C1A.1. General
   a. The Department of Design and Construction and Facilities Management is responsible for the planning, design and construction and/or renovation of facilities at the University. These standards and procedures have been developed in support of successful project delivery.
   b. The ODU Project Manager will hold a pre-kick off management meeting with the Architectural and Engineering project managers to review the project specific management plan and the Design Standards. Refer to APPENDIX A1 – CAPITAL PROJECT MANAGEMENT TEAM KICK OFF AGENDA OR APPENDIX for a discussion guide.

C1A.2. Design Standards Compliance
   a. The Department of Design & Construction overseas and maintains the Old Dominion University Design Standards. The Design Standards have been established to communicate the base building and process requirements for new construction and/or renovations on all campuses of the university. While all projects shall adhere to its content, it is not the intent of these standards to be restrictive and as such it is our expectation that the A/E participating in the development of a project from programming through occupancy submit APPENDIX B – DESIGN STANDARDS VARIANCE REQUEST FORM when a project specific modification (Physical, not process) to the standards is necessary. The form must be completed and submitted to the University Project Manager who will review the request with the Director of Design and Construction and the University Architect within two weeks of submission at which point the A/E will be notified of any delay in review or request for additional information, prior to the conclusion of those initial two weeks. It is preferable that the A/E submit variances in groups prior to a design phase submission for efficiency. In this way there is clear communication between the A/E, Contractor and the University regarding project details.

       NOTE: If the A/E deviates from the Design Standards without prior written approval, the variance will be considered an error and a claim may be processed against the A/E’s professional liability insurance for reimbursement of the cost to meet the Design Standards. If the Contractor is responsible for design / building certain (or all) aspects of the project, and varies from the Design Standards without prior written approval, the Contractor’s variance will be considered an error and a claim may be processed against the Contractor’s insurance. If the Contractor makes a change or substitution during the shop drawing and submittal process that is a variance from the Standards, it is the burden of the Contractor, not the A/E, to seek a variance approval. Inclusion of a Design Standards variance in either drawings or specifications during any design phase submittal reviews or construction shop drawing and submittal reviews, is not considered a Standards Variance approval. It is the A/E and / or Contractor’s burden to point out variances to the ODU Project Manager and to specifically request written variance approval prior to incorporating in the Project. The University is not responsible for identifying any deviations from the Design Standards.

   b. The A/E shall submit the APPENDIX C - DESIGN STANDARDS COMPLIANCE FORM, at the submission of Schematic Design and update and resubmit the form at the Preliminary Design and Working Document submissions to the University, PRIOR to each BCOM submission.
   c. These signed forms will certify that the University Design Standards have been incorporated into the project by the A/E, Contractor and the University Project Manager or the A/E.
C1A.3. Project Team

a. The University will establish key groups who will be involved in each project. The composition of these groups will be communicated to all members of the project team and may be composed of, but not limited to the following:

i. Executive Committee: Senior University Leadership

ii. Steering Committee: Final decision maker(s) for the specific project, such as a Dean or Department VP. They will provide direction when the planning committee is at an impasse.

iii. Planning Committee: Project users, as identified by the Department head or University Leadership, who will act as the working group engaged in and responding to A/E’s design direction. The Planning Committee shall include the following individuals at a minimum:
   a. Chairs or designated representative as identified by the Dean of the College or VP of the Department associated with the project
   b. ODU Project Manager
   c. University Architect
   d. Assistant Director of Classroom & Learning Space Technologies.
   e. Public Safety Physical Security Specialist
   f. University Space Manager (through all programming discussions)
   g. Risk Management (Fire Safety Manager)
   h. Information Technology Services

iv. Management Team: Focused on logistics, process and management of the successful execution of a project from inception to occupancy. The Management Team will include the ODU Project Manager and Director and Assistant Director of Design & Construction, Architect/Engineering Design Team (A/E), Construction Manager at Risk (CMaR) and/or the General Contractor.

v. University Stakeholders: Representatives of Facilities Management, ITS, Public Safety, Risk Management, Parking and Transportation, end users (as determined by the department head) and others identified specific to the project, who will be engaged in the design process and design review. Meaningfully engaging these stakeholders early in the project, as appropriate, is key to building project consensus and project success limiting changes after the design is well developed and in construction.

1. Below is a list of University stakeholders (in addition to those noted as part of the committees above) and at what phase they should begin engaging in design discussions:

   - **Programming**
     - Facilities Management - Housekeeping
     - Environmental Health and Safety Officer
     - Auxiliary Services – As appropriate to the Project
     - Student Engagement and Enrollment Services
   - **Early Site Planning**
     - Director of Transportation & Parking
     - Facilities Management - Grounds Manager
     - Risk Management (Fire Safety Manager)
   - **Schematic Design through Working Drawings**
     - Facilities Management (Structural, Locksmith Shop, MEP Shop, Housekeeping, Grounds, Moving & Hauling)
     - Procurement Officer
     - Project Inspector (PRELIM and Working Drawing Review)
     - Risk Management (Fire Safety Manager)
b. The University Space Manager shall be included in all initial program discussions at the beginning of the project to facilitate how the new program will interact with the overall campus space utilization.

c. Specialty Consultants

   i. Depending on the nature and complexity of a project, the A/E should consider, when appropriate, additional consultants to their team to assist with the design and execution of the project. Potential consultants might include, but are not limited to, the following:

      1. Landscape Architect
      2. Acoustical Consultant
      3. Fire Safety - engineering judgements on construction as needed by BCOM. Refer to BCOM NEWSLETTER FOR JANUARY 2018 with regards to the use of engineering judgements.
      4. Audio Visual Consultant – The University has its own design team that typically handles all audio visual design and implementation. In some instances, as determined by the university, an AV consultant may be warranted.
      5. Lab Planner
      6. Food Service
      7. Sports Planners
      8. Student Engagement
      9. Lighting Designer
     10. Wayfinding/Signage – While the University maintains room, transportation and garage signage standards, on certain projects, wayfinding and graphic content are more important or featured in the project and a consultant should be considered.

   ii. Specialty consultants may be contracted directly by the university and/or have their contract assigned to the A/E or the A/E may be responsible for securing the consultant as a direct member of their team.

   iii. Envelope Consultant – it is desirable for projects to engage an expert on total envelope design to review the A/E approach to vapor and air barriers, insulation and water infiltration. This consultant can be provided by either the A/E as part of the design team, or as part of the CMaR’s constructability team on both new construction and exterior renovations.

C1A.4. Project Vision | Goals | Expectations

   a. Prior to the start of Design the A/E will meet with the Executive / Steering Committee for a university leadership project kick off; this is a separate discussion which should be followed by a Planning Committee design kick off meeting at which the A/E will facilitate a visioning session. The visioning session will look at what are considered key success factors for the project by the Users, Administration, and Design and Construction. Project Goals will be identified and all Planning Committee members will have an opportunity to indicate what their expectations are of the A/E and/or the University.

   b. A one page Project Vision Statement as well as bulleted project goals, should be documented by the A/E and confirmed by the Planning Committee. The vision should include comments on both the exterior and interior aesthetics. This will then be used as a litmus test for decisions moving forward. The Project Vision statement can include diagrams, photo examples or other items that best communicate the vision for the project.
C1A.5. Communications

a. Old Dominion University’s designated Project Manager is the central point of contact for the project. All communication between the A/E and the University shall be routed through the Project Manager. Clear, concise, consistent and timely communication is key to the success of any project. Larger more complicated projects rely on established communication protocols which should be adhered to at all times. The ODU Project Manager along with the Management Team shall establish mutually acceptable lines and methods of communication at the project kick off. The University Project Manager will be copied on all correspondence and will maintain the university’s project files. The A/E will coordinate closely with the University Project Manager for scheduling University personnel throughout the design phases of the project. Since email has become the most utilized form of communication, we request that the A/E coordinate with the University Project Manager to establish the short hand name of the project which will then be used in the subject line of all emails associated with that project. For example SU is short hand for Student Union. This allows for the quick search for associated emails by all parties. Informative email subject lines improve communication (i.e. SU – Budget Update).

b. Agendas and Draft Presentations

i. Agendas for all design phase meetings are to be submitted to the University’s Project Manager at least one week prior to any meeting for confirmation. While we understand A/E’s work right up until the last moment preparing for meetings, a draft version of the material to be presented/discussed, should be issued to the University Project Manager at least 48 hours prior to the scheduled meeting, who will distribute the materials to the project team.

c. Sign In Sheets

i. The A/E working with the University Project Manager will develop a sign-in sheet for use at each meeting. The sign-in sheet will identify participants and provide their contact information allowing participants to confirm their information and initial they are present for the meeting. Sign-In Sheets will be updated as new individuals are added to meetings, Sign-in sheets will also act as the project directory.

d. Meeting Minutes

i. At the project kick-off the A/E shall propose a meeting schedule including presentations and reviews. The university understands that the initial meeting schedule will not cover all topics that may come up during the process, but having the majority of the meetings loaded into personal calendars will ease the number of conflicts. The A/E shall make a record of meeting participants and the items discussed and provide meeting minutes for all meetings. These meeting minutes will include an action item log for the project based on meeting discussions, identifying the action requested, responsible party, date of request and anticipated date action is required to be closed. Items will remain on the action item log until they are complete, and the resolution recorded.

ii. Complete meeting minutes include the Sign-in Sheet, Meeting Notes, copy of Presentation materials and the Action Item Log. Meeting Minutes shall be in Adobe PDF format.

iii. The University Project Manager shall post all meeting minutes to a project specific cloud storage folder, designated by the project. The folder shall be accessible by all planning committee
members, stakeholders and management team. All presentations and meeting minutes will then be accessible to the full project team as needed.

iv. The ODU Project Manager shall provide a copy of all meeting minutes to the FM Plant Engineer for distribution to the appropriate FM staff, for information purposes. This includes meetings at which FM was not in attendance.

Should a project be delayed between Working Drawings and the start of Construction, the ODU project Manager will hold a restart kick off meeting confirming who the current stakeholders for the project are. A design walk through will take place by the A/E to bring everyone up to speed, including new players. It is not the intent to revise the design, but to reengage the team.

v. If the project uses a CMaR delivery method then the A/E shall be responsible for producing meeting minutes from the Kick off meeting through the completion of Design, at which point the CMaR will be responsible for meeting minutes.

vi. If the project uses a design bid build delivery method, then the A/E shall be responsible for producing meeting minutes for the duration of the project from Design through construction and closeout.

C1A.6. Design Schedule

a. The Department of Design and Construction has developed schedule templates for both Capital and Non Capital projects using Microsoft Project. It is the preference of the Department that the A/E provide a logic schedule and use the templates as the basis. By using the templates, the department will be able to track and compare schedules from various projects using e-Builder (a fully-integrated, owner-centric, cloud-based construction program management software implemented within the Department of Design and Construction) by importing the schedule data. If the A/E does not have the ability to develop the design schedule using the Microsoft Project templates, the Department can provide the A/E with an excel file using the same task list. The templates are not intended to limit how detailed the design schedule is, but represents the minimum information desired and should be edited to suit the specific needs of each project.

b. The A/E shall provide a total project schedule during the Schematic Design Phase. The A/E should understand and show how the schedule overlays with the academic calendar. This initial schedule shall be the baseline schedule for the project.

c. At their own discretion, the A/E can choose to provide a graphic overview schedule for the Steering and Planning Committee meetings; this does not take the place of the detailed schedule requested above.

d. The design schedule shall be provided to the ITS department, who shall be considered a consultant to the project team and included in A/E communications as appropriate. Specifically it is important that any design schedule updates or shifts be communicated to ITS as soon as possible for their planning purposes.

e. The design schedule is to be updated monthly and submitted to the Project Manager concurrent with A/E invoice. The monthly updates shall be shown as a tracking Gantt against the baseline schedule and indicate the % complete for each task.
C1A.7. Programming and Room Data Sheets

a. **Program Summary:** The A/E shall include a program summary and room data sheets with the Schematic Design submittal. The room data sheets shall be tied to the program summary using a space identifier, which could relate to the FICM codes used by the university and the state as noted in **APPENDIX AE- FICM CODES.** Only one room data sheet is required for each type of space, as long as the detail is clear. Room Diagrams, where appropriate, are encouraged to convey specifics to the users at this early design stage. The room data sheet for each type of space shall include the following information at a minimum:

i. Room Name
ii. Room Quantity
iii. Room size
iv. Room Occupancy
v. Function – general description, highlighting any special space needs.
vi. Adjacencies – describe any required, desired or none
vii. Furniture & Equipment - general description of what is intended to fit in the space, highlighting specific equipment that needs to be accommodated. If equipment sizes are available, it is beneficial to indicate these here for reference during the design phases.
viii. Electrical - including emergency power requirements or other special needs
ix. Mechanical – indicate any special needs, such as separate independent cooling or 100% outside air.
x. Plumbing – indicate what will be provided in the space and any special needs such as an emergency eye wash, lab gases, etc.
xii. IT – number and type of connection points in space or any special needs
xii. Door Hardware – mechanical lock or electronic (Card Access)

b. Provide a place at the bottom of each room data sheet where the appropriate party as designated by the Dean or Department Head can sign the sheet approving the space description. All sheets shall be dated. The university will return signed room data sheets to the A/E for record and reference in developing the design and for subsequent phase reviews.

C1A.8. Site Survey and Geotech Report

1. ODU’s 3rd party contractor to mark irrigation systems and fiber on the site
2. The A/E’s consultant shall include the irrigation and fiber optic systems on the site survey drawings.
3. The A/E’s consultant is responsible for back checking that the irrigation and fiber optic systems were located on the drawings accurately
4. Site survey shall include any existing abandoned utilities
5. ODU shall provide all available existing site documents associated with the project site AND all adjacent properties to the A/E’s consultant for review and consideration when developing their site survey scope.
6. The A/E’s consultant shall indicate if an underground tank survey is warranted.
C1A.9. Project Scope and Budget
   a. The A/E will develop a method for tracking the budget and scope (program) of each project. This document will track key metrics that the planning committee determines at the start of each project. Examples of these metrics are projected construction cost, GSF, NSF, number of seats in a dining hall, number of beds, number and type of classrooms, area of research to offices to academic spaces, etc. These metrics establish the priorities for the project and are aligned with the Project Vision and Goals.

   b. After baseline metrics are established, each subsequent scheme, option, or submittal should be compared to the baseline. This will assist the University in understanding the effect of decisions and direction as the project moves forward. While the A/E seeks to satisfy users’ needs and requests, time can be lost if the impact of those decisions are not understood against the approved baseline for the project. Enough emphasis cannot be placed on the importance of maintaining the project scope, budget and schedule. Because the Planning Committee is composed of people who may not be aware of the impact their direction can have on project scope, budget and schedule, it is the A/E and Contractor’s responsibility to clearly articulate the impact of design direction on the project in a timely fashion.

   “Do not show us what we can’t afford,” is a statement often repeated on campuses across the country, but which is worthy of repeating here. At the same time the design must always reflect the identity of the Old Dominion University within the project specific budget.

   “Don’t render what you cannot build” – Renderings are what people remember and get attached to, so during the design process renderings are very helpful to convey ideas, just be sure that if you show a design element or idea in a rendering that it can logistically be built within the budget.

C1A.10. Programming and Conceptual Design
   a. Program Summary: The A/E shall include a program summary and room data sheets with the Schematic Design submittal. The room data sheets shall be tied to the program summary using a space identifier, which could relate to the FICM codes used by the university and the state as noted in APPENDIX AE- FICM CODES. Only one room data sheet is required for each type of space, as long as the detail is clear. Room Diagrams, where appropriate, are encouraged to convey specifics to the users at this early design stage. The room data sheets shall include the following information in written form for each type of space:
      i. Room Name
      ii. Room Quantity
      iii. Room size
      iv. Room Occupancy
      v. Function – general description, highlighting any special space needs.
      vi. Adjacencies – describe any required, desired or none
      vii. Furniture & Equipment - general description of what is intended to fit in the space, highlighting specific equipment that needs to be accommodated. If equipment sizes are available, it is beneficial to indicate these here for reference during the design phases.
      viii. Electrical - including emergency power requirements or other special needs
ix. Mechanical – indicate any special needs, such as separate independent cooling or 100% outside air.

x. Plumbing – indicate what will be provided in the space and any special needs such as an emergency eye wash, lab gases, etc.

xi. IT – number and type of connection points in space or any special needs

xii. Door Hardware – mechanical lock or electronic (Card Access)

xiii. Security - identify any special concerns, note if security cameras are required in the space

xiv. AV – describe intended audio visual features including sound requirements if any

xv. Finishes – describe, in general, the floor walls and ceiling finish types anticipated

b. Provide a place at the bottom of each room data sheet where the appropriate party as designated by the Dean or Department Head can sign the sheet approving the space description. All sheets shall be dated. The university will return signed room data sheets to the A/E for record and reference in developing the design and for subsequent phase reviews.

C1A.11. Cost Estimate Contingencies

a. Per the CPSM and as reiterated in the BCOM NEWSLETTER OF FEBRUARY 2017, a design contingency of a maximum of 10% shall be carried in the schematic estimate and a design contingency of a maximum of 5% shall be carried in the Preliminary estimate. In both schematic and preliminary estimates a construction contingency shall be carried at no more that 3% in the estimates and shall be reduced to 2% at Working Drawings / GMP.

b. The A/E may request a reduction in the design contingency percentage stated above at both schematic and preliminary estimates, if the project type or level of development warrants. This is no way alleviates the A/E from meeting the design not to exceed budget number.

c. Cost Estimate Escalation

i. Escalation shall be carried to the establishment of the GMP for CM at Risk Projects. Escalation shall not be calculated on fixed fee percentages.

ii. Escalation shall be carried to the midpoint of construction for traditional bid projects.

C1A.12. Life Safety Drawings

a. All projects shall follow the requirements of CPSM SECTION 5.8.6.9.1 as it relates to fire protection and fire safety systems. It is vital to have this design information clearly identified for all projects for reference years after the building is constructed when renovations are necessary. Included in the life safety drawings, for both capital and non-capital projects, shall be a site plan indicating fire truck access and any required building clearance distances used in calculations to determine allowable floor areas. Show any assumed (by the A/E for the purposes of building separation of buildings on the same lot) property lines between new and existing buildings.

b. Life Safety Drawings shall be numbered using LS instead of FP to avoid confusion with fire protection (sprinkler) drawings.

C1A.13. Value Management

a. While our desire is to have a smooth process where the design developed and presented to the University is on budget, we understand the reality is sometimes not so clear. In order to keep a project on budget, there will be times, typically at each submittal’s cost estimate review, where changes are required in the design in order to bring the cost in alignment with the “Design Not To Exceed” budget. During these discussions, the University expects the A/E and in some cases the Contractor, to provide
a comprehensive list of options for reducing costs. The A/E and Contractor should indicate the pros or cons for each item, any impact to sustainability goals, any impact to the project’s schedule or whether the change would put the project out of compliance with these Design Standards. University Leadership will review the list at each design phase and will ultimately determine what items are to be reduced, cut or modified in order to bring the design in line with the budget. Appendix F – Project VE Format is provided (request the excel version from the ODU project manager) to assist in developing this comprehensive VE list. This VE process works in conjunction with the CPSM’s Value Engineering Requirements and in no way intends to supersede those.

b. The ODU Project Manager is responsible for communicating the VM List to the project stakeholders for their input and to communicate the accepted VE items to the stakeholders as each design phase of the project.

C1A.14. Design Review Process

a. Prior to the submission of the design to AARB (Art and Architectural Review Board), the Executive Committee shall review and approve all building designs on campus. The Department of Design and Construction, the University Architect, Project Users and Senior Administration reviews projects, offers constructive advice, and ultimately recommends to the Executive Committee and other University Leadership that the project be constructed.

b. Any change to the exterior of a campus building requires AARB approval.

c. Design Phase Approvals

i. It is the intent of the university to improve the review process with the state, decreasing the number of comments and time required by the reviewing agency. At each design phase of a project, the university will review the design phase submittal, provide written review comments to the A/E who will provide written responses to each comment and return the completed list to the university project manager using Appendix E – Submittal Review Sheet. The project manager will then complete Appendix G – Design Phase Approval form, circulate this form for signatures and official design phase approval. Each submittal requiring review by BCOM, shall be reviewed by the University, with comments incorporated prior to submittal to BCOM.

ii. To facilitate the University review process, an “On-Board” review session can be held at the University for each Phase Submittal. On Board review sessions will be proceeded by distribution of the submittal documents at least 5 days in advance. Comments received during the on board review are to be recorded by the ODU Project Manager and the A/E Project Manager compiling a complete comment list. These comments and their responses will be distributed to the entire review team for acceptance.

iii. We recommend that the same “On-Board” review process be used for reviewing more complicated projects with BCOM. The ODU Project Manager should discuss this option during BCOM’s project introduction meeting.

iv. Old Dominion University’s design review and comment process does not limit the liability of the A/E for quality control and quality assurance for the project, nor does it relieve the A/E from adherence to all applicable building codes and regulatory requirements.

v. The A/E will provide ODU with the BIM models as part of each submittal phase review. These models will only be used as part of the review process, for visualization of systems coordination,
by the University Architect and will not be distributed outside of the Department of Design and Construction.

C1A.15. **BCOM Submittal Reviews** (Bureau of Capital Outlay Management)

a. On Capital Projects the University encourages the A/E to work closely with our designated reviewer at BCOM to ensure clear communication on design and code issues. The A/E is responsible for confirming that their responses to BCOM comments are acceptable before proceeding with the next design phase. If an A/E response to a BCOM review comment is repeated in a subsequent submittal review, then the resolution of that comment is the responsibility of the A/E at their own expense. Significant errors that require a design change impacting structural systems and which push the project over budget and/or behind schedule, requiring further revision to bring the project budget back in alignment, will be the responsibility of the A/E at no additional cost to the University.

C1A.16. **Building Information Modeling (BIM)**

a. The university is a proponent of the use of BIM software for the development of building design and documents. Currently the university uses both AutoCAD and Revit platforms. It is our desire that all projects utilize BIM software for the development of documents including all disciplines except civil and landscape.

b. The A/E will share their project specific BIM Execution Plan with the University to assist in use of the BIM models. The Plan shall include minimum BIM requirements, and project-related BIM goals, processes, protocols and levels of development identified by the project team. The BIM execution plan should include sub consultants, if utilized by the A/E or the CMaR. This plan should be shared with the ODU Project Manager and updated and modified as needed. The American Institute of Architects (AIA) has developed Project BIM Protocol forms and exhibits which can be used to guide the A/E in the development of the execution plan or the A/E can provide their own documentation.

C1A.17. **Web-based Project Management**

a. The Department of Design and Construction encourages the use of web-based collaboration software for information management, such as Newforma Project Center and encourage its use on projects by the A/E. When available through the A/E, we support using project collaboration software tools for such things as:
   i. Document Sets: transfers, logging, tracking, access
   ii. RFIs
   iii. Submittals and Shop Drawings
   iv. Change Orders

C1A.18. **File Naming**

a. As a university, we manage multiple projects at one time as well as actively manage the maintenance and space utilization of a large network of buildings. As such tracking, organizing and storing information is one that requires consistency. The University will rename files received from the A/E and contractors to match our system as follows (example):

   YYYY MMDD_MM Kick Off – The first part of the file is the date of the document followed by all caps letters referencing the type of information in the file, in this case Meeting Minutes, then followed by short description in lower case of the content. The benefits are that when filed, the information is sorted chronologically, the consistent use of a file type identifier makes it easy to search for a type of
document, followed by a more specific description or event identifier. Since data is stored by project, the name of the project need not be in the file name, unless desired by the ODU Project Manager or as desired by the A/E for their own reference. If the project short name is used in the file name, it should be consistently located in all file names. The Project Identification Code noted below is not required in the file name, nor is it beneficial to have the A/E’s project number in the file name.

C1A.19. Document Labeling
   a. The CPSM defines the Project Identification Code. **ALL correspondence and documentation shall include the project identification code number and date on the document.** All documents shall have a date on each page and will identify the submittal associated. Design Narratives should have the Project Name, Submittal Name and Project Identification numbers on each page along with a page number and date. Proofing submittal prior to submission to BCOM and/or ODU is an expectation by the owner for quality control and a reduction in comments from both entities.

   All drawings submittal cover sheets should be clearly identified having, as part of the cover sheet title, the submittal name, i.e. PRELIMINARIES, 2nd WORKING DRAWINGS, PERMIT, etc., and the date in large letters.

C1A.20. Drawing Submissions
   a. It is the preference of the Department of Design and Construction to have a consistent sequence of drawings between projects by different firms. Recognizing that we use the drawings as reference drawing sets for years to come, having consistency moving forward will be highly beneficial.
   b. Below is the file structure we have set in place for the University’s digital library and represents the sequence that we use in filing all drawing sets:
      01 General (Includes Cover sheet)
      02 Life Safety
      03 Civil
      04 Landscape
      05 Structural
      06 Architectural
      07 Plumbing
      08 Mechanical
      09 Electrical
      10 Fire Alarm
      11 Fire Protection
      12 AV
      13 Data
      14 Food Service
      15 Laboratory
      16 Specialty Consultant
   c. Exterior / Roof Detail Drawing Scale: Due to the high level of importance on the building envelop, in its entirety, the A/E shall draw details at a minimum scale of 3” = 1'-0" but a 6” = 1'-0" scale is preferred to clearly see the extent of the water, air, vapor and thermal systems barriers.

C1A.21. Specifications
a. Headers shall include the current date of the section issued. For example if the section was issued and then revised and reissued, the section should have two dates in the upper right corner.

b. The header shall indicate, as a minimum, the following:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Issued 12/12/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLD DOMINION UNIVERSITY</td>
<td>OLD DOMINION UNIVERSITY</td>
</tr>
<tr>
<td>Campus Location; i.e. Norfolk, Virginia</td>
<td>ADD 01 1/10/2017</td>
</tr>
<tr>
<td>Project Code:</td>
<td></td>
</tr>
</tbody>
</table>

c. Specifications shall be developed selecting three specific products. BCOM does not accept a basis of design plus two manufacturers. Alternately a basis of design and a performance specification can be used, being careful that the performance specification does not then exclude the basis of design.

d. The CPSM does not allow the specifications to require a specific number of years of experience or time in business as a basis of award.

e. The A/E shall include a list of submittals as part of the specifications.

f. Sole Source Specifications:

i. The following systems have received approval from the Director, Division of Engineering & Buildings to use in a sole source specification. ODU can provide the relevant CO-18 form when requested. Refer to CPSM 5.3.9.3 SOLE SOURCE SPECIFICATIONS for further information with regards to procuring designated sole source items.

- Fire Alarm – Simplex Grinnell
- Jim Collins (Branch Manager) 757-853-6611/ Frank Kleczewski 757-853-6611 (ext. 224)]
- Building Automation System – Siemens
- Electronic Locks/ Building Access – Stanleyworks BEST Access
- Coordinate through Richard Wollam with ODU Public Safety (757-683-4003) and Dan Gavin with ODU Facilities Management (757-683-4269) as you discuss with BEST. BEST contact is Randy Huff (804-556-2872)].
- Locks – Stanleyworks BEST Locking Systems
- Coordinate through Dan Gavin with ODU Facilities Management (757-683-4269) as you discuss with BEST. BEST contact is Jerry Garrison (804-509-0700).

g. Hardware

i. Door Hardware schedules and coordination with door access requirements requires careful review and coordination with ODU’s ITS group.

ii. A/E shall coordinate a door hardware and access meeting during the working drawing phase, prior to the owner review submittal for working drawings. This should be a specific detailed discussion, independent of other meetings.

C1A.22. Conformed Documents

a. Conformed Construction Documents are the Construction Documents modified to include any addenda issued during the bidding or negotiation process. The A/E is responsible for providing copies of conformed documents prior to the start of construction, in PDF format for distribution. These are sometime termed the IFC or Issued for Construction set.

C1A.23. Construction Field Reports

a. Per the CPSM, field reports are expected to be produced by the A/E on a regular basis during construction, typically coinciding with monthly meetings. Action lists included in the field reports are
valuable and should identify the action requested, responsible party, date of request and anticipated date action is required to be closed. Action items will remain on the field report until they are complete, and the resolution recorded.

C1A.24. Deficiency Log
   a. The ODU Project Inspector follows the CPSM with regards to Daily Reports. Additionally the inspector keeps a deficiency log of items he/she encounters on the project. The deficiency log will be provided to the contractor and A/E for resolution.

C1A.25. Attic Stock
   a. Refer to APPENDIX I - ADDITIONAL MATERIALS (ATTIC STOCK) for quantity of materials required.

C1A.26. Project Close Out
   a. The A/E’s contract will not be considered complete, nor will final payment be made until all project close-out requirements are met. Refer to APPENDIX J – CLOSE OUT DOCUMENT CHECK LIST. The A/E Project Manager and the ODU Project Manager shall work together to confirm all documents have been received and accounted for.
      i. It is vital that individual file names not exceed the overall limit of characters for the full path of files located within our digital library. The Contractor and A/E shall direct their teams to develop file names that don’t exceed 80 characters in length (includes spaces). Do not include a “.” in the file name and avoid other punctuation. Avoid excessive folder structures when compiling the record documents as these also use up available file characters. If upon receipt of the closeout documents we cannot load these to the university’s digital library, they will be returned in their entirety to the A/E and or contractor for renaming.
   b. The contractor shall complete and deliver As-Built documents to the A/E within four months after project completion. ODU encourages the use of a linked PDF file for the compilation of the Record Drawings, submittals and O&M manuals. ODU does not desire an executable file that could degrade over time. The closeout documents shall include a “READ ME” file with directions on how to access and use the documents.
   c. The A/E shall deliver Record Drawings as defined by the CPSM and electronic BIM/AutoCAD files within six months of project completion. Failure to deliver As-Built and Record Documents on a timely basis will be considered as criteria in future A/E and Contractor selections.
   d. As part of the Record Drawings submission, the A/E shall include the original approved photometric drawing for the site as well as a final surveyed photometric as built drawing indicating the final built light levels.
   e. As part of the Record Drawing Submission, the Civil engineer shall provide a single drawing sheet for each BMP which shall note the following:
      ii. Specs
      iii. Details
      iv. Construction sequencing
      v. Maintenance requirements & Responsible Party for maintenance
      vi. DEQ BMP Certification Statement
   f. APPENDIX K – BUILDING FACT SHEET
      Provide a completed Building Fact Sheet, in Microsoft Word using the form provided in APPENDIX K – BUILDING FACT SHEET, as part of the close out documents.
g. The A/E shall provide the linked BIM models (detached) to the university for future reference, along with the civil and landscape AutoCAD files. While these files are a valuable resource in the management and maintenance of campus facilities, we understand that the use of these files for the university’s benefit will in no way create any additional project specific liability issues for the A/E.

h. The contractor shall turn over any Navisworks models used on the project for use as reference materials by ODU.

i. The A/E’s professional photography shall be coordinated through the ODU Project Manager. The A/E shall secure copyright usage of the images by the University for their web site and any promotional materials related to the project.

j. The A/E shall provide, to the ODU Project Manager for review with Facilities Management, a consolidated list of all O&M training to be provided by the contractor with reference to the specific specification section containing the details for the training.

k. The General Contractor shall provide a consolidated list of all warranty requirements, as part of the O&M manual, beyond the standard 1-year warranty covering everything in the building (except consumables such as filters, etc.)

l. The A/E shall require, as part of the specifications for close out, an as-built valve directory (laminated and secured to a visible wall in the mechanical room.

m. All underground sanitary piping shall be GPS located and those coordinates shall be reflected on as-built drawings.

n. All piping systems shall be reviewed using cameras at the end of the project to determine no debris is blocking pipes. Videos shall be submitted to FM for verification of clean pipes.

C1A.27. Lessons Learned

a. The ODU PM, following building occupancy and prior to final closeout, will lead an informational review with the design team and the CMaR/GC to discuss “Lessons Learned” throughout the design and construction process. It is difficult to collect all parties at the end of a project, but the value to an open dialog can inform and improve future projects for all parties. All team members should contribute agenda items ahead of the session to keep the conversation organized and on topic. The ODU project Manager will then share the input with the Department of Design and Construction and any other parties that would benefit.

- The Lessons Learned session shall include:
  - Project Team
  - Stakeholders / Planning Committee
  - University Leadership
  - Contractor PM and Superintendent
  - Facilities Management

b. Topics for discussion shall include:
   i. What worked well in the design process? What would you do the same? Different?
   ii. What worked well in the construction process? What would you do the same? Different?
   iii. What worked well in the occupancy of the building including FF&E? What would you do the same? Different?
   iv. Did the building meet expectations? Any area where the building fell short of expectations?
v. Was the schedule met? If not what were the driving factors and could anything have been avoided?

vi. Was the budget met? Discuss an analysis of the full budget and specifically change orders and who/what drove those. The Change Orders should be grouped into the following areas: Unforeseen Conditions, Errors and Omissions, Owner Changes, other. We understand that no one is perfect, this is about understanding if and where we can improve future projects.

vii. Regarding the management of the project – University, A/E, Users and CMaR/GC – was everyone efficient and successful? Identify any processes that were implemented as part of the project that should be considered for implementation across all projects in the future.

viii. What Obstacles were experienced and how were they overcome?

ix. What procedures established in the design standards that were difficult or cumbersome to achieve? What new procedures would you recommend be implemented in the future?

c. Attendance shall be voluntary for the A/E and Contractor, but is encouraged by all parties as a learning opportunity for both the University and it’s consultants.

C1A.28. Post Occupancy Review

a. Ten (10) Months after building occupancy, the ODU Project Manager will schedule a joint project review and walkthrough with the entire project team, A/E, Contractor and Users. The review and walk through is an evaluation of what works and what does not from a design and construction standpoint and to confirm there are no open warranty issues. Participation in the post occupancy review by the A/E is voluntary.
October 12, 2018

General Project Requirements – Non-Capital and Maintenance Reserve Projects (MR)

NOTE: For larger Non-Capital Projects, such as those associated with the ODU Foundation, the Project General Requirements for Capital Project shall be followed.

C1B.1. General

a. The Department of Design and Construction and Facilities Management is responsible for the planning, design and construction and/or renovation of facilities at the University. These standards and procedures have been developed in support of successful project delivery. While the intent is to develop consistent processes for project delivery on the ODU campus, there are differences between Capital Projects and Non Capital projects, whether executed through Design and Construction or Facilities Management. To that end we have identified those specific actions associated with non-capital or Maintenance Reserve projects.

b. During the project Kick Off meeting with the University Project Manager will review project specific management plan and the Design Standards. Refer to APPENDIX A2 – NON-CAPITAL / MR PROJECT KICK OFF AGENDA for a discussion guide.

C1B.2. Design Standards Compliance

a. The Department of Design & Construction overseas and maintains the Old Dominion University Design Standards. The Design Standards have been established to communicate the base building and process requirements for new construction and/or renovations on all campuses of the university. While all projects shall adhere to its content, it is not the intent of these standards to be restrictive and as such it is our expectation that the A/E participating in the development of a project APPENDIX B – DESIGN STANDARDS VARIANCE REQUEST FORM when a project specific modification (Physical, not process) to the standards is necessary. The form must be completed and submitted to the University Project Manager who will review the request with the University Architect and other appropriate parties within two weeks of submission at which point the A/E will be notified of any delay in review or request for additional information, prior to the conclusion of those initial two weeks. It is preferable that the A/E submit variances in groups prior to a design phase submission for efficiency. In this way there is clear communication between the A/E and the University regarding project specific details.

NOTE: If the A/E deviates from the Design Standards without prior written approval, the variance will be considered an error and a claim may be processed against the A/E’s professional liability insurance for reimbursement of the cost to meet the Design Standards. If the Contractor is responsible for design / building certain (or all) aspects of the project, and varies from the Design Standards without prior written approval, the Contractor’s variance will be considered an error and a claim may be processed against the Contractor’s insurance. If the Contractor makes a change or substitution during the shop drawing and submittal process that is a variance from the Standards, it is the burden of the Contractor, not the A/E, to seek a variance approval. Inclusion of a Design Standards variance in either drawings or specifications during any design phase submittal reviews or construction shop drawing and submittal reviews, is not considered a Standards Variance approval. It is the A/E and / or Contractor’s burden to point out variances to the University Project Manager and to specifically request written variance approval prior to incorporating in the Project. The University is not responsible for identifying any deviations from the Design Standards.
b. The A/E shall submit the **APPENDIX C - DESIGN STANDARDS COMPLIANCE FORM**, at the submission of working drawing design submittal. The signed form will certify that the University Design Standards have been incorporated into the project by the A/E, Contractor and the University Project Manager.

**C1B.3. Project Team**

a. The composition of the project team will vary depending on the size and complexity of the project. At the inception of the project, the University Project Manager, working with the end user, will identify who should be involved in the design and execution of the project and within that planning committee who is the key decision maker. Below are constituents for consideration:

- Department Head’s designated representative
- University Architect
- Facilities Management - Housekeeping
- Environmental Health and Safety Officer
- Auxiliary Services
- Student Engagement and Enrollment Services
- Director of Transportation & Parking
- Facilities Management - Grounds Manager
- Risk Management (Fire Safety Manager)
- Facilities Management (Structural, Locksmith Shop, MEP Shop, Housekeeping, Moving & Hauling)
- Procurement Officer
- Project Inspector (PRELIM and Working Drawing Review)
- Assistant Director of Classroom & Learning Space Technologies.
- Public Safety Physical Security Specialist
- Information Technology Services

**C1B.4. Project Vision | Goals | Expectations**

a. During the project Kick Off meeting the A/E will facilitate a project stakeholder discussion to identify the end users vision, goals and expectations for the project. All participants should be given the opportunity to add to the discussion. It has been proven that this key conversation is the foundation for project success and shall not be skipped.

b. A Project Vision Statement as well as bulleted project goals and expectations shall be documented by the A/E and submitted to the University Project Manager for distribution to all stakeholders.

**C1B.5. Communications**

a. Old Dominion University’s designated Project Manager is the central point of contact for the project. All communication between the A/E and the University shall be routed through the Project Manager. Clear, concise, consistent and timely communication is key to the success of any project. The University Project Manager along with the Management Team shall establish mutually acceptable lines and methods of communication at the project kick off. The University Project Manager will be copied on all correspondence and will maintain the university’s project files. The A/E will coordinate closely with the University Project Manager for scheduling University personnel throughout the design phases of the project.

b. Since email has become the most utilized form of communication, we request that the A/E coordinate with the University Project Manager to establish the short hand name of the project which will then be used in the subject line of all emails associated with that project. For example SU is short hand for Student Union. This allows for the quick search for associated emails by all parties. Informative email subject lines improve communication (i.e. SU – Budget Update).
c. Agendas for each design meeting shall be provided to the University Project Manager prior to the meeting for distribution to the attendees.

d. If a project is of a sensitive nature, as determined by the university project manager, draft presentations shall be provided for review, prior to presenting the planning committee.

e. Sign In Sheets
   i. The A/E working with the University Project Manager will develop a sign-in sheet for use at each meeting. The sign-in sheet will identify participants and provide their contact information allowing participants to confirm their information and initial they are present for the meeting. Sign-In Sheets will be updated as new individuals are added to meetings, Sign-in sheets will also act as the project directory.

f. Meeting Minutes
   i. At the project kick-off the A/E shall propose a meeting schedule including presentations and reviews. The A/E shall make a record of meeting participants and the items discussed and provide meeting minutes for all meetings. These meeting minutes will include an action item log for the project based on meeting discussions, identifying the action requested, responsible party, date of request and anticipated date action is required to be closed. Items will remain on the action item log until they are complete, and the resolution recorded.
   ii. Complete meeting minutes include the Sign-in Sheet, Meeting Notes, copy of Presentation materials and the Action Item Log. Meeting Minutes shall be in Adobe PDF format.
   iii. The University Project Manager shall post all meeting minutes to a project specific cloud storage folder, designated by the project. The folder shall be accessible by all planning committee members, stakeholders and management team. All presentations and meeting minutes will then be accessible to the full project team as needed.
   iv. The University Project Manager shall provide a copy of all meeting minutes to the FM Plant Engineer for distribution to the appropriate FM staff, for information purposes. This includes meetings at which FM was not in attendance.
   v. The A/E shall be responsible for producing meeting minutes for the duration of the project from Design through construction and closeout.

C1B.6. Design Schedule

a. The Department of Design and Construction has developed schedule templates for both Capital and Non Capital projects using Microsoft Project. It is the preference of the Department that the A/E provide a logic schedule and use the templates as the basis. By using the templates, the department will be able to track and compare schedules from various projects using e-Builder (a fully-integrated, owner-centric, cloud-based construction program management software implemented within the Department of Design and Construction) by importing the schedule data. If the A/E does not have the ability to develop the design schedule using the Microsoft Project templates, the Department can provide the A/E with an excel file using the same task list. The templates are not intended to limit how detailed the design schedule is, but represents the minimum information desired and should be edited to suit the specific needs of each project.

b. The A/E should understand and show how the schedule overlays with the academic calendar. This initial schedule shall be the baseline schedule for the project.
c. At their own discretion, the A/E can choose to provide a graphic overview schedule for the Planning Committee meetings; this does not take the place of the detailed schedule requested above.

d. The design schedule shall be provided to the ITS department, who shall be considered a consultant to the project team and included in A/E communications as appropriate. Specifically it is important that any design schedule updates or shifts be communicated to ITS as soon as possible for their planning purposes.

e. The design schedule is to be updated monthly and submitted to the Project Manager concurrent with A/E invoice. The monthly updates shall be shown as a tracking Gantt against the baseline schedule and indicate the % complete for each task.

C1B.7. Project Scope and Budget

a. Enough emphasis cannot be placed on the importance of maintaining the project scope, budget and schedule. Because the Planning Committee is composed of people who may not be aware of the impact their direction can have on project scope, budget and schedule, it is the A/E’s responsibility to clearly articulate the impact of design direction on the project in a timely fashion.

“Do not show us what we can’t afford,” is a statement often repeated on campuses across the country, but which is worthy of repeating here. At the same time the design must always reflect the identity of Old Dominion University within the project specific budget.

“Don’t render what you cannot build” – Renderings are what people remember and get attached to, so during the design process renderings are very helpful to convey ideas, just be sure that if you show a design element or idea in a rendering that it can logistically be built within the budget.

C1B.8. Cost Estimate Contingencies

a. Per the CPSM and as reiterated in the BCOM NEWSLETTER OF FEBRUARY 2017, a design contingency of a maximum of 10% shall be carried in the schematic estimate and a design contingency of a maximum of 5% shall be carried in the Preliminary estimate. In both schematic and preliminary estimates a construction contingency shall be carried at no more that 3% in the estimates and shall be reduced to 2% at Working Drawings / GMP.

b. All estimates shall carry a design contingency up through working drawing submission.

c. The A/E may request a reduction in the design contingency percentage stated above, if the project type or level of development warrants. This is no way alleviates the A/E from meeting the design not to exceed budget number.

d. Cost Estimate Escalation
   i. Escalation shall be carried to the midpoint of construction.

C1B.9. Life Safety Drawings

a. ALL University projects shall follow the requirements of CPSM SECTION 5.8.6.9.1 as it relates to fire protection and fire safety systems. It is vital to have this design information clearly identified for all projects for reference years after the building is constructed when renovations are necessary.

b. Life Safety Drawings shall be numbered using LS instead of FP to avoid confusion with fire protection (sprinkler) drawings.

C1B.10. Value Management

a. While our desire is to have a smooth process where the design developed and presented to the University is on budget, we understand the reality is sometimes not so clear. In order to keep a project
on budget, there will be times, typically at each submittal’s cost estimate review, where changes are required in the design in order to bring the cost in alignment with the “Design Not To Exceed” budget. During these discussions, the University expects the A/E to provide a comprehensive list of options for reducing costs. The A/E should indicate the pros or cons for each item, any impact to sustainability goals, any impact to the project’s schedule or whether the change would put the project out of compliance with these Design Standards. Facilities Management Leadership will review the list at each design phase and will ultimately determine what items are to be reduced, cut or modified in order to bring the design in line with the budget. **APPENDIX F – PROJECT VE FORMAT** is provided (the excel file can be downloaded from the resource section on Design & Construction’s website.

b. The University Project Manager is responsible for communicating the VE List to the project stakeholders for their input and to communicate the accepted VE items to the stakeholders as each design phase of the project.

C1B.11. Design Review Process

a. ANY change to the exterior of a building, including the addition of windows, is required to be submitted to the AARB (Art and Architectural Review Board) for approval. The University Architect shall review and prepare the AARB submission, with the assistance of the A/E. The University Architect shall coordinate necessary reviews with AARB and make such presentations.

b. Design Phase Approvals

   i. It is the intent of the university to improve the review process with the state and the City, decreasing the number of comments and time required by the reviewing agency. At each design phase of a project, the university will review the design phase submittal, provide written review comments to the A/E who will provide written responses to each comment and return the completed list to the university project manager using **APPENDIX E – SUBMITTAL REVIEW SHEET**. Each submittal requiring review by BCOM, the State Review Agency and/or Authority Having Jurisdiction (AHJ), shall be reviewed by the University, with comments incorporated prior to submittal to BCOM or to the local AHJ. For Non Capital projects using an AHJ, the same review process at each phase will be followed even though submittals are not formally required to the AHJ.

   ii. To facilitate the University review process, an “On-Board” review session can be held at the University for each Phase Submittal. On Board review sessions will be proceeded by distribution of the submittal documents at least 5 days in advance. Comments received during the on board review are to be recorded by the University Project Manager compiling a complete comment list. These comments and their responses will be distributed to the entire review team for acceptance.

   iii. Old Dominion University’s design review and comment process does not limit the liability of the A/E for quality control and quality assurance for the project, nor does it relieve the A/E from adherence to all applicable building codes and regulatory requirements.

   iv. The A/E will provide ODU with the BIM models as part of each submittal phase review. These models will only be used as part of the review process, for visualization of systems coordination, by the University Architect and will not be distributed outside of the Department of Design and Construction.

C1B.12. Building Permit

   a. Projects on campus fall into three categories with the following identified as the AHJ:
i. BCOM
ii. The City of Norfolk Building Inspectors
iii. The FM Director

b. Refer to CPSM APPENDIX P – BUILDING PERMIT POLICY FOR CONSTRUCTION OF STATE OWNED BUILDINGS & STRUCTURES to determine if a Non-Capital Project requires BCOM review. The A/E in conjunction with the University will complete APPENDIX H – ANNUAL PERMIT WORKSHEET and file the completed worksheet with the project files, once the worksheet is accepted by the Director of Facilities Management.

c. For non-capital projects reviewed by the local AHJ (Authority Having Jurisdiction) the same concept applies; introducing the project to the local AHJ and Fire Marshall and reviewing design approaches to critical codes issues, is key in keeping a project on track.

C1B.13. Building Information Modeling (BIM)

a. The university is a proponent of the use of BIM software for the development of building design and documents. Currently the university uses both AutoCAD and Revit platforms. It is our desire that all projects utilize BIM software for the development of documents including all disciplines except civil and landscape.

b. The A/E will share their project specific BIM Execution Plan with the University to assist in use of the BIM models. The Plan shall include minimum BIM requirements, and project-related BIM goals, processes, protocols and levels of development identified by the project team. The American Institute of Architects (AIA) has developed Project BIM Protocol forms and exhibits which can be used to guide the A/E in the development of the execution plan or the A/E can provide their own documentation. The goal of the documentation is to assist the university in navigating the BIM models which are templated differently by each A/E.

C1B.14. File Naming

a. As a university, we manage multiple projects at one time as well as actively manage the maintenance and space utilization of a large network of buildings. As such tracking, organizing and storing information is one that requires consistency. The University will rename files received from the A/E and contractors to match our system as follows (example):

YYYY MMDD_MM Kick Off – The first part of the file is the date of the document followed by all caps letters referencing the type of information in the file, in this case Meeting Minutes, then followed by short description in lower case of the content. The benefits are that when filed, the information is sorted chronologically, the consistent use of a file type identifier makes it easy to search for a type of document, followed by a more specific description or event identifier. Since data is stored by project, the name of the project need not be in the file name, unless desired by the University Project Manager or as desired by the A/E for their own reference. If the project short name is used in the file name, it should be consistently located in all file names. The Project Identification Code noted below is not required in the file name, nor is it beneficial to the university to have the A/E’s project number in the file name.

C1B.15. Document Labeling

a. The CPSM defines the Project Identification Code. ALL correspondence and documentation shall include the project identification code number and date on the document. All documents shall have a date on each page and will identify the submittal associated. Proofing submittals prior to
submission to BCOM and/or ODU is an expectation by the owner for quality control and a reduction in comments from both entities.

All drawings submittal cover sheets should be clearly identified having, as part of the cover sheet title, the submittal name, i.e. PRELIMINARIES, 2nd WORKING DRAWINGS, PERMIT, etc., and the date in large letters.

C1B.16. Drawing Submissions

a. It is the preference of the Department of Design and Construction to have a consistent sequence of drawings between projects by different firms. Recognizing that we use the drawings as reference drawing sets for years to come, having consistency moving forward will be highly beneficial.

b. Below is the file structure we have set in place for the University’s digital library and represents the sequence that we use in filing all drawing sets:

01 General (Includes Cover sheet)
02 Life Safety
03 Civil
04 Landscape
05 Structural
06 Architectural
07 Plumbing
08 Mechanical
09 Electrical
10 Fire Alarm
11 Fire Protection
12 AV
13 Data
14 Food Service
15 Laboratory
16 Specialty Consultant

c. Exterior / Roof Detail Drawing Scale: Due to the high level of importance on the building envelop, in its entirety, the A/E shall draw details at a minimum scale of 3“ = 1’-0” but a 6“ = 1’-0” scale is preferred to clearly see the extent of the water, air, vapor and thermal systems barriers.

C1B.17. Specifications

a. Headers shall include the current date of the section issued. For example if the section was issued and then revised and reissued, the section should have two dates in the upper right corner.

b. The header shall indicate, as a minimum, the following:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLD DOMINION UNIVERSITY</td>
<td>12/12/2016</td>
</tr>
<tr>
<td>Campus Location; i.e. Norfolk, Virginia</td>
<td>ADD 01 1/10/2017</td>
</tr>
</tbody>
</table>

Project Code:

c. Specifications shall be developed selecting three specific products. BCOM does not accept a basis of design plus two manufacturers. Alternately a basis of design and a performance specification can be used, being careful that the performance specification does not then exclude the basis of design.
d. The CPSM does not allow the specifications to require a specific number of years of experience or time in business as a basis of award.

e. The A/E shall include a list of submittals as part of the specifications.

f. Sole Source Specifications:
   i. The following systems have received approval from the Director, Division of Engineering & Buildings to use in a sole source specification. ODU can provide the relevant CO-18 form when requested. Refer to CPSM 5.3.9.3 SOLE SOURCE SPECIFICATIONS for further information with regards to procuring designated sole source items.
      ▪ Fire Alarm – Simplex Grinnell
      ▪ Jim Collins (Branch Manager) 757-853-6611/ Frank Kleczewski 757-853-6611 (ext. 224]
      ▪ Building Automation System – Siemens
      ▪ Electronic Locks/ Building Access – Stanleyworks BEST Access
      ▪ Coordinate through Richard Wollam with ODU Public Safety (757-683-4003) and Dan Gavin with ODU Facilities Management (757-683-4269) as you discuss with BEST. BEST contact is Randy Huff (804-556-2872)
      ▪ Locks – Stanleyworks BEST Locking Systems
      ▪ Coordinate through Dan Gavin with ODU Facilities Management (757-683-4269) as you discuss with BEST. BEST contact is Jerry Garrison (804-509-0700).

g. Hardware
   i. For all projects utilizing an A/E whether through the RFP process or through the term contracts, shall provide a door hardware schedule as part of their scope of services. The hardware standards are identified in Division 08 – Openings of these standards.
   ii. Door Hardware schedules and coordination with door access requirements requires careful review and coordination with ODU’s ITS group.
   iii. A/E shall coordinate a door hardware and access meeting during the working drawing phase, prior to the owner review submittal for working drawings. This should be a specific detailed discussion, independent of other meetings.

C1B.18. Conformed Documents

a. Conformed Construction Documents are the Construction Documents modified to include any addenda issued during the bidding or negotiation process. The A/E is responsible for providing copies of conformed documents prior to the start of construction, in PDF format for distribution. These are sometimes termed the IFC or Issued for Construction set.

C1B.19. Construction Administration Services

b. The A/E shall provide the following construction administration services, at a minimum:
   i. The A/E shall facilitate a once monthly Owner Architect Contractor (OAC) meeting (or at a timing designated by the University Project Manager for short duration projects). The A/E shall be responsible for written meeting minutes for each OAC meeting.
   ii. The A/E shall provide a written Field Reports, of site observations during the construction. Site visits shall occur bi-monthly, or as determined by the University Project Manager depending on the specific needs of the project. Action lists included in the field reports are valuable and should identify the action requested, responsible party, date of request and anticipated date action is
required to be closed. Action items will remain on the field report until they are complete, and the resolution recorded.

iii. The A/E shall coordinate with the university project manager, the closeout of the project. This shall include a punch list, punch list verification and record documents.

C1B.20. Attic Stock
   a. Refer to APPENDIX I - ADDITIONAL MATERIALS (ATTIC STOCK) for quantity of materials required.

C1B.21. Project Close Out
   a. The A/E’s contract will not be considered complete, nor will final payment be made until all project close-out requirements are met. Refer to APPENDIX J – CLOSE OUT DOCUMENT CHECK LIST. The A/E Project Manager and the University Project Manager shall work together to confirm all documents have been received and accounted for.
   iv. It is vital that individual file names not exceed the overall limit of characters for the full path of files located within our digital library. The Contractor and A/E shall direct their teams to develop file names that don’t exceed 80 characters in length (includes spaces). Do not include a “.” in the file name and avoid other punctuation. Avoid excessive folder structures when compiling the record documents as these also use up available file characters. If upon receipt of the closeout documents we cannot load these to the university’s digital library, they will be returned in their entirety to the A/E and or contractor for renaming.
   b. The contractor shall complete and deliver As-Built documents to the A/E within one month after project completion. ODU encourages the use of a linked PDF file for the compilation of the Record Drawings, submittals and O&M manuals. ODU does not desire an executable file that could degrade over time. The closeout documents shall include a “READ ME” file with directions on how to access and use the documents.
   c. The A/E shall deliver Record Drawings as defined by the CPSM and electronic BIM/AutoCAD files within three months of project completion. Failure to deliver As-Built and Record Documents on a timely basis will be considered as criteria in future A/E and Contractor selections.
   d. The A/E shall provide the linked BIM models (detached) to the university, for future reference, along with the civil and landscape AutoCAD files. While these files are a valuable resource in the management and maintenance of campus facilities, we understand that the use of these files for the university’s benefit will in no way create any additional project specific liability issues for the A/E.
   e. The A/E shall provide, to the University Project Manager for review with Facilities Management, a consolidated list of all O&M training to be provided by the contractor with reference to the specific specification section containing the details for the training.
   f. The General Contractor shall provide a consolidated list of all warranty requirements, as part of the O & M manual, beyond the standard 1-year warranty covering everything in the building (except consumables such as filters, etc.)
   g. All piping systems shall be reviewed using cameras at the end of the project to determine no debris is blocking pipes. Videos shall be submitted to FM for verification of clean pipes.