

## DROP WIRE

### PLACING WIRE FOR MOBILE HOMES

#### 1. GENERAL

- 1.01** This section covers general information for the placing of drop wire for mobile homes.
- 1.02** This section is reissued to specify the use of insulator supports in grounding of the mobile home chassis and to elaborate on various other grounding precautions associated with drop wire installations.
- 1.03** Placing drop wire, station wire, and protectors on mobile homes should be on the same basis as installations for permanent buildings with the exceptions noted.
- 1.04** Prior to proceeding with installation, a preliminary survey of the area should be made. Makeshift pole lines, insufficient clearances, etc, should definitely be avoided. Necessary arrangements for facilities such as private poles and digging and backfilling trenches for buried wire should be made by the outside plant engineer.
- 1.05** Where such negotiated arrangements have not been made by the engineer or conditions are found unsatisfactory, refer the matter to the supervisor.
- 1.06** Where attachments are made on joint-use poles and posts, the standard separations between power and telephone wires must be provided as for permanent residences.



*Defects in electrical equipment or wiring in a mobile home may energize the unit and present an electrical hazard to persons in or near it. If a hazardous condition is found to exist, the craftsman must proceed no further until the condition has been corrected and the supervisor informed of the condition. The craftsman should inform the occupant or the trailer park manager, if available, of any hazardous condition found.*

#### 2. TESTING MOBILE HOME

- 2.01** Before the craftsman makes bodily contact with *any* metal portion of the mobile home, the following tests should be made:
- (a) Test metallic mobile home body for possibility of being energized.
  - (b) Test chassis of mobile home for possibility of being energized.
- 2.02** The craftsman should use the best available ground (water pipe, ground rod, etc) for making test.

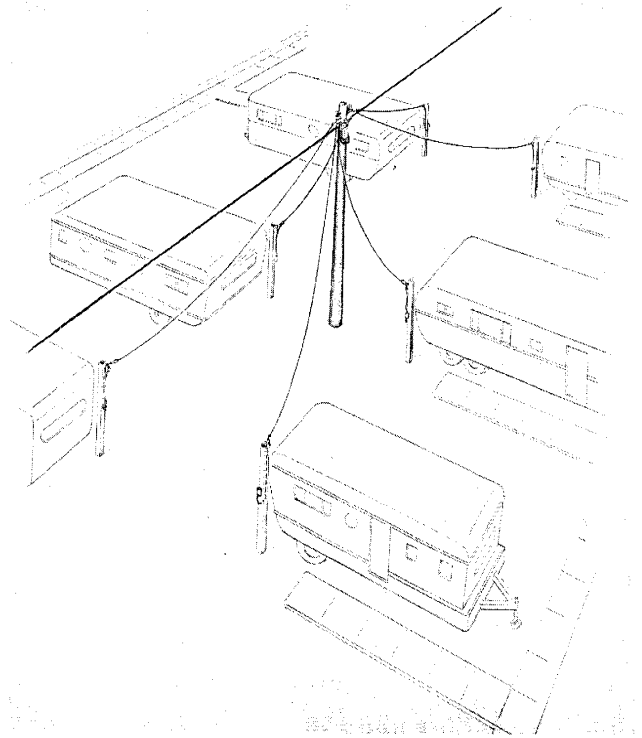
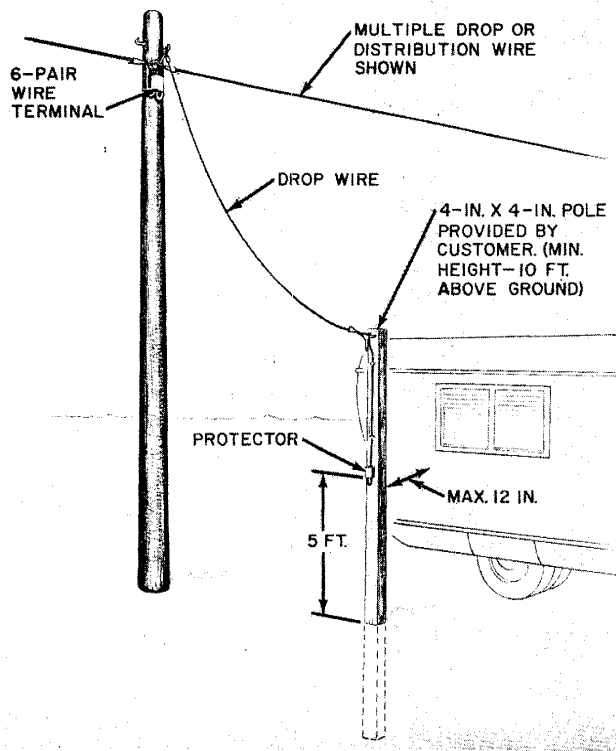


Fig. 1—Typical Aerial Service Connections

**2.03** To verify presence or absence of hazardous voltage on a mobile home body or chassis, use the B Voltage Tester in the same manner as when verifying the presence of voltage on ground leads on joint-use poles as described in Section 620-105-010. If it is necessary to cut through paint to ensure good contact between mobile home and B Voltage Tester, select an inconspicuous location to avoid marring the appearance of the mobile home. *Use rubber gloves and avoid bodily contact with the mobile home during this operation.*

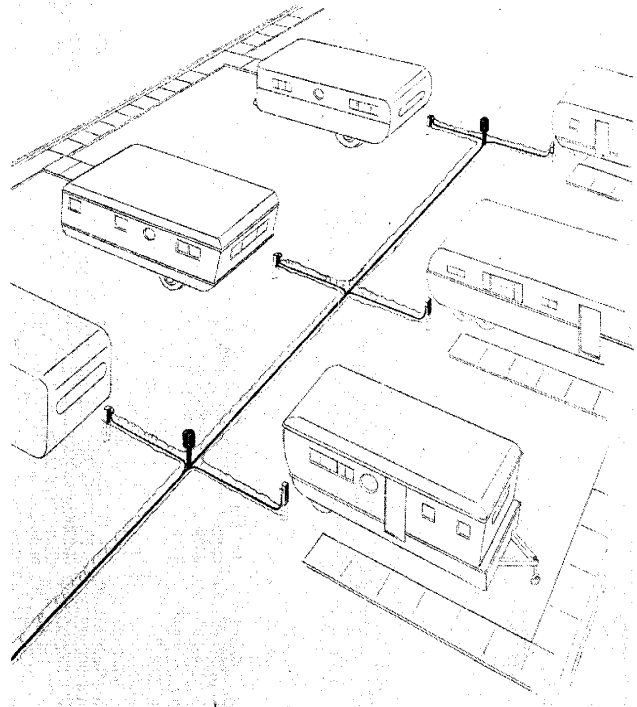
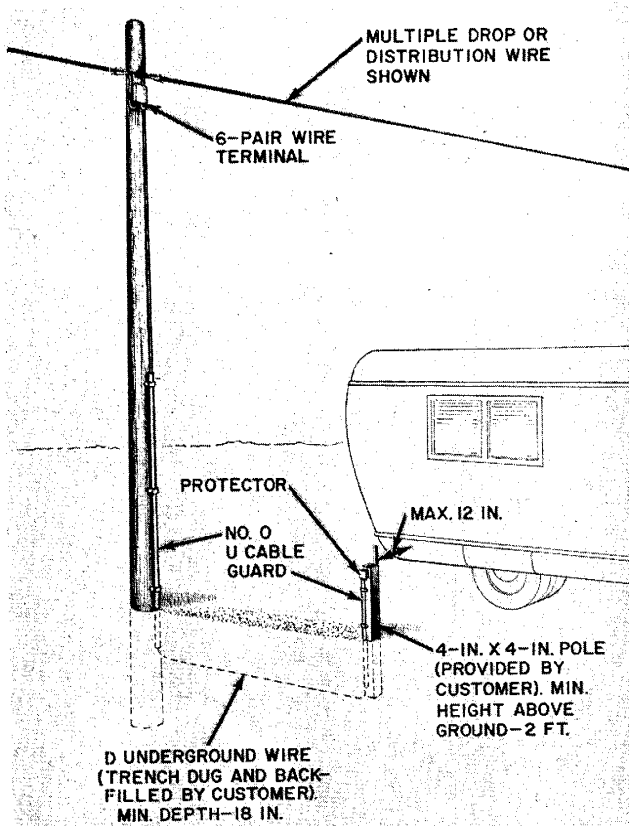
**THINK** If the B Voltage Tester indicates that any part of the mobile home is energized, do not proceed until the condition is corrected and the supervisor is informed. (See 1.06.)

### 3. INSTALLING SERVICE DROPS

**3.01** The distribution plant serving a trailer park may be any of the following types, depending on the number of lines required:

- Drop wire—multiple or single
- Distribution wire
- Aerial cable
- Buried cable.

Service to an individual trailer may be either an aerial drop wire or a buried wire. Typical service connections to trailers are shown in Fig. 1 and 2.

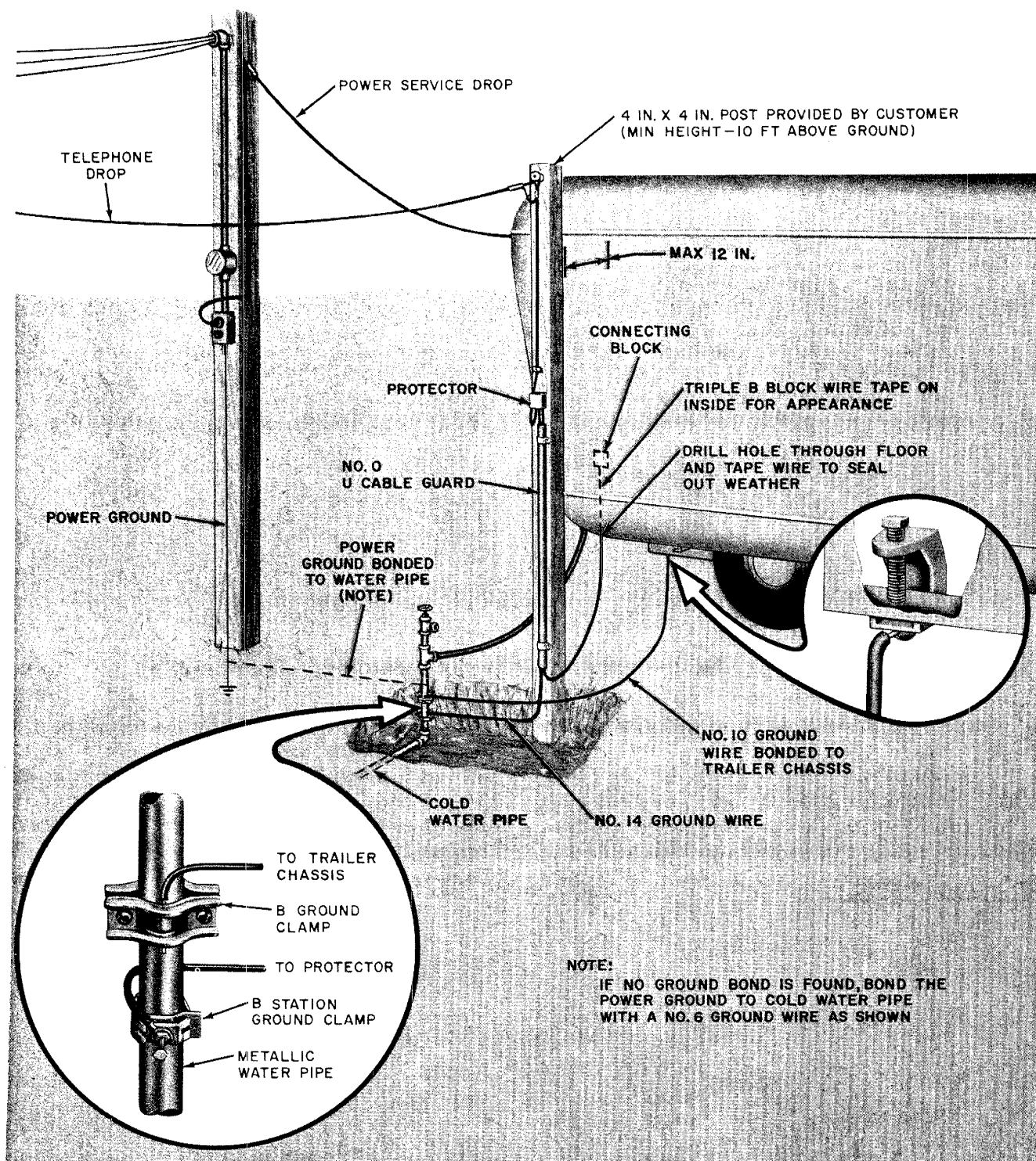


**Fig. 2—Typical Buried Service Connections**

#### **4. INSTALLING STATION WIRE AND CABLE**

**4.01** Installations generally vary, depending on the type of facilities provided by the customer. Typical grounding arrangements are shown in Fig. 3 and 4.

**4.02** The protector should be located as near as possible to the mobile home on a private post or mounted on the outside surface of the mobile home. When mounting protector on the outside surface, use 79-type or other suitable backboard. This backboard may also be used for the drop or block wire attachment.



**Fig. 3—Grounding Methods—Aerial Distribution**

## NOTE:

IF NO GROUND BOND IS FOUND, BOND THE POWER CONDUIT TO COLD WATER PIPE WITH A NO. 6 GROUND WIRE AS SHOWN

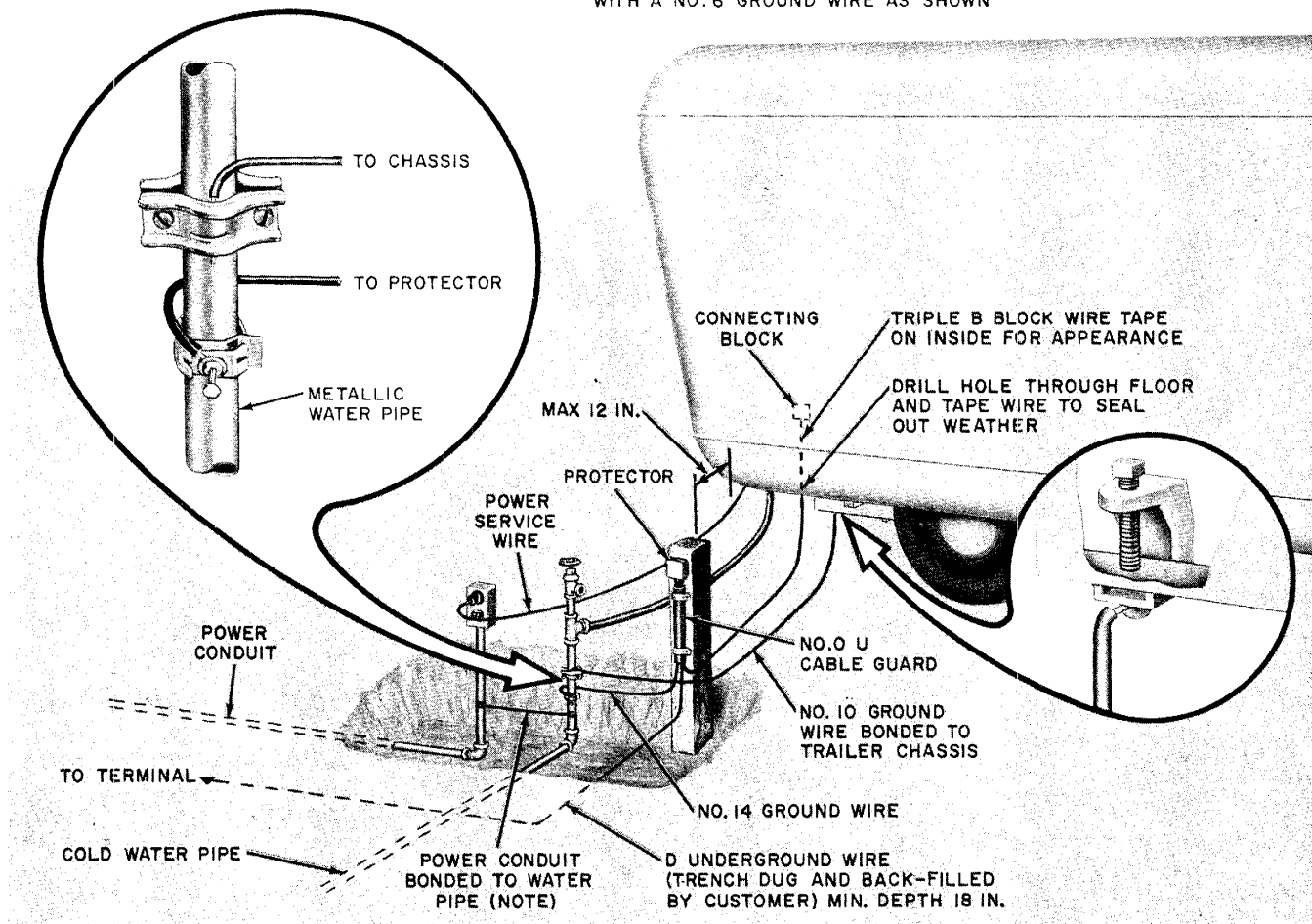


Fig. 4—Grounding Methods—Buried Distribution

### Grounding

**4.03** Refer to Section 460-100-201 for selection and installation of protector grounds and wiring of protector. For a mobile home the best ground is the power ground system. Using a #14 ground wire, connect the protector to the power ground rod, ground wire, power service conduit, or a water pipe serving as a power ground. A typical installation of this type is shown in Fig. 3 and 4. If the power ground is not present or available, ground the protector to a driven ground

rod or a metallic water pipe of which at least 10 feet is buried as shown in Fig. 5 and 6. *It is particularly important to have the power and telephone grounds bonded together. If for any reason separate ground rods are used, bond them together.*

### Bonding Mobile Home

**Caution:** The mobile home chassis must be bonded directly to the telephone protector or to the station ground.

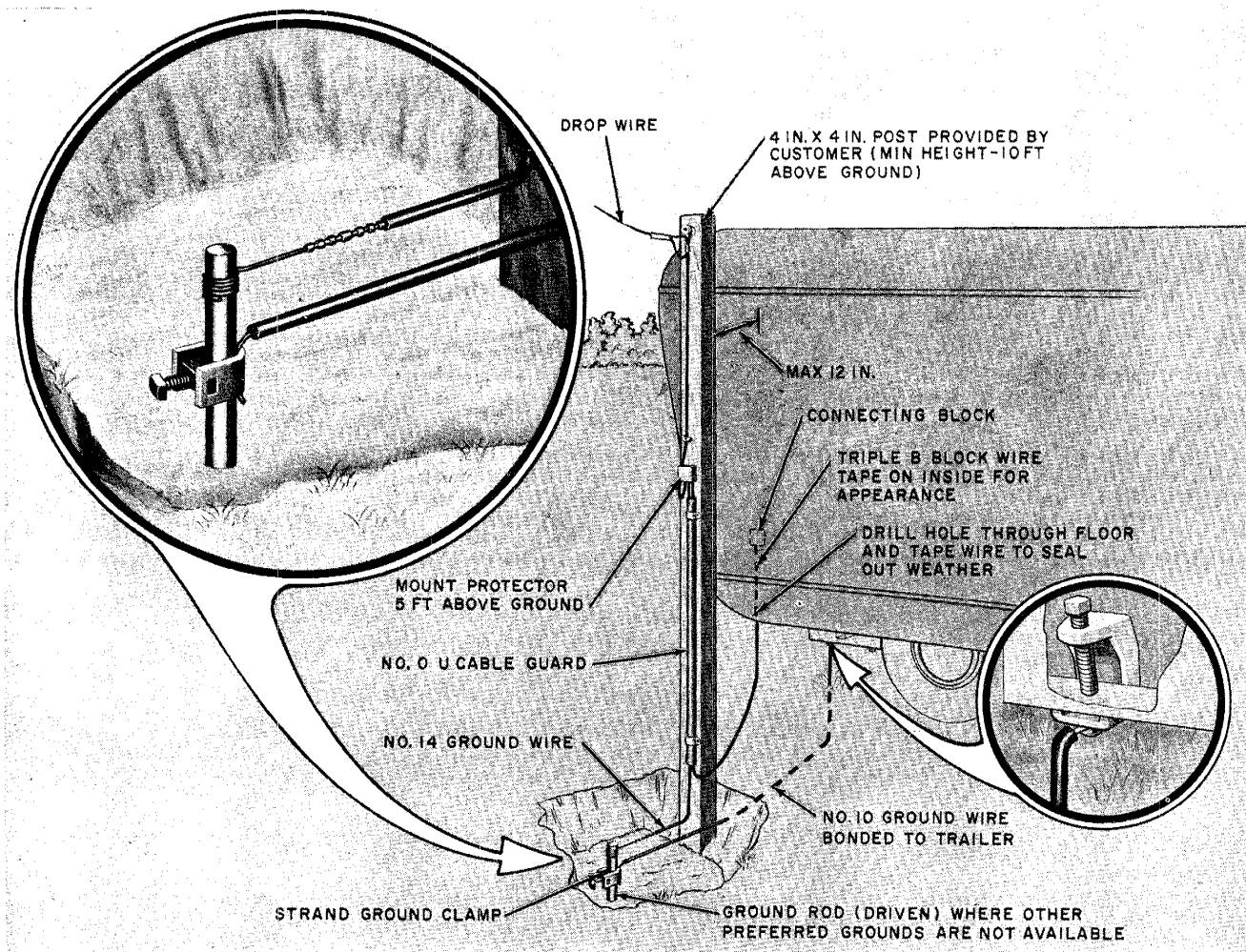


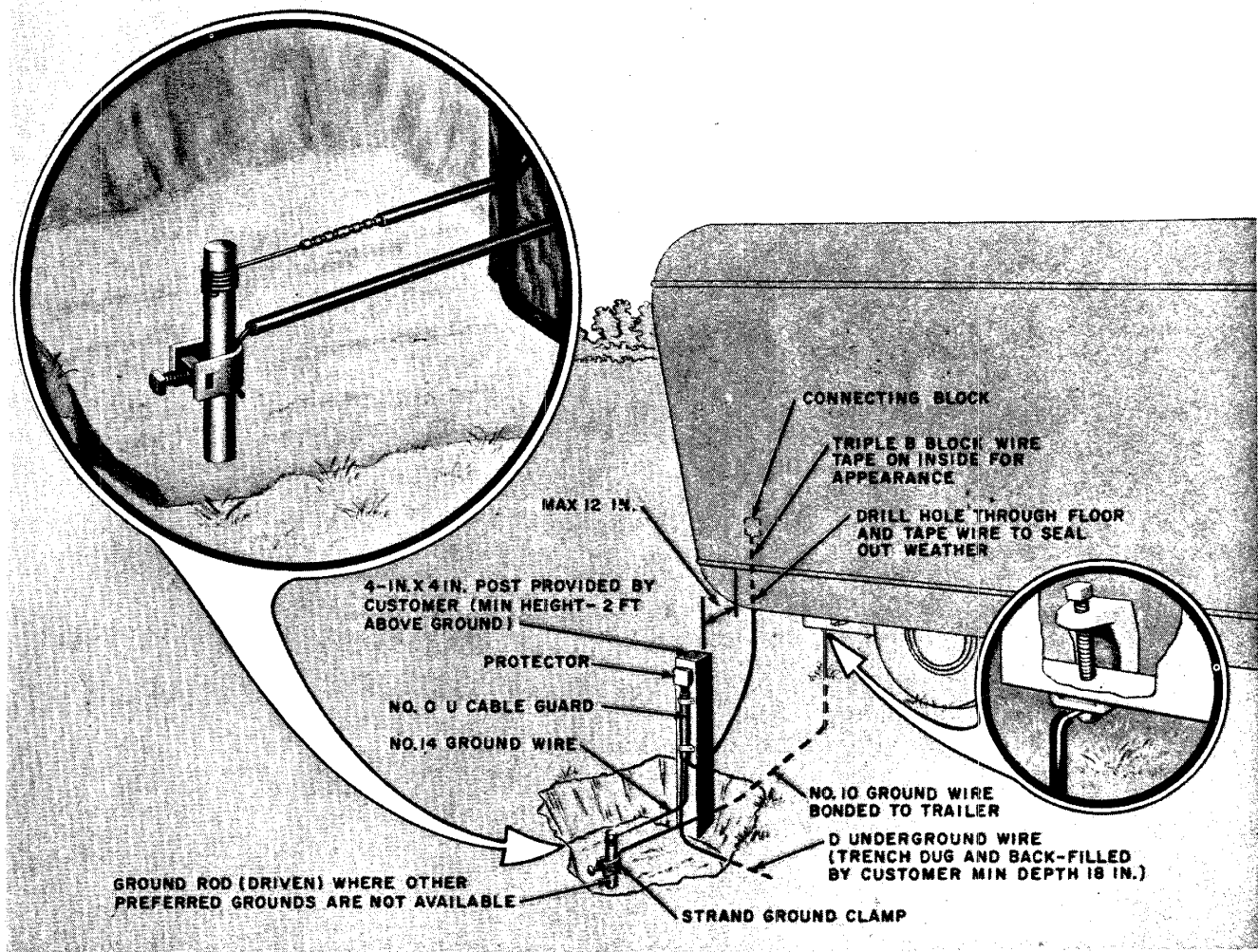
Fig. 5—Grounding—Drop Wire Distribution

**4.04** Use a suitable size B, C, or D Insulator Support to bond the mobile home chassis to the protector ground terminal or station ground. Attach the insulator support to a flange on the structural member of the mobile home chassis (Fig. 3 through 6). Attach the #10 ground wire to the insulator support with a 3/4-inch 10-24 round-head machine screw, zinc- or cadmium-plated, and a suitable size zinc- or cadmium-plated flat washer. The ground wire should be installed in a manner to provide the best possible mechanical protection.

**4.05** Bonding should be completed before any installation work is started.

#### Wiring

**4.06** The inside wiring and cabling of mobile homes should be on the same basis as for permanent structures. In some cases, short lengths of conduit for telephone wiring are provided between the bottom of the mobile home and outlet locations. Where such facilities are not provided, entrance holes should generally be drilled in the floor, the wire pulled through, taped to seal out weather, and terminated on a connecting block on the inside wall. On mobile homes that are moved often and require telephone service, it may be desirable to place permanent wiring inside to a protector mounted on the outside.



**Fig. 6—Grounding—Buried Wire Distribution**

**4.07** Use wood guard or conduit from post to mobile home to protect drop or block wire

from damage when the post cannot be placed 12 inches or less from the mobile home.