

## **PART III – CSU FACILITIES PLANNING, DESIGN AND CONSTRUCTION STANDARDS**

### **DIVISION 27 – COMMUNICATIONS**

---

**Housing and Dining Facilities (HDS) has adopted amendments for all HDS facilities. Confirm applicable standards with Project Representative on a per Project basis. Refer to HDS amendments here – <https://housing.colostate.edu/about/construction/>.**

### **DIVISION 27 – COMMUNICATIONS**

#### **27 00 00 – GENERAL INFORMATION**

A. The Colorado State University (CSU) Office of Telecommunications is responsible for managing the entire telecommunications network. This includes determining suitability of proposed uses, compliance with appropriate codes and standards, periodic removal and/or replacement of network components, and extensions and additions to the network.

1. The Office of Telecommunications shall be consulted, through the Project Representative, during the Project design phase.
  - a. They shall provide design parameters for the Distribution System and for the Systems in individual buildings prior to construction.
2. Telecommunications Standards can be found at the following address: [https://it.colostate.edu/wp-content/uploads/sites/6/2023/02/Networking-and-Telecommunications-Design-Standards\\_01-04-23.pdf](https://it.colostate.edu/wp-content/uploads/sites/6/2023/02/Networking-and-Telecommunications-Design-Standards_01-04-23.pdf)

B. Procedures:

1. Planning:
  - a. Facilities Management (FM) shall provide the Office of Telecommunications with floor plan Drawings for new building construction and/or major remodel Projects.
  - b. Office of Telecommunications personnel shall meet with building occupants, Academic Computing and Networking Services (ACNS), and any other interested parties to determine the communications requirements for specific projects.
  - c. The preliminary plans shall be marked to show service locations and space requirement; then returned to FM for inclusion in the final plans.
  - d. The University shall reserve the right to include any or all portions of the telecommunications work on projects for which bids are being sought.
2. Implementation:
  - a. Contractors performing telecommunications work on University projects shall ensure that all material and equipment meet the requirements of the above listed codes and standards.
  - b. Upon request, by the Project Representative, Contractors shall provide catalog numbers and samples of materials and equipment to be supplied, along with the Manufacturer's name, address, and telephone number.

#### **27 41 00 – AUDIO VIDEO SYSTEMS**

A. Design and construction of Audio and Video Systems shall be coordinated with Classroom Technical Services, a division of CSU ACNS.

B. Classroom Video Display:

1. Locate 110–volt duplex outlet and signal cable outlet at each video display location 90” above floor (or just below ceiling level).
2. Switch all video display outlets in a single room from a common switch convenient to the front of the room, painted red, and labeled Video.

## **PART III – CSU FACILITIES PLANNING, DESIGN AND CONSTRUCTION STANDARDS**

### **DIVISION 27 – COMMUNICATIONS**

---

- a. In lecture rooms, video displays shall be switched from the podium by low voltage relay control.
  3. Use locking wall–mount brackets. Projecting brackets and displays shall be designed so no part is lower than 80” above the finished floor unless projection is less than 4” from the wall.
  4. Provide conduit for signal cable from equipment room to the video display signal outlet.
  5. Coordinate mounting of large, heavy and bulky displays with Classroom Technical Services and FM Planning, Design, Construction and Engineering.
    - a. CRT displays shall be avoided.
- B. Classroom Audio–Visual:**
1. Junction boxes and conduit from the front to the back of the room shall be provided to allow front control of projectors in the back of the room.
  2. Lecture rooms shall have a control room, which shall also allow sound, light, and video control from a podium.
  3. Classrooms shall have a mechanical or motorized projection screen at the aspect ratio of 16:10 for a wide image data projector.
    - a. Bottom of screen shall be 4’–0” above floor when screen is extended.
  4. Classrooms that incorporate a front projection data projector and have ceiling heights greater than 12’–0” shall include a motorized projector maintenance lift.
  5. Classrooms with multiple banks of lights require the lighting controls near the projection screen.
    - a. Large lecture halls shall have a low voltage Controllable Lighting System that can be controlled by the Smart Room Touch Panel at the Lectern.
  6. Classrooms where large flat panel monitors are to be installed, a recessed junction box providing power and signal conduit shall be provided.
    - a. Additional support structure/backing shall also be provided for monitors in excess of 65 lbs.
  7. Electrical outlets shall be provided in the ceiling of classrooms for computer projectors as needed.
  8. In classrooms designed “Smart Rooms” at least one, in some cases two, 1” conduits shall be provided from the classroom floor where the podium shall be placed to the ceiling access or outside room access. This shall provide paths for projector source and control wiring, audio wiring, lighting control wiring, rear projection control wiring, and network wiring.
  9. In classrooms designed “Smart Rooms” at least two fourplex outlets providing 120–volt power shall be located in the floor where the lecture podium is to be placed.
    - a. This may be a junction box that shall allow flex conduit and duplexes to be placed inside the podium once it is in place.
- C. Projection Rooms:**
1. Lighting in projection rooms shall be on a dimmer switch.

**END OF DIVISION**