Design Guidelines for Facilities Construction:

DESIGN GUIDELINE   DG17-5   Access / Outlet Locations

GUIDELINE CONTENTS:

I.   GENERAL

Most communications outlet locations and types will be defined as a function of the project and general guidelines for the various user needs for voice, data, or video communication services. Some communications outlet needs are defined by special system requirements. This guideline document presents very general guidance for some aspects of defining general user communication outlets and enumerates the special system requirements that are known.

II.   DESIGN CONSIDERATIONS

General Recommendations

All individual outlet locations and types should be clearly indicated on floor layout drawings. While location of the outlets on the E series drawings is common and most useful to the electrical contractor responsible for installation of outlet boxes, consideration should be given to use of a separate T series of drawings for detailing telecommunications system information, as recommended by BICSI and others. Whatever labeling is used, it is quite useful to have both electrical and communications outlets on the same floor layout drawing.

OIT recommends adherence to accepted guidelines (EIA/TIA, BICSI) for quantity of outlets per office size, location, etc. when applicable and possible. We recognize that the university instructional environment is somewhat unique and common guidelines for industrial or commercial application may not apply. OIT will be glad to discuss and offer advice on these issues during project definition.

OIT recommends that <u>every</u> space other than restrooms and small closets have at least one communications outlet. It should be recognized that rooms often become used for other than the original intended use, and that many systems in spaces that once had no need for communications are now requiring network connections. The fact that all WMU buildings are to have full wireless network capability should not be sufficient to omit wired communications outlets. Wireless

connectivity is less secure and reliable and still much slower than wired connections. Consult OIT for more detailed advice.

OIT strongly recommends that floor-mounted communications outlets be minimized for many reasons. They have proven to be problem-prone over the years, often suffering from physical and sometimes water damage. The stringent requirements on the bend radius, etc., for modern cabling including the jumpers connecting to user equipment make the treatment of floor-based connections an even greater problem. Wall-mounted communications outlets for most uses are strongly preferred whenever possible.

Special consideration must be given to modular office systems to assure compliance with minimum bend requirements, support for efficient cabling revisions, and protection from damage.

III.   SPECIAL UTP OUTLET REQUIREMENTS

This section presents specific situations that are currently known and call for specific types of communication capabilities/outlets. These are intended only as a starting point in defining special communication needs for a given project. Each project is unique and has unique special communication requirements. Also, special system needs continue to evolve rapidly over time and this list cannot be expected to be complete and accurate over any period. Designers of all other building systems should be queried for communications requirements.

A.   Instructional Systems

General Classrooms

> All instructional rooms are generally currently being equipped with an "instructor outlet" of some sort independent of other outlets in the room. The instructor outlet has a VOIP jack, a data jack, and a video jack to be sure the room has at least one outlet capable of supporting a phone if required, a laptop or other computer to be used for instructional purposes, and a TV if required. When the room is equipped with an instructor podium, this outlet is incorporated into that. Additional outlets and the specific definition of instructor outlets can, of course, vary as a function of the particular space or project.

Computer Labs and Classrooms

- LCD Projectors

    o   Require at least one UTP jack. We currently recommend one UTP data outlet for management purposes. These normally require special conduit or other connectivity within the room of use. OIT should be consulted for latest requirements.

    o   Customer: OIT Media Engineering (Brad Morgan)

AV Control and Tele-conferencing Rooms

- Several special data connections are generally required. Consult OIT Faculty Support (Media Engineering) for input in this area.

B.   Operational systems

Systems connected with general WMU building operation and are known to require outlets are listed below.

Building management system access points.

- May require two to several jacks. One jack for each access location should be left open for use by technicians with laptops. Locate in mechanical room near central control system as specified by Physical Plant.

- Customer: Physical Plant (Currently Kirk Dillery)

Electrical System Management System.

- Currently requires one jack near the management control system.

- Customer: Physical Plant (Currently Dan Brimmer) and Campus Engineering (Currently George Wilson).

Electrical Substations

- Currently requires one jack inside the substation cabinet.

- Customer: Physical Plant (Currently Dan Brimmer) and Campus Engineering (Currently George Wilson).

Elevator Systems

- Currently require two jacks: one for management system and one for emergency phone in elevator. Locate in Elevator equipment room. OIT now assumes the emergency phone and cabling from it to control room will part of the elevator system unless otherwise arranged.

  - The phone is generally a current-loop device.

- Physical Plant has asked that a third jack be installed to allow maintenance personnel to access the system with a laptop.

- Customer: Physical Plant (Currently ?)

C.   Security Systems

Card-based access system central access point for building.

- Currently requires one jack near the management control system.

- It is recommended that an additional jack be provided for maintenance personnel to access the network with a laptop.

- Customer: Public Safety (Bob Coffman).

Police Emergency Phones

- Currently require a single UTP outlet with wall-phone faceplate or no faceplate.   These are generally current-loop phones.

- Customer: Public Safety (Chief Bob Brown)

Surveillance systems

- Currently require a communications outlet at a special location(s) that is a function of the system used.

- Customer: Public Safety (Bob Coffman)

IV. EDUCABLE CATV OUTLETS

General Recommendations

Buildings generally will have a broadband CATV-style system to deliver WMU's EDUcable service to:

- All instructional rooms.

- All conference rooms.

- Selected public areas.

- Selected offices and other spaces.

END OF SECTION