GENERIC SPECIFICATIONS

FOR
INSTALLATION
OF

TELECOMMUNICATIONS ROOMS

FOR THE

XXX BUILDING/RENOVATIONS

AT THE

UNIVERSITY OF DELAWARE
NEWARK, DELAWARE

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TELECOMMUNICATIONS ROOMS

PART 1 – GENERAL

A. LOCATION AND GENERAL INFORMATION:

1. All levels within the building shall have one Telecommunications Room each for the termination of cables and placement of equipment related to the entire UD Telecommunications system.

2. All Telecommunications Rooms within the building SHALL BE STACKED upon one another, to satisfy minimum riser cable routing and lengths as it applies to standard UD Network & Systems Services network design.

3. All Telecommunications Rooms shall be dedicated for the purpose of equipment placement and cabling terminations for the UD Network & Systems Services supported Network, Telephone, and CATV Systems only. No other mechanical systems and related equipment or junction/control panels of any other discipline shall co-located within the defined Telecommunications Rooms of the building, unless approved by a representative of the UD-NSS department.

4. There shall be no routing of domestic water supply, sanitary, or any type of plumbing piping into, passing thru, or entering the Telecommunications Rooms, with the exception of the supply for the local room AC units being fed by the campus chilled water loop.

5. There shall be no routing of ductwork into, passing thru, or entering the Telecommunications rooms.

6. Telecommunications Room locations shall be indicated on the building drawings.

B. SIZE

1. The room size shall be determined by the amount of circuits to be installed within the building as well as the Communications equipment that will operate the system and shall be determined and/or approved by the UD Network & Systems Services Department. The Main Telecommunications or “Building Entrance” Room and all other Telecommunications Rooms shall be a minimum are of 100 sq. ft. (10’x10’)

2. Room size will be indicated within the specifications under parts 2, 3, and 4 as well as in the building drawings.

C. STRUCTURAL

1. All walls shall have ¾" AC grade Plywood hung upon them, and shall be painted with two coats of fire retardant paint on all sides and edges. The ¾" plywood shall be 8' 0" in height, with the bottom starting at a point 3" above the finished floor, and hang on walls on each floor as indicated on the building drawings. Each 4 ft. x 8 ft. sheet of plywood shall secure to the wall at ten (1) locations.

2. Each 4 ft. x 8 ft. sheet of plywood shall secure to the wall at ten (10) locations.

3. For block/masonry walls, securing hardware at each location shall consist of one (1) ¼" x 1-1/4" zinc fender washer and one (1) ¼" x 2-1/4" hex tapcon.

4. For drywall installation, securing hardware at each location shall consist of one (1) ¼" x 1-1/4" zinc fender washer and one (1) ¼"-20 x 4" toggle bolt.

5. For partial sheets of plywood that are 36" or less in horizontal length, midpoint fastening is not required.

6. Non-rectangular pieces of plywood shall be secured on an individual basis.

7. The floors of all Telecommunications Rooms shall be covered with standard VCT flooring to match the interior colors of the building.

8. Ceilings shall be a minimum of 8'- 6" high. There shall be NO dropped ceiling installed in any Telecommunications Room.

9. The entrance door shall swing out of the room, with minimum dimensions being 3'-0" by 6'-8"

D. ENVIRONMENTAL

1. All rooms shall be supplied with internal room temperature and control units that are directly tied into the campus chilled water loop, and shall provide 24/7/365 room chilling capability.

2. Communications equipment being installed may generate up to 20,000 BTU's. Upon design of each building, Network & Systems Services will provide cooling specifications for each telecommunications room.

3. General design specifications for all telecommunications rooms dictate that cooling be designed such that the rooms be at the following parameters: 69-77 degrees Fahrenheit, and 40-55% relative humidity.

E. ELECTRICAL AND LIGHTING

1. There shall be a dedicated 15 amp 125V ac circuit installed on each wall of each room in the building, with 5-15R receptacles. There shall be two (2) receptacles above each relay rack in each room in the building. One (1) receptacle shall be 30 amp 125V circuit with L5-30R receptacle, and one (1) shall be 15 amp 125V circuit with 5-15R receptacle. The wall outlets shall be placed approximately 18" above the finished floor. **All circuits shall be installed from panels associated with the building emergency generator system.** Specific load requirements will be supplied by the NSS representative during the design process. Individual receptacles shall be located as defined in individual TR drawings submitted as part of the project construction documents.

2. There shall be fluorescent fixture with two 40W tubes approximately every four feet across the ceiling.

PART 2 – BASEMENT LEVEL

A. SIZE

MAIN TELECOMMUNICATIONS ROOM

1. The basement level main Telecommunications or "Building Entrance" Room shall be located where indicated on building drawings and have minimum dimensions of 10' 0" by 10' 0".

2. All specifications of Part 1 apply.

B. CONDUIT

1. There shall be 4"conduits and/or sleeves installed from the Main Telecommunications Room to all other Telecommunications Rooms for routing of riser cabling. Exact quantities shall be determined by NSS personnel during the design phase.

2. Provisions shall be made for 4" conduits for feeder cables from the telephone company and all other aspects of Telecommunications at UD, which will tie into the existing UD inter-building conduit system.

3. All sleeves or conduit pathways thru floors and ceilings shall be fire stopped to meet all local, state, and national codes.

C. EQUIPMENT

1. Install equipment relay racks as indicated on the building drawings and on the attached cut sheets in “Appendix aa”. All racks shall be permanently fastened to the cement floor by way of the supplied hardware. The racks shall be tied into the building ground by way of available groundings kits. Install dust covers on all rack bases.

2. Install cable tray on all walls of each telecommunications room as indicated on the building drawings, at a height of 7-ft., 1-inch above the finished floor.

PART 3 – UPPER LEVELS

A. SIZE

1. All upper level Telecommunications Rooms shall be located where indicated on building drawings and dimensions of approximately 10’ 0” x 10’ 0”.

2. All specifications of Part 1 apply.

B. CONDUIT

1. There shall be a minimum of two (2) 4” sleeves installed between each Telecommunications Room for routing of riser cabling.

2. There shall be a minimum of two (2) 4” sleeves installed from each Telecommunications Room into hallways for routing of horizontal cabling.

3. All sleeves or conduit pathways thru floors and ceilings shall be fire-stopped to meet all local, state, and national codes.

C. EQUIPMENT

1. Install XX (X) equipment relay racks. All racks shall be permanently fastened to the cement floor by way of the supplied hardware. The racks shall be tied into the building ground by way of available grounding kits. Install dust covers on all rack bases.

2. Install cable tray on all walls of each telecommunications room at a height of 7-ft., 1-inch above the finished floor.

PART 4 – PRODUCTS

A. MATERIALS AND EQUIPMENT

1. The equipment and components included in this specification are manufactured by Homaco, Chatsworth, Cablofil Inc., or similar.

2. All materials and equipment supplied shall be new and shall meet or exceed the latest published specifications of the manufacturer in all respects, and shall be UL approved. The Contractor shall supply the latest model available at the time of bidding of each piece of equipment.

3. Equipment shall include, but may not necessarily be limited to the following:

   a. EQUIPMENT RELAY RACKS

      (1) Required quantity of Chatworth Products Inc. #55053-503, 7ft. x 19inch equipment relay racks to be installed in all telecommunications rooms and within the inter/intrabuilding communications cabling specifications.

   b. CABLE TRAY

      (1) Required of Cablofil Inc., EZ-Tray to be installed in all corridors and around all walls of each telecommunications room, and within the inter/intrabuilding communications cabling specifications

END OF SECTION

APPENDIX A.A

This Section Contains Cut Sheets for Layout of the Telecommunications Rooms.

APPENDIX A.B

This Section Contains Pictorial Examples of Equipment.