



Division 13 Special Construction

13 05 00 Common Work Results for Special Construction

13 05 10 General Requirements for Special Construction

1. Project Specifications for Audio-Visual Systems shall use as their basis *Section 27 40 00 Audio-Visual Systems* of the latest edition of the DFDM Master Specifications when applicable. Consult with the UW Project Manager as to applicability.
2. Deviations from DFDM's Minimum Design Guidelines or the DFDM Master Specification sections shall be made only upon approval from the UW-Madison Project Manager.
3. The Guidelines for Planning and Design of UW-Madison Facilities shall take precedence over DFDM Guidelines, but the A/E shall discuss all conflicts within the guidelines and specifications with the UW-Madison Project Manager.
4. The goals and guiding principles of the UW-Madison Campus Master Plan (latest edition) shall be considered and referenced as part of the planning, design, detailing, and material section for every project.

13 05 30 Architectural Mock Up

1. Unless there are extenuating circumstances, agreed upon during the design phase by all parties, including the UW-Madison University Architect, an architectural mock up is required to be constructed for each project to confirm major building material selections including all masonry, metal panel, sealants and mortars, vision and spandrel glass, metal copings, sills, headers, and trim, among others. The mock up not only ensures that the materials work well with each other, but confirm they will work well in their larger context as applied to the new building. In addition, the mock up provides an excellent opportunity for testing how materials come together via design details, and constructability overall.
2. Architectural mock ups shall be prioritized to be constructed soon after the site is cleared for construction. There must be ample time allocated such that any delays in obtaining materials or any rejected materials will be able to be reordered and applied to the mock up for additional review and approval **prior** to there being any construction schedule impacts.
3. The architectural mockup must be reviewed and approved by the design team, including the UW-Madison University Architect, **prior** to the order of any large quantities of materials for the new building.

13 20 00 Special Purpose Rooms

13 22 00 Academic Spaces

13 22 20 Laboratories

1. A/E Design Teams shall utilize the services of qualified laboratory planners for the design of all new laboratory buildings.



2. Consultants shall be current with NIH (National Institutes of Health) guidelines for laboratory design.

13 22 40 Auditoriums and Lecture Halls

1. Design Criteria:
 - 1.1. In new construction, auditoriums and lecture halls shall contain fixed continuous tables and moveable ergonomic chairs (on casters appropriate for the flooring). The appropriate number of accessible seating with companion seats shall be provided. Wheelchair spaces and designated aisle seats shall be dispersed to provide a choice of admission prices (if applicable) and lines of sight comparable to that provided to other spectators.
 - 1.2. In new construction and to the extent possible in renovation projects, each seat should be wired for power with one duplex outlet serving two seats. Data outlets are not needed as wireless shall be used.
 - 1.3. The floor shall be tiered or sloped to allow for best sight lines. Transitions between ramped aisles and stepped rows shall be beveled, well designed, and coordinated for safety.
 - 1.4. Aisles shall be ramped (not stepped) to meet ADA requirements.
2. Audio/Visual Requirements:
 - 2.1. Rear screen projection is only permitted on a specific case need. The A/E shall consult with the UW-Madison Project Manager if a specific need is required.
 - 2.2. The A/V design shall be discussed early in Programming to determine equipment needs. Some system inputs may include:
 - 2.2.1. Blu Ray player accommodating DVD/laser discs - unlocked
 - 2.2.2. CD, MP3 or equivalent Audio
 - 2.2.3. Document Cameras (multiple in large lecture halls)
 - 2.2.4. Video camera for the recording of lectures
 - 2.2.5. Laptop input HDMI
 - 2.2.6. Code compliant Assistive Listening Devices
 - 2.3. Some system outputs may include:
 - 2.3.1. Video projectors (multiple)
 - 2.3.2. Recording devices
 - 2.3.3. Overflow classroom
 - 2.3.4. Distance learning technology
 - 2.3.5. Video windows in touch control screen and video based interactive educational smart boards
3. A/V Podium Control System shall include:
 - 3.1. The A/V control system shall use a touch color screen with video window for monitoring document camera, videos, cameras, window shades, and lighting scenes.



- 3.2. The A/V Control System shall use an easy to understand icon based graphical user interface (GUI).
- 3.3. The A/V Control System shall contain automation software to trigger by user actions, system events, or timed events.
- 3.4. A/V Control Systems and podiums shall be made accessible.
- 3.5. A well-labeled telephone shall be provided for technical assistance when needed.
4. Integration of the Control System:
 - 4.1. Video system and equipment control
 - 4.2. Window shades control
 - 4.3. Lighting system control
 - 4.4. Sound system and equipment control
 - 4.5. The sound system shall include a podium as well as UHF wireless microphones and a high quality multi-speaker system.

13 24 00 Special Activity Rooms

13 24 10 Single Occupancy Toilet Rooms

1. A minimum of one (1) single occupancy toilet room shall be included within each new or significantly renovated building and more than one if programmatically desired.
2. The most publicly located single occupancy toilet room shall contain a floor-mounted urinal in addition to standard lavatory and toilet. It should also include a menstrual product dispenser.
3. The room shall be ADA accessible and unisex in nature and shall be located on the floor and/or near spaces designed for general public use and gathering. At the discretion of the building occupants, it may also be fitted with an infant changing table to enable the room to serve as a family restroom.
4. The single occupancy toilet room shall be signed “Restroom” to be consistent with other room signs within the same facility. The term “Unisex” shall not be used. The pictogram associated with the sign, shall indicate that it is accessible and whether or not it includes an infant changing table.

13 24 20 Commuter Showers/Changing Rooms

1. As biking is an important mode of transportation on our campus, it is desirable to include shower/changing facilities within each new or significantly renovated building. The quantity of showers shall be determined by the occupants of the building.
2. The rooms shall be located near a building point of entry and near bicycle parking.
3. The rooms shall be ADA accessible and unisex in nature. The shower shall incorporate a trench drain across the entrance to the shower to capture as much water as possible. It shall also include a toilet and sink with appropriate accessories including mirror, robe hooks, etc.



4. The room shall be accessed by card reader and also have a deadbolt for privacy as part of the hardware group.

13 24 40 Wellness Rooms

1. A minimum of one (1) room designated for lactation and/or personal health treatments shall be included within each new or significantly renovated building and more than one if programmatically desired. These spaces shall be located in staff rich zones, such as on floors occupied primarily by offices and workstations to encourage their use, yet removed from the direct public domain for privacy and quiet.
2. The room shall be accessible with a minimum of 50 ASF and include a built-in counter at table height along one wall – minimum 48 inches long – with knee space and a single base cabinet for storage. Power shall be provided above the counter for easy access.
3. A task chair with arms and casters shall be provided at the counter.
4. A small wall mounted sink with gooseneck faucet and mirror shall be included.
5. The room shall be accessed by card reader and also have a deadbolt for privacy as part of the hardware group.
6. Refrigeration will not be provided inside the room for security and access reason, but should be made available nearby.
7. Confirm Wellness Room requirements with UW Project Manager prior to design.

13 24 80 Custodial Equipment Storage Rooms

1. All new buildings on campus shall provide convenient, code compliant storage space for larger equipment such as snow blowing equipment, leaf blowers, and mowers, accessible from the exterior of the building. The storage rooms must store at least 4 gallons of gas and two 20 pound LP tanks, approximately 50 square feet of space and a floor drain. An early review of the building-specific requirements is suggested during Programming.
2. All new buildings on campus shall provide a code compliant room to allow for charging and storing of large pieces of battery powered custodial equipment. Size depends on building configuration and floor materials to be cleaned. There shall be at least 150 square feet with proper ventilation for three 36 V and three 24 V machines, 18 inch deep shelf at 54 inch above floor to put chargers on, and outlets 12 inches above shelves (average hall machine 52 inches high, 38 inches wide, and 60 inches long). For a detailed plan, please contact the UW-Madison FP&M Project Manager.
3. Rooms shall be located close to loading docks or building entries, where equipment is most frequently needed.
4. Custodial closets must include:
 - 4.1. 42 inch doors on 180 degree hinge opening out
 - 4.2. There shall be one outlet on each wall with no more than 8 feet between the outlets
 - 4.3. Outlets shall be mounted 24 inches above the floor to handle two 12 amp chargers



- 4.4. Shelves shall be provided for custodial cleaning supplies. An early review of the building-specific requirements is suggested during Programming.
- 4.5. Sufficiently sized space for ladder storage and at least one custodial cart (50 inches long, 22 inches wide, and 39 inches high) shall be provided.
- 4.6. Mop sink shall be provided with no higher than 6 inch sides for ease in emptying buckets and equipment. A hose bib with flex connection is required. The wall area behind the sink area shall be covered with a water resistant material such as ceramic tile, FRP panel, or similar.

13 40 00 Integrated Construction

13 41 00 Built-In Waste and Recycling Units

1. Freestanding waste and recycling containers shall be coordinated with FF&E per Division 12. It may also be desired to include built in waste and recycling units for this purpose in highly visible public spaces. The following guidelines shall apply to these:
 - 1.1. Materials for the enclosure units shall be coordinated by the design team as appropriate to the space in which they occur. The units may be fully recessed or semi-recessed, built into alcoves.
 - 1.2. Separated units shall be included to manage the streams which UW-Madison Waste and Recycling collect: Waste, comingled recycling of glass, plastic & aluminum, and mixed paper. Additionally, office paper is collected, but collection points for this stream are not typically located in public areas, rather they are located in copy and work areas where this type of waste paper is generated.
 - 1.3. The enclosure units shall include an opening in the top or on the front for each stream large enough to enable items to be tossed in without congestion. There shall be no flipper doors over the opening. These tend to break and are difficult to keep clean.
 - 1.4. Labels shall be associated with each compartment and can be created using an applied plaque or the words can be engraved directly into the surface near the openings. The proper language per UW-Madison Waste and Recycling is as follows:
 - 1.4.1. Trash
 - 1.4.2. Mixed Paper
 - 1.4.3. Glass, Plastic, & Aluminum (ampersand and commas are optional, text can be on 3 lines)
 - 1.5. The enclosure units shall be designed with front doors that open to remove the liner so less lifting is required. The inside of the units sized to fit a large, standard size Rubbermaid container, whose model number shall be called out in the details. The Rubbermaid containers can be purchased either by the contractor or via FF&E.