

# **UNDERGROUND SERVICE TO METER ON HOUSE**

## **SINGLE PHASE, 120/240 VOLTS, 3-WIRE SERVICE, 100 AMP MINIMUM**

### GENERAL

All service entrance equipment to be supplied and installed on house by member, including proper size conduit from meter base to below ground level. Conduit shall be galvanized steel or rigid non-metallic conduit (Schedule 80 PVC). It shall be of proper size as indicated below and securely fastened to side of house by suitable clamps.

Main switch and service entrance panel shall be located at a readily accessible location nearest the point of entrance of the service conductors in the house.

Member shall provide service entrance cable to reach from designated Cooperative owned pole transformer or pad-mount transformer to meter base on house. Member shall provide the bottom ten feet of 2" conduit, to be installed on Cooperative owned pole. Conduit shall be either galvanized steel or Schedule 80 PVC. The remaining conduit, clamps, couplings, etc., required on the pole will be provided and installed by the Cooperative.

### GROUNDING

Ground wire shall be one continuous length, without splice or joint, from main switch to grounding electrodes. Suitable clamp must connect ground-wire securely to two driven ground rods - minimum 6' apart in undisturbed earth.

Grounding electrodes must be rods: 5/8" x 8' solid rod, either galvanized or copper-clad.

PVC conduit installed on the pole and/or house requires a 3 wire cable from the pole to the house. If the metal conduit is used on either end, it must be bonded to the meter box and/or the service panel.

Metal conduit used on the pole and house requires a 3 wire cable plus a ground wire bonded from the metal conduit to the meter box on the house or the service panel.

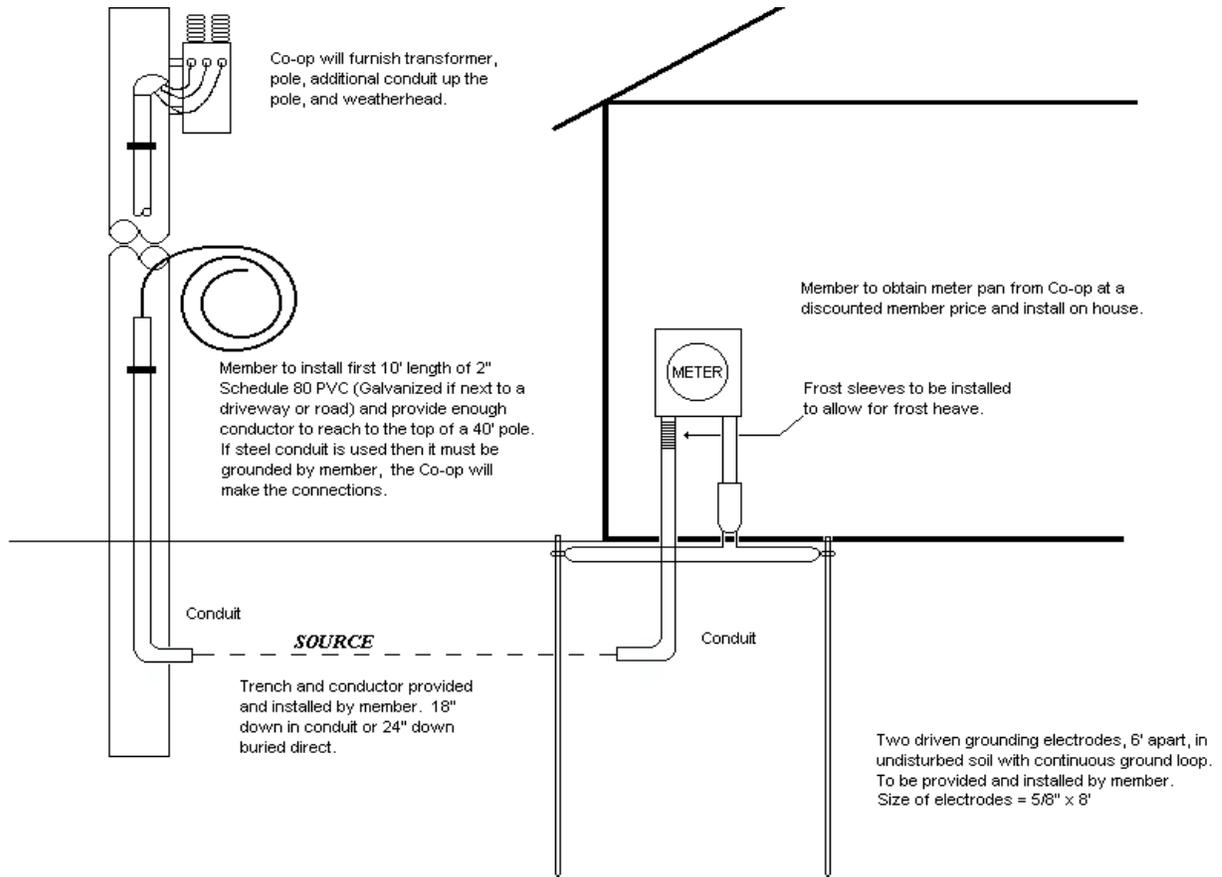
If metallic conduit is used from the meter box to the service panel, bonding bushings must be used at each location and a 3 wire cable may be use between the meter box and the service panel.

On all of the above, 2 ground rods must be installed at the house.

### NOTES

1. All installations to be made according to the diagram on reverse side.
2. All materials to be approved by the Underwriters Laboratories.
3. All wiring to be in conformance with the National Electric Code and the National Electric Safety Code, current edition, and certified by a Cooperative approved inspection agency.
4. Always have a qualified electrician take care of your wiring needs.
5. Members not following these minimum specifications may be refused service connection.
6. Service connections and/or meter approval shall be done only by authorized Cooperative personnel.
7. Reduced neutral may be allowed.
8. All service entrances will be located by Cooperative personnel and above clearances may be greater. Any change to the service entrance location without authorization from the Cooperative may incur an additional expense to the member.

ITEM	MATERIAL	100 AMP SERVICE	150 AMP SERVICE	200 AMP SERVICE	300 AMP SERVICE	400 AMP SERVICE	600 AMP SERVICE
1	Service Entrance Cable, Type SEU Copper Wire	#4	#1	#2/0			
2	Service Entrance Cable, Type SEU Aluminum Wire		#2	#2/0	#4/0		
3	Copper Wire, Type THW In Conduit	#4	#1	#2/0	350 MCM	500 MCM	6-350 MCM
4	Aluminum Wire, Type THW In Conduit		#2	#2/0	#4/0	500 MCM	6-500 MCM
5	Minimum Conduit Size	2"	2"	2"	3"	3" 3 1/2"	4" 4"
6	Minimum Conduit Size For UG Service Conductors	2"	2"	2"	3"	4"	4"
7	Copper Ground Wire To Driven Grounding Electrodes	#6	#6	#4	#2	#1/0	#1/0



The trench depths specified are minimum and are measured from final grade.

The trench width is a minimum of 12" and shall be increased as necessary to obtain the required depth in loose soil.

The trench shall be dug so that the bottom has a level grade and the bottom of the trench shall be relatively smooth, undisturbed earth or tamped earth or sand. Large rocks, stones, and gravel in excess of one inch shall be removed from the bottom and sides of trench. Where this cannot be done, a three inch layer of clean masonry sand shall be placed in the bottom of the trench, and screened dirt (using a one inch mesh screen) shall be used for backfill. **TRENCH SHALL NOT BE FILLED WITH EXCESS CONSTRUCTION MATERIALS SUCH AS CONCRETE BLOCK, LUMBER, DRYWALL, ETC.**

If proper depth cannot be maintained from final grade, galvanized conduit or Schedule 40 PVC must be used. All trenches parallel to the building foundation shall be no closer than four feet.

The trench shall be backfilled as described above as soon as possible after the placing of the cable. The top twelve inches of such backfill shall be well tamped while backfilling, and shall be banked over the top of the ditch to provide for settling of the backfill.

Duct shall be installed under driveways, patios, or other paved areas. Duct may be either galvanized pipe, Type II Fiberduct or Schedule 80 PVC.

\*Members not following these minimum specifications may be refused service connection.

\*Grounding to meet National Electric Code on new construction.