

Division 01: General Requirements

The following are special provisions to acquaint the A/E and General Contractors with requirements specific to working at Old Dominion University. The A/E is responsible for incorporating these requirements noted herein into the contract documents as applicable.

01.1. Definitions

- a. General Contractor refers to both the Construction Manager at Risk and the prime general contractor for bid projects.

01.2. Summary of the Work

- a. The A/E shall provide a written "Summary of the Work" section within the specifications. In FM projects, where specifications may be included on the drawings a written "Summary of Work" shall also be provided. The Summary of Work shall indicate the following:
 - i. General description of all work including exterior work required for each trade. Provide a brief, but complete description to indicate the full scope of work for each contract. The proposed use for the building should be explained. Concurrent occupancy of adjacent buildings, or parts of a renovated building should be noted. Specific details and requirements for the project should be noted here. Individual specifications' work scope must be coordinated with this overall summary.
 - ii. Provide a list of separate contracts, if any, which are involved in the project.
 - iii. Identify any additional work outside the scope of the General Contract that will be performed concurrently with the project, by other contractors or the University, advise the contractors that coordination and cooperation with this work will be required.
 - iv. Identify University furnished items and any related work required of the general contractor.
 - v. Identify items to be salvaged or removed from existing structures by the University, and items to be salvaged by the Contractor then turned over to the University. Identify these items on the drawings as appropriate. Indicate where salvaged materials are to be delivered to.
 - vi. Project conditions such as occupation of buildings, limited scheduling for utility connections, and special events of the University must be defined.
 - vii. When directed by the ODU Project Manager, the summary of work shall include specific language identifying the project schedule including the substantial and final completions dates.

01.3. Work by the University

- a. Work by University may include, but not necessarily be limited to, the following:
 - i. Data and Communications infrastructure and cabling. See **APPENDIX S – TELECOMMUNICATIONS PATHWAYS AND SPACES**
 - ii. Install, terminate (at user and in telecom closet) and test all Category Cabling throughout the building. (twisted Pair Cat6)
 - iii. Install access control cable.
 - iv. Install Copper Backbone to adjacent building.
 - v. Install Copper Riser to join multiple closets.
 - vi. Terminate and test all Copper Riser and Backbone Cabling.
 - vii. Install and ground lightning protection for Copper Backbone
 - viii. Provide and install dial tone for Elevator phones. (final connection to elevator equipment is performed by the general contractor)
 - ix. Install Fiber Optic Backbone (Single Mode and Multi-mode) – diverse paths out of the building.

- x. Install Fiber Optic Riser cabling to join multiple closets.
 - xi. Install Fiber Optic Riser to FACP panel
 - xii. Terminate and test all Fiber Riser and Backbone.
 - xiii. Install Telecommunications Racks
 - xiv. Install all rack hardware, to include patch panels and Fiber housing systems.
 - xv. Install cable tray inside Telecommunications Room.
 - xvi. Ground communications cable tray and racks inside Telecom Room.
 - xvii. Provide Telecom room layout and power specs.
 - xviii. Install cable TV system.
 - xix. Install VOIP gateway system.
 - xx. Install security cameras
 - xxi. Install Wireless access points.
 - xxii. Provide drops cables for PC connections.
- b. Work by Owner shall be confirmed, on a project by project basis, with the ODU Project Manager.

01.4. Standard Work Hours

- a. Standard work hours are as follows:
Monday – Friday: 7:00 AM to 5:00 PM
Weekends and Holidays: 8:00 AM to 5:00 PM
- b. Contractors, on a case-by-case basis, may schedule work either earlier or later than the listed times to accommodate material delivery or to avoid disruption to normal university operations. Such times must be approved by the ODU Project Manager/Project Inspector and shall be communicated no less than 48 hours in advance.
- c. Special Work hours should be considered during estimating, as some projects may require construction at times other than the standard hours noted above.
- d. Official ODU observed holidays can be found on the ODU website.

01.5. No-Work Days

- a. There are times during the academic year that noisy, disruptive construction work should cease because of the potential negative impact to students and/or faculty. The following days shall be incorporated into the construction schedule and reviewed with the ODU Project Manager on a project by project basis.
 - Residence Hall Move-in Days
 - Reading Days
 - Exams Days
 - Commencement
 - Athletic Events
 - ODU Closure for Weather Related Events
- b. The academic calendar is available on the ODU website. Coordinate design and construction schedules, up front, with the academic calendar.
- c. Work done in existing buildings shall require careful coordination of work hours so as not to disrupt ongoing classes, research or office operations. Work adjacent to residence halls may require an adjustment to the standard work hours. Coordinate any changes to the construction work hours with the ODU Project Manager.

- d. The ODU Project Manager is responsible for communicating and coordinating any disruptive activities on campus with the Assistant Directors (3) in Facilities Management.
- 01.6. Coordination work that impacts University Operations
- a. Traffic flow shall be maintained at all times. If traffic flow must be interrupted, the contractor will notify the ODU Project Manager and the university fourteen (14) days prior to the disruption. This includes, but is not limited to, pavement repair and/or deliveries. The contractor will be required to provide a traffic control and pedestrian safety plan. The plan shall be coordinated with the City of Norfolk when blocking access to a public street or city right of way. The contractor is responsible for obtaining the necessary permits from the City of Norfolk. Deliveries to the construction site should be avoided during home football games, residence hall move in and move out days or university graduations.
 - b. The ODU Project Manager shall ensure that disruptive activities are **posted in the University Announcements at least 48 hours in advance.**
 - c. The ODU Project Manager shall keep the Director of Transportation and Parking up to date on the timing of lot / street or other closures and/or disruptions that may impact the student faculty and staff including impacts to the shuttle bus. Street debris including mud and spillage caused by the work shall be removed immediately. Failure to clean public and University streets and/or rights of way may result in the University performing the work and back charging the contractor.
 - d. Repair of damaged streets, roads, or other facilities shall be the responsibility of the General Contractor, at no expense to the University. Work shall be performed to the satisfaction of the University and the City of Norfolk, as applicable.
 - e. Washout of concrete equipment or contamination by any construction products anywhere on University property is strictly prohibited.
 - i. The same requirement is expected during design phases where the A/E intends to do any site or existing building investigative work.
- 01.7. Emergency Contact Information
- a. The Contractor and the ODU PM shall compile a comprehensive list of management personnel assigned to the project from the Contractor and the A/E. The list shall also include contact information for ODU Public Safety, Fire, Facilities Management and any other key personnel. The appropriate 24-hour emergency point of contact shall be provided for each entity.
- 01.8. Safety & Security
- a. Jobsite Safety & Security is the contractor's responsibility. The Contractor shall provide written project specific safety & security protocols to the project to the ODU Project Manager for review and approval. The approved safety and security plan shall be presented at the construction kick off meeting.
 - b. Entrances and exits for the public must be maintained during periods of joint occupancy.
 - c. Keys or key cards may be provided to the General Contractor by the University for renovation projects. The General Contractor shall be responsible for coordination of access by all trades, and shall return the keys upon completion. See **APPENDIX AD – CONTRACTOR KEY REQUEST** for additional information.
 - d. The general contractor is responsible for confirming his and his subcontractor's personnel are wearing the appropriate safety gear including, but not limited to, hard hats, safety glasses, appropriate footwear, safety vests, etc.
- 01.9. Worker Behavior and Decorum
- a. Contractor's personnel shall refrain from contact with students, faculty and staff other than as necessary for the execution of their contract responsibilities. Specifically banned is contact in the form of

harassment, whistles, cat-calls, comments gestures or any form of uninvited communication. Any breach of this policy will result in immediate and permanent removal of the offender from the project site.

- b. Contractor is responsible for ensuring all workers, whether a subcontractor, vendor, or contractors staff, are dresses appropriately. Offensive slogans or words on any portion of a workers attire, at the university's sole discretion, will not be allowed and will result in immediate and permanent removal of the offender from the project site.
- c. The Contractor is responsible for communicating to workers that the appropriate safety gear is worn while on the job site, including, but not limited to hard hats, safety glasses and safety vests. Individual workers are responsible for their own personal safety gear. The contractor shall document each instance of failure to wear appropriate gear while on the job site and shall establish, at the project's inception, the number of offenses allowed prior to the immediate and permanent removal of the offender from the project site.

01.10. Contractor Parking

- a. Refer to the **ODU PARKING AND TRANSPORTATION** website for Vendor and Contractor parking permit requirements. The A/E and the Contractor are responsible for providing parking for their personnel. Any costs associated with parking off site shall be anticipated and included in cost estimates as well as final bid numbers. Parking is not allowed on grassed/planted areas or on sidewalks. Vehicles shall not block any means of access or egress. Vehicles shall not block fire truck access to any buildings on campus.

01.11. The ODU Project Manager shall coordinate with the Director of Transportation and Parking, the date when onsite parking spaces become the university's to control and subject to ticketing.

01.12. Staging Plan

- a. Staging Plans are required for all projects, whether large Capital projects or small Non-Capital renovation projects. For smaller non-capital projects key factors are contractor parking and identifying construction entrances, and a construction delivery plan.
- b. Contractor shall submit to the ODU Project Manager a written and graphic plan for staging of demolition work, staging of work, layout and location of material staging areas, and the location of dust prevention partitions within seven (7) calendar days from the Notice to Proceed date. The Plan shall be reviewed, revised as required and approved by the ODU Project Manager prior to initiation of work at site. The ODU Project Manager will share the staging plan with the Director of Facilities Management.
 - i. The staging plan shall include indications of what parking, if any, will be within the project's construction fencing. Vehicles parked within the construction fence do not require a campus parking permit.
 - ii. The staging plan shall indicate the location of construction dumpsters, construction trailers, lay down space, materials storage and any other pertinent activities. Staging and lay-down areas are very limited on campus and if additional space is required beyond the construction limits, then the impact of this should be considered in the schedule and cost estimating.
 - iii. Indicate the location of temporary sanitary facilities on the staging plan.
 - iv. Show the limit of the temporary construction fence and gates and construction truck entrances as appropriate.
 - v. The staging plan and ongoing construction activities must take into consideration pedestrian flow and vehicular traffic around the site.

- vi. Identify all fire lanes for the subject property and/or building and fire lanes for adjacent buildings.
 - vii. Crane Plan
 - c. The contractor shall present the staging plan at the construction kick off meeting so that all stakeholders are made aware of the conditions.
- 01.13. Serve Weather Plan
- a. The contractor shall provide a plan for securing the site to ODU Project Manager prior to the onset of a storm event, such as a tropical storm, hurricane, blizzard or nor'easter. The plan will be reviewed with Design & Construction at least 24 hours in advance of oncoming weather. Discuss timing and alternate plans if weather escalates or dissipates.
- 01.14. General Contractor's Representative
- a. The General Contractor's representative shall be present in the field office or on the building site at all times during the work.
- 01.15. Construction Dumpsters
- a. All dumpsters used on site during construction shall have a securable cover or lid provided by the contractor. The cover/lid shall be secured (from wind and rain) at the end of each day and verified by the ODU Project Inspector.
 - b. Construction debris and waste shall not be dumped into ODU's trash site.
- 01.16. Rain Gauge
- a. The General Contractor shall provide a rain gauge secured to the construction trailer. The ODU Project Inspector shall record the rain accumulation each day on the daily report.
- 01.17. Field office
- a. All new building construction projects shall require a job site office trailer with sufficient conference space for Owner Architect Contractor (OAC) meetings to be held at a minimum. **Each contractor** may provide its own field office trailer if site area permits. The General Contractor shall show the location of all trailers on the staging plan.
 - b. Job offices **within the building** may be established if the project size warrants, provided that this use does not adversely affect progress. ODU must approve use of the building for temporary office use by the contractors.
 - c. Refer to **CPSM 7.5.17.2.2 INSPECTOR'S USE OF FACILITIES**
 - d. Provide space for state inspectors, with desk and chair on site.
 - e. The use of existing bathroom facilities within renovation projects, by the contractor, shall be approved by the ODU Project Manager prior to the start of construction. The contractor shall be responsible for cleaning existing bathrooms when used by his personnel. At the conclusion of the project, the general contractor shall be responsible for returning the existing bathrooms to the condition they were found, prior to use. If the building is occupied, use of existing restroom facilities is not allowed and the contractor shall provide temporary facilities on site and shown on the staging plan.
- 01.18. Project Identification Sign
- a. The ODU Project Manager will determine, along with the general contractor, the requirement of a project identification sign(s) at the project.
 - b. On renovation projects, the general contractor will post "pardon our dust" signs, refer to **APPENDIX AL – CONSTRUCTION PROGRESS SIGNS**.
 - c. A construction sign will be posted at a location to be determined by the University and shown on the site plan. The cost of mounting and disposing of the sign shall be included in the contractors general

conditions cost. Refer to **APPENDIX O – CONSTRUCTION PROJECT SIGN** for requirements. The Construction sign shall not be fabricated and installed without ODU Project Manager approval. No other project signage or advertising will be allowed without prior University approval.

- d. The sign panels are to be fabricated from ¾" High Density Overlay Plywood. Sign graphics to be prepared on a white non-reflective vinyl film with positionable adhesive backing. Apply graphic panel to prepared HDO plywood panel following manufacturers' instructions. Sign uprights to be structural grade 4" x 4" treated Douglas Fir or Southern Yellow Pine, No.1 or better. Attach sign panel to uprights using a minimum of six (6) .375" T-nuts. Position uprights and sign panels to allow a minimum of 4 feet clear between the grade and the bottom of the sign. Provide additional 2" x 4" struts on inside face of uprights to reinforce installation as necessary.

01.19. Materials and equipment

- a. The University will not sign for, pay for, or otherwise accept materials for any contractors. All shipments are to be addressed and delivered to the project site.
- b. Transportation and handling is the responsibility of the General Contractor. The General Contractor shall control deliveries to the site to avoid congestion of storage and work areas with materials which cannot be installed in a reasonable time.
- c. The specifications shall identify the proper method of storage and protection of building materials and equipment and will include weather tight sheds of sufficient size to store all materials which might be damaged by the weather. All outdoor storage (when permitted by the specification) must be limited to the area within the construction fence. Small sheds shall be painted with one coat of gray paint, consistent for all sheds. Small identification signs are permitted.
- d. Storage of materials within the building shall not obstruct any of the work, or entrances and exits of the building. Material storage within the building must be agreeable to the University.
- e. Storage of University equipment or furnishings may be required shortly before substantial completion. The contractors shall discuss with the university and shall make available large rooms at or near grade level for this use.
- f. Protection of University equipment stored on site is required of all contractors, similar to the protection afforded other contractor's materials and equipment. This includes materials and equipment associated with data and communications installed by the University.

01.20. Temporary Construction Fence

- a. The contractor shall provide a temporary fence surrounding the project site when shown on the construction documents. The fence shall include a lockable construction entrance which shall be identified with appropriate signage and shall be a minimum of 12 feet in width to allow access for emergency vehicles. Gates shall be closed and locked at all times the site is not occupied, unless otherwise directed by the University where emergency vehicle passage through the site is needed to access existing occupied buildings. One Key shall be provided to the Director of Capital Design and Construction and one key to the Director of Operations and Maintenance
- b. The temporary fence shall be at least 6' feet high and shall have a privacy screen on all sides. The screen will have a minimum of 85% privacy, made of knotted HDPE UV Polyethylene fabric in blue with a minimum of a 2 year life span. The fencing shall be of galvanized 11-1/2 ga. chain-link construction with a minimum of 1-5/8" O.D. tubular steel posts and top rails.
- c. The fence screen shall have the name/logo of the general contractor, the Old Dominion University Crown and name as well as signage indicating Construction Site – No Trespassing.

- d. Safety related OSHA signage and site entry rules shall be installed by the contractor as deemed appropriate.
 - e. The contractor shall maintain the construction site for the duration of the project including keeping plant growth around the base limited and trimmed. Construction fencing shall only be removed when directed by ODU.
 - f. Movable, surface mounted fence panels may be used with the approval of the University. These panels shall be adequately braced to resist wind forces and shall be secured to prevent public access.
 - g. Plywood barriers may be needed for closed sidewalks adjacent to construction sites.
 - h. Fencing using razor wire or other similar product shall NEVER be used on campus.
- 01.21. Interior Temporary Partitions and Barriers
- a. Interior temporary partitions are to be specified as part of the design documents and shall comply with the building code requirements for the construction type and occupancy of the existing building. The contractor shall provide spare keys for any temporary locks to the ODU Project Manager in case emergency access is required.
 - b. No work shall take place which obstructs the buildings means of egress without first coordinating with Office of Fire Safety. All attempts must be made to add additional temporary partitions and doors that will redirect exit access travel from a blocked exit to avoid creating dead-end conditions. Refer to the CPSM for additional requirements and approval process.
- 01.22. Temporary Scaffolding and Platforms
- a. All scaffolding must have protection to prevent unauthorized access, such as a lockable plywood surround.
- 01.23. Permits and Shutdowns
- a. The General Contractor shall identify to the ODU Project Manager all shutdowns anticipated for the project within 7 days of the Notice to Proceed.
 - b. Seventy-two (72) hours, excluding weekends, prior to any utility, communication device(s) or HVAC system cut-off, to all or any portion of the project site(s), adjacent university sites, or private properties required by the progress of the Work, the Contractor shall notify the ODU Project Manager in writing of such cut-off or interruption. The notification shall include, but not be limited to, service(s) to be cut-off, the date and time of the cut-off and the anticipated duration of the cut-off.
- 01.24. Hot Work Permit
- a. Hot work permits are required for operations involving open flames or producing heat and/or sparks. This includes, but is not limited to: brazing, cutting, grinding, soldering, thawing pipe, torch-applied roofing, and cadwelding. A hot work permit is valid for only one day. A permit, submitted at least 24 hours prior to the start of the work, must be completed and posted for the duration of all hot work. For safety questions regarding Hot Work Permits, contact the office of Fire Safety at **757- 683-5166**.
<https://www.odu.edu/content/dam/odu/offices/emmgmt/docs/fire/hot-work-permit.pdf>
<https://www.odu.edu/content/dam/odu/offices/emmgmt/docs/fire/hot-work-safety-guide.pdf>
- 01.25. Fire Protection System Shut Downs
- a. Any shut down or disruption of a fire suppression, fire alarm, and other fire protection system shall be coordinated with ODU's Office of Fire Safety and the ODU Project Manager and/or the ODU Project Inspector. A minimum of 7 days advance notification of shut down or disruption is required, along with provision of a fire watch provided by the contractor requesting the outage.

01.26. Electrical Shutdowns

- a. Notify and coordinate all electrical system shut downs with the ODU Project Manager and Assistant Director of Facility Operations And Maintenance. A minimum of 72 hours advance notice is required for any shut down and critical systems may require provision of alternate or temporary power. Sensitive areas, such as research, may require additional time to prepare for a shutdown, coordinate with the ODU Project Manager. It is the A/E's responsibility to identify critical systems during early design phases to determine what shut down requirements are necessary and to include these requirements in the construction documents.

01.27. Temporary Use of Installed HVAC Equipment

- a. The contractor shall obtain prior approval from ODU, the CxA and the A/E to use newly installed or existing HVAC equipment during any drywall, demolition or other similar operations. The contractor shall compile a detailed Temporary Operating and Conditioning Plan provided by all subcontractors involved. The plan shall consider how the ducts and equipment will be maintained, cleaned, filters changed and placed in service (warranty commencement) for review and approval. In general ODU discourages the use of HVAC equipment for dust control during construction.

01.28. Commissioning

- a. Capital Projects shall all receive fundamental commissioning at a minimum.
- b. Non-Capital projects shall receive commissioning as determined by Assistant Director of Engineering. The A/E on Non-Capital HVAC replacement projects should discuss the level of commissioning required with the ODU Project manager and specify same in the construction documents.
- c. Fundamental commissioning is a requirement of LEED and CPSM 6.1.3 High Performance Buildings Act. ODU shall procure the services of an independent commissioning agent on all projects receiving commissioning, whether fundamental or enhanced as defined by LEED. ODU will procure the independent commissioning agent contract through the utilization of the state wide open end contract for commissioning services administered by the Department of General Services, Division of Engineering and Buildings. ODU will determine which projects are to receive enhanced commissioning, based on the technical nature of the HVAC systems.
- d. The Contract Documents shall require the General Contractor and all subcontractors to cooperate, provide labor, materials, supplies and information where required to facilitate the specified scope of commissioning work. The Contractor shall provide all specified assistance in a timely manner, at no extra cost to the University, and shall incorporate all commissioning activities and milestones into the overall Project Construction Schedule. Satisfactory completion and acceptance of all commissioning tests and reports shall be a condition for granting Final Completion of the project. Ideally, all functional performance testing shall be completed in order to grant Substantial Completion of the project.
- e. The A/E and ODU Project Manager shall coordinate participation by Facilities Management in the commissioning process and review in detail the TABS and commissioning reports.

01.29. Tree Protection

- a. Refer to **DIVISION 31 – EARTHWORK** for Tree Protection requirements.

01.30. Protecting Installed Construction

- a. Roof Protection – Before working on or moving equipment, materials or personnel over a new or existing roof, the General Contractor and any of their agents and/or subcontractors must thoroughly and completely protect the roof system from damage and excessive wear during and following the roofing work. Construction activities over or the movement of equipment, materials or personnel over a

new or existing roof without approved roof protection shall be cause for the University and/or A/E to stop work until the protection is provided and any damage to the roof system is corrected. See **DIVISION 7 – THERMAL AND MOISTURE PROTECTION 7.03** reparation for low Slope Re-Roofing for additional requirements.

- b. The contractor shall protect all utilities and structures installed in this contract whether by them or other contracts from construction operations at all times during the work. Protection of stormwater pipes and structures must comply with the Annual Standards and Specifications for Erosion and Sediment Control, found in the appendix. Means and methods of protection shall be submitted to the A/E for review and approval prior to work being performed.
- c. The University will have the right to access the work for post installation testing of roofs, utilities and structures or any other installed systems for construction damage, forwarding the findings to the A/E for development of strategies for correction by the contractor.

01.31. Additives Bid Items (Alternates)

- a. Refer to the **CPSM 5.10 ADDITIVE BID ITEMS**. The use of additive bid items shall be carefully considered before inclusion in the bid documents. All additive bid items must be approved by ODU leadership.

01.32. Unit Prices

- a. Refer to **CPSM 6.0.7 UNIT PRICES**. Unit prices used as part of the bid documents shall include, but are not limited to:
 - i. Removal of unsatisfactory soil and replacement with compacted satisfactory borrow soil material.
 - ii. Removal of unsatisfactory soil and replacement with compacted imported structural fill material.
- b. Schedule of Unit Prices must be approved by the ODU Project Manager.
- c. Bid documents shall indicate quantities for the basis of bids.

01.33. Allowances

- a. If allowances are carried in the estimates at schematic design and/or preliminary design, they cannot exceed \$50,000 in total per the CPSM.

01.34. Submittals

- a. Refer to **APPENDIX S – OWNER CONSTRUCTION SUBMITTAL REVIEW** for a list of submittals/shop drawings the University expects to review prior to submittal approval. The general contractor shall develop the procurement schedule to include University review of the designated submittals as noted in the appendix. The University shall be allocated 2 weeks for review of submittals concurrent with review by the A/E. The university will provide their review comments to the A/E for inclusion in the official review comments by the A/E. On board review of submittals such as hardware is an acceptable method to advance the review process, but attendance by the appropriate parties is a contingency of that review and approval.

01.35. Project Inspectors (PI)

- a. The role of the PI is defined in the CPSM. Additionally the PI's will verify underground utilities are being shown on the contractor's as built's each month prior to acceptance of the monthly pay application. Documenting the specific location and type of all underground activity is vital information to the University for future projects and work. It is the Contractor's responsibility to carefully document, with measurements, the actual location of the utilities, during their installation. Photographs showing the utilities with files named to indicate the location would be invaluable information. The Civil engineer, who will produce record drawings from the contractor's as built's, should make themselves aware of the

- progress of the marked up as built; waiting until the end of the project to review will leave some information can be lost or forgotten.
- b. If the General Contractor or a subcontractor needs a specific inspection performed by the PI, at least 24 hours advance notice to the Project Inspector shall be made. It is preferable that the request be made 48 hours in advance. Requests for inspections should use **APPENDIX AN – PROJECT INSPECTION REQUEST FORM**.
- 01.36. Exterior Mock Ups
- a. Initial brick panel mock ups, used specifically for final selection of brick and mortar can be used, prior to construction of the full integrated mock up.
 - b. The final selected and proposed bricks, mortar, masonry/steel stud backup, mortar net, wall ties, insulation and limestone/precast stone trim, flashing including termination bars and drip edges, etc., applicable to the project shall be constructed in a fully integrated mock up. This mock up is separate from the sample panel/s and is to be used to set standards for quality, along with final confirmation of exterior materials selection.
 - i. The extent, materials and details of the project mock up panels shall be shown in the Preliminary Design Submittal by the A/E.
 - ii. Cost for the construction of the mock up shall be included as a line item in the schematic design estimate and updated through all subsequent estimates.
 - iii. The Architect of Record and the University shall review and approve the mock up wall panel for workmanship and conformance to the construction documents, prior to the materials order by the contractor. The Architect of Record shall advise the University prior to approving or not approving a mockup and prior to notifying the Contractor. Final approval shall be by the University.
 - iv. The intent of the integrated mock ups are to obtain University Leadership, University Architect and A/E's approval of appearance and construction methodology prior to material ordering and production. To be acceptable, work must match approved mock ups. Confirm construction sequence, details, compatibility, means, methods, and techniques.
 - v. Test mock ups as specified for water infiltration.
 - c. Architectural cast-in-place concrete shall be included as part of the exterior mock-up for inspection and approval by the University. The mock-up will include a minimum of a 4' x 8' area. The mock-up shall establish an acceptable standard of workmanship and quality concerning concrete finishing, texture of formed material, etc. The concrete used in the mock-up shall be furnished by the project concrete supplier, and shall represent the approved mix for strength and texture. The sample panel shall be protected from construction operations, but shall be exposed to the elements.
 - d. Roofing systems shall be included in the construction Mock-Up for each project. The Mock-up shall be built before proceeding with final purchase of materials and fabrication of roofing components. Provide mock-up of sufficient size and scope to show typical pattern of seams, fastening details, edge construction, and finish texture and color. Incorporate materials and methods of fabrication and installation identical with project requirements. Retain accepted mock-up as quality standard for acceptance of completed roofing.
 - e. Mock Ups should be constructed of actual materials to be used in the Project including actual finishes and colors. The exterior mock up is intended both to provide final material approval, but also as a "peel away" mock up to examine building envelop system construction.

- f. The location of the mock ups shall be preapproved by the University and A/E and shall consider the solar orientation.
 - g. The General Contractor shall hold a Pre Mock Up meeting with the ODU project Manager, the A/E and all installers to review contract requirements, expectations, and acceptance criteria prior to construction of each mock up.
 - h. Installers shall be the same workers to be employed for the actual construction and production work during the remaining Contract.
 - i. Mock Ups can be rejected for appearance and/or construction. Remove and replace rejected mock ups at no additional cost to the Owner until an acceptable mock up is constructed.
 - j. The A/E shall provide drawings defining and detailing the mock up as part of the working drawings. The intent and scope of the mock up shall be discussed early in the project and associated costs included in the construction estimates.
 - k. Exterior Skin Mock Up shall include the following, as a minimum:
 - i. Each exterior skin material.
 - ii. Windows/storefront/glazed curtain walls including frames and each glass type.
 - iii. Flashings including drips and weep holes.
 - iv. Joint sealants.
 - v. Water, air, vapor and thermal barrier systems, including insulation.
 - vi. Roof construction
 - vii. Roof edges, fascias, soffits, cornices.
 - viii. Sun shades, sun screens.
- 01.37. Interior Mock Ups
- a. The A/E shall discuss with the planning committee any requirements for mock ups specific to the project such as typical lab casework, athletic team lockers, theater style seating, etc. A list shall be compiled for review and approval by the planning committee for inclusion in the specifications.
- 01.38. Interior Paint Mock Ups
- a. ALL interior paint colors shall be mocked up on the relevant wall or frame surface for final approval by the University Architect. Wall paint mock ups shall be a minimum of 8 feet high x 4 feet wide and shall begin at the floor level. Lighting and floor finishes shall either be temporarily or permanently installed as associated with specific paint colors. At least one of the paint mock ups shall show all preparation steps including primer and base coats in “peel away” demonstration.
 - b. If the A/E or the CMaR chooses to proceed with final painting without providing paint mock ups, as described above, for university approval, the cost to repaint shall be borne by the entity providing said direction.
 - c. The A/E shall include the requirement for interior paint mock ups in the project specifications.
- 01.39. In Place Shaft Wall Mock Ups
- a. The university recommends that the construction of shaft walls be first built as an in place mock up for review by the ODU Project Inspector and the General Contractor. The goal is to identify and resolve problems, if any, early and to minimize remedial work; specifically to identify any issues with the application of UL designs in the field and to improve the acceptance of shaft wall construction by BCOM, State Fire Marshall.
 - b. The contractor shall engage the Project Inspector and the A/E to review shaft wall in-place mock ups.
- 01.40. Engineering By Contractor (Delegated Design)

- a. The A/E shall clearly identify when engineering by the Contractor is required and what the specific requirements are, for each application specification section. The specifications shall require the following:
 - i. The engineer be a Virginia Registered Professional Engineer employed by the Contractor.
 - ii. The engineer shall be registered in the discipline for which the engineering is required.
 - iii. The engineer shall carry Professional Liability, Errors and Omissions Insurance for Design Professionals Employed by the Contractor.
 - iv. The Professional Engineer employed by the Contractor shall be responsible for the following:
 - 1. Be sole professionally responsible for the work.
 - 2. Calculate, design, engineer, and document the work.
 - 3. Prepare, professionally seal, sign, and submit calculations, shop fabrication drawings, erection and installation drawings, and other documents needed.
 - 4. Meet requirements of authorities having jurisdiction including applicable Codes.
 - 5. Meet requirements specified in the Contract Documents including visual requirements.
 - 6. Meet industry standards, unless higher performance is specified in the Contract Documents.

01.41. Temporary Utilities

- a. **Connections to University utilities** shall be arranged by the general contractor through ODU.
- b. **The University** may permit the general contractor to connect to existing utilities when they are available and shall not charge for electricity, water or natural gas. When utilities are not available, the general contractor shall arrange with the local utility company for installation of temporary utility service and shall pay all costs involved, which shall be included in the general conditions of the contract.
- c. The A/E shall obtain drawings for existing utilities and include information concerning temporary connections in the contract documents.
- d. **Utility company installations** of temporary services shall be reviewed with ODU and the A/E.
- e. The General Contractor shall provide heating required by the work or trade as needed -until weather tight enclosure of the building. The general contractor is responsible for providing temporary heating, ventilation, and dehumidification after weathertight enclosure of the building.
- f. **Temporary Storm Drainage:** shall be compliant with the **ODU ANNUAL STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT** in the Appendix as well as the project specific SWPPP.
- g. **Internet service:** Where available, the university will provide guest access to internet services via the university wireless system for contractors' use during construction. Where not available, contractors are required to provide for their own service via outside providers or by cellular/broadband services at their expense. The A/E shall coordinate availability with ODU and indicate the status in the contract documents.
- h. **Hoisting facilities** for the project shall be provided by the General Contractor.
 - i. **New elevators** may not be utilized for transportation of workers and materials
 - ii. **Existing elevators** may not be used for construction unless approved by ODU.

01.42. No Smoking

- a. All areas within the project site are designated as NO SMOKING areas. The Contractor shall not allow any workers to smoke within the project building(s). Additionally, smoking is not allowed within 25 feet of any campus building entrance/exit.

01.43. University Declared Emergency

- a. If the University is officially closed due to an emergency condition, the Contractor will not be allowed to work.
- 01.44. Unmanned Aerial Systems (UAS or Drones) – As stated on the ODU website:
- a. *“First and foremost, ODU’s main campus and that of the Peninsula and Virginia Beach Higher Education Centers are located within a 5 mile radius of a military airport installation. All Unmanned Aerial Systems (UAS) operated for business or recreational purposes within a five mile radius of a military airport cannot be operated without the military providing explicit permission. Likewise, operations within five miles of a civilian airport requires similar approvals. The ODU Office of Risk Management is responsible for requesting flight permission for UAS operations. To address the use of drones on campus, ODU has established **POLICY #3015: UNMANNED AIRCRAFT SYSTEM AKA DRONES, AERIALS AND OTHER POWERED MODEL AIRCRAFT**. Students, Faculty, Staff, Vendors and Guests who plan to operate a drone on or over property owned or controlled by ODU are required to abide by this policy.”*
 - i. Permit Application required by Policy #3015 can be found here:
<https://www.odu.edu/content/dam/odu/policies/university/docs/uas-request-form.pdf> .
 - ii. Once the application is received by the Office of Risk Management (ORM), the process requires the ORM to contact Chambers Field and obtain approval from them prior to the flight. This is required as ODU’s campus lies within Class D airspace. Chambers requires a minimum of 7 days’ notice to allow for review and approval.
 - iii. Once approval is received from Chambers Field, the ORM will notify the ODU UAS Approval Committee (UAC) and they will approve or dis-approve the flight. Once the UAC approves, ODU Risk Management will issue a permit.
 - iv. Be sure to include the longitude and latitude coordinate and a radius about which the flight will be bounded. Include the height. Two-hundred feet AGL is typically what is requested and approved.
- 01.45. Evacuation Plans
- a. Evacuation Plans shall be provided by the A/E for installation in the building at approved locations. Evacuation Plans shall indicate where exterior gathering spaces are located as directed by the University Fire Safety Engineer.
- 01.46. Valve Plans
- a. The Contractor shall provide floor plans showing the location of all shut off valves in the building.
 - b. Floor plans shall be laminated and installed on a visible, accessible wall in the main mechanical room.
 - c. The contractor shall provide a PDF copy of the shut off valve location plans to the University with the close out documents.
- 01.47. Roof Inspection Reports
- a. Copies of the independent roof inspection reports roof acceptance reports and the roof warranty documentation, shall be provided to the Facilities Management Assistant Director(s) and filed in the Digital Library.
- 01.48. Approved UL Wall Assemblies
- a. The State Fire Marshall requires a three ring binder be kept at the construction site of all approved wall assemblies and that this binder subsequently be stored within the building, in an easily identifiable location for post occupancy inspections.
- 01.49. O&M Training

- a. The General Contractor shall develop an O&M training plan for review by the ODU Project Manager and Facilities Management. The General Contractor shall provide at least a 1 week notice prior to the commencement of training. Training shall be provided by the manufacturer reps, not the contractor.
- b. Talk to Brian and John about the need for preventive maintenance training on major equipment.

01.50. Warranty Requirements

- a. A list of all Warranties and the date of receipt of individual warranty documentation by Facilities Management shall be maintained by the ODU Project Manager and included in the close out documentation.

01.51. Close Out

- a. A representative of Facilities Management shall accompany the ODU Project Manager on a close out walk through to confirm the following:
 - i. Ensure all piping is properly labeled
 - ii. Ensure all electrical panels are properly labeled
- b. At least week prior to occupancy of the building by the University, Facilities Management will make any inspections in preparation of acceptance. Facilities Management shall be notified by the ODU PM and acknowledge the date of the building is being accepted for University Occupancy.
- c. Mechanical equipment warranties shall commence at the acceptance of the final building commissioning report.
- d. Operation and maintenance (O & M) manuals
 - i. O&M manuals shall be submitted by the General Contractor as bookmarked PDF(s) with sections clearly identified and a linked table of contents, to the A/E for review and approval, prior to delivery to the University.
 - ii. The general contractor shall provide one hard paper copy format in loose-leaf binders with label pockets on the front and the binding shall be provided and stored in the building in the mechanical room or other secure location designated by Facilities Management. This copy shall only contain the O&M information, warranties and certificates associated with the mechanical electrical and plumbing equipment for the building. The general contractor shall provide a small metal cabinet for the storage of the manuals within the building.
 - iii. The general contractor can provide a combined file of as built, O&M Manual, Warranty and equipment PDF as desired. This would be in addition to the separate PDF files and shall not require any special training, software or equipment to open and read/use beyond Adobe Reader.
 - iv. The electronic O&M Manual shall be stored in ODU's digital Library.
 - v. Refer to **APPENDIX J – CLOSE OUT DOCUMENT CHECK LIST** for further information.

01.52. Final Cleaning

- a. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
- b. Complete the following cleaning operations before requesting inspection for certification of Final Completion for entire Project or for a portion of Project:
 - i. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscaped areas, of rubbish, waste material, litter, and other foreign substances.
 - ii. Broom clean paved areas. Remove petrochemical spills, stains, and other foreign deposits.

- iii. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- iv. Remove tools, construction equipment, machinery, and surplus material from Project site.
- v. If applicable, remove snow and ice to provide safe access to building.
- vi. Clean exposed exterior and interior hard-surfaced finishes to condition free of dirt, stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- vii. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- viii. Sweep concrete floors broom clean in unoccupied spaces.
- ix. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - x. Clean transparent materials, including mirrors and glass in doors and windows.
 - xi. Remove glazing compounds and other noticeable, vision-obscuring materials.
 - xii. Replace chipped or broken glass and other damaged transparent materials. Remove labels that are not permanent.
 - xiii. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - xiv. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - xv. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - 1. Replace parts subject to unusual operating conditions.
 - xvi. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - xvii. Replace temporary air filters with permanent air filters per the construction documents. The A/E shall provide specifications for the type and use of temporary air filters in the specifications. Coordinate filter replacement with other requirements of the specifications including LEED.
 - xviii. Clean exposed surfaces of diffusers, registers, and grilles.
 - 1. Clean ducts, blowers, and coils if units were operated without filters during construction.
 - 2. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
 - 3. Clean turning vanes and any other accessories added to ductwork.
 - xix. Replace burned-out bulbs, and those noticeably dimmed by hours of use. Replace any defective LED boards or drivers.
 - xx. Leave Project clean and ready for occupancy.
 - xxi. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and report to rid Project of rodents, insects, and other pests.
 - xxii. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on University's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.