

**Δ (3) In Buildings or Structures Without Intersystem Bonding Termination or Grounding Means.** If the building or structure served has no intersystem bonding termination or grounding means, as described in 770.100(B)(2), the grounding electrode conductor shall be connected to either of the following:

- (1) To any one of the individual grounding electrodes described in 250.52(A)(1), (A)(2), (A)(3), or (A)(4).
- (2) If the building or structure served has no grounding means, as described in 770.100(B)(2) or (B)(3)(1), to any one of the individual grounding electrodes described in 250.52(A)(7) and (A)(8) or to a ground rod or pipe not less than 1.5 m (5 ft) in length and 12.7 mm (½ in.) in diameter, driven, where practicable, into permanently damp earth and separated from lightning protection system conductors as covered in 800.53 and at least 1.8 m (6 ft) from electrodes of other systems. Steam, hot water pipes, or lightning protection system conductors shall not be employed as electrodes for non-current-carrying metallic members.

**(C) Electrode Connection.** Connections to grounding electrodes shall comply with 250.70.

**(D) Bonding of Electrodes.** A bonding jumper not smaller than 6 AWG copper or equivalent shall be connected between the grounding electrode and power grounding electrode system at the building or structure served where separate electrodes are used.

*Exception: At mobile homes as covered in 770.106.*

Informational Note No. 1: See 250.60 for connection to a lightning protection system.

Informational Note No. 2: Bonding together of all separate electrodes limits potential differences between them and between their associated wiring systems.

### **770.106 Grounding and Bonding of Entrance Cables at Mobile Homes.**

**Δ (A) Grounding.** Grounding shall comply with 770.106(A)(1) and (A)(2).

**N (1) Installations Without Mobile Home Service Equipment.** If there is no mobile home service equipment located within 9.0 m (30 ft) of the exterior wall of the mobile home it serves, the non-current-carrying metallic members of optical fiber cables entering the mobile home shall be grounded in accordance with 770.100(B)(3).

**N (2) Installations Without Mobile Home Disconnecting Means.** If there is no mobile home disconnecting means grounded in accordance with 250.32 and located within 9.0 m (30 ft) of the exterior wall of the mobile home it serves, the non-current-carrying metallic members of optical fiber cables entering the mobile home shall be grounded in accordance with 770.100(B)(3).

**(B) Bonding.** The grounding electrode shall be bonded to the metal frame or available grounding terminal of the mobile home with a copper conductor or other equivalent corrosion-resistant material not smaller than 12 AWG under either of the following conditions:

- (1) If there is no mobile home service equipment or disconnecting means as in 770.106(A)
- (2) If the mobile home is supplied by cord and plug

### **Part V. Installation Methods Within Buildings**

#### **770.110 Raceways, Cable Routing Assemblies, and Cable Trays for Optical Fiber Cables.**

**(A) Types of Raceways.** Optical fiber cables shall be permitted to be installed in any raceway that complies with either 770.110(A)(1) or (A)(2).

**(1) Raceways Recognized in Chapter 3.** Optical fiber cables shall be permitted to be installed in any raceway included in Chapter 3. The raceways shall be installed in accordance with Chapter 3.

**(2) Communications Raceways.** Optical fiber cables shall be permitted to be installed in listed communications raceways selected in accordance with Table 800.154(b).

**(B) Raceway Fill for Optical Fiber Cables.** Raceway fill for optical fiber cables shall comply with either 770.110(B)(1) or (B)(2).

**(1) Without Electric Light or Power Conductors.** Where optical fiber cables are installed in raceway without electric light or power conductors, the raceway fill requirements of Chapters 3 and 9 shall not apply.

**(2) Nonconductive Optical Fiber Cables with Electric Light or Power Conductors.** Where nonconductive optical fiber cables are installed with electric light or power conductors in a raceway, the raceway fill requirements of Chapters 3 and 9 shall apply.

**(C) Cable Routing Assemblies.** Optical fiber cables shall be permitted to be installed in listed cable routing assemblies selected in accordance with Table 800.154(c).

**(D) Cable Trays.** Optical fiber cables shall be permitted to be installed in metal or listed nonmetallic cable tray systems.

**N 770.111 Innerduct for Optical Fiber Cables.** Listed plenum communications raceways, listed riser communications raceways, and listed general-purpose communications raceways selected in accordance with Table 800.154(b) shall be permitted to be installed as innerduct in any type of listed raceway permitted in Chapter 3.

**770.113 Installation of Optical Fiber Cables.** Installation of optical fiber cables shall comply with 770.113(A) through