



TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER

Operating Policy and Procedure

HSC OP: 61.22, **Installation of Cabling in TTUHSC Facilities**

PURPOSE: The purpose of this Health Sciences Center Operating Policy and Procedure (HSC OP) is to establish a standard procedure for the approval and installation of cable in TTUHSC buildings to control the quality of such work.

REVIEW: This HSC OP will be reviewed on August 1 of each odd-numbered year (ONY) by the Directors of Facilities Operations Abilene, Amarillo Dallas Lubbock and Midland/Odessa, with recommendations for revisions forwarded to the Vice President of Facilities and Safety Services (VPFSS) by September 15.

POLICY/PROCEDURE:

1. **Definitions.** For the purpose of this HSC OP, cabling is defined as conductor(s) serving any communications, telephone, fiber optic, security alarm, energy monitoring system, data acquisitions, television circuits, two-way radios, department/school network computer or electrical system.
2. **Control.** The Vice President of Facilities and Safety Services (VPFSS) is responsible for policy regarding cable that is installed in all TTUHSC Campuses or facilities. Requests for the installation of all cabling in any TTUHSC facility shall be approved by the VPFSS or designee. Approval will be based on the user's certification that cable is required, proper funding is available, and the procedures adhere to codes and installation standards of cabling for plenums, equipment rooms and building interiors.
3. **Authorization.** An electronic request shall be submitted via the Facilities and Safety Tab on the WebRaider portal or on the following link <https://app4.ttuhsc.edu/FacilitiesApps/Login.aspx> identifying the campus, building, room number(s), type of system being served, the location and type of equipment, the number and type of cable to be installed, termination locations, the contact person, the system used to identify the cable, the installation method and the schedule under which the cable is to be installed. Once submitted, the requests will be routed to the appropriate Facilities and Safety Services office in Lubbock, , Abilene, Amarillo, Dallas Midland or Odessa. Please see Section 7 of this HSC OP for additional details.
4. **Coordination.** Facilities and Safety Services will coordinate cabling and associated equipment related to IT systems with the Information Technology Department.
5. **Notification.** In the event an outside vendor is to install the cabling, Facilities Operations of the respective campus shall be notified by the Purchasing Office and/or Information Technology as to the name of the vendor, the date of the Notice to Proceed, and the proposed completion date and notify when complete so that inspection for proper installation can be conducted if necessary; and to ensure there is no damage to building, including but not limited to ceiling tiles, ceiling grid, walls or floor finishes.
6. **Inspection.** Facilities Operations will be compensated by project to inspect the cable installation if an outside vendor completed the work to ensure that:
 - a. All cable and related items are properly installed and identified in accordance with the installation standards in Section 8;
 - b. All debris (excess cables, empty spools, boxes and any other materials) is removed from the job site upon completion of the work; and

- c. All ceiling tiles, including ceiling grid are returned to their original places and ensure tiles and grid have incurred no damage. All damage to building, including but not limited to ceiling tiles, ceiling grid, walls or floor finishes must be replaced or returned to its original state matching existing tiles, paint colors or finishes within 30 days at the vendor's expense.
7. **Liability.** Should Facilities Operations determine that cables have been installed by improper installation procedures or that the installation has damaged finishes, including but not limited to damaged ceiling tiles, the user/department will be notified of the deficiencies requiring corrections. If the department fails to correct the deficiencies within an appropriate time frame (typically 30 days unless other arrangements have been agreed to by Facilities Operations), the deficiency will be corrected at the user/department's expense by Facilities Operations. Facilities Operations has final determination if damage was caused during installation of cabling.
8. **Standards.** All cabling shall be installed in a consistent manner in accordance with the following guidelines:
- a. All non-plenum rated cable will be run in conduit from termination-to-termination points. All plenum cable shall be rated and code approved for the conducted service.
 - b. Plenum rated cabling run in the interstitial above dropped ceilings does not need to be run in conduit for data runs, but shall be installed and supported as close as possible to the floor pan above. Telephone runs shall be installed in conduit/raceway or other approved method. Approved method shall be determined by Facilities and Safety Services and in accordance with TTUHSC's IT Communications Systems Cable and Fiber Installation specifications. Cable shall not lie on the ceiling grid. It will be run at right angles, north/south, east/west with drops into rooms being perpendicular to main cable bundles.
 - c. During the construction of a new wall assembly or significant intrusion in a wall during a remodel, conduit will be required to be installed for plenum or non-plenum rated cabling of any type within the wall cavity. The conduit shall extend six inches above the top plate of the wall exiting the wall through standard wall boxes and wall plate outlets. Bushings shall be installed at top of conduit to prevent damage to cable. Existing walls in which it is feasible to utilize plenum rated cable that will not be undergoing construction or require intrusion where the installation of a Phone or Internet Port or other type of connection point may not require installation of conduit. It will be considered as an alternative during the initial discussion to install the plenum rated cable within the wall cavity, utilizing a low voltage backless box and designated plates at the termination point within the wall.
 - d. On walls constructed of solid concrete or cinder block, cables will be run in concealed conduit, surface wire mold or another FSS approved raceway, determined on a case by case.
 - e. No ceiling tiles will be removed or holes punched out to accommodate cable penetration into a room.
 - f. All cabling will be labeled or tagged to indicate system served and owning department. Matching labels are required on both ends of the cable at every 50 feet on exposed runs or 25 feet on concealed runs, and at every entry/exit point throughout the run. Please refer to TTUHSC's IT Communications Systems Cable and Fiber Installation Specifications.
 - g. Cabling will be bundled neatly and well secured. It will not be secured to other cabling systems. It will not be secured to or draped over duct, piping, piping supports or valves. It will not be wrapped around piping, piping supports or conduit. Supports into concrete must be drilled, not driven in, to prevent cracking and dislodging of cable supports. Please refer to TTUHSC's IT Communications Systems Cable and Fiber Installation Specifications.
 - h. Cabling may be run or secured to a messenger cable system where cable trays are not available, using wall locks and clamps. Cable will not be installed with excessive slack so as to cause a safety hazard to personnel (not to exceed 6 inches) with support at horizontal runs not exceeding 4 feet.

Please refer to TTUHSC's IT Communications Systems Cable and Fiber Installation Specifications.

- i. Cables requiring crimp-on connectors must have those connectors attached with an appropriate and recommended specialized crimping tool. Please refer to TTUHSC's IT Communications Systems Cable and Fiber Installation Specifications.
- j. Specific systems and sites require conduit as a component. Approval to eliminate conduit will be considered electronic Work Request via the Portal review process.
- k. Provide suitable pull string in each empty conduit except sleeves and nipples. Where cable is pulled through an empty conduit, but not filling the conduit to capacity, a pull string should be pulled with the cable to allow for addition of cable to capacity of conduit. Cable or conduit penetrating rated wall assemblies are required to have the penetration sealed with an approved fire stopping material or by use of a designed fire stop sleeve assembly.