Southern Utah University

Design Requirements

To be used as a supplement to the Utah Division of Facilities Construction and Management (DFCM) Design Requirements

http://dfcm.utah.gov/downloads/design_manual/design_requirements.pdf

Revised: May 2025

The items listed below are supplemental requirements to the DFCM Design Requirements and are specific to Southern Utah University. These requirements will be implemented into all SUU projects.

1. Concrete
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Contents

1. Concrete

1.1 Flatwork Specifications

1.2 Exterior Concrete Specifications

1.3 Quality Control Testing

1.1 For all flatwork, use SUU mix

- Sunroc: 6003A
- Western Rock: SUU Spec

1.2 Requirements for Exterior Concrete

- 4000 Psi and 6.0 Bag
- 3.0 Lbs. of Macrofiber (650 Fiber, Fortafiber) per cubic yard of concrete
- Pozzolans: Less than 15%
- Air Entrainment: 6 ¼ % plus or minus 1 ¼ %
- Use of calcium chloride prohibited
- Seal with Dayton Superior J29 Weather Worker (28 days after pour) Done by owner unless otherwise specified

1.3 Quality Control Testing: required on any pour greater than one (1) cubic yard

- Concrete: one set of cylinders for every 10 cubic yard or every truck. Test every load for temperature, slump, and air
- Subgrade: 98% compaction
- Make temperature is 26 degree and rising prior to pour
- 4 in slump max
- During winter conditions cover with approved blankets (32 degrees and below)

2. Interior Finishes

2.1 Drywall

- Gypsum: All Drywall finish will be smooth wall with no sand scratches or pinholes. As such, a level 5 finish is required.

2.2 Paint

- New drywall or patchwork will be primed with one coat of an appropriate sheetrock primer such as PPG HIGH HIDE or PROMAR 200. Paint with two coats Sherwin Williams Cashmere low luster or PPG Zero VOC Satin. Back roll each coat applied to match up to existing stipple. Paint all patches corner to corner.
- Facilities Management will approve all colors and products for each individual building.
- Metal surfaces must be degreased and decontaminated and properly prepared. Prime with appropriate metal primer designed for exterior or interior surfaces. Paint with semi-gloss water based alkyd urethane. Facilities Management will approve all colors and sheen.
- Floors: prepare all concrete by means of acid washing, concrete floor cleaner, or grinding, whichever is appropriate for the specific situation. Paint all floors with epoxy or waterborne epoxy with gloss sheen. Use of a slip resistant additive is recommended. Facilities Management will approve all colors.
- Any specialty items that may require different products or procedures must be approved by an authorized **facilities management technical advisor.**

2.3 Flooring

- All stairs must have contrasting color or material, approved by SUU facilities Management, at the leading edge of each step unless otherwise stated.

2.4 Framing

- Steel Stud min 20 gauge
- Wall bracing seismic standards - every 4 ft. minimum

2.5 Ceiling Grid

- Seismic bracing must be used every 4 ft. minimum on main runners, seismic clips are required.

3. Door Hardware

3.1 Cylindrical Locks/Cylinders

- Schlage ND Vandlgard Series levers
    - IC core cylinders
    - 626 finish unless otherwise specified
- Everest D Family restricted keyway
    - 626 finish unless otherwise specified

3.2 Auto Openers

- LCN4642 or 4631 Aluminum or Dark Bronze finish
- LCN8310-356 WS RF transmitter
- LCN8310-865 RF receiver

3.3 Closers

- LCN4041 Super Smoothee Closer Aluminum or Dark Bronze finish

3.4 Panic Hardware

- VonDuprin 99 Exit Device
- VonDuprin 99 Exterior Trim
    - IC core cylinders
    - 26D finish

3.5 Hinges

- Continuous Geared Hinges - Hager Roton
- Ball Bearing 4-1/2 by 4-1/2 Butt hinges - Ives or Hager

3.6 Keying

- Match SUU's existing master key system
- Schlage Everest D Family Restricted keyway
- Master Key System shall be provided by/coordinated with Southern Utah University's lock shop

3.7 Doors/Openings

- (Exterior Door) Wide style and rail (10") store front doors 1" bronze/ LOW-E glass
- (Interior/Vestibule Door) Wide style and rail (10") store front doors ¼" clear glass
- Steel, key removable mullion
- SDI 100 16 gauge welded hollow metal frames
- SDI 100 18 gauge hollow metal doors
- Premium grade wood doors.

3.8 Door Trim

- Kick Plates and Armor Plates
- Minimum thickness of .050 stainless steel
- Threshold – Pemko or National Guard

3.9 Wall Stops and Holders

- Wall Stops required at location where the door or hardware interacts with another structure.
- Magnetic Holders only – Ties into Fire Panel – Coordinate with SUU electrical shop
- Simplex or Rixon

3.10 Electronic Access Control

- Match SUU's existing Electronic Access Control System
- Access Expert Platform
- HID Origo Readers
- Mercury Controllers
- All low-voltage wiring will be entirely in conduit or approved protected raceway.
- System and components shall be coordinated with Southern Utah University's lock shop.

4. Mechanical

4.1 Service Access

- Adhere to manufacturer's recommendations for working area provided around and in front of all equipment.
- Cannot be blocked by piping, conduit, cable trays, or other obstructions installed as part of the construction process.
- Place equipment to accommodate ready service access to unit.
- Provide adequate access for service of equipment via access panels in ceilings or catwalks in attic space to include a platform working space around equipment placed within the attic space.
- All access methods must meet OSHA, NFPA and other pertinent regulations.

4.2 Lighting

- Provide lighting in attic areas for all pathways to equipment and where equipment is located. Minimum of 15 foot candles, with adequate lighting at equipment location for service to be performed safely.

4.3 Wiring

- Provide service outlet at equipment (110V duplex outlet).
- Place all wiring in trays, conduit or bundled - install parallel to ceiling and walls.

4.4 Heat Exchangers

- Provide chemical circulation ports on both inlet and outlet of hot water heat exchangers (domestic and heating) located on the equipment side of isolation / shut-off valves (for tube "boil-out").

4.5 Fire Systems

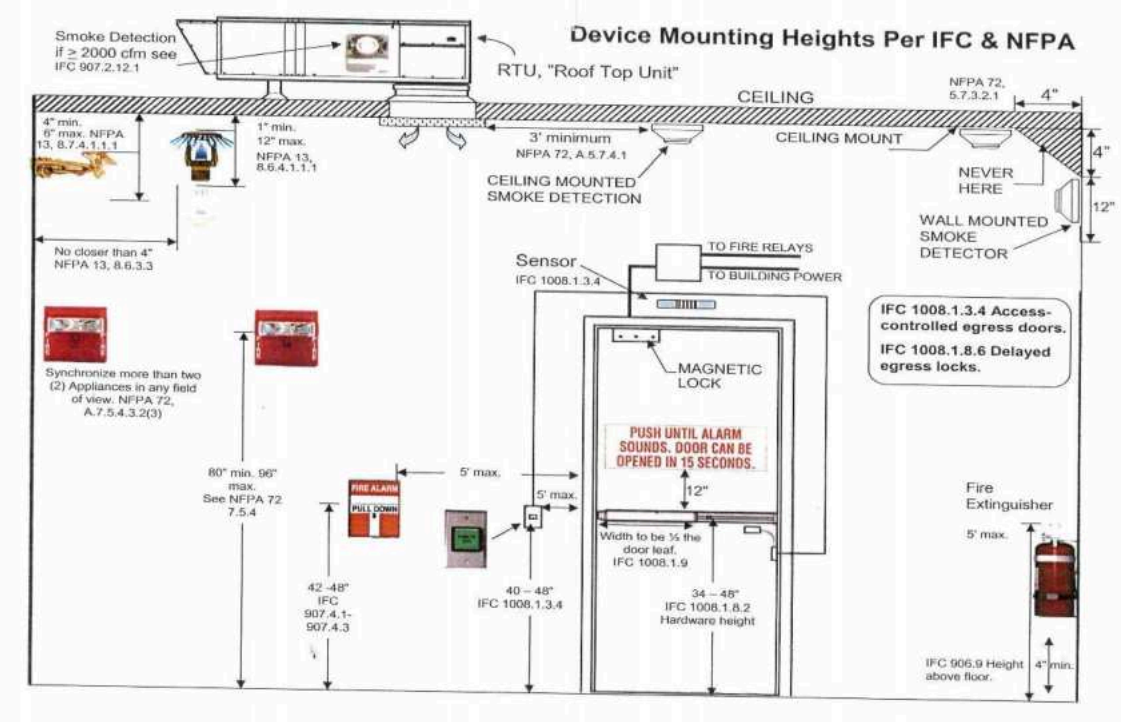
- All fire system main drains shall be piped to the exterior of the building where landscaping will not be damaged.

4.6 Water systems

- All pumps must have high (discharge) and low (suction) side pressure gauges. Installer shall select a pressure gauge whose operation range is only slightly larger than the actual operating pressure range of the equipment on which it is installed . Water systems must have dry thermal wells for installation of thermometers at critical points where the temperature delta is important for operating systems.
- Water systems must have domestic manufacture ball style shut off valves installed on supply and return lines at all zone branch departures from the main line. Shut off valves shall be installed for the isolation of any device on the water system, allowing repair and maintenance with a minimum of water loss. All valve locations shall be clearly indicated on "Record" drawings.

4.7 Fire Device Mounting

- Fire Device Mounting Heights (See Image)



4.8

4.8Codes and standards

- All work must be done in a professional manner.
- A representative from the IT department should be included when designing or bidding new head ends or control systems that utilize campus network or fiber resources.

5. Electrical

5.1 Raceways & Conduit

- Provide steel (EMT, IMC, RMC, FMC, LFMC) raceways, fittings and box/enclosure systems for all interior wiring. Flexible raceways are permitted only in short lengths where necessary due to movement, vibration, or expansion joints. Fixture whips shall be no longer than 6', and shall use threaded connectors.
- Concealed flexible raceways are not permitted.
- Schedule 40 PVC shall be used for below grade/underground installations. Factory bent IMC or RMC with corrosive resistant covering must be used where bends exceeding 22.5 degrees are necessary in below grade/underground installations.
- Minimum size conduit above grade shall be 3/4". Minimum size conduit below grade shall be 1".
- Minimum burial depth for underground conduit is 24". Install electrical warning tape between 8"-12" above conduit.
- All raceways containing voltage greater than 600 volts shall be encased in red dyed concrete. These shall be inspected by an SUU representative prior to encasement.
- Fire alarm systems shall have red covers on all junction boxes and raceways shall be identified by continuous red marking. Conduit shall be run in a Class-A loop, and each run shall contain only one initiating/notification zone.

5.2 Boxes & Fittings

- No gang-able or handy boxes shall be used unless special permission is granted by SUU.
- All conduit fittings trade size 3/4" or larger must have insulated throats or insulating bushings installed.
- No cast aluminum conduit fittings or locknuts; except for screw in cast aluminum flex connectors on conduits 1 inch or smaller or where specifically allowed by SUU.

- All four-inch square boxes shall be 2-1/8” deep, minimum, unless approved by SUU. No more than 3- ¾” conduits in this size box. More than 3 conduits will require 4-11/16” x 2-1/8” square boxes or larger.

5.3 Anchoring & Support

- All raceways, boxes, luminaires, devices, conductors, etc. shall be supported by a listed device, independent from all other electrical, mechanical, ceiling, or any other support systems.
- Conduits shall be strapped within 18” of j-boxes, panels etc. and then at least two straps for every ten-foot piece of conduit. FMC/LFMC shall be strapped within 12 inches of j-boxes and every three feet thereafter. Fixture whips are not required to be strapped.
- Unless approved by SUU staff, non-removable anchors shall not be used.
- Seismic wires size #12 minimum, galvanized shall be used where required.

5.4 Wiring

- Aluminum conductors are not permitted.
- Minimum conductor size for general-use branch circuits and lighting branch circuits shall be #12 AWG.
- All conductors #12 and smaller shall be solid. Conductors #10 and larger may be stranded.
- Metallic conduit shall not be used for equipment grounding. A separate equipment grounding conductor must be used.
- Cable types MC, NM, BX, AC, etc. shall not be used unless by special permission from SUU Electrical Manager.
- Direct-bury methods are not permitted. All underground installations shall be in conduit.
- Signal/data wiring shall not share a raceway with line voltage. Control wiring may share a raceway with line voltage wiring so long as they belong to the same system and are both rated for the same voltage, per NEC.
- Multiwire branch circuits are prohibited. All ungrounded phase conductors must have a dedicated grounded (neutral) conductor.
- No more than one conductor of each phase may be installed within the same conduit, unless by special permission from SUU.
- Voltage drop calculations must be considered in all feeders and branch circuits.

5.5 Switchboards, Panelboards, & Breakers

- All panels shall have bolt-in type circuit breakers - Square D Type QOB is preferred. Panel busbars and transformer windings shall be copper.
- New switchboards, panelboards and load centers shall include a minimum of 25% spare OCPD spaces for future usage.
- All new switchboards, panelboards and load-centers shall include a minimum of three (3) spare/empty ¾” trade size EMT raceways connected to panel enclosure (can) and terminating in a readily accessible ceiling or suspended floor space for future usage.

- All switchboards, panelboards and load centers (new and existing) shall have printed circuit identification schedules. Printed schedules shall reflect all existing circuit identification as-is and all new circuiting changes performed.
- Three pole breakers shall not be used to serve single phase circuits. Unless special permission is granted.

5.6 Equipment Identification

- Circuit number & Panel Identification shall be displayed at each junction box and device box. Permanent marker (sharpie) is acceptable only for concealed junctions. Cover plates, panel covers, disconnects, etc. shall be labeled with printed UV-resistant tape, or by engraved plaque.
- All switchboards, panelboards and load centers (new and existing) shall have printed, new circuit identification schedules. New printed schedules shall reflect all existing circuit identification as is (handwritten or printed) and all new circuiting changes performed.
- Provide floor markings to ensure clearances as required by the NEC.
- Provide ARC Flash warning labels in accordance with NEC, NFPA and OSHA requirements.
- Warning labels and signs shall comply with NFPA 70 and 29 CFR 1910.145.

5.7 Devices

- All general use lighting (toggle) switches must be listed, spec grade, and rated at 20 amps. Switches shall be white with stainless cover unless otherwise noted.
- All general use receptacles/outlets must be listed, spec grade, and rated at 20 amps. General use receptacles shall be white with stainless steel cover plates unless otherwise noted.

5.8 Lighting

- Only LED (integrated and lamp equipped) lighting shall be used.
- ALL components of ALL interior fixtures, (junction boxes, whips, driver enclosures, drivers, etc.) regardless of location, construction methods, materials used, etc. must be serviceable and readily accessible as defined by NEC.
- Color temperature for all interior lighting shall be ~4,000K.
- Surface mounted low profile linear (strip) fixtures are preferred for use in areas without lay-in grid type ceiling construction. Recessed fixtures of any type, in hard ceilings and walls, are strongly discouraged due to the lack of accessibility to serviceable components after installation.
- Linear-type (complete) lighting fixtures and/or systems shall not have a cost that exceeds $100/linear foot.
- Fixtures shall not be “daisy chained”. Each fixture shall have a dedicated fixture whip no longer than 6’ to a junction box.

5.9 Lighting Controls

- All lighting control circuits in areas not defined as “public spaces” (classrooms, labs, conference rooms, offices, break rooms, etc.) shall be controlled independently using **line voltage**, dual technology sensor switches whenever possible. Dimmable lighting control systems and low voltage lighting control systems should be avoided in these spaces. Sensor switches should be manual on-auto off by default.
- Basis of design shall be Legrand-Wattstopper. Lighting control panels and all associated components/devices (relays, low voltage switches, room controllers, occupancy sensors, daylight harvesting sensors, etc.) of alternate brands must be submitted to SUU Electrical Department for consideration.
- Lighting control systems shall have an open or direct interface and keyboard, keypad or touchscreen access.
- Exterior Campus Walkway Lighting shall be controlled by photocell, with secondary provisions for timer or control panel override.

5.10 Emergency Systems

- See University specifications/drawings for Emergency Blue Light detail.
- Emergency/egress lighting shall be placed on a dedicated circuit and shall not be controlled by any network connected lighting control panel or device.

5.11 General Requirements

- All local and national electrical codes and standards shall be followed.
- All work must be done in a professional and workmanlike manner.
- A representative from the IT department should be included when designing or bidding new head ends or control systems that utilize campus network or fiber resources.
- Minimum 3.5-inch-wide studs for walls. Room is needed for data, power, and soundproofing with the use of deep boxes for devices.
- For newly constructed buildings and building-wide Electrical service modifications the contractor shall provide a laminated, 17” x 11” Single Line Diagram reflecting all new and/or existing Electrical distribution equipment associated with the project. Where practical, display new Single Line Diagram within Electrical room near the main switchboard/main distribution panel.

6. Communication Systems

6.1 Communications rooms:

- Are never to be located under or adjacent to plumbing systems, such as restrooms. Fire sprinklers, as required by fire code, will be the only permitted plumbing system.
- Should be located near the center of a building in order to minimize cable lengths.
    - For multi-story buildings, the rooms should be stacked vertically.
    - Whenever possible the main room (MDF) should be centered vertically.
    - When cable lengths allow, all cables shall be terminated in the MDF. Other communications rooms (IDF) will serve as a path for the cables to get to the MDF.
- Are to be dedicated spaces, not shared with electrical, custodial, or any other utility or service.
    - Exceptions: Locks controllers, DVR, Fire panels. (These could also go in an IDF.)
- Are not to have any walls that are building exterior walls.
    - They should not be adjacent to elevator shafts or transformers.
- Are to be accessible without going through a classroom or an office.
- Cooling must be separate from the building cooling system and should be capable of running year round, even if the rest of the building is being heated. No water based cooling in communications rooms.
- Power is to be supplemented by a backup generator if the building has one.
- SUU IT will provide switches and VisiPatch patch cables.
- Contractor is responsible for providing and installing the VisiPatch 360 system, minus the patch cables.
        - The layout of the VisiPatch 360 blocks starts on the left with user lines. Then vertical wire management (doors) followed by switches then doors then user and so forth. Vertically there will be 96 lines on the top then horizontal wire management in the middle and another 96 lines on the bottom. IT can provide a diagram with measurements before beginning installation.
- Contractor is responsible for providing and installing a 7 foot 2-post equipment rack and all ladder rack needed in the comm room.
- Contractor is responsible for providing and installing switch tails from the VisiPatch 360 to the equipment.

6.2 Cabling infrastructure between buildings

- Fiber optic cables:
    - Are to be Corning Freedom LST Gel Free loose tube cables with interlocking armor.

    - Are to have, unless otherwise specified, a fiber count of 12 SM and 12 MM (hybrid preferred).
        - The MM fiber will be 50 micron.
  - Terminations at the building end of the fiber
    - Are to be terminated in a wall mount housing using Corning splice cassettes.
    - Will use LC connectors
  - Terminations at the campus core end of the fiber
    - Are to be terminated in a communications rack using Corning splice cassettes.
    - Will use LC connectors
- Copper cables for analog systems:
  - Are to be a minimum of cat3 25 pair 22 awg and armored if running in utility tunnels.
  - Runs between buildings are to be terminated on 66 blocks with surge suppression. Runs between MDF and IDF in the same building do not require protection.

6.3 Cabling infrastructure within buildings

- Fiber optic cabling
  - Shall be Corning fiber optic cable.
  - If not in conduit, the fiber must have interlocking armor.
  - To be terminated in a wall mount housing using Corning splice cassettes.
- The twisted pair cabling solution must be Systimax Category 6A.
  - If there is limited conduit space in an existing building and adding new conduit is not feasible, a Systimax Category 6 cabling solution may be used upon approval from SUU IT.
- Data jacks
  - Category 6A jacks must be black
    - Systimax part number: MGS600-003
  - Category 6 jacks must be black
    - Systimax part number: MGS400-003
  - “Data jacks” will be black for all network cables including phones, faxes, cameras, TVs, projectors etc.
- Cable types
  - Category 6A riser cable color must be black
    - Systimax part number: 1091B BLK C6A 4/23 U/UTP W1000
  - Category 6A plenum cable color must be green
    - Systimax part number: 2091B GRN C6A 4/23 U/UTP W1000
  - Category 6 riser cable color must be slate
    - Systimax part number: 1071E SL 4/23 W1000
  - Category 6 plenum cable color must be blue
    - Systimax part number: 2071E BL 4/23 W1000
- Faceplates
  - Shall be stainless steel, unless otherwise specified by the campus to match surrounding device plates.
- Twisted pair cabling terminations in the communications room must be made on wall mounted VisiPatch 360 blocks. Patch panels are not acceptable.
- All cables shall be home run to the communications room.

6.4 Data cable locations

- A standard office must have at least two data drop locations with two cables at each data drop location.
    - Data drop locations are to be placed appropriately for where furniture would most likely be placed.
    - Larger offices should have more data drop locations appropriate for the room size.
    - Workrooms for office areas shall have a minimum of 4 data jacks. One will be reserved for Fax machines.
- Data drop locations for wireless access points
    - There shall be two cables for each data drop location.
    - Locations shall be in the ceiling or may be high on a wall with campus IT approval.
    - Location of the drops in the ceiling areas requires IT approval.
    - There should be a minimum of 2 data drop locations in the ceiling for every 2000 sq. feet of floor space.
    - The number and location of data drops for wireless can change due to expected user density. I.E. A stadium style classroom would need more Wi-Fi density than a similar area used as an office space.
- Data drop locations for emergency notification IP speakers
    - To be located in main hallways, lobbies, and foyer areas on the main floor.
    - One cable at each drop location
    - Location should be on either a wall or in the ceiling
- Mechanical rooms where smart building IP based controls are placed shall have data drops as required. These may include DVRs, security camera controls, lighting, signage, locks, sprinkler controls, and HVAC.
- Mediated rooms and classrooms will require 3 data runs to the presenter / teacher station.
    - A 1 ½" conduit is required between the teacher station and projector and or wall mount TV location.
    - If the room has a TV, then 2 data outlets are required at the TV location.
    - Rooms that call for a projector shall have two data outlets and a power outlet at the projector. The projector mount and location should be approved by the SUU IT Media Tech.
    - Consider data drops for classroom signage and controls that are IP based.

6.5 Data cable pathways

- Conduits shall be 1" minimum.
- No more than two boxes max may be daisy chained on one conduit. Watch the fill ratios. No daisy chaining is preferred.
- Conduit fill for Category 6A should be as follows:
    - ¾" – 2 cables (¾" only allowed if already existing)
    - 1" – 4 cables
    - 1 ¼" – 7 cables
    - 1 ½" – 9 cables
    - 2" – 15 cables

    - 3” – 41 cables
    - 4” – 69 cables
- Conduit fill for Category 6 should be as follows:
    - ¾” – 3 cables
    - 1” – 6 cables
    - 1 ¼” – 10 cables
    - 1 ½” – 15 cables
    - 2” – 26 cables
    - 3” – 59 cables
    - 4” – 105 cables
- If cable tray is used, it must be above hallways, never above offices, classrooms, restrooms or solid ceilings.
- Conduits should extend all the way to the cable tray.
- To facilitate future moves, adds and changes, the architect, or other design engineer, is responsible to clarify on the plans that air ducts and other utilities are installed above the cable tray leaving it accessible.
- Where cable tray passes through a firewall, provide adequate firestop pillows.

6.6 Labeling and Documentation

- All faceplates, jacks, and termination blocks shall be numbered and labeled. The numbering must match the campus’ documentation system. Campus IT can provide examples for labeling.
    - Each faceplate will have a unique ID based on the building and room.
        - For Example, the Science building uses building code SC, and room 101 in the Science building has 2 drop locations in it. The two plates in room 101 would be labeled as follows: PLATE-ID SC-01, PLATE-ID SC-02. If room 102 has 3 drop locations, then the three plates would be labeled as follows: PLATE-ID SC-01, PLATE-ID SC-02, PLATE-ID SC-03. Each room then begins with PLATE-ID (building code)-01 and increments according to how many faceplates there are in the room. It is common to start with the first plate to the left of the door as -01 and continue clockwise around the room. Provide SUU IT with a map showing room numbers, locations, and faceplate-id numbers.
        - All data needs to have a faceplate ID assigned to it including wireless access points, projectors, cameras etc.
    - Each data jack will have a unique number within the building.
        - If all cables are terminated in a single comm room then the numbering assigned will begin with 1001 and increment sequentially.
        - If cables are terminated in multiple comm rooms, then the cables will be numbered according to which comm room they are terminated in. The MDF cables will be numbered with 1001 and increase sequentially. The first IDF cables will be numbered with 2001 and increase sequentially. The second IDF cables will be numbered with 3001 and increased sequentially. And so on.
        - Every data jack shall be labeled individually with D 1001, D 1002 etc.

        - One faceplate can have from 1 to 6 data jacks. They don't have to be sequential, but they do need to be mounted in numerical order left to right and top to bottom, like reading a book.
    - VisiPatch 360
        - The VisiPatch 360 connecting blocks will be numbered sequentially starting at 1001 and working up.
        - If there are multiple comm rooms then the MDF blocks will be numbered sequentially with 1001 working up. The first IDF blocks will be numbered sequentially with 2001 working up. The second IDF blocks will be numbered with 3001 and working up. And so on.
        - The data jack numbers throughout the building (i.e. D 1001) must match the other end of the cable mounted on the VisiPatch 360 blocks (1001).
        - SUU IT will provide all labels for VisiPatch 360 panels.
- At the conclusion of a project, provide IT with a floor plan that shows jack locations with faceplate ID's and data jack numbers.
- Installer will provide cable test results. Ask about acceptable formats.
- All test results and documentation shall be provided to IT before receiving final payment.

7. Grounds

7.1 Damage

- Any landscape damaged by the contractor or subcontractors will be repaired to SUU Grounds standards by a licensed Landscape contractor before receiving final payment.
- Any damage to grass areas such as holes or heavy machinery driving on grass causing compaction should be handled in the appropriate way.
    - Damaged area should be over excavated by 12 inches, and at least 6 inches of approved topsoil will be added to the area. Each damaged area should be cut with a sod cutter in order to create defined lines where the new approved sod begins and to create an even continuation from old grass to new grass. New sod cannot be laid on top of old grass!
- Any damage to trees should be brought to the attention of the grounds crew as soon as possible. It will be up to the Director of Grounds & Gardens to determine if the tree can be salvaged or should be replaced.
    - Damage due to compact drip line, broken limbs, damaged roots, lack of water, or damaged bark can result in replacement of tree. The replacement tree should be the same species of the damaged tree unless otherwise approved by the Director of Grounds and Gardens who has the right to deny any new tree that does not meet certain requirements of a healthy tree.
    - See 7.2 regarding replanting of trees.
- See 7.3 regarding sprinkler lines.

7.2 Tree Replacement

- Trees should be planted according to SUU Grounds specifications
- Trees that are bought and are in a container or bucket should be handled according to the instructions found at this web address https://www.arborday.org/trees/planting/containerized.cfm
- Trees that are purchased and come in a wire basket, and/or burlap should have those materials removed as much as possible and then follow the instructions found at this web address https://www.arborday.org/trees/planting/balled-burlapped.cfm
- Trees that are considered bare root are not to be planted on SUU grounds, unless approved by the Manager of SUU grounds.
- All trees must have a (1) year warranty from the date the project is complete.

7.3 Sprinkler lines

- The grounds crew will be in charge of isolating any sprinkler lines that are outside the assigned work area but may still affect the project; However, any sprinkler lines inside the project will be the responsibility of the contractors to protect. If sprinkler lines are damaged, the grounds crew shall be notified so they can check the area for any potential issues. Any re-designing of sprinkler lines and heads because of construction should always be designed with head-to-head coverage.
    - All sprinkler parts should be replaced with similar product (e.g., Schedule 40 should be replaced with Schedule 40. Schedule 80 should be replaced with Schedule 80.) All sprinkler heads and valves must be replaced with Rainbird products.

7.4 Trash and Debris

- All trash and debris shall be cleaned up daily. Contractors and subcontractors are responsible for cleaning the worksite/area.

7.5 Clocks

- All new clocks must be Rainbird brand and must be capable of connecting to the Rainbird IQ central control system. The clock will require a data connection.

7.6 Backflow system/pressure vacuum breaker

- If the back flow system or pressure vacuum breaker (PVB) is altered in any way, the contractor m ust follow all state codes regarding backflow prevention.

7.7 Mulch

- Weed fabric should be used under any mulch or decorative rock added to all planters. Dewitt brand is preferred but any weed fabric used must meet the specifications of the Dewitt 4oz.
- Mulch products must be approved by the grounds supervisor in charge of the project or the Director of Grounds and Gardens.
- Approved Soil
    - 20 % Organic Materials (No fungus)
    - 20 % Washed Sand
    - 60 % Screened Soil
- Approved Sod
    - 80 % Cool Weather Blue Grass
    - 20 % Fine Fescue
    - Local source preferred

8. Custodial

8.1 Custodial closet

- Minimum one closet per floor level.
- All custodial closet doors must swing out of the room
- Custodial closets will have finished walls throughout
- Wet sink for chemical dilution and bucket filling

8.2 Supply room

- Include one custodial supply room of approximately 80 square feet per building in addition to the custodial closets on each floor.
- Minimum of one electrical receptacle.
- Once wall space 24” deep by 48” wide minimum for shelving.

8.3 Custodial Office

- Shall be large enough for one desk and two side chairs minimum.
- Minimum one electrical receptacle and data line.

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