

CAMPUS BUILDING STANDARDS

This document is meant to supplement contracts and construction documents, not to supersede those mentioned.

Final selections and/or design may vary depending on specific project requirements, but the architect is to notify the College when proposing alternates to our standards. These standards are not intended to introduce proprietary purchasing practices and competitive bidding for all products, where equal, shall occur.

- **Design Requirements**

- Design Documents

- Wall section and detail marks are to be on all floor plans including roof plan.
 - An “issued for construction” set shall be prepared after all addenda. The set shall incorporate all addenda into the plans and specification to create one set for reference during construction.
 - Documents/Design to comply with all ADA standards, including mounting heights for accessories
 - Maximum plan size is to be 30” x 42”
 - Show all MEPFP work on architectural elevations
 - As-built documents are to be prepared at the conclusion of construction incorporating any changes by the Architect.
 - Refer to campus wide ADA survey and Hazardous Material survey for existing conditions to incorporate on documents.
 - If any requested changes in scope will cause an excess budget, the Architect should notify the College immediately
 - Room Numbers
 - At beginning of design the Architect shall work with Lafayette College to assign room numbers. The College’s numbering is to be used as the basis for all construction, O&M manuals, etc.
 - Numbering system should be reviewed when nearing design completion

- Use of design documents

- There will be no press releases or other publications of project information without the College’s written permission.

- Review and implement the College’s Energy Policy, which can be found at

<http://facilitiesplanning.lafayette.edu/files/2009/10/LC-Campus-Energy-Policies.pdf>

- Note any proposed variations from this policy for projects

- **01 00 00 – General Requirements**

- Contractor will limit campus disruption as much as possible, including parking on campus and working hours
 - Architect to coordinate with the College regarding attic stock requirements in the contract specifications
 - Construction Fence
 - When required within the active campus, all precautions are to be taken to minimize disruption of campus activities while assuring safety of campus stake-holders.
 - Metal fence should be used, otherwise receive approval from Director of Facilities Planning and Construction
 - Signs
 - No signs allowed by Contractors or Architects/Engineers.
 - Coordinate drawings between trades
 - Lafayette College is Tax Exempt
 - Insurance
 - See contract for insurance requirements.
 - 01 56 39 Temporary Tree and Plant Protection
 - Minimum plant protection specifications shall include:
 1. Install a four to eight foot high, wood or metal fence installed at or beyond a plants drip line.
 - i. The drip line is an imaginary vertical line extending from the outermost portion of the tree canopy to the ground. The drip line or critical root area of the plant is the green boxed area. The red boxed area is the structural root area. Damage to any roots in this area is usually fatal to the tree and may leave the plant unstable.

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2. This area may also be defined as the product of the tree trunk's diameter in inches at a height of 4.5 feet x 1.5, expressed in feet. Protective barriers should be installed outside this area of the tree's protected root zone.
 3. Install eight to twelve inches of organic mulch over the critical root zone for protection and for water retention. Refrain from piling the mulch with-in six inches of the base of the plant.
 4. Provide adequate signage indicating the area is a landscape protection zone and no entry or use of area is allowed.
 5. Provide a water source to ensure the root zone is kept adequately moist. Who is responsible for applying the water must also be determined.
 6. Locate lay down areas, equipment, or vehicle storage areas, and parking areas away from valuable plant material.
 7. Do not allow portable toilets to be staged under or near protected landscapes.
 8. Prevent any spills from occurring near protected landscape areas. Do not allow cement trucks or masonry operations to occur near these areas. Do not allow cement trucks to clean out near drainage ditches, trees or shrubs. Quickly clean up and restore any area where spills have occurred.
 9. Do not allow any trenching, excavation or storage with in the tree protection zone.
 10. Utilities should be routed around the critical root zone. However, if the utilities must be located in the critical root zone area, boring or tunneling, rather than trenching should be performed.
 11. If vehicles or construction equipment must travel over the critical root zone area, adequate drive ramps must be used in addition to the mulch.
- **02 00 00 – Existing Conditions**
 - Design standards to be determined on a per project basis.
 - Any existing utilities on the College’s campus should be noted and drawn on construction documents
 - **03 00 00 - Concrete**
 - Design standards to be determined on a per project basis.
 - **04 00 00 - Masonry**
 - Design standards to be determined on a per project basis.
 - 04 05 23.19 Masonry Weepholes & Vents
 - Hohmann & Barnard, Inc. – QV Quadro Vent
 - Brick cavity wall weeps shall be plastic cellular type inserts
 - Advanced Building Products – Mortar Maze Cell Vents
 - No cotton wick systems allowed, unless being used in retaining / site walls
 - 04 05 23.16 Masonry Embedded Flashing
 - Where coping stones are shown, any flashing is to enclose anchor pin
 - 04 05 23.17 Brick Unit Paving (Quad Project)
 - Manufacturer: Glen-Gery
 - Heavy Vehicular Clay Paving Brick, without frogs or cores
 - Color - Lafayette Blend (60% Red, 30% Cypress & 10% Brown)
 - Finish - Chamfered Edge
 - Size - 4” x 8” x 2¼”
 - Concrete Sand for joint infill
 - Additive: caulk polymeric sand
 - 04 05 23.18 Stone Paving (Quad Project)
 - “True Blue” Bluestone Pavers sourced from Endless Mountain Stone

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- Top Face Finish, Thermal
 - Side Finish, Sawn
 - Thickness, 2¼” inch thick
 - Size, 18”x18”
 - Color, Blue to Grey to Green
 - Mason Sand for joint infill
 - 04 05 23.19 Stone Curbs (Quad Project)
 - Virginia Mist, sourced from North Carolina Granite
- **05 00 00 - Metals**
 - Design standards to be determined on a per project basis.
- **06 00 00 - Wood, Plastics & Composites**
 - Design standards to be determined on a per project basis.
- **07 00 00 - Thermal & Moisture Protection**
 - 07 24 00 - Insulation
 - Design standards to be determined on a per project basis.
 - 07 31 26 - Slate Roofing (McKelvey House, DKE)
 - Vermont Structural Slate Co. – “Hendricks”, semi-weathering, 16”x8”x1/4”
 - Camara Slate Co. – Vermont Black
 - Vermont Grey Black (approximately 20% less than Vermont Black)
 - 07 32 00 - Roofing Tiles (Kirby Hall, Van Wickle)
 - Preferred Manufactures: Ludowici – Celadon Co.
 - 07 54 19 - PVC Roofing (Hugel Hall at tower)
 - Preferred Manufactures: Carlisle Corp.
 - “Thru-color” and heat welded joints
 - All roofing shall be 20-year warranty minimum; flat roofs shall be tapered configuration – no standing water.
 - 07 72 53 - Snow Guards
 - Required at walkways, or similar paths, and exits when below a sloped roof. To be installed per manufacturer’s recommendations.
- **08 00 00 - Doors/Frames/Hardware & Windows**
 - 08 11 00 - Metal Doors & Frames (Insulated)
 - Preferred Manufacturers: Pioneer Industries Div., Core Industries Inc., Republic Builders Products, Desco Corp.Ceco Fenestra
 - 08 14 00 - Wood Doors
 - Preferred Manufacturers: Algom, Eggers, Marshfield, Lambton
 - 08 31 00 - Access Doors
 - Preferred Manufacturers: Bilco Co.
 - 08 31 16 - Access Panels
 - Recessed Flanged – prepped for 7-pin Best lock core
 - 08 40 00 - Entrances & Storefronts
 - Preferred Manufacturers: Kawneer and YKK
 - All glass shall be insulated
 - 08 50 00 – Windows
 - Windows in residence halls should have security screens
 - 08 52 00 - Wood Windows
 - Preferred Manufacturers: Andersen Corp, Marvin Windows, Pella
 - All glass shall be insulated
 - All windows shall have sash limiters restricting opening to that required by local code official.
 - 08 62 00 - Unit Skylights
 - Preferred Manufacturers: Velux-Arnerica, Inc.
 - 08 70 00 - Finish Hardware
 - Stanley Best Security Solutions
 - Mortise Locks – 45H7 Series
 - Office = 45H7AT or 45H7T, Storerooms = 45H7D, Classrooms = 45H7T, Dormitories = 45H7T, - For security reasons, may be used for

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Classrooms/Seminar rooms, Dormitory “Student Rooms” = 45H7T3J (626 finish),
 Passage = 45H0N, Privacy = 45H0L (used for single occupant restroom)

- Cylindrical Locks
 - Lever Type = 93K (lever handle preferred: 14D or 14L) Office, Entry, Storeroom & Classroom functions
- Tubular Deadbolts
 - 82T, 83T Series
 - Single cylinder: 83T7K, General Use
 - Single cylinder: 83T7S, Restroom use, multi-user, when push-pull door hardware is used.
- Student Room & Offices
 - Cylindrical lever: ND92BD X RHO X 626 Entry lock
 - Must be a 7-Pin Best Lock core
- Schlage Lock Co.
 - Student rooms: ND92BD X RHO X 626 Entry lock, must accept a 7 pin “Best lock Core”!
- Oaks Security Group, LLC
 - Student Rooms: G-1 Cylindrical Lever Lockset (Lost Motion) 1CL3-EB-1-H2-A-626-LM “Must accept a 7 pin “Best lock core”! Office, Entry, Storeroom & Classroom functions
- Panic Devices
 - Von Duprin: Panic devices:
 - Exterior Doors: 99NL, with desired outside trim, always locked when closed, key retracts latch, can be dogged down with standard dogging key
 - Exterior Doors: 99NLCD, cylinder dogging, can be kept unlocked by turning key on inside of panic device
 - Exterior Double Doors, same as above, but latches to keyed removal mullion between the doors (preferred method)
 - Exterior double doors, concealed vertical hardware – 9947, or surface mounted 9927.

***All can be used on interior doors as required, trim choice may differ**
**** Preferred**
- Cylindrical Locks: ****Preferred****
 - Lever Type: 93K (Lever handles preferred: 14D or 14L) Office, Entry, Storeroom & Classroom functions (****LM Lost Motion Function****), must accept a 7 pin SFIC “Best Lock Core”
 - Schlage Lock Co. ****Student rooms: ND92BD X RHO X 626 Entry Lock (** LM Lost Motion function**), must accept a 7 pin SFIC “Best Lock Core”**
 - Oaks Security Group, LLC ****Student rooms:G-1 Cylindrical Lever Lockset (Lost Motion) 1CL3-EB-1-H2-626-LM, must accept a 7 pin SFIC “Best Lock Core”** Office, Entry, Storeroom and Classroom Functions
- Tubular Deadbolts:
 - 82T, 83T Series
 - Single Cylinder: 83T7K, General Use
 - Single Cylinder: 83T7S, Restroom use, multi-user, when push/pull door hardware is used
- Gender Neutral Bathroom Deadbolts:
 - Arrow E50 Occupancy Indicator Deadbolt
- If Necessary To Use Mortise:
 - Mortise Locks: 45H7T
 - Functions Used:
 - Office: 45H7AT or 45H7T

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- Storeroom: 45H7D
- Classroom: 45H7T
- Dormitory: 45H7T-For security reasons, may be used for classrooms/seminar rooms
- Dormitory: Student Rooms 45H7T3J(626 finish) (Please see preferred**)
- Passage:45H0N
- Privacy:45H01 (Used for single occupant restroom)

- Electronic Access Standards (All exterior doors)
 - Door Controllers
 - Preferred = SoftwareHouse iSTAR Ultra 8 Door Controller (Expandable up to 16 doors)
 - Alternate = SoftwareHouse iSTAR Edge 2 Door Controller (1 door POE & 4 door also acceptable)
 - RFID Card Readers (Wired, Exterior Entries)
 - Preferred = Salto XS4 WRMx001, Mifare card format (must use if offline locks are used)
 - Alternate = Salto XS4 WRMx001FS, Mifare card format (for mullion mounting)
 - Alternate = HID RP40 multiCLASS Reader
 - Alternate = HID RP15 multiCLASS Reader (for mullion mounting)
 - RFID Card Reader (Offline, Bedrooms, Classrooms, Labs, Etc...)
 - Preferred = Salto XS4 Offline Lock, Kyy Override Option, Cylindrical, Mifare Card Format
 - Alternate = Salto XS4 Wireless Lock, Key Override Option, Cylindrical, Mifare Card Format (Requires Gateway)
PLEASE USE CYLINDRICAL LOCK WHENEVER POSSIBLE.
MORTISE LOCK IS ACCEPTABLE IF CYLINDRICAL CANNOT BE USED
 - Power Supplies
 - Preferred = Altronix AL600ULACM – 12VDC or 24VDC – Depending on power requirements, more than one may be needed
 - Electric Lock/Unlock
 - Preferred = Von Duprin 99 Series Electric Panic – (Requires dedicated Power Supply)
 - Preferred = HES 9600 Electric Strike (use HES 9400 for slim line version)
 - Preferred HES 4500 Series Electric
 - Alternate = HES 8500 Series Electric Strike
 - Alternate = HES 8000 Series Electric Strike
 - Door Contacts
 - Preferred = Sentrol 1076C, White, ¾”, Flush, SPDT
 - Alternate = GRI 190-12W, White, ¾”, Flush, SPDT
 - Alternate = Sentrol 1087T, White, Surface, SPDT, Screw Terminals
 - Request to Exit
 - Preferred = Kantech – T.REX-LT
 - Alternate = Securitron XMS
 - Prop Alarm Annunciators/Sounders
 - Preferred = System Sensor SpectrAlert Advance
 - Model No MHW-12/24VDC Mini-Horn, White
 - Alternate = Gentex
 - Model No. GX91-W-12/24VDC Mini Horn, White

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- **09 00 00 - Finishes**
 - 09 22 26.23 - Metal Suspension Systems
 - Preferred Manufacturers: USG Interiors, Inc. (USG Corp.), Armstrong
 - 09 24 00 - Portland Cement Plaster/Stucco
 - Preferred Manufacturers: Thoro System Products
 - 09 29 00 - Gypsum Board
 - Preferred Manufacturers: Georgia-Pacific Corp., USG Corp., National Gypsum Co.
 - Consider use of high impact gypsum board in high traffic areas
 - 09 30 13 – Porcelain Ceramic Tile
 - Design standards to be determined on a per project basis.
 - 09 50 00 – Ceilings
 - Preferred Manufacturers: Armstrong
 - 09 65 00 - Resilient Flooring
 - Preferred Manufacturers: Armstrong World Industries, Inc., Congoleum Corp., Kentile Floors, Inc.
 - 09 65 13.13 – Resilient Base
 - Rubber Cove base
 - Preferred Manufacturers: Roppe
 - 09 90 00 - Painting
 - Preferred Manufacturers: Sherwin Williams Co., MAB,
 - Eggshell finish, walls and semi-gloss trim
 - Interior – Acrylic Latex
- **10 00 00 - Specialties**
 - 10 21 13.19 – Plastic Toilet Compartments
 - Preferred Manufacturers: Santana - Phenolic type (DKE)
 - Support – Ceiling mounted or wall mounted
 - 10 22 39 – Folding Panel Partitions
 - Preferred Manufacturers: Modernfold, Inc.
 - Models: Moveo (OCGE), Acousti-Seal (Marquis Hall)
 - 10 28 00 – Toilet, Bath & Laundry Accessories
 - Mounting heights to comply with current ADA standards
 - Electronic Dual Flush – Sloan RESS-C-1.6/1.1
 - Furnished by Lafayette, Installed by Contractor
 - Toilet Tissue – SanJamar R4090TBK, 9” Double Roll Dispenser Surface Mount
 - Paper Towel - Sanjamar 1290 TBK Lever Roll Paper Towel Dispenser Surface Mount
 - Consider use of hand dryers in renovations and new constructions
 - Soap - GoJo 800mL (27oz.) Wall Mount Dispenser Surface Mount
 - Feminine Napkin – A&J Washroom U510 Surface Mount
 - 10 44 16 - Fire Extinguishers
 - Preferred Manufacturers: Amerx, Badger
 - No Kidde Extinguishers or extinguishers with plastic heads or plastic body.
 - All mountable extinguishers must use heavy-duty spring mounts.
 - Fire extinguishers in residence halls shall be in enclosures with door alarms.
 - J L Industries ABC Fire Extinguisher Cabinets with lock. White Baked Enamel Vigilante Cabinet Alarms - Recessed Cabinets with Cameo bubble lens to enhance visibility in hallways.
 - 10 51 00 - Lockers
 - Preferred Manufacturers: Hadrian Manufacturing, Inc., Lyon Metal Products, Inc., Penco Products, Inc., Republic Storage Systems Co. (219 N. 3rd St.)
 - 10 56 13 – High Density Storage Shelving
 - Preferred Manufacturers: Space Saver Corp.
- **11 00 00 – Equipment**
 - Design standards to be determined on a per project basis.
- **12 00 00 - Furnishings**
 - Design standards to be determined on a per project basis.

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- Miscellaneous
- 12 46 33 – Interior Furniture
 - Waste Receptacles
 - 2 garbage cans per 20-30 students (28-gallon capacity)
 - 1 recycling can per 20-30 students.
- 12 49 00 – Window Treatments
 - Roller shades used in residence halls (Grossman House, DKE)
- 12 93 00 Site Furnishings
 - Trash Receptacles
 - DuMor (800-598-4018), Receptacle 102, 22gal, Galvanized Steel, Polyester Powder Coat, Black
 - Bike Rack
 - DuMor (800-598-4018), Ribbon Rack (Model 125-30), Galvanized Steel, Polyester Powder Coat, Black
 - Outside Benches
 - Preferred Manufacturers:
 - Country Casual (800-289-8325), “Windsor”, 5’ long, Stainless steel hardware and ground anchors, hardwood teak
 - DuMor, Inc., 120 series, 6’ long, zinc epoxy with polyester powder coating (Grossman House, 219 N. 3rd St)
 - Campus Blue Phone
 - Concrete footing, two 1” conduits for 120V Power feed & CAT 6 feed to base. Post, box, phone and light will be furnished and installed by the College.
 - Preferred Manufacturer: Ramtel
 - Contact: 115 Railroad Avenue, Johnston, RI 02919; Charlene L. Slidkevich @ 401-231-3340 x225
 - Parking Deck – RR733; Dormitories – RR734
- **13 00 00 - Special Construction**
 - Design standards to be determined on a per project basis.
 - 13 85 00 - Fire Alarm System
 - Simplex (panels) No pyrotronics – Addressable–Sounder Bases in student rooms.
 - Residence Halls/Academic Buildings – visual annunciation and voiceover capabilities
 - Whelen sirens, or equivalent, for mass communication through voice circuits
 - 13 86 00 - Burglar Alarm Systems
 - Preferred Manufacturers: Moose Inc. – R.S. Security, ITE, R.S. Security
- **14 00 00 - Conveying Systems**
 - 14 20 00 - Elevators
 - Tamper resistant devices to be provided.
 - Recommended Specification: Dover Elevator Systems, Inc. - Marquis 25 Series
 - Alternate Manufacturers: Thyssen Krupp, KONE or Otis
- **21 00 00 – Fire Suppression**
 - Design standards to be determined on a per project basis.
- **22 00 00 – Plumbing**
 - Design standards to be determined on a per project basis.
 - 22 14 26.13 Roof Drains
 - Roof surface water to be piped directly to storm sewer (No dumping of water on ground.)
 - 22 33 00 - Hot Water Heaters
 - Instant Hot units to be used in administrative buildings, in lieu of “house” hot water heater and associated piping
 - Preferred Manufacturers: Aerco, Bradford White, A.O. Smith
 - 22 40 00 – Plumbing Fixtures General
 - Hand sinks
 - Integral bowl flush to counter
 - Mop sinks.

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- All mop sinks are to be floor mounted units to minimize lifting.
 - FIAT Products MSBID2424 (Marquis Hall)
- 22 41 00 – Miscellaneous Equipment & Accessories
 - Utility Fixtures
 - American Standard - #7695.018 Arron
 - American Standard - #8379.026 Rim Guard
 - American Standard - #8341.075 Faucet
 - Kohler
 - Hose bib on roof within 10' of rooftop HVAC equipment.
 - Plumbing Accessories
 - Preferred Manufacturers: A.O. Smith, Aerco, Nibco, Bell & Gossett, Sarco
 - Roof drain piped to sanitary sewer line
 - HVAC equipment cleaning in 10' vicinity of equipment (Chemical wash can't go into roof/storm drains.)
 - Floor trap located at floor drain
 - Fittings, Trim, & Accessories
 - Preferred Manufacturers: American Standard, Moen, Inc., Sloan Valve Co., Sarco, Kohler
 - Electronic Dual Flush – Sloan RESS-C-1.6/1.1
- 22 41 13.13 – Water Closets
 - American Standard - #6560.015 Timberook
 - American Standard - #3351.101.020 (Marquis Hall)
 - American Standard - #0476.028 Aqualyn
 - American Standard - #0373.050 Penlyn
 - Gerber, Kohler (no Toilets)
 - Sloan Royal - #186 Water Saving Flush Valve
 - Delta Model 500 Washerless Single Handle
 - Gerber
- 22 47 19 - Water Station Water Coolers with bottle filling stations
 - Preferred Manufacturers: Elkay exH2O Bottle Filling Station Single ADA Cooler Model LZS8WSSK
- **23 00 00 – Heating, Ventilating & Air Conditioning (HVAC)**
 - 23 22 00 – Steam & Condensate Piping & Pumps
 - Preferred Manufacturers: Ricwill Inc., Galva Guard,
 - Foam glass insulation
 - Exterior: Condensate –Stainless steel
 - Interior: Carbon steel pipe
 - Schedule 40, insulated
 - 23 70 00 – Central HVAC Equipment
 - Preferred Manufacturers: Trane, Carrier, York
 - No steam from plant to be used for humidification; all heat rejection shall be on roof and hidden; air-cooled heat rejection preferred.
 - 23 81 16 - Room Air-Conditioners
 - Preferred Manufacturers: G. E.
 - 23 82 33 – Convectors
 - Hot water steam convectors
 - Preferred Manufacturers: Bell and Gossett
- **25 30 00 – Integrated Automation Instrumentation & Terminal Devices**
 - 25 35 00 – Integrated Automation Instrumentation & Terminal Devices HVAC
 - Proprietary vendor: Siemens
 - All terminal controllers shall be Siemens
 - Provide visibility from Siemens systems to space thermostats
 - Finish color: white

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- Refrigerant Leak Monitor
 - Preferred Manufacturer: Bacharach Diffusion Style
- **26 00 00 - Electrical**
 - Residence Halls shall have a dedicated 20-amp service for each student bed
 - Copiers/Printers shall have dedicated 20-amp breakers
 - Surface mounted conduits or raceways are not permitted unless expressly approved in writing by the Director of Facilities Planning and Construction.
 - 26 05 00 – Common Work Results for Electrical
 - Preferred Manufacturers: Hubbell, Leviton, Leviton (Occupancy Sensors), Hubbell (Base Track Wire Raceway, IBM Mini C Jacks (Data Receptacles)
 - Motors & Generators
 - Less than ½ HP, 120V, Single Phase
 - Over ½ HP – 208V
 - Gas-fired only; circuits for life/safety and health only.
 - Generator Assemblies
 - Preferred Manufacturers: Kohler, Caterpillar, MTU
 - Transformers
 - Preferred Manufacturers: Westinghouse, General Electric
 - Dual voltage primary – 4160/2400V
 - Medium Voltage Switching & Protection
 - Preferred Manufacturers: Square D, Siemens, Allen-Bradley
 - Minimum 25% spare capacity; all panel boxes shall have means of accessing spares from all sides (knockouts on all sides of box.)
 - Lighting & Accessories
 - Design standards to be determined on a per project basis.
 - Outlets and other device finishes: white
 - Outdoor Lighting
 - Preferred Manufacturers: Spring City Elec. Mfg. Theimpa103– DDT Iron Post with the EFFS-M9-Luminaire (Drawing #LP-25832)
- **27 00 00 – Communications**
 - 27 20 00 - Data Communications
 - See IT/AV/FIBER OPTICS.
- **28 00 00 – Electronic Safety & Security**
 - 28 31 00 – Fire Detection & Alarm
 - Simplex – Addressable-Sounder Bases in student rooms.
 - Fire alarm – Remote enunciator required
- **31 00 00 - Earthwork**
 - Dumpsters Storage Areas
 - Storm drain is required in the dumpster area.
 - Reinforced Turf where required by Fire Department for fire truck access
 - Shall support 40,000 lbs per Sq. Ft with a deflection of no more than 1”.
- **IT / AV / FIBER OPTICS**
 - General Notes
 - All work is to be completed by the contractor, unless noted as being provided by College.
 - A 24-strand single mode fiber optic feed, with SC connectors, from building’s computer room to nearest switch is required for IT.
 - A 24-strand multi-mode fiber optic feed, with SC connectors, from building to nearest panel is required for Fire Alarm panel. Fire Alarm panel is to be either Simplex 4010 with voice signaling or 4100ES with voice signaling.
 - Provide 50 pair copper into a new building for Whelan, Keltron, Future, VOIP analog phones, etc.
 - Provide one (1) Power and Data drop for each machine at vending areas.
 - Provisions to be made for Simplex Door access controls on all exterior doors, including one data drop at each opening.

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- The eight (8) drops at a Smart Podium should be terminated in a single quad box, using a Siemons faceplate.
- Provisions to be made for Siemens HVAC Controls' Building Management data points, including any necessary data drops
- There is no need for IT closets on each floor, provided data runs do not exceed 100 meters (328lf).
- A single IT room in the basement is preferred at 8'x10' up to 10'x10'
- Data drops to be 18" above finish floor (typical)
- The College uses VOIP handsets, which are wired via network data drops. Any analog telephones need to be wired back to network rack using standard network drops.
- The College uses IP Cameras, which are wired via network data drops. Any analog telephones need to be wired back to network rack using standard network drops.
- Computer rack to be furnished and installed by contractor
- A Dedicated 20amp circuit on the emergency generator is to be provided at computer rack.
- The College will provide Wireless Access points and contractor will install
- The contractor is to provide the cabling tray
- The contractor is to provide Patch Panels and the College will provide patch cables.
- The contractor must be certified in Siemons data terminations
- The contractor is to provide all cabling and terminations
- The contractor is to label all cabling at the wall and patch panel
 - The contractor to provide as-built documentation on network drop wall jack patch panel installation.
- The contractor is to provide a letter confirming that all terminations have been completed and tested in accordance with the contract documents.
- The following contractors are approved to perform data installations for the College
 - Westside Hammer
 - Tri-M Group LLC
 - Shelly Communications
 - Berks Telecom
- Parts List where applicable
 - Chatsworth 2 post black aluminum 19" EIA Rack 45 RMU
 - Graybar part number 94058665
 - Mohawk or Siemons Cat 6 cable is acceptable for all data cabling
 - Graybar part number 99569206
 - Mohawk cat 6 non-plenum cable is acceptable for all data cabling
 - Graybar part number 99569209
 - 24 strand single-mode fiber indoor/outdoor riser rated
 - Graybar part number 22120115
 - Cat 6 flat network jacks to be used at wall jack and patch panel
 - Siemon 16 port blank patch panel, Graybar part number 97221932
 - Siemons MX6-F20, Graybar part number 99423981
 - Corning LIU tray
 - Graybar part number 22085201
 - 12 fiber SC coupling panels (Single mode)
 - Graybar part number 97221942
 - Single gang 1 port face plate
 - Graybar part number 96068930
 - Single gang 2 port face plate
 - Graybar part number 96080841
 - Single gang surface box 1 port
 - Graybar part number 25072155
 - Single gang 4 port MX-FP-S-01-20 face plate
 - Graybar part number 96080839
 - Double gang 8 port MX-FP-D-08-20 face plate
 - Graybar part number 96086105

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- Blanks (bag of 10) MX-BL-20 face plate blanks
 - Graybar part number 96080829
- SC fiber tips SM
 - Graybar part number 25314192
- Fan out kit 12 fiber
 - Graybar part number 94010572
- Single sided 3” wide vertical wire manager
 - Graybar part number 96048698
- Siemons LIU Trays
 - 24 strand - Graybar part number RIC3-24-01
 - 36 strand - Graybar part number RIC3-36-01
 - 48 strand - Graybar part number RIC3-48-01
 - 72 strand - Graybar part number RIC3-72-01
- SC Coupleing adapters
 - Graybar part number RIC-F-SC6-01
 - Graybar part number RIC-F-SC8-01
 - Graybar part number RIC-F-SC12-01 SC
- Typical Design Requirements
 - Lecture Halls
 - Wireless Access Points in Ceiling (Quantity = 2) – Data Drop
 - POE (Powered over Ethernet), no electrical required (typical)
 - Smart Podium (Quantity = 1) – Eight (8) Data Drops and power required
 - Projectors in Ceiling – Data Drop and power required
 - No data required at student desks, as access will be provided via wireless
 - Computer Labs
 - Computer Seats – Data Drop and power required at each seat
 - Printer (Quantity = 1) – Data Drop and power required
 - Security Camera (Quantity = 1) – Data Drop
 - POE (Powered over Ethernet), no electrical power required (typical)
 - Seminar Rooms
 - Smart Podium (Quantity = 1) – Eight (8) Data Drops and power required
 - Projectors in Ceiling – Data Drop and power required
 - Provide one additional Data Drop on each wall
 - Research/Flex Space/Offices
 - Provide two additional data drops in Research/Flex Space for CBLR use
 - Provide one data drop (VOIP/Data) at desk in Office
 - Public Spaces/Corridor Notes
 - Provide one data drop and power at Display Walls
 - Wireless Access Points in Ceiling (Quantity = 2) – Data Drop
 - Classrooms
 - Wireless Access Points in Ceiling (Quantity = 2) – Data Drop
 - Smart Podium (Quantity = 1) – Eight (8) Data Drops and power required
 - Projectors in Ceiling – Data Drop and power required
 - No data required at student desks, as access will be provided via wireless
 - Workrooms - Provide three (3) data drops for printers, etc.
 - Offices & Administrative Assistants - Provide one data drop at each desk
 - Conference Rooms
 - Provide One (1) Data drop for Plasma Display
 - Provide two (2) Date drops for general use