

Xfinity Communities

Fiber-To-The-Building Specifications & Requirements

Wiring Specifications

Coaxial Cable

All coaxial cable within the property, including the drop cables from the unit to the common distribution room, shall meet or exceed the following requirements:

- RG-6 Tri-Shield for drop lengths up to 150'.
- RG-11 Tri-Shield for drop lengths between 151' and 250'.
- Drop lengths should not exceed 250'. Each unit will have its own coaxial cable drop from the nearest intermediate/main distribution frame terminal/cabinet to the unit with no additional splices/splitters between the unit and the intermediate/main distribution frame coaxial terminal/cabinet.
- All coaxial cables used for RF signal distribution shall meet the minimum physical and electrical requirements of ANSI/SCTE 74 2003, Specification for Braided 75 ohm Flexible RF Coaxial Drop Cable, and must be approved by Comcast Project Coordinator (CPC). Cables used for RF signal distribution in all new installations must be a minimum size of Series 6 with a minimum foil-braid-foil, Tri-Shield configuration that includes a bonded inner foil tape, outer foil tape bonded to the jacket and at least 77% braid coverage.
- Alternative coaxial cable or connectorization needed for coaxial shielding termination requires CPC approval prior to installation.

Internal Unit Wiring

- Each unit will have multimedia jack plates with 1 coaxial cable and 1-2 CAT5e/6/6e/6a subscriber interfaces. Leave 18"-24" coaxial and CAT5x/6x slack behind plate. Wiring must adhere to TIA-570B wiring/labeling standards.
- Media panels, where required, must be placed in a central/accessible location in unit. Enclosure material composition must accommodate wireless access when housing network/customer equipment, and is needed for subscribed wireless services. Each multimedia jack outlet in the unit must be wired to the panel enclosure.

The media panel must have the following:

- Recessed minimum 14.35"w x 30"-48"h vs. mounted panel 24"w x 36"h, heated per ambient temperature not to fall below 32° Fahrenheit.
- Sized to terminate 9-16+ media; coaxial, CAT5x/6x and accommodate associated network equipment (power supplies, battery backup systems, UPS, gateways, routers, switches, access points, RF splitters, etc.).

- One non-switched, duplex 15-A receptacle per provider inside recessed panel or within 5' of mounted panel to power network equipment.
- 50% of the usable space within the panel must be available for Comcast's use to ensure that necessary equipment can be fully placed within a unit distribution panel. Such space must be contiguous.
- Media cable must not be pulled through any holes that contain other wiring or plumbing facilities. Mud rings should be used as opposed to closed boxes unless code requirements dictate otherwise. In such instances, an oversized box is required.
- Do not kink, form tight 90° angles, pierce the outer jacket, damage or mishandle the media cable in any way. Use approved media cable fasteners only.
- Under no circumstances should Romex or similar staples be used to secure media cable. Keep media cable at least 6" from electrical wires. Use separate holes to run media cable and electrical wires.
- Wood studs require a nail plate protector. Care should be taken to prevent drywall screws from damaging media cables. Metal studs require plastic bushings.
- Media cables must be run straight vertically and horizontally, not diagonally.
- Wall plates, recommended in every bedroom and one or more in the living room, should be at the same height as the electrical outlets. When possible, the wall plate should be near an electrical outlet, but not in the same bay or on the same stud.
- The CPC must be given at least 10 days' notice to inspect all media cable prior to the installation of wallboard/drywall.

Conduit and Space Requirements

Comcast requires a secure, safe, accessible environment for personnel and network distribution elements.

- The minimum depth of distribution rooms should be 4' to accommodate unobstructed operations and routine maintenance, as well as opening and closing of panel doors. Unless otherwise indicated by the CPC, the distribution room must have a minimum of a 4' x 8' plywood backing installed for Comcast's use for network equipment. Plywood backing requirements may vary due to property size, scope of network equipment, dimensions, etc.
- Conduits should typically be 2"-4" in diameter, depending on the design. Contact the CPC for the sizing recommendation. Sweeps: 36", 90°. Drop conduit sized for cable media, typically 2" EMT or PVC to wall box or media panels.
- Conduit shall not be installed in exterior areas where cables could be damaged, such as a parking garage. No more than two sweeps on any single run. Conduit must have pull lines installed and be capped at either end. Conduit runs that exceed 250' inside a building will require a 24" x 24" pull box.
- One 4" diameter sleeve is required between vertical risers, floor to floor. If the rise is more than one floor, conduit may be required. Contact your CPC for sleeve recommendation based on design plan. Sleeves need to be 6"l x 10"w with curb of 1"h or conduit of 4"d with a curb of 1"-3"h. All coaxial rise media shall be installed and aggregated inside riser/pathway or duct through floor.

- One 4" schedule 40 conduit shall be installed from building terminal to the property line at a minimum depth of 24" for Comcast's use for all underground installations. Sweeps: 36", 90°. The conduit location will be provided by the CPC. Duct banks in roadways or driveways require concrete encasement.
- Intermediate distribution frame coaxial terminals (lockboxes) may be distributed throughout floors to avoid multiple bundles to main distribution frame cabinet/splitter terminal. The quantity and placement will be dependent upon duct/riser access, units served, etc.
- Main Distribution Frame provides interface between outside plant and internal distribution network and consists of management hardware and active network electronics. Main/Intermediate Distribution Frame may be located within building interior, exterior pedestal or utility shed. Power/ventilation may be required. Depending upon unit number, location and site conditions, CPC will specify installation guidance associated with backup power solutions, natural gas, liquid propane or DC battery. Hybrid Fiber Coaxial Node shall be installed at closest location alongside building in outside plant or inside building requiring backup power options.
- A property site plan must be submitted to the CPC with a minimum of 30 days' advanced notice prior to the commencement of trench back filling, showing trench/utility routing and associated box housing locations and distance between them.
- All equipment and installation must comply with federal, state, local fire and safety codes (OSHA, NEC, GO95, NESC, ANSI/TIA, etc.).
- All physical-layer coaxial designs must comply with Comcast Corporate Engineering approved/certified design. Owner/builder is required to work with Comcast construction, engineering and account team, along with CPC and other Comcast resources throughout the build. Workflow milestones for FTTB must comply with mutually agreed to timelines.

The **CPC** must be contacted immediately in the event that any of the minimum requirements in this document will not be met for any reason.

Find out more about the Advanced Communities Network and other ways Xfinity Communities can help make your property stand out.

Visit xfinity.com/xfinitycommunities.



Advanced specifications adopted/approved by Comcast may subsequently supersede those stated above. Content subject to change without notice. Please consult with local Comcast construction, engineering, and account teams for latest guidance. Version 110115 FLY202152