

STANDARDS SERVICE GUIDE



**Ouachita Electric
Cooperative Corporation**

GENERAL INFORMATION

This publication is prepared to provide Ouachita Electric Cooperative Corporation's recommendation concerning service installations. All material in this publication with respect to wiring or the installation of electrical equipment by the cooperative member in or on accomplished only by qualified personnel.

Since Ouachita Electric does not and cannot have any control over the manner of methods employed by the member in his wiring or installation of electrical equipment, the cooperative cannot be responsible for any damage or injury to persons or property resulting from improper or inadequate wiring or installation of electrical equipment.

None of the recommendations and/or suggestions in the publication is in intentional conflict with the National Electrical Code or the National Fire Protection Association. In the event there should be a conflict, the recommendation of the National Electrical Code should be followed.

In any case where Ouachita Electric provided electrical service within the corporate City Limits of any area, appropriate City Ordinances have precedence over this publication.

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RESIDENTIAL SERVICE

POINT OF ATTACHMENT OF OVERHEAD WIRES TO BUILDINGS

Ouachita Electric will make only one point of attachment of its service wires to a building. The point of attachment will be such that the bottom of the drip loop is no less than 12 feet above the ground.

The point of attachment must be provided by the member before service will be rendered, and must be such that attaching the service wires to it will not damage the building.

Specific location of the point of attachment will be determined by Ouachita Electric after investigation by one of its representatives. Information as to the proper point of attachment may be obtained by consulting the Engineering Department of Ouachita Electric.

If a point of attachment is established without approval by Ouachita Electric, the cooperative reserves the right not to make connection until any relocation of the point of attachment deemed necessary by Ouachita Electric is made.

Only one set of service wires will be erected to serve any one building.

The member must provide at the point of attachment a suitable place or method for attaching the service wires. Ouachita Electric will provide, free of charge, an eyebolt suitable for attaching the service wires to masonry, brick, block, stucco, rock, etc.

For a building with walls or roof of less than 12 feet above the ground, there shall be a conduit type entrance known as a "Service Mast Installation" (pages 3 and 11) strong enough to support the service wires at an elevation of at least 12 feet above the ground, and, in cases where the service wires cross a driveway, at least 15 feet above the ground.

Where a minimum of ten (12) feet of clearance to the bottom of the drip loop may be obtained without using a "Service Mast Installation," a "Meter Loop" (page 10) may be used.

LOCATION OF METER

All residential meter shall be of the outside type. A representative of Ouachita Electric shall be consulted regarding the correct location of the meter socket.

The location of the meter must meet these requirements:

1. It must be located at a point on the outside wall of the building. Porches, either enclosed or open, are considered as being inside the building.
2. It must not be located where it is subject to the action of water running off a roof.
3. It shall be no more than six (6) feet nor less than five (5) feet above ground level, as measured from the center of the meter socket.
4. It must be accessible to the meter reader and/or any other representative of Ouachita Electric.

METER POLE INSTALLATIONS

The meter socket shall be installed with the center of the socket not more than six (6) feet nor less than five (5) feet from the ground. The switch will be rainproof and deadfront. All wires shall be run in rigid conduit.

The weatherhead shall be installed as shown in the applicable drawing on pages 13, 14, 15, 16, or 17. Sufficient wire shall extend from the weatherhead to reach the various Ouachita Electric conductors. The conduit shall be of the size called for in the National Electrical Code for the number of sizes of wires being used.

Grounding. The ground wire shall be fastened to the pole from top to the bottom of the pole. Wire shall be continuous to the ground rod, but may be tapped with a connector to ground the switch box, which shall be grounded.

SERVICE MAST INSTALLATIONS

A service mast installation shall be used to provide the 12-foot clearance required by the National Electrical Code on low buildings where this clearance cannot otherwise be provided in attaching to the building.

The mast shall extend a minimum of 42 inches above the roof to provided space for fastening service wires, and said top of conduit shall be a minimum of 13 feet above ground level.

A mast of two and one half inch rigid galvanized conduit is recommended for the service mast.

Consumer will furnish a meter socket with proper size hub, either one-and-one-half -inch or two-inch. The mast will be reduced to this size and extended down to proper socket location. A 10-foot length of mast will be satisfactory, unless added length is needed.

In reducing conduit size, offset reducers shall be used so that the meter socket will mount flat on the wall; or a board of treated or painted wood of the proper thickness shall be mounted behind the socket to give a firm base on which to fasten the socket, when standard pipe reducers are used.

Grounding. The No. 4 bare copper grounding conductor shall be run through the meter socket, coming out of the 1/4-inch knockout in the bottom of the socket. If there is no knockout, a 1/4-inch hole shall be drilled at the back and bottom of the socket to permit passage of the conductor as one continuous wire to the ground rod.

PROTECTIVE EQUIPMENT

An approved safety type service entrance switch with fuse receptacle or circuit breaker assembly shall be provided in all services. This switch shall be enclosed in a metal case, and be of the deadfront type. For commercial and residential services in both rural and urban systems there shall be only one main disconnecting and overcurrent device for each meter. Length of service entrance can not exceed 10'

to main disconnect.

The service switch shall be located indoors or in some other dry, noncorrosive location, and shall be as near to the meter as practicable. This switch shall be located in a readily accessible location, and shall be not less than four (4) feet nor more than six (6) feet above the floor.

On meter pole installations, all outside switches shall be rain-proof and deadfront.

All connections in protective equipment, or anywhere stranded wire is used, shall be made with approved screw type lugs or soldered lugs, unless approved lugs are in the equipment.

Fuse type panels must be fused.

THREE WIRE ENTRANCE SERVICES

Conduit shall terminate at an approved type weatherhead at a point of attachment to overhead conductors. Each conductor shall extend at least two (2) feet beyond the weatherhead to provide proper attachment to overhead service, except that for service mast installations extending through the roof, only 18 inches of conductor must be left.

Service wires shall be sized in accordance with the National Electrical Code to carry the connected load.

Service entrance cable for bottom and top connections shall enter the meter socket through approved bushings provided with permanent raintight compression type glands.

All entrance cable shall be run flat against and parallel to the lines of the building and fastened with approved cable clamps using brass, galvanized or cadmium plated screws from bottom of meter socket to switch. These clamps are to be spaced not more than two (2) feet apart. All entrance wiring is to be in conduit.

All material used on the outside of consumer's premises on wall must be of non-corrosive material. That is, rustproof.

Service equipment shall be approved, solid-neutral type with neutral bonded to switch frame, and deadfront type (a cover over all wiring while fuses are uncovered), minimum size 60 amperes.

Meter pole installations shall be of rainproof equipment.

GROUNDING

The method of grounding approved by Ouachita Electric is with the meter socket ground connected to 5/8-inch by 8-foot galvanized or copperweld ground rod.

Service entrance switch ground is made by connecting to grounded neutral.

The grounding conductor shall be no smaller than No. 6 copper wire, and shall be run from the meter base without splices to a driven ground rod. The grounding rod or electrode shall be a 5/8-inch galvanized ferrous or copperweld metal rod not less than eight (8) feet long, with the proper clamp.

The grounding conductor shall be run parallel with, or at right angles to, the lines of the building, and shall be fastened to the wall or other support with galvanized or copperweld metal staples. These fastenings shall be spaced not more than two (2) feet apart.

REMODELING OLD WIRES

If, while remodeling old wiring, it is necessary for Ouachita Electric to remove its service wires, then the service will be treated as a new service and the Engineering Department will specify the point of attachment (see page 1), and the meter location shall conform with requirements of meter location (see page 2).

When changing from an old to a new service entrance, an employee of Ouachita Electric shall disconnect the old entrance from the service wires and connect the new entrance, unless special permission is given by the Operations Department of Ouachita Electric. This is must!

WIRING BEYOND METER

Wiring beyond the meter is be installed by qualified personnel. Wiring is to be in conformance with the National Electrical Code or local statutes, whichever pre more restrictive.

Length of approved service entrance cable must be less than 10ft. distance between meter base and main disconnect.

STANDARD FORM OF SERVICE

Electricity in the form of 60-cycle alternating current is available to members of Ouachita Electric for ordinary light and small power in the form of single-phase, three-wire at approximately 120/240 volts.

FINAL CONNECTION

Final electric connections will not be made until the entrance wiring has been verified by an authorized representative of Ouachita Electric, or, in the case of members living inside corporate City Limits, by the appropriate building inspector. Final connections must be made by a Ouachita Electric representative.

COMMERCIAL SERVICE

Wiring installations for commercial and industrial service shall meet all requirements for residential service, and, where applicable, shall meet additional requirements.

Any variation or exception to the regulations can be made only after review by the Engineering Department of Ouachita Electric. It is the intention of Ouachita Electric to be reasonable in its requirements and to try to work on a cooperative basis with all contractors to the end that satisfactory and economical wiring installations will be made.

In order to insure a uniform practice in the interest of contractors, consumers and Ouachita Electric, it will be necessary to decline connections to installations where the service entrance does not conform to requirements.

STANDARD FORM OF SERVICE

Inquiry should be made at the Ouachita Electric offices to ascertain the form of service that may be obtained at a particular location within the service area

MOTOR SERVICE REGULATIONS

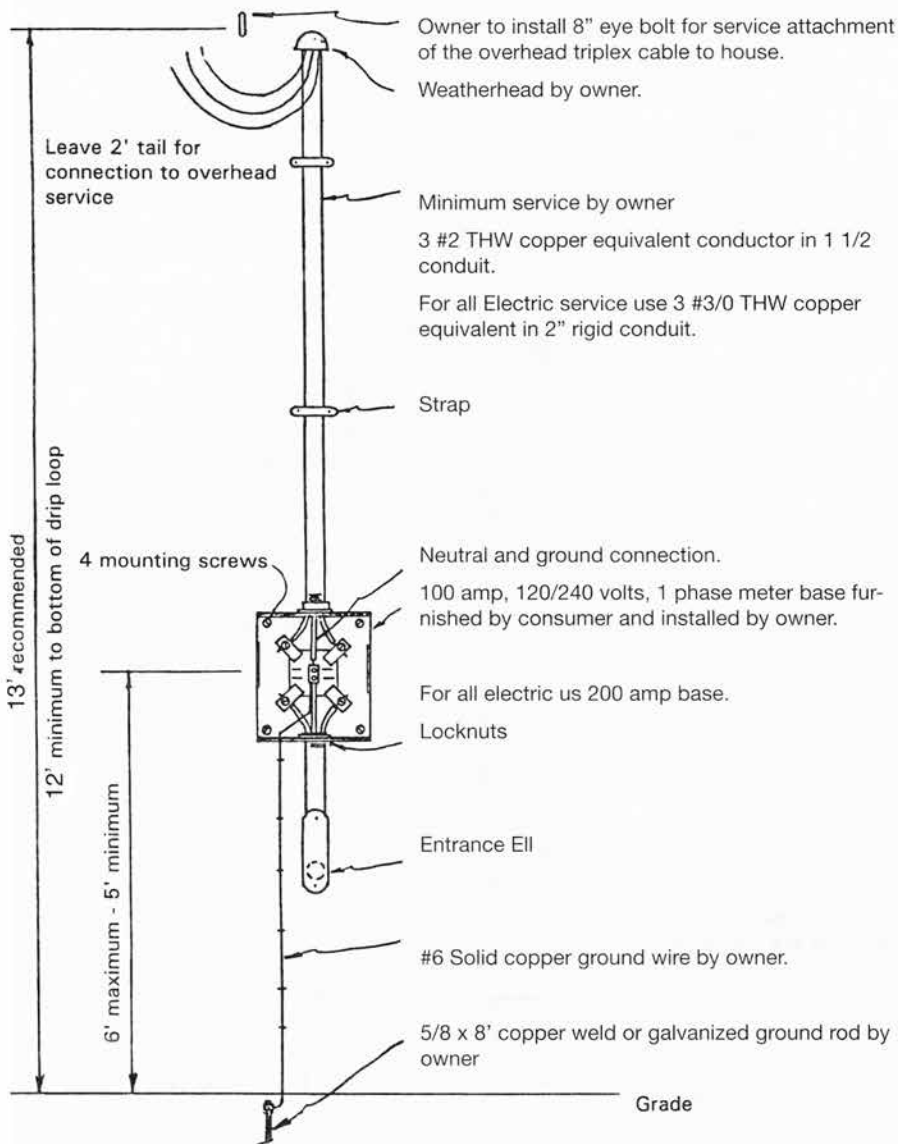
Motors in excess of 10 horsepower should be either three phase or should be soft start such that starting current is limited to 260 amperes at 230 volts. Three phase motors in excess of 50 HP are not to be installed without prior written approval of Ouachita Electric. All three phase motors should be protected by appropriate switching devices for overheating, single phasing, and undervoltage conditions.

TELEVISION ANTENNA SAFETY

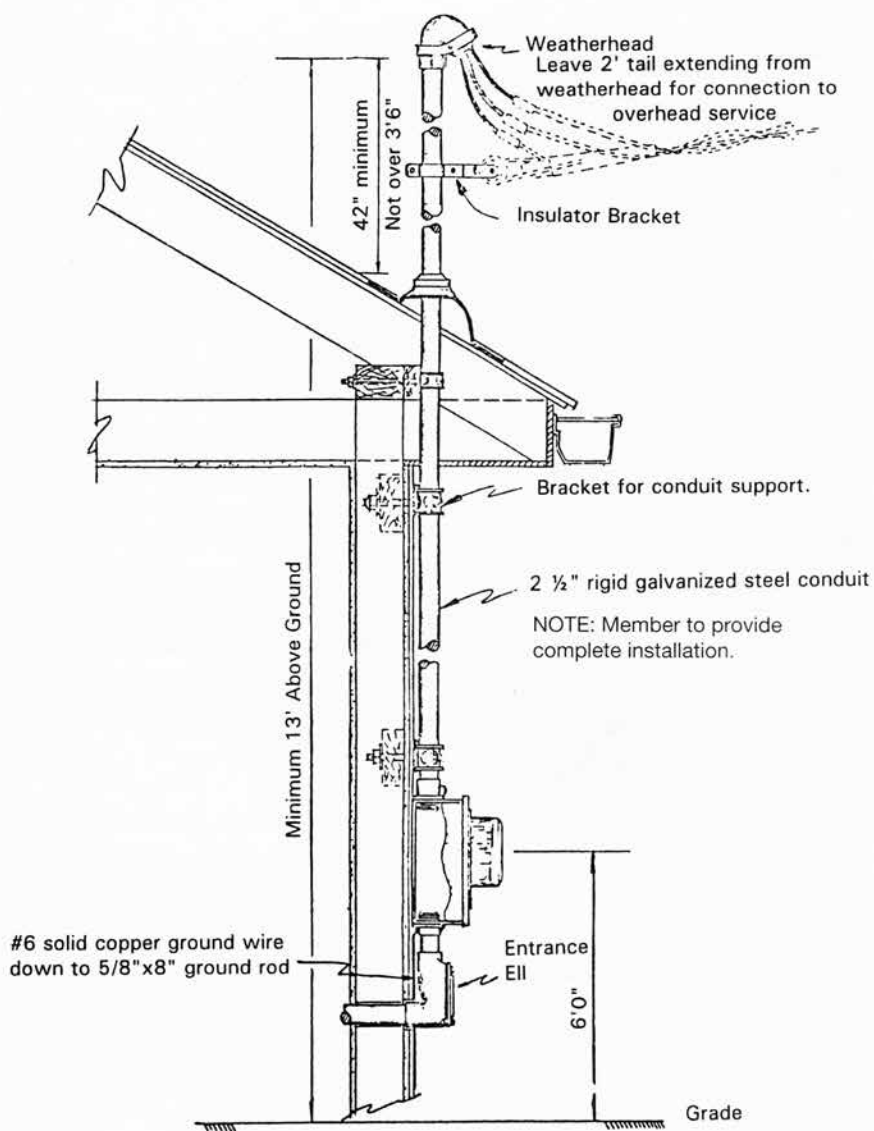
The erection and maintenance of television antennas presents a problem closely allied with electrical wiring in that, in many cases, the same people are engaged in both types of work.

Although the following recommendations for the safe erection and maintenance of television antennas are not mandatory, we sincerely urge you to abide by them in the interest of your own safety as well as that of other persons.

1. Do not erect any antenna in such a location that the antenna, mast, guys or any part of the installation could come in contact with a power line during its erection, or if it should fall.
2. Install adequate bonding jumpers to all pipe joints, guy attachments and other metal accessories to assure a solid, low resistant path to an approved driven ground rod equipped with an approved type clamp.
3. Each conductor of each lead-in cable should be provided with a lightning arrester approved for such application. Such arrester should be installed per manufacturer's recommendations.
4. All antennas should be of adequate mechanical strength, and should be guyed in such a manner as to withstand the elements to which it will of necessity be exposed. This consideration should include possible windstorms and ice conditions. The practice of attaching antennas to chimneys is not considered wise, as the possible leverage action of an antenna is substantial.

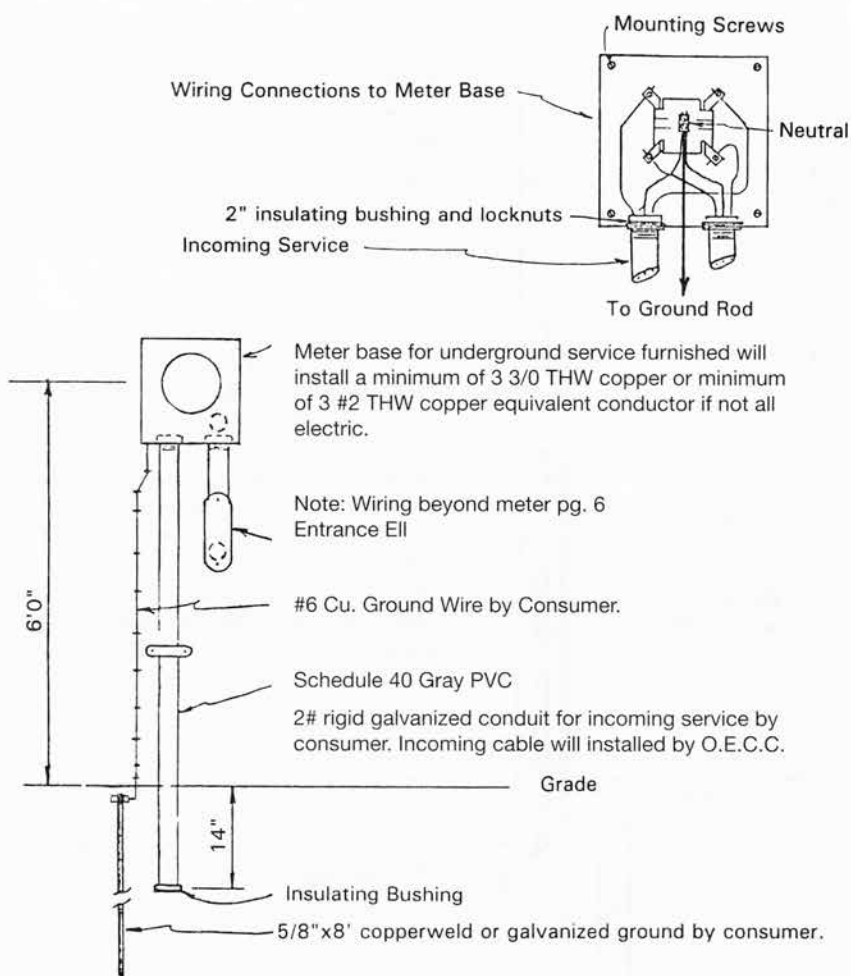


TYPICAL METER LOOP

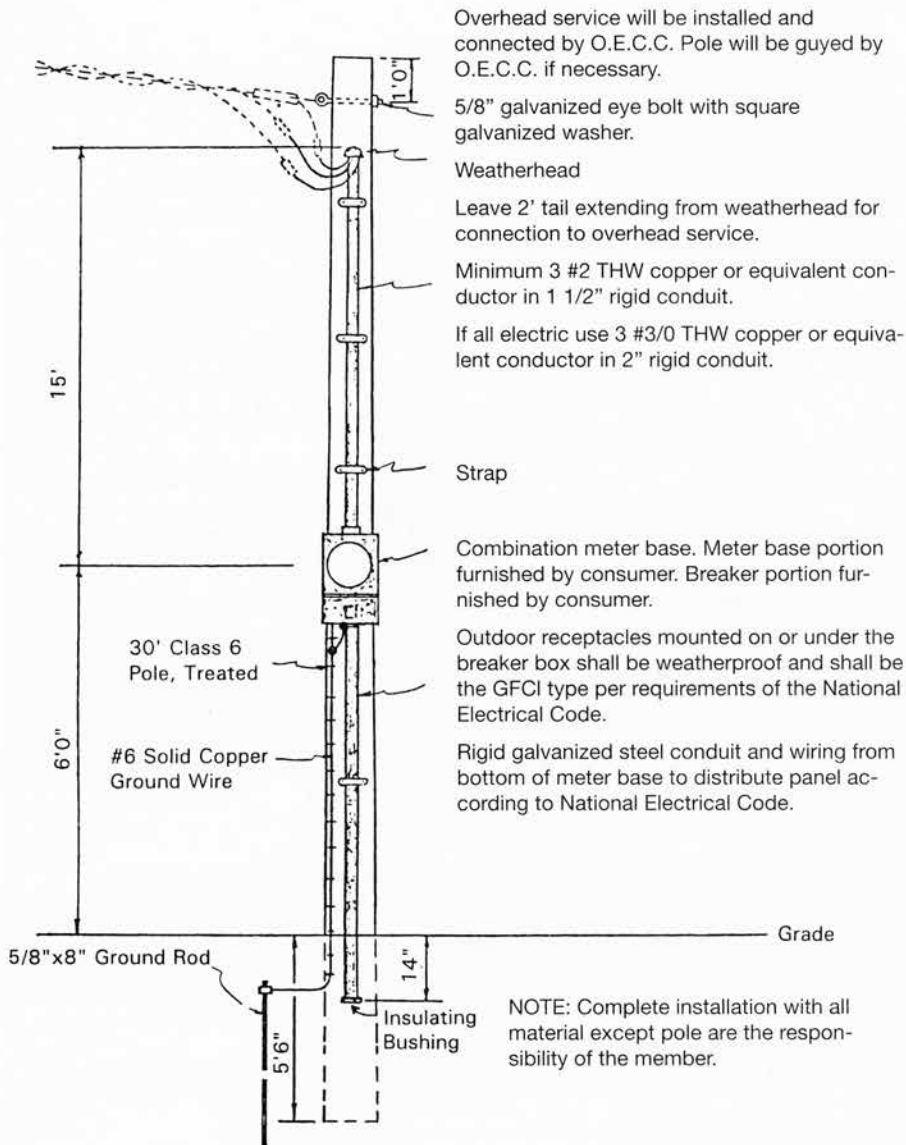


See page 9 for typical ground rod and ground rod connection.

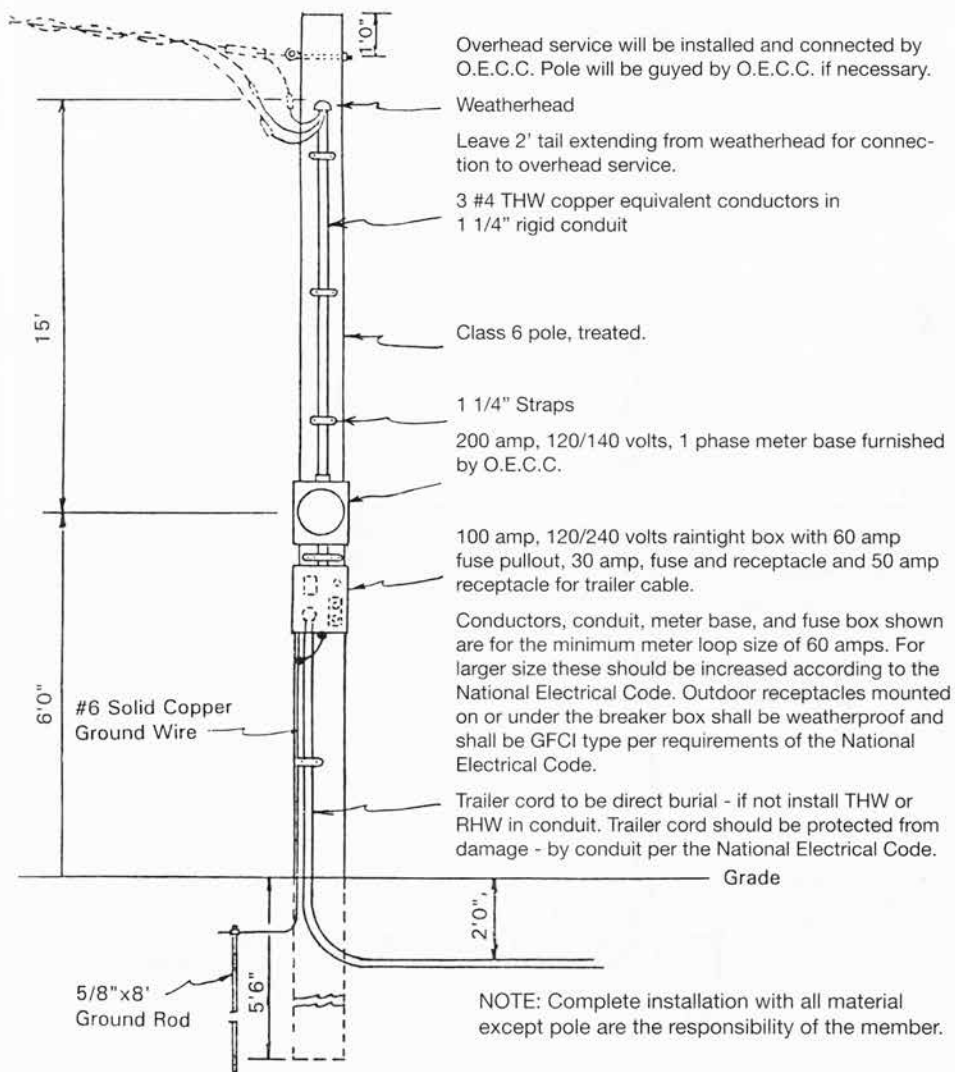
TYPICAL SERVICE MAST INSTALLATION



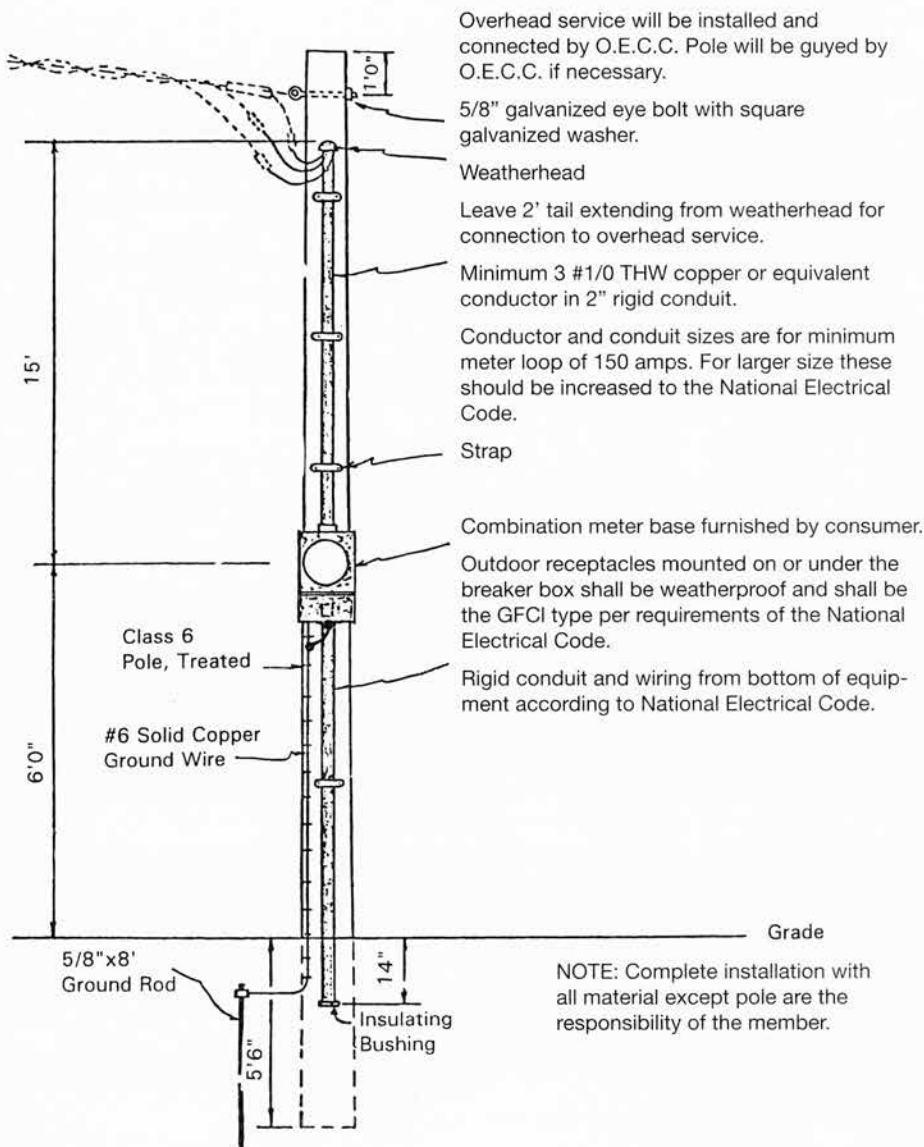
**TYPICAL METER LOOP
FOR UNDERGROUND SERVICE**



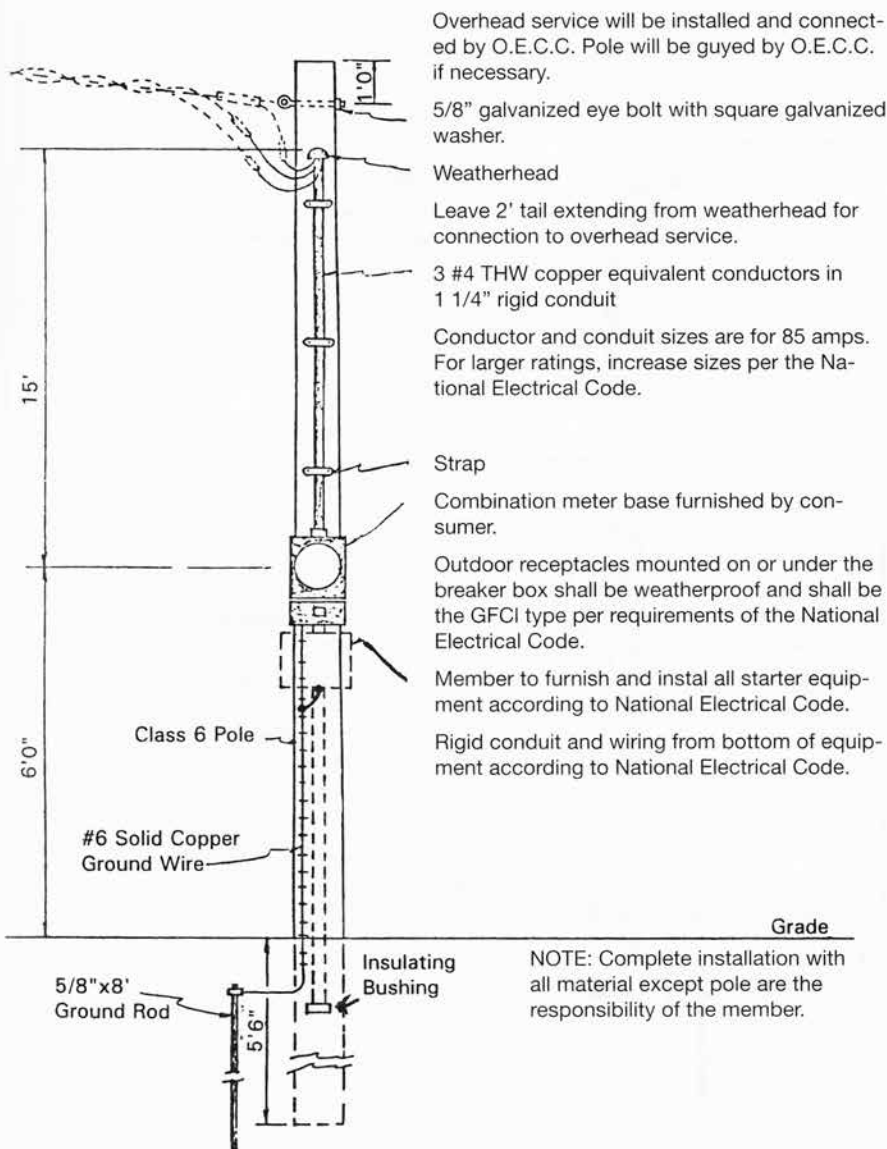
TYPICAL METER POLE FOR TRAILERS



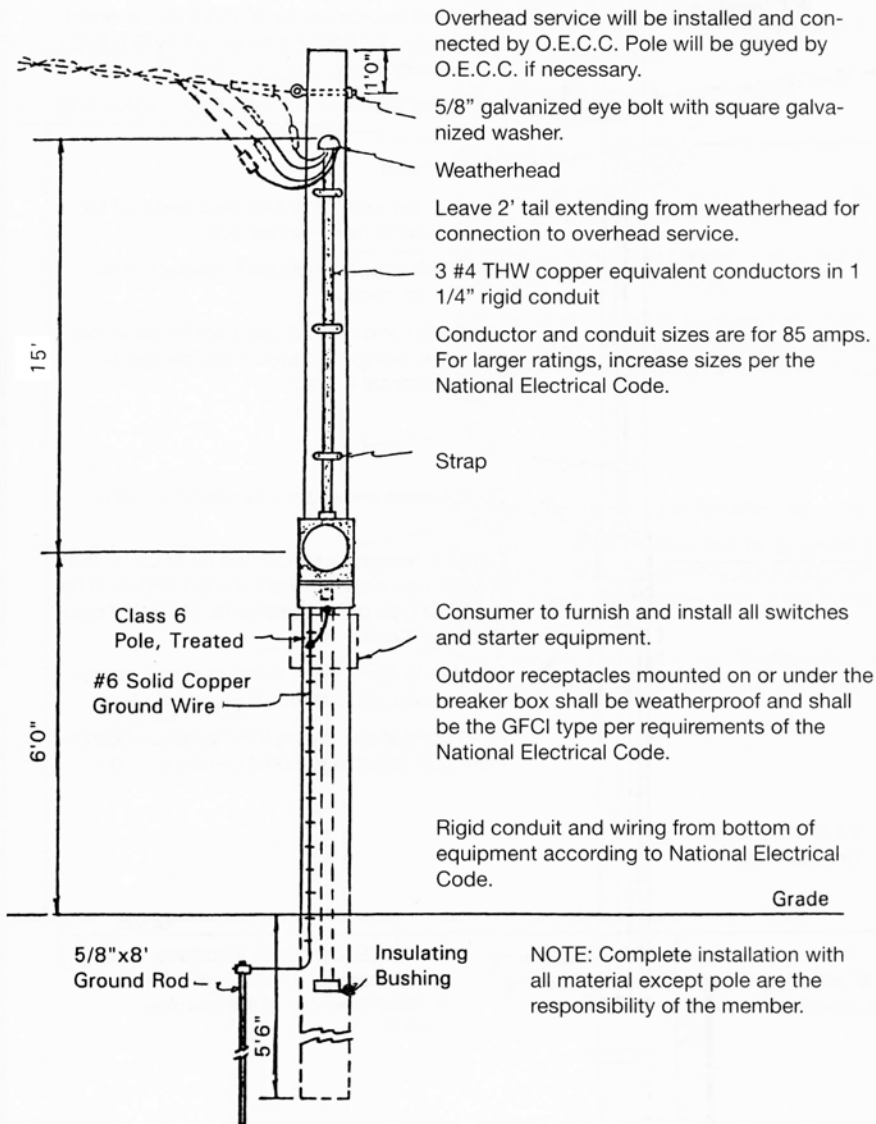
TYPICAL METER POLE FOR TRAILERS



TYPICAL METER POLE FOR ALL ELECTRIC TRAILERS



TYPICAL METER POLE FOR 1-PHASE WELLS



TYPICAL METER POLE FOR 3-PHASE WELLS

MINIMUM WIRE SIZES FOR ENTRANCE SWITCHES

BREAKER OR SWITCH SIZE	PHASE	WIRE SIZE (Copper)	REMARKS
60 amperes	1 or 3-phase	#6 THW	1-phase, 14.4 kva
100 amperes	1 or 3-phase	#2 THW	1-phase, 24 kva
150 amperes	1 or 3-phase	#1/0 THW	1-phase, 36 kva
200 amperes	1 or 3-phase	#3/0	1 phase, 48 kva
400 amperes	3-phase	#500 MCM THHW or equal	
600 amperes	3-phase	#1000 MCM THHW or equal 2-300 MCM or equal	
800 amperes	3-phase	Two (2) 500 MCM, THHW paralleled or equal	

