


	RESIDENTIAL AND SMALL COMMERCIAL OVERHEAD TO UNDERGROUND ELECTRIC SERVICE CONVERSION		061032
	Asset Type: Electric Metering		Function: Construction
Issued by: Quoc Hoang (QxH1)		Date: 04-15-11	
Rev. #04: This document replaces PG&E Document 061032, Rev. #03. For a description of the changes, see Page 4.			

This document is also included in the following manuals:

- *Electric and Gas Service Requirements (Greenbook)*
- *Electric Meter Work Practices*

Purpose and Scope

This document shows methods acceptable by PG&E, to be used by residential and non-residential (200-amp or less main service switch) customers when converting existing 2-wire or 3-wire overhead services to underground.

General Information

1. A typical overhead service conversion is illustrated in Figure 1 on Page 3. PG&E will install cable in a conduit system provided by the applicant. Various surface mount and semi-flush meter socket installations (illustrated in Figure 2 on Page 3 through Figure 7 on Page 4) are used with services converted to underground. The conversion option selected by the customer shall comply with all local building codes and ordinances. The customer shall furnish, install, own, and maintain termination facilities on or within the building to be served.
2. Local ordinances may include requirements in addition to those shown in this document. Consult local inspection authorities for these requirements. In areas where local ordinances require permits and inspection, these must be obtained before PG&E can establish service. PG&E will install meter(s) after an inspection clearance has been given by the appropriate electrical inspection authority.
3. When a service larger than 200 amps is desired, the customer shall consult with the local PG&E representative.
4. Service Conduit and Termination
 - A. PG&E will install the underground service cable and make the connections at the service termination point in accordance with [PG&E's Electric Rule 16](#). The underground service lateral conductors will be installed, owned, and maintained by PG&E from PG&E's distribution system to the termination facility as indicated in Figure 2 through Figure 7 on Pages 3 through 4.
 - B. The customer shall provide trenching, conduit and backfill on his property in accordance with PG&E specifications and pay any costs required by [PG&E's Electric Rule 16](#).
 - C. Service conductors will be installed in conduit as shown in Figure 1 on Page 3. For conduit size, refer to PG&E Document 063927 for residential service or Document 063928 for commercial service.
 - D. The customer shall contact the local PG&E office to discuss service arrangements and agree upon the "Electric Service Location" before trenching or wiring.
 - E. The customer shall provide and install, in addition to termination facilities, all equipment needed to modify the service entrance when changing from overhead to underground service.
 - F. For conduit type on or within the applicant's building, refer to PG&E Document 063927 or Document 063928. Also consult local code authority.
 - G. Install bend in direction of service trench. To facilitate cable installation, only one 90° bend is permitted in the riser. If a deeper trench is required, a minimum radius bend, per PG&E Document 063927 or Document 063928, shall be installed to the same depth as the trench.

Residential and Small Commercial Overhead to Underground Electric Service Conversion

- H. If the trench is used jointly with other facilities (telephone, cable TV, etc.), increased cable depth may be required. Refer to PG&E’s electrical and gas service requirements *Electric and Gas Service Requirements Manual (Greenbook)* Appendix B, Electric and Gas Service Documents: Joint Trench Configurations and Occupancy Guide.
 - I. Size and type of cable, conduit, and other facilities on the load side of the service termination point are subject to local code requirements.
 - J. To avoid cable insulation damage, the ends of all risers shall be provided with a suitable termination fitting such as bushing, nipple, hub or end bell, etc.
 - K. Pull termination box as specified in Table 1 on below. Item 6 is for service up to 250 kcmil cable. For larger conductor, size box as required. See PG&E Document 058817.
 - L. The point where PG&E’s service conductors connect to the customer’s conductors, as shown in Figure 2 on Page 3 through Figure 7 on Page 4, is identified as the “PG&E Service Termination Point.”
 - M. Item 3 in Figure 4 on Page 4 and Figure 5 on Page 4, may be used only if the service conductor is 1/0 AWG or smaller, and can be pulled from the PG&E end of the service.
 - N. Customer may install short-radius conduit fitting (i.e. service elbows that prevent water from penetrating the fitting at termination to meter panel). Short radius conduit fittings should not contain splices or taps. The cover also must be sealable by PG&E personnel.
5. Grounding: The customer shall be responsible for bonding and grounding all exposed non-current-carrying metal parts. Grounding shall be in accordance with the National Electric Code (NEC) and local ordinances, except that the grounding wire shall be protected against mechanical damage by rigid steel conduit or armored copper ground wire.
6. Metering Requirements: Meter will be furnished and installed by PG&E.

References	Location	Document
Trench and Installation Requirements for URD Cable .. Terminating Underground Electric Services 0–600 Volt in Customer-Owned Facilities ..	ELS ..	040686
Methods and Requirement for Installing Residential Underground Electric Services 0–600 V to Customer-Owned Facilities ..	UG-1: Services/Greenbook ..	058817
Methods and Requirements for Installing Commercial Underground Electric Services 0–600 Volts to Customer-Owned Facilities ..	UG-1: Services/Greenbook ..	063927
	UG-1: Services/Greenbook ..	063928

Table 1 Description of Items to be Furnished and Installed by Customer

Item	Description
1	Option 1: Meter Adapter, Cooper B-Line Cat. No. MARR20L45GRSD (160A) Use with Customer’s Panel Rated at 160A Continuous ^{1, 2} Option 2: Meter Adapter, Ekstrom Industries No. 722B (175A). Specify Left, Right, or Bottom Hub
2	Combination Service Meter and Breaker Panel (rating as required)
3	Pull Termination Box, 8” x 12” x 4”, Rain-Tight, Circle A-W (Cooper B-Line) No. R-9007A or Equivalent (see Note 4M on Page 2)
4	Conduit, See Notes 4C and 4G on Page 1
5	Hub to Be Closed and Made Tamper Proof
6	Pull Termination Box, 12” x 26” x 6”, Rain-Tight, Circle A-W Catalog Number R-90008, or Equivalent (see Note 4K on Page 2)

¹ Fifth jaw accessory, use Cooper B-Line Cat. No. 50365.

² Reducer hub and gasket accessories for 2” conduit, use Cooper B-Line Cat. No. AW200 and 12750A.

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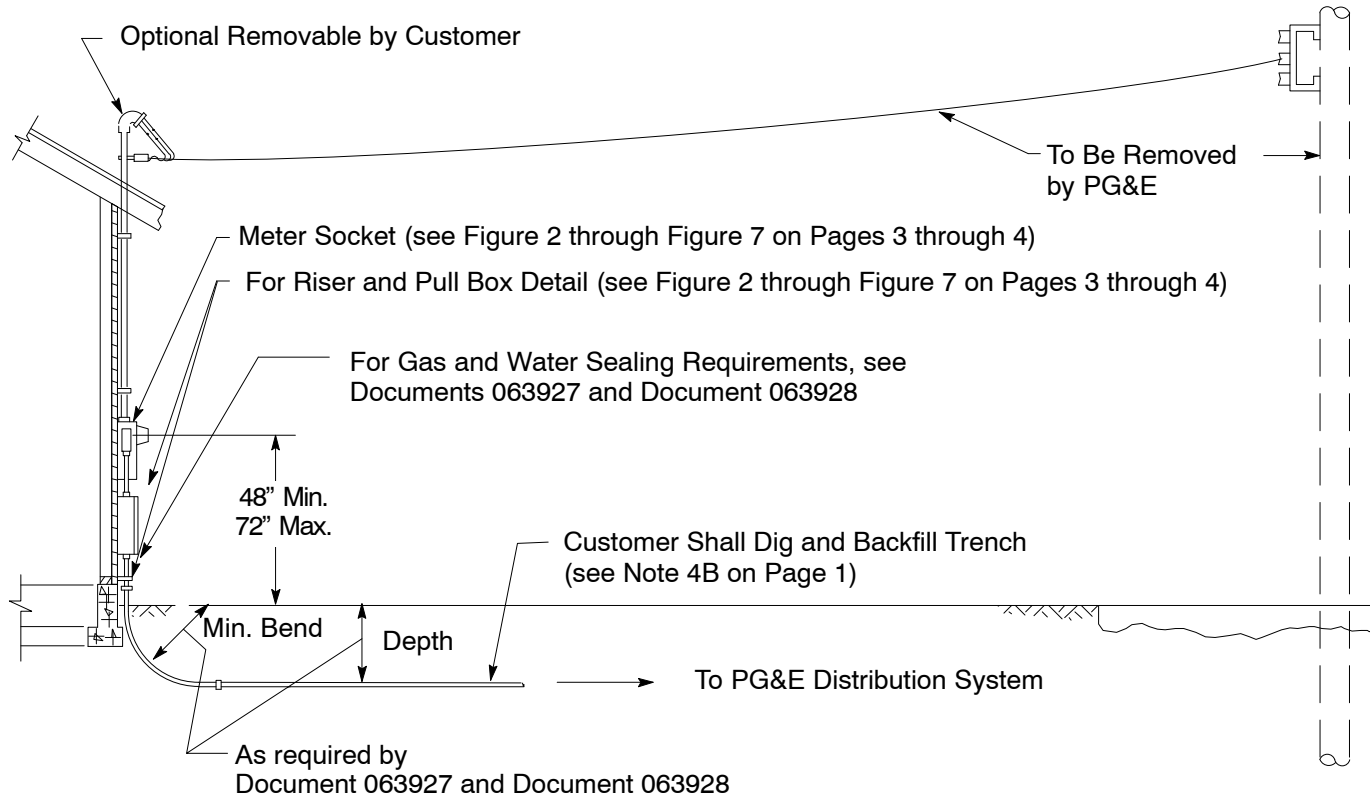


Figure 1
Typical Service Conversion

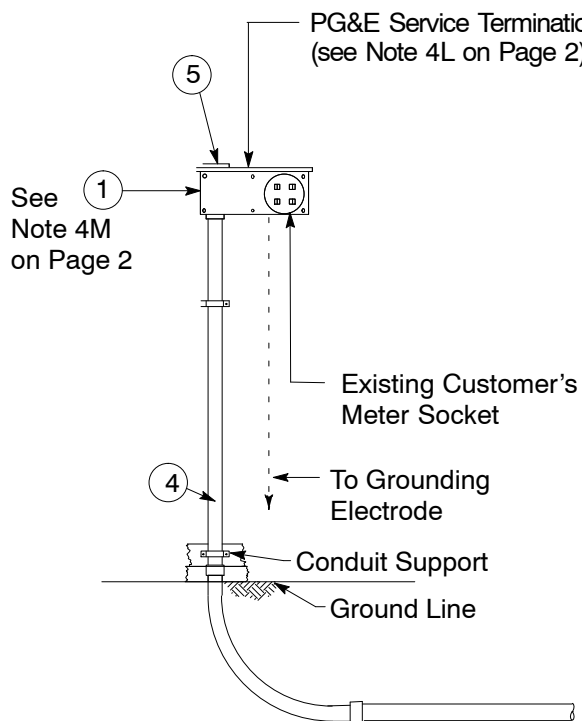


Figure 2
Cooper B-Line Meter Adapter

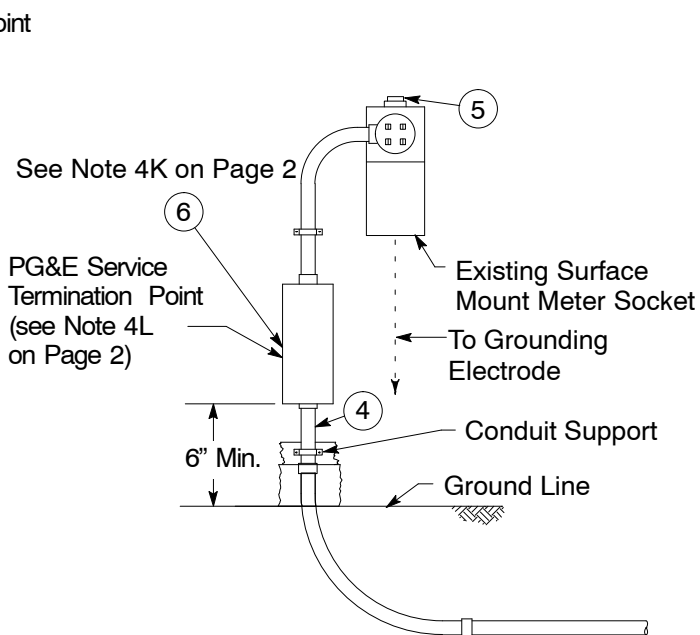


Figure 3
Surface Mount Meter Socket

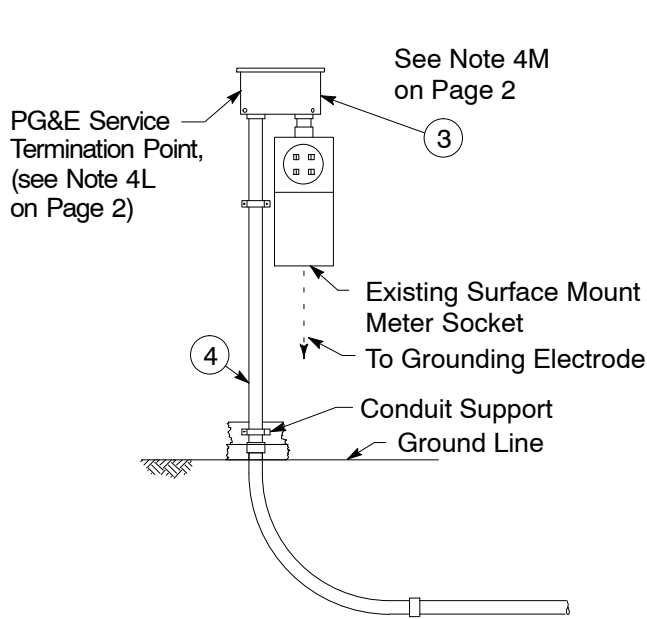


Figure 4
Surface Mount Meter Socket

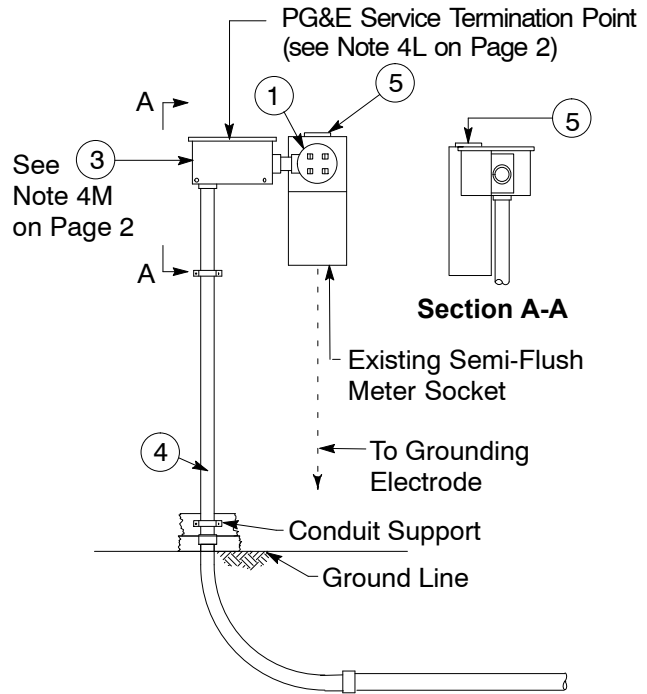


Figure 5
Semi-Flush Meter Socket

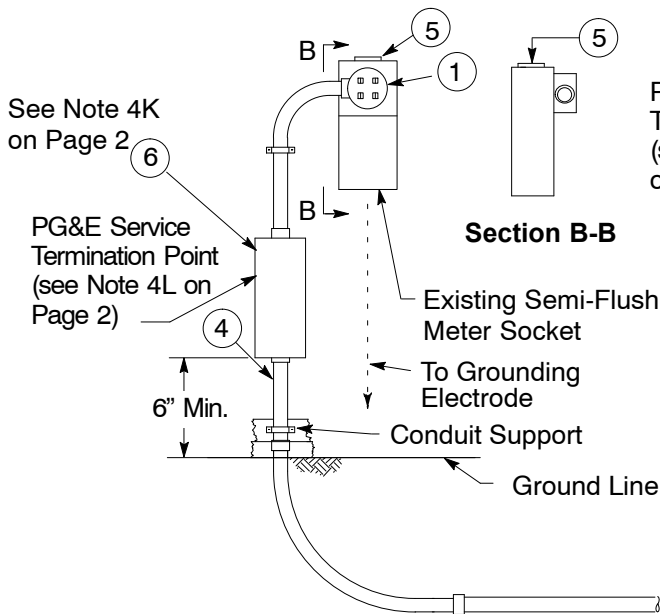


Figure 6
Semi-Flush Meter Socket

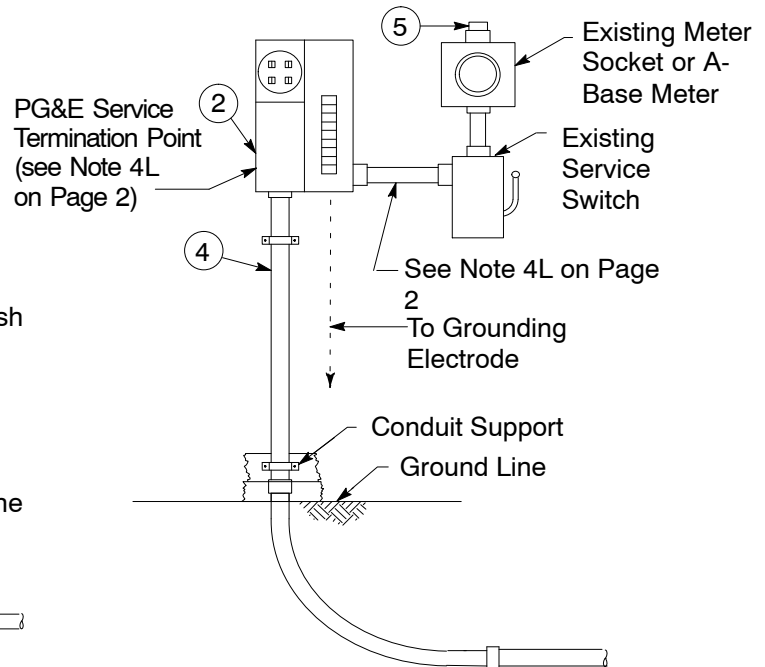


Figure 7
2-Wire or A-Base Meter Connection

Revision Notes

Revision 04 has the following changes:

1. Revised Note 4G on Page 1.
2. Revised Table 1 and Note 4H, and added Note 4N on Page 2.
3. Revised minimum depth and radius bend in Figure 1 on Page 3.
4. Added Figure 2 on Page 3 with new B-Line meter adapter.