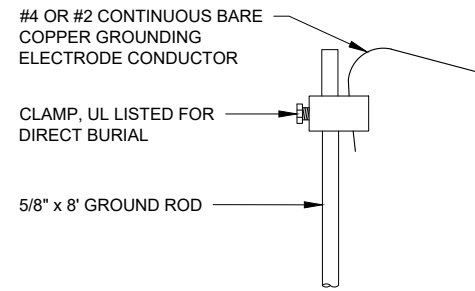
# Instructions by Item Number

REVISED 03/2021

- ① **GROUND ROD**  
 Shall be 5/8" x 8'-0" listed copper-clad. Locate in undisturbed earth a minimum of 18" from pole and outside of hole dug for pole installation.

Ground rod at house must be located at least 1'-6" from foundation or basement of building and out from under eaves. See National Electrical Code, Article 250 for more information.

Drive rod 6" below ground level into undisturbed earth. Leave exposed for inspection. Cover the ground rod hole in winter to prevent it from filling with snow.



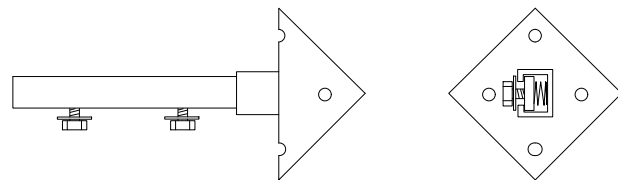
- ② **GROUND ROD CLAMP**  
 Use bronze or stainless steel clamp listed for direct burial.

- ③ **#4AWG OR #2AWG SOLID OR STRANDED BARE COPPER WIRE**  
 Connect continuous grounding electrode conductor to grounding block at disconnect, then ground to minimum 5/8" x 8'-0" ground rod and, if available, connect to nearest continuous metallic cold water system. Attached with UL listed grounding connectors.

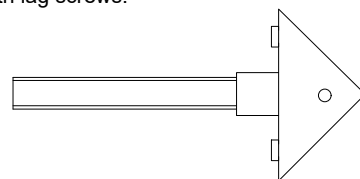
- ④ **STAPLE, Copper Clad**  
 Staple Ground Wire every 6".



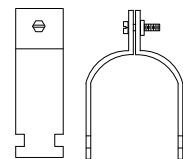
- ⑤ **STAND-OFF BRACKET**  
 Used to mount service equipment, with nuts, bolts, washers, and lag screws.



STAND- OFF BRACKET  
 with lag screws.



CONDUIT CLAMP  
 Must be listed for use with conduit type installed.

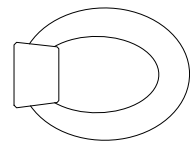


- ⑥ **FULLY PRESSURE TREATED POLE, NO CEDAR (MEMBER OWNED)**

Length: Min. 25'-0" or greater as required to maintain clearances.  
 Strength: ANSI class 6 or better (e.g. Class 5, 4, etc.).

The pole must be installed at a location agreed upon with GVEA's Construction Services Representative. At least 5'-0" of the pole must be buried below the level of the surrounding ground. Poles 30'-0" and longer must be buried 10% of pole length plus 2'-0". The fill around the pole must be tamped firm so that the pole will not lean when it is climbed. Pole brand (belly button) must be visible after equipment is mounted.

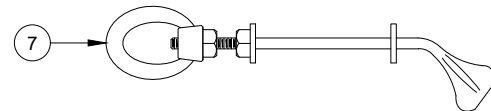
- ⑦ **OVAL EYENUT (for min. 5/8" diameter bolt)**



- ⑧ **GALVANIZED SQUARE WASHER**  
 2 1/8" Square Washer



- ⑨ **GALVANIZED THIMBLE EYEBOLT**  
 Install 2 square washers, and 2 square nuts (min. 5/8" diameter bolt).

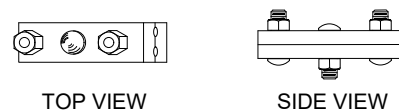


- ⑩ **PERFORMED GRIP OR THREE BOLT GUY CLAMP**

- Grip must be the correct size for the guy conductor.
- The painted marks on the grip must be aligned after it is installed.
- A three-bolt clamp may be used instead of a grip.



PERFORMED GRIP



TOP VIEW

SIDE VIEW

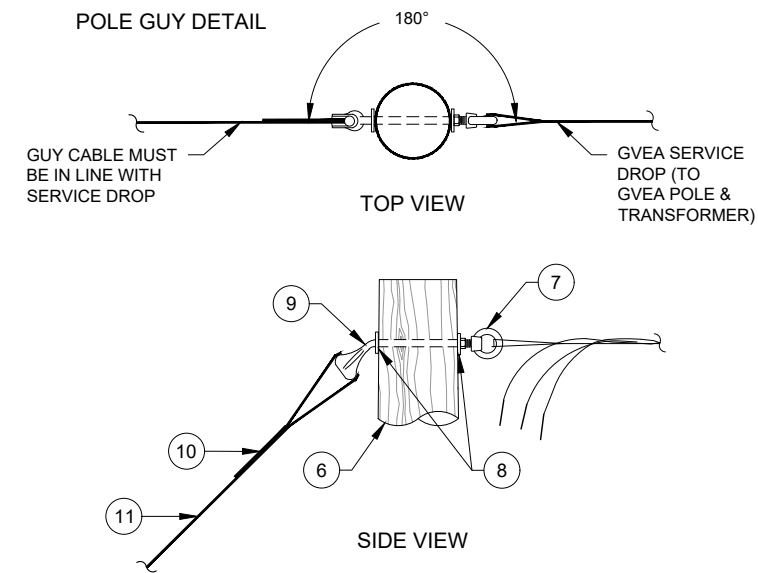
THREE BOLT GUY CLAMP

- ⑪ **GUY CABLE**

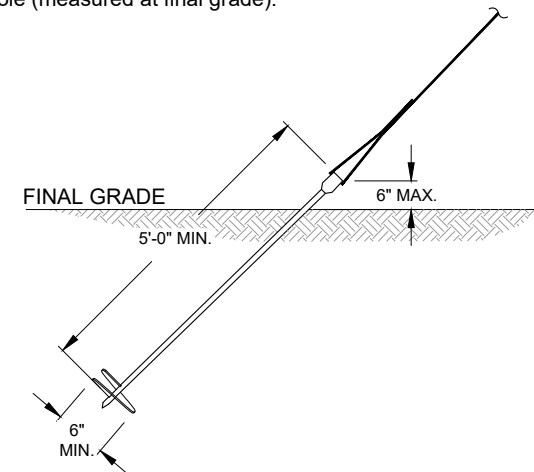
Must be minimum 1/4" stranded galvanized steel or aluminum clad cable with approved clamps. If service drop exceed 50'-0", pole must be guyed. Service drop must not exceed 150'-0". See Pole Guy Detail and Screw Anchor Detail on following page.

# Instructions by Item Number

REVISED 03/2021



- ⑫ **SCREW ANCHOR DETAIL**  
 Screw Anchor shall be installed a minimum of 15'-0" from meter pole (measured at final grade).



- ⑬ **SERVICE ASSEMBLY - (Member's service equipment)**  
 Preassembled with Mast, Breaker, and Conductors See "Construction Guide for Overhead Residential Service Assembly" for details.

1. Prior to wiring a building or performing any electrical construction for a new service, the member shall request approval from GVEA for the location of member's service equipment, including meter(s).

2. The location of the member's service equipment shall be determined by working with GVEA's Construction Services Representative.

3. The member's service equipment shall be level, plumb, and located outside on the member's structure. The member's service equipment must be firmly supported and be in a location free from vibration, mechanical damage, and accumulating or falling ice. The meter must be accessible for reading, testing, and replacement.

4. GVEA does not permit the installation of the member's service equipment on GVEA facilities. Member's service equipment is not allowed to be installed on mobile structures.

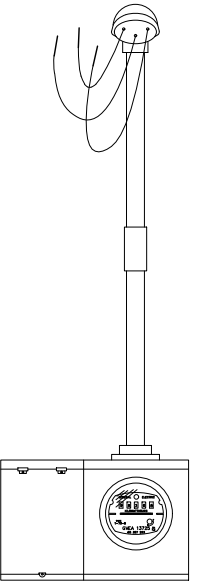
- ⑬ **SERVICE ASSEMBLY (CONTINUED)**

5. Horizontal centerline of the meter shall be between 5'-0" and 6'-0" above the finished grade immediately in front of the meter.

6. Member must provide and maintain a minimum 4'-0" wide path and debris free clearing between the member's service entrance mast and GVEA's pole for access to GVEA's service drop conductors. Remove any overhanging limbs or trees.

7. All service conduit extending above the roof must be minimum 2" rigid (RMC or IMC) conduit and must be guyed.

8. Meter socket for a 300A self-contained service must have a lever bypass and the upper right-hand jaw must be reduced or have an anti-inversion clip installed to prevent the insertion of a 200A meter.



- ⑭ **CONDUIT BUSHING**  
 Install bushing appropriately sized for the conduit.

- ⑮ **CONDUCTOR (Type USE - Direct Burial)**  
 Wire size depends on length of run. Check with GVEA's Construction Services Representative. Load side conduit shall be properly sized for member's wire between service and house. GVEA recommends the use of copper wire between meter and house.

- ⑯ **1"x6" PLANK OR MARKING TAPE**  
 Soil below plank or marker tape must be rock free and hand backfilled to avoid cable damage.

- ⑰ **2-HOLE CONDUIT STRAPS**  
 Strap must be listed for use with conduit installed. Install with screws appropriate for the material to which it is being fastened.



- ⑱ **SERVICE DISCONNECT**  
 Install appropriately sized disconnect based on NEC. Breaker enclosure must be of raintight construction.

- ⑲ **CONDUIT**  
 Install appropriate size and type based on NEC.

- ⑳ **LOCKNUT & BONDING BUSHING**  
 Standard locknuts or sealing locknuts are acceptable when used with a bonding bushing.

- ㉑ **COPPER CONDUCTOR**  
 LEAVE MINIMUM 1'-6" TAILS out of weather head for connection to GVEA system. Mark neutral with White Tape around ends.