

**Description:**

The purpose of the section is to highlight the role of the UMD building and campus network infrastructure in relation to building performance goals and general building design principles for new and renovated facilities.

**Related Sections:**

- TBD

**Effective Date:**

January 1, 2020

**Applicable Standards:**

- Underwriter's Laboratories, Inc. Standards for Lightning Protection Systems, UL 96A.
- National Fire Protection Association Code for Lightning Protection Systems, #78.
- Underwriter's Laboratories Inc., Standards for Master Labeled Lightning Protection Systems, UL 96A, latest edition and the Master Label covering the existing buildings.

**General Requirements:****Building Goals:**

To integrate the building network design with the overall building design, specifically pertaining to functional electric and electronic systems and devices embedded in the building infrastructure.

**Design Principles:**

Holistic smart city and smart building design and technology can improve the performance and energy efficiency of campus-wide and building operations. Internet of Things (IoT) systems and devices can provide centralized electronic governance via the network. Some devices may be both powered and controlled via Power over Ethernet (PoE) thereby reducing the number of electric outlets, while increasing the power requirements in the Telecommunication Rooms (TR) and the network connections throughout the building.

Listed below are examples of IoT systems and devices for design consideration. The list is not intended to be comprehensive or to limit the designers in any way:

- Access control systems
- Audio/visual equipment
- Automated window shades
- Building automation devices and controls
- Clocks
- Conference room reservation devices
- Digital signage
- Fire alarm and protection systems
- HVAC controllers
- Laboratory equipment
- Lighting and lighting controls
- Refrigeration
- Security systems and video surveillance
- TV monitors
- Vertical transportation