PART 1 - GENERAL

1.01 OVERVIEW

A. This Section includes design standards and requirements for electrical distribution for telecommunications equipment rooms. This is a design standard and is not intended to be used as a Specification.

PART 2 - DESIGN CRITERIA

2.01 GENERAL

A. The design for electrical distribution for telecommunications equipment rooms shall comply with the National Electrical Code and Owner’s Design Guideline Elements D50 Electrical.

B. This section specifies requirement on power, grounding, standby power, and wiring requirements for voice system equipment and associated peripheral equipment installed in the equipment room.

C. A 24-hour lighting system shall be provided to ensure that personnel working in telecommunications equipment rooms are able to see the equipment and labels attached to the equipment. All lighting fixtures in the telecommunications rooms shall be on standby power. The light intensity level must be a minimum of 50 foot-candles at three foot above finished floor. Lighting fixtures shall be installed flush with the bottom of cable tray.

D. 120V (and where required, 208V) power from both the normal power system and UPS system shall be provided. UPS power shall be derived from a centralized UPS, with generator backup of the centralized UPS.

E. A centralized UPS shall be provided for all new building construction, or whenever a full, or major, renovation of an existing building occurs.

F. HVAC equipment serving telecommunications rooms shall be fed from standby power.

2.02 INTERMEDIATE DISTRIBUTION ROOMS (IDR)

A. Each IDR shall have a minimum of a quad outlet comprised of two separate, dedicated circuits (one regular power and one UPS power) mounted at the top of the data rack. Minimum power shall consist of two 15A/120V circuits with twist lock connector or two 30A/208V circuits with twist lock connector. The quantity, location, and type of power outlets shall be determined and coordinated with MD Anderson Network Services and Telecommunications Services Engineering, for specific project requirements.

B. In addition, each IDR shall have one wall-mounted 15A/120V electrical duplex outlet on dedicated UPS power, a minimum of one wall-mounted 15A/120V electrical duplex on normal power, and one 30A/208V outlet with twist lock connector on normal power.
C. Each IDR shall also include a 15A/120V duplex outlet on dedicated UPS power circuit mounted on wall 7'-0" AFF for paging system.

D. Each system cabinet along with the auxiliary cabinet requires a separate power outlet. These outlets shall not be shared with other equipment, shall not be switched, and shall be located outside the cross-connect field (wire wall) area. Exact requirements vary from project to project and shall be determined and coordinated with MD Anderson Network Services and Telecommunications Services Engineering.

E. Outlets located below raised floors should be located within 2 feet of the cabinet it serves.

F. All electrical circuits should be dedicated for the specific telecommunications room, preferably via a dedicated electrical power panel(s) inside the room.

2.03 CONDUITS AND WIREWAYS FOR TELECOMMUNICATIONS

A. Refer to Owner’s Design Guideline Element D5030 Communications for following design criteria.

1. Outdoor and indoor wireways for communications cables.
2. Outdoor and indoor pull boxes for communications cables.
3. Cable trays and dividers for communications cables.
4. Conduit inner ducts for fiber optic cables.

PART 3 - DOCUMENT REVISION HISTORY

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