This document is intended to be used as a quick reference for NETS requirements for Telecommunication Spaces, and NOT a replacement for detailed construction specifications. The following requirements have been adopted from the EIA-568, BICSI, National Electric Code (NEC) and other industry specifications, and have been broken down into the following categories:

- Topology
- Location
- Size
- Finish
- Environment
- Electrical

Each of these categories summarize significant requirements taken from the specification groups and documents. For full explanations and requirements of Telecommunications Spaces: Telecommunications Rooms (TR) and Cable Riser Room, and Entrance Facilities (EF) refer to the individual specification documents.

**Topology**

1. NETS and Industry standard is based on a Star topology. Network cabling is systematically aggregated to the TR via a horizontal distributor or Cable Riser Room. The Cable Riser Room shall be central to the nodes, and on the same floor of the service area. All network cabling is then centralized into dedicated TRs for efficiency of space, equipment, and resources providing network service. The actual quantity and layout of the TRs will be determined by the size, construction layout and service requirement(s) of the buildings network.

**Location**

1. The TR shall be centrally located to the Telecommunications Outlets (TOs) the room serves. The furthest TO must be within 250’ cable feet of the designated TR.
2. If multiple floors are being serviced by a single TR, Cable Riser Rooms are required. Cable Riser Rooms must be vertically stacked within the footprint of the TR above or below.
3. An Entrance Facility shall be within 50’ of the designated building service entrance or Dmarc.
4. All Telecommunications Spaces should be free of vertical and horizontal obstructions that may interfere with the installation & routing of cable, network infrastructure, and equipment.

**Size**
1. The TR will have a minimum size of 150-square feet and have, minimally, one 10’ wall. Actual size will be determined by NETS Infrastructure Engineering staff.
2. Telecommunications Riser Rooms shall be on every floor of a building that does not have a TR; the actual size will be determined by NETS Engineering staff and have a minimum size of 4’x8’.
3. The Telecommunications portion of the building’s Entrance Facility shall have a minimum footprint of 4’x8’.

Finish

1. All Telecommunications Spaces shall be finished to a one hour fire rating.
2. Walls shall have ¾” fire rated plywood covering the sheetrock to an elevation of 8’.
3. The Floor shall be either concrete sealed/stained or non-static floor tiles.
4. Walls shall be finished to deck and painted in a highly reflective color.
5. The TR shall be open ceiling construction, and should be painted with the same wall color.
6. All penetrations shall be sealed to a one hour fire rating.
7. Electrical, HVAC and plumbing service NOT solely dedicated to Telecommunications Space shall not be located within the Telecommunications Spaces. Adjacent devices shall maintain a minimum 4’ separation from the TR, Riser, or Entrance Facility.
8. Electrical power conduits shall maintain 6” separation from Telecommunications cabling.
9. TRs must be able to be secured with a lock and a card reader system. Cable Riser Rooms and Entrance Facilities must be secured with a lock, no card reader is required.
10. Doors shall be located toward a corner of the Telecommunications Space and swing out.

Environment

1. A minimum of 500 Lux shall be present uniformly 1’ above the floor.
2. Light fixtures should be installed clear of equipment racks or cable raceway.
3. Lighting shall be chain hung, and flex fed to make lighting reconfiguration simple and not restrict work access to any infrastructure above or around.
4. The room should have dedicated HVAC that does not allow the room to exhibit temperature above 75 or below 65-degrees Fahrenheit with active network load.
5. Humidity shall be in the range of 30-55%.
6. Constant 24/7 hour air flow is required in the room so the temperature values are not exceeded in the equipment.

Electrical

1. Dedicated 120V power is required within TRs. Separate circuits shall be installed for each available service type; and a minimum of two dedicated circuits for network device should be present in each TR.
2. Dedicated special 220V circuits for Telecommunications equipment are required, and shall be specified by NETS Infrastructure engineers.
3. If a building UPS system is present or planned, circuits should be provided to each TR as specified by a NETS Infrastructure engineer.
4. If a building has emergency generator power, circuits should be provided to each TR as specified by a NETS Infrastructure engineer.
5. Each power circuit shall be within six feet of the designated location of the Telecommunications UPS or Switch within the room; final receptacle location should be determined by a NETS engineer.
6. An isolated Telecommunications Grounding System including dedicated ground bus bars and grounding backbone is a requirement for all Telecommunications Spaces, and shall follow the proper grounding specifications.