N **(B) Other Applications.** Communications wires and cables and CATV-type coaxial cables shall be separated at least 50 mm (2 in.) from conductors of any electric light, power, Class 1, non-power-limited fire alarm, or medium-power network-powered broadband communications circuits.

Exception No. 1: Separation shall not be required where either (1) all of the conductors of electric light, power, Class 1, non-power-limited fire alarm, and medium-power network-powered broadband communications circuits are in a raceway or in metal-sheathed, metal-clad, nonmetallic-sheathed, Type AC or Type UF cables, or (2) all of the communications wires and cables and all of the CATV-type coaxial cables are encased in raceway.

Exception No. 2: Separation shall not be required where the communications wires and cables and CATV-type coaxial cables are permanently separated from the conductors of electric light, power, Class 1, non-power-limited fire alarm, and medium-power network-powered broadband communications circuits by a continuous and firmly fixed nonconductor, such as porcelain tubes or flexible tubing, in addition to the insulation on the wire.

N **(C) Support of Communications Wires and Cables and CATV-Type Coaxial Cables.** Raceways shall be used for their intended purpose. Communications wires and cables and CATV-type coaxial cables shall not be strapped, taped, or attached by any means to the exterior of any raceway as a means of support.

Exception: Overhead (aerial) spans of communications drop wires, communications cables, and CATV-type coaxial cables shall be permitted to be attached to the exterior of a raceway-type mast intended for the attachment and support of such wires and cables.

In some instances, the only way to achieve the proper clearance above roadways, driveways, or structures is by use of a mast. The exception permits overhead spans of communications cable to be attached to the exterior of a raceway-type mast only if the mast is installed to support communications cable. The attachment of communications cable to a service mast or to a feeder and/or branch-circuit mast is prohibited by 230.28 and 225.17, respectively.

800.154 Applications of Listed Communications Wires, Cables, and Raceways, and Listed Cable Routing Assemblies. Permitted and nonpermitted applications of listed communications wires, cables, coaxial cables, network-powered broadband communications system cables and raceways, and listed cable routing assemblies, shall be in accordance with one of the following:

(1) Listed communications wires and cables as indicated in Table 800.154(a)
(2) Listed communications raceways as indicated in Table 800.154(b)
(3) Listed cable routing assemblies as indicated in Table 800.154(c)

The permitted applications shall be subject to the installation requirements of 800.110 and 800.113.

Communications system wires, cables, raceways, and routing assemblies generally are required to be listed where installed within a building. Unlisted cables are permitted to enter the building, but their length is limited. The length of unlisted cable permitted in a building depends on how and where it is terminated.

Exhibit 800.2 illustrates applications of listed communications cables.

See also

800.48 for unlisted outside plant communications cables entering buildings

805.90(B) for location of the primary protector

Part V. Listing Requirements

N **800.170 Plenum Cable Ties.** Cable ties intended for use in other space used for environmental air (plenums) shall be listed as having low smoke and heat release properties.

Informational Note: See NFPA 90A-2018, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, and ANSI/UL 2043-2013, *Standard for Safety Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces*, for information on listing discrete products as having low smoke and heat release properties.

N **800.171 Communications Equipment.** Communications equipment shall be listed as being suitable for electrical connection to a communications network.

Informational Note No. 1: See ANSI/UL 60950-1-2014, *Standard for Safety of Information Technology Equipment*, ANSI/UL 1863-2012, *Standard for Safety Communications Circuit Accessories*, or ANSI/UL 62368-1-2014 or ANSI/UL 62368-1-2018, *Audio/Video, Information and Communication Technology Equipment — Part 1: Safety Requirements*.

Informational Note No. 2: See ANSI/ATIS 0600337-2016, *Requirements for Maximum Voltage, Current, and Power Levels Used in Communications Circuits*, for additional information regarding voltages, currents, and power allowed on communications circuits.

UL 1863, *Standard for Communications Circuit Accessories*, and UL 60950, *Standard for Safety of Information Technology Equipment — Safety — Part 1: General Requirements*, are two safety standards that contain requirements for determining whether equipment connected to a telecommunications network is suitable for the intended purpose. Listed equipment that is connected to the telecommunications network and evaluated according to other U.S. safety standards is also subject to telecommunications requirements appropriate for the equipment. Examples include information technology equipment, audio-video equipment, and signaling equipment connected to a central station. The appropriate requirements contained within the applicable safety standard are extracted from UL 1863, UL 60950, or both.