

**TITLE 8.  
CITY PROPERTY.**

**CHAPTER 8-400. CONSTRUCTION  
AND DEVELOPMENT STANDARDS FOR  
COMMUNICATION SERVICES**

**Part 8-410. Communication Service.**

**8-411. General.**

(1) Standards and Specifications. These specifications cover the installation of the communication system being installed to provide a wide range of communication services to include high speed internet service, cable television, and metering reading for electric, water, and pressurized irrigation meters, etc.

(2) Construction Costs. As a condition of receiving a permit for any development activity within the City, the developer shall be required to provide underground conduit for communication services for the development. For the purpose of this Chapter, development activity shall include any construction or expansion of a building, structure, or use, any change in use of a building or structure, or any changes in the use of land that creates additional demand and need for public facilities. Upon acceptance of the improvements by the City, the improvements shall be deemed to be dedicated to the City to accommodate the provision of communication services. All costs of the underground conduit shall be the responsibility of the developer.

(3) Attaching to Existing City Facilities Prohibited. No person or entity, shall install wiring or attachments on poles or other equipment of City unless specifically authorized, in writing, by the City.

(4) Permits and Inspections. Service will not be established until all necessary permits have been obtained and not until wiring installation has been inspected and approved by the City. The City reserves the right to inspect wiring and to refuse service to any installation that is, in the opinion of the City, unsafe, or if the operation of same may be detrimental to the service furnished others or the City.

(5) Access to Premises. Any properly identified representative of the City shall, at all reasonable hours, have free access to and from the premises of any person or entity applying for, or receiving service, for the purpose of inspecting access portals (AP) and cable installations for the purpose of repairing, testing, or removing the AP or other property relating to the operation of the communication system.

**8-402. Materials**

(1) Conduit. All conduits shall be communication grade conduit. Conduit shall be SDR 11 HDPE pipe or equivalent, meeting ASTM-3035 specifications unless otherwise specified by the City. "FIBER" shall be permanently marked on all conduits at a minimum three foot (3') interval. At no time shall the pipe be deformed to make any bend. The minimum radius for any bend or sweep in the conduit shall be thirty-six inches (36"). The total number of bends in any conduit run shall not exceed three hundred sixty degrees (360°).

(2) Enclosures. All enclosures shall be level and set according to utilities construction standards. If ground sleeves or pads setter, Developer shall be required to re-level to the above specifications.

**8-403. Installation**

(1) General. A licensed contractor shall construct all communication facilities in a development except for the following which shall be completed by the Utility:

- (a) Pulling underground or overhead cable;
- (b) Installing communication cable terminations;
- (c) Setting of large communications pedestals which house Nodes, and Fiber Optic Equipment;
- (d) Installing communication connections and terminations.
- (e) All overhead facilities, including extension of risers.

(2) Underground Lines. All new facilities shall be constructed underground unless otherwise expressly authorized by the City. No overhead communication lines will be allowed unless required by the Utility and authorized by the City.

(3) Depth. Conduit depth shall be a minimum of eighteen inches (18") to top of pipe. When installed with electric conduit it shall be installed twelve inches (12") above electric conduit.

(4) Tracer Wire and Pull Strings. A twelve (12) gauge solid THHN tracer wire shall be installed with all stubbed conduits according to standard drawings. Wire shall be pulled tight along the pipe. All fiber and main communication conduits shall have a pull string in the conduit securely tied of in each pad or enclosure.

(5) Caution Tape and Stub Markers. All conduits shall have a yellow "Caution - Fiber Optic or Communication Cable" tape at least four inches (4") wide, one foot below grade. The end of each stubbed conduit, including service laterals, shall be marked to the surface according to the standard drawings.

(6) Labels. An imprinted, plastic label shall be securely taped to the end of each conduit run. The label shall indicate whether the conduit run is fiber. The label shall also include the address of where the run ends.

**8-404. Inspection - Communication.**

(1) Conduit Inspection. The City must inspect all conduit before the trench is backfilled.

(2) Service Stub Inspection. The City must inspect all service stubs before backfilling.

(3) Final Communication Inspection. Once all communication work for a development is completed to City standards a final communication inspection must be done by the City.

**8-405. Service.**

(1) Point of Service. The City determines the point of service delivery for all development activity. The City will decide if multiple buildings, business and residential, or portions of building will be serviced using single of (MDU) multiple distribution unit enclosures.

(2) Underground Service Requirements. For new development activity, the developer shall install all conduit lateral from the public right-of-way to the building, structure, or used to be serviced. For new service to an existing building, structure, or use, the lateral conduit and any required appurtenances thereto, shall be installed by the person or entity requesting that service. The conduit and required appurtenances thereto, shall be installed according to the City standards.

**8-406. Inside Wiring Recommendations.**

(1) General. The following information provides wiring detail adequate to facilitate communication services inside the home.

(2) Coax wire and fittings. The following are required specifications for a home communication panel. Any exceptions or substitutions in material may only be allowed by written permission of the City.

- (a) Coax Wire. Only use RG-6 coax cable.
- (b) Center Conductor. Center conductor should be copper covered steel center.
- (c) Dielectric Insulation. Dielectric insulation should be flame retardant polyethylene with a low dissipation factor of 0.00015, a low dielectric constant of 2.3, and foam velocity pf propagation greater than eighty percent (80%) and manufactured using micro cell technology for greater strength, to resist deformation, and to prevent moisture ingress.
- (d) Shielding. Shielding should consist of a foil layer which is to be bonded to the insulation with a wire shielding of sixty percent (60%) braid coverage on the outside of the foil shielding. The material for both the braid, and the foil should be all aluminum.
- (e) Non-Plenum Jacket. Non-plenum

jacket should be PVC material, and rated for general indoor use, and must meet NEC article 820 for flame 5. retardant protection.

(f) Crimp Fittings. Crimp fittings should incorporate a three hundred sixty degree (360°) compression type crimp.

(g) Splitters. Splitters should be 5-900 MHz or broader.

(3) Category 5E Wire and Fittings. The following are recommended specifications for a home communication panel.

(a) Category-5 Wire. Only use CAT-5E wire.

(b) Bends. Avoid sharp bends in the CAT-5E wire. Maintain a minimum radius of twelve inches (12").

(c) Proximity to Electrical Wiring. CAT-5E wiring shall maintain separation from power conduits and electrical wiring, preferably twelve inches (12"). CAT-5E wiring may cross electrical conductors but shall maintain twelve inches (12") separation when running in parallel.

(4) Home Communications Panel. The following are required specifications for a home communication panel. Any exceptions or substitutions in materials may only be allowed by written permission of the City.

(a) Mounting. The minimum necessary for a communications center would be a simple 2' X 2' piece of half inch (½") plywood securely attached to the wall in the basement, although manufactured panels are preferred. The panel must be located in a finished closet, under the stairs, or in another visible area. A nineteen inch (19") deep shelf should also be installed close to the communication panel to support network hubs or other electronic devices.

(b) Location. The location of the communication center should be readily accessible: either in the furnace or utility room, or under the stairs, in a closet, or other similar area. Access to this panel will be required in order to reset the cable modem, network hob, or pre-amp for cable TV where applicable.

(c) Electrical Outlet. A standard electrical outlet must be placed adjacent to the communications center to power the cable modem, network hub, or pre-amp when multiple computers, or televisions are used.

(d) Wiring RG-6. An RG-6 wire should be run from the panel to each cable television outlet. An RG-6 wire should also be run from the exterior of the house, to the panel.

(e) Wiring CAT-5E. A CAT-5E cable should be run from the panel to each RJ-45

network access outlet (one each for computer and one each for TV). Note: If a computer and TV are to be used in the same room, two outlets per room will be required.

(f) Fiber Optic Cable. Fiber optic cable may be substituted as desired for the CAT-5E cable. Bends shall maintain a radius of twelve inches (12").

(g) Telephony. Telephony wiring shall also be CAT-5E and run out of the panel as well.

**8-407. Utility Improvements - Communication.**

(1) General. It shall be the responsibility of the Developer to connect to existing utilities or improvements wherever they are located and extend those improvements to and throughout the development. Workmanship and details of construction shall be in accordance with the City Construction and Development Standards and/or other requirements adopted by the city.

**8-408. Severability.** If any section, subsection, sentence, clause or phrase of this Ordinance is declared invalid or unconstitutional by a court of competent jurisdiction, said portion shall be severed and such declaration shall not affect the validity of the remainder of this Ordinance.

**8-409. Effective Date.** This Ordinance being necessary for the peace, health and safety of the City, shall become effective immediately upon posting.