University of West Florida Building Construction Standards

The University defines its design priorities in terms of plans and specifications that:

1. **Meet the University program requirements.** Incorporate information technology in spaces, and comply with state codes and federal laws. It must be recognized that changing curricula and modifications of spaces are frequent occurrences in a University operation. As such, flexibility should be a consideration in any plan to accommodate anticipated as well as unanticipated changes and future growth. A sound, functional plan is the single most important factor in obtaining an acceptable solution to the requirements of the building program. Therefore, careful listening, planning, and preparation of space relationships must occur with Users prior to design submittal.

2. **Result in low maintenance, long-lived buildings free of structural, material, and operating defects.** These guidelines and requirements presented in this document are based upon University experiences with materials and construction methods thereby detailing which have resulted in the fewest problems in operation and maintenance. It is further supplemented by the statement of “no pioneering with new products or systems” and expecting us to be in the **forefront of proven technology.** Uniformity in the use of materials and equipment throughout campus limits the range of cleaning and maintenance products, and reduces the variety of parts and materials that must be inventoried for repairs as well as providing a continuity of aesthetics and functional user-experiences.

3. **Provide a high degree of energy efficiency.** Energy conservation must be given special consideration in the design and construction/installation of new or remodeled University buildings and equipment. That stated, we expect buildings to be healthy environments, therefore, they must comply with ASHRAE’s recommended Indoor Air Quality.

4. **Create and develop visual and architectural attractiveness within the context of preferred University architecture.** There are certain architectural elements that are expected to occur in future buildings that include, masonry banding, “buff” masonry color consistent with the Conference Center and Commons buildings. Exterior design of the building is expected to be compatible with these selected components of the campus whole. Exterior materials as well as the building form will be examined very carefully to ensure compliance with the requirements of the project and Design Standards.

5. **Use State of Florida and locally created funds judiciously considering life-cycle costs.** Selections of materials, systems, and equipment must be made considering the best service during the component’s life. New materials, systems, and equipment, when proven sound, may justify changes from these standards. The basis for these standards are derived from the philosophy of experimenting with known products when absolutely necessary; however, **avoid pioneering.**

Dr. James R. Barnett, Associate Vice President
Facilities Services

February 15, 2002
Building Construction Standards

Architectural and Engineering Services
# Building Design and Construction Standards for The University of West Florida

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INTRODUCTION

The Building Design and Construction Standards described in this document are for the use of architects, engineers, designers, and construction personnel and are intended to be utilized as a checklist for coordinating and understanding the desired construction standards required by the University of West Florida. They are presented to assist the professional in the selection of materials, the design, construction, and long-term maintenance of building projects at the University of West Florida by providing minimum quality standards acceptable by the University Facilities Department and the Board of Trustees.

The information contained in this document is organized in the CSI format and is based on sound architectural and engineering principals as well as the University’s experience. These construction standards are neither completely inclusive nor totally exclusive. If a situation develops which is contradictory to these standards or, if the design professional can demonstrate evidence of a more advantageous solution, the University will welcome modifications, upon approval of the University Project Manager and the Director of Architectural and Environmental Services. Questions or comments regarding this document can be addressed to the Department of Architectural and Engineering Services.

It is intended that the construction standards checklist become a requirement of each project milestone review process. Those items of the construction standards not followed will be discussed and approval/disapproval given by University prior to proceeding to the next design stage. Failure for designers, architects, and engineers to meet stated standards and/or to work with University personnel to reach agreement on deviations from these construction standards will result in appropriate evaluation.

The State University System Professional Services Guide (Rev. 15 Dec., 1998) shall be a binding part of this document (see Exhibit No. 1). The Guide shall be utilized by the design professional to assist in fulfilling requirements of the Owner and the A/E Agreement, the Project Manual, Owner/Contractor Agreement and the Building Design and Construction Standards.
DEFINITIONS

AA – The Aluminum Association, Inc.
AAMA – American Architectural Manufacturing Association
ACI – American Concrete Institute
ADA – Americans with Disabilities Act
A/E – Architectural/Engineering Consultant
ANSI – American National Standards Institute
ARB – Architectural Review Board, City of Pensacola

Architectural and Engineering Services – The department at the University of West Florida responsible for all capital planning, design and construction; space analysis and management; and general project management for all projects.

ASHRAE – American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.
ASTM – American Society for Testing and Materials
AWI – Architectural Woodwork Institute
CMU – Concrete masonry unit

Environmental Health and Safety – The department at the University of West Florida responsible for indoor air quality, hazardous waste, building code administration, etc.

EPA – Environmental Protection Agency

Facilities Management – The department at the University of West Florida responsible for the operations and maintenance of existing facilities.

Facilities Services – A descriptive term used to summarize three departments: Architectural and Engineering Services, Facilities Management, and Environmental Health and Safety

FDEP – Florida Department of Environmental Protection
F.S. – Florida Statute
NFPA – National Fire Protection Association
NWMA – National Woodwork Manufacturer’s Association
OSHA – Occupational Safety and Health Administration
Owner – University of West Florida

Planning and Design Office – A subgroup of Architectural and Engineering Services, which provides services in regards to electronic drawings for: campus documentation of space, systems, and ownership; Facilities Management; planning/estimating and design; infrastructure documentation; surveying/GPS/GIS; and, O&M manuals and project completion documentation library

SMACNA – Sheet Metal and Air Conditioning Contractor’s National Association, Inc.
SUS – State University System
University – University of West Florida

University Project Manager – Consultants and Contractors point-of-contact for the University of West Florida

WFHPI – West Florida Historic Properties, Inc.
GENERAL DESIGN GUIDELINES

University of West Florida’s Offices of Architectural and Engineering Services, Facilities Management, and Planning and Design are responsible for all components of the built environment on the Campus – buildings, open spaces and infrastructure. These departments are entrusted with providing the University of West Florida with buildings that incorporate a high degree of:

1) Functional Efficiency
2) Innovative, but Appropriate Design
3) Contextual Harmony with the Site
4) Appropriately Selected Materials and Systems
5) Health and Safety Characteristics
6) Accessibility for the Disabled
7) Life Cycle Value

The Building Construction Standards have been compiled to establish general and, in some cases, specific design policies as a guide to University staff and to consultant architects and engineers (A/E) for designing new facilities, as well as the alteration or renovation of existing structures. These Standards supplement the job-specific Facility Program. Should the Facility Program and the Standards conflict, Standards shall supersede.

A. The Architect/Engineer (A/E) should endeavor to incorporate a design concept that will facilitate possible future changes, expansion, or renovation.

B. A building’s placement and design shall be coordinated with the University of West Florida Masterplan.

C. Some of the existing buildings that reflect architectural design standards the University is striving for are Buildings 32 (Library – New Addition), 89 (Archeology), Martin Hall, Pace Hall, 22(Commons), and to a limited degree 41 (Psychology). Each of these buildings has successful design elements that contribute to the goals of the Master Plan. Design elements that should be incorporated into future buildings include:

1. Recessed or Covered Entries: These elements provide a functional use by controlling heat gain and protection from the elements at the building entrance. Aesthetically, they provide the opportunity for architectural development at the entrance, reduce the building scale at the entrance and give additional visual interest to the building façade.

2. Masonry Building Materials: Masonry is a low maintenance material that works well in the Florida climate. The nature of the material establishes a fueling of longevity and allows for limitless detailing in the building elevations.

3. Incorporations of Immediate Site into the Design: The Design of new buildings should integrate significant site features. Existing trees should be maintained, and site grading should be minimized.
4. Exterior spaces should be integral to the design. The impact adjacent to new buildings should be such that the transitions from exterior circulation paths to interior building spaces are smooth and gradual. The building form and detailing should be designed in conjunction with landscaping and site development.

5. Screened Mechanical Yards: Mechanical yards and dumpsters should be screened with similar materials and design as the building it serves.

D. All buildings shall have designated service entrances and their location shall be coordinated with the University of West Florida Masterplan’s service access routes.

E. Adequate time shall be programmed in the design process for complete review of major design projects by the University staff at the Schematics, Design Development and Construction Documents phases (a “stand-up” review meeting shall be scheduled at the end of each review time). Written approval of each submittal shall be obtained from the University Project Manager before proceeding with subsequent phases. In no case shall construction documents be released to prospective contractors before final approval of all documents by Architectural and Engineering Services, the University Building Code Official, and the University Project Manager.

1. Design Schedule (For detailed requirements at each submittal, consult SUS “Professional Services Guide,” Article 4.)

<table>
<thead>
<tr>
<th>Phase of Work</th>
<th>Percentage of Work Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Conceptual Schematic Design/Program Confirmation</td>
<td>15%</td>
</tr>
<tr>
<td>b. Advanced Schematic Design/Final Programming</td>
<td>30%</td>
</tr>
<tr>
<td>c. Design Development (Interior/Exterior Color Board)</td>
<td>60%</td>
</tr>
<tr>
<td>d. 50% Construction Documents</td>
<td>80%</td>
</tr>
<tr>
<td>e. 100% Construction Documents</td>
<td>100%</td>
</tr>
<tr>
<td>f. Final Construction Documents</td>
<td>----</td>
</tr>
</tbody>
</table>

2. The A/E shall submit four (4) sets of documents for each phase of work noted above.

3. The A/E shall allow for a two (2) week minimum review following each submittal of major design projects. A lesser review will be decided on minor addition and renovation projects.

4. At “100% Construction Documents” submittal, the A/E shall submit 2 “signed and sealed” sets, each, to the State Fire Marshall and the UWF Building Code Administrator. Drawings that will be sent to the State Fire Marshall shall have each sheet “signed and sealed” by it’s respective discipline.

5. At “Final Construction Documents” submittal, the A/E shall submit CAD files for all hardcopies.

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Architectural and Engineering Services
F. CAD Files:
1. All drawings shall be submitted in AutoCAD (Autodesk, Inc.) .DWG format at the current highest release level or level that is 100% compatible to the current highest release level. UWF shall not accept any drawings in the Drawing Exchange Format (DXF). If any drawing translators are used prior to submittal the results of such translations shall be 100% complete. It is the responsibility of the Consultant to crosscheck translated drawings for errors and omissions.
2. All electronic drawing files shall be submitted on either 3.5” floppy diskettes 1.44mb high density format, IBM formatted Omega Zip Disk, or CD-R (Record able Compact Disc). No CD-RW’s shall be accepted. If a CD-R is to be used, the CD-R shall be written in a single-session (closed) format, using ISO-9660 files system.
3. All submitted electronic media shall be clearly labeled with consultant name, date of submittal, project name, and list of data files. Labels shall be firmly attached to the diskette/CD.

G. Building Code Inspection Program: Florida Statutes, Chapter 553.80(6), requires State Universities, Community Colleges, and school districts to adhere to the requirements of the Florida Building Code, and perform plans review, and inspections by personnel certified under F. S. Chapter 468, Part XII.

Sliding scale fees cover the cost of program operation including:
- Plans Review of All Required Disciplines
- Permitting of Construction, Renovation and Maintenance activities
- Multiple Inspections of construction
- Issuing of Certificates of Occupancy or Completion by permitting authority.

1. Total Project cost: $0 - $999 will incur a flat fee of: $50
   $1000 - $4999 will incur a flat fee of: $75
   $5000 - $9999 will incur a flat fee of: $100
2. Roofing jobs up to $150,000 total construction value, shall incur a flat fee of: $100
   Roofing jobs greater than $150,000 total construction value, shall incur a flat fee of: $200
3. All telecom work shall incur a minimum fee of: $30
   The sliding fee scale shall apply to telecom projects with a total cost of $10,000 and greater.
4. All projects of total value of $900,000 and greater shall be estimated at 0.88%

H. Upon completion of Schematic Design Phase, room numbers and door numbers should be coordinated with the University Project Manager. Final numbers shall not appear on subsequent documents without prior approval from the University Project Manager.

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I. The West Florida Historic Preservation, Inc. (WFHPI) is an organization comprised of twenty-two (22) historic buildings located in downtown Pensacola. The WFHPI is controlled, operated and maintained by the University of West Florida. All work on these structures shall have the approval of the City of Pensacola’s Architectural Review Board (ARB). Questions concerning the procedures of the ARB can be answered by contacting Mary Anne Peterson at (850) 435-1631.

J. Office Space Square Footage Criteria

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>President</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>Vice President</td>
<td>200</td>
<td>225</td>
</tr>
<tr>
<td>Dean</td>
<td>200</td>
<td>225</td>
</tr>
<tr>
<td>Directors</td>
<td>175</td>
<td>200</td>
</tr>
<tr>
<td>Asst. Directors</td>
<td>135</td>
<td>145</td>
</tr>
<tr>
<td>Other Administrators</td>
<td>110</td>
<td>115</td>
</tr>
<tr>
<td>Senior Secretarial w/ Files</td>
<td>130</td>
<td>140</td>
</tr>
<tr>
<td>Clerk</td>
<td>105</td>
<td>110</td>
</tr>
<tr>
<td>Multiple Clerk Office</td>
<td>130 sf for first, 50 sf each additional</td>
<td></td>
</tr>
<tr>
<td>Conference</td>
<td>20 sf per occupant</td>
<td></td>
</tr>
<tr>
<td>Records/File per 5000 FTE</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>(large central file room)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classrooms</td>
<td>22 sf per station</td>
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K. General Classroom Design Criteria:

1. Classroom environments need to be a space that is lecturer flexible and listener (note taker) friendly. This includes the attention to future changes due to curriculum, use of visual displays, orientation of the room given sunlight, and quiet mechanical systems.

2. Construction materials need to be chosen based upon durability, cleanability, and acoustical properties in mind. Acoustical treatment is especially important with seating greater than 75 students.

3. If not designed as an electronic classroom, provide conduit, mounting location, and 110v electrical for a future teaching station and ceiling mounted projector based upon existing preferred equipment selections.

4. White marker boards are preferred. Avoid use of chalkboards and dust. Placement is to be at the front (lecture) of the room. Sidewall locations may be necessary (University Project Manager (UPM) needs to ask user). Boards are to have a cork tack strip along the top edge and spring clips.

5. Tackboards: Provide one, nine square foot tackboard within each classroom on the sidewalk near the exit/entrance.

6. Window coverings: Provide durable, room darkening blinds for windows. Window coverings are to be selected keeping in mind the action of the window. Horizontal operating windows are to have horizontal louver blinds, etc.
7. Exits/entrances are to be at the back of the room.
8. Provide one fixed lecturer teaching station with electrical utilities (UPM needs to ask user style) and one moveable lectern in each room.
   - **Fixed** equipment includes built-in casework, fume hoods, wall cabinets, counter, tackboards, fixed seating, fixed teaching stations, markerboards, and permanently installed projection screens. Their costs are included in the contract documents. The consulting architect shall prepare drawings to assure all utilities are included. Specifications are to be written that leave no question as to which of the several contractors, general and assigned, and suppliers has responsibility for making all necessary connections and installation of equipment, including receiving, unloading storing, uncrating, and disposal of waste.
   - **Moveable** equipment includes items such as office furniture, computers, file cabinets, freestanding bookcases, etc. are "owner supplied". It is essential the consulting design team know sizes, electrical amperage load needs, mechanical exhaust needs, heat gain, etc., so the contract documents provide adequate utilities services and space for these purchases. The UPM will communicate with the User and the Purchasing Office of the monetary amount to be used for moveable equipment purchase after bid receipts.
9. All fixtures, permanent/fixed or moveable, need to be covered with plastic laminate or be constructed of plastics of colors (prefer neutral) to provide easier match later in the building's life, as that provide exceptional durability and strength (no fabric seats such as found in an auditorium/theatre environment).
10. Wall treatment: Unless a specialty classroom, it is preferred walls be constructed with concrete masonry unit separation. A less preferred, however acceptable, alternative is painted gypsum drywall.
11. Floor treatment: Large lecture auditoriums with fixed seating, carpet front and back aisles with vinyl composition tile or sheet goods in the seating area. Carpeting can be installed in small seminar rooms with final selection by the UPM.
12. Fixed seating width: Minimum of 22". Folding mechanisms to have "rattle-free" mechanisms.
13. Telecommunications: Minimum installation is a voice-data cable near an 110v outlet on center from wall below white markerboard. UPM to check exact location with user.
14. Lighting:
   a. Student seating without note taking
   b. Note taking without projection screen spillage
   c. Instructor/presentation
   d. Markerboard
   - Lighting controls to be at front of room and easy for instructor to control.
   - Light switches with clearly labeled functions
• Two lighting zones, one zone for general fluorescent lighting; one zone for incandescent low level lights.

15. Electrical:
• Provide minimum of four, 100v duplex receptacles. One for front wall and one receptacle all other walls use will be for media equipment, portable computer on cart, vacuum cleaners, etc.
• Provide empty 3/4-inch conduit between front and rear walls, centered on ceiling for future unknown use with blank face box cover plate.
• Control of instructional equipment to be at front of room.
• Provide electrically operated projection screen in auditorium/theatre rooms of 75 occupancy and greater.
• Provide wall clock visible for instructor and students.
• Provide a floor receptacle near first row of fixed seating at center to accommodate portable projector.
• Provide a ceiling mounted video projector mount to be:
  • Approximately 15-feet from front, centered screen.
  • Minimum of a 2-inch conduit from projector position to front control panel.
• 110v duplex receptacle at ceiling mount location.

16. Media Design Guidelines and Criteria:
• Sufficient storage and installation of media equipment.
• Control of equipment at front and rear of room.
• Effective lighting controls and levels (see Lighting, Item 14).
• Effective viewing angles not to exceed a 30-degree angle.
• Quality audio listening levels and acoustics.
• Provision of standard, high quality, and serviceable models of media equipment. Architectural and Engineering services Owner’s Representative to confer with the Information Technology.

17. Audio-Visual Equipment: (UPM to plan with IT personnel)
• Provisions for use shall be incorporated into new and remodeled buildings.
• Include flexibility of electrical connections and panels to allow move and side projectors, overhead projectors, television monitors, television cameras, and portable cart computer terminals. Note: UPM to check with user to determine is a specialty room is to be wired for students to interconnect their portable laptops at their desk.
• Requirements for equipment selection, conduit sizes, cable trays, amperage, etc., will be developed for projects with assistance from IT personnel.

K. Specific Classroom Needs: In addition to the guidelines for general classrooms the following specific elements need to be incorporated into the design.

1. Auditoriums:
   a. Minimum workspace at front of room should allow 10-feet of distance.
between the screen surface and overhead projection position. It is preferred to utilize a second corner mounted 84-inch minimum Screen for overhead projection.

b. Largest dimensions should be front to rear considering preferred viewing angle for projection. However, a dimension of 80-foot depth and 75-foot width is acceptable if viewing angle does not exceed 30 degrees.

c. Ceiling height should allow viewing of a vertical 96-inch image without obstruction from all seating positions.

d. Auditoriums may need to utilize a riser at room front and/or use a sloped floor.

e. If a rear projection booth for the auditorium is necessary by the user, it should contain:
   1) Fixed glass projection window.
   2) Controls similar to front of the auditorium.
   3) 110v duplex receptacles and data outlets above the counter surface.
   4) Two 3/4-inch conduits to front control panel.

f. Provide a control panel at front side of room with optimum availability for instructors to contain:
   1) All lighting, electrical, projection voice/data, and audio control jacks.
   2) Lockable storage compartment for video player, PA/sound system, and remote control unit for video player.

g. Program and design potential use of the auditorium for remote video conferencing. After review with users, Telecommunications, and that it's use is probable for the space, include:
   1) Conduit for remote cameral locations.
   2) Extra space for a media wall or switching console projection booth.
   3) Interconnectivity (conduit and cable) to the building’s fiber optic panel in the utility closet.
   4) Two extra 3/4” conduits from front control panel to media wall or projection booth.

2. Classroom (30-50 seat):
   a. Minimum workspace at front of room should allow 8-feet distance between the screen surface and overhead projection position.
   b. Avoid viewing angles greater than 30 degrees. Therefore, a slightly greater distance should occur front to back and the lesser dimension side to side.
   c. Ceiling height should allow viewing of a vertical 70” image without obstruction from seating positions.

3. Lecture/Presentation (50-120 seat):
   a. Storage space of 22-inches by 36-inches for mobile media carts at rear of lecture hall.
   b. A 3/4-inch conduit (center of front to center of rear) is required for
remote control wiring or future use.
c. An 110v duplex floor receptacle centered approximately 15-feet from room front to portable equipment.

L. Classroom Technology Requirements: The following are minimum technology standards for all classrooms:

1. Basic Classroom
   • Lectern with faceplate and wiring for video and data
   • Ceiling mounted projector
   • VCR (VHS)/DVD
   • Two (2) ceiling speakers and amp
   • One (1) screen
   • Close captioning device
   • Cable TV, AC power and telephone jack
   • Dimmable lighting and sound damping panels
   • Ethernet connectivity

2. Large Classroom (100+ seating)
   • Lectern with faceplate and wiring for video and data
   • Ceiling mounted projector
   • VCR (VHS)/DVD
   • Four (4) to six (6) ceiling speakers and amp
   • One (1) large screen (16-feet+)
   • Close captioning device
   • Cable TV, AC power and telephone jack
   • Dimmable lighting and sound damping panels
   • Digital document camera
   • Ethernet connectivity (consider a wireless access point to provide access for students and the Professor)

3. As pertaining to cabling, the A/E shall specify the latest accepted industry standard; i.e., use CAT-5E in lieu of CAT-5.

4. Color-coding for data outlets shall match the following:
   • Data/Nautilus Car = Blue
   • Voice = White
   • Analog/Other = Green

M. Hurricane Shelter: Until a regional planning council in which a campus is located has sufficient public hurricane evacuation shelter space, any campus building for which a design contract is entered into, subsequent to July 1, 2001, must be constructed in accordance with public shelter standards for use as a public hurricane evacuation shelter. Enhanced hurricane resistance standards included fixed passive protection for window and door applications to provide mitigation protection, security protection with egress, and energy efficiencies that meet standards required in the 130-mile-per-hour wind zone areas. The A/E must also submit proposed facility retrofit projects to the Department of
Community Affairs for assessment and inclusion in the annual report prepared in accordance with s. 252.385(3).

N. In buildings that require vending equipment, a separate room or space must be provided unless directed otherwise. Coordinate all equipment operation and use with the University “Nautilus” access system. Consult Section 16727 (Exhibit No. 11), “ACCESS SYSTEM.”

O. All walls shall be constructed to provide desired sound attenuation and/or fire rated capacity.

P. Provide acoustical privacy from space-to-space. Sensitive offices or spaces that require complete privacy shall have partitions with sound-attenuation batts that run to the underside of structure above. Sound seals around doors may be required in specific locations.

Q. Custodial Closets: There shall be one custodial closet for each 16,000 gross square feet of building area. Minimum size for custodial closets shall be 40 square feet. Custodial closets shall not share space with building mechanical, plumbing, electrical, fire alarm, security, or telecommunications equipment, shall be directly entered from a corridor, and shall not be a passageway to any other room. The design of each custodial closet shall include the following:
1. A floor mounted service sink with hot and cold water.
2. Thirty linear feet of 12-inch shelving wall mounted.
4. Lighting at 40-foot candles.
5. Resilient tile floor covering.
6. An exhaust fan that is interlocked with the air-handling unit serving the area.
7. Custodial closets must be accessed from the hall and not from a classroom or office.
8. Adjustable shelves must be provided in each closet.

R. Provide low maintenance and no maintenance materials and equipment both interior and exterior.

S. Wall construction in high-traffic areas, such as corridors, shall be painted CMU or metal stud/gypsum wallboard assemblies with veneer plaster.

T. Under no conditions shall the A/E design or specify an EIFS system into any portion of the work.

U. All tile floors in toilet areas shall slope to floor drains.

V. The use of skylights is discouraged.

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Architectural and Engineering Services

X. Non-Programmed Space Requirements:
1. Corridors: Appropriate exiting requirement, drinking fountains, permanent benches, and other public facilities should be included to serve the occupants.
2. Public Toilets: Any pipe space (chase) behind toilets shall be 3-0-feet clear and shall be readily accessible. Include lighting and a separate 120-volt duplex receptacle in each pipe space. Install hand dryers in washrooms.
3. Maintenance Storage: Provide a storage space of approximately 1/100th the gsf of the building (in a 100,000 gsf building, and area of 1000 gsf should be designed). At minimum, 100 gsf must be included for storage of maintenance items for the building such as extra floor tile, lights, stepladder, etc. This can be in a corner of the mechanical room.
4. Elevators: Size these capable of using an emergency medical gurney. They should be located close to custodial closets for easy access of transporting scrubbers to other floors.
5. Waste Disposal: As this is a daily pick-up operation, a dumpster/recycling area should be discrete and large enough for the building size. Biological waste (sharpes, etc.) and chemical wastes materials require special consideration in specific buildings where they occur (Beu Health Center, Currens, Waggoner, Physical Plant, and buildings having photography labs)
6. Dock/service areas must be appropriate for deliveries considering the building size and equipment.
7. Utility Closets: Locate telecommunications, computing fiber, and branch electrical panelboards in the same utility closet. Provide adequate clearance around equipment.
8. Codes and Legal Compliance: All designs will meet applicable trade and building codes in addition to the Americans with Disabilities Act (ADA), and Life Safety 101.
9. Existing Utilities: No structure will be placed over existing utilities.
10. Mechanical Penthouses: Roof penthouses are discouraged. Mezzanines are acceptable if new replacement units can fit through the access door. Integration of mechanical rooms into the on-grade floor plan is preferred. Placement of appropriate sound attenuation is required.

Y. Various publications are referenced in other sections of this Standard to establish requirements for the work. These references are identified in each section by document number. The document number used in the citation is the number assigned by the standards producing organization. When preparing a Project Manual, the A/E shall use the most current issue of the publication.

END OF SECTION

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Architectural and Engineering Services
DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS

A. All Architects and Engineers selected to provide design services for the University of West Florida will be provided bidding and contract requirements by the Architectural and Engineering Services. These documents are to be completed by the design professional and included in the Project Manual. Specific items, sections, and forms include the following:

- Call for Bids
- Instructions to Bidders
- Proposal Form
- List of Subcontractors and MBE Participation Form
- General Conditions of the Contract for Construction AIA Document A201 as Modified
- Forms of Performance and Payment Bonds
- Form of Owner-Contractor Agreement for Construction
- Forms
  - Certificate of Substantial Completion
  - Certificates of Contract Completion
  - Antitrust Claims Form
  - Certificate of Non-Segregated Facilities
  - Change Order Form (and Change Order Justification Form)
  - Construction Change Directive Form
  - Schedule of Values Form
  - Payment Requisition Routing Slip
  - Certificate of Partial Payment Form
  - Project Sign (University of West Florida)
- Special Conditions
- Supplement to Project Manual

END OF SECTION
DIVISION 1 – GENERAL REQUIREMENTS

01010 – Summary of Work

A. The A/E shall provide a complete description of all elements of the project, including any related work, and explain the use for which the project is being built, in order that prospective bidders can decide whether or not to bid on the project.

B. List all Owner-furnished items to be installed by the Contractor, and the work required to install them. Details and installation instructions shall be indicated in the applicable section of the specifications and drawings.

C. Provide instructions for future work, such as an addition, including structural provisions, utilities, areas of the site to be kept clear, and site preparation, installation of special equipment, or other such task. Indicate provisions for fire safety, circulation, and accessibility. Identify areas of work such as piping, ductwork, and conduit that may be extended in future work without necessitating a system shutdown.

D. Describe all job conditions that will affect phasing and scheduling of the work. Provide the proper guidance for projects involving remodeling in buildings that are to remain in operation during work. It is the responsibility of the A/E and Contractor to coordinate all required utility shutdowns during construction with the University Project Manager to minimize the impact on operational facilities.

01015 – Owner-Furnished Threshold Inspector

A. For any building classified as a “threshold building,” the A/E shall provide a written threshold plan submitted with the final Contract Documents.

01026 – Unit Prices

A. Unit prices may be used where identifiable materials to be provided are not quantifiable.

01060 – Regulatory Requirements

A. The Design Professional shall follow all requirements specified in the State University System “Professional Services Guide,” Rev. December 15, 1998, or subsequent editions, (see Exhibit No. 1). It will be the responsibility of the A/E to ascertain that all new work and renovations concur with current:

1. Florida Building Code, March 2002
4. Requirements of the City of Pensacola Architectural Review Board (ARB)
5. Fire safety requirements as provided in Section 633, F.S. including required plan review by the State Fire Marshal’s Office.
6. Requirements for the physically disabled as provided in the Florida Building Code, including the “Florida Americans with Disabilities Act of 1993”.
7. Flood plain management criteria as described in Section 255.25(6) F.S.
8. Facility energy evaluation per the requirements of Section 255.254 F.S., utilizing the Trane Trace program or approved equal.
9. Applicable codes, regulations, and orders as listed in the “Professional Services Guide” and this document.

B. The Architectural and Engineering Services and/or the Planning and Design Office will assist and advise in matters pertaining to Item A above. Prior to commencing the preparation of the Conceptual Schematic drawings, it will be mandatory for the design professional to participate in conferences with the University staff at which time he will be informed of more detailed requirements and specific data concerning materials, heating, air conditioning, electrical work, plumbing, and related areas.

01100 – Alternates

A. A limited number of alternates may be used as a means of ensuring base bids within the available construction funds. Only additive alternates shall be used. Proposals shall be clearly defined, listed in priority of need, and clearly reviewed with the University Project Manager.

01200 – Project Meetings

A. The A/E shall record and distribute meeting minutes to each party present and to parties who should have been present.

B. A “Preconstruction Conference” shall be held to discuss items of significance that could affect progress, including the following:
   1. Contractor Safety Program Document (See Exhibit No. 2).
   2. Tentative construction schedule.
   3. Critical work sequencing.
   4. Designation of responsible personnel.
   5. Procedures for processing field decisions and Change Orders.
   6. Procedures for processing Applications for Payment.
   8. Submittal of Shop Drawings, Product Data, and Samples.

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Architectural and Engineering Services
10. Use of the premises.
11. Parking availability.
12. Office, work, and storage areas.
13. Equipment deliveries and priorities.
15. First aid.
17. Housekeeping.
18. Working hours.

C. Conduct “Construction Progress Meetings” at the project site every two (2) weeks. These meetings shall review the present and future needs of each entity present, including the following:
1. Interface requirements.
2. Time.
5. Deliveries.
6. Off-site fabrication problems.
8. Site utilization.
9. Temporary facilities and services.
10. Hours of work.
11. Hazards and risks.
12. Housekeeping.
13. Quality and work standards.
15. Documentation of information for payment requests.
16. Meeting format:
   a. Introductions of new persons attending the meeting
   b. Set date of the next pay/progress meeting
   c. Review minutes of previous meeting
   d. Submittal Schedule:
      1) Shop drawing and submittal log (a copy of the project to date log should be attached to the agenda)
      2) Review of key building component status by contractor (i.e., resubmittals, long lead components and need to expedite, etc.)
   e. Change Orders, Request for Proposal, and Anticipated Change Orders:
      1) Review change order log by number and issue as to what action has taken place by contractor.
      2) Review all contract changes. If no changes have occurred, state such.
   f. Delivery Problems: Report by contractor
   g. Project Schedule: Only after items 4, 5, and 6 have been discussed can Item 7 be considered. The schedule needs to be revised per the specification.
h. Unresolved Issues:
   1) Request for Information by contractors: State each RFI received and the status.
   2) Other
i. Provide field bulletins written by the on-site observer from Architect/Engineer.
j. Progress report form each contractor:
   1) Past 30-day period progress
   2) Expected next 30-day period progress
k. Contract Status:
   1) Contract dollars approved thru this pay request less retainage in row and column format by contractor. Identify Pay Request No., Net Change Orders approved, current contract amount, retainage, current paid amount and any other column you believe necessary.
   2) Percentage of contract work completed to date in row and column by contractor.
l. Miscellaneous Discussion
   1) We expect meetings to have great structure and organization about them.

D. Conduct “Pre-Installation Conferences” as required throughout this document.
   1. The following pre-installations shall be scheduled the same day of construction meetings:
      • Concrete formwork, placing, and backshoring
      • Waterproofing
      • Mortar/masonry
      • Flashing
      • Roof
      • Entrance and window installation
      • Sealant
      • Vapor barrier
      • Sprinkler and ductwork
      • Painting
      • Architect or Engineering firm will record and distribute minutes

E. Training:
   • All training for day and night shift personnel shall be coordinated with using agency and A/E. Each session shall be no longer than 3 hours, not more than 6 hours of instruction per day, and maximum of 16 total contact hours/system.
   • Design firm to summarize by division and section numbers with title of the building system on one page within Division 1, general requirements.
   • Training must be scheduled and completed as part of and prior to Establishing the D.O.S. completion.
   • Operating and Maintenance Manuals – Contractor shall provide a hard
copy, English language version of the system operating sequence program prior to energizing system controllers.

- The operation and maintenance manuals shall contain all information necessary for the operation, maintenance, replacement, installation, and parts procurement for the entire system. This documentation shall include specific part numbers and software versions and dates. A complete recommended spare parts inventory list shall be included with the lead time and expected frequency of use of each part clearly identified.

**01300 – Submittals**

A. It is the A/E’s responsibility to request and receive approval of a submittal if it is other than specified in these guidelines.

B. The following submittals shall be forwarded the University Project Manager (for approval) in conjunction with the A/E’s review and prior to the return of the submittals to the Contractor:
   1. Brick
   2. Roofing System
   3. Door Hardware
   4. HVAC
   5. Plumbing
   6. Electrical
   7. Communications/Data
   8. Access System (Nautilus)
   9. Any submittal that requires a color selection.

C. A minimum of six (6) copies of each submittal is required. Two (2) copies shall be retained by the A/E for distribution to the Owner.

D. Of the two (2) copies noted in Paragraph C above, one (1) copy shall be forwarded immediately to the University Project Manager after the approval process by the A/E. The other copy shall be retained by the A/E and shall be delivered to the Owner at completion of the project. The final collection of submittals to the Owner shall be provided in a 3-ring binder with a table of contents and tabbed appropriately.

E The A/E shall include the following statement (or approved version) in the Project Manual:

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ALL REQUESTS FOR SUBSTITUTIONS OR USE OF “OR EQUAL” PRODUCTS MUST BE SUBMITTED PRIOR TO THE OPENING OF BIDS, AND APPROVALS SHALL BE GRANTED NO LESS THAN 10 DAYS PRIOR TO THE BID DATE. SUBSTITUTIONS REQUESTED AFTER THAT DATE WILL RECEIVE NO CONSIDERATION.
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F. The A/E shall provide a Submittal Register as part of the Project Manual and shall distribute copies at the Preconstruction Conference (see Exhibit No. 3 for sample Submittal Register).

01500 – Construction Facilities and Temporary Controls

A. The A/E shall coordinate with the University Project Manager to determine temporary construction facilities such as heating, cooling, and ventilation, water, sanitary, electrical and lighting, fire protection, and barriers and enclosures. The University intends to meter temporary utilities for reimbursement by the Contractor.

B. Where applicable, the A/E shall specify that the Contractor be required to provide temporary controls such as drainage, stormwater run-off, and noise and dust repression.

C. The University Project Manager shall direct the A/E as to what degree the Contractor shall provide and/or maintain field offices and sheds, materials and equipment storage, parking and access to the construction area, traffic control and barricades, and the rerouting of University vehicular and pedestrian traffic.

D. The A/E shall coordinate with the University Project Manager to clearly define the Contractor’s staging and storage areas on the Contract Documents.

01530 – Utility Locations

A. Utility Locates Outside the Building Line:
   1. Architect/Engineering design firms will provide owner record documents for their use. The owner assumes no responsibility for actual locations of existing utilities. A/E’s will show such approximate utility locations on a site plan and other plans as appropriate.
   2. With 48-hour notice, the WIU Physical Plant in conjunction with local utilities will assist the contractor with approximate layout of utility locations. Subsequently, the contractor will be responsible to maintain approximately locations.
   3. Contractor will be responsible to disconnect, remove, cap, continue service, or relocate all facility utilities distribution systems necessary to perform the scope of work within the contract documents. Capping of any utility will be made as close to the main as possible following all applicable code requirements.
   4. Existing utilities shall be protected by the Contractor. All damages incurred as a result of the Contractor’s operation shall be required in accordance with the applicable code, at the Contractor’s expense, and to the satisfaction of the Owner.
5. The contractor will note all such work on as-built construction site drawings.

B. Utility Locates Inside the Building Envelope:
   1. Architect/Engineer design firms will be provided owner record documents for their use. The owner assumes no responsibility for actual locations of existing utilities. A/E will locate utilities on a general plan is multiple trades may encounter utilities, or utility plan if only M/E trades will encounter utilities.
   2. Contractor will be responsible to locate, disconnect, remove, cap, continue service, or relocate facilities utility distribution systems required to perform the scope of work within the contract documents. Capping of any utility will be made as close to the main as possible following all applicable code requirements.
   3. Existing utilities shall be protected by the Contractor. All damages incurred as a result of the Contractor’s operation shall be repaired in accordance with the applicable code, at the Contractor’s expense, and to the satisfaction of the Owner.
   4. The contractor will note all such work on as-built construction site drawings.
   5. The contractor will notify the owner when utilities have been located and the area for demolition or construction has been laid out. A walk through will be scheduled with the affected department representative to observe and voice concerns.

01560 – Environmental Protection

A. All contractors, sub-contractors, and their employees, intending to bid on projects and do work for the University of West Florida, must comply with these procedures as summarized. A complete copy of the procedures may be obtained by contacting one of the Departments listed at the end of this summary. Violations of State and Federal regulations could result in fines or civil and criminal action against the Contractor or the University. The following guidelines have been developed to assist the Contractor and the University in meeting requirements of the state and federal regulatory agencies. The numbers in parenthesis appearing at the end of succeeding paragraphs refer to articles contained in the document "Procedures to Identify and Manage Environmental Issues During Demolition, Renovation, and New Construction Projects at the University Of West Florida Exhibit B, Supplemental General Conditions of the Contract for Construction" (See Exhibit 4).

B. During the bidding phase of all demolition and renovation projects, the contractor shall receive a site inspection report from the Office of Environmental Health and Safety (EH&S), or Drawings and / or Specifications from the Architect, Environmental Consult and, or University Project Manager identifying any
potential building components of an environmental concern within the scope of
the renovation or demolition only. {10.4.1}

C. Prior to contracting for work, each contractor, subcontractor, and their
employees, who use hazardous material and may generate a hazardous waste,
must provide evidence of having received RCRA Hazardous Waste Awareness
Training, and annual refresher training, as required by 40 CFR 265.16 and 262.34
{10.5.3}

D. Contractors and subcontractors shall identify all hazardous materials and
maintain Material Safety Data Sheets (MSDS) for each product on site as
required by the OSHA Hazard Communication Standard. {10.4.2 and 10.7.1.3}

E. Contractors shall be responsible for estimating the type and quantity of hazardous
waste that will be generated by all contractor employees and sub-contractors
prior to start of a project. {10.4.2}

F. The General Contractor shall be responsible for the proper identification, and
management of all hazardous wastes within the scope of a given project.
Specifically, contractors must identify a secure waste accumulation area, store
waste in appropriate containers, identify the contents of the containers including
the words HAZARDOUS WASTE, and inspect the containers on a weekly basis.
The inspection must be documented. {10.1.5.3}

G. The Contractor shall turn all properly identified hazardous waste over the
University, Office of Environmental Health and Safety, at the end of the project
or other agreed upon time. Any other arrangements shall have prior written
approval from the Office of Environmental Health and Safety and the Office of
Facilities Planning. {10.1.5.4}

H. HAZARDOUS WASTE shall not be removed from the campus by contractors or
sub-contractors, unless prior arrangements have been made with the University
and the waste is properly manifested and transported by a licensed hazardous
waste transporter. {10.1.5.5}

I. The Office of Environmental Health and Safety will verify the identification of
the waste. If the identification is unacceptable, EH&S will not accept the waste
and the contractor shall bear the cost of laboratory analysis for adequate
identification. {10.1.5.6}

J. All hazardous waste will be shipped off site using the University's hazardous
waste contractor, under a manifest bearing the USEPA ID# of the University of
West Florida, and signed by a University EH&S representative, unless prior
arrangements have been made and approved in writing by UWF Office of EH&S
and Facilities Planning. {10.13.5}
K. All hazardous waste turned over to the University shall be contained in appropriate, compatible, and closed, containers for the type and volume of waste generated. Containers may include DOT approved 55 or 30 gallon open-head or closed-head drums, 5 gallon pails or cans, etc., or possibly the original container. The contractor shall be responsible for providing the appropriate container for all types of hazardous waste generated. {10.10.3}

L. Paint brushes, rollers, rags, sludges, absorbent, etc. used with oil paints or solvents, and that are waste materials shall be placed in 5 gallon sealable buckets, or other appropriate size containers. {10.15.7}

M. In no cases shall evaporation be used to dry solvent laden materials destined for disposal. Evaporation of waste solvents is considered illegal disposal of hazardous waste. {10.15.7}

N. All hazardous waste must be stored in a secured, locked, and safe location. Incompatible waste (acids/bases/flamables) must be stored in physically separate location. Hazardous waste storage locations shall be coordinated and approved by EH&S. {10.6.1}

O. All hazardous waste containers must be closed at all times except when adding waste. {10.15.7}

P. Fluorescent bulbs and ballasts shall be removed from all lighting fixtures prior to disposal.
   1. Fluorescent bulbs shall be placed in appropriate size tube cartons from original cartons or available form bulb recycling facilities. Do not break bulbs. Do not tape bulbs. Broken bulbs must be placed in sealed containers and handled separately. Each box must be labeled in accordance with FAC 62-737 and dated. {10.12.3}
   2. Ballasts shall be separated into PCB and non-PCB categories and placed into separate 55-gallon (or appropriate smaller size) open-head steel DOT drum. Each drum must be labeled with appropriate labels: "PCB Ballasts for Recycling" or "Non-PCB Ballasts for Recycling". {10.12.4}

Q. The Contractor shall be charged by the University for all hazardous waste based on the current contract rates with the University's Hazardous Waste Contractor. {10.15.9}

R. The General Contractor and Sub-Contractors shall agree to all requirements as specified in the document entitled "PROCEDURES TO IDENTIFY AND MANAGE ENVIRONMENTAL ISSUES DURING DEMOLITION, RENOVATION, AND NEW CONSTRUCTION PROJECTS AT THE UNIVERSITY OF WEST FLORIDA".

S. Examples of trades that may generate hazardous wastes;
1. Demolition Contractors
2. Roofing Contractors
3. Painting Contractors
4. Carpet/Floor Finish Applications
5. Specialty Application Contractors
6. Plumbers

T. Examples of hazardous waste that may be generated:
   1. Florescent and HID Light Tubes
   2. PCB/non-PCB Ballasts
   3. Lead-containing Paint
   4. Mercury containing devices (thermostats & controls)
   5. Mineral Spirits
   6. Toluene
   7. Acetone
   8. Oil based paints and stains
   9. Paint Thinners
   10. Aerosol cans (paints, cleaners, adhesives)
   11. Roof Patch/tar
   12. Carpet glue
   13. PVC Primer and glue
   14. Brushes, rollers, and rags used with oil-based paint and solvents
   15. Sludge from cleaning oil paints and equipment
   16. Waste product from any container labeled flammable or combustible or that contains "petroleum distillates" or chlorinated hydrocarbon compounds.

U. See Exhibit No. 4, for "Procedures to Identify and Manage Environmental Issues During Demolition, Renovation, and New Construction Projects at the University Of West Florida." If you have questions concerning this information, please contact one of the following:
   1. Mr. Ron Hambrick, Director of Environmental Health and Safety-(850) 474-2177
   2. Mr. Dave Luttrell, A/E Services Department -- (850) 474-3417
   3. Ms. Elaine Smith, University Purchasing -- (850) 474-2632

01580 – Project Sign

A. See Exhibit No. 5, for drawings depicting requirements for the project sign for construction.

01700 – Contract Closeout

A. The A/E shall review the University’s General Conditions and contract requirements to determine whether or not this subject is adequately covered.
Items to be considered shall include, but not necessarily be limited to the following:

1. Project Record Documents
2. "Design" CADD Drawings and Specifications (if approved as an additional service)
   - Before submitting as-built CAD files to the Planning and Design Office; all external references (xref) drawings must be bound and all appropriate script files shall be run so the CAD file shows a true visual representation of its corresponding hard copy. Include all non-standard AutoCAD font files and CAD layer name list and their descriptions. The "purge all" command shall be performed prior to submittal to remove unused elements and reduce drawing size.
3. "As-Built" Drawings and Specifications (hard copy)
4. Operation and Maintenance Manuals
5. Final Inspection/Completion and Final Payment
6. Project Turnover Procedures
7. Warranties, Guarantees, and Bonds
8. Final Project Approval: projects will be finally accepted, regardless of the funding source, after the design firm and University Project Manager have assured all trades punch list items have been satisfactorily completed. A copy of the official punch list with the lead consultant and University Project Manager’s Representative’s initials with the approval date will be placed in the project file. Final payment will be made after the above has been completed.
9. Require training on installed equipment, systems etc.
10. Test and Balance Report

B. The A/E shall provide a comprehensive "Closeout Spreadsheet" as part of the Project Manual and shall distribute copies at the Preconstruction Conference. See Exhibit No. 6 for sample closeout spreadsheet.

END OF SECTION
DIVISION 2 – SITE WORK

General Site Work Guidelines

A. Stormwater retention design for each new building or site work project shall be coordinated with the University of West Florida Masterplan and with the location of future campus regional ponds.

B. The A/E shall specify that compaction, pipe leakage, hydrostatic, and other related testing shall be conducted and paid for by the Contractor.

C. Avoid steps in walks between the street and a building entrance, especially steps midway in the walk. Instead of steps, a ramp may be used, provided that the length of the gradient is short, that the slope is not more than 1:12 ratio and that a handrail is provided alongside the walks if they are sloped more than 1:20 ratio percent. All Florida Accessibility Code for Building Construction requirements must be followed. Exposed aggregate shall not be used for sidewalks except for ADA code requirements.

02010 – Subsurface Exploration

A. The A/E shall furnish a subsurface investigation report as described in the SUS Professional Services Guide. The A/E shall provide plans showing required test boring locations or any other information required for the testing laboratory.

B. The Owner shall supply the A/E with maps showing underground installations and the A/E shall locate borings to avoid these utilities. The A/E shall specify to the Contractor that the Owner shall in no way be held responsible for the accuracy of the information.

02050 – Demolition

A. Structure removal shall be included in the demolition package.

B. In open areas, foundations of structures shall be removed in its entirety. Where new structures will replace existing structures, indicate extent of foundation removal on the drawings. No existing slabs shall remain under fill for new structures. Hazardous material removal shall be conducted prior to structural removal as required by federal, state and local requirements.

C. On all projects involving demolition and/or renovation, the A/E shall review with the University Project Manager (for inclusion in the bid documents) the possibility of salvage of materials and equipment, either for use in the remodeling project, or by the Department of Facilities Management. The
University Project Manager will notify the A/E of materials and equipment to be removed by the Owner or to be turned over to the Owner by the Contractor. Non-reusable materials, including toxic and/or hazardous waste will be removed from campus by the Contractor. The A/E shall specify in the “Summary or Work” accompanying the Invitation to Bid and in the Contract specifications, that the University reserves the right to remove certain items prior to start of construction, and in defined instances the Contractor shall turn over specified items of salvage to the Owner.

D. The A/E shall specify that under no circumstances shall demolition materials be buried on-site or on campus property.

**02100 – Site Preparation (Tree Protection)**

A. See Exhibit No. 7, “Tree Protection Policy”. This document was produced by the University of West Florida and may be used by the A/E as a guideline in the proposed Project Manual.

**02110 - Clearing and Grubbing**

A. The A/E shall specify that debris resulting from stripping and demolition operations shall be removed from university property at frequent intervals to prevent debris from accumulating on the site.

B. Removal of trees, shrubs, and groundcover shall be in compliance with the approved Tree Protection Plan.

C. The removal of trees and shrubs shall include removal of stumps and roots to the extent that no root greater than three (3) inches in diameter remains within five (5) feet of and underground structure or utility line or under footings or paved areas. Grubbing in open areas shall include removal of stumps and three (3) inch roots to two (2) feet below finish grade elevations.

**02200 – Earthwork**

A. The A/E shall specify excavation, filling and grading for new construction as required to suit site appurtenances. Grading and filling shall be performed to lines and grades required by civil engineering. These grade lines will be integrated with the new paving and surfacing as well as landscaped areas. Removal of unsatisfactory or deleterious materials from the premises will be done as required for the work. Disposal of debris and waste material, temporary protection of work, barricades, rerouting requirements, signage, control of stormwater drainage during construction of the project, etc. shall also be
included.

B. The finish floor elevation of concrete floor slabs on fill shall be at least 8-inches above the finish grade elevation at its highest elevation at any point around the building.

C. Slopes shall not be greater than one (1) vertical to six (6) horizontal in grassed areas. Steeper slopes will be considered in unique circumstances and will be reviewed and approved by the University.

D. The A/E shall specify a six (6) inch depth of topsoil for seeded/sodded areas and twelve (12) inch depth for planting areas. Topsoil shall be indigenous to general area in which the project is located and shall be suitable for planting and seeding.

02280 – Termite Control

A. Termite treatment is required for every building. The type of chemical treatment shall be specified, including the amount of application per unit area. Chemicals and application shall conform to EPA’s Federal Insecticide, Fungicide and Rodenticide Acts.

B. The Subcontractor for soil poisoning shall be required to furnish a service agreement stating the work performed will be guaranteed for a period of five (5) years from the date of substantial completion. In addition, the agreement shall state that the structure will be inspected yearly for infestation and treatment provided as necessary. The service agreement shall state that in the event of damage during the guarantee period, the Contractor shall make repairs to structurally damaged surfaces to a dollar value based on the size of the building.

02480 – Landscaping

A. Trees, plants and ground cover work shall include planting, backfill, guying, irrigation, pruning, as well as, replacements and guarantees.

B. All trees, plants, and groundcover work shall be in compliance with the approved Tree Protection Plan.

C. Turf Considerations:
   1. Avoid excessive proportion of edge to be trimmed. Do not create narrow strips or inaccessible grass areas for mowing. Avoid breaking up grass areas with obstructions.
   2. Grass areas protected by fencing, trip rails, etc. should allow for a gate
(approximately 10-feet) wide for gang mowers or 6.5-feet for rotary mowers.

3. Grass or sodding adjacent to parking lot pavement which is less than 72-inches in width is not desirable. Sodding adjacent to parking lot pavement and bordered by wooded areas is not desirable.

4. Centipede grass and “Flora tam” St. Augustine grass are the preferred turf types. Turf should to be specified when shade equals or exceeds 50%. Specification of bermuda grass or bahia grass is prohibited.

D. Landscape Design Requirements: Incorporate native plant species into all plantings wherever possible. See following list of native plants preferred by the University.
   1. Merge planting beds where there are narrow strips of turf separating them.
   2. Create mulched beds surrounding tight groupings of shrubs, ornamentals, and shade trees. All mulch beds shall have a minimum thickness of 4-inches.
   3. Areas exceeding 20% slope should not be sodded. Groundcover is mandatory.
   4. Native plant areas that are fully established or incorporated as part of the design do not need irrigation.
   5. Shrub plantings at the corner of buildings should not exceed two-thirds of the distance between the ground and the eaveline of the building. Enframement trees should be used to incorporate the building into the landscape proportionately, the enframement trees must suit the size of the structure. Tree selection must be from preferred list. Plant selection should be based on zone 8 hardiness and those recommended in the UWF preferred list.
   6. Soil amendments added as a pre-plant treatment are not recommended. Selection of plants that grow and develop quickly must be tempered by considerations of wood strength, longevity, and eventual size. Colors and textures in the fruits and booms are less important than the physical characteristics in the foliage because leaves are present during more of the year. The essence of landscape design at University of West Florida should be to incorporate the structure into the natural environmental and enhance it through the select use of the preferred plant list.

E. Planting Techniques:
   1. Planting holes should be dug 3X the size of the root ball in width or 12-inches wider than root ball.
   2. Planting hole depths should to exceed root ball vertical height but 2 - 4-inches less in heavy soils.
   3. Amendments such as peat moss or manure are not necessary or desirable. Mulch should be organic in nature and should not exceed 3” in depth. Pine products mulch is recommended.
   4. Prune out dead, broken, or diseased branches but do not prune any living branches.
5. Do not attempt to balance the roots and crown through pruning or fertilize at time of planting.
6. Do not wrap the trunk or trunks with paper wrap or paint the trunk.
7. Do not guy or stake unless conifers with large crown to root ratio are utilized.
8. Containerized plants must be “Grade A” Florida Fancy. Rootbound, stunted, diseased, or mechanically injured plant material will not be accepted.

F. Irrigation:
1. Controllers: Dual programming capacity required. Solid State technology desirable. Controller measurement by volume desirable. Pipe: Utilize the Standard Dimensional Ratio (SDR) for PVC pipe selection. SDR – the ratio between wall thickness and the outside diameter of the pipe which means a uniform working pressure for all sizes within a pipe class Belled-end main line desirable.
2. Valves: Plastic valves desirable due to ease of repair. Two-inch valves are to be used as the repair. Two-inch valves are to be used as the standard size. Toro or Rainbird valves are recommended.
3. Fittings: Utilization of flexible swing pipe acceptable. Waterproof glue and cleaner for PVC is mandatory.
4. Heads: Rainbird components desirable. Rotor or impact with interchangeable nozzles desirable; Toro series 640 ok for large areas. Limit the usage of pop-up spray heads. System shall be zoned irrigation according to plant requirements with rain check and/or meiser devices. Also, minimize overall system to conserve money and water.

G. Trees; Native Preferred List:
- Acer sp. – all adapted species
- Betula sp. – all adapted species
- Celtis Laevigata – Hackberry – Sugar
- Chamaecyparis thyoides – White Cedar
- Chioanthus virginica – Fringe Tree
- Crataegus aestivalis – May haw
- Crataegus flava – Summer hawthorne
- Cornus florida – Dogwood
- Diospyros virginiana - Persimmon
- Fagus grandifolia – Beech
- Gordonia Lasianthus Lobolly Bay
- Ilex cassine – Dahoon Holly
- Ilex opaca – American Holly
- Ilex vomitoria – Yaupon Holly
- Ilex sp. – all other adapted
- Magnolia sp. – all adapted species
- Nyssa sylvatica - Blackgum

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• Pinus sp. – all adapted species
• Prunus augustioria – Chickasaw plum
• Quercus sp. – all adapted species
• Taxodium distichum – Bald Cypress
• Ulmus Alata – Winged Elm
• Vaccinium arborcun – Sparkleberry
• Vibrunum sp. – adapted native species

H. Trees; Other Preferred List:
• Aesculus sp. – adapted species
• Albizia sp. – Wilt resistant mimosa sp.
• Atalpa bignoniodes – catalpa sp.
• Cedrus sp. – adapted sp.
• Carya sp. – adapted sp.
• Cupressocypaxis LeyLandii
• Erobotrya japonica - Loquat
• FrankLinia alatahama - Franklinin
• Ginkgo biloba - Ginargo
• Halesia Carolina – Snowdrop
• Juniperus Virginiana – all adapted varieties
• Juniperus Scopulorum – Rocky Mt. Juniper
• LagerStroemia fauriei – no indica species
• Liriodendron tulipifera – yellow popular
• Ostrya Virginiana – American hornbeam
• Oxydendrum arboreum - Sourwood
• Parrotia persica - Parrotia
• Paulownia tomentosa – Empress tree
• Pistacia chinensis - Pistachio
• Rhus sp. – adapted species
• Sassafras albidum – sassafras
• Sophora japonica – Pagoda tree
• Stewatia sp. – all adaptable sp.
• Styrax japonicus - Snowbell
• Symplcos tinctoria – Sweet Leaf

**02500 – Paving and Surfacing**

A. Asphaltic Concrete Paving: Provide materials and installation to comply with requirements of the Florida Department of Transportation and as determined by the civil engineer. Minimum installation shall consist of one 2-inch plant mixed type S-1 asphaltic concrete surface course over six (6) inch compacted base over ten (10) inch stabilized soil, unless civil engineers determine otherwise with approval from the University Project Manager.
B. Concrete Paving: Provide concrete with a minimum compressive strength of 3000 psi in 28 days. All products, materials, and execution shall comply with applicable ANSI and ASTM standards. Concrete paving shall be floated, troweled, and medium broom finished. Consult DIVISION 3 - CONCRETE for additional requirements.
1. Expansion Joints shall be premolded type, 1/2-inch thick, full depth of concrete, spaced 30-feet 0-inch o.c. maximum and at junctions with vertical surfaces. Expansion joints shall be shown on the drawings as well as indicated in the specifications.
2. Control joints shall be saw-cut to squared relief (e.g. for 6-feet-0-inch wide sidewalk provide joints at 6-feet-0-inch o.c. between). Joints shall be aligned to avoid new stress points.

C. The A/E shall specify that boring under existing paved areas for underground utilities shall be standard procedure. Saw-cutting of finished surfaces shall be used only as a last resort, and as approved by the University Project Manager. If concrete sidewalks are to be cut, they shall be cut and replaced from joint to joint, and dowelled into the remaining slab.

D. Where sidewalks are required, they shall be a minimum of 6-feet wide, 4-inches thick, with 6x6, W1.4xW1.4 welded wire mesh reinforcement. The edge thickness shall be increased a minimum of 2-inches.

02710 – Water Distribution System

A. Water main materials, for pipe sizes 4-inches in diameter or larger shall be ductile iron pressure pipe and/or AWWA Standard C-900 PVC pressure pipe (for pipe sizes 3-inches in diameter and smaller, use AWWA Standard C-160 PVC pressure pipe). All new branches, fire hydrants, backflow prevention devices and meters shall be provided with gate valves. The A/E shall confer with the university regarding location of valves as well as installation details for valve boxes, direct burial, and ground level access to valve operator. Water lines shall be disinfected according to AWWA Standard C-601. All pipes shall be tested for leakage. Detectable plastic marking tape shall be installed underground above buried utility lines, as required, to facilitate the location of the lines before damage to the lines can occur during required excavation.

B. The A/E shall specify an INVENSYSS “Auto Read” flow meter on all potable water lines.

C. Isolation Values: Provide a 2 inch minimum AWWA resilient wedge valve on all water taps for distribution and irrigation lines

D. Flush Valves: Provide on dead-end side of water supply in building for

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flushing the buildings’ water system.

E. No water taps shall be made without a Facilities Management Representative on site. After the tap is made, the Contractor shall provide the University of West Florida with tap coupon. NO EXCEPTIONS.

02720 – Storm Drainage System

A. Catch basins and inlets shall be pre-cast (conforming to ASTM C 478) or cast-in-place concrete.

B. Grates and frames shall be cast iron, conforming to ASTM A 48, Class 35B or ductile iron, conforming to ASTM A 536.

C. Drainage pipe shall be concrete meeting ASTM C 76, Class III or PVC pipe and fittings meeting AWWA C 900.

02730 – Sanitary Sewer System

A. Sanitary sewers shall be PVC pipe and fittings meeting ASTM D 3034, Type PSM, with joints as recommended by pipe manufacturer.

B. Frames and covers shall be cast iron conforming to ASTM A 48, Class 20B, or ductile iron conforming to ASTM A 536.

END OF SECTION
DIVISION 3 – CONCRETE

03300 – Concrete

A. The A/E shall specify concrete to have a 28-day compressive strength of 3,000 psi or greater. All work shall be in accordance with ACI 301.

B. For projects that include masonry bearing walls, the A/E may specify a 2,500-psi mix for wall fill.

C. Concrete slabs, concrete frames (if building structure is poured concrete) and reinforced masonry walls shall show control and expansion joints on the Drawings. Slabs shall be broken into areas of 400 to 600 s.f. between joints and one direction being no greater than twice the distance in the other.

D. Slump for concrete shall be specified at 4-inches (plus or minus 1-inch) except for 2,500-psi wall fill or if a superplastisizer is used. The water cement ratio shall be approximately 5 for 3,000 psi concrete with smaller ratios for higher strength concrete or for concrete exposed to salts or other corrosive environments.

E. Fly ash may be used so long as the amount does not exceed 25% of the cementitious material.

F. Welding of reinforcement steel shall not be allowed unless approved by the University Project Manager.

G. The use of fiberglass may be used in lieu of welded wire fabric when approved by the University Project Manager. Fiberglass shall not be used where large areas of ceramic or stone floor tile are to be installed.

H. When major shoring or reshoring is anticipated, the A/E shall instruct the Contractor to submit for approval a shoring design prepared by a registered engineer specializing in this type of work.

I. Vapor barrier shall be polyethylene sheeting with a 6-mil minimum thickness.
03520 – Lightweight Concrete Roof Insulation

A. A lightweight concrete roof insulation system shall reach a minimum compressive strength of 125 pounds per square inch in 28 days and shall meet the following requirements:
   1. Foaming Agent: ASTM C 796
   2. Portland Cement: ASTM C 150, Type I
   3. Insulation Board: ASTM C 578, one pcf density with an average “R” value of 20 when in combination with insulating concrete.

END OF SECTION
DIVISION 4 – MASONRY

General Masonry Guidelines

A. The A/E shall try to place control joints in masonry walls at roughly 50-feet on center. If the building design exceeds 200-feet in length, the A/E shall design a complete building expansion joint or at least through the walls. Where expansion or control joints are used, continuous bond beam reinforcement shall be stopped and smooth dowels (one end which is greased or wrapped) shall be placed through the joint.

B. The A/E shall provide a 2-inch minimum air space between veneer brick and cavity insulation. Specify cavity to be unobstructed and free of mortar droppings.

04210 - Brick Masonry

A. Specify Type FBS, solid brick, conforming to requirements of ASTM C 216. Solid brick shall be used in lieu of veneer brick where installation of brick would expose cells to view.

B. Field brick shall be a “buff” color as approved by A&E Services. Accent brick will be allowed with approval by the University Project Manager.

C. Mortar color shall be selected on a project-by-project basis.

D. A “mock-up” panel with an approximate size of 4-feet by 4-feet will be required for approval prior to the installation of brick veneer. The panel shall also include CMU back-up, thru-wall flashing, insulation, reinforcement and control joints.

E. Brick Ties: For brick veneer anchoring system to steel stud construction, use 12 gauge triangular wire anchor or 16 gauge corrugated strap anchor. All components shall be hot-dipped galvanized.

04220 - Concrete Masonry Units

A. Hollow and solid CMU shall be Type II lightweight or normal weight, conforming to the requirements of ASTM C 90.

B. Use of CMU in interior masonry walls and partitions shall be no less than six-inches in nominal thickness.
C. Coordinate CMU coursing with door heights to eliminate the need for cutting block.

D. Single-wythe masonry exterior construction will not be accepted.

E. Wall Reinforcement:

F. The A/E shall specify bituminous dampproofing for all exterior masonry back-up construction.

G. Provide through-wall flashing of a waterproof, impermeable elastomeric sheeting not less than .030-inch thick.

04270 – Glass Unit Masonry

A. All glass unit masonry products and accessories shall be equal to Pittsburgh Corning.

B. Details and specifications outlining the installation of glass block shall be as per “Pittsburgh Corning Glass Block Products, Design and Specification Guidelines Manual.”

END OF SECTION
DIVISION 5 – METALS

General Metal Guidelines

A. All steel components exposed to the exterior, shall be hot-dipped galvanized. □ □ □

B. Unless directed otherwise, specify all items to be galvanized after fabrications where practical. □ □ □

05100 – Structural Steel

A. Design all structural steel systems, including layout, materials, installation, fabrication, erection, quality control and testing, to be in accordance with the “Manual of Steel Construction – Allowable Stress Design,” latest edition, and pertinent publications of the American Institute of Steel Construction (AISC), American Society for Testing and Materials (ASTM), and American Welding Society (AWS). Structural steel shall be Grade A36 or greater. □ □ □

B. If the steel structure design is of a complicated nature, the A/E shall specify that the fabricator shall be an AISC certified plant with a Category I or II rating. Steel connections shall be specified to designed and sealed by the fabricator’s engineer if the structure is very complicated and not specifically detailed on the Drawings. □ □ □

C. Specify that all welders, welding operators and tackers shall be qualified by AWS. □ □ □

05200 – Metal Joists

A. The A/E shall state uplift requirements on the Drawings and shall refer to the Steel Joist Institute for bridging requirements. □ □ □

B. If joists are to be left exposed, painting shall be specified in the painting section of the Specifications. □ □ □

05300 – Metal Decks

A. The A/E shall indicate profile, depth, gauge and structural properties of metal decks and whether the deck is to be painted or galvanized. □ □ □

B. If acoustical decks are to be used and the larger flat portion of the deck is placed on the bottom, the A/E shall specify an appropriate structural material to be placed on top of the deck to bridge the distance between the small upturned ribs. □ □ □
05400 – Cold-Formed Metal Framing

A. Provide manufacture’s standard C-shaped steel studs with lipped flanges, a G90 galvanized coating designation, and with a Grade A, 33,000-psi minimum yield strength.

B. Approved Manufacturers
   1. Alabama Metal Industries Corp.
   2. Dale/Incor Industries of Florida
   3. Unimast, Inc.

05500 - Metal Fabrications

A. The A/E shall specify and design items that do not form a part of the structural steel framework, such as lintels, angles, and miscellaneous mountings and frames.

05720 – Aluminum Handrails

A. Design aluminum handrails with 1 1/2-inch O.D. posts and top rail fabricated from structural extrusions equal to 6061-T6 or 6005-T5 alloy/temper and with 1 1/4-inch O.D. intermediate rails fabricated from extrusions equal to 6023-T5.

B. Design Loads
   1. Top Rail:
      a. Concentrated load of 200 pounds applied at any point and in any direction.
      b. Uniform load of 50 pounds per linear foot applied horizontally and concurrently with uniform load of 100 pounds per linear foot applied vertically downward.
      c. Concentrated load need not be assumed to act concurrently with uniform loads.
   2. Intermediate/Bottom Rails:
      a. Concentrated load of 200 pounds applied at any point and in any direction.
      b. Uniform load of 50 pounds per linear foot applied in any direction.
      c. Concentrated and uniform loads need not be assumed to act concurrently.

END OF SECTION
DIVISION 6 – WOODS AND PLASTICS

06100 – Rough Carpentry

A. All pressure-treated wood items shall be in accordance with pertinent publications of the American Wood Preservers’ Association (AWPA).

B. The A/E shall specify that the following items be pressure-treated:
   1. Wood plates, furring and sleepers that are less than 24-inches from the ground.
   2. Any wood item that is set into or in contact with concrete or masonry.
   3. Wood nailers, edge strips, crickets, curbs and cants for roof decks.

C. The A/E shall detail or note wood blocking in walls and ceilings at locations for the installation and attachment of finish materials, fixtures, and equipment.

06200 – Finish Carpentry

A. All wood finish and trim items shall meet the standards of the Architectural Woodwork Institute (AWI) and the National Wood Window and Door Association (NWWDA).

06400 – Architectural Woodwork

A. All cabinets, countertops and custom casework shall meet the standards of the Architectural Woodwork Institute (AWI), Builders’ Hardware Association, Inc. (BHMA), Hardwood Plywood Manufacturers’ Association (HPMA), and the U.S. Department of Commerce Product Standards (PS).

B. Specify that all cabinets shall be fabricated to “Custom” grade standards of AWI. Exception: All door and drawer fronts utilizing natural/stain finish wood veneer shall be fabricated to “Premium” grade standards of AWI.

C. All cabinet “boxes” shall be constructed with melamine panels except for “boxes” that contain sinks, lavatories, or other items that may cause damp, humid, or wet conditions. These wet-location “boxes” shall be constructed of exterior grade veneer plywood with plastic laminate finish.

D. Countertops shall be constructed using only veneer plywood. It is preferred that all countertops are designed with a hardwood, PVC, or post-formed edge.

E. Minimum hardware standards:
   2. Door and Drawer Pulls: At the Architects’ discretion.

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3. Drawer Slides: Standard extension, 100-pound, commercial load capacity, side-mount with ball bearing rollers.
4. Grommets: Provide recessed grommets with caps, properly sized, for wiring access slots in countertops.

F. See Exhibit No. 8, for design drawings depicting the University's standard lectern for classroom application.

END OF SECTION
DIVISION 7 – THERMAL AND MOISTURE PROTECTION

General Thermal and Moisture Protection Guidelines

A. All roof installations shall meet current wind load requirements.

B. Roofs shall have a slope of not less than 1/4-inch per horizontal foot. The slope of the roof can be obtained either through the structural design or tapered insulation. The design and workmanship of the finished roof shall be such that no water shall pond on the roof surface more than 24 hours.

C. An interior means of gaining access to the roof shall be provided with locking capability.

D. No interior building roof drains shall be allowed.

E. Emergency overflow scuppers should be constructed below the flashing and not more than one-inch above the roof surfaces.

F. On all built-up or membrane roofs, roof walkways shall be provided from roof access point(s) to and around all roof installed mechanical or electrical equipment. Verify walkway locations with the University Project Manager.

G. The A/E shall specify a minimum of three manufacturers of roofing systems and shall obtain notarized letters from each factory technical representative that the type of roofing system specified will perform in this locality and that all materials delivered to the job site and used by the contractor complies with the specifications. Minimum warranty shall be 20 years unlimited with no dollar limit. Warranties from roofing manufacturers should include coverage for installation as well as materials. In the event of roofing material failure, the roofing manufacturer should warrant all costs of roofing repairs, including labor. Warranty should be in effect for as long as the material warranty is in effect.

H. Parapet walls and caps (or coping) shall have through wall counterflashings. If limestone or cast stone is used, they shall have a lead "T" shaped cap embedded in caulking between each piece of stone cap. Mortar shall not serve this purpose. Pre-cast concrete caps shall not be used.

I. The A/E shall perform core drills on all existing roofs (membrane roofs) prior to any reproofing project.

J. A pre-installation conference shall be held two weeks prior to starting roof systems work.

K. The A/E shall provide full-time inspection service and post-installation

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moisture testing as required by the above standard practice. The proposed inspector shall be approved by the University Project Manager prior to commencing work on the roof.

L. Under no conditions shall the A/E design or specify an EIFS system into any portion of the work.

M. Fire Caulking: The A/E shall utilize 3M’s “Applications and Specifiers Guide for Through-Penetration Protection Systems” manual as a reference for the design and application of fire stopping products and systems.

07212 – Mineral Fiber Blanket Insulation

A. The A/E shall specify only Kraft-faced glass fiber batts that comply with ASTM C 533, Type I, or ASTM C 665, Type II. These batts shall be used for installation in stud cavity walls and applicable roof/ceiling assemblies.

07214 – Board and Block Insulation

A. Provide polyisocyanurate rigid foam insulation board that complies with ASTM C 1289, Type I and/or Type II.

B. Insulation board shall be 1-inch minimum thickness with a compressive strength of 20 psi.

C. Approved Manufacturers:
   1. Apache Products Company
   2. Celotex Corporation

07220 – Roof Insulation

A. Provide polyisocyanurate rigid foam insulation board for flat or tapered insulation systems. Insulation board shall comply with ASTM C 1289, Class 1, Type II.

B. Specify the insulation board to be 1 1/2-inch minimum thickness with a compressive strength of 20 psi.

C. All insulation systems shall have FM Standard 4450/4470 approval.

D. Approved Manufactures:
   1. Apache Products Company
   2. Atlas Roofing Corporation
3. Johns Manville Roofing Systems Group

07310 – Fiberglass Shingles

A. Provide a fiberglass asphalt shingle complying with ASTM D 3018, Type I, ASTM D 3161, Type I, and ASTM D 3462. The shingle shall have a 25-year limited warranty, UL Class “A” fire rating, and a UL 997 Wind Test label. Provide with 5-inch exposure.

B. The A/E shall specify an “Ice and Water Shield” type product with an adhesive back for underlayment.

C. Approved Manufacturers:
   1. Celotex Corporation
   2. GAF Materials Corporation
   3. Owens Corning

07412 – Standing Seam Metal Roofing

A. The A/E shall specify an architectural standing seam metal roofing system that has been tested in accordance with ASTM E 331.

B. Roofing material shall be a prefished galvalume, 24-gauge, meeting ASTM A 792/A 792M. Finish shall be Kynar 500 coating for top side and manufacturer’s standard prime coat finish for the bottom side.

C. Color shall be Beige (Archaeological Building). Other colors shall be approved by the Department of A/E Services and the University Project Manager prior to their selection and use.

D. All fasteners shall be concealed.

E. Flashings, closures, and related accessories shall be of the same material and finish as the roofing panels.

F. Approved Manufacturers:
   1. Berridge Manufacturing Company
   2. MBCI, Metal Roof and Wall Systems
   3. McElroy Metal, Inc.

07540 – Thermoplastic Membrane Roofing

A. Membrane roofing shall conform to ASTM D 4434, Type II, Grade 1, for fully-
adhered applications and ASTM D 4434, Type III, for mechanically fastened applications.

B. As manufactured, the membrane shall conform to the following physical properties:
   1. Color to be standard white or off-white.
   2. 60-mil minimum thickness.
   3. Fiberglass reinforced membrane.

C. All membrane-laminated, galvanized metal flashings, flash accessories, fasteners, and adhesives shall be produced or approved by the membrane manufacturer.

D. Approved Manufacturers:
   1. Sarnofil, Inc.
   2. GenFlex Roofing Systems
   3. Duro-Last Roofing, Inc.

**07550 – Modified Bituminous Membrane Roofing**

A. Provide a membrane roofing system with the following attributes:
   1. Asphalt-Coated Glass Fiber Base Sheet: Comply with ASTM D 4601, Type II without perforations.
   2. SBS Fiberglass Base Sheet: Comply with ASTM D 6162, Type II, Grade G or S, 75-mil minimum thickness.
   3. SBS Fiberglass Cap Sheet: Comply with ASTM D 6162, Type II, Grade G, 160-mil minimum thickness.

B. Metal for edging, counterflashing, copings, patch pans, and other related items, shall be .040-inch prefinished aluminum.

C. Approved Manufacturers:
   1. Garland Company
   2. W.P. Hickman Systems, Inc.
   3. Johns Manville Roofing System

**07660 – Sheet Metal Flashing**

A. The A/E shall specify sheet metal weights, thicknesses, and gauges as per the SMACNA “Architectural Sheet Metal Manual.”

B. Galvanized and “paint-grip” type flashings shall not be utilized.
07920 – Sealants and Caulking

A. Interior Sealant: Specify an acrylic latex caulk conforming to ASTM C 834. Products shall be equal to “Sonolac,” as manufactured by Sonneborn Building Products.

B. Exterior Sealant: Specify an one-component urethane sealant conforming to ASTM C 920, Type S, Grade NS, Class 25, use NT, M and A. Products shall be equal to “NP1” as manufactured by Sonneborn Building Products.

END OF SECTION
DIVISION 8 – DOORS & WINDOWS

General Door and Window Guidelines

A. Steel studs shall be nested at door jambs and head to accommodate weight of door and shock caused by closing the door. Finished wall shall extend a minimum of 1-1/2-inches into the wrap-around frame throat opening.

B. At least one (1) main entry door shall be handicap-accessible from adjacent sidewalks, and shall display the proper handicap signage. All other entry doors shall have proper signage to direct wheelchair handicapped persons, according to University signage standards, Division 10. The accessible door shall have automatic door opening devices as provided and installed by the Contractor.

C. All corridor doors, closet doors, and all doors required to be fire-rated shall meet requirements of NFPA 80 and 101, and shall be able to use standard locksets.

D. All egress doors shall have vision panels conforming to the requirements of NFPA 80 and FBC compliant.

E. All classroom and office doors shall have vision panels set in steel framing or stops complying with NFPA 80.

F. It is desirable that all exterior entrance doors be recessed or covered.

G. Wherever possible, exterior windows shall be operable as a means of ventilation in the event that air-conditioning equipment is not in operation.

H. Manufacturer’s Guarantee:
   1. All components of each door system shall be protected against failure and/or performance deficiencies by a product manufacturer’s installation and materials warranty. Said warranties shall be specific to each system required and shall be non-prorated warranties which guarantee against material and labor defects for a minimum period of five (5) years.
   2. Interior solid core wood doors shall have lifetime guarantee, and shall include removal, finishing, and hanging of doors at no cost to the University.
   3. Power operators, controls, electrical circuitry provided by the power door operator equipment supplier shall be guaranteed against defects in material and workmanship at no cost to the University for a period of five (5) years from the date of installation.
   4. Hardware including: closers, hinges, locksets, hold-opens, etc. required for the proper installation of all interior and exterior doors shall be provided with a manufacturer’s minimum five (5) year guarantee against defects in labor and materials.

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5. Windows shall provide warranties guaranteeing material and workmanship for ten (10) years and against failure of hermetic seal in insulated glazing for ten (10) years.

I. The A/E shall provide a power source at locations where power-assisted door openers are required.

**08110 – Steel Doors and Frames**

A. All single steel doors shall be 3-feet 0-inches by 7-feet 0-inches by 1 3/4-inches, 18 gauge galvanized steel, minimum.

B. All double steel doors shall be 6-feet 0-inches by 7-feet 0-inches by 1 3/4-inches, 18 gauge galvanized steel, minimum and shall be provided with removable center mullion.

C. All exterior and interior metal frames shall be one piece-welded frames. For renovation projects, knock-down frames for interior only application may be used when approved by the University Project Manager.

D. All steel frames shall be 14-gauge galvanized steel. All frames in masonry walls shall have a 4-inch head, a minimum of three (3) anchors at each jamb, and shall be grouted solid at head and jambs. Where two (2) doors swing from the same mullion, the frame shall be 12 gauge and reinforced.

E. All components of steel doors and frames shall be specified to be shop-primed (all surfaces).

F. Approved Manufacturers:
   1. Ceco Door Products
   2. Republic Builders Products, Desco Corp.
   3. Steelear Craft Manufacturing Co., Ingersoll-Rand Company

**08120 – Aluminum Storefront Doors and Frames**

A. All aluminum entrance doors shall be full-glazed medium or wide stile and rail doors with 1/4” tempered glazing. Frames with sidelites and transoms shall be double-glazed.

B. Extrusions shall comply with ASTM B 221M, Alloy 6063-T5 or T6. Fasteners shall be hard aluminum or stainless steel. New construction shall be dark-bronze anodized and renovation projects shall match existing doors and frames unless otherwise directed by the University Project Manager.
C. Doors to receive surface applied hardware shall be reinforced as required.

D. Metal glazing beads, vinyl inserts, and glazing gaskets shall be provided for securing glass. Glass stops shall be tamperproof on exterior side.

E. Weather-stripping shall be continuous thermoplastic elastomer bulb and fin type and shall be provided on head, jamb, and sill of exterior door frames.

F. Approved Manufacturers:
   1. AMARLITE Architectural Products, Aluminum and Glass Co., Inc.
   2. Kawneer Company, Inc.
   3. Vistawall Architectural Products

08210 – Wood Doors

A. All single wood doors shall be 3-feet 0-inches by 7-feet 0-inches by 1 3/4-inches solid core, 5-ply construction. Veneer faces shall be Premium Grade plain-sliced red oak (for natural finish) and/or Custom Grade hardwood veneer (for paint finish), or of wood species as directed by the University Project Manager. Doors shall comply with the standards of the National Woodwork Manufacturers’ Association (NWMA) and the Architectural Woodwork Institute (AWI).

B. Approved Manufacturers:
   1. Algoma Hardwoods, Inc.
   2. Georgia-Pacific Corporation
   3. Weyerhaeuser Door Division

08213 – Plastic Faced Wood Doors

A. Plastic laminate facing for wood doors shall conform to NEMA LD-3. Adhesives for interior and exterior shall conform to ANSI/NWMA-I.S.1.

08500 – Aluminum Windows

A. Exterior windows shall be fabricated from aluminum extrusions, thermally-broken, double-glazed insulated, with an outer shield of solar glass. Operable windows shall be provided with positive locking devices.

B. Provide windows with minimum rating of HC-60 and/or as required to meet local and state building codes and applicable wind loads.

C. Windows shall be furnished with a Kynar 500 coating complying with AAMA
2605 or anodic coating (anodized) complying with AA 45.

D. Approved Manufacturers:
   1. Graham Architectural Products Corporation
   2. Traco/Three Rivers Aluminum Company
   3. Wausau Metals Corporation

08700 – Finish Hardware

A. All locksets shall be Corbin-Russwin.

B. All butts shall be five knuckle, stainless steel. All doors with closers shall have ball bearing butts. All doors with closers, in excess of 3-feet 0-inches wide, shall have four (4) heavy-duty ball bearing butts. All interior doors with closers, up to 3-feet 0-inches wide, shall have two (2) ball bearing butts. All doors without closers shall have non-ball bearing butts. All butts on exterior doors shall have non-removable pins.

C. All exit devices for non-aluminum doors shall be Von Duprin type 99 or approved equivalent, in finish compatible with door. All exterior pairs of aluminum doors shall have Kawneer Panic Guard or approved equivalent. All building entrance/exit doors shall have concealed vertical rod exit devices. Surface vertical rod exit devices are not acceptable.

D. As required by code, exterior doors for buildings (other than dormitories) shall have Russwin 2820 Series or LCN 4040 Series surface-applied closers. Exterior doors for dormitories shall have Corbin 110 Series surface-applied closers.

E. As required by code, interior doors for buildings (other than dormitories) shall have Russwin 2820 Series or LCN 4040 Series surface-applied closers. Interior doors for dormitories shall have Corbin 100 Series surface-applied closers. Closers shall be mounted on room side of doors so as not to be visible from corridors, lobbies, and other public spaces. Closers shall be finished to match room décor.

F. All stops shall be wall-mounted, convex rubber with concealed fasteners. Floor stops shall be used only where absolutely necessary. Solid blocking shall be provided in stud walls for attachment of stops.

G. Typical hardware finish shall be stainless steel US 32D. Other finishes may be used only where necessary to match materials to which hardware is applied. All operable items on exterior doors shall have an integral finish, i.e. not applied, painted, baked on, etc.
H. For each item, the A/E shall specify and schedule one manufacturer as the standard, and whenever possible, two other manufacturers whose products are approved by the University’s locksmith.

I. The A/E shall specify in the hardware schedule a complete list of items proposed as the standards, together with manufacturer’s names and with the names of manufacturers whose products are proposed as equals. This schedule must be approved by the Owner at 50% Construction Documents.

J. Keys and keying for each lock cylinder shall be compatible with specified hardware and with existing university hardware and keying systems.

K. The University Locksmith shall prepare the keying schedule.

08800 – Glazing

A. The types of glass and location shall be indicated on the drawings or in the specifications as follows:
   1. The A/E shall specify obscure glass in toilet and bathroom windows.
   2. Tempered Glass: Glass for exterior aluminum doors shall be ¼-inch thick, minimum, tempered safety glass.
   3. Insulating Glass: Glass for exterior windows shall be ¾-inch - minimum clear (non-reflective) “Low-E” type with interior air space filled with inert low heat transfer gas and 1-inch minimum for aluminum storefront.
   4. Color and Coatings: All glass shall be clear unless approved otherwise by the University Project Manager.
   5. Mirror glass – Type I transparent flat, Class I-Clear, 1/4-inch minimum thickness conforming to ASTM C 1036.

END OF SECTION