This is for informational purposes only and only address site conditions for ST1. Vendors must conduct a site visit before finalizing any system design.

General

The facility shuts down once per year to perform planned maintenance.

Physical

- The computer room has a slab floor with power, cooling and communications delivered overhead.
- The path from the loading dock to the computer room will accommodate 8'H x 12'W
- The lowest obstruction is the computer room center aisle (widest/preferred path) is 90"
    - Side aisle can be used for taller equipment but path width is limited to 48"
- Rack heights
    - Facility standard height: 90"
    - Maximum height: 112"
    - Notes:
        - All heights stated include 12" clearance between top of rack and lowest overhead obstruction.
        - Racks taller than the facility standard height may require modification to existing infrastructure and/or new construction.
- Maximum row length for ST1 is 40'
- Maximum rack weight is 4000 lb

Electrical

- Compute/IT Equipment
    - Power is delivered overhead by busway and taps
    - Busway voltage: 400V L-L, 230V L-N
    - Equipment power factor must be .9 or better
    - The cluster design must have at least N+1 redundancy to allow for electrical maintenance without requiring shutting the cluster down
    - The standard power connector type is IEC60309 3P+N+G (red) for 30A and 60A feeds. Other connection types are allowed, but must be coordinated with the facility in advance.
- Mechanical
    - Limited 480V L-L, 277V L-N is available as well to support mechanical equipment such as standalone CDUs.
    - 480/277V circuits are installed as needed per installation and must be coordinated with the facility in advance of cluster installation.

ST1 Electrical Distribution

Non-UPS

- 4x 400A bus bars, N+1 (i.e. 3+1 used for available power calculations)
    - 828kW - 100% rating
    - 662kW - 80% (i.e. conventional code conformant derating for PDUs)
    - 629kW - .95 power factor (i.e. average power supply pf)

UPS

- Limited UPS power is available to support critical cluster equipment.
- Rack mounted energy storage (UPS, batteries, capacitors, etc.) is currently not supported; any solution that requires this must be coordinated with the facility in advance.

Chilled Water

- Total Flow Available: 680 GPM (6" lateral flow rate limit)
- Supply temperature range: 60-65 deg F

Environmental

- Temperature: 80 °F
- Relative Humidity: 20% - 80%
- Rack return air temperature must not to exceed 80 °F

Communications

- There are two communications entry rooms in the building on the first floor
- There is pre-installed fiber within the building for cross connecting between the entry rooms
- There is pre-installed fiber within the building for cross connecting from entry rooms to the computer room
- There is conduit space available for dedicated fiber installs (ER-ER, ER-CR)
- There is pre-installed cable tray for fiber distribution in the computer room
- There are five carriers operating in the building (Verizon, Comcast, CrownCastle, MIT and UMass)
- Two research exchanges have presence in the building: Northern Crossroads (NoX) and The North East Research and Education Network (NEREN)
- There is outside-plant, dark fiber available for new builds (metro loop, coordinated with local muni, multiple splice location options)
- There is also outside-plant conduit space available for new fiber pulls
- Some, limited rack space is available in the entry rooms to support carrier equipment