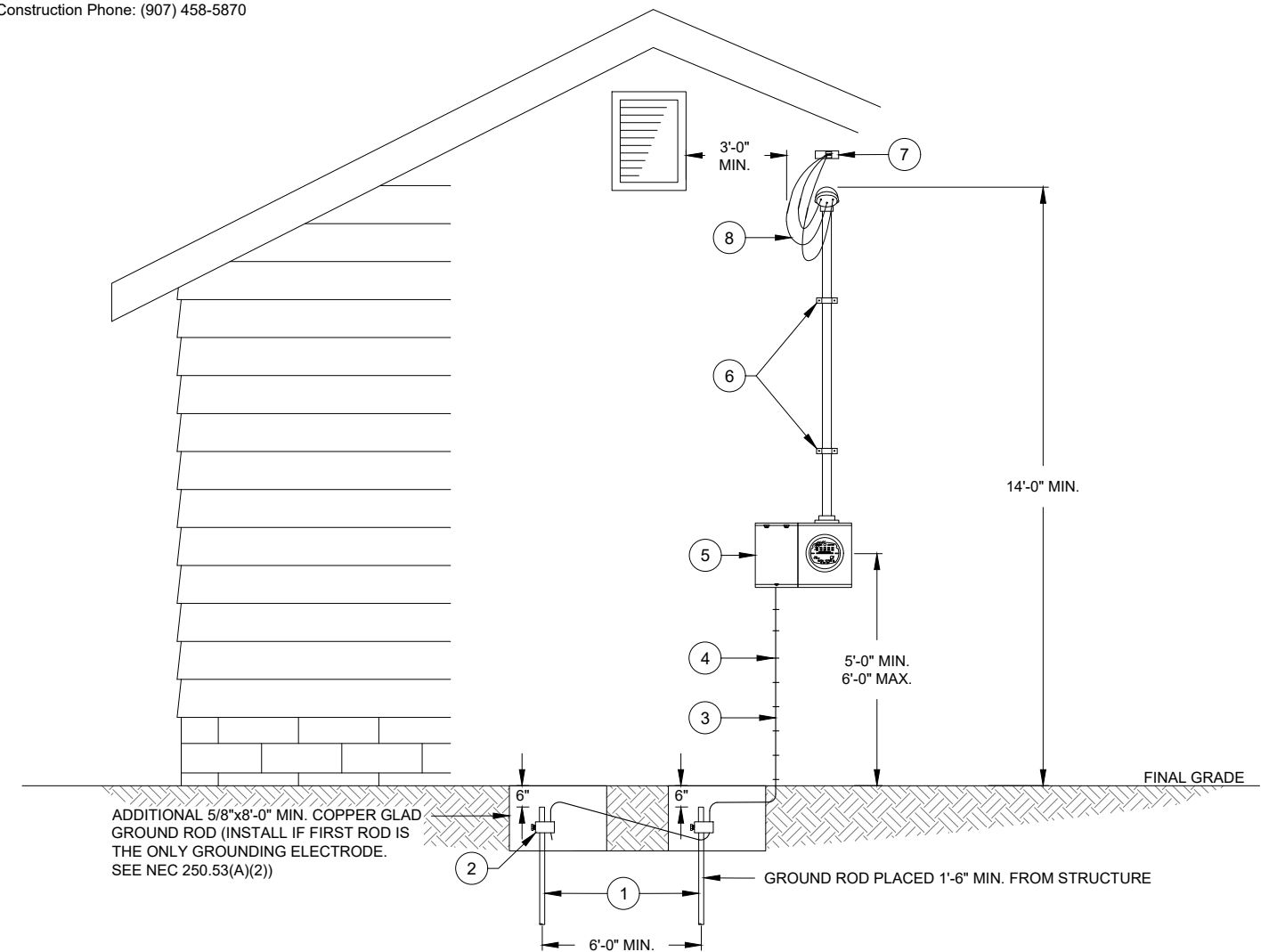




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 New Construction Phone: (907) 458-5870

Construction Guide For Overhead Residential Service - Meter On House (Type B)

REVISED 03/2020



NOTES:

1. In addition to the requirements of NEC 230.9, service drop conductors shall be a minimum of 3'-0" from any door, opening window, gable vent, or other building opening. The service drop conductors may be less than 3'-0" when installed above a gable vent or non-opening window per the Exception to NEC230.9(A).
2. The information in this handout 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).
3. Telephone drop must be more than 1'-0" (vertical clearance) below power cable at all points. See NESC 235C1.

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	1	SERVICE ASSEMBLY	*
6	2	CONDUIT STRAPS (RMC OR IMC)	Blackburn 16-416
7	1	OVAL EYEBOLT - 5/8"	Joslyn J9410

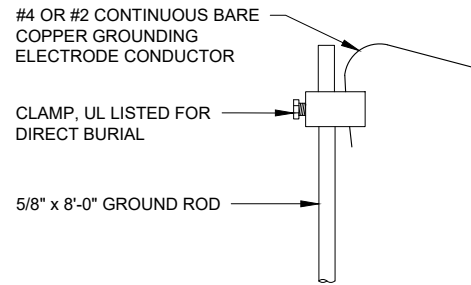
*See instruction on following pages.
 **Quantity/Length determined by installation requirements.

Instructions by Item Number

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- 1 GROUND ROD**
 Shall be 5/8" x 8'-0" listed copper-clad. Locate 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 SERVICE ASSEMBLY - (Member's service equipment)**
 Preassembled with Mast, Breaker, and Conductors See "Construction Guide for Overhead Residential Service Assembly" for details.

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

- 5 SERVICE ASSEMBLY (CONTINUED)**

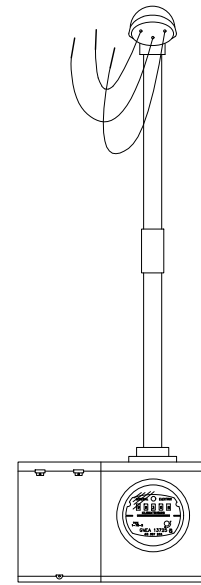
5. Horizontal centerline of the meter shall be between 5'-0" and 6'-0" above the finished grade immediately in front of the meter.

6. The distance between the vertical center line of the meter and any wall or obstruction shall be greater than 7".

7. 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.

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

9. 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.



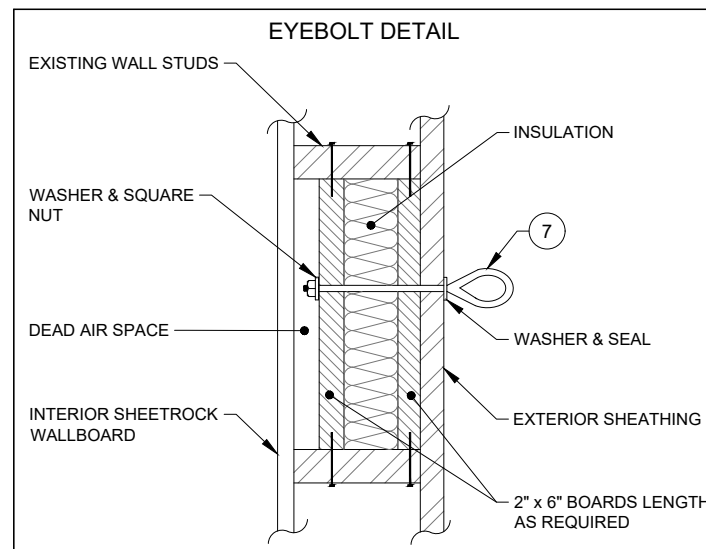
- 6 CONDUIT STRAPS**
 Strap must be listed for use with conduit installed. Install with screws appropriate for the material to which it is being fastened.



- 7 GALVANIZED THIMBLE EYEBOLT**
 Install with adequate weather seal, square washers, and square nut (min. 5/8" dia).



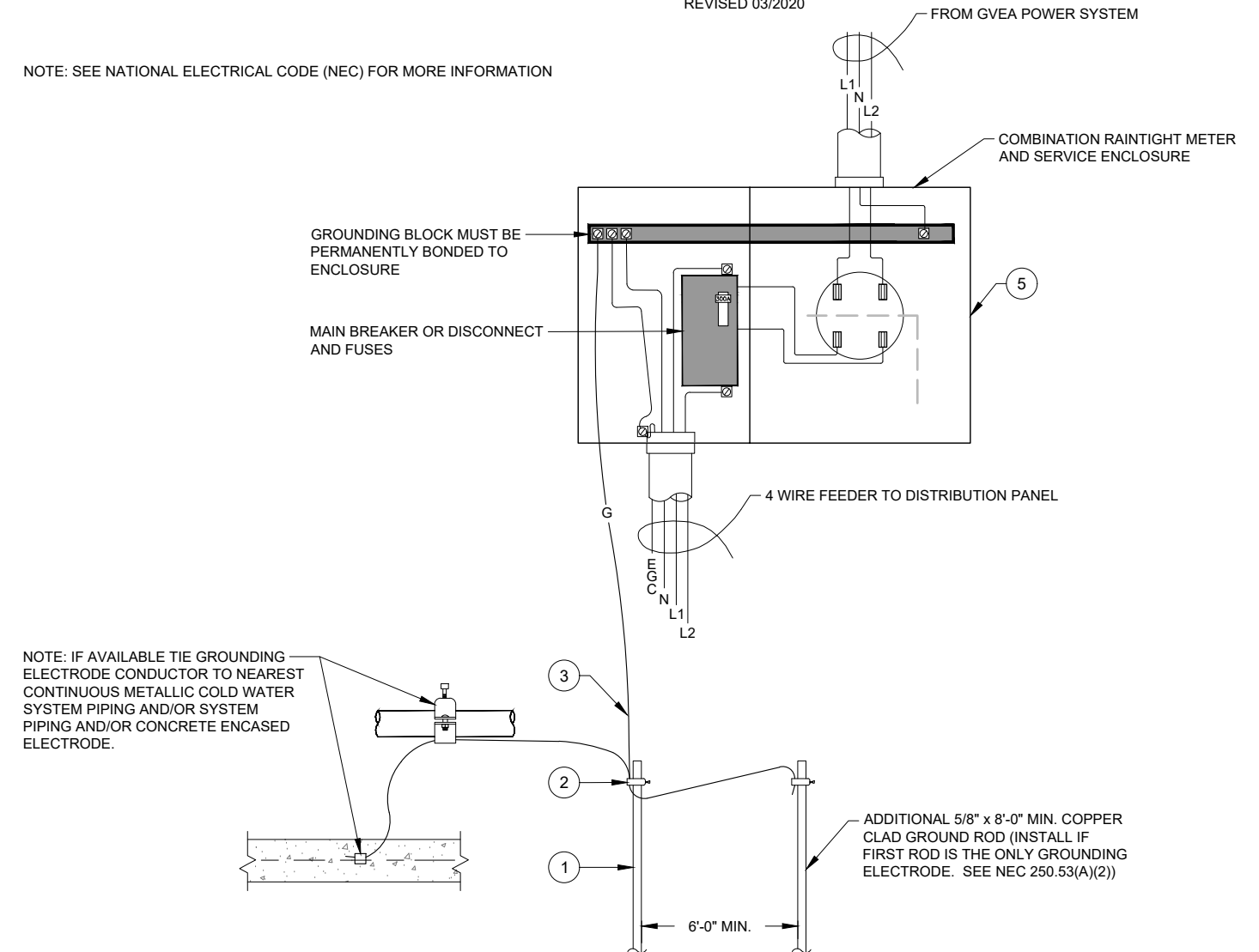
- 8 COPPER CONDUCTOR**
 Leave minimum 1'-6" tails out of weather head for connection to GVEA system. Mark neutral with white tape around ends.



Connection Detail - Meter Located On Building Being Served

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NOTE: SEE NATIONAL ELECTRICAL CODE (NEC) FOR MORE INFORMATION



NOTE: IF AVAILABLE TIE GROUNDING ELECTRODE CONDUCTOR TO NEAREST CONTINUOUS METALLIC COLD WATER SYSTEM PIPING AND/OR SYSTEM PIPING AND/OR CONCRETE ENCASED ELECTRODE.

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

*See instructions for item #5 regarding masts above roof line.