



WEBER STATE UNIVERSITY DAVIS CAMPUS

Professional Programs Classroom Building Program

June 13, 2008



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Approvals



This facility program has been prepared by VCBO Architecture LLC in cooperation with Weber State University and the Division of Facilities Construction Management (DFCM).

Weber State University Review Signatures

We have reviewed the program and warrant that it adequately represents our request for a facility to fulfill our mission and programmatic needs. All appropriate parties in the agency have reviewed it for completeness and accuracy.

Norm Tarbox

Date

Weber State University Review Signatures

We have reviewed the program and warrant that it adequately represents our request for a facility to fulfill our mission and programmatic needs. All appropriate parties in the agency have reviewed it for completeness and accuracy.

Kevin Hansen

Date

Division of Facilities Construction Management State of Utah Review Signatures

We have reviewed the program, jointly prepared with agency, for completeness and accuracy. These signatures do not necessarily represent an endorsement for the need of the requested space at this time.

Bill Bowen

Date



Executive Summary

This program document is divided into two components that are both vital to the continued success of the Weber State University – Davis campus. These components are the Professional Programs Classroom Building and the Central Plant. Both facilities are critical to the future campus for numerous reasons. The Professional Programs Classroom Building will not only provide more flexible, state-of-the-art instructional space for Weber State students, but will also provide student amenities that make a vibrant and dynamic campus life for those students.

The Central Plant and electrical sub-station are necessary to provide efficient, more affordable and uninterruptible heating, air conditioning and electrical power to the entire WSU-Davis campus.

Programming Process

A steering committee, consisting of a representative from each of the departments from Weber State University included in the program, met weekly with members from the VCBO program team. Classroom and academic support facilities were at the core of the program development and these meetings yielded important “big picture” decisions. In early Steering Committee meetings, members determined the departments currently represented on the Davis campus, their projected growth, and departments that are likely to be launched on the campus either before or with the construction of the proposed Professional Programs Classroom Building.

After curricular projections were solidified and the programmatic make-up of the facility was determined, interactive, two day workshops were held whereby each department included in the program had numerous representatives to discuss specifics to be included in their spaces for their department. These workshops not only included the academic departments, but also included student services, campus IT (information technology), campus police, and facilities management/physical plant. During the course of the programming process there were four workshops where the participants were engaged in a detailed utilization analysis of their representative spaces and developed innovative solutions to their instructional and operational challenges.

Professional Programs Classroom Building

Instructional Space Flexibility

Continuous Day and Night Usage of Classrooms

The majority of the space allocated for the Professional Programs Classroom Building is devoted to providing much needed flexible and technologically equipped instructional space. The reason for providing flexible educational settings (labs and classrooms) is to accommodate a variety of instructional layouts that vary with teaching styles and pedagogies. This flexibility facilitates their use by several academic departments for continuous use of the facility throughout the entire day and nighttime schedules. Northern Utah Academy of Math and Sciences (NUAMES) proposes to use a large share of the classrooms during the day when the demand by Weber State University is not as high. During nighttime hours (after 4:00 p.m., when NUAMES is not in session) all the classrooms are available for the peak demand of Weber State students.

Growing and Successful Programs

The discussions with Weber State University-Davis stakeholders emphasized the need to provide a home for several thriving, innovative programs. These specific programs emphasize creating a professional atmosphere for their students. The sharing of this professional atmosphere leads to a collaborative synergy among the programs involved.

Included in the facility are entire programs from the Dumke College of Health Professions (DCOHP), the College of Applied Science and Technology (COAST) and NUAMES. DCOHP programs will include the Nursing Program, Masters of Health Administration and the Medical Technologies department. COAST will include Construction Management, Interior Design, and Engineering. Several other campus departments will also take advantage of the available classroom space for general education classes at the new facility.

Providing Desired Student Amenities

From the University stakeholder discussions and a comprehensive student survey regarding services, a desired mix of student amenities to be located in the facility was identified. Popular student activity spaces including a food court, a fitness center, computer lab, study spaces, event space, expanded testing center, and a copy/print store were chosen for inclusion in the facility.

The amenities ultimately selected, offer the opportunity to fully engage the student's minds and bodies for the time that they spend on the campus. This active engagement and opportunity to create social situations on the campus provides students additional reasons to remain on campus to fraternize and collaborate with their fellow students. These highly desired student services on the WSU-Davis campus will create a dynamic student center, an important feature that has not yet been fully realized at the campus.

Area Summary

There are multiple occupancy areas that comprise the Professional Programs Classroom Building. The program includes flexible and technologically equipped classroom space, a student union component; academic support space (student affairs functions and event space), NUAMES space (classrooms, labs, and offices for Northern Utah Academy of Math, Engineering and Science educational programs); classroom support spaces (faculty/staff offices and classroom storage areas), and building support areas (campus police and information technology services).

Function	Net Square Footage	Percentage of Total
Classroom	25,515	35
Student Union	13,825	19
Academic Support	11,405	16
NUAMES	11,815	16
Classroom Support	8,290	11
Building Support	1,164	02
Total NSF	71,654	100

A net/gross factor of .625 will be used for the building. This factor takes into consideration circulation space, wall thickness, and other spaces not designated in the net square footage. With this factor the total gross square footage of the building is 114,646 square feet.

Central Plant and Electrical Substation

Phased Construction

When the central boiler and chiller plant for the Davis Campus is constructed it will provide the heating and cooling needs for the entire campus. A central plant provides opportunity to reduce energy and maintenance costs, while meeting the campus heating and cooling needs. It is important that this facility be planned in a manner that will fulfill the energy demands of the full campus at final build-out, but be flexible enough to accommodate the growing campus at each stage of its development with each new building. This strategy necessitates that the Central Plant be planned to be built in phases that correspond with each campus development. Adequate ground for an expanded footprint must be available and remain so until the final phase of the Central Plant construction is completed.

The Central Plant programming information has been coordinated and developed in conjunction with Weber State University personnel to include the types of systems and equipment that are conducive to their maintenance practices and procedures. It includes chillers and a heat exchanger for cooling, winter and summer steam boilers, an electrical room, outdoor electrical equipment, an outdoor cooling tower, and outdoor back-up fuel tanks.

The plant is programmed to include flexibility and phasing as necessary to meet the campus needs with each new building. The plant shall have redundant back-up capacity to ensure continuous operation of the heating and cooling systems to each building.

Much like the Central Plant, the Electrical Substation will also meet the campus needs as new buildings are added. Electricity can be delivered to the Davis campus through the substation more economically, more reliably, and more efficiently than through the local power utility.

Tunnel Routing

The central plant shall provide steam and chilled water to each building on campus. The steam and chilled water piping shall be routed from the central plant to the individual buildings through utility tunnels. The tunnel and piping infrastructure, much like the Central Plant, shall be designed with enough capacity to anticipate the full campus build-out. The utility extensions in the campus plaza shall be coordinated to be under the proposed locations of the sidewalks for the plaza. Any placement of these tunnels should be carefully considered to align with the intentions of paving as delineated in the master plan for the campus.

Project Cost Summary

The project consists of three distinct divisions of work. The campus infrastructure will include **a Central Plant** (with boilers and chillers) that will provide the current and future campus with heating and cooling capacity. The second campus infrastructure portion of the work includes an **Electrical Substation** that will provide the campus with electrical power. These projects will be designed to have the ability to be expanded in the future as the campus grows.

The third portion of the work is the **Professional Programs Classroom Building**. The construction cost for each of these portions of the work is as follows.

Category of Work	Cost (Sub-Total)
Central Plant	\$5,370,416
Electrical Sub-Station	\$1,813,967
Professional Programs Classroom Building	\$25,427,310
CONSTRUCTION COST TOTAL*	\$32,611,693

*The project soft costs (including design fees, FF&E, impact fees, AV/IT, etc.) need to be added to these figures to establish the total project costs.

Project Objectives

CLASSROOM FACILITIES ON THE DAVIS CAMPUS WILL...

- Efficiently accommodate a diverse population of WSU, WSU Early College, and NUAMES students.
- Incorporate technology to better prepare students for the current job market.
- Use innovative classroom design to increase flexibility and to accommodate a variety of classroom settings and room layouts.

THE CLASSROOM BUILDING WILL...

- Promote interdisciplinary interaction and shared departmental resources.
- Increase student satisfaction by providing collegiate services on the Davis campus.
- Avoid redundancies with the current building and proposed Central Plant facilities.

THE DESIGN OF THE CLASSROOM BUILDING WILL...

- Welcome students and provide easy access to core services.
- Utilize environmentally friendly design by meeting DFCM High Performance Building standards and attaining LEED Certification.
- Comply with the 2001 WSU-Davis Master Plan.

THE CENTRAL PLANT AND ELECTRICAL SUB-STATION WILL...

- Meet the heating and cooling needs for the entire campus.
- Have the ability to be fully expanded to fully meet the energy demands of each new campus building.
- Have redundant back-up capacity to ensure continuous operation.

Planning Requirements



Identified Requirements / Justification

During the programming process, departments and services to be incorporated into the Professional Programs Classroom Building were determined. The beginning of the process consisted of meetings with campus and university stakeholders, after it was determined by these individuals what departments and service may be incorporated, smaller departmental workshops were conducted to determine their needs and the efficacy of including them in the programmed building. Some programs were determined better served by remaining in the current building due to specialized facilities already in place, lack of projected growth, or departmental preference.

Many factors were taken into consideration when determining which programs and services to include in the new building. However, VCBO and the Steering Committee made the ultimate decision based on the efficiency and long-term benefit of including specific spaces.

In addition to Steering Committee meetings and departmental workshops, a campus-wide survey including students, staff, faculty, and administrators was also conducted by VCBO. The survey was used to identify current needs of the campus population and projected long-term preferences of survey participants. A summary of the survey results are included in Tab Four, and the full survey results are provided in an appendix to this document.

Master Plan Requirements

As stated in the Weber State University Davis Campus Master Plan (HFS Architects & Laura Bayer, Architectural Planning & Programming, 2001), Weber State University has served the Davis County region for twenty-five years, operating at a series of instructional sites. In the 1990s, projections estimated that Davis County would grow by nearly 50,000 residents in each of the next three decades, and that the population would double by 2020.

Recognizing that this rapidly growing area would support a permanent campus and deserved to have comprehensive higher education opportunities, the State Board of Regents and the Legislature approved the purchase of a site to be held as a land bank for the eventual construction of a second Weber State University campus in Davis County. This led to the development of the current Weber State University Davis campus.

The Campus Vision

The Master Plan set forth three main considerations in campus development. The goal is to create a campus that is:

- **High Tech:** Designed to bring the latest in technology to Davis County, the campus will offer current technology and the flexibility to accommodate future technology.
- **High Touch:** A personal approach to teaching and learning has always been the hallmark of Weber State University. Facilities at the new campus will be designed to support this people-centered approach to learning by providing spaces for students and teachers to work together in formal and informal settings that encourage personal contact, team learning, and participation in campus activities.
- **Connected:** Like the community it serves, WSU Davis will foster connections.
 - among students, faculty, staff and administration
 - between the campus and the surrounding communities
 - with the rich heritage of Davis County, with the mountains, the sky, and the lake – the natural environment in which the campus is located
 - with the borderless world of today's technology
 - with the future

Vision and planning

Throughout the process VCBO incorporated the goals of the WSU Davis campus as well as larger Weber State University goals.

Site Considerations



WSU Program Site Information

Location

Weber State University – Davis Campus
2750 North University Park Boulevard
Layton, Utah 84041-9009

Driving Directions

From I-15 Exit 334

Turn East on Hwy 193 (toward the mountains) and go to 2000 East (Clearfield). Turn right and go approximately one block to the entrance. Turn left onto the WSU Davis Campus.

From Hwy. 89

Exit 343 to Highway 193. Go West to 2000 East (Clearfield). Turn left on 2000 East and go approximately one block to the entrance. Turn left onto the WSU Davis Campus.



Site Characteristics

The location of the proposed Professional Programs Classroom Building (PPCB) is located generally east of the existing Academic Building. The site slopes down from northeast to southwest and is currently undeveloped. Site work for the PPCB will require minimal site demolition. Permanent existing buildings and surrounding site improvements will be retained and protected during construction. The site will require extending existing utilities, adding additional parking stalls a new utility tunnel Central Plant and Electrical Substation as part of the project.



Neighbors

The WSU Davis Campus is situated within a unique variety of community neighbors. Directly to the north, across Highway 193, is the south boundary of Hill AirForce Base. It is a common occurrence for Hill's training flights to pass directly overhead. The flights are very noisy and steps should be taken to mitigate this acoustic issue for the classroom building. To the south and east are single family home. It is important to protect these areas from noise and/or fumes that may emanate from the Central Plant. It is also important to not develop any roads from the campus that would directly distribute campus traffic into these neighborhoods.

Three story commercial properties lie to the east of the campus, and an outdoor retail mall is being developed just northeast of the campus. As this immediate area increases in density, it is imperative to continuously monitor the automobile traffic generated by these commercial areas and the University so that traffic bottlenecks and parking issues do not arise.



Building Orientation

The new facility needs to be oriented along the master planned campus pedestrian access. It is not a true orthogonal axis, but angled 22.5 degrees to the east of true north.

Vehicular and pedestrian traffic

All of the vehicular traffic for this building will be entering from the west and parking either in the south lot or along University Park Boulevard to the west. It is anticipated that there will be very little pedestrian or bicycle traffic coming from off campus. Pedestrian traffic within the site for the existing building is anticipated to be from the parking lot to the south. For the time being, it is likely that very little pedestrian traffic will enter the new building from the pedestrian mall (north of the building) except when moving from one building to the other. The current sidewalks at the mall terminate just east of the main north entry to the existing building. New construction will include the need to extend the mall walkways to the eastern line of the new building. Walkways for the Central Plant will be limited to the general building area.

There are several new developments in the adjacent areas including a new outdoor type mall across the street west of University Park Boulevard fronting on Highway 193. This will greatly increase vehicular traffic in the area and the intersections both to the north at Highway 193 and south at Antelope Drive will be impacted. It is anticipated that an additional campus entry will eventually be built on Highway 193 directly north of campus as new buildings are constructed. This is not anticipated in this phase of the campus development.

Currently there are public bus routes that access the site. A new commuter rail is in operation and will ease vehicular traffic along I-15 and facilitate student travel from Salt Lake and southern Davis Counties.

Parking

The existing site accommodates approximately 750 vehicles. The new classroom facility will require the need for an additional 750 vehicles to be located to the south and east of the new facility. Parking for four utility vehicles will be required at the substation and four utility vehicles at the central plant. All stalls to meet current WSU Davis requirements.

Views

The program for the new building calls for three stories of space. Given this scenario, views from the building will be restricted on the main level, but on the second and third levels, views will be available in all directions. Views to the west may be somewhat restricted due to the existing building. In the future, when new buildings come on line, views to the east and perhaps to the north may be somewhat obstructed. Currently, the views



VIEW: Southeast to mountains across parking lot



VIEW: Southeast to mountains



VIEW: Northeast



Raised grade at existing building

to the east magnificently frame the Wasatch Mountains. From the upper floors distant views of the lake are visible. The immediate views to the south will be the single family housing development adjacent to the school property.

Slopes

The property slopes from high on the north to lower on the south. These slopes are significant, but within the footprint of the new building, the site slope is approximately 8 feet from a high on the north to a low on the south. The grading for the existing building to the west of the new has been raised to accommodate the second floor entrance from the pedestrian mall (see photo below). It is anticipated that the campus master plan will dictate that the site be brought up on the north end to accommodate the mall. It would be advantageous to hold the grade at the north elevation down to the point where natural light could be brought down to the ground floor.



Drawing from Master Plan by HFS Architects

Site drainage currently is to the south parking lot with a small detention facility on the southwest corner of the campus. It is anticipated that current roof drainage can be accommodated in the system as now constituted.

Landscaping

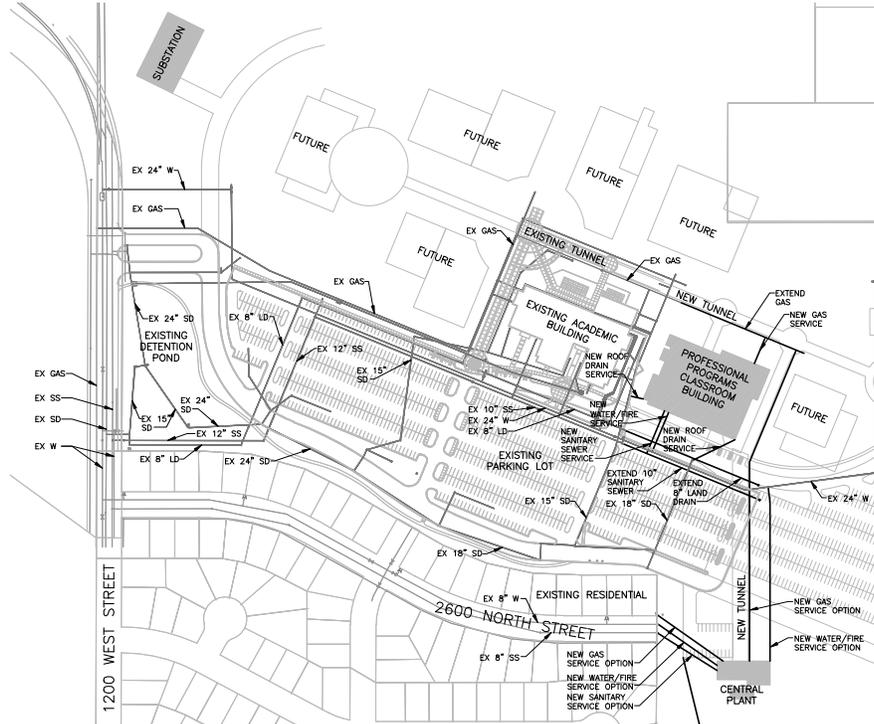
Current landscaping of some trees and irrigated lawn is limited to the area around the location of the existing building. Lawn areas adjacent to the existing building have been cordoned so as not to allow foot traffic. Consideration should be given to modifying these areas so that fencing can be removed. The area where the new building is to be located is sparsely irrigated bluegrass lawn. Lawn will need to be removed and irrigation modified. Depending upon when the new building is constructed, existing trees may or may not be able to be relocated. Those trees that can be moved without damage shall be relocated.

New landscaping and irrigation shall be designed for areas surrounding the new Classroom Building, Central Plant, Electrical Substation, and new parking. See Tab 13 for a description of the Central Plan and Substation. Design for summer and winter conditions with landscaping complimentary to the scale of the building, plant species that require very little irrigation and maintenance should be considered. All landscaping shall meet Weber State Davis Campus requirements.



Utilities

With the existing development that has already taken place on the campus, a good amount of utility infrastructure is already in place. After analyzing the site and utility information provided by Weber State University, we would recommend the following regarding utilities on the site:



Sanitary Sewer

An existing 10-inch sanitary sewer line is stubbed to the southwest corner of the proposed PPCB. The sewer at this location is approximately 6-feet in depth to the flow line and generally routes to the west along the northern edge of the existing parking lot until it connects to a City sewer main in 1200 West Street. The 10-inch sewer line should be extended to the southeast approximately 360 feet to a point just east of the proposed tunnel from the Central Plant. This sewer line would then be approximately 100-feet south of the proposed building and available to not only service the PPCB, but would also be available for extending to service future buildings on the eastern portion of the site.

Water

An existing 24-inch ductile iron water line is routed through the site from approximately 725 West Street on the east to 1200 West Street on the west. As the water line routes through the site it is generally located near the northern edge of the existing parking lot, on the south side of both the existing Academic Building and proposed PPCB. The existing water line is located approximately 100-feet south of the proposed building and will be utilized to provide both culinary water and fire protection services. Another item that will need to be resolved in regards to the water line is the crossing of the new tunnel from the Central Plant and the existing 24-

inch waterline. It is probable that there will be a conflict with the elevation of the tunnel and the elevation of the existing water line. A couple of alternatives that should be considered in resolving the conflict would be to construct the tunnel beneath the waterline or to lower the water line beneath the new tunnel.

Storm Drain and Land Drain

Storm drain on the site currently consists of a number of inlets in the existing parking lot and roof drains that collect surface flow and route the flow to an existing detention basin on the east side of 1200 West Street that has a storage capacity of approximately 2 acre feet. In the vicinity of the proposed PPCB there are two storm drain lines; a 15-inch line on the west side of the proposed building and an 18-inch line on the south side of the proposed building. Either or both of these lines could be utilities for any site drainage around the proposed building and for roof drain connections. In addition to the storm drain system, the site also has a land drain. The land drain generally follows the same route as the sanitary sewer and connects to the storm drain system near the detention basin located at 1200 West Street. The land drain currently terminates near the southwest corner of the proposed PPCB. Like the sanitary sewer, it is recommended that the land drain system be extended approximately 360 feet to a point just east of the proposed tunnel from the Central Plant. The land drain line would be located south of the proposed building and available to not only service any perimeter or underground from the PPCB, but would also be available for extending to service future buildings on the eastern portion of the site.

The program also identifies the addition of parking on the southeastern portion of the site. The additional parking will require storm drain and detention facilities. The 2001 master plan for the campus recommended a new detention basin be constructed in one of two locations; the first was on the site currently being recommended for the Central Plant and the second was in the southeast corner of the site. The master plan suggests the outfall from this detention basin could be routed to an existing storm drain in 950 West Street, but the City of Layton questioned the availability capacity. The information provided by Weber State indicates the size of this storm drain to be 12-inch. It is very questionable as to whether or not the 12-inch line would have the available capacity of this storm drain to receive outfall from a new detention basin located anywhere on the southeast portion of the site. In addition, a detention basin on the southeast portion of the site would need to take into consideration the impacts of constructing a detention basin on a relatively steep slope. If a detention basin is constructed anywhere on the south side of the campus, dam safety should be considered to determine any requirements for potential embankments and to address potential flooding safeguard for the residential development to the south. The master plan also indicates

that drainage from the parking at the northern position of the site will be routed to the existing detention basin on the 1200 West Street. We recommend that the original storm drain master plan for the site be reviewed and re-evaluated. Part of the evaluation would be to look at bringing the storm water from the new parking lot recommended in this program to the existing detention basin on 1200 West Street. Another part of the evaluation would be looking at making some modification to the existing detention basin and bringing storm water from the entire site to the detention basin on 1200 West Street or the possible addition of another detention basin on 1200 West Street located north of the existing site entrance.

Natural Gas

Natural Gas is currently routed from 1200 West Street along the northern portion of the existing parking lot until it reaches the west side of the Academic Building. It then continues north along the west side of the Academic Building to the south side of the existing tunnel and then east along the south side of the existing tunnel and terminates at the northeast corner of the Academic Building. Extending the gas line along the south

Outdoor Spaces

Outdoor student and faculty congregating spaces shall be developed where appropriate to take advantage of climatic conditions and their relationship to interior spaces. Outdoor spaces that extend dining opportunities or informal gatherings, lecture opportunities, or recreational activities should be strongly considered.



Campus Survey Results Summary

The survey was launched on Monday, January 7, 2008 and ended on Monday, January 21, 2008. A total of 596 people began the survey and 448 completed the survey in full.

The median age of participants was 23-26. However, the range of ages was from 15 to 51+.

The majority of respondents were affiliated with Weber State University (83%), 4% were affiliated with the WSU-Early College, and 13% were affiliated with NUAMES.

Almost 90% of respondents identified themselves as Students (89%), as opposed to Faculty (5%) or Staff (6%).

The survey asked questions in the following categories:

Student follow-up

Questions regarding expected year of graduation, enrollment status, intended major, and typical class times were asked. These questions were only asked of respondents who identified themselves as students. The greatest percentage of students (30.9%) had an expected graduation date of 2010. More than half of students (62.3%) were enrolled full-time.

Food Service

Information was collected on the frequency and time of day respondents currently ate on campus. Desire for new food services, food choice priorities, and price point tolerance were also gauged. Most students were interested in lunch or snack items. Almost half of respondents were willing to pay up to \$4.00 for a meal, almost 25% would pay \$4.01 to \$5.50. **From the survey results it was determined that a food service component that offers sandwiches and light fare should be included.**

Fitness Center

Information on current on-campus fitness room usage and perceived need for an expanded fitness center was collected. Additionally, time, amenity, and activity preferences were discerned. A large majority (86.3%) of respondents do not currently work out the WSU Davis campus. When asked, "Does WSU Davis need more fitness amenities on campus?" 65% of respondents answered "Yes." 35% replied "No." **From the survey it was determined that an area with selectorized machines, an area for cardiovascular equipment, and fitness studio/classrooms be included in the program.**

Events & Activities

This category of questions was focused on the time respondents spent out of class on-campus. The amount of time, activities engaged in, and prioritized amenities (excluding fitness and food) for this purpose were discovered. Respondents spent an average of 5.4 hours per week outside of class. Most of their time was spent in individual study, using the computer lab, and meeting with faculty/staff.

Gathering Spaces

This section included questions on study space and social congregational space preferences. Currently the preference is to study in study nooks/undesigned space, the library, and small study rooms. 22.1% of respondents do not prefer to study on campus. When asked about the gathering space preferences in the future, respondents rated the library, study nooks, small study rooms, Information Commons, and student commons as high priorities. ***This survey response highlights the importance of programming small dedicated study rooms in the building.***

Preferences

The final category included open-ended questions on respondent likes and dislikes about the current campus and provided space for additional comments. Students reported classrooms & technology, location & layout, and newness & modernity as what they liked most about the current WSU Davis facility. Least-liked features included: class selection, lack of cafeteria/food court, lack of study areas, and small fitness center.

**The detailed Results can be found in Appendix 1 of this document.*



Architectural Analysis

Project Planning Principles/Guidelines/Goals

Professional Academic Setting

The new Professional Programs Classroom Building for Weber State University Davis, first and foremost is meant to provide a first class professional setting for instruction by the Department of Health Sciences and the College of Applied Science and Technology. Classroom spaces that are comfortable, flexible, adaptable, efficient, equipped with state of the art technology and filled with natural light are required.

The laboratory spaces shall possess the same traits as the classroom spaces and are meant to simulate the professional environments that the students will soon find themselves in as they graduate from the University. The inclusion of state of the art technologies in the labs is a very important component of creating these real world simulation environments.

Flexibility in the Instructional Areas

The University knows its market well and most of the programs offered in the facility cater to students whose availability is at night after they get off work from their regular jobs. The majority of the classrooms are available for WSU students after 4:00 p.m. Northern Utah Academy of Math and Sciences (NUAMES) students utilize a large portion of the classrooms from 8:00 a.m. to 3:00 p.m. This sharing of classrooms makes it imperative that they be designed to easily accommodate both high school and higher education instruction. The classrooms should have the ability to be set up at one moment in a “faces forward” traditional instructional setting and the next in a seminar room format or a team table approach setting. To accommodate these changes, the facility will utilize easily moveable furniture within an open classroom framework with a flat floor in the majority of classroom spaces.

Active Student Center

The University has made the commitment to provide the students of the Davis campus with amenities in the proposed facility that will make it a very dynamic activity center. It is important that the facility provide food and technology, the two components necessary for creating an active and collaborative student activity center. This hub of student amenities will include a Lobby/Lounge, Food Court, Event/Lecture Space, Fitness Center, Copy/Print Room, Laptop Lounge, and Quiet Study spaces. It is important that this student energy flow unimpeded into a second level that contains Student Affairs and a Testing Center.

Campus Master Plan Coherence

The master plan for the WSU Davis campus, completed in 2001, calls for all buildings planned, designed, and constructed on the campus to be governed by the WSU Davis Design guidelines and by the Architectural and Engineering Standards developed by the office of Facilities Management for Weber State University. The Professional Programs Classroom Building should utilize the established palette of materials developed in the design and construction of Existing Academic Building and shall complement that facility in form, mass, materials, color and texture.

Site and Building Coordination

The orientation and the relative height and size of buildings at WSU Davis has been established by the University and their master plan for the campus. The 22.5 degree rotation of the campus grid from true north to coordinate with site topography has set the course for future buildings. Although this orientation is less than ideal for the control of daylight into the building, a combination of this orientation with a truer north/south building orientation for other parts of the facility could be explored.

The change in grade from north to south should also be used to the facility's advantage by creating a dual level entry into the building. Entering from the parking to the south at grade and entering from the pedestrian mall from the south at one level higher will create a synergy with these two levels designed to be open to one another. This will help create the active student center that is desired for the building.

Sustainability

Building this vital facility utilizing sustainable principles will assure that it is energy efficient, maintainable and perhaps lengthen the ultimate life and viability of the facility. Weber State University has made it a goal to achieve LEED® Certification for the facility while also fulfilling the requirements of the State of Utah High Performance Building Rating System.

The building should take advantage of an ideal solar orientation to increase the potential, controlled daylighting into the classrooms, labs and offices. The facility should orient on an east-west axis thus lengthening the north and south faces. Windows on the east and west faces should be limited in size and used as view windows with mountain views to the east and lake views to the west. South facing windows should be equipped with exterior shades to minimize the summer solar heat gain and to avoid direct sunlight into classrooms. North windows will not require exterior shading and provide ideal lighting for classrooms and labs.

Materials and finishes for the facility should complement the existing campus building and shall have a low environmental impact, be available locally (when possible), durable and maintainable.

Building Dynamics

Central Hub of Activity

As recommended by the master plan, each campus building should include a major interior commons area linked to the exterior campus commons. This study recommends providing this through a centralized student activity center. This center shall be anchored on the ground floor (accessed from the south) by the Lobby of the facility which will include Dining space and areas for students to informally gather to study and hang out. Surrounding the Lobby will be other active student amenities which include a Fitness Center, Laptop Lounge, Copy/Print Room, Event/Lecture Space and a Food Court. The Event/Lecture Space shall be contiguous with the Lobby so that the Lobby can be space used as break-out space for large happenings in the Event/Lecture Space.

This centralized Lobby shall be open to the second level of the facility. This second level will be entered from the outdoor commons space from the north. A major linked entry from this level will help to activate the currently under-utilized central campus commons pedestrian core that is slowly being realized from the master plan. From the second level entry students can access the Student Affairs spaces, a Testing Center, and Health Science programs. A central stair linking these two levels will help encourage a direct and strong link between the levels. This exciting open space and the student amenities offered in the building will support an atmosphere of collaboration, collegiality and will encourage the students to linger on campus thus expanding their interactions with their fellow students.

Important Spatial Relationships

Other relationships within the building are also important for enhanced functionality of programs. The Customer Service Counter on the main level will be charged with several important functions. It will be the primary information dissemination point for the facility. It will also be the laptop lending station for the Laptop Lounge area. This counter will also provide the oversight of this computer lounge. This counter could also be the desk area for the Copy/Print area. These functional responsibilities necessitates that this counter be placed adjacent to Copy/Print, Laptop Lounge, and the Lobby.

The campus police department shall be located with visible access from the main Lobby but shall retain a separate entrance to the exterior so that they are not walking perpetrators through the Main Lobby of the building.

On the second level, the Testing Center needs to have visual accessibility from the Lobby, but shall be located in a quieter area than the active central Lobby. It shall be located somewhat away from the central Lobby but remain visually accessible. The Testing Center also needs to be

located next to a classroom so that they could utilize it when there is an over-utilization of their testing space.

On the second level, the Masters of Health Administration program shall be located near the Nursing Department. Both of these programs can share a reception station and a faculty workroom.

On the third level, there are similarities between the NUAMES program and the WSU COAST programs. Laboratories and workroom spaces may be shared where appropriate. With this in mind, it is recommended that these programs be located together on the third floor of the facility.

Service Access

There are several spaces that will require either direct access to or retain close contact with the loading dock of the facility. Of course the Receiving and Receiving Storage will need to be adjacent to the loading dock, but also the Food Court Storage area and Kitchen will need to be very close to the dock for both receiving supplies and garbage removal.

The Concrete Lab and accompanying storage area will need to be proximate to the dock in order to receive concrete production supplies.

The facility's service area and loading dock could be located either on the east or west side of the building, however, if it was located on the west side it could share an access drive and service space with Building No. 2 (existing building to the west).

Building Circulation

It is envisioned that a major portion of the circulation throughout the main level of the proposed Professional Programs Classroom Building will occur within the Lobby space. The Lobby will act as a central hub by which all the programs on this level can be accessed. This study has recommended that 2,000 square feet of unassignable square footage be added to the 3,000 square feet assigned to the Lobby/Dining space for the purpose of circulation.

The circulation into the Fitness center (accessed from the Lobby) shall be directed through a single control access point so that only authorized participants are allowed entry to use the fitness equipment.

On the first level there will also be a service corridor that will be used to transport goods, services and supplies throughout the facility. This service corridor will run from the Loading Dock to the Food Court Kitchen/Serving area, including storage. The service corridor shall also link the Concrete Lab and its storage to the Loading Dock.

The second level of the facility shall also have a centralized entry through which all the programs on this floor can be accessed. It is envisioned that this entry space be open to the Lobby below. A central, open stair will help facilitate this ease of movement from level to level. This visual communication will allow the student energy created by the building to flow from the first to the second level. This Lobby circulation shall be configured so that building occupants can easily flow out to the Campus Commons plaza to the north. This ease of circulation will help activate the important pedestrian core of the campus.

The office spaces on the second and third levels shall be organized together so that they can take advantage of closer proximity to shared reception and workroom areas. This closer knit organization of offices will help to increase chance meetings of faculty members and encourage discourse among them.

In the wings of classroom spaces on the second and third levels, circulation spaces that access classroom and lab spaces shall be efficient, but not be so tightly squeezed as to not allow sufficient circulation to and from classes. Corridors outside of classroom spaces shall have adequate room to manage not only the students all leaving at once but also sufficiently accommodate the people waiting for the next class. Providing increased widths in parts of corridors to facilitate these break-out functions of the classrooms are highly encouraged.

It should also be noted that a portion of the learning process takes place outside of the classroom walls. Informally configured, chance meeting spaces off of the corridors provide additional learning environments in the facility and their inclusion in the building should be strongly considered.

Building Security

The building security for this facility shall follow the standards that have been established through WSU's Design and Construction Standards for Architects, Engineers and Contractors. Although this building is not meant to be a highly secure facility, all exterior access doors into the facility shall be equipped with a electronic access and monitoring system. The card readers on the main entry doors (on first and second levels) shall only be active after operational hours of the facility. These doors will also be equipped with automatic door operator systems that shall work in conjunction with the card readers after normal operating hours. The other exterior access doors shall maintain the security access or door position monitoring at all times. There was considerable discussion about making the building access card the same card that the students utilize for dining services and for use of the Fitness Center.

There will also be security cameras mounted throughout the building. The Campus Police will have the ability to continuously monitor these cameras.

Codes, Regulations and Life Safety

The proposed Professional Programs Classroom Building will need to be designed to meet all applicable codes and standards. The Design Team shall be responsible to verify the latest revisions, updates, or amendments to any of these applicable codes and standards. The following list of governing codes for the project is current at the time of this writing:

- International Building Code 2006 (with State of Utah Amendments)
- International Mechanical Code 2006
- International Building Plumbing Code
- International Fire Code
- National Electric Code
- NFPA 101 (with State of Utah Amendments)
- Laws, Rules and Regulations of the Utah State Fire Marshall
- Design Guidelines - Weber State University-Davis;
- Design and Construction Standards for Architects, Engineers and Contractors - Facilities Management/Weber State University
- Americans with Disability's Act Title III, 1991 (ADAAG)
- ANSI 117-119-1998
- Planning and Design Criteria to Prevent Architectural Barriers for Aged and Physically Handicapped
- State of Utah DFCM High Performance Building Rating System
- USGBC LEED Green Building Rating System
- Weber State University-Davis Master Plan (2001)

The proposed facility has been analyzed using the 2006 International Building Code. The results of this study as well as a Plumbing Fixture count follow this sheet.

International Building Code Review
International Building Code 2006

Project Description (Footing/Foundation Review)

Three story mixed use facility with classrooms, offices, and student service amenities (Dining, Event Space, Fitness) with the following occupancy types:

A3 Assembly – (at 1st level, Lobby/Dining, Fitness Center, and Event Space)

B Offices, Classrooms/Labs with less than 50 occupants (beyond the 12th grade)

Required Fire Separations

A fire separation between the A3 and B occupancies shall be required (2 hours) (Table 302.3.2). The building will be analyzed with separated uses.

Incidental use areas (Table 302.1.1) will be required at the following locations:

Mechanical (Boiler) Room – 1 hour separation

Electrical Room – 1 hour separation (where required)

Actual Square Footages (Total building)

A3	Assembly Space	18,460 SF
B	Remainder of Building	96,186 SF
Total levels 1, 2 and 3		114,646 SF

Actual Square Footages (First Level)

A3	Assembly (Lobby, Event Space, Fitness)	18,460 SF
B	Offices/Education	26,840 SF
Total this level		45,300 SF

Actual Square Footages (Second Level)

B	Offices/Education	38,260 SF
Total this level		38,260 SF

Actual Square Footages (Third Level)

B	Offices/Education	31,566 SF
Total this level		31,566 SF

Project Assumptions

- Building will be analyzed with separations between the occupancy groups.
- Assume a Type IIB Construction Type for the building.
- Building is to be equipped with an automatic fire sprinkling system

Basic Allowable Areas and Height: (From Table 503)

A3 – Construction Type IIB

A3 Allowable Area	9,500 SF
B Allowable Area	23,000 SF
Height	2 stories

Allowable Area Increases:

Frontage Increase (If)

$$If = 100(F/P - .25) \times W/30 =$$

$$If = 100(740/740 - .25) \times 30/30 = 75\%$$

Fire Sprinkler Increase 200%

Multi-Story Increase (For total building)

(2 stories maximum) Area x 2

Allowable Area (after increases) per floor:

$$Aa (A3) = 9,500 \text{ sf} + (9,500 \times 75/100) + (9,500 \times 200/100)$$

A3 allowable	35,625 square feet
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$$Aa (B) = 23,000 \text{ sf} + (23,000 \times 75/100) + (23,000 \times 200/100)$$

B allowable	86,250 square feet
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Mixed Use Occupancy Ratio Calculation/Floor (First Floor):

$$A \text{ actual} / A \text{ allowable} + B \text{ actual} / B \text{ allowable} = 18,460 \text{ sf} / 35,625 \text{ sf} + 26,840 \text{ sf} / 86,250 \text{ sf} = .829 \leq 1.0$$

OK

Allowable Areas (after multi-story increase) – entire building:

A3	35,625 SF x 2 stories	71,250 SF
B	86,250 SF x 2 stories	172,500 SF

Mixed Use Occupancy Ratio Calculation/Floor:

$$A \text{ actual} / A \text{ allowable} + B \text{ actual} / B \text{ allowable} = 18,460 \text{ sf} / 71,250 \text{ sf} + 96,186 \text{ sf} / 172,500 \text{ sf} = .558 \leq 1.0$$

OK

Construction Types

Type II B Construction – Levels 1, 2 and 3

Fire Resistance Ratings for Building Elements

Table 601

Structural Frame	0 hour
Bearing walls (Int./Ext.)	0 hour
Non-Bearing Walls (Int./Ext.)	1 hour < 30 ft., (Table 602)
Floor construction	0 hour
Roof construction	0 hour (where applicable, see Table 601)
Shaft enclosures (elevator/stairway)	1 hour

Note:

1. Corridor walls will not need to be fire-resistive rated since the building is protected by a automatic sprinkler system. (IBC Table 1004.3.2.1)
2. Fire protection of structural members shall not be required.

Allowable Heights

A3 occupancy is allowed to be 2 stories high (55 feet) (Table 503) with a height increase of one story and 20 feet for inclusion of an approved automatic sprinkler system. (IBC Section 504.2).

A3	3 stories allowed (75 feet high)
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Actual Height: 3 stories

The facility is proposed to be three stories.

Dead End Corridors

Dead end corridors shall be a maximum of 20 feet long in the building in the A3 occupancy areas. A corridor length of 50 feet will be allowed in the other areas.

Exit Widths

Egress widths for the occupancies served:

Stairs - .2 inches/occ.

Other - .15 inches/occ.

First Level: 1338 occupants x .15 = 201 inches required (3 exits required)

Second Level: 580 occupants x .20 = 116 inches required (3 exits required)
3 stairs @ 60" clear = 180 inches provided

Third Level: 915 occupants x .20 = 183 inches required (3 exits required)
3 stairs @ 60" clear = 180 inches provided

Sustainable Design



Weber State University-Davis has made a commitment that the Professional Programs Classroom Building and Central Plant be designed utilizing sustainable building principles and energy efficient strategies.

The measure of sustainability of the project will be evaluated using two ratings systems. The first system is the State of Utah's High Performance Building Rating System. This system has been developed by the State of Utah's DFCM (Division of Facilities and Construction Management) whereby all State of Utah buildings must comply with this rating system. This facility will need to achieve all ten (10) prerequisites and twenty (20) of the available Sustainability Credits to comply with the Rating System.

The second rating system by which this project will be measured is the United States Green Building Council's (USGBC) LEED® Green Building Rating System. This rating system, initially developed in 1998 to define and measure "green buildings," has evolved to become a standard construction measure to evaluate environmental performance of a building over its entire life cycle. Weber State University Davis has established a goal of achieving LEED® certification for the building.

The two systems have some overlap in their philosophical intent and some exact duplication of sustainability credits. Each system will be evaluated here and a recommended list of credits for incorporation into the project can be found in the appendix of this study.

***The detailed credit lists can be found in Appendix II of this document.**

State of Utah High Performance Building Rating System

This system requires that ten (10) prerequisites be implemented in the design and construction of the facility. An energy analysis must be performed and twenty (20) of a possible forty-three (43) Sustainability Credits must be attained.

Prerequisites

Fundamental Building Commissioning.

Commissioning Agent shall ensure that fundamental building components are installed and calibrated to operate as intended. This prerequisite is also a LEED® prerequisite (EA Prerequisite 1).

Life-Cycle Cost Analysis

The Design Team (and Owner) shall use a life-cycle cost analysis to make critical facility decisions regarding the building products, building systems, and services in order to lower the project costs and to reduce energy and water consumption.

CFC Reduction in HVAC and Refrigeration Equipment

The Design Team shall designate refrigeration equipment that does not utilize chlorofluorocarbons (CFC). This prerequisite is also a LEED® prerequisite (EA Prerequisite 3).

Ventilation Systems

The Design Team shall provide a mechanical ventilation system that complies with ASHRAE 62. This prerequisite is also a LEED® prerequisite (EA Prerequisite 3).

Drainage Systems

The Design Team shall design surface grades, storm drainage systems, HVAC system and other systems to avoid accumulation of standing water around the building.

Landscape and Irrigation Systems

Design team shall design the landscape and irrigation systems according to DFCM Guidelines for Landscape & Irrigation Standard. This prerequisite is also a LEED® Credit (WE 1.1).

Fundamental Lighting Design

The Design Team shall design the lighting system according to IESNA Lighting Handbook.

Mold Prevention During Construction

The Contractor shall ensure that porous building materials (wood, insulation, paper, and fabric) are kept dry to prevent the growth of mold and bacteria.

Filtration Media Replacement Before Occupancy

Contractor shall ensure that all filtration media used during the construction of the facility is replaced with new media before occupancy.

Thermal Comfort

The Design Team shall ensure that thermal comfort requirements are meeting ASHRAE Standard 55. This prerequisite has overlapping requirements with a LEED® Credit (EQ 7.1).

- Winter humidification is not required
- Summer dehumidification is not required.
- Upper temperature limit in natural ventilation buildings is not required.

Energy Efficient Requirements

DFCM will hire an Energy Specialist to perform an energy model of the building (in compliance with ASHRAE's Standard 90.1 – Appendix G). The energy specialist will consider reducing energy demands in each of these major categories: meeting ASHRAE Standard 55.

- Lighting
- Cooling
- Heating
- Pumps/cooling tower
- Internal loads
- External loads

With this study the following technologies will be considered: daylighting; natural ventilation; evaporative cooling; demand-controlled ventilation using CO2 sensors or occupancy sensors; green roof; ground source heat pumps, spectrally selective glazings; underfloor air distribution; radiant cold beam systems; displacement ventilation systems. The commissioning agent shall ensure that the selected energy efficiency measures are installed and calibrated to operate as intended.

Sustainability Credits*Daylighting Credits*

Up to five (5) credits are available in this category. It is felt that four (4) or five (5) credits can be achieved in this category. To achieve five (5) credits will require that at least 74% of the inhabitable spaces in the facility be daylit under the guidelines of the system. This prerequisite is also a LEED® Credit (EQ 8.1).

Energy Credits

- Evaporative Cooling. This credit should be evaluated by the Design Team, however, Weber State University has not had good experiences with evaporative cooling on large scaled projects.
- Demand-Controlled Ventilation using CO2 Sensors. This credit should be strongly considered. This credit is also a LEED® Credit (EQ 1).

- Underfloor Air Distribution System. This credit should be evaluated by the Design Team. This credit but it may be a difficult credit to achieve, however, this floor system allows increase flexibility for the building.

Renewable Energy Credits

These credits involve providing on site renewable energy sources such as photovoltaic solar panels, wind turbines, etc. Up to six credits are available in this category. This item is worthy of study by the Design Team, especially if there are special grants, tax credits or rebates available from either utility providers or governmental agencies. These credits also satisfy comparable LEED® credits (EA 2).

Indoor Air Quality Credits

- Low Emitting Materials. These credits (4) involve selecting adhesives, sealants, paints, coatings, carpets, and composite woods meeting the requirements of USGBC LEED® credits 4.1 – 4.4. All of these credits should be earned in the design and construction of the facility. The new generation of products that meet these requirements are readily available, cost efficient, and high quality. Care should be taken to not allow the use of any older generation products in this project.
- Pollutant Source Control. These credits (3) involve the design of the HVAC system to vent pollution sources in the building such as copy rooms, chemical storage rooms, janitorial rooms and other pollution sources. The HVAC system should also be designed to eliminate accumulation of mold and dust in plenums and ductwork. These credits should be strongly considered in the design phases. This credit is also a LEED® Credit (EQ 5).
- Construction Indoor Air Quality Management Plan. These credits involve managing the construction process so that Volatile Organic Compounds (VOC's), dusts, oils, and odors have been removed from the building before occupancy. This is accomplished by construction procedures that reduce dust, and by a fifteen (15) day flush of the building using 100% outside air through the mechanical ventilation system. The credit that requires an indoor air quality management plan during construction should be taken, and the building flush credit should be evaluated for its appropriateness with the construction schedule of the building and how it interfaces with the Owner move-in dates. These credits are also LEED® Credits (EQ 3.1 and 3.2).

Commissioning and Training Credits

These credits involve providing additional commissioning services to ensure that the building is designed, constructed, and calibrated to operate as intended. . Up to two (2) credits are available in this category. This item is worthy of further exploration by the Owner and Design Team.

This credit often times has a very rapid payback in a life cycle cost analysis. This credit(s) is also a LEED® credit(s) (EA 3).

Acoustics Credits

These credits involve improving the acoustical performance of the building's spaces. One (1) credit is given for reducing the acoustical level of the spaces to 36 to 40 dBA background, and .6 second reverberation times or less. Another credit is given for reducing the acoustical level of the spaces to 35 dBA background or less, and .6 second reverberation times or less. The first credit should be strongly considered and the additional acoustics credit should be explored further for application in the design. There are no LEED® credits available for these items.

Sustainable Material Credits

This credit involves selection of building products that are produced using materials that include recycled content. One (1) point is given for using four to seven major materials with recycled content. Another point is given for using eight or more major materials with recycled content. This credit has application toward LEED® Credits (MR 4.1 and 4.2).

Waste Reduction Credits

This credit is given when the Contractor can recycle, compost or salvage the construction waste of the project. The recycle rate is the ratio of recycled waste (by weight) to total waste (by weight). One (1) point is given for a recycle rate of 50% to 74%. Another point is given for a recycle rate for 74% or greater. These credits should be pursued in the design of the facility. These credits are also LEED® Credits (EQ 2.1 and 2.2).

Water Reduction Credits

These credits involve utilizing water efficient fixtures and appliances that have very low flow rates. Three points are available in this category and are strongly recommended in the design of this facility. These credits are also LEED® Credits (WE 3.1 and 3.2).

Performance Measurement and Verification Credits

These credits include monitoring of each energy type for the building (electricity, natural gas, central chilled water, central heating water). In this multi-building campus, each building shall have meters. Another point is available if the following systems are each continuously monitored for equipment performance: Lighting system; motor loads; variable frequency drives (VFD's); chiller efficiency; air and water economizers; boiler efficiency; process loads. These credits are also LEED® Credits (EA 5).

Innovation in Design

Four (4) additional credits may be given for exceptional energy or environmental measures not addressed in this rating system.

USGBC LEED® Green Building Rating System

LEED® (Leadership in Environmentally Efficient Design) is a rating system that was developed to measure the environmental performance of buildings where credits are given for meeting specific requirements that address environmental impacts of the buildings design, construction and operation. The rating system is organized into five categories where each category has some prerequisites that must be obtained and a list of available credits. Graduated levels of LEED® certification are available depending upon how many credits are obtained by the project. Weber State University has set the goal of achieving a LEED® Certified Level for the Professional Programs Classroom Building.

The five categories in which credits are earned are:

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality

The credits that have the highest probability of being implemented into the project are listed below:

Sustainable Sites

This category focuses upon the impacts of choosing the right site for the development of the project. Sites that preserve natural ecosystem functions and enhance the existing, surrounding community are given preferential scoring in the rating system.

Construction Activity Pollution Prevention – Prerequisite 1

The project shall have an Erosion and Sedimentation Control Plan (in compliance with 2003 EPA Construction General Permit or local sedimentation control standards whichever are more stringent) in place to prevent loss of soil during construction by stormwater runoff or wind erosion; prevent sedimentation of storm sewer or receiving streams; prevent polluting the air with dust and particulate matter from the jobsite.

Alternative Transportation – Credits 4.1, 4.2, and 4.3

- These credits involve transportation means and methods to the project site. The programming team encourages the project to pursue each of these credits for the project.
- Credit 4.1 encourages building occupants to utilize nearby mass transit options. The credit is gained when the project site is within a specified distance of a mass transit stop, light rail line, or bus lines.

- Credit 4.2 entails providing bicycle storage for 5% of the building users and a shower/changing facilities.
- Credit 4.3 is achieved by providing a specified percentage of dedicated parking spaces for fuel efficient vehicles.

Site Development (Maximize Open Space) – Credit 5.2

This credit encourages a large area of open space as compared to developed area for the project. This open space is meant to promote biodiversity on the site. This strategy is in alignment with the master plan for the site and this credit option should be explored.

Stormwater Design (Quantity and Quality Control) – Credits 6.1, 6.2

These credits are acquired by implementing a stormwater management plan that decreases the amount of stormwater that leaves the project site (Credit 6.1) and by increasing the quality of the stormwater that does leave the site (Credit 6.2). Both of these credits are viable for this project.

Heat Island Effect (Non-Roof and Roof) – Credits 7.1, 7.2

The intent of these credits is to reduce the thermal gradient differences between developed areas of the project site and the undeveloped areas to diminish the effects on microclimate for human and wildlife habitats. The credits apply to non-roof areas of the project (parking lots) (Credit 7.1), and to the roof (Credit 7.2). It is recommended that Credit 7.1 be incorporated into the project, and Credit 7.1 be further studied to assess its appropriateness for the project.

Light Pollution Reduction – Credit 8

This credit aims to lessen the escape of site lighting from the project's borders in order to reduce glare and increase the night sky access. The existing parking lot light fixtures should be analyzed for compliance with this credit.

Water Efficiency

The intent of this category is to reduce the use of potable water within the building and the site. The result of this reduction in water usage allows the Owner to realize reduced utility costs (water).

Water Efficient Landscaping – Credits 1.1

This credit can be gained by limiting or eliminating the use of potable water for the irrigation of the project's landscaping. This may be achieved by using drought tolerant plantings, increasing irrigation efficiency, and/or using recycled/captured stormwater.

Water Use Reduction (20% Reduction) – Credits 3.1

This credit involves maximizing the water efficiency of the fixtures within the building. This credit has the potential to reduce utility costs for the project and will ultimately reduce the burden on local water utility providers. Fixtures that are low or no-flow such as showers, water closets, urinals and occupant sensors all assist in reducing the water demand for a building. This credit should be pursued for the project.

Energy & Atmosphere

This category concentrates on increasing the efficiency of the building mechanical and electrical systems and encourages the use of clean energy sources.

Fundamental Commissioning of the Building Energy Systems – Prerequisite 1

Fundamental Commissioning of the building's systems verifies that these systems are installed and are performing as they were designed to operate. The ultimate goal of these services is to ensure the building's occupants comfort and that the systems are operating efficiently and thus saving energy costs for the Owner.

Minimum Energy Performance – Prerequisite 2

This prerequisite establishes a minimum level of energy performance for the building and its energy systems as compared to the requirements of ASHRAE 90,1-2004.

Fundamental Refrigerant Management – Prerequisite 3

This prerequisite does not allow CFC(chlorofluorocarbon) based refrigerants in the building's HVAC (heating, ventilating and air conditioning) systems.

Optimize Energy Performance – Credit 1

This credit encourages the use of energy efficient building systems as compared to the baseline referenced in Prerequisite 2. There are ten (10) credits available in this item, however, the project should target, at a minimum, three (3) credits in this category.

On-Site Renewable Energy – Credits 2

The credits in this item are available if the project produces energy on-site through the use of photovoltaic panels, wind turbines, or bio-mass digestors to offset the building's energy costs. Although these energy sources have been traditionally expensive to implement on buildings, there are grants available through utility providers and other available incentives that the Owner could pursue for the project.

Enhanced Commissioning – Credits 3

The intent of this credit is to gain advantages by involving a building commissioner early in the design process so that all energy efficiency options are evaluated for their incorporation into the project. The use of enhanced commissioning should be explored in the pre-design services of the project by the Design Team.

Enhanced Refrigerant Management - Credit 4

This credit involves the project's capacity to minimize the emission of compounds due to refrigerant systems used for the building's mechanical system. A reduction of these compounds ultimately reduces ozone depletion and supports early compliance with the Montreal Protocol. This credit should be pursued in the design of the project.

Green Power - Credit 6

To obtain this credit, 35% of the building's electricity must be obtained from renewable energy sources by engaging in a two-year contract. Currently, Weber State University purchases a percentage of their power from a renewable energy source. This credit should be explored to determine if the amount of energy purchased by Weber State University will satisfy this requirement.

Materials & Resources

This category encourages the use of reused, salvaged, recycled, or locally manufactured materials for the project so as to decrease the waste diversion stream of building materials into landfills.

Storage & Collection of Recyclables – Prerequisite 1

A dedicated, easily accessible area within the building shall be designated to collect and store non-hazardous materials for the purpose of recycling those materials.

Construction Waste Management (Divert 75% from Disposal) – Credits 2.1 and 2.2

This credit entails diverting construction and demolition debris from disposal in landfills and redirects the waste into a stream of recovered resources back into the manufacturing process.

- Credit 2.1 includes recycling 50% of the construction waste.
- Credit 2.2 is a 75% recycling rate of the construction waste.

Although there is an added cost to the project for this construction waste management, the costs are manageable and the programming team would recommend that these credits be pursued for the project.

*Recycled Content (10% post-consumer + ½ pre-consumer)
– Credit 4.1*

The intent of this credit is to encourage the use of recycled materials in the project which will ultimately reduce the global impacts resulting from the extraction and processing of virgin materials. There are available and affordable materials that are of sufficient quality for use in the proposed facility. The programming team recommends that the project pursue this project credit.

Regional Materials (10% extracted, processed & manufactured regionally) – Credit 5.1

This credit encourages the use of products that are extracted and manufactured locally, thus reducing the environmental impacts involved in transporting materials from long distances. 10% (based on total materials cost) of the project's materials shall be extracted and manufactured within 500 miles of the project site. This credit makes sense because brick, concrete, and sometimes steel can be counted towards this credit.

Certified Wood – Credit 7

This credit encourages the use of wood from environmentally managed forests. 50% of the wood-based products require certification from the Forest Stewardship Council (FSC) Principles and Criteria. This credit option has additional cost associated, but is nevertheless recommended for incorporation into the project.

Indoor Environmental Quality

This category strives to improve the quality of the indoor environment for the building's occupants through providing proper ventilation, reducing airborne particulates and volatile organic compounds, and improving the interior environment by providing light and views.

Minimum IAQ Performance – Prerequisite 1

This prerequisite establishes a minimum indoor air quality performance to enhance indoor environmental quality in the building. This is in an effort to increase the comfort and well-being of the building's occupants.

*Environmental Tobacco Smoke (ETS) Control –
Prerequisite 2*

This prerequisite minimizes the exposure of the building's occupants to tobacco smoke. Various options are available to reduce this chance for exposure.

Outdoor Air Delivery Monitoring – Credit 1

This credit intends to improve the quality of the building's ventilation system by providing monitoring that provides feedback on the ventilation system performance in order to ensure that the system maintains design

minimum ventilation requirements. This credit should be pursued, especially since it is also a credit in the DFCM High Performance Building Standards.

Construction IAQ Management Plan – Credits 3.1 and 3.2

These credits involve improving construction practices to improve the indoor air quality of the project.

- Credit 3.1 requires the implementation of an Indoor Air Quality (IAQ) Management Plan whereby construction materials are stored and protected until installation so as to reduce deleterious effects from moisture and dust. The plan also places restrictions on how the building's mechanical system can be used during the course of construction.
- Credit 3.2 requires that the building be "flushed out" (or air quality tested) after the completion of construction as dictated by the above mentioned IAQ Management Plan to ensure that the air quality within the building is satisfactory for the building's occupants.

Both of these credits are recommended for incorporation into the project's construction. The "flush-out" will require advance planning and coordination with the project construction schedule and the move-in dates required by the Owner.

Low-Emitting Materials – Credits 4.1, 4.2, 4.3 and 4.4

These credits strive to reduce the quantity of indoor air contaminants that are odorous, irritating or harmful to the well-being of the construction trade workers and the ultimate building occupants. These credits require materials that have a low potential of off-gassing (VOC's).

- Credit 4.1 refers to the use of adhesives, sealants and primers used in the building.
- Credit 4.2 refers to the use of paints and coating used within the building.
- Credit 4.3 refers to the use of carpet systems used within the building.
- Credit 4.4 refers to the use of composite wood and agrifiber products within the building, typically associated with the millwork.

The new generation of materials that comply with these credit opportunities are of high quality, affordable and would be recommended in the construction of this facility. Care should be taken by the design and construction teams to now allow older generation products that were not as high of quality and effectiveness. These credits should be pursued, especially since it is also a credit in the DFCM High Performance Building Standards.

Indoor Chemical & Pollutant Source Control – Credit 5

This credit involves providing dedicated exhaust systems for rooms that have the potential for providing hazardous particulates and chemical pollutants into the building environment, including janitors closets and copy rooms. Entryway systems that capture dirt and particulates before entering the building are also required under this credit. This credit should be pursued, especially since it is also a credit in the DFCM High Performance Building Standards.

Controllability of Systems – Credit 6.1 and 6.2

These credits involve including a high level of controllability by individual building occupants for both the lighting system and the thermal comfort system of the facility.

- Credit 6.1 requires that 90% (minimum) of the building's occupants have the ability to adjust the lighting system to adequately be adjusted to suit their individual tasks.
- Credit 6.2 requires that 50% (minimum) of the building's occupants have the ability to adjust the thermal comfort system to suit their individual preferences. Operable windows will satisfy this requirement. This credit requirement is similar to a DFCM HPBS credit.

These credits should be analyzed for their appropriateness for the project.

Thermal Comfort – Credit 7.1 and 7.2

These credits involve the design and verification of the building's HVAC system to provide a comfortable thermal environment that supports the well-being of the building's occupants.

- Credit 7.1 requires that the HVAC system and the building envelope meet the requirements of ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy.
- Credit 7.2 requires that the Owner perform a thermal comfort survey of the building occupants within a period of six to eighteen months after occupancy. If results are not satisfactory, the Owner agrees to develop a plan for corrective action to improve the thermal comfort in the building.

The programming team recommends that these credits be pursued for

the project.

Daylight & Views – Credit 8.1 and 8.2

The intent of these credits is to provide adequate light and views to the building's occupants to improve the overall building livability of the project.

- Credit 8.1 requires that 75% of all regularly occupied spaces in the building can achieve a 2% minimum glazing factor (daylight).
- Credit 8.2 requires that 90% of the regularly occupied areas achieve a direct line of sight to the outdoor environment through the building's windows.

The ultimate footprint of the final design will need to be analyzed to determine if these requirements can be achieved.

Innovation & Design Process

This category provides the opportunity to be awarded points for exceptional performance in the above credit options, and/or innovative performances in Green Building categories not specifically addressed by the LEED-NC Green Building Rating System.

LEED® Accredited Professional – Credit 2

A credit will be awarded if the design team is led by an accredited LEED professional. The intent is to encourage the design integration required by a LEED-NC green building project and to streamline the application and certification processes.

Other Sustainable Initiatives and Programs

LEED Campus

The USGBC is currently developing a standard for the LEED certification for University Campuses. As these standards become available they should be analyzed for their applicability to the Weber State University Davis campus.

Rocky Mountain Power FinAnswer Program

The local utility provider has a program whereby energy efficiency strategies that are implemented into the facility are rewarded by payback incentives. This program shall be initiated early in the design process by the Design Team.

Cost Estimate



Professional Programs Classroom Building

An estimate of probable construction costs has been compiled based on the programmed square footage, level of finish materials (interior and exterior) anticipated for the building, and mechanical and electrical systems projected for the facility. These costs have been forecasted in today's construction dollars.

This proposed construction budget is in today's dollars. An escalation factor will need to be projected and added to this budget in order to adequately reflect more accurate costs of constructing the facility, when that construction is slated to begin.

Building Cost Summary	Unity Qty	Unit Cost	Subtotal
Construction Subtotal	114,646 SF	\$ 173.27	\$ 19,865,086
General Conditions	8%	\$ 13.80	\$ 1,589,207
Overhead & Profit	5%	\$ 8.63	\$ 993,254
Design Contingency	15%	\$ 25.88	\$ 2,979,763
Construction Total		\$221.58	\$ 25,427,310

**Note: These costs are inclusive only of the hard construction costs. The soft costs will need to be added to the construction budget by DFCM to arrive at the final Capital Budget Estimate.*

**A complete breakdown of the work by construction division is included in Appendix IV of this document.*



Program Summary

The Professional Programs Classroom facility is a true mixed-use building and contains a variety of spaces to support that multitude of uses. The following table is an accounting of building areas within the facility and each area’s percentage of the total net square footage.

Square Footage Usage

Function	Net Square Footage	Percentage of Total
Classroom	25,115	35
Student Union	13,825	19
Academic Support	11,405	16
NUAMES	11,815	16
Classroom Support	8,290	12
Building Support	1,164	02
Total NSF	71,654	100

For more information on how this information was calculated see Appendix III: Functional Use Data.

Included Space Overview

Student Union Component

Union components that were determined to be appropriate for inclusion in the program include: Student Union, Fitness Center and Student Affairs.

Student Union

This area is to be located at the entry circulation point of the building, the program includes: Entry, Lobby, Lounge and Dining components. Support for the Student Union will entail Table/Chair Storage and Recreation Storage; Food Court Kitchen/Serving; and, Event Staging for the Event/Lecture Space.

Fitness

Representatives of the WSU fitness department described their mission as “[providing] opportunities to recreate, build relationships, improve all aspects of physical health, reduce stress, and [providing] opportunities to participate in safe and healthy activities.”

In order to accomplish this mission, it was determined that the following amenities should be programmed into the Fitness Center: a Reception/Control Desk, an Office for program administration, a Weights/Cardio Area (including cardio machines and selectorized equipment), two Group Exercise rooms that can be combined to accommodate larger classes, Equipment Storage, and drop-in Lockers & Showers.

Student Affairs

Prominently locating the Student Affairs department will increase WSU's ability to take full advantage of the Professional Programs Classroom Building as programmed.

The Reception, Lounge, and Offices will be relocated from the current building to the Professional Programs Classroom Building. These spaces will free up space in the current building for use by the Counseling Department, Services for Students with Disabilities, and Veterans Upward Bound.

The Clubs and Organizations Office and Storage will accommodate the current Student Council and provide space for future growth and flexibility.

Academic Support

Customer Service

The Customer Service component was determined to be a necessary part of the Professional Programs Classroom Building. Due to the nature of the present campus, many professors do not reside full-time on the Davis facility; therefore, when on campus they require a higher level of support from full-time Davis support staff. In addition, certain customer service kiosks will also be available to assist students and campus visitors, facilitating a positive experience for all guests.

The Faculty Lounge is also a desirable element on the Davis campus, facilitating interdisciplinary interaction and collaboration.

Information Commons / Laptop Lounge

The Information Commons area in the current building will not experience any change in this program. However, the Steering Committee deemed it prudent to provide adequate computing space in the programmed common space. This Laptop Lounge will provide open, flexible space in the Professional Programs Classroom Building for technology now and in the future.

Copy/Print Room

The Copy/Print Room was added to replicate a similar space on the WSU Ogden campus. The space is sized to accommodate both buildings on the Davis campus.

Event/Lecture Space

The Event/Lecture Space will be a flexible, flat space to accommodate large presentations, student events and assemblies, conferences, and community events. The space will have the ability to be subdivided into

smaller rooms. The lobby will serve as break out space when large events are in session. The Steering Committee felt that this space will be a valuable amenity to have on the WSU Davis campus.

Quiet Study Rooms

Due to the demand for Quiet Study Rooms in the current building and from positive survey results, it was determined that this building should also adequate the facilities for private study.

Testing Center & Tutoring

The current Testing Center has out grown it's current space. It was determined that future directions on the WSU Davis campus necessitate a larger and more efficient space. The trend of professors charging the Testing Center with proctoring exams does not seem to be abating on the Davis campus. In addition, standardized testing continues to draw a considerable portion of the resources available.

It is anticipated that Tutoring will occupy the vacated Testing Center in the existing building.

Campus Support Services (Building Support)

Campus Police

The Campus Police have a vested interest in being located in the Professional Programs Classroom Building due to the Union and Dining components as well as the proximity to NUAMES.

IT and Building Support

IT and Building Support are an integral part of any campus building and as such are represented in this program.

College of Health Professions

The Dumke College of Health Professions (DCHP) at WSU Davis, much like Davis County surrounding it, is experiencing immense growth. This college currently offers courses in Davis County supporting its health administration, nursing, and health sciences programs. Expanded health sciences and nursing programs, in the proposed new building, are aimed at fulfilling the DCHP mission of preparing graduates for the practice of nursing and allied health in a variety of health care settings. The programmed places in the health professions include two bed labs, an innovative simulation suite, a wet lab, and an anatomy lab. These programmed spaces will assist the college in continuing its historic mission as a frontrunner in the health field.

College of Applied Science & Technology (COAST)

COAST programs that the department intends to develop at the Davis campus include: Interior Design, Construction Management, and Engineering. These three programs were determined by departmental representatives to have the most current interest and long-term development potential at the Davis campus.

NUAMES

NUAMES's relationship with the WSU Davis campus is ongoing and expected to continue for the foreseeable future. Therefore, a small administrative component was added to this program that includes: 4 Administrative Offices, a 2-person Reception area, Faculty Workroom, Faculty Breakroom, and General & Secure Storage spaces. In addition to these dedicated spaces, NUAMES will continue to use general and computer classrooms as scheduled through WSU Davis.

Classroom Support

This category of space includes the office space and the classroom storage areas that are required to support the classroom components within the building. These spaces are located throughout the building with the storage spaces typically being located adjacent to the classroom that it supports. The offices are likewise, spread throughout the building and are also located in close proximity to the classrooms that their department services.

Departmental Summaries

UNION component

Student Union

		QTY	SF	NSF
SU.1	Student Union	1	5000	3000
	• Entry, Lobby, Lounge, Dining			
	• 3,000 SF Net Assignable Area			
	• 2,000 SF Not included in Net Assignable Area			
SU.2	Table/Chair Storage	1	400	400
SU.3	Recreation Storage	1	400	400
SU.4	Food Court Kitchen/Serving	1	2800	2800
	• Cooking Kitchen @ 1400 SF			
	• Food Storage @ 600 SF			
	• Servery @ 800 SF			
SU.5	Event Staging	1	400	400

Fitness Center

Fl.1	Reception/Control Desk	1	120	120
Fl.2	Office	1	120	120
Fl.3	Weights/Cardio Area	1	3000	3000
Fl.4	Group Exercise	2	800	1600
Fl.5	Equipment Storage	1	400	400
Fl.6	Lockers & Showers	2	600	1200

Student Affairs

SA.1	Reception	1	120	120
SA.2	Lounge	1	250	250
SA.3	Office	5	120	600
SA.4	Storage/Workroom	1	200	200
SA.5	Conference Room	1	300	300
SA.6	Clubs & Organizations Office	1	300	300
SA.7	Clubs & Organizations Storage	1	200	200

Academic Support

Customer Service

	QTY	SF	NSF
AS.1 Customer Service Counter	1	600	600
AS.2 Academic Support Counter	1	150	150
AS.3 Customer Service Office	2	120	240
AS.4 Customer Service Storage	1	600	600
AS.5 WSU Faculty Lounge	1	200	200

Event/Lecture Space

AS.6 Event/Lecture Space	1	4500	4500
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Information Commons II

AS.7 Laptop Lounge	1	1000	1000
AS.8 Copy/Print Room	1	800	800
AS.9 Laptop Lending Storage/Workroom	1	200	200
AS.10 Quiet Study	7	150	1050
AS.11 Quiet Study with privacy blinds	2	150	300
AS.12 Computer Alcove (2nd floor)	1	50	50

Testing Center

AS.13 Reception	1	250	250
AS.14 Waiting/Quiet Study	1	400	400
AS.15 Office, Testing Specialist	1	120	120
AS.16 Testing Area	2	1115	2230

Campus Support Services

Campus Police

		QTY	SF	NSF
CP.1	Patrol room & Reception	1	120	120
CP.2	Supervisor Office	1	120	120
CP.3	Interview/Detention Room	1	100	100
•	<i>Existing space can be used by itinerant Parking, Fire Marshall, etc.</i>			

IT

IT.1	Shared Office (2 workstations)	1	150	150
IT.2	Central Server	1	200	200
IT.3	Communications Rooms (2 per floor)	6	54	324
IT.4	Workroom/Storage	1	150	150

Building Support

(Not Included in Net Assignable Area)

BS.1	Loading Dock	1	Exterior Space	
BS.2	Receiving	1	600	600
BS.3	Receiving Storage	1	500	500
BS.4	Mechanical Equipment	1	3500	3500
BS.5	Electrical Equipment	1	500	500
BS.6	Restrooms (3 ea (6 total))	6	300	1800
BS.7	Janitorial Storage	3	120	360
•	<i>1 with workstation</i>			
BS.8	General Building Storage	3	100	300

College of Health Professions

Nursing/Health Science

		QTY	SF	NSF
HP.1	Reception	1	150	150
HP.2	Adjunct Faculty	2	70	140

Nursing

HP.3	Offices	4	120	480
HP.4	Bed Lab	2	800	1600
HP.5	Bed Lab Storage	2	300	600
HP.6	Simulation Suite Rooms	5	140	700
HP.7	Simulation Suite Nursing Station	1	150	150
HP.8	Simulation Suite Med Closet	1	200	200
HP.9	Control Room	1	180	180
HP.10	Simulation Suite Storage	1	300	300

MS Health Sciences

HP.11	Office	2	120	240
	• 1 MS, 1 BA			
HP.12	Wet Lab	1	1000	1000
HP.13	Wet Lab Prep/Storage	1	400	400
HP.14	Anatomy Lab	1	900	900
HP.15	Cadaver Storage	1	150	150
	• Coordinate with Ogden design			

COLLEGE OF APPLIED SCIENCE & TECHNOLOGY (COAST)

Interior Design

	QTY	SF	NSF
CO.1 Office	2	120	240
CO.2 Adjunct Faculty	4	70	280
CO.3 Workroom/Lab	1	800	800
CO.4 Lab/Studio	2	800	1600
CO.5 Library	1	200	200
CO.6 Storage	1	300	300

Construction Management

CO.7 Concrete Lab	1	1000	1000
• Near Receiving			
CO.8 Storage	1	400	400
CO.9 Office	14	120	1680
CO.10 Adjunct Faculty	4	70	280
CO.11 Reception (shared)	1	150	150
CO.12 Workroom (shared)	1	200	200
CO.13 Senior Project Room	1	800	800
CO.14 Classroom Storage Room	3	300	900

Engineering

CO.15 Lab	4	1000	4000
CO.16 Lab Storage	2	250	500
CO.17 Offices, Private	8	120	960
• 3 for WSU, 5 for USU			
CO.18 Shop	1	800	800

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

NUAMES

	QTY	SF	NSF
NU.1 Reception (2 workstations)	1	150	150
NU.2 Administrative Offices	4	120	480
NU.3 Faculty Workroom	1	120	120
NU.4 Faculty Breakroom	1	200	200
NU.5 General Storage	1	150	150
NU.6 Secure Storage (student records)	1	60	60
NU.7 Classroom	14	Varies	**11040
• classrooms shared with other departments			
NU.8 Lab	4	1000	**4000
• labs shared with other departments			
NU.9 Art Room	1	950	950
NU.10 Art Room Storage	1	300	300
NU.11 Project Room	1	800	800
NU.12 Project Room Storage	1	300	300

**Shared classroom and lab spaces. Square footage has been included in other department area totals

Classrooms

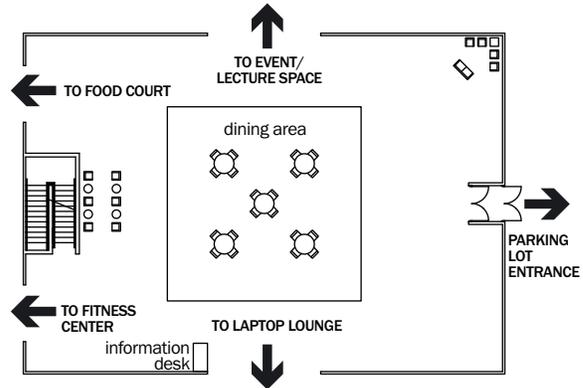
		QTY	SF	NSF
CR.1	Classroom, 40-person	2	900	1800
	Classroom, 40-person	6	900	5400
	• <i>Associated with Construction Management</i>			
CR.2	Classroom, Computer, 34-person	1	1020	1020
	Classroom, Computer, 34-person	1	1020	1020
	• <i>Associated with Health Science</i>			
	Classroom, Computer, 34-person	1	1020	1020
	• <i>Associated with Nursing</i>			
CR.3	Classroom, 32-person	2	640	1280
	• <i>Associated with English</i>			
	Classroom, 32-person	1	640	640
	• <i>Associated with Nursing</i>			
	Classroom, 32-person	1	640	640
	• <i>Associated with Interior Design</i>			
	Classroom Pod, 32-person	2	640	1280
	• <i>Associated with Engineering Pod</i>			
CR.4	Classroom, Seminar, 25-person	2	500	1000
	Classroom, Seminar, 25-person	1	500	500
	• <i>Associated with MA Health Sciences</i>			
	Classroom, Seminar, 25-person	2	500	1000
	• <i>Associated with MA English</i>			
	.			
Net Assignable Sub-Total				71,654
Net/Gross Ratio (Walls, Circulation, etc.) @.625				42,992
Gross Total				114,646

DEPARTMENT **STUDENT UNION**
FACILITY # **SU.1**
SPACE NAME **STUDENT UNION**

SPACE

Area 3,000 SF Assignable
Minimum Dimensions 2,000 SF Unassignable
Minimum Ceiling 12' (varies)
Occupants 250
Quantity 1

FUNCTION



RELATIONSHIP / ADJACENCIES

- Lobby
- Dining area
- Entry to building
- Circulation hub to all student amenities
- Overflow and breakout for Event/Lecture Space

MILLWORK (BUILT-IN CABINERY)

- Adjacent to Event/Lecture Space
- Adjacent to Food Court, Dining
- Near information desk
- Near Laptop Lounge
- Near Fitness Center
- Open to 2nd level

EQUIPMENT / FURNITURE

- Moveable furniture, including: lounge chairs, end tables/study tables, stackable table & chairs for dining. For 250 total
- Customer Service Counter/Information Desk

NOTES

- Include PA System throughout building
- *Audio/Visual Requirements:
 - Large screen LCD televisions
 - Speaker system
 - Voice enhancement
 - Moveable microphone

MECHANICAL / PLUMBING

HVAC Standard
Plumbing Electric Water Cooler
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task/accent
Audio / Visual *see Page 75
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets Code minimum

FINISHES / ENVIRONMENT

Wall Painted gypsum board/Protection wainscot/Acoustical treatment
Base Rubber/Tile
Floor Carpet tiles/Concrete/Ceramic tile
Ceiling Acoustical/Open/Hard surface

DOORS, WINDOWS, HARDWARE

Doors Solid core wood/Aluminum
Door Glazing EXTERIOR: Full light 1" tempered
 INTERIOR: 1/4" tempered
Windows Views / daylight important
Hardware Lever, lockable; card access at main

SECURITY REQ'S Cameras as required

DEPARTMENT STUDENT UNION

FACILITY # SU.2

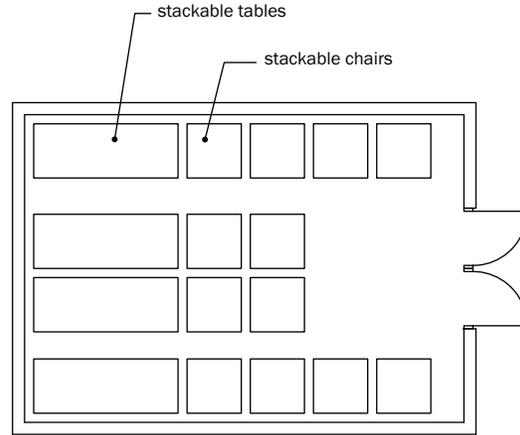
SPACE NAME TABLE/CHAIR STORAGE

SPACE

Area 400
 Minimum Dimensions
 Minimum Ceiling 9'
 Occupants 0
 Quantity 1

FUNCTION

- Area to store stackable tables and chairs as needed for Event/Lecture Space



RELATIONSHIP / ADJACENCIES

- Adjacent to Event/Lecture Space
- Adjacent to Lobby

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control No
 Misc

MILLWORK (BUILT-IN CABINETS)

ELECTRICAL / COMMUNICATIONS

Lighting 25 f.c.
 Audio / Visual None
 Telephone None
 Voice / Data None
 Outlets Code minimum

EQUIPMENT / FURNITURE

- Tables, stackable (50)
- Chairs, stackable (250)
- Table dollies (5)
- Chair dollies (14)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Hard surface
 Ceiling Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood (double); min 6'W
 Door Glazing None
 Windows None
 Hardware Lever, lockable

SECURITY REQ'S None

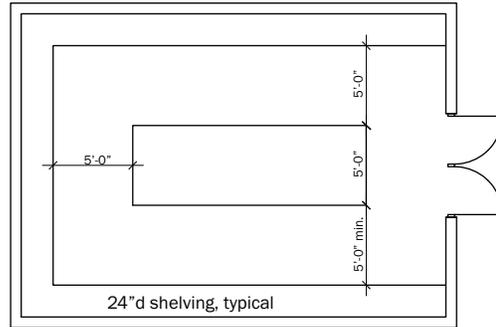
DEPARTMENT **STUDENT UNION**
FACILITY # **SU.3**
SPACE NAME **RECREATION STORAGE**

SPACE

Area 400
 Minimum Dimensions
 Minimum Ceiling 9'
 Occupants 0
 Quantity 1

FUNCTION

- Area to store outdoor recreation equipment
- Area to store equipment for check-out to students



RELATIONSHIP / ADJACENCIES

- Near Lobby
- Near Fitness
- Near Loading Dock or other exterior access for equipment pick-up

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control
 Misc

MILLWORK (BUILT-IN CABINERY)

- Shelving (24" Deep) around room

ELECTRICAL / COMMUNICATIONS

Lighting 25 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (1) Data connection
 Outlets Code minimum

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Hard surface; easily cleanable
 Ceiling Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood (double)
 Door Glazing None
 Windows None
 Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT STUDENT UNION
FACILITY # SU.4A
SPACE NAME FOOD COURT KITCHEN

SPACE

Area 1400
 Minimum Dimensions 10'
 Minimum Ceiling 12
 Occupants 1
 Quantity 1

FUNCTION

- Cooking Kitchen @ 1400 SF
- Food Storage @ 600 SF
- Servery @ 800 SF

RELATIONSHIP / ADJACENCIES

- Near Loading Dock
- Near Lobby

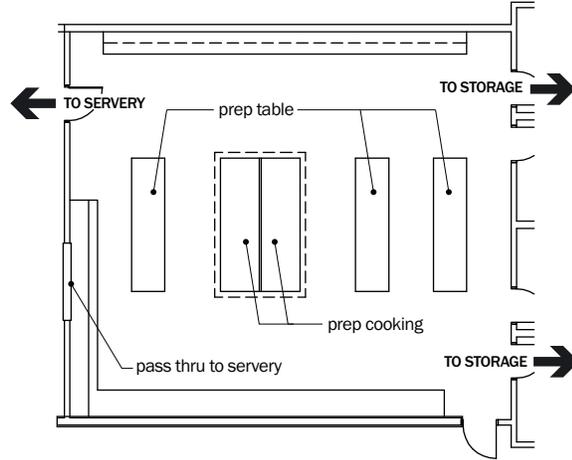
MILLWORK (BUILT-IN CABINERY)

- Counter for napkins, utensils, microwaves
- Servery counter/rail system

EQUIPMENT / FURNITURE

- See Appendix V

NOTES



MECHANICAL / PLUMBING

HVAC Accommodate equipment
Plumbing F.D. / Accommodate equipment
Ventilation Standard
Climate Control Yes
Misc Hood over cooking line / prep cooking

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task / accent
Audio / Visual None
Telephone (1) Outlet
Voice / Data (5) Connections (4 @ servery, 1 @ office)
Outlets Accommodate equipment

FINISHES / ENVIRONMENT

Wall Painted gypsum board;
 Ceramic tile, washable
Base Quarry tile
Floor Quarry tile, non-slip, Washable
Ceiling

DOORS, WINDOWS, HARDWARE

Doors H.M.
Door Glazing None
Windows Roll-up grilles
Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT **STUDENT UNION**
FACILITY # **SU.4C**
SPACE NAME **FOOD STORAGE**

SPACE

Area 600
Minimum Dimensions
Minimum Ceiling 10'
Occupants 100 per day
Quantity 1

FUNCTION

- Cooking Kitchen @ 1400 SF
- Food Storage @ 600 SF
- Servery @ 800 SF

RELATIONSHIP / ADJACENCIES

- Near Loading Dock
- Near Lobby

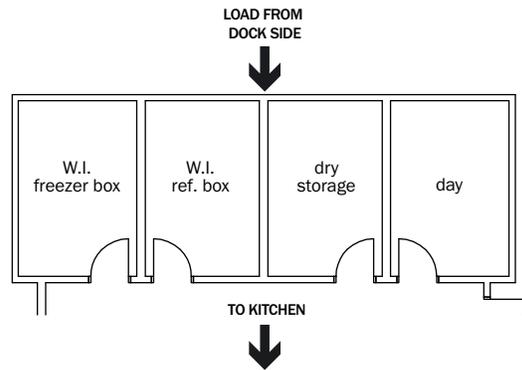
MILLWORK (BUILT-IN CABINERY)

- Counter for napkins, utensils, microwaves
- Servery counter/rail system

EQUIPMENT / FURNITURE

- Walk in freezer
- Walk in refrigerator

NOTES



MECHANICAL / PLUMBING

HVAC Accommodate equipment
Plumbing F.D. / Accommodate equipment
Ventilation Standard
Climate Control Yes
Misc Hood over cooking line / prep cooking

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task / accent
Audio / Visual None
Telephone (1) Outlet
Voice / Data
Outlets Accommodate equipment

FINISHES / ENVIRONMENT

Wall Painted gypsum board; stainless steel
Base Quarry tile
Floor Quarry tile, non-slip
Ceiling Washable

DOORS, WINDOWS, HARDWARE

Doors H.M.
Door Glazing None
Windows
Hardware Lever, lockable

SECURITY REQ'S None

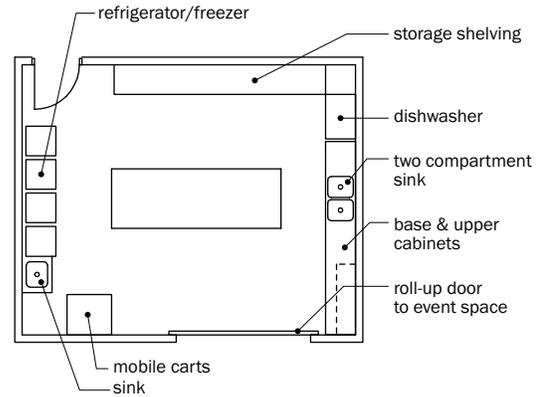
DEPARTMENT **STUDENT UNION**
FACILITY # **SU.5**
SPACE NAME **EVENT STAGING**

SPACE

Area 400
Minimum Dimensions
Minimum Ceiling 9'
Occupants 4
Quantity 1

FUNCTION

- Area to store food & wash dishes as needed for Event/Lecture Space



RELATIONSHIP / ADJACENCIES

- Near Event/Lecture space
- Near Food Court Kitchen/Serving
- Near Loading Dock

MECHANICAL / PLUMBING

HVAC Standard
Plumbing Accommodate equipment
Ventilation Accommodate equipment
Climate Control
Misc Hood at dishwasher

MILLWORK (BUILT-IN CABINETRY)

- Upper shelving (12" Deep)
- Cabinets (24" Deep)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task
Audio / Visual None
Telephone (1) Outlet
Voice / Data None
Outlets Accommodate equipment

EQUIPMENT / FURNITURE

- Two-compartment sink; Handwash sink
- Floor space & plug-ins for carts
- Refrigerator/Freezer
- Dish storage
- Dishwasher
- Ice maker

FINISHES / ENVIRONMENT

Wall Hard surface, washable
Base Quarry tile
Floor Quarry tile, non-slip; insulated at freezer
Ceiling Washable

NOTES

- Access to an employee restroom
- Can washer
- Custodial

DOORS, WINDOWS, HARDWARE

Doors H.M.
Door Glazing None
Windows Roll-up grille at event space
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT **FITNESS**
FACILITY # **FI.1**
SPACE NAME **RECEPTION/CONTROL DESK**

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 10'
Occupants 2
Quantity 1

FUNCTION

- Single, controlled entry point
- Serve community & student members
- Station to distribute towels, check out equipment, disseminate information

RELATIONSHIP / ADJACENCIES

- Adjacent to Fitness Office
- Near Lobby
- Near Equipment Storage
- Counter faces entrance

MILLWORK (BUILT-IN CABINETY)

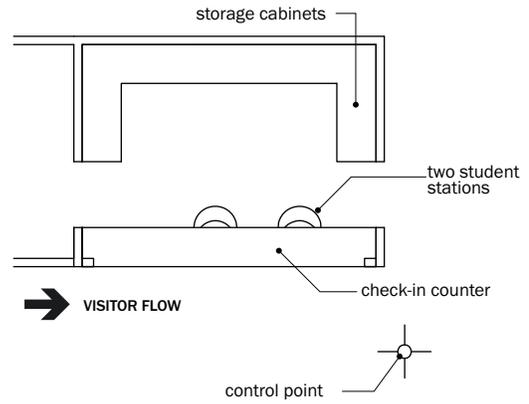
- Storage cabinets
- Counter (10 LF) with drawers & cabinetry below
- Stations for workstudy students (2)
- White board

EQUIPMENT / FURNITURE

- A.E.D
- Cash register
- Card swipe system
- Control bar barrier
- Counter height chair
- Towel bin
- Bulletin board
- Desk chair (2)

NOTES

- Staffed by a person specifically trained for fitness control (special certifications)
- First Aid kit



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting Office function with accent
Audio / Visual Speaker
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (4) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet
Ceiling Acoustical

DOORS, WINDOWS, HARDWARE

Doors Aluminum
Door Glazing Safety
Windows Not required
Hardware

SECURITY REQ'S

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT **FITNESS**

FACILITY # **FI.2**

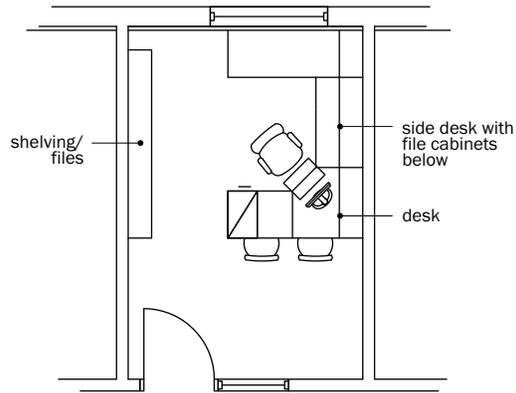
SPACE NAME **OFFICE**

SPACE

Area	120
Minimum Dimensions	10'X12'
Minimum Ceiling	9'
Occupants	1
Quantity	1

FUNCTION

- Administration of fitness/recreation program
- Meet with staff/students



RELATIONSHIP / ADJACENCIES

- Adjacent to Reception/Control Desk
- Near Weights/Cardio Area

MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

MILLWORK (BUILT-IN CABINERY)

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(2) Data connections
Outlets	(3) Duplex outlets

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving / bookcases

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tiles
Ceiling	2' x 2' Acoustical ceiling tiles Preferred

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Views/daylight important
Hardware	Lever, lockable

NOTES

SECURITY REQ'S None

DEPARTMENT **FITNESS**
FACILITY # **FI.3**
SPACE NAME **WEIGHTS/CARDIO AREA**

SPACE

Area 3000
Minimum Dimensions 40'X75'
Minimum Ceiling 15'
Occupants 100
Quantity 1

FUNCTION

- Drop in fitness area
- Weight training classes

RELATIONSHIP / ADJACENCIES

- Visible from Lobby
- Adjacent to Equipment Storage
- Adjacent to Group Exercise rooms
- Across from Reception/Control Desk for monitoring

MILLWORK (BUILT-IN CABINETRY)

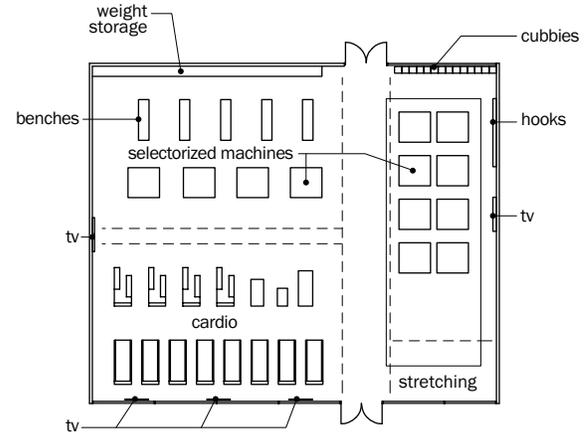
- Cubbies for coats, bookbags (18" square) (20)
- Hooks for coats, bags, etc.

EQUIPMENT / FURNITURE

- AED
- Ellipticals (10)
- Treadmills (8)
- Stationary bikes (4)
- Stair climbers (2)
- Single-station selectorized weight equipment (18)
- Dumbbell rack (1)
- Matted area for stretching (1)
- Mirrors on short wall by stretching area / dumbbells
- No free weights planned (dumbbells only)
- Flat screen TVs (4)

NOTES

- Music separate from group exercise, controlled at reception
- Sound isolation
- Equipment wipe-off station
- *Audio/Visual Requirements:
 - Sound system
 - Flat-screen televisions
 - Speaker system
 - Voice enhancement



MECHANICAL / PLUMBING

HVAC Standard
Plumbing E.W.C.
Ventilation Suitable for space; fans
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting High bay
Audio / Visual *see NOTES
Telephone None
Voice / Data (3) Data connections
Outlets NEMA 20AM plugs for treadmills

FINISHES / ENVIRONMENT

Wall Durable / Wainscot / Mirror
Base Rubber
Floor Resilient athletic flooring
Ceiling Open with acoustical treatment

DOORS, WINDOWS, HARDWARE

Doors Solid core wood (double)
Door Glazing
Hardware
Windows View to Lobby

SECURITY REQ'S

SPACE

Area	800
Minimum Dimensions	28'X28'
Minimum Ceiling	12'
Occupants	20
Quantity	2

FUNCTION

- Drop in group exercise programs
- Accommodate credit-bearing P.E. classes
- Accommodate 20 people per exercise class, 40 people when rooms combined

RELATIONSHIP / ADJACENCIES

- Folding door system between Group Exercise rooms (2); ability to combine into large space
- Possibility of locating Equipment Storage between Group Exercise & Weights/Cardio Area

MILLWORK (BUILT-IN CABINERY)

- Mirrors on one wall
- Ballet bar on mirrored wall

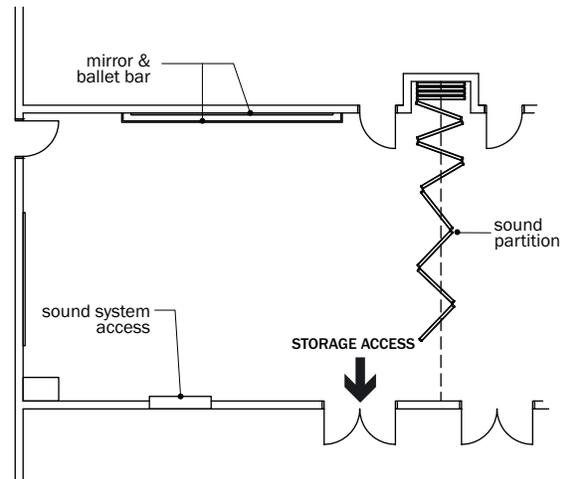
EQUIPMENT / FURNITURE

- A.E.D.
- Sound system (2)
- Speakers in ceiling
- Spin bikes (20)

NOTES

- Spinning bikes left in Fitness Studio
- Good instructor visibility; layout preferred close to square
- Folding door acoustical separation very important
- Projected use: NUAMES 2 class/day; WSU PE 4 class/day
- *Audio/Visual Requirements: Sound system, TV hookup, speaker system, voice enhancement; instructor microphone

DEPARTMENT	FITNESS
FACILITY #	FI.4
SPACE NAME	GROUP EXERCISE



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	E.W.C.
Ventilation	Suitable for space
Climate Control	Yes
Misc	Temperature control within rooms

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c. with adjustable control
Audio / Visual	*see NOTES
Telephone	(1) Outlet
Voice / Data	(2) Data connections
Outlets	(2) per wall & accommodate equipment

FINISHES / ENVIRONMENT

Wall	Painted gyp. board; mirror (1 wall)
Base	Rubber
Floor	Hardwood floors, dance floor system
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood at entry door
Special Doors	Paired partitions; 50 STC rating
Windows	Desired; Frosted or with blinds
Hardware	Lever, lockable

SECURITY REQ'S

DEPARTMENT **FITNESS**
FACILITY # **FI.5**
SPACE NAME **EQUIPMENT STORAGE**

SPACE

Area 400
 Minimum Dimensions
 Minimum Ceiling 10'
 Occupants 0
 Quantity 1

FUNCTION

- Store equipment
- Store sound system
- Sound system fronts accessed from Group Exercise rooms

RELATIONSHIP / ADJACENCIES

- Near Weights/Cardio Area
- Convenient access from both Group Exercise rooms

MILLWORK (BUILT-IN CABINETS)

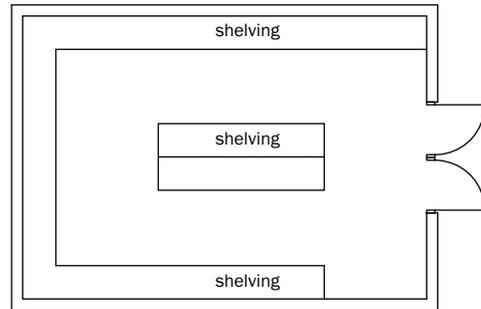
- Equipment indicated below

EQUIPMENT / FURNITURE

- Steps (20) platform / risers
- Bands (20) assorted sizes
- Medicine balls asst'd weights
- Balls (20)
- Slides
- Bosu balls
- Ladder ropes
- Cones
- Hand held weights (20)
- Mats (20)

NOTES

- Should allow easy access for storing/retrieving equipment
- Steps need stacking area on floor
- Lockable



MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

ELECTRICAL / COMMUNICATIONS

Lighting 25 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data None
 Outlets (2) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient
 Ceiling Acoustical

DOORS, WINDOWS, HARDWARE

Doors Double solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable

SECURITY REQ'S None

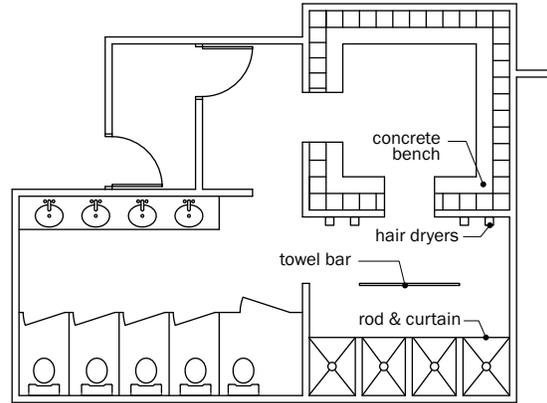
DEPARTMENT FITNESS
FACILITY # FI.6
SPACE NAME LOCKERS & SHOWERS

SPACE

Area 600
Minimum Dimensions 30'X20'
Minimum Ceiling 10'
Occupants Lockers for 45 occupants
Quantity 2

FUNCTION

- Provide for changing and showering of occupants
- Restrooms included in locker area



RELATIONSHIP / ADJACENCIES

- Women's locker room adjacent to Reception/ Control Desk
- Adjacent to Restrooms
- Near a custodial closet
- Chilled water fountain in hallway

MILLWORK (BUILT-IN CABINETRY)

- Metal lockers, 2-tiered with recessed padlocks (45)
- Benches @ lockers
- Counter/sinks (4)
- Accessible lockers (3)

EQUIPMENT / FURNITURE

- Individual shower stalls
- Hair dryers
- Mirrors

NOTES

MECHANICAL / PLUMBING

HVAC To accommodate space
Plumbing Accommodate fixtures
Ventilation Room exhausted
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.
Audio / Visual None
Telephone None
Voice / Data None
Outlets Outlets, hair dryers

FINISHES / ENVIRONMENT

Wall Washable
Base Ceramic tile
Floor Ceramic tile
Ceiling Washable

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing None
Windows None
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT **STUDENT AFFAIRS**
FACILITY # **SA.1**
SPACE NAME **RECEPTION**

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 10'
Occupants 2
Quantity 1

FUNCTION

- Workspace for a full-time staff person whose roles include: setting appointments for advisors & counselors and assisting student council members

RELATIONSHIP / ADJACENCIES

- Adjacent to Student Affairs Storage/Workroom
- Adjacent to Student Affairs Lounge
- Near Student Affairs Conference Room
- Near Student Affairs Offices

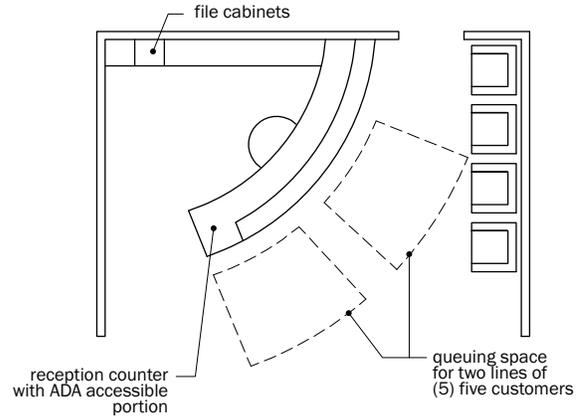
MILLWORK (BUILT-IN CABINETY)

- Countertop & workstation for full-time secretary

EQUIPMENT / FURNITURE

- Computer
- File cabinets (lockable)
- Printer
- Soft seating chairs (4)
- Desk chair (1)

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (5) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles
 Preferred

DOORS, WINDOWS, HARDWARE

Doors None
Door Glazing None
Windows Not required
Hardware Lever, lockable

SECURITY REQ'S None

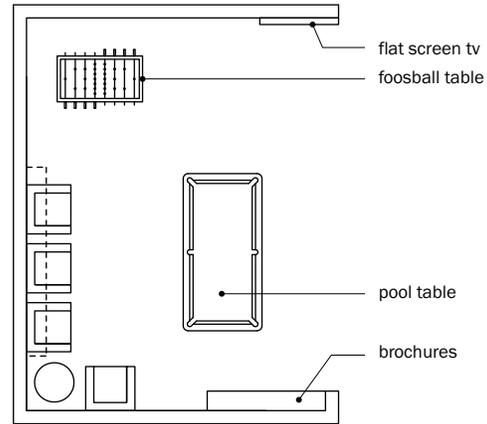
DEPARTMENT **STUDENT AFFAIRS**
FACILITY # **SA.2**
SPACE NAME **LOUNGE**

SPACE

Area 250
Minimum Dimensions
Minimum Ceiling 10'
Occupants Varies
Quantity 1

FUNCTION

- Provide a welcoming lounge space outside the Student Affairs area



RELATIONSHIP / ADJACENCIES

- Adjacent to Student Affairs Reception
- Adjacent to Clubs & Organizations Office

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (4) Duplex outlets

EQUIPMENT / FURNITURE

- Wall racks for brochures/printed materials
- Couch and soft seat chairs
- Small electronic marquee
- Foosball table
- Pool table
- TV

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles
Preferred

DOORS, WINDOWS, HARDWARE

Doors None
Door Glazing None
Windows Not required
Hardware Lever, lockable

NOTES

SECURITY REQ'S None

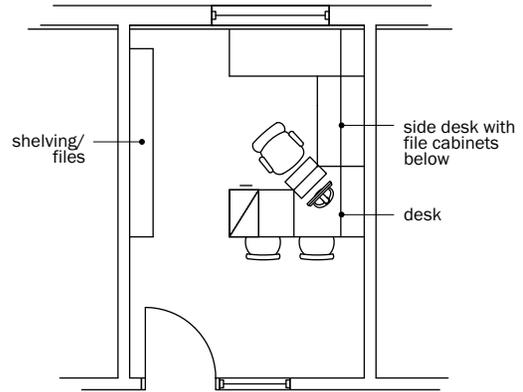
DEPARTMENT **STUDENT AFFAIRS**
FACILITY # **SA.3**
SPACE NAME **OFFICE**

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 9'
Occupants 2
Quantity 5

FUNCTION

- Workspace for staff members
- Area for student consultation



RELATIONSHIP / ADJACENCIES

- Adjacent to Student Affairs Reception

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving/bookcases
- Wall-hung storage
- Lateral files
- Task chair (1)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered Preferred;
Windows views/daylight important
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT **STUDENT AFFAIRS**
FACILITY # **SA.4**
SPACE NAME **STORAGE/WORKROOM**

SPACE

Area 200
Minimum Dimensions
Minimum Ceiling 9'
Occupants 10
Quantity 1

FUNCTION

- Workroom for staff members
- Storage for printer cartridges, paper, office supplies, etc.
- Billiard equipment storage

RELATIONSHIP / ADJACENCIES

- Near Student Affairs Reception
- Near Student Affairs Offices

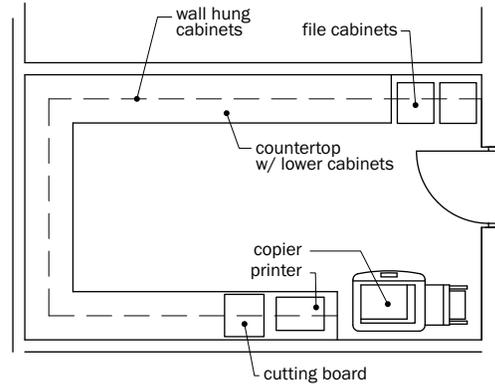
MILLWORK (BUILT-IN CABINetry)

- Countertop
- Wall-hung shelves, undercounter shelves

EQUIPMENT / FURNITURE

- Copier
- Fax machine
- Printer (2)
- Cutting board
- Billiard equipment
- File cabinets
- Shredder

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
Audio / Visual None
Telephone (1) Outlet
Voice / Data (3) Data connections
Outlets (3) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Resilient floor tile
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing None
Windows Not required
Hardware Lever, lockable

SECURITY REQ'S None

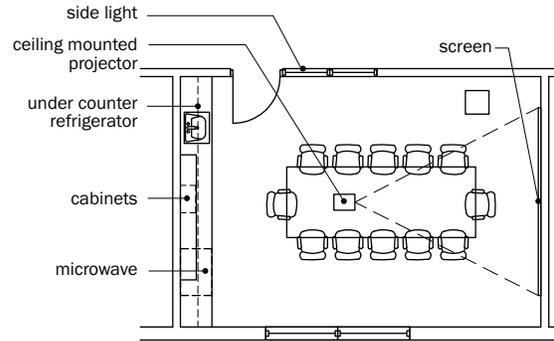
DEPARTMENT **STUDENT AFFAIRS**
FACILITY # **SA.5**
SPACE NAME **CONFERENCE ROOM**

SPACE

Area 300
Minimum Dimensions Rectangular
Minimum Ceiling 10'
Occupants 12
Quantity 1

FUNCTION

- Area for Student Affairs staff and/or Student Council to hold meetings



RELATIONSHIP / ADJACENCIES

- Near Student Affairs Reception
- Prefer between Clubs & Organizations Office and staff offices

MECHANICAL / PLUMBING

HVAC Standard
Plumbing Sink/water for refrigerator
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINETRY)

- Sink, undercounter storage
- White board

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting/
Audio / Visual controls
 *see NOTES
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (4) Duplex outlets

EQUIPMENT / FURNITURE

- Microwave
- Refrigerator
- Conference table
- Projector & screen
- Conference room chair (12)

FINISHES / ENVIRONMENT

Wall Painted gyp. board/Wainscot/Chair
Base rail
Floor Wood
Ceiling Carpet tiles
 2'X2' Acoustical ceiling tiles

NOTES

- Sound isolation from adjacent spaces
- *Audio / Visual Requirements:
 - Voice enhancement
 - Ceiling-mounted projector
 - Conference equipment

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing None
Windows Preferred
Hardware Lever, lockable

SECURITY REQ'S None

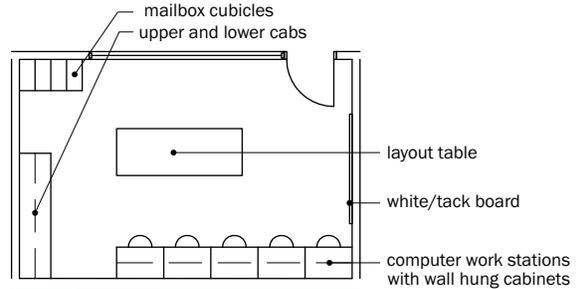
DEPARTMENT **STUDENT AFFAIRS**
FACILITY # **SA.6**
SPACE NAME **CLUBS & ORGANIZATIONS OFFICE**

SPACE

Area 300
Minimum Dimensions Rectangular
Minimum Ceiling 10'
Occupants 5
Quantity 1

FUNCTION

- Area for student clubs & organizations officers to work on advertising, event planning, etc.
- 1 workstation for advertising assistant



RELATIONSHIP / ADJACENCIES

- Adjacent to Student Affairs Lounge
- Near Clubs & Organizations Storage
- Near Student Affairs Reception

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Large mailboxes for student council (12)
- Wall-hung shelving
- Filing cabinets
- White board
- Bulletin board

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting / controls
Audio / Visual Voice enhancement
Telephone (5) Outlets
Voice / Data (6) Data connections
Outlets (10) Duplex outlets

EQUIPMENT / FURNITURE

- Computer workstations (5)
- Layout table for advertising
- Seating at workstation (5)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles
 Preferred

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows Preferred
Hardware Lever, lockable

NOTES

- Window into room from public space (possibly Student Affairs Lounge) to increase accessibility/awareness

SECURITY REQ'S None

DEPARTMENT **STUDENT AFFAIRS**
FACILITY # **SA.7**
SPACE NAME **CLUBS & ORGANIZATIONS STORAGE**

SPACE

Area 200
 Minimum Dimensions
 Minimum Ceiling 10'
 Occupants 0
 Quantity 1

FUNCTION

- Storage for seasonal promotional materials (*large posters, Christmas tree, etc.*)
- Storage for event supplies (*including non-perishable food*)
- Storage space for helium tank

RELATIONSHIP / ADJACENCIES

- Near Clubs & Organizations Office

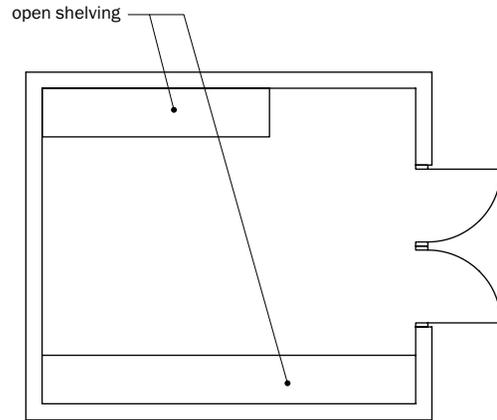
MILLWORK (BUILT-IN CABINETY)

- Open shelving (12"-18" Deep)
- See-through bin storage
- Open, adjustable shelving

EQUIPMENT / FURNITURE

NOTES

- Need open wall space and floor space for odd size items



MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone None
 Voice / Data None
 Outlets (2) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient floor tile
 Ceiling 2'X4' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable; storeroom function

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

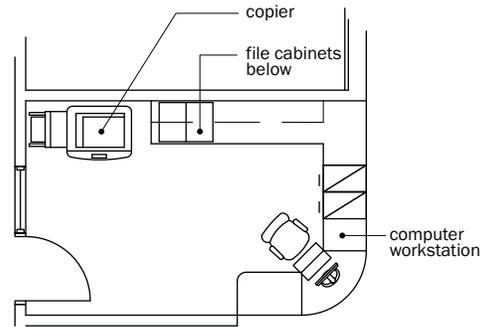
Weber State University Davis

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ARCHITECTURE

DEPARTMENT CUSTOMER SERVICE
FACILITY # AS.2
SPACE NAME ACADEMIC SUPPORT COUNTER

SPACE

Area 150
Minimum Dimensions
Minimum Ceiling 10'
Occupants 2
Quantity 1



FUNCTION

- Provide copying and other support services for faculty

RELATIONSHIP / ADJACENCIES

- Located on 3rd floor
- Near faculty offices
- Near faculty workroom

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Reception counter with accessible and standing heights

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (4) Duplex outlets

EQUIPMENT / FURNITURE

- Copier
- Fax machine
- Layout table

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Staffing: 1 satellite, 1 dedicated
- Hybrid, cross-trained staff

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows Access to daylight required
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT **CUSTOMER SERVICE**

FACILITY # **AS.3**

SPACE NAME **OFFICE**

SPACE

Area	120
Minimum Dimensions	10'X12'
Minimum Ceiling	10'
Occupants	1
Quantity	2

FUNCTION

- Supports professors and acts as a call-in center
- Front office function for adjunct faculty and full-time staff

RELATIONSHIP / ADJACENCIES

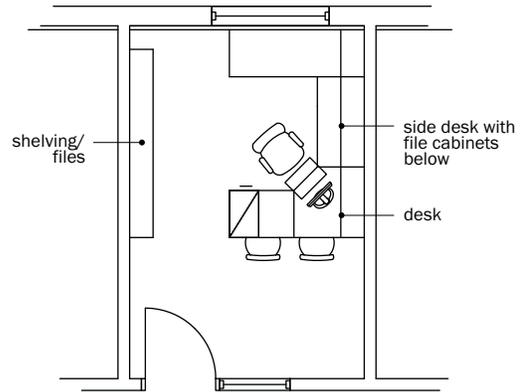
- Near Customer Service Counter

MILLWORK (BUILT-IN CABINERY)

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving/bookcases

NOTES



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(2) Data connections
Outlets	(2) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tiles
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Access to daylight required
Hardware	Lever, lockable

SECURITY REQ'S None

DEPARTMENT CUSTOMER SERVICE

FACILITY # AS.4

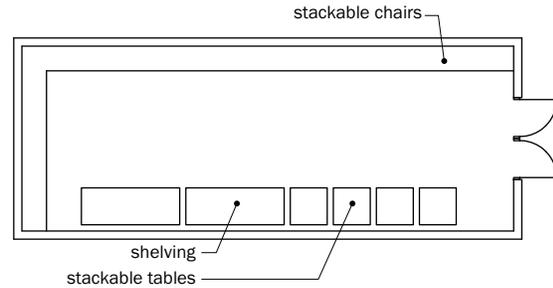
SPACE NAME STORAGE

SPACE

Area	600
Minimum Dimensions	15'X40'
Minimum Ceiling	10'
Occupants	0
Quantity	1

FUNCTION

- Storage area for: supplies, packages, and tables
- Area for lost & found



RELATIONSHIP / ADJACENCIES

- Near Customer Service on 1st Floor

MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

MILLWORK (BUILT-IN CABINERY)

- Open shelving

ELECTRICAL / COMMUNICATIONS

Lighting	30 f.c.
Audio / Visual	None
Telephone	None
Voice / Data	None
Outlets	(2) Duplex outlets

EQUIPMENT / FURNITURE

- Stackable tables (25)
- Stacking chairs (100)
- Chair dollies (6)
- Table dollies (3)

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Resilient floor tile
Ceiling	Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors	Double solid core wood
Door Glazing	None
Windows	None
Hardware	Lever, lockable; storeroom function

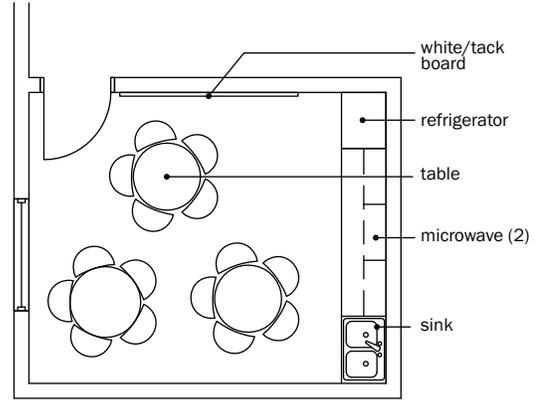
SECURITY REQ'S None

DEPARTMENT CUSTOMER SERVICE
FACILITY # AS.5
SPACE NAME WSU FACULTY LOUNGE

SPACE

Area 200
 Minimum Dimensions
 Minimum Ceiling 10'
 Occupants 15
 Quantity 1

FUNCTION



RELATIONSHIP / ADJACENCIES

- Near Student Affairs Reception

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing Double compartment sink
 Ventilation Exhaust fan
 Climate Control Yes
 Misc Water to refrigerator

MILLWORK (BUILT-IN CABINETY)

- Upper/lower cabinets
- Countertop
- Tack board/whiteboard combo

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
 Audio / Visual Flat-screen television
 Telephone (1) Multi-line IP set
 Voice / Data (4) Data connections
 Outlets (4) Duplex outlets + Appliances

EQUIPMENT / FURNITURE

- Double compartment sink
- Refrigerator
- Microwave (2)
- Garbage disposal
- Round tables (3)
- Chairs and tables (15)

FINISHES / ENVIRONMENT

Wall Painted gypsum board, washable
 Base Rubber
 Floor Resilient floor tile, carpet
 Ceiling 2' x 2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows Preferred
 Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT STUDENT UNION

FACILITY # AS.6

SPACE NAME EVENT/LECTURE SPACE

SPACE

Area	4500
Minimum Dimensions	Rectangular
Minimum Ceiling	16'
Occupants	250
Quantity	1

FUNCTION

- Multi-purpose assembly space
- 250-person capacity
- Celebration/special event space
- Divisible into 1,500 SF; 1,500 SF; 1,500 SF

RELATIONSHIP / ADJACENCIES

- Adjacent to Lobby
- Adjacent to Event Staging
- Near Food Court Kitchen/Serving
- Lobby & Event/Lecture Space overlap
- Openable to Lobby

MILLWORK (BUILT-IN CABINERY)

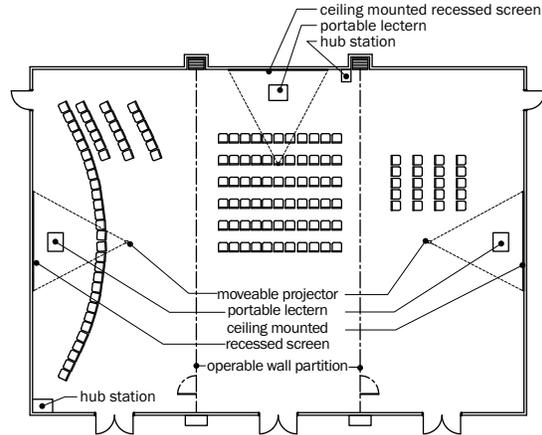
- Sound equipment cabinets

EQUIPMENT / FURNITURE

- Portable staging equipment
- Portable lectern at each divisible space

NOTES

- Foldable wall partitions, acoustical division
- *Audio / Visual Requirements:
 - Sound system
 - Speaker system
 - Voice enhancement



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Combined & individual spaces
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task/controls
Audio / Visual	*see NOTES
Telephone	(1) Outlet per space
Voice / Data	(4) Data connections per space
Outlets	(6) Duplex outlets per space

FINISHES / ENVIRONMENT

Wall	Painted gypsum board; Acoustical tiles as required
Base	Rubber
Floor	Carpet tiles
Ceiling	Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid wood
Special Doors	Paired-partitions; 50 STC rating
Windows	Access to daylight; capacity for blackout
Hardware	Lever, lockable

SECURITY REQ'S None

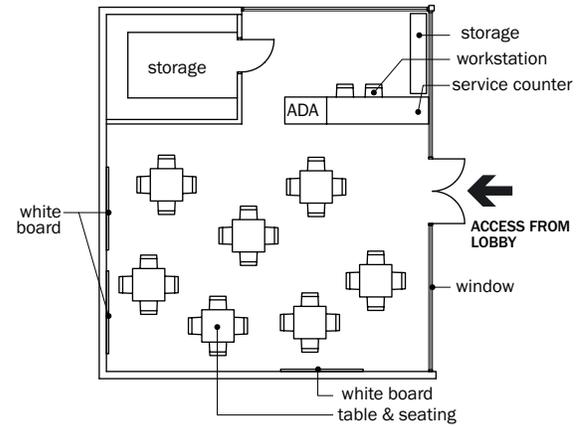
DEPARTMENT INFORMATION COMMONS
FACILITY # AS.7
SPACE NAME LAPTOP LOUNGE

SPACE

Area 1000
Minimum Dimensions
Minimum Ceiling 10'
Occupants 30
Quantity 1

FUNCTION

- Space to accommodate 30 students with 30 computers
- Workspace area for 1-2 lab aides



RELATIONSHIP / ADJACENCIES

- Adjacent to Laptop Lending Storage/Workroom
- Adjacent to Lobby
- Near Quiet Study rooms
- Near classrooms, labs

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Reception counter with ADA height
- Cupboards & drawers for supplies
- Work area for lab aide
- Counter space
- Whiteboard (3)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task/indirect
Audio / Visual Projection system
Telephone (1) Outlet
Voice / Data (35) Data connections, wireless capable
Outlets (35) Duplex outlets, 120V, clean power

EQUIPMENT / FURNITURE

- Printer (1)
- Office chairs (2)
- Square tables (7)
- Seating at tables (28)

FINISHES / ENVIRONMENT

Wall Painted gypsum board, wainscot, and/or chair rail
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Tables should be moveable to accommodate group or individual study

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows Interior preferred
Hardware Lever, lockable

SECURITY REQ'S Camera

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT INFORMATION COMMONS

FACILITY # AS.8

SPACE NAME COPY/ PRINT ROOM

SPACE

Area	800
Minimum Dimensions	
Minimum Ceiling	9'
Occupants	8
Quantity	1

FUNCTION

- Copy/print services for students, faculty and staff on campus
- Self-service copy/print area

RELATIONSHIP / ADJACENCIES

- Adjacent to and easily accessible from Lobby
- Near Customer Service Counter

MILLWORK (BUILT-IN CABINETRY)

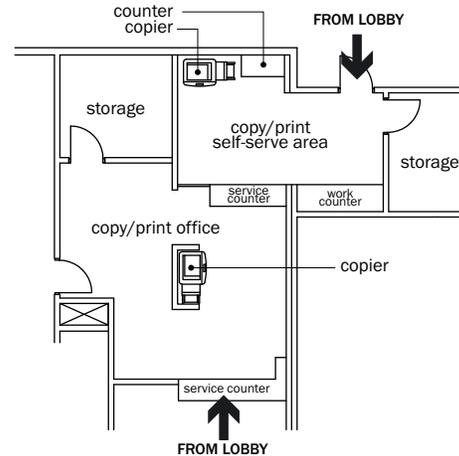
- Storage shelving for supplies
- Desks (2) 1 for workstation and 1 for office
- Paper shelves -24 (individual shelves)
- 2' x 8' counters (2) for binding and waiting on customers

EQUIPMENT / FURNITURE

- Color/B&W copier/printer (1)
- 8500 Copier B&W (1)
- Self service small copiers (2)
- Cutter (1)
- Spiral, coil binding unit with punch (1)
- Computers (2) 1-workstation and 1-office
- File cabinets (4)
- 1 cash register

NOTES

- Space should be acoustically isolated from adjacent spaces



MECHANICAL / PLUMBING

HVAC	Enhanced cooling
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	Accommodate equipment
Outlets	Accommodate equipment

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Resilient floor tile, carpet tile
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	
Windows	
Hardware	Lever, lockable

SECURITY REQ'S None

DEPARTMENT INFORMATION COMMONS
FACILITY # AS.9
SPACE NAME LAPTOP LENDING STORAGE/WORKROOM

SPACE

Area 200
 Minimum Dimensions 10'X20'
 Minimum Ceiling 9'
 Occupants 2
 Quantity 1

FUNCTION

- Accommodate laptops (35) when not in use
- A workroom and charging area for rentable laptops

RELATIONSHIP / ADJACENCIES

- Directly accessible from Laptop Lounge
- Adjacent to first floor Customer Service Counter
- Near high-traffic student areas
- Near Quiet Study rooms

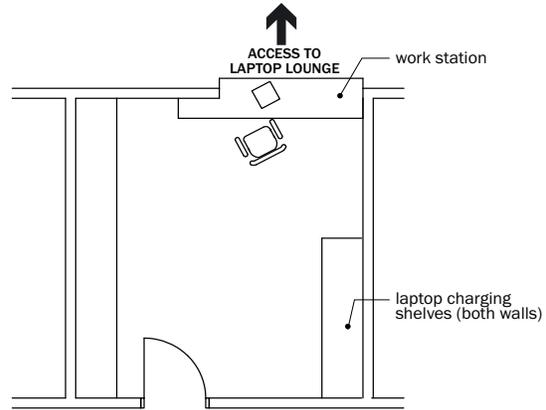
MILLWORK (BUILT-IN CABINETY)

- Open shelving with power for 35 laptops
- Countertop work area with undercounter cupboards / drawers

EQUIPMENT / FURNITURE

- Office chair (1)

NOTES



MECHANICAL / PLUMBING

HVAC Enhanced cooling
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.
 Audio / Visual None
 Telephone (1) Multi-line IP set
 Voice / Data (2) Data connections
 Outlets (35) Cabinet outlets, (4) Duplex

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Carpet tile
 Ceiling Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows None
 Hardware Lever, lockable; Access card

SECURITY REQ'S Camera; Card reader @ door access

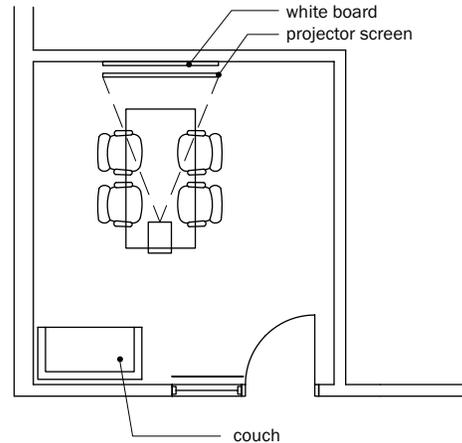
DEPARTMENT INFORMATION COMMONS
FACILITY # AS.10
SPACE NAME QUIET STUDY

SPACE

Area 150
Minimum Dimensions 10'X15'
Minimum Ceiling 9'
Occupants 6
Quantity 7

FUNCTION

- Quiet study area for student groups (6) or individual



RELATIONSHIP / ADJACENCIES

- Near Laptop Lounge
- Near other study areas
- Near Customer Service Counter

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- White board (4'X8')

ELECTRICAL / COMMUNICATIONS

Lighting Low glare fluorescent or Indirect
Audio / Visual Projection system at 1 room
Telephone (1) Outlet
Voice / Data (2) Data/wireless capable
Outlets (4) Duplex outlets

EQUIPMENT / FURNITURE

- Moveable table
- Chairs (6)
- Projector (at one-of- seven Quiet Study rooms)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tile
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Two adjacent Quiet Study rooms with divisible sound partition (to seat 12)
- One power and data connection at floor that will network with projector at one study room

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing 1/4" tempered
Windows Next to door
Hardware Lever

SECURITY REQ'S

DEPARTMENT INFORMATION COMMONS

FACILITY # AS.11

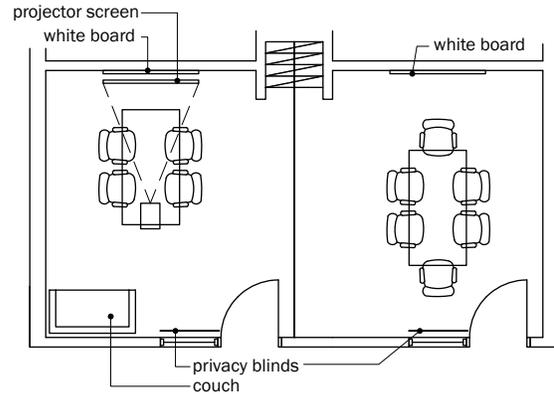
SPACE NAME QUIET STUDY (PRIVACY BLINDS)

SPACE

Area	150
Minimum Dimensions	10'X15'
Minimum Ceiling	9'
Occupants	6
Quantity	2

FUNCTION

- Quiet study area for student groups (6) or individual with privacy blinds on interior/exterior windows



RELATIONSHIP / ADJACENCIES

- Near Laptop Lounge
- Near other study areas
- Near Customer Service Counter

MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

MILLWORK (BUILT-IN CABINETRY)

- White board

ELECTRICAL / COMMUNICATIONS

Lighting	Low glare fluorescent or Indirect
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(2) Data/wireless capable
Outlets	(4) Duplex outlets

EQUIPMENT / FURNITURE

- Moveable table
- Chairs (6)
- Couch in one-of-two rooms (sick room function)

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tile
Ceiling	2'X2'Acoustical ceiling tiles

NOTES

- All windows have privacy blinds

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood (provide blinds)
Door Glazing	1/4" tempered (provide blinds)
Windows	Next to door
Hardware	Lever

SECURITY REQ'S

DEPARTMENT **INFORMATION COMMONS**

FACILITY # **AS.12**

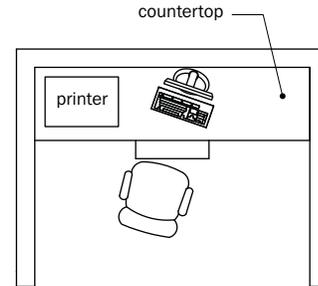
SPACE NAME **COMPUTER ALCOVE**

SPACE

Area	50
Minimum Dimensions	6'
Minimum Ceiling	8'
Occupants	1
Quantity	1

FUNCTION

- Satellite computer alcove for student use



RELATIONSHIP / ADJACENCIES

- Located on 2nd Floor

MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	None
Misc	

MILLWORK (BUILT-IN CABINERY)

- Countertop computer work surface

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(2) Data connections
Outlets	(2) Duplex outlets

EQUIPMENT / FURNITURE

- Computer
- Printer
- Office chair (1)

FINISHES / ENVIRONMENT

Wall	Gypsum board
Base	Rubber
Floor	Carpet tile
Ceiling	Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors	None
Door Glazing	None
Windows	None
Hardware	None

SECURITY REQ'S

DEPARTMENT TESTING CENTER
FACILITY # AS.13
SPACE NAME RECEPTION

SPACE

Area 250
 Minimum Dimensions
 Minimum Ceiling 10'
 Occupants 4
 Quantity 1

FUNCTION

- Workstations (4) for checking students in and out
- Storage of paper tests & office supplies
- Space for proctor to observe test-takers in testing area
- Includes sound vestibule between Reception & Testing Area

RELATIONSHIP / ADJACENCIES

- Adjacent to one computer classroom and one regular classroom, in order to position for possible future expansion
- Adjacent to hallway for convenient entrance/exit
- Near Waiting/Quiet Study area
- Overlooks Testing Area

MILLWORK (BUILT-IN CABINERY)

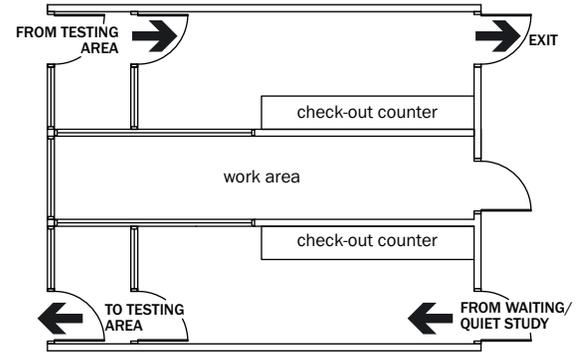
- Counterspace for (4) computer workstations
- Undercounter cabinets & drawers

EQUIPMENT / FURNITURE

- Computer (4)
- Chair (5)
- Printer
- Scanner
- Fax
- Copy machine
- File cabinets: lateral unit (1) and 4-drawer vertical unit (2)

NOTES

- Located in quiet area of building
- Window between Reception & Testing Area; it's vital for proctor to oversee test-takers whether seated or standing (~32"-72" off floor)



MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

ELECTRICAL / COMMUNICATIONS

Lighting Low glare fluorescent
 Audio / Visual None
 Telephone (2) Outlets
 Voice / Data (6) Data connections
 Outlets (6) Duplex outlets, 120 V

FINISHES / ENVIRONMENT

Wall Painted gypsum board,
 Base soundproof
 Floor Rubber
 Ceiling Carpet tile
 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing Standard
 Windows Low glare fluorescent or indirect
 Hardware Lever, lockable

SECURITY REQ'S 1 keypad entrance

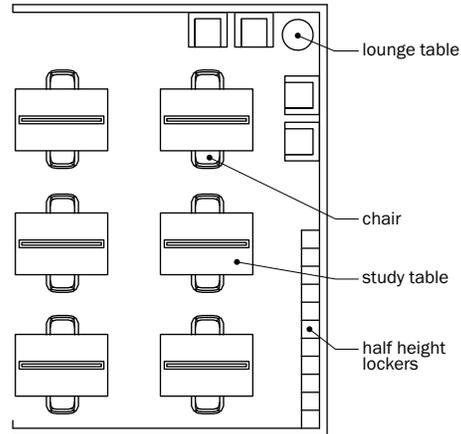
DEPARTMENT TESTING CENTER
FACILITY # AS.14
SPACE NAME WAITING/QUIET STUDY

SPACE

Area 400
Minimum Dimensions
Minimum Ceiling 10'
Occupants Varies
Quantity 1

FUNCTION

- Place for students to study before a test
- Place for people to wait for other test-takers
- Place to store belongings while testing



RELATIONSHIP / ADJACENCIES

- Adjacent to Testing Center Reception
- Near Testing Area

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Lockers, half-height, solid plastic or phenolic (36)

ELECTRICAL / COMMUNICATIONS

Lighting Low glare fluorescent
Audio / Visual None
Telephone None
Voice / Data (10) Data connections
Outlets (10) Duplex outlets, 120V

EQUIPMENT / FURNITURE

- Table (6)
- Chairs (12)
- Soft chairs (4)
- End table (1)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Can be an open area between reception and hallway, leading to other parts of the building

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Preferred
Hardware None

SECURITY REQ'S None

DEPARTMENT TESTING CENTER
FACILITY # AS.15
SPACE NAME OFFICE, TESTING SPECIALIST

SPACE

Area 120
 Minimum Dimensions 10'X12'
 Minimum Ceiling 10'
 Occupants 1
 Quantity 1

FUNCTION

- Office with an overview of the Testing Area for supervision and consultation
- Workspace for 1 staff member
- Meeting room for 3 people

RELATIONSHIP / ADJACENCIES

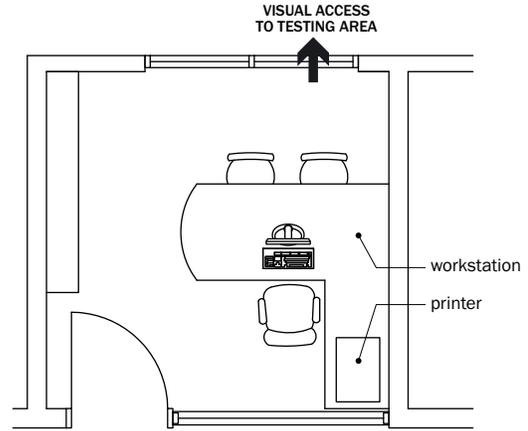
- Near Testing Center Reception
- Overlooking Testing Area

MILLWORK (BUILT-IN CABINETY)

EQUIPMENT / FURNITURE

- Desk (1)
- Office chair (1)
- Guest chair (2)
- Bookcase/storage shelves
- Computer
- Printer

NOTES



MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

ELECTRICAL / COMMUNICATIONS

Lighting Low glare fluorescent
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (4) Data connections
 Outlets (3) Duplex outlets, 120V

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Carpet
 Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing Standard
 Windows Interior window into Testing Area
 Hardware Lever, lockable

SECURITY REQ'S Standard

DEPARTMENT TESTING CENTER
FACILITY # AS.16
SPACE NAME TESTING AREA

SPACE

Area 1115
Minimum Dimensions
Minimum Ceiling 10'
Occupants 69 students, 1 supervisor
Quantity 2

FUNCTION

- Adjacent testing rooms (2) that can be separate or combined
- Area for students to take electronic and paper tests under supervision

RELATIONSHIP / ADJACENCIES

- Adjacent to one computer classroom and one regular classroom, in order to position for possible future expansion
- Adjacent to Testing Center Reception
- Adjacent to Testing Specialist Office
- Near Waiting/Quiet Study area

MILLWORK (BUILT-IN CABINETRY)

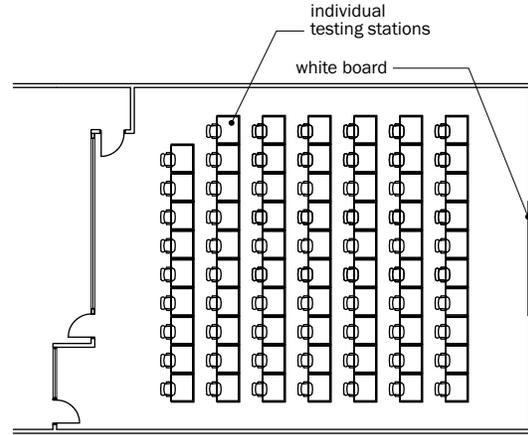
- Large white board

EQUIPMENT / FURNITURE

- Tables, 36"X30" (70)
- Computers workstations (60)
- Paper-test workstations (10)
- Seating at tables (70)

NOTES

- Windows must allow proctors in Reception and Testing Specialist full visibility into the Testing Area
- Located in a quiet area of the building
- Room must be sound proof
- UPS power source
- Two exits from room required



MECHANICAL / PLUMBING

HVAC Enhanced cooling capabilities
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting Low glare fluorescent, indirect
Audio / Visual None
Telephone None
Voice / Data (75) Data connections
Outlets (75) Duplex outlets, 120V

FINISHES / ENVIRONMENT

Wall Painted gypsum board, soundproof
Base Rubber
Floor Carpet
Ceiling Acoustical ceiling tiles, soundproof

DOORS, WINDOWS, HARDWARE

Doors Solid core wood, soundproof
Door Glazing None
Windows Must be high or opaque to exterior
Hardware Passage function

SECURITY REQ'S Safety

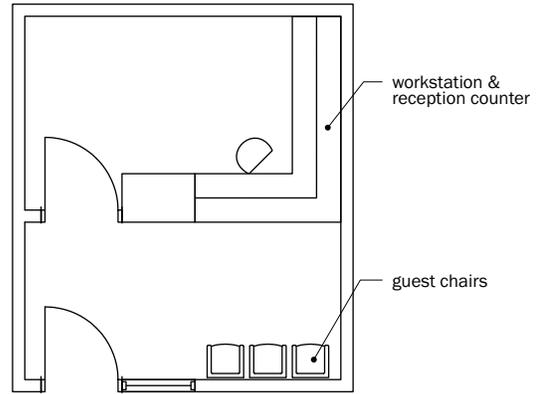
DEPARTMENT **CAMPUS POLICE**
FACILITY # **CP.1**
SPACE NAME **PATROL ROOM & RECEPTION**

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 9'
Occupants 1
Quantity 1

FUNCTION

- Space for public reports
- Workstations for report writing



RELATIONSHIP / ADJACENCIES

- Near an exterior entrance
- Accessible to the public
- Not included in Lobby
- Main floor preferred

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Workspace for one full-time officer
- Reception counter

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

- Office chair
- Soft seat chairs (3)
- Cabinets for public access forms

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Current schedule: 7:30 a.m.-11:00 p.m.; Monday-Saturday
- Build out @ Davis campus with NUAMES: 2-3 daytime officers, 1 nighttime officer

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Not required
Hardware Lever, lockable; card reader

SECURITY REQ'S Card access

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

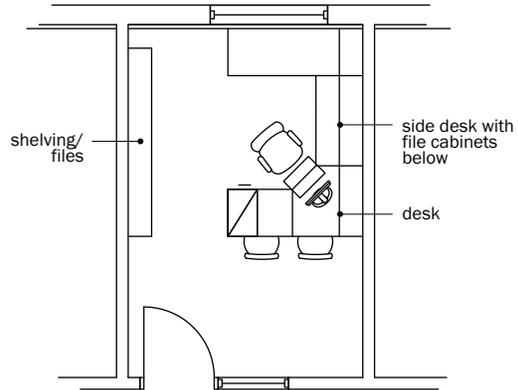
Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT **CAMPUS POLICE**
FACILITY # **CP.2**
SPACE NAME **OFFICE, SUPERVISOR**

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 9'
Occupants 1
Quantity 1



FUNCTION

- Private office space for one full-time officer

RELATIONSHIP / ADJACENCIES

- Adjacent to Patrol Room/Reception

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving bookcases

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Preferred
Hardware Lever, lockable

SECURITY REQ'S None

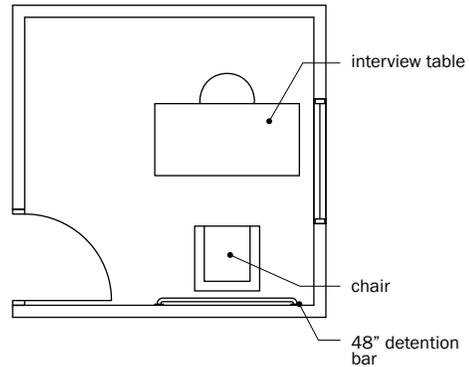
DEPARTMENT **CAMPUS POLICE**
FACILITY # **CP.3**
SPACE NAME **INTERVIEW/DETENTION ROOM**

SPACE

Area 100
 Minimum Dimensions 10'X10'
 Minimum Ceiling 8'
 Occupants 2
 Quantity 1

FUNCTION

- Quiet area for interview/interrogation



RELATIONSHIP / ADJACENCIES

- Near Patrol Room
- Near exterior exit (privacy concerns taking handcuffed individuals through common areas)

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Metal rail for handcuffing detained individuals

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c. controls
 Audio / Visual Video taping capability
 Telephone (1) Outlet
 Voice / Data (1) Data connection
 Outlets (2) Duplex outlets

EQUIPMENT / FURNITURE

- Table
- Chair
- Guest chair

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Vandal-resistant backing
 Base
 Floor Rubber
 Ceiling Resilient flooring
 Gypsum board , vandal-resistant

NOTES

- Acoustical separation
- 1-way glass from Supervisor Office

DOORS, WINDOWS, HARDWARE

Doors H.M.
 Door Glazing None
 Windows 1-way glass
 Hardware Lever, lockable

SECURITY REQ'S None

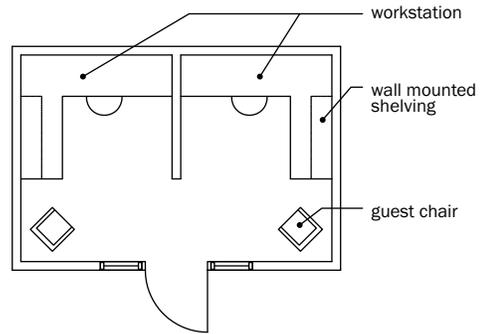
DEPARTMENT IT
FACILITY # IT.1
SPACE NAME SHARED OFFICE

SPACE

Area 150
Minimum Dimensions 10'X15'
Minimum Ceiling 10'
Occupants 2
Quantity 1

FUNCTION

- 2 workstations for IT responsibilities



RELATIONSHIP / ADJACENCIES

- Near Central Server
- Accessible from Receiving

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINETY)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

- Computer workstations (2)
- Task chairs (2)
- Guest chairs (2)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Lever, lockable

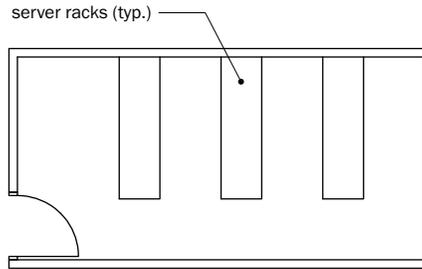
SECURITY REQ'S None

DEPARTMENT IT
FACILITY # IT.2
SPACE NAME CENTRAL SERVER

SPACE

Area 200
 Minimum Dimensions 10'X20'
 Minimum Ceiling 9'
 Occupants 2
 Quantity 1

FUNCTION



RELATIONSHIP / ADJACENCIES

- Near IT Shared Office

MECHANICAL / PLUMBING

HVAC Enhanced cooling
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINetry)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone Accommodate equipment
 Voice / Data Accommodate equipment
 Outlets Accommodate equipment

EQUIPMENT / FURNITURE

- Server rack system (by Owner)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient flooring
 Ceiling 2'X2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable; card access

SECURITY REQ'S Camera; card reader

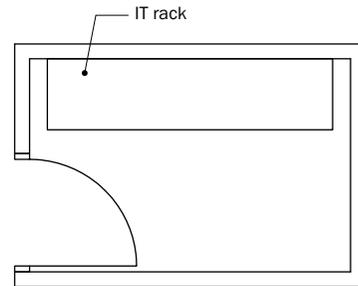
DEPARTMENT IT
FACILITY # IT.3
SPACE NAME COMMUNICATIONS ROOM,
 2 PER FLOOR

SPACE

Area 54
 Minimum Dimensions 6'X9'
 Minimum Ceiling 10'
 Occupants 0
 Quantity 6

FUNCTION

- Contains IT racks



RELATIONSHIP / ADJACENCIES

- Stacked from floor to floor

MECHANICAL / PLUMBING

HVAC Enhanced cooling
 Plumbing None
 Ventilation Sufficient for heat load
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINETY)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone Accommodate equipment
 Voice / Data Accommodate equipment
 Outlets Accommodate equipment

EQUIPMENT / FURNITURE

- IT racks (by Owner)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient flooring
 Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable; card access

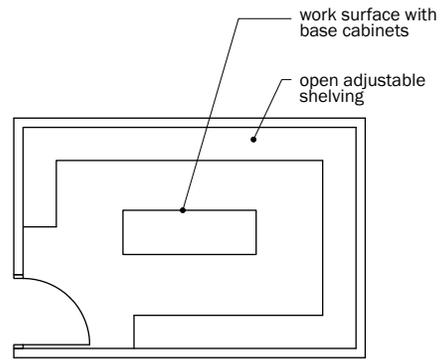
NOTES

SECURITY REQ'S Card reader

DEPARTMENT IT
FACILITY # IT.4
SPACE NAME WORKROOM/STORAGE

SPACE

Area 150
 Minimum Dimensions 10'X15'
 Minimum Ceiling 9'
 Occupants 0
 Quantity 1



FUNCTION

RELATIONSHIP / ADJACENCIES

- Near IT Office
- Near Central Server
- Accessible from Receiving

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Shelving

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone None
 Voice / Data None
 Outlets (2) Duplex outlets

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient flooring
 Ceiling 2'X2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable; storage function

SECURITY REQ'S None

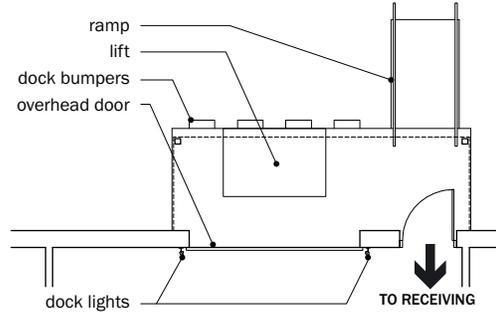
DEPARTMENT BUILDING SUPPORT
FACILITY # BS.1
SPACE NAME LOADING DOCK

SPACE

Area Exterior Space
Minimum Dimensions NA
Minimum Ceiling 12' to roof cover
Occupants 0
Quantity 1

FUNCTION

- Dock for loading/unloading building supplies



RELATIONSHIP / ADJACENCIES

- Adjacent to Receiving

MECHANICAL / PLUMBING

HVAC
 Plumbing
 Ventilation
 Climate Control
 Misc

MILLWORK (BUILT-IN CABINETY)

ELECTRICAL / COMMUNICATIONS

Lighting
 Audio / Visual
 Telephone
 Voice / Data
 Outlets Per Code

EQUIPMENT / FURNITURE

- Scissor lift
- Dock bumpers
- Dock light

FINISHES / ENVIRONMENT

Wall
 Base
 Floor Concrete
 Ceiling

NOTES

- Space may be outdoors with roof cover

DOORS, WINDOWS, HARDWARE

Doors Steel overhead / H.M.
 Door Glazing Vision panels
 Windows
 Hardware

SECURITY REQ'S Camera

DEPARTMENT BUILDING SUPPORT

FACILITY # BS.2

SPACE NAME RECEIVING

SPACE

Area 600

Minimum Dimensions

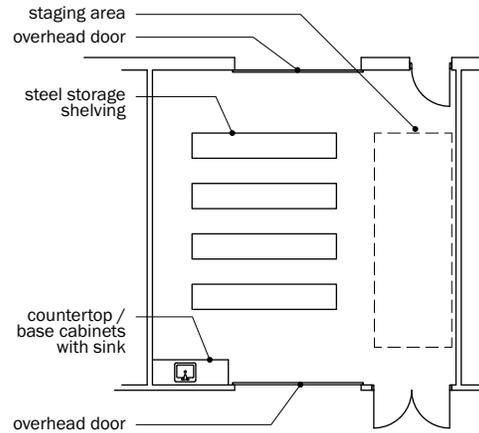
Minimum Ceiling 12'

Occupants

Quantity 1

FUNCTION

- Receiving/shipping/storage for building



RELATIONSHIP / ADJACENCIES

- Adjacent to Loading Dock
- Near Food Court Kitchen/Serving
- Near Construction Management
- Near Event/Lecture Space

MECHANICAL / PLUMBING

HVAC Radiant Heat
 Plumbing Accommodate sink
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Base cabinet with work top

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c., industrial
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (1) Data connection
 Outlets (4) Duplex outlets

EQUIPMENT / FURNITURE

- Steel storage shelving

FINISHES / ENVIRONMENT

Wall Painted gypsum board/Durable/Wainscot/Rail
 Base Rubber
 Floor Concrete
 Ceiling Open

NOTES

DOORS, WINDOWS, HARDWARE

Doors 12' Overhead door/H.M.
 Door Glazing None
 Windows None
 Hardware Lever, lockable; Card access on ped. door

SECURITY REQ'S None

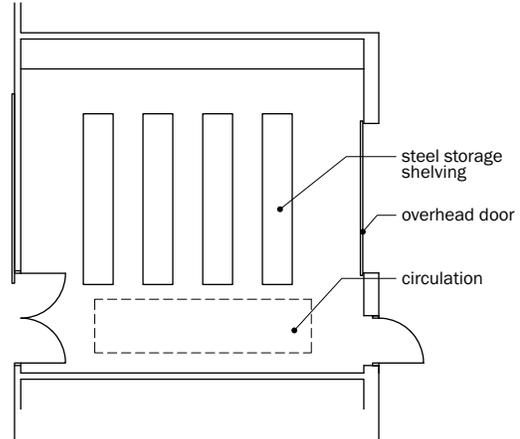
DEPARTMENT BUILDING SUPPORT
FACILITY # BS.3
SPACE NAME RECEIVING STORAGE

SPACE

Area 500
 Minimum Dimensions
 Minimum Ceiling 12'
 Occupants 0
 Quantity 1

FUNCTION

- Store receivables for the building



RELATIONSHIP / ADJACENCIES

- Adjacent to Receiving

MECHANICAL / PLUMBING

HVAC Minimal
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINETRY)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (2) Data connections
 Outlets (10) Duplex outlets

EQUIPMENT / FURNITURE

- Steel storage shelving

FINISHES / ENVIRONMENT

Wall Painted gypsum board / Durable / Wainscot / Rail
 Base Rubber
 Floor Concrete
 Ceiling Open

NOTES

DOORS, WINDOWS, HARDWARE

Doors 12' Overhead door / H.M.
 Door Glazing None
 Windows None
 Hardware Lever, lockable; Card access on ped. door

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT BUILDING SUPPORT
FACILITY # BS.4
SPACE NAME MECHANICAL EQUIPMENT

SPACE

Area 3500
Minimum Dimensions
Minimum Ceiling 12'
Occupants
Quantity 1

Mechanical engineer to layout during design

FUNCTION

RELATIONSHIP / ADJACENCIES

- Near Receiving
- North side up against earth

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

EQUIPMENT / FURNITURE

- Central station air handling units (multiple units for some redundant capacity, exact quantity to be determined during design)
- Steam to hot water shell and tube heat exchangers (2)
- Heating water pumps (2)
- Heating water expansion tank, air separator, and chemical feeder
- Chilled water pumps (2)
- Chilled water expansion tank, air separator, and chemical feeder
- Steam PRV station
- Steam powered domestic water heater
- Steam powered condensate pump
- Floor drains and floor sinks at equipment

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
Audio / Visual None
Telephone
Voice / Data Accommodate equipment
Outlets Accommodate equipment

FINISHES / ENVIRONMENT

Wall Painted gypsum board/Wainscot
Base Rubber
Floor Concrete
Ceiling Open

DOORS, WINDOWS, HARDWARE

Doors H.M.
Door Glazing
Windows
Hardware Lever, lockable; card access

NOTES

SECURITY REQ'S None

DEPARTMENT BUILDING SUPPORT
FACILITY # BS.5
SPACE NAME ELECTRICAL EQUIPMENT

SPACE

Area 500
 Minimum Dimensions
 Minimum Ceiling
 Occupants
 Quantity 1

electrical engineer to layout during design

FUNCTION

RELATIONSHIP / ADJACENCIES

- Near Mechanical Equipment

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINETRY)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone Accommodate equipment
 Voice / Data Accommodate equipment
 Outlets Accommodate equipment

EQUIPMENT / FURNITURE

- Main Switchboard
- Distribution Panels
- Dry Transformers
- Branch Panelboards
- Transfer Switch(es)
- Emergency and Standby Distribution

FINISHES / ENVIRONMENT

Wall Painted gypsum board/ Wainscot
 Base Rubber
 Floor Concrete
 Ceiling Open

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable; card access

NOTES

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

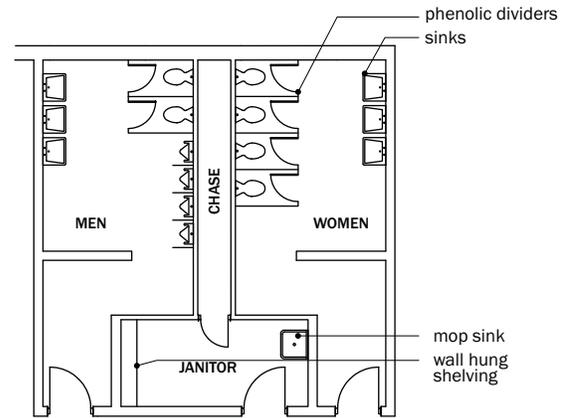
VCBO
ARCHITECTURE

DEPARTMENT **BUILDING SUPPORT**
FACILITY # **BS.6**
SPACE NAME **RESTROOMS, 3X2 PER FLOOR**

SPACE

Area 300
Minimum Dimensions 12'W
Minimum Ceiling 10'
Occupants
Quantity 6

FUNCTION



RELATIONSHIP / ADJACENCIES

- Near Lobby on 1st Floor

MECHANICAL / PLUMBING

HVAC Standard
Plumbing Accommodate low flow fixtures
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.
Audio / Visual None
Telephone None
Voice / Data None
Outlets Electric hand dryers

EQUIPMENT / FURNITURE

- Hand dryer
- Phenolic divider partitions

FINISHES / ENVIRONMENT

Wall Ceramic tile
Base Ceramic tile
Floor Ceramic tile
Ceiling Washable

NOTES

- Provide minimum 30" pipe chase
- Stack vertically, if possible

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Push/pull plates

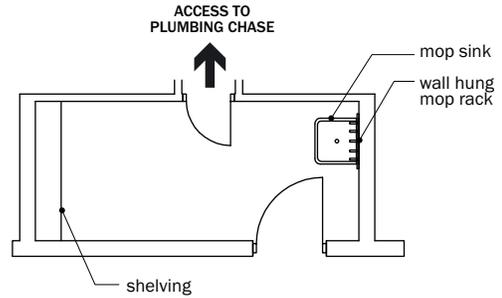
SECURITY REQ'S None

DEPARTMENT BUILDING SUPPORT
FACILITY # BS.7
SPACE NAME JANITORIAL STORAGE

SPACE

Area 120
 Minimum Dimensions 8'W
 Minimum Ceiling 9'
 Occupants 1
 Quantity 3

FUNCTION



RELATIONSHIP / ADJACENCIES

- Near Restrooms

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing Sink
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINETS)

- Wall-hung open shelving

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone None
 Voice / Data None
 Outlets (2) Duplex outlets

EQUIPMENT / FURNITURE

- Mop sink
- Mop rack

FINISHES / ENVIRONMENT

Wall Painted gypsum board / Wainscot
 Base Rubber
 Floor Resilient, vinyl sheet
 Ceiling Washable

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable

NOTES

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

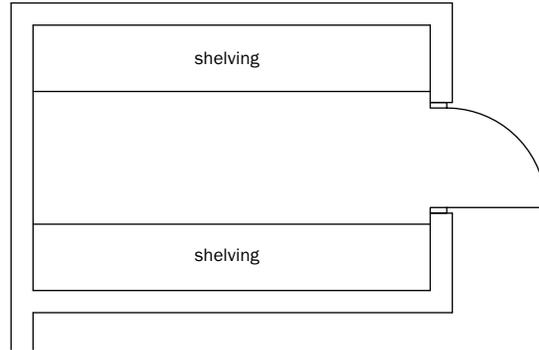
Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT BUILDING SUPPORT
FACILITY # BS.8
SPACE NAME GENERAL BUILDING STORAGE

SPACE

Area 100
Minimum Dimensions 8'X12'
Minimum Ceiling 10'
Occupants 0
Quantity 3



FUNCTION

RELATIONSHIP / ADJACENCIES

- Near elevator

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINETS)

- Open shelving on both sides of room

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
Audio / Visual None
Telephone None
Voice / Data None
Outlets (1) Duplex outlet

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board/Wainscot
Base Rubber
Floor Resilient floor tile
Ceiling Acoustical

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT NURSING HEALTH SCIENCE
FACILITY # HP.1
SPACE NAME RECEPTION

SPACE

Area 150
 Minimum Dimensions
 Minimum Ceiling 10'
 Occupants 1
 Quantity 1

FUNCTION

- Reception and queueing area for College of Health Professions students
- Open to circulation area with access for 30 students

RELATIONSHIP / ADJACENCIES

- Near faculty offices

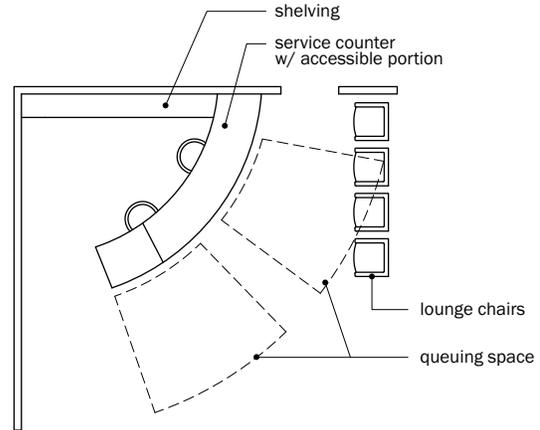
MILLWORK (BUILT-IN CABINETS)

- Reception desk

EQUIPMENT / FURNITURE

- Task chairs (2)
- Soft seat chairs (4)

NOTES



MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
 Audio / Visual Flat screen television
 Telephone (1) Outlet
 Voice / Data (4) Data connections
 Outlets (4) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Carpet tiles
 Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood / Aluminum
 Door Glazing Half light 1/4" tempered
 Windows Views
 Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT NURSING HEALTH SCIENCE

FACILITY # HP.2

SPACE NAME ADJUNCT FACULTY

SPACE

Area	70
Minimum Dimensions	
Minimum Ceiling	8'
Occupants	2
Quantity	2

FUNCTION

- Area for adjunct faculty to store belongings
- Area for adjunct faculty to prepare for classes

RELATIONSHIP / ADJACENCIES

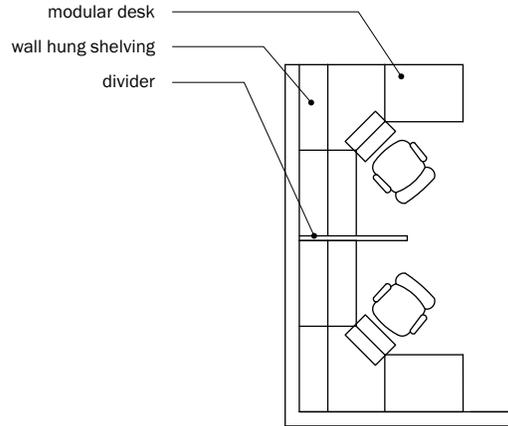
- Near Health Administration Reception

MILLWORK (BUILT-IN CABINETS)

EQUIPMENT / FURNITURE

- Desks
- Chair (2)
- Lateral files
- Overhead shelving

NOTES



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(2) Data connections
Outlets	(2) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tiles
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors
Door Glazing
Windows
Hardware

SECURITY REQ'S None

DEPARTMENT NURSING
FACILITY # HP.3
SPACE NAME OFFICE

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 10'
Occupants 1
Quantity 4

FUNCTION

- Area for faculty to store belongings
- Area for faculty to prepare for classes
- Area for faculty to consult with students

RELATIONSHIP / ADJACENCIES

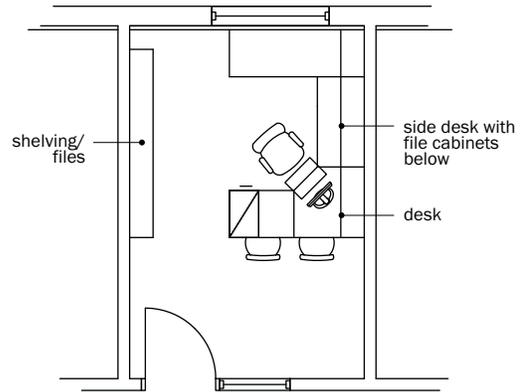
- Near Health Administration Reception

MILLWORK (BUILT-IN CABINETRY)

EQUIPMENT / FURNITURE

- Desk
- Chair (1)
- Guest chairs (2)
- Credenza

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (3) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Views/daylight important
Hardware Lever, lockable; office function

SECURITY REQ'S None

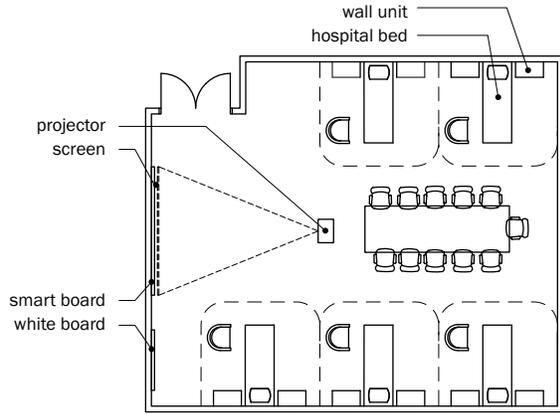
DEPARTMENT **NURSING**
FACILITY # **HP.4**
SPACE NAME **BED LAB**

SPACE

Area 800
Minimum Dimensions 32'
Minimum Ceiling 10'
Occupants 10-12
Quantity 2

FUNCTION

- 5-bed nursing skills lab
- Classroom in middle of lab



RELATIONSHIP / ADJACENCIES

- Adjacent to Bed Lab Storage

MILLWORK (BUILT-IN CABINETS)

- Bedside cabinets left & right of bed (10)
- Pull-down/pull-out writing surface next to each bed (5)
- Upper & lower storage cabinetry with countertop space
- Bookshelf for reference material
- Dry erase board
- Bulletin board

EQUIPMENT / FURNITURE

- Hospital bed (5)
- Over bed headwall med-units (5)
- Chair (12)
- Table (4)
- Bedside chairs (5)
- Dry erase board
- Bulletin board

NOTES

- Headwalls contain suction, "oxygen," compressed air
- Multimedia classroom includes: overhead projection (computer, DVD, VHS)
- Camera overhead each bed with recording capability and closed-circuit feed to control room & nearby classroom
- Duplex outlets at head of bed & along counter
- High Fidelity Bed Lab contains glass filter & curtains between beds

MECHANICAL / PLUMBING

HVAC Standard
Plumbing 3 sinks
Ventilation Standard
Climate Control Yes
Misc Medical air & vacuum @ each bed

ELECTRICAL / COMMUNICATIONS

Lighting Overhead
Audio / Visual Camera, projector, screen
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (8) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Resilient vinyl tile
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Extra wide for gurneys/beds
Door Glazing Half light 1/4" tempered
Windows Views/daylight important
Hardware Lever, lockable

SECURITY REQ'S Locks on all cabinets

DEPARTMENT **NURSING**
FACILITY # **HP.5**
SPACE NAME **BED LAB STORAGE**

SPACE

Area 300
Minimum Dimensions
Minimum Ceiling 9'
Occupants
Quantity 2

FUNCTION

- Storage for Bed Lab supplies, including: syringes, laptops, 8 full-size adult manikins

RELATIONSHIP / ADJACENCIES

- Adjacent to Bed Lab

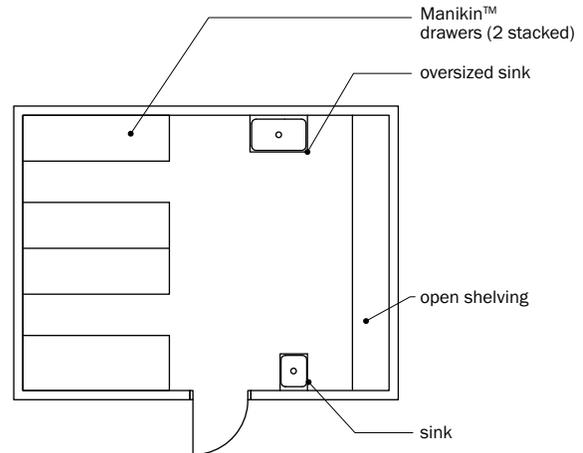
MILLWORK (BUILT-IN CABINETY)

- Manikin™ drawers
- Upper & lower storage cabinetry with countertop space
- Open shelving

EQUIPMENT / FURNITURE

- Filing cabinet, 4-drawer lateral (2)
- Large suitcase holding test training equipment

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing Oversized sink (1), Sink (1)
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting Overhead
Audio / Visual None
Telephone (1) Outlet
Voice / Data (1) Data connections
Outlets (2) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Resilient vinyl tile
Ceiling Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood; 3'6"W
Door Glazing
Windows Lever, lockable
Hardware Lockable cabinets

SECURITY REQ'S

DEPARTMENT **NURSING**
FACILITY # **HP.6**
SPACE NAME **SIMULATION SUITE ROOMS**

SPACE

Area 140
Minimum Dimensions 10'X14'
Minimum Ceiling 10'
Occupants 2-3
Quantity 5

FUNCTION

- Simulation 1-bed patient room
- Instructional space

RELATIONSHIP / ADJACENCIES

- Near Sim Suite Nursing Station
- Near Sim Suite Med Closet
- Near Sim Suite Storage

MILLWORK (BUILT-IN CABINERY)

- Bedside cabinets left & right of bed
- Pull-down or pull-out writing surface next to each bed
- Upper & lower storage cabinetry with countertop space and sink
- Dry erase board

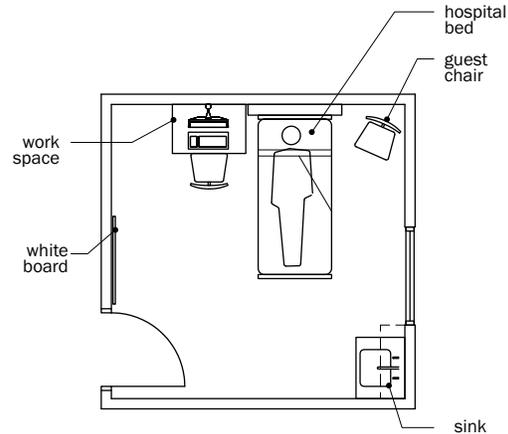
EQUIPMENT / FURNITURE

- Hospital bed
- Overbed table
- Bedside chair
- Care giver task chair (1)

NOTES

- Training headwalls contain suction, "oxygen," compressed air
- Sim man cannot run off of wall units; must have compressed air
- Camera above each bed with recording capability and closed-circuit feed to control room & nearby classroom
- Duplex outlets at head of bed & counter

HP.6



MECHANICAL / PLUMBING

HVAC Standard
Plumbing 1 accessible sink in each room
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting Overhead
Audio / Visual Yes
Telephone (1) Outlet
Voice / Data (1) Data connections
Outlets (2) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board, washable
Base Rubber
Floor Resilient floor tile
Ceiling Acoustical ceiling tiles, washable

DOORS, WINDOWS, HARDWARE

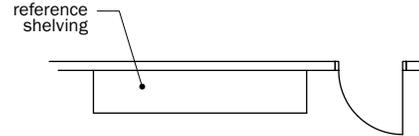
Doors Extra wide for gurneys/beds
Door Glazing Half light 1/4" tempered
Windows Views/daylight important
Hardware Lever, lockable

SECURITY REQ'S Locks on all cabinets

DEPARTMENT **NURSING**
FACILITY # **HP.7**
SPACE NAME **SIM SUITE NURSES STATION**

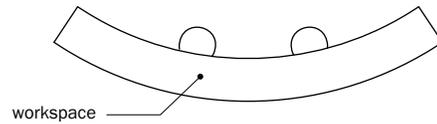
SPACE

Area 150
Minimum Dimensions
Minimum Ceiling 10'
Occupants 5
Quantity 1



FUNCTION

- House two workstations for students to look up simulated lab information/patient records
- Area for students to access reference materials



RELATIONSHIP / ADJACENCIES

- Near Sim Suite Rooms
- Near Sim Suite Med Closet
- Near Sim Suite Storage
- Near Sim Control Room

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINetry)

- Nursing station counter

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual Camera monitors
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (4) Duplex outlets

EQUIPMENT / FURNITURE

- Computer (2)
- Chair (2)
- Bookcase (3)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Camera above station with recording capability and closed-circuit feed to control room & nearby classroom

DOORS, WINDOWS, HARDWARE

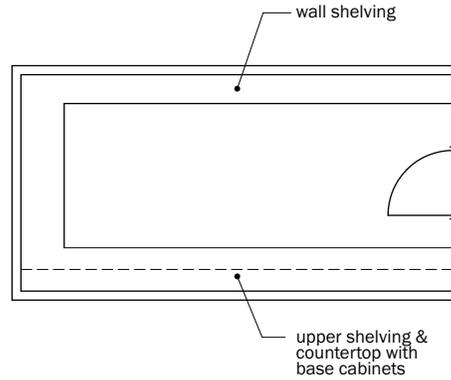
Doors
Door Glazing
Windows
Hardware

SECURITY REQ'S

DEPARTMENT **NURSING**
FACILITY # **HP.8**
SPACE NAME **SIM SUITE MED CLOSET**

SPACE

Area 200
Minimum Dimensions
Minimum Ceiling 10'
Occupants
Quantity 1



FUNCTION

- Area to store simulation medications and supplies for use in Sim Suite

RELATIONSHIP / ADJACENCIES

- Near Sim Suite Rooms
- Near Sim Suite Nursing Station
- Near Sim Suite Storage
- Near Control Room

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Upper shelving with base cabinets
- Wall shelving

ELECTRICAL / COMMUNICATIONS

Lighting Overhead
Audio / Visual None
Telephone
Voice / Data (1) Outlet
Outlets (1) Duplex outlet

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board/Wainscot
Base Rubber
Floor Resilient vinyl tile
Ceiling Acoustical ceiling tiles

NOTES

- Camera overhead with recording capability and closed-circuit feed to control room & nearby classroom

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Lever, lockable; storage function

SECURITY REQ'S None

DEPARTMENT **NURSING**
FACILITY # **HP.9**
SPACE NAME **CONTROL ROOM**

SPACE

Area 180
Minimum Dimensions
Minimum Ceiling 10'
Occupants 4
Quantity 1

FUNCTION

- House four workstations for faculty/staff to supervise Bed Lab and Sim Patient Rooms

RELATIONSHIP / ADJACENCIES

- Near Sim Suite Rooms
- Near Sim Suite Med Closet
- Near Bed Lab

MILLWORK (BUILT-IN CABINETS)

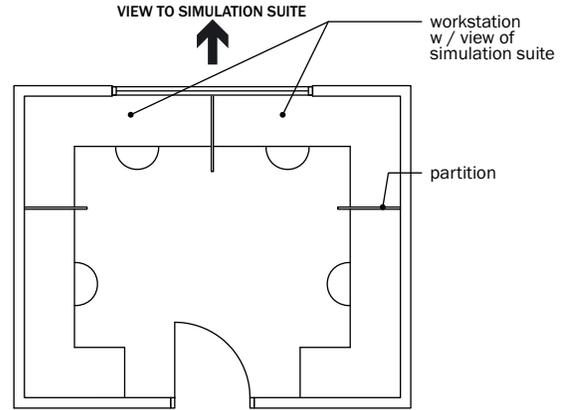
- Countertop with base cabinets

EQUIPMENT / FURNITURE

- Chair (4)
- Partitions (3)

NOTES

- One-way visual connection to Simulation Suite
- Sound/audio access to Simulation Suite



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (4) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT **NURSING**
FACILITY # **HP.10**
SPACE NAME **SIM SUITE STORAGE**

SPACE

Area 300
Minimum Dimensions
Minimum Ceiling 0'
Occupants
Quantity 1

FUNCTION

- Storage for Bed Lab and Sim Suite
- Storage area for large ventilators and other medical equipment

RELATIONSHIP / ADJACENCIES

- Adjacent to Sim Suite Rooms

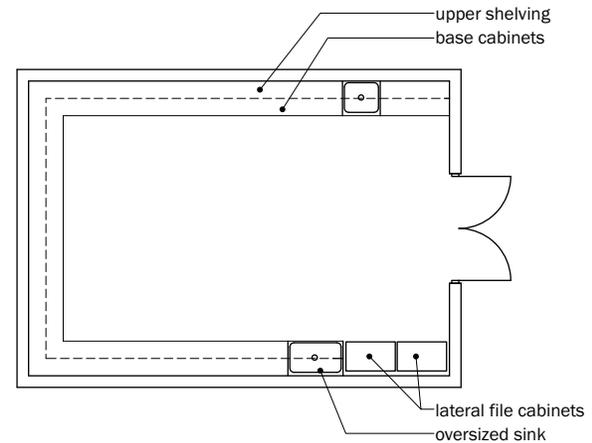
MILLWORK (BUILT-IN CABINERY)

- Upper & lower storage cabinetry with countertop space

EQUIPMENT / FURNITURE

- Filing cabinet, 4-drawer lateral (2)

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing Oversized sink (1), Sink (1)
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting Overhead
Audio / Visual None
Telephone (1) Outlet
Voice / Data (1) Data connections
Outlets (1) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Resilient vinyl tile
Ceiling Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Lever, lockable; storage function

SECURITY REQ'S Lockable cabinets

DEPARTMENT MS HEALTH SCIENCE

FACILITY # HP.11

SPACE NAME OFFICE

SPACE

Area	120
Minimum Dimensions	10'X12'
Minimum Ceiling	9'
Occupants	1
Quantity	2

FUNCTION

- Offices for MS professor and BA professor
- Area for faculty to store belongings
- Area for faculty to prepare for classes
- Area for faculty to consult with students

RELATIONSHIP / ADJACENCIES

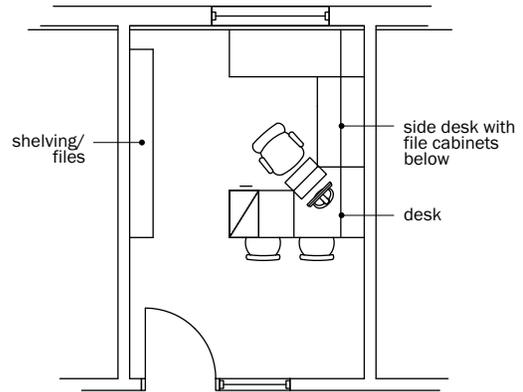
- Near Health Administration Reception

MILLWORK (BUILT-IN CABINETRY)

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving/bookcases

NOTES



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(1) Data connections
Outlets	(2) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tiles
Ceiling	2'X2' Acoustical ceiling tile

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Views/daylight important
Hardware	Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT MS HEALTH SCIENCE

FACILITY # HP.12

SPACE NAME WET LAB

SPACE

Area	1000
Minimum Dimensions	
Minimum Ceiling	10'
Occupants	24
Quantity	1

FUNCTION

RELATIONSHIP / ADJACENCIES

- Adjacent to Wet Lab Prep

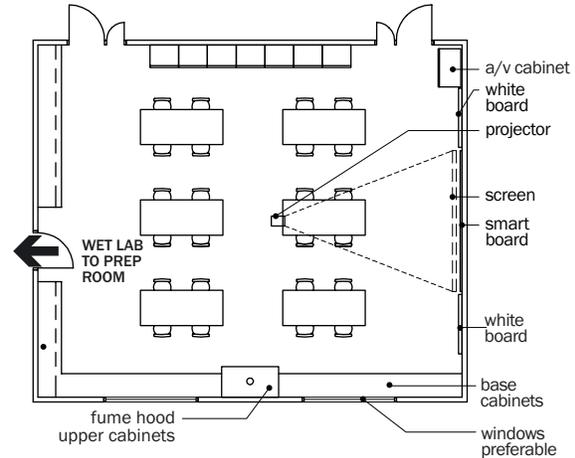
MILLWORK (BUILT-IN CABINERY)

- Base & wall cabinets
- Lab tables
- Whiteboard
- Projection screen

EQUIPMENT / FURNITURE

- Stools (24)
- Teacher lectern
- Whiteboard
- Projection screen

NOTES



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	Accommodate equipment
Ventilation	100% ventilation & as required
Climate Control	Yes
Misc	Gas, air, vacuum, eye wash, fire ext.

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	Projector, screen
Telephone	Accommodate equipment
Voice / Data	From overhead service carrier
Outlets	From overhead service carrier

FINISHES / ENVIRONMENT

Wall	Washable
Base	Vinyl, one base
Floor	Resilient, stainless sheet vinyl
Ceiling	Vinyl coated acoustical tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Daylight important
Hardware	Lever, lockable

SECURITY REQ'S None

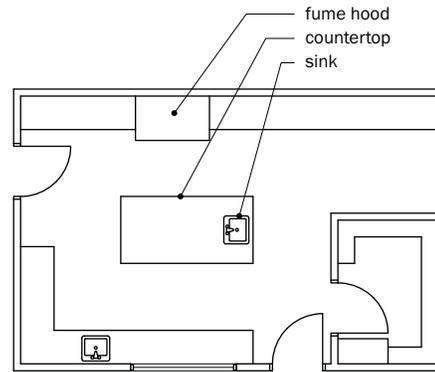
DEPARTMENT MS HEALTH SCIENCE
FACILITY # HP.13
SPACE NAME WET LAB PREP/STORAGE

SPACE

Area 400
 Minimum Dimensions
 Minimum Ceiling 10'
 Occupants
 Quantity 1

FUNCTION

- Prep for Wet Lab function
- Storage for demonstration materials



RELATIONSHIP / ADJACENCIES

- Adjacent to Wet Lab
- Direct access to corridor for supplies

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing Sinks
 Ventilation Fume hood, accommodate equip.
 Climate Control Yes
 Misc Compressed air, gas, vacuum/suction

MILLWORK (BUILT-IN CABINETS)

- Base & wall cabinets

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data Raceny at perimeter
 Outlets Raceny at perimeter

EQUIPMENT / FURNITURE

- Fume hood

FINISHES / ENVIRONMENT

Wall Painted gypsum board, washable
 Base Vinyl core base
 Floor Resilient vinyl sheet
 Ceiling Vinyl coated ceiling tile

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows Interior window into Wet Lab
 Hardware Lever, lockable

NOTES

SECURITY REQ'S None

DEPARTMENT MS HEALTH SCIENCE

FACILITY # HP.14

SPACE NAME ANATOMY LAB

SPACE

Area	900
Minimum Dimensions	
Minimum Ceiling	10'
Occupants	24
Quantity	1

FUNCTION

RELATIONSHIP / ADJACENCIES

- Adjacent to Cadaver Storage
- Near Wet Lab

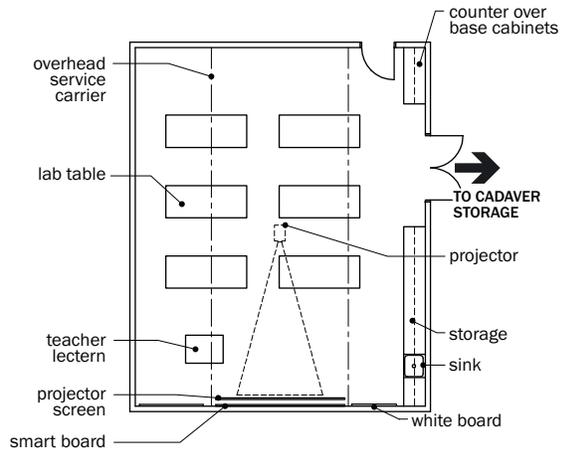
MILLWORK (BUILT-IN CABINERY)

- Large white board

EQUIPMENT / FURNITURE

- Lab bench (6)
- Lab chairs (24)
- Instructor lecture (1)

NOTES



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	Accommodate equipment
Ventilation	100% ventilation
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	Accommodate equipment
Audio / Visual	Camera, projection system
Telephone	(1) Outlet
Voice / Data	From overhead service carrier
Outlets	From overhead service carrier

FINISHES / ENVIRONMENT

Wall	Washable
Base	Vinyl
Floor	Resilient seamless sheet vinyl
Ceiling	Vinyl acoustical ceiling tile

DOORS, WINDOWS, HARDWARE

Doors	H.M.
Door Glazing	
Windows	
Hardware	Lever, lockable

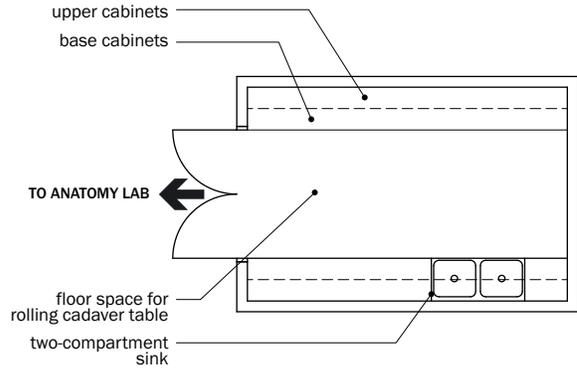
SECURITY REQ'S

DEPARTMENT MS HEALTH SCIENCE
FACILITY # HP.15
SPACE NAME CADAVER STORAGE

SPACE

Area 150
Minimum Dimensions 10'X15'
Minimum Ceiling 9'
Occupants 0
Quantity 1

FUNCTION



RELATIONSHIP / ADJACENCIES

- Adjacent to Anatomy Lab

MECHANICAL / PLUMBING

HVAC Standard
Plumbing Accommodate equipment
Ventilation 100% ventilation
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINetry)

- Upper and lower cabinets

ELECTRICAL / COMMUNICATIONS

Lighting Accommodate equipment
Audio / Visual Camera, projection system
Telephone (1) Outlet
Voice / Data (1) Data connection
Outlets Per code

EQUIPMENT / FURNITURE

- Rolling cadaver table (dimensions: 34"W X 36"H X 87"L), includes: tank, hood, body tray frame, frame, and casters
- Dip tank is designed to hold cadavers submerged under a fixative solution for prolonged storage

FINISHES / ENVIRONMENT

Wall Washable
Base Vinyl cove base
Floor Resilient seamless sheet vinyl
Ceiling Vinyl acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors H.M.
Door Glazing None
Windows Not required
Hardware Lever, lockable

SECURITY REQ'S Card access required

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT COAST- INTERIOR DESIGN

FACILITY # CO.1

SPACE NAME OFFICE

SPACE

Area	120
Minimum Dimensions	10'X12'
Minimum Ceiling	9'
Occupants	1
Quantity	2

FUNCTION

- Area for faculty to store belongings
- Area for faculty to prepare for classes
- Area for faculty to consult with students

RELATIONSHIP / ADJACENCIES

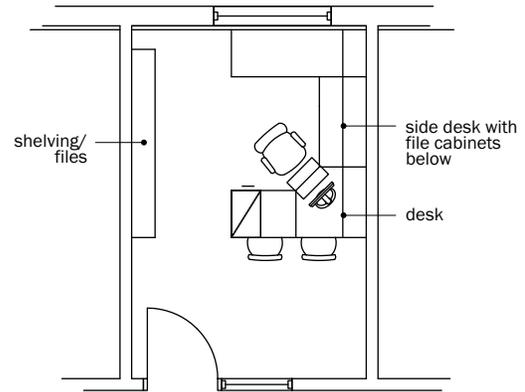
- Near COAST/Construction Management Reception

MILLWORK (BUILT-IN CABINETRY)

EQUIPMENT / FURNITURE

- Desk
- Chair
- Guest chairs (2)
- Credenza
- Shelving

NOTES



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(4) Data connections
Outlets	(3) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tiles
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Views/daylight important
Hardware	Lever, lockable

SECURITY REQ'S None

DEPARTMENT COAST- INTERIOR DESIGN

FACILITY # CO.2

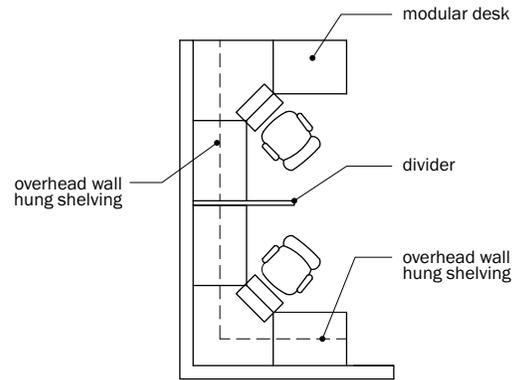
SPACE NAME ADJUNCT FACULTY

SPACE

Area 70
 Minimum Dimensions
 Minimum Ceiling
 Occupants 3
 Quantity 4

FUNCTION

- Area for adjunct faculty to store belongings
- Area for adjunct faculty to prepare for classes



RELATIONSHIP / ADJACENCIES

- Near COAST/Construction Management Reception

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (4) Data connections
 Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

- Modular office equipment
- Desk
- Chair
- Lateral files
- Overhead shelving

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Carpet tiles
 Ceiling 2'X2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing Half light 1/4" tempered
 Windows Views/daylight important
 Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT COAST- INTERIOR DESIGN
FACILITY # CO.3
SPACE NAME WORKROOM/LAB

SPACE

Area 800
Minimum Dimensions
Minimum Ceiling 10'
Occupants 15-20
Quantity 1

FUNCTION

- Space to assemble models and color boards
- Space to cut and assemble models
- Area to select finishes and surfaces

RELATIONSHIP / ADJACENCIES

- Adjacent/connected to Interior Design Library
- Near Interiors Design Lab/Studio

MILLWORK (BUILT-IN CABINETRY)

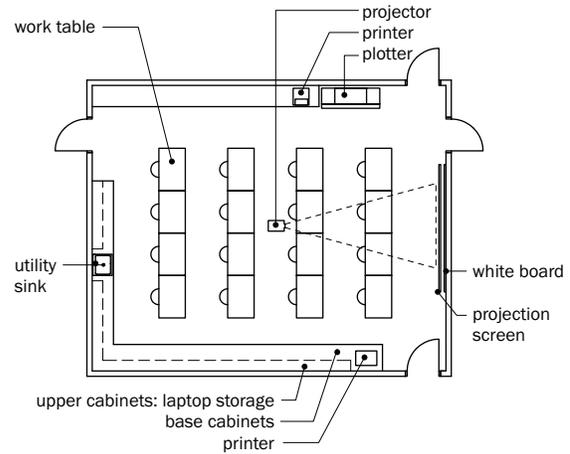
- Model assembly area with durable surfaces (cutting, gluing)
- Laptop storage in workroom with charging station
- Whiteboard

EQUIPMENT / FURNITURE

- 30”X48”X36”H tables (20)
- Cutting boards on tables
- Lockable storage under studio tables
- Color printer (19”W)
- D-size plotter
- Chairs, for 36”H tables (20)

NOTES

- Natural light & access for colors
- Good color rendition lights for Lab & Studio spaces



MECHANICAL / PLUMBING

HVAC Standard
Plumbing Utility sink for paint, sediment
Ventilation trap
Climate Control Standard
Misc Yes

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual Projector, screen
Telephone (1) Outlet
Voice / Data (20) Data connections
Outlets (30) Duplex outlets

FINISHES / ENVIRONMENT

Wall Pinnable, except at white boards
Base Rubber
Floor Resilient vinyl tile
Ceiling 2’X2’ Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4” tempered
Windows Daylight important
Hardware Lever, lockable

SECURITY REQ’S Card reader

DEPARTMENT COAST- INTERIOR DESIGN

FACILITY # CO.4

SPACE NAME LAB STUDIO

SPACE

Area	800
Minimum Dimensions	
Minimum Ceiling	10'
Occupants	20
Quantity	2

FUNCTION

- Computer workstations and architectural desks for 20 students
- Classroom for hand-drawing, AutoCAD and lecture

RELATIONSHIP / ADJACENCIES

- Near Interior Design Workroom/Lab
- Near Interior Design Library
- Near Storage

MILLWORK (BUILT-IN CABINERY)

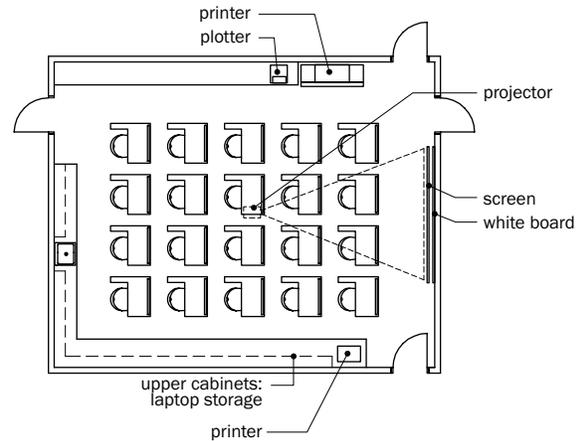
- Storage spaces at workstation, under desk
- Built-in classroom storage
- Whiteboard

EQUIPMENT / FURNITURE

- L-shaped workstations with computer and plan space (20)
- Seating at "L" shaped stations (2)

NOTES

- Natural light & access for colors
- Good color rendition lights for Lab & Studio spaces
- Durable work surfaces



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	Utility sink for paint, sediment trap
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	Projection
Telephone	(1) Outlet
Voice / Data	(20) Data connections
Outlets	(20) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Pinnable, except at white boards
Base	Rubber
Floor	Carpet tile
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Daylight important
Hardware	Lever, lockable

SECURITY REQ'S Card reader

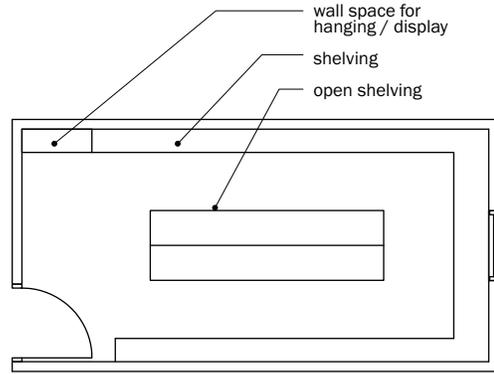
DEPARTMENT COAST- INTERIOR DESIGN
FACILITY # CO.5
SPACE NAME LIBRARY

SPACE

Area 200
Minimum Dimensions 10'X20'
Minimum Ceiling 10'
Occupants 20
Quantity 1

FUNCTION

- Space to store materials information and samples
- Space to store finishes, surfaces, catalogues



RELATIONSHIP / ADJACENCIES

- Adjacent/connected to Workroom/Lab

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINETRY)

- Wall shelving with depths to accommodate bins, books, etc.
- Area to hang fabric samples and store odd-shaped samples
- Shelving capable of holding granite, marble samples
- Open shelving for materials samples
- Layout tables with undertable storage

EQUIPMENT / FURNITURE

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (4) Duplex outlets

FINISHES / ENVIRONMENT

Wall Standard
Base Rubber
Floor Resilient vinyl tile
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Daylight important
Hardware Lever, lockable

NOTES

- Natural light & access for colors
- Good color rendition lights for Lab & Studio spaces
- Some walls with pegboard

SECURITY REQ'S None

DEPARTMENT COAST- INTERIOR DESIGN

FACILITY # CO.6

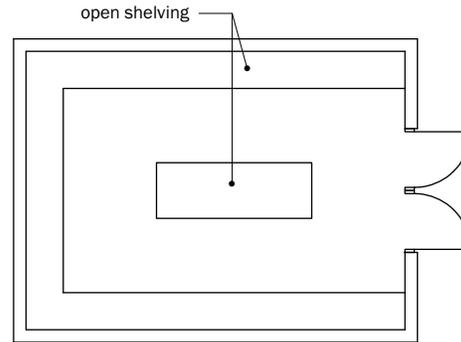
SPACE NAME STORAGE

SPACE

Area 300
 Minimum Dimensions
 Minimum Ceiling 9'
 Occupants
 Quantity 1

FUNCTION

- Store student materials for accreditation purposes, including: color boards, notebooks, models and 11"x17" plans



RELATIONSHIP / ADJACENCIES

- Adjacent to Interior Design Workroom/Lab
- Near Interior Design Lab/Studio
- Near Interior Design Library

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Open shelving
- 36" depth adjustable shelving
- 1 center worktable (36"H)

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (4) Data connections
 Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Carpet tiles
 Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Materials are sized up to 30"H X 36"L

DOORS, WINDOWS, HARDWARE

Doors Solid core plastic laminate
 Door Glazing Half light 1/4" tempered
 Windows Views/daylight important
 Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT COAST- CONSTRUCTION MGMT
FACILITY # CO.7
SPACE NAME CONCRETE LAB

SPACE

Area 1000
 Minimum Dimensions
 Minimum Ceiling 11'
 Occupants 32
 Quantity 1

FUNCTION

- Room for concrete and mechanical lab instruction

RELATIONSHIP / ADJACENCIES

- Adjacent to Storage with double-door access
- Adjacent to a Construction Management classroom
- Near Receiving for ease of access to heavy materials
- Near an exterior dumpster
- Near exterior storage of gravel, sand and other aggregate materials (exterior storage bins or 55 gallon drums on pallets)

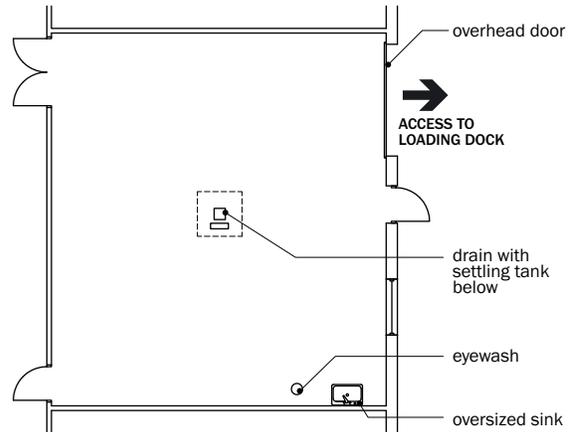
MILLWORK (BUILT-IN CABINETRY)

EQUIPMENT / FURNITURE

- Multi-stage drain to accommodate washing concrete equipment, settling tank
- Sink with garden hose
- Emergency eye wash

NOTES

- Overhead door with access to the exterior of the building
- Bench-height power around perimeter for test equipment
- Exterior storage bins, 2 drums high
- Dust evacuation is important
- Separate fan system
- Forklift access



MECHANICAL / PLUMBING

HVAC Standard
Plumbing Sink; floor drain, sediment traps; eye wash
Ventilation Standard
Climate Control Dust evacuation system
Misc Climate control separate from bldg.

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.
Audio / Visual None
Telephone Accommodate equipment
Voice / Data Accommodate equipment
Outlets Accommodate equipment

FINISHES / ENVIRONMENT

Wall Painted gyp. board/Wainscot/Washable
Base Rubber
Floor Sealed concrete
Ceiling Open ceiling, 11'clearance, painted

DOORS, WINDOWS, HARDWARE

Doors 10' high O.H. door; personnel door
Door Glazing Half light safety
Windows Daylight important
Hardware Lever, lockable

SECURITY REQ'S None

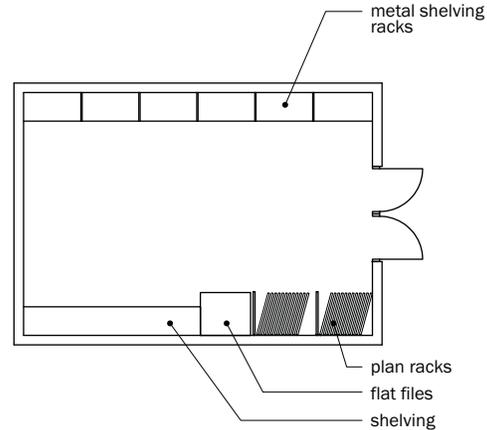
DEPARTMENT COAST- CONSTRUCTION MGMT
FACILITY # CO.8
SPACE NAME STORAGE

SPACE

Area 400
 Minimum Dimensions
 Minimum Ceiling
 Occupants
 Quantity 1

FUNCTION

- Concrete Lab storage
- Survey equipment storage
- Plan/construction document storage



RELATIONSHIP / ADJACENCIES

- Adjacent to Concrete Lab with double door access (6'X2' rolling instructional station)
- Near exterior storage of gravel, sand, and other construction management materials
- Near Loading Dock

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINETS)

- Shelving

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (2) Data connections
 Outlets (6) Duplex outlets

EQUIPMENT / FURNITURE

- Metal racks, adjustable shelving (5)
- Hanging plan racks
- Flat files

FINISHES / ENVIRONMENT

Wall Painted gypsum board/Wainscot
 Base Rubber
 Floor Sealed concrete
 Ceiling Hard

NOTES

- Additional exterior storage

DOORS, WINDOWS, HARDWARE

Doors Double H.M.
 Door Glazing Half light 1/4" tempered
 Windows
 Hardware Lever, lockable; storage function

SECURITY REQ'S None

DEPARTMENT COAST- CONSTRUCTION MGMT
FACILITY # CO.9
SPACE NAME OFFICE

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 10'
Occupants 1
Quantity 14

FUNCTION

- Area for faculty to store belongings
- Area for faculty to prepare for classes
- Area for faculty to consult with students

RELATIONSHIP / ADJACENCIES

- Near COAST/Construction Management Reception

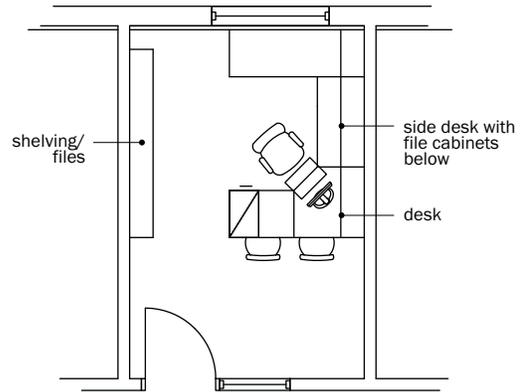
MILLWORK (BUILT-IN CABINETY)

- 4'X4' dry erase board

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving/bookcases

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (3) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Views/daylight important
Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT **COAST- CONSTRUCTION MGMT**

FACILITY # **CO.10**

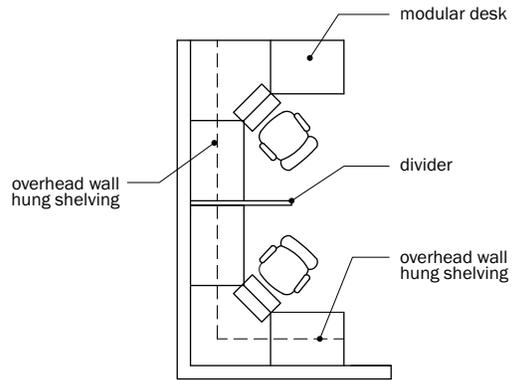
SPACE NAME **ADJUNCT FACULTY**

SPACE

Area	70
Minimum Dimensions	
Minimum Ceiling	9'
Occupants	1
Quantity	4

FUNCTION

- Area for adjunct faculty to store belongings
- Area for adjunct faculty to prepare for classes



RELATIONSHIP / ADJACENCIES

- Near COAST/Construction Management Reception

MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

MILLWORK (BUILT-IN CABINETS)

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(4) Data connections
Outlets	(3) Duplex outlets

EQUIPMENT / FURNITURE

- Desk
- Chair
- Lateral files
- Overhead shelving
- Modular office equipment

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tiles
Ceiling	2'X2' Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

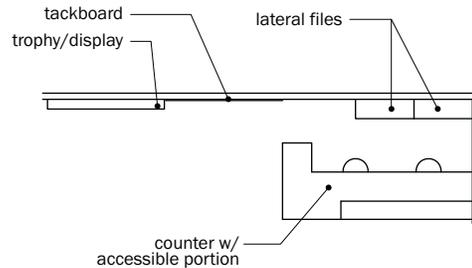
Doors	Solid core plastic laminate
Door Glazing	Half light 1/4" tempered
Windows	Views/daylight important
Hardware	Lever, lockable

SECURITY REQ'S None

DEPARTMENT **COAST- CONSTRUCTION MGMT**
FACILITY # **CO.11**
SPACE NAME **RECEPTION, SHARED**

SPACE

Area 150
Minimum Dimensions
Minimum Ceiling
Occupants
Quantity 1



FUNCTION

- Provide support services to COAST faculty and students
- Student workstation

RELATIONSHIP / ADJACENCIES

- Near Construction Management, Engineering, and Interior Design offices and workroom
- Near a lobby space or common area with waiting seating for 8

MILLWORK (BUILT-IN CABINETY)

- Secretarial workstation
- 43"-high partition between secretarial workstation and public
- 15" wide work surface on top of partition
- ADA accessible counter
- Tack boards (8'X4') (4)

EQUIPMENT / FURNITURE

- 4-drawer lateral file cabinets (2)
- Computer (2)
- Adjacent wall space: trophy/display case; 16' LF donor wall

NOTES

- Tack boards: program (1), student clubs (1), employment (2)
- Trophy/display case is for awards and or current notable student work, should be near donor wall
- Donor wall must be in a visible/prominent location (ie. between elevator and reception area)

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (4) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tile

DOORS, WINDOWS, HARDWARE

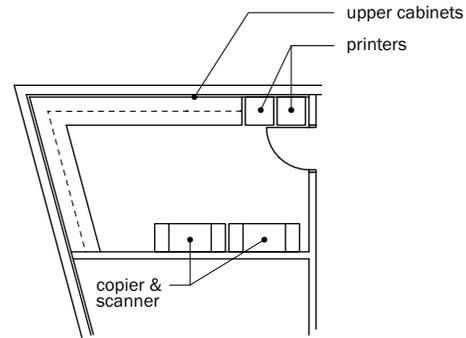
Doors
Door Glazing Half light 1/4" tempered
Windows
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT COAST- CONSTRUCTION MGMT
FACILITY # CO.12
SPACE NAME WORKROOM, SHARED

SPACE

Area 200
 Minimum Dimensions
 Minimum Ceiling 9'
 Occupants
 Quantity 1



FUNCTION

- Workroom for COAST faculty and staff

RELATIONSHIP / ADJACENCIES

- Near COAST offices
- Near COAST/Construction Management Reception

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing Standard
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- 23”X96” work surface with lower cabinets and upper shelves

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (4) Data connections
 Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

- Combination copier/printer/scanner
- Construction drawing scanner (for plans up to 36”X48”)
- 8-1/2”X11” printer with duplexer
- 11”X17” printer
- 8-1/2”X14” scanner
- Fax machine

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient vinyl tile
 Ceiling Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

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DEPARTMENT COAST- CONSTRUCTION MGMT

FACILITY # CO.13

SPACE NAME SENIOR PROJECT ROOM

SPACE

Area	800
Minimum Dimensions	
Minimum Ceiling	10'
Occupants	16
Quantity	1

FUNCTION

- Dedicated space for students to work on Senior Projects
- Space for members of student clubs to prepare for student competitions

RELATIONSHIP / ADJACENCIES

MILLWORK (BUILT-IN CABINETY)

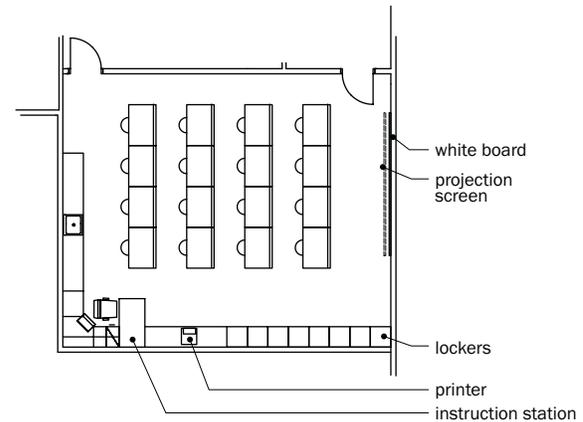
- Instructor station with computer, projector, VHS player, computer, overhead projector, and connection for portable ELMO projector
- 16'X4' dry erase board

EQUIPMENT / FURNITURE

- Plan desk (48"X32") (16)
- Desks include power and network cable connections
- Printer located away from instructor's station
- 24"Wx24"Dx42"H lockers with one movable shelf (30)
- Seating at desks (16)
- Instructor chair (1)

NOTES

- Dimmable lighting
- Projector screen should be located 2" in front of dry-erase board
- *Audio/Visual: voice enhancement, projector, screen, multimedia



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	Sink
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	*See NOTES
Telephone	(1) Outlet
Voice / Data	(25) Data connections
Outlets	(40) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Tackable
Base	Rubber
Floor	Resilient vinyl tile
Ceiling	Acoustical

DOORS, WINDOWS, HARDWARE

Doors	Double solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Views/daylight important
Hardware	Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

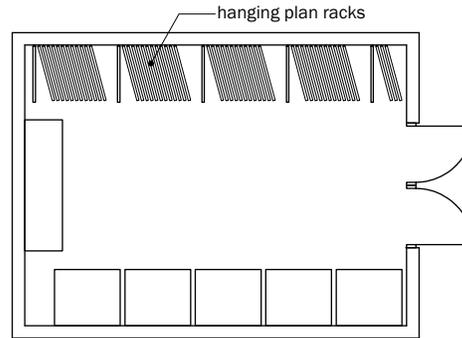
DEPARTMENT COAST- CONSTRUCTION MGMT

FACILITY # CO.14A

SPACE NAME CLASSROOM STORAGE

SPACE

Area 300
Minimum Dimensions 7'W
Minimum Ceiling
Occupants
Quantity 1



FUNCTION

- Storage space for 2 adjacent Engineering classrooms

RELATIONSHIP / ADJACENCIES

- Adjacent to Engineering classrooms

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (6) Duplex outlets

EQUIPMENT / FURNITURE

- Storage A: Hanging plans on one side; surveying equipment on other side

FINISHES / ENVIRONMENT

Wall Painted gypsum board/ wainscott
Base Rubber
Floor Sealed concrete
Ceiling Hard

NOTES

DOORS, WINDOWS, HARDWARE

Doors Double H.M.
Door Glazing
Windows
Hardware Lever, lockable

SECURITY REQ'S None

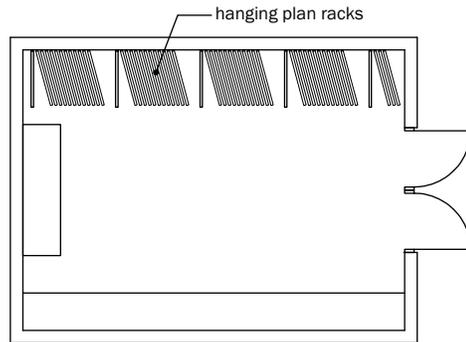
DEPARTMENT **COAST- CONSTRUCTION MGMT**
FACILITY # **CO.14B**
SPACE NAME **CLASSROOM STORAGE**

SPACE

Area 300
 Minimum Dimensions 7'W
 Minimum Ceiling
 Occupants
 Quantity 1

FUNCTION

- Storage space for 2 adjacent Engineering classrooms



RELATIONSHIP / ADJACENCIES

- Adjacent to Engineering classrooms

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINETY)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (2) Data connections
 Outlets (6) Duplex outlets

EQUIPMENT / FURNITURE

- Storage B: Hanging plans on one side; shelving for materials storage on the other

FINISHES / ENVIRONMENT

Wall Painted gypsum board / Wainscot
 Base Rubber
 Floor Sealed concrete
 Ceiling Hard

NOTES

DOORS, WINDOWS, HARDWARE

Doors Double H.M.
 Door Glazing
 Windows
 Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

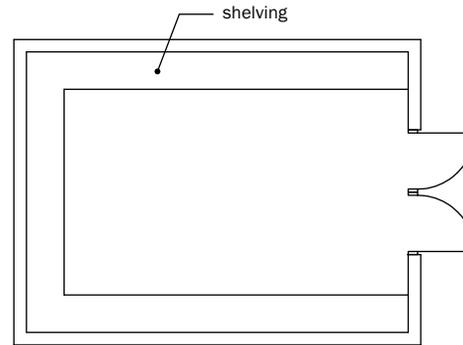
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DEPARTMENT COAST- CONSTRUCTION MGMT
FACILITY # CO.14C
SPACE NAME CLASSROOM STORAGE

SPACE

Area 300
Minimum Dimensions 7'W
Minimum Ceiling
Occupants
Quantity 1



FUNCTION

- Storage space for 2 adjacent Engineering classrooms

RELATIONSHIP / ADJACENCIES

- Adjacent to Engineering classrooms

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Storage C: Shelving to store material samples on both sides.

ELECTRICAL / COMMUNICATIONS

Lighting Double H.M.
Audio / Visual
Telephone
Voice / Data Lever, lockable
Outlets None

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board / Wainscot
Base Rubber
Floor Sealed concrete
Ceiling Hard

NOTES

DOORS, WINDOWS, HARDWARE

Doors Double H.M.
Door Glazing
Windows
Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

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DEPARTMENT **COAST- ENGINEERING**

FACILITY # **CO.15**

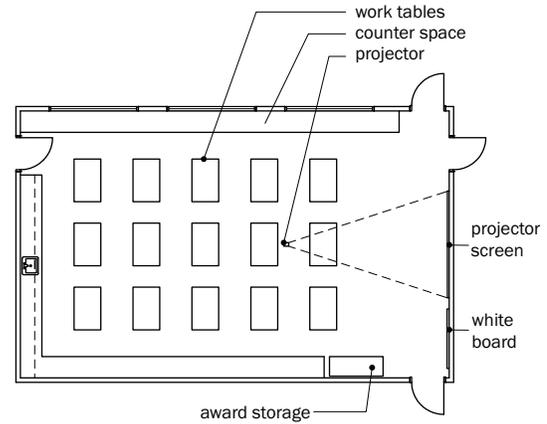
SPACE NAME **ENGINEERING LAB**

SPACE

Area	1000
Minimum Dimensions	
Minimum Ceiling	
Occupants	24
Quantity	4

FUNCTION

- Lab instruction space



RELATIONSHIP / ADJACENCIES

- Near Engineering classrooms
- Near Engineering Lab storage

MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

MILLWORK (BUILT-IN CABINETRY)

- Base & wall cabinets
- Lab tables
- Whiteboard

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	Projector, screen
Telephone	Accommodate equipment
Voice / Data	From overhead service carrier
Outlets	From overhead service carrier

EQUIPMENT / FURNITURE

- Stools (24)
- Teacher lectern (1)
- Projection screen

FINISHES / ENVIRONMENT

Wall	Washable
Base	Vinyl, one base
Floor	Resilient, stainless sheet vinyl
Ceiling	Vinyl coated acoustical tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors	Solid core plastic laminate
Door Glazing	Views/daylight important
Windows	Half light 1/4" tempered
Hardware	Lever, lockable

SECURITY REQ'S None

DEPARTMENT COAST- ENGINEERING

FACILITY # CO.16

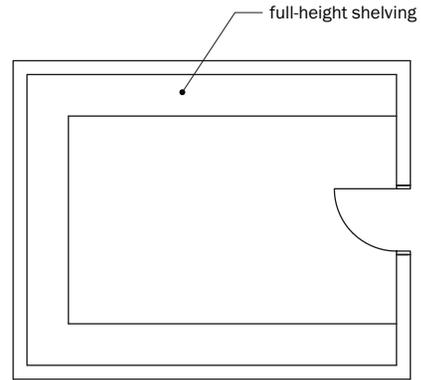
SPACE NAME LAB STORAGE

SPACE

Area 250
 Minimum Dimensions
 Minimum Ceiling 9'
 Occupants
 Quantity 2

FUNCTION

- Storage space for instructional material and equipment for Engineering Labs



RELATIONSHIP / ADJACENCIES

- Adjacent to Engineering Labs

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Storage shelving

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (2) Data connections
 Outlets (6) Duplex outlets

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board/Wainscot
 Base Rubber
 Floor Sealed concrete
 Ceiling Hard

NOTES

DOORS, WINDOWS, HARDWARE

Doors Double H.M.
 Door Glazing
 Windows
 Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

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DEPARTMENT **COAST- ENGINEERING**

FACILITY # **CO.17**

SPACE NAME **OFFICES, PRIVATE**

SPACE

Area	120
Minimum Dimensions	
Minimum Ceiling	10'
Occupants	1
Quantity	8

FUNCTION

- 3 offices, WSU faculty; 5 offices, USU Engineering faculty
- Area for faculty to store belongings
- Area for faculty to prepare for classes
- Area for faculty to consult with students

RELATIONSHIP / ADJACENCIES

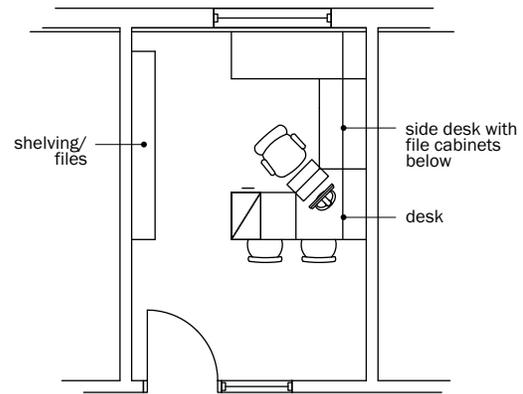
- Near Construction Management Reception
- Near Construction Management Workroom

MILLWORK (BUILT-IN CABINERY)

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving/bookcases

NOTES



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	None
Telephone	(1) Outlet
Voice / Data	(2) Data connections
Outlets	(3) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Painted gypsum board
Base	Rubber
Floor	Carpet tiles
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Views/daylight important
Hardware	Lever, lockable; office function

SECURITY REQ'S None

DEPARTMENT COAST- ENGINEERING

FACILITY # CO.18

SPACE NAME ENGINEERING SHOP

SPACE

Area	800
Minimum Dimensions	
Minimum Ceiling	11'
Occupants	25
Quantity	1

FUNCTION

- Open space for the utilization of large construction/fabrication equipment

RELATIONSHIP / ADJACENCIES

- Near Receiving for transportation of heavy equipment

MILLWORK (BUILT-IN CABINERY)

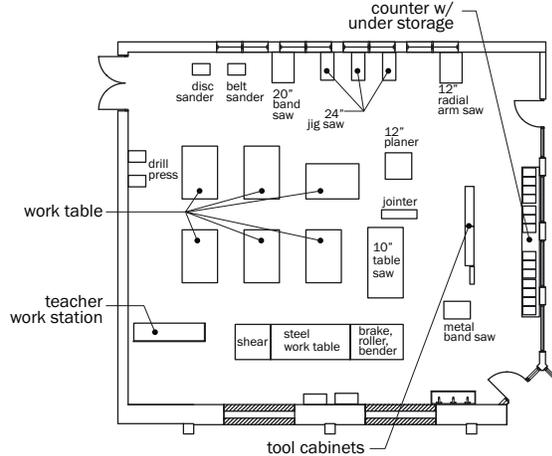
- 12' LF work surface
- 12' LF lower cabinet space
- 16'X4' dry erase board

EQUIPMENT / FURNITURE

- Coordinate equipment list with COAST

NOTES

- Most equipment in use will have included individual worksurface
- Bench-height power around perimeter for test equipment
- 110V/220V power drops
- Overhead power strips used for teaching



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.; include task lighting
Audio / Visual	Projector, multi-media
Telephone	(1) Outlet
Voice / Data	Accommodate equipment
Outlets	Accommodate equipment

FINISHES / ENVIRONMENT

Wall	Painted gypsum board/Wainscot
Base	Rubber
Floor	Concrete
Ceiling	Open

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Daylight important
Hardware	Lever, lockable

SECURITY REQ'S None

DEPARTMENT NUAMES
FACILITY # NU.1
SPACE NAME RECEPTION, 2 WORKSTATIONS

SPACE

Area 150
Minimum Dimensions 10'X15'
Minimum Ceiling 9'
Occupants 6
Quantity 1

FUNCTION

- Control access to NUAMES Administrative Offices
- Guest waiting
- Information/service counter
- 1 workstation at counter, other variable

RELATIONSHIP / ADJACENCIES

- Adjacent to Lobby
- Near NUAMES Faculty Workroom
- Near NUAMES Administrative Offices
- Visibility to parents/public very important

MILLWORK (BUILT-IN CABINETRY)

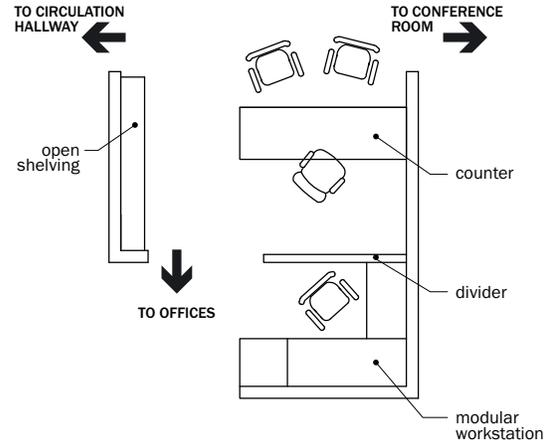
- Counter/workstation that separates office area from waiting area preferred (like Bruce Davis')
- Lower cabinets
- Open shelving behind workstation

EQUIPMENT / FURNITURE

- Guest chairs (2)
- Task chairs (2)
- Modular station (1)
- Partition (1)

NOTES

- Will utilize WSU-Davis typical office furnishings through state contract pricing



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (4) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood/aluminum
Door Glazing Half light 1/4" tempered
Windows
Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

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DEPARTMENT NUAMES
FACILITY # NU.2
SPACE NAME OFFICE, ADMINISTRATIVE

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 9'
Occupants 1
Quantity 4

FUNCTION

- Area for administrative support of school functions
- Area for administrators to consult with students & parents

RELATIONSHIP / ADJACENCIES

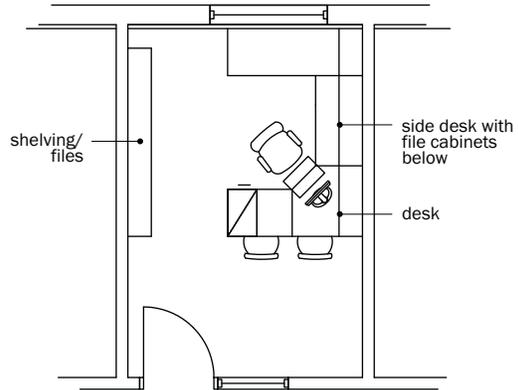
- Near NUAMES Reception

MILLWORK (BUILT-IN CABINETRY)

EQUIPMENT / FURNITURE

- Desk
- Office chair (1)
- Guest chair (2)
- Computer
- Printer/copier/fax
- Large filing cabinet (1)
- Shelving/bookcases

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (3) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Views/daylight important
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT NUAMES
FACILITY # NU.3
SPACE NAME FACULTY WORKROOM

SPACE

Area 120
Minimum Dimensions 10'X12'
Minimum Ceiling 9'
Occupants 4
Quantity 1

FUNCTION

- Space for faculty to prepare class materials

RELATIONSHIP / ADJACENCIES

- Near NUAMES Administrative Offices
- Near NUAMES Reception
- Near Faculty Breakroom
- Near elevator

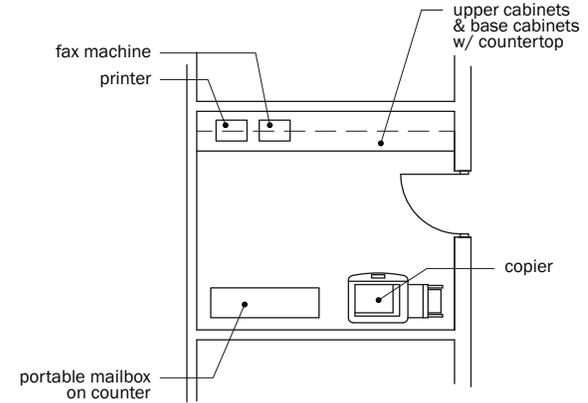
MILLWORK (BUILT-IN CABINETRY)

- 8" of countertop work surface against wall
- Storage for 10 boxes of 10 reams of paper

EQUIPMENT / FURNITURE

- Copier (2) - 1 high-speed mimeograph
- Paper cutter
- Printer
- Fax machine
- Mailbox (portable)

NOTES



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (3) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

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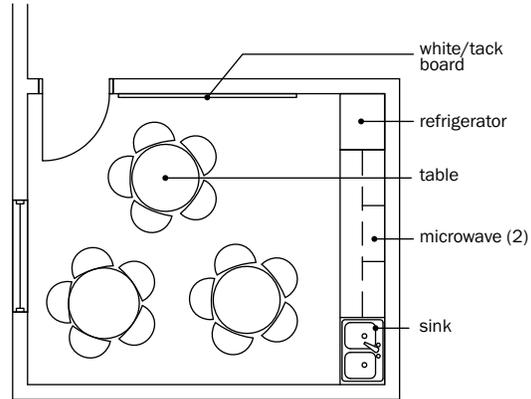
DEPARTMENT NUAMES
FACILITY # NU.4
SPACE NAME FACULTY BREAKROOM

SPACE

Area 200
Minimum Dimensions
Minimum Ceiling
Occupants 12-16
Quantity 1

FUNCTION

- Location for faculty to conduct meetings, post information and congregate for lunch



RELATIONSHIP / ADJACENCIES

- Near Faculty Workroom

MECHANICAL / PLUMBING

HVAC Standard
Plumbing Double compartment sink
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- 6' LF Counter space
- Base & upper cabinets
- Undersink storage
- White board/tackboard

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual None
Telephone (1) Outlet
Voice / Data (2) Data connections
Outlets (6) Duplex outlets

EQUIPMENT / FURNITURE

- Microwave
- Refrigerator
- Round tables (3)
- Chairs (16)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Resilient vinyl tile
Ceiling 2'X2' Acoustical ceiling tiles

NOTES

- Envisioned like room #241 in current building

DOORS, WINDOWS, HARDWARE

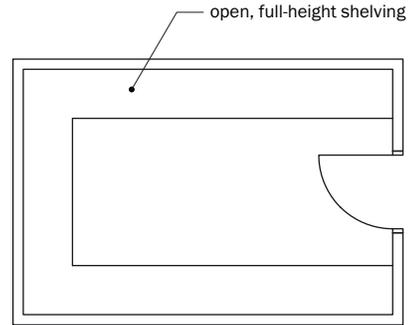
Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Daylight important
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT NUAMES
FACILITY # NU.5
SPACE NAME STORAGE, GENERAL

SPACE

Area 150
Minimum Dimensions 10'X15'
Minimum Ceiling 9'
Occupants
Quantity 1



FUNCTION

- Store office supplies (paper, ink, etc.)
- Store registration materials (tables, chairs, etc.)

RELATIONSHIP / ADJACENCIES

- Adjacent to NUAMES Reception

MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

MILLWORK (BUILT-IN CABINERY)

- Open shelving

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
Audio / Visual None
Telephone (1) Outlet
Voice / Data (1) Data connections
Outlets (2) Duplex outlets

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board
Base Rubber
Floor Resilient
Ceiling Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing
Windows
Hardware Lever, lockable; storage function

SECURITY REQ'S None

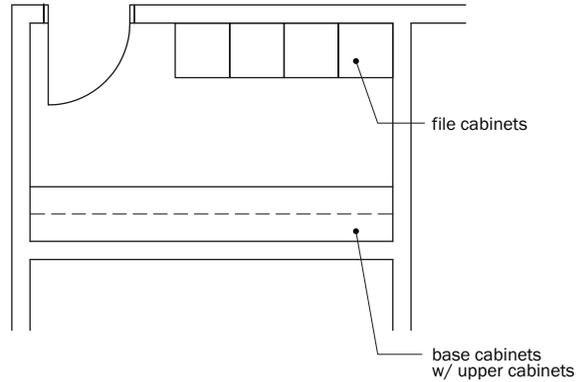
DEPARTMENT NUAMES
FACILITY # NU.6
SPACE NAME STORAGE, SECURE

SPACE

Area 60
 Minimum Dimensions
 Minimum Ceiling
 Occupants
 Quantity 1

FUNCTION

- Secure storage for student records



RELATIONSHIP / ADJACENCIES

- In or adjacent to NUAMES General Storage

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Base cabinets (on one wall)
- Upper cabinets (on one wall)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (1) Data connections
 Outlets (3) Duplex outlets

EQUIPMENT / FURNITURE

- 4'X5' fire-proof file cabinets (4)

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Carpet tiles
 Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing None
 Windows None required
 Hardware Lever, lockable; storage function

NOTES

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT **NUAMES**
FACILITY # **NU.07**
SPACE NAME **ART ROOM**

SPACE

Area 950
Minimum Dimensions
Minimum Ceiling 10'
Occupants 30
Quantity 1

FUNCTION

- Instruction of art classes (ceramics, painting)
- Digital art: doubles as computer lab

RELATIONSHIP / ADJACENCIES

- Adjacent to Art Room Storage
- Near Interior Design rooms

MILLWORK (BUILT-IN CABINETRY)

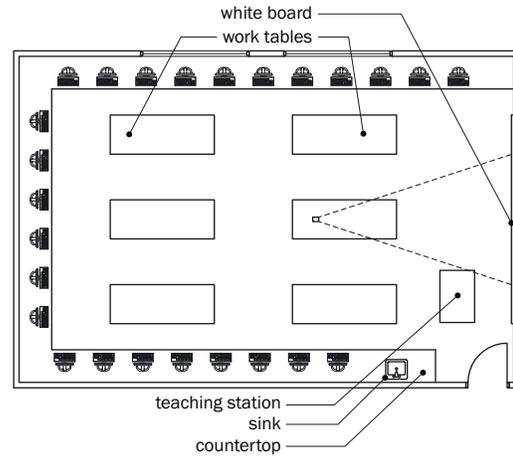
- Counters with knee space around perimeter to accommodate 20-25 computer workstations
- Teacher workstation
- 6' tables for large art projects (6)
- White board/tackboard

EQUIPMENT / FURNITURE

- Computers wired around the perimeter of classroom OR mobile wireless laptop cart
- Sink
- Seating at computers / tables (30)
- Lecture for instructor (1)

NOTES

- Voice enhancement



MECHANICAL / PLUMBING

HVAC Standard
Plumbing Sink with sediment trap
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.; include task lighting
Audio / Visual Projector, screen; Full multi-media
Telephone (1) Outlet
Voice / Data (25) Data connections
Outlets (25) Duplex outlets

FINISHES / ENVIRONMENT

Wall Tackable/washable
Base Rubber
Floor Resilient vinyl tile
Ceiling Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

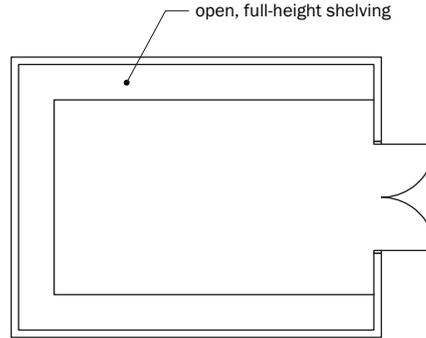
Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Daylight important
Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT NUAMES
FACILITY # NU.08
SPACE NAME STORAGE, ART ROOM

SPACE

Area 300
 Minimum Dimensions
 Minimum Ceiling 9'
 Occupants
 Quantity 1



FUNCTION

RELATIONSHIP / ADJACENCIES

- Adjacent to NUAMES Art Room

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Open shelving (24" Deep)

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (2) Data connections
 Outlets (2) Duplex outlets

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient vinyl tile
 Ceiling Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT **NUAMES**
FACILITY # **NU.09**
SPACE NAME **PROJECT ROOM**

SPACE

Area 800
Minimum Dimensions
Minimum Ceiling 10'
Occupants 26
Quantity 1

FUNCTION

- Assembly & manufacture of student projects

RELATIONSHIP / ADJACENCIES

- Near Engineering Labs

MILLWORK (BUILT-IN CABINETS)

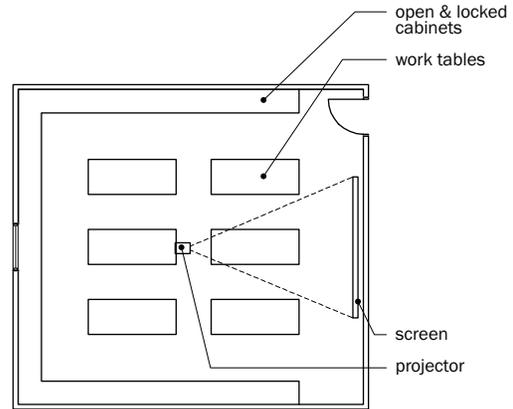
- Shelving around perimeter of room, mixed open cabinets, locked cabinets at least 18" deep

EQUIPMENT / FURNITURE

- Standing tables, no chairs (6)
- Equipment includes: Saws, drills, ShopVac
- 18"X18" Circuit board project materials
- Small scale model materials: Balsa wood/glue/exacto knives
- Tool chest

NOTES

- Open room with storage around outside walls
- Possibility of sharing with COAST



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Dust evacuation
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c. indirect
Audio / Visual Projection
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (20) Duplex outlets

FINISHES / ENVIRONMENT

Wall Tackable
Base Rubber
Floor Resilient vinyl tile
Ceiling Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Daylight important
Windows Lever, lockable
Hardware Half light 1/4" tempered

SECURITY REQ'S None

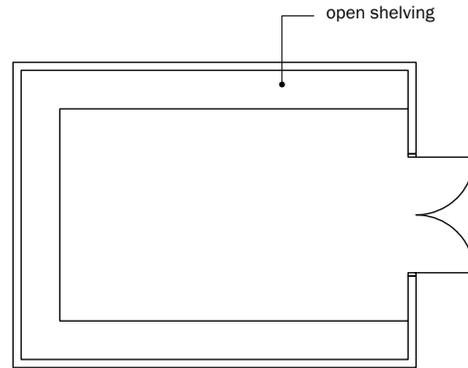
DEPARTMENT NUAMES
FACILITY # NU.10
SPACE NAME STORAGE, PROJECT ROOM

SPACE

Area 300
 Minimum Dimensions
 Minimum Ceiling
 Occupants
 Quantity 1

FUNCTION

- Lockable supply storage



RELATIONSHIP / ADJACENCIES

- Adjacent to NUAMES Project Room

MECHANICAL / PLUMBING

HVAC Standard
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

MILLWORK (BUILT-IN CABINERY)

- Open shelving

ELECTRICAL / COMMUNICATIONS

Lighting 30 f.c.
 Audio / Visual None
 Telephone (1) Outlet
 Voice / Data (2) Data connections
 Outlets (2) Duplex outlets

EQUIPMENT / FURNITURE

FINISHES / ENVIRONMENT

Wall Painted gypsum board
 Base Rubber
 Floor Resilient vinyl tile
 Ceiling Acoustical ceiling tiles

NOTES

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing
 Windows
 Hardware Lever, lockable

SECURITY REQ'S None

DEPARTMENT CLASSROOMS
FACILITY # CR.1
SPACE NAME 40-PERSON

SPACE

Area 900
Minimum Dimensions
Minimum Ceiling 10'
Occupants 40
Quantity 8

FUNCTION

- Instructional space for a variety of educational topics
- Classroom furniture for a multitude of classroom setups
- Construction Management instruction (6)

RELATIONSHIP / ADJACENCIES

- Three pairs of classrooms co-located to share Construction Management Classroom Storage in between

MILLWORK (BUILT-IN CABINETRY)

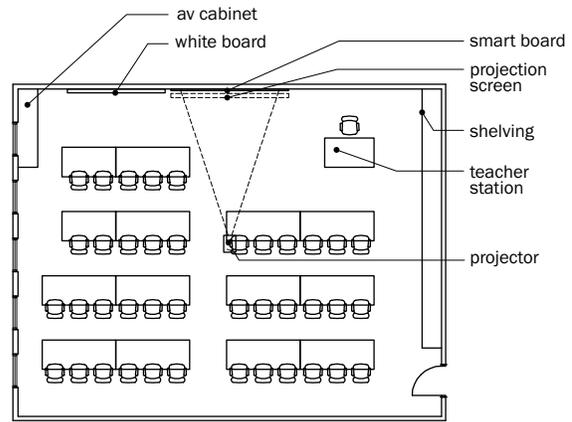
- Instructor station with computer, projector, DVD/VHS player, overhead projector, and connection for portable ELMO projector
- Instructor station needs space for 24"X36" blueprints @ Construction Management classrooms
- Projector screen (12'W minimum) should be located 2" in front of dry-erase board
- 20'X4' dry erase board

EQUIPMENT / FURNITURE

- Large moveable student tables designed to accommodate 30"X42" blueprints
- Desks include power and network cable connections
- Length of desk space per person = 32"
- Printer located away from instructor's station
- Smart board flanked by white boards
- Instructor lecture (1)
- Seating at tables (40)
- Instructor chair (1)

NOTES

- 6 of 8 classrooms associated with Construction Management
- Dimmable lighting
- Campus Police is recommending two access doors into all classrooms (decision to be made during design)
- Flat floor will provide more options for classroom setup
- Flexible (moveable) tables and chairs



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.
Audio / Visual Projection, multi-media, voice enhance
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (10) Duplex outlets

FINISHES / ENVIRONMENT

Wall Painted gyp. board/Tackable / Acoustical tiles
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Daylight important
Hardware Lever, lockable; classroom function

SECURITY REQ'S None

DEPARTMENT CLASSROOMS
FACILITY # CR.2
SPACE NAME 34-PERSON, COMPUTER

SPACE

Area 1020
 Minimum Dimensions
 Minimum Ceiling 10'
 Occupants 34
 Quantity 3

FUNCTION

- Computer instructional space for a variety of educational topics
- Classroom furniture for a multitude of classroom setups

RELATIONSHIP / ADJACENCIES

MILLWORK (BUILT-IN CABINERY)

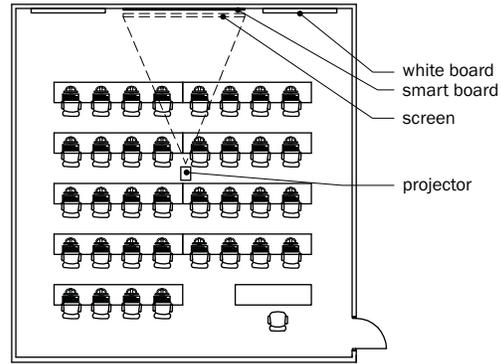
- Instructor station with computer, projector, DVD/VHS player, overhead projector, and connection for portable ELMO projector
- Whiteboard (16' Minimum) flanked by tackboards

EQUIPMENT / FURNITURE

- Computer tables with built-in power and data (18)
- Desktop computers (34)
- Chairs (34)
- Printer
- Smart Board
- Projector
- Screen
- Instructor lecture (1)

NOTES

- 1 of 3 classrooms associated with Nursing
- Computer tables either built-in or prefabricated
- Wireless capability in room



MECHANICAL / PLUMBING

HVAC Enhanced cooling
 Plumbing None
 Ventilation Standard
 Climate Control Yes
 Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.
 Audio / Visual Multi-media
 Telephone (1) Outlet
 Voice / Data (37) Data connections
 Outlets (35) Duplex outlets

FINISHES / ENVIRONMENT

Wall Tackable
 Base Rubber
 Floor Carpet tiles
 Ceiling Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
 Door Glazing Half light 1/4" tempered
 Windows Daylight important
 Hardware Lever, lockable; classroom function

SECURITY REQ'S None

teacher station

DEPARTMENT CLASSROOMS
FACILITY # CR.3
SPACE NAME 32-PERSON

SPACE

Area 640
Minimum Dimensions
Minimum Ceiling 10'
Occupants 32
Quantity 6

FUNCTION

- Instructional space for a variety of educational topics
- Classroom furniture for a multitude of classroom setups

RELATIONSHIP / ADJACENCIES

- Engineering classrooms adjacent to storage

MILLWORK (BUILT-IN CABINERY)

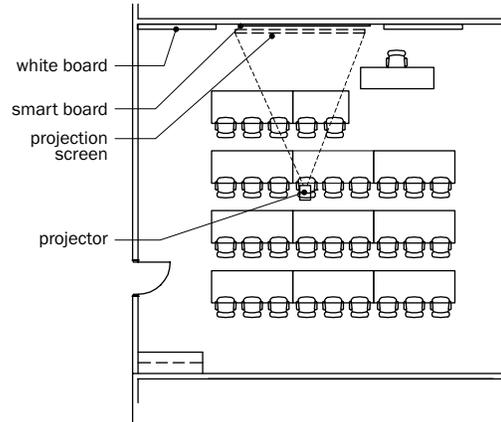
- Instructor station with computer, projector, DVD/VHS player, overhead projector, and connection for portable ELMO projector
- Whiteboard (16' Minimum) flanked by white/tackboard

EQUIPMENT / FURNITURE

- Projector
- Screen
- Smart Board
- Student tables (10)
- Seating at tables (32)
- Instructor lecture (1)

NOTES

- 2 of 6 classrooms associated with English
- 1 of 6 classrooms associated with Nursing
- 1 of 6 classrooms associated with Interior Design
- 2 of 6 classrooms associated with Engineering Pod
- Wireless capability in room



MECHANICAL / PLUMBING

HVAC Standard
Plumbing None
Ventilation Standard
Climate Control Yes
Misc

ELECTRICAL / COMMUNICATIONS

Lighting 50 f.c.
Audio / Visual Multi-media
Telephone (1) Outlet
Voice / Data (4) Data connections
Outlets (6) Duplex outlets

FINISHES / ENVIRONMENT

Wall Tackable
Base Rubber
Floor Carpet tiles
Ceiling 2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors Solid core wood
Door Glazing Half light 1/4" tempered
Windows Daylight important
Hardware Lever, lockable; classroom function

SECURITY REQ'S

None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

VCBO
ARCHITECTURE

DEPARTMENT CLASSROOMS

FACILITY # CR.4

SPACE NAME 25-PERSON

SPACE

Area	500
Minimum Dimensions	
Minimum Ceiling	
Occupants	25
Quantity	5

FUNCTION

- Instructional space for a variety of educational topics
- Classroom furniture for a multitude of classroom setups

RELATIONSHIP / ADJACENCIES

MILLWORK (BUILT-IN CABINERY)

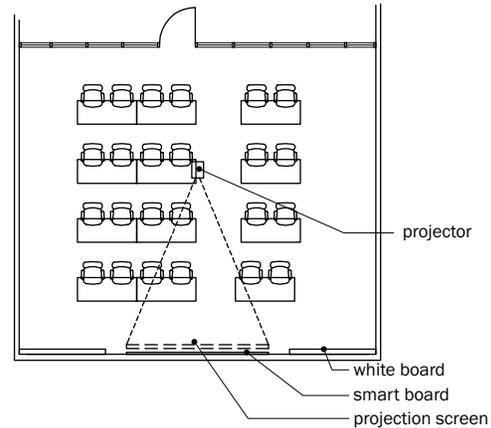
- Instructor station with computer, projector, DVD/VHS player, overhead projector, and connection for portable ELMO projector
- Whiteboard (16' Minimum) flanked by white/tackboard

EQUIPMENT / FURNITURE

- Boardroom-style
- Projector, screen
- Smart board (1)
- Tables for students (13)
- Seating at tables (25)
- Instructor lecture (1)

NOTES

- 1 of 5 classrooms associated with MS Health Sciences
- 2 of 5 classrooms associated with MA English
- Wireless capability in room



MECHANICAL / PLUMBING

HVAC	Standard
Plumbing	None
Ventilation	Standard
Climate Control	Yes
Misc	

ELECTRICAL / COMMUNICATIONS

Lighting	50 f.c.
Audio / Visual	Multi-media
Telephone	(1) Outlet
Voice / Data	(4) Data connections
Outlets	(6) Duplex outlets

FINISHES / ENVIRONMENT

Wall	Tackable
Base	Rubber
Floor	Carpet tiles
Ceiling	2'X2' Acoustical ceiling tiles

DOORS, WINDOWS, HARDWARE

Doors	Solid core wood
Door Glazing	Half light 1/4" tempered
Windows	Daylight important
Hardware	Lever, lockable; classroom function

SECURITY REQ'S None

PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis

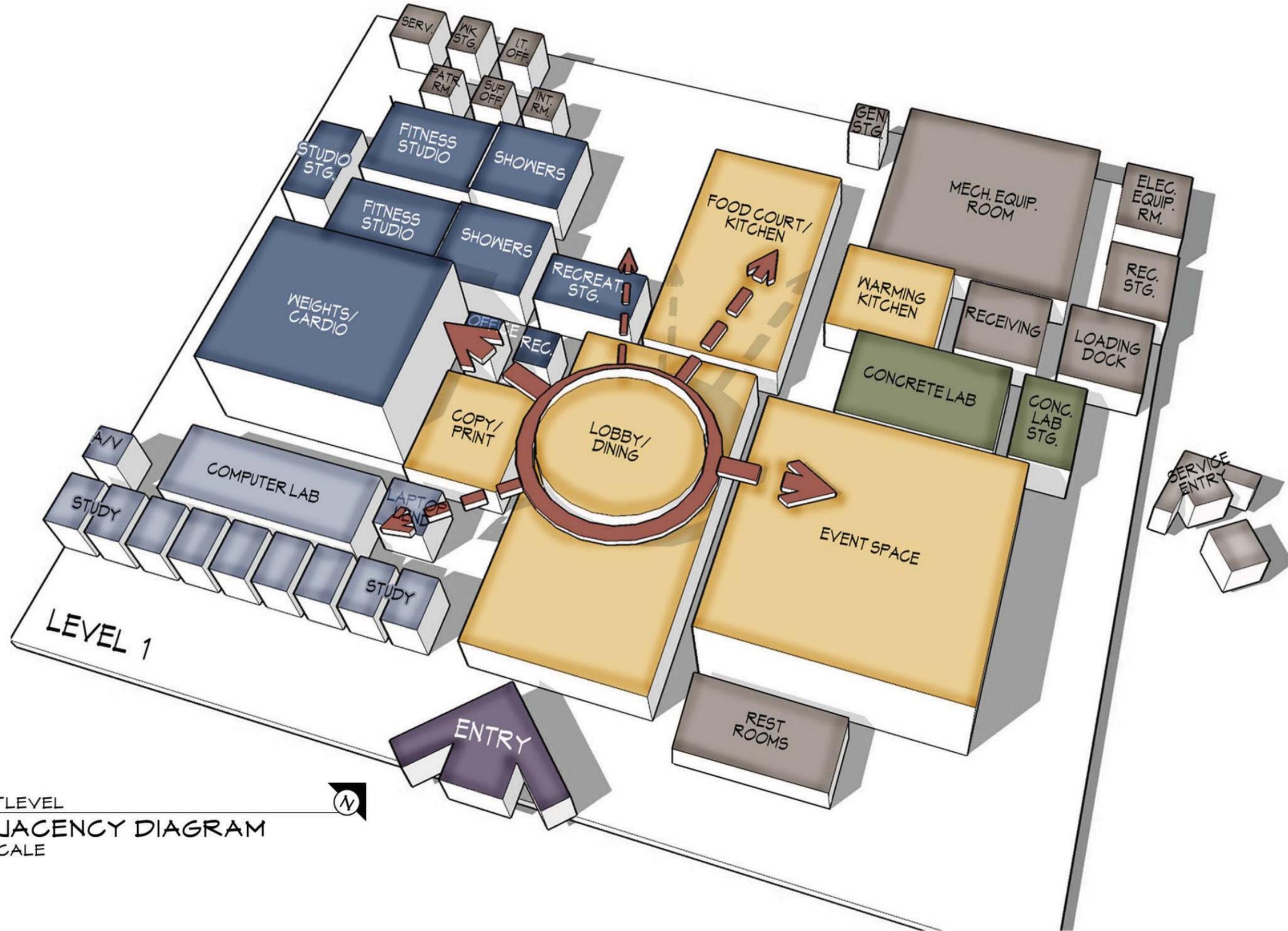


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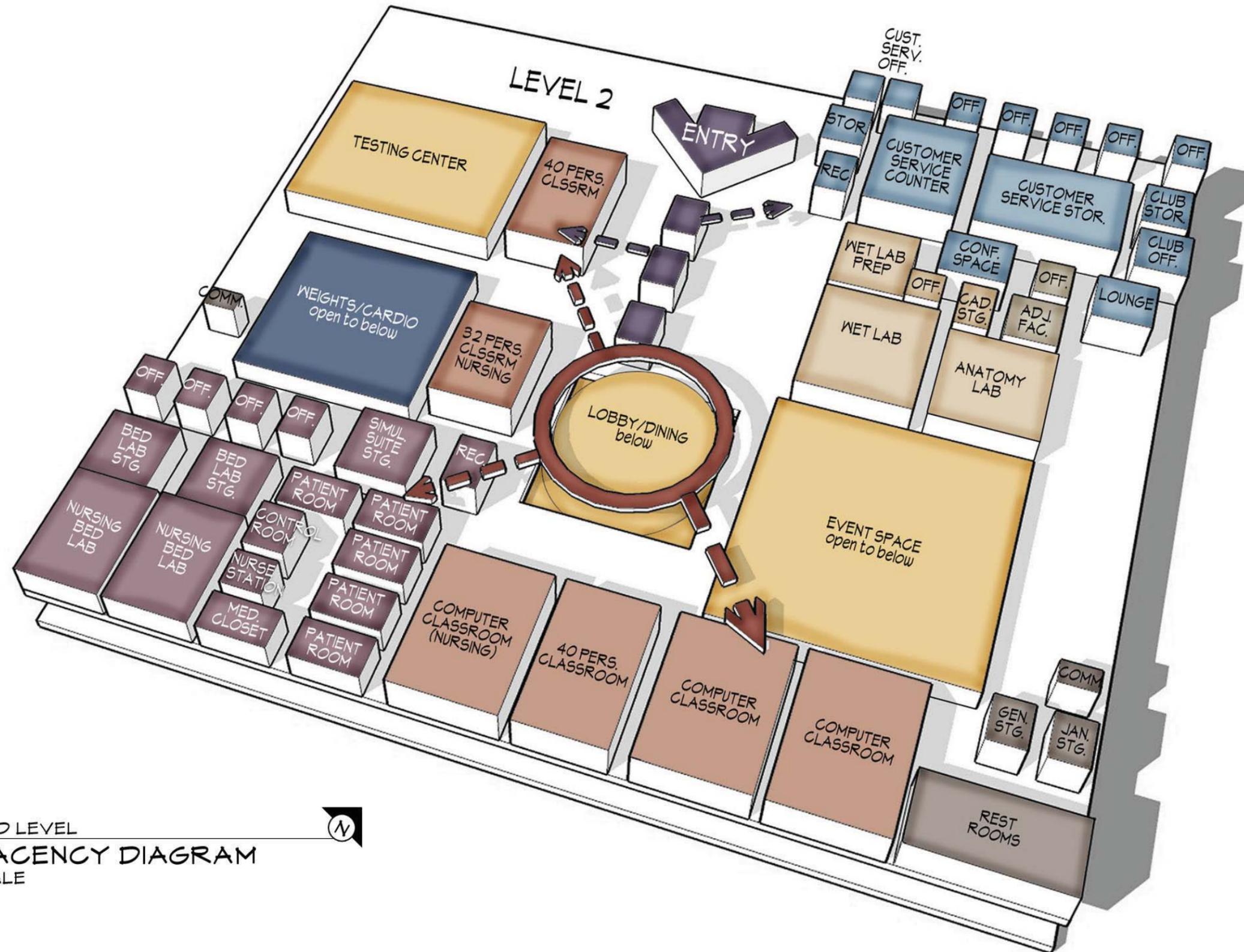
PROFESSIONAL PROGRAMS CLASSROOM BUILDING PROGRAM

Weber State University Davis





FIRST LEVEL
ADJACENCY DIAGRAM
NO SCALE



SECOND LEVEL

ADJACENCY DIAGRAM

NO SCALE



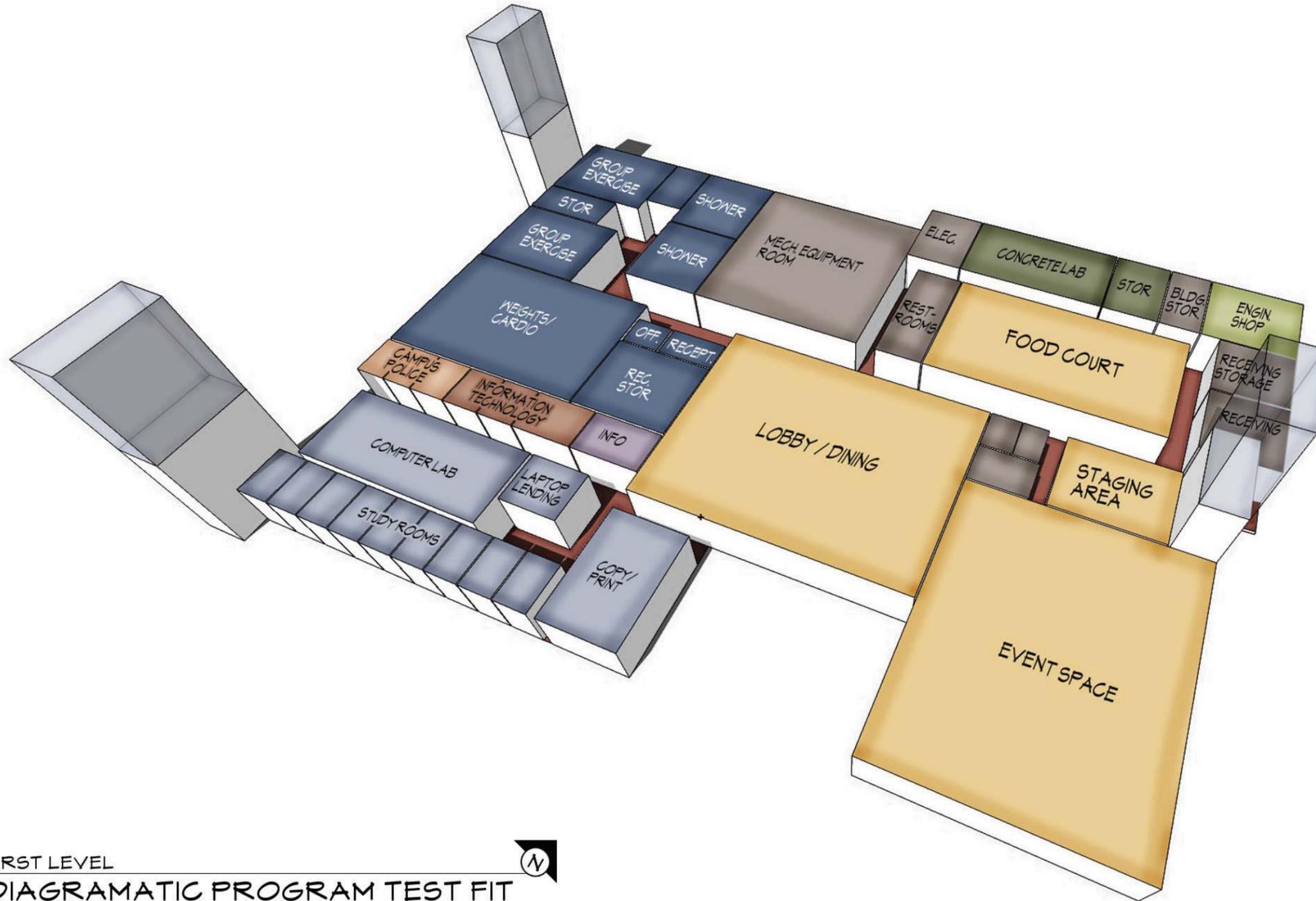


THIRD LEVEL

ADJACENCY DIAGRAM

NO SCALE



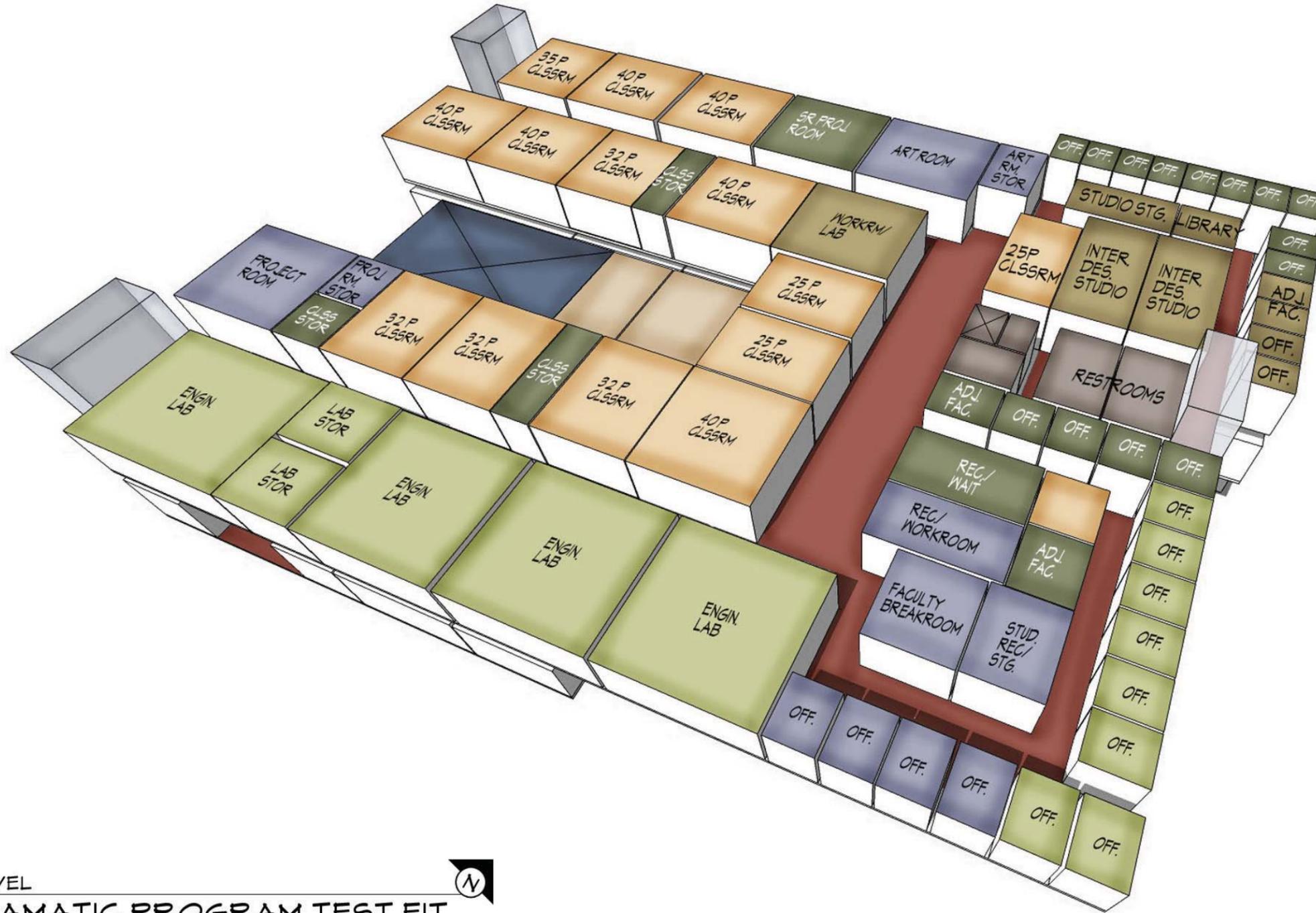


FIRST LEVEL

DIAGRAMATIC PROGRAM TEST FIT

NO SCALE





THIRD LEVEL

DIAGRAMATIC PROGRAM TEST FIT

NO SCALE

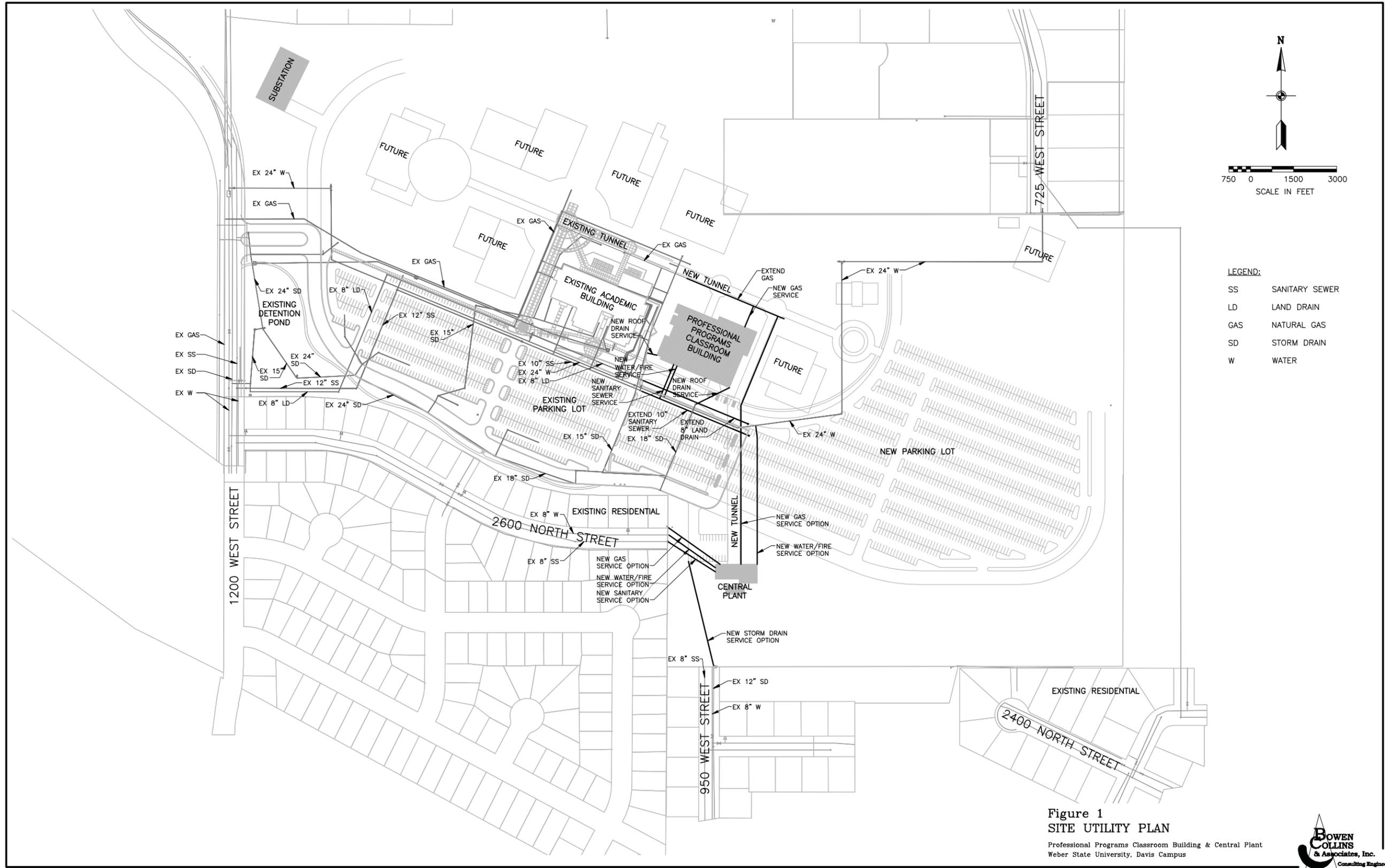












Building Systems Structural



4.0 Structural

The purpose of this project is to provide a new Professional Programs Classroom Building, Central Plant, and Substation to be constructed at the Weber State University Davis in Layton, Utah. High standards of architecture and structural design are required to be compatible with the user and owner's requirements. Selection of the building structural systems must balance concerns for safety, cost and function.

The classroom facility will consist of a three-story, 114,646 gsf academic building to include classrooms, laboratories, faculty offices, academic support space, a student union space, food service, recreation areas and dedicated space for the Northern Utah Academy for Math, Engineering & Science (NUAMES) charter high school. A 6000 gsf central heating and chilled water plant as well as a 5 megawatt substation will be a part of the project.

The design of the new facility must address local conditions and shall be in conformance with applicable local/state ordinances, building codes, regulations, DFCM Design Standards and referenced criteria herein. The structural design of the floors should anticipate loadings for future remodels and reassignment of the use of the space. The design will be governed by the current version of the International Building Code.

The structural system shall conform to the functional layout of the architectural floor plan. The structural system shall balance factors of structural integrity, performance, economy, flexibility of future use, and local availability of materials.

4.1 Foundations/Geotechnical

A geotechnical report shall be provided by a geotechnical firm, signed and stamped by an engineer licensed in the state of Utah. The geotechnical report is of special concern as the soil in this area has historically had great effect on the structures that have been built. The geotechnical report shall specifically address or provide the following items:

1. Provide subsurface testing sufficient to determine subsurface conditions to acceptable degree of reliability. The report should provide a description of the sub-surface conditions including a discussion of the water table.
2. Recommendations for foundation systems (Concrete spread footings, piles, drilled piers, etc.). The report should also address the reliability and the performance of different systems.

3. Discussion of expected and acceptable settlements of the foundation systems over the life of the structure.
4. The soils shall be tested for moisture sensitive soils and the report shall discuss recommendations for managing moisture sensitive soils where they are discovered. The design team will be expected to specifically address their means of managing this concern.
5. Design parameters required by other design professionals.
 - a. Soil type and soil site seismic classification.
 - b. Soil bearing pressure including the allowable increase for temporary loading conditions. Pile capacities where piles are proposed.
 - c. Frost depth.
 - d. Lateral earth pressures. Active, at-rest, passive pressures shall be provided including the values for seismic load conditions.
 - e. Sliding coefficient of friction.
6. Excavation requirements including cut and fill slopes including recommendations for excavation shoring and stabilization.
7. Compaction requirements including recommendations for stabilization of slopes or soft soils encountered.
8. Recommendations for the remediation of moisture sensitive soils, either expansive or collapsible, shall be provided if present on the site.
9. Structural fill requirements in fill areas and below footing, slabs, and pavements. The report should define the gradation and other significant properties of the structural fill. It shall also discuss the possibility of using the native soil to meet the structural fill requirements.
10. Requirements for support of concrete slabs on grade and pavement. This should include subgrade moduli for designing slabs on grade where applicable.
11. The soils shall be tested for water soluble sulfate content and the report shall discuss recommendations for managing the level of sulfates and mitigating their effect on the structure and its elements. It should be noted that the soils at adjacent buildings have been found to have severe sulfate attack potential on concrete. The design team will be expected to specifically address their means of managing this concern.
12. Liquefaction potential at the site shall be discussed.

4.2 Structural Framing Systems

The suggested framing systems include:

1. Steel frame building consisting of:
 - open web steel roof joists and joist girders with galvanized metal roof deck.
 - steel wide flange composite beams or open web steel joist with composite steel floor deck and concrete topping slab at suspended floors.
2. Masonry or concrete bearing wall system consisting of:
 - open web steel roof joists and joist girders with galvanized metal roof deck.
 - steel wide flange composite beams or open web steel joist with composite steel floor deck and concrete topping slab at suspended floors.

4.3 Lateral Force Resisting System

Lateral wind and seismic forces will be resisted by a system of steel frames (special concentric braced frames, eccentric braced frames, buckling-restrained braced frames, or special moment frames) and steel deck diaphragms according to the current International Building Code. Special reinforced concrete or masonry shear walls may also be used if compatible with the architectural plan. The design team shall show how they plan on managing the inter-story drift with relation to exterior building enclosure.

4.4 Structural Design Criteria

The structure is designed to support actual dead loads plus live loads and combinations according to the 2006 International Building Code and DFCM Design Standards. These loads are as follows:

4.4.1 Live Load

Office/Classroom	80 psf + 20 psf partition loading and a 2000 lb load over a 2 ½ ft square footprint
Corridor	100 psf
Light storage	125 psf
Roof	20 psf minimum

4.4.2 Snow Load (also include drift and unbalanced conditions)

Exposure Category	B
Ground Snow Load (Pg)	43 psf
Importance Factor (IS)	1.1 (Category II Building)
Thermal Factor (Ct)	1.0

4.4.3 Seismic Loads

Academic Building

Seismic Use Group	II
Importance Factor (IE)	1.25 (Category II Building)
Spectral Response Coefficients are to be determined in accordance with current United States Geological Survey Maps	

4.4.4 Wind Loads

Exposure Category	B
Basic Wind Velocity (V)	90 mph (3 second gust)
Importance Factor (IW)	1.15

4.4.5 Working Stresses (Minimum Recommended)

Concrete (28 day)	
Footings	f'c = 3000 psi
Slabs-on-Grade	f'c = 4000 psi
Columns, Walls, Floor Systems	f'c = 4000 psi
Concrete Masonry Units (CMU) ASTM C-90	f'm = 1500 psi
Reinforcing Steel ASTM A615 Grade 60	Fy = 60 ksi
Structural Steel ASTM A572 or A 992	Fy = 50 ksi
Open Web Steel Joists & Girders	per SJI
Steel Deck	per SDI
Allowable Soil Bearing Pressure	per Geotechnical Report

Building Systems Mechanical

General Mechanical

The design and construction of the Professional Programs Classroom Building at Weber State University – Davis Campus shall comply with the current State of Utah Division of Facilities and Construction Management’s Design Criteria, including the High Performance Building Standard, as well as the current Weber State University Design Standards.

The mechanical and plumbing systems for the buildings shall be energy conserving and suitable for the building occupancy. Systems and equipment shall have a proven history of providing minimal life cycle costs, including energy efficiency, reliability, maintainability, etc.

Automatic temperature controls shall be suitable for the building systems and occupancy. The control system shall be an electronic DDC system tied into either the Johnson Metasys central campus control system, or the Staeffa Talon control system. If Johnson Metasys is used, it must also be installed at the Davis Campus front end. If Staeffa Talon is used, it must also be installed at the Ogden Campus front end in addition to the Davis campus. The new controls shall be 100% compatible and integrated with the existing campus systems.

Provide complete operation and maintenance manuals at the completion of the project as well as a complete set of record drawings and specifications.

All equipment shall be clearly labeled. Equipment, piping and ductwork shall be painted and labeled as required by the Weber State University design guidelines.

Design Conditions

The mechanical system shall be designed to maintain comfort condition in accordance with the Utah State Energy Code, DFCM A/E Design Guide, and WSU Design and Construction Standards.

Elevation	4350 Ft.
Lat / Longitude	41 ° 15’ N, 111 ° 57’ W
Ambient	ASHRAE 2-1/2%, 97%
Summer	95 ° F DB 65 ° F WB
Winter	5 ° F DB
Indoor Conditions	
Summer	75 ° F
Winter	72 ° F

Envelope U-values

Building envelope shall be designed in coordination with mechanical systems in order to achieve energy performance of 10% better than ASHRAE 90.1 – 2004, per DFCM requirements.

Ventilation Rates	ASHRAE 62-1 – 2004
Internal Heat Gain	
• People	ASHRAE Estimates for Level of Activity
• Equipment	ASHRAE Estimates for Following: Computers, Copy Machines, TV Monitors
• Lights	Include lighting loads in heat gain calculations. Adjust for special occupancy or task requirements.

Applicable Codes

The mechanical system throughout the building shall be designed and installed in accordance with the most recently adopted of the following codes and standards:

- Life Safety Code
- International Building Code (IBC) including all appendices
- International Mechanical Code (IMC)
- International Plumbing Code (IPC)
- International Energy Conservation Code (IECC)
- International Fuel Gas Code (IFGC)
- National Electrical Code (NEC)
- National Fire Protection Association (NFPA)
- ASHRAE 90.1
- ASHRAE Standard for Ventilation 62-1
- ASHRAE Guides and Standards (ASHRAE)
- State of Utah Boiler and Pressure Vessel Rules and Regulations
- American Society of Mechanical Engineers (ASME)
- American Standards Association (ASA)
- American Society of Testing Materials (ASTM)
- Sheet Metal and Air conditioning Contractors National Association (SMACNA)
- Occupational Safety and Health Administration (OSHA)
- DFCM Indoor Air Quality Criteria
- Utah State Division of Facilities and Construction Management (DFCM)
 - ~ Architect / Engineer Design Guide
- Weber State University Design Guide

Heating, Ventilating, and Air Conditioning

The building shall be heated, cooled, and ventilated with systems suitable for the building function and occupancy in accordance with ASHRAE and DFCM standards. HVAC systems must compare with other mechanical systems designed for classroom and administration areas. The primary mechanical system for the Professional Programs Classroom building shall be VAV with reheat. Consider perimeter fin tube supplemental heat at areas with large glass exposures.

Heating System

Heating source shall be campus supplied high pressure steam. Steam pressure shall be reduced at a 1/3 and 2/3 PRV station at the building, and connected to a shell and tube heat exchanger. Steam shall be converted to heating water and shall be distributed through a two pipe, direct return system to the building. Hot water pre-heat coils shall be installed at air handling units, and hot water re-heat coils shall be installed at the VAV boxes.

The hot water pumps shall be designed with 100% redundancy. The hot water system shall consist of hot water distribution pumps, standby pumps, variable frequency drives, pre-heat coil circulating pumps, air eliminator, and expansion tank complete with automatic make-up water system. The heating water pumps shall be on emergency power. The entire hot water system shall be controlled by the DDC Building Management System, and completely integrated into the existing campus central control system. Provide a building steam meter to measure instantaneous flows (in BTUH), as well as cumulative flows (in BTU's). Flow meter shall have a manual reading at the building, as well the ability to communicate readings via the central control system. Provide a steam powered condensate pump at the building.

Cooling System

Cooling source shall be chilled water provided by the central chiller plant. Chilled water piping shall be routed from the tunnel to the mechanical room in the building. Building chilled water loop shall consist of a building chilled water pump with a variable frequency drive, air eliminator, and expansion tank. In addition, provide an automatic bypass 3-way valve upstream of the chilled water pump. This valve shall be controlled by the BMS. It shall be programmed to bypass the pumps when the central pumping system is capable of meeting the chilled water demand. When the campus pumping system cannot meet the building chilled water demand, the bypass shall open to the pump, and the building chilled water pump VFD shall modulate to meet demand.

Building chilled water system shall be completely integrated with the campus central control system. Chilled water supply piping shall supply 45° F chilled water to the cooling coils located in the building air handling units. Coils shall be designed for a 10° F water temperature rise. Provide a building chilled water flow meter to measure instantaneous flows (in gpm), as well as cumulative flows in (in gallons). Flow meter shall have a manual reading at the building, as well the ability to communicate readings via the central control system. Computer server rooms and data rooms shall be provided with independent dedicated cooling units. IDF and MDF telecom rooms shall be provided with exhaust and line voltage cooling only thermostats. Computer room cooling units, and telecom exhaust fans shall be on emergency power.

Air Systems

Air system for the buildings shall be a combination of variable volume air handling units, with VAV boxes for individual zones. Each classroom shall have a dedicated VAV box. Individual rooms in the administration area shall be zoned together with other rooms of similar loading, function, outdoor exposure, etc. No more than 3 individual offices shall be combined on the same VAV box. If LEED credits are pursued for optimal zoning, these requirements will be refined as necessary. The number of air handling units and their locations shall be determined by space location and usage, individual zone requirements, and economics. Each air handling unit shall be provided with hot water pre-heat coils, and chilled water cooling coils. Each air handling unit shall have 100% economizer capability. The use of return/relief fans shall be determined during design. Return fans are encouraged where there are large pressure drops through return air systems, or where additional control of building static pressure will be required.

Roof mounted belt driven exhaust fans shall be provided for the toilet rooms, custodial closets, laundry room, copy room, elevator rooms and kitchens. Rooms with similar use, function, and schedule may be combined in the same fan systems. The exact number and location of the fans shall be determined during design. Exhaust ducts shall be routed to roof fans. Building exhaust fans shall be controlled independently via the BMS.

Outside air ventilation shall comply with the most current version ASHRAE Standard 62-1. Outside air shall be controlled by carbon dioxide sensors to provide adequate ventilation, as well as improved energy efficiency. The systems shall be capable of 100% outside air and 100% relief air in economizer load. The number and location of fresh air inlets, and relief air outlets shall be determined during design.

The air handling system shall be controlled by a DDC control system that is 100% integrated into the campus central control system. Building air handling system controls shall include air handler VFD control with duct static pressure re-set, air handler discharge temperature control, VAV box space temperature and discharge temperature control, building static pressure control, outside air damper control, etc. Additional specifics of the controls system shall be coordinated with the University during design.

All ductwork shall be insulated metal duct with volume dampers for each diffuser or grille. Classroom and office air distribution systems shall be designed to provide a quiet comfortable learning and working environment.

Plumbing Systems

Plumbing systems shall be designed to meet the International Plumbing Code as adopted by the State of Utah, D.F.C.M. Guidelines and Weber State University Design and Construction Standards.

Domestic hot water piping shall be provided by a new semi-instantaneous steam powered water heater. The water heater shall be a plate and frame steam to water heat exchanger, or prior approved shell and tube heat exchanger, fed by campus supplied steam from the tunnels. Domestic water system shall include building hot water re-circulation with pump and hot water re-circulating line.

Plumbing fixtures shall be manufactured by the same source. Provide ADA compliant fixtures as required by code, and where called out in the individual space requirements. Provide water closets, sinks, lavatories, and any other fixtures as detailed in the individual space requirements.

Provide floor mounted service sinks and wall mounted hand sinks in the custodial closets indicated in the individual space requirements.

Provide mixing valves on all public lavatories. Design hot water re-circulating connections that will allow hot water faucets. As required by the design, lavatories shall be either cabinet mounted or wall mounted self supporting fixtures.

Water closets shall be wall mounted flush valve type with elongated bowl and open front seat. In order to meet the High Performance Standard, and possibly LEED requirements, dual flush valves shall be used.

Floor drains shall be provided in all bathrooms, custodial closets, mechanical equipment rooms and laundry rooms.

Water treatment for the heating hot water and chilled water systems shall be provided to match the existing campus system. The current WSU water treatment organization is Water and Energy Systems Technology (WEST).

Exterior Hydrants shall be provided for landscape and hose connections as requested by University.

Fire Protection Systems

Fire sprinkler protection shall be provided suitable for the building type and occupancy. The entire building shall be sprinkled. System shall comply with NFPA, Campus Fire Marshal and State of Utah Fire Marshal requirements.

Fire alarm main panels shall be installed by the main front entrance used by the fire department, and the exact placement shall be decided during design in conjunction with the campus Fire Marshal.

The fire sprinkler inspector's test shall be piped into a drain or sewer to prevent water damage.

The fire sprinkler inspector test shall be of the simulated sprinkler head type, and not the glass bulb type.

The fire alarm contractor shall provide a "dry" set of contacts to tie into the central campus annunciator panel.

All fire rated doors shall be supplied with a magnetic door hold open that is tied into the fire alarm system. Upon activation of a fire alarm or power failure, they shall release.

The contractor shall provide documentation of the acceptability of all fire-safety materials used.

Utilities

Water

Design team shall evaluate line size coordinate location and routing with the civil site utility plan. Underground water service piping shall be type K wrapped copper and enter the building into a pressure reducing station and main building shut-off valve. All interior above grade water piping shall be type L copper. All culinary hot and cold water piping shall be insulated. Depending on budget, University may consider alternate water piping materials such as Aquatherm polypropylene piping with fusion joints.

Provide a domestic water PRV station to reduce the upstream water pressure and regulate the down stream pressure as necessary. Provide water meters for culinary hot and cold water at this building. Flow meters shall measure instantaneous flows (in gpm), as well as cumulative flows in (in gallons). Flow meter shall have a manual reading at the building, as well the ability to communicate readings via the central control system.

Coordinate fire line for riser with civil site utility plan.

Sewer

The new Building sewer line shall be coordinated with the civil site utility plan. Sewer piping shall be cast iron. No-hub piping is not allowed underground. Provide cleanouts as required by code. Depending on budget, University may consider alternate sewer piping materials such as ABS or PVC for underground piping only.

Storm Drainage

Building roof drain piping shall surface drain. Roof drain piping inside the building shall be insulated. Primary and secondary roof drain system shall be provided. Roof drains shall be tied into campus storm drain system. Coordinate with civil site utility plan.

Steam and Condensate Piping

Steam and condensate piping from the central plant will be routed through the tunnels to the building. Steam and condensate piping shall be schedule 80.

Sustainable Design

This building shall be designed to comply with the State of Utah DFCM High Performance Building Standard. The University may also pursue LEED certification. See Sustainable Design section of the program for detailed list of possible and recommended design strategies.

Building Systems Electrical / Data Systems

Codes and Standards

- Codes which are applicable to the design of the electrical systems are listed below. Comply with each of the latest adopted publications. They are incorporated into this program by reference and are not restated in the program narrative.
- ASHRAE 90.1 Energy Code
- DFCM, Division of Facilities Construction and Management, Design Manual
- DFCM High Performance Building Rating System
- EIA/TIA, Electronics Industries Association/Telecommunications Industry Association
- International Building Code
- IESNA, Illuminating Engineering Society of North America
- LEED NC 2.2 Rating System
- NFPA, National Fire Protection Association (applicable sections including but not limited to):
 - NFPA 70, National Electrical Code
 - NFPA 72, National Fire Alarm Code
- UL, Underwriter's Laboratories
- Utah State Fire Marshal Laws, Rules and Regulations
- Weber State University Design and Construction Standards for Architects, Engineers and Contractors
- Weber State University Campus CAD Standards

Site Electrical

Medium Voltage

Rocky Mountain Power (RMP) presently serves the existing building on campus. Coordinate primary service to the new building and central plant with RMP. Provide all trenching and conduit for the primary cabling and equipment to be installed by RMP. Locate pad-mounted transformers as close to the buildings as possible. Meet RMP requirements regarding transformer and meter locations. Consider future buildings and campus growth when determining the routing for underground distribution.

Site Telecommunications Raceways

Provide a minimum of (4) 4" conduits into building for telecommunications service. Provide (2) 4" conduits from existing classroom building for intra-campus telephone and data networking.

Building Service and Distribution

Main Service

Design main electrical room close to utility transformer for the building. Main switchboard shall be provided with digital metering that is capable of being remotely read through a web-browser or other type of digital interface. Service voltage shall be 277/480V, 3-phase, 4-wire. For power quality, separate different types of loads onto different feeders and load centers, such as motors, lighting, convenience power and clean computer power. In general, large motors and equipment shall be served at 480V, 3 phase; lighting at 277V; outlets and small equipment at 120V. Verify voltage requirements with each specific equipment item.

Motor Control Centers

Provide motor control centers for areas where 3 or more motors are grouped. All 3-phase motors shall be provided with phase-loss protection. Provide disconnect switches within sight of all motors. Provide variable frequency drives (VFD's) where required for mechanical equipment in compliance with DFCM and Campus requirements, and sized at least 15% over the connected motor load. Minimum total harmonic current distortion when measured at the input terminals of the VFD shall be not greater than 15%. The design electrical engineer may evaluate the variety of harmonic filtering and mitigation techniques and choose the best method to achieve this performance.

Transformers

Where 480-120/208V, dry-type, step down transformers are used for loads requiring this voltage, consideration shall be given to the harmonic content of the loads when sizing and specifying these transformers, while taking into account overall energy efficiency of the system. Evaluate the use of high-efficiency, K-rated and harmonic-mitigating transformers based on initial cost, energy payback and tolerance to harmonic loads. Fewer, larger transformers should be favored over multiple smaller transformers to optimize load diversity and harmonic cancellation. All power equipment (transformers) must be located outside telecommunications or computer rooms.

Panelboards

Provide panelboards in vertically stacked electrical rooms. The electrical rooms should be centrally located as much as possible, while taking into account other building and architectural considerations. Provide two or more rooms per floor to ensure that branch circuit distances do not exceed 150'. Dedicate these rooms to electrical distribution and not for storage or any other purposes. Consideration shall be given to the ease and accessibility of running new and future conduits out of each room, for example, do not land lock the room between stairs, elevators, restrooms, shearwalls, etc. that would make future work difficult. If inaccessible

ceilings surround the room, stub (5) spare 3/4" conduits from each panelboard to accessible ceiling areas. Provide large block-outs above the ceiling through any concrete walls. Dedicate an area of each room for current and future riser conduits or busways so that wall-mounted equipment will not impede vertical distribution. Panelboards serving normal lighting and outlet circuits shall be located on the same floor as the circuits they serve. All branch panelboards shall have hinged front covers, as opposed to screw-on or latching covers.

Spare Capacity

Switchboards, panelboards, transformers and other distribution equipment shall be provided with 25% spare capacity and spaces/spares for future growth and flexibility. Electrical equipment rooms shall have 25% additional space for future equipment. Design system to minimize shutdowns for future additions or work.

Branch Circuits

Load branch circuits to no more than 80% of what is allowed by NFPA 70. Where outlets are intended for a specific piece of equipment, the load of the outlet shall be based on the equipment nameplate. Otherwise, allow no more than 6 convenience outlets per circuit or 4 outlets per circuit serving workstation computer terminals. Allow sufficient capacity for plug-in task lights and other peripherals typical of desk items. Outlets with dedicated branch circuits (one outlet per circuit) are required for vending machines, copy machines, break room counters, refrigerators, dishwashers, A/V cabinets and other locations likely to have equipment requiring dedicated circuits. Each branch circuit homerun shall have no more than 3 circuits per raceway. Neutral conductors shall be sized for the anticipated harmonic currents that they will carry. As a minimum, the shared neutral conductor shall be one size larger than the phase conductors for all outlet branch circuits.

Conductors

All conductors shall be copper. Conductors for branch circuits shall be sized to prevent voltage drop exceeding 3% at the farthest load. The total voltage drop on both feeders and branch circuits shall not exceed 5%. When calculating the voltage drop, the load shall be assumed to be at the most distant outlet and 80% of the capacity of the branch circuit and feeder conductors. Specify that actual load tests and voltage readings be taken upon completion of installation to verify these requirements, and deficiencies corrected.

Raceways

Design all wiring in raceways, minimum 3/4"C. Type MC or AC cable is not permitted. Do not embed any conduit or raceway in elevated concrete slabs (it is permissible in slabs on grade). Design cable tray system so that station cable raceways do not extend more than 50' max to cable tray.

Stub conduits to the cable tray. Include pull strings in all empty conduits. Include raceway for all security, audio/visual, and technology systems whether furnished as part of the construction contract or furnished by the Owner.

Equipment and Furniture

It is the responsibility of the design engineer to obtain equipment catalog sheets and installation diagrams and include power and raceway for all equipment requiring electrical connections. Provide power and raceway rough-in for all equipment and furniture identified in the program documents, whether it is furnished as part of this project or under a separate contract, for complete operation. Coordinate furniture connections with furniture designers and/or systems suppliers.

Fault Current and Coordination Study

Perform a fault current and coordination study to indicate available fault current at all points in the Building distribution systems. Design new equipment rated for the amount of available fault current. Study system coordination and select fuses or breakers to ensure minimum system outage due to overloads or fault currents. Set breakers with adjustable long time, short time, instantaneous and/or ground fault settings for optimum system coordination.

Transient Voltage Surge Suppression

Provide transient voltage surge suppression (TVSS) and “noise” protection at service equipment (each main) and on branch panelboards in the facility which serve computer terminals. TVSS units may be integral to the panelboard or switchboard, or individually mounted “stand-alone” units. However, if individual units are used, they shall be placed immediately adjacent to the panelboard or switchboard to minimize the effects of increasing clamping voltages due to excessive lead lengths.

Additional TVSS protection is recommended to be provided by way of surge/outlet strips for each workstation. The surge strips would not only provide the additional outlets needed for the many computer peripheral devices that are used today, but also offer an additional level of protection. The surge strips are recommended to be provided under the furnishings and equipment budget on an as-needed basis. The surge strip should be commercial-grade quality and have at least 26 kA per phase maximum surge rating.

Outlets

Outlets shall be 20A, minimum. Refer to program and space plan sheets for basic requirements. Unless noted otherwise, the following shall be used as a general guideline. Each outlet location shall be coordinated with the design team and end user during design. Where the term “outlet” is used, this refers to a 20A duplex receptacle outlet (unless otherwise noted).

Classrooms, Lecture Halls and other Instructional Spaces

Provide outlets for instructor’s station, audio/visual equipment and each student. Ensure that there is at least one duplex outlet for each 10’ of wall space. Provide floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space. Where tables are fixed in place, coordinate power outlets mounted directly into the millwork.

Student Commons, Lounges and Study Areas

Provide power outlets for laptop computers, at least one duplex for each group of 4 seats, but no less than one outlet per each 12’ of wall space. Provide floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space. A flexible power grid using raised floor or cellular deck system should be strongly considered to ensure maximum flexibility for desktop and/or laptop computers.

Offices

For each workstation, provide one outlet dedicated to computer terminals and one normal outlet, and one additional normal outlet for every 10’ of wall space. Provide sufficient outlets to accommodate task lighting for all staff workstations. It is not the intent to provide an outlet for every possible office machine and peripheral device. Where more outlets are needed than what is specified in this program, then outlet/surge strips are recommended to be provided under the furnishings and equipment package.

Conference and Board Rooms

One outlet for every 10’ of wall space, plus one outlet dedicate to computer terminals on two walls. Provide floor outlets underneath conference room tables. Coordinate installation of outlets in conference table tops with furniture/millwork.

Lounges/Breakrooms/Kitchenettes

GFI Outlets on dedicated circuits every 4’ on counter top plus dedicated outlets for refrigerator, microwave, dish washer, ice machine and disposal (switched at counter top), plus one outlet for every 10’ of other wall space in room.

Counter tops (in general)

One outlet every 4'; GFI where within 8' of a sink.

Main Computer/Server/MDF

Several outlets on emergency/UPS power under raised floor and around perimeter or room with circuit density to allow for at least 100 watts per square foot. Coordinate exact quantity required with the User groups and the anticipated equipment, including future provisions as well. Provide a minimum 6-outlet surge/power strip, rack-mounted, in every equipment rack.

Telephone/Data Closets (IDF)

At least 6 quad outlets on emergency and UPS power with circuit density to allow for at least 50 watts per square foot. Provide a minimum 6-outlet surge/power strip in every equipment rack. Whether local rack-mounted UPS units are used, or if the central UPS system is used to power these closets shall be evaluated and coordinated with the Use groups during the design.

Electrical Rooms

At least one outlet on emergency power.

Restrooms

One GFI outlet on wall adjacent to sink at counter height, plus one remote from sink at standard height for breast pumps, vacuum cleaner or power scrubber.

Corridors, Lobbies

Provide at least one outlet every 15', on alternating sides of the corridor or lobby.

Stairs

One outlet at each landing and intermediate landing.

Storage Rooms (small), Janitors Closets

One outlet, near light switch.

Building Exterior

One WP/GFI convenience outlet near each entrance, or a minimum of every 120 feet; additional outlets as needed for special events. Coordinate with users during design.

Other Areas

Refer to individual space plan data sheets, and coordinate requirements with user during design, as necessary.

Grounding

All feeder and branch circuit raceways shall include an insulated equipment grounding conductor. Provide a grounding riser system throughout the telecommunications closets, with grounding bus bars mounted accessibly in each closet. In computer or server rooms with raised access flooring, provide a signal reference grounding grid in accordance with IEEE standard 1100-1999. All grounding systems shall be bonded together per NEC requirements.

Lightning Protection

Provide a lightning protection system for the new Building. Engage an LPI-certified installer, designer and inspector for the system. Provide a UL Master Label System and comply with NFPA 780.

Emergency Service and Distribution

Provide an emergency diesel generator for the new building. Generator shall be outdoors in a screened area with weather-protective, sound-attenuating housing and skid-mounted, double-walled tank. Fuel supply shall be minimum 18 hours at full load. Design at least two transfer switches: one for emergency and one for non-emergency (“stand-by”) loads. Annunciate alarms adjacent to fire alarm panel. Design generator distribution panel with digital metering. The following shall be provided with emergency power:

- Emergency egress and exit lighting
- Fire Alarm
- One Elevator (if required by IBC)
- Smoke control – to the extent provided
- Communications and Server rooms (including main computer room) – outlets, lights and air conditioning
- Electrical rooms – lights and outlets
- Security systems

Uninterruptible Power Supply (UPS)

Design a UPS system for the main server/computer room and MDF, sized to provide 100 watts per square foot, minimum. Other critical computers and equipment, as determined during the design, may be provided with UPS power. UPS shall be static, double conversion, on-line type and have an external maintenance bypass. Size batteries for approximately 15 minutes at full load. Evaluate fully-redundant modules and battery strings on a cost vs. benefit basis and present results to the Owner/User groups for a decision during the design.

Lighting

General

Comply with illuminance levels and uniformity criteria of IESNA and its Recommended Practices. Comply with RP1-93 “Office Lighting”, RP3-00 “Lighting for Educational Facilities”, RP-8-00 “Roadway Lighting”, RP-20-98 “Lighting for Parking Facilities”, and RP-33-99 “Lighting for Exterior Environments”. Ensure that illumination levels are appropriate for task, time and age. For exterior lighting, indirect lighting, and other specialized task lighting provide point-by-point plot of illuminance establishing conformance with the Recommended Practices. Except for specialized applications, design lighting with a minimum efficacy of 85 lumens per watt. Specify maximum 20% THD electronic ballasts. In addition, design lighting with a CRI exceeding 82, except in storage, mechanical, electrical, and similar nonpublic applications. As much as practical and meets the design intent, specify as few types of lamps as possible to simplify ordering and warehousing. Use 4’ T-8 lamps with CRI of 88 or greater wherever possible. T5 lamps may be considered for applications that would benefit from a small-profile lamp, but should not be used to generally replace all T8 lamps. Specify lamps complying with EPA TCLP requirements.

Comply with ASHRAE 90.1 requirements, except that overall energy target requirements should be reduced by 10% min. Cost-effective, energy efficiency measures beyond the minimum standards are strongly encouraged. Design lighting control to harvest daylighting where practical, to control based upon occupancy and daylight availability, to rely on reduced ambient illumination levels supplemented by task lights when possible, and according to programmable scheduling as appropriate to the application.

Parking, Pedestrian, and Street Lighting

Use only campus standard lighting fixtures for walkways, parking and roadways, compatible with the campus surroundings. Control exterior lighting through a programmable lighting relay system that is interfaced with the building automation system. The building automation system shall use photocell inputs and time schedule control to optimize use.

Design parking areas to comply with RP-20-98, except that the minimum illuminance shall exceed 1 footcandle with a 4:1 uniformity. Design pedestrian areas to comply with RP-8 (average to minimum uniformity ratio less than 4 to 1), except that the average horizontal illuminance shall be increased to 1 footcandle and the average vertical illuminance to 1 footcandle. For each of these areas design two level lighting so that from 11:00 PM to dawn the illuminance level reduces to .6 footcandles minimum. Consider “dark sky” principles in application of luminaires.

Design street lighting to comply with RP-8, except that the average illuminance level shall exceed 1.0 footcandles and average to minimum uniformity ratio less than 3 to 1 with special consideration for the entry from the roadways bounding the site to comply with minimum uniformity requirements and veiling luminance ratios.

Interior Lighting

In general, utilize low-glare fluorescent lighting with electronic ballasts. Pendant indirect lighting should be strongly considered where appropriate, but must be carefully coordinated in rooms with projectors so that the fixtures will not interfere with the projected image. Select luminaires for areas where VDTs are planned which are designed to minimize veiling reflections, and provide multilevel lighting control and task lighting to reduce the illuminance on the VDT. Wherever overhead cabinets occur over counters, provide integrated task lights underneath. In rooms with audio visual, design lighting with variable or switched levels as indicated with a separate controlled zone to reduce glare and illuminance on the audio visual display. In origination rooms and distance learning rooms, design dimming system to interface with audio/visual control system. Include in addition, TV studio lighting fixture to focus and highlight on instructor. In rooms with projectors, provide a separate bank of lighting control switches or station near the instructor position for ease of controlling lighting during presentations. Comply with RP-3-00 for classroom lighting and RP-1-93 for office lighting. In areas with lower ambient lighting levels, provide separately-switched task lighting for all work surfaces. Provide lighting to illuminate art where it occurs, in coordination with furniture plans.

Design lighting fixtures to be accessible by means of ladders or standard lifts. Light fixtures in high-ceiling areas shall be accessible through a lowering device or with a lift that can fit through the doors of the building.

Select occupancy sensors for the appropriate applications and control for daylight harvesting. Specify dual-technology ceiling-mounted directional sensors in private offices and classrooms with manual off switches. Specify ultrasonic sensors in restrooms. Specify programmable lighting control with manual timed overrides in all common areas such as open offices, corridors, lobbies, and similar areas. Interface this lighting control system with the building automation system.

Design exit lighting to comply with IBC. Design emergency lighting for means of egress to 1 fc minimum to comply with IBC. Include emergency lighting in restrooms, electrical rooms, vaults and communication rooms. Where emergency lights are required in rooms with audio/visual, provide emergency transfer ballasts that allow the emergency light to be switched off and then automatically turned on in a power failure.

Fire Alarm

Campus Fire Alarm and Life Safety

Comply with Utah State Fire Marshall's "Rules and Regulations" and campus requirements. Coordinate with campus facilities during design to ensure that any new system is acceptable to the campus. Design an addressable system capable of reporting back to central campus security office. Design strobes visible from all locations except private offices and coordinate with furniture plans. Evaluate whether a voice evacuation system is required during the design. Design audible devices to comply with NFPA including for higher ambient noise requirements. Where smoke control systems are required, coordinate the integration of the fire alarm with the smoke control systems. Provide duct detectors and fan shutdown where required by NFPA and the IMC, including detection of smoke at all return air shafts serving multiple floors. Coordinate location of the building annunciator with the Campus fire marshal. All other detectors and functions shall comply with the referenced codes and standards. All fire alarm wiring shall be in conduit. Final programming of system shall be coordinated with the Campus Fire Marshal to ensure that the program will be compatible with existing campus fire alarm programming.

Telecommunications Raceways

Riser Distribution

Provide stacked telecommunications closets to serve each floor of the building. Comply with EIA/TIA and campus IT requirements in the sizing and locating of these rooms. Increase room size for A/V, TV and other systems that may be located in these rooms. Coordinate equipment layout and wall space with the Campus. Locate closets such that when cabling is routed through the raceway system provided, no cable length will exceed 290' regardless of the path. Consideration shall be given to the ease and accessibility of running new and future raceways and cables out of each room, for example, do not landlock the room between stairs, elevators, restrooms, shear walls, etc. that would make future work difficult. Provide large block-outs above the ceiling through any concrete walls. Provide a minimum of four 4" conduits from the MDF to the stacked IDF locations and four 4" sleeves between floors. If possible, stack the MDF below the IDF's. Provide both normal and emergency circuits to each IDF, 3 each, with one fourplex per circuit. Twenty-four hour HVAC is required in each closet and shall be supplied with stand-by power for the emergency generator.

Horizontal Distribution

Provide a cable tray distribution network throughout each floor and into the IDF closets. Extend the cable tray around inside of the IDF room to allow cables to be routed within the room. Consider ease of access to the tray system when the building is in full operation. Limit cable tray routing to be above corridors, common and similar areas. In all ceiling areas where accessible, provide ladder-type tray to match existing campus standard. Where ceilings are inaccessible, provide an equivalent conduit system bridging cable trays in accessible ceilings. It will be the designer's responsibility to size the cable tray and raceway system for the intended cabling installation. Do not load the cable tray and raceway system to more than 50% of what is allowed by cable fill requirements of NFPA 70. Specify that cable runs take routes that will limit the total cable distance, between termination end points, to 290' or less. Design horizontal pathways such that this is possible, when taking into account the conduit stubs from the outlets to the cable tray system.

Voice/Data Drops

Each voice/data outlet location shall consist of a 4" square box with two gang mud ring and one 1" conduit stubbed to the nearest cable tray. Refer to program space plans for quantities and coordinate exact locations with the users during design. As a minimum, provide one voice/data drop for each workstation, fax machine, copy machine, vending machine, desk, computer terminal and teaching station. Where wireless networks are designed for student access, still allow sufficient empty raceways for future hardwired connections should the wireless system have insufficient bandwidth for evolving applications.

Building Systems Technology

Codes and Standards

Codes and standards which are applicable to the design of the technology systems are listed below. Comply with each of the latest adopted publications. They are part of this program by reference and are not restated in the program narrative.

- ADA, Americans with Disabilities Act
- DFCM, Division of Facilities Construction and Management, Design Criteria
- EIA/TIA, Electronics Industries Association/Telecommunications Industry Association
- IBC 2000, International Building Code
- NFPA, National Fire Protection Association (applicable sections including but not limited to):
- NFPA 70, National Electrical Code
- NFPA 72, National Fire Alarm Code
- UL, Underwriter's Laboratories
- IEEE Compliance: Comply with applicable requirements of IEEE 208
- Utah State Fire Marshal Laws, Rules and Regulations
- Standard Broadcast Wiring and Installation Practices", as excerpted from "Recommended Wiring Practices," Sound System Engineering, (2nd Edition), D. Davis
- The Basics of Audio and Visual Systems Design, Revised Edition, Ray Wadsworth / International Communications Industries Association, Inc.

Structured Cabling Systems

General

Voice/data cabling (structured cabling systems) will include copper station cabling, copper and fiber backbones, all terminations, wall plates, patch panels, cross connects, racks and wire management.

Redundant voice and data service will originate from the designated campus demarcation points. The service cabling will consist of a combination of category 3 approximately 300 multi-pair copper cabling for voice, and approximately a 72 strand single and 36 strand multimode fiber for data. Once in the Professional Programs Building, this cabling will terminate in the main telecommunications room, or main data frame (MDF). From the MDF, a backbone of category 3 copper cable for voice, and a combination of multimode and single mode fiber cabling for data will be provided to each subsequent wiring room, or intermediate data frame (IDF) on each of the floors for voice and data signal distribution. From that point, horizontal cabling will be provided to each of the voice/

data outlets. All horizontal cable specified for data jacks will be 10 G, augmented category 6 UTP rated at 90 meters. All horizontal cable specified for voice jacks will be category 3 cable.

Typical Voice / Data Outlet

For non-teaching spaces, design each typical voice/data outlet with 3 each, augmented, Category 6 jacks. More or fewer jacks may be required to serve specific voice/data outlet needs in other specialty areas. Where indicated in classroom and lab areas, provide one each augmented category 6, RJ46 data jack for each student seat (unless directed otherwise by authorized Institution personnel during the design process), and three each augmented category 6, RJ45 data jacks at each teaching station. In computer labs, design one augmented category 6, RJ45 data outlet for each computer station.

All outlet wall plates shall be one gang with provisions for up to six RJ type jacks labeled to comply with campus standards. Match color of electrical devices. Cable each standard voice/data outlet with three augmented Category 6 cables total. Cable each jack in classroom and lab areas with one augmented category 6 cable for each RJ45 jack specified. If systems furniture is installed coordinate location of the voice/data outlets with cabling for each workstation and the systems furniture.

Wireless Network

Weber State desires that the building, and all immediately adjacent outdoor areas, be provided with reliable wireless local area network coverage. Provide data outlets at owner designated locations for wireless access points to cover all interior areas, as well as to “spill-out” into all immediately adjacent outdoor areas. Design wireless access point data outlets with one augmented category 6, RJ45 data jack mounted on a single gang wall plate.

Telephone Outlet

Design telephone outlets for pay phones, elevator panels, wall phones and other required uses. Install 4 pair Category 3 cable in a suitable wall plate for the application.

Voice and Data System Active Electronics and Passive Devices

All active voice and data system electronics including, but not limited to, telephone instruments, hubs, routers, servers, PBX's, etc... will be provided from a separate budget and are not part of the construction budget. All passive devices including, but not limited to cabling, termination devices, wall plates, patch panels, connectors, open frame equipment racks, cable runway, and cable management systems are part of the construction budget.

1.3 Security Systems

General

All security systems will comply with established campus standards. Systems will annunciate alarm conditions to, and be completely monitored.

Card Access

A complete access control system will be specified to control entry to all perimeter entry/exit points, and at select sensitive interior spaces. Card readers will be the proximity type, and will comply with established campus standards. Card readers will report to central door controllers. Coordinate door hardware to minimize the aesthetic impact to the appearance of the building.

Video Surveillance

A complete video surveillance system will be specified to provide for visual monitoring at all building entry/exit points, at select main building thoroughfares, elevator lobbies, and at select sensitive interior areas. Cameras will be specified for viewing of owner designated subject areas, and installed in appropriately rated enclosures. Signals from cameras will be connected to a central switching/multiplexing system with minimum 20" video monitors for viewing. All camera images will be digitally recorded by DVR's that are local area network accessible.

Intrusion Detection

A complete intrusion detection system will be specified for electronic monitoring and status reporting of all building entry/exit points, select building thoroughfares, and at select sensitive interior areas. Sensing devices will include door position switches, motion sensors, and where/if appropriate, glass break sensors. All sensing devices will report to a zoned monitoring panel for specific location identification of an alarm condition. The intrusion detection system will be integrated with the video surveillance system for priority viewing of security breach areas.

Emergency Phones

Emergency (Blue Light) telephones will be specified. Provide density and alarm annunciation based on established campus standards. At a minimum, locate telephones in outdoor parking and pedestrian areas of the site at highly visible locations.

1.4 Audio and Video Systems

General

Audio and video systems will be specified by the A&E team for installation as part of the building construction work, to be completed with all building trades under the general contract. Audio and video systems will be specified for designated locations in full compliance with established campus standards. Audio and video systems in all rooms will be similar in design, function and operation to facilitate user friendly operation by faculty from room to room.

Classroom 25 – 40-person / Teaching Labs

Rooms will be provided with fully integrated audio, video, and control systems. Audio systems will amplify program audio originating from media source playback devices such as computers and DVD players.

Each classroom will be provided with a building standard teaching station (lectern). Several media source devices will be provided and housed at each lectern. These devices will include, but not be limited to, one permanent computer, inputs for one portable computer, a DVD player, a VCR, a television tuner, a document camera, and audio/video/data sources originating from outside the classroom. Audio originating from these source devices will be selected, processed, and amplified to a speaker system. In compliance with the Americans with Disabilities Act, connections for a portable wireless assisted listening system will be provided.

Provide video systems for the large screen display of classroom subject matter. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers for 16:9 aspect ratio, tensioned cabled, electric roll-up projection screens. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1366 X 768 wide aspect ratio. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be “washed out” by ambient room lighting. Include all video system calculations in the construction drawings.

Equip classrooms with an integrated control panel for control of all audio and video system components, lighting systems, and motorized window coverings (where applicable). To meet this need, a touch screen control panel will be provided. The touch screen control panel will serve as the control panel, lectern monitor, and the annotation input device. Specify control system manufacturers in compliance with established campus standards. The touch screen control panel will be programmed in full

compliance with the end user's desired button layout, configuration, and labeling. In addition, macros (multiple events) will occur when a button on the touch panel is engaged.

Provide infrared sensors to monitor the position of the folding partition in rooms with folding partitions. Program the control system to accept control voltages from the sensors and make the room AV systems and lighting systems operate separately or combined.

Event Space

Event Space rooms will be provided with fully integrated audio, video, and control systems. Audio systems will be provided for the amplification of the spoken word from all meeting participants. Microphones will be provided for meeting participants and will be mixed using automatic mixers. In addition, the audio systems will amplify program audio originating from media source playback devices such as computers and DVD players.

The Event Space will be provided with media sources. These devices will include, but not be limited to, inputs for one portable computer, a DVD player, a VCR, a television tuner, a portable document camera, and audio/video/data sources originating from outside the room. Audio originating from these source devices will be selected, processed, and amplified to a speaker system. In compliance with the Americans with Disabilities Act, a fixed assisted listening system will be provided.

Provide video systems for the large screen display of subject matter. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers for 16:9 aspect ratio, tensioned cabled, electric roll-up projection screens. Locate projection screens in close coordination with potential seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1366 X 768 wide aspect ratio. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be "washed out" by ambient room lighting. Include all video system calculations in the construction drawings.

Equip room(s) with an integrated control panel for control of all audio and video system components, lighting systems, and motorized window coverings (where applicable). To meet this need, a touch screen control panel will be provided. The touch screen control panel will serve as the control panel, lectern monitor, and the annotation input device. Specify control system manufacturers in compliance with established campus standards. The touch screen control panel will be programmed in full compliance with the end user's desired button layout, configuration, and labeling. In addition, macros (multiple events) will occur when a button on the touch panel is engaged.

Provide infrared sensors to monitor the position of the folding partition in rooms with folding partitions. Program the control system to accept control voltages from the sensors and make the room AV systems and lighting systems operate separately or combined.

Conference Rooms

Conference rooms will be provided with very basic audio and video systems. Provide a single, smaller scale, projector and 16:9 format, tensioned cable, electric roll-up projection screen permanently mounted in each room. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1366 X 768. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be “washed out” by ambient room lighting. Include all video system calculations in the construction drawings.

Provide a small audio system for the playback of portable media source audio only. Provide wall or floor mounted computer video, composite video and S-video inputs, with their associated audio signals, to the permanently mounted projector. Resident source devices are not required in these rooms. Provide a simple wall-mounted control system to lower the screen, power the projector, select the projector input, and control the sound system.

Nursing Simulation Area

Equip all exam rooms with cameras and microphones to capture an audio and video record of interaction between students and mock patients. Provide two video cameras located in each room. One directly over the exam table for specific exam table interaction, and one in a room corner for an overall interaction shot. A single surveillance type microphone will be mounted in the ceiling or wall for audio capture.

Once captured, audio and video signals will be digitized and stored on a hard drive in a central database. Future access can be gained via a central file server utilizing standard file management software. Upon file transfer and downloading, audio and video playback can be accomplished via the standard PC tools using commonly available media players. This process will make it possible to playback exam room sessions at any networked computer, including those used for large screen media sources in the classroom A/V technology systems.

Lobby and Food Court

Provide public address systems for high quality voice reinforcement and basic quality music playback. Provide audio system inputs at three locations throughout each room. Locate equipment in a non-public area, and locate controls remotely, as directed by the Institution.

Fitness Center

Provide a music playback system throughout the Fitness Center. Include speaker systems which faithfully reproduce full range music frequencies. Locate equipment in a non-public area, and locate controls remotely, as directed by the Institution.

TV Distribution System

Extend the campus TV distribution system into the building. An RF TV distribution system will be provided for distribution of campus audio and video signals throughout the building. The TV distribution system will be provided with cable, amplifiers, splitters, directional couplers, terminators, outlets, and connectors. The system will be the broadband type, for distribution of low resolution, modulated audio and video signals onto a carrier frequency. A minimum 750 MHz bandwidth will be specified, and all outlets will be provided with between +5 and +10 dBu at each building television outlet. Provide TV outputs in all classrooms, labs, conference rooms, break rooms, dining rooms, and to individual machines in the Fitness Center.

Clock System

Provide battery operated clocks throughout the building, and a GPS receiver/transmitter at a central location. Specify clocks to be correctable by the GPS receiver/transmitter via a wireless connection directly to each clock.

Building Systems Commissioning

Building Systems Commissioning can best be defined as an integral part of the design and construction process for a building that results in achieving, verifying and documenting building and systems components. Commissioning is a Quality Management process with the initial activities related to quality assurance and subsequent activities related to quality control.

To achieve LEED® certification and to meet the DFCM High Performance Building Standards, a project must provide basic commissioning for the building's energy systems. Basic Commissioning begins at the start of construction for the project and includes such activities as verifying that the building's energy systems are operating as they were intended to operate as designed.

Additional Commissioning can be contracted for any project. This includes services that begin in the design phase of the project. A review of the building's energy systems are done by the Commissioning Agent and recommendations are made to improve the efficiency of the facility's systems. An additional credit is available in the LEED® process for this Commissioning.

The Professional Programs Classroom Building project will require that a Building Commissioning Agent be a part of the Design Team for the project.

Central Plant

Site

The proposed Central Plant Building is located on the south portion of the site, southeast of the proposed Professional Programs Classroom Building. The site is located on a slope of approximately 10% and slopes down from the northeast to the southwest. The proposed site is also located just east and north of existing residential developments.

Utilities

The proposed Central Plant Building is in a fairly remote location with relation to the rest of the Campus. Although the campus already has a good amount of utility infrastructure in place, the utilities are not very accessible and useful in providing service to the Central Plant site. After analyzing the site and utility information provided by Weber State University, we would recommend the following regarding utilities on the site:

Sanitary Sewer

The nearest sanitary sewer line on Campus will be located approximately 430 feet to the north of the proposed Central Plant. Due to depth of the existing sewer and the length from the Central Plant, flowing by gravity is likely not achievable. It would be possible to install a small lift station and force main to the gravity sewer, but this is still not a very good option. The better option would be to place the Central Plant at such a location that the sewer service could connect to the existing 8-inch sanitary sewer located west of the site in 2600 North Street. This would require a sewer lateral approximately 150 feet in length.

Water

Water and Fire services to the Central Plant could be provided a couple of different ways. One would be to have the services connect to the existing 24-inch waterline located approximately 430 feet to the north. The other, assuming there is adequate capacity, would be to provide service from the existing 8-inch water line located west of the site in 2600 North Street. Assuming that adequate fire flow can be provided from 2600 North Street, this would require culinary and fire services approximately 150 feet in length.

Storm Drain

There is not any storm drain located near the site on the Campus that could service the Central Plant without pumping. One option is percolate the storm drain from the site back into the ground depending on the ground water level and requirements of Layton City. Another option is to detain

on-site and outfall to the 12-inch storm drain located approximately 310 feet south of the site in 950 West Street.

Natural Gas

Gas Services to the Central Plant could also be provided a couple of different ways. One would be to have the services connect to the gas line located approximately 735 feet to the north. The other, assuming there is adequate capacity, would be to provide service from the existing gas line located west of the site 2600 North Street. Assuming that adequate capacity can be provided from 2600 North Street, this would require a service approximately 150 feet in length.

Initial Phase

Phased Construction

When the central boiler and chiller plant for the Davis Campus is constructed it will provide the heating and cooling needs for the entire campus. A central plant provides opportunity to reduce energy and maintenance costs, while meeting the campus heating and cooling needs. It is important that this facility be planned in a manner that will fulfill the energy demands of the full campus at final build-out, but be flexible enough to accommodate the growing campus at each stage of its development with each new building. This strategy necessitates that the Central Plant be planned to be built in phases that correspond with each campus development. Adequate ground for an expanded footprint must be available and remain so until the final phase of the Central Plant construction is completed.

Space Description

The space required for the central boiler and chiller plant shall include the following:

Phase 1 interior space	
Chiller Room	Approximately 2500 sf
Boiler Room	Approximately 2600 sf
Electrical Room	Approximately 600 sf

Phase 1 exterior space	
Electrical Equipment Yard	Approximately 1500 sf
Exterior Space for Cooling Tower	Approximately 2500 sf
Exterior Space for back-up fuel tanks	Approximately 1800 sf

The space for future expansion shall include the following:

Phase 2 interior space	
Chiller room expansion	Additional 1250 sf

Phase 2 exterior space	
Electrical Room expansion	Additional 300 sf
Electrical yard expansion	Additional 500 sf
Cooling tower expansion	Additional 700 sf

Phase 3 interior space	
Boiler room	Additional 1600 sf

Initial Assumptions

Total anticipated future build out: 1,000,000 gsf

The overall anticipated final campus structures will consist of approximately 10 buildings of approximately 100,000 gsf/building (or 8 buildings of approximately 125,000 gsf/building). This will give a total future campus of approximately 1,000,000 gsf.

Total anticipated future load: 2000 tons cooling, 40,000,000 BTUH heating

The approximate future peak cooling load assuming 400 sf/ton, with an 80% diversity will be about 2000 tons. The approximate future peak boiler load assuming 40BTUH/sf is approximately 40,000,000 BTUH, with no diversity on the heating load. Actual peak loads should be re-evaluated as the campus develops, and proposed building square footage and usage changes. Regular evaluations will more accurately determine building peaks and diversity with the campus usage patterns.

Anticipated time for full campus build out: Approximately 30 years

The anticipated timing is not exact; however, it is anticipated that the Davis campus will continue to grow at the rate of approximately 1 new building every 3-5 years. This approximation could have the campus finished in as little as 25 years for 9 new buildings, or as many as 40 years. Of course this timeline is subject to change in the future due to economics, student enrollment, etc. For purposes of the initial central plant masterplan, we will assume 30 years.

Anticipated central plant at full campus build out:

In order to meet the heating and cooling requirements identified above, and include redundancy, the anticipated final central plant (in the year 2038) could consist of three (3) 1000 ton chillers (2 chillers to serve the 2000 ton load with 1 chiller as a back up) and two (2) 30,000 - 40,000

lbs/hr steam boilers (with 1 acting as a full back-up). In addition to the primary chillers and boilers, the plant shall have a plate and frame heat exchanger connected to the cooling tower for off season cooling, and a small summer boiler for more efficient summer steam production.

Central Plant Initial Phase

In order to provide the campus needs at full build out, it is recommended to design all the infrastructure including the utility tunnels, piping, etc. large enough to handle the total future load. In order to save initial costs, and improve operating efficiency, it is recommended that the plant itself and the equipment be provided in phases or stages to more efficiently provide the needs of the smaller campus as it grows.

Phase 1

Provide central plant at the same time as building #2. Size the cooling in the plant large enough to accommodate the first 3 buildings (approximately 240 tons each), with redundancy. This shall include two (2) approximately 720 ton chillers, a 1000 ton plate and frame heat exchanger, and a two cell ceramic cooling tower with each cell sized for 1000 tons. Size the boilers large enough to handle the first 5 buildings on campus with redundancy. This shall include two (2) approximately 20,000 lb/hr steam boilers. Provide also a small summer boiler for off peak loads, including domestic hot water and VAV reheat. Provide main campus distribution pumps with variable frequency drives. Size chilled water pumps, boiler feed pumps, and fuel oil pumps for 100% redundancy.

Campus Controls System

The existing building at the Davis Campus, as well as the TLC building in Layton, are both currently controlled by a Staefa Talon Building Management System. The Ogden campus is currently controlled by a Johnson Metasys Building Management System. In order to get the most competitive bidding, we recommend using both these systems throughout both campuses. The Ogden campus personnel will remotely monitor the new central plant 24 hours a day, 7 days a week, and not needing to constantly man the Davis Campus. If Staeffa Maintenance staff will need to be trained in both controls systems, but this will also aid in making staff interchangeable between campuses.

Fuel Supply

The boilers shall use natural gas as the primary fuel source. The boiler system should include a back-up fuel oil supply. The back-up tanks should be installed in phase 1 with a capacity large enough to handle the full campus load at final build-out (approx. 40,000 lb/hr) for a minimum of 48 hours.

Piping in tunnels

Chilled water, steam, and condensate piping in tunnel shall be sized full size for future campus build out. Provide steam trap monitoring at all steam traps.

Alternative design approaches**Ice storage**

Ice storage can be used to reduce electricity demand charges by using off peak utilities in order to make ice at night. The ice can then be used to provide all or part of the chilled water supply in the daytime “peak” hours.

Ice storage is a series of storage tubs, that can be outside, inside, or buried. The tubs are approximately 8’ in diameter, and 8’ tall. Each tub provides approximately 160 ton hours of cooling. (20 tons for 8 hours, or approximately 14 tons for 12 hours). The tubs cost approximately \$20,000/each installed, not including excavation, site work, etc. if buried. In order to supply the full peak load of approximately 2000 tons for 12 hours a day, this would require approximately 150 ice tubs (approximately 24,000 ton hours). The approximate mechanical cost of 144 tubs would be around \$3,000,000. Twelve rows of twelve tubs per row would require approximately 1000 square feet. This could be split into phases if desired. If ice storage is used for partial load instead of full load, any lesser combination may be used.

Chillers for ice storage can be either centrifugal or screw chillers. Screw chillers are efficient both at making ice at night, and chilled water during the day. Centrifugal chillers need to be designed for one or the other. If they are designed for ice storage, they are inefficient, though capable for chilled water production. It may make sense to use 1 chiller for ice production that would act as the back-up chiller during the day, and use the other chiller as the primary day time chiller.

The economic payback of the ice storage is a result of using non-peak electricity. Although the amount of electricity consumed is comparable, the demand charges are reduced by consuming this electricity at night. The demand payback associated with ice storage is approximately \$1,600/storage tub/year. (assuming \$10/kW demand charge, 0.95 kW/ton plant efficiency, and 8 month chiller operation) This results in a simple payback of 10-15 years. The justification to use this technology would need to be based on additional factors such as Rocky Mountain Power incentives, Rocky Mountain Power off peak rate schedules, LEED credits, future power cost considerations, etc.

Weber State will be interested in the opportunity of using ice storage if the funding is available.

Chilled water storage

Chilled water storage uses the same concept as ice storage to produce chilled water at night in off peak hours, and then use that chilled water throughout the day to serve the campus needs. Instead of using a series of smaller tubs, chilled water storage typically uses an extremely large above ground storage tank, designed for temperature stratification within the tank. To get the same ton hours (approximately 24,0000) this would require approximately a 3,500,000 gallon tank (approximately 100' diameter, and 50' tall).

This is most likely not going to work with the campus master plan. The disadvantages of the visual impact on the site, coupled with the difficulty implementing it in phases prevent this from being a viable alternative.

Impact on Existing Building #1**Existing Boiler**

In order to connect the existing building to the new central plant, the hot water boiler will need to be replaced with a steam to hot water converter. The rest of the heating water system will remain in place. The existing hot water boilers may be considered to be re-installed at the central plant and converted to steam for summer use. If required by budget, it may be considered to leave the hot water boiler in service, and tie into the central steam system at a later date.

Existing Chiller

In order to connect this building to the new central loop, it makes sense to keep the building chilled water loop, pumps, piping, etc. The existing main building pumps would become tertiary pumps to the main system. The air cooled chiller shall be removed when the new piping connection is made. The existing chiller could remain in place and be connected to the new loop as additional back-up if desired. It could also be re-located to the plant to be used as the back-up chiller if desired. The disadvantage with using this chiller as a back-up is that it is only sized for the load for 1 building. If it is the primary back-up, it will not be able to adequately handle the entire load, so the recommended option is not to re-install the existing chiller as part of the back-up.

**Master Plan to Connect Individual Buildings to
Central Plant
Heating and Cooling**

Each building shall include steam to hot water converters that will be supplied by the campus steam system. Provide steam trap monitoring at each steam trap. Hot water from the converter will be pumped to building heating coils. Chilled water shall have tertiary pumps with variable frequency drives at each building.

Domestic Hot Water

The domestic hot water shall be provided by steam powered water heaters at each building. Building shall have hot water re-circulating systems to assure quick response.

Electrical Substation

A new power substation, located on the west side of campus (see building graphics section for exact location), will be designed and constructed to handle the power needs for the new Professional Programs Classroom Building and Central Plant as well as the electrical needs for all of the future buildings and other amenities as masterplanned in the HFS masterplan. The new substation will need to accommodate 46 kV to 12.5 kV. In addition, approximately 1400 feet of ductbank with sectionalizers and switches will need to be constructed to get power to the existing buildings.

Two transformers currently supply power to the existing buildings. With the addition of the new substation, these will no longer be needed and become surplus. Rocky Mountain Power, at the time of this program, is requiring that WSU purchase these transformers.

Current supplied power to the site is 46 kV. There may be a possibility, at the time of construction, that RMP transmission lines will be upgraded to 138 kV. Assuming this scenario, the design takes into consideration an incoming structure with spacing for 138 kV equipment and metering but provides 46 kV equipment and metering. This design allows for future expansion to accommodate a second 5 MVA transformer to provide full load back up power to campus from either transformer.

A design scenario was investigated that would provide dual transformers to accommodate both 46 kV and 138 kV. Because of extremely high front end costs, this idea was not pursued.

Prior to design, a power study will need done by RMP to assess existing capacities and availability. This study may take up to 6 months to complete and will need to be paid for by Weber State University prior to commencement.

See Appendix for Memorandum from Spectrum Engineers.

Future Phasing

Potential Future Phasing

In order to provide the campus needs at full build out, it is recommended to design the central plant, and all infrastructure including the utility tunnels, piping, etc. large enough to handle the total future load in the initial phase. In order to save initial costs, and improve operating efficiency, it is recommended that equipment be provided in phases or stages to more efficiently provide the needs of the smaller campus as it grows. Below is a possible scenario for the central plant phasing:

Phase 2

When building #4 is added to the central plant (in approximately 7-10 years), expand the cooling capacity to accommodate buildings #4-#7. The anticipated load for 7 buildings is approximately 1,400 tons. This could be done by adding to one side of the plant, adding a third chiller of approximately 1000 tons, and a third ceramic tower cell of 1000 tons. This would give a total chiller capacity of 1,720 tons, with a total redundant back-up capacity of approximately 1,440 tons.

Phase 3

When building #6 is added to the central plant (in approximately 12-20 years), the boiler capacity will not have full redundancy. The second side of the plant could be extended, and a third boiler sized for 30,000 - 40,000 lb/hr could be added at this time, which would give a total redundant capacity of 40,000 BTUH. This would be enough to handle the remainder of the campus build out.

Phase 4

When building #8 is added (in approximately 18-25 years), the central chiller plant will not have full redundant cooling capacity. At this time, the two 720 ton chillers that were included in phase 1 could be replaced with two (2) 1000 ton chillers. This would be enough to handle the total campus build out.

Phase 5

When the 10 building is added (in approximately 25-40 years), the boilers installed as part of phase 1, and the chiller added in phase 2 will be close to the end of their recommended life. The actual campus loads and needs will be more known and defined. At the time the 10th building is added, the base plan would replace the two (2) 20,000 BTUH boilers with one (1) 40,000 BTUH boiler, and replace the oldest 1000 ton chiller with a new 1000 ton chiller. However, due to changing loads and requirements, it may make more sense to size the new equipment differently in order to accommodate the actual campus loads at that time.

Possible alternative design approaches**Ice storage**

Ice storage can be used to reduce electricity demand charges by using off peak utilities in order to make ice at night. The ice can then be used to provide all or part of the chilled water supply in the daytime “peak” hours. See analysis in initial phase program. If ice storage is employed, then it’s capacity, value, and future additions to the ice storage system should be considered at each phase where the cooling system is modified.

Architectural Analysis

There are several issues inherent in the design and construction of the Central Plant that will need to be considered. The Plant should not be located too close to the central campus or too near adjacent housing units. A combination of trees and screen walls should be used to mitigate noise from the Plant and obscure views into the Plant from adjacent areas. The largest source of noise will be the electrical equipment yard and the chiller section of the plant. Tall stacks will rise from the boiler section of the plant, and unpleasant discharge may originate from these stacks. Any items downwind of the boiler stacks should be taken into account when considering mitigation strategies.

The cooling towers are specified as the ceramic type and can be skinned in any material. A brick facing would blend with the existing campus buildings. The main part of the Central Plant can also be faced in a combination of architectural cast-in-place concrete and brick veneer.

The utility lines from the cooling tower, underground fuel tanks and the electrical yard will need to be closely coordinated so that the lines are not located in conflict with future phases to be added to the Plant. There will be buried cooling tower lines that need to get to the chillers; buried fuel lines will need to go from the fuel tanks to the boilers; and buried electrical cables will run from the electrical equipment yard to the electrical room.

Site Considerations

Landscaping

Landscaping at the Central Plant should be sensitive to the surrounding residential areas. Landscaped sound barrier screens with plants that maintain foliage year round to aid in attenuating noise from cooling towers and other equipment need to be designed. Also, fast growing species should be considered. Parking areas at these facilities need to be landscaped to create a sight screen between the Plant and neighboring residences. Consideration should be taken to design for summer and winter conditions.

The Substation landscaping should be designed to minimize visual exposure to adjacent properties and to attenuate any noise from maintenance/service vehicles. Again, plant varieties that maintain foliage all year and are relatively maintenance free should be used.

Cost Estimate

An estimate of probable construction costs has been compiled based on the programmed square footage, level of finish materials (interior and exterior) anticipated for the building, and mechanical and electrical systems projected for the facility. These costs have been forecasted in today’s construction dollars.

This proposed construction budget is in today’s dollars. An escalation factor will need to be projected and added to this budget in order to adequately reflect more accurate costs of constructing the facility, when that construction is slated to begin.

Central Plant Cost Estimate

Building Cost Summary	Unity Qty	Unit Cost	Subtotal
Construction Subtotal	6,500 SF	\$ 582.26	\$ 3,784,674
General Conditions	7%	\$ 40.76	\$ 264,927
Overhead & Profit	5%	\$ 29.11	\$ 189,234
Design Contingency	15%	\$ 87.34	\$ 567,701
Construction Total*	6,500 SF	\$739.47	\$ 4,806,536

Electrical Substation Cost Estimate

Building Cost Summary	Unity Qty	Unit Cost	Subtotal
Substation Equipment			\$ 771,706
Erection Installation			\$ 514,470
Design Contingency	10%		\$128,618
Distribution / Duct bank			\$399,173
Construction Total*			\$1,813,967

*Note: These costs are inclusive only of the hard construction costs. The soft costs will need to be added to the construction budget by DFCM to arrive at the final Capital Budget Estimate:

Building Systems Structural

1. Structural Design Criteria

The structure is designed to support actual dead loads plus live loads and combinations according to the 2006 International Building Code and DFCM Design Standards. These loads are as follows:

1.1 Snow Load (also include drift and unbalanced conditions)

Exposure Category	B
Ground Snow Load (Pg)	43 psf
Importance Factor (IS)	1.1 (Category II Building)
Thermal Factor (Ct)	1.0

1.2 Seismic Loads

Central Plant

Seismic Use Group	II
Importance Factor (E)	1.25 (Category II Building)
Spectral Response Coefficients are to be determined in accordance with current United States Geological Survey Maps	

1.3 Central Heating Chiller Plant additional loads

A 50 psf minimum allowance for hanging loads shall be provided for incidental new and future pipes and equipment hanging from the roof structure. Additional capacity for substantial hanging loads shall be provided for catwalks and major permanent elements supported by the roof structure.

1.4 Wind Loads

Exposure Category	B
Basic Wind Velocity (V)	90 mph (3 second gust)
Importance Factor (IW)	1.15

Building Systems Mechanical

HVAC

Provide steam unit heaters in boiler and chiller room for freeze protection heating. Provide fan coil unit with chilled water coil for cooling in chiller room as necessary to protect VFDs and other equipment. Provide general exhaust in all three rooms. Provide refrigerant leak detection system in chiller room, and interlock with exhaust fan and outdoor louver. Provide combustion air louvers for boiler room. Provide flue stacks for each boiler. Coordinate exact size and height of stacks with DAQ permitting.

Plumbing

Provide floor sinks, floor drains, and trench drains as necessary at all equipment to prevent the possibility of standing water on the floor. Provide domestic water for water make-up to steam system and chilled water system. Provide hose bibs as necessary for cleaning and maintenance. Provide emergency eyewash and drench shower with tempered water in boiler room and chiller room.

Building Systems Electrical

Codes and Standards

Codes which are applicable to the design of the electrical systems are listed below. Comply with each of the latest adopted publications. They are incorporated into this program by reference and are not restated in the program narrative.

- ASHRAE 90.1 Energy Code
- DFCM, Division of Facilities Construction and Management, Design Manual
- DFCM High Performance Building Rating System
- EIA/TIA, Electronics Industries Association/Telecommunications Industry Association
- International Building Code
- IESNA, Illuminating Engineering Society of North America
- LEED NC 2.2 Rating System
- NFPA, National Fire Protection Association (applicable sections including but not limited to):
 - NFPA 70, National Electrical Code
 - NFPA 72, National Fire Alarm Code
- UL, Underwriter's Laboratories
- Utah State Fire Marshal Laws, Rules and Regulations
- Weber State University Design and Construction Standards for Architects, Engineers and Contractors
- Weber State University Campus CAD Standards

Site Electrical

Medium Voltage

Rocky Mountain Power (RMP) presently serves the existing building on campus. The campus is considering 3 options to provide power to the new Central Plant and future buildings. Explore each option with the Campus, DFCM and Rocky Mountain Power during the schematic design phase. Provide life-cycle cost analysis for each option and present to steering committee for final decision on how to proceed. If project delivery method is design-build, then provide a line item cost for each option in the design-build proposal.

Option 1

The campus will take secondary power delivery from RMP (similar to the existing building on campus). RMP will provide all primary switches, cabling and transformer. Trenches, empty conduit, transformer pad/vault and meter base shall be provided as part of the project per RMP standards. Metering will occur on the secondary side of the transformer per applicable RMP rate schedule.

Option 2

The campus will take primary power delivery at 12,470 V from RMP. A new 15-kV metering point will need to be established and the existing 15-kV equipment (switches, transformers and cabling) be purchased from RMP. Primary metering discount per the RMP rate schedule will apply. Under this option, a 15-kV power distribution system shall be designed that originates from the new Central Plant. Design system in a redundant loop that will feed new and existing buildings, with provisions to facilitate extension into future buildings. Size main distribution switchgear and backbone cabling for full campus build out. Comply with campus design standards for medium-voltage distribution.

Option 3

Provide a new substation that the campus will own and maintain, and take high-voltage power delivery at 46,000 V under RMP Rate Schedule 9. Design medium-voltage distribution system that originates from the substation (which may extend to a distribution point at the central plant). Design system in a redundant loop that will feed new and existing buildings, with provisions to facilitate extension into future buildings. Size main distribution switchgear and backbone cabling for full campus build out. Comply with campus design standards for medium-voltage distribution. Refer to the substation report that is part of the program for additional details and information.

Initially, provide two service transformers for the new central plant, with provisions for two more. Connect the transformers in a secondary main-tie-main arrangement for redundancy. Size each transformer for the anticipated running load of the central plant so that one transformer can maintain the central plant operational should the other transformer fail.

Site Telecommunications Raceways

Provide a minimum of (2) 4" conduits from existing telecommunications manhole on site into the central plant for telecommunications service. Design new manholes and duct banks to facilitate extension into future buildings. Provide (2) 4" conduits from existing classroom building for intra-campus telephone and data networking.

Building Service and Distribution

Main Service

Design main electrical room close to utility transformers for the building. Provide double-ended, main-tie-main switchboards with key interlocks. Provide digital metering that is capable of being remotely read through a web-browser or other type of digital interface. Service voltage shall be 277/480V, 3-phase, 4-wire. Verify voltage and load requirements of central plant equipment with the mechanical design. Provisions shall be made for future full build-out of the central plant. Switchboards and electrical distribution equipment shall be located in a dedicated electrical room, and not placed inside of the mechanical equipment area. The room shall be sized for full build-out of central plant, or otherwise made to be easily expanded when future work takes place.

Motor Control Centers

Provide motor control centers for each main service switchboard. Motor control centers may be located in the mechanical equipment area as long as proper NEC-required clearances are maintained and piping is not run over the top of the MCC's. Separate motors and loads that serve the same function onto different services such that if one service fails, the redundant components will be maintained with power from the other service. All 3-phase motors shall be provided with phase-loss protection. Provide disconnect switches within sight of all motors. Provide variable frequency drives (VFD's) where required for mechanical equipment in compliance with DFCM and campus requirements, and sized at least 15% over the connected motor load. Minimum total harmonic current distortion when measured at the input terminals of the VFD shall be not greater than 15%. The design electrical engineer may evaluate the variety of harmonic filtering and mitigation techniques and choose the best method to achieve this performance.

Transformers

Where 480-120/208V, dry-type, step down transformers are used for loads requiring this voltage, provide high-efficiency (NEMA TP-1) type transformers.

Panelboards

Provide 277/480V and 120/208V panelboards in the main electrical room for the anticipated loads.

Spare Capacity

Switchboards, panelboards, transformers and other distribution equipment shall be provided with 50% spare capacity and spaces/spares for future growth and flexibility. Electrical equipment rooms shall have 50% additional space for future equipment. Design system to minimize shutdowns for future additions or work.

Branch Circuits

Load branch circuits to no more than 80% of what is allowed by NFPA 70. Where outlets are intended for a specific piece of equipment, the load of the outlet shall be based on the equipment nameplate. Otherwise, allow no more than 6 convenience outlets per circuit or 4 outlets per circuit serving workstation computer terminals. Each branch circuit homerun shall have no more than 3 circuits per raceway. Neutral conductors shall be sized for the anticipated harmonic currents that they will carry. As a minimum, the shared neutral conductor shall be one size larger than the phase conductors for all outlet branch circuits.

Outlets

Outlets shall be 20A, minimum. Provide sufficient outlets for specific equipment served, plus convenience outlets on all walls at approximately 10' on center.

Conductors

All conductors shall be copper. Conductors for branch circuits shall be sized to prevent voltage drop exceeding 3% at the farthest load. The total voltage drop on both feeders and branch circuits shall not exceed 5%. When calculating the voltage drop, the load shall be assumed to be at the most distant outlet and 80% of the ampacity of the branch circuit and feeder conductors. Specify that actual load tests and voltage readings be taken upon completion of installation to verify these requirements, and deficiencies corrected.

Raceways

Design all wiring in raceways, minimum $\frac{3}{4}$ "C. Type MC or AC cable is not permitted. Include pull strings in all empty conduits. Include raceway for all telecommunications and security systems whether furnished as part of the construction contract or furnished by the Owner.

Fault Current and Coordination Study

Perform a fault current and coordination study to indicate available fault current at all points in the Building distribution systems. Design new equipment rated for the amount of available fault current. Study system coordination and select fuses or breakers to ensure minimum system outage due to overloads or fault currents. Set breakers with adjustable long time, short time, instantaneous and/or ground fault settings for optimum system coordination.

Transient Voltage Surge Suppression

Provide transient voltage surge suppression (TVSS) and "noise" protection at service equipment (each main) and on branch panelboards in the facility that serve sensitive electronic equipment. TVSS units may be integral to the panelboard or switchboard, or individually mounted "stand-

alone” units. However, if individual units are used, they shall be placed immediately adjacent to the panelboard or switchboard to minimize the effects of increasing clamping voltages due to excessive lead lengths.

Grounding

All feeder and branch circuit raceways shall include an insulated equipment grounding conductor. All grounding systems shall be bonded together per NEC requirements.

Emergency Service and Distribution

Provide an emergency diesel generator for the new central plant. Generator shall be outdoors in a screened area with weather-protective, sound-attenuating housing and skid-mounted, double-walled tank. Fuel supply shall be minimum 18 hours at full load. Design at least two transfer switches: one for emergency and one for non-emergency (“stand-by”) loads. Annunciate alarms adjacent to fire alarm panel. Design generator distribution panel with digital metering. The following shall be provided with emergency power. Verify emergency and standby loads with the campus during design:

- Emergency egress and exit lighting
- Fire Alarm
- Communications Equipment
- Building Management System
- Boiler and Heating System Equipment (sufficient to keep pipes in tunnel from freezing)
- Electrical rooms – lights and outlets
- Security systems

Lighting**General**

Comply with illuminance levels and uniformity criteria of IESNA and its Recommended Practices. Comply with RP-8-00 “Roadway Lighting”, RP-20-98 “Lighting for Parking Facilities”, and RP-33-99 “Lighting for Exterior Environments”. For exterior lighting provide point-by-point plot of illuminance establishing conformance with the Recommended Practices. Except for specialized applications, design lighting with a minimum efficacy of 85 lumens per watt. Specify maximum 20% THD electronic ballasts. As much as practical and meets the design intent, specify as few types of lamps as possible to simplify ordering and warehousing. Use 4’ T-8 lamps with CRI of 88 or greater wherever possible. Specify lamps complying with EPA TCLP requirements.

Comply with ASHRAE 90.1 requirements, except that overall energy target requirements should be reduced by 10% min. Cost-effective, energy efficiency measures beyond the minimum standards are strongly encouraged.

Parking, Pedestrian, and Street Lighting

Use only campus standard lighting fixtures for walkways, parking and roadways, compatible with the campus surroundings. Control exterior lighting through a programmable lighting relay system that is interfaced with the building automation system. The building automation system shall use photocell inputs and time schedule control to optimize use.

Design parking areas to comply with RP-20-98, except that the minimum illuminance shall exceed 1 footcandle with a 4:1 uniformity. Design pedestrian areas to comply with RP-8 (average to minimum uniformity ratio less than 4 to 1), except that the average horizontal illuminance shall be increased to 1 footcandle and the average vertical illuminance to 1 footcandle. For each of these areas design two level lighting so that from 11:00 PM to dawn the illuminance level reduces to .6 footcandles minimum. Consider “dark sky” principles in application of luminaires.

Design street lighting to comply with RP-8, except that the average illuminance level shall exceed 1.0 footcandles and average to minimum uniformity ratio less than 3 to 1 with special consideration for the entry from the roadways bounding the site to comply with minimum uniformity requirements and veiling luminance ratios.

Interior Lighting

In general, utilize protected, industrial-type fluorescent lighting fixtures. Provide means to control interior lighting based on occupancy, with manual override switches.

Design exit lighting to comply with IBC. Design emergency lighting for means of egress to 1 fc minimum to comply with IBC. Include emergency lighting in restrooms, electrical rooms, vaults and communication rooms.

Fire Alarm**Campus Fire Alarm and Life Safety**

Comply with Utah State Fire Marshall’s “Rules and Regulations” and campus requirements. Coordinate with campus facilities during design and use only campus-approved manufacturers to ensure that any new system is acceptable to the campus. Design an addressable system capable of reporting back to central campus security office. Design strobes visible from all locations. Design audible devices to comply with NFPA including for higher ambient noise requirements. Provide duct detectors and fan shutdown where required by NFPA and the IMC. Coordinate location of the building annunciator with the Campus fire marshal. All other detectors and functions shall comply with the referenced codes and standards. All fire alarm wiring shall be in conduit. Final programming of system shall be coordinated with the Campus Fire Marshal to ensure that the program will be compatible with existing campus fire alarm programming.

Telecommunications Systems

Voice/Data Drops

Each voice/data outlet location shall consist of a 4" square box with two gang mud ring and one 1" conduit stubbed to the main communications room. Coordinate voice/data outlet locations with the campus during the design. Provide cabling, connectors, devices and all terminations per the campus standards.

Security Systems

General

All security systems will comply with established campus standards. Systems will annunciate alarm conditions to, and be completely monitored.

Card Access

A complete access control system will be specified to control entry to all perimeter entry/exit points. Card readers will be the proximity type, and will comply with established campus standards. Card readers will report to central door controllers. Coordinate door hardware to minimize the aesthetic impact to the appearance of the building.

Video Surveillance

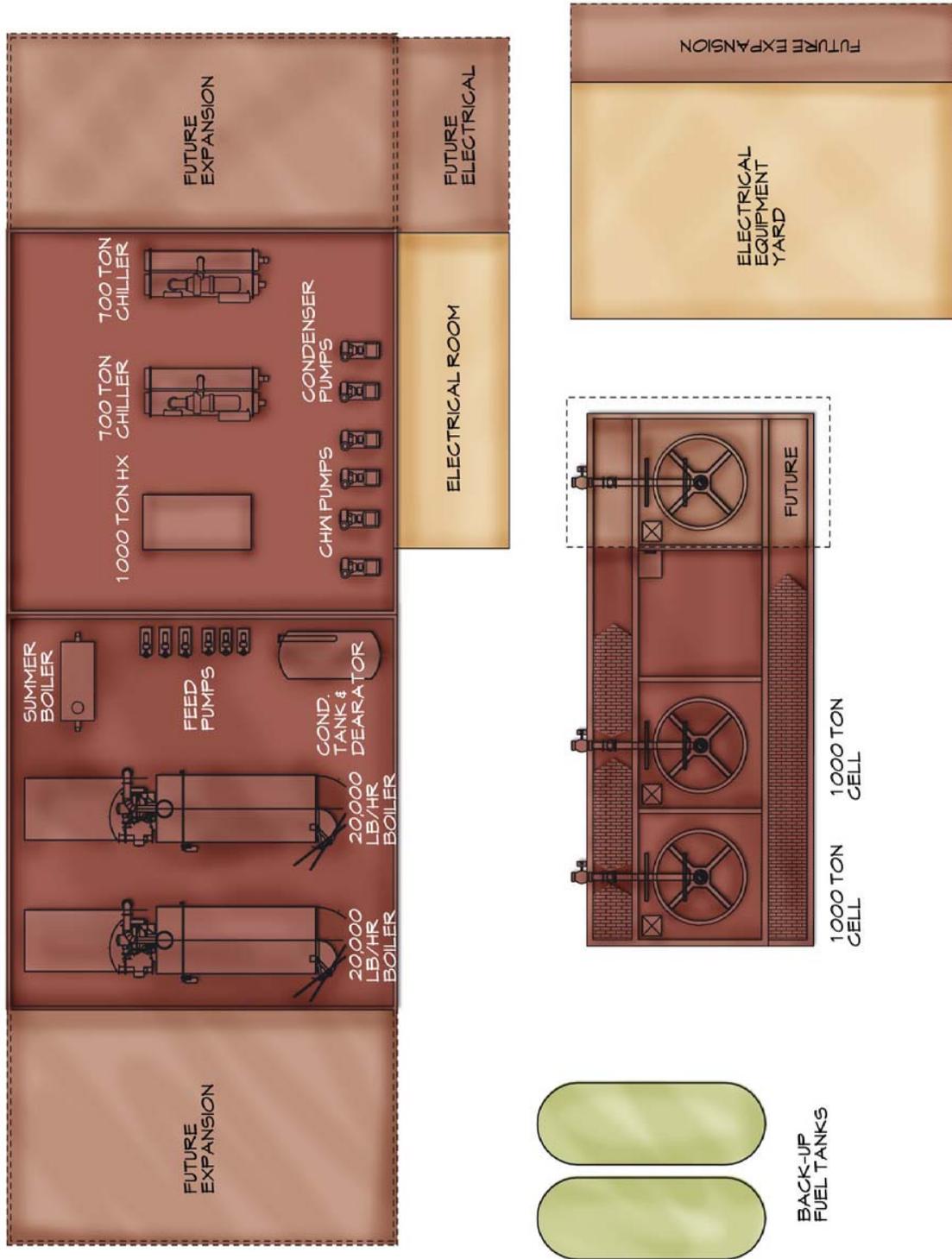
A complete video surveillance system will be specified to provide for visual monitoring at all building entry/exit points. Cameras will be specified for viewing of owner designated subject areas, and installed in appropriately rated enclosures. Signals from cameras will be connected to a central switching/multiplexing system with minimum 20" video monitors for viewing. All camera images will be digitally recorded by DVR's that are local area network accessible.

Intrusion Detection

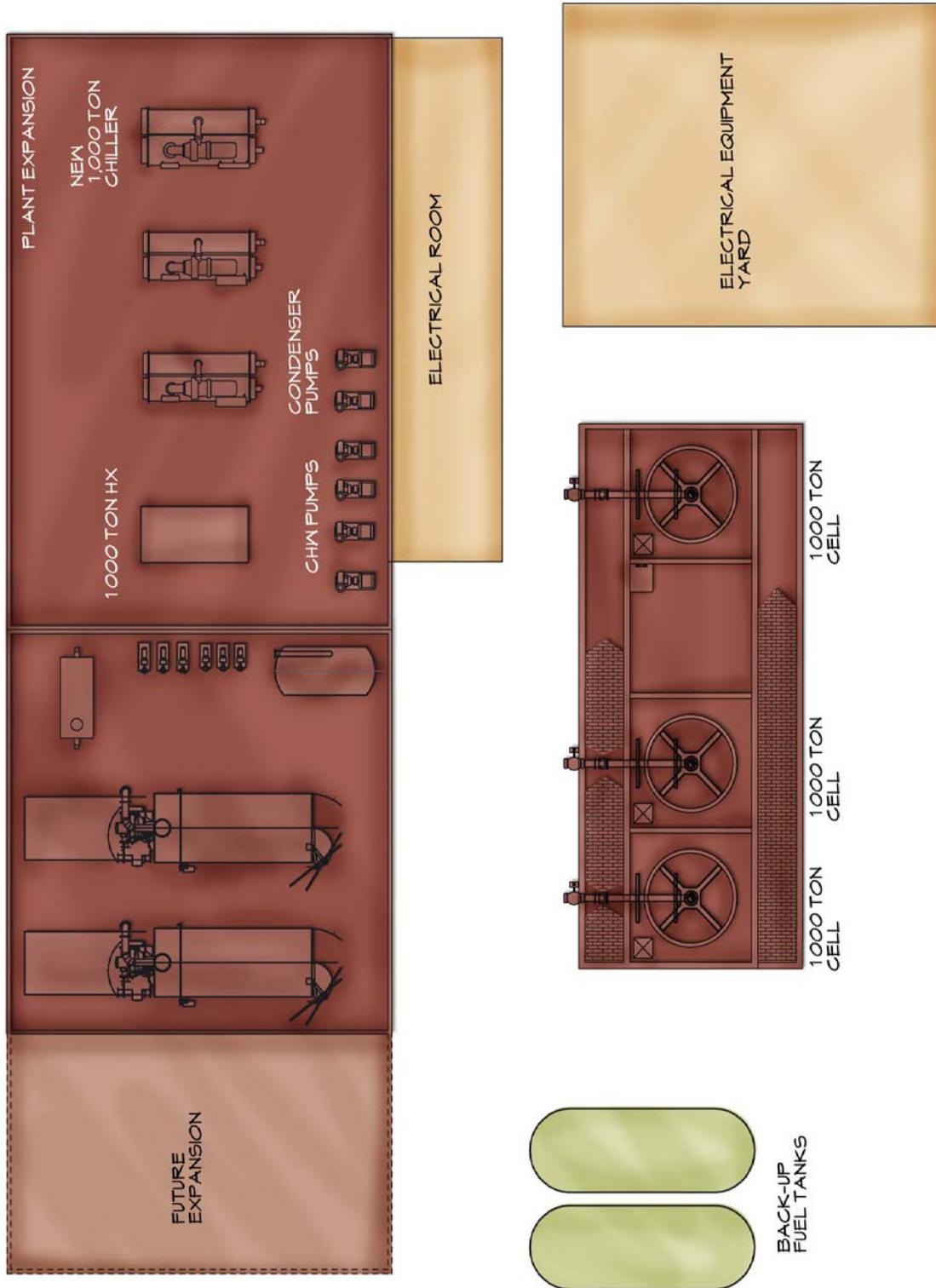
A complete intrusion detection system will be specified for electronic monitoring and status reporting of all building entry/exit points. Sensing devices will include door position switches and motion sensors where appropriate. All sensing devices will report to a zoned monitoring panel for specific location identification of an alarm condition. The intrusion detection system will be integrated with the video surveillance system for priority viewing of security breach areas.

Emergency Phones

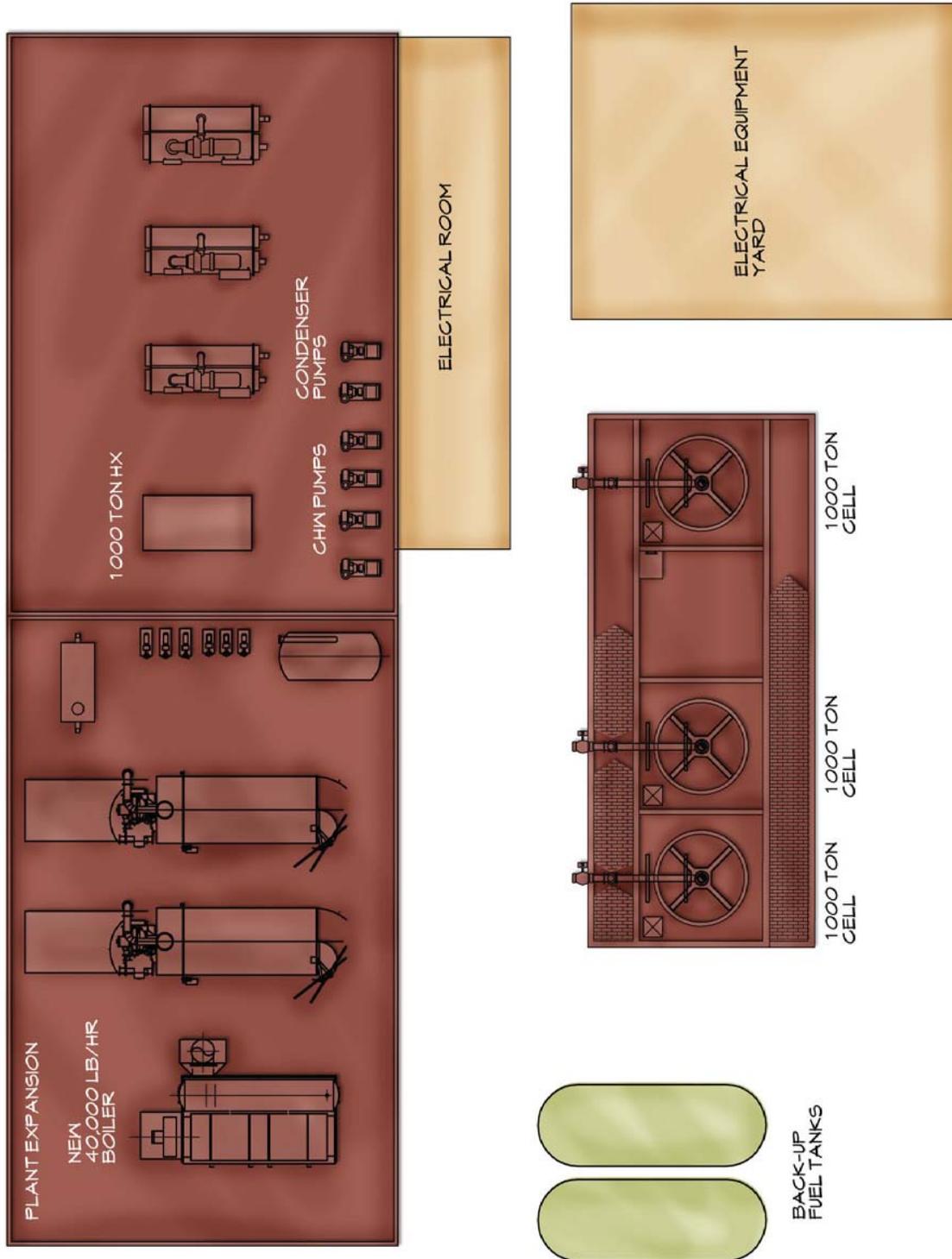
Emergency (Blue Light) telephones will be specified. Provide density and alarm annunciation based on established campus standards. At a minimum, locate telephones in outdoor parking and pedestrian areas of the site at highly visible locations.



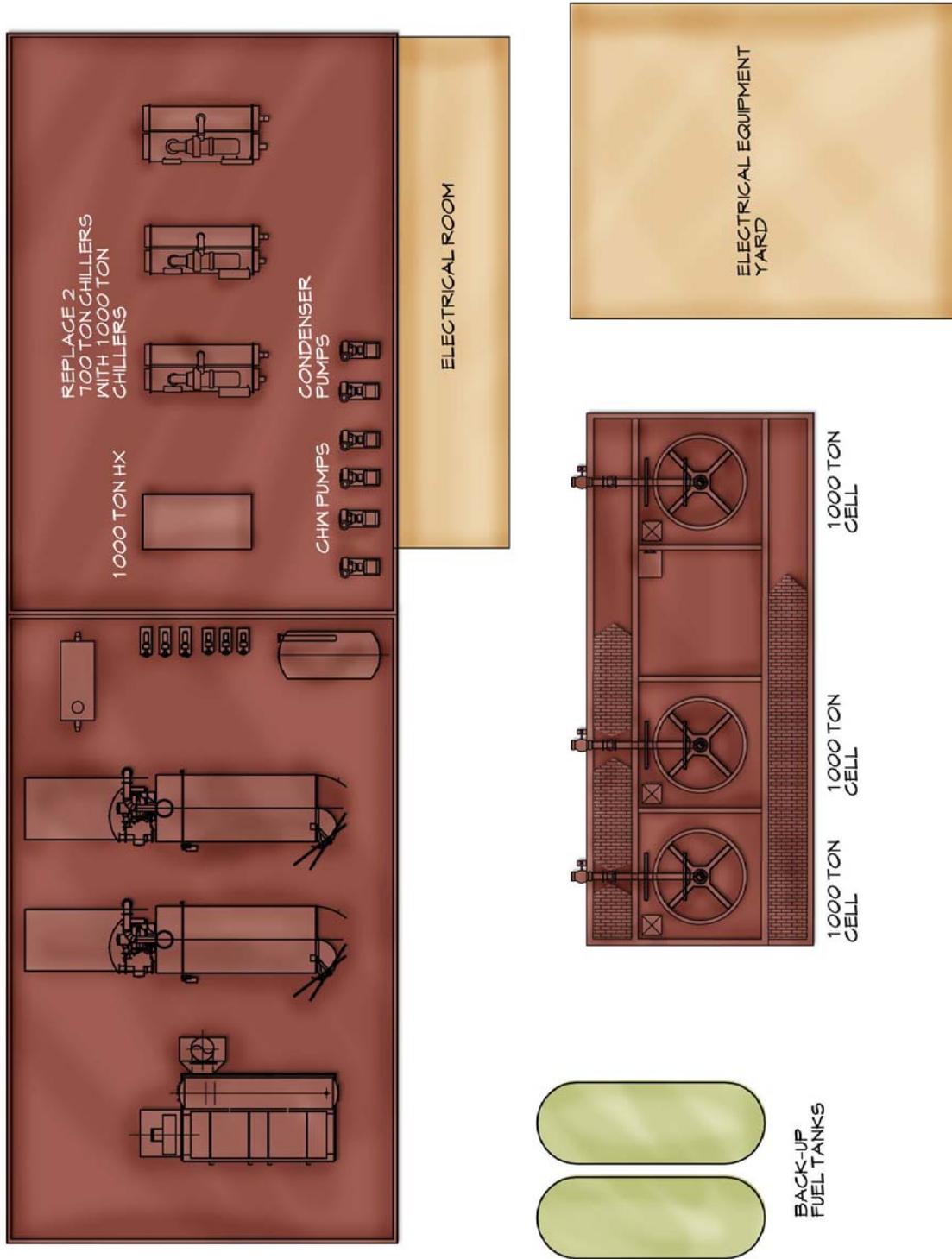
PHASE 1 W/ BUILDING #2



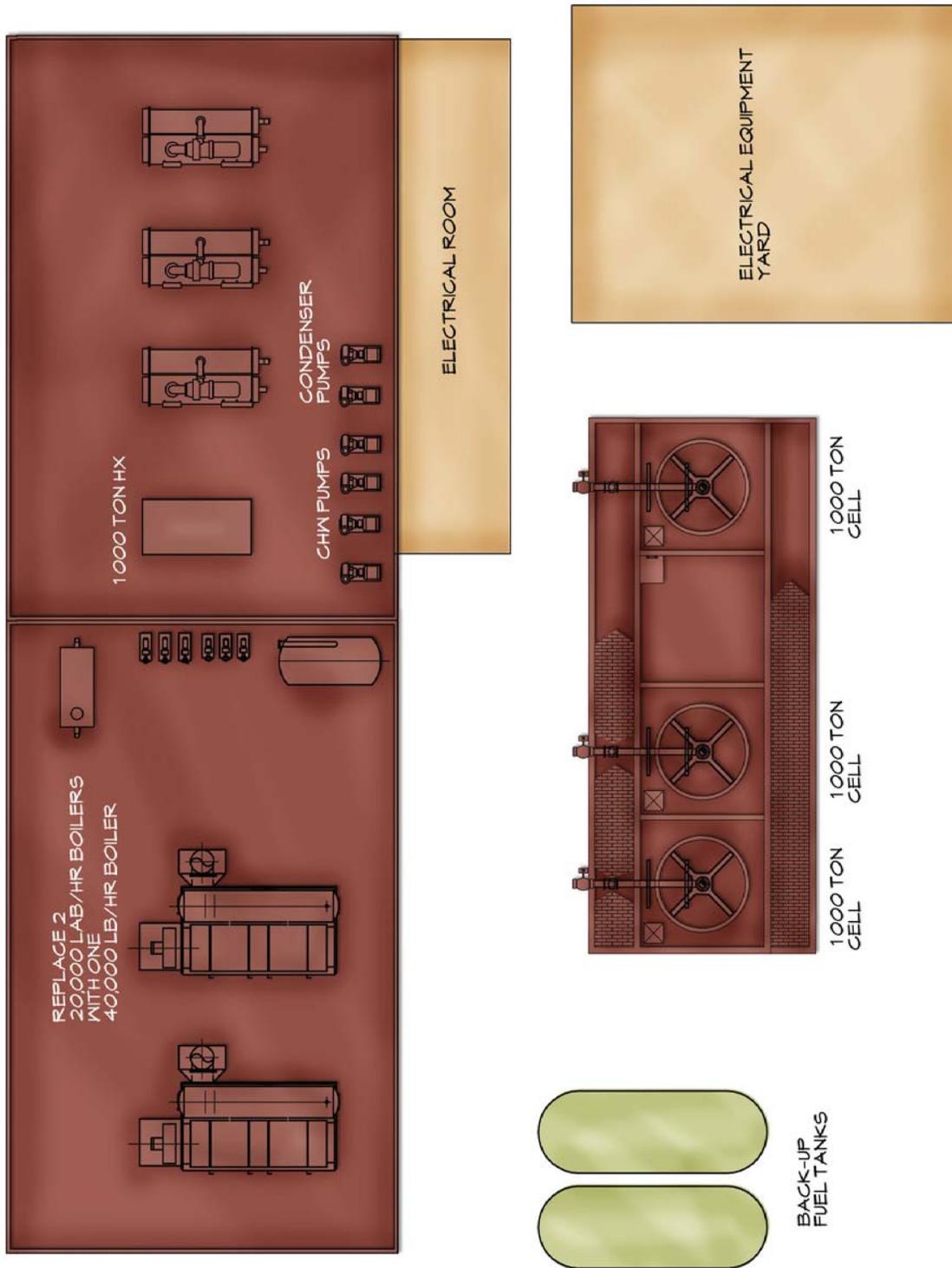
PHASE 2 w/BUILDING #4 • APPROXIMATELY 7 - 10 YEARS



PHASE 3 W/ BUILDING #6 APPROXIMATELY 12-20 YEARS



PHASE 4 w/ BUILDING #8 • APPROXIMATELY 18-25 YEARS



FINAL PHASE (FINISHED CAMPUS) • APPROXIMATELY 25-40 YEARS

Report Summary

As the Steering Committee and Programming Team worked through the process of determining what was to be included in the Professional Programs Classroom Building, there were numerous appropriate departments discussed for placement in the facility. Weber State University is continually developing new, technologically advanced, and popular programs; many of these programs were under consideration to be located at the Davis campus. In the final analysis, the programs with the greatest future student demand and an affiliation with programs already offered at the Davis campus were chosen for inclusion in the program.

The student services included within the facility were also chosen through careful consideration, including a comprehensive student survey and the guidance of the Steering Committee. A vital mix of amenities and activities were chosen that will not only provide the students with critical services but will make this facility an activity hub for the Davis campus. This hub will encourage students to spend more time on campus as well as collaborate and participate in activities with their colleagues.

The layout of the building will be important in creating this activity hub. The Programming Team believes that it is key to open the first and second floors to each other so that the activities and amenities are visually accessible from each of the entry levels into the building. This synergy will begin to activate the pedestrian plaza to the north of the facility as it was envisioned in the Master Plan of the Davis campus.

The placement of the Central Plant on the campus is also a very important decision as this addition will efficiently provide utility services to the Davis campus for years to come. Keeping the Plant an appropriate distance away from the Main Campus is important for several reasons. First, the building elements of the Plant need to be visually screened and acoustically isolated from the Main Campus (and also the adjacent residential neighborhoods). Secondly, there are utilities that need to be coordinated with the utility tunnels that will be brought onto the Main Campus (on the central pedestrian core). A major 20" water line will need to be crossed by the utility tunnel configuration and will need to be studied extensively before being implemented.

The new electrical substation included in the program was added near the end of the programming process. It is also important for the long-term sustainability of the campus. Electricity can be delivered to the Davis campus through the substation more economically, more reliably, and more efficiently than through the local power utility. The decision to include the substation is a commitment by Weber State University to the future of a viable, long-term home on the Davis campus.

The siting of the facility, and the materials used for the Professional Programs Classroom Building are critical for creating a visually integrated campus. The new facility will need to appear to be ‘cut from the same cloth’ as the original campus building while at the same time reflecting new technologies and a commitment to sustainable building strategies. Through a series of renderings of one possible design solution (included in this program document), one can see that through the use of similar materials, massing, and orientation, that a cohesive collection of campus buildings can be achieved.

It is our sincere expectation that this program document and, ultimately, the design and construction of the new Professional Programs Classroom Building, the Central Plant and the Electrical Substation will provide Weber State University an opportunity to develop the Davis campus in a sustainable, energy efficient and economical manner. This program will deliver a facility that is complementary to the existing building, full of student collaboration and activity, and a center for learning that is of the highest professional quality.

Appendix I Campus Survey Results

Survey Respondents Demographics

The survey was launched on Monday, January 7th and ended on Monday, January 21. A total of 596 began the survey and 448 completed the survey in full. Participants were encouraged to answer every question but were not required to due to the voluntary nature of the survey.

Age

1. What is your age?			Response Percent	Response Count
15-18			17.6%	105
19-22			15.6%	93
23-26			22.4%	133
27-30			11.9%	71
31-40			17.1%	102
41-50			9.4%	56
51+			5.9%	35
<i>answered question</i>				595
<i>skipped question</i>				1

Gender

51.3% of respondents were Male, 48.7% if respondents were Female.

Program Affiliation

3. With which program are you affiliated?			Response Percent	Response Count
Weber State University			82.9%	489
Weber State University- Early College			4.1%	24
NUAMES			13.1%	77
<i>answered question</i>				590
<i>skipped question</i>				6

Role on Campus

89.4% of respondents were Students; 4.6% were Faculty; and, 6.1% were Staff.

Hours on Campus

4. At what hours are you typically on campus? Choose all that apply.			Response Percent	Response Count
6:00 - 8:00 a.m.			18.3%	106
8:00 - 10:00 a.m.			59.3%	344
10:00 a.m. - noon			59.7%	346
12:00 - 2:00 p.m.			45.0%	261
2:00 - 4:00 p.m.			28.4%	165
4:00 - 6:00 p.m.			39.1%	227
6:00 - 8:00 p.m.			46.4%	269
8:00 - 10:00 p.m.			15.0%	87
			answered question	580
			skipped question	16

Expected Year of Graduation

6. What is your expected year of graduation?			Response Percent	Response Count
2008			25.4%	130
2009			21.3%	109
2010			30.9%	158
2011			12.1%	62
2012 or later			10.4%	53
			answered question	512
			skipped question	84

Enrollment Status

62.3% of respondents were Full-Time Students. 37.7 % of respondents were Part-Time Students.

Class Times

9. At what time of day do you most often take classes?			Response Percent	Response Count
Morning			56.3%	293
Afternoon			11.2%	58
Evening			32.5%	169
			answered question	520
			skipped question	76

Intended or Declared Major

Major	#	%
Other*	68	16.0
Business	44	10.2
Education	36	8.4
Accounting	28	6.5
English	28	6.5
Nursing	27	6.3
MBA	18	4.2
Information Systems Technologies	15	3.5
MMET	15	3.5
Computer Science	14	3.3
Criminal Justice	14	3.3
Engineering	13	3.0
Social Work	10	2.3
Microbiology	9	2.1
Communication	8	1.9
Pre-Med	8	1.9
Psychology	8	1.9
Construction Management	7	1.6
General Education	7	1.6
History	7	1.6
Technical Sales	7	1.6
Telecommunications and Business Education	7	1.6
EET	6	1.4
Undecided	6	1.4
Art	5	1.1
Radiologic Sciences	5	1.1
Sociology	5	1.1
Zoology	5	1.1

*Other includes any discreet major that had 4 or less respondents. Majors include: Anthropology, Automotive Technology, Biology, CEET, Chemistry, Clinical Laboratory Science, Dental Hygiene, Design Graphics Engineering, EMT, Environmental Geosciences, Family Studies, Foreign Language - Spanish, General Studies, Geography, Geology, Gerontology, Health Promotion / Health Sciences, Interior Design Technology, Masters in Criminal Justice, Mathematics, MHA, Physical Education, Physics, Political Science, Pre-Chiropractic, Pre-Engineering, Pre-Law, Pre-PA, Pre-Pharmacy, Pre-Vet, Respiratory Therapy, Social Science Composite Teaching, Software Engineering, and Supply Chain Management.

Food Service
Current Food Consumption on Campus

10. How often do you currently eat on campus? (Including food you have purchased off-campus that you eat on-campus)		
	Response Percent	Response Count
0 times per week	38.7%	210
1-2 times per week	38.4%	208
3-5 times per week	20.5%	111
6+ times per week	2.4%	13
answered question		542
skipped question		54

Day-Part Consumption

11. Which meal do you primarily eat on campus?		
	Response Percent	Response Count
Breakfast	6.3%	28
Lunch	44.4%	197
Dinner	7.0%	31
Snacks	42.3%	188
answered question		444
skipped question		152

Food Service Interest

79.6% of respondents answered “Yes” to the question, “Does WSU-Davis need more food choices on campus?”

On-Campus Food Service Price-Point

17. How much would you be willing to pay for a meal at an on-campus food service area?		
	Response Percent	Response Count
\$1.00-2.50	17.8%	94
\$2.51-4.00	48.6%	256
\$4.01-5.50	24.5%	129
\$5.51+	9.1%	48
answered question		527
skipped question		69

Cafeteria and Food Court Interest

13. How often would you eat on campus if there was a cafeteria?			Response Percent	Response Count
0 times per week			22.6%	119
1-2 times per week			44.1%	232
3-5 times per week			28.3%	149
6+ times per week			4.9%	26
			<i>answered question</i>	526
			<i>skipped question</i>	70

14. How often would you eat on campus if there was a food court?			Response Percent	Response Count
0 times per week			12.9%	68
1-2 times per week			48.2%	254
3-5 times per week			31.9%	168
6+ times per week			7.0%	37
			<i>answered question</i>	527
			<i>skipped question</i>	69

Priority Weights

Throughout the survey, the level of prioritization was weighted as follows:

- NOT a priority=0**
- LOW priority=1**
- MEDIUM priority=2**
- HIGH priority=3**

Therefore, an average score of 2-2.5 means that overall respondents rated that item as a MEDIUM-HIGH priority. An average score of 2 represents a MEDIUM priority; 1.5 represents an MEDIUM-LOW priority; and, 1 represents a LOW priority.

Food Type Preferences

Respondents were asked, “Which of the following food choices are a priority for you in a new food service area?”

Food Type	Average
Deli sandwiches & wraps	2.10
Salad Bar	1.94
Daily hot food entrees	1.90
Juice bar / smoothies	1.88
Pizza	1.88
Ready-to-eat sandwiches	1.71
Café beverages & pastries	1.69
Burgers & fries	1.66
Chinese food	1.66
Mexican food	1.66
Soup	1.60
Pasta	1.58
Breakfast	1.47
Microwaveable entrees	1.08
Sushi	0.70

Summary

Deli sandwiches and wraps were the highest rated (MEDIUM priority) food type (x=2.10). Though the average was a MEDIUM priority, 39% of respondents rated it a HIGH priority.

The next highest rated food items, salad bar and daily hot food entree (x~1.9), were rated a HIGH priority by 37% and 30% of respondents, respectively.

Juice bar/smoothies & Pizza (x=1.88) were rated a HIGH priority by 33% and 31% of respondents, respectively.

Seating Preferences

Type	Average	Med/High Priority
2 person tables	1.96	74%
4-6 person tables	1.82	66%
4-6 person booths	1.64	59%
Bar / window seating	1.62	58%

Fitness

Current Fitness Center Use

18. How often do you currently work out on the WSU-Davis campus?			Response Percent	Response Count
0 times per week			86.3%	446
1-2 times per week			8.5%	44
3-5 times per week			4.6%	24
6+ times per week			0.6%	3
<i>answered question</i>				517
<i>skipped question</i>				79

Perceived Fitness Center Need

When asked, “Does WSU-Davis need more fitness amenities on campus?” 65% of respondents answered “Yes.” 35% said “No.”

Hypothetical Fitness Center Usage

20. How often would you work out on campus if there was a more extensive fitness center?			Response Percent	Response Count
0 times per week			29.9%	149
1-2 times per week			36.3%	181
3-5 times per week			30.9%	154
6+ times per week			3.0%	15
<i>answered question</i>				499
<i>skipped question</i>				97

22. At what time would you typically work out at a more extensive fitness center? Check all that apply.			Response Percent	Response Count
6:00 - 8:00 a.m.			25.4%	123
8:00 - 10:00 a.m.			10.7%	52
10:00 a.m. - noon			10.3%	50
12:00 - 2:00 p.m.			14.0%	68
2:00 - 4:00 p.m.			14.8%	72
4:00 - 6:00 p.m.			18.4%	89
6:00 - 8:00 p.m.			26.0%	126
8:00 - 10:00 p.m.			32.0%	155
Never			18.1%	88
<i>answered question</i>				485
<i>skipped question</i>				111

Typical Workout Length

48% of respondents reported that their typical workout lasts from 30-60 minutes; 37% typically work out for 0-30 minutes; while 15% report a typical workout lasting longer than 60 minutes.

Fitness Class Interest

Fitness class interest was low. All of the listed classes were reported NOT a priority by at least 30% of respondents.

Class	Average	High Priority	High #
Yoga	1.51	26%	120
Kickboxing	1.42	22%	99
Pilates	1.36	21%	95
Step Aerobics	1.28	15%	69
Hip Hop Cardio	1.23	18%	79
Sculpt	1.23	14%	64
Dance	1.19	18%	79
Step & Sculpt	1.17	13%	60
Spinning	1.16	15%	67
Bootcamp	1.11	15%	67
Zumba	0.75	6%	27

Fitness Space Interest

Space	Average	High Priority	High #
Weight machines	2.13	48%	221
Cardio equipment	2.11	49%	227
Free weights	1.99	41%	190
Fitness classrooms	1.71	27%	125
Racquetball	1.56	27%	125
Indoor basketball	1.53	27%	123
Climbing wall	1.44	24%	112
Outdoor recreation equipment rental	1.43	21%	96
Outdoor basketball	1.36	20%	89
Indoor volleyball	1.30	18%	80
Outdoor volleyball	1.30	18%	80
Outdoor soccer	1.22	19%	85
Indoor soccer	1.13	18%	81
Batting cages	1.12	15%	68

Activities & Gathering Spaces

Events & Activities

On-Campus Time

Respondents spent an average of 5.4 hours per week on the WSU-Davis campus outside of class. The amount of time reported ranged from 0 to 35 hours per week.

These out-of-class on-campus hours are distributed as follows:

- Individual study, 25%
- Using the computer lab, 17%
- Meeting with faculty/staff, 14%
- Engaging in group study, 9%
- Socializing with classmates, 9%
- Using the fitness center, 4%
- Attending student events, 4%
- Other, 18%

Priority Weights

Throughout the survey, the level of prioritization was weighted as follows:

- NOT a priority=0**
- LOW priority=1**
- MEDIUM priority=2**
- HIGH priority=3**

Therefore, an average score of 2-2.5 means that overall respondents rated that item as a MEDIUM-HIGH priority. An average score of 2 represents a MEDIUM priority; 1.5 represents an MEDIUM-LOW priority; and, 1 represents a LOW priority.

Events & Activities Priorities

Activity	Average	High Priority
Educational programs	1.95	37%
Fitness classes	1.65	25%
Social events	1.47	17%
Activities for families	1.35	19%
On-campus outdoor recreation	1.19	11%
Off-campus outdoor recreation	1.14	13%
Intramural sports	1.12	12%

Gathering Spaces

Preferred study spaces: All Respondents

29. Where do you prefer to study on WSU-Davis campus?		
	Response Percent	Response Count
Building entry	4.4%	19
Information Commons	13.6%	59
Library	21.9%	95
Small study rooms	15.7%	68
Study nooks, undesignated space	22.4%	97
Do not prefer to study on campus	22.1%	96
<i>answered question</i>		434
<i>skipped question</i>		162

Preferred study spaces: WSU Students

29. Where do you prefer to study on WSU Davis campus?		
	Response Percent	Response Count
Building entry	3.7%	13
Information Commons	12.9%	45
Library	21.1%	74
Small study rooms	17.1%	60
Study nooks, undesignated space	22.3%	78
Do not prefer to study on campus	22.9%	80
<i>answered question</i>		350
<i>skipped question</i>		139

Preferred study spaces: NUAMES/WSU Early College Students

29. Where do you prefer to study on WSU Davis campus?		
	Response Percent	Response Count
Building entry	7.4%	6
Information Commons	17.3%	14
Library	23.5%	19
Small study rooms	9.9%	8
Study nooks, undesignated space	23.5%	19
Do not prefer to study on campus	18.5%	15
<i>answered question</i>		81
<i>skipped question</i>		20

Hypothetical Gathering Space Priorities

Space	Average	High Priority
Library	2.22	46%
Study nooks	2.04	38%
Small study rooms	1.91	33%
Information Commons	1.74	24%
Student commons area	1.70	24%
Café	1.53	22%
Food Court	1.52	21%
Vacated classrooms	1.34	14%

Additional Information

Student Amenity Priorities

Amenity	Average	High Priority
Quiet study space	2.34	54%
Computer lounge	2.18	46%
Food service	2.15	43%
Increased # of classrooms	2.00	36%
Improved fitness center	1.90	37%
More informal gathering / hang-out space	1.74	30%
Large multi-purpose room / event space	1.67	24%
Improved health center	1.65	25%
Improved counseling center	1.54	16%

Most-Liked Features

339 people responded to the question, “What do you like most about the current WSU-Davis facility?” These 339 respondents reported 408 discreet items of appeal; this is due to the fact that some people mentioned more than one item ($x=1.20$ items per person).

Item	#	%
Classrooms & Technology	110	27
Location	107	26
Layout, Newness & Modernity	47	12
Parking	34	8
Cleanliness	34	8
Faculty / Staff	25	6
Small Campus	14	3
Other	37	10

Classrooms & Technology

27% of the responses (110 individual comments) mention Classrooms & Technology as the most liked amenity in the building. These comments included:

- “The large student desks in the rooms. I can have more than one book open at a time plus my notebook and a drink.”
- “Classrooms have nice chairs and power outlets for computers to plug into during class.”
- “I like the way the classrooms are set up. Lots of counter space if needed and the labs are close to the lecture rooms and the faculty offices.”
- “I really like the classroom with the workstations. They are much nicer than the workstations in the Computer Science building’s classrooms.”
- “Classrooms and classroom technology.” “Big and up-to-date classrooms.” “I like the classroom size.” “Modern, high-tech classrooms.”

Location

26% of the responses (107 individual comments) mention Location as what was liked most about the campus. These comments included:

- “I love having WSU-Davis campus. It makes it so much easier to go to school when you work and have a family to raise. The fact that I don’t have to drive too far to go to school allows me to spend more time with the ones who need it– My family.”
- “It’s more convenient. I don’t like to drive and I love how close the facility is to my job and where I live. Plus, it’s especially nice during the winter.”
- “Location: It’s close to where I live and work.”
- “Access for Davis County residents.” “It is convenient for those in Davis County.” “Location within the community.”
- “Close to home.” “Convenience to home.” “Easy to access from my house.”

Layout, Newness & Modernity

12% of the responses (47 individual comments) mention the Layout or Newness & Modernity as the most liked aspect of the building. These comments included:

Layout

- “It is easy to find classrooms, the testing center, etc.” “Easy to find classrooms.”
- “Building Layout: It’s a nice floor plan and easy to navigate.”
- “Easy to navigate how to get to classes and other activities.”
- “It is nice and easy to find your way around.”

Newness & Modernity

- “[The campus] is very modern and a very comfortable place to take classes.”
- “[The campus] is beautiful and very modern.”
- “Modern building design” “Modern.” “Modern design.”
- “How nice and new it is compared to the main campus.” “How nice and new it is.” “I like that it is new, clean.”

Parking

8% of the responses (34 individual comments) mention that the Ease of Parking was the thing liked most about the building. These comments included:

- “Parking.” “Close parking.” “How easy it is to park.”
- “Parking is in one general area instead of little lots all over campus.”
- “Better parking than Ogden campus, not a lot of walking.”

Cleanliness

8% of the responses (34 individual comments) mention that the Cleanliness was what was liked most about the building. These comments included:

- “Clean, welcome environment.” “How new and clean [the building] is.”
- “Clean building.” “Clean and spacious.” “Clean and comfortable.”
- “Clean, well-maintained, well-lit.” “Facilities are well taken care of.”
- “Clean classrooms and computer lab.”

Faculty / Staff

Commendations for the faculty and staff made up 6% of the responses (25 individual comments). These comments included:

- “Friendly staff.” “Friendly, open atmosphere with a great staff.” “The staff are very friendly.” “Knowledgeable staff.”
- “[Faculty] are approachable and helpful/willing to share their knowledge and experience not only in the classroom, but also as a one-to-one mentor. Every teacher at WSU-D, with one exception, has bent over backwards to help me and the other students in my classes. PLEASE bring back Dr. Schweibert to WSU-D.”

- “The staff/faculty at Davis Campus are great. I know that I can get all the help I need from people like Lori Drake, Adrienne Gillespie and Laurell Martinez ~ if they don’t have an answer, it doesn’t exist!”

Small Campus & Other

Responses that focused on the virtue of a small campus made up 3% of responses (14 individual comments); Other very specific responses made up the remaining 10 %. Comments categorized as Other included:

- “I love the small class sizes.” “Night classes.” “Works with my schedule.”
- “The TV in the lobby is my favorite thing.” “The billiards table.”
- “Family events, girls night out.” “The Student Activities.”
- Least-Liked Features
- 306 people responded to the question, “What do you like least about the current WSU-Davis facility?” These 306 respondents reported 306 discreet items of dislike.

Item	#	%
Class selection	57	19
Lack of cafeteria / food court	54	18
Lack of study areas	32	10
Small fitness center	22	7
Fee for parking	20	7
NUAMES	16	5
Lack of social space & events	13	4
Small campus	10	3
Bookstore	9	3
Small library	8	3
Other	65	21

Class Selection

19% of respondents (57 individuals) mentioned Class Selection as their least favorite aspect of WSU-Davis Campus. These comments included:

- “Course selection. They need to offer more classes from the current schedule.” “I wish more classes were offered here.”
- “Doesn’t offer many general education requirement classes.” “How few classes are offered there.”
- “Limited availability of classes in my major.” “Need to offer more classes there that pertain to my degree.”
- “I wish the campus offered a few more science-based classes, particularly physics. With offering physics and such classes, there is a

need for science labs, etc. I also think there needs to be an extension of the music programs as well.”

- “I wish there was some physical education classes offered at the davis campus.”

Lack of Cafeteria / Food Court

18% of respondents (54 individuals) mentioned the lack of food service on campus as what they liked least. These comments included:

- “Lack of food court.” “Eating establishments.” “Food availability.” “Lack of food/drink availability.” “Food choices.”
- “Every time I go to the bookstore there is never enough food and there is not a very wide selection.”
- “I can’t get food late at night, around 7 p.m., during my class break.”
- “It does not have any Cafeteria to eat at. I think that a food court needs to be put in.”

Lack of Study Areas

10% of respondents (32 individuals) mentioned that a lack of study areas, including quiet study and study nooks, was their least favorite aspect of the WSU-Davis campus. These comments included:

- “Very little study space.” “There isn’t very much room to sit down and study.”
- “There needs to be more quiet study space.” “No extra space to study before class.”
- “There really is no place to study. The tables are always taken or there is too much going on. All of the classrooms are locked until class starts so you have to hang out in the hall before class starts.”
- “THERE IS NO PLACE TO STUDY. The few table set up here and there just aren’t enough and it’s rarely quiet. A dedicated study area would be so beneficial. Please add study nooks, dedicated study rooms, etc. Even the library is fairly noisy with the tutoring going on.”

Small Fitness Center

7% of respondents (22 individuals) mentioned that the small fitness center was their least favorite aspect of the WSU-Davis campus. These comments included:

- “I would like to workout on campus, and have workout classes available for credit. Some classes I wanted to take were only offered at the Main campus.
- “I don’t like the fitness area. I use it but I wish it could be more like the

one up at the Ogden campus, with a shower facility.”

- “The fitness “center:” it is a tiny room and I can tell it was put together and the last minute. If you guys could make one like at the promontory tower at the Ogden campus, with padded floors that would be awesome.”
- “It needs more signs. I didn’t even know there was a exercise area before I took this survey.”

Other

21% of respondents (65 individuals) provided very specific concerns or dislikes. These comments included:

Bookstore

- “The bookstore only carried Davis campus class books. If I have a Weber campus class and Davis campus split schedule, I would like to be able to buy both sets of books at one location.”
- “The bookstore, I would love to have more books available and more food choices.”

Noise

- “I understand that people are not supposed to talk on their cell phone in the computer lab, so they go out to the hall way just outside the lab to talk. However, it does not make much of a change since the lab is “open” and right next to the hallway or the arena by the elevator.”
- “Noisy. Single building creates a larger crowd it seems.”

Circulation

- “Needs more/bigger elevators and stairs located near the elevators so everyone doesn’t feel like they have to take the elevator. I am in a wheelchair and sometimes there is not enough room in the elevator. It’s also very slow.”
- “No stairway in center of building near the ultra-slow elevator.”
- “You have to go up from the main entrance to the floor where everything is (bookstore, computer lab, library, everything) in a round-a-bout way. Why aren’t any of the most commonly used areas, on the main floor? Why aren’t there any easy to access stairs from the main lobby?”
- “No sidewalks that extend to the main street for people who don’t have parking passes. We have to walk on the road and risk getting hit by cars.”
- “Only one entrance to property. I ride a bike to campus and approach from the south. I must travel nearly one mile out of my way to get to the entrance. A bicycle/pedestrian entrance on the south side of the property would be an inexpensive solution.”
- “I wish there was a better left turn lane into the campus when coming from Hwy 193.”

Specific

- “I think it is a great campus. I dislike the huge Institute building on the east side of campus. And I wish there was a better left turn lane into the campus when coming from Hwy 193.”
- “It would be really helpful if the laptop rental was a little longer. It’s hard to get involved in your work, then have to stop and check it out again.”
- “Many things: 1) No (good) coffee/Starbucks/espresso drinks prepared on-demand. 2) The horrible condition of the University Parkway road surface. 3) The “C-store”’s new early closing hour – 7:00 is when most every night class I’ve ever had has a break and now the one place to get anything is closed. 4) The Bookstore/”C-Store”’s \$2.00 minimum for credit card purchases (which is actually not permitted by the merchant agreements for Visa, MasterCard and Discover Card). 5) Bland/boring/unimaginative design of the building, campus, classrooms, everything, really...”

Additional Comments

78 people responded to the option “Additional comments.” These 78 respondents reported 78 discreet items of concern.

Item	#	%
Positive comments about Davis campus	23	29
Desire for more classes at Davis campus	14	18
Desire for more extensive Fitness Center	8	10
Comments about NUAMES	8	10
Concerns about Parking	6	8
Food Service preferences	4	5
Thank you for asking	4	5
Other	11	15

Positive Comments

Positive comments about the WSU-Davis campus included:

- “Davis Campus rocks!”
- “I really like the Davis Campus. I prefer to take classes there over taking class on the main campus.”
- “I think the Davis campus is excellent and if I wanted the true “college” experience I would move out and go to Ogden anyway, so the Davis campus definitely does its job.”
- “I think the idea of expanding at the Davis campus is great! I have had only a limited experience there, but would enjoy taking more classes there if they are available.”
- “I thoroughly enjoy this campus. It is a wonderful alternative to the Ogden campus.”

Class Selection

Additional comments about class selection on the WSU-Davis campus included:

- “We are extremely short of classroom space.”
- “I really like the classroom layouts and the technology adopted in the Davis Campus. I wish I could take all my courses at Davis.”
- “I think WSU could benefit the Davis campus by tripling their current facility. More classrooms are a must. The portables look horrible out there. A second entrance and exit to the campus is needed as well.”
- “Please build more buildings and offer more classes there - it’s great!!!”

Fitness Center

Additional comments reiterating the desire for a new Fitness Center on the WSU-Davis campus included:

- “I would like more in the way of fitness.” “Make a bigger fitness center.”
- “It would be nice to have more activities like yoga offered at Davis, like spinning, pilates, etc.”

NUAMES

The comments about NUAMES were mixed, they included:

Negative

- “It’s probably too late, but NUAMES was a bad idea.”
- “NUAMES students are loud.”
- “Separate areas for the High school students; they are very disrespectful and loud for a college campus.”
- “The Davis campus was my campus of choice until the NUAMES students destroyed the environment. Everyone I talk to who has seen the scene agrees with me.”

Positive

- “As a student of NUAMES, I really enjoy all of the resources you are giving the high school students access to, so thank you!”
- “I really like being able to use computers and be able to be at Weber State and use some of their things, for example the pool table. I love playing pool and I would really like to participate in something like volleyball.”
- “I think it is cool that they let us NUAMES students on their campus.”
- “WSU is a great place to go to school, and it is a wonderful place for a high school, Thanks for letting us be here.”

Other

Other very specific concerns included:

- “I’d like to see more bicycle racks, and covered bicycle racks near the entrances would be very helpful.”
- “The campus needs more trees, but the building is very nice and up-to-date.”
- “I don’t know if this is applicable, but when turning left on Highway 193 to get to Campus in the evening it is very difficult to get through the line because the traffic light doesn’t have a protected arrow.”

Thanks

- “This survey is a good idea.”
- “Thanks for taking my input into account.” “Thanks for asking...” “Thanks.”

Appendix II Sustainability Checklists

DFCM High Performance Building Rating System			
Prerequisites	Points	Projected	LEED Credit
Fundamental Building Systems Commissioning			Y-Prereq
Life-Cycle Cost Analysis			
CFC Reduction in HVAC and Refrigeration Equipment			Y-Prereq
Ventilation Systems			
Drainage Systems			
Landscape and Irrigation Systems			LEED WE1
Fundamental Lighting Design			
Mold Prevention During Construction			EQ3.1
Filtration Media Replacement before Occupancy			EQ3.1
Thermal Comfort			EQ6.2
			EA1
Category	Points	Projected	LEED Credit
Daylighting			
Daylighting in 40% of space	2		
Daylighting in 52% of space	3		
Daylighting in 62% of space	4	4	
Daylighting in 74% of space	5		LEED EQ8.1
Daylighting in 90% of space	6		
Energy Credits			
Evaporative cooling system	2		
Ventilation			
Demand-controlled ventilation system	1	1	LEED EQ.1
Air Distribution			
Underfloor air distribution system	2		
Renewable Energy Credits			
5% reduction in source energy use	2		
12% reduction in source energy use	3		
22% reduction in source energy use	4		
34% reduction in source energy use	5		
50% reduction in source energy use	6		
Indoor Air Quality Credits			
(1) Low-Emitting Materials			
Adhesives & sealants that meet LEED 4.1	1	1	Y
Paints & coatings that meet LEED 4.2	1	1	Y
Carpets that meet LEED 4.3	1	1	Y
Composite woods that meet LEED 4.4	1	1	Y
(2) Pollutant Source Control			
Source ventilation system to vent pollution sources.	1	1	LEED EQ.5
Install separation walls that extend to the structure to prevent cross-contamination			
HVAC system to avoid areas where mold & dust can accumulate			
Select MERV rated filters of 11 or greater (Standard 52.2)	1	1	
(3) Construction Indoor Air Quality Management Plan			
Construction Indoor Air Quality Management Plan	1	1	LEED EQ3.1
Prior to occupancy and after Substantial Completion, flush building for 15 days with 100 percent outside air. <i>Schedule dependent.</i>	1	1	Y
Commissioning and Training Credits			
Additional Commissioning. <i>Cost dependent.</i>	2	2	EA.3
Acoustics Credits			
Acoustical level of 36 to 40 dBA background, and 0.6 second reverberating times or less.	1	1	
Acoustical level of 35 dBA background or less, and 0.6 second reverberating times or less. <i>Worthy of investigation.</i>	2		
Sustainable Material Credits			
Four to seven major materials with recycled-content.	1	1	LEED MR4.1
Eight or more major materials with recycled-content.	2		
Waste Reduction Credits			
Recycle rate of 50 to 74%		1	LEED MR2.1
Recycle rate of 75% or greater		1	LEED MR2.2

Water Reduction Credits			
Water efficient fixtures and appliances.	2		LEED 3.1
Performance Measurement and Verification Credits			
<i>(1) Building performance monitoring on multi-building campus. Worthy of analysis.</i>	1	1	LEED EA5
<i>(2) System Performance Monitoring. Worthy of analysis.</i>	1	1	LEED EA5
Innovation in Design			
Exceptional energy or environmental measures	1 to 4		
Total Points		21	



LEED-NC Version 2.2 Registered Project Checklist

WSU Davis - Professional Classrooms Building

Clearfield, UT

Yes	?	No			
7	1		Sustainable Sites		14 Points
Y			Prereq 1	Construction Activity Pollution Prevention	Required
			Credit 1	Site Selection	1
			Credit 2	Development Density & Community Connectivity	1
			Credit 3	Brownfield Redevelopment	1
1			Credit 4.1	Alternative Transportation , Public Transportation Access	1
1			Credit 4.2	Alternative Transportation , Bicycle Storage & Changing Rooms	1
1			Credit 4.3	Alternative Transportation , Low-Emitting and Fuel-Efficient Vehicles	1
			Credit 4.4	Alternative Transportation , Parking Capacity	1
			Credit 5.1	Site Development , Protect or Restore Habitat	1
	1		Credit 5.2	Site Development , Maximize Open Space	1
1			Credit 6.1	Stormwater Design , Quantity Control	1
1			Credit 6.2	Stormwater Design , Quality Control	1
			Credit 7.1	Heat Island Effect , Non-Roof	1
1			Credit 7.2	Heat Island Effect , Roof	1
1			Credit 8	Light Pollution Reduction	1
Yes	?	No			
2			Water Efficiency		5 Points
1			Credit 1.1	Water Efficient Landscaping , Reduce by 50%	1
			Credit 1.2	Water Efficient Landscaping , No Potable Use or No Irrigation	1
			Credit 2	Innovative Wastewater Technologies	1
1			Credit 3.1	Water Use Reduction , 20% Reduction	1
			Credit 3.2	Water Use Reduction , 30% Reduction	1
Yes	?	No			
5	1		Energy & Atmosphere		17 Points
Y			Prereq 1	Fundamental Commissioning of the Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
3			Credit 1	Optimize Energy Performance	1 to 10
			Credit 2	On-Site Renewable Energy	1 to 3
			Credit 3	Enhanced Commissioning	1
1			Credit 4	Enhanced Refrigerant Management	1
1			Credit 5	Measurement & Verification	1
	1		Credit 6	Green Power	1
					continued...
Yes	?	No			
5			Materials & Resources		13 Points

Y			Prereq 1	Storage & Collection of Recyclables	Required	
			Credit 1.1	Building Reuse , Maintain 75% of Existing Walls, Floors & Roof	1	
			Credit 1.2	Building Reuse , Maintain 100% of Existing Walls, Floors & Roof	1	
			Credit 1.3	Building Reuse , Maintain 50% of Interior Non-Structural Elements	1	
1			Credit 2.1	Construction Waste Management , Divert 50% from Disposal	1	
1			Credit 2.2	Construction Waste Management , Divert 75% from Disposal	1	
			Credit 3.1	Materials Reuse , 5%	1	
			Credit 3.2	Materials Reuse , 10%	1	
1			Credit 4.1	Recycled Content , 10% (post-consumer + ½ pre-consumer)	1	
			Credit 4.2	Recycled Content , 20% (post-consumer + ½ pre-consumer)	1	
1			Credit 5.1	Regional Materials , 10% Extracted, Processed & Manufactured Regionally	1	
			Credit 5.2	Regional Materials , 20% Extracted, Processed & Manufactured Regionally	1	
			Credit 6	Rapidly Renewable Materials	1	
1			Credit 7	Certified Wood	1	
Yes	?	No				
10	4		Indoor Environmental Quality			15 Points
Y			Prereq 1	Minimum IAQ Performance	Required	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required	
1			Credit 1	Outdoor Air Delivery Monitoring	1	
			Credit 2	Increased Ventilation	1	
1			Credit 3.1	Construction IAQ Management Plan , During Construction	1	
1			Credit 3.2	Construction IAQ Management Plan , Before Occupancy	1	
1			Credit 4.1	Low-Emitting Materials , Adhesives & Sealants	1	
1			Credit 4.2	Low-Emitting Materials , Paints & Coatings	1	
1			Credit 4.3	Low-Emitting Materials , Carpet Systems	1	
1			Credit 4.4	Low-Emitting Materials , Composite Wood & Agrifiber Products	1	
1			Credit 5	Indoor Chemical & Pollutant Source Control	1	
	1		Credit 6.1	Controllability of Systems , Lighting	1	
	1		Credit 6.2	Controllability of Systems , Thermal Comfort	1	
1			Credit 7.1	Thermal Comfort , Design	1	
1			Credit 7.2	Thermal Comfort , Verification	1	
	1		Credit 8.1	Daylight & Views , Daylight 75% of Spaces	1	
	1		Credit 8.2	Daylight & Views , Views for 90% of Spaces	1	
Yes	?	No				
1			Innovation & Design Process			5 Points
			Credit 1.1	Innovation in Design:	1	
			Credit 1.2	Innovation in Design:	1	
			Credit 1.3	Innovation in Design: Exemplary Construction Waste Mgmt.-95%	1	
			Credit 1.4	Innovation in Design: Exemplary Use of FSC Certified Wood	1	
1			Credit 2	LEED® Accredited Professional	1	
Yes	?	No				
30	6		Project Totals (pre-certification estimates)			69 Points
Certified 26-32 points Silver 33-38 points Gold 39-51 points Platinum 52-69 points						

Appendix III Functional Usage Data

Square Footage Usage

Function	Net Square Footage	Percentage of Total
Classroom	25,155	35
Student Union	13,825	19
Academic Support	11,405	16
NUAMES	11,815	16
Classroom Support	8,290	12
Building Support	1,164	02
Total NSF	71,654	100

Nuames Category Breakdown

Assumptions

Building Open Hours: 8:00 a.m. - 10:00 p.m.

Building Hours available per day: 14 hours

NUAMES Classroom Hours: 8:00 a.m. - 3:00 p.m.

NUAMES Classroom Usage per day: 7 hours

NUAMES Fitness Usage: 2 hours

Space	Usage	Usage %	Equation	SF
Classrooms	7 hours / day	50%	$11200 \times .5$	5600
Labs	7 hours / day	50%	$2400 \times .5$	1200
Subtotal				6800
Other				3510
SU.5 Food Service				400
Fl.4 Group Exercise	2 class / day 2 / 14 hours	14%	$.14 \times 800$	115
Fl.6 Lockers	2 class / day 2 / 14 hours	14%	$.14 \times 1200$	170
TOTAL				10995

Student Union Breakdown

Space	Usage	Equation	SF
SU.1			3000
SU.2			400
SU.3			400
SU.4	(500) NUAMES	2800- 500	2300
SU.5			400
F1.1			120
F1.2			120
F1.3			3000
F1.4	4 class / day P.E. = (460) / day P.E. (115) NUAMES	1600-460-115	1025
F1.5			400
F1.6	4 class/day P.E. = (340)/day P.E. (170) NUAMES	1200-340-170	690
Subtotal			11460
SA1.-.7			1970
TOTAL			13825

Academic Support Breakdown

Space	Usage	Equation	SF
AS.1-.5			1790
AS.6 Event Space	4 class / day lecture= (1285) / day	4500-1285	3215
AS.7-.16			6400
TOTAL			11405

Building Support Breakdown

Space	Usage	Equation	SF
CP.1-3			340
IT.1-4			824
TOTAL			1164

Classroom Support Breakdown

**Includes Offices & Storage*

Space	Usage	Note	SF
HP.1-3		O	770
HP.5		S	600
HP.11		O	240
HP.8		S	200
HP.10		S	300
HP.15		S	150
CO.1-2		O	520
CO.6		S	300
CO.8		S	400
CO.9-11		O	2110
CO.14		S	900
CO.16		S	500
CO.17		O	960
Subtotal			7950
Fl.6			340
TOTAL			8290

Classroom / Instructional Space Breakdown

Space	Usage	Equation	SF
F1.4			460
F1.6			0
CR.1-4	(5520) NUAMES	16600-5520	11080
Subtotal			11540
CO.3-5			2600
CO.7			1000
CO.12-13			1000
CO.15	(2000) NUAMES		2000
CO.18			800
Subtotal			7400
AS.6			1285
HP.4			1600
HP.6			700
HP.7			150
HP.9			180
HP.12			1000
HP.13			400
HP.14			900
Subtotal			6215
TOTAL			25155

NUAMES

Space	Usage	Equation	SF
F1.4	4 classes/day PE (115) NUAMES		115
F1.6	4 classes/day PE (170) NUAMES		170
SU.4			500
NU.1-6			1160
CR1.4 (NU.7)			5520
CO.15 (NU.8)			2000
NU.9-12			2350
TOTAL			11815

Appendix IV

PROJECT ESTIMATE		CONSTRUCTION CONTROL CORPORATION		7/15/2008	
PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING CLASSROOM BUILDING					
LOCATION.....SALT LAKE CITY, UT					
ARCHITECT.....VCBO					
STAGE OF DESIGN.....PROGRAMMING					
UNI #	DESCRIPTION	UNIT QTY	UNIT COST		
A	SUBSTRUCTURES		\$ 7.94	\$	914,517
B	SHELL		\$ 49.97	\$	5,752,375
C	INTERIORS		\$ 30.30	\$	3,487,971
D	SERVICES		\$ 68.55	\$	7,891,887
E	EQUIPMENT & FURNISHINGS		\$ 1.86	\$	214,306
F	SPECIAL CONSTRUCTION AND DEMOLITION		\$ -	\$	-
G	SITWORK		\$ 13.93	\$	1,604,030
SUBTOTAL			\$ 172.55		19,865,086
	GENERAL CONDITIONS	8%	\$ 13.80	\$	1,589,207
	OVERHEAD & PROFIT	5%	\$ 8.63		993,254
	DESIGN CONTINGENCY	15%	\$ 25.88		2,979,763
TOTAL ESTIMATED COST			\$ 220.87	\$	25,427,310
<p>**ESCALATION HAS NOT BEEN INCLUDED IN THE COSTS OF THIS ESTIMATE**</p>					

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CLASSROOM BUILDING**
LOCATION.....SALT LAKE CITY, UT
ARCHITECT.....VCBO
STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
A	<u>SUBSTRUCTURES</u>			
	Continuous Footings	285 CY	\$ 325.00	\$ 92,531
	Spot Footings	288 CY	\$ 345.00	\$ 99,217
	Below Grade Foundation Wall	7,808 SF	\$ 19.63	\$ 153,272
	Slab on Grade	38,375 SF	\$ 3.75	\$ 143,908
	Foundation Damproofing	7,027 LF	\$ 1.65	\$ 11,595
	Building Area Site Clearing	38,375 SF	\$ 0.39	\$ 14,966
	Building Excavation	22,741 CY	\$ 6.00	\$ 136,446
	Backfill & Compaction	5,685 CY	\$ 20.65	\$ 117,401
	Remove Excess	22,741 CY	\$ 5.00	\$ 113,705
	Building Grading	38,375 SF	\$ 0.39	\$ 14,966
	Gravel Under Slab	750 TN	\$ 22.00	\$ 16,510
	TOTAL SUBSTRUCTURES			\$ 914,517
B	<u>SHELL</u>			
B10	Superstructure			
	Roof Structure- Steel	307,003 LB	\$ 1.90	\$ 583,305
	Roof Deck	38,375 SF	\$ 2.35	\$ 90,182
	Floor Deck	76,751 SF	\$ 2.25	\$ 172,689
	Floor Structure	921,008 LB	\$ 1.90	\$ 1,749,915
	Topping Slab	76,751 SF	\$ 3.70	\$ 283,977
B20	Exterior Enclosure			
	Exterior Wall Framing	57,459 SF	\$ 4.00	\$ 229,838
	Rigid Roof Insulation	38,375 SF	\$ 2.55	\$ 97,857
	Roofing	38,375 SF	\$ 2.75	\$ 105,532
	Exterior Wall Sheathing w/ vapor barrier	57,459 SF	\$ 1.99	\$ 114,344
	Exterior Wall Finish-	57,459 SF	\$ 22.00	\$ 1,264,107

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CLASSROOM BUILDING**
 LOCATION.....SALT LAKE CITY, UT
 ARCHITECT.....VCBO
 STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
	Building Fireproofing	115,126 SF	\$ 1.65	\$ 189,958
	Exterior Glazing	22,984 SF	\$ 34.50	\$ 792,940
	Fire Stopping/ Caulking	115,126 SF	\$ 0.25	\$ 28,782
	Exterior Doors	8 EA	\$ 3,650.00	\$ 29,200
	Metal Flashings	1,500 SF	\$ 6.50	\$ 9,750
	Caulking & Sealants	1 LS	\$ 10,000.00	\$ 10,000
	TOTAL SHELL			\$ 5,752,375
C	<u>INTERIORS</u>			
	Stud Frame Partitions	115,126 SF	\$ 6.00	\$ 690,756
	Interior Doors	115,126 SF	\$ 3.85	\$ 443,235
	Interior Glazing	3,000 SF	\$ 34.50	\$ 103,500
	Identifying Devices	1 LS	\$ 50,000.00	\$ 50,000
	Millwork	115,126 SF	\$ 4.00	\$ 460,504
	Mirrors	1,640 SF	\$ 11.65	\$ 19,106
	Lobby Corridor Flooring	22,500 SF	\$ 4.75	\$ 106,875
	Fitness Area Flooring	3,600 SF	\$ 9.00	\$ 32,400
	Restroom/ Shower Flooring	3,500 SF	\$ 10.00	\$ 35,000
	Wall tile	9,100 SF	\$ 9.50	\$ 86,450
	Stairs	2,800 SF	\$ 59.00	\$ 165,200
	Free Standing Railing	296 LF	\$ 300.00	\$ 88,800
	Food Court Flooring	2,800 SF	\$ 10.65	\$ 29,820
	Sealed Concrete	5,760 SF	\$ 0.39	\$ 2,246
	Lab Area Flooring	16,990 SF	\$ 5.50	\$ 93,445
	Carpet	59,976 SF	\$ 3.33	\$ 199,920
	Ceiling	115,126 SF	\$ 3.75	\$ 431,723

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CLASSROOM BUILDING**
LOCATION.....SALT LAKE CITY, UT
ARCHITECT.....VCBO
STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
	Wall Coverings	115,126 SF	\$ 2.65	\$ 305,084
	Specialties	115,126 SF	\$ 1.25	\$ 143,908
	TOTAL FINISHES			\$ 3,487,971
D	<u>SERVICES</u>			
	Plumbing	115,126 SF	\$ 7.65	\$ 880,714
	HVAC	115,126 SF	\$ 30.00	\$ 3,453,780
	Fire Protection	115,126 SF	\$ 3.35	\$ 385,672
	Electrical Service & Distribution	115,126 SF	\$ 6.00	\$ 690,756
	Electrical- Power	115,126 SF	\$ 4.00	\$ 460,504
	Electrical Lighting	115,126 SF	\$ 10.00	\$ 1,151,260
	Special Systems	115,126 SF	\$ 3.25	\$ 374,160
	Fire Alarm	115,126 SF	\$ 1.65	\$ 189,958
	Telecommunication	115,126 SF	\$ 2.65	\$ 305,084
	TOTAL SERVICES			\$ 7,891,887
E	<u>EQUIPMENT & FURNISHINGS</u>			
	Blinds	22,984 SF	\$ 5.65	\$ 129,858
	Entrance Mats	150 SF	\$ 29.65	\$ 4,448
	Passenger Elevator- 3 stop	1 EA	\$ 80,000.00	\$ 80,000
	TOTAL EQUIPMENT & FURNISHINGS			\$ 214,306
F	<u>SPECIAL CONSTRUCTION & DEMOLITION</u>			
	TOTAL SPECIAL CONSTRUCTION & DEMOLITION			\$ -
G	SITWORK			
	Site Grading	100,000 SF	\$ 0.39	\$ 39,000
	Parking Area Expansion	210,000 SF	\$ 4.65	\$ 976,500
	Site Improvements	61,625 SF	\$ 5.25	\$ 323,530
	Site Utilities	1 LS	\$ 120,000.00	\$ 120,000

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CLASSROOM BUILDING**
 LOCATION.....SALT LAKE CITY, UT
 ARCHITECT.....VCBO
 STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
	Site Lighting	1 LS	\$ 120,000.00	\$ 120,000
	Site Specialties	1 LS	\$ 25,000.00	\$ 25,000
	TOTAL SITEWORK			\$ 1,604,030

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CENTRAL PLANT**
 LOCATION.....SALT LAKE CITY, UT
 ARCHITECT.....VCBO
 STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
A	SUBSTRUCTURES		\$ 35.68	\$ 231,908
B	SHELL		\$ 51.97	\$ 337,794
C	INTERIORS		\$ 2.00	\$ 12,983
D	SERVICES		\$ 293.76	\$ 1,909,450
E	EQUIPMENT & FURNISHINGS		\$ -	\$ -
F	SPECIAL CONSTRUCTION AND DEMOLITION		\$ 234.46	\$ 1,524,000
G	SITework		\$ 32.70	\$ 212,540
	SUBTOTAL		\$ 650.57	4,228,674
	GENERAL CONDITIONS	7%	\$ 45.54	\$ 296,007
	OVERHEAD & PROFIT	5%	\$ 32.53	211,434
	DESIGN CONTINGENCY	15%	\$ 97.58	634,301
TOTAL ESTIMATED COST			\$ 826.22	\$ 5,370,416

****ESCALATION HAS NOT BEEN INCLUDED IN THE COSTS OF THIS ESTIMATE****

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CENTRAL PLANT**
 LOCATION.....SALT LAKE CITY, UT
 ARCHITECT.....VCBO
 STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
A	<u>SUBSTRUCTURES</u>			
	Perimeter Footings	83 CY	\$ 325.00	\$ 26,963
	Below Grade Foundation Wall	4,480 SF	\$ 19.63	\$ 87,943
	Slab on Grade	6,500 SF	\$ 3.75	\$ 24,375
	Foundation Insulation	4,032 LF	\$ 1.65	\$ 6,653
	Building Area Site Clearing	6,500 SF	\$ 0.89	\$ 5,785
	Building Excavation	3,852 CY	\$ 7.00	\$ 26,963
	Backfill & Compaction	963 CY	\$ 22.00	\$ 21,186
	Remove Excess	3,852 CY	\$ 7.00	\$ 26,963
	Building Grading	6,500 SF	\$ 0.39	\$ 2,535
	Gravel Under Slab	127 TN	\$ 20.00	\$ 2,542
	TOTAL SUBSTRUCTURES			\$ 231,908
B	<u>SHELL</u>			
B10	Superstructure			
	Roof Structure- Steel	52,000 LB	\$ 1.85	\$ 96,200
	Roof Deck	6,500 SF	\$ 2.35	\$ 15,275
	CMU	7,540 SF	\$ 16.59	\$ 125,089
	Metal Grating at cooling tower enclosure	400 SF	\$ 39.00	\$ 15,600
	Floor Structure	4,800 LB	\$ 1.85	\$ 8,880
B20	Exterior Enclosure			
	Rigid Roof Insulation	6,500 SF	\$ 2.45	\$ 15,925
	Roofing	6,500 SF	\$ 2.55	\$ 16,575
	Overhead Doors	5 EA	\$ 6,500.00	\$ 32,500
	Metal Flashings	1,500 SF	\$ 6.50	\$ 9,750

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CENTRAL PLANT**
 LOCATION.....SALT LAKE CITY, UT
 ARCHITECT.....VCBO
 STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
	Caulking & Sealants	1 LS	\$ 2,000.00	\$ 2,000
	TOTAL SHELL			\$ 337,794
C	<u>INTERIORS</u>			
	Paint/Seal CMU	15,080 SF	\$ 0.59	\$ 8,898
	Seal Concrete	6,500 SF	\$ 0.59	\$ 3,835
	Paint Doors	2 EA	\$ 125.00	\$ 250
	TOTAL FINISHES			\$ 12,983
D	<u>SERVICES</u>			
	Plumbing	6,500 SF	\$ 3.65	\$ 23,725
	Unit Heater	2 EA	\$ 2,500.00	\$ 5,000
	Boiler 20,000 MBH	2 EA	\$ 260,000.00	\$ 520,000
	Pumps	12 EA	\$ 6,500.00	\$ 78,000
	Boiler- Small	1 EA	\$ 50,000.00	\$ 50,000
	Condensation Tank	1 EA	\$ 25,000.00	\$ 25,000
	Heat Exchanger 1,000 ton	1 EA	\$ 120,000.00	\$ 120,000
	700 Ton Chiller	2 EA	\$ 288,500.00	\$ 577,000
	cooling Tower 1,000 ton	2 EA	\$ 120,000.00	\$ 240,000
	Fire Protection	6,500 SF	\$ 6.00	\$ 39,000
	Electrical Service & Distribution	6,500 SF	\$ 9.65	\$ 62,725
	Electrical- Power	6,500 SF	\$ 15.00	\$ 97,500
	Electrical Lighting	6,500 SF	\$ 3.00	\$ 19,500
	Special Systems	6,500 SF	\$ 6.00	\$ 39,000
	Telecommunication	6,500 SF	\$ 2.00	\$ 13,000
	TOTAL SERVICES			\$ 1,909,450
E	<u>EQUIPMENT & FURNISHINGS</u>			

PROJECT NAME.....WEBER STATE PROFESSIONAL BUILDING **CENTRAL PLANT**
 LOCATION.....SALT LAKE CITY, UT
 ARCHITECT.....VCBO
 STAGE OF DESIGN.....PROGRAMMING

UNI #	DESCRIPTION	UNIT QTY	UNIT COST	
	TOTAL EQUIPMENT & FURNISHINGS			\$ -
F	<u>SPECIAL CONSTRUCTION & DEMOLITION</u>			
	Utility Tunnel	1,270 LF	\$ 1,200.00	\$ 1,524,000
	TOTAL SPECIAL CONSTRUCTION & DEMOLITION			\$ 1,524,000
G	SITWORK-			
	Site Clearing	40,000 SF	\$ 0.59	\$ 23,600
	Site Grading	33,500 SF	\$ 0.39	\$ 13,065
	Site Improvements	33,500 SF	\$ 5.25	\$ 175,875
	TOTAL SITWORK			\$ 212,540



Spectrum Engineers, Inc.

Summary Sheet

Client: VCBO
 Project: WSU DAVIS SUBSTATION
 Location: Layton, Utah
 JOB No. : 20080161.DW

Date: 5/21/2008
 By/Chk: TLT
 Approved:

Cost Code	COST DESCRIPTION	ESTIMATED COST			
		QTY	UNIT	UNIT COST	TOTAL
COST OF SUBSTATION					
19511	NON-EQUIPMENT COSTS				
	REAL ESTATE ASSUME WSU OWNS LAND				
	RIGHT OF WAY				
	FENCE AND GRAVEL	1	LOT	\$22,000	\$22,000
	ROCKY MOUNTAIN POWER (RMP) ENGINEERING STUDY	1	LOT	\$10,000	\$10,000
	SITE PREPARATION	1	LOT	\$35,000	\$35,000
	CONCRETE FOUNDATIONS	8	EACH	\$5,000	\$40,000
	TRANSFORMER FOUNDATION	1	EACH	\$8,000	\$8,000
19511	EQUIPMENT COST				\$115,000
19512	SUBSTATION EQUIPMENT				
	TRANSFORMER (unit cost is cost per MVA)	5	MVA	\$32,600	\$163,000
	46 kV AIR BREAK SWITCH, 3 phase, 600 A	1	EACH	\$8,700	\$8,700
	46 kV PRIMARY FUSES, 1 phase, 600 A	3	EACH	\$2,400	\$7,200
	VOLTAGE REGULATORS, 333 kVA, 7200 Volt	3	EACH	\$19,000	\$57,000
	REGULATOR BYPASS SWITCHES, 1 phase	9	EACH	\$1,500	\$13,500
	15 KV METERING TRANSFORMER BYPASS SWITCHES		EACH	\$1,500	
	HALOPHANE LIGHT FIXTURES	4	EACH	\$600	\$2,400
	9 kV LIGHTNING ARRESTERS, intermediate class		EACH	\$272	
	9 kV LIGHTNING ARRESTERS, distribution class	15	EACH	\$1,500	\$22,500
	46 kV LIGHTNING ARRESTERS, Station class	3	EACH	\$4,600	\$13,800
	RECLOSER, With bypass switches		EACH	\$28,000	
	15 kV CONDUCTOR & TERMINATIONS	1	PER SET OF 3	\$6,800	\$6,800
	15 kV INSULATED DEAD END ASSEMBLY W/CLAMP		EACH	\$149	
	46 kV INSULATED DEAD END ASSEMBLY W/CLAMP	12	EACH	\$409	\$4,908
	46 kV METERING PTs & CTs	6	EACH	\$5,000	\$30,000
	47 kV METERING BYPASS SWITCHES	6	EACH	\$2,000	\$12,000
	METERING ENCLOSURE AND SOCKET	1	EACH	\$2,000	\$2,000
	15 kV BUSS SUPPORT INSULATOR W/CLAMP	18	EACH	\$80	\$1,440
	STATION SERVICE XFMR	1	EACH	\$2,500	\$2,500
	STATION SERVICE 120/240 V PANEL	1	EACH	\$1,500	\$1,500
	15 kV METERING TRANSFORMERS		EACH	\$775	
	GROUND SLEEVES		EACH	\$7,500	
	15 kV V-BREAK SWITCH, 3 phase, 600 A	3	EACH	\$6,000	\$18,000
	15 kV POWER FUSES - 600 A	9	EACH	\$2,000	\$18,000
	55' WOOD POLE FOR LIGHTNING PROTECTION	2	EACH	\$2,500	\$5,000
	GUY WIRE FOR LIGHTNING PROTECTION POLE	2	EACH	\$1,450	\$2,900
	OH GROUND WIRE FOR LIGHTNING PROTECTION	1	EACH	\$900	\$900
	138 kV GANG OPERATED AIR BREAK SWITCH ON RMP	1	EACH	\$33,000	\$33,000
19512	Subtotal Equipment				\$427,048
19513	STRUCTURES				
				COST PER POUND OF STEEL	\$2.00
	46 kV INCOMMING BUS STRUCTURE		EACH		
	46 kV SWITCH STRUCTURE		EACH		
	15 kV SWITCH STRUCTURE	1	1786 LBS STEEL	\$3,572	\$3,572
	15 kV REGULATOR BYPASS STRUCTURE	1	1270 LBS STEEL	\$2,540	\$2,540
	15 kV RECLOSER STRUCTURE	3	1275 LBS STEEL	\$2,550	\$7,650
	138kV METERING STRUCTURE	1	8361 LBS STEEL	\$16,722	\$16,722
	138 kV INCOMMING BOX STRUCTURE	1	55713 LBS STEEL	\$111,426	\$111,426
19513	Subtotal Structures				\$141,910



Spectrum Engineers, Inc.

Summary Sheet

Client: VCBO
 Project: WSU DAVIS SUBSTATION
 Location: Layton, Utah
 JOB No. : 20080161.DW

Date: 5/21/2008
 By/Chk: TLT
 Approved:

Cost Code	COST DESCRIPTION	ESTIMATED COST			
		QTY	UNIT	UNIT COST	TOTAL
19514	MISC. COSTS				
	MAN HOLES		EACH	\$20,000	
	BUS CONDUCTOR AND MISC. FITTINGS	1	LOT	\$10,000	\$10,000
	GROUND CONDUCTOR AND CONNECTIONS	1	LOT	\$40,000	\$40,000
	15 KV CONDUCTOR , ALUMINUM	300	FOOT	\$9	\$2,700
19514	Subtotal Misc. Costs				\$52,700
	PAD MOUNTED SWITCHES				
	S&C VISTA MODEL 422	1	EACH	\$25,000	\$25,000
	DEAD BREAK OR LOAD BREAK TERMINATIONS	6	EACH	\$250.00	\$1,500
	VAULT	1	EACH	\$5,000	\$5,000
	6" 90 DEG. RGS ELBOW	4	EACH	\$635.00	\$2,540
	15 KV ALUMINUM CABLE #750 MCM	60	LF	\$9.00	\$540
	3/4" GROUND RODS	2	EACH	\$126.00	\$252
	EXOTHERMIC WELD TO GROUND ROD	2	EACH	\$68.00	\$136
	#1/0 GROUND WIRE	20	LF	\$3.98	\$80
19519	TOTAL EACH PAD MOUNTED SWITCH				\$35,048
	TOTAL-Substation Equipment				\$771,706
	ERECTION AND INSTALLATION				\$514,470
	CONTINGENCY - 10%				\$128,618
	TOTAL-Substation Equipment and Construction				\$1,414,794



Spectrum Engineers, Inc.

Summary Sheet

Client: VCBO
 Project: WSU DAVIS SUBSTATION
 Location: Layton, Utah
 JOB No. : 20080161.DW

Date: 5/21/2008
 By/Chk: TLT
 Approved:

Cost Code	COST DESCRIPTION	ESTIMATED COST			
		QTY	UNIT	UNIT COST	TOTAL
	12.5 kV Underground Distribution from substation to buildings.				
	SECTIONALIZER				
	SECTIONALIZING ENCLOSURE	1	EACH	\$7,500	\$7,500
	DEAD BREAK TERMINATIONS	6	EACH	\$250.00	\$1,500
	VAULT	1	EACH	\$5,000	\$5,000
	6" 90 DEG. RGS ELBOW	2	EACH	\$635.00	\$1,270
	15 kV COPPER CABLE #500 MCM	40	LF	\$14.60	\$584
	3/4" GROUND RODS	2	EACH	\$126.00	\$252
	DEAD BREAK JUNCTIONS	3	EACH	\$300.00	\$900
	EXOTHERMIC WELD TO GROUND ROD	2	EACH	\$68.00	\$136
	#1/0 GROUND WIRE	20	LF	\$3.98	\$80
	TOTAL EACH SECTIONALIZER				\$17,222
	DUCT BANK COST PER FOOT				
	TRENCHING	1	LF	\$11.00	\$11
	DUCT BANK 2 EACH SCHED. 40 6" CONDUITS	2	LF	\$42.00	\$84
	CONCRETE FOR DUCT BANK	0.07	CU. YD.	\$200.00	\$15
	BACKFILL AND COMPACTION	1	LF	\$25.25	\$25
	15 kV ALUMINUM CABLE #500 MCM	3	LF	\$9.00	\$27
	TOTAL DUCT BANK COST PER FOOT				\$162
	PAD MOUNTED SWITCHES				
	S&C VISTA MODEL 422	1	EACH	\$25,000	\$25,000
	DEAD BREAK OR LOAD BREAK TERMINATIONS	6	EACH	\$250.00	\$1,500
	VAULT	1	EACH	\$5,000	\$5,000
	6" 90 DEG. RGS ELBOW	4	EACH	\$635.00	\$2,540
	15 kV ALUMINUM CABLE #750 MCM	30	LF	\$9.00	\$270
	3/4" GROUND RODS	2	EACH	\$126.00	\$252
	EXOTHERMIC WELD TO GROUND ROD	2	EACH	\$68.00	\$136
	#1/0 GROUND WIRE	20	LF	\$3.98	\$80
19519	TOTAL EACH PAD MOUNTED SWITCH				\$34,778
	DISTRUBTION SYSTEM & DUCTBANK				
	PAD MOUNTED SWITCHES	2	EACH	\$34,778	\$69,555
	1400 FEET OF DUCTBANK	1400	LF	\$161.92	\$226,683
	SECTIONALIZER EVERY 500'	3	EACH	\$17,222	\$51,665
	6" 90 DEG. RGS ELBOW	2	EACH	\$635.00	\$1,270
	ESTIMATED COST OF RMP TRANSFORMERS	1	LOT	\$50,000.00	\$50,000
	TOTAL-DISTRUBTION SYSTEM & DUCTBANK				\$399,173
	TOTAL-DISTRUBTION SYSTEM, DUCTBANK, & SUBSTATION				\$1,813,967



Memorandum

To: _____
Company: _____

Telephone: _____
Fax: _____

Copies to: Dave Wesemann

From: Terry L. Tippetts, P.E. **Telephone:** 801-401-8433

Job: WSU Davis Substation Estimate **Toll Free:** 800-678-7077

Re: Medium Voltage Power Distribution **Fax:** 801-401-9433

Job Number: 20080161 **E-mail:** tlt@spectrum-engineers.com

Date: May 21, 2008 **Page:** 1 of

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Spectrum Engineers was engaged to estimate the cost to build a 46 kV to 12.5 kV substation at the Weber State University Davis Campus. The estimated cost is \$1,420,000. In addition approximately 1400 feet of ductbank with sectionalizers and switches will need to be constructed to get power to the existing buildings at an estimated cost of \$349,173. WSU will need purchase the two RMP transformers that serve the existing buildings. RMP has not as of the time of this report been able to determine this cost because of uncertainty over what equipment will be needed by WSU. Spectrum estimates that the two transformers will be all that can be purchased because the Church of Jesus Christ of Latter Day Saints institute building will still need to have power provided by RMP and this will require most of the existing equipment to remain in place. Spectrum estimated the cost of RMP equipment to be purchased by WSU to be \$50,000. Total project cost is \$1,813,967.

A meeting was held with Jim Harris, Mark Halverson and Steve Tippetts of WSU, Terry Tippetts of Spectrum, Jeff Pinegar of VCBO and Craig Bruderer of Rocky Mountain Power (RMP) on May 6 to discuss the project. Mr. Bruderer in response to that meeting informed us that:

1. RMP Would provide service to WSU at 46 kV but the University must agree to pay all costs to upgrade to 138 kV should RMP decide to upgrade their transmission line to that voltage.
2. RMP will require WSU to pay for an interconnection study to be conducted by RMP Engineers to ensure that capacity is available to serve WSU. This study may take 4 – 6 months to complete and must be completed before final approval is given to serve the campus at 46 kV.
3. RMP will allow metering on the medium voltage side of the substation if only one transformer is served. If two transformers are served high side (46 kV) metering will be required.
4. WSU will need to buy the existing 12.5 kV distribution equipment and transformer from RMP that is now serving the buildings on campus. RMP will determine this cost and inform WSU. This cost

Spectrum Engineers, Inc.

Mechanical Engineering ♦ Electrical Engineering ♦ Technology Design ♦ Lighting Design ♦ Acoustical Engineering
Theater Design ♦ Fire Protection

SALT LAKE CITY PHOENIX ST. GEORGE
800-678-7077

www.spectrum-engineers.com



Memorandum

was estimated by Spectrum Engineers at \$50,000. The actual price provided by RMP will of course vary.

WSU wanted the estimate to be a worst case evaluation of the possible cost. To this end Spectrum Engineers based the estimate on the design shown in the attached plans which assumes an incoming structure with spacing for 138 kV equipment and metering but provided with 46 kV equipment and metering. This way if RMP ever requires the upgrade to 138 kV, the structure will be ready to have the 46kV switches and metering replaced with 138 kV equipment along with a new transformer, to take delivery of power at 138 kV. The design allows for future expansion of the substation to include a second 5 MVA transformer to provide full load back up power to the campus from either transformer. There are also provisions for connection of an emergency generator or mobile substation to the 12.5 kV system. When the second transformer is added, the design allows for the 12.5 kV bus to be fed from either transformer or from the mobile substation/generator connection point. The second transformer and bus are not included in this estimate.

Metering was put on the 138 KV side of the substation because it is desired to have two transformers, each capable of backing up the other and carrying the full campus load.

The possibility of using a dual voltage 138/46 KV transformer was evaluated. Manufacturer's are reluctant to design and build a transformer with this rating because of problems related to 138 kV being three times 46 kV which could cause problems with harmonics and resonance. It can be done but the design is tricky. The cost for a 5 MVA transformer would increase from \$163,000 to \$273,000 if dual voltage were provided. Given that the possibility of RMP requiring 138 kV in the next ten years is remote, there is no cost/benefit justification for this option.

A drawing was generated to aide in the estimate. It shows a possible layout for the substation and indicates the major equipment required. It is not suitable for construction, but is to show the reader the basis for the estimate.

Spectrum Engineers, Inc.

Mechanical Engineering ♦ Electrical Engineering ♦ Technology Design ♦ Lighting Design ♦ Acoustical Engineering
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Appendix V



July 15, 2008

Professional Programs Classroom Building
Programming – Weber State University Davis

Food Service Equipment List:

Food Storage

- Dry Storage Shelving
- Bulk Walk-in Cooler and Freezer with Shelving
- Non-Food Storage Shelving
- Day Walk-in Box Cooler with Shelving
- Receiving Table and Scale
- Hand Wash Sink

Kitchen:

- Ice Maker and Bin
- Stainless Steel Work Tables
- Preparation Equipment (slicer, mixer, food processor)
- Stainless Steel Prep Sink
- Bakery Prep Table
- Proofing Box
- Cooking Equipment (convection ovens, combi-oven, range, steamer, tilt kettle, tilt skillet, grill, fryer etc)
- Exhaust Hood and Fire Protection
- Hot Food Warming Cabinet
- Reach-in Refrigerator
- Hand Wash Sink

Ware Washing:

- Stainless Steel Dirty and Clean Dish Tables
- Dishwasher
- Vent Hood
- Booster Heater
- Dish Shelving
- Stainless Steel Pot Sink
- Hand Wash Sink
- Janitor Sink
- Chemical Storage Shelving

Serving:

- Stainless Steel Serving Counters with Hot and Cold Display (four to five separate stations)
- Beverage Counter and Beverage Dispensing Equipment
- Cashier Counters

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Food Service Equipment List:

- Refrigerated Merchandising Cases
- Hot Food Warming Cabinets
- Reach-in Refrigerators
- Stainless Steel Utility Counters
- Hand Wash Sinks

NUAMES Service Area

- Stainless Steel Serving Counter with Hot and Cold Display
- Hot Food Warming Cabinets
- Reach-in Refrigerators
- Hand Wash Sinks

Prepared by:

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JEDRZEWSKI
ASSOCIATES**

INTERIOR DESIGN – SPACE PLANNING - FOOD FACILITIES DESIGN