MHTN ARCHITECTS + Hastings+Chivetta ARCHITECTURE • PLANNING • ENGINEERING

UTAH VALLEY UNIVERSITY
STUDENT LIFE CENTER & PARKING STRUCTURE

[ARCHITECTURAL PROGRAM]

FINAL - 04.15.2011

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MHTN PROJECT #2011501

APPROVALS

WE HAVE REVIEWED THE UVU STUDENT LIFE CENTER & PARKING STRUCTURE PROGRAM AND WARRANT THAT IT ADEQUATELY REPRESENTS OUR REQUEST FOR A FACILITY TO FULFILL OUR MISSION AND PROGRAMMATIC NEEDS. ALL APPROPRIATE PARTIES REPRESENTING THE DIVISION HAVE REVIEWED IT FOR COMPLETENESS AND ACCURACY.

Matthew Holland, President	Utah Valley University	Date
Val Peterson, Vice President for Administration & Legislative Affairs	Utah Valley University	Date
Cory Duckworth, Vice President for Student Affairs & Strategic Planning	Utah Valley University	Date
Bob Rasmussen, Dean of Students	Utah Valley University	Date
David G. Buxton, Director	State of Utah, Division of Facilities & Construction Management	Date
Kurt Baxter, Project Manager	State of Utah, Division of Facilities & Construction Management	Date

ACKNOWLEDGEMENTS

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Dave Waldron, PE

RB&G Engineering (Site Survey & Geotechnical Report)
Carl Cook

1: EXECUTIVE SUMMARY

This document describes the programmatic needs for the Utah Valley University Student Life Center and Parking Structure project.

Student Life Center

		NSF	GSF
A.	Entry & Lounge	8,800	11,991
B.	Activity Spaces	76,302	104,078
C.	Campus Recreation	8,528	13,522
D.	Student Activities	11,364	17,678
E.	Student Life	9,644	14,656
F.	Reflection Center	2,000	2,965
G.	Support Space	6,770	10,432
H.	Whirlpools	1,800	2,833
	TOTAL	125,208	178,155

Student Life Center

The Student Life Center will contain fitness and activity components for recreational use, as well as much-needed space for Campus Recreation, Student Life and Student Activities programs and services. The Center's program components are summarized in the shaded box to the left.

Parking Structure

The Parking Structure will accommodate approximately 550 vehicles. It will provide monthly parking for students, faculty, and staff as well as visitor parking on an hourly basis. It will be designed to handle event parking for the Student Life Center as well as existing buildings adjacent to the site.

Central Plant

The project includes a central plant that will serve this project as well as future buildings in this part of campus. The central plant boiler/chiller room will be located on the north end of the lowest level of the Student Life Center. In addition, a mechanical penthouse of 7,600 gross square feet (additional to the building total 178,155 GSF) will house air handlers and other equipment to serve Student Life Center needs. Cooling towers are recommended to be rooftop mounted.

Campus Connector

The project will include a pedestrian corridor connector linking the Student Life Center and/or Parking Structure to the existing campus corridor system at the Liberal Arts, PE, or Library buildings. The length of the connector will be determined during design. The program cost opinion assumes a 300-foot length and a cost of $1.8 million for this element.

Project Site

The project will be located in the east central portion of campus, between the Sorenson Student Center on the south and the Library on the north. The PE and Liberal Arts buildings are along the project site's west side, and College Drive, the campus loop road, provides project access on the east.

Cost Opinion

The program cost opinion is summarized below. It includes the central plant as described above. The costs are April 2011 dollars; there is no inflation factor.

Student Life Center	Program
Construction cost	$32.8 million
Soft costs	$6.2 million
Parking Structure	
Construction cost	$7.1 million
Soft costs	$0.8 million
Campus Connector	
Allowance	$1.8 million
TOTAL	$48.6 million

The program cost opinion is $0.6 million above the total project budget of $48 million. The project scope will be adjusted as necessary during design to fit within the project budget.

PROJECT GOALS

Project participants expressed their goals for the new Student Life Center at the first on-site workshop, some of which are listed below.

University / Campus

- Improve the overall college experience of UVU students.
- Enhance student recruitment and retention.
- Boost school spirit and enthusiasm and promote school pride.
- Increase the level of excitement on the UVU campus.

Fitness and Health

- Increase awareness of health, wellness and recreation programs and opportunities.
- Promote well-rounded, physically active lifestyles for the campus community.
- Provide multi-use facilities that can accommodate a variety of functions, sports, and events, with recreational and fitness opportunities that are available anytime.

Student Focus

- Create a "student-centric" facility, a "home away from home" for all students.
- Promote student ownership and branding of the new space.
- Create a "Wow!" environment that will engage students with the University and encourage them to stay on campus.

Gathering Space

- A safe and centralized gathering place – a social center that connects students to the University.
- Accommodate hundreds and promote "hanging out".
- Provide more lounge/lobby space for students to study or relax between classes.
- Create a centralized "hub" to bring together the diverse aspects of UVU culture.
- Bring non-traditional students together.

Community & Involvement

- Create a sense of community that keeps students on campus.
- Promote student interaction.
- A welcoming, inviting and relaxing center – a diverse and inclusive place to come together.
- Promote diverse student involvement.
- Address inclusive activities that are interesting to a variety of students and serve multiple interests.
- Provide a wide variety of learning activities, clubs, intramurals, etc. that encourage students to become involved.

PROGRAMMING PROCESS

The programming process took place from January through April 2011. The project was guided by an Executive Committee which included a representative from DFCM (State Division of Facilities Construction & Management) as well as University administrators, planners and future building occupants. Programming input was obtained from a broad representation of University departments, programs and services, as well as general students.

The process included the following:

- Input on project goals and initial program needs in an initial series of meetings with University administrators, departments, and future building occupants.
- Web-based surveys regarding fitness / activity components, distributed to students and faculty/staff to determine user demand. This resulted in the program's recommended fitness and activity component types and sizes.
- Interviews with Student Life/Student Activity components regarding detailed space needs.
- A survey and geotechnical study for the project site.
- A workshop regarding the parking structure needs and parameters.
- Investigation into utility and sustainability needs for the project.
- Additional study regarding a proposed new central plant for this area of campus.
- Conceptual site and building design studies, to confirm that programmatic needs can be met on the project site.
- Program adjustments to meet project budget and square footage parameters, made by University representatives after review of the initial program summary.
- Detailed documentation, which was reviewed and approved by University and DFCM project team members.

2: SITE CRITERIA

Utah Valley University is a teaching institution where the focus for students is to learn, do, and become. This mission helps to explain why UVU is now one of the largest institutions of higher learning in Utah with a student population of over 33,000. UVU's location in the central portion of Utah County within the dramatic landscape of the Wasatch Front Mountains gives it a unique character. The fabric of the campus as largely concrete, masonry and glass give it a strong presence in contrast to the natural features that surround it. Unique in its approach to student circulation, it is easy to understand why so many students choose to attend UVU. As the site is considered for the new Student Life Center and Parking Garage, careful attention should be paid to enhancing and building upon the qualities of UVU that make it a special and enduring place for it students, faculty, & staff.

SITE RELATIONSHIPS

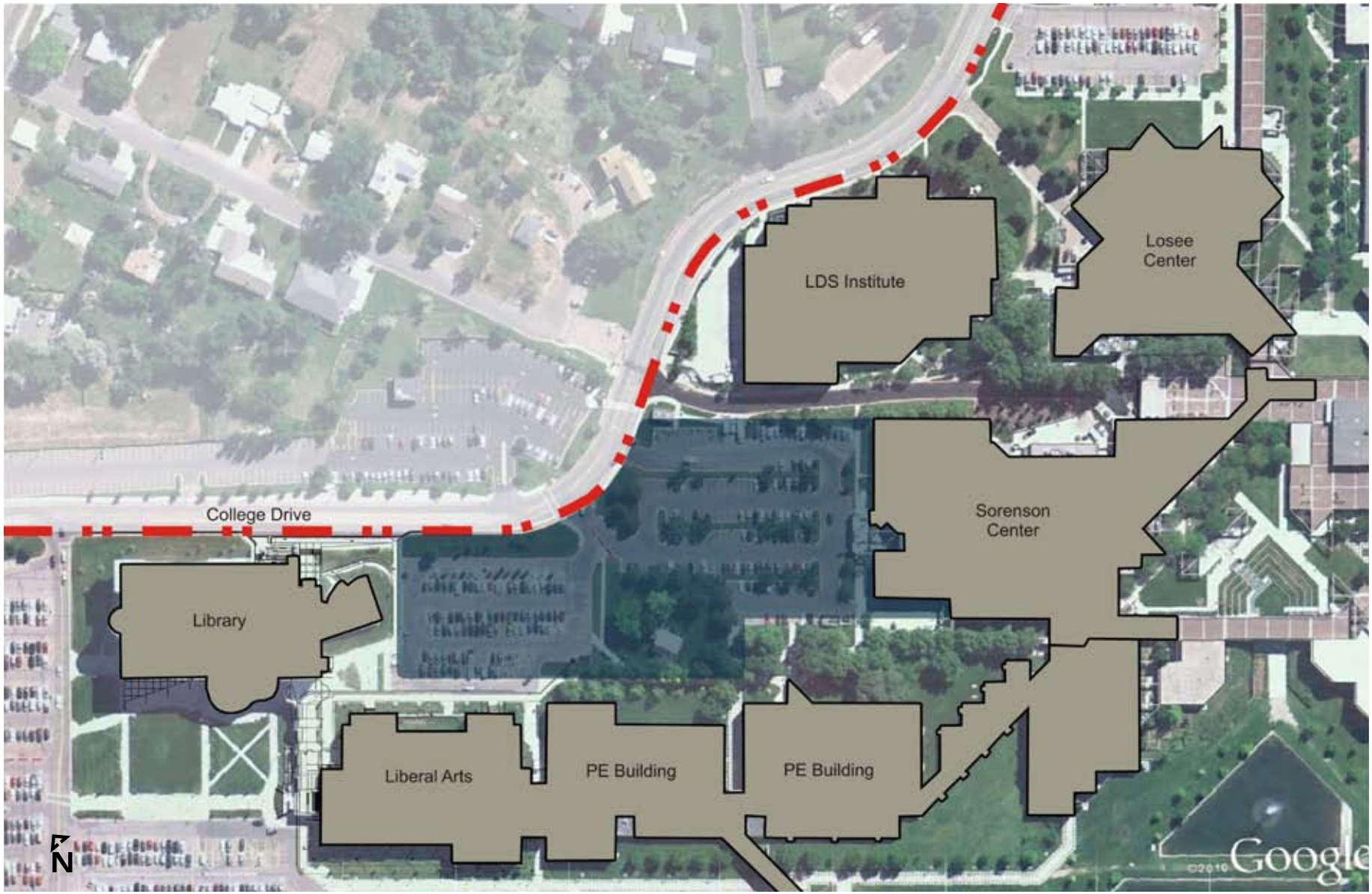
General Vicinity

UVU is located centrally in Utah County along the I-15 corridor, East of Utah Lake in the city of Orem. This location makes this university an attractive option for students living in the immediate area as well as a convenient option for students residing in the southern end of Salt Lake County.

Site Location

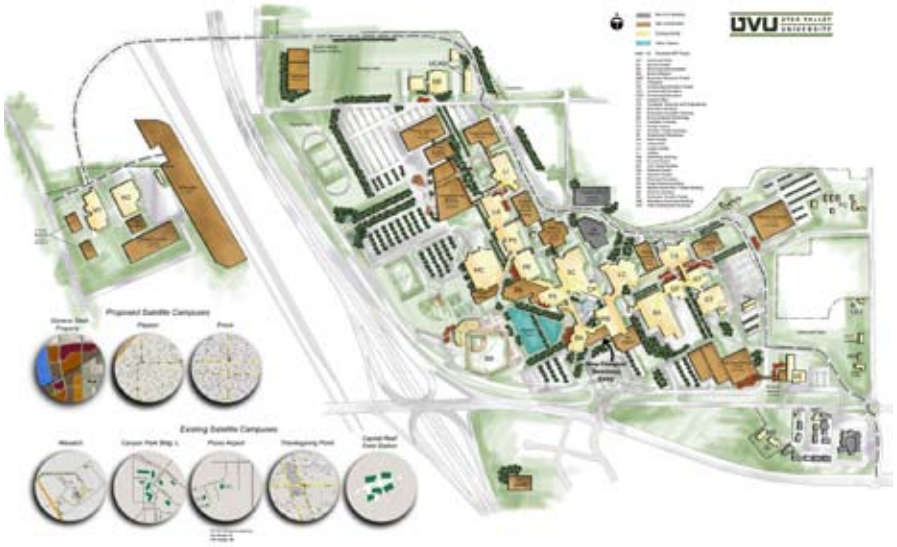
The site for the proposed Student Life Center and Parking Structure is somewhat centrally located on campus. Although the proposed site lacks visibility from the major roadways to the West and South of the campus, the probable height of the Student Life Center will likely lend some prominence and visibility from the I-15 to the West as well as from University Parkway to the South.

The site for the new facilities is north of the Sorenson Center, east of the Physical Education (PE) and Liberal Arts buildings, and south of the Library. At the highest point of the site, to the east, is the LDS Institute Building. Areas across Campus Drive from the proposed site consist mainly of residential streets of single family dwellings that are not part of the campus proper. The site is somewhat "L" shaped and provides an opportunity to enhance the eastern central edge of the campus. There is little vegetation on the existing site as it consists of primarily surface parking lots although there is some under-developed green space at the south end. There is a significant amount of slope from the highest point to the lowest point across the site which may provide some challenges as well as opportunities for final placement of the Student Life Center & Parking Structure. A small structure referred to as the "Pioneer House" occupies a portion of the site near the existing PE Building. It has been determined that the Pioneer House should be moved or demolished as this is not is original location.


College Drive
LDS Institute
Losee Center
Sorenson Center
Library
Liberal Arts
PE Building
PE Building
N
Google

Master Plan

The master plan as developed by UVU has identified this area of campus for the parking garage and student life center. Future developments of a performing arts building, as well as additional structured parking to the north of the library will serve to support the level of activity that is desired in the new student life center.



Site Access

In terms of vehicular traffic, the site can be reached by driving east or west on University Parkway to the south end of the campus, then following the Campus Drive ring road. This road is a two lane road which loops around the campus. It is accessible from 800 South Street on the north, 960 South Street at about the middle of the campus, and 1200 South on the south end of campus. Although there are several arteries that serve the campus, the primary vehicular access to Campus Drive is from University Parkway to the south.

Parking

Current parking on surface lots on the proposed site will be replaced with the new parking structure that is to have approximately 550 spaces. The typical use for this structure will be monthly parking for faculty, staff, and students as well as hourly vistor parking. Special permits will be required to park in this facility. Special events will rely on the parking that is available on all levels of the structure. Parking for special events will be paid for as a flat fee upon arrival to the structure in order to expedite exiting at the end of the event. This approach to event parking will have a significant impact on the design of the approach and entry/exit points to the garage. Detailed information regarding the parking structure is provided in Section 3 of this document. Accessible spaces that serve the Student Life Center will need to be located in the garage or on site and will need to be located such that they are as close to the building entry as possible. Short term spaces for use by the bookstore and for ticket sales to planned events may also be necessary.

Public Transportation

Utah Valley University is well serviced by Utah Transit Authority in terms of bus stops. Shuttle busses run continuously Monday – Thursday 7:00 am to 10:00 pm and Friday from 7:00 am to 4:00 pm. Bus stops around campus are shown on the following figure.

Pedestrian Access

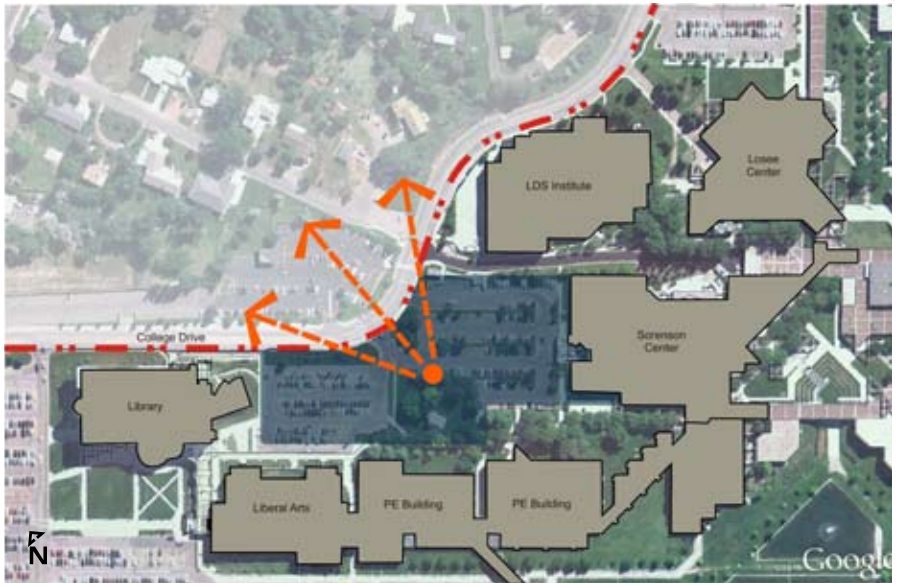
Once on campus, the primary mode of access to the various buildings is walking. Most of the campus buildings are accessible via a series of connected "malls" and breezeways so one can walk to nearly any building without having to go outside. This interconnection of the buildings has given the campus an excellent reputation for pedestrian friendly access. The following figure shows the interconnectivity of the buildings and the sidewalks around campus.

The desire to create an internal "loop" for the pedestrian flow has been discussed as a possible benefit for the Student Life Center. If possible, the pedestrian mall from the Sorenson Center would ideally extend through the Student Life Center and then re-connect to itself through the existing PE, Liberal Arts, or Library buildings to the west and north.

Views

The project site has mostly blocked views except for the east side which affords a somewhat generous panorama of the Wasatch Mountains. As the views move further to the south they will likely be obstructed by the LDS Institute except for perhaps the uppermost floors of the new Student Life Center.

Although there are few views to the external portions of campus on the West and South, there are opportunities for minor views into developed courtyards and green spaces in this direction. Care should be taken to maximize the connection from the new facility to the resulting outdoor spaces and courtyards that may become a part of the project.



Solar Orientation

The site is oriented in its long direction along a North-East to South-West axis. As a result, the new student life center will have opportunities for solar exposure primarily in the early morning and later afternoon hours. The placement of the parking garage may be useful as a means to control excessive heat gain along the long edges of the site due to low sun angles. It may be necessary to consider north facing light monitors or clerestory windows in order to provide the desired level of daylight.

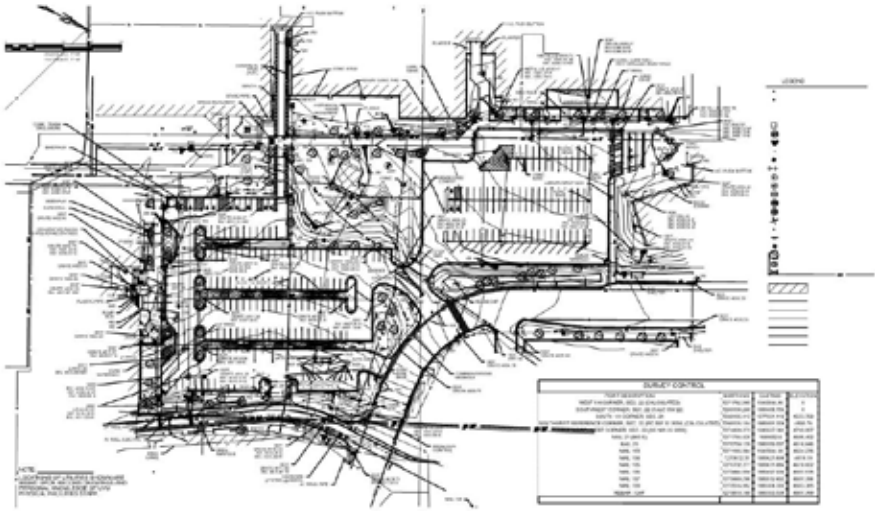
Climate

The climate of Orem City ranges from winter cold low temperatures of about 22 degrees below zero to summer temperatures of about 107 degrees. Average temperatures are much milder than the extremes. The building design must incorporate and mitigate the climatic environment at Utah Valley University.

Orem City NWSFO Climate Report													
	Temperature					Precipiation (inches)					Wind		
	Means			Extreeme		Precipiation			Snowfall		Prevail		Max
	Max	Min	Avg	Max	Min	Mean	Max	Min	Mean	Max	Dir	SPD	GST
Jan	37	19	28	62	-22	1.3	2.92	0.1	13	29.98	S	10	69
Feb	43	24	34	69	-14	1.2	2.8	0.1	10.01	28.01	S	10	54
Mar	52	31	41	78	2	1.8	4.02	0.1	10.99	42	S	10	62
Apr	62	38	50	85	15	2	4.61	0.4	5.99	26	S	10	69
May	72	46	59	93	25	1.7	4.81	0.1	0.98	8	S	10	69
Jun	83	54	69	104	35	0.9	2.8	0	0	0	S	10	94
Jul	93	62	78	107	40	0.8	2.6	0	0	0	S	10	74
Aug	90	61	76	104	37	0.9	3.7	0	0	0	S	10	74
Sep	80	51	65	100	27	1.1	7.01	0	0	4.02	S	10	71
Oct	66	40	53	89	16	1.3	3.9	0	2.01	20.01	S	9	71
Nov	50	30	40	75	-14	1.3	2.6	0	5.99	26.99	S	9	59
Dec	38	22	30	67	-15	1.4	4.41	0.1	13	34.99	S	9	60
ANNUAL	63.8	39.8	51.9	107	-22	15.7	46.18	0.9	61.97				

Topography

A topographical survey has been provided for the project as shown below. Please note that for this survey, north is to the lower right. In the concept figures above, north is to the left. The site has a fall of about 23 feet. Prior to beginning work on the project, the design engineer should get an electronic copy of the survey with spot elevations and determine that sufficient topographical data is provided. Additional topographical survey work may be needed in order to tie into key locations of things such as sidewalks, ADA access locations, building doors. The following figure shows a copy of the topographical survey as provided by RB&G Engineering.



Soils Report

A geotechnical report has been prepared for this project and can be found in the appendix. The report shows that the soils in this area generally consist of silty gravels with sand over silty sands and sandy silts over clays over silty sands. The site is susceptible to significant reduction in bearing pressure during a seismic event. Site retaining walls, if required, should be designed with a bearing pressure of about 600 pounds per square foot after a seismic event.

Site fill should match the requirements indicated in the geotechnical report and should generally be a well graded granular material with a maximum size of 6-inches and not more than 30% passing the number 200 sieve. All site fill should be plasticity index of less than 6. The site fill should be compacted to not less than 95% of maximum dry density and within 2% of optimum moisture content. Soft soils may be bridged with the use of cobbles tamped into the soft clays. Geofabric may also be used to stabilize soft soils.

Grading should be done so that water flows away from the buildings. The locations of detention areas and bioswales and percolation areas should be placed to reduce significant water percolation down to the footings and foundation systems of the buildings.

A recommendation for the concrete and asphalt paving was not provided in the geotechnical report. The report indicts that additional borings will be required as part of the final design plans. When the additional borings are taken, the geotechnical engineer should also be tasked with a design for asphalt and concrete paving. The paving designs should be based on heavy loading for fire trucks and similarly loaded emergency vehicles. It is expected that concrete and asphalt paving sections will be similar to the following:

	Asphalt Paving		Concrete Paving		
	Standard	Heavy Duty	Sidewalks	Drives	Fire Lane
	(inches)	(inches)	(inches)	(inches)	(inches)
Sub Base	0	8	0	6	8
Road Base	6	6	6	6	6
Pavement	3	3	4	5	6

All of the paving will be on properly prepared subgrades. Sub base will generally be site fill material. Road Base will be similar to APWA standard specification for 1-inch minus road base. The pavements will be similar to APWA standard specifications for ½" minus non-rut asphalt paving and ¾" concrete paving with 4000 psi strength and about 4% air.

Elevations

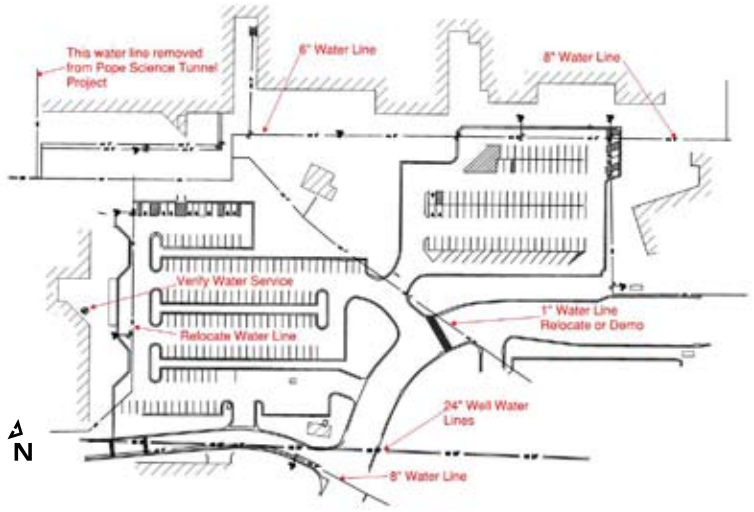
The proposed structure(s) will be tied to the existing buildings on campus. Care must be taken to set the proposed building elevations so that any connections to the existing building can be made without ramps. Campus Level 0 Elevation is 4588.0. Campus Level 1 Elevation is 4603.0. Various surveys of campus show that these elevations have been matched very closely. The elevation of connection points shall be verified by the design engineer. The site elevations range from about 4619 to about 4596. The building elevations must be set so that access to Campus Drive and pedestrian access can be maintained and the connections to the various buildings can be maintained.

Depending on the final building layout and the site plan, it is possible that site retaining walls may be necessary. If they are required, the design team shall coordinate the retaining wall with the geotechnical engineer. On past projects, it has been found that some of the soils are very soft and a very small bearing pressure is allowed. This has caused footings for the retaining walls to become very large to keep the retaining walls from overturning in the soft soils.

SITE UTILITIES

General Utility Information

There are several utilities that cross the project site. The design engineer needs to confirm with Utah Valley University which utility lines can be capped and eliminated and which utility lines must be relocated. If the lines are to be capped, they should be capped at the main line connection. The eliminated pipe line should be removed and the excavation backfilled with acceptable soils to not less than 95% compaction unless further excavation will take place. If the utility is to be relocated, the new utility lines must be installed and commissioned prior to the old line being removed from service.



Water Systems

Culinary Water

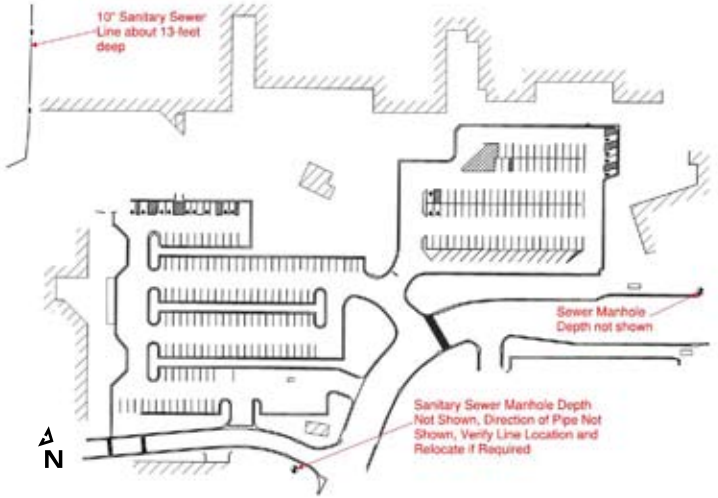
The site is fed from the north between the Liberal Arts Building and the Library with Culinary Water. This line is a 6-inch main for a portion of the way and an 8-inch main further to the north. The line that was to be installed in the tunnel between the Pope Science Project and the Sorenson Center was removed from the Pope Science Center Project. The design engineer should verify if the water system that feeds this site is a dead end main or if it will become a dead end main as a result of this project. If it is a dead end main, the design engineer should verify that the system has sufficient pressure and fire flow capacity. If the system is still looped, the design engineer will need to verify that the system has sufficient capacity and pressure for fire protection.

It is possible that a water line could be installed in the tunnel for the Pope Science project. If this is required, the civil engineer should coordinate the locations of other existing utilities so that the water main can be placed appropriately. This option should be used as the last option as it will require removal and replacement of very new concrete paving.

On the east side of the project, the topographical survey shows a pair of 24" water lines called out as "Well Water Lines". These water lines are part of the unique heating and cooling system on campus and have nothing to do with the culinary water system on campus. These lines will need to be relocated as necessary depending on the location of the buildings and the water lines.

Sanitary Sewer

The sanitary sewer for the project will most likely be routed to the sanitary sewer that comes from the Sorenson Center and flows through the tunnel that is part of the Pope Science Project. This sewer line is about 13 feet deep but its depth is not shown on the provided topographical survey. The design engineer will have to locate the sewer manhole and verify elevations of the manhole as part of the design process prior to setting any finish floor elevations. The following shows the sanitary sewer lines. It should be noted that there are also two additional manholes shown on the topographical survey and the design engineer will need to verify that these lines will not need relocation.



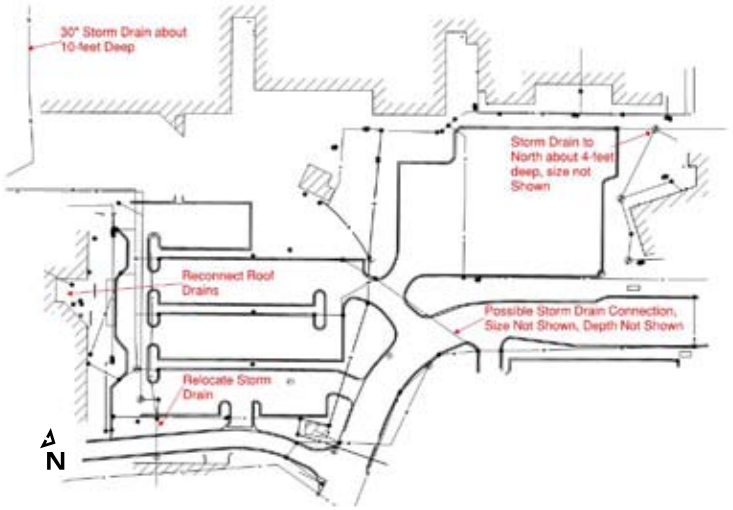
Sanitary Sewer System

Storm Drainage

There are several storm drain lines that run through the site. The topographical survey that was provided shows these lines on an existing irrigation layer. The design engineer will need to review the survey and field verify which storm drain lines shown on the irrigation layer are in fact storm drain lines and which are in fact irrigation lines. The design engineer will also be required to verify which of these lines must be relocated. Some of the drain lines run to the south and several run to the north. The design engineer will have to make certain that the final storm water design does not significantly increase the storm water flow to one direction or to the other. If possible, a reduction of overall storm water volume would be preferred. The design engineer and design team should also verify that the roof drains coming from the Sorenson Center are connected to the storm drainage system. The following figure shows the storm drain lines and some of the irrigation lines as indicated by the survey.

Landscape Irrigation

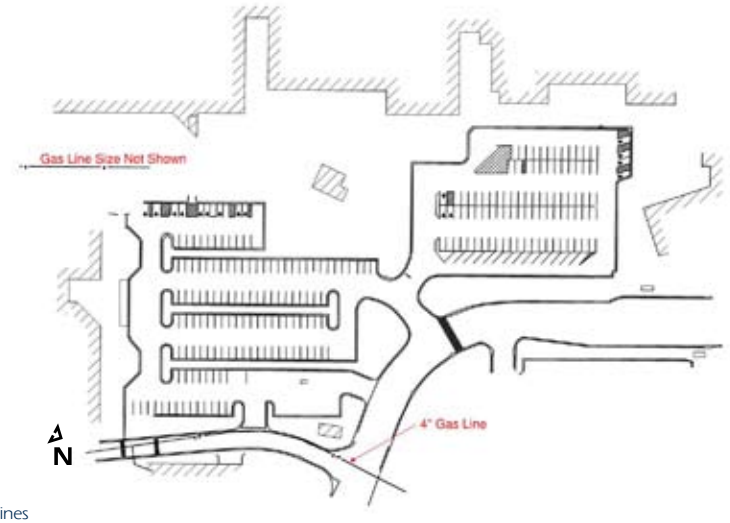
There are several irrigation lines that service the landscape areas around the project. Much of the irrigation system is looped. The landscape design architect will need to verify what irrigation lines can be capped and which irrigation lines will have to be relocated. This information will need to be carefully coordinated with the civil engineer. In addition to the irrigation lines, there are a number of control sensors and control boxes that will need to be identified and addressed. The landscape design architect should coordinate with Utah Valley University the locations and relocations of any sensors and control boxes. This information will also need to be coordinated with the civil engineer. The following figure shows the locations of some of the irrigation lines in question.



Storm Drain and Irrigation Pipes

Natural Gas

There is a gas line without a size designation shown to the south of the project site. There is a 3-inch gas line shown to the east of the project site. The design engineer will be responsible to coordinate with Utah Valley University the size of the gas lines and shall coordinate with the mechanical engineer the size and capacity required for the proposed building as designed.



Gas Lines

Site Electrical

The electrical engineer's narrative for site electrical and telecommunications describes these systems in detail; However, it should be noted that the civil design engineer will need to coordinate the locations of all site electrical equipment and associated routing with the electrical design engineer.

SUSTAINABLE CONSIDERATIONS

LEED Criteria

Sustainable measures will be a key part of this project, and as such there are several LEED points that should be considered as the site is developed. These include the storm water quantity point and the storm water quality point. The design engineer should verify that the current site is more than 50% impervious. As such, the quantity point requires that the amount of storm water leaving the site be reduced by 25%. To do this, more landscape area could be provided, or storm water could be percolated into the ground. It is expected that some small additional amount of landscape area will be created depending on the final configuration of the building. The remaining reduction in storm water could be achieved through percolation into the ground. This must be coordinated with the geotechnical report and with the owner. It must be understood that the groundwater to the west of the breezeway is very shallow. It is not advisable to add excessive amounts of storm water to the soil only to have it collect and be piped from the land drains around the various buildings. The storm water quality point will require that the design be set so that 80% removal of total suspended solids takes place for 80% of the storm water leaving the site. This goal could be accomplished with the use bioswales, hydrodynamic separators, and filtration. The design engineer should select the most economical method to clean the storm water prior to the storm water leaving the site that still meets the needs of the campus and rest of the adjacent campus.

CODE CONSIDERATIONS

Code Standards

International Building Code (IBC) 2009
International Fire Code (IFC) 2009
National Fire Code (NFPA) 72 2007
American's with Disabilities Act (ADA) 1991
2010 ADA Standards for Accessible Design (Dept. of Justice)
ICC A117.1-2009, Accessible and Usable Buildings and Facilities (ANSI)
State of Utah Fire Marshal's Requirements R710-4
American National Standards Institute (ANSI) A117.1

Additional Standards

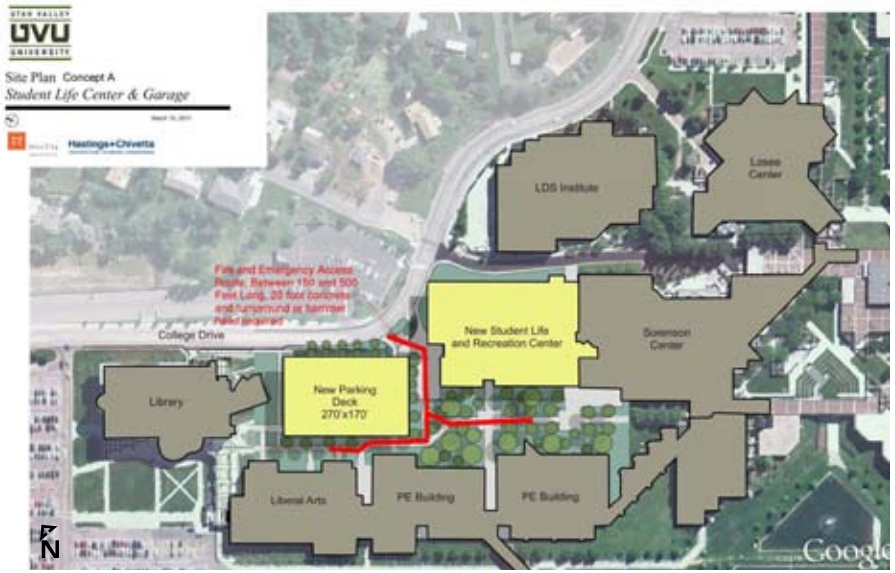
DFCM Design Criteria – latest version
UVU Design Standards – latest version

Emergency Access

Open space around the facility is critical for pedestrian egress and emergency vehicle access, as well as for aesthetics. Several possible building configurations / concepts have been discussed with Utah Valley University. The configurations have also been discussed with Mark Burton, State Fire Marshal and with Bret Larsen, the local Fire Marshal. The Fire Marshal requires that all building exits lead to an open area which can provide safe egress without going back into a building. This eliminated one of the concepts that had a large detached courtyard that would not have been accessible by emergency vehicles. In addition to avoiding detached courtyards, the Fire Marshal's requirements for emergency vehicle access are as follows:

- Provide a 20 foot wide emergency vehicle access lane to within 150 feet of all portions of the building.
- If the emergency vehicle must back up more than 150 feet after approaching the building, a hammer head or turning circle is needed for turnaround.
- If the travel distance is more than 500 feet, the width of the paved lane must be at least 26'.
- Any bridge elements connecting the buildings must have at least 13'-6" clear below the bottom of the bridge.

The following figure shows Concept A for the building configuration along with its associated emergency vehicle access. The lengths of the access road are more than 150 feet but less than 500 feet. For this option, the access road must be at least 20 feet wide and must have a turn-around or hammer head so that the maximum backup distance is less than 150 feet.

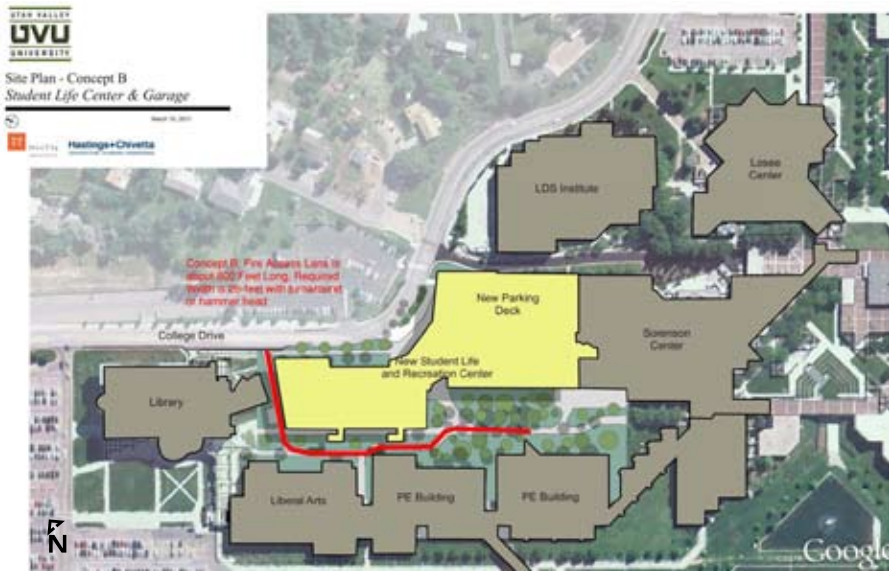


Concept A Fire Access

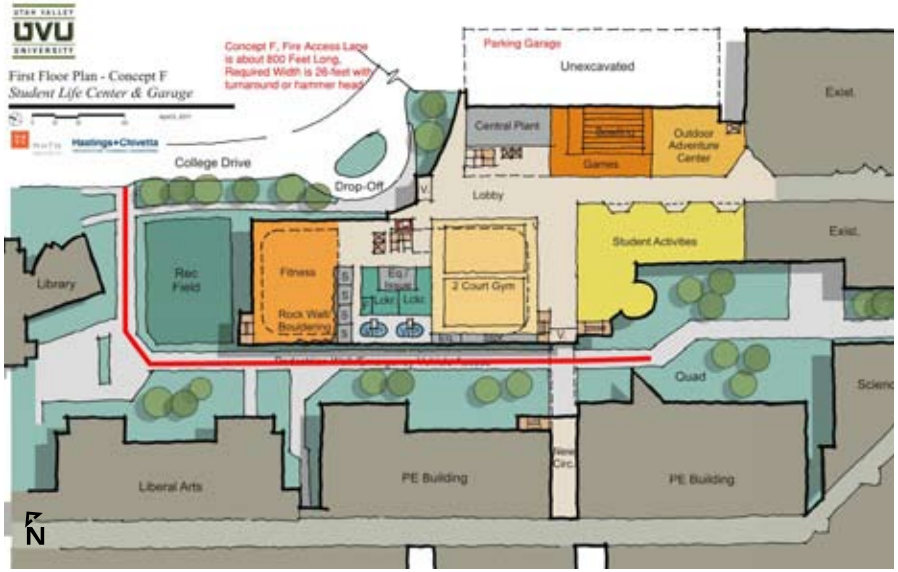
The following figures show emergency vehicle access for Concepts B & F. The lengths of the access roads are about 800 feet. For these options, the emergency access road must be at least 26 feet wide and must have a turnaround or hammer head so that the backup distance is less than 150 feet. Emergency vehicle access roads greater than 750 feet in length will require special approval from the fire authority. Approval should be sought early in the process to avoid code related problems as the design moves forward.

All emergency vehicle access walks and drive surfaces must be designed for H 20 loading. Service drives that continue to adjacent buildings must also be sized for this heavy duty loading.

During construction, access to the buildings surrounding the project must be kept open. Based on the locations of the various walks, it is possible that temporary walks and drives may be required.



Concept B Fire Access



Concept F Fire Access

FUNCTIONAL CONSIDERATIONS

Building Service Access

The existing dock that serves the Sorenson Center Bookstore and the Outdoor Adventure Center will likely be blocked for construction of this project. Although deliveries to the existing dock could potentially happen with smaller vehicles along the internal fire access lanes (see Emergency Access section on the previous pages), it is not desirable to rely on these internal streets. A new service entry point should be considered and should take into consideration the needs of several different departments. For this reason, it is anticipated that the newly located service dock will need to be located in such a way as to provide a direct link to the internal pathway of the building. This will allow use by the Bookstore, Student Life / Student Activities, Student Government, Clubs & Organizations and the Office of Student Involvement. Student Media will also require frequent access to the service entry for delivery and pick-up of printed newspapers.

The Outdoor Adventure Center will need a secured & covered exterior storage area of 2,000 square feet in addition to 4 adjacent parking stalls for equipment loading and unloading. The connection of the outdoor storage area to the interior space of the Outdoor Adventure Center will be critical due to the nature of equipment rental.

CONSTRUCTABILITY CONSIDERATIONS

Construction Access and Staging

The figures as shown so far clearly demonstrate that the area of the buildings will effectively occupy the majority of the available space on the site. Special consideration will need to be given to construction staging and lay-down space. If a concept similar to Option A is to be pursued, part of the site could be used for construction access and staging at least for the first building. In this scenario, when the second building is constructed, staging will likely have to be located elsewhere. The parking lot just east of the project belongs to the LDS Institute. The use of this parking lot for staging or relocation of traffic is not a viable option. If concepts similar to Concept B or Concept F are to be pursued, the use of the existing site will be much more difficult for the second "half" of the construction phase and staging and lay-down areas may have to be remotely located.

As part of the construction documents, the following areas of concern and priority should be discussed and solutions made available:

- The location and number of vehicles on the site pertaining to the construction of the project should be handled in a clean and orderly fashion.
- Construction access and haul routes to the site must be planned. Campus Road is a full width road but is very busy. The access to the freeway is closest to the south; however this route travels through a round-a-bout and may be problematic for large construction vehicles. If this route is selected, timing of construction vehicles may be problematic during peak rush hour traffic periods.
- Continued safe access for vehicles along Campus Drive must be maintained.
- Continued safe access for pedestrians must be maintained.
- Fire truck access along Campus Drive must be maintained and access to the existing buildings (Sorenson Center, PE Building, Liberal Arts, and Library) must be provided at all times.

3: BUILDING CRITERIA

Poised to become the largest university in the State of Utah, Utah Valley University desires to continue reaching out to students and meeting their needs in a way that encourages continued academic growth and provides valuable opportunities for student life experiences. The new Student Life Center at UVU will become a place where students can more fully engage with each other, increase their all around wellness, obtain leadership experience, and develop a desire to continue with their collegiate education through graduation. The variety of spaces outlined in the program offer venues for recreation, social interaction, wellness, student involvement, activities, leadership, and service. It is also intended that the large assembly spaces be designed to accommodate a variety of activities and gatherings beyond recreation. This will be a dynamic and flexible facility that serves the needs of all students, encouraging them to spend more time on campus.

As the campus population grows, there is increased pressure for campus parking space. The site proposed for the new Student Life Center and Parking Structure is located north of the Sorenson Student Center, south of the Library, and east of the PE buildings. Currently, this property serves as a location for two significant parking lots close to the heart of campus, one being a visitors lot and the other a permit lot. To replace the parking spaces that will be lost, and to increase the campus parking capacity to serve the increase in student population, a parking garage is needed. The parking structure will serve several constituencies: student, faculty, and staff permit holders; hourly visitors; and guests attending special events. The Sorenson Center is the main event location on campus with the Ragan Theater, the Ballroom, large and small conference rooms, and food venues. Also within the Sorenson Center is the bookstore. The parking structure will provide needed visitor access to these spaces, retail outlets, and special events.

3A: ARCHITECTURAL

GENERAL CONSIDERATIONS

The Student Life Center will be designed and constructed with a total gross square footage of approximately 178,000 SF at a total project cost of approximately $40 million. The Parking Structure will be designed and constructed to accommodate approximately 550 cars for a total project cost of approximately $8 million. The project will include a new central plant and a pedestrian corridor connection to existing buildings to the west and/or north.

The new satellite central plant is needed primarily to provide heating and cooling for the Student Life Center. The existing campus system is at its limit and cannot accommodate the new building. The central plant will be planned to accommodate future, master-planned buildings as the campus grows to the north. It will include a boiler/chiller room at the north end of the Student Life Center's lowest level and roof-mounted cooling towers. A 7,600 square foot penthouse will contain air handlers and other equipment to serve the Student Life Center. (The 7,600 square feet is in addition to the building total 178,000 GSF),

An enclosed pedestrian corridor will be constructed as part of the project, connecting the Student Life Center and/or Parking Structure to the existing campus corridor system on the west and /or north; piping connecting the new central plant to existing campus utilities will extend through the upper structure of this corridor. The length of the corridor connector will be determined during design; the progam assumes a length of 300' (9,000 GSF) at $1.8 million.

Given the tight site and sizable program areas, the Student Life Center may be as tall as three to four stories. The parking structure's height may vary as a function of its length and width and how many bays of parking are accommodated on a single floor. It is possible in some scenarios that the new Parking Structure could be as tall as five or six stories. Greater detail about the parking structure will be found in the parking structure narrative.

A conceptual cost opinion has been provided in Section 5. The costs provided in the opinion are based upon parameters that were in effect at the time of the space summary creation. As the local economy changes, consideration must be given to the cost estimate changing as well.

SITE AND MASTER PLAN CONSIDERATIONS

The location of the Parking Structure and Student Life Center will be critical to their success and efficacy in meeting University strategies for student engagement, encouraging community involvement, and building upon the strong foundation of student life that already exists on campus.

The campus is currently connected with a corridor system that serves every major building on campus. A critical factor in the success of these new facilities will be how they fit on the site and how they are linked to this corridor system and become and integral part of the campus fabric.

During project design, consideration must be given to the physical connection (or lack thereof) between the Student Life Center and the Parking Structure. Another important early design consideration is whether the Student Life Center or the Parking Structure will be located closest to the Sorenson Center. Many of the Student Life Center components have a strong functional relationship with Sorenson Student Center programs and services, and would benefit greatly from proximity to them. On the other hand, patrons attending events at the Sorenson Center would benefit from a shorter distance between the parking structure and the Sorenson Center. Hybrid design solutions that accomplish all important project goals should be explored.

Design concept schemes have been provided in this section following the architectural narrative. They were developed in order to confirm that the program could be accommodated on the site and show several ways that the new facilities might be organized on the site and in relationship to existing campus buildings.

EXISTING BUILDINGS

How the new Student Life Center and Parking Structure connect to the existing campus facilities that currently serve student life, conferencing venues, and recreation functions will be a determining factor in the success of the facilities. The Sorenson Center currently houses many Student Life functions, while some of them will move into the new Student Life Center, others will remain in the Sorenson Center. Thus a connection between the two buildings may be important to maintain those synergistic relationships that already exist and to allow for a seamless continuation of the Student Life functions between the buildings.

The PE Buildings have facilities that focus on recreation aspects of campus life. While these current facilities are regularly used for academic recreational venues, they will still have a strong relationship with the new recreation components. It is even possible that the locker room facilities in the existing PE Building might be utilized as locker rooms for the new facility. As outlined in the site narrative, there are several life safety code considerations that will impact how those connections might occur.

Since the new facilities will have such a strong relationship to the existing facilities, floor levels of the new Student Life Center should be planned to relate successfully with the old facilities. It is hoped that the first and second floors of the Sorenson Center will have a direct relationship with the first and second floors of the Student Life facility.

BUILDING CODE AND PERFORMANCE REQUIREMENTS

The new buildings – both the Student Life Center and the Parking Structure – are expected to follow the 2009 Edition of the International Building Code and associated amendments from the State Fire Marshal's Office of the Department of Public Safety. The State of Utah Division of Facilities Construction and Management will be the authority having jurisdiction over the project.

The campus has been organized around a 30' wide pedestrian corridor system. The corridor system also forms the campus systems backbone, carrying utilities in its ceiling. The 30 foot wide corridor allows the buildings surrounding it to be built using the covered mall criteria outlined in the building code. It is recommended that the design architect work out the mall accommodation with the State of Utah Code Review Officer early in the design process.

As with all new buildings built under the jurisdiction of the State DFCM, the new Student Life Center is expected to be designed and built to achieve LEED Silver Certification. At the time of this program creation, the State DFCM as well as Utah Valley University indicated that while the Parking Structure was not expected to meet LEED Silver Certification, the design and construction should strive to attain the highest level of sustainability possible given the project constraints.

In considering the various strategies to achieve a LEED Rating, the true goal of sustainability – reducing the impact our built environment has on the natural world – should not be lost.

The State and UVU Facilities managers are extremely interested in constructing a building that has significantly lower life cycle operation costs as well as lower life cycle maintenance costs. This may require that first costs be a bit higher in order to achieve true life cycle benefits.

Design of these two buildings must give due consideration to the site factors found in the site survey, site geo-technical study, and seismic maps. Other sections of this program, including the civil, structural and site narratives, have more to say about these criteria and how they might be accommodated within the design. Copies of the site survey and site geo-technical study are found in the appendix of this program.

DESIGN CONSIDERATIONS

Most campus buildings have been designed and constructed with respect and consideration to the campus modernist design motif using concrete, masonry, and glass, ordered with a predominant 30 foot grid. The campus corridor system uses the same 30 foot spacing. The design aesthetic of the new Student Life Center and Parking Structure should work within these parameters as expressed in the existing buildings on campus. While still maintaining the campus design "standard" there are a variety of interpretations on campus of the aesthetic parameters. It is assumed the design will be created in close association with the campus facilities group who can provide critiques regarding the design direction.

While many of the older buildings on campus used a concrete structural system with masonry and glass exterior, a few of the newer facilities have used steel combined with pre-cast or GFRC panels hung from the steel frame. Creative yet reliable systems that provide the design aesthetic desired can be considered.

The campus would like to create a facility that becomes the preferred place for students on campus, the place they want to be when they are not in class. Creating a facility with WOW and aesthetic appeal is a project goal. As a student-focused facility whose construction will be financed by student fees, the facility should have great appeal to students.

Given the important location of the new facilities on the campus, the Student Life Center must immediately impress students as a desirable and pleasing facility and place where they will want to hang out and meet with friends and make new friends.

Clear and obvious sight-lines from without, from within, throughout each floor, and from floor to floor should be given great consideration as an ordering tool for the new building. Likewise, ample amounts of natural light and spacious views of the mountains and surrounding campus must be included within the design.

Interior spaces should be animated, exciting, and designed to provide a variety of ambiance in public space and student lounge space, to appeal to a wide variety of student needs and preferences. Appropriate use of color will be expected. Consideration must be given to views from one recreation venue to another, to provide transparency within the spaces. Visual connection to the outside will be important in creating desirable places to recreate, socialize, and work.

FUNCTIONALITY

Given the multi-functional nature of the Student Life Center, it is expected that the building will have a publicly accessed portion as well as a controlled access portion. Publicly accessed spaces will include all Student Life and Student Activities functions, as well as Campus Recreation Administration, the Wellness Center, the Outdoor Adventure Center and the Games Area. Controlled spaces will include all other activity and fitness functions. It is preferred that a single control point be used to screen activity and fitness spaces from general public access.

The Student Life Center must function as a center of student life on campus. Ample student lounge and activity program space must be developed on the public side of the facility, in the common space. Rather than develop a single large lobby / lounge space, it is preferable to develop a variety of small to medium sized spaces to accommodate lounge and activity functions throughout the public side of the facility.

Large gathering spaces on campus are needed. These spaces are needed to host a variety of events and activities. These events and activities will range from dances and social activities to speakers, lectures, and formal dinners. The large gym and multi-activity-centers programmed within the facility should act as multi-purpose spaces and not serve only as recreation spaces. The designer will need to create these spaces so they can have controlled access when needed yet be able to be easily accessed from the public space for functions, events, and activities when large numbers of people will be attending. Appropriate A/V systems will be needed in these spaces to serve a multitude of activities.

While aquatic facilities were seen as a preference on the student surveys that were conducted during programming, historic usage on comparable campuses shows that these spaces are costly to construct and maintain and generally utilized less than the surveys might lead one to expect. This facility will provide three large whirlpool / spa facilities that can be used more as social gathering spaces and a location to relax after a strenuous workout or activity.

Since the facility will accommodate a variety of spaces in close proximity to one another, and some spaces will generate more noise than others, importance must be given to acoustic isolation between noisy and quiet spaces. Adjacencies can also play a supportive role in isolating noisy areas from quiet areas.

CONCEPT DESIGN

The following pages contain four site and building concepts for the Student Life Center and Parking Structure project. The concepts were developed during the programming process in order to confirm that the program could be accommodated on the site. They explore several ways that the new facilities might be organized on the site, in relationship to existing campus buildings.

The project team did not decide upon a concept direction during programming. During future design phases, the project team will need to consider whether one of the program's schemes or a new concept direction is most supportive of the project's functions, goals and vision.

Concept A shows the Student Life Center as an extension of the north side of the existing Sorenson Student Center, and the Parking Structure as a free-standing facility on the north side of the site, to the south of the Library. There are two options for the Parking Structure – a wide and shorter 3-bay design and a narrower, taller 2-bay design.

Concept B places the parking component directly north of the Sorenson Center, the Student Life Center public-access components to the west of and attached to the parking building, and the Student Life Center controlled-access fitness / activity areas on the north end of the site.

Concept F is a variation of Concept B which explores a stronger connection with the existing PE buildings to the west of the site.

Concept G shows a strong connection to the existing PE Building, a new internal courtyard between the Student Activities area and the PE Building, a new dock access north of the Sorenson Center, and a new recreation field between the Library and the new Student Life Center.

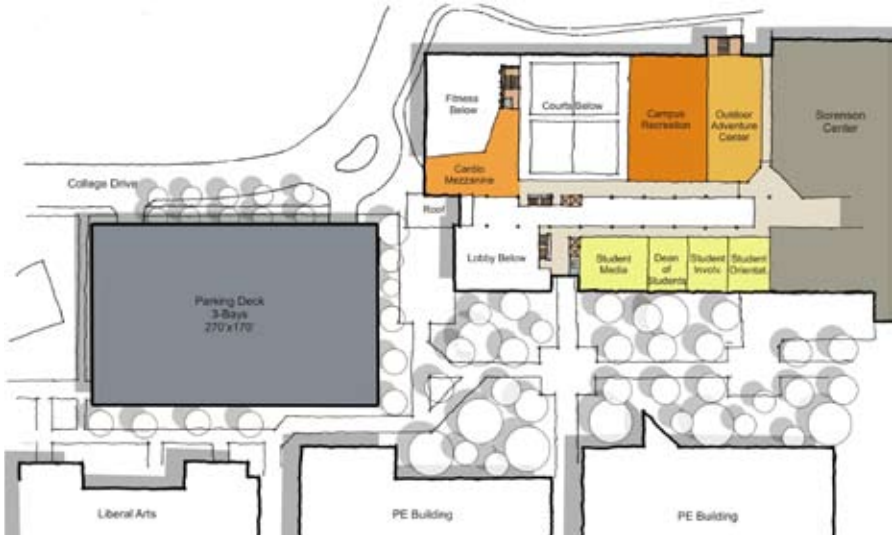
Each concept has advantages and disadvantages which will need to be explored in detail during project design in order to make a determination of project design direction.

Several design considerations were discussed during programming:

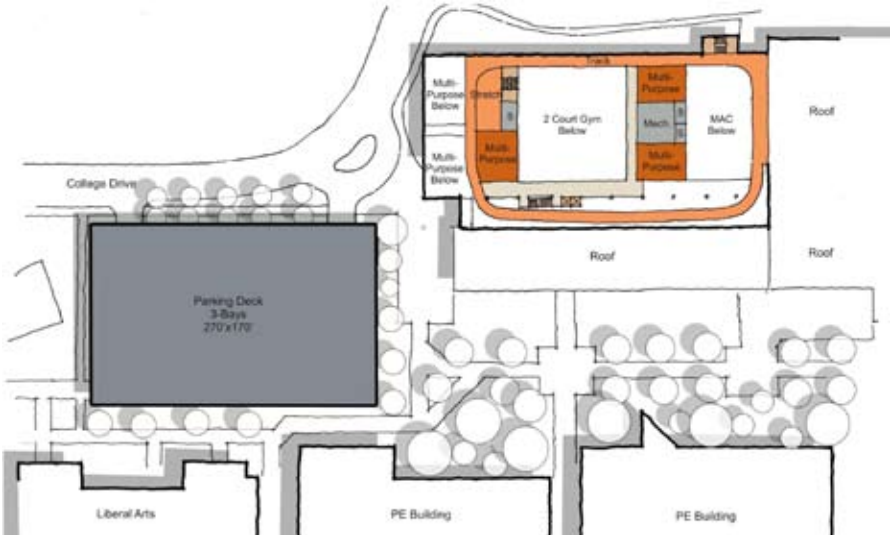
- The internal campus corridor system must be extended through this project to create strong connections and a continuous pedestrian loop and flow among the Student Life Center, Parking Structure, and the existing buildings south, west and north of the project site.
- A strong physical connection between the new Student Life Center and the existing Sorenson Student Center is highly desired to support the many relationships of programs and services in the two buildings.
- The Parking Structure will support large events that take place in the Sorenson Center. The physical connection between the parking structure and the Sorenson Center must be easily navigated and a visually pleasant experience.
- The project must be designed to provide visual and physical access to Student Activities and Student Life components, for a high volume of people as they pass through the building on their way to the fitness component, parking structure, or existing campus buildings to the west and north. The internal campus corridor should be extended as a visually exciting, high-volume space with student life programs and services immediately adjacent, visible and accessible on either side.
- Emergency vehicle access and life safety parameters are of paramount importance and must be met in the project design.
- If possible, the project design should incorporate a green space that features an exterior campus pedestrian pathway, from the south near the Sorenson Center extending north to the library. It would be beneficial to maintain an unobstructed view of the library as one approaches from the south on the pedestrian pathway.

Concept A. First Floor

Concept A. Third Floor

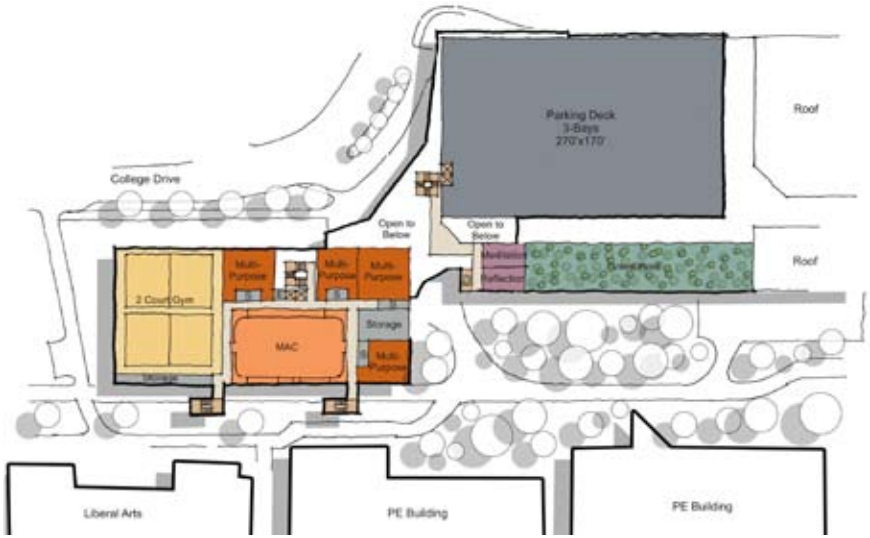


Concept A. Second Floor

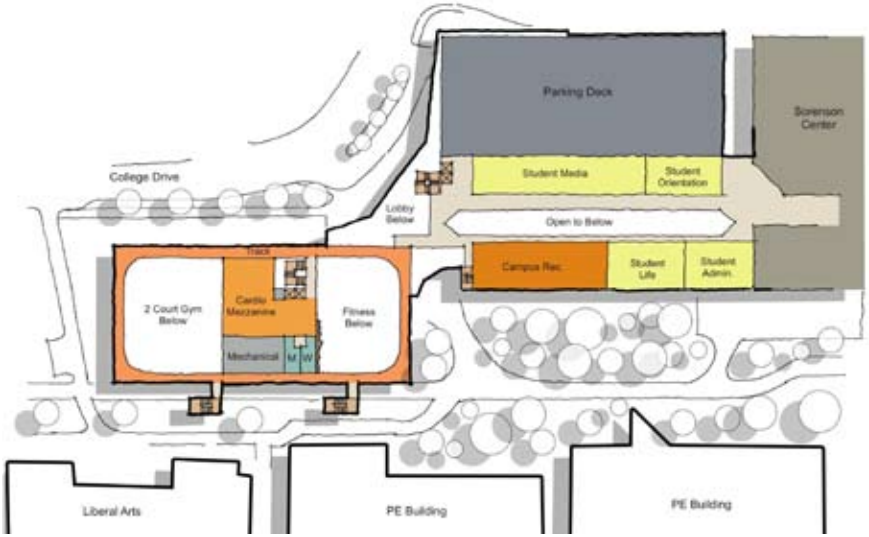


Concept A. Fourth Floor

Concept B. First Floor



Concept B. Third Floor



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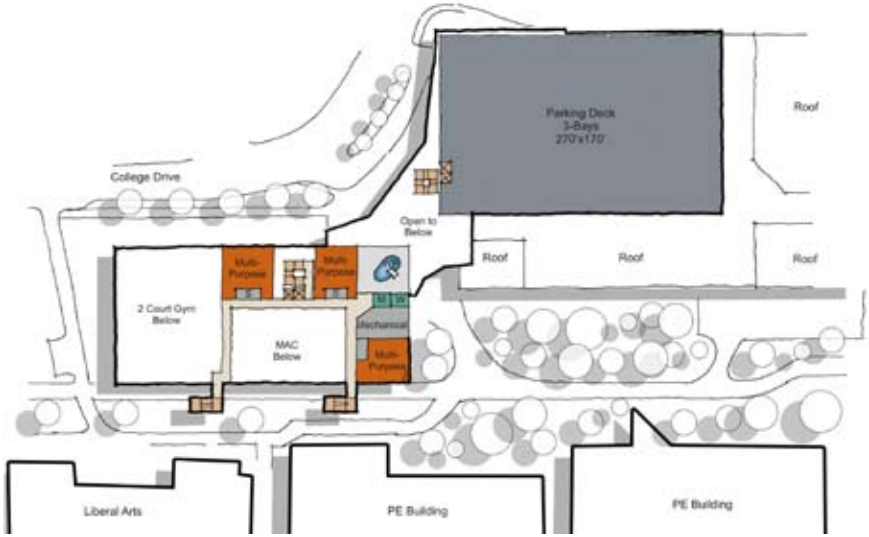
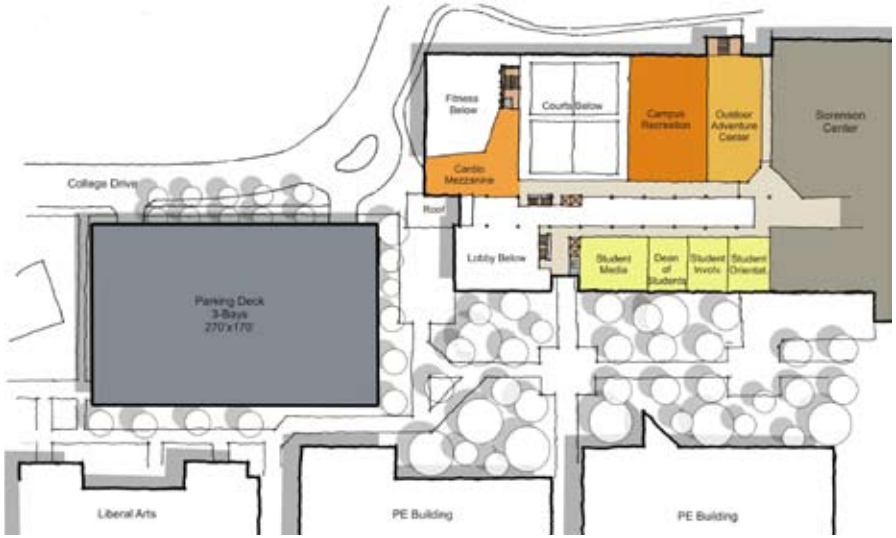


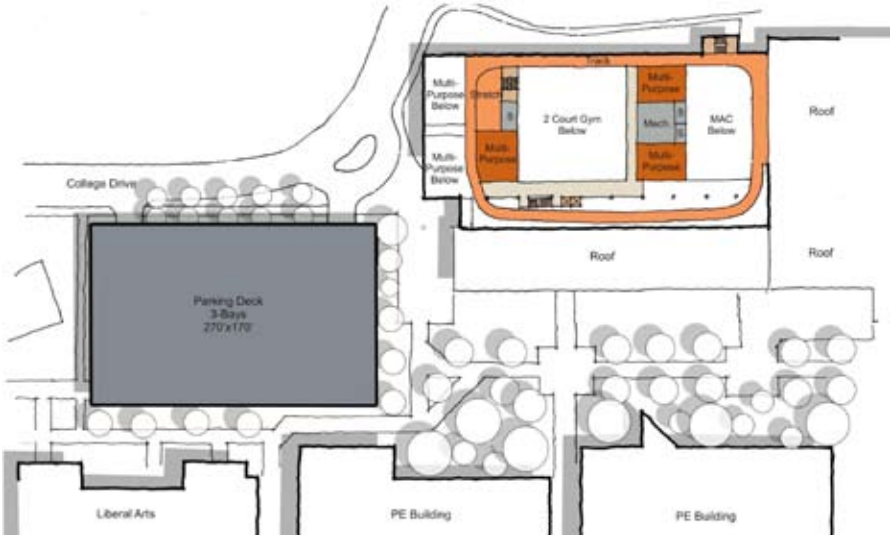
Concept B. Fourth Floor

Concept A. First Floor

Concept A. Third Floor

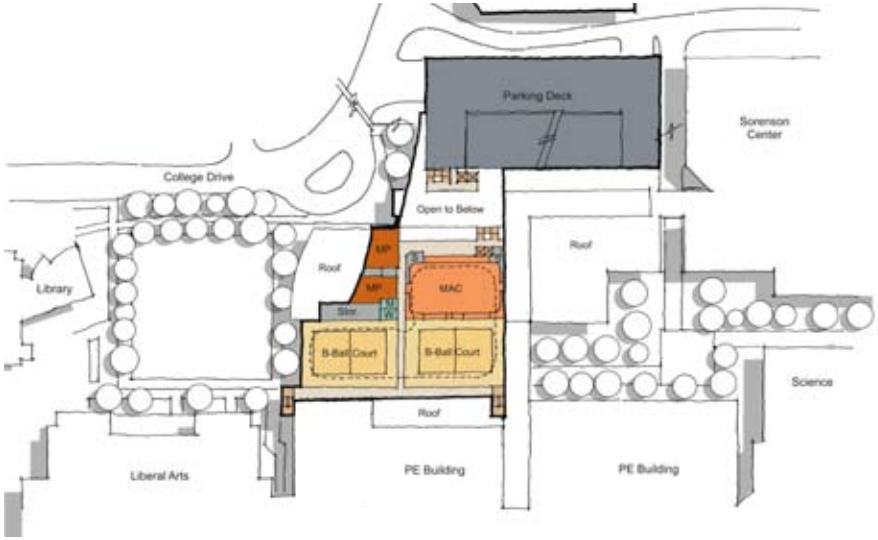


Concept A. Second Floor

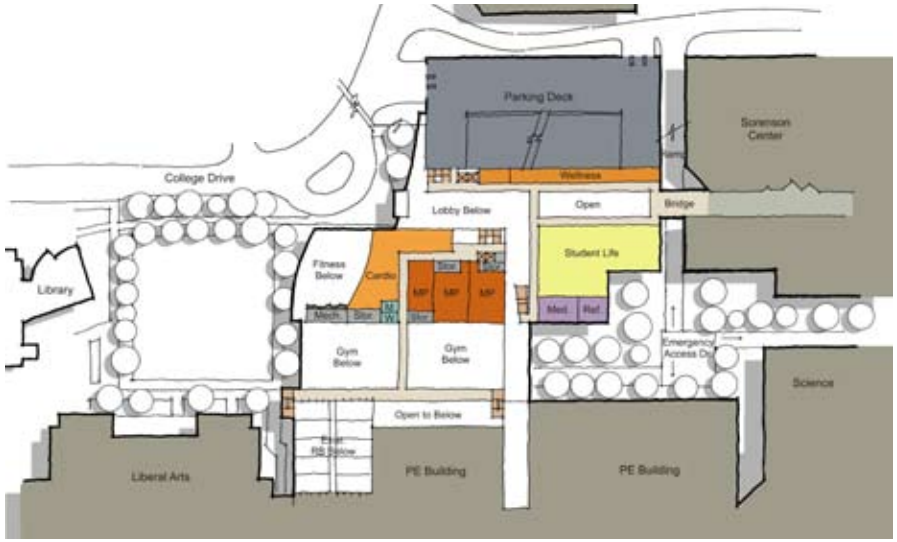


Concept A. Fourth Floor

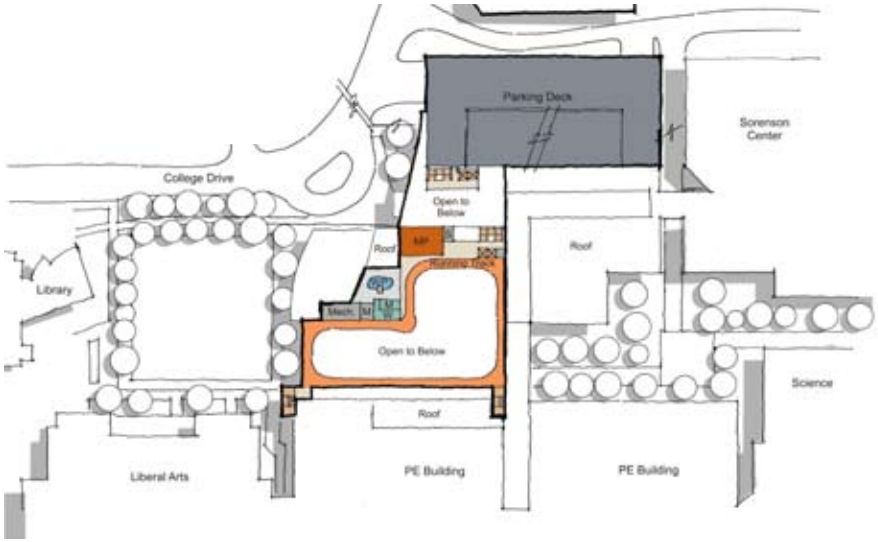
Concept G. First Floor



Concept G. Third Floor



Concept G. Second Floor



Concept G. Fourth Floor

3B: STRUCTURAL

The characteristics of the structural framing system(s) shall complement the overall architectural footprint and contribute to the functional requirements of the programmed space. Special considerations shall be given to enable future flexibility of interior spaces such that the major structural elements do not impose significant restrictions to future programming. Close interaction with other design professionals can result in implementing prudent economical structural decisions. Often such decisions affect other aspects of the overall building cost. Often the least expensive structural solution may not prove to be the least expensive overall building cost.

General

The structural opportunities which can significantly affect the overall performance and budget of this facility must be completely understood. Such opportunities include the unique site, the attaching of a new structure to an existing structure, the vertical mixed use of program spaces, flexibility of design spaces, vibration mitigation for rhythmic dance or aerobics, significant lateral design loads and the constructability on a restricted site. Additionally the site soils characteristics on site present a unique challenge when selecting the foundation system. The site specific Geotechnical Investigation can be referenced in Appendix G.

Close contact with the Owner and Owner's representative will result in meeting the expectations and user desires for the structure with respect to both vertical and lateral loads. It is important to realize that code force levels represent the absolute minimum requirements for life safety and do not necessarily meet owner needs for overall building performance. Therefore higher force levels may need to be used as design constraints in order to meet the College's performance expectations for a specific structure. The strong emphasis on sustainable design must also be incorporated into the design process. The structure should utilize materials that are readily available and can be procured in reasonable fashion for this specific location. Consideration should also be given to the availability of skilled labor in each particular material type. Seasonal characteristics can also affect material selections.

Future expansion of the building is not a design parameter for this project and is not anticipated. Interior expansion joints may be required depending upon the final configuration of the floor plan layout. A seismic expansion joint will be required at the connection between the new structure and any existing structure. Care should be given to the thermal expansion properties of the structural framing members.

Blast Protection and Progressive Collapse design measures are outside the scope of this design. Although these stringent design measures are not a program requirement it is noted that efficient sound design methods significantly increase a structure's inherent ability to resist such forces. Redundancy and sound connection design are economical methods for increasing the structures ability to resist Blast Protection and Progressive Collapse.

Different areas of the building require different levels of vibration control. Column spacing and floor systems can economically address vibration issues.

DESIGN CRITERIA

The 2009 International Building Code will be used as the minimum code and standard for this project. This includes the current editions of the standards referenced by the 2009 International Building Code. This project will also have to conform to the latest DFCM Standards and local UVU Design Standards for Structural Engineering. The final design criteria and material strengths are to be clearly shown on the final structural documents. Listed below are some minimum required structural design criteria and material strengths. These criteria and strengths will continue to be evaluated as the design process evolves. This building is to be classified as Category III occupancy per the IBC 2009 Code.

Floor Live Loads:

Office, Admin.	80 psf
Gymnasiums *	125 psf
Corridors and Lobbies	100 psf
Weight, Exercise *	150 psf
Partition Loads **	20 psf

* Vibration control areas

** Those locations where partitions are expected to be relocated.

Roof Live Loads: (Snow)

Snow Ground Load	Pg=44 psf
Snow Importance Factor	I=1.15
Exposure Factor	Ce=1.0
Thermal Factor	Ct=1.0
Rain on Snow Surcharge	5 psf

Snowdrift accumulation at valleys, parapets, offsets in roofs, and adjacent to penthouse locations shall be considered.

Wind Loads:

Equivalent Wind Speed	90 mph
Exposure Type	C
Importance Factor	1.0

Exposure C shall be used for elements and components including the exterior window/wall systems.

Seismic Loads:

Short Period Mapped Acceleration	Ss =1.154
Long Period Mapped Acceleration	S1 =0.485
Soil Site Class, (Assumed)	D
Short Period Site Coefficient	Fa = 1.0
Long Period Site Coefficient	Fv = 1.5
Spectral Response Acceleration	SDS = 2/3 * Fa * Ss = 0.799
Spectral Response Acceleration	SD1 = 2/3 * Fv * S1 = 0.490
Seismic Importance Factor	I = 1.25
Response Modification Coefficient	Brace Frame R = 8.0 (BRBF)
	Shear Wall R = 5.0
Seismic Response Coefficient	Cs=0.100 (BRBF)
	Cs=0.160 (Shear Wall)
Dead Loads of Structure	W
Seismic Design Category	D
Base Shear (Strength Design)	V = Cs * W =0.100W (BRBF)
	=0.160W (Shear Wall)
Base Shear (Working Stress Design)	V = Cs * W =0.070W (BRBF)
	=0.112W (Shear Wall)

Miscellaneous Loads:

Blast Loading was not a required design parameter for this project. Additionally, there are no specific requirements to satisfy progressive collapse.

Working Stresses for Materials:

Concrete (28 day strength min.)

Footings	4,500 psi
Foundation Walls	4,500 psi
Slab on Grade	4,500 psi
Structural Slabs	5,000 psi
Columns	5,000 psi

Reinforcing Steel	ASTM 615 Grade 60
	Fy = 60 ksi
Structural Steel	Wide Flange Shapes
	ASTM A992
	Other Shapes and Plates
	ASTM A36
	Steel Tube Columns
	ASTM A500 Grade B (46ksi)

Other minimum codes and standards that apply to the design of this project include current editions of the following:

- International Building Code (2009)
- AISC Code with Commentary
- ACI 318 Code
- AISI Cold Formed Steel Specifications
- ANSI/AWS D1.1 Welding Code
- SJI for Steel Joists and Girders
- SDI for Steel Decking

BASIC DESCRIPTION

The building will be 3 or 4 stories in height and may be divided into different wings each housing specific functions. The new structure may connect to the existing Sorenson Center in some fashion as to create a gathering atmosphere or to another building on campus for adjacency and circulation purposes. Such connections will be separated by a seismic expansion joint as to not adversely impact the existing or new structure.

The column spacing should be based on the most efficient layout for the various functions while respecting the campus grid spacing of 30' x 30'. Understanding the need for large column free floor plates it will be necessary to deviate from the campus standard in certain locations. It is also important that these functions stack in some efficient manor such that similar floor loading and vibration requirements are best satisfied. Stacking functions will also minimize the need for large transfer girders to support functions above. Transfer girders result in deep interstitial spaces resulting in taller structures and more construction cost. The floor to floor heights are also related to these specific functions. In gymnasium locations two-story elements will be required. Different grid spacing ideas are discussed below.

The structural framing system and framing components can vary depending upon different architectural requirements, service load needs, desired performance and availability and economics of material. Additionally, column spacing is usually dictated by occupancy and functional needs. Different column spacing can offer different framing and even different material scenarios.

GRAVITY FRAMING SYSTEMS

Ground Floor:

Ground floor of the structure is anticipated to have a slab-on-grade type floor. It is not anticipated that a basement is programmed into this space. Should a basement be implemented similar on grade assumptions as below can apply. At all slab on grade locations at least 12 inches of compacted engineered fill shall be placed below slabs. Connections to existing and new utility tunnels may impact the ground floor design.

The slab-on-grade shall be designed to satisfy all characteristics of the geotechnical report for the given site. (See Appendix G) Care should be taken to minimize surface cracks as well as to prevent moisture from permeating from below the slab. In the classroom or office locations it is not anticipated the slab-on-grade will experience loads that would exceed that of a similar facility, thereby permitting normal reinforcing. It is assumed that a 4 or 5 inch slab with #4 at 18" each way would satisfy these loading requirements. In the event that loads on the slab on grade exceed typical loading (100 psf) additional thickness and reinforcing can be utilized.

The final foundation systems are not yet resolved pending additional investigation of the different proposed schemes identified within the Geotechnical Investigation. Costs between overexcavation of existing materials verses current costs of other soil improvement techniques should be evaluated. The use of Geopiers, Stone Columns or other methods of soil strengthening should be investigated depending upon the final loads and soils investigations. The final selection of the structural framing systems, (concrete verses steel) will have a significant impact on the selected foundation system. With large column free spaces such as below gymnasiums it is not anticipated that a mat foundation will be utilized.

ELEVATED FLOOR SYSTEMS

Steel Option:

The general framing system could consists of steel wide-flange composite beams supporting a 3" steel deck. It is suggested that the deck span 10' +/- to maximize the decks efficiency. This will result in the steel framing to be spaced approximately 10' apart.

A concrete fill would be placed on the deck which can provide the necessary fire rating requirements.

Two options are to be evaluated including 6-1/2" total concrete thickness (normal weight concrete) or 6" total concrete thickness (light weight concrete). Our initial suggestion would be to use a 3" deck with 3" light weight concrete over the top for a total depth of 6". This will provide the necessary 1-hour fire rating through the slab element. The current availability of lightweight concrete in the region is an important factor in evaluating cost.

Another benefit of utilizing light weight concrete for this application is the reduced weight for the long span elements required at column free spaces. Light weight concrete will also reduce the lateral forces the building must resist. Other advantages of light weight concrete can be realized in the foundation design and the overall steel tonnage. Light weight concrete is not as desirable in vibration sensitive areas and those areas where the concrete floors are exposed.

It is noted however that if there are areas where the concrete is to be exposed, stained or otherwise used as an architectural surface, lightweight concrete should not be used. Based upon the amount of area in question, it may prove beneficial that normal weight concrete be used. It is noted however that in these locations 3-1/2" of normal weight concrete must be used to achieve a 1-hour fire rating.

This may result in utilizing 6-1/2" of concrete in all locations if there is a combination of normal weight and light weight concrete used.
Beams will have minimal camber. If camber is determined to be more efficient in some of the

floor beams the camber will be limited to 75% of the DL deflection. If elevated floor slabs are not exposed and act as finished surfaces, saw-cutting of these slabs would not be required. Any saw-cutting of elevated slabs must be coordinated with the Structural Engineer. Nominal reinforcing will be provided directly over the gird line beams to assist in crack mitigation.

Steel wide flange columns will support the gravity loads.

Typical framing sizes for office areas: (approx.)

Filler beams	W18 x 35 (10' oc)
Girders & Perimeter	W24 x 84 (30' oc)
Long Span Girders	W36 x XXX
Braced Frame Beams	W14 x 233 (avg.)
Columns	5 psf/building area

In regions where floor loads are in excess of 100 psf and vibration requirements are desired to be at 4,000 micro- inches per second the premium to the steel could reach 20%-30% above that of office areas.

Concrete Option:

The general framing system could consist of cast in place concrete slabs and concrete beams. With the potential column spacing of approximately 30 feet on center each way, such column spacing would be economically conducive to a system utilizing either waffle (two-way) or rectangular pan (one-way) construction. Both pan systems could reduce the volume of concrete, compared to a flat plate system and provide the necessary depth of slab to efficiently use the reinforcing bars and mitigate vibration.

The overall thickness of the structural slabs can be varied depending upon the loading criteria and span of each area. It is recommended however that the same depth of dome or pan be used throughout the building to achieve maximum cost efficiency.

Typical exercise and multi-purpose areas could utilize 16 inch pans or domes with a 4 inch topping slab. This would result in an efficient and stiff structural slab. Other areas which require live loads in excess of 125 psf or with spans greater than 30'-0" could efficiently be framed with 20-24 inch domes with a 4 inch topping slab. This slab thickness would also provide an excellent floor resulting in a vibration control. In those areas where the column spacing greatly exceeds 40'-0" deeper beams may be required to support the pan systems. These areas will be required to be designed as one-way slab systems.

Column sizes would range from 20 inch square to 24 inch square depending upon loading conditions.

Post-tension concrete would generally not be utilized for this type of project, although should be evaluated.

ROOF SYSTEMS

The roof framing can either be of similar concrete construction, as the floor systems utilizing reduced loading criteria, or be framed with steel construction. Steel wide flange or tube steel columns can support steel girders and filler beams. The steel framing can either be of open web steel girders and joists or wide-flange sections. Where roof framing is below mechanical equipment or other heavy loads wide-flange sections should be utilized. Elevator or mechanical penthouses should be of wide-flange construction and support concrete fill.

LATERAL SYSTEMS

Typically, seismic loads will govern a building design of this type. This is true for both a structural steel building and concrete frame building. However; it is important that various elements of the structure be properly designed to resist the prevailing wind loads. These elements may include overhangs, roof projection, exterior cladding systems, window mullion, etc.

Seismic loads enter a building by way of ground accelerations. These ground accelerations are absorbed by the lateral force resisting system of a building. Several different types of structural systems can satisfy these lateral forces. The number of bays requiring braced frames and/or concrete shear walls are different for each system and building configuration. The code restricts this number in order to ensure appropriate redundancy.

The lateral resisting system of this structure will best be satisfied with either steel braced frames or cast in place concrete shear walls. Steel frames could be utilized if a steel framing scenario is selected for the main structural framing system. Concrete shear walls can be used for both the steel framing scenario as well as the concrete framing option.

Such frames or walls should be located in strategic locations which not only optimizes sound structural design, but also does not adversely impact the architectural footprint and flow of the enclosed spaces. Should a steel option be utilized for the roof system then steel braced frames can be used at this level in lieu of cast in place concrete shear walls. Such frames should be located directly above shear walls below. It is paramount that the lateral elements stack vertically from the roof to the foundation level. Smaller openings such as doors can be located within the shear wall elements.

The gymnasiums or MAC Gyms may be constructed out of structural steel in either framing option. Large open spaces may be best satisfied with steel construction. Special care should be utilized such that the combination of steel elements and concrete elements are in harmony with respect to vertical displacement and vibration. Steel and concrete structures may behave differently with respect to story drift and the balance of these two systems must be incorporated into the lateral design. Lateral loads for this portion will be best satisfied with steel braced frames. A seismic expansion joint will be located between the new structure and the existing structure which can accommodate the building drift associated with a seismic event.
Refer to other sections of this program for special requirement with respect to fire ratings and area separations.

PERIMETER WALL SYSTEMS

None of the interior or exterior walls systems will be used to support gravity or lateral loads. (Except designated shear wall location.) They will be designed to support those required loads specified in the code with reference to wind loads, etc. Exterior panels will be supported from the superstructure.

FOUNDATION DESIGN

The final report provides alternate foundation options depending upon the final column and wall loads. Additionally, the report identifies differences in the soil capacity across the site. It is reasonable to assume that different foundation types may be utilized in different regions of the site.

It is anticipated that the foundation system for a majority of the site could not be of conventional spot footing and continuous footing construction. Building loads exceed allowable bearing pressures for footings on natural grade. Lateral spread and differential settlements exceed tolerable limits. In order to support high column loads engineered structural fill will be required below all the footings. The depth of the structural fill will be dependent upon the actual column loads and could be between 17 and 28 feet thick. The fill should extend outward from the bottom of the footing as per the final soils investigation report. Replacement fill will help control differential settlements and allow for higher bearing pressures. Anticipated soil bearing pressures should range between 4,000 psf and 5,000 psf. for footings placed over engineered fill. In many parts of the site it may require de-watering to achieve the removal of the poor soils.

Alternate solutions for foundation design can be met with Geo-Piers, stone columns or a deep foundation system. Geo-Piers can mitigate low bearing pressures and minimize differential settlements. Pier design and the number of piers required will be dependent upon the structural system and upon the column and wall loads. Another alternate solution for foundation design presented in the Geotechnical Investigation would be Driven Piles. Consideration could be given to supporting the structure on driven piles extending 10 feet into the dense silty sand underlying the clay. This elevation will vary across the site. The estimated pile length varies between about 55 and 70 feet. This system is typically more expensive but may be required under very high column loads that cannot be supported by aggregate piers.

Groundwater is not anticipated to be a factor in the final design. No basements are anticipated. Although static groundwater may not be encountered, the area is notorious for laterally and vertically variable "perched" groundwater conditions. It is therefore strongly recommended that a perimeter foundation/chimney sub-drain be installed on the outside perimeter wall of at least the up-gradient and side-gradient sides. Water collected can be discharged to a suitable point of gravity discharge down-gradient to the west. This sub-drain would consist of a simple four-inch perforated slotted pipe encased in gravel with a chimney sub-drain extending to within two feet of final grade. Groundwater will be encountered during the removal of loose non-structural fills. A method to dewater the site will be required to remove unwanted fills.

Liquefaction potential for this site has been identified as a risk and requires further study and investigation. Liquefaction potential can be mitigated with soil improvements noted within the soils report. Additionally no active faults pass through the site area.

Frost protection is 30 inches minimum.

GRID SPACING

It has been determined that the campus preferred structural grid spacing is based on a 30'-0" x 30'-0" grid. This will be respected as much as possible with particular emphasis on any connecting elements to existing structures. It is noted however that based on the function of this space that large areas of column free space will be required. At these a-typical location is will be economically critical that columns stack vertically from the roof to the foundation system. Transfer girders used to shift column lines are inefficient ways to capture space and should be minimized as much as possible.

Grid spacing is especially sensitive to vibration control.

VIBRATION

Vibration is a nuisance and can provide a detrimental working environment or comfortable resting environment. Different areas of the building require different levels of vibration control. Utilizing a concrete structure greatly enhances the ability for vibration mitigation. Increasing the level of vibration control can be achieved quite economically with concrete floor systems or deep steel framing members.

Currently there are no specific vibration requirements, but; it is anticipated that this control will play an important part in the selection decision of the structural systems. This issue warrants further exploration during the design phase relative to future building flexibility vs. construction costs.

An excellent way of mitigating vibration from one function space to an adjacent space is to interrupt the vibration at the source as much as possible. This can be satisfied with flooring systems and specific source mitigation at the floor. This way the entire structure is not penalized by certain adjacencies.

EQUIPMENT AND MECHANICAL CONSIDERATIONS

Mechanical equipment for the new central plant will be located on the lower level of the Student Life Center. Air handlers for the Student Life Center will be located in a mechanical penthouse.

For that portion of equipment that will be located in a mechanical penthouse on the roof of the new structure the location of the penthouse should be located such that it is not over long spanning members of the roof such as the gymnasium. Mechanical loads can best be supported on typical spans of 30'-0" +/-. Air handlers and other fan driven equipment should be mechanically isolated such that vibration and noise is not transmitted to the spaces below. Cooling towers which are located on the roof also should be located within reasonable spans. It is assumed that the penthouse will be supported on a structural slab

It is assumed that the vertical circulation of air and other mechanical or electrical equipment will be in identified shafts. These shafts can be economically provided when identified early in design. Horizontal distribution of the utilities can be easily achieved within the ceiling space.

Areas where the mechanical equipment has motors, fans or other moving parts may cause unwanted noise and vibration. Noise levels can be achieved in wall systems as identified by the architect. Vibration concerns must be achieved by providing isolated systems between the equipment and the structural floor. Such areas must be evaluated by both the mechanical engineer and structural engineer to ensure that proper mitigation techniques have been implemented.

Special consideration must be taken where the mechanical systems are located on a structural slab.

QUALITY CONTROL

Quality control can best be achieved through close coordination and communication between design professionals. All required testing and inspections for structural materials and processes are to be clearly identified on the contract documents. Timely site observations and review of shop drawings can mitigate conflicts before they happen.

SUSTAINABILITY

Standards

The referenced standard utilized in the development of sustainable design includes current editions of the following:

LEED-NC for New Construction Reference Guide.

The structural systems utilized can take into consideration the Credits available in the following sections:

Materials & Resources
Innovation in Design

Materials & Resources:

This section offers opportunities for the structural engineer to contribute to the sustainable design and resource management for this important project. Close coordination with the General Contractor can result in the managing of construction waste, reducing waste, and the potential re-use of material on future stages of construction. Structural sizes can be normalized and result in multiple uses during construction. An example can be the use of shoring material or forming material eventually being used as framing members. As this percentage increases the opportunity increases which benefits the environment.

The incorporation of reuse material and recycled material provides opportunities for construction savings as well as benefiting regional companies. These materials can include exterior brick, concrete masonry units, structural steel, and concrete mixes (fly ash quantities) to name a few.

Perhaps the strongest effort will be in the efficiency of design. This should result in the need for less material than found in an inefficient design. The efficient layout and use of structural materials can result in overall less structural steel, structural concrete, and impact to the existing site. Although there may not be Credit Points directly associated with this effort, the overall impact on the economy in the production of less is a very important part of Sustainable Design. Buildings designed to last well into the future are the very essence of sustainable design. This structure will be designed to meet and even exceed the latest standards in earthquake design.

Innovation in Design:

Opportunities exist in this area if our ability to exceed noted values in the Materials & Resources Section above. If a very aggressive Construction Waste program is instituted where we can divert 95%, an additional Credit can be achieved. This would be very aggressive but potentially achievable.

Additionally, reducing the overall height of the building reduces building shadow and reduces the overall material use. Reducing the amount of building damage following a seismic event also has potential for innovation credits. This may increase the overall demand capacity in the structural frame, but provide the very essence of Sustainability.

STRUCTURAL COSTS

The structural systems shall be selected based on experience and familiarity for similar type structures. A comparison of the building construction time and impact on the construction schedule between various structural systems should also be considered when choosing the final system for the building. Lead times for certain structural components should also be investigated.

All cost comparisons between structural systems should include interface costs between other building components and systems including architectural, mechanical and electrical. Life cycle costs may be significant when considering the possibility of a seismic event.

Winter conditions and General Conditions can also affect the structural costs.

Foundation considerations have a large impact on overall building costs. Due to the nature of the soils across the site, it may warrant modifying the locations of the structures on the given site. The Geotechnical Investigation, (Appendix G) provides alternate foundation systems which should be further investigated and compared to current cost models.

3C: MECHANICAL

APPLICABLE CODES AND STANDARDS

Conform to the latest edition of the following codes and standards, or the requirements defined in this program, whichever is more restrictive:

- 2009 IBC
- 2009 IMC
- 2009 IPC
- 2009 IFGC
- 2009 IFC
- 2009 IECC
- Latest Division of Facilities Construction and Management (DFCM) Design Requirements
- Latest DFCM CADD Criteria
- LEED Version 3.0 – Silver Rating or better

AVAILABLE UTILITIES.

Heating Hot Water

A 12"ø heating hot water supply and return main will extend from the new central plant to the existing campus-wide distribution system as part of this project, and will serve the Student Life building as well as other buildings across campus.

In order to extend the operating range of the existing central plant heat recovery chillers, which are used as the primary source of heat for the campus, design supply temperature at coils in the building during the winter months is 100°F, with design ΔT = 15°F. The design supply temperature during summer months is 90°F, with design ΔT = 10°F.

Chilled Water

A 12"ø chilled water supply and return main will extend from the new central plant to the existing campus-wide distribution system as part of this project, and will serve the Student Life building as well as other buildings across the campus.

Design supply temperature inside the building is 48°F, with design ΔT = not less than 12°F

Culinary Water

An underground water line runs near the anticipated location of the building, and is to be utilized for domestic water service to the building.

Natural Gas

Provide a natural gas service to the building from existing Questar gas mains in the street.

Natural gas consumption will be limited to use by the boilers in the central plant space. Work with the serving gas utility to provide gas service to the building. Provide building shut off valve in an easily accessible location.

Sanitary Sewer

A new sewer main will be installed in the building as part of this project.
Anticipated building drain size = 6"ø.
Gravity-flow sanitary sewer is required. Sewage ejection is not acceptable.

Storm Sewer

New storm drain will be available on site for the building.

Fire Service

New 8"ø service will be installed into the building as part of this project.

Relocation of Existing Utilities

See Site Utilities portion of this programming document for requirements for relocating existing utilities that lie beneath the footprint of the proposed building.

GENERAL REQUIREMENTS FOR MECHANICAL DESIGN

Temperature

Outdoor design temperatures: (Provo)

winter:	9°F	(ASHRAE 99.6%)
summer:	95DB /62.4WB °F	(ASHRAE .4%)
evaporative:	87.0DB /66.4WB °F	(ASHRAE .4%)

Indoor design temperatures:
Maintain at temperatures specified in the following table, +/- 1 °F.

	Occupied		Unoccupied	
	Cooling	Heating	Cooling	Heating
Normally occupied spaces	73	72	85	55
Computer/Server Rooms	72	72	72	72
Utility Spaces, including mechanical rooms	90	60	90	55

Noise

Use the RC Mark II method for rating HVAC system related noise, and use the following table for maximum allowable noise levels generated by HVAC equipment:

Room Type	RC(N)
Classrooms	25
Private Offices	30
Open Plan Offices	35
Conference Rooms	30
Corridors	40
Pool Area	40
Gym/Multi-Purpose/Weightlifting	35

Ventilation/Indoor Air Quality

Comply with ASHRAE 62.1-2007 and the International Mechanical Code for minimum ventilation requirements. Where discrepancies occur between the International Codes and the ASHRAE standard, use the more stringent requirements.

Design a ventilation system that results in an air change effectiveness greater than or equal to 0.9 as determined by ASHRAE 129-1997. Follow recommended design approaches in ASHRAE 2009 Fundamentals, Chapter 20.

Develop and implement an IAQ Construction Management Plan that includes the use of high efficiency filters (Minimum Efficiency Reporting Value (MERV) = 8, as determined by ASHRAE 52.2-1999), at each return air grille for systems used during construction.

Provide MERV 5 pre-filters and MERV 13 final filters at central air handlers upon completion of project.

Ventilation/Indoor Air Quality In Indoor Climbing Areas

The use of magnesium carbonate/chalk on the hands of people using the indoor climbing wall could result in large amounts of dust in the room. Consider circulating room air from these spaces through a filter unit to maintain indoor air quality.

Humidity

Humidification of the building is not required. Upper relative humidity levels in all indoor spaces, with the exception of pool areas, will be passively limited by the central air handling system to no greater than approximately 55%. However, this is not a design requirement.
Humidity levels in pool areas must not be allowed to exceed 60% RH.

Project Documentation

Provide a design narrative that includes the following:

- Basis of design, including all information required to prepare the design
- Sequence of operation of all systems, as well as their interaction with other systems
- System description, including operating parameters and assumptions
- Acceptance testing requirements, in tabular form, for use by the installing contractor and verification by the commissioning agent and design engineer. This may be incorporated into the commissioning documentation
- A description of the methods used by the design team to achieve sustainability, including the integrated design process; and a description of the results, i.e. a description of the sustainable elements included in the design. Include in this section how the requirements of this program were met.
- Results of the energy simulation, with a design energy performance standard for the building.
- LEED submittal documents.

ENERGY EFFICIENCY

Determine the energy cost budget for this building in compliance with ASHRAE/IESNA 90.1-2007, Section 11, then document that the proposed design reduces annual energy cost by at least 10%, using the methodology of ASHRAE/IESNA 90.1-2007, Appendix G. Cost-effective energy efficiency measures beyond this goal are encouraged and may be necessary to achieve a LEED rating of at least Silver.

Additionally, comply with the latest DFCM standards for building energy performance in effect at start of design.

This analysis may be performed by the mechanical or electrical design firm.

Design in accordance with the requirements of ASHRAE/IESNA 90.1-2007. Document compliance using COMchek-EZ. Note that compliance with the minimum requirements of the energy standard does not release the design from the requirement that annual energy cost be at least 10% less than baseline.

Strategies that the mechanical engineer can implement to reduce the building energy consumption for heating and cooling include:

- Oversize the duct and piping systems for low static pressure losses.
- Oversize coils to reduce pressure drop.
- Design new coils for higher temperature range on fluid side to reduce system flow.
- Indirect/Direct Evaporative cooling.
- Provide demand controlled ventilation in areas with varying occupancy.
- Evaluate the feasibility of seasonal heat recovery on systems serving pool areas.
- Other strategies deemed appropriate by the design engineer and Owner's representatives.

Building Envelope
Reference IECC 2009, Climate Zone 5 for minimum envelope requirements

Potable Water Consumption
Design the plumbing system so that the annual potable water consumption by interior plumbing fixtures is no more than 90% of the Energy Policy Act of 1992 plumbing fixture maximum. Additional reductions in water consumption may be required for the building to achieve a Silver LEED rating.

Strategies available to achieve water consumption reductions include low-consumption lavatory faucets, low-consumption urinals and flush valves, low water consumption flush-valve water closets, and other similar items. Use only those items and types of products acceptable to the owner. Waterless urinals are not acceptable.

Commissioning
Coordinate construction documents with the DFCM-selected commissioning agent. Commissioning of the building will comply with requirements for building commissioning detailed in the DFCM Solicitation for Commissioning Services.

Measurement And Verification
While the M&V LEED credit may not be pursued for this project, the design shall provide continuous metering of chilled and heating water consumption in the building and shall be integrated with building BMS system for the following uses:

Chilled water Btu consumption at building.
Heating water Btu consumption at building.
Domestic water consumption at building.

Use ultrasonic-type meters integrated into a pipe spool piece of the same size as the pipe run into which the flow meter is being installed. Bolt-on and insertion-type meters are not acceptable.

SYSTEMS

General Description
Provide central station custom or field built-up air handler(s) with cooling and heating coils as required to meet minimum ventilation standards. Use backward-inclined centrifugal fans with variable speed control. Locate air handling equipment indoors in a roof-mounted penthouse, or basement mechanical room with adequate service clearance. Locate prime-source mechanical equipment (i.e. heat exchangers, pumps) in mechanical room.

Although campus standards indicate heating water will be generated at 105oF at the plants, assume 100 oF heating water supply temperature at the building when sizing all heating coils and heat exchangers.

Use variable speed return/relief fans.

Building Operating Schedule
The operating schedule for the building will vary based on time of year and events scheduled in the building. Review load calculation and energy modeling operating schedules carefully with University to ensure they match the University's expectations.

Heating Water
Central plant heating hot water is generated from heat recovery chillers. Natural gas boilers are available for supplemental heating of the water in emergency situations only.

Generate building heating hot water through a plate and frame heat exchanger, utilizing the campus low temperature system. Maximum allowable pressure drop on each side of the heat exchanger is 10 psig.

On source side of heat exchanger, note that campus supply temperature is 100° . Design approach is 5°F.

On load side of heat exchangers, provide constant volume primary pumping and variable volume secondary pumping, with combined heating water transport energy consumption as follows:

	Maximum Water Transport Energy (bhp/1,000,000 Btuh)
Full Load	2.50
50% Load	1.15

Provide air handler coils as follows:

Tube		Fins	
Min Rows	Min Thickness (in)	Max Fins Per Inch	Max Thickness
2	0.035	6	0.0075

Specify minimum schedule 40 black steel piping of domestic manufacture.

Provide isolation valves (ball valve 3" and smaller, butterfly valves 4" and larger) at each air handler, pump, heat exchanger and any other device that requires maintenance.

Design piping system, including isolation valves and appropriate piping arrangements to allow maintenance of sub-zones of the heating water system without requiring complete shutdown. Review piping schematic with Physical Plant personnel.

Chilled Water

Central plant chilled water is generated by existing chillers. Provide variable speed distributed pumping for building distribution, without heat exchanger.

Design the chilled water transport energy consumption as follows:

	Maximum Water Transport Energy (bhp/ton)
Full Load	0.05
50% Load	0.04

Provide air handler coils as follows:

Tube		Fins	
Min Rows	Min Thickness (in)	Max Fins Per Inch	Max Thickness
6	0.035	10	0.0075

Specify minimum schedule 40 black steel piping of domestic manufacture.

Provide isolation valves (ball valve 3" and smaller, butterfly valves 4" and larger) at each air handler, pump, heat exchanger and any other device that requires maintenance.

Condenser Water

Condenser water for use by the direct/indirect evaporative system serving the building should be provided by dedicated cooling towers located on the roof of the building. Cooling towers should be constructed of stainless steel on all wetted surfaces. Size condenser water piping between cooling towers and pumps for low velocity and pressure drop in order to minimize likelihood of cavitation inside pumps. Review the need for tower basin heaters and heat trace on outdoor condenser water piping before proceeding with system design.

Specify minimum schedule 40 black steel piping of domestic manufacture.
Provide isolation valves (ball valve 3" and smaller, butterfly valves 4" and larger) at each air handler, pump, heat exchanger and any other device that requires maintenance.

Air Distribution

Document fan sizing calculations with zone-by-zone load calculations.

Use automatic dampers on exhaust fans in lieu of barometric dampers.

Document that transport energy consumption meets the following criteria:

	Maximum Water Transport Energy (bhp/1,000 cfm)
Full Load	1.0
50% Load	0.30

Require pressure and leak testing of all medium-pressure duct systems.

Provide each space with individual room temperature control. Provide zoning plan during schematic design review that indicates proposed zoning plan for review and approval by Facilities Planning staff.
Construct all new supply and transfer air ductwork with galvanized sheet metal, per the SMACNA duct construction manual.

Construct all new medium pressure ductwork to SMACNA 6" pressure class.

Construct all new low pressure ductwork to SMACNA 2" pressure class.

Seal both types of ductwork to SMACNA seal class A.

Do not duct return air outside the mechanical rooms. Return air path will be through return air plenums above ceilings, or unducted through spaces without ceilings. Short metal transfer ducts/ sound boots will be used to allow return air paths to penetrate walls that extend to the structural deck above.

Duct return air inside the mechanical rooms to the air handlers.

Provide new outside air intakes for the building, and coordinate location relative to new cooling tower fan discharges, general exhaust fan discharges, plumbing vent terminations, generators, the RV dump station, and other sources of local air pollution.

Consider locating all air handlers on the roof of the building inside an enclosed penthouse. Penthouse size should not be less than 7,600 ft2. Stair access and an elevator stop should be provided to the penthouse. In the event a direct/indirect evaporative cooling system is designed, locate the dedicated cooling tower on the roof of the building.

NEW CENTRAL PLANT

Design shall include space for a new central plant that will connect to existing campus-wide heating and cooling distribution piping and shall be minimum 8,200 ft2 in size. (The 8,200 ft2 is included in the Student Life Center 178,000 total gross square feet.) Locate new central plant inside the Student Life building on the lowest level of the building, and as far north as practical. The new central plant will be sized to handle the anticipated heating and cooling loads of four buildings on the campus. New central plant shall be sized to accommodate the eventual installation of three variable speed or heat recovery chillers, each sized at 600 tons of cooling capacity, minimum eight modulating, vertical orientation, condensing, natural gas fired boilers with a combined heat output of not less than 20,000,000 BTUH, and all associated piping, pumps, expansion tanks, air separators, controls, variable speed drives, and related equipment.

Note that heat recovery chillers may be required. UVU will direct the design team at the beginning of the design project on which type of chiller is to be used in the design of the new central plant. In the event UVU directs the design team to design around cooling-only chillers, use variable speed chillers with cooling towers located on the roof. The University's preference is for ceramic towers at the central plant in order to minimize tower corrosion and associated maintenance costs. Design should use ceramic towers if they are located slab-on-grade. Use stainless steel cooling towers if the central plant cooling towers are located on the roof of the building. Design one cooling tower per cooling-only chiller.

The initial build-out of the central plant that occurs during this project shall include:

- Construction of the entire min. 8,200ft^2 central plant space. Only some of the source equipment will be installed as part of this project, the rest of the source equipment will be installed as part of future projects.
- A single 600 ton chiller (heat recovery chiller vs. cooling-only to be decided by UVU at the start of the design project)
- A series of boilers that provide a minimum of 12,000,000 BTUH of heat output.
- 12" heating and cooling mains from the new central plant to the existing 12" campus-wide distribution pipes in the concourse at the LA building or at the Library. Note that a connection to the existing campus-wide distribution piping in the Sorenson Student Center is not required. All pipes between buildings to be routed indoors
- No exterior or buried pipes will be allowed. Route new piping inside new concourse that connects the Student Life building to the existing concourse system.
- All air separators, expansion tanks, piping, branch lines with manual valves and caps, and floor sinks as necessary to accommodate all boilers, chillers, and pumps installed as part of this project and that will be installed in the future.

The design of this new central plant shall indicate all boilers, chillers, pumps, and piping, both that will be installed as part of this project and that will be installed in the future. In this way, space planning assumptions will be maintained throughout all future build-out phases. Carefully review all phases of plant design with UVU campus planning and plant operations personnel.

The central plant will house equipment that serves other buildings in the northern quadrant of campus as well as the Student Life Center itself. In addition to the equipment located in the central plant area, the Student Life Center will require equipment to service its air handling and other mechanical needs. It is expected that this equipment will be located in a 7,600 square foot mechanical penthouse atop the Student Life Center. (The 7,600 square foot penthouse is in addition to the Student Life Center 178,000 total gross square feet.)

PLUMBING

Provide pressure reducing valve station for domestic water service in mechanical room in the new building.

Do not route pressurized piping over electrical rooms, telecom rooms, computer rooms or other rooms that would suffer catastrophic damage from fluid leakage.

Use Type L copper supply piping, no-hub SV service cast-iron waste piping above grade and PVC DWV piping below grade.

Specify piping of domestic manufacture.

Size hot and cold water piping to maintain 30 psi at hydraulically most remote fixture, and with maximum velocity of 6 fps.

Size roof drain system for 1.5" / hour maximum rainfall.

Support all piping from building structure via approved hangers and supports. Support piping to maintain required grading and pitching of lines, prevent vibration, and allow for expansion and contraction.

Insulate hot water, domestic cold water and primary roof drain piping. Provide all-service jacket in concealed areas, PVC jacket in exposed.

Identify all piping with markers at 20'-0" on center and at all wall penetrations.

Design full sized isolation ball valve at each floor, and at each terminal device.

The University's preferred plumbing fixtures include:

- Basis-of-design lavatory faucets shall be Moen 8413 with pivot action single lever handle
- Vitrious china plumbing fixtures to be Kohler or American Standard
- Sloan flush valves, hard-wired automatic sensor style at urinals (0.13 GPF), and manual dual flush at water closets.

Waterless urinals are not acceptable.

Design with deep-seal traps at floor drains and floor sinks.

Provide freeze-proof sillcocks on outside walls, two each on the west and south, and one each on the north and east. Provide a sillcock at each cooling tower enclosure. Provide a hose bib in each toilet room, with loose key handle.

Obtain domestic hot water from the existing campus-wide circulated domestic hot water line in the existing concourse, and return to the existing domestic hot water circulating return line.

Locate hot water circulating lines within 8 feet of fixtures being served.

Design an industrial cold and hot water system to serve cooling tower make-up and pool system make-up.

Any pool systems shall be the responsibility of the pool system designer.

FIRE PROTECTION

Provide fire sprinkler protection throughout building. System to comply with NFPA, campus fire marshal and State of Utah Fire Marshal requirements. Extend a fire sprinkler water supply pipe to the building from the existing below-grade water line. Review locations of fire sprinkler riser assemblies and FDCs with the campus fire marshal and state fire marshal.

A fire pump is not anticipated, because the flow and pressure requirements can likely be met from the campus system. The design team shall conduct a fire flow analysis per DFCM criteria during the design phase to confirm this assumption.

Provide individual floor control assembly, including zone check assembly, at each floor
Provide an express drain system to simplify testing and draining the sprinkler piping on each floor.

Components and Installation: Capable of producing piping systems with 175-psig minimum working-pressure rating, unless otherwise indicated.

Specify all piping and components Schedule 40 minimum black steel, and of domestic manufacture.

Class I, standpipe system design shall be designed assuming 150 psi available at fire department connection. Pressure and required flow shall be provided by fire pumper truck.

SMOKE CONTROL

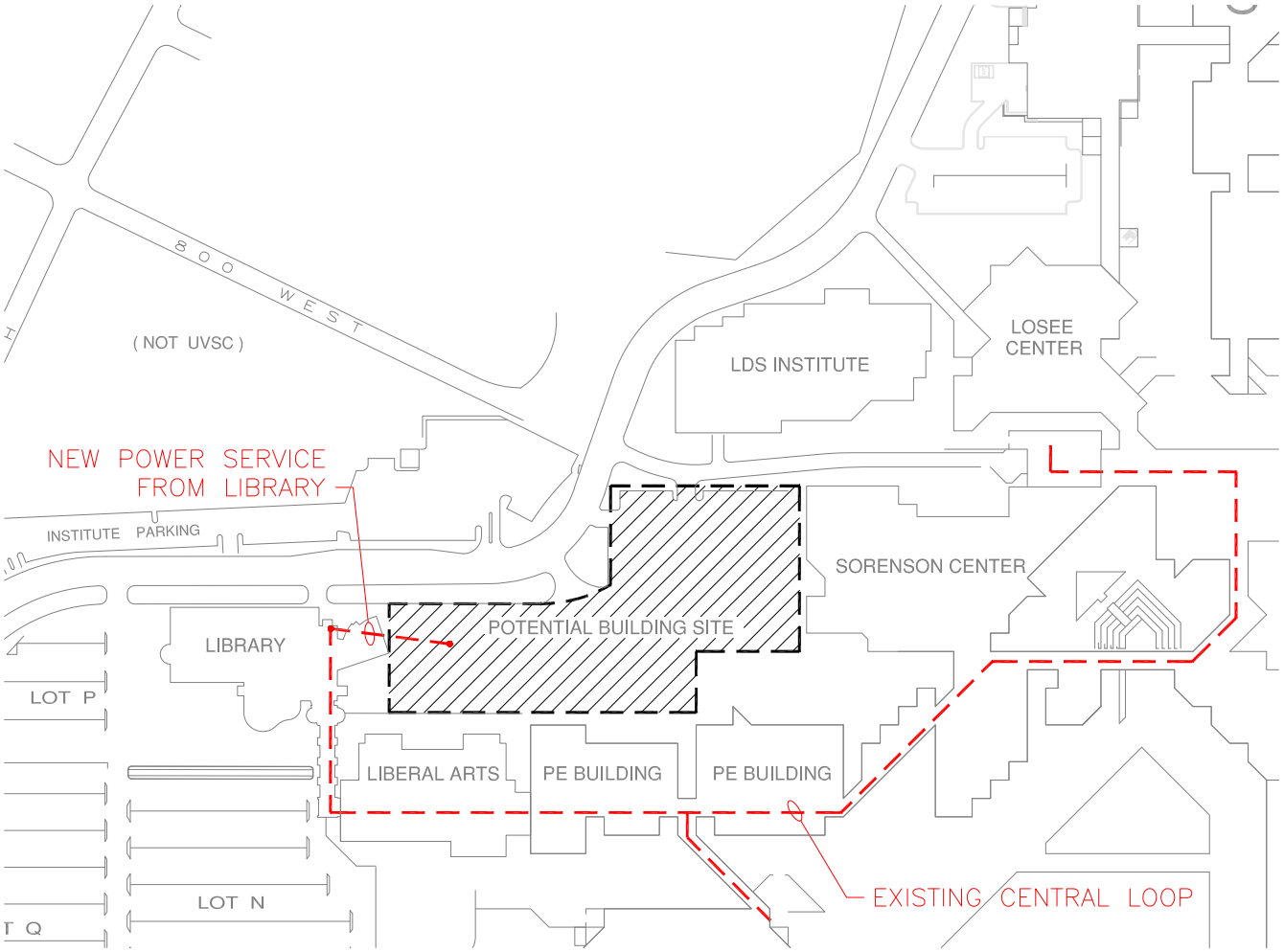
Provide a mechanical or passive atrium smoke exhaust system in the event the building includes an atrium.

CONTROLS

The UVU standard for Direct Digital Control (DDC) systems is a flat specification for Utah Yamas controls providing the TAC-IA Lon-based system.

Integrate the mechanical and electrical systems. Provide microprocessor to microprocessor communication between the DDC and variable frequency drives, air handler(s), electrical distribution, lighting, emergency generators, UPS system and building power. Provide 15% reserve capacity for additional points to be made available for non-mechanical/electrical monitoring.

Provide written sequence of operation on drawings for all systems controlled by the DDC system.



ELECTRICAL DISTRIBUTION PLAN
SCALE 1" = 300'

3D: ELECTRICAL

CODE REQUIREMENTS

The codes and laws that apply to the electrical systems are the latest versions of the following:

National Electric Code (NEC) 2008 (or 2011 if adopted prior to permit)
International Energy Conservation Code (IECC) 2009
International Building Code (IBC) 2009
International Fire Code (IFC) 2009
International Mechanical Code (IMC) 2009
National Fire Code (NFPA) 72 2007
American's with Disabilities Act (ADA) 1991
ADA Application Guide (latest edition)
Underwriters Laboratories (UL)
State of Utah Fire Marshal's requirements R710-4
American National Standards Institute (ANSI) A117.1

Additional Standard Requirements

The additional standards that apply to the electrical systems are the latest versions of the following:

ANSI standards as applicable
NEMA standards as applicable
IEEE standards as applicable
EIA/TIA standards as applicable to Information Technology
BICSI standards as applicable to Information Technology
DFCM Design Criteria – latest version
UVU Design Standards – latest version
UVU IT Infrastructure and Cabling Specifications – latest version

According to the IBC, the building complex will likely be a business "B" occupancy. The International Fire Code, for "B" occupancies, requires a manual fire alarm system for 500 or more. There is an exception that allows no manual fire alarm if the building is sprinkled with notification appliances that notify occupants during sprinkler flow. However, in the University environment, and because smoke detectors are required by the State Fire Marshall for State owned buildings, the cost of adding manual fire alarm boxes is minimal, and is normally done at the University in these types of occupancies.

The State Fire Marshall requires smoke detectors in all corridors, and in paths of egress.

The IMC requires smoke detection on fan systems, and fan shutdown.

Power Service to New Facility

A new dedicated power service shall be provided for the new facility. The parking garage may have a 2nd dedicated power service facility, due to the potential for phasing the parking garage prior to the main facility opening.

The new recreation facility shall be designed for a minimum of 15.3 watts per square foot to accommodate load growth over time plus and additional load to accommodate the central plant with expansion. The University design guidelines require a minimum of 50% space and capacity, included in the 15 watts per square foot.

	Connected	Design
	Load	Watts/SF (w/50% spare)
Lights	1.2 (or less)	1.8
Receptacles	1	1.5
HVAC	6	9
Elevators	1	1.5
Miscellaneous	1	1.52
TOTAL	10.2 W/SF	15.3 W/SF

	Central Plant Load
Initial Load	600 ton
Future Load	1200 tons
TOTAL	Approx. 2.5 MW

The new parking garage shall be designed for a minimum of 3 watts per square foot to accommodate load growth over time.

	Connected Load	Design Watts/SF (w/50% spare)
Lights	0.5 (or less)	0.75
Receptacles	0.1	0.15
HVAC (stair)	0.2	0.3
Elevators	1	1.5Co
Miscellaneous	0.2	0.3
TOTAL	2 W/SF	3 W/SF

277/480 volt service is desired for the main facility. Dual transformers for 120/208 volt and 277/480 volt service may be considered as an energy saving option and to avoid stepdown transformers inside the building. Because of the nature of the central plant, it is desirable for the plant to have a separate dedicated transformer, with a potential manual cross tie between the main building service and the central plant. Assuming the chillers will not exceed 600 tons, it is recommended that the chillers be fed with 480 volt power. Any size above 800 tons would require medium voltage systems of 4160 volt.

The service can originate from the existing distribution loop just east of the Library. Refer to Site drawing Electrical Infrastructure, for further details of options for power service.

A new vault mounted vacuum fault interrupter (VFI) switch, with dielectric medium, is preferred over a fused switch. The switch shall be installed indoors near the main electrical room, similar to the Language Arts and/or the Library installations. Exterior switches are not acceptable. Oil switches and gas switches are not acceptable.

New transformer(s) should be installed to serve the facility. Transformers shall be copper only, aluminum will not be allowed. The transformers must be screened from the public view. If located near the generator, a concrete or masonry "blast wall" shall screen the generator from any possible arc flash of the transformer.

The designer shall include a selective coordination study for the medium voltage service, to determine the overcurrent protection settings at the vacuum fault interrupter. The contractor shall adjust the overcurrent protection settings as part of the commissioning process.

Conduits running from the manholes to the building switch, and from the switch to the transformer, shall be 5 inch PVC, with 10 feet of PVC wrapped rigid conduit where entering the manhole, penetrating building foundation wall, or exiting from underslab to transformer. Where medium voltage is installed inside the building, conduit shall be rigid, 5 inch size conduit, painted red and labeled according to the NEC. Provide at least one spare conduit in all new runs.

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Power Service Accessories

Digital Metering equipment shall be provided at main service switchboard per campus standards.

Phase failure protection shall be provided for motor circuits.

Transient Voltage Surge suppression shall be provided at the main switchboard and the emergency switchboard, and at other selected locations through the facility as determined by the design engineer.

Power Distribution

Electrical rooms shall be stacked where possible to facilitate future changes and minimize the initial cost of feeder runs. Closets shall be centrally located to minimize branch circuit distances. No point in the building shall exceed 160 feet to the nearest electrical panel, preferably most circuits shall be less than 125 feet to the nearest panel. Electrical closets shall have unused wall space for future growth, minimum of 25% free wall space.

All power distribution feeders shall be in conduit, with copper conductors, full size neutrals, with isolated ground and equipment ground conductors per University Design Guidelines. Aluminum feeders are not allowed.

Transformers and Power panels shall be located within electrical closets, not within labs, where possible. Transformers and panel busses shall be copper only. Electrical service shall be located as near as possible to the largest mechanical loads, for efficiency and cost savings.

All outlet circuits shall have dedicated neutrals with single pole breakers. Shared neutrals with two and three pole breaker handles are not allowed.

Power feeders within the central plant and non-public mechanical areas shall be labeled and painted as per the campus standard. All medium voltage feeder conduits located inside the building shall be painted red with labeling "DANGER – HIGH VOLTAGE".
All circuits shall be designed so there is no more than 5% maximum voltage drop from the main service entrance to the outlet or device. It is preferred that the feeder have no more than 2% voltage drop, and the branch circuit no more than 3% voltage drop, at maximum connected load. This may be accomplished by increasing wire size, or minimizing distance of the feeders and branch circuits, as appropriate.

Power panels for receptacle power shall be separate from panels feeding mechanical and lighting loads to allow for easy, separate metering as required by the IECC and/or USGBC LEED M&V points (if selected). Separation will also reduce harmonic transfer between building mechanical loads and receptacle power.

Variable Frequency Drives

The electrical designer, not the mechanical designer shall specify the Variable Frequency Drives at the University. Exceptions may be allowed with prior approval from UVU for certain packaged units, however, specifications of the mechanical and electrical designers shall match as to harmonic control and accessories.

Emergency Power

Batteries are not allowed on new facilities at the University. A new, diesel generator will be required as part of the project. The generator will run egress lighting, and all information technology equipment inside the MDF/IDF rooms including HVAC inside the telecommunication rooms.

The generator may be located in the transformer yard area, screened from public view. Consideration shall be taken to control noise by at least 15 dB for a target not to exceed 75 dB measured at 10 feet.

The tank shall have a minimum of 12 hours of backup fuel at 100% rated load.

A minimum of two ATS switches is required, one for life safety egress lighting, and the other for auxiliary equipment such as the computer data rooms.

UPS Systems

It is expected that small, rack mounted UPS systems will be provided in the MDF and IDF rooms as part of FF&E to backup telephone and data systems for the building. The UPS systems in all MDF/IDF rooms will be backed up by the building diesel engine generator.

Outlets

The number and location of outlets shall be coordinated with each space with users and comply with their needs and requirements. The main lobby space shall contain outlets for charging of laptops and for displays. Office areas shall contain a minimum of 3 outlets per private office.

GFI outlets shall be provided for all vending machines and for break rooms, restrooms, roof outlets, and other locations within 6 feet of a sink.

Provide dedicated outlets for all copy machines, laser printers, vending outlets, microwaves, and other high-use equipment.

Provide at least one outlet in each storage and mechanical closet.

Lighting

Wherever possible, the designer shall utilize long life, energy efficient lighting solutions. Four foot T8, T5, or T5 HO fluorescent lamps, with electronic ballasts, are preferred. T8 lamps shall be premium, greater than 3100 lumens. T8 ballasts shall be premium, high efficiency, with ballast factor less than 0.8.

For smaller fixtures, Biaxial fluorescent, or compact triple tube fluorescent lamps are preferred. Incandescent lamp sources shall not be used. LED solid state systems may be used for exit signs, for track lighting, and downlights. Other LED sources approved by the campus prior to specification.
Lighting solutions shall incorporate automated controls per the latest version of the energy code. This can be timeclock switching systems, or occupancy based switching systems. If occupancy sensors are used, an override switch mounted on the wall will allow the user to turn off the lights for appropriate presentations. In addition, if the occupancy sensors fail, the University can have the immediate option of bypassing the sensor and using the switch only for control purposes. Dual technology occupancy sensors are preferred to help prevent false off and false on operation of the lights. Dual technology shall be ultrasonic and IR, sound sensing dual technology sensors are not allowed. Design Engineer shall include commissioning specifications in the design to commission all lighting control systems, and provide required owner training.

Daylighting controls with continuous dimming may be considered in selected areas of the facility, including both circulation spaces and court spaces. Stepped dimming systems shall not be specified.

Provide egress illumination and illuminated exit signs complying with all required codes. As a minimum, 1 footcandle shall be provided for all egress pathways. In addition, provide some illumination on backup generator power in restrooms, mechanical rooms, electrical rooms, and communications closets.

Illumination levels shall follow the published guidelines of the Illumination Engineering Society, North America (IESNA), and its recommended practices. Specifically, refer to RP1-93 “Office Lighting”, RP3-00 “Lighting for Educational Facilities”, and RP33-99 “Lighting for Exterior Environments.

Fire Alarm systems

The fire alarm system will consist of manual pullstations, smoke detectors down corridors and paths of egress, and smoke detection on the fan systems exceeding 2000 CFM. Notification devices will be provided per code guidelines. Sprinkler system will be monitored for flow and tamper. The elevator shall be recalled according to ANSI guidelines.

Card Access and Security Systems

Card Access systems will be specified on select doors, including telecommunications MDF and IDF rooms.

CCTV cameras shall be provided inside near exterior exits, near telecommunications MDF/IDF closets, and public gathering spaces and elevator lobbies. In addition, CCTV cameras will be provided on the exterior, in weather housings, to view major sitelines of the exterior.

CCTV cameras shall be color. Black and White is not acceptable.

CCTV Exterior housings shall have weather accessories, defoggers and/or heaters to ensure a clear vision path.

Security systems shall be networkable and monitored through IP through Network Management Protocol (SNMP) compatible. Integrate all cameras into the campus wide NVR video surveillance VSS system.

All needed infrastructure and upgrades on the existing campus wide system for the additional cameras shall be specified including software and hardware licenses. Only qualified vendors, factory approved, and campus approved vendors may participate.

Grounding

Provide grounding equipment conductors in all feeder and branch circuits. Conduit ground is not acceptable. Provide an additional isolated ground conductor in all 120/208 branch power panelboard feeders, complete with isolated ground bus.

Provide grounding riser system for all telecommunications closets, complete with grounding bus bars.

Lightning Protection Systems

The designer shall provide a full lightning protection analysis per NFPA guidelines. It is anticipated that with the importance of the facility, a prominent location, and the overall square footage of the facility, the analysis may suggest a lightning protection system be added to the project. The final cost of such a system depends heavily on the construction materials used on the facility. The designer shall consult with the owner to determine if the system is desirable.

Clocks

Provide battery operated, radio frequency self correcting clocks in all public areas. Primex is the campus standard.

Designer shall ensure that repeaters are located within the building (or integral to clocks) so that signal reaches each specified clock location.

Public Safety Radio Repeater System

It has been noted that in some areas of UVU, the public safety/police radios do not work due to lack of signal. The designer shall specify appropriate repeater stations within the building to ensure coverage throughout the new recreation building.

Sustainable Principles and LEED Silver

It is desired that where economically feasible, sustainable practices and design shall be employed. The state will require this to be LEED silver, at a minimum. Many of the above system descriptions already use energy efficient design practices. The designer shall meet with the DFCM energy coordinator and meet all requirements of the DFCM energy standard.

Electrical designer shall include all commissioning requirements in the electrical specifications required for measurement and verification.

The lighting design is targeting 10-15% better than code for peak lighting energy density. Controls are desired to provide better energy savings by shaving the peak density. As stated previously there may be daylighting controls within some of the spaces adjacent to exterior windows and clerestories to take advantage of free and efficient daylight when available.

The lighting layouts and fixture selections will aid in reducing light pollution from interior light sources as well as aid in reducing sky glow from exterior sources.

INFORMATION TECHNOLOGY

Designer shall refer to the *UVU IT Infrastructure and Cabling Specifications revised 04-13-11* in the appendix, all requirements shall apply.

Designer shall coordinate with UVU campus Office of Information Technology staff, including Kevin Dent, Infrastructure, Eddie Sorenson, and Tom Branam, Director of Telephone Service, and other appropriate staff. Campus IT staff will approve all designs prior to bidding.

Telecommunications Service To New Facility

The data fiber optic and voice service to the new building shall be obtained from the Library MDF (Main Distribution Frame) immediately west of the project, with an additional loop feed to the Library MDF immediately north of the project.

In the Liberal Arts and Library building, additional cable tray and/or D-rings are needed to consolidate the new cabling on the wall and above the racks. There is space available for additional cabling. New 110 style patch panels may be installed on the existing plywood, and new Light Interface Unit fiber patch panels may be installed on the existing racks.

The following service trunkline cables shall be provided and installed by the contractor:

- 600 pair copper voice backbone cable from new Recreation Center MDF to the Liberal Arts MDF
- 144 strand single mode fiber optic from new Recreation MDF to the Liberal Arts MDF.
- 144 strand single mode fiber optic from new Recreation Center MDF to the Library MDF.
- The parking garage can be served with a single 25 pair copper backbone cable and a 12 strand single mode fiber cable from either the Liberal Arts building, or the Greenhouse near the Student Center and Pope Science, or the new Student Life Center MDF, depending on the phasing of construction

All fiber optic shall be run in innerduct inside new and existing cable tray and/or through duct-bank. Designer shall verify fill of existing cable tray, where appropriate add new cable tray.

Where entering and running inside existing buildings, the designer shall carefully plan the route and conceal conduits. Avoid exposed conduits on the outside of the existing buildings.

Telecommunications Trunklines Within New Facility

Each new Intermediate Distribution Frame (IDF) room shall be connected to the new MDF via cable tray/conduits, trunkline fiber optic, and trunkline copper voice cabling.

The following MDF to IDF trunkline cables shall be provided and installed by the contractor:

- 300 pair copper voice backbone cable from new Recreation building MDF to each new IDF room.
- 96 strands single mode fiber optic cable from new Recreation building MDF to new IDF room.
- 48 strands multimode fiber optic cable from the new Recreation Center MDF to new IDF room.

Telecommunication MDF and IDF Room Requirements

The new IDF rooms shall be stacked with the new MDF to minimize cable distance and provide flexible future growth. Rooms shall be centrally located, to ensure no workstation cable is longer than 280 feet to any point within the facility. Where required, provide additional IDF closets to ensure that cable length is minimized and meets the standard. At a minimum, provide one MDF/IDF room per floor.

MDF and IDF rooms shall be directly accessible from the hallway; access through teaching spaces or offices is not acceptable.

Size of all Telecommunications rooms shall follow campus minimum size standards or written approval shall be obtained to deviate. MDF minimum size shall be 500 square feet suitable for a maximum of 18 floor racks. IDF minimum size shall be 140 square feet, suitable for a maximum of 4 floor racks plus appropriate wall space. Initially, provide only the floor racks required for cable and network installation, plus a minimum of 30% space available.

A dedicated HVAC cooling system shall be provided in each MDF and IDF rooms that can run 24 hours per day, 365 days per year.
Each new telecommunication MDF and IDF shall be on Emergency Generator backup, including all outlets, and HVAC.

All walls of MDF and IDF rooms in the new building must be covered with ¾ inch by 8 foot high plywood, painted with fire retardant paint. The plywood shall be used to mount copper voice cables, fire alarm, and security CCTV systems.

All MDF and IDF rooms shall have appropriate grounding, and grounding bus, tied back to the power service ground. Provide grounding jumpers to all metal raceways entering the closet. Provide spare holes on grounding bus for campus IT services to ground their equipment.

Each MDF and IDF shall have card access, and be monitored with a CCTV camera system, as per standards.

Horizontal Workstation Cabling Requirements

Cable tray or conduit homeruns shall distribute horizontal cabling throughout the facility. Open plenum wiring and j-hooks will not be allowed. Minimum size conduit shall be 1 inch.

Wireless access outlets shall be provided so there are reliable wireless access points in all student study areas and teaching areas.

BUILDING TECHNOLOGY & A/V

Designer shall refer to the UVU IT Infrastructure and Cabling Specifications in the appendix, all requirements shall apply.

Designer shall coordinate all specifications and design with Media Services, Travis Tasker, Director of Media.

All new construction on UVU campus will include the necessary infrastructure necessary for the installation of technology whether or not the equipment itself will be purchased through the contractor or as part of the FF&E package.

All student and recreational areas, will contain appropriate facilities for Technology and A/V, as detailed below.

Additional Standards Requirements

The additional standards that apply to the Technology, in addition to codes and standards required for electrical systems are the latest versions of the following:

- EIA/TIA 607 standards as applicable to A/V and Information Technology
- BICSI standards as applicable to A/V and Information Technology
- IEEE 208 standards as applicable
- UVU IT Infrastructure and Cabling Specifications – latest version
- "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

Note that the A/V and Media Integrator/Programmer must be CAIP Certified, and have a minimum of 5 years experience installing media equipment in an educational environment.

UVU Media Technology Definitions

There are four classification systems or levels within the different types of spaces:

- Basic
- Standard
- Premier
- Specialty Fitness Areas

Basic systems are used only on low budget jobs and are not desireable for this project. All types of environments, including fitness rooms, multipurpose rooms, and conference rooms shall follow the design standards of one of the other three classification of systems.

The intent of any new design is to follow similar standards used elsewhere on campus, to allow ease of use by teachers and staff.

Standard Systems

The Standard system in small conference rooms consists of a fixed credenza, usually tied to a wall or against the wall near the front of the room. The system would include laptop connections for an overhead projector or flat panel LCD screen, a Blu-Ray media player, and an amplifier with speakers either wall mount or overhead. Consult with UVU media services to determine the exact speaker layout depending on the size and configuration of the space.

The control would be a Crestron touchscreen with side button panel, with programmed volume control, and on-off of all sources. The system will interface with the campus room monitoring system "Crestron Roomview", which allows remote monitoring and control of the room. New interface technologies such as IPAD wireless control may also be required.

Lighting control is integrated with a small touch screen panel located near the entry door.

The minimum size of the credenza is 24 inches deep, with the ability to house a 19 inch wide equipment rack. Heat relief by forced ventilation is required.

Location of the credenza and controls must not block the view of the projection area, nor shall the screen drop into or near the credenza.

A minimum of 6 data drops is required for the credenza. It is recommended that spare conduits be provided to the fixed credenza as follows:

(1) 2 inch conduit for A/V
(1) ¾ inch conduit for dedicated power branch circuit
(1) 1 inch conduit for 6 data cables
(1) 1 inch spare conduit

All conduits to have insulated bushings both ends, and contain no more than three 90 degree bends.

A/V must be installed in a separate conduit from power and data cables.

Speakers are preferred to be distributed overhead in Standard systems.

The control is a touchscreen (Crestron is the approved campus standard, other vendors cannot connect to the central system). The touchscreen also has traditional buttons to the side, including source control on the left, and transports on the right.

Lighting is integrated into the A/V controls in the Standard and Premier Systems. Lighting control, volume, and menus all are reflected in the touchscreen and must be coordinated with campus to reflect the programming shown elsewhere.

Annotation is accomplished on Standard systems by paper and document camera on the table top, not on the touchscreen. "Walltalker" and similar systems are banned on campus.

Student Council Room (1500 SF – approx 60 people)

The Student Council room shall be designed with the "premiere" level system.

These systems include all of the equipment of the Standard system, but they add several items, including a lecturn cabinet for A/V equipment, wireless lapel mics, the use of a high quality ceiling mounted document camera and a larger touch screen.

Premiere systems shall have the capability of recording the lecture via camera and recording media, for use as distribution on electronic media.

Provisions shall be made for the expansion of the facilities for future video conferencing, including possible audience microphones (ceiling and/or tabletop), future camera locations, and appropriate lighting to provide proper vertical illumination of faces. (downlights that illuminate only the horizontal surfaces will not be acceptable).

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In all specified systems, the A/V integrator must provide the source code to UVU media services so the program can be changed at a later date without contacting the vendor.

Lighting shall be zoned so that the user can use a whiteboard as well as the overhead projector, in a side by side configuration. The whiteboard may also be used for projection in addition to the motorized screen, so it should be a 16 x 10 ratio in size. The whiteboard will not take the place of the screen under normal operation.

Specialty Fitness Rooms

Gymnasiums, Multipurpose and Fitness Rooms shall all have sound systems/intercom paging capability. Media credenza's shall be located within or near each space to house sound amplifiers, and source media. Specific requirements vary according to the space as indicated below.

Paired Gymnasium Space

The dividable paired gymnasium will also be used as an assembly area where video and audio might be broadcast. The users envision potential for movies, large speeches, overflow space where additional seating may be contained, etc. As such, it will be important to control natural light via motorized shade assemblies, and provide for zoned lighting to allow visibility. The large venue means a high brightness projector and large screen will be necessary. A/V controls shall be mounted in the front and rear of the room, to allow easy access to both speakers/presenters, and perhaps an A/V assistant. Specialty lighting bars that are protected from balls and damage may be used for spotlighting the area where a speaker/presenter may speak.

There is a possibility of traveling roadshows or theater. No special requirements other than power plug-in locations nearby will be required for traveling shows.

Multipurpose Rooms

The multipurpose room shall have a sound system and media credenza. Optional LCD screens for Blu-Ray media, cable TV, or campus digital signage may be placed in select locations.

Fitness Rooms

All exercise equipment such as treadmills, stair machines, and bikes (spin rooms) shall be wired for data, cable TV, and power to provide streaming media to small screens located on the equipment. It will be possible to network the machines together to run competitions and make comparisons using the network interface. In addition, one or two spin room machines (bikes) may be interfaced to large LCD screens immediately in front of the machine to give the user the experience of biking through various terrain and to retain interest in exercise.

Optional LCD screens for Blu-Ray media, Cable TV, or campus digital signage may be placed in select locations within the fitness rooms.

Public Space Intercom System

The phone system will be integrated with the overhead speaker system for distributed intercom. The intercom will also be tied specifically to fitness and multipurpose rooms for the ability to all-call, or select individual spaces for paging purposes. Streaming background music in all areas including fitness rooms, multipurpose rooms, and locker rooms and corridors may be used to create a fun, inviting atmosphere. Ensure that separate spaces such as fitness rooms and multipurpose rooms are on their own amplifier zones for flexibility as to where the background music is played.

Projection Screens

All projection screens shall be electrically operated. Consult with campus on type of screen, investigations are currently underway as to use of an approved "writable" surface as demand from the professors is asking for such a thing. In any case, a whiteboard should be located immediately to the side and/or behind the screen to allow simultaneous projection and writing on an adjacent board.

Digital Signage

The building will incorporate digital display monitors/signage and Emergency operation notification in the main lobby entry, elevator lobbies and other major entries into the facility, using a minimum size 46 inch flat LED or LCD screen. This may occur at more than one location as the building abuts the main circulation mall and at secondary entrances or lounge spaces. This digital billboard will be used for campus events, information , and for campus emergencies. The digital signage shall be in portrait format, and power and data drops shall be located at each sign.

A second type of signage is for Entertainment. It is located in sitting spaces, student study areas, relaxation areas, and within multipurpose and fitness rooms. This type of sign would be in landscape format, and have campus events, advertisements, source cable TV, and other types of media. Overhead directional speakers shall be used to contain the sound in the immediate area. Power, data, and TV drops shall be located at these entertainment signs.

A 3rd type of signage is for Interactive (touchscreen) activities. This is usually in one location in the facility, near the main entrance. This sign should be floor or wall mounted, and located near the student main path of entry. Maps and wayfinding information may be used on this interactive display.

Backing will be required for all digital signage locations. Homerun all cabling from digital signage to a conditioned MDF/IDF closet. Provide space for additional local media for "behind the sign" computer for source media. All signs will homerun to the same IDF closet, with minimum two cables for media distribution plus a standard workstation data outlet homerun to the nearest closet. In addition, provide a cable TV outlet at each sign. Total cables at each sign shall be four, two for media, one for data, and one for cable TV.

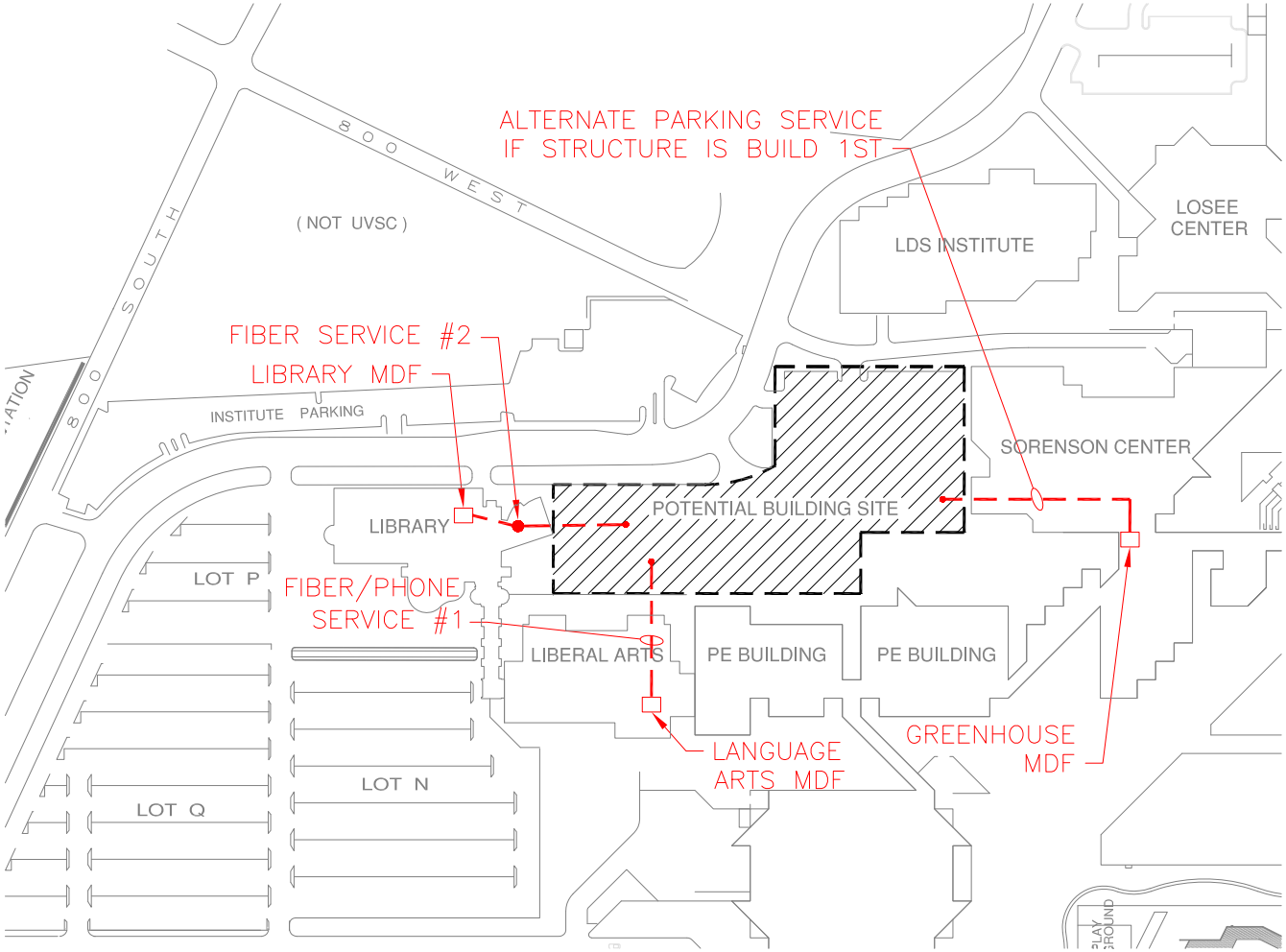
Homeruns of data cables shall be with yellow jacket.

Provide small LED and/or LCD screens for room scheduling in lecture hall and auditorium multi-scheduled spaces. Interface with digital signage system

Cable TV

A cable TV broadband RF system or a digital IP TV system is anticipated throughout the facility, including to all fitness areas, classrooms, conferences, and private offices. The digital IP TV system is under development, and may or may not be active when this facility is built. Designer shall verify with campus to determine the exact cabling configuration used.

Provide appropriate CATV drop or data drops, amplifiers, taps, and other equipment specified in the IT Infrastructure and Cabling Specifications attached in the appendix



DATA/TELEPHONE, BACKBONE PLAN
SCALE 1" = 300'

DESIGN NARRATIVE

3E: PARKING STRUCTURE

Utah Valley University (UVU) has determined the need for a 550-space parking structure in association with the new Student Life Center to be located on Parking Lot F north of the Sorenson Center building on the UVU campus. This narrative documents the program requirements for the parking structure portion of this project determined in meetings with university staff and the design team on January 27, 2011 and March 7, 2011.

The construction cost for the parking structure is approximately $7,062,000 or approximately $12,840 per parking space.

PARKING OPERATIONS

The parking garage will be utilized by students, faculty, staff, visitors and special event parkers. Gate control will be provided at all entrance and exit lanes. Students and faculty will pay a monthly fee to park in the garage. Visitors will pay an hourly fee to park in the garage. Special event parkers will pay a fee on entry with unrestricted exiting.

The campus currently uses a 'T2' proprietary parking control system software and plan to continue using it. New parking control gear and hardware need to work with this existing system.

The parking garage will accommodate monthly or annual users as well as daily or hourly users. In the case of long term users, it is expected that they will pay a fee and their university account will be credited. This will allow their university ID card, with magnetic strip, to be used as their parking pass. The parking entry and exit equipment must be able to read these cards and interface with the T2 system.

Daily or hourly users will have several options. One scenario involves the entry equipment to issue a card at time of entry. In one exit scenario, this card will be fed into a pay kiosk located within the garage (perhaps more than one kiosk will be required at the major entries / exits to the garage) which will then accept an appropriate form of payment – cash or credit – and reissue the card which then acts as the exit card when inserted into the exit gate equipment.

In another scenario, entry also involves issuance of a card from the entry gate equipment. Exit involves a cash or credit payment to a parking attendant. The attendant will also be able to help with unforeseen conditions regarding entry or exit.

In a third scenario, entry could be by inserting a personal credit card into the entry gate equipment which reads and records the necessary information. Upon exit, the same card is inserted into the exit gate equipment which debits the credit card and opens the gate for exit.

Final entry / exit equipment design decisions will be made during the design phase of the project.

FUNCTIONAL DESIGN

Ingress/Egress Design

UVU staff indicated that the entire garage may fill for special events in the Sorenson Center. The parking garage is also in relatively close proximity to the UCCU Events Center. The design of the ramping system and ingress/egress design for the parking structure will be dictated by the peak hour arrival/departure volume for those events. Traffic counts at an existing parking lot on campus before and after a special event are recommended as the basis for design. Absent the traffic counts, if one assumes that the entire garage must have the capability to fill or dump within one hour, then the peak arrival or departure volume will be 550 vehicles per hour.

The access design is based on the peak fifteen-minute period within the peak arrival/departure hour. Special event arrivals typically are more spread out than departures. The peak arrival fifteen minute period is roughly 50% larger than the average fifteen minute period. The peak hour factor (PHF) is defined as the average fifteen minute period divided by the peak fifteen minute period. The PHF for arrivals is then 0.67. The design arrival rate of flow is then the peak hour volume divided by the peak hour factor or a design rate of flow on entry of 797 vehicles per hour. For special event departures, the peak fifteen minute rate of flow is double the average rate of flow for a PHF of 0.5. The design exiting rate of flow is then 1068 vehicles per hour.

The service rate for pay on entry with an even dollar flat fee and gates locked open is 300 vehicles per hour. Therefore, 3 entry lanes are required (797 vph/300). If the fee is not an even dollar, the service rate is 200 vehicles per hour, in which case, four entry lanes should be provided (797 vph/200). For unrestricted exiting (i.e. gates locked open), the service rate is 800 vehicles per hour. Therefore, two exit lanes are required for special event exiting.

For normal daily use, our experience indicates that up to 50% of the garage capacity will enter or exit in the peak hour or approximately 275 vehicles per hour. The service rate of a ticket dispenser, card reader or exit verifier are all on the order of 400 vehicles per hour. The peak hour factor is typically about 0.85 for the daily users. The design rate of flow is then 314 vehicles per hour. For normal daily use, one entry lane and one exit lane is adequate, however, we recommend 2 entry lanes and 2 exit lanes for redundancy in the event of vehicle or equipment breakdowns.

The amount of queuing at each lane is a function of the traffic intensity, which is the peak hour volume divided by the aggregate service rate of all entry or exit lanes. The traffic intensity for the three entry lanes is 550/900 or 0.6. The maximum entry queue is then one vehicle behind the vehicle in the service position. Therefore, the parking controls must be located 20 feet inside the garage entrance or right and left turn lanes should be provided with a through lane in each direction on College Drive. The traffic intensity for the two exit lanes is 550/1600 or 0.33. The maximum queue is less than one vehicle so traffic will not likely back up inside the garage with two exit lanes, assuming adequate gaps are available for the on-street traffic to exit the garage.

Ramp Design

The site is relatively tight, therefore the footprint of the parking structure must be minimized. The code maximum slope is 1:15 per the 2009 IBC for sloped floors with parking. The minimum clearance is 8'-2" for van accessible vehicles or 7'-0" for all other vehicles. A 2 inch tolerance is typically added to account for construction tolerances. The structure depth is 3 feet regardless of whether the structural system is precast concrete or cast-in-place post tensioned concrete. Therefore, the maximum floor height is 11'-4". The minimum length for the sloping ramp at a rise of 11'-4" is approximately 170 feet. Adding 45 feet at each end for a two-way crossover aisle and end parking results in a minimum length for the garage of 260 feet. If the maximum slope is limited to 6%, the minimum length is 280 feet. The van accessible stalls are generally located on the ground floor. The floor height at the upper levels could then be 10'-2". The ramp slope at 170 feet long for the upper levels is then 6.0%. The ramp slope at 190 feet long for the upper levels is then 5.4%.

The width of a parking module with two way traffic and 90-degree parking is 60 feet. The width of the parking structure is then in modules of 60 feet. A two module parking structure will be 120 feet wide. A three module parking structure is 180 feet wide. The width could be reduced approximately 10 to 15 feet if angle parking and one way traffic parking modules are employed.

Possible ramping systems are illustrated in Figures 1 through 4.

Walker has a procedure for determining the ramping system capacity which is explained on page 90 of *Parking Structures: Planning, Design, Construction, Maintenance & Repair, Third Edition, By Chrest Et Al* (published by Springer Media). The functional system capacity for special event traffic is 335 parking spaces for Figure 1 ramping, 675 spaces for Figure 2 ramping, 480 spaces for Figure 3 ramping, and 830 spaces for Figure 4 ramping. Since the proposed capacity of the parking structure is 550 stalls, the ramping systems in Figure 1 does not have adequate capacity. Figure 3 is marginally inadequate. Further study is required of that ramping scheme. The ramping system in Figures 2 or 4 are definitely adequate, particularly if one way traffic is used.

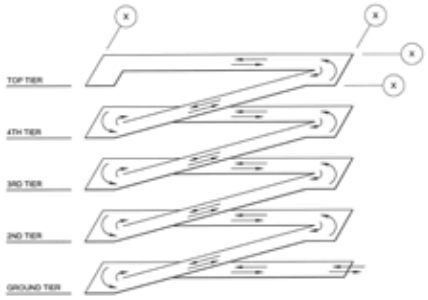


Figure 1. Two Bay Single Threaded Helix

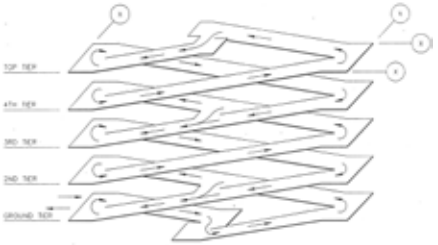


Figure 2. Two Bay Double Threaded Helix

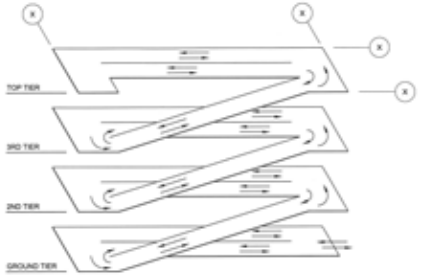


Figure 3. Three Bay Single Threaded Helix

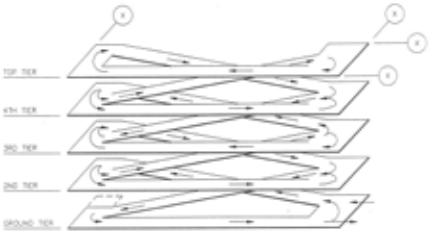


Figure 4. Three Bay Double Threaded Helix

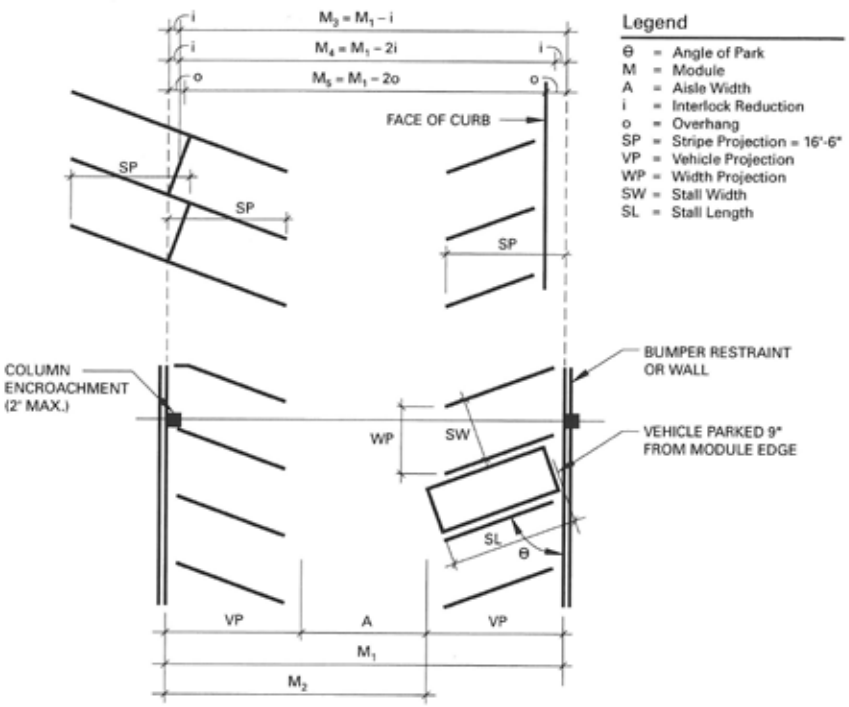


Figure 5. Parking Layout

Parking Layout

Walker Parking Consultants recommends that the parking dimensional requirements meet the recommendations of the Parking Consultants Council of the National Parking Association publication Guidelines for Parking Geometrics. Those recommendations are contained in Figures 5 and 6.

Walker has monitored the size of the vehicle population since 1987. Annually, we determine the size of the 85th percentile design vehicle based upon vehicle sales. Currently the design vehicle is 6'-7" wide by 17'-1" long. Vehicles on college and university campuses tend to be smaller than the typical automobile population.

The width of the stall is a function of the door opening clearance plus the width of the design vehicle. For long term parkers (over 4 hours), a door opening clearance of 20 inches is an industry standard. For short term parkers (less than 4 hours), a door opening clearance of 24 inches is an industry standard. Adding the door opening clearance to the width of the design vehicle, results in a recommend stall width of 8'-3" for long term parkers and 8'-7" for short term parkers. Walker recommends a one-size-fits-all stall width of 8'-6".

Bicycle parking and motorcycle parking should also be provided in the parking structure.

Building Height

The 3 bay design will have a parking capacity of approximately 125 stalls per level. For 550 total spaces, approximately 5 levels are required (4 ramped bays and 5 level bays). The height will be 45'-6" from the ground level to the top of the parapet wall at the top level. The two bay design will have a parking capacity of approximately 90 stalls per level. For a minimum of 550 spaces, 6 levels are required. The height to the top of the parapet wall at the top level is then 55'-8". A roof over the top level for a play area, running track or green roof will not be provided as that cost and fire exit implications are not in the proposed budget. Future vertical expansion of the parking structure also will not be considered.

Safety & Security

UVU is particularly concerned with safety & security in the parking structure. In this regard, we recommend locating the ramp for the three bay option on a side rather than in the middle of the garage. A ramp in the middle of the garage cuts off site lines and increases pedestrian travel distance to an exit. The two contiguous flat floors with a side ramp increases the openness and visibility across the floors. Further the ramp should be located on the far side from the pedestrian's primary destination in order to minimize vehicle/pedestrian conflicts.

Closed-circuit TV cameras shall be installed to monitor vehicle and pedestrian entry/exit locations, elevator lobbies, elevator cabs, and stair landings on each level. The CCTV cameras will connect to monitors in the campus security office. We recommend video recording activated by motion sensors that detect activity in an area during periods of low usage. UVU indicated that ground level screening in wall openings is not required and rolling doors are not required at vehicle entry/exits. Closure of the stairs at the ground level with secured access is also not required.

Lighting in the parking structure shall meet the minimum requirements of the Illuminating Engineering Society of North America (IESNA) in their publication RP-20-98, Lighting for Parking Facilities, and publication G-1-03, Guideline for Security Lighting for People, Property, and Public Spaces. These publications require a minimum illuminance on the covered levels of 1 footcandle anywhere on the floor and a minimum of 0.5 footcandles at the roof level. The maximum to minimum illuminance ratio cannot exceed 10 on the covered levels and not exceed 15 at the roof level. The average illuminance on the covered levels should be 6 footcandles with an average to minimum uniformity ratio not to exceed 4. Elevator lobbies and stairs should have an average illuminance of 10 footcandles.

Curbs and wheel stops should be avoided. A study of personal injury insurance claims for a national parking operator indicated 75% of the claims were for slip and fall or trip and fall. Bollards should be used to separate pedestrian and vehicle areas.

Angle (deg)	Base Module	Veh Proj	Aisle Width	Single Loaded Module	Wall to Intlck (8'6")	Intlck to Intlck (8'6")	Curb To Curb	Over-hang	8'3" stalls		8'6" stalls		8'9" stalls		9'0" stalls	
									Width Proj	Intlck	Width Proj	Intlck	Width Proj	Intlck	Width Proj	Intlck
	M_3	VP	A	M_2	M_3	M_4	M_5	o	WP	i	WP	i	WP	i	WP	i
30	41'2"	15'1"	11'0"	26'1"	37'6"	33'10"	38'8"	1'3"	16'6"	3'7"	17'0"	3'8"	17'6"	3'9"	18'0"	3'11"
35	43'0"	16'0"	11'0"	27'0"	39'6"	36'0"	40'2"	1'5"	13'5"	3'5"	14'10"	3'6"	15'3"	3'7"	15'8"	3'8"
40	44'10"	16'11"	11'0"	27'11"	41'7"	38'4"	41'8"	1'7"	12'10"	3'2"	13'3"	3'3"	13'8"	3'4"	14'0"	3'5"
45	47'0"	17'7"	11'10"	29'5"	44'0"	41'0"	43'6"	1'9"	11'8"	2'11"	12'0"	3'0"	12'4"	3'1"	12'9"	3'2"
50	48'6"	18'2"	12'2"	30'4"	45'9"	43'0"	44'8"	1'11"	10'9"	2'8"	11'1"	2'9"	11'5"	2'10"	11'9"	2'11"
55	50'0"	18'8"	12'8"	31'4"	47'7"	45'2"	45'10"	2'1"	10'1"	2'4"	10'5"	2'5"	10'8"	2'6"	11'0"	2'7"
60	51'6"	19'0"	13'6"	32'6"	49'4"	47'2"	47'2"	2'2"	9'6"	2'1"	9'10"	2'2"	10'1"	2'2"	10'5"	2'3"
65	53'0"	19'2"	14'8"	33'10"	51'2"	49'4"	48'6"	2'3"	9'1"	1'9"	9'5"	1'10"	9'8"	1'10"	9'11"	1'11"
70	54'0"	19'3"	15'6"	34'9"	52'7"	51'2"	49'4"	2'4"	8'9"	1'5"	9'1"	1'5"	9'4"	1'6"	9'7"	1'6"
75	55'0"	19'1"	16'10"	35'11"	53'11"	52'10"	50'2"	2'5"	8'6"	1'1"	8'10"	1'1"	9'1"	1'2"	9'4"	1'2"
90	59'0"	18'0"	23'0"	41'0"	59'0"	59'0"	54'0"	2'6"	8'3"	0'0"	8'6"	0'0"	8'9"	0'0"	9'0"	0'0"

[1] Deduct 1 ft from aisle, and corresponding module, for parking in structures or where guides or curbs are provided at least 30% of the stalls.
[2] Add min 10" to stall width where adjacent to walls, columns and other obstructions to door opening and/or turning movement.
[3] Add min 10" to stall width for stalls next to curbs and islands to reduce trip hazard.
[4] Up to 3 ft of aisle width may be added to provide a higher level of comfort.
[5] Light poles and columns may protrude into a parking module a maximum of 2 ft combined as long as they do not impact more than 30% of the stalls. For example, either a 1 ft encroachment on both sides of the aisle, or a 2 ft encroachment on one side only, is acceptable.
[6] Interlock reductions cannot be taken where there is encroachment by columns, light poles or other obstructions at more than 30% of the stalls in the bay.
[7] Aisles and corresponding modules are for two-way traffic flow for 90 degree parking and one- way traffic flow for angled parking between 30 and 75 degrees.
[8] For an equal level of comfort of turn into the stall, 3" can be deducted from the module for each 1" additional stall width (maximum of 9'0" stall width.)
[9] Parallel parking stall length is 21'0".
[10] All dimensions rounded to the nearest inch.

Figure 6. Parking Dimensions

Other Features

A 10 ft by 15 ft office should be provided for security and/or parking management personnel. The office should be located to provide visibility of the entry/exit locations. If the garage is staffed, a unisex toilet may be required by code. An electric room, storage room and mechanical room are easily accommodated under the ramp at the ground level.

Electric vehicle charging stations should be provided for one percent of the parking spaces.

Machine-roomless, electric traction elevators should be provided. For special event pedestrian traffic, one elevator is recommended for every 200 parking spaces or 3 elevators. Elevators should have a minimum capacity of 3500 lbs and a minimum speed of 150 fpm.

White or off-white painted ceilings and beams are recommended, if within the budget, to enhance brightness perception and cleanliness inside the garage.

Sustainable design features shall be included to the extent practical and within the budget.

The design of the structural system shall meet the durability features specified in American Concrete Institute (ACI) publication 362.

Miscellaneous Design Considerations

- Floor drains as needed will be located away from columns or other vertical concrete structures in order to avoid potential corrosive effects of storm water and chemicals in the storm water
- Appropriate amounts of silica fume should be considered to create a water resistive surface to the floor structure – perhaps no more than 2.1/2% - to allow strength of the matrix and still allow workability during construction
- DCI admixture in appropriate amounts will aid in long term corrosion resistance of the parking structure
- A nominal finish of the parking surface – a float finish - will create a more durable and weather resistant surface
- Appropriate sealants at slab joints will be necessary to resist corrosion
- It is intended that electrical conduit run within the slabs rather than be surface mounted
- A combination of LED and fluorescent lighting should be considered for power reduction. LED could be used in areas where lights will remain on at all times and fluorescent lamps could be used in areas where natural light will provide light during the day – these lights could be on photo sensor circuits.
- Stairwells will have concrete surfaces
- Elevators will have hard surface floors for ease of cleaning
- Hose bibs are needed at various locations throughout the structure to facilitate periodic cleaning and emergency power washing
- An oil / grease separator may be needed on the storm drain line
- A janitor closet will be needed to store cleaning and maintenance supplies and should have a mop sink
- Consider a speed bump at the garage entry to help dislodge ice and snow from vehicle undercarriages before the cars enter the garage.

Occupied Space Within The Parking Structure

Preliminary concept studies indicate that the Student Life Center and parking structure buildings may be planned directly adjacent to each other, such that one or more levels of the parking structure contain occupied space from the Student Life program. This scenario has implications for the design and cost of the parking structure, as noted below:

1. Including occupied space at the less expensive, ground level requires the addition of displaced parking spaces on the upper, more expensive floors of the parking structure, thereby increasing the cost per stall for the garage.

2. The occupied space will likely require a higher ceiling than the parking structure which impacts the slope of the floor used for vertical vehicle circulation.

3. There are code implications, particularly for fire exiting and fire separations vertically and horizontally around the occupied space.

4. Waterproofing the parking level above the occupied space becomes more critical.

These issues must be considered and their implications fully understood prior to proceeding with a design that integrates the Student Life Center and parking structure.

STRUCTURAL NARRATIVE

3E.2: PARKING STRUCTURE

APPLICABLE CODES AND STANDARDS

The minimum codes and standards that apply to the design of new buildings include current editions of the following:

International Building Code (2009 Edition)
American Institute of Steel Construction (AISC) with Commentary
ACI 318 Building Code Requirements for Reinforced Concrete

SITE SPECIFIC REQUIREMENTS

The structural systems for this parking garage shall also be designed to meet specific site driven requirements. Some of these requirements have been provided and include:

- Soil bearing pressure characteristics based on a current soils report. It is anticipated that the allowable soil bearing pressure will be about 5,000 psf. for footings placed on engineered compacted fill. The soils report will contain this information as well as the site class definition and the spectral response acceleration values which are needed for seismic design.
- Wind velocity 110 MPH (three second gust speed), exposure C
- Roof snow load is 30 psf. Snowdrift loads will be considered.

The soils report identifies several options for foundation systems. Each option deals with the liquefaction potential of loose silty sand and sandy silt layers encountered between elevation 4586 and 4575 which can result in a loss of shear strength, strain related settlement, and potential for lateral displacement.

BASIC DESIGN

The structure will satisfy conditions outlined in the RFP with respect to basic geometry, floor to floor heights, and exterior appearance. The parking garage will be seismically separated from the Student Life Center as to not share gravity or lateral loads. The campus requirement is to park 534 +/- cars. The site has constraints which will affect the height of the parking garage based on the location of the garage structure.

The desire is to provide a "one-way" cast in place post-tensioned concrete structure. This will ensure that the columns of the structure are at the ends of the parking stalls and not located between parking stalls. Cast in place concrete beams will span from column to column, (approximately 60 feet) and be spaced at either 18 feet or 27 feet on center. A monolithically cast in place post-tensioned slab will span from beam to beam and provide the driving surface for the garage.

It is important that the life cycle and life expectancy of the structure be carefully investigated. We propose an additional ½" of concrete cover over the top steel of the post-tensioned slabs. It is proven that additional coverage such as this is the best deterrent against slab deterioration and de-lamination. Additionally concrete additives will be used (DCI) in the concrete mix to provide additional protection to the reinforcing steel. It is not anticipated that a topical deck coating will be applied to the slab.

GRAVITY LOADING CRITERIA

Foundations: It is anticipated that the foundations will be conventional strip and isolated spread concrete footings supported on approximately 10 feet of engineered fill. (Engineered fill must extend down to the dense lean clay layer). Strip footings may be used to minimize differential settlements and allow higher bearing pressures. The walls around the sub basement (½ level below grade) will be of concrete of between 10" and 12" in thickness. Basement walls will be placed on continuous strip footings over engineered fill as well.

An alternate foundation system utilizing spread footings on short aggregate piers is also presented in the soils report as an option. This entails reinforcing the native soils beneath the footings. Piers should extend through the loose sand and silt zones and into the lean clay. With this method an allowable bearing pressure of approximately 4,000 psf. may be achieved. These piers are designed by specialty contractors and the final bearing pressures may be modified slightly. This foundation system would not require over-excavation and replacement with engineered compacted fill as noted above.

Another alternate presented within the soils report was a deep foundation system. This would include driven piles which extend down 10 feet into the dense silty sand underlying the clay. Typical piles could be 55 to 70 feet deep. This system should be investigated but experience indicates that this is typically a more expensive system than the other two options presented above.

Slab on Grade: Lower floor of the structure is anticipated to have a slab-on-grade type floor. This floor will be sloped to drains and mirror the sloping of the structural slab above. The slab-on-grade will be either a 4" thick or 6" thick slab depending upon direction from the soils engineer. At least 12 inches of compacted engineered fill will be required below the slab on grade. Care will be taken to minimize surface cracks as well as to prevent moisture from permeating from below the slab. It is not anticipated the slab-on-grade will experience loads that would exceed that of an ordinary parking garage.

Floor Framing: The elevated structural levels will be of post-tensioned concrete construction. The provided scheme utilizes one-way slab type construction spanning 18'-0" +/-. Post Tensioned Slabs are to be supported by 36" total depth post-tensioned concrete beams spanning 60 to 64 feet. Columns will cast in place concrete with plan dimensions of 24" square. Should it be determined to space the beams at 27'-0" +/- the same depth of post-tensioned beams can be utilized with additional reinforcing and post-tensioning. Slab depths spanning 18"-0" would typically be 6" thick, wherein slabs spanning 27'-0" would typically be 7" thick.

Roof Framing: It is not anticipated that there will be a roof structure over the top level of parking.

If it is decided that an add-alternate would include a covered roof at the top level, this level may either be of steel construction or as a value added concrete roof that ultimately can be used as a future phase parking deck.

Wall Systems: Cast in place concrete shear walls will be used to provide lateral support against earthquake and wind loads. Walls will be arranged as increase visibility and reduce security risks.

SEISMIC LOADING CRITERIA

It is anticipated that seismic loads will govern the design of this building. However, it is important that various elements of the structure be properly designed to resist the prevailing wind loads. These elements may include pre-cast wall elements, light fixtures, and other non structural elements.

The seismic loads enter a structure by way of ground accelerations. These ground accelerations are absorbed by the lateral force resisting system of the structure. It is anticipated that the appropriate lateral system for the garage is cast in place concrete shear walls.

Concrete Shear Walls: Concrete shear walls would provide an excellent means of supporting the given lateral loads for this facility. A seismic importance factor of 1.00 will be used as recommended by the Building Code.

VEHICULAR BARRIER SYSTEMS

The code requires that at a distance of 30" off the surface of the parking deck that a system of building components near open sides of a garage floor or ramp or building walls be required to act as restraints for vehicles. This prevents cars from crashing through a non-structural barrier and falling to a level below. This member (around the perimeter of the parking deck) will most likely be of cast in place concrete and double as a pedestrian barrier wall. The element will be 42" high to satisfy minimum heights of pedestrian barriers. Typically these wall elements are 8" in thickness depending upon architectural reveals. Cable barriers are typically used at interior ramp locations. Cables are typically stainless steel or galvanized.

STRUCTURAL DESIGN CRITERIA AND MATERIAL STRENGTHS

Listed below are the structural design criteria and material strengths. The criteria and strengths will continue to be evaluated as the design progresses. The structural design will be according to the 2009 International Building Code (IBC 2009).

Design Criteria

1. Roof Snow Load

Snow Ground Load	Pg = 50 psf
Snow Importance Factor	I = 1.15
Exposure Factor	C_e = 1.0
Thermal Factor	Ct = 1.0
Flat Snow Loads (top level)	Pf = .7*Pg*I*Ce*Ct = 35 psf plus snow drift loads where appropriate
Rain on Snow Surcharge	5 psf

2. Seismic Loads

Short Period Mapped Acceleration	S_S = 1.154
Long Period Mapped Acceleration	S_1 = 0.485
Soil Site Class	D
Short Period Site Coefficient	F_a = 1.0
Long Period Site Coefficient	F_v = 1.5
Design Spectral Response Acceleration	$S_{DS} = 2/3 * F_a * S_S$ = 0.799
Spectral Response Acceleration	$S_{D1} = 2/3 * Fv * S_1$ = 0.490
Seismic Importance Factor	I_e = 1.00
Response Modification Coefficient	R = 6.0
Seismic Response Coefficient	$C_s = S_{DS} * I_e / R$
W	Dead Loads of Structure
Building Seismic Design Category	D
Base Shear	V= C_s * W (Strength Design)

3. Wind Loads:

Basic Wind Velocity (3 Second Gust)	110 mph
Exposure Type	C
Importance Factor	1.1

Working Stresses for Materials

1. Concrete (28 day strength):

Footings/Walls	4,500 psi
Columns	6,000 psi
Interior Slabs on grade	4,500 psi
Structural Post-Tension Slabs	5,000 psi

2. Reinforcing Steel ASTM 615 Grade 60 — Fy = 60 ksi

3. Masonry: — f'm = 2,000 psi

4: STUDENT LIFE CENTER SPACE NEEDS

This section contains space needs information for the proposed new Student Life Center. At right is a summary of the space needs for the entire building, broken down into space categories. The following pages contain a spreadsheet page for each space category, listing the spaces for that group.

Following the space list spreadsheet are sub-sections for each space category, describing the detailed needs for that group, using narrative, adjacency diagrams for the group, and individual room data sheets and diagrams.

In the spreadsheet lighting columns, "Y" = yes, "N" = no, and "M" = maybe.

Program Summary

ID	SPACE GROUPING	TOTAL NSF	TOTAL DEPT. GSF	TOTAL GROSS SF
A	Entry & Lounge	8,800	9,829	11,991
B	Activity Spaces	76,302	85,310	104,078
C	Campus Recreation	8,528	11,084	13,522
D	Student Activities	11,364	14,490	17,678
E	Student Life	9,644	12,021	14,656
F	Reflection Center	2,000	2,430	2,965
G	Support Space	6,770	8,551	10,432
H	Whirlpools	1,800	2,322	2,833
Student Life Center - Total Building		**125,208**	**146,036**	**178,155**
Building Efficiency (Net / Gross):		70%		

NSF: Net Square Feet, or space measured inside surrounding walls or furniture panels.

Wall/Circ. Factor: Factor that accounts for area needed for walls surrounding a space and immediate circulation to the space.

Dept. GSF: Department Gross Square Feet, or NSF plus area needed for walls and immediate circulation (NSF x Wall/Circ. Factor = Dept. GSF).

Building Factor: Factor that accounts for area needed for mechanical, electrical, stairs, elevators, custodial closets, major circulation, exterior walls, etc.

Gross SF (GSF): Gross Square Feet, or entire building measured from outside surface of exterior walls.

Building Summary

ID	SPACE GROUPING	TOTAL NSF	TOTAL DEPT. GSF	TOTAL GROSS SF
A	**Entry & Lounge**	8,800	9,829	11,991
B	**Activity Spaces**			
B100	Gymnasium, MAC Gym, Indoor Track	42,500	46,966	57,299
B200	Weight / Cardio	12,245	13,571	16,556
B300	Multipurpose	12,120	13,838	16,882
B400	Climbing / Bouldering	2,325	2,794	3,409
B500	Games	7,112	8,141	9,932
		76,302	*85,310*	*104,078*
C	**Campus Recreation**			
C100	Campus Rec Administration	1,122	1,506	1,837
C200	Intramurals	746	1,010	1,232
C300	Outdoor Adventure Center	4,082	5,176	6,314
C400	Wellness Programs	2,578	3,392	4,138
		8,528	*11,084*	*13,522*
D	**Student Activities**			
D100	Student Activities Staff	2,080	2,772	3,382
D200	Student Government	2,870	3,741	4,564
D300	Clubs & Organizations	2,964	3,779	4,610
D400	Shared Spaces	3,450	4,199	5,122
		11,364	*14,490*	*17,678*
E	**Student Life**			
E100	Dean of Students Administration	1,080	1,444	1,752
E200	Student Media	4,050	4,887	5,962
E300	Office of Student Involvement	2,890	3,526	4,301
E400	Orientation	1,624	2,164	2,641
		9,644	*12,021*	*14,656*
F	**Reflection Center**	2,000	2,430	2,965
G	**Support Space**	6,770	8,551	10,432
H	**Whirlpools**	1,800	2,322	2,833
	Building Total	125,208	146,036	178,155

A. Entry & Lounge

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
A	**Entry & Lounge**														
A101	Control Counter	1	200	200	266	325	6 AM-11 PM	public	Y	Y	Y	50	72-74°F		
				200	266	325									
A201	Entry Lobby / Lounge	1	3,000	3,000	3,300	4,026	6 AM-11 PM	public	Y	Y	Y	30	72-74°F		
A202	Social Lounge	1	4,500	4,500	4,950	6,039	6 AM-11 PM	public	Y	Y	Y	30	72-74°F		
				7,500	8,250	10,065									
A301	Vending Area	1	100	100	133	162	6 AM-11 PM	public	N	N	N	20	72-74°F		
A302	Food Venue	1	1,000	1,000	1,180	1,440	6 AM-11 PM	public	M	M	M	50	72-74°F		M
				1,100	1,313	1,602									
	Totals			**8,800**	**9,829**	**11,991**									

B. Activity Spaces

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING				HVAC		
								public, controlled, secure	daylighting	daylighting controls	view	footcandle target	temp range	ventilation > code	exhaust
B	**Activity Spaces**														
	Gymnasiums, MAC Courts & Indoor Track														
B101	Four-court Gym - 84' courts	1	26,000	26,000	28,600	34,892	6 AM-11 PM	controlled	Y	Y	M	40	72-74°F		
B102	Four-court Gym Storage	1	600	600	750	915	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B103	MAC Gymnasium - 84' Court	1	7,200	7,200	7,920	9,662	6 AM-11 PM	controlled	Y	Y	M	40	72-74°F		
B104	Spectator/Athlete Seating/Boxes	1	1,000	1,000	1,180	1,440	6 AM-11 PM	controlled	Y	Y	M	20	72-74°F		
B105	MAC Gymnasium Storage	1	200	200	266	325	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B106	Elevated Jogging Track	1	7,500	7,500	8,250	10,065	6 AM-11 PM	controlled	Y	Y	Y	20	72-74°F		
				42,500	46,966	57,299									
	Weight / Cardio														
B201	Free Weights	1	3,355	3,355	3,691	4,502	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B202	Machine Weights	1	3,850	3,850	4,235	5,167	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B203	Cardio Equipment	1	4,600	4,600	5,060	6,173	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B204	Cardio/Weight Room Storage	2	120	240	319	389	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B205	Cardio/Weight Work/Repair Rm	1	200	200	266	325	6 AM-11 PM	secure	N	N	N	15	72-74°F		
				12,245	13,571	16,556									
	Multipurpose														
B301	MP Room - Aerobics	2	1,800	3,600	4,140	5,051	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B302	MP Room - Aerobics Storage	2	120	240	319	389	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B303	MP Room - Dance	2	2,300	4,600	5,060	6,173	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B304	MP Room - Dance Storage	2	120	240	319	389	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B305	MP Room - Yoga/Pilates	1	1,600	1,600	1,840	2,245	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B306	MP Room - Yoga/Pilates Storage	1	120	120	160	195	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B307	MP Room - Spinning	1	1,600	1,600	1,840	2,245	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B308	MP Room - Spinning Storage	1	120	120	160	195	6 AM-11 PM	secure	N	N	N	15	55-85°F		
				12,120	13,838	16,882									

B. Activity Spaces

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	public, controlled, secure (SECURITY)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
B	**Activity Spaces**														
	Climbing / Bouldering														
B401	Rock Climbing Wall	1	1,000	1,000	1,180	1,440	6 AM-11 PM	controlled	Y	Y	Y	30	72-74°F	Y	Y
B402	Bouldering Wall	1	1,000	1,000	1,180	1,440	6 AM-11 PM	controlled	Y	Y	Y	30	72-74°F	Y	Y
B403	C/B Registration Counter	1	100	100	133	162	6 AM-11 PM	controlled	Y	Y	M	40	72-74°F		
B404	Climbing / Bouldering Storage	1	200	200	266	325	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B405	Climbing/Bould'g Cleaning Alcove	1	25	25	35	43	6 AM-11 PM	controlled	N	N	N	30	72-74°F		M
				2,325	2,794	3,409									
	Games														
B501	Golf Simulator	1	600	600	750	915	6 AM-11 PM	public	M	M	M	50	72-74°F		
B502	Bowling	1	4,992	4,992	5,491	6,699	6 AM-11 PM	public	M	M	M	30	72-74°F		
B503	Billiards	1	800	800	1,000	1,220	6 AM-11 PM	public	M	M	M	50	72-74°F		
B504	Table Tennis	1	400	400	500	610	6 AM-11 PM	public	M	M	M	70	72-74°F		
B505	Electronic Gaming	1	320	320	400	488	6 AM-11 PM	public	M	M	M	30	72-74°F		
				7,112	8,141	9,932									
	Activity Spaces Total			**76,302**	**85,310**	**104,078**									

C. Campus Recreation

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING				HVAC		
								public, controlled, secure	daylighting	daylighting controls	view	footcandle target	temp range	ventilation > code	exhaust
C	**Campus Recreation**														
	Campus Recreation Administration														
C101	Director of Campus Rec Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C102	Asst. Dir. of Campus Rec Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C103	Fitness / Aerobics Coord. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C104	Summer Camp Coord. Wkstation.	1	64	64	90	109	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C105	Staff Workstation	2	64	128	179	219	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C106	Future Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C107	Conference Room	1	300	300	399	487	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
				1,122	1,506	1,837									
	Intramurals														
C201	Intramurals Coordinator Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C202	Staff Workstation	4	64	256	358	437	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C203	Copy / Print / Supplies	1	150	150	200	243	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
C204	Office Storage	1	100	100	133	162	8 AM-5 PM	secure	N	N	N	15	55-85°F		
				746	1,010	1,232									

C. Campus Recreation

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
								public, controlled, secure	daylighting	daylighting controls	view	footcandle target	temp range	ventilation > code	exhaust
C	**Campus Recreation**														
	Outdoor Adventure Center (OAC)														
C301	Retail Area	1	800	800	1,000	1,220	8 AM-6 PM	public	Y	Y	M	40	72-74°F		
C302	Resource Area	1	600	600	750	915	8 AM-6 PM	public	Y	Y	M	30	72-74°F		
C303	Shop / Mechanics	1	600	600	750	915	8 AM-6 PM	controlled	Y	Y	M	50	72-74°F		M
C304	OAC Director Office	1	150	150	200	243	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C305	OAC Coordinator Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C306	OAC Store Manager Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C307	OAC Asst. Store Manager Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C308	OAC Trip Coordinator Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C309	OAC Climbing Wall Coord. Wkstn.	1	80	80	112	137	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C310	Trip Leader Workstation	2	36	72	101	123	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C311	Multipurpose Room	1	500	500	625	763	8 AM-6 PM	controlled	M	M	M	40	72-74°F		
C312	Storage / Staging	1	800	800	1,000	1,220	8 AM-6 PM	secure	N	N	N	15	72-74°F		Y
	Not included in total Gross Square Feet:														
C313	Outdoor Storage	1	2,000	2,000	2,000	2,000	N/A	secure		NA		0.5	no HVAC		
C314	Outdoor Staging / Loading	1	0	0	0	0	N/A	public		NA		2	no HVAC		
C315	RV Dump Station	1	0	0	0	0	N/A	secure		NA		2	no HVAC		
				4,082	5,176	6,314									

C. Campus Recreation

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
C	**Campus Recreation**															
	Wellness Programs															
C401	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	M	30	72-74°F		
C402	Copy / Print / Supplies	1	120	120	160	195	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
C403	Resource Materials	1	48	48	67	82	8 AM-5 PM	secure	N	N	N	30	72-74°F		
C404	Wellness Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C405	Wellness Asst. Coordinator Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C406	Intern Open Office	1	200	200	266	325	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C407	Personal Training Assessment	1	100	100	133	162	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
C408	Health Risk Appraisal	1	300	300	399	487	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
C409	Biofeedback / Massage	1	100	100	133	162	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
C410	Interview Room	3	100	300	399	487	8 AM-5 PM	controlled	M	M	M	40	72-74°F		
C411	Multipurpose Room	1	500	500	625	763	8 AM-5 PM	controlled	Y	Y	M	40	72-74°F		
C412	Demonstration Kitchen	1	150	150	200	243	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
C413	Storage	1	200	200	266	325	8 AM-5 PM	secure	N	N	N	15	55-85°F		
				2,578	3,392	4,138										
	Campus Rec Total			**9,528**	**12,084**	**14,522**										

D. Student Activities

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	public, controlled, secure (SECURITY)	daylighting (LIGHTING)	daylighting controls (LIGHTING)	view (LIGHTING)	footcandle target (LIGHTING)	temp range (HVAC)	ventilation > code (HVAC)	exhaust (HVAC)
D	**Student Activities**														
	Student Activities Staff														
D101	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	M	30	72-74°F		
D102	Assistant Dean of Students Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D103	Coord. of Finance & Oper. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D104	Director of Student Activities Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D105	Clubs & Orgs Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D106	Academic Senate Coord. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D107	Independent Branch Coord. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D108	Intern Shared Office	1	180	180	239	292	8 AM-5 PM	controlled	Y	M	M	50	72-74°F		
D109	Dance/Cheer Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D110	Dance/Cheer Coord. Workstation	1	80	80	112	137	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D111	Office Supplies / Storage	1	120	120	160	195	8 AM-5 PM	secure	N	N	N	15	72-74°F		
D112	Work Room	1	300	300	399	487	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
D113	Dance/Cheer Storage Room	1	300	300	399	487	8 AM-5 PM	secure	N	N	N	15	55-85°F		M
				2,080	2,772	3,382									
	Student Government														
D201	Student Body President Office	1	120	120	160	195	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D202	Activities VP Office	1	100	100	133	162	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D203	Senate VP Office	1	100	100	133	162	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D204	Executive VP Office	1	100	100	133	162	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D205	Student Council Workstation	32	25	800	1,120	1,366	8 AM-10 PM	controlled	Y	M	M	50	72-74°F		
D206	Publicity / Work Room	1	750	750	938	1,144	8 AM-10 PM	controlled	N	N	N	30	72-74°F	Y	Y
D207	Storage Room	1	900	900	1,125	1,373	8 AM-10 PM	secure	N	N	N	15	55-85°F		
				2,870	3,741	4,564									

D. Student Activities

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
D	**Student Activities**															
	Clubs & Organizations															
D301	Clubs & Orgs VP Office	1	100	100	133	162	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D302	VP Assistant Workstation	1	64	64	90	109	8 AM-10 PM	controlled	Y	M	M	50	72-74°F		
D303	Ambassador Office	1	150	150	200	243	8 AM-10 PM	controlled	Y	M	M	50	72-74°F		
D304	Student Lounge / Work Area	1	600	600	750	915	8 AM-10 PM	public	Y	Y	M	30	72-74°F		
D305	Clubs & Orgs Conf. Room	1	300	300	399	487	8 AM-10 PM	controlled	M	M	M	50	72-74°F		
D306	Multipurpose Room	1	750	750	938	1,144	8 AM-10 PM	controlled	M	M	M	40	72-74°F		
D307	Publicity / Work Room	1	750	750	938	1,144	8 AM-10 PM	controlled	N	N	N	30	72-74°F	Y	Y
D308	Storage Room	1	250	250	333	406	8 AM-10 PM	secure	N	N	N	15	55-85°F		
				2,964	3,779	4,610										
	Shared Spaces															
D401	Reception / Lounge	1	900	900	1,125	1,373	8 AM-10 PM	public	Y	Y	M	30	72-74°F		
D402	Copy / Print / Supplies	1	150	150	200	243	8 AM-10 PM	controlled	N	N	N	50	72-74°F		
D403	Student Council Conference Rm	1	1,500	1,500	1,725	2,105	8 AM-10 PM	controlled	M	M	M	50	72-74°F		
D404	Student Activities Conf Rm	1	300	300	399	487	8 AM-10 PM	controlled	M	M	M	50	72-74°F		
D405	Staging Area	1	600	600	750	915	8 AM-10 PM	controlled	N	N	N	30	72-74°F		
				3,450	4,199	5,122										
	Student Activities Total			**11,264**	**14,357**	**17,516**										

E. Student Life

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
E	**Student Life**														
	Dean of Students / Judicial Affairs														
E101	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	M	30	72-74°F		
E102	Dean of Students Office	1	170	170	226	276	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E103	Assistant Dean Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E104	Judicial Affairs Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E105	Ombudsman Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E106	Copy / Print / Supplies	1	120	120	160	195	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
E107	Hearing Room	1	400	400	532	649	8 AM-5 PM	controlled	M	M	M	40	72-74°F		
				1,080	1,444	1,752									
	Student Media														
E201	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	Y	30	72-74°F		
E202	Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E203	Assistant Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E204	Advertising Director Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E205	Advertising Staff Office	1	200	200	266	325	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E206	Editor-in-Chief Office	1	100	100	133	162	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E207	Newsroom	1	2,200	2,200	2,420	2,952	6 AM-11 PM	controlled	Y	Y	Y	50	72-74°F		
E208	Layout Room	1	300	300	399	487	6 AM-11 PM	controlled	Y	M	Y	50	72-74°F		
E209	Website / Broadcast Room	1	200	200	266	325	6 AM-11 PM	controlled	Y	M	Y	40	72-74°F		
E210	Conference Room	1	400	400	532	649	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E211	Storage Closet	1	10	10	14	17	8 AM-5 PM	secure	Y	N	Y	15	55-85°F		
E212	Reporter Lockers	1	80	80	112	137	6 AM-11 PM	controlled	Y	M	Y	20	72-74°F		
				4,050	4,887	5,962									

E. Student Life

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
E	**Student Life**															
	Office of Student Involvement															
E301	OSI Director Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E302	OSI Coordinator Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E303	Student Leader Office	1	400	400	532	649	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E304	Publicity / Work Room / Storage	1	600	600	750	915	8 AM-8 PM	secure	N	N	N	15	72-74°F		
E305	Teaching Area	1	1,500	1,500	1,725	2,105	8 AM-8 PM	public	Y	Y	M	50	72-74°F		
				2,890	3,526	4,301										
	Orientation															
E401	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	Y	30	72-74°F		
E402	Orientation Director Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E403	Orientation Asst. Director Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E404	Orientation Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E405	Orientation Shared Office	1	100	100	133	162	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E406	Administrative Asst. Workstation	1	64	64	90	109	8 AM-5 PM	controlled	Y	M	M	50	72-74°F		
E407	Intern Open Office	1	400	400	532	649	8 AM-5 PM	controlled	Y	M	M	50	72-74°F		
E408	Copy / Print / Supplies	1	120	120	160	195	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
E409	Storage Room	1	150	150	200	243	8 AM-5 PM	secure	N	N	N	15	55-85°F		
E410	Conference Room	1	200	200	266	325	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
				1,624	2,164	2,641										
	Student Life Total			**9,644**	**12,021**	**14,656**										

F. Reflection Center

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
F	**Reflection Center**														
F101	Meditation Room	1	500	500	625	763	6 AM-11 PM	public	Y	Y	M	30	72-74°F		
F102	Prayer Room	1	500	500	625	763	6 AM-11 PM	public	Y	Y	M	30	72-74°F		
F103	Open Space	1	1,000	1,000	1,180	1,440	6 AM-11 PM	public	Y	Y	M	30	72-74°F		
	Totals			**2,000**	**2,430**	**2,965**									

G. Support Space

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING				HVAC		
								public, controlled, secure	daylighting	daylighting controls	view	footcandle target	temp range	ventilation > code	exhaust
G	**Support Space**														
G101	Maintenance Storage/Office	1	400	400	532	649	6 AM-11 PM	secure	N	N	N	50	72-74°F		
G102	Student Employees' Work Space	1	600	600	750	915	6 AM-11 PM	secure	M	M	M	50	72-74°F		
G103	Men's Locker Room	1	1,250	1,250	1,475	1,800	6 AM-11 PM	public	M	M	N	30	72-74°F		Y
G104	Women's Locker Room	1	1,250	1,250	1,475	1,800	6 AM-11 PM	public	M	M	N	30	72-74°F		Y
G105	Asstd. Change (Univ'l.) Locker Rm	1	190	190	253	308	6 AM-11 PM	public	M	M	N	30	72-74°F		Y
G106	Men's Restrooms	3	240	720	958	1,168	6 AM-11 PM	public	M	M	N	30	72-74°F		Y
G107	Women's Restrooms	3	300	900	1,197	1,460	6 AM-11 PM	public	M	M	N	30	72-74°F		Y
G108	Universal Restrooms	2	80	160	224	273	6 AM-11 PM	public	M	M	N	30	72-74°F		Y
G109	Rec. Equip. Checkout/ Storage	1	800	800	1,000	1,220	6 AM-11 PM	secure	N	N	N	15	72-74°F		Y
G110	Laundry	1	180	180	239	292	6 AM-11 PM	secure	M	M	N	30	65-80°F		Y
G111	Custodial Closets	4	80	320	448	547	6 AM-11 PM	secure	N	N	N	15	55-85°F		Y
	Totals			**6,770**	**8,551**	**10,432**									

H. Whirlpools

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
H	**Whirlpools**															
H101	Whirlpool Spa	3	300	900	1,197	1,460	6 AM-11 PM	controlled		Y	N	Y	30	72-74°F		Y
H102	Pool Deck	1	900	900	1,125	1,373	6 AM-11 PM	controlled		Y	N	Y	30	72-74°F		Y
	Totals			**1,800**	**2,322**	**2,833**										

4A: ENTRY & LOUNGE

The Entry & Lounge spaces will welcome visitors to the Student Life Center, as well as provide informal gathering and refreshment spaces.

The Entry Lobby / Lounge will be a dynamic, visually exciting and high volume space at the primary building exterior entry. Its multi-story height will allow a visual connection with many of the building's internal spaces and components. It should be enclosed in large part by glass walls, giving views to the campus and the natural landscape beyond. This exterior transparency will also allow the building interior to be seen by passing pedestrian and vehicular traffic.

The Entry Lobby / Lounge should have durable, attractive and high-quality finishes. It will be furnished with seating groupings that function as informal hang-out space for campus community members.

Some Social Lounge space will augment the Lobby / Lounge square footage at the building entry, but much of the lounge component will be spread throughout the building in a variety of active and quiet spaces. Both the Lobby / Lounge and Social Lounge components will provide the welcoming gathering spaces that are currently in high demand and short supply on the UVU campus.

The Food Venue will adjoin the large lobby space. A small retail outlet, it will provide a variety of hot and cold drinks, as well as grab-n-go and quickly-prepared food items. It should be located for convenient and quick access by those using the building's fitness areas, and also those who are passing through the Center via the internal campus corridor which will extend through this building. It would be beneficial for it to be located near the Games Area – the dining and recreational functions are compatible and synergistic.

The Entry Lobby / Lounge will also contain the Control Counter which is the point of entry to the controlled-access fitness / activity spaces in the building. The Control Counter must have a clean and uncluttered appearance, with a design that hides any paperwork on the desk surface from public view.

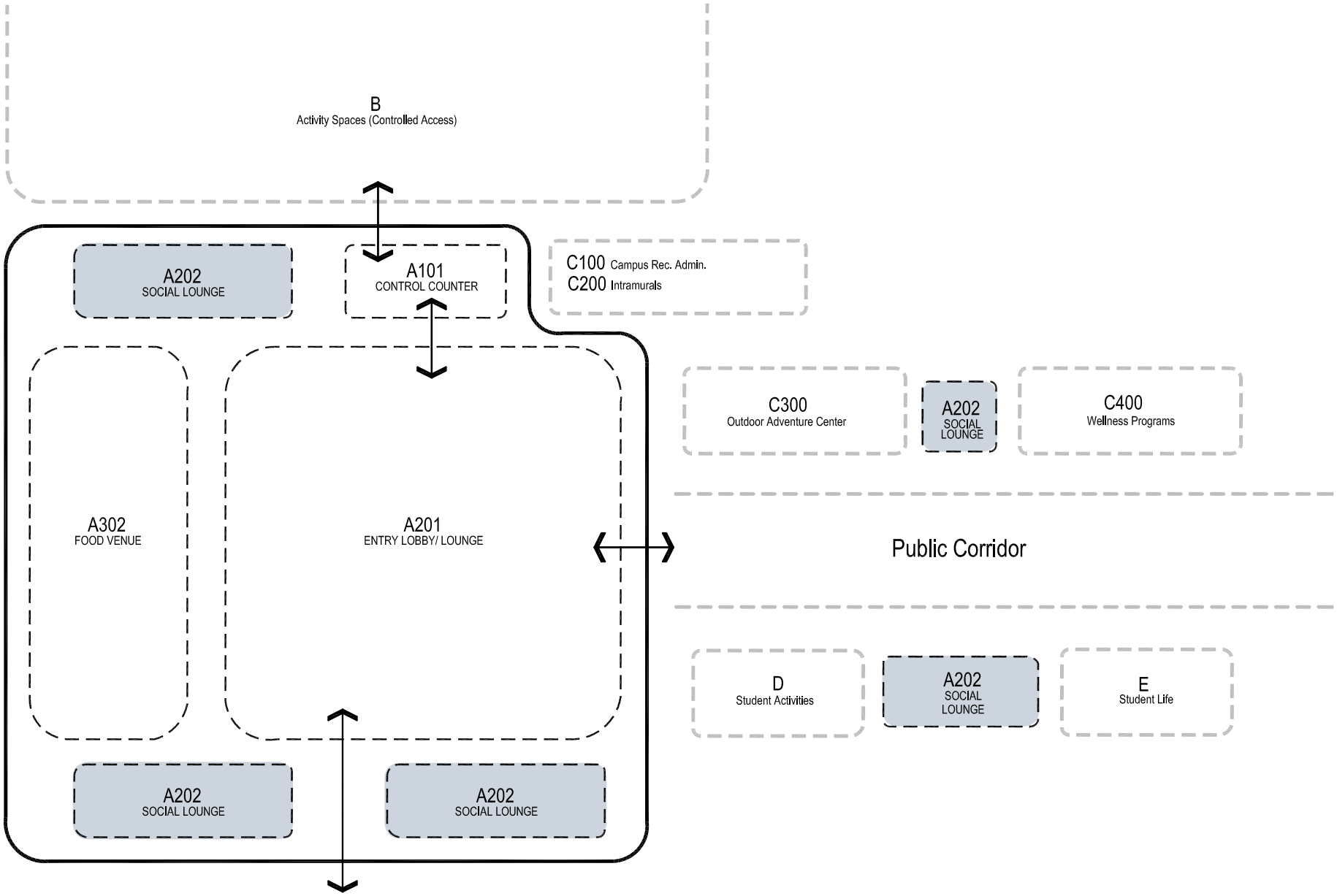
The fitness spaces, including the climbing wall, will be visible from the lobby through a glass wall behind the Control Counter, letting visitors know what activities are available in the building and encouraging participation. Intramural registration will take place at the Control Counter or a nearby computer kiosk, and must be high-visibility.

The Vending Area should be in a public-access lounge or corridor, in a location that is complementary to the Food Venue in the main lobby.

A. ENTRY & LOUNGE

TOTAL AREA: 8,800 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
A	**Entry & Lounge**														
A101	Control Counter	1	200	200	266	325	6 AM-11 PM	public	Y	Y	Y	50	72-74°F		
				200	266	325									
A201	Entry Lobby / Lounge	1	3,000	3,000	3,300	4,026	6 AM-11 PM	public	Y	Y	Y	30	72-74°F		
A202	Social Lounge	1	4,500	4,500	4,950	6,039	6 AM-11 PM	public	Y	Y	Y	30	72-74°F		
				7,500	8,250	10,065									
A301	Vending Area	1	100	100	133	162	6 AM-11 PM	public	N	N	N	20	72-74°F		
A302	Food Venue	1	1,000	1,000	1,180	1,440	6 AM-11 PM	public	M	M	M	50	72-74°F		M
				1,100	1,313	1,602									
	Totals			**8,800**	**9,829**	**11,991**									



ENTRY & LOUNGE ADJACENCY DIAGRAM

A101 CONTROL COUNTER

AREA: 200 ASF

Occupants: 2-3 staff

Function: Control of access to fitness and activities areas of building

Adjacency: Entry Lobby / Lounge, main corridor system

Environment:

Floor: Hard-surface flooring (porcelain tile, etc.)
Walls: None
Ceiling: Painted gypsum board; 10' minimum height
Windows: None
Doors: None

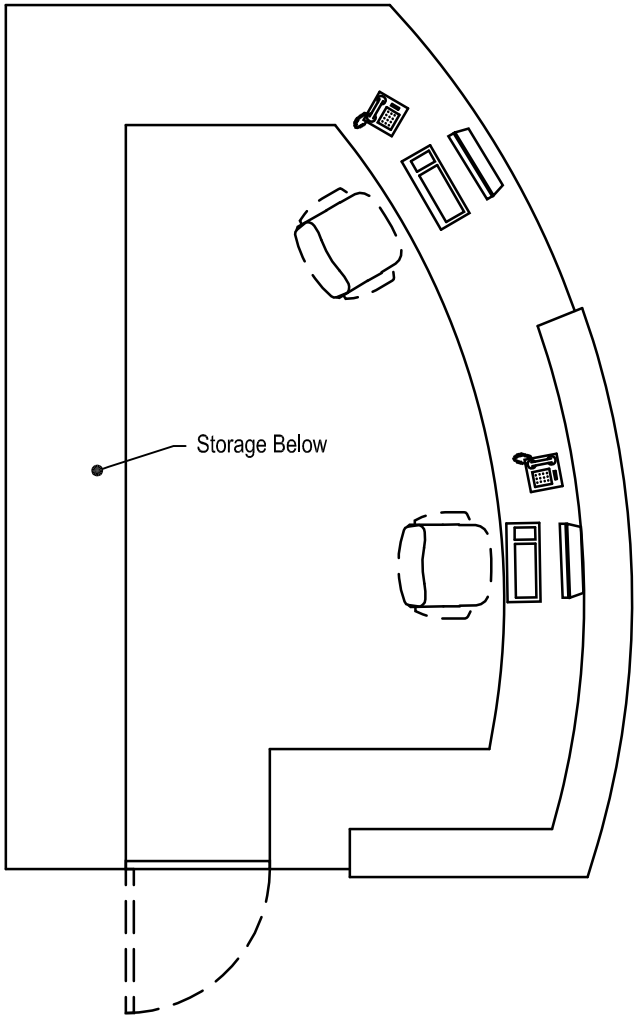
Equipment: 2 computers, 2 telephones, card reader, turnstiles
Control counter is stand-alone custom casework

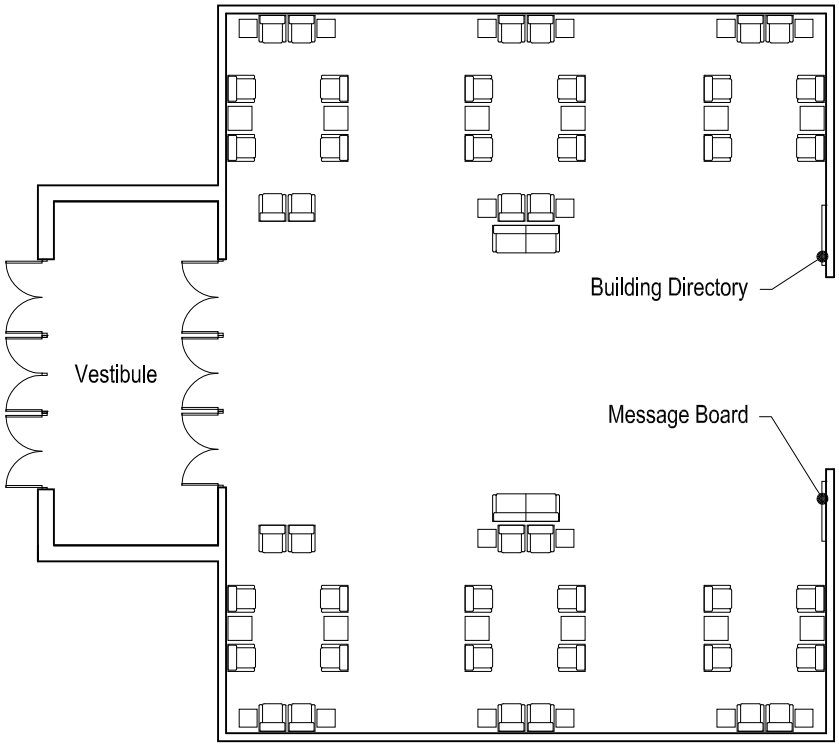
Furnishings: 2 desk chairs

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets
Under cabinet task lighting
May include building lighting controls, door control monitoring panels, security monitoring

Notes: Staff work surface screened from public view





A201 ENTRY LOBBY / LOUNGE

AREA: 3,000 ASF

Occupants: 30-60 occupants daily, up to 200 peak

Function: Building entry space; general social lounge; event space

Adjacency: Building main entry, main corridor system, Control Counter, Food Venue

Environment:

Floor: Hard-surface flooring (porcelain tile, etc.)
Walls: Ground face CMU; painted gypsum board
Ceiling: Painted gypsum board and lay-in acoustical tile in some areas; open to floors above
Windows: Exterior windows / views desired
Doors: Aluminum and glass

Equipment: Building directory

Furnishings: Lounge chairs, sofas, benches, end tables, dining / study tables & chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical outlets to support laptop use in lounge seating areas
Voice / data outlets
Wireless data network

Notes:

A202 SOCIAL LOUNGE

AREA: 4,500 ASF

Occupants: 45-90 occupants daily, 300 peak

Function: Casual / social lounge space, study space

Adjacency: A portion located at entry lobby
A portion spread throughout building as pockets of lounge / hang-out space, in both active and quiet areas of the building; priority locations: adjacent to Student Activities components to encourage students to congregate there; adjacent to Games area

Environment:

Floor: Hard surface flooring (porcelain tile, etc.); carpet tile
Walls: Painted gypsum board; ground face CMU; wood paneling
Ceiling: Painted gypsum board and lay-in acoustical tile; 10' minimum height
Windows: Exterior windows / views desired
Doors: None

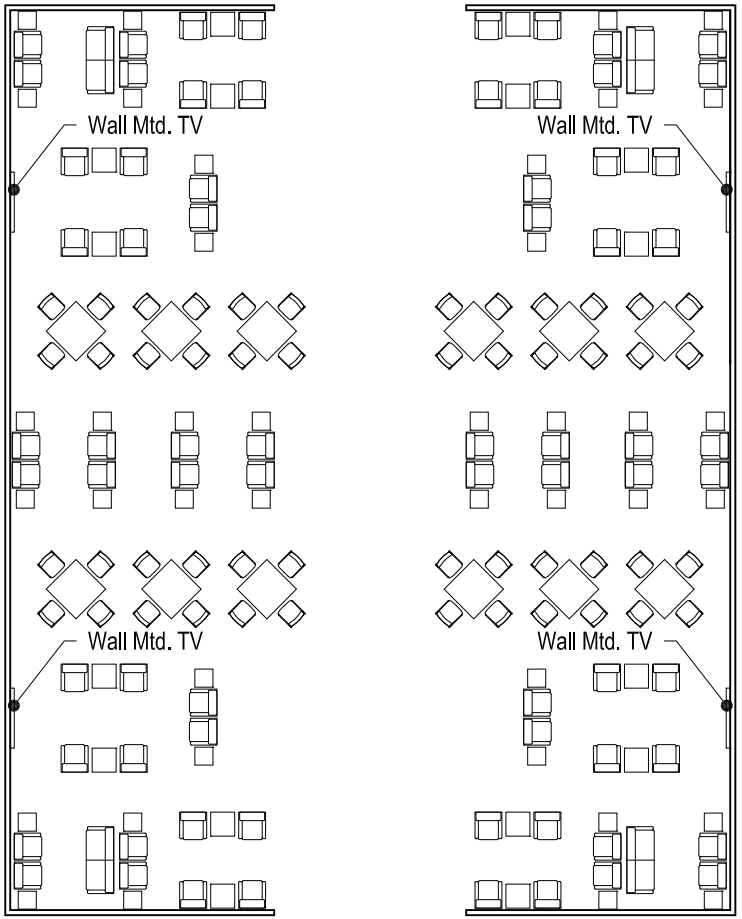
Equipment:

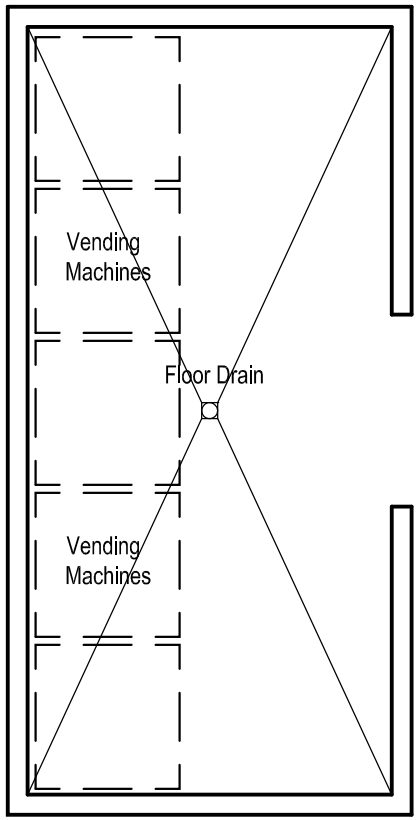
Furnishings: Lounge chairs, sofas, benches and end tables
Small study tables with chairs

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Electrical outlets to support laptop use
Voice / data outlets
Wireless data network

Notes:





A301 VENDING AREA

AREA: 100 ASF

Occupants: 2-3 staff

Function: Control of access to fitness and activities areas of building

Adjacency: Entry Lobby / Lounge, main corridor system

Environment:

Floor: Hard-surface flooring (porcelain tile, etc.)
Walls: None
Ceiling: Painted gypsum board; 10' minimum height
Windows: None
Doors: None

Equipment: 2 computers, 2 telephones, card reader, turnstiles
Control counter is stand-alone custom casework

Furnishings: 2 desk chairs

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets
Under cabinet task lighting
May include building lighting controls, door control monitoring panels, security monitoring

Notes: Staff work surface screened from public view

A302 FOOD VENUE

AREA: 1,000 ASF

Area: 1,000 SF total to include:
200 SF Storage and Support
450 SF Retail Service Area
350 SF Seating / Lounge

Occupants: 4 employees; up to 20 diners

Function: Sales and service of food and beverages
Dining seating for 20 people

Adjacency: Entry Lobby / Lounge, Social Lounge; main corridors
Integrated with open lounge space
Vending Area or Food Venue near Games Area

Environment:

Floor: Hard surface flooring (porcelain tile, etc.)
Walls: Ground face CMU; painted gypsum board
Ceiling: Painted gypsum board and lay-in acoustical tile (moisture resistant and cleanable over food production areas); 10' minimum height
Windows: None
Doors: Wood doors in HM frames, locking (storage / support)

Equipment:

(Estimated, final selection based on menu TBD)

3 compartment sink
(2) hand sinks
Food prep table with sink
Reach in refrigerator
Reach in freezer
Storage shelving
Mop sink
Soda system
Ice machine
Custom millwork serving counter
Rear service counter with sink
(2) undercounter refrigerator
Combination dry / refrigerated display
(2) blenders
Ice bin
Sandwich make table
Automated espresso machine
Coffee brewer
Retail display racks
Juicer
Ventless speed oven
Cash register

Mechanical: Shared HVAC zone; exhaust at Retail Service Area

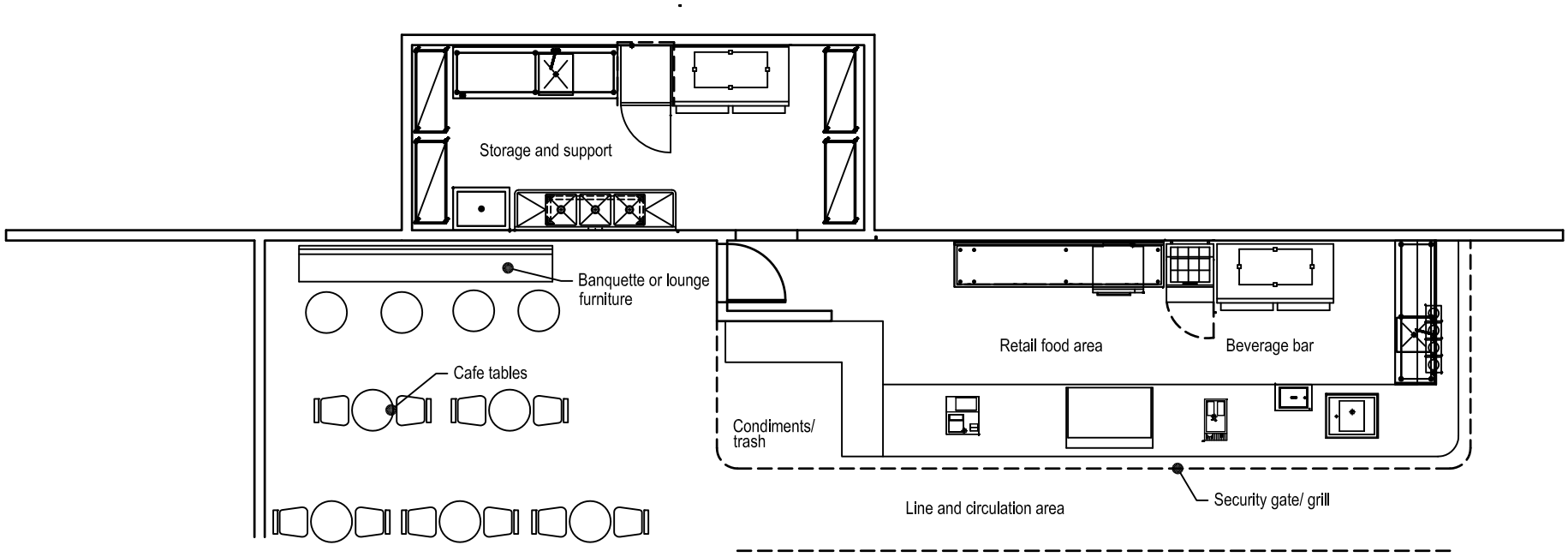
Electrical: Duplex electrical & voice / data outlets to support concession equipment
Wireless data network
Electric service to support food service equipment

Notes:

The food service venue as described above is envisioned to include a hot and cold beverage bar, smoothies, fresh juice drinks, grab-n-go salads and sandwiches, baked goods, etc. Specialty sandwiches could be made to-order. Hot items, if provided, would be limited to speed oven items (similar to Starbucks). Specialty bottle beverages, sports drinks, waters, etc. would be provided in bottled form. Soda is assumed to be fountain type.

The operation should be easily secured by a rolling gate system or equal that allows the operation to be secured without removing items to the storage room.

The Storage and Support area will include storage, plus clean-up and sanitation areas. A small food preparation area is included which could be used for assembly and preparation of limited food offerings, or the assembly of small catered events.


Storage and support
Banquette or lounge furniture
Cafe tables
Retail food area
Beverage bar
Condiments/ trash
Line and circulation area
Security gate/ grill

4B: ACTIVITY SPACES

The Activity Spaces are the primary function and focus of the Student Life Center. The majority of these spaces will have controlled access through a single point – the Control Counter in the building's main entry lobby.

Some of the Activity Spaces – in particular the climbing wall, and the weight-lifting and cardio equipment areas – should be open and high-visibility. They should be visible to building visitors through glass walls in the Student Life Center's lobby / public areas.

The program includes four full-size gymnasiums. These can be configured in two adjoining pairs, with the adjoining gyms separated by a movable curtain so that they can be used as a single, large space. The four gymnasiums should have identical sizes, configurations and amenities, so that all are perceived to be equally desirable and usable facilities.

Although the gyms will be in the controlled-access portion of the building, at least one of the pairs will be used for large public events. This pair must have alternate direct access points from a public corridor, for use during the public events.

The MAC (Multi-Activity Court) Gymnasium will have flooring and court surrounds that make if suitable for indoor soccer and similar activities. It will have an adjoining spectator seating area.

The building will have six Multipurpose Rooms ranging in size from 1,600 to 2,300 square feet. These will be available for a variety of classes and activities such as aerobics, dance and yoga. One room will be more permanently set up for spin classes. Each of the multipurpose rooms will have an adjacent associated storage room to support flexibility and multifunctionality.

The Climbing and Bouldering Walls will be a dramatic visual feature within the building, as well as a very popular amenity for the University's students. It should be visible through glass walls from the Control Counter, lobby, public corridors and from outside the building if possible. The climbing wall should adjoin the cardio / weight area, but must have a separate access point that can be closed at times.

The Games Area is the Activity component that will be in the non-controlled portion of the building. It will contain a variety of elements, including golf simulation, eight lanes of bowling, billiards, table tennis and electronic gaming. These should be grouped together in an area that is visible from and open to the public corridor during hours of operation, with a means of securing the space after-hours. Social lounge space should be added to the Games Area so that it becomes a lively and comfortable hang-out area for the campus community, providing a venue for daytime and evening socializing. It would be beneficial to have access to food near the Games area; the Food Venue or the Vending Area should be planned to be adjacent.

B: ACTIVITY SPACES

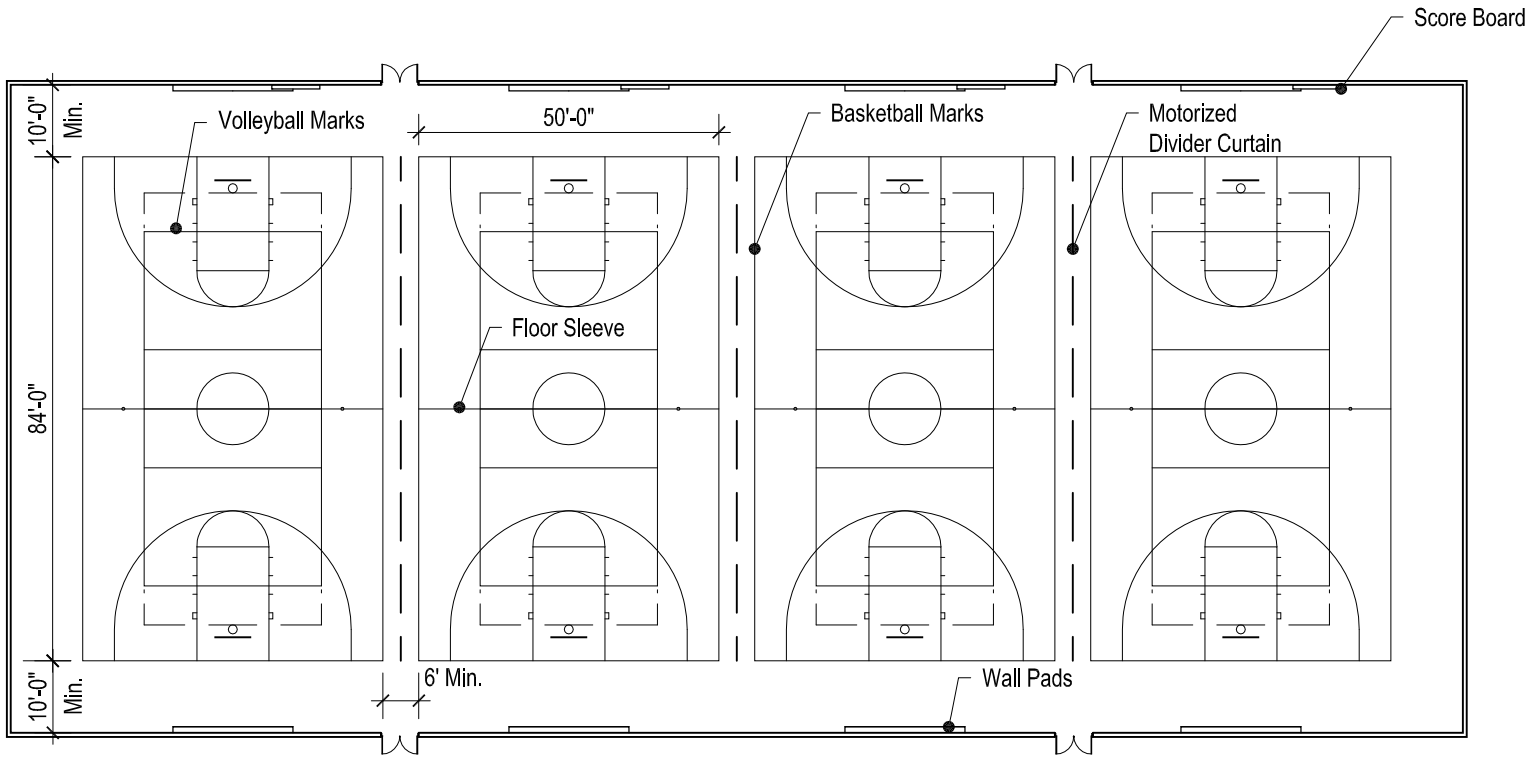
TOTAL AREA: 42,500 NSF

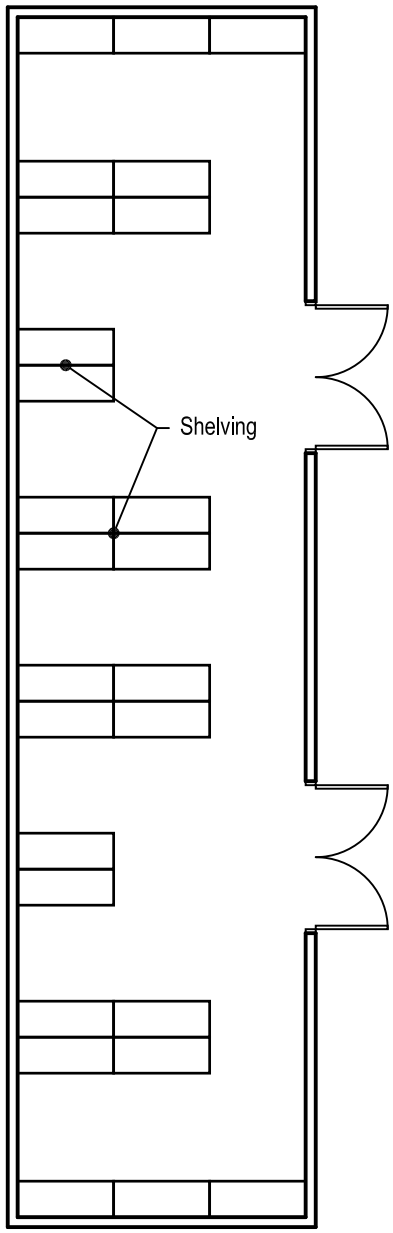
ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
B	**Activity Spaces**														
	Gymnasiums, MAC Courts & Indoor Track														
B101	Four-court Gym - 84' courts	1	26,000	26,000	28,600	34,892	6 AM-11 PM	controlled	Y	Y	M	40	72-74°F		
B102	Four-court Gym Storage	1	600	600	750	915	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B103	MAC Gymnasium - 84' Court	1	7,200	7,200	7,920	9,662	6 AM-11 PM	controlled	Y	Y	M	40	72-74°F		
B104	Spectator/Athlete Seating/Boxes	1	1,000	1,000	1,180	1,440	6 AM-11 PM	controlled	Y	Y	M	20	72-74°F		
B105	MAC Gymnasium Storage	1	200	200	266	325	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B106	Elevated Jogging Track	1	7,500	7,500	8,250	10,065	6 AM-11 PM	controlled	Y	Y	Y	20	72-74°F		
				42,500	46,966	57,299									

B101 FOUR-COURT GYM - 84' COURTS

AREA: 26,000 NSF

Occupants:	TBD
Function:	Recreational basketball, volleyball, badminton, etc. May be divided into (2) two-court gyms Large events for public attendance (speakers, dances, etc.)
Adjacency:	Four-court Gym Storage Two courts must have possibility of public corridor access for large public events
Environment:	
Floor:	Resilient wood with ventilated base
Walls:	CMU to 12' min., gypsum board above
Ceiling:	Exposed structure, acoustical deck; 25' height minimum
Windows:	Desirable with shading devices
Doors:	Wood in HM frames
Equipment:	8 power-operated retractable backboards, floor sleeves for volleyball / badminton net standards, wall mounted scoreboards, protected clock, wall pads
Furnishings:	4 sets of volleyball/ badminton nets and standards
Mechanical:	Dedicated HVAC zone
Electrical:	Duplex electrical outlets per code, power / data for backboards, scoreboards HID or LED lighting
Notes:	See Section 3D Electrical for media and AV requirements


Score Board
10'-0" Min.
Volleyball Marks
50'-0"
Basketball Marks
Motorized
Divider Curtain
Floor Sleeve
84'-0"
10'-0" Min.
6' Min.
Wall Pads



B102 FOUR-COURT GYM STORAGE

AREA: 600 NSF

Occupants: None

Function: Storage for Four-court Gym

Adjacency: Immediately adjacent to four/ two court gym

Environment:

Floor: Sealed concrete
Walls: Painted CMU or gypsum board
Ceiling: Exposed structure; 10' height minimum
Windows: None
Doors: 3' x 8' pair wood lockable doors

Equipment: None

Furnishings: Shelving

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B103 MAC GYMNASIUM - 84' COURT

AREA: 7,200 NSF

Occupants: To be determined based on code requirements

Function: Multi-purpose court for indoor soccer, hockey, basketball, volleyball, etc.

Adjacency: Spectator / Athlete Seating / Boxes
MAC Gymnasium Storage

Environment:

Floor: Synthetic floor
Walls: CMU or gypsum board above 18'
Ceiling: Exposed structure, acoustical deck; 25' height minimum
Windows: Exterior windows
Doors: 3' x 7' wood doors

Equipment: 2 power operated retractable basketball backboards, Floor sleeves for volleyball net standards, wall mounted Scoreboards, protected clocks, dasherboard system

Furnishings: Volleyball / badminton nets and standards

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code, power/data for backboards, scoreboards
HID or LED lighting

Notes: Provide rounded corners and fixed, recessed goals 12' wide, netting to keep balls in play
See Section 3D Electrical for media and AV requirements

B104 SPECTATOR/ATHLETE SEATING BOXES

AREA: 1,000 NSF

Occupants: Up to 140 spectators

Function: Team benches, penalty boxes, scorers area, officials area, spectator seating

Adjacency: MAC Gymnasium

Environment:

Floor: VCT/ carpet tile
Walls: CMU or gypsum board
Ceiling: Exposed structure, acoustical deck; 25' height minimum
Windows: Exterior windows
Doors: 3' x 7' wood doors and dasherboard doors

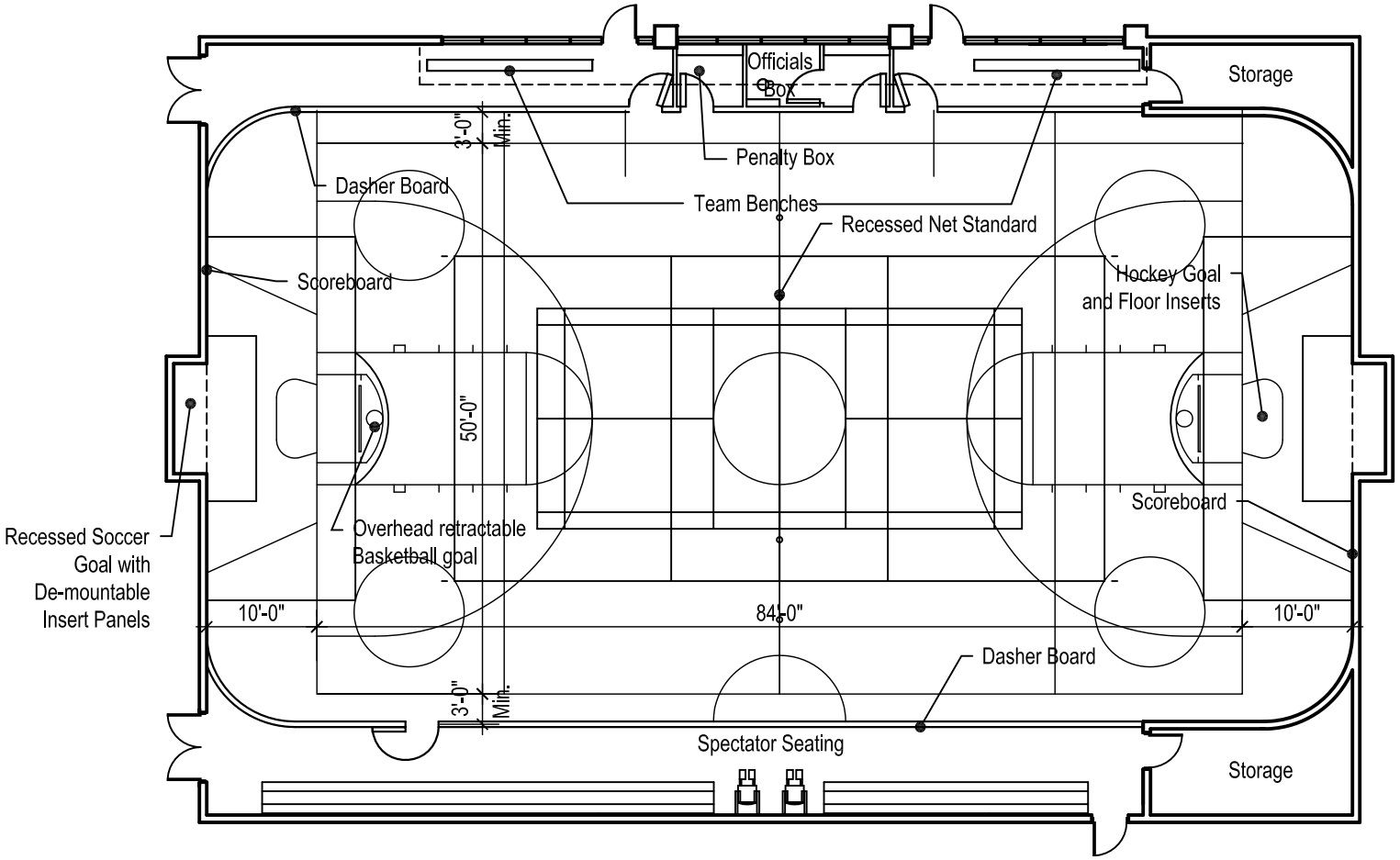
Equipment: Fixed spectator bleachers

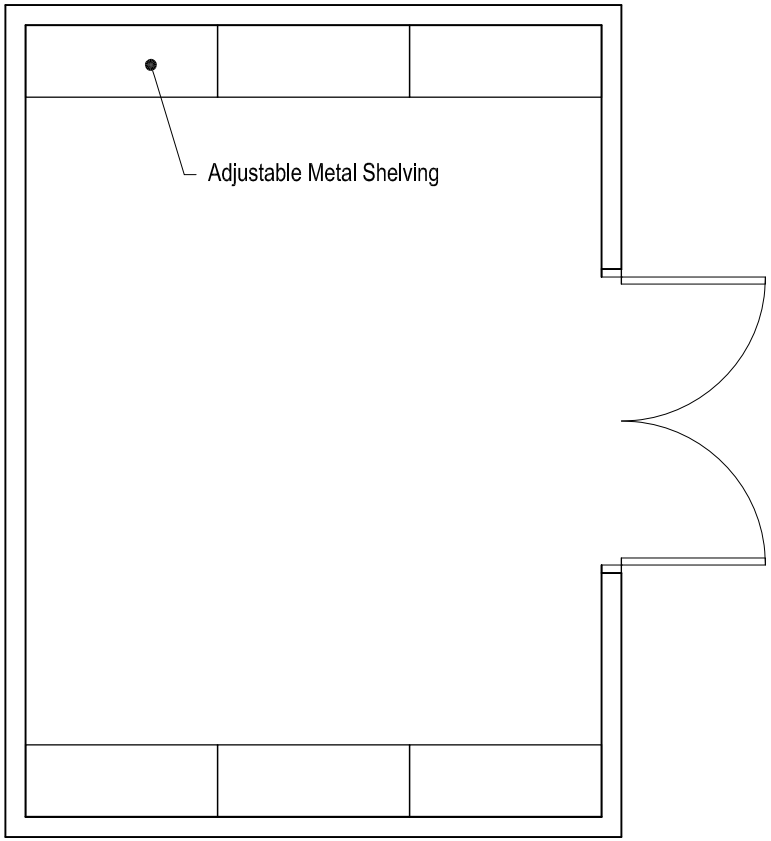
Furnishings: Team benches

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code, power/data for backboards, scoreboards
HID or LED lighting

Notes:


Officials Box
Storage
3'-0" Min.
Penalty Box
Dasher Board
Team Benches
Recessed Net Standard
Scoreboard
Hockey Goal and Floor Inserts
50'-0"
Scoreboard
Recessed Soccer Goal with De-mountable Insert Panels
Overhead retractable Basketball goal
10'-0"
84'-0"
10'-0"
Dasher Board
3'-0" Min.
Spectator Seating
Storage



B105 MAC GYMNASIUM STORAGE

AREA: 200 NGSF

Occupants: None

Function: Storage for MAC Gymnasium

Adjacency: Immediately adjacent to MAC Gym

Environment:

Floor: Sealed concrete
Walls: Painted CMU or gypsum board
Ceiling: Exposed structure; 10' height minimum
Windows: None
Doors: 3' x 7' pair wood lockable doors

Equipment: None

Furnishings: Shelving

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B106 ELEVATED JOGGING TRACK

AREA: 7,500 NSF

Occupants: TBD based on code

Function: 3-4 lane walking / jogging track

Adjacency: Adjacent to main building circulation

Environment:

Floor: Synthetic floors
Walls: CMU/gypsum board
Ceiling: Exposed structure / acoustical deck; 10' height min.
Windows: Exterior windows / views desired
Doors: 3' x 7' wood doors in HM frame

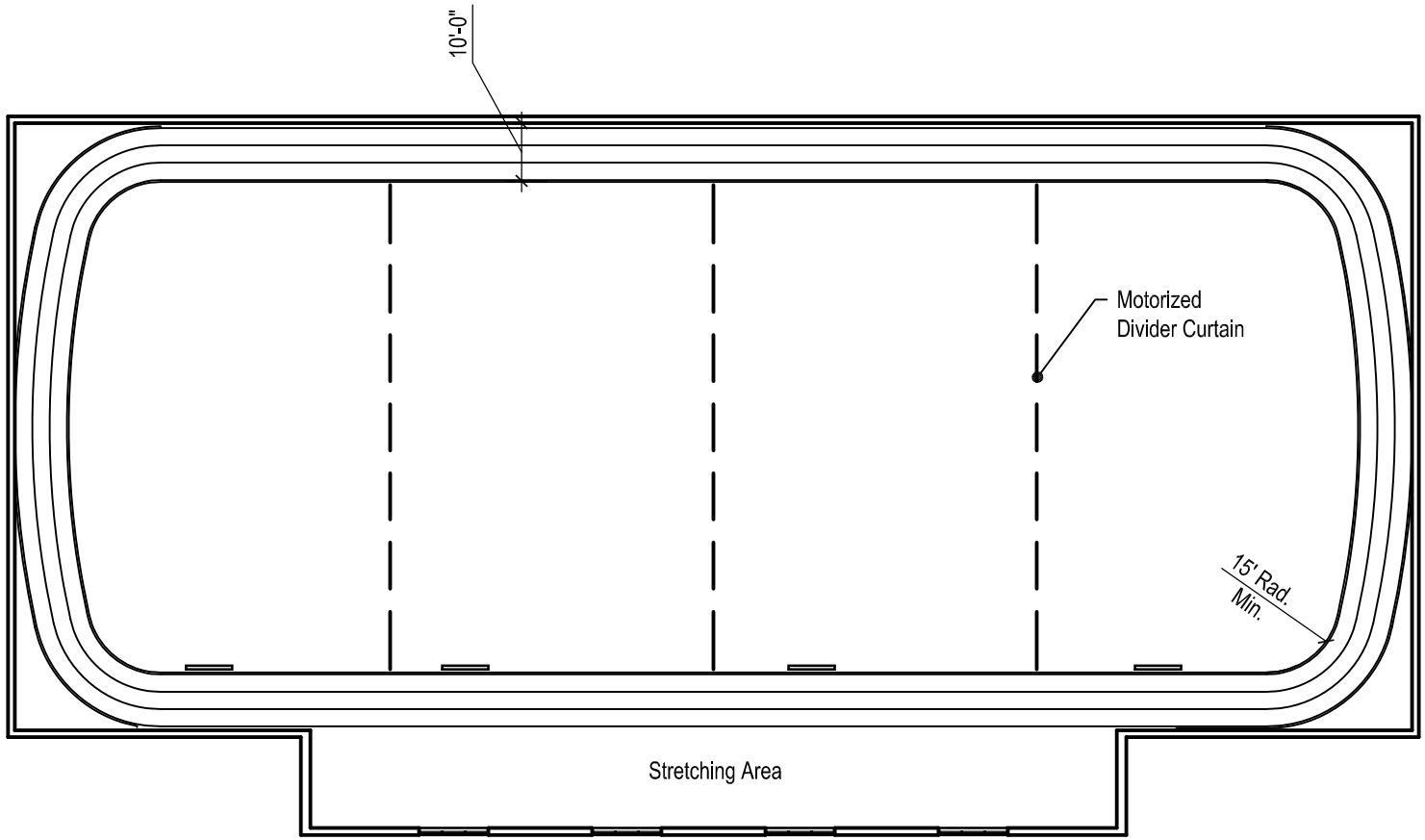
Equipment: Digital pace clock, track direction signage

Furnishings: None

Mechanical: Shared HVAC zone

Electrical: Electrical outlets as required per code, telephone, TV

Notes: Provide adjacent stretching area & drinking fountains
Approximate 750' track length


10'-0"
Motorized
Divider Curtain
15' Rad.
Min.
Stretching Area

B: ACTIVITY SPACES

TOTAL AREA: 12,245 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
B	**Activity Spaces**														
	Weight / Cardio														
B201	Free Weights	1	3,355	3,355	3,691	4,502	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B202	Machine Weights	1	3,850	3,850	4,235	5,167	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B203	Cardio Equipment	1	4,600	4,600	5,060	6,173	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B204	Cardio/Weight Room Storage	2	120	240	319	389	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B205	Cardio/Weight Work/Repair Rm	1	200	200	266	325	6 AM-11 PM	secure	N	N	N	15	72-74°F		
				12,245	13,571	16,556									

B201 FREE WEIGHTS

AREA: 3,355 NSF

Occupants: TBD based on code

Function: Free-weight workout area
55 stations (60 SF per station)

Adjacency: Machine Weights, Cardio/Weight Room Storage, Cardio/Weight Work/Repair

Environment:

- **Floor:** Rolled or tiled rubber
- **Walls:** CMU or gypsum board, extend floor 24" up wall surface
  Some mirrored walls
- **Ceiling:** Acoustical tile or gypsum board; 12'+ height preferred
- **Windows:** Exterior windows with window treatments
- **Doors:** Paired doors to accommodate large equipment

Equipment: Equipment cleaning stations

Furnishings: Free weight equipment

Mechanical: Dedicated HVAC zone

Electrical: Indirect lighting, electrical outlets, sound system

Notes: Minimize floor outlets

B202 MACHINE WEIGHTS

AREA: 3,850 NSF

Occupants: TBD based on code

Function: Weight machine workout area
64 stations (60 SF per station)

Adjacency: Free Weights, Cardio/Weight Room Storage, Cardio/ Weight Work/Repair

Environment:

- **Floor:** Rolled or tiled rubber / carpet tile
- **Walls:** CMU or gypsum board, extend floor 24" up wall surface
- **Ceiling:** Acoustical tile or gypsum board; 12'+ height preferred
- **Windows:** Exterior windows with window treatments
- **Doors:** Paired doors to accommodate large equipment

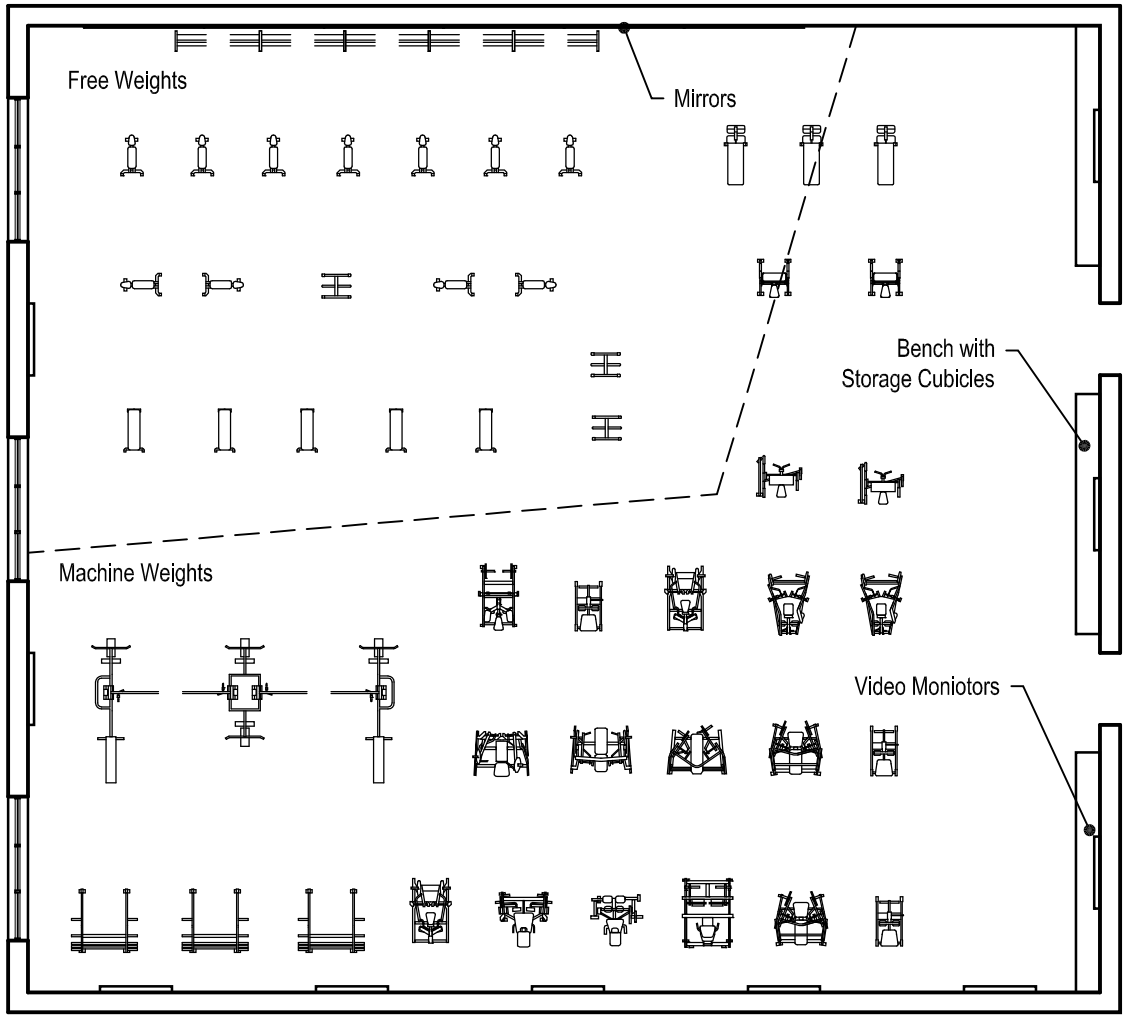
Equipment: Equipment cleaning stations

Furnishings: Weight machines

Mechanical: Dedicated HVAC zone

Electrical: Indirect lighting, electrical outlets per code and as needed for equipment, sound system

Notes: Minimize floor outlets


Free Weights
Mirrors
Bench with
Storage Cubicles
Machine Weights
Video Moniotors

B203 CARDIO EQUIPMENT

AREA: 4,600 NSF

Occupants: TBD based on code

Function: Cardio equipment workout area
92 stations (50 SF per station)

Adjacency: Machine Weights, Cardio/Weight Room Storage, Cardio/ Weight Work/Repair

Environment:

Floor: Rolled or tiled rubber
Walls: CMU or gypsum board, extend floor 24" up wall surface
Ceiling: Acoustical tile or gypsum board; 12'+ height preferred
Windows: Exterior windows with window treatments
Doors: Paired doors to accommodate large equipment

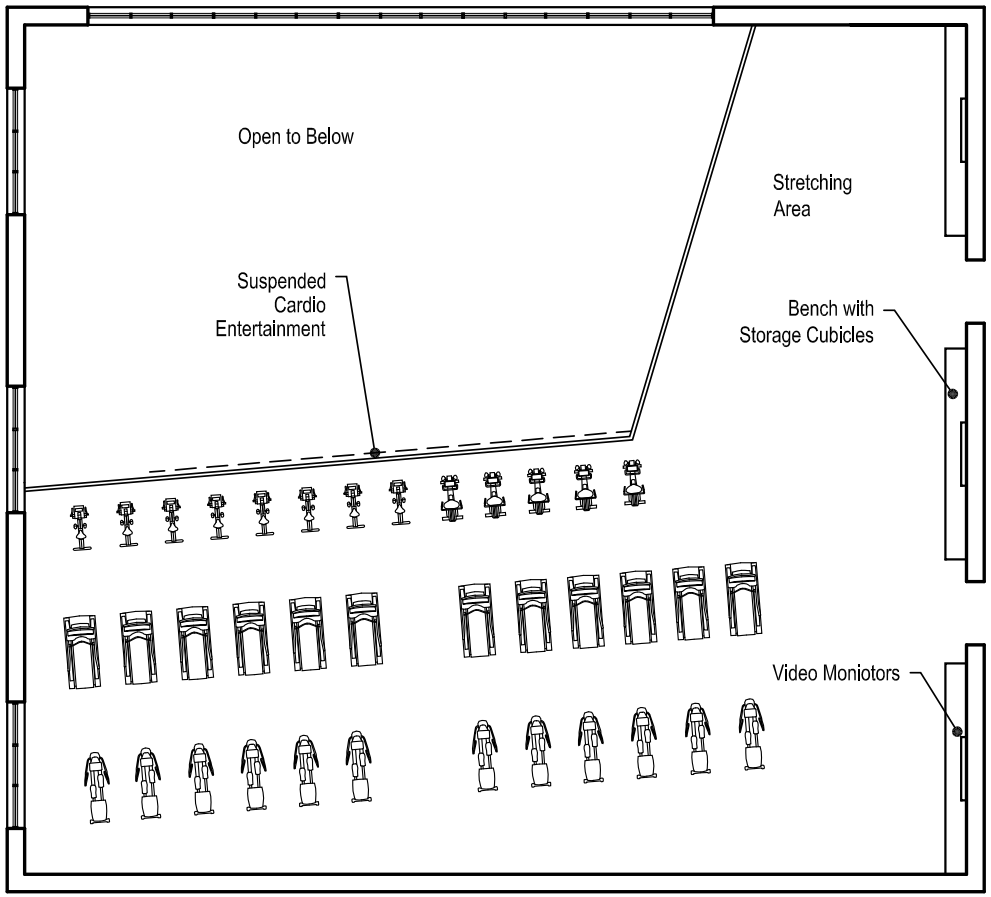
Equipment: Equipment cleaning stations, cardio theater system

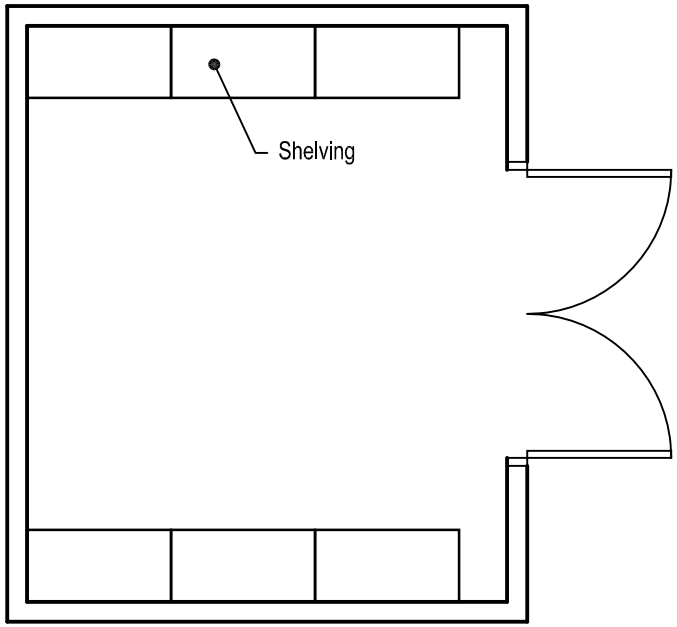
Furnishings: Cardio equipment (treadmills, bicycles, elliptical trainers, etc.)

Mechanical: Dedicated HVAC zone

Electrical: Indirect lighting, electrical outlets per code and as needed for equipment, sound system

Notes: Minimize floor outlets
See Section 3D Electrical for media and AV requirements





B204 CARDIO/WEIGHT ROOM STORAGE

AREA: 120 NSF

Occupants: None

Function: Space for storage of weight & cardio equipment

Adjacency: Machine Weights, Cardio Equipment, Cardio/Weight Work/Repair

Environment:

Floor: Rolled or tiled rubber
Walls: CMU or gypsum board, extend floor 24" up wall surface
Ceiling: Acoustical tile or gypsum board; 10' height minimum
Windows: None
Doors: Paired doors to accommodate large equipment

Equipment: None

Furnishings: Shelving in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B205 CARDIO/WEIGHT WORK/REPAIR RM

AREA: 200 NSF

Occupants: Up to 2 employees

Function: Workshop space for maintenance and repair of cardio and weight equipment

Adjacency: Machine Weights, Cardio Equipment, Cardio/Weight Room Storage

Environment:

Floor: Rolled or tiled rubber
Walls: CMU or gypsum board, extend floor 24" up wall surface
Ceiling: Acoustical tile; 10' height
Windows: Exterior windows with window treatments
Doors: Paired doors to accommodate large equipment

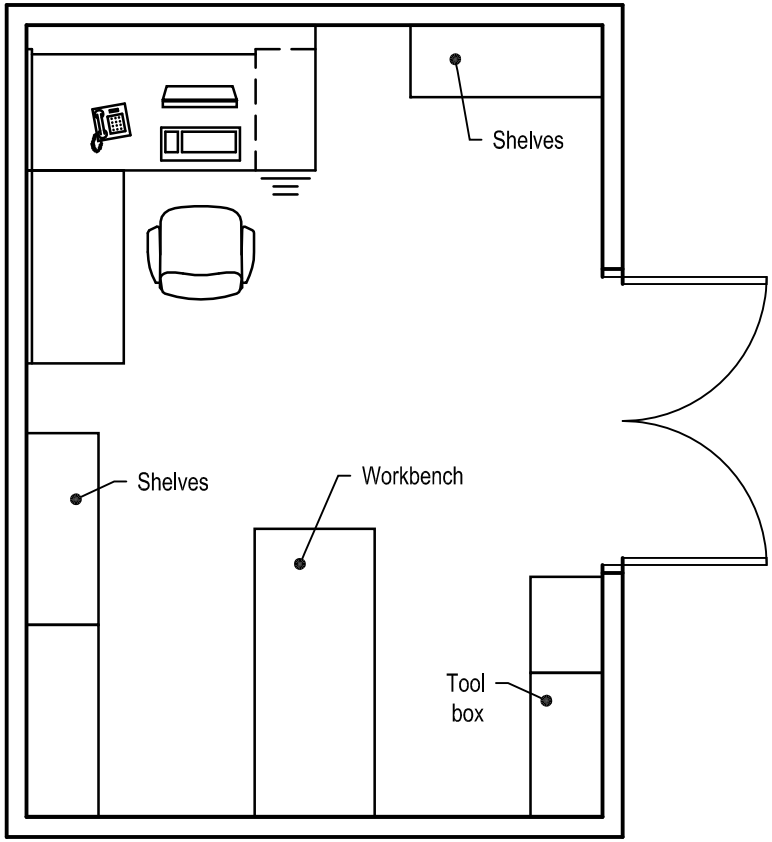
Equipment: Electrical equipment used in maintenance and repair work

Furnishings: Office furniture, workbench, tool racks, shelving

Mechanical: Dedicated HVAC zone

Electrical: Electrical outlets per code and as needed for equipment
Plug mold above workbench
Task lighting at workbench

Notes:



B: ACTIVITY SPACES

TOTAL AREA: 12,120 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
B	**Activity Spaces**														
	Multipurpose														
B301	MP Room - Aerobics	2	1,800	3,600	4,140	5,051	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B302	MP Room - Aerobics Storage	2	120	240	319	389	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B303	MP Room - Dance	2	2,300	4,600	5,060	6,173	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B304	MP Room - Dance Storage	2	120	240	319	389	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B305	MP Room - Yoga/Pilates	1	1,600	1,600	1,840	2,245	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B306	MP Room - Yoga/Pilates Storage	1	120	120	160	195	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B307	MP Room - Spinning	1	1,600	1,600	1,840	2,245	6 AM-11 PM	controlled	Y	Y	Y	40	72-74°F		
B308	MP Room - Spinning Storage	1	120	120	160	195	6 AM-11 PM	secure	N	N	N	15	55-85°F		
				12,120	13,838	16,882									

B301 MP ROOM - AEROBICS

AREA: 1,800 NSF

Occupants: Up to 36 occupants

Function: Group aerobic activities and classes

Adjacency: Aerobics Storage

Environment:

Floor: Resilient wood with ventilated base
Walls: Gypsum board
Ceiling: Acoustical tile; 12'+ height preferred
Windows: Exterior windows with window treatments
Doors: 3' x 7' wood doors with hollow metal frames

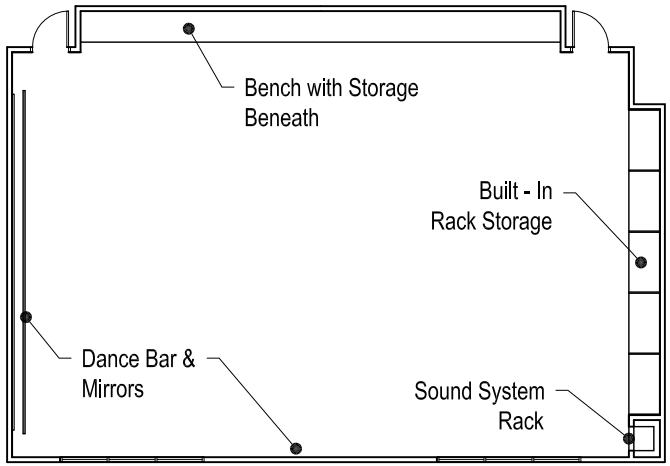
Equipment: Built-in bench with storage cubicles below, aerobics equipment storage, dance barre, fixed mirrors, sound system with built-in speakers

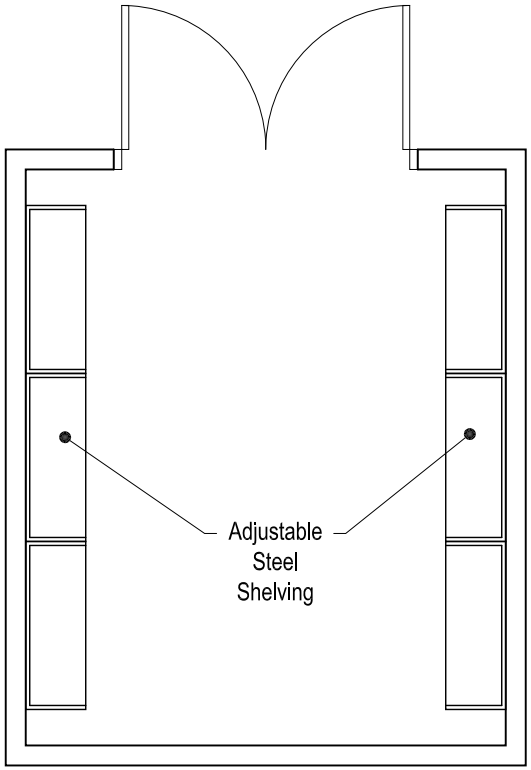
Furnishings: Aerobics equipment

Mechanical: Dedicated HVAC zone

Electrical: Electrical outlets per code; electrical and voice / data as needed for equipment
Indirect lighting preferred; variable light levels

Notes: See Section 3D Electrical for media and AV requirements





B302 MP ROOM - AEROBICS STORAGE

AREA: 120 NSF

Occupants: None

Function: Storage for Multipurpose Room equipment

Adjacency: Immediately adjacent to Multipurpose room

Environment:

Floor:	VCT
Walls:	Gypsum board
Ceiling:	Acoustical tile; 10' height minimum
Windows:	None
Doors:	3' x 7' wood door in hollow metal frame. Paired doors to accommodate large pieces of equipment

Equipment: None

Furnishings: Shelving units / racks in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B303 MP ROOM - DANCE

AREA: 2,300 NSF

Occupants: Up to 36 occupants

Function: Group dance activities and classes

Adjacency: Dance Storage

Environment:

Floor: Resilient wood w/ ventilated base
Walls: Gypsum board
Ceiling: Acoustical tile; 12'+ height preferred
Windows: Exterior windows w/ window treatments
Doors: 3' x 7' wood doors w/ hollow metal frames

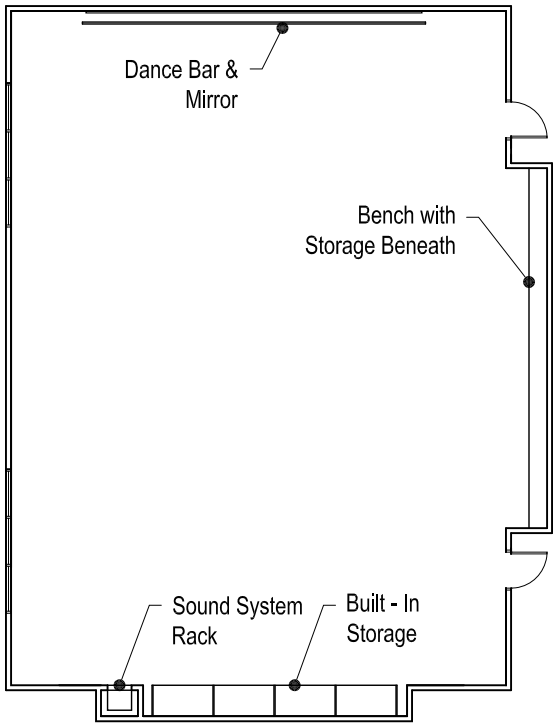
Equipment: Built-in bench w/ storage cubicles below, aerobics equipment storage, dance barre, fixed mirrors
Built-in sound system and speakers

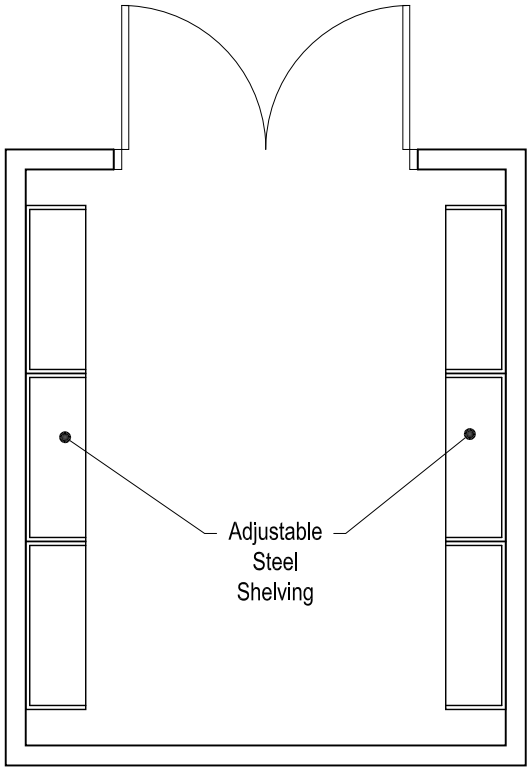
Furnishings: None

Mechanical: Dedicated HVAC zone

Electrical: Electrical outlets per code; electrical and voice / data as needed for equipment
Indirect lighting preferred; variable light levels

Notes: See Section 3D Electrical for media and AV requirements





B304 MP ROOM - DANCE STORAGE

AREA: 120 NSF

Occupants: None

Function: Storage for MP Room equipment

Adjacency: Immediately adjacent to Yoga / Pilates Room

Environment:

Floor: VCT
Walls: Gypsum board
Ceiling: Acoustical tile; 10' height minimum
Windows: None
Doors: 3' x 7' wood door in hollow metal frame. Paired doors when necessary to accommodate large pieces of equipment

Equipment: None

Furnishings: Shelving units in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B305 MP ROOM - YOGA/PILATES

AREA: 1,600 NSF

Occupants: Up to 36 occupants

Function: Group activities; primarily yoga and pilates classes

Adjacency: Yoga / Pilates Storage

Environment:

Floor: Resilient wood with ventilated base
Walls: Gypsum board
Ceiling: Acoustical tile; 12'+ height preferred
Windows: Exterior windows with window treatments
Doors: 3' x 7' wood doors with hollow metal frames

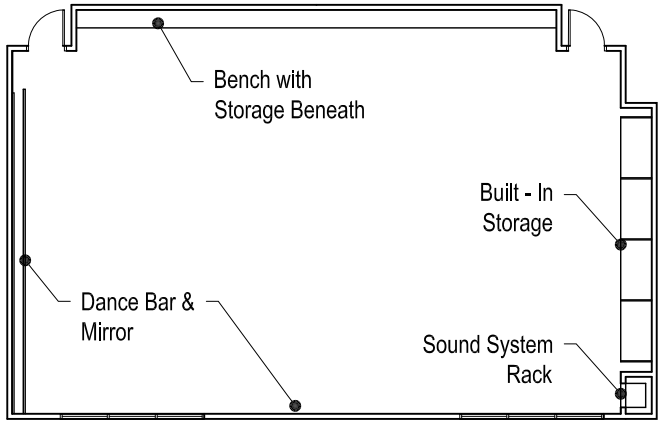
Equipment: Built-in bench with storage cubicles below, aerobics equipment storage, dance barre, fixed mirrors
Built-in sound system and speakers

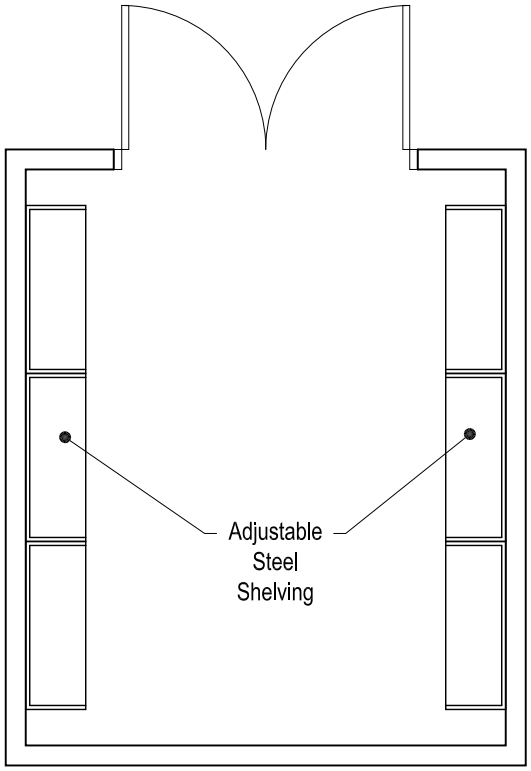
Furnishings: Yoga and Pilates equipment

Mechanical: Dedicated HVAC zone

Electrical: Electrical outlets per code; electrical and voice / data as needed for equipment
Indirect lighting preferred; variable light levels

Notes: See Section 3D Electrical for media and AV requirements





B306 MP ROOM - YOGA/PILATES STORAGE

AREA: 120 NSF

Occupants: None

Function: Storage for Spinning Room equipment

Adjacency: Immediately adjacent to Spinning Room

Environment:

Floor: VCT
Walls: Gypsum board
Ceiling: Acoustical tile; 10' height minimum
Windows: None
Doors: 3' x 7' wood door in hollow metal frame. Paired doors to accommodate large pieces of equipment

Equipment: None

Furnishings: Shelving units in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B307 MP ROOM - SPINNING

AREA: 1,600 NSF

Occupants: Up to 40 occupants

Function: Spin classes and aerobic activities

Adjacency: Spinning Storage

Environment:

Floor: Resilient wood with ventilated base
Walls: Gypsum board
Ceiling: Acoustical tile; 12'+ height preferred
Windows: Exterior windows with window treatments
Doors: 3' x 7' wood doors with hollow metal frames

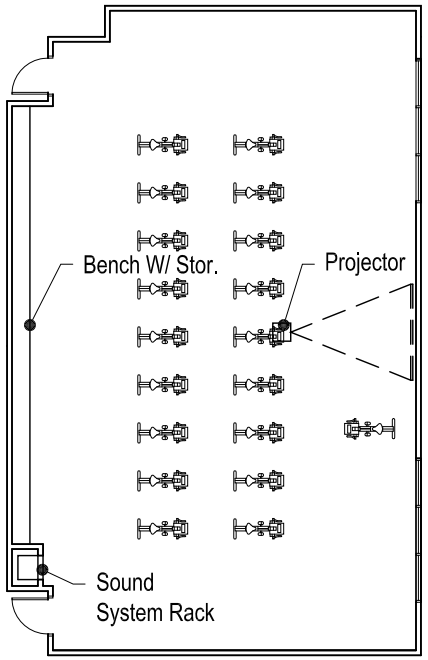
Equipment: Built-in bench with storage cubicles below
Built-in sound system and speakers

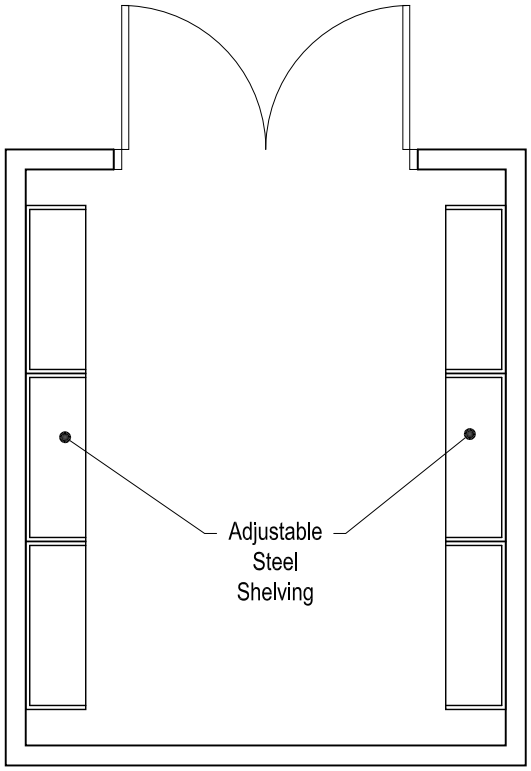
Furnishings: 40 spin bicycles

Mechanical: Dedicated HVAC zone

Electrical: Electrical outlets per code and as needed for bicycles and sound system; voice / data outlets
Indirect lighting preferred; variable light levels

Notes: See Section 3D Electrical for media and AV requirements





B308 MP ROOM - SPINNING STORAGE

AREA: 120 NSF

Occupants: None

Function: Storage for Spinning Room equipment

Adjacency: Immediately adjacent to Spinning Room

Environment:

Floor: VCT
Walls: Gypsum board
Ceiling: Acoustical tile; 10' height minimum
Windows: None
Doors: 3' x 7' wood door in hollow metal frame. Paired doors to accommodate large pieces of equipment

Equipment: None

Furnishings: Shelving units in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B: ACTIVITY SPACES

TOTAL AREA: 2,325 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
B	**Activity Spaces**														
	Climbing / Bouldering														
B401	Rock Climbing Wall	1	1,000	1,000	1,180	1,440	6 AM-11 PM	controlled	Y	Y	Y	30	72-74°F	Y	Y
B402	Bouldering Wall	1	1,000	1,000	1,180	1,440	6 AM-11 PM	controlled	Y	Y	Y	30	72-74°F	Y	Y
B403	C/B Registration Counter	1	100	100	133	162	6 AM-11 PM	controlled	Y	Y	M	40	72-74°F		
B404	Climbing / Bouldering Storage	1	200	200	266	325	6 AM-11 PM	secure	N	N	N	15	55-85°F		
B405	Climbing/Bould'g Cleaning Alcove	1	25	25	35	43	6 AM-11 PM	controlled	N	N	N	30	72-74°F		M
				2,325	2,794	3,409									

B401 ROCK CLIMBING WALL

AREA: 1,000 NSF

Occupants: Up to 16 people

Function: Space for climbing and climbing instruction

Adjacency:
Bouldering Wall, support spaces
Within view of Climbing / Bouldering Registration Counter
Visual access to this area from non-controlled portion of building and possible from exterior

Environment:

Floor: Synthetic cushioned floor – safety landing area
Walls: Rock structure over CMU / steel structure
Ceiling: Exposed structure, acoustical deck or gypsum board
Windows: Controlled natural light through windows or skylights
Doors: None

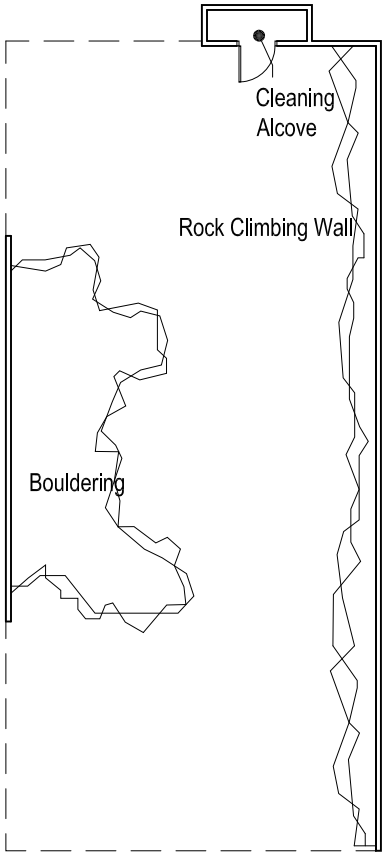
Equipment: Climbing wall

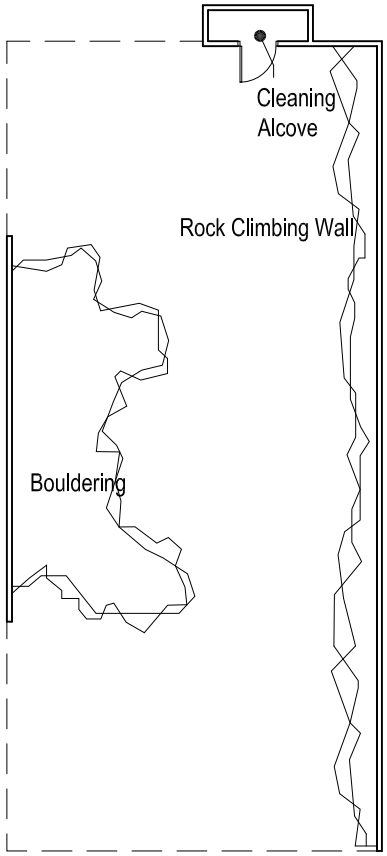
Furnishings: Climbing equipment, belaying systems and anchors

Mechanical: Shared HVAC zone

Electrical: Electrical outlets per code, specialty lighting for wall

Notes:
Recessed slab for synthetic floor
Approximately 40' wide; 8 climbing routes





B402 BOULDERING WALL

AREA: 1,000 NSF

Occupants: Up to 16 people

Function: Space for bouldering and bouldering instruction

Adjacency:
Climbing Wall, support spaces
Within view of Climbing / Bouldering Registration Counter
Visual access to this area from non-controlled portion of building and possible from exterior

Environment:

Floor: Synthetic cushioned floor – safety landing area
Walls: Rock structure over CMU / steel structure
Ceiling: Exposed structure, acoustical deck or gypsum board
Windows: Controlled natural light through windows or skylights
Doors: None

Equipment: Bouldering wall

Furnishings: Bouldering equipment

Mechanical: Shared HVAC zone

Electrical: Electrical outlets per code, specialty lighting for wall

Notes:
Recessed slab for synthetic floor
Approximately 40' wide; 8 climbing routes

B403 C/B REGISTRATION COUNTER

AREA: 100 NSF

Occupants: 1-2 staff

Function: Registration and service desk for climbers
Visual supervision of climbing area

Adjacency: Climbing and bouldering walls, support spaces

Environment:

Floor: Carpet tile or VCT
Walls: CMU or gypsum board
Ceiling: Exposed structure, acoustical deck; 10' minimum
Windows: Controlled natural light
Doors: None

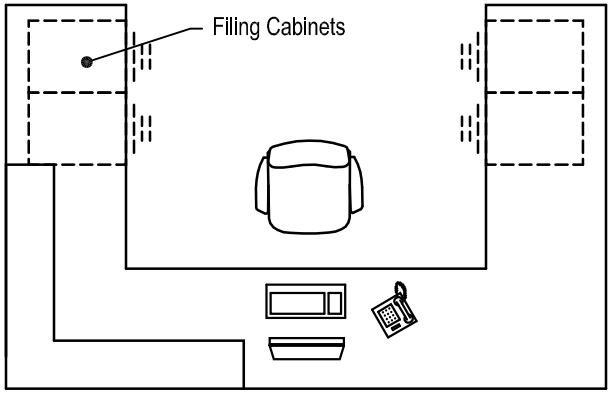
Equipment: Built-in millwork counter with storage below
Computer, telephone

Furnishings: Filing cabinets

Mechanical: Shared HVAC zone

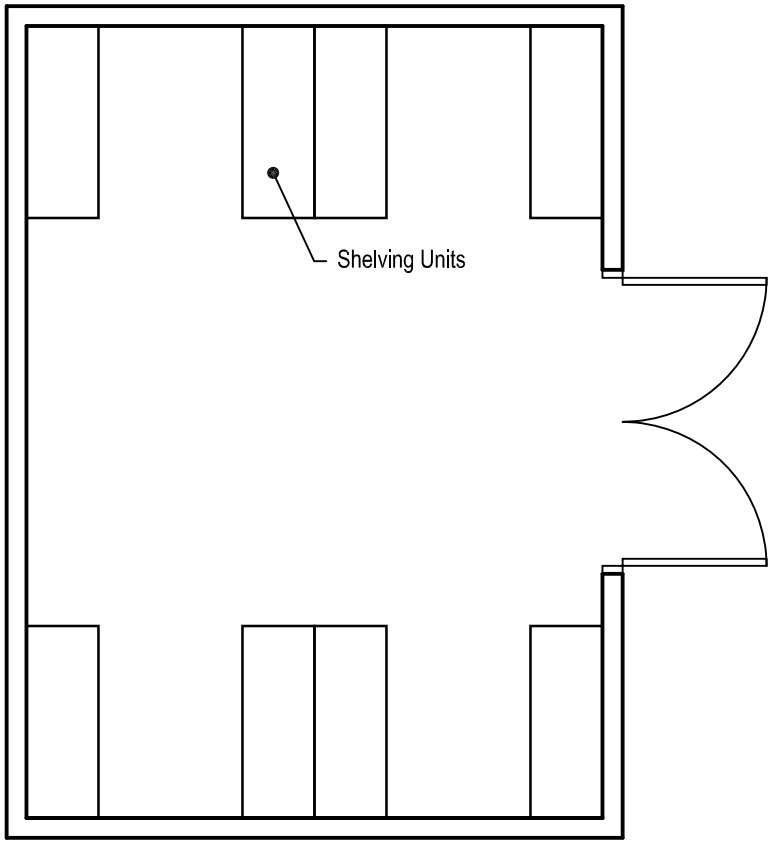
Electrical: Duplex electrical outlets per code
Electrical and voice / data as needed for computer & telephone
Fluorescent

Notes:



B404 CLIMBING/BOULDERING STORAGE

AREA: 200 NSF



Occupants: None

Function: Storage for MP Room equipment

Adjacency: Climbing and bouldering walls, support spaces

Environment:

Floor: Sealed concrete
Walls: Gypsum board
Ceiling: Acoustical tile; 10' height minimum
Windows: None
Doors: 3' x 7' wood door in hollow metal frame. Paired doors to accommodate large pieces of equipment

Equipment: None

Furnishings: Shelving units in a portion of room

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B405 CLIMBING/BOULDERING CLEANING ALCOVE

AREA: 25 NSF

Occupants: 1 staff

Function: Storage for cleaning supplies

Adjacency: Climbing and bouldering walls, support spaces

Environment:

Floor: Carpet tile or VCT
Walls: CMU or gypsum board
Ceiling: Exposed structure, acoustical deck; 10' height min.
Windows: Controlled natural light
Doors: TBD based on climbing area enclosure/control

Equipment: None

Furnishings: Storage cabinets, locking

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Fluorescent

Notes:

B: ACTIVITY SPACES

TOTAL AREA: 7,112 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
B	**Activity Spaces**														
	Games														
B501	Golf Simulator	1	600	600	750	915	6 AM-11 PM	public	M	M	M	50	72-74°F		
B502	Bowling	1	4,992	4,992	5,491	6,699	6 AM-11 PM	public	M	M	M	30	72-74°F		
B503	Billiards	1	800	800	1,000	1,220	6 AM-11 PM	public	M	M	M	50	72-74°F		
B504	Table Tennis	1	400	400	500	610	6 AM-11 PM	public	M	M	M	70	72-74°F		
B505	Electronic Gaming	1	320	320	400	488	6 AM-11 PM	public	M	M	M	30	72-74°F		
				7,112	8,141	9,932									

B501 GOLF SIMULATOR

AREA: 600 NSF

Occupants: 4 people

Function: Recreational golf game (2)

Adjacency: Bowling area
In open-access portion of building

Environment:

Floor: VCT / carpet tile / synthetic turf
Walls: CMU / gypsum board
Ceiling: Acoustical tile
Windows: Minimal controlled natural light
Doors: Aluminum and glass

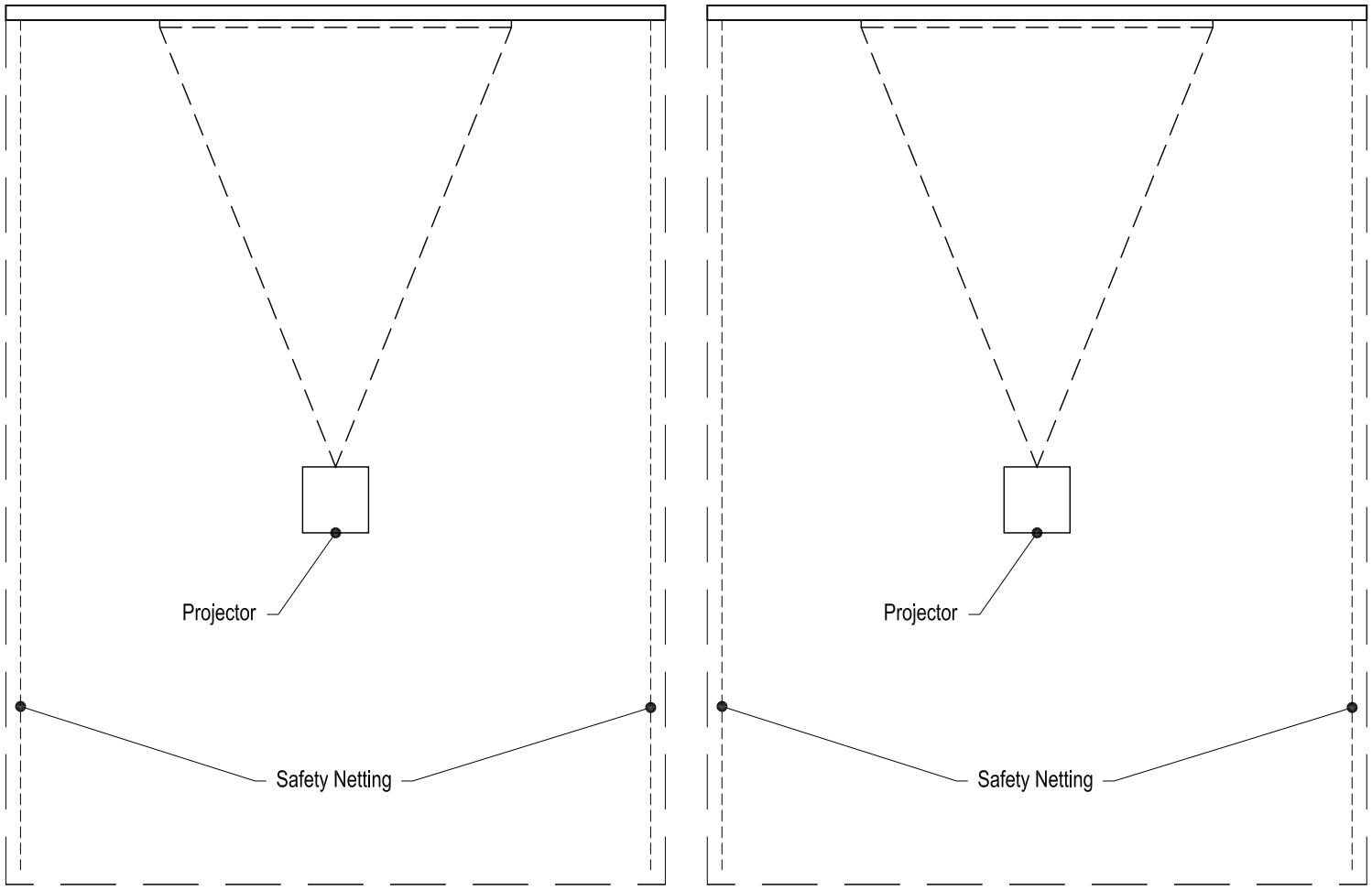
Equipment: Golf simulator machines (2)

Furnishings: None

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets per code and as needed for simulators

Notes: Games area open to public during operating hours; requires security enclosure after-hours


Projector
Safety Netting
Projector
Safety Netting

B502 BOWLING

AREA: 4,992 NSF

Occupants: TBD

Function:
Recreational bowling, 8 lanes
Lounge / hang-out space

Adjacency:
Main circulation system
In open-access portion of building
Lounge seating adjacent

Environment:

Floor: Wood / VCT
Walls: CMU / gypsum board
Ceiling: Acoustical tile and gypsum board; 12' minimum
Windows: Minimal controlled natural light
Doors: Aluminum and glass

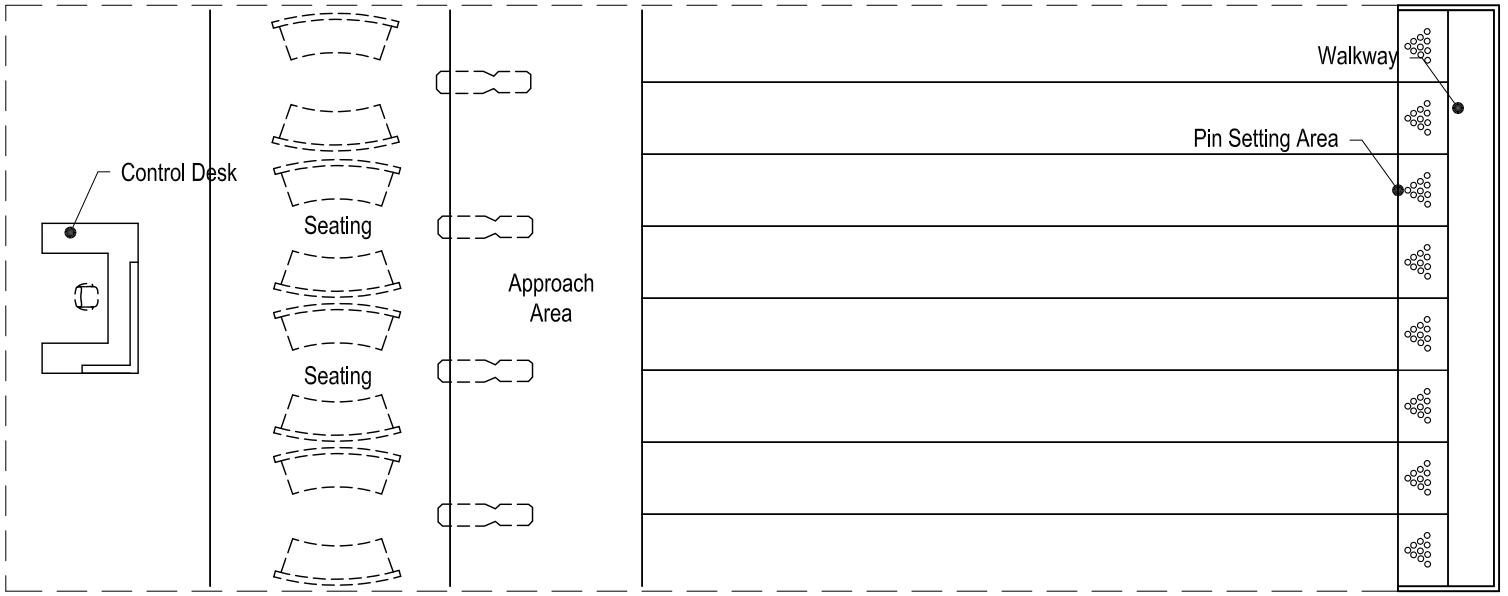
Equipment:
Bowling lanes, fixed seating, ball racks
Shoe storage, control desk, cash drawer
Sound system with built-in speakers

Furnishings: Lounge seating, tables

Mechanical: Dedicated HVAC zone

Electrical:
Electrical outlets, power for scoring systems, pin set and ball return
Fluorescent lighting; variable light levels; disco lighting capability

Notes:
Acoustical treatments on wall
Games area open to public during operating hours; requires security enclosure after-hours
During design, consider incorporating specialty sound and lighting systems needed for disco bowling


Control Desk
Seating
Seating
Approach Area
Walkway
Pin Setting Area

B503 BILLARDS

AREA: 800 NSF

Occupants: TBD

Function: Recreational billiards
Lounge / hang-out space

Adjacency: Bowling area
In open-access portion of building
Lounge seating adjacent

Environment:

Floor: VCT/ Carpet tile
Walls: CMU / gypsum board
Ceiling: Acoustical tile and gypsum board; 12' minimum
Windows: Minimal controlled natural light
Doors: Aluminum and glass

Equipment: None

Furnishings: 4 billiard tables; cue racks, scoring boards

Mechanical: Shared HVAC zone

Electrical: Electrical outlets per code and scoring boards; ambient lighting plus pending lighting at each table

Notes: Games area open to public during operating hours; requires security enclosure after-hours

B504 TABLE TENNIS

AREA: 400 NSF

Occupants: TBD

Function: Recreational table tennis
Lounge / hang-out space

Adjacency: Billiards area
In open-access portion of building
Lounge seating adjacent

Environment:

Floor: VCT/ carpet tile
Walls: CMU / gypsum board
Ceiling: Acoustical tile and gypsum board; 12' minimum
Windows: Minimal controlled natural light
Doors: Aluminum and glass

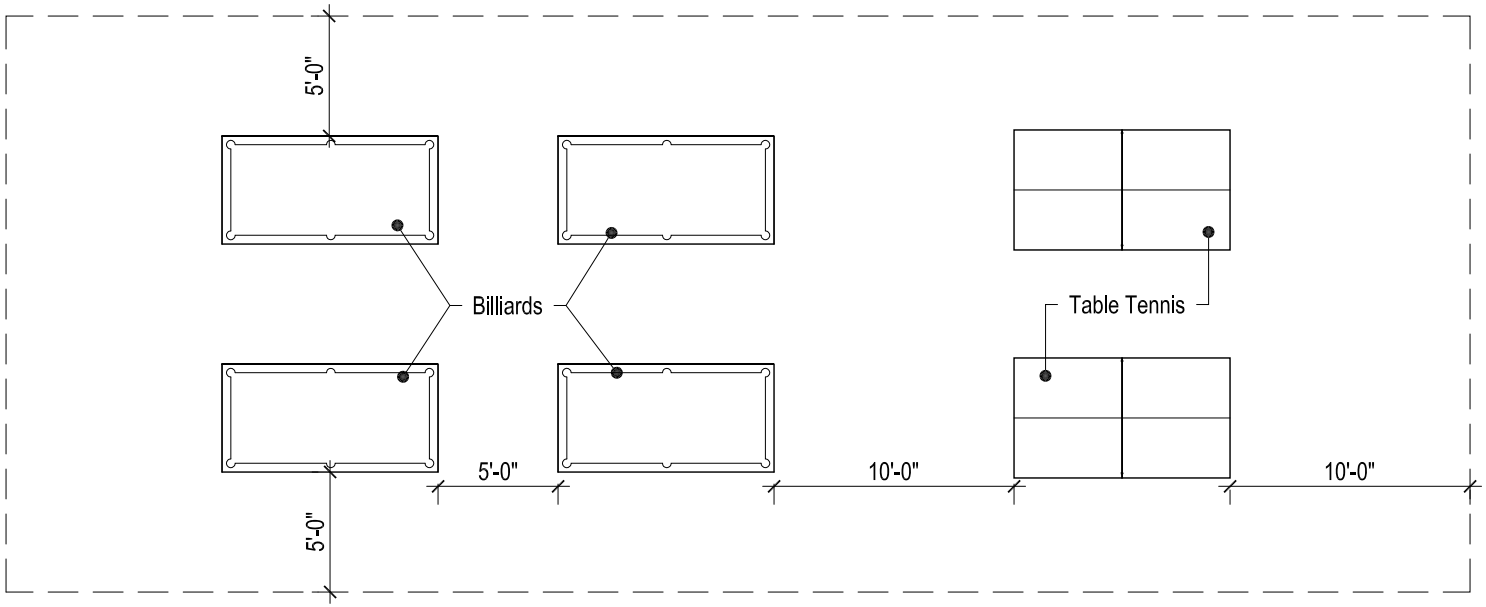
Equipment: None

Furnishings: 2 table-tennis tables, paddle racks, scoring board

Mechanical: Shared HVAC zone

Electrical: Electrical outlets, overhead lighting

Notes: Games area open to public during operating hours; requires security enclosure after-hours


5'-0"
Billiards
Table Tennis
5'-0"
10'-0"
10'-0"
5'-0"

B505 ELECTRONIC GAMING

AREA: 320 NSF

Occupants: TBD

Function: Recreational electronic gaming – 2 to 3 areas
Lounge / hang-out space

Adjacency: Billiards & Table Tennis areas
In open-access portion of building
Lounge seating adjacent

Environment:

Floor: VCT/ carpet tile
Walls: CMU / gypsum board
Ceiling: Acoustical tile and gypsum board; 10' minimum
Windows: Minimal controlled natural light
Doors: Aluminum and glass

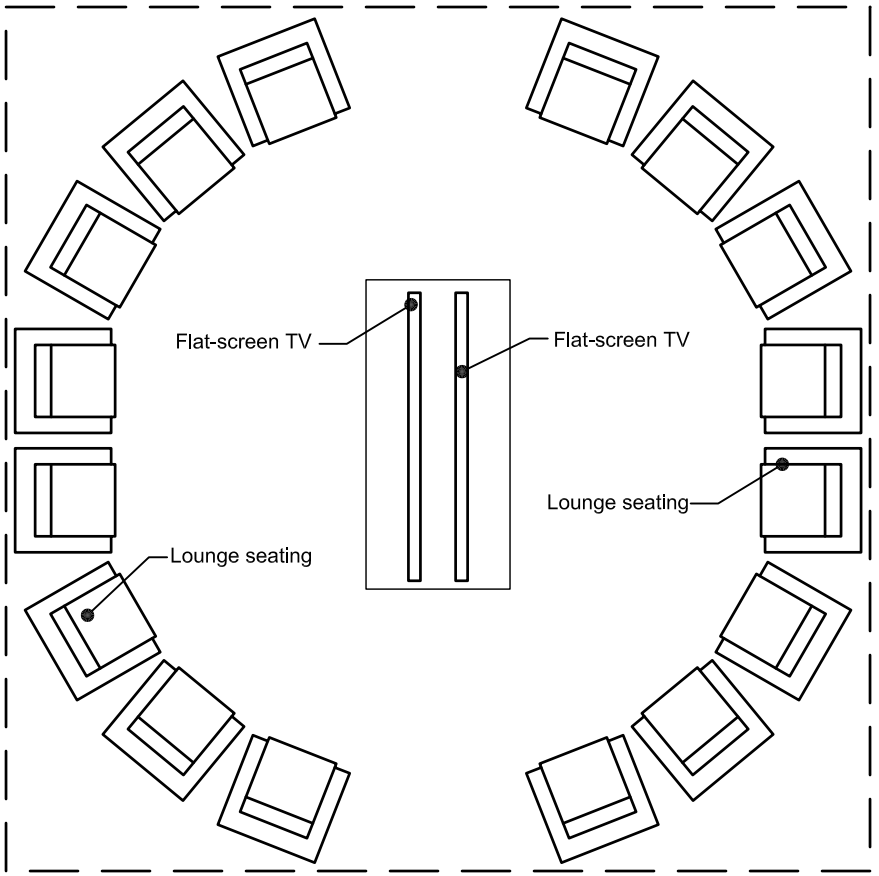
Equipment: 2-3 flat-screen TV's; 2-3 electronic gaming consoles

Furnishings: Lounge seating / occasional tables (2-3 groupings)

Mechanical: Shared HVAC zone

Electrical: Electrical outlets per code; electrical and voice / data as needed for equipment; variable light levels

Notes: Games area open to public during operating hours; requires security enclosure after-hours



4C: CAMPUS RECREATION

There will be four Campus Recreation groups in the Student Life Center:

Campus Recreation Administration will be responsible for management of the Student Life Center. This group's spaces include several private offices and workstations for those who will market, plan and manage the activities of the Center.

Intramurals will staff and manage the Control Desk and will be responsible for managing access to the activity areas. Ideally, this group will be located behind the Control Counter, with good access to both the control point and the activity spaces. Intramurals will work closely with Campus Rec Administration; the two groups must be co-located. They will share Copy / Print / Supplies and Office Storage (listed under Intramurals), as well as a Conference Room (listed under Campus Rec Admin).

There are four Staff Workstations in Intramurals which will be shared by Intramurals' many part-time staffers. One or two of the workstation should be in the Intramurals office area and the balance should be placed in the activity spaces for visual supervision purposes.

Intramurals registration will occur at the Control Counter or an adjacent kiosk and must be high visibility in order to support the engagement of students in intramural activities.

The Outdoor Adventure Center (OAC) must be in a high-visibility location on the building's public corridor to encourage student awareness of and participation in their programs. The space should have a set-up similar to the existing OAC: a large, open space with the Retail Area at the front, the Resource Area in the center and the Shop / Mechanics area at the back. An office suite consisting of private offices and open workstations should be located to one side; some private offices should have internal windows into the Retail, Resource and Shop spaces.

A Multipurpose Room will provide space for a variety of functions, including pre- and post-trip meetings, classes and seminars. It will be used primarily in the afternoons and evenings. It should be easily accessible from the public corridor, to facilitate visitor use. Its finishes should be durable and easy to clean (for post-trip meetings). It should have an internal window providing visual access from the Retail and Resource Areas.

The Storage / Staging area is very important to the OAC, providing space for rental equipment storage, pre-trip preparation / staging, and post-trip clean up. It should have easy access to the Outdoor Storage and Staging / Loading areas. The Outdoor Storage space should be covered and enclosed by fencing for security. This should be adjacent to the Outdoor Staging / Loading.

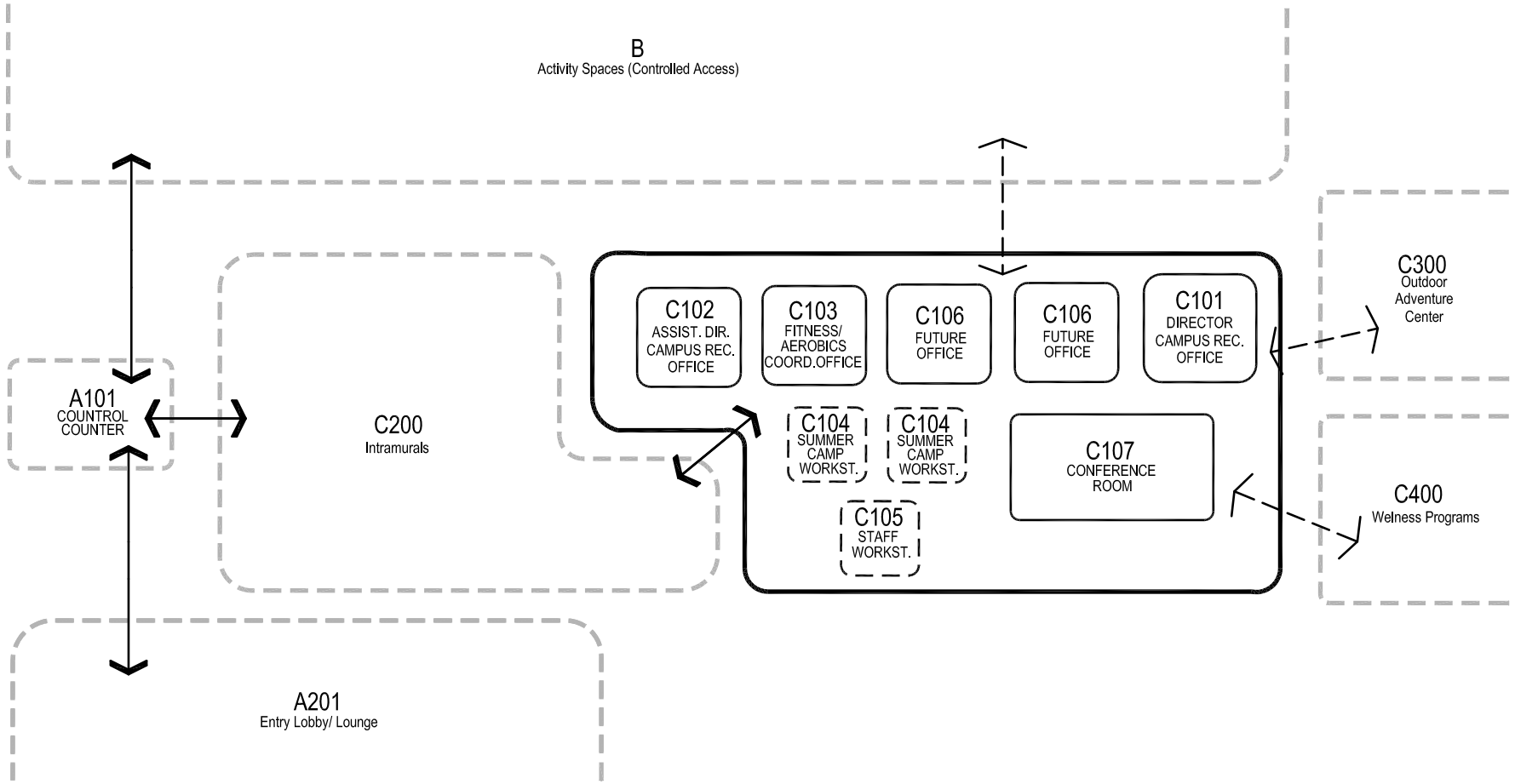
Wellness Programs must be in an easily-accessed location on the public corridor, but has a lesser need for visibility than the OAC. It should be adjacent to the OAC if possible, to share a Copy / Print / Supplies room and the Multipurpose Room. It must be near the building's activity spaces, for ease of showing clients the building's offerings. It will consist of office spaces, along with client interview and health assessment spaces. It has a Multipurpose Room that will provide space for a variety of functions, including cooking demonstrations, with an adjoining Demonstration Kitchen that ideally will be visible from the public corridor.

If possible, all Campus Rec groups should be near each other, to facilitate management and to share spaces and resources. It would be beneficial for these groups to be located near Clubs & Organizations as well.

CAMPUS RECREATION ADMINISTRATION

TOTAL AREA: 1,122 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
C	**Campus Recreation**														
	Campus Recreation Administration														
C101	Director of Campus Rec Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C102	Asst. Dir. of Campus Rec Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C103	Fitness / Aerobics Coord. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C104	Summer Camp Coord. Wkstation.	1	64	64	90	109	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C105	Staff Workstation	2	64	128	179	219	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C106	Future Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C107	Conference Room	1	300	300	399	487	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
				1,122	1,506	1,837									



CAMPUS RECREATION ADMINISTRATION
ADJACENCY DIAGRAM

C101 DIRECTOR OF CAMPUS REC OFFICE

AREA: 150 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: More internal location within Campus Rec / Intramurals administrative office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

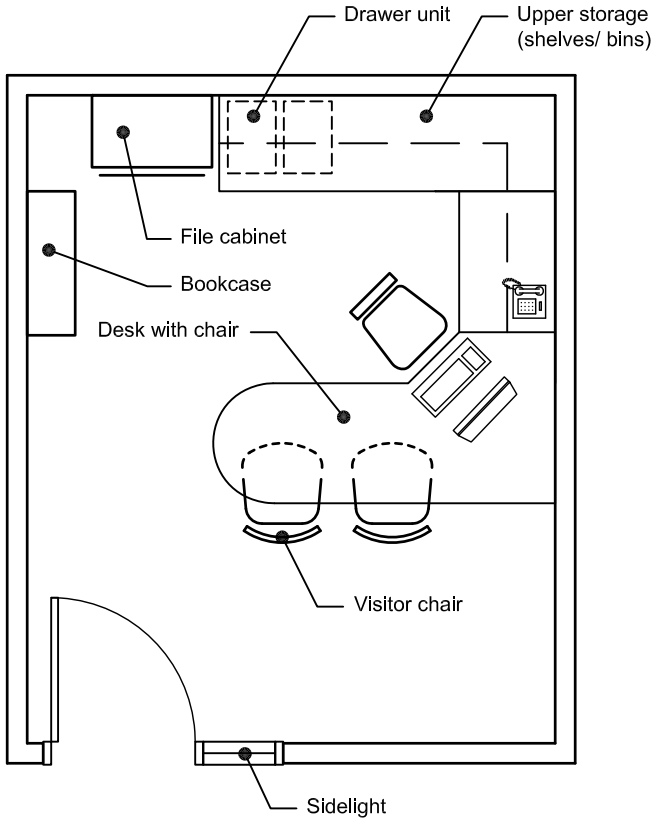
Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

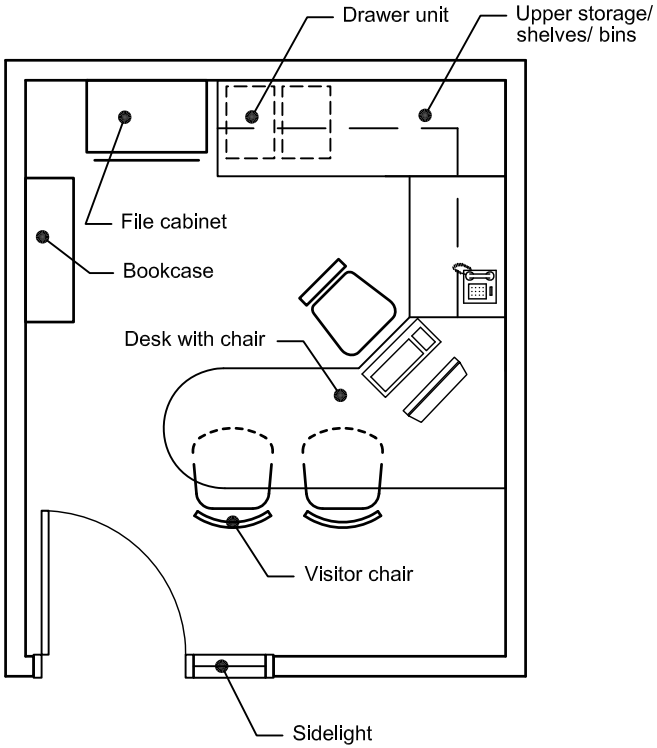
Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:



C102 ASST. DIRECTOR OF CAMPUS REC OFFICE

AREA: 120 NSF



Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Campus Rec / Intramurals administrative office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

C103 FITNESS/AEROBICS COORD. OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Campus Rec / Intramurals administrative office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

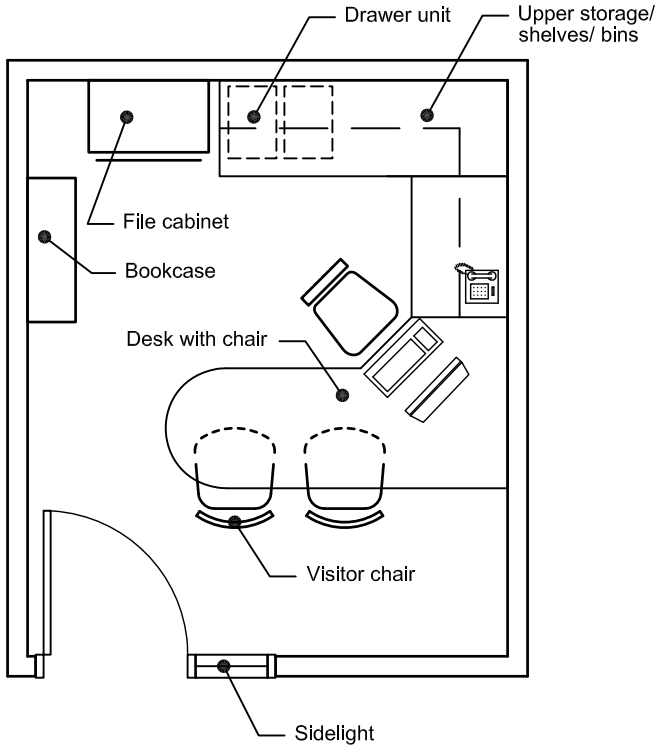
Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

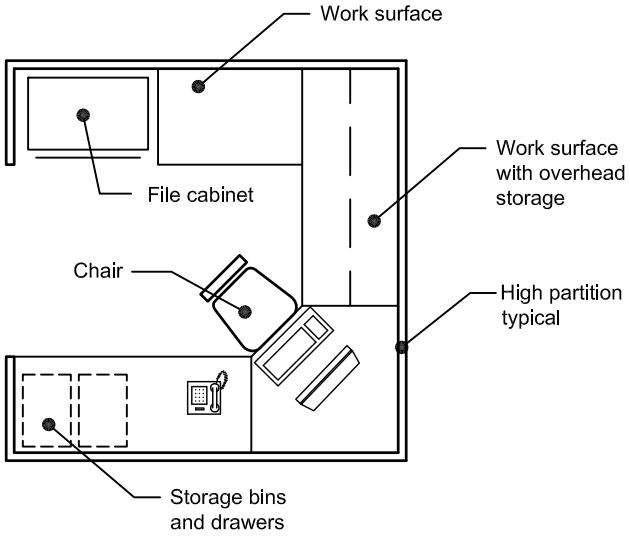
Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:



C104 SUMMER CAMP COORD. WORKSTATION

AREA: 64 NSF



Occupants: 1 occupant

Function: Open office workstation

Adjacency: Within Campus Rec / Intramurals administrative office space

Environment:

- **Floor:** Carpet tile
- **Walls:** Painted gypsum board
- **Ceiling:** Lay-in acoustic tile; 10' height
- **Windows:** Exterior windows with window coverings desired in open office area
- **Door:** None

Equipment: Computer; telephone

Furnishings: U-shaped open office workstation with shelving, storage bins, and drawers
Desk chair
File cabinet

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes:

C105 STAFF WORKSTATION

AREA: 64 NSF

Occupants: 1 occupant

Function: Open office workstation

Adjacency: Within Campus Rec / Intramurals administrative office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired in open office area
Door: None

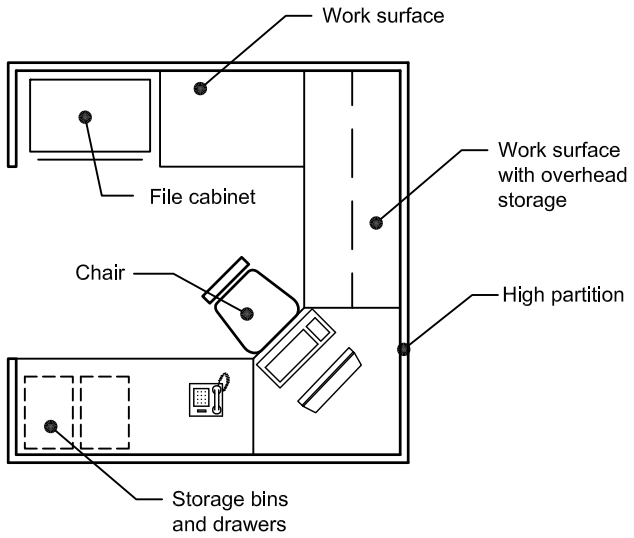
Equipment: Computer; telephone

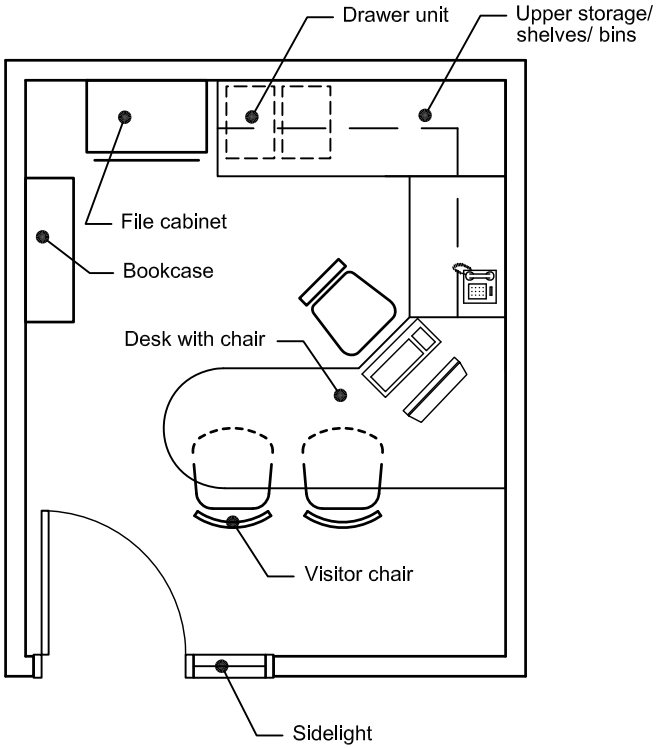
Furnishings: U-shaped open office workstation with shelving, storage bins, and drawers
Desk chair
File cabinet

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes:





C106 FUTURE OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Campus Rec / Intramurals administrative office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: Future Business & Marketing Managers

C107 CONFERENCE ROOM

AREA: 300 NSF

Occupants: Up to 16 people

Function: Enclosed room for meetings and staff training; primary usage by Campus Rec Administration and Intramurals

Adjacency: Within Campus Rec and Intramurals administrative office space; easily accessed from administrative office entry point

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile & painted gyp. board; 10' height minimum
Windows: Exterior windows with room-darkening window coverings desired
Sidelight at entry door
Doors: 3' x 7' wood door, locking

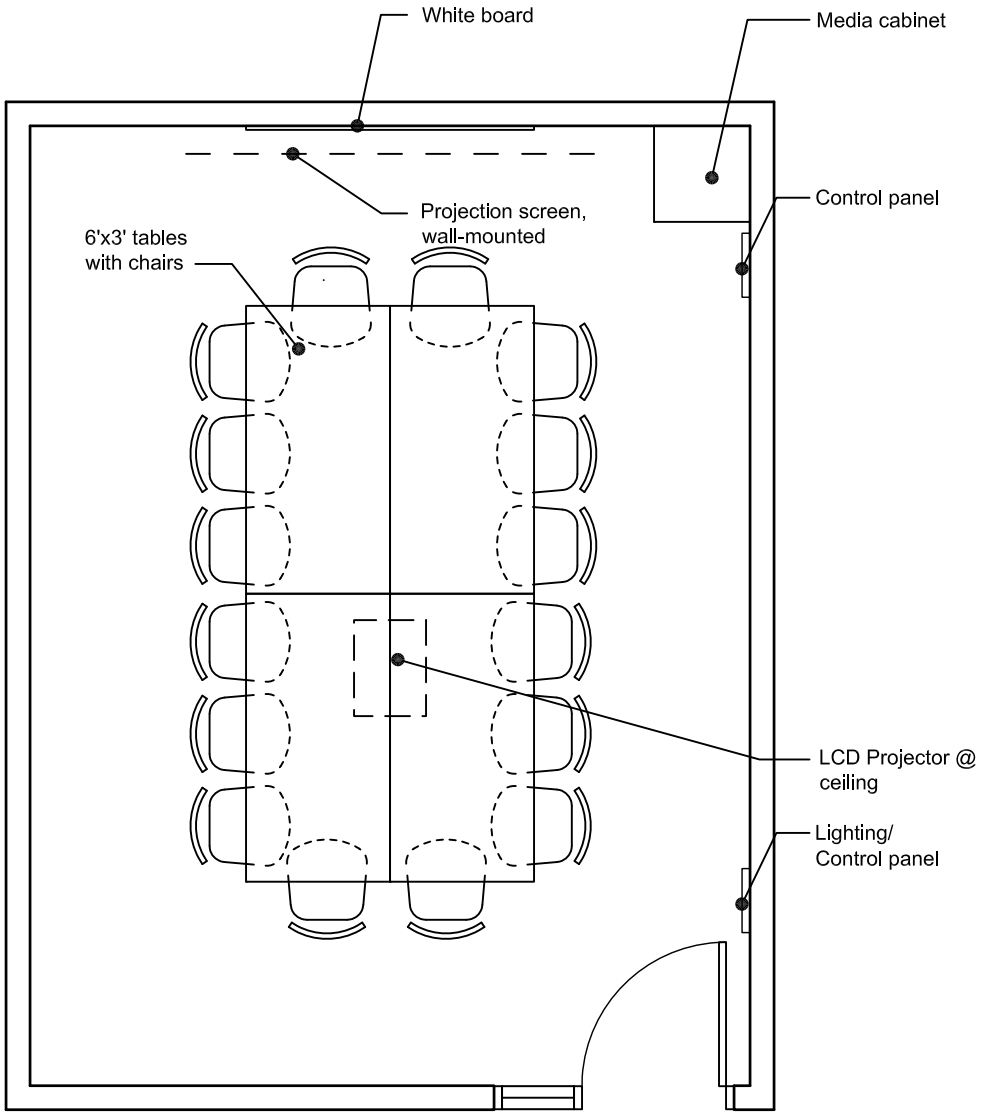
Equipment: White board, 6'W x 5'H
Projection screen
Ceiling-mounted LCD projector
Media cabinet / credenza & wall-mounted control station
Telephone

Furnishings: (4) 3' W x 6' L tables (movable) with 16 chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical & data connections for ceiling-mounted projector and AV control station
Electrical & data connections for telephone
Light fixtures that allow for varying light levels & support the use of AV

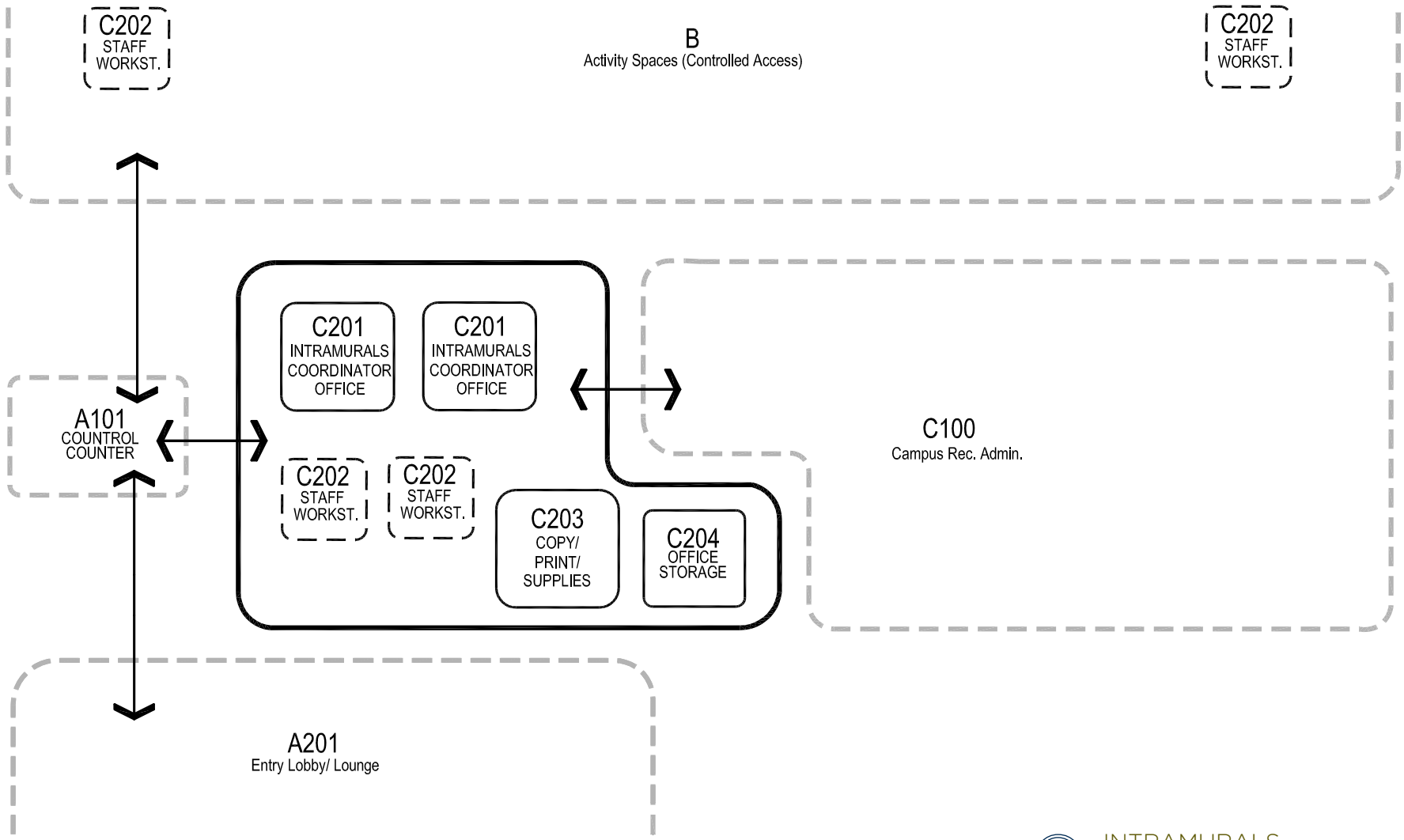
Notes: Possible option to use flat panel monitor in place of projector & projection screen – confirm during design



INTRAMURALS

TOTAL AREA: 746 GSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
C	**Campus Recreation**														
	Intramurals														
C201	Intramurals Coordinator Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C202	Staff Workstation	4	64	256	358	437	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C203	Copy / Print / Supplies	1	150	150	200	243	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
C204	Office Storage	1	100	100	133	162	8 AM-5 PM	secure	N	N	N	15	55-85°F		
				746	1,010	1,232									



INTRAMURALS
ADJACENCY DIAGRAM

C201 INTRAMURALS COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Campus Rec / Intramurals administrative office space
Near Control Desk

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

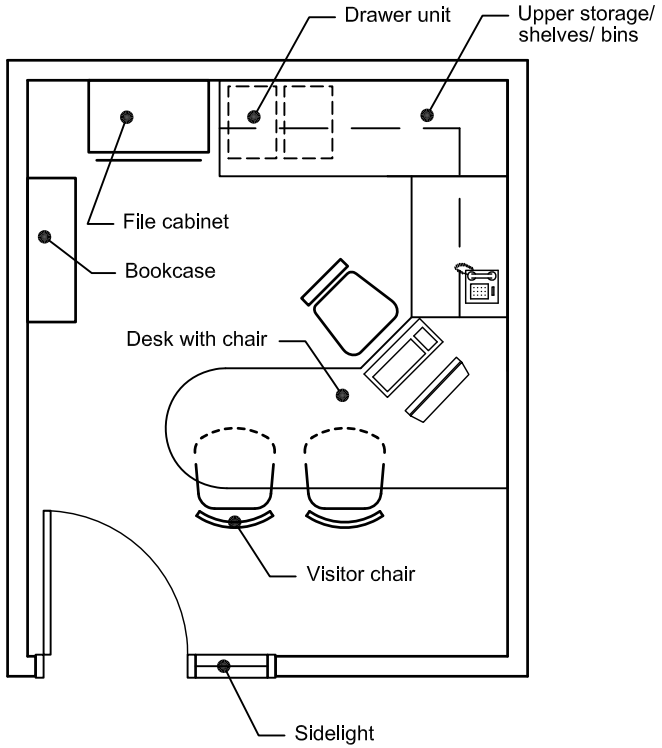
Equipment: Computer; telephone

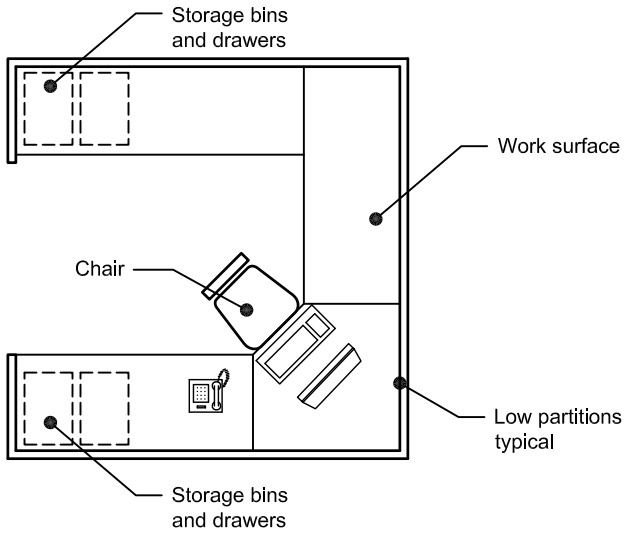
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





C202 STAFF WORKSTATION

AREA: 64 NSF

Occupants: 1 occupant

Function: Open office workstation shared by up to 30 Intramurals staff members for activities planning, preparation & promotion; workstations located in activity areas will be used for visual supervision of activities

Adjacency: 4 total workstations; 1 or 2 located within Campus Rec / Intramurals administrative office space; others in activity areas in locations that allow visual supervision

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired in open office area
Door: None

Equipment: Computer; telephone

Furnishings: U-shaped open office workstation with locking drawers and low panels (approx. 42"H)
Desk chair

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes:

C203 COPY/PRINT/SUPPLIES

AREA: 150 NSF

Occupants: None

Function:
Enclosed room for office equipment
Workspace for collating, assembling, etc.
Shared by Campus Rec Administration and Intramurals staff

Adjacency: Central location within administrative office space, easily accessible by all staff

Environment:

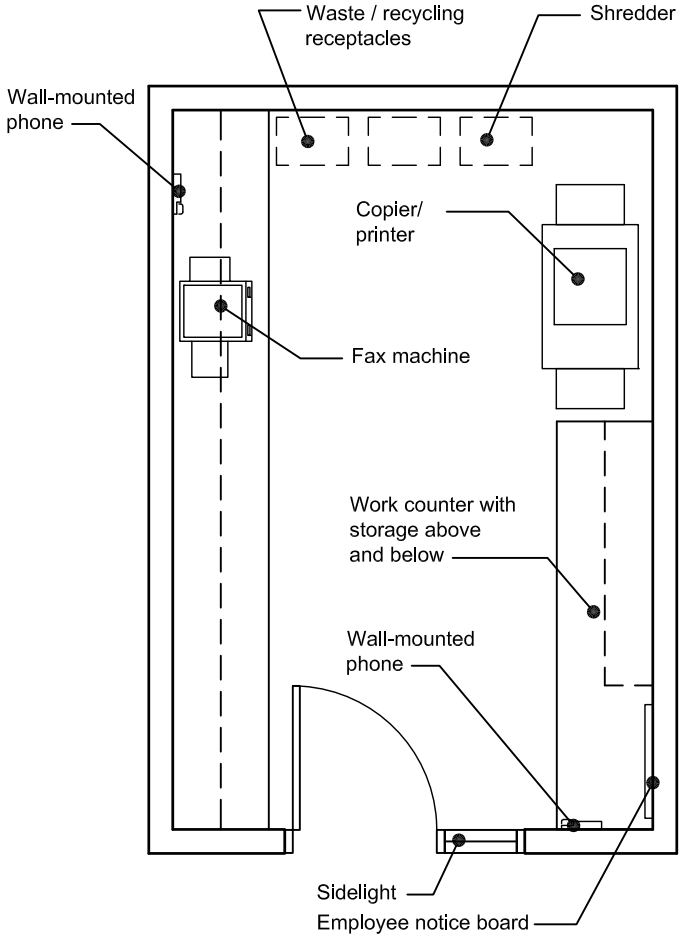
Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Doors: 3' x 7' wood door, locking

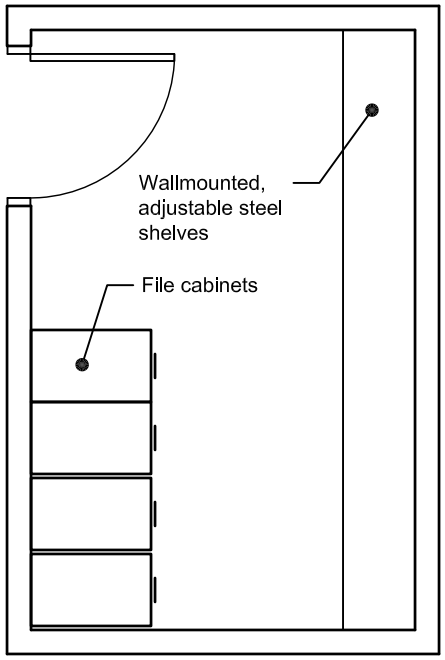
Equipment:
Copier / printer; fax machine; shredder
Wall-mounted telephone
Millwork countertops with storage cabinets and/or drawers above and below
Employee notice board

Furnishings: Waste and recycling receptacles

Mechanical:
Dedicated HVAC zone
Exhaust

Electrical:
Electrical wall outlets per code
Electrical and voice / data outlets for copier / printer, fax machine and telephone
Electrical outlets above countertop
Fluorescent parabolic lighting





C204 OFFICE STORAGE

AREA: 100 NSF

Occupants: None

Function: Enclosed storage room for files, office supplies, promotional materials, etc.
Shared by Campus Rec Administration and Intramurals staff

Adjacency: Adjacent to Copy / Print Station, easily accessible by all staff

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: None
Doors: 3' x 7' wood door, locking

Equipment: Wall-mounted, adjustable steel shelving, 12"-18" deep, in a portion of room

Furnishings: File cabinets

Mechanical: Minimal ventilation

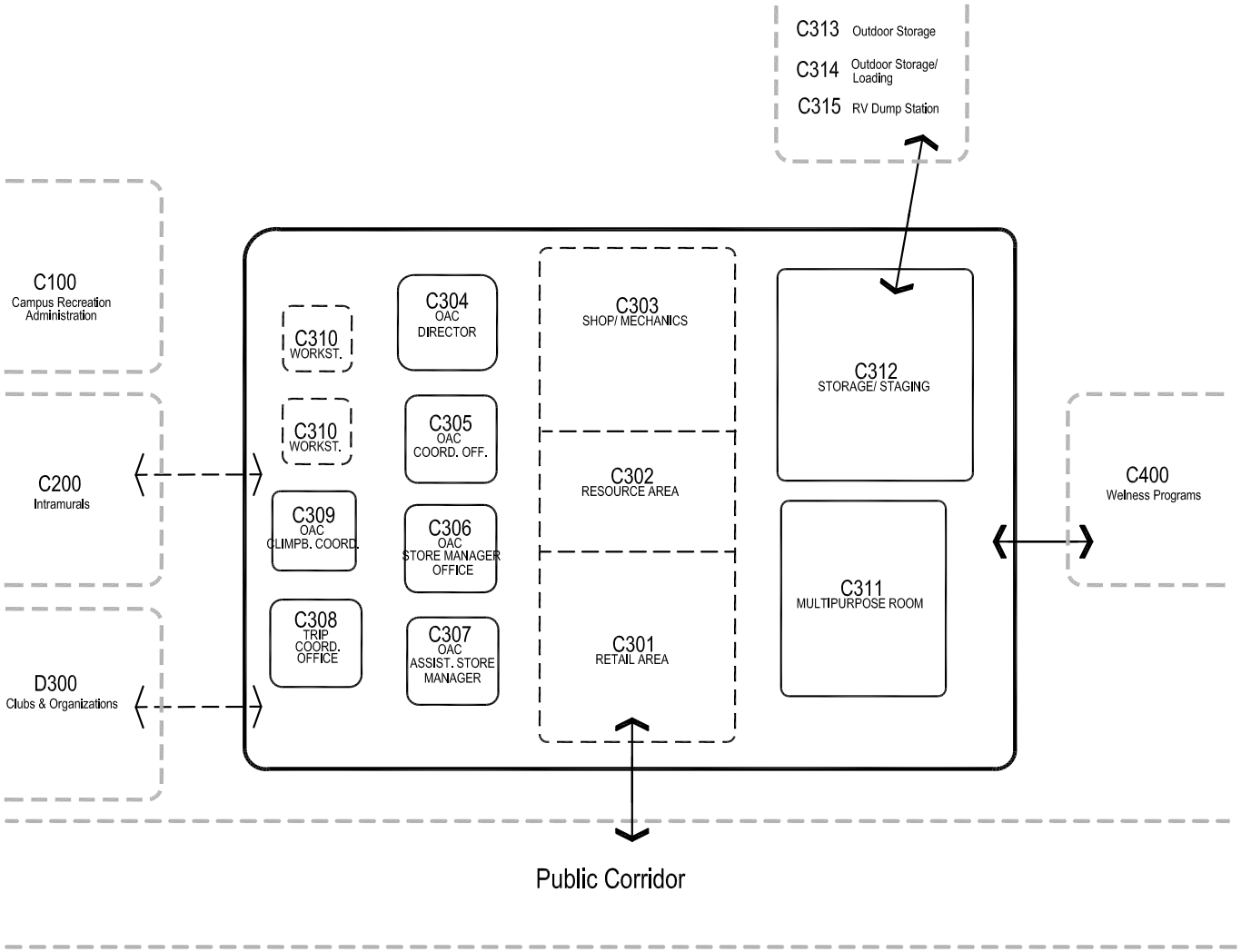
Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

Notes:

OUTDOOR ADVENTURE CENTER (OAC)

TOTAL AREA: 4,082 GSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
C	**Campus Recreation**															
	Outdoor Adventure Center (OAC)															
C301	Retail Area	1	800	800	1,000	1,220	8 AM-6 PM	public	Y	Y	M	40	72-74°F		
C302	Resource Area	1	600	600	750	915	8 AM-6 PM	public	Y	Y	M	30	72-74°F		
C303	Shop / Mechanics	1	600	600	750	915	8 AM-6 PM	controlled	Y	Y	M	50	72-74°F		M
C304	OAC Director Office	1	150	150	200	243	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C305	OAC Coordinator Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C306	OAC Store Manager Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C307	OAC Asst. Store Manager Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C308	OAC Trip Coordinator Office	1	120	120	160	195	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C309	OAC Climbing Wall Coord. Wkstn.	1	80	80	112	137	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C310	Trip Leader Workstation	2	36	72	101	123	8 AM-6 PM	controlled	Y	M	Y	50	72-74°F		
C311	Multipurpose Room	1	500	500	625	763	8 AM-6 PM	controlled	M	M	M	40	72-74°F		
C312	Storage / Staging	1	800	800	1,000	1,220	8 AM-6 PM	secure	N	N	N	15	72-74°F		Y
	Not included in total Gross Square Feet:															
C313	Outdoor Storage	1	2,000	2,000	2,000	2,000	N/A	secure		NA		0.5	no HVAC		
C314	Outdoor Staging / Loading	1	0	0	0	0	N/A	public		NA		2	no HVAC		
C315	RV Dump Station	1	0	0	0	0	N/A	secure		NA		2	no HVAC		
				4,082	5,176	6,314										



OUTDOOR ADVENTURE CENTER (OAC)
ADJACENCY DIAGRAM

C301 RETAIL AREA

800 NSF

Occupants: OAC staff; OAC participants and retail customers

Function:
Sale and / or rental of outdoor recreation equipment, literature and maps
Video-viewing area
Entry to OAC area

Adjacency: Public corridor; Retail, Resource & Shop / Mechanics Areas will be adjacent to each other in a single open space (Retail at entry & Resource in center)

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height minimum
Windows: Natural light desired
Glass storefront or windows separating Retail Area from public corridor
Possible interior window into Multipurpose Room
Door: Wood or storefront system glass door; locking

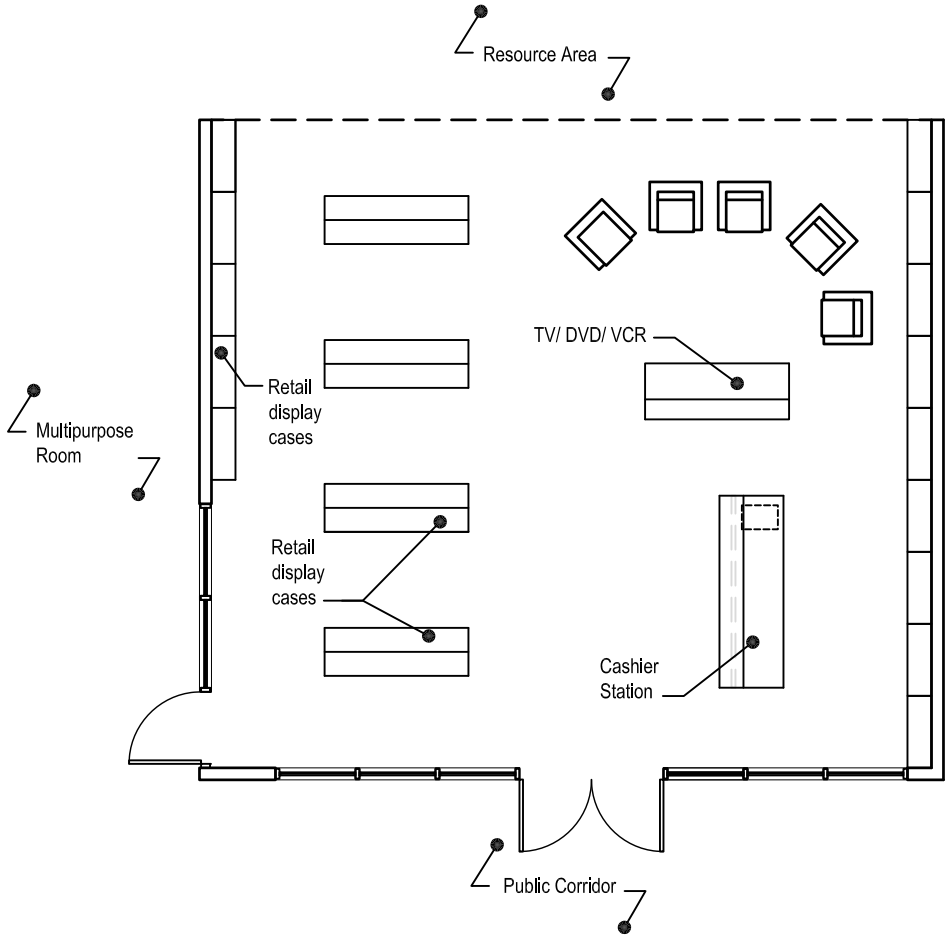
Equipment:
Retail display shelving; movable retail display casework/ cabinets, with glass fronts
Millwork sales / service counter with point of sale computer
TV / DVD / VCR

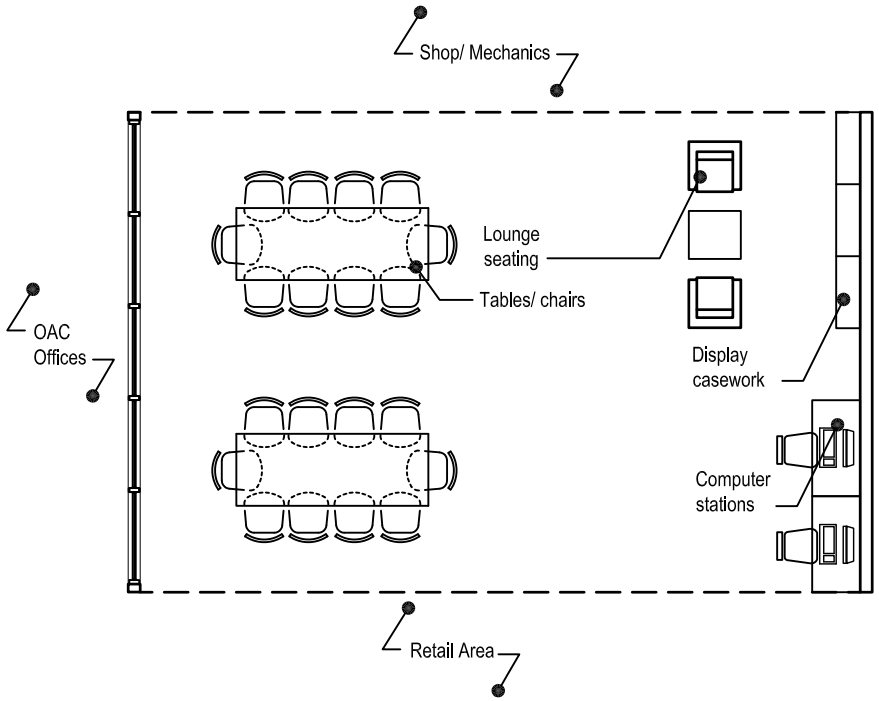
Furnishings: Lounge seating (4-6 people)

Mechanical: Shared HVAC zone

Electrical:
Duplex electrical outlets per code
Electrical and voice / data as needed for computer and video viewing equipment
Fluorescent parabolic lighting and specialty retail lighting

Notes: OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms





C302 RESOURCE AREA

AREA: 600 NSF

Occupants: Up to 25 people; OAC staff, participants, and retail customers

Function: Lounge and informal meeting space for groups of 8-25 people; trip planning & discussion
Individual research using computer, or printed or audio-visual resource materials

Adjacency: Retail, Resource & Shop / Mechanics Areas will be adjacent to each other in a single open space (Retail at entry & Resource in center)

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height minimum
Windows: Natural light desired
Door: None

Equipment: 2 computers
TV / DVD / VCR
Built-in casework for displaying books, maps, literature, DVDs, brochures

Furnishings: (2) 8'L x 3'W tables with 8 chairs each
Lounge seating
2 computer stations with desk chairs

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Electrical and voice / data as needed for computers and AV equipment
Fluorescent parabolic lighting and display lighting

Notes: OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms

C303 SHOP / MECHANICS

AREA: 600 NSF

Occupants: OAC staff

Function: Equipment repair & tune-up (bicycles, snowboards, ski's, etc.

Adjacency: Retail, Resource & Shop / Mechanics Areas will be adjacent to each other in a single open space
Shop / Mechanics separated from Resource by free-standing service counter
Storage / Staging adjacent

Environment:

Floor: Carpet tile
Walls: Painted CMU or gypsum board
Ceiling: Acoustic tile; 10'-0" minimum
Windows: Natural light desired
Open service window into Storage / Staging
Door: Hollow metal door to Storage / Staging

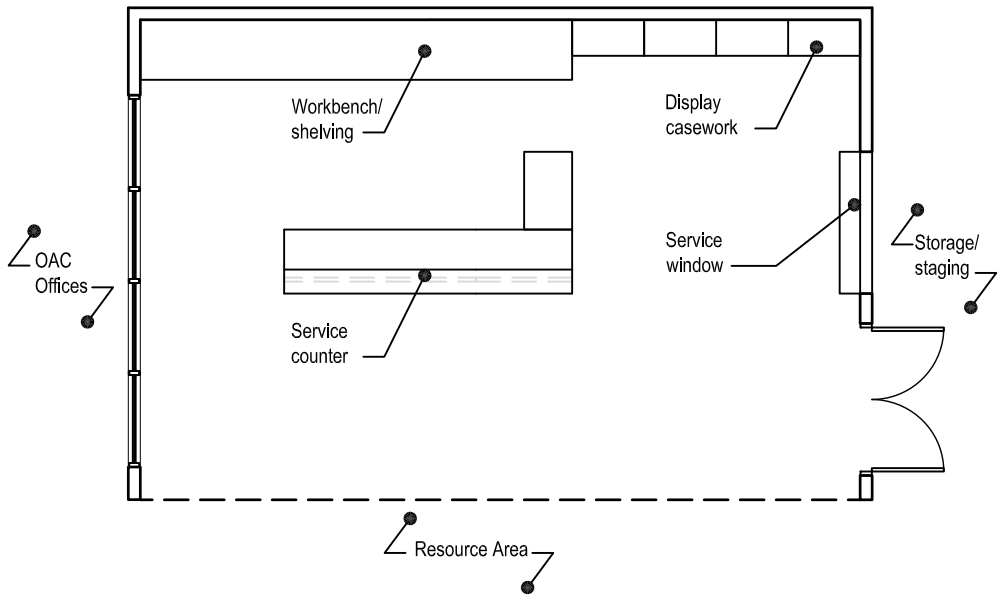
Equipment: None

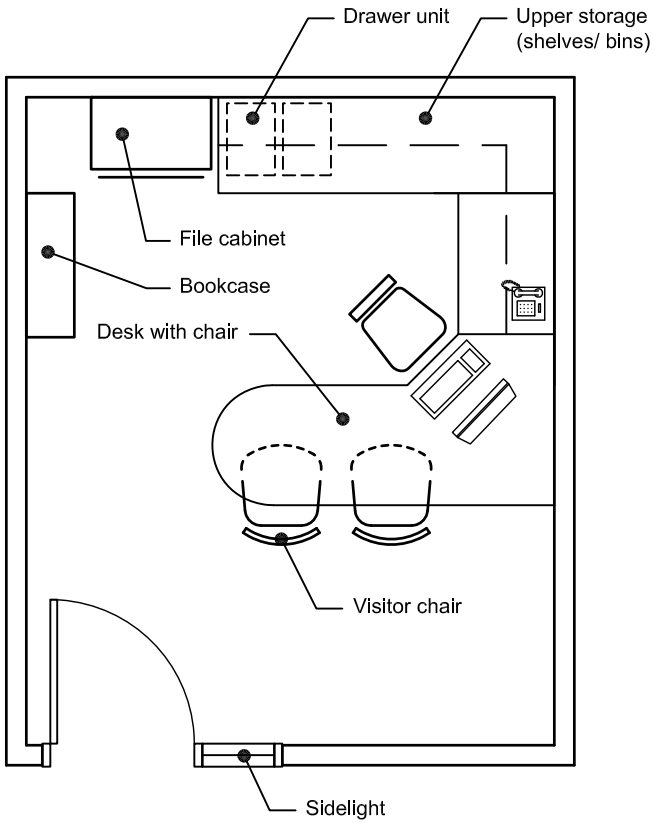
Furnishings: Millwork service counter into Resource Area
Workbench, shelving units, tools

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code at workbench
Fluorescent parabolic lighting; task lighting at workbench

Notes: OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms





C304 OAC DIRECTOR OFFICE

AREA: 150 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within OAC office area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: OAC office area: accessed from OAC Retail Area; behind a locking door
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms

C305 OAC COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within OAC office area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

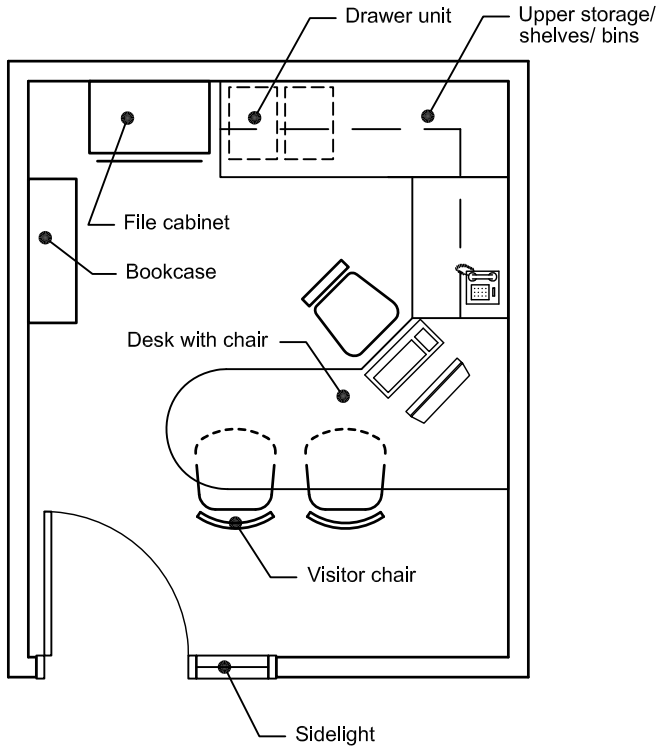
Equipment: Computer; telephone

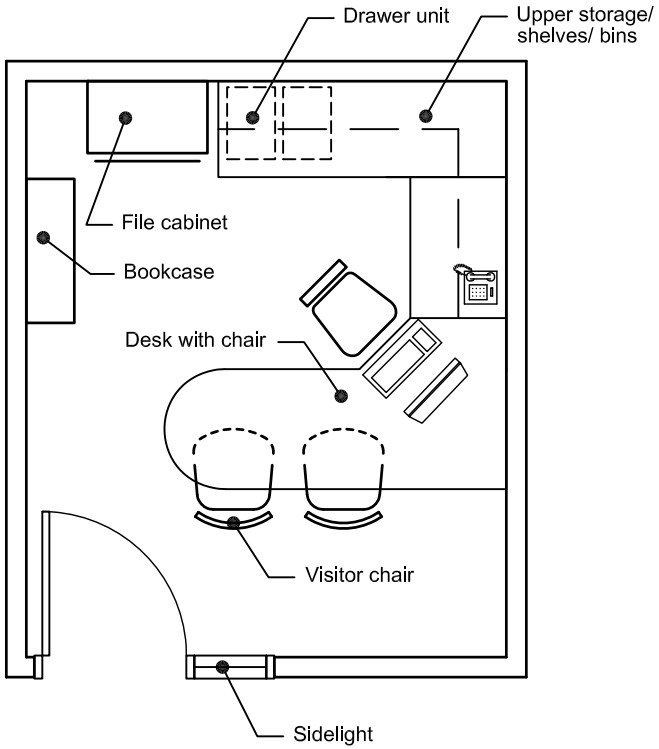
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: OAC office area: accessed from OAC Retail Area; behind a locking door
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms





C306 OAC STORE MANAGER OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within OAC office area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Interior window to Retail Area
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: OAC office area: accessed from OAC Retail Area; behind a locking door
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms

C307 OAC ASST. STORE MANAGER OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within OAC office area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

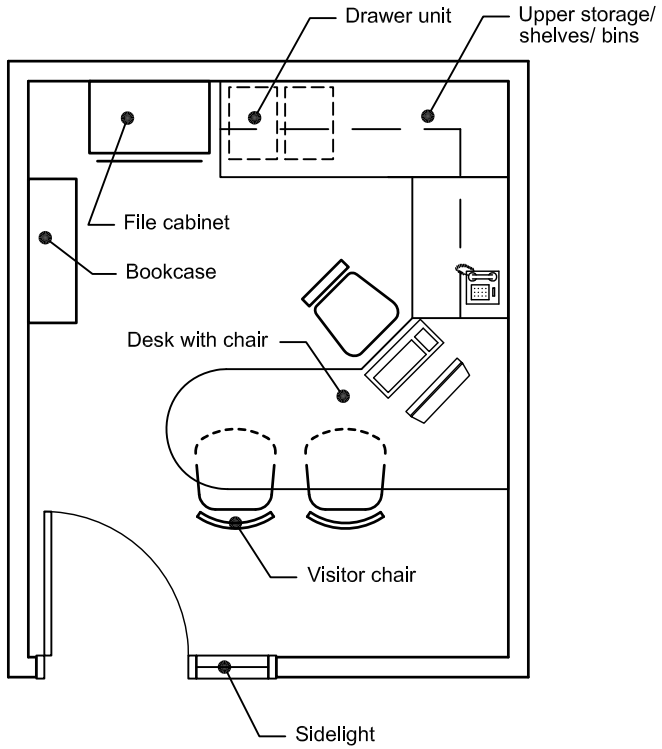
Equipment: Computer; telephone

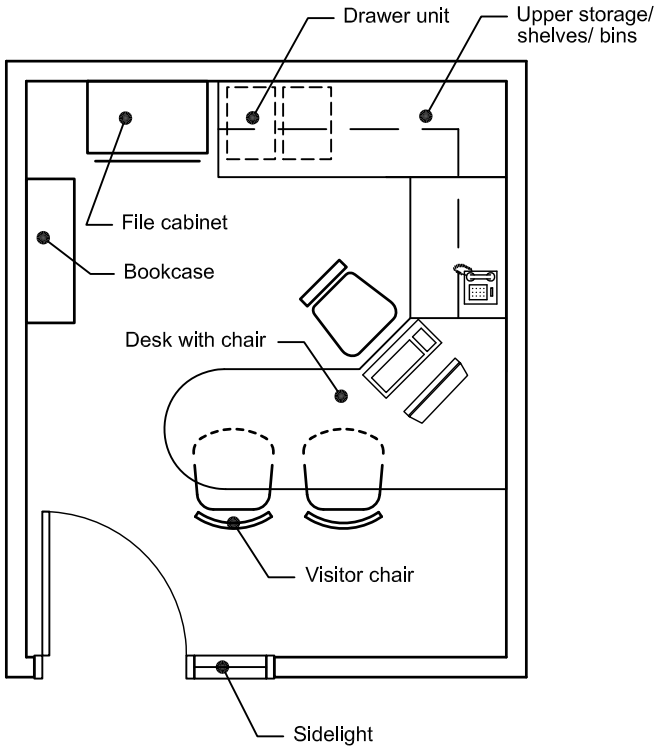
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: OAC office area: accessed from OAC Retail Area; behind a locking door
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms





C308 OAC TRIP COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within OAC office area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: OAC office area: accessed from OAC Retail Area; behind a locking door
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms

C309 OAC CLIMBING WALL COORD. WORKSTATION

AREA: 80 NSF

Occupants: 1 occupant

Function: Open office workstation

Adjacency: Within OAC office area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired in open office area
Door: None

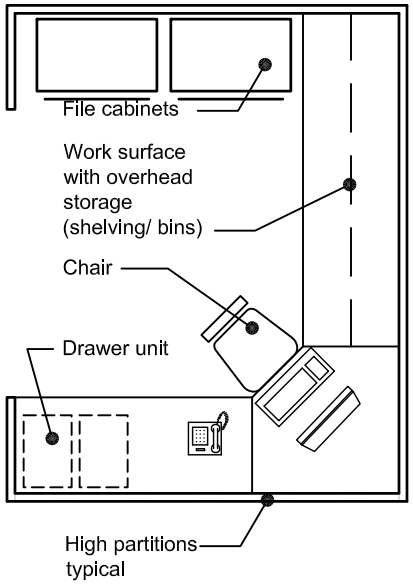
Equipment: Computer; telephone

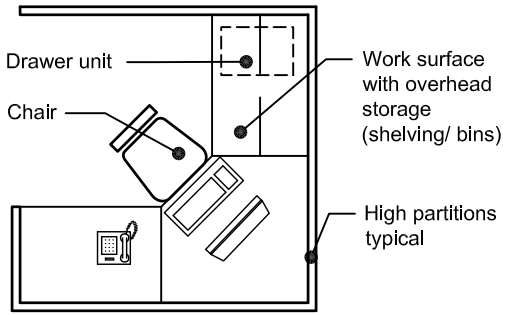
Furnishings: U-shaped open office workstation with shelving, storage bins, and drawers
Desk chair

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes: OAC office area: accessed from OAC Retail Area; behind a locking door
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms





C310 TRIP LEADER WORKSTATION

AREA: 36 NSF

Occupants: 1 occupant

Function: Open office workstation shared by OAC Trip Leaders who plan and manage OAC trips

Adjacency: 2 workstations; located within OAC office area

Environment:

- **Floor:** Carpet tile
- **Walls:** Painted gypsum board
- **Ceiling:** Lay-in acoustic tile; 10' height
- **Windows:** Exterior windows with window coverings desired in open office area
- **Door:** None

Equipment: Computer; telephone

Furnishings: L-shaped open office workstation with shelving, storage bins, and drawers
Desk chair

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes: OAC office area: accessed from OAC Retail Area; behind a locking door
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms

C311 MULTIPURPOSE ROOM

AREA: 500 NSF

Occupants: Up to 24 people

Function:
Trip planning meetings
Staff training
Rec-related clinics, classes or seminars (first-aid, etc.)
Will be used primarily in the late afternoon / evening

Adjacency:
Within or directly adjacent to OAC retail area; separated from it by an interior window if possible
Direct access from a public corridor is desirable, to facilitate evening use, and use by other groups
Access point near OAC service entrance / loading area is desirable, to facilitate pre- and post-trip meetings

Environment:

Floor:	VCT (must be easy to clean)
Walls:	Painted gypsum board
Ceiling:	Lay-in acoustic tile; 10' height minimum
Windows:	Interior window(s) to OAC Retail/Resource/Shop Areas
Door:	3' x 7' wood door, locking

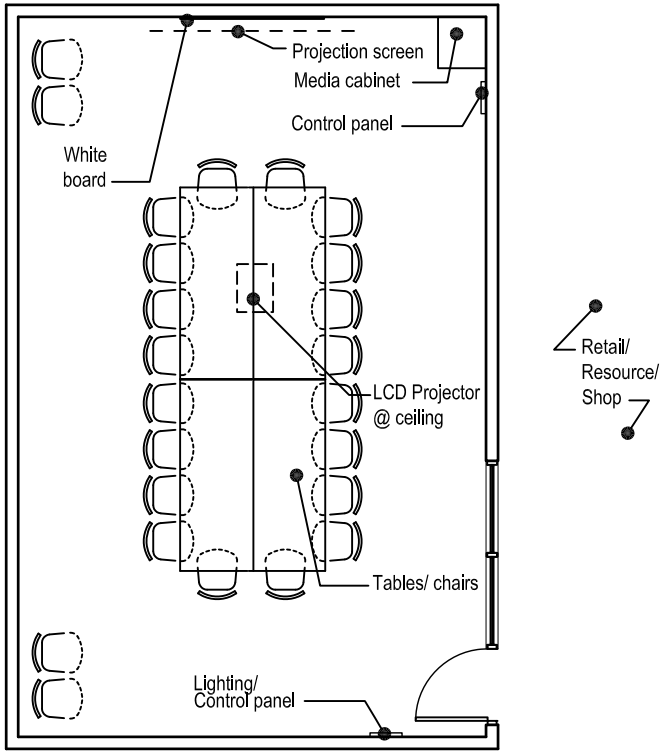
Equipment:
White board, 8'W x 5'H
Ceiling-mounted LCD projector
Projection screen
Media cabinet / credenza & wall-mounted control station
Telephone

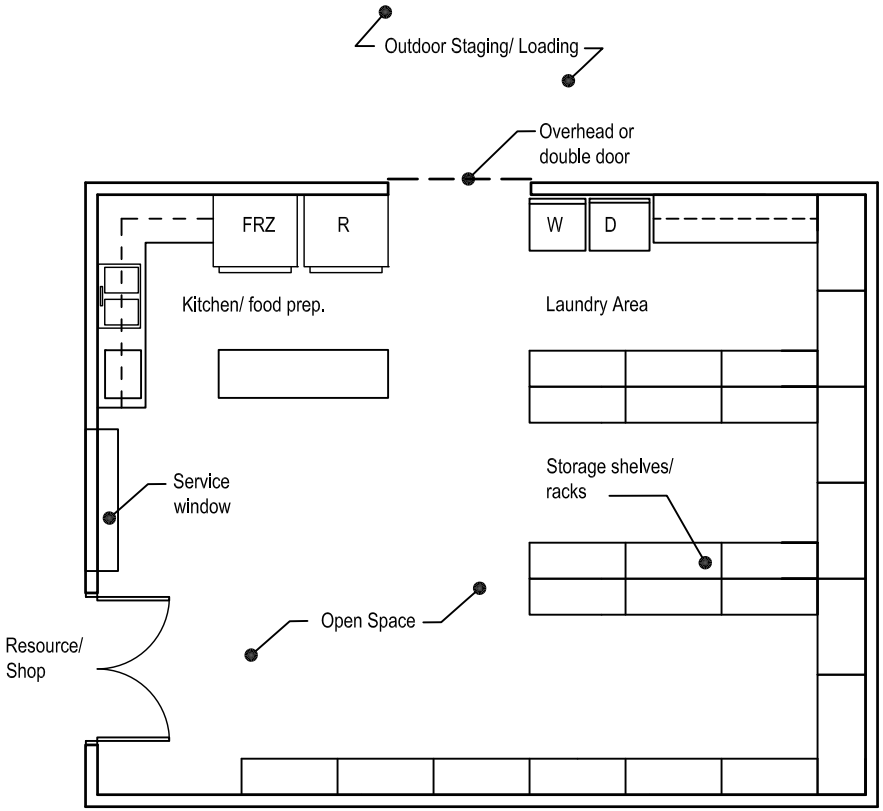
Furnishings: (4) 8'L x 3'W movable tables; 24 chairs

Mechanical: Dedicated HVAC zone

Electrical:
Electrical wall outlets per code
Electrical / data outlets as needed for AV equipment
Light fixtures that allow for varying light levels & support the use of AV

Notes: Could be shared with other Campus Recreation groups, in particular Wellness, if adjacent





C312 STORAGE/STAGING

AREA: 800 NSF

Occupants: OAC staff and trip participants

Function:
Equipment storage, preparation & staging for trips or rentals
Equipment cleaning / hose-off
Laundry area: trip preparation & clean-up
Kitchen area: storage & preparation of food for trips

Adjacency: Outdoor Storage, Retail / Resource / Shop Areas

Environment:

Floor: Sealed concrete
Walls: Painted CMU
Ceiling: Open upper structure; 12' minimum height
Windows: Open service window into Shop / Mechanics
Doors: Double 3' x 7' wood door, locking, into Shop / Mechanics area
Overhead or double 3' door to Outdoor Staging / Loading

Equipment:
Millwork cabinets / countertop with kitchen sink; with storage cabinets & drawers above and below
Refrigerator; freezer; microwave
Residential clothes washer and dryer

Furnishings: Large adjustable shelving racks

Mechanical: Hose bibb and floor drain(s)

Electrical:
Duplex electrical outlets per code and as needed for equipment
Compact fluorescent lighting

Notes: OAC and Wellness should be adjacent if possible, to allow

C313 OUTDOOR STORAGE

AREA: 2,000 NSF

Occupants: OAC staff

Function: Secure, covered storage of large outdoor rental & trip equipment

Adjacency: Outdoor Staging / Loading
Easily accessible from interior Storage / Staging

Environment:

Floor: Concrete
Walls: Wall or fenced enclosure (secure)
Ceiling: Overhead covering provided by roof, or by parking / Student Life building structure
Windows: None
Doors: Pair 6' gates (12' overall width), locking, to loading area

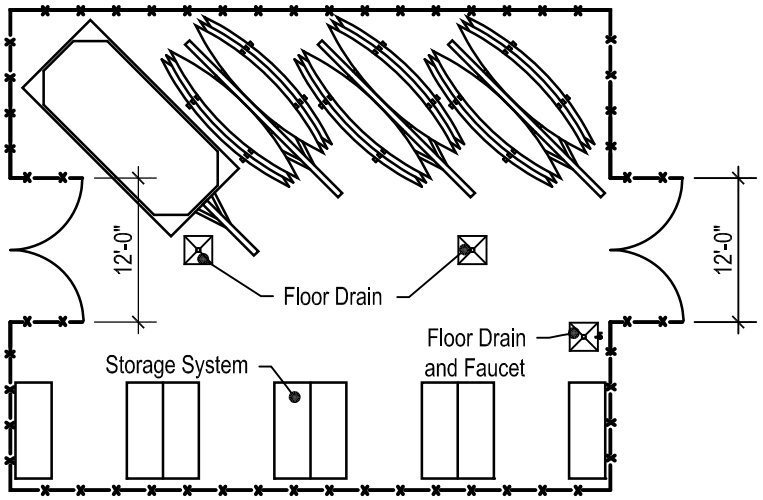
Equipment: Stored equipment includes large items such as trailers, canoes & kayaks (on racks), paddleboards, etc.

Furnishings: Shelving and equipment racks

Mechanical: Hose bibb and outdoor drain

Electrical: Exterior lighting

Notes:



C314 OUTDOOR STAGING/LOADING

AREA: 0 NSF

Occupants: OAC staff, trip participants, and people renting OAC equipment

Function: Trip loading / unloading
Rental equipment pick-up / drop-off
Parking space for golf cart / OAC vehicles

Adjacency: Outdoor Storage, interior Storage / Staging

Environment:

- **Floor:** Concrete
- **Walls:** None
- **Ceiling:** None
- **Windows:** None
- **Doors:** None

Equipment: None

Furnishings: None

Mechanical: None

Electrical: Outdoor lighting

Notes: Number of required parking spaces to be confirmed
Staging / Loading area should be at grade – no raised dock is needed

C315 RV DUMP STATION

AREA: 0 NSF

Occupants: None

Function: Station to empty / unload portable toilets rented by OAC or used on OAC trips

Adjacency: Outdoor Staging / Loading

Environment:

- **Floor:** Concrete
- **Walls:** None
- **Ceiling:** None
- **Windows:** None
- **Doors:** None

Equipment: xx

Furnishings: None

Mechanical: xx

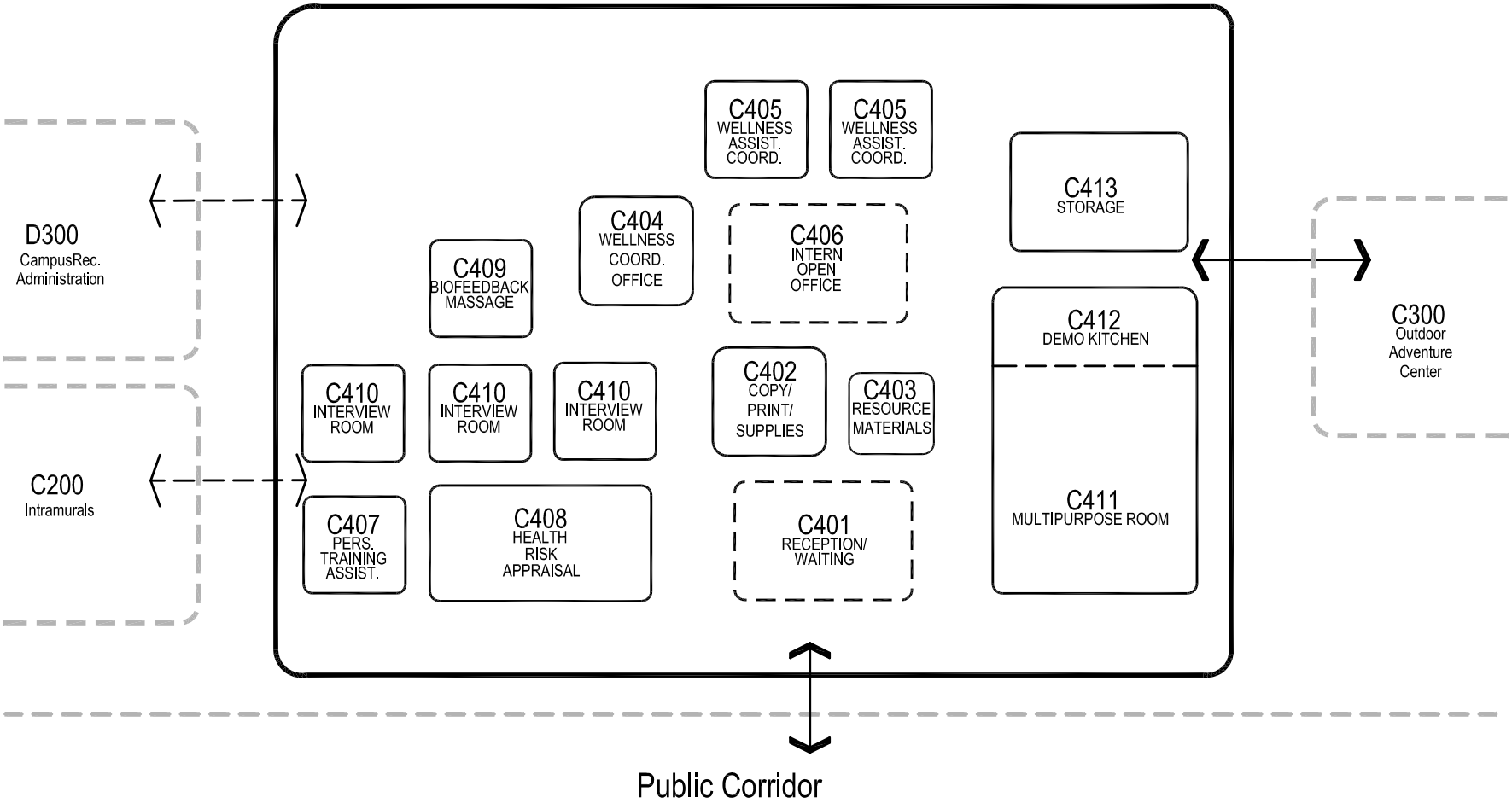
Electrical: xx

Notes:

WELLNESS PROGRAMS

TOTAL AREA: 2,578 SF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
C	**Campus Recreation**															
	Wellness Programs															
C401	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	M	30	72-74°F		
C402	Copy / Print / Supplies	1	120	120	160	195	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
C403	Resource Materials	1	48	48	67	82	8 AM-5 PM	secure	N	N	N	30	72-74°F		
C404	Wellness Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C405	Wellness Asst. Coordinator Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C406	Intern Open Office	1	200	200	266	325	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
C407	Personal Training Assessment	1	100	100	133	162	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
C408	Health Risk Appraisal	1	300	300	399	487	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
C409	Biofeedback / Massage	1	100	100	133	162	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
C410	Interview Room	3	100	300	399	487	8 AM-5 PM	controlled	M	M	M	40	72-74°F		
C411	Multipurpose Room	1	500	500	625	763	8 AM-5 PM	controlled	Y	Y	M	40	72-74°F		
C412	Demonstration Kitchen	1	150	150	200	243	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
C413	Storage	1	200	200	266	325	8 AM-5 PM	secure	N	N	N	15	55-85°F		
				2,578	3,392	4,138										



WELLNESS PROGRAMS
ADJACENCY DIAGRAM

C401 RECEPTION/WAITING

AREA: 200 NSF

Occupants: 1 occupant and up to 4 waiting visitors

Function: Entry, reception and control point for Wellness

Adjacency: Entry point to Wellness space; high-visibility location in non-controlled portion of building
Adjacent to OAC office area, if Wellness & OAC are adjacent

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Glass storefront or windows separating Reception from public corridor
Door: Wood door or storefront system glass door; locking

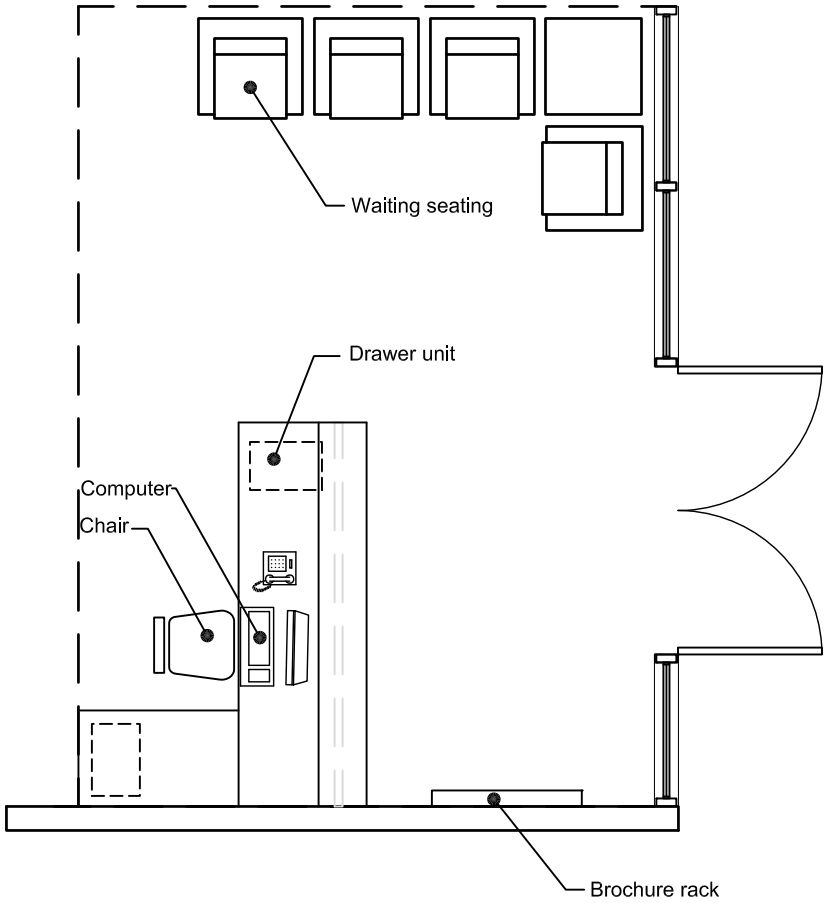
Equipment: Computer; telephone at reception station

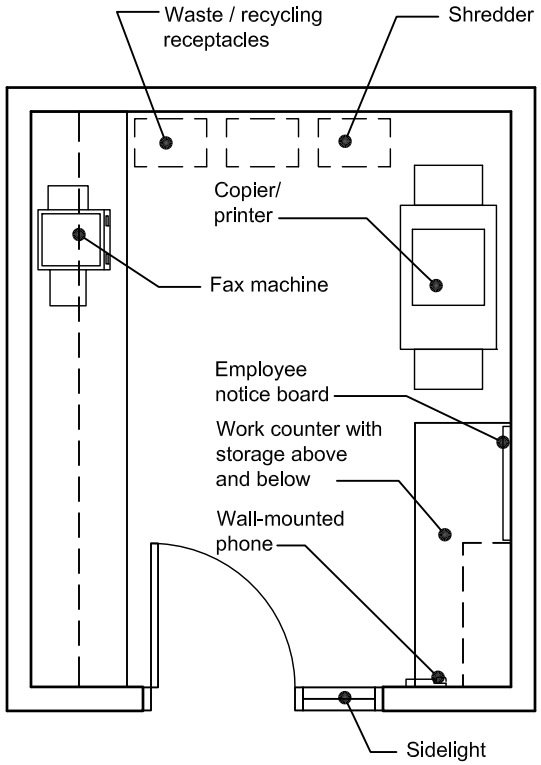
Furnishings: 50 SF systems furniture reception station with drawer units and transaction counter
Desk chair
4 waiting chairs with occasional table(s)
Brochure rack for display of informational materials

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Voice / data outlets for reception station equipment
Fluorescent parabolic lighting

Notes: Wellness entry and reception point should be as open and welcoming as possible
OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms
Informational materials will also be displayed in the public corridor outside Wellness entrance





C402 COPY/PRINT/SUPPLIES

AREA: 120 NSF

Occupants: None

Function:
Enclosed room for shared office equipment
Workspace for collating, assembling, etc.
Storage for office supplies / materials

Adjacency:
Location within Wellness that is easily accessible to staff
Easily accessible to OAC staff, if Wellness & OAC are adjacent

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment:
Copier / printer; fax machine; shredder
Wall-mounted telephone
Millwork countertops with storage cabinets and / or drawers above and below
Employee notice board

Furnishings: Waste and recycling receptacles

Mechanical:
Dedicated HVAC zone
Exhaust

Electrical:
Electrical wall outlets per code
Electrical and voice / data outlets for copier / printer, fax machine and telephone
Electrical outlets above countertop
Fluorescent parabolic lighting

Notes:: OAC and Wellness should be adjacent if possible, to allow sharing of Reception, Copy / Print / Supplies, and Multipurpose Rooms

C403 RESOURCE MATERIALS

AREA: 48 NSF

Occupants: None

Function: Enclosed room for storage of Wellness resource materials, for check-out to clients

Adjacency: Adjacent to Receptionist, who will control access and materials check-out

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: None
Door: 3' x 7' wood door, locking

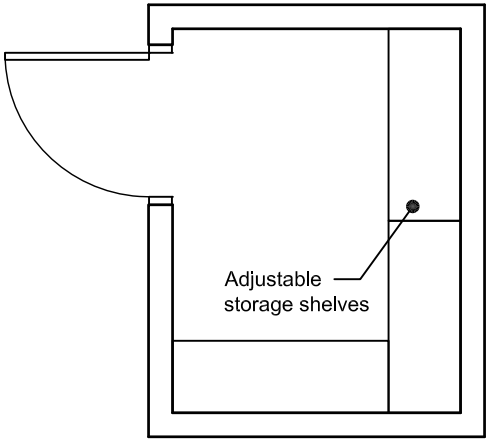
Equipment: None

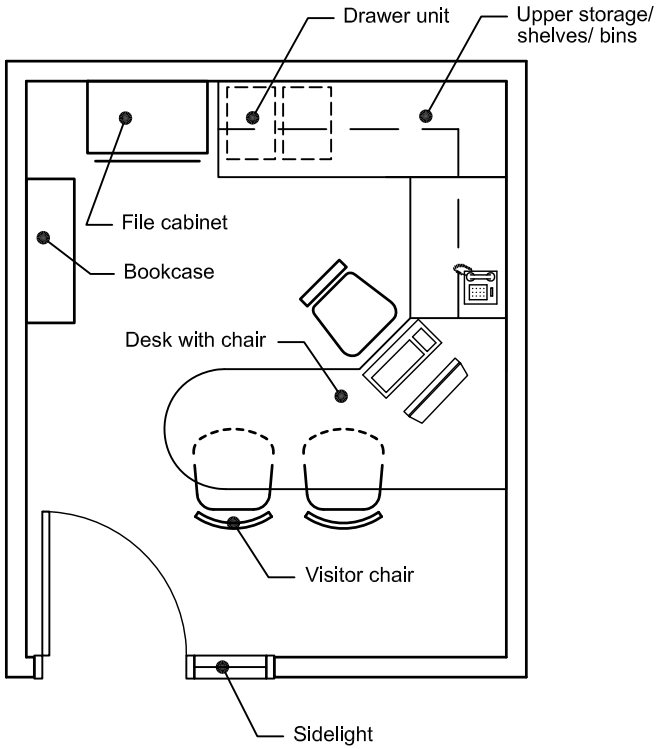
Furnishings: Adjustable storage shelving units

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Fluorescent parabolic lighting

Notes: Items stored include printed & AV materials; free weights; exercise bands; etc.





C404 WELLNESS COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Locate beyond Reception / Waiting, with easy access to assessment and appraisal spaces

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

C405 WELLNESS ASST. COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Locate beyond Reception / Waiting, with easy access to assessment and appraisal spaces

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

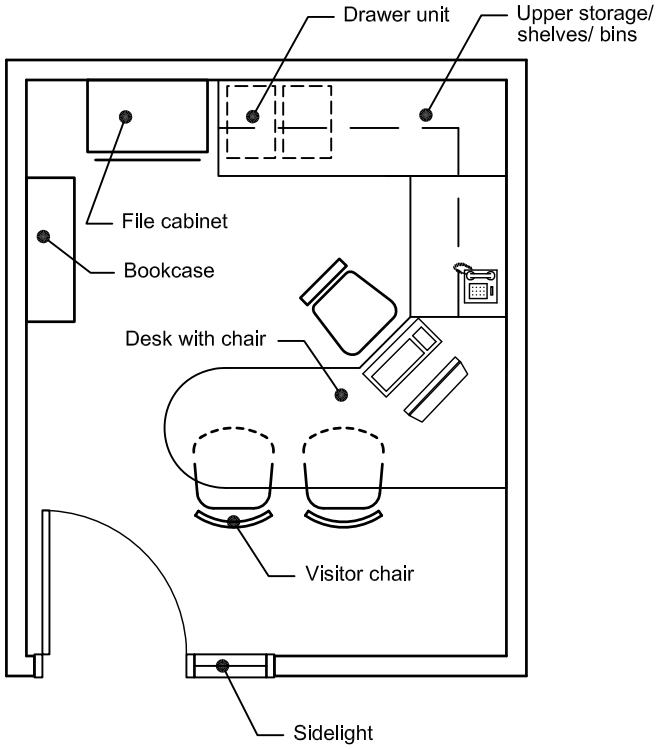
Equipment: Computer; telephone

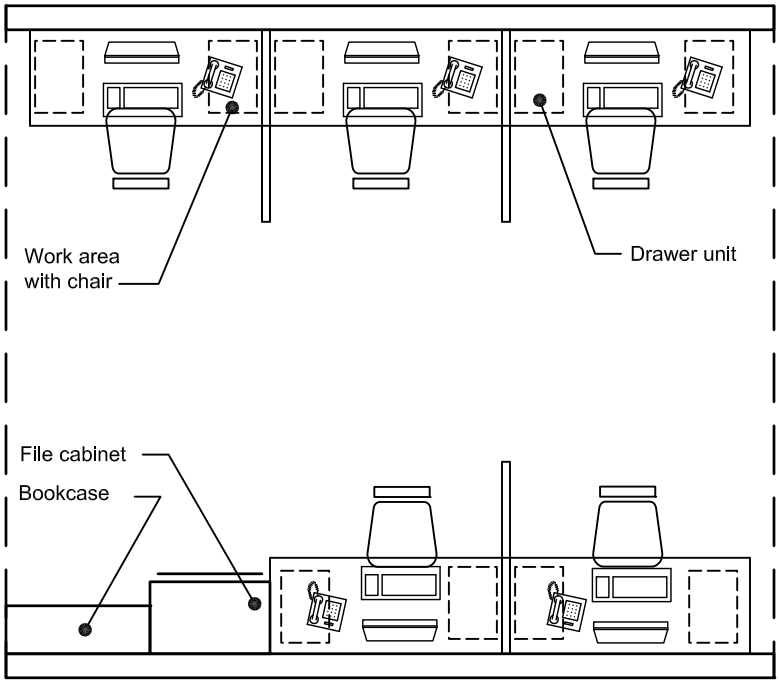
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





C406 INTERN OPEN OFFICE

AREA: 200 NSF

Occupants: Up to 5 occupants

Function: Open office workspace space shared by Wellness interns; locking drawers provide space for interns to store their personal belongings

Adjacency: Locate beyond Reception / Waiting, with easy access to assessment and appraisal spaces

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Door: None

Equipment: 5 computers; 5 telephones

Furnishings: 5 work spaces, 5'W, for shared use by 10 Wellness interns; with locking drawers
5 desk chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
5 sets of electrical and voice / data outlets for computers & telephones
Fluorescent parabolic lighting

Notes:

C407 PERSONAL TRAINING ASSESSMENT

AREA: 100 NSF

Occupants: Wellness staff & clients

Function: Enclosed room for Wellness staff to work one-on-one with clients on assessments and personal training, including demonstrations of equipment use

Adjacency: Easily accessible from Wellness Reception area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Door: 3' x 7' wood door, locking

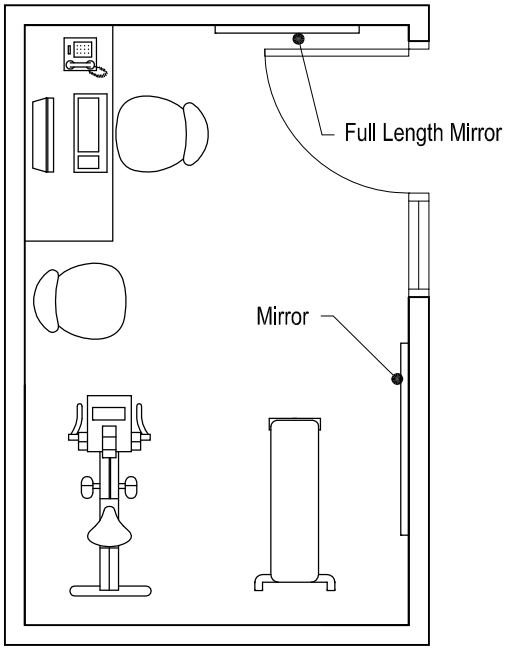
Equipment: Health assessment equipment
Telephone; computer
Full-height mirror(s)

Furnishings: 2 chairs
Small worksurface/desk
Graphs & posters with personal training/health assessment information

Mechanical: Shared HVAC zone

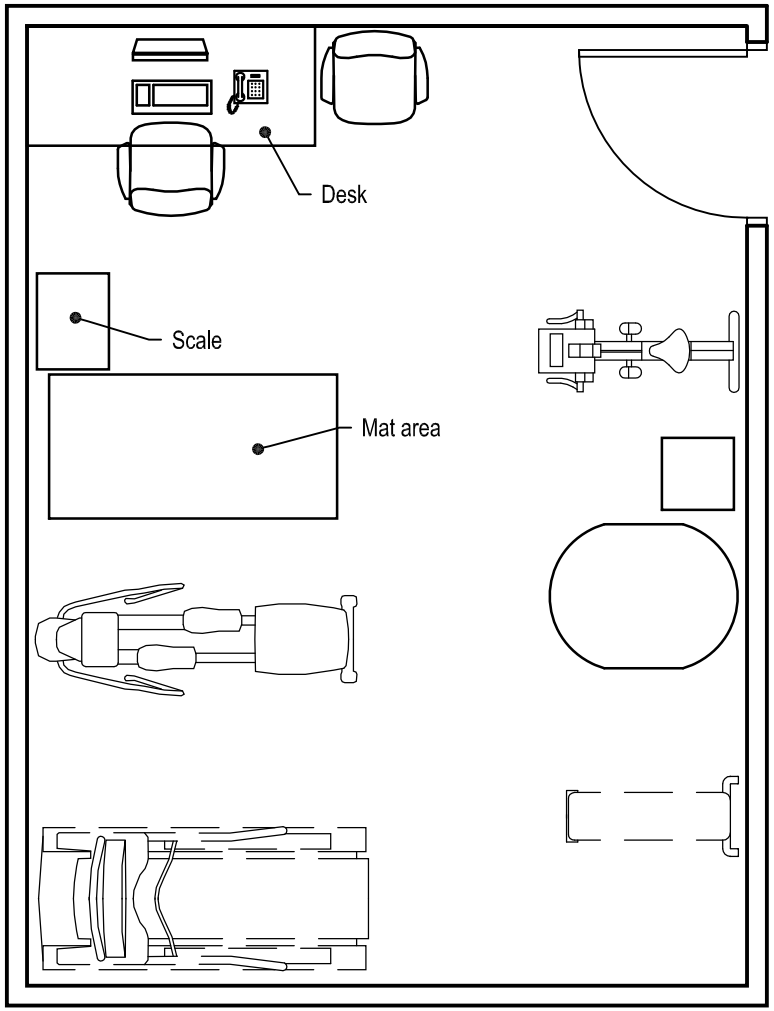
Electrical: Duplex electrical outlets per code
Electrical and voice/data outlets as needed for equipment
Fluorescent parabolic lighting

Notes:



C408 HEALTH RISK APPRAISAL

AREA: 300 NSF



Occupants: Wellness staff & clients

Function: Enclosed room with permanent set-up of equipment used in assessing client health status

Adjacency: Easily accessible from Wellness Reception area

Environment:

Floor: Special sports flooring (SSF)
Walls: Painted gypsum board with SSF base
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Sidelight at entry door
Door: 3'-6" x 7' wood door, locking

Equipment: 6 health risk appraisal stations: Treadmill, elliptical trainer, scale, stretching mat, bench press, body fat assessment device
Computer; telephone

Furnishings: Small desk or worksurface
2 chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical and voice/data outlets as needed for equipment at each station, and computer & telephone
Fluorescent parabolic lighting

Notes:

C409 BIOFEEDBACK/MASSAGE

AREA: 100 NSF

Occupants: Wellness staff & clients

Function:
Enclosed room used for biofeedback and regularly scheduled massage therapy
May function as an interview room when not being used for its primary functions

Adjacency: Easily accessible from Wellness Reception area

Environment:

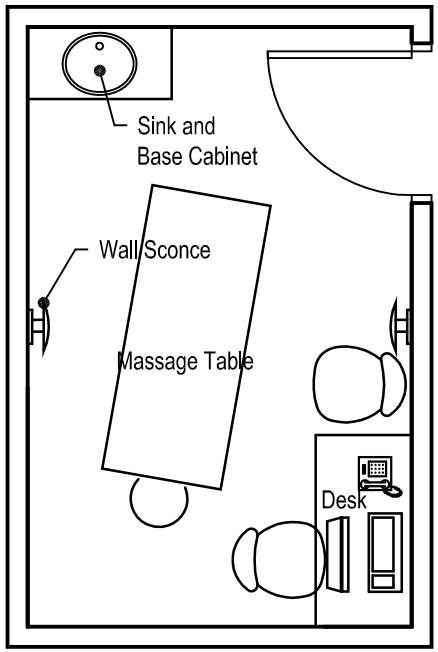
Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: None
Doors: 3' x 7' wood door, locking

Equipment:
Biofeedback machine, small sound system
Millwork base cabinet with hand-washing sink
Computer & telephone

Furnishings:
Massage table
2 chairs
Consultation/work desk
Movable screen for visual privacy of primary functions

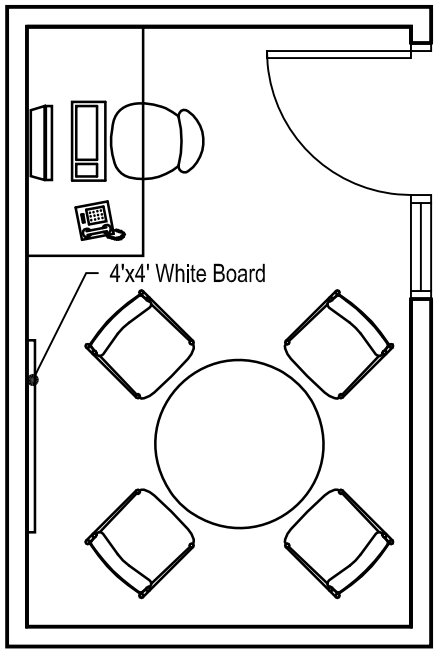
Mechanical: Shared HVAC zone

Electrical:
Duplex electrical outlets per code
Electrical and voice / data outlets as needed for equipment
Fluorescent parabolic lighting
Wall sconce lighting, switched independently of overhead lighting



C410 INTERVIEW ROOM

AREA: 100 NSF



Occupants: Wellness staff & clients

Function: Enclosed room for interviews with clients

Adjacency: Easily accessible from Wellness Reception area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment: Computer; telephone
Wall-mounted white board, 4' x 4'

Furnishings: 42" diameter table with 4 chairs
Consultation/work desk with chair

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical and voice / data outlets for computer and telephone
Fluorescent parabolic lighting

Notes:

C411 MULTIPURPOSE ROOM

AREA: 500 NSF

Occupants: Up to 30 people

Function: Enclosed room for Wellness classes, workshops, groups, cooking demonstrations, etc.
Will be used primarily from 8 AM – 5 PM

Adjacency: Separated from Demonstration Kitchen by movable partition
Within or directly adjacent to Wellness area
Direct access from a public corridor is desirable, to facilitate evening or weekend use, and use by other groups

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height minimum
Windows: Sidelight at entry door
Doors: 3' x 7' wood door, locking
Movable panel partition, minimum STC 45, with recessed storage pocket

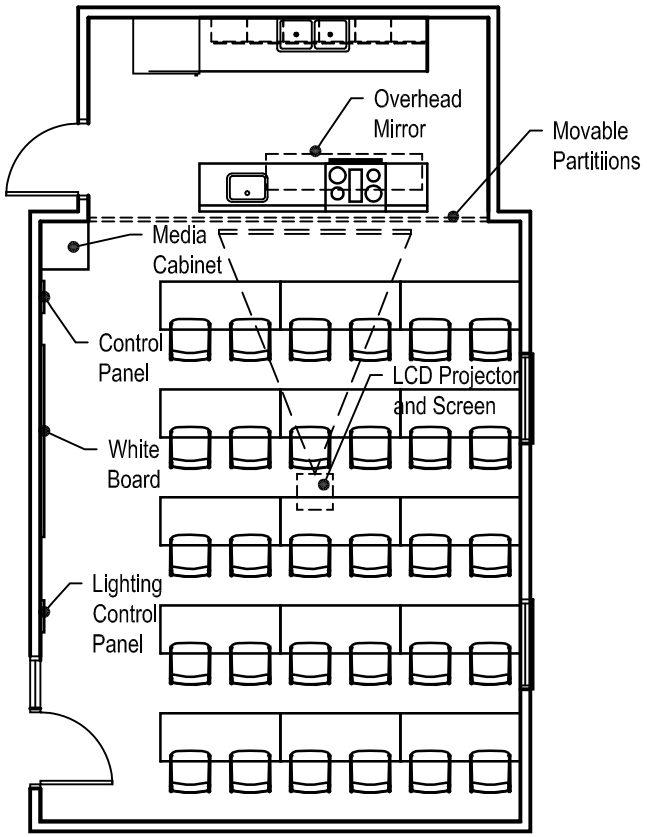
Equipment: White board, 8'W x 5'H
Ceiling-mounted LCD projector
Projection screen
Media cabinet / credenza & wall-mounted control station
Telephone

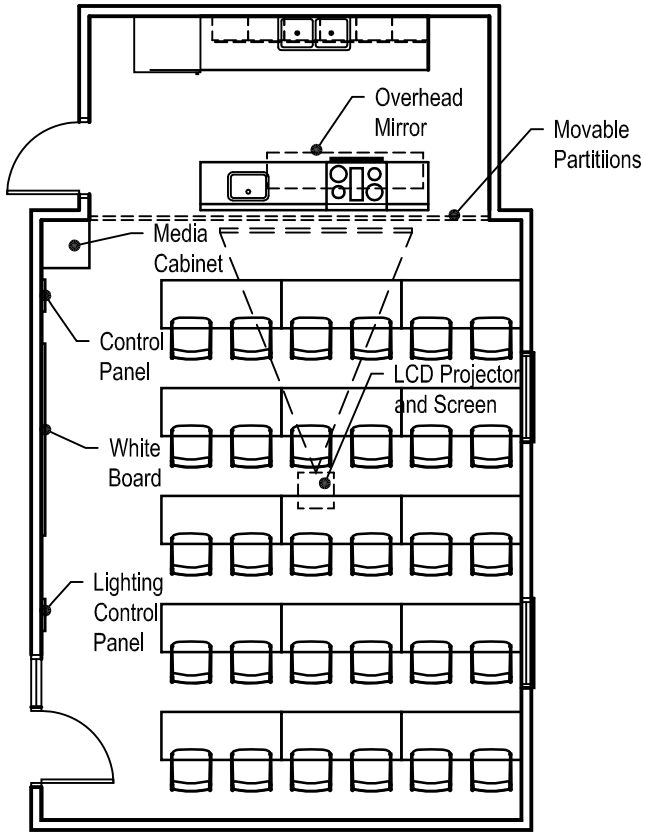
Furnishings: Movable tables, 30 chairs

Mechanical: Dedicated HVAC zone

Electrical: Electrical wall outlets per code
Light fixtures that allow for varying light levels & support the use of AV system

Notes: Could be shared with other Campus Recreation groups, in particular OAC, if adjacent





C412 DEMOSTRATION KITCHEN

AREA: 150 NSF

Occupants: Wellness staff / visitors preparing & staging cooking demonstrations

Function: Enclosed room for preparing & staging cooking demonstrations

Adjacency:
Separated from Multipurpose Room by movable partition
Within or directly adjacent to Wellness area
Direct access from a public corridor is desirable, to facilitate evening or weekend use, and use by other groups

Environment:

Floor: Hard surface flooring (ceramic tile, VCT, etc.)

Walls: Painted gypsum board; moisture-impervious surfaces at sink area

Ceiling: Painted gypsum board or washable acoustical tile; 10' height minimum

Windows: Sidelight at entry door

Doors: 3' x 7' wood door, locking
Movable panel partition, minimum STC 45, with recessed storage pocket

Equipment:
Millwork cabinets / countertops with kitchen sink; with storage cabinets & drawers
Millwork demonstration Island with cooktop; with overhead mirror, or overhead camera connected to projection surface in Multipurpose Room and/or corridor
Refrigerator; dishwasher; oven; microwave

Furnishings: None

Mechanical:
Dedicated HVAC zone
Exhaust

Electrical:
Duplex electrical outlets per code
Electrical and voice / data for camera and AV equipment
Electrical outlets as needed for appliances / equipment
Compact fluorescent ambient lighting
Task lighting to support demonstration and projection functions

C413 STORAGE

AREA: 200 NSF

Occupants: None

Function: Enclosed storage room for materials used in Wellness Multipurpose Room

Adjacency: Adjacent to Multipurpose Room; accessed from a public corridor adjacent to Multipurpose Room, to facilitate access when events take place in the evening or on weekends

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: None
Doors: 3' x 7' wood door, locking

Equipment: Table and chair dollies

Furnishings: Adjustable steel shelving units, 12"-18" deep, in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

Notes:

4D: STUDENT ACTIVITIES

The Student Activities spaces will be in the non-controlled portion of the building, on the public corridor, in an area that is easy to locate and with fairly high visibility. It would be beneficial for them to be located near the Sorenson Student Center, to facilitate collaboration and interaction with Student Life groups with offices in the Student Center.

Student Activities Staff is a self-contained office suite for Student Activities administration and advisors. The suite consists primarily of office space. It will have a Work Room with shared office equipment, storage, and publicity materials and equipment. This suite should be separate from but adjacent and easily accessible to the Student Government and Clubs & Organizations offices.

Shared Spaces should be located between Student Government and Clubs & Organizations. The Reception / Lounge will serve as the access point for both groups, and the Copy / Print / Supplies, Conference Room, Student Council Conference Room, and Staging Area will be used by both.

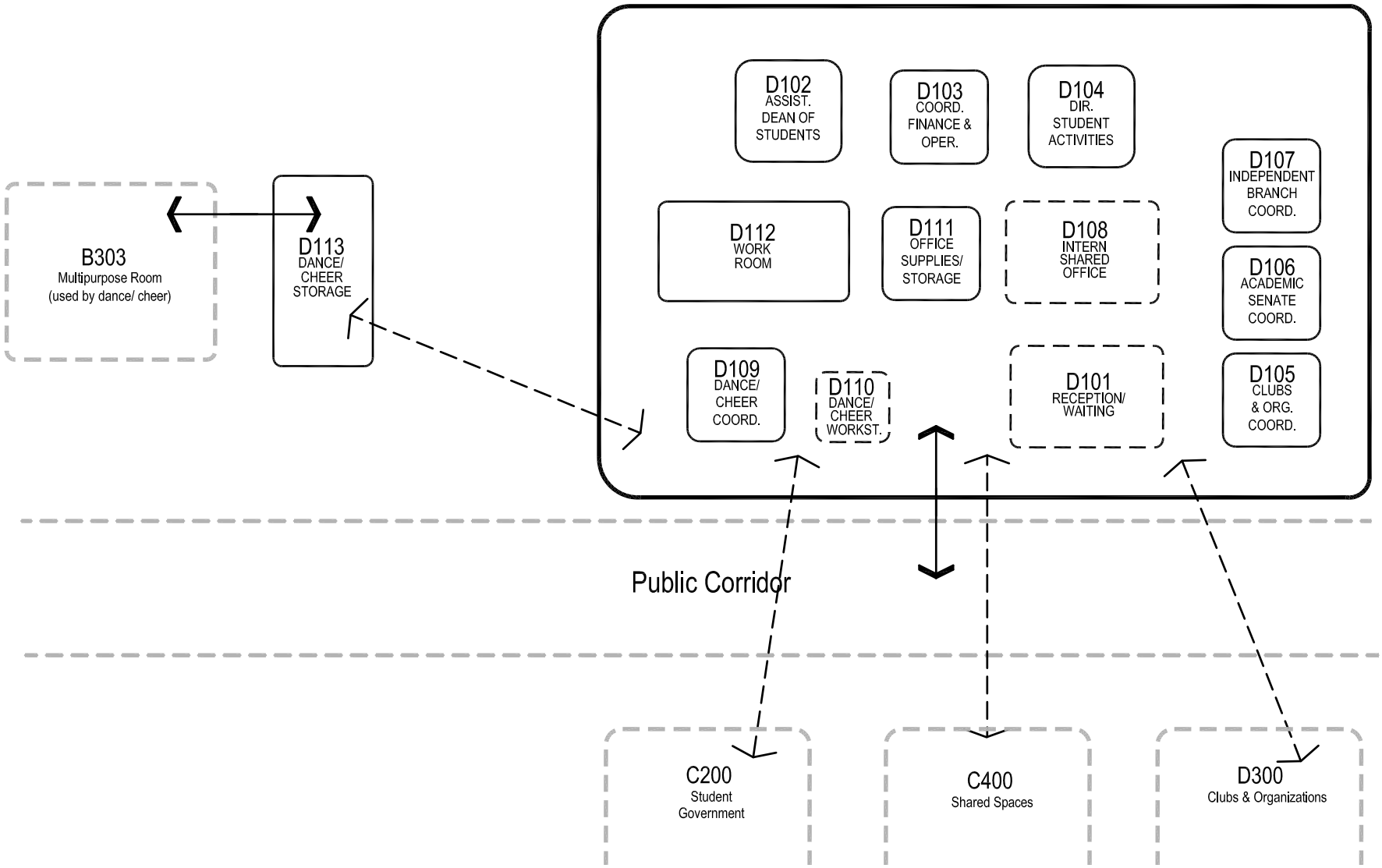
Student Government consists of four private offices for student body officers, a large open office space with 32 shared-use Student Council workstations, a Publicity / Work Room for making posters, banners and other materials supportive of Student Government events, and a Storage Room. The Storage Room should be near the shared Staging Area; both should have easy access to a building (service) entrance.

Clubs & Organizations contains spaces that can be used by UVU student clubs for planning, collaborating, and creating publicity materials for their activities and events. The Student Lounge / Work Area will be a central shared work / hang-out space for students involved in Clubs & Organizations. At its perimeter will be office space and a Publicity / Work Room. This group will have Conference and Multipurpose Rooms that will be used for club meetings and activities. The Storage Room should be located near the shared Staging Area, with good access to a building (service) entrance.

D: STUDENT ACTIVITIES STAFF

TOTAL AREA: 2,080 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
D	**Student Activities**														
	Student Activities Staff														
D101	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	M	30	72-74°F		
D102	Assistant Dean of Students Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D103	Coord. of Finance & Oper. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D104	Director of Student Activities Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D105	Clubs & Orgs Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D106	Academic Senate Coord. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D107	Independent Branch Coord. Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D108	Intern Shared Office	1	180	180	239	292	8 AM-5 PM	controlled	Y	M	M	50	72-74°F		
D109	Dance/Cheer Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D110	Dance/Cheer Coord. Workstation	1	80	80	112	137	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
D111	Office Supplies / Storage	1	120	120	160	195	8 AM-5 PM	secure	N	N	N	15	72-74°F		
D112	Work Room	1	300	300	399	487	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
D113	Dance/Cheer Storage Room	1	300	300	399	487	8 AM-5 PM	secure	N	N	N	15	55-85°F		M
				2,080	2,772	3,382									



D: STUDENT ACTIVITIES STAFF
ADJACENCY DIAGRAM

D101 RECEPTION/WAITING

AREA: 200 NSF

Occupants: 1 occupant and up to 4 waiting visitors

Function: Entry, reception & waiting area for Student Activities Staff office

Adjacency: Entry point to Student Activities Staff office space
Adjacent to Student Government and Clubs & Organizations offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Glass storefront or windows separating Reception from public corridor
Door: Wood door or storefront system glass door; locking

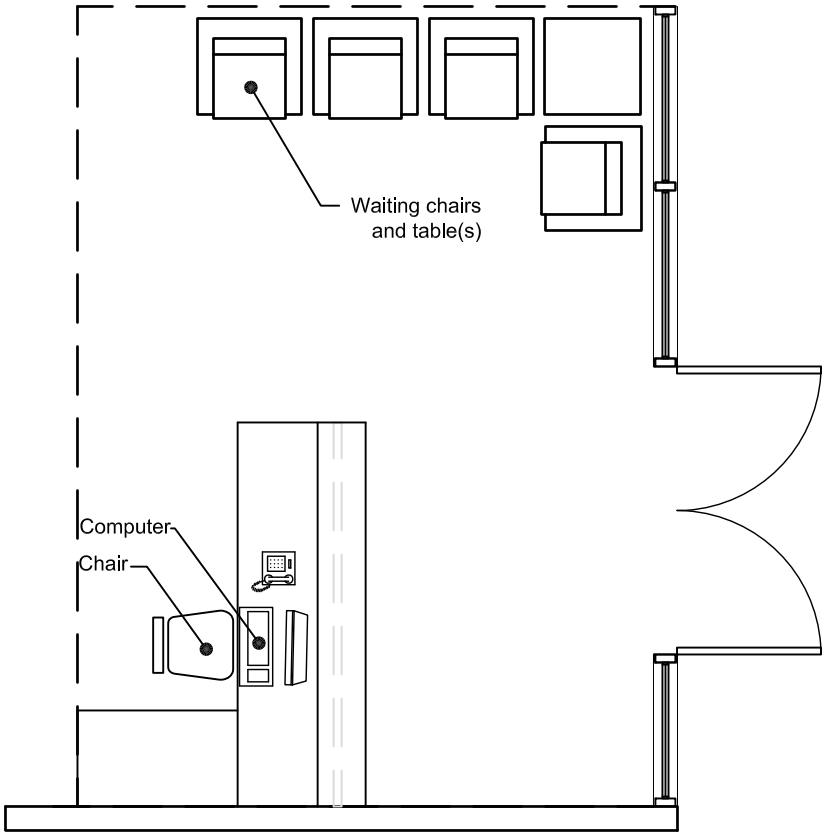
Equipment: Computer & telephone at reception station

Furnishings: 50 SF systems furniture reception station with drawer units and transaction counter
Desk chair
4 waiting chairs with occasional table(s)

Mechanical: Shared HVAC zone

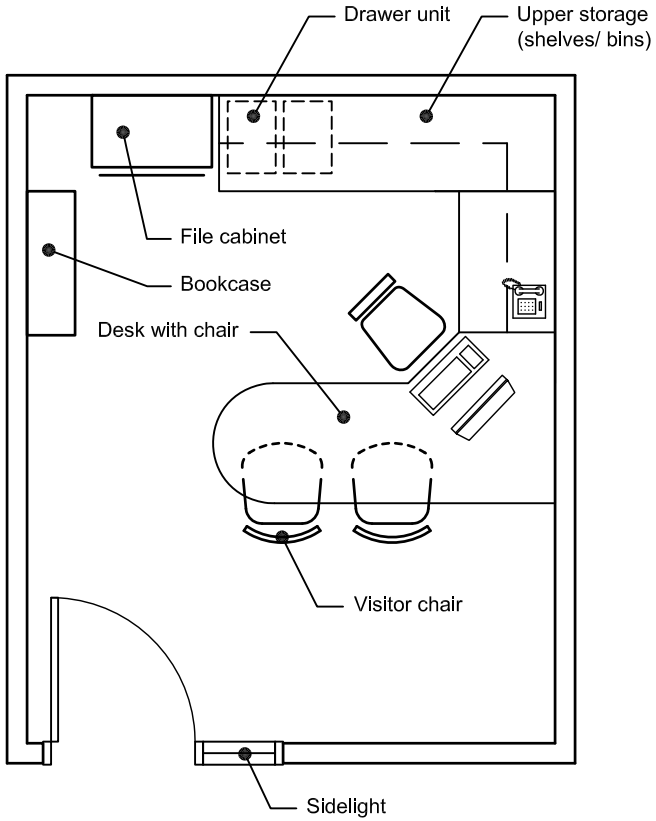
Electrical: Duplex electrical outlets per code
Voice / data outlets for reception station equipment
Fluorescent parabolic lighting

Notes:



D102 ASSISTANT DEAN OF STUDENTS OFFICE

AREA: 150 NSF



Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

D103 COORD. OF FINANCE & OPER. OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Near Assistant Dean of Students Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

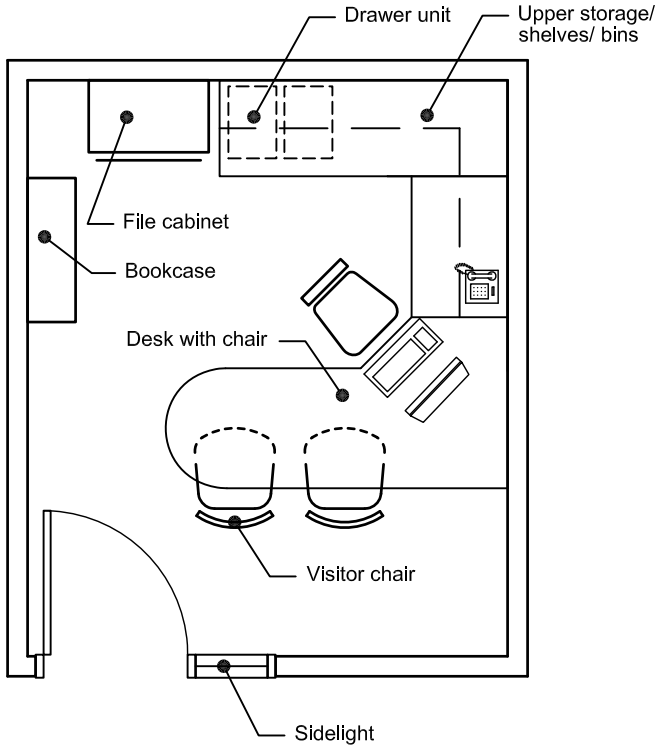
Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

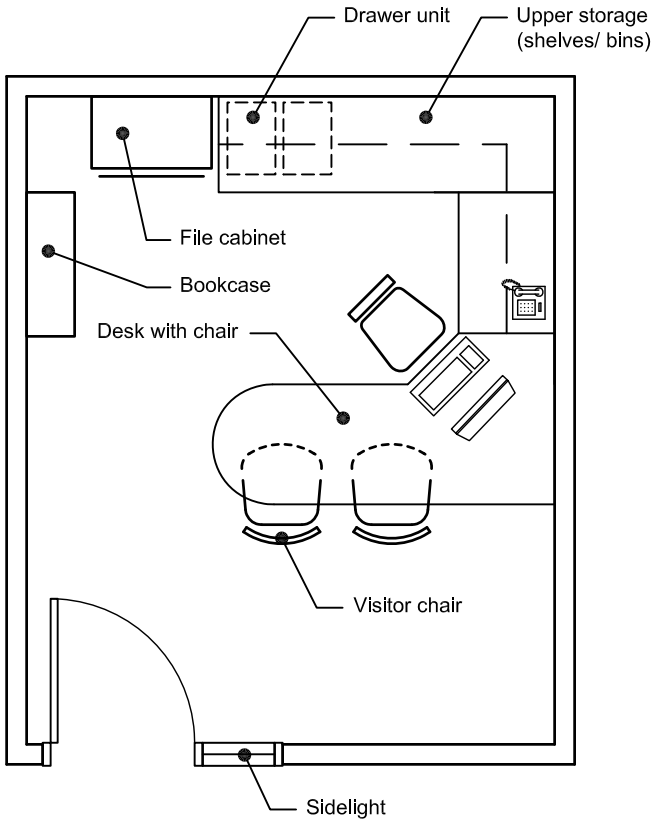
Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:



D104 DIRECT. OF STUDENT ACTIVITIES OFFICE

AREA: 150 NSF



Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

D105 CLUBS & ORGS COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easy access to Clubs & Organizations office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

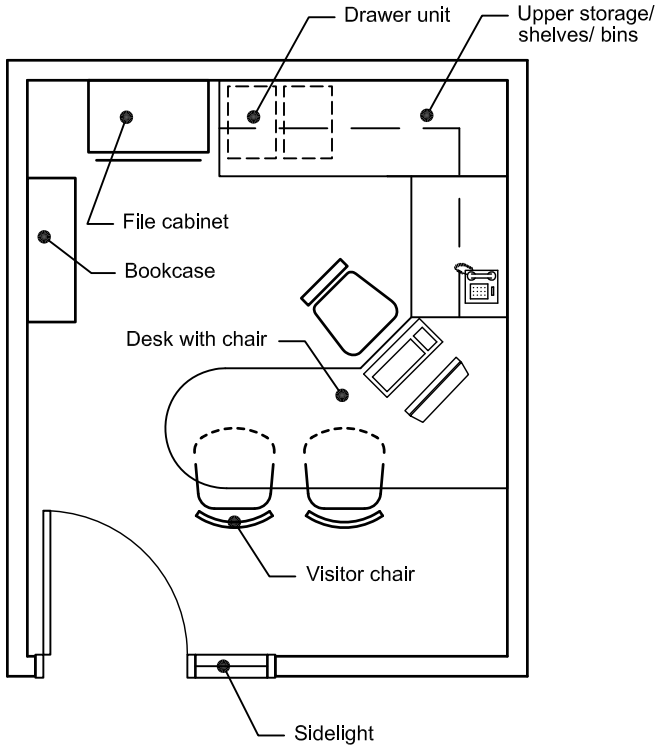
Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

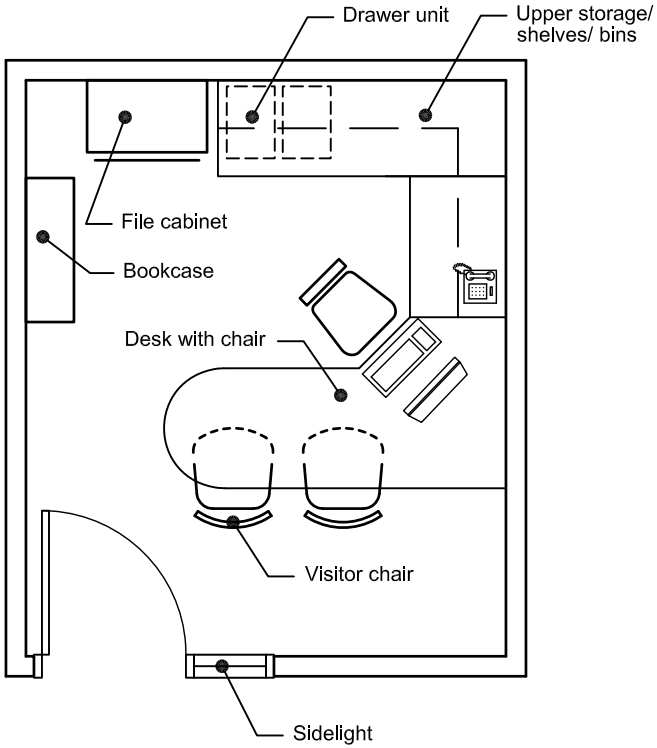
Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:



D106 ACADEMIC SENATE COORD. OFFICE

AREA: 120 NSF



Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easy access to Student Government office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

D107 INDEPENDENT BRANCH COORD. OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easy access to Orientation office space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

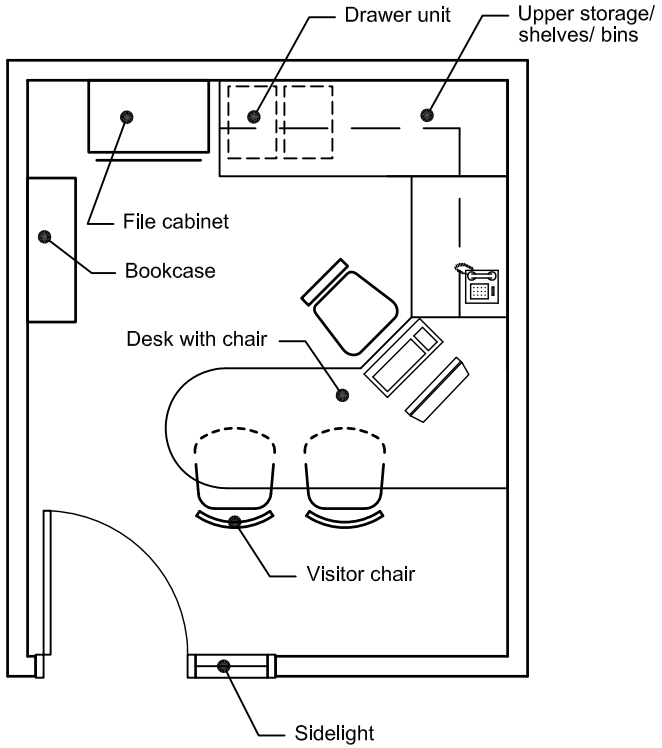
Equipment: Computer; telephone

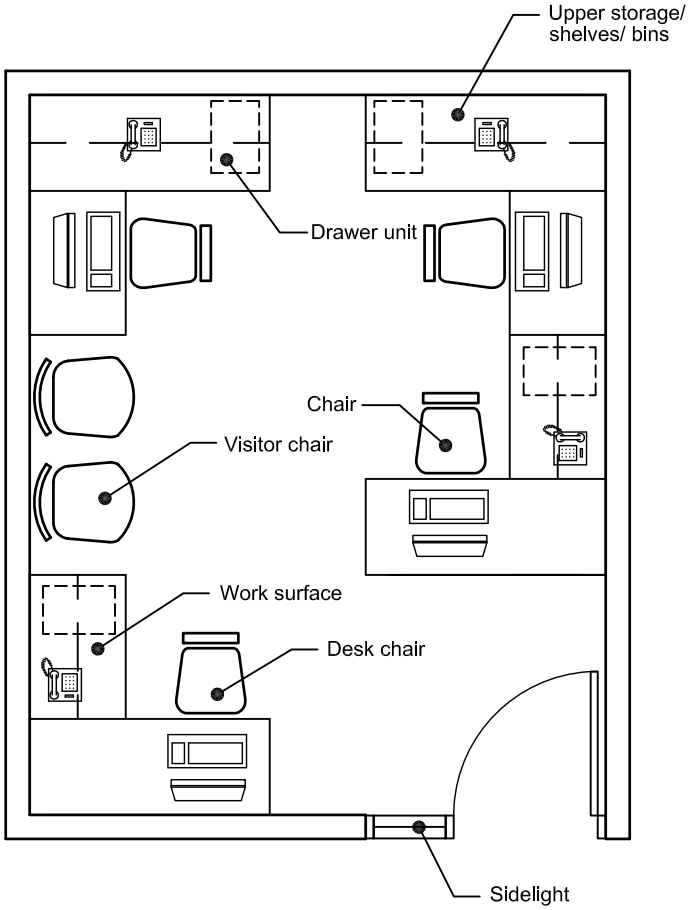
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





D108 INTERN SHARED OFFICE

AREA: 180 NSF

Occupants: 4 occupants and 2 visitors

Function: Enclosed office for shared use by 4 Interns

Adjacency: Near Director of Student Activities Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: 4 computers; 4 telephones

Furnishings: 4 L-shaped workstations or desks, approximately 25 NSF each; shelves or bins above; drawer units below
4 desk chairs
2 visitor chairs

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
8 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

D109 DANCE/CHEER COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Near Dance / Cheer Coordinator Workstation

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

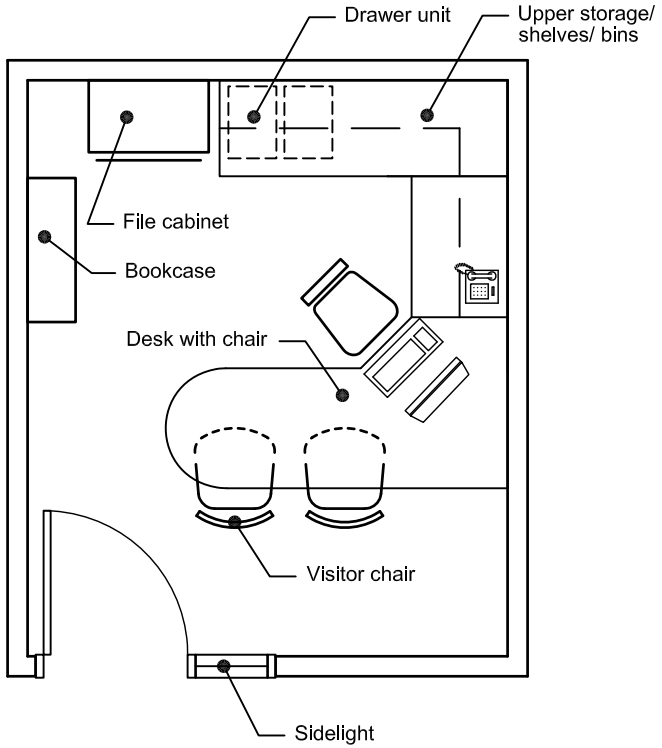
Equipment: Computer; telephone

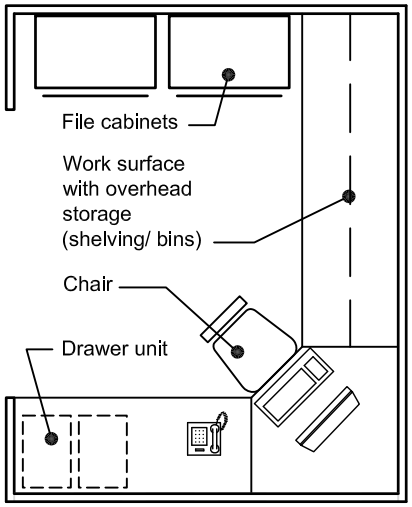
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





D110 DANCE/CHEER COORD. WORKSTATION

AREA: 80 NSF

Occupants: 1 occupant

Function: Open office workstation shared by 2 part-time Dance / Cheer Coordinators

Adjacency: Near Dance / Cheer Coordinator Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired in open office area
Door: None

Equipment: Computer; telephone

Furnishings: U-shaped open office workstation with shelving, storage bins, and drawers
Desk chair
File cabinets

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes:

D111 OFFICE SUPPLIES/STORAGE

AREA: 120 NSF

Occupants: None

Function: Series of 6 enclosed storage closets, 3'D x 6'W, each with locking door; storage of supplies and equipment used by Student Activities Staff on a daily basis

Adjacency: Central location within Student Activities Staff office space, easily accessed by all staff

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Painted gypsum board; 10' height
Windows: None
Door: (6) 3' x 7' wood doors, locking

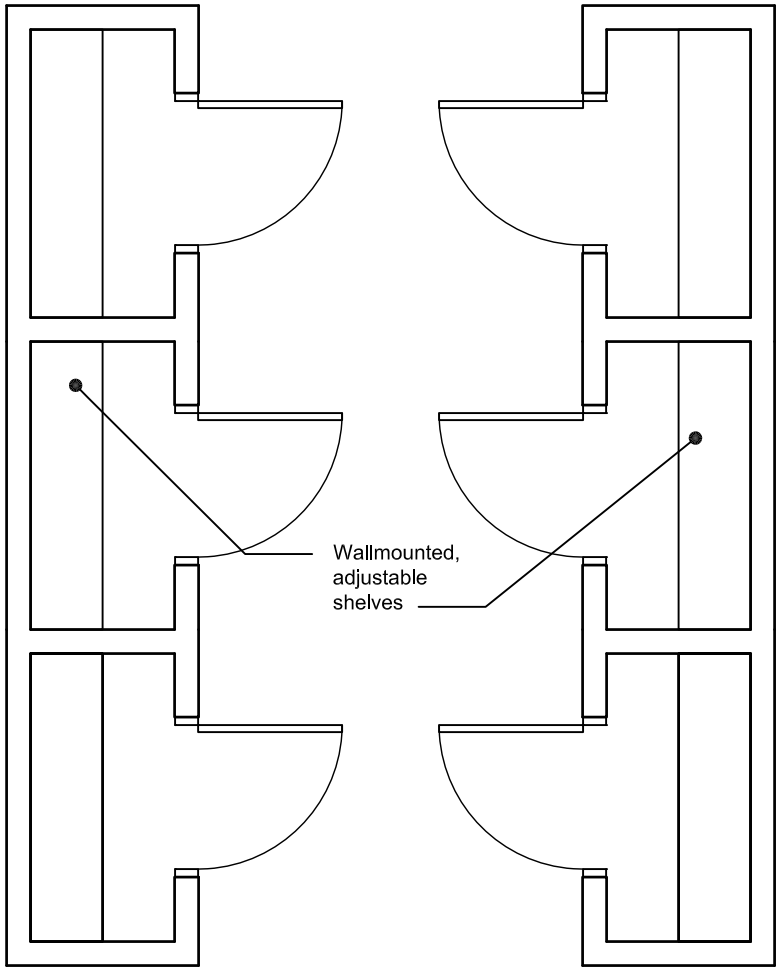
Equipment: Adjustable heavy duty storage shelving

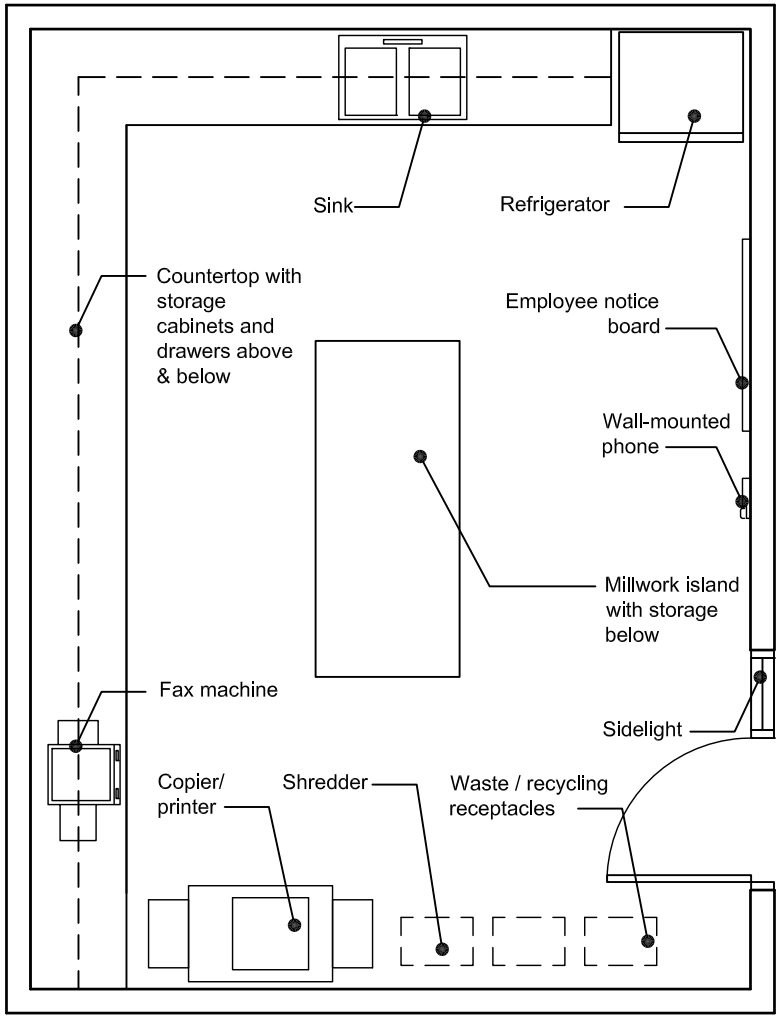
Furnishings: None

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

Notes:





D112 WORK ROOM

AREA: 300 NSF

Occupants: None

Function: Enclosed room for shared office & publicity equipment;
Storage of materials used by Student Activities staff
Storage of food for Student Activities events

Adjacency: Central location within Student Activities Staff office space, easily accessed by all staff

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Copier / printer; fax machine
Millwork cabinets and countertops, 24"D, with storage cabinets & drawers above and below; with kitchen sink
Millwork island, 6' x 3', with storage below, including some flat file drawers & vertical slots
Refrigerator
Wall-mounted telephone
Employee notice board
Shredder

Furnishings: Trash & recycling receptacles

Mechanical: Dedicated HVAC; exhaust

Electrical: Electrical and voice / data outlets for equipment
Fluorescent parabolic lighting

Notes:

D113 DANCE/CHEER STORAGE ROOM

AREA: 300 NSF

Occupants: None

Function: Enclosed storage room for materials (mats, uniforms, costumes, etc.) used by Dance / Cheer program

Adjacency: Near MAC Court which will be used by Dance / Cheer for practices & workouts
Easily accessible by Dance / Cheer staff

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: None
Doors: 3' x 7' wood door, locking

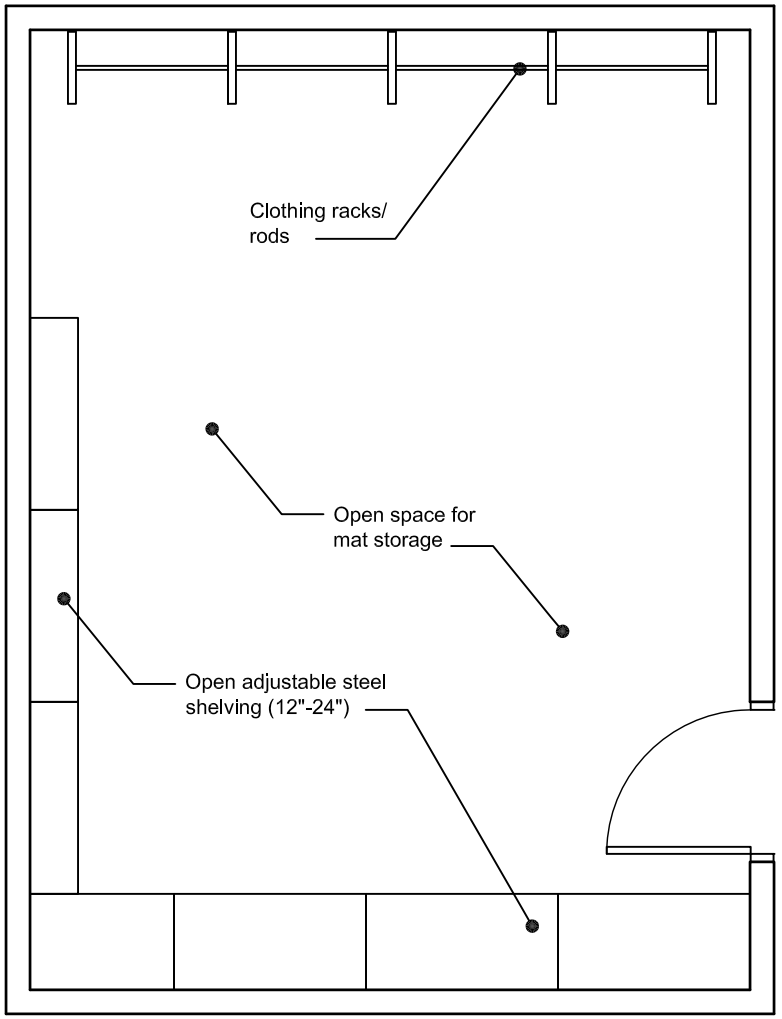
Equipment: None

Furnishings: Clothing racks / rods, with multiple rod heights, in a portion of room, for costumes, uniforms
Open adjustable shelving units in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

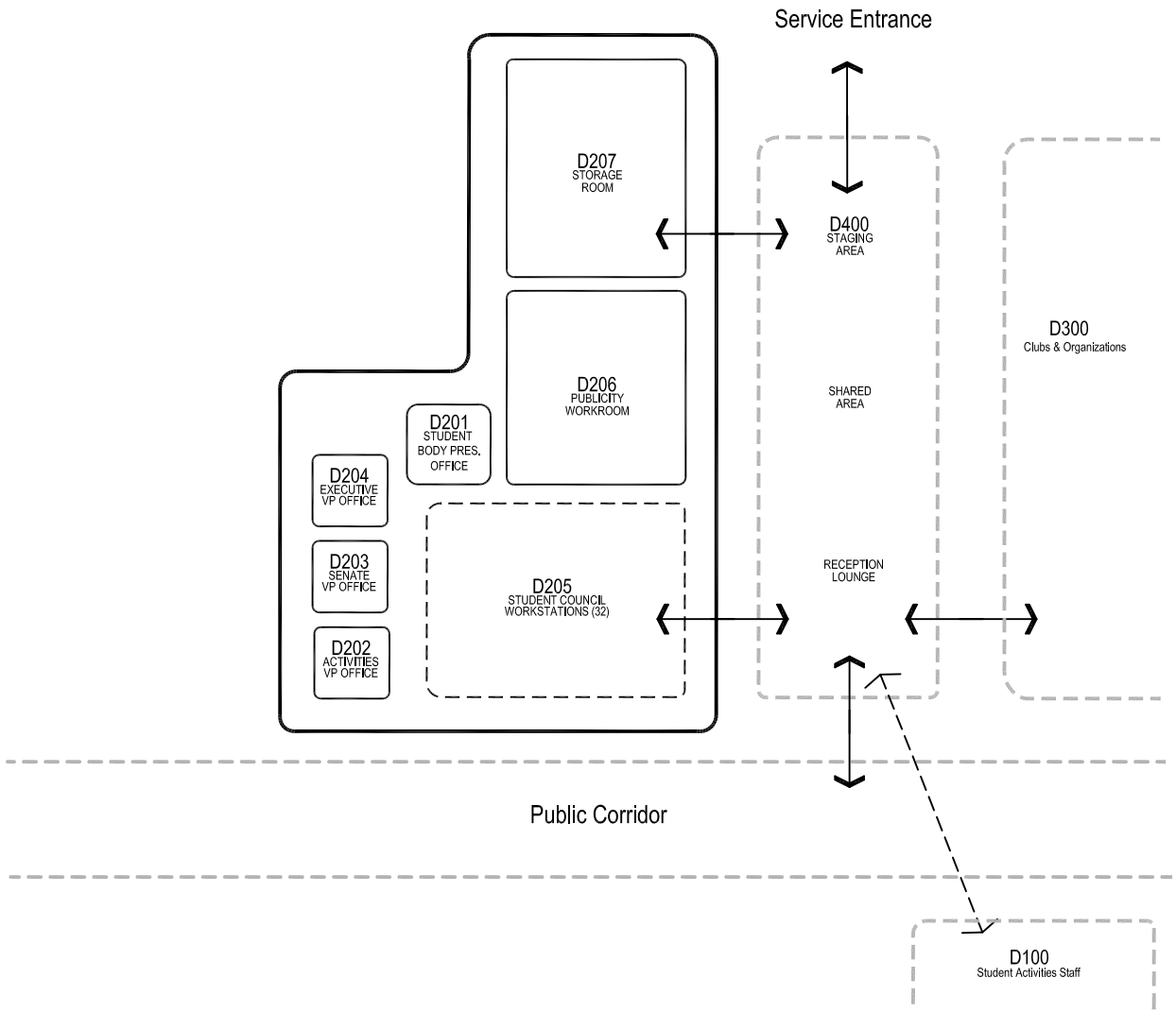
Notes:



D: STUDENT GOVERNMENT

TOTAL AREA: 2,870 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
D	**Student Activities**														
	Student Government														
D201	Student Body President Office	1	120	120	160	195	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D202	Activities VP Office	1	100	100	133	162	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D203	Senate VP Office	1	100	100	133	162	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D204	Executive VP Office	1	100	100	133	162	8 AM-10 PM	controlled	Y	M	Y	50	72-74°F		
D205	Student Council Workstation	32	25	800	1,120	1,366	8 AM-10 PM	controlled	Y	M	M	50	72-74°F		
D206	Publicity / Work Room	1	750	750	938	1,144	8 AM-10 PM	controlled	N	N	N	30	72-74°F	Y	Y
D207	Storage Room	1	900	900	1,125	1,373	8 AM-10 PM	secure	N	N	N	15	55-85°F		
				2,870	3,741	4,564									



STUDENT GOVERNMENT
ADJACENCY DIAGRAM

D201 STUDENT BODY PRESIDENT OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Student Government office space
Near Student Government VP offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

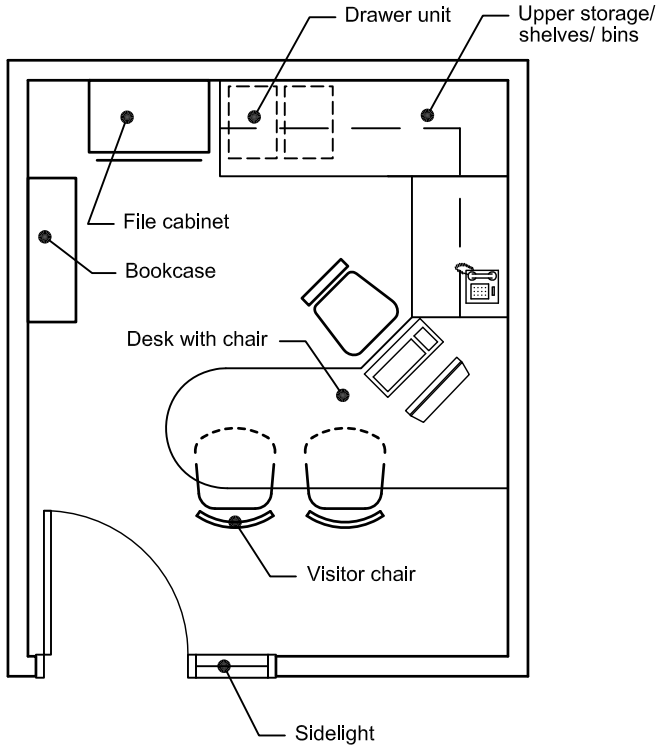
Equipment: Computer; telephone

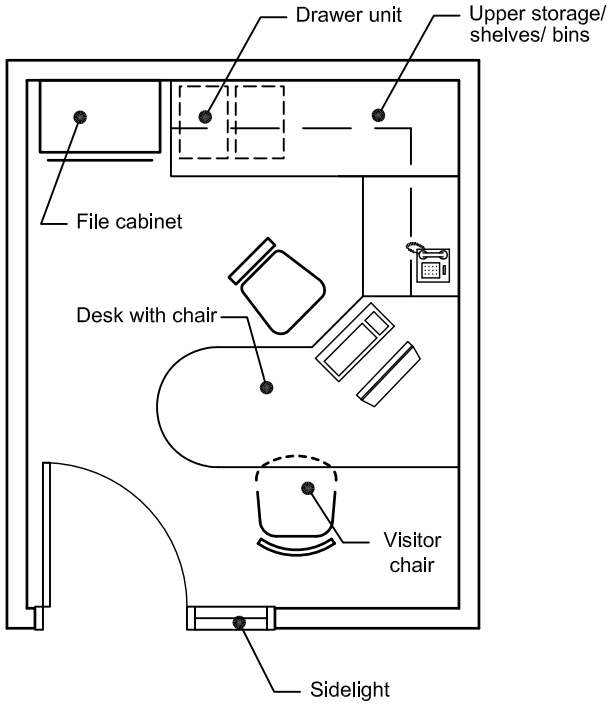
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: Student Government adjacent to Clubs & Organizations; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies





D202 ACTIVITIES VP OFFICE

AREA: 100 NSF

Occupants: 1 occupant, with 1 visitor

Function: Private office

Adjacency: Within Student Government office space
Near other Student Government VP offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
Visitor chair
File cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: Student Government adjacent to Clubs & Organizations; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies

D203 SENATE VP OFFICE

AREA: 100 NSF

Occupants: 1 occupant, with 1 visitor

Function: Private office

Adjacency: Within Student Government office space
Near other Student Government VP offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

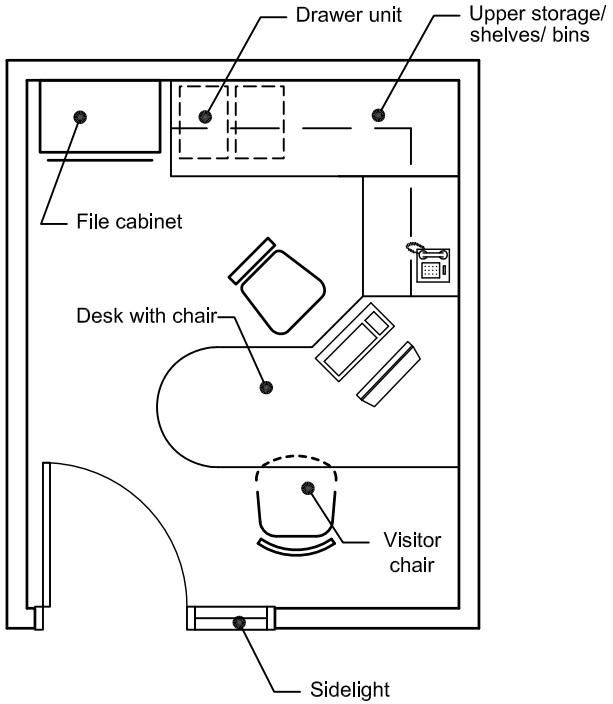
Equipment: Computer; telephone

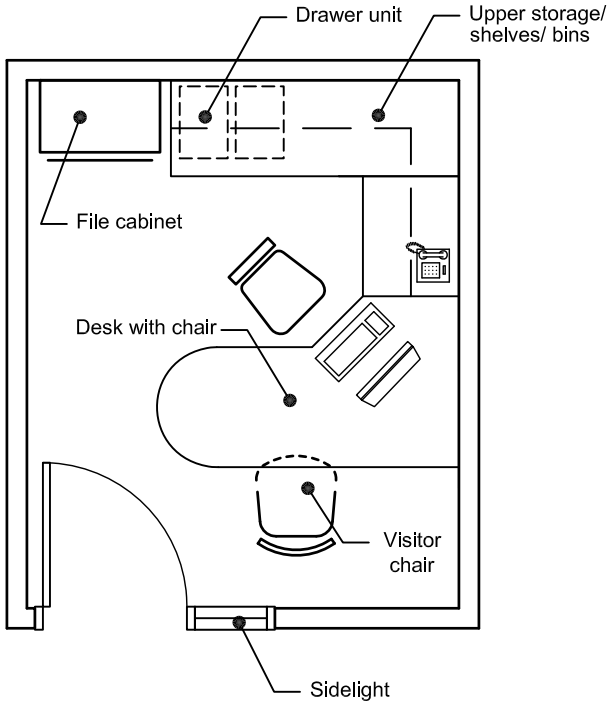
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
Visitor chair
File cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: Student Government adjacent to Clubs & Organizations; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies





D204 EXECUTIVE VP OFFICE

AREA: 100 NSF

Occupants: 1 occupant, with 1 visitor

Function: Private office

Adjacency: Within Student Government office space
Near other Student Government VP offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
Visitor chair
File cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: Student Government adjacent to Clubs & Organizations; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies

D205 STUDENT COUNCIL WORKSTATION

AREA: 25 NSF

Occupants: 1 occupant

Function: Open office workstation for shared used by Student Council members (32 stations for 40 Student Council Members)

Adjacency: 32 Student Council Workstations grouped in clusters, in Student Government open office area
Near Student Government office entry

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height minimum
Windows: Exterior windows with window coverings
Door: None

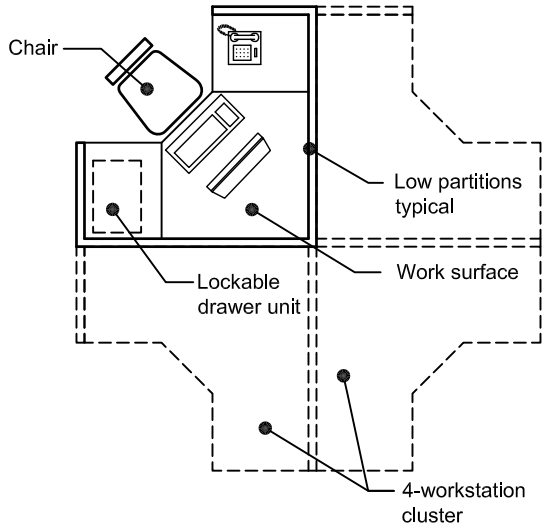
Equipment: Computer; telephone

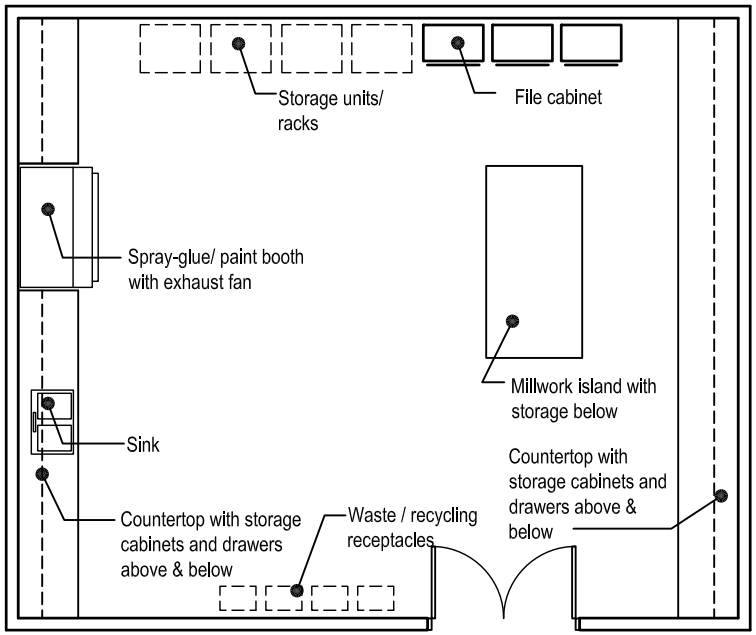
Furnishings: Systems furniture L-shaped workstation with low panels (approximately 42"H) and locking drawer unit
Desk chair

Mechanical: Shared HVAC zone

Electrical: Electrical outlets (6 per workstation)
Voice / data outlet for computer & telephone
Fluorescent parabolic lighting

Notes: Student Government adjacent to Clubs & Organizations; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies





D206 PUBLICITY/WORK ROOM

AREA: 750 NSF

Occupants: None

Function: Enclosed room for generating graphics / artwork & preparing materials used by & for Student Government, including large-format posters & signs; materials include paint, glue, glitter, etc.

Adjacency: Within Student Government office space
Easy access to Student Government Storage Room and Staging Area

Environment:

Floor: Sealed concrete
Walls: Painted gypsum board
Ceiling: Open upper structure; 10' height minimum
Windows: None
Door: Double 3' x 7' wood doors, locking

Equipment: Millwork cabinets / countertop, 30"D, with storage cabinets & drawers above & below; millwork island, 4' x 8' with storage below; some flat file drawers & vertical slots for posters & large format items
Kitchen sink in millwork cabinet for artwork / painting clean-up
Spray-glue / paint booth with exhaust fan

Furnishings: Chairs / stools for workstations at countertops & island
Storage units or racks for items such as large paper rolls; storage cabinets; file cabinet(s)

Mechanical: Dedicated HVAC zone; exhaust venting at spray-glue / paint booth work area

Electrical: Duplex electrical outlets per code
Electrical & voice / data outlets as needed for equipment
Fluorescent parabolic lighting

Notes: Space designed for ease of washing and maintenance; materials used are very messy

D207 STORAGE ROOM

AREA: 900 NSF

Occupants: None

Function: Enclosed storage room for materials used by Student Government

Adjacency: Near Student Activities Shared Spaces Staging Area (D405), adjacent to a building exterior entry
Easily accessible from Student Government space

Environment:

Floor: Sealed concrete
Walls: Painted gypsum board
Ceiling: Open upper structure; 10' height minimum
Windows: None
Doors: Pair of 3' x 7' wood doors, locking

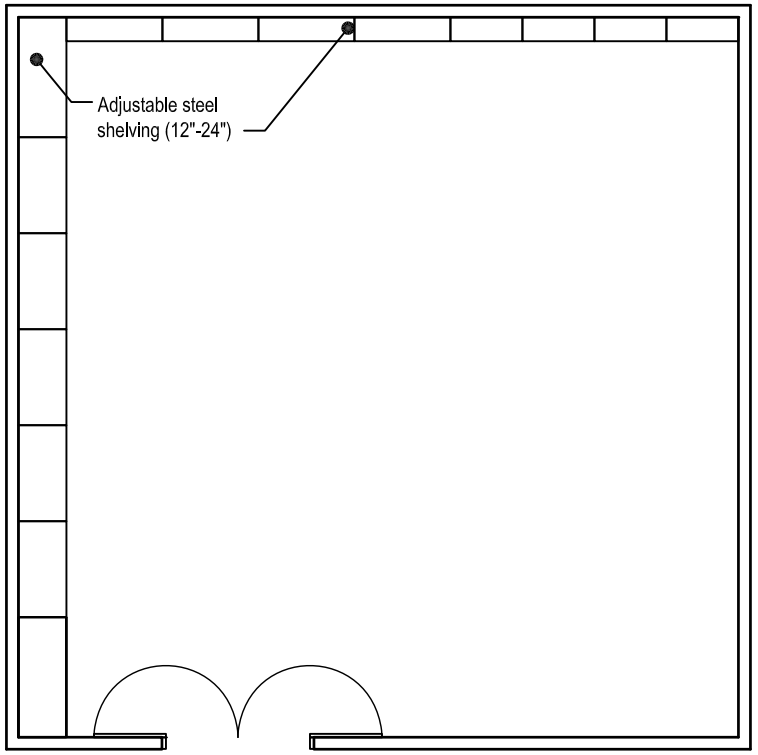
Equipment: None

Furnishings: Adjustable steel shelving units, 12"-24" deep, in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

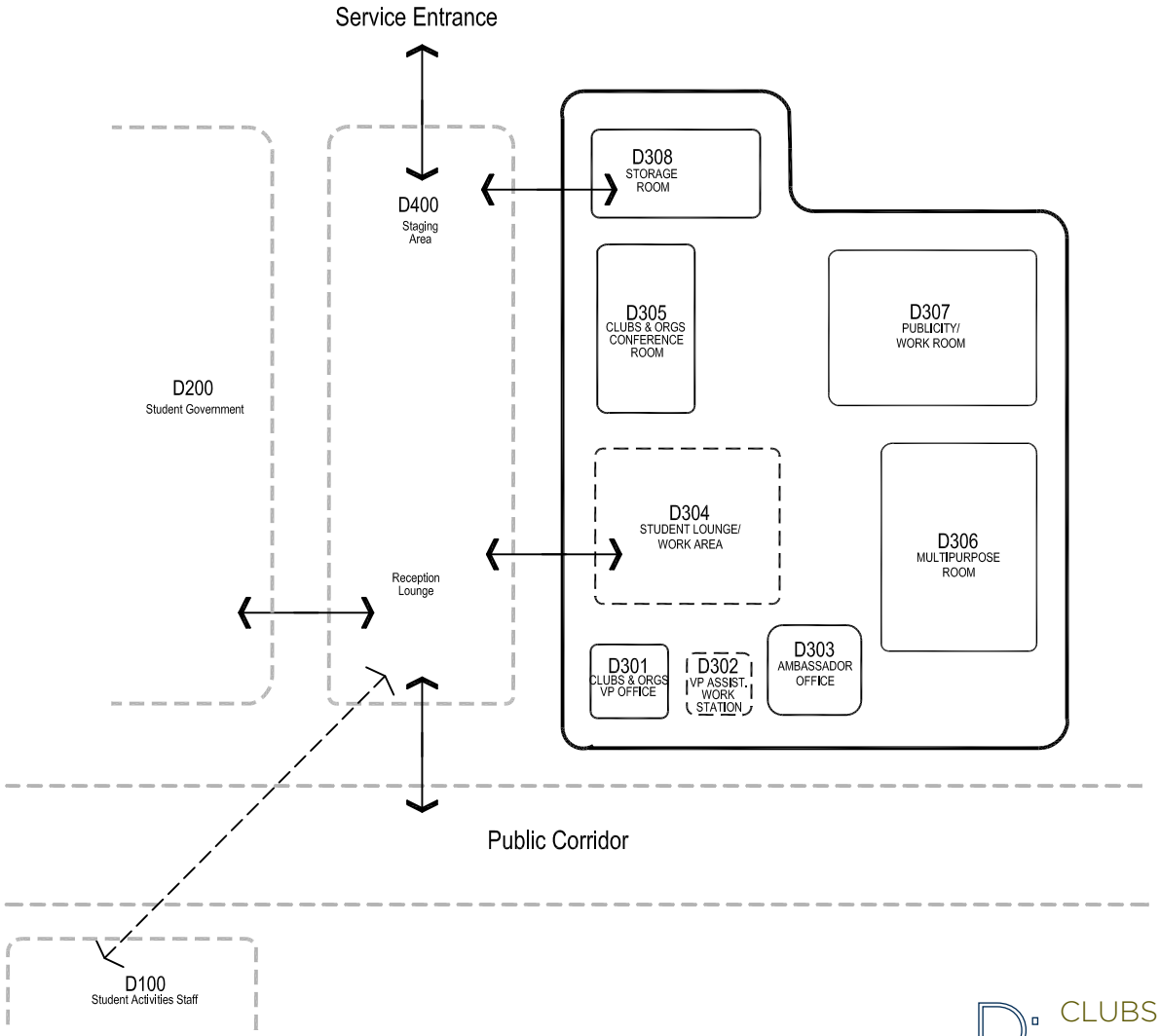
Notes:



D: CLUBS & ORGANIZATIONS

TOTAL AREA: 2,964 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
D	**Student Activities**															
	Clubs & Organizations															
D301	Clubs & Orgs VP Office	1	100	100	133	162	8 AM-10 PM	controlled		Y	M	Y	50	72-74°F		
D302	VP Assistant Workstation	1	64	64	90	109	8 AM-10 PM	controlled		Y	M	M	50	72-74°F		
D303	Ambassador Office	1	150	150	200	243	8 AM-10 PM	controlled		Y	M	M	50	72-74°F		
D304	Student Lounge / Work Area	1	600	600	750	915	8 AM-10 PM	public		Y	Y	M	30	72-74°F		
D305	Clubs & Orgs Conf. Room	1	300	300	399	487	8 AM-10 PM	controlled		M	M	M	50	72-74°F		
D306	Multipurpose Room	1	750	750	938	1,144	8 AM-10 PM	controlled		M	M	M	40	72-74°F		
D307	Publicity / Work Room	1	750	750	938	1,144	8 AM-10 PM	controlled		N	N	N	30	72-74°F	Y	Y
D308	Storage Room	1	250	250	333	406	8 AM-10 PM	secure		N	N	N	15	55-85°F		
				2,964	3,779	4,610										



CLUBS & ORGANIZATIONS
ADJACENCY DIAGRAM

D301 CLUBS & ORGS VP OFFICE

AREA: 100 NSF

Occupants: 1 occupant, with 1 visitor

Function: Private office

Adjacency: Accessed from Student Lounge / Work Area
Easy access from Shared Reception / Lounge

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

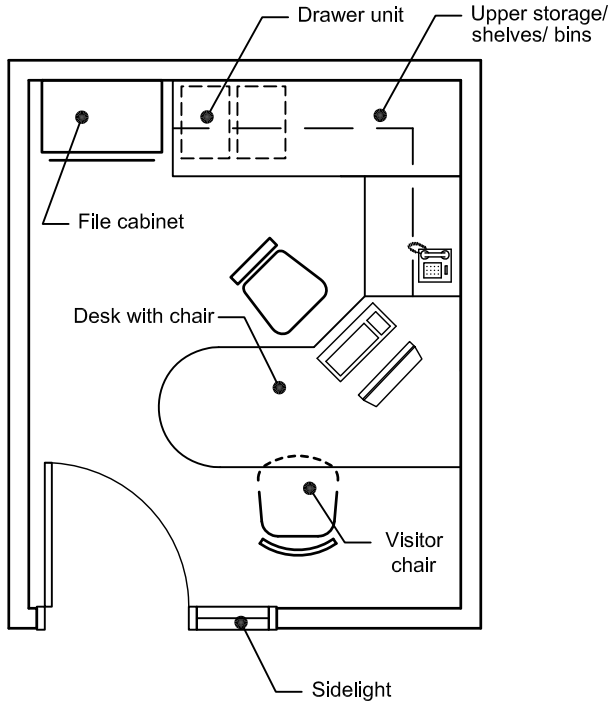
Equipment: Computer; telephone

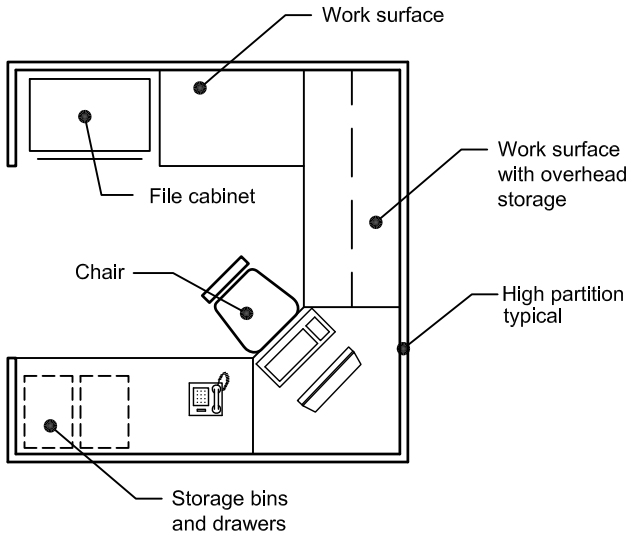
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
Visitor chair
File cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies





D302 VP ASSISTANT WORKSTATION

AREA: 64 NSF

Occupants: 1 occupant

Function: Open office workstation

Adjacency: Adjacent to Clubs & Orgs VP Office
Adjacent to / part of Student Lounge / Work Area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Access to natural light / exterior views desired
Door: None

Equipment: Computer; telephone

Furnishings: U-shaped open office workstation with transaction counter, shelving / storage bins, and drawers
Desk chair

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes: Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies

D303 AMBASSADOR OFFICE

AREA: 150 NSF

Occupants: 4 occupants and up to 2 visitors

Function: Enclosed office for shared use by 4 Club Ambassadors

Adjacency: Accessed from Student Lounge / Work Area

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Interior window to Student Lounge / Work Area
Door: 3' x 7' wood door, locking

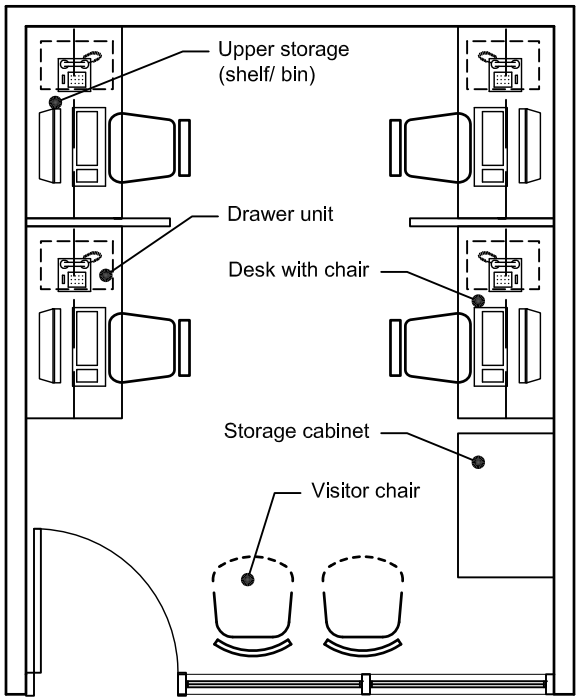
Equipment: 4 computers; 4 telephones

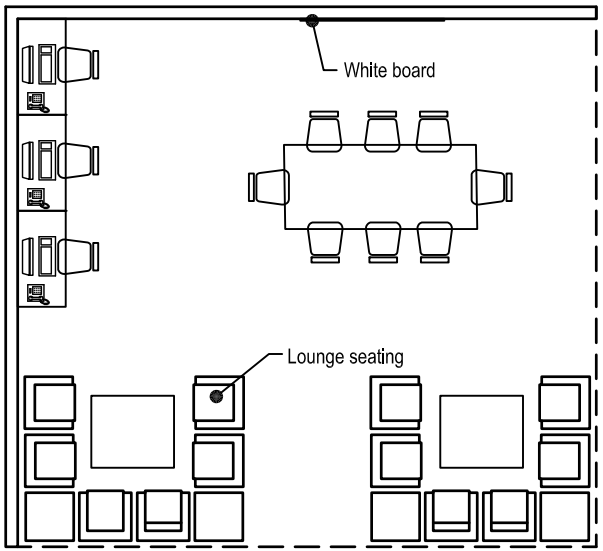
Furnishings: (4) 4'W work spaces; shelf or bin above; drawer unit below
4 desk chairs
Visitor chair
Locking storage cabinet, 3'W x 2'D

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
8 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes: Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies





D304 STUDENT LOUNGE/WORK AREA

AREA: 600 NSF

Occupants: Up to 20 occupants

Function: Open space for use by students in support of UVU clubs & organizations, primarily for planning events & activities; computer / publicity work; informal meetings & discussions

Adjacency:
Accessed from Shared Reception / Lounge; visual connection between Reception / Lounge & Student Lounge / Work Area
Central to Clubs & Organizations office space, with Clubs & Orgs rooms accessed from this space
VP Assistant Workstation directly adjacent to / part of this space

Environment:
- **Floor:** Carpet tile
- **Walls:** Painted gypsum board
- **Ceiling:** Lay-in acoustic tile; 10' height minimum
- **Windows:** Exterior windows with window coverings
- **Door:** None

Equipment: 3 computers; 3 telephones
White board, 6'W x 5'H, adjacent to table & chairs

Furnishings: (3) 4'W computer workstations; 3 desk chairs
42"W x 8'L table with 8 chairs
Lounge seating groupings; occasional tables

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
3 sets of voice / data outlets for computer stations
Fluorescent parabolic lighting

Notes: Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies

D305 CLUBS & ORGS CONF. ROOM

AREA: 300 NSF

Occupants: Up to 16 people

Function: Enclosed meeting room for primary usage by UVU Clubs & Organizations, for Club meetings & small events

Adjacency: Accessed from Student Lounge / Work Area
Easily accessed from Shared Reception / Lounge

Environment:

- **Floor:** Carpet tile
- **Walls:** Painted gypsum board
- **Ceiling:** Lay-in acoustic tile & painted gyp. board; 10' height
- **Windows:** Exterior windows with room-darkening window coverings desired
  Sidelight at entry door
- **Doors:** 3' x 7' wood door, locking

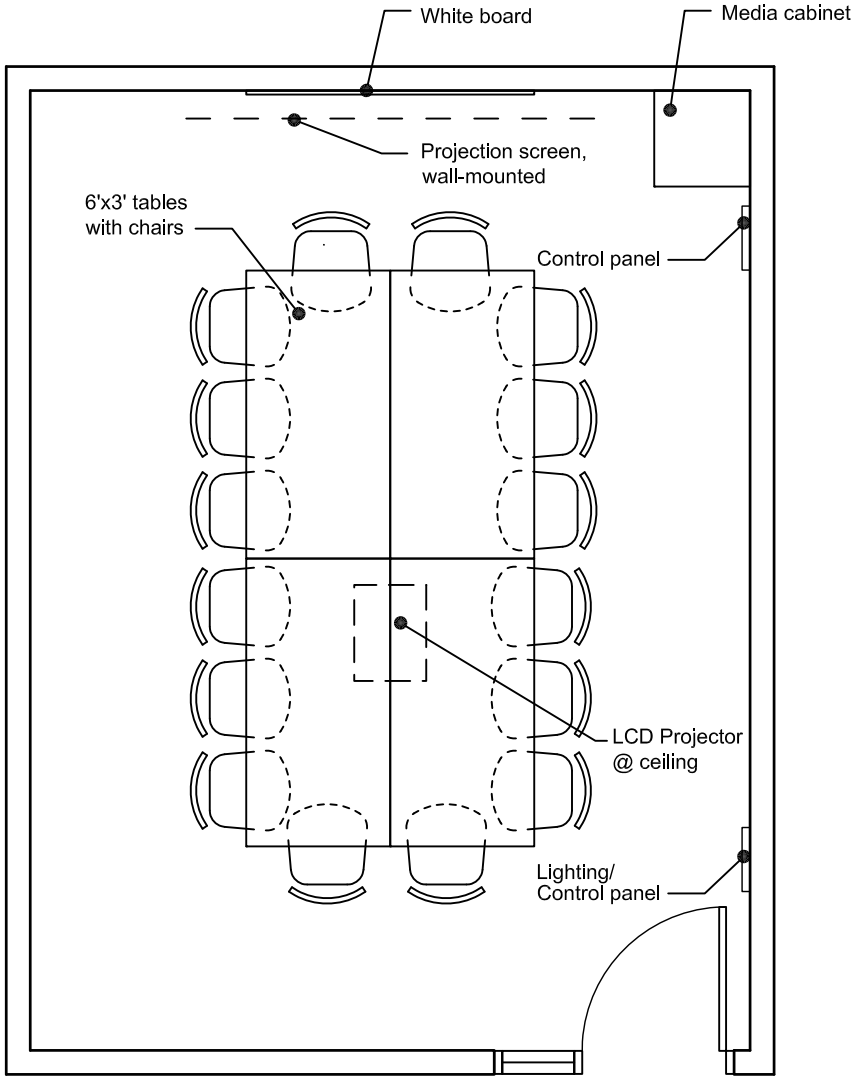
Equipment: White board, 6'W x 5'H
Projection screen
Ceiling-mounted LCD projector
Media cabinet / credenza & wall-mounted control station
Telephone

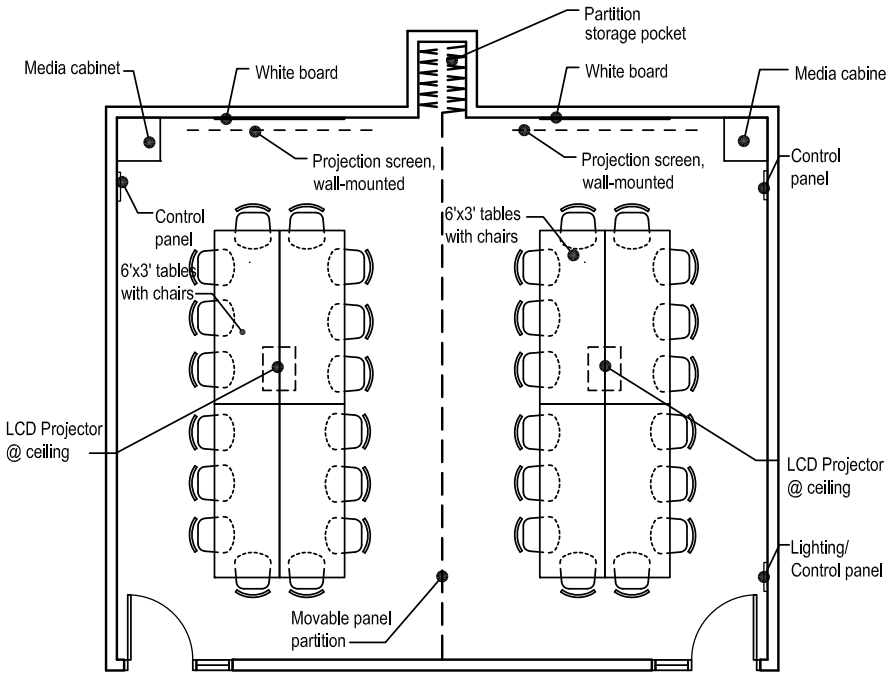
Furnishings: (4) 3' W x 6' L tables, movable, with 16 chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical & data connections for ceiling-mounted projector and AV control station
Electrical & data connections for telephone
Light fixtures that allow for varying light levels & support the use of AV

Notes: Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies
Possible option to use flat panel monitor in place of projector & projection screen – confirm during design





D306 MULTIPURPOSE ROOM

AREA: 750 NSF

Occupants: Up to 32 people

Function: Enclosed room for primary usage by UVU Clubs & Organizations for service projects, socials, speakers, club meetings, etc.
Subdivides into two independent meeting rooms with movable partition, for smaller gatherings

Adjacency: Accessed from Shared Reception / Lounge

Environment:

- **Floor:** Carpet tile
- **Walls:** Painted gypsum board
- **Ceiling:** Lay-in acoustic tile & painted gypsum bd.; 10' height minimum
- **Windows:** Sidelight at each entry door
- **Doors:** (2) 3' x 7' wood doors, locking
  Movable panel partition, minimum STC 45, with recessed storage pocket

Equipment: 2 white boards, 8'W x 5'H
2 of each: ceiling-mounted LCD projectors; projection screens; media cabinets / credenzas; wall-mounted control stations
2 telephones

Furnishings: (8) 3'W x 8'L tables, movable & folding, with 32 chairs

Mechanical: 2 HVAC zones

Electrical: Electrical wall outlets per code
Electrical & data outlets as needed for AV equipment
Light fixtures that allow for varying light levels & support the use of AV
Lighting & AV for each half of the sub-divided room must be separate / independent

Notes: Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies

D307 PUBLICITY/WORK ROOM

AREA: 750 NSF

Occupants: None

Function: Enclosed room for generating graphics / artwork & preparing materials used by & for student clubs & organizations, including large-format posters & signs; materials include paint, glue, glitter, etc.

Adjacency: Accessed from Student Lounge / Work Area

Environment:

Floor: Sealed concrete
Walls: Painted gypsum board
Ceiling: Open upper structure; 10' height minimum
Windows: None
Door: Double 3' x 7' wood doors, locking

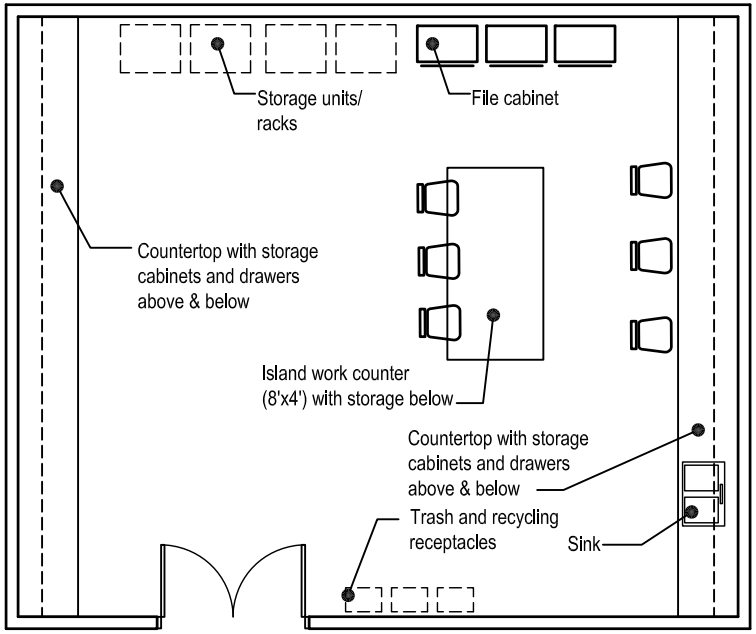
Equipment: Millwork cabinets / countertop, 30"D, with storage cabinets & drawers above & below; millwork island, 4' x 8' with storage below; some flat file drawers & vertical slots for posters & large format items
Kitchen sink in millwork cabinet for artwork / painting clean-up

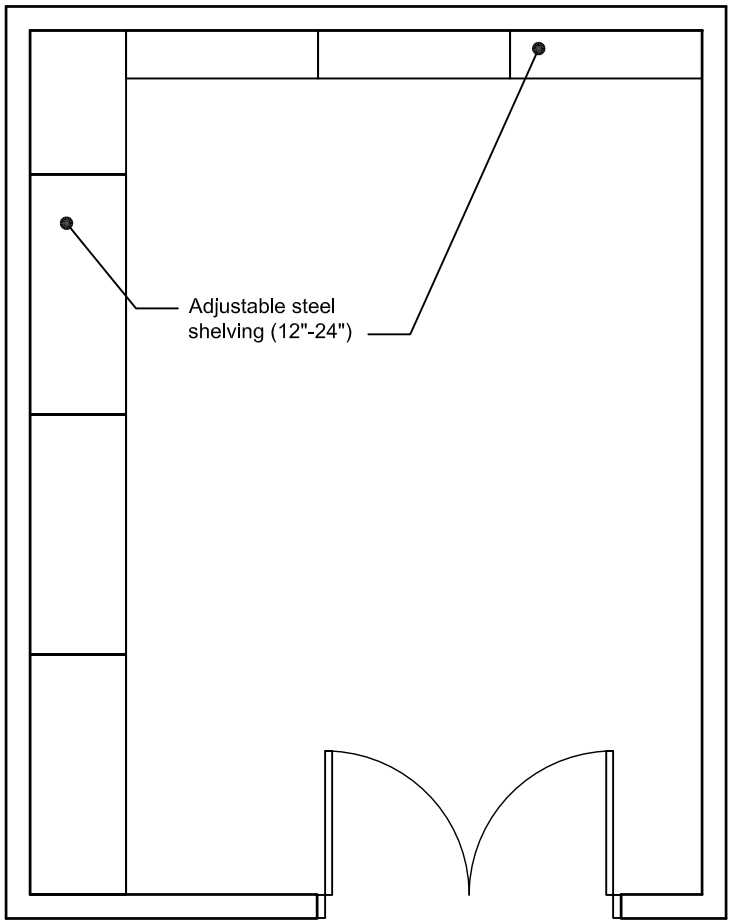
Furnishings: Chairs / stools for workstations at countertops & island
Storage units or racks for items such as large paper rolls; storage cabinets; file cabinet(s)
Trash & recycling receptacles

Mechanical: Dedicated HVAC zone; exhaust venting at spray-glue work zone

Electrical: Duplex electrical outlets per code
Electrical & voice / data outlets as needed for equipment
Fluorescent parabolic lighting

Notes: Space designed for ease of washing and maintenance; materials used are very messy
Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies





D308 STORAGE ROOM

AREA: 250 NSF

Occupants: None

Function: Enclosed storage room for materials used by Clubs & Organizations (promotional materials, art / office supplies, chairs, other equipment for use in Multipurpose Room, etc.)

Adjacency: Near Shared Spaces Staging Area (D405), adjacent to a building exterior entry
Easy access to Multipurpose Room and Clubs & Organizations office space

Environment:

Floor: Sealed concrete
Walls: Painted gypsum board
Ceiling: Open upper structure; 10' height minimum
Windows: None
Doors: Pair of 3' x 7' wood doors, locking

Equipment: None

Furnishings: Adjustable steel shelving units, 12"-24" deep, in a portion of room

Mechanical: Minimal ventilation

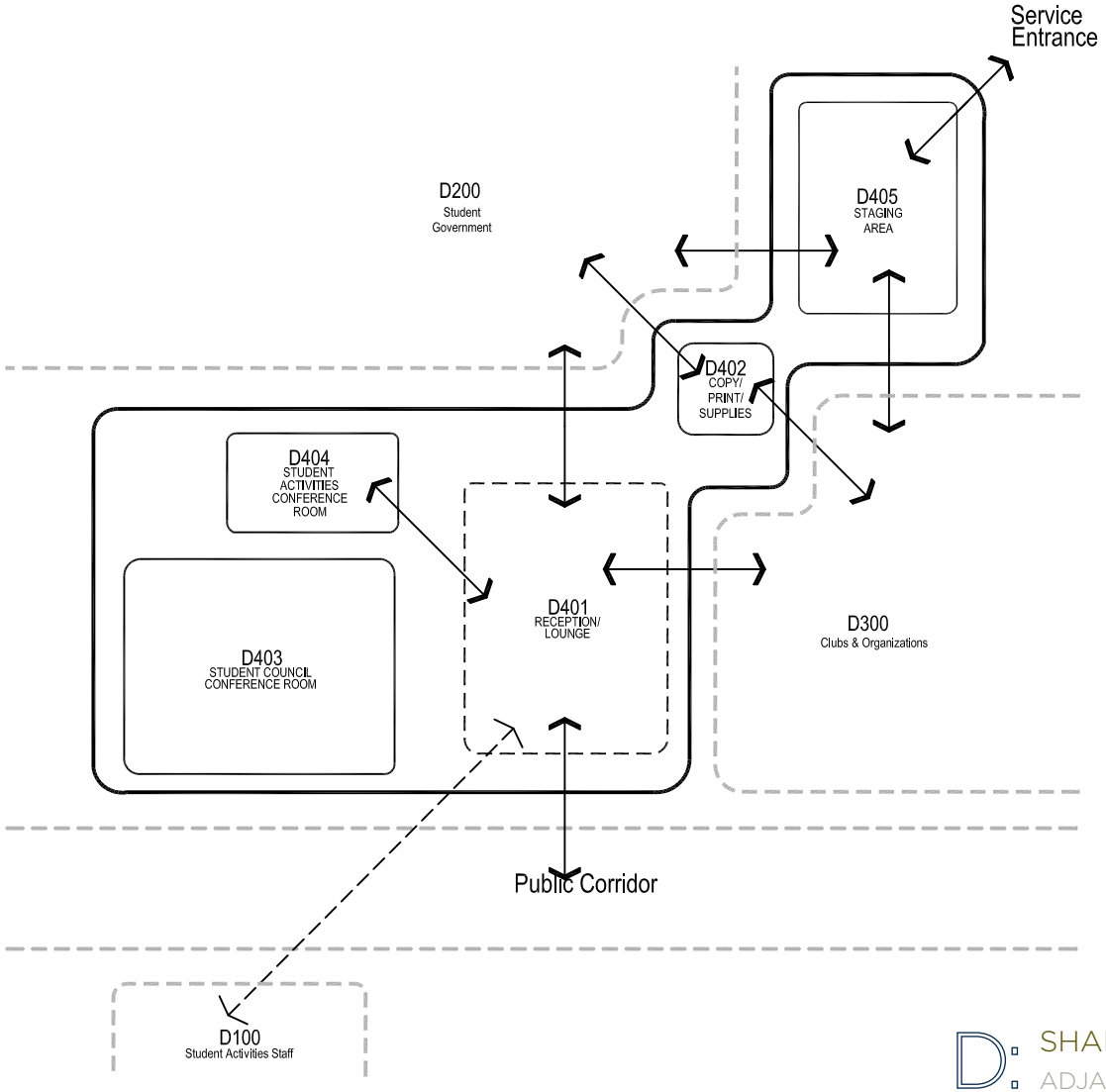
Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

Notes: Clubs & Organizations adjacent to Student Government; both offices supported by / adjacent to Shared Spaces (D400), in particular Reception / Lounge and Copy / Print / Supplies

D: SHARED SPACES

TOTAL AREA: 3,450 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
D	**Student Activities**															
	Shared Spaces															
D401	Reception / Lounge	1	900	900	1,125	1,373	8 AM-10 PM	public	Y	Y	M	30	72-74°F		
D402	Copy / Print / Supplies	1	150	150	200	243	8 AM-10 PM	controlled	N	N	N	50	72-74°F		
D403	Student Council Conference Rm	1	1,500	1,500	1,725	2,105	8 AM-10 PM	controlled	M	M	M	50	72-74°F		
D404	Student Activities Conf Rm	1	300	300	399	487	8 AM-10 PM	controlled	M	M	M	50	72-74°F		
D405	Staging Area	1	600	600	750	915	8 AM-10 PM	controlled	N	N	N	30	72-74°F		
				3,450	4,199	5,122										



D: SHARED SPACES
ADJACENCY DIAGRAM

D401 RECEPTION/LOUNGE

AREA: 900 NSF

Occupants: 1 occupant and up to 24 visitors in lounge seating

Function:
Entry, reception & waiting area shared by Student Government and Clubs & Organizations offices
Lounge / hang-out space for students involved in Student Government / Clubs & Organizations
Work space for Clubs & Orgs Administrative Assistant

Adjacency:
Location on public corridor, easy to locate & fairly high visibility
At entry point to Student Government & Clubs & Organizations offices
Clubs & Orgs Student Lounge / Work Area adjacent
Student Government Student Council Workstation open office area adjacent

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height minimum
Windows: Exterior windows with window coverings desired
Glass storefront or windows separating Reception / Lounge from public corridor
Door: Wood door or storefront system glass door; locking

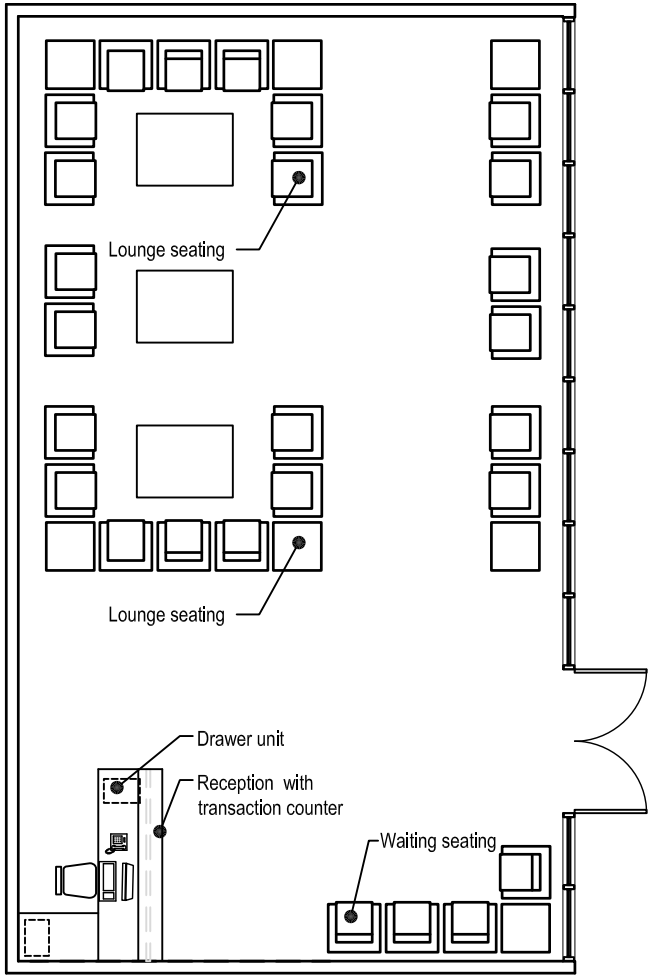
Equipment: Computer & telephone at reception station

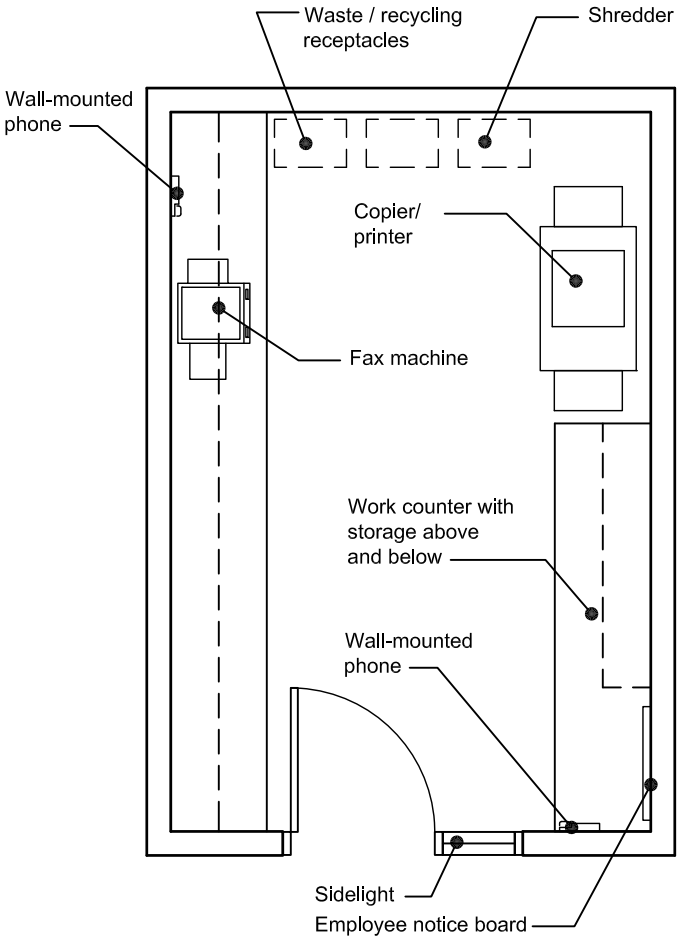
Furnishings:
50 SF systems furniture reception station with drawer units and transaction counter
Desk chair
4 waiting chairs with occasional table(s)
Lounge seating with occasional tables

Mechanical: Shared HVAC zone

Electrical:
Duplex electrical outlets per code
Voice / data outlets for reception station equipment
Fluorescent parabolic lighting

Notes: Open, inviting appearance





D402 COPY/PRINT/SUPPLIES

AREA: 150 NSF

Occupants: None

Function: Enclosed room for office equipment and supply storage shared by Student Government and Clubs & Organizations
Workspace for collating, assembling, etc.

Adjacency: Central location between Student Government and Clubs & Organizations

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment: Copier / printer; fax machine; shredder
Wall-mounted telephone
Millwork countertops with storage cabinets and/or drawers above and below
Employee notice board

Furnishings: Waste and recycling receptacles

Mechanical: Dedicated HVAC zone
Exhaust

Electrical: Electrical wall outlets per code
Electrical and voice / data outlets for copier / printer, fax machine and telephone
Electrical outlets above countertop
Fluorescent parabolic lighting

Notes:

D403 STUDENT COUNCIL CONFERENCE ROOM

AREA: 1,500 NSF

Occupants: Up to 66 people

Function: Enclosed room for large, formal events such as Student Council meetings
Table should seat 46, with another 20 seats at room perimeter

Adjacency: Accessed from Shared Reception / Lounge
Possible direct access from public corridor, to facilitate shared use of this room

Environment:

- **Floor:** Carpet tile
- **Walls:** Painted gypsum board
- **Ceiling:** Lay-in acoustic tile & painted gypsum bd.; 10' height minimum
- **Windows:** Sidelight at each entry door
- **Doors:** (2) 3' x 7' wood doors, locking

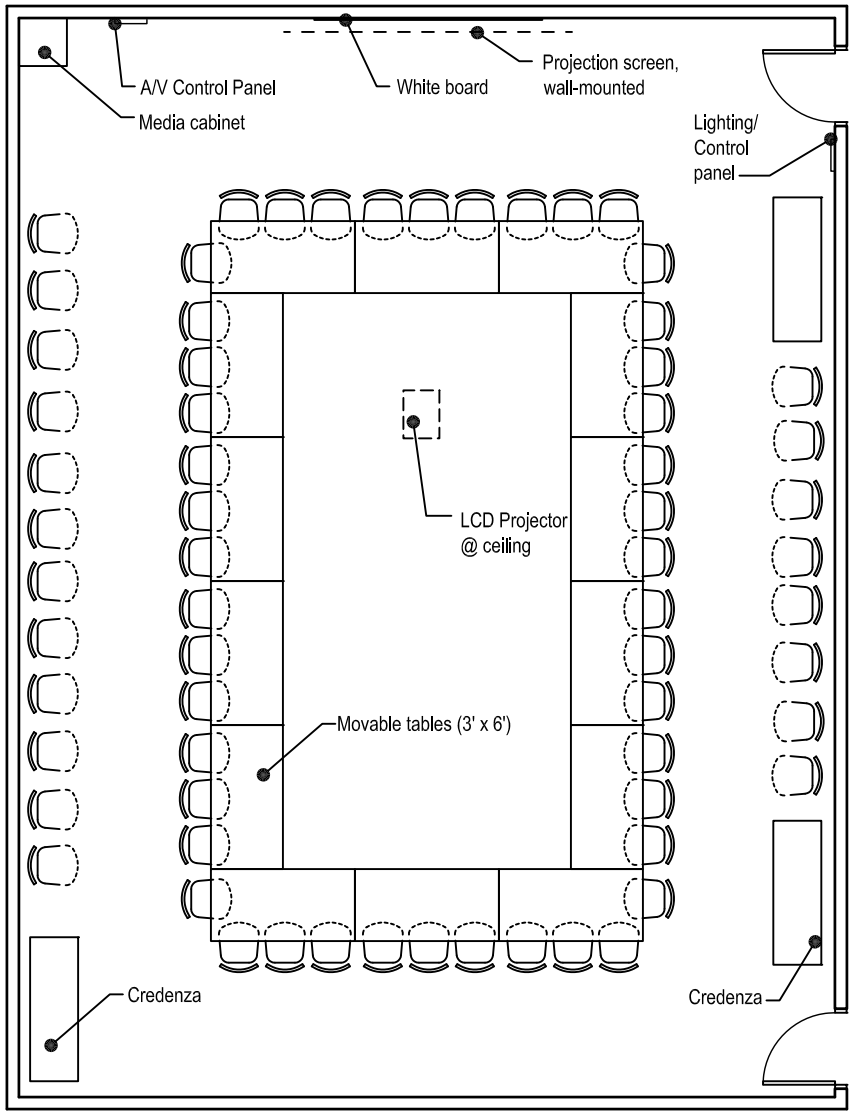
Equipment: White board, 8'W x 5'H
Ceiling-mounted LCD projector; projection screen
Media cabinet / credenza & wall-mounted control station(s)
Telephone

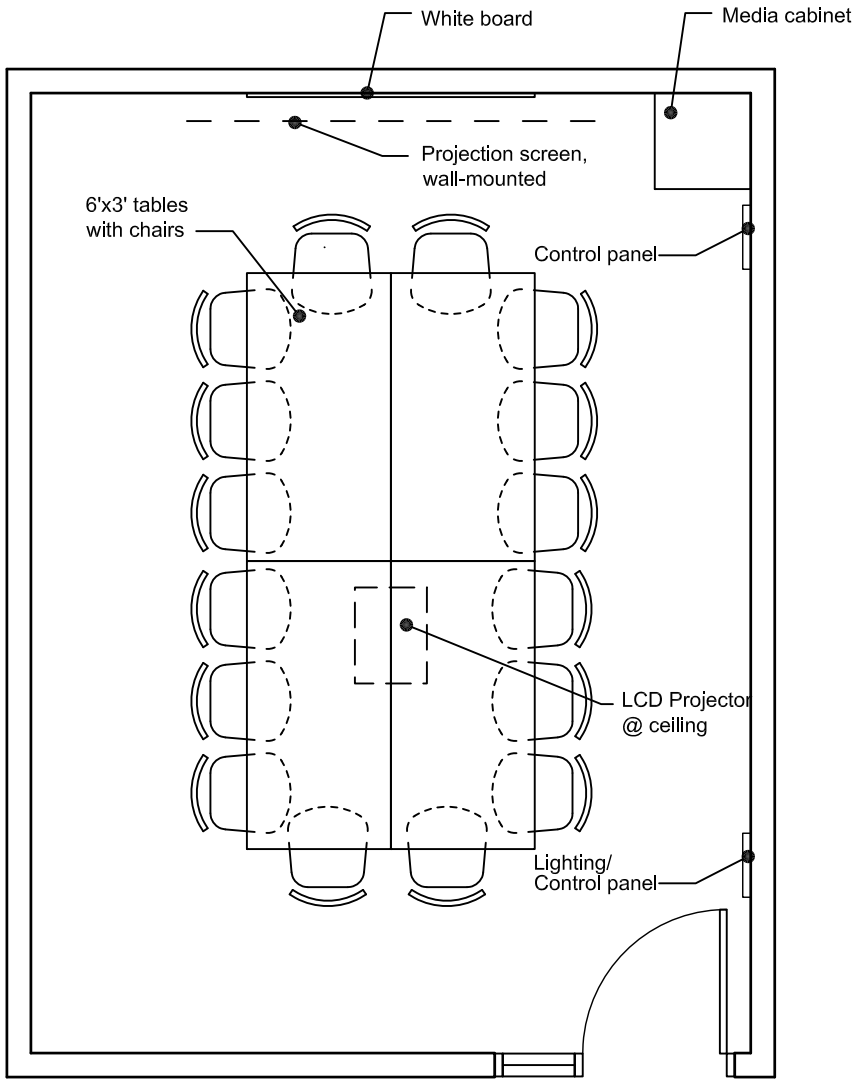
Furnishings: (10) 3'W x 6'L tables, movable & reconfigurable
46 chairs for table
20 chairs for room perimeter

Mechanical: Dedicated HVAC zone

Electrical: Electrical wall outlets per code
Light fixtures that allow for varying light levels & support the use of AV
Electrical and voice / data outlets for AV equipment

Notes: Primary usage by Student Government, but other Student Activities and Student Life groups will use it as well





D404 STUDENT ACTIVITIES CONF. ROOM

AREA: 300 NSF

Occupants: Up to 16 people

Function: Enclosed meeting room for shared usage by Student Government, Clubs & Organizations, and other Student Activities / Student Life groups

Adjacency: Accessed from Shared Reception / Lounge
Possible direct access from public corridor, to facilitate shared use of this room

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile & painted gyp. board; 10' height
Windows: Exterior windows with room-darkening window coverings desired
Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment: White board, 6'W x 5'H
Projection screen
Ceiling-mounted LCD projector
Media cabinet / credenza & wall-mounted control station
Telephone

Furnishings: (4) 3' W x 6' L tables, movable, with 16 chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical & data connections for AV equipment
Electrical & data connections for telephone
Light fixtures that allow for varying light levels & support the use of AV

Notes: Possible option to use flat panel monitor in place of projector & projection screen – confirm during design

D405 STAGING AREA

AREA: 600 NSF

Occupants: None

Function: Area for preparing incoming and outgoing materials that will be used in campus events and activities
Shared use by Student Government, Clubs & Organizations, and other Student Activities / Student Life groups

Adjacency: Location with easy, direct access to building service entrance
Adjacent to or easily accessed from Student Government and Clubs & Organizations Storage Rooms

Environment:

Floor: Sealed concrete
Walls: Painted gypsum board
Ceiling: Open upper structure; 12' minimum height
Windows: None
Doors: Pair of 3' x 7' wood doors, locking

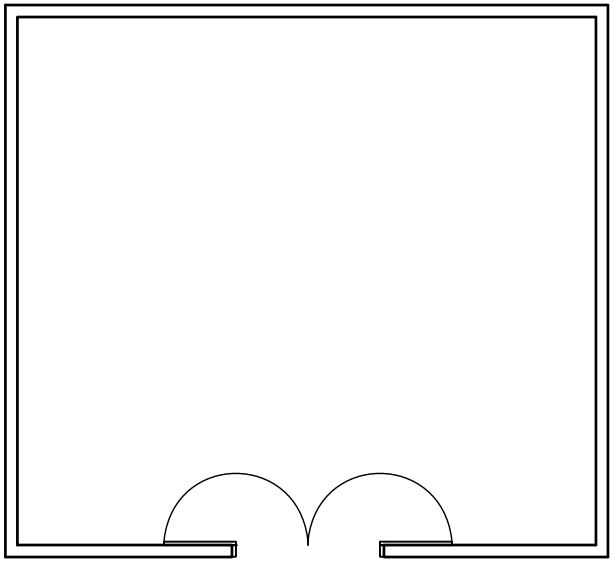
Equipment: None

Furnishings: None

Mechanical: None

Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

Notes:



4E: STUDENT LIFE

The Student Life groups will be in the non-controlled portion of the building, on the public corridor, in an area that is easy to locate but not necessarily high visibility. It would be beneficial for them to be located near the Sorenson Student Center, to facilitate collaboration and interaction with Student Life groups with offices in the Student Center.

Dean of Students and Judicial Affairs will be co-located in an office suite consisting of a reception / waiting area, private offices, a copy / print / supplies room and a Hearing Room.

Student Media should be easy for the public and first-time visitors (including advertising clients) to locate, but does not require high visibility. It would be beneficial to have short-term parking somewhat near, for those paying brief visits to Student Media. Student Media requires access to a service entrance / loading dock for unloading newspapers and inserts.

The primary space in Student Media will be the newsroom, with numerous small open workstations for shared use by student newspaper editors, reports and illustrators. The Newsroom will have three private offices and one shared office at its perimeter. Student Media will also have a shared-use Advertising Staff Office with an adjoining private office; Layout and Website / Broadcast Rooms, each with several small workspaces; a conference room to be used for meetings and staff training; and small lockers to be shared by the reporting staff.

The Office of Student Involvement (OSI) will be located on a high-traffic public corridor. It would be beneficial for them to be located near the Outdoor Adventure Center, Intramurals, and Clubs & Organizations, to facilitate collaboration with these groups.

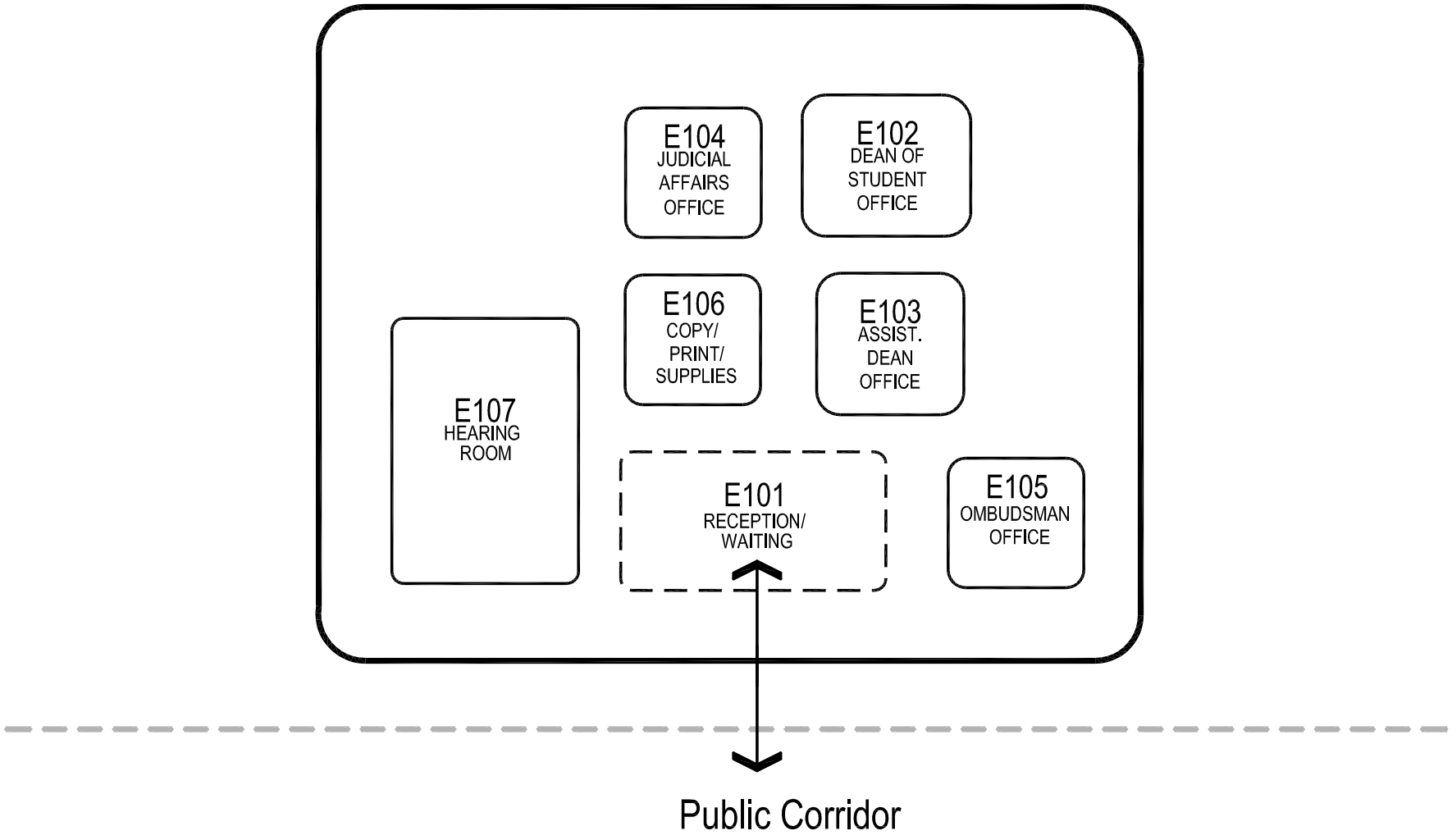
Its primary space will be the Teaching Area. The Teaching Area will be fully open to the public corridor during hours of operation, with the ability to close for security after hours using movable partitions or walls, or a security grille. Three private offices and a shared office for Student Leaders will adjoin the Teaching Area, with windows looking into it. OSI will also have a Publicity / Work / Storage Room, to store and prepare materials, equipment and furniture used in the group's numerous activities and events.

Orientation will have several private offices, a shared office for student interns, space for shared office equipment and storage, and a conference room. During the programming process, it was determined that Orientation will continue to use the Sorenson Student Center Ballroom for its large events, rather than space in the new Student Life Center. It would be beneficial for this office to be located near the Sorenson Center to facilitate coordination and movement of materials during their busy orientation season.

DEAN OF STUDENTS / JUDICIAL AFFAIRS

TOTAL AREA: 1,080 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
E	**Student Life**														
	Dean of Students / Judicial Affairs														
E101	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	M	30	72-74°F		
E102	Dean of Students Office	1	170	170	226	276	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E103	Assistant Dean Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E104	Judicial Affairs Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E105	Ombudsman Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E106	Copy / Print / Supplies	1	120	120	160	195	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
E107	Hearing Room	1	400	400	532	649	8 AM-5 PM	controlled	M	M	M	40	72-74°F		
				1,080	1,444	1,752									



E: DEAN OF STUDENTS / JUDICIAL AFFAIRS
ADJACENCY DIAGRAM

E101 RECEPTION/WAITING

AREA: 200 NSF

Occupants: 1 occupant and up to 4 waiting visitors

Function: Entry, reception and waiting area for Dean of Students / Judicial Affairs office

Adjacency: Entry point to office space; easy-to-find location in non-controlled portion of building
Adjacent to other Student Life offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Glass storefront or windows separating Reception from public corridor
Door: Wood door or storefront system glass door; locking

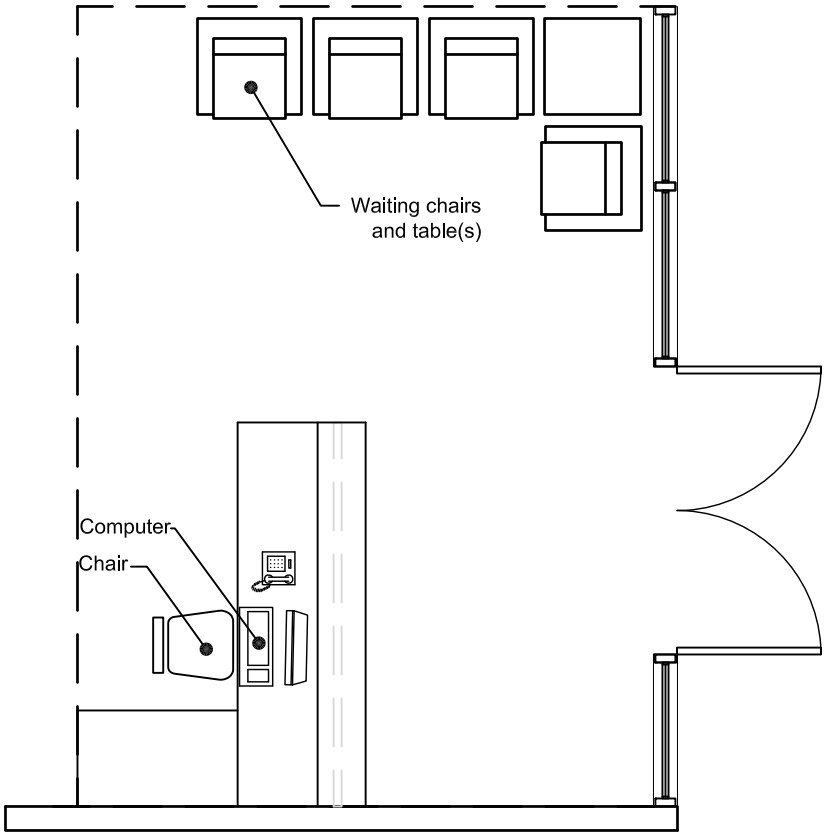
Equipment: Computer & telephone at reception station

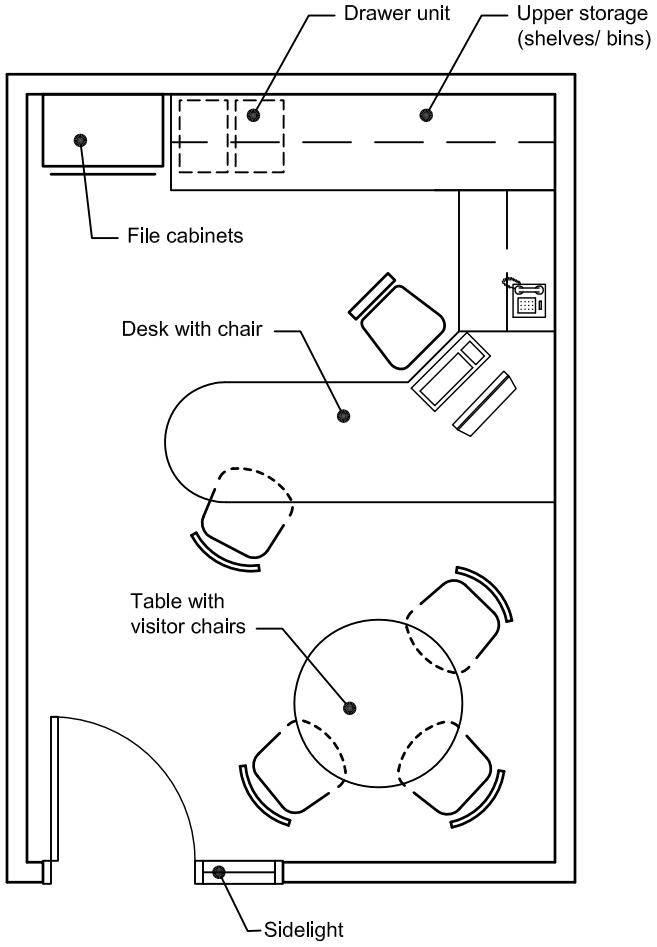
Furnishings: 50 SF systems furniture reception station with drawer units and transaction counter
Desk chair
4 waiting chairs with occasional table(s)

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Voice / data outlets for reception station equipment
Fluorescent parabolic lighting

Notes: Entry and reception point should be open and welcoming, but somewhat private / visually discreet, for disciplinary function





E102 DEAN OF STUDENTS OFFICE

AREA: 170 NSF

Occupants: 1 occupant, with up to 4 visitors

Function: Private office with space for small meetings

Adjacency: Within Dean of Students / Judicial Affairs office space
Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
42" diameter table
4 visitor chairs
File cabinet or bookcase

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E103 ASSISTANT DEAN OFFICE

AREA: 150 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Dean of Students / Judicial Affairs office space
Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

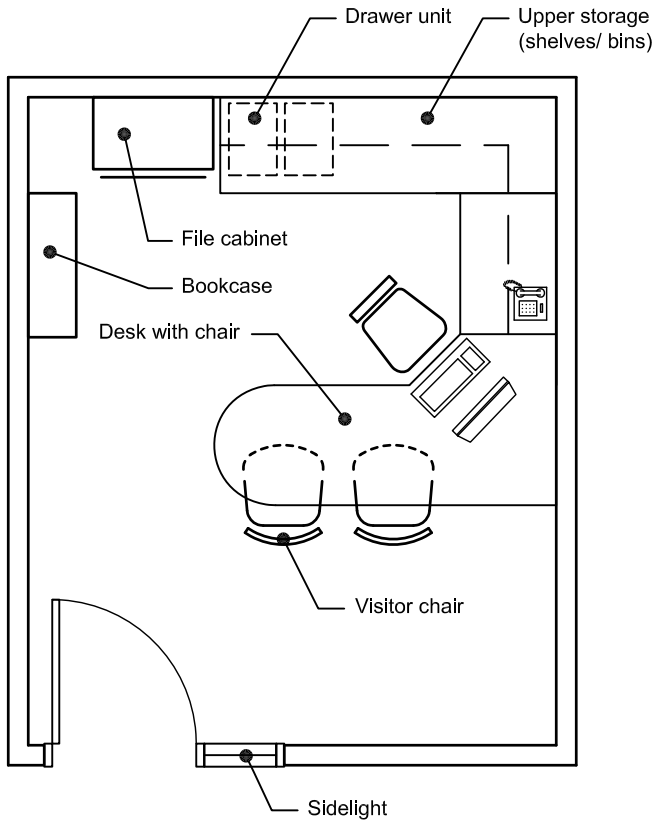
Equipment: Computer; telephone

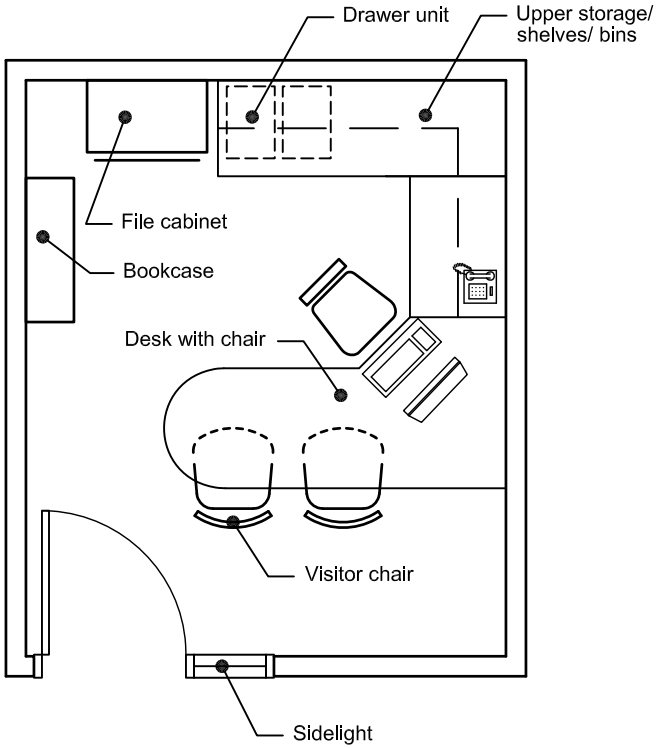
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





E104 JUDICIAL AFFAIRS OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Dean of Students / Judicial Affairs office space
Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E105 OMBUDSMAN OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Within Dean of Students / Judicial Affairs office space
Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

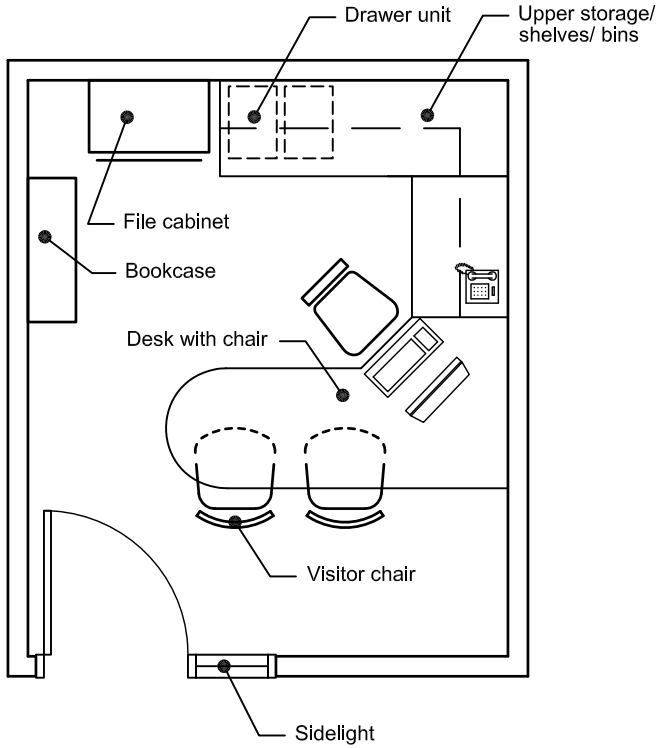
Equipment: Computer; telephone

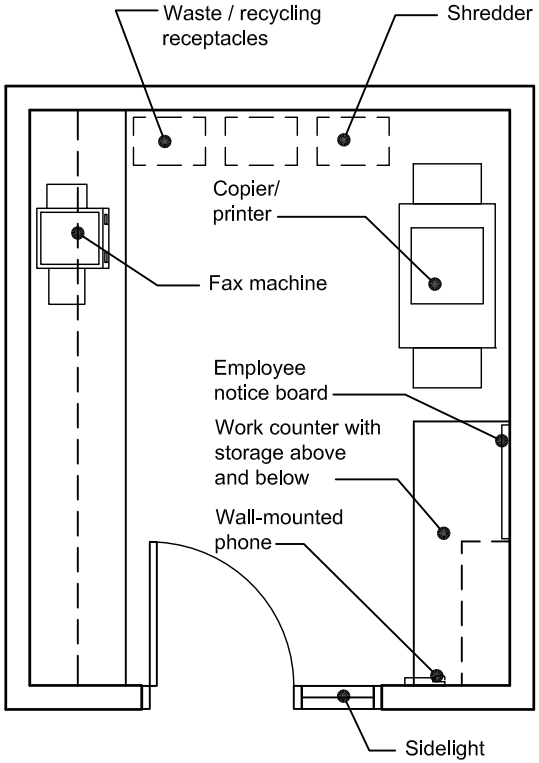
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





E106 COPY/PRINT/SUPPLIES

AREA: 120 NSF

Occupants: None

Function:
Enclosed room for shared office equipment
Workspace for collating, assembling, etc.
Office supply storage

Adjacency: Central location within office space, easily accessible by all staff

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment:
Copier / printer; fax machine; shredder
Wall-mounted telephone
Millwork countertops with storage cabinets and/or drawers above and below
Employee notice board

Furnishings: Waste and recycling receptacles

Mechanical:
Dedicated HVAC zone
Exhaust

Electrical:
Electrical wall outlets per code
Electrical and voice / data outlets for copier / printer, fax machine and telephone
Electrical outlets above countertop
Fluorescent parabolic lighting

Notes:

E107 HEARING ROOM

AREA: 400 NSF

Occupants: Up to 16 people

Function: Enclosed room for judicial hearings and Dean of Students office meetings

Adjacency: Within Dean of Students / Judicial Affairs office space
Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile & painted gyp. board; 9-10' height
Windows: Exterior windows with room-darkening window coverings desired
Sidelight at entry door
Doors: 3' x 7' wood door, locking

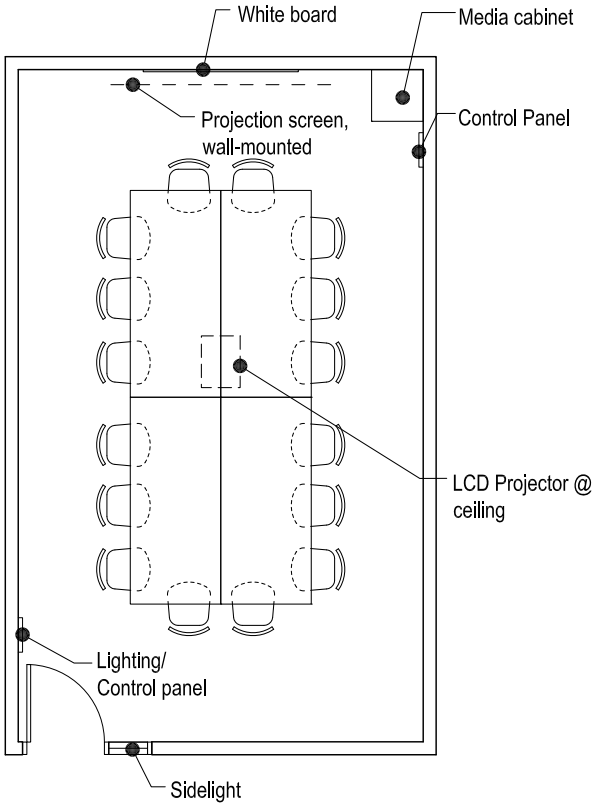
Equipment: White board, 6'W x 5'H
Projection screen
Ceiling-mounted LCD projector
Media cabinet / credenza & wall-mounted control station(s)
Telephone

Furnishings: (4) 42" W x 8' L tables (movable) with 16 chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical & data connections for AV equipment
Electrical & data connections for telephone
Light fixtures that allow for varying light levels & support the use of AV

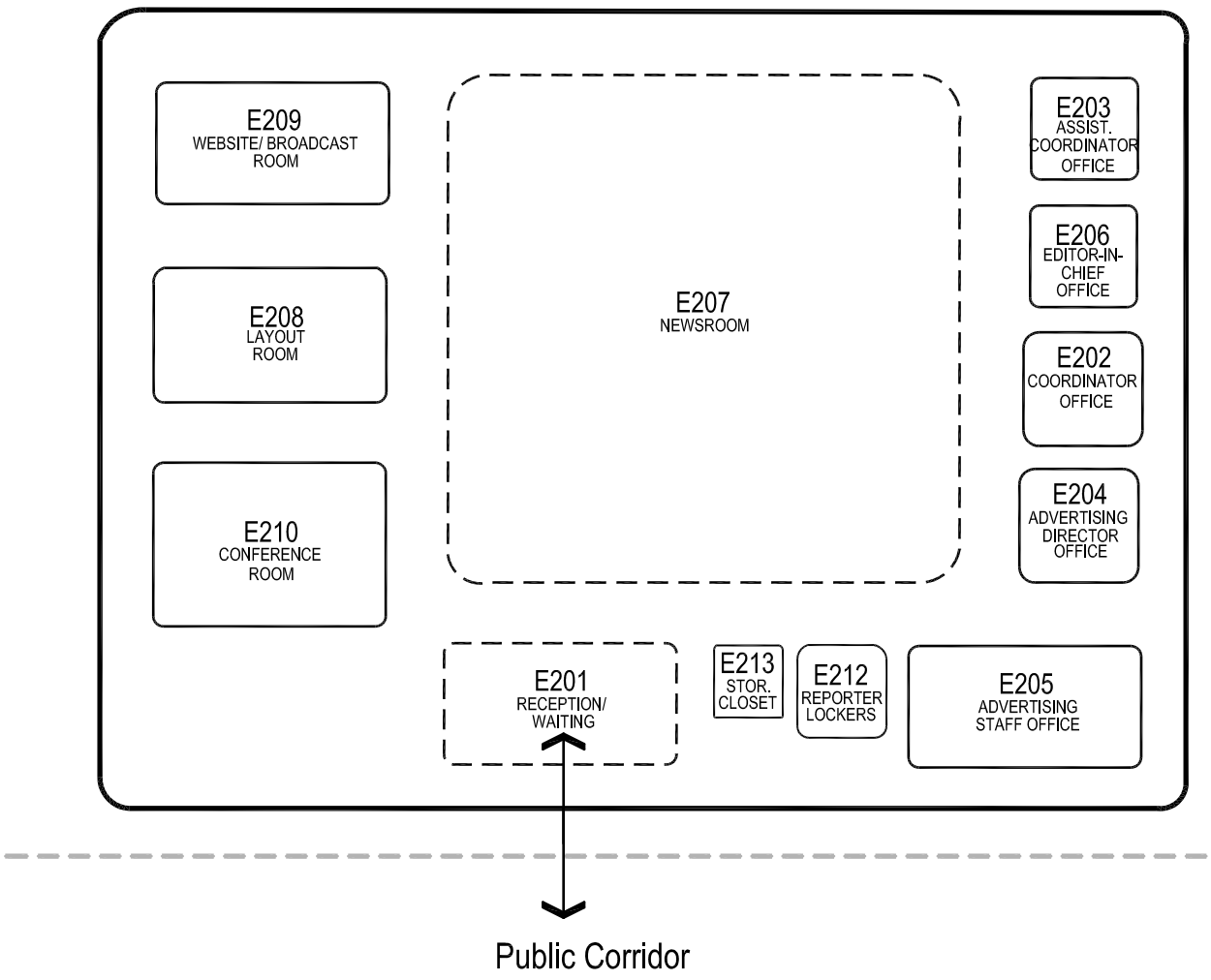
Notes: Possible option to use flat panel monitor in place of projector & projection screen – confirm during design



STUDENT MEDIA

TOTAL AREA: 4,050 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
E	**Student Life**															
	Student Media															
E201	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	Y	30	72-74°F		
E202	Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E203	Assistant Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E204	Advertising Director Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E205	Advertising Staff Office	1	200	200	266	325	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E206	Editor-in-Chief Office	1	100	100	133	162	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E207	Newsroom	1	2,200	2,200	2,420	2,952	6 AM-11 PM	controlled	Y	Y	Y	50	72-74°F		
E208	Layout Room	1	300	300	399	487	6 AM-11 PM	controlled	Y	M	Y	50	72-74°F		
E209	Website / Broadcast Room	1	200	200	266	325	6 AM-11 PM	controlled	Y	M	Y	40	72-74°F		
E210	Conference Room	1	400	400	532	649	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E211	Storage Closet	1	10	10	14	17	8 AM-5 PM	secure	Y	N	Y	15	55-85°F		
E212	Reporter Lockers	1	80	80	112	137	6 AM-11 PM	controlled	Y	M	Y	20	72-74°F		
				4,050	4,887	5,962										



STUDENT MEDIA
ADJACENCY DIAGRAM

E201 RECEPTION/WAITING

AREA: 200 NSF

Occupants: 1 occupant and up to 4 waiting visitors

Function: Entry, reception & waiting area for Student Media office

Adjacency: Entry point to Student Media office space; easy-to-find location in non-controlled portion of building
Adjacent to other Student Life offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Glass storefront or windows separating Reception from public corridor
Door: Wood door or storefront system glass door; locking

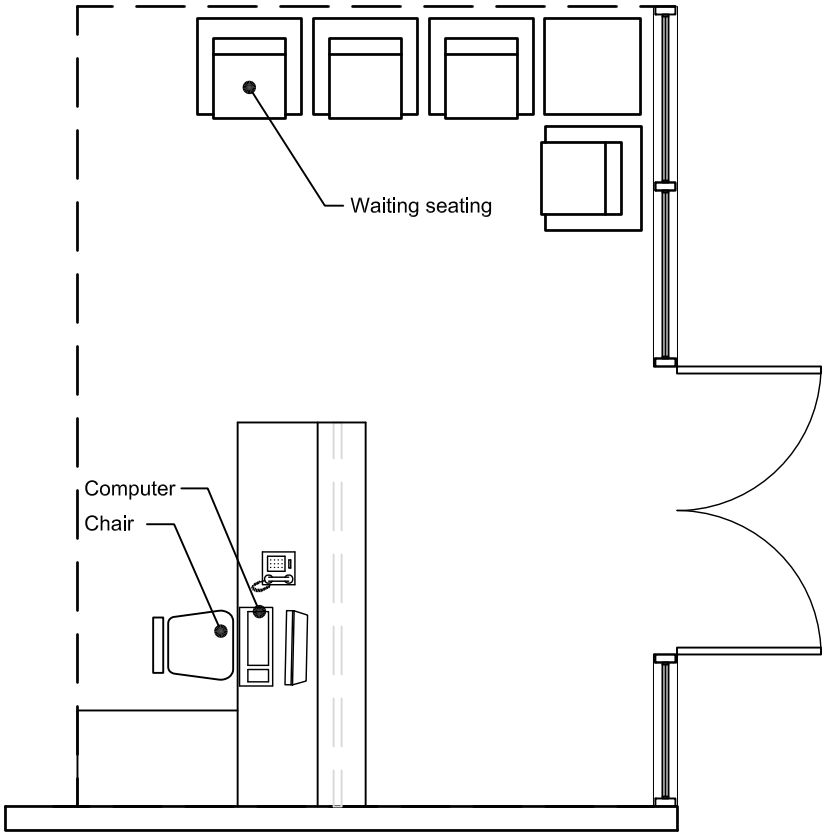
Equipment: Computer & telephone at reception station

Furnishings: 50 SF systems furniture reception station with drawer units and transaction counter
Desk chair
4 waiting chairs with occasional table(s)

Mechanical: Shared HVAC zone

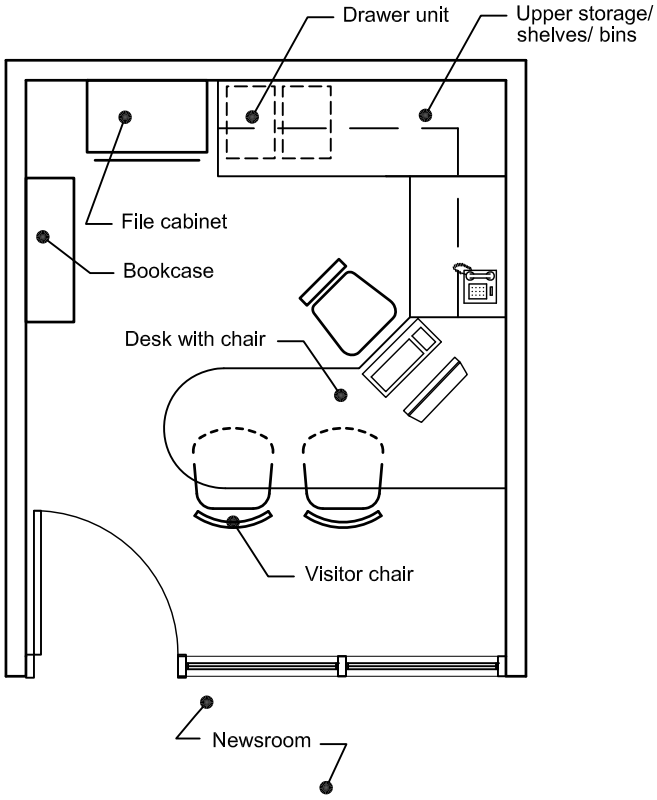
Electrical: Duplex electrical outlets per code
Voice / data outlets for reception station equipment
Fluorescent parabolic lighting

Notes: Entry and reception point should be open and welcoming



E202 COORDINATOR OFFICE

AREA: 120 NSF



Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Accessed from Newsroom
Directly adjacent to Editor-in-Chief Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Interior window to Newsroom
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E203 ASSISTANT COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Accessed from Newsroom
Directly adjacent to Editor-in-Chief Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Interior window to Newsroom
Door: 3' x 7' wood door, locking

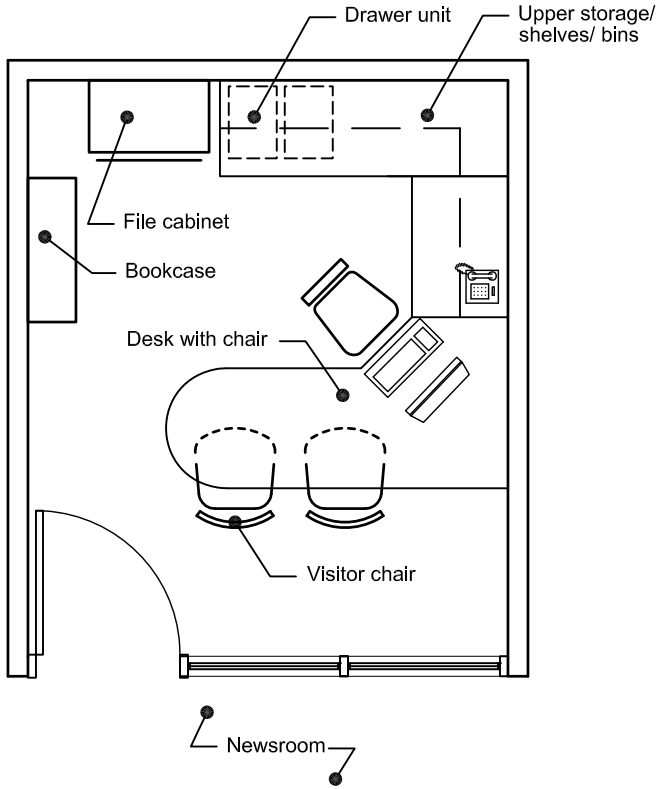
Equipment: Computer; telephone

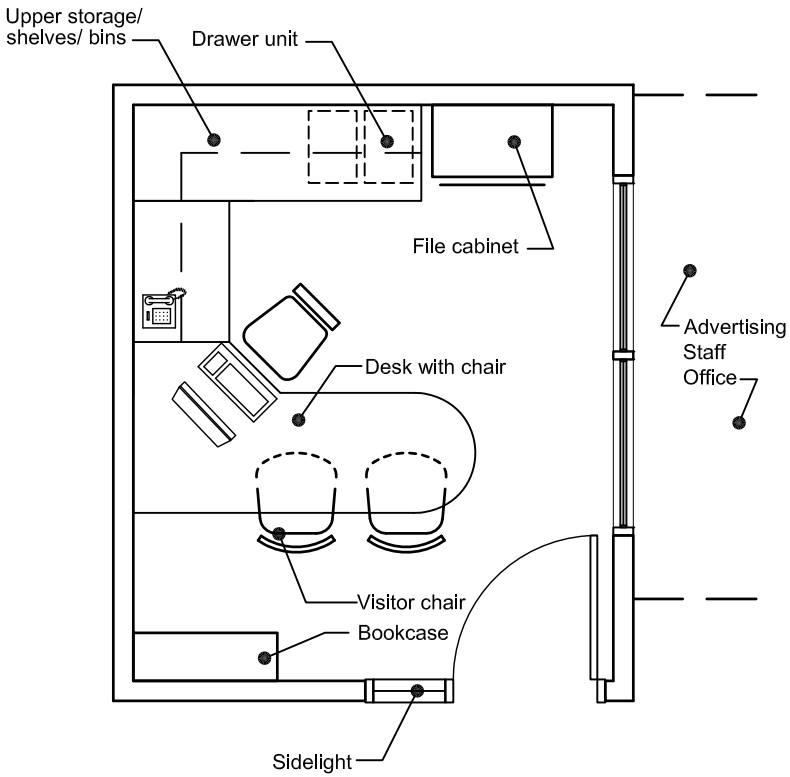
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





E204 ADVERTISING DIRECTOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Directly adjacent to Advertising Staff Office
Adjacent to Coordinator & Assistant Coordinator offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Sidelight at entry door
Interior window to Advertising Staff Office
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E205 ADVERTISING STAFF OFFICE

AREA: 200 NSF

Occupants: 6 occupants

Function: Enclosed office for shared use by up to 6 Advertising Staff

Adjacency: Directly adjacent to Advertising Director
Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Interior window to Advertising Director Office
Sidelight at entry door
Door: 3' x 7' wood door, locking

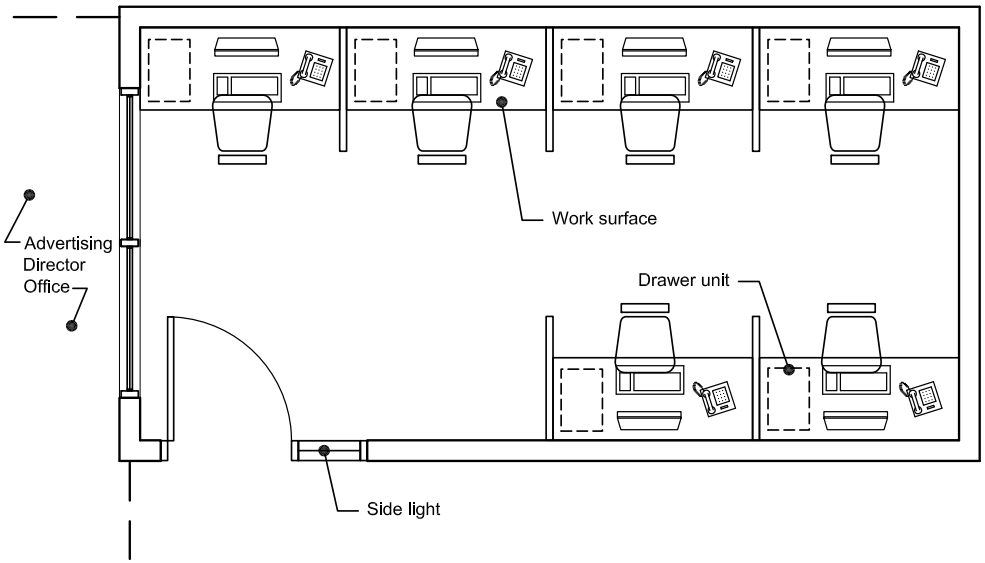
Equipment: 6 computers; 6 telephones

Furnishings: 6 worksurfaces, 4'-5' wide each; drawer unit below
6 desk chairs

Mechanical: Shared HVAC zone

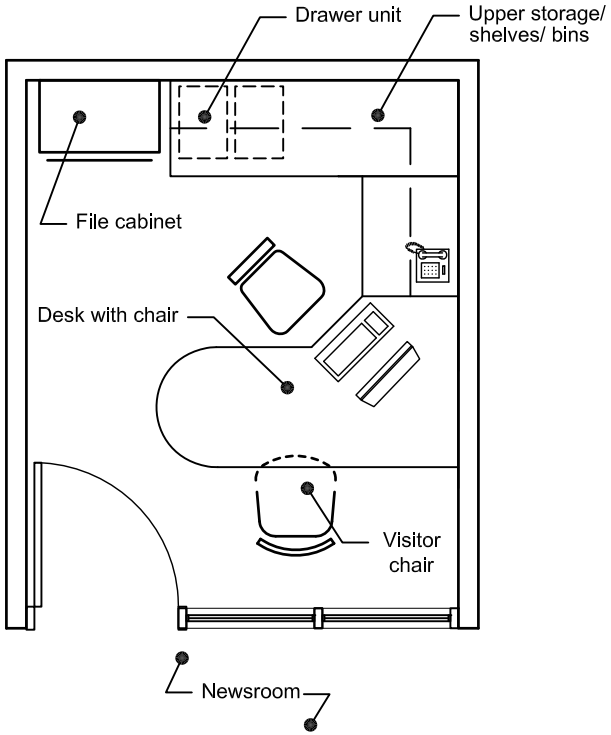
Electrical: Duplex electrical outlets per code
8 sets of voice / data outlets for computers / telephone
Fluorescent parabolic lighting

Notes: 6 work spaces for shared use by up to 10 Advertising Staff



E206 EDITOR-IN-CHIEF OFFICE

AREA: 100 NSF



Occupants: 1 occupant, with 1 visitor

Function: Private office

Adjacency: Accessed from Newsroom
Between Coordinator & Assistant Coordinator offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Interior window to Newsroom
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
Visitor chair
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E207 NEWSROOM

AREA: 2,200 NSF

Occupants: Up to 56 occupants

Function: Open office work space for editorial staff & reporters:
- Assigned stations: Editors / Section Editors
- Shared stations: Asst. Section Editors & Reporters

Informal meeting & training space for Student Media staff (up to 40 people)

Adjacency: Easily accessed, but not visible, from Reception / Waiting
Coordinator, Assistant Coordinator & Editor-in-Chief Offices accessed from this space
Layout Room, Website / Broadcast Room & Reporter Lockers adjacent

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height minimum
Windows: Exterior windows with window coverings desired
Interior windows to Coordinator, Asst. Coordinator & Editor-in-Chief offices
Door: None

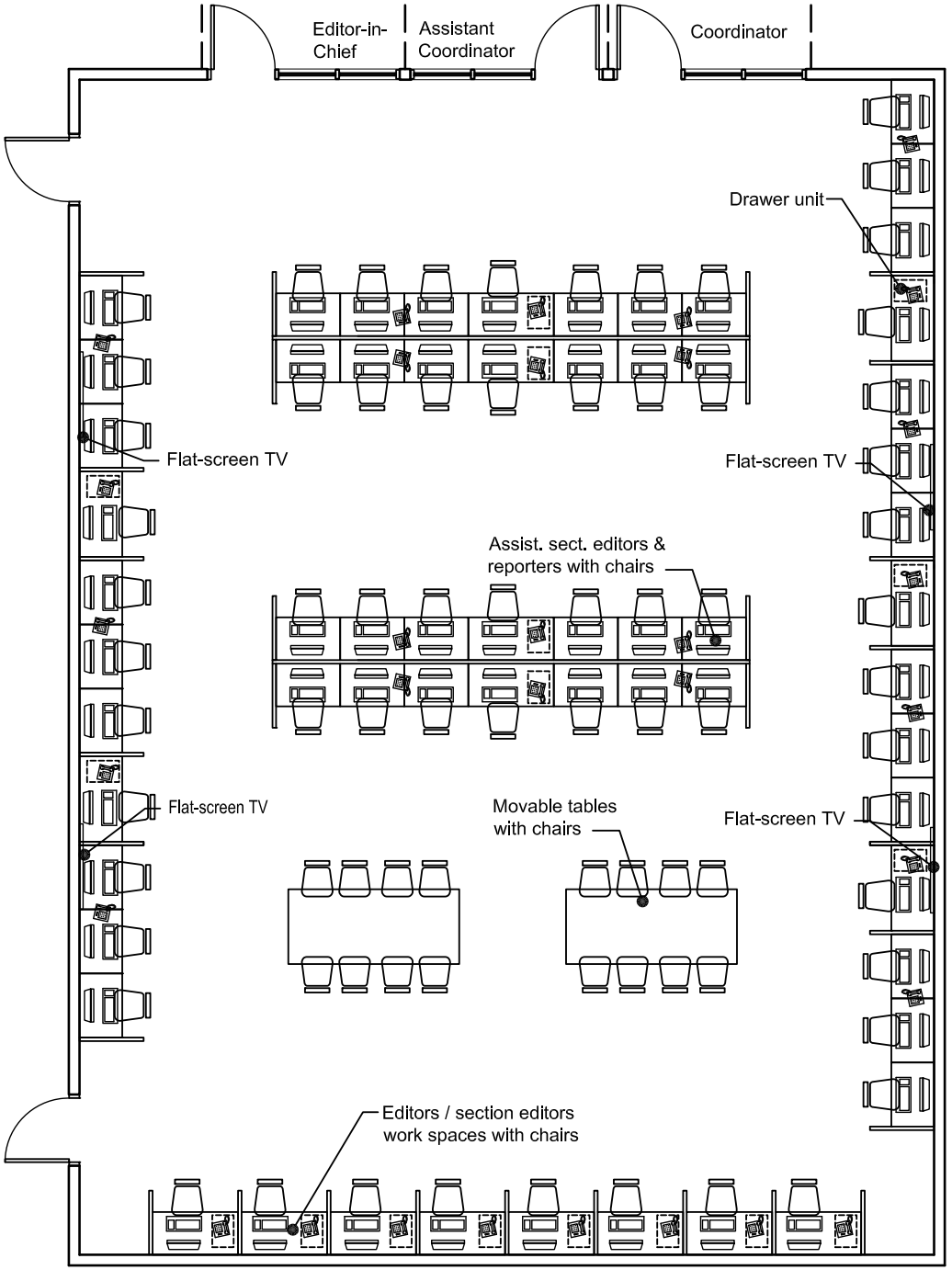
Equipment: 62 computers (1 for each work space)
32 telephones (1 for each Section Editor; 1 per 3 Assistant S.E. / Reporter work spaces)
4 wall-mounted flat-screen TV's

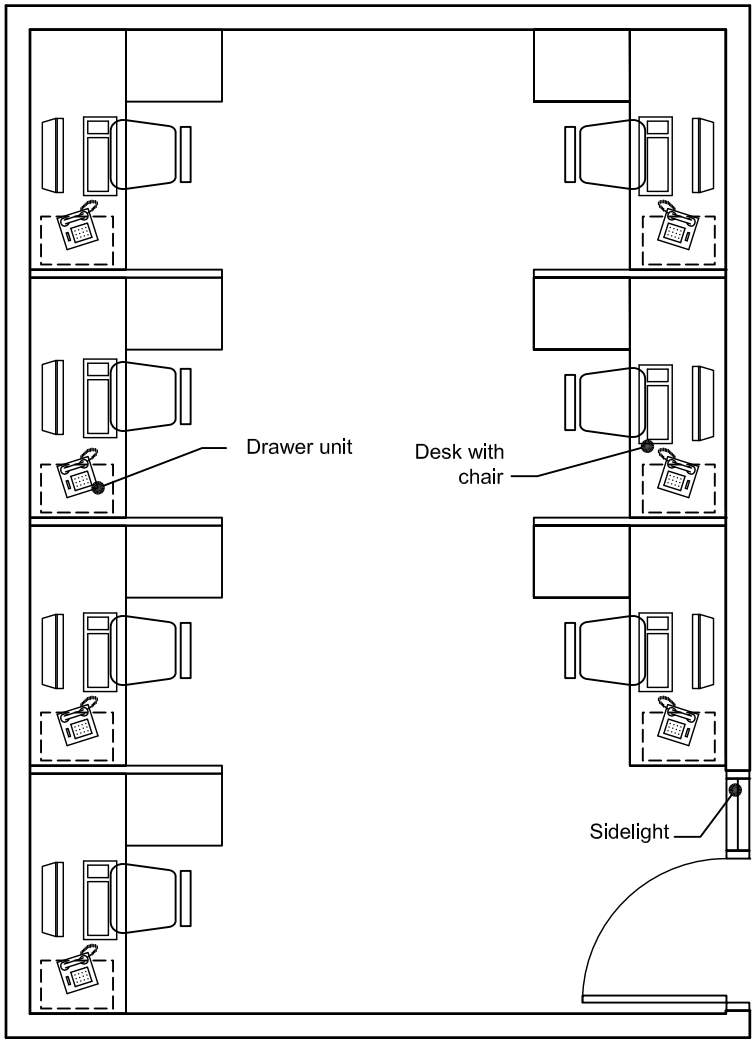
Furnishings: Editors / Section Editors: 17 work spaces, 4' W; with 1 box & 1 file drawer each
Asst. Sect. Editors / Reporters: 45 work spaces, 3' W
62 desk chairs
2 tables, movable; 42"W x 8'L; 16 chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code / equipment
56 sets of voice / data outlets for computers & telephones
Fluorescent parabolic lighting

Notes:





E208 LAYOUT ROOM

AREA: 300 NSF

Occupants: Up to 7 occupants

Function: Enclosed room with assigned work space for Media layout & graphics staff

Adjacency: Quiet location within Student Media office space
Near Newsroom and Coordinator / Assistant Coordinator offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile & painted gyp. board; 10' height
Windows: Exterior windows with room-darkening window coverings desired
Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment: 7 computers & 7 telephones

Furnishings: (7) 4' x 5' L-shaped workstations; with drawers
7 chairs

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Electrical & data connections computers & telephones
Light fixtures that allow for varied light levels, to support computer graphics work

Notes:

E209 WEBSITE/BROADCAST ROOM

AREA: 200 NSF

Occupants: Up to 4 occupants

Function: Enclosed room with assigned work space for Media website design & broadcast staff

Adjacency: Quiet location within Student Media office space
Near Newsroom and Coordinator / Assistant Coordinator offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile & painted gyp. board; 10' height
Windows: Exterior windows with room-darkening window coverings desired
Sidelight at entry door
Doors: 3' x 7' wood door, locking

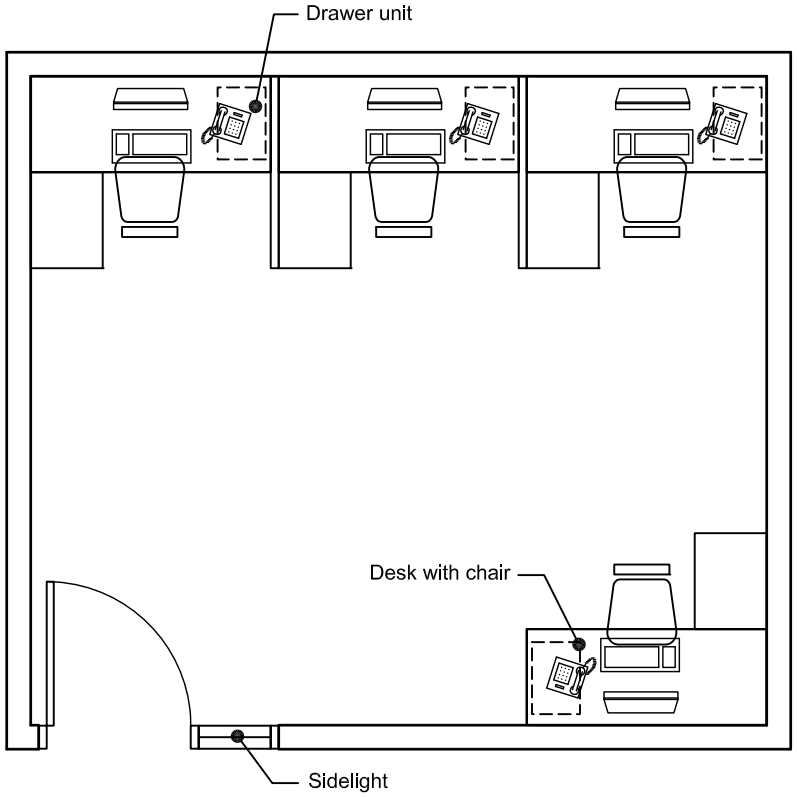
Equipment: 4 computers & 4 telephones

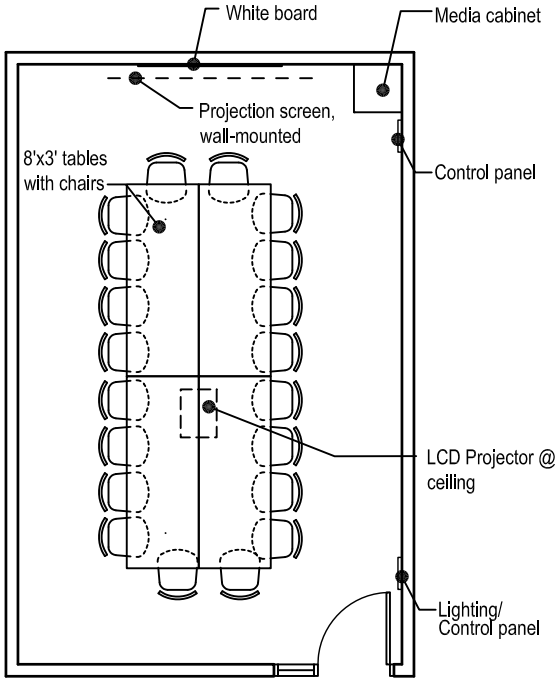
Furnishings: (4) 4' x 5' L-shaped workstations; with drawers
4 chairs

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Electrical & data connections computers & telephones
Light fixtures that allow for varied light levels, to support computer graphics work

Notes:





E210 CONFERENCE ROOM

AREA: 400 NSF

Occupants: Up to 20 people

Function: Enclosed room for meetings and staff training

Adjacency: Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile & painted gyp. board; 10' height
Windows: Exterior windows with room-darkening window coverings desired
Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment: White board, 6'W x 5'H
Projection screen
Ceiling-mounted LCD projector
Media cabinet / credenza & wall-mounted control station
Telephone

Furnishings: (4) 3' W x 8' L tables, movable, with 20 chairs

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
Electrical & data connections for ceiling-mounted projector and AV control station
Electrical & data connections for telephone
Light fixtures that allow for varying light levels & support the use of AV

E211 STORAGE CLOSET

AREA: 10 NSF

Occupants: None

Function: Enclosed storage room for Student Media files & materials

Adjacency: Easily accessible location within Student Media space

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Painted gypsum board; 10' height
Windows: None
Doors: 3' x 7' wood door, locking

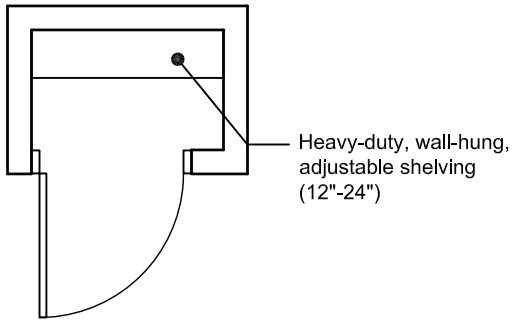
Equipment: None

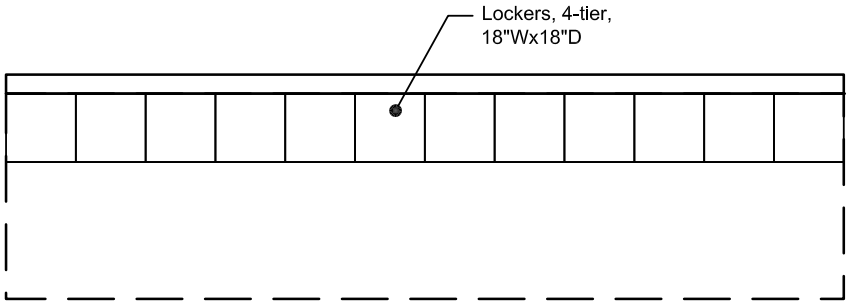
Furnishings: Heavy-duty, wall-hung adjustable shelving, 12"-24" deep

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

Notes:





E212 REPORTER LOCKERS

AREA: 50 NSF

Occupants: None

Function: Open space / alcove for lockers used by student reporters

Adjacency: Low-visibility location within Student Media space
Easily accessible from Newsroom

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Painted gypsum board or lay-in acoustic tile; 10' height
Windows: None
Doors: None

Equipment: 48 lockers, 4-tier, 18"W x 18"D

Furnishings: None

Mechanical: Shared HVAC zone

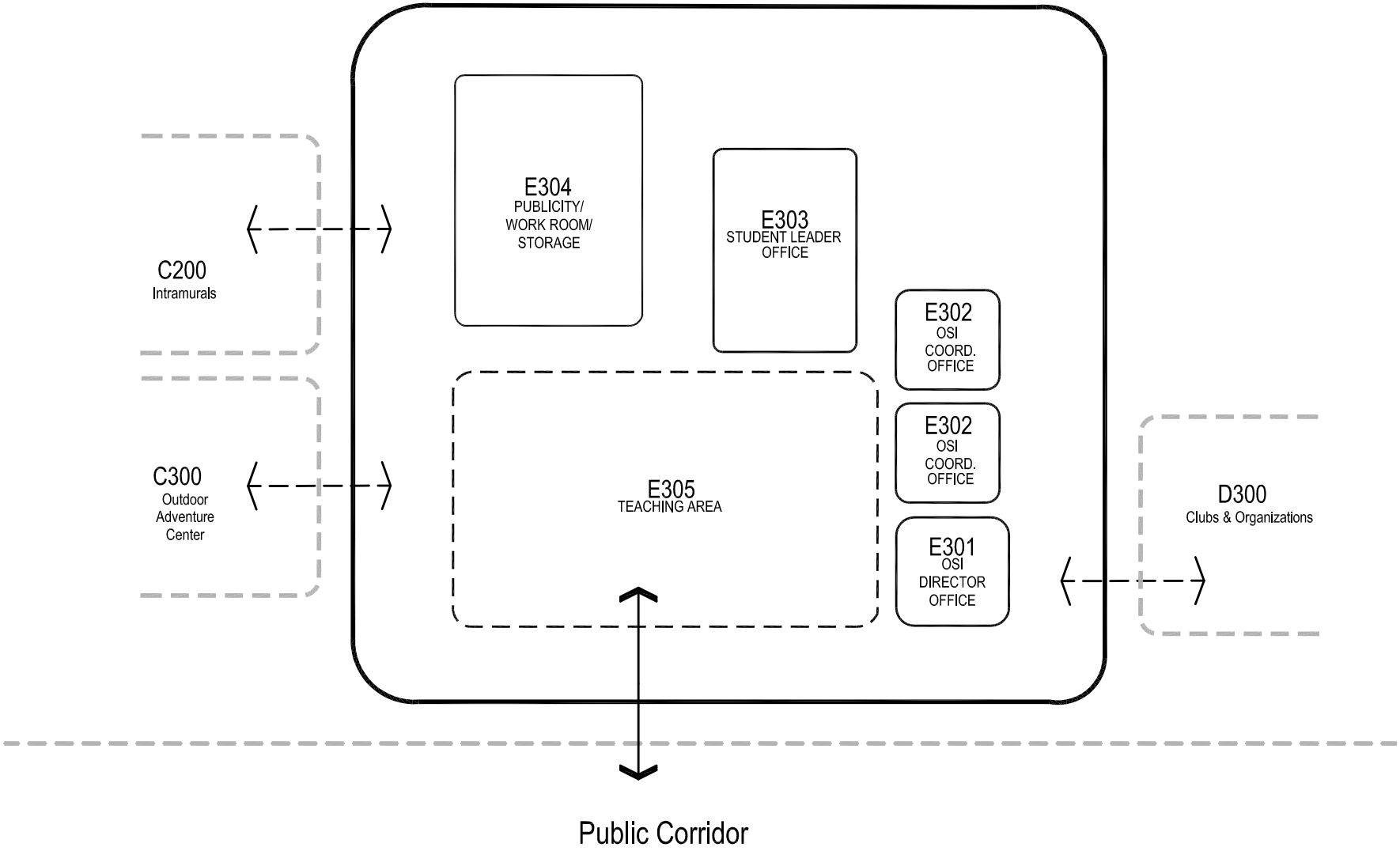
Electrical: Fluorescent parabolic lighting

Notes:

OFFICE OF STUDENT INVOLVEMENT

TOTAL AREA: 2,890 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY (public, controlled, secure)	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
E	**Student Life**														
	Office of Student Involvement														
E301	OSI Director Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E302	OSI Coordinator Office	2	120	240	319	389	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E303	Student Leader Office	1	400	400	532	649	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E304	Publicity / Work Room / Storage	1	600	600	750	915	8 AM-8 PM	secure	N	N	N	15	72-74°F		
E305	Teaching Area	1	1,500	1,500	1,725	2,105	8 AM-8 PM	public	Y	Y	M	50	72-74°F		
				2,890	3,526	4,301									



OFFICE OF STUDENT INVOLVEMENT
ADJACENCY DIAGRAM

E301 OSI DIRECTOR OFFICE

AREA: 150 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Accessed from Teaching Area
Adjacent to Coordinator & Student Leader offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Interior window into Teaching Area
Door: 3' x 7' wood door, locking

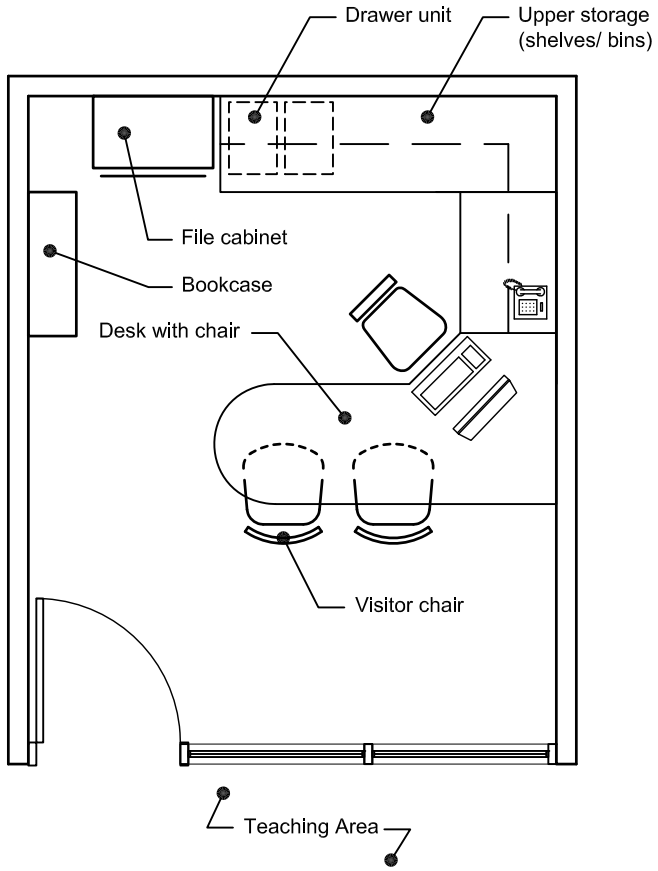
Equipment: Computer; telephone

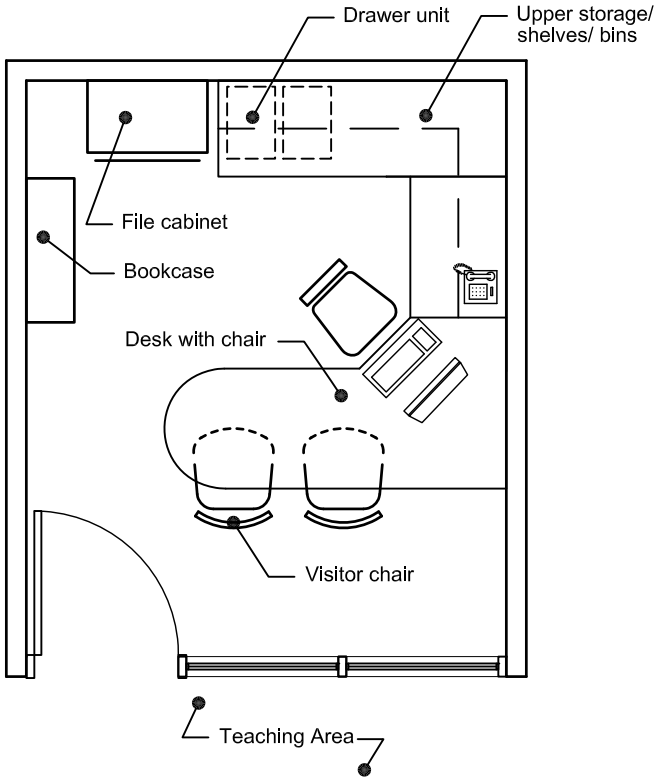
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase(s) / file cabinet(s)

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





E302 OSI COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Accessed from Teaching Area
Adjacent to Director & Student Leader offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Interior window into Teaching Area
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase(s) / file cabinet(s)

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E303 STUDENT LEADER OFFICE

AREA: 400 NSF

Occupants: Up to 12 occupants

Function: Enclosed room with 12 work spaces for shared use by up to 60 OSI REC's, ALC's & Zone Managers, who plan, prepare & publicize OSI activities & events

Adjacency: Accessed from Teaching Area
Adjacent to Director & Coordinator offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Interior window into Teaching Area
Door: 3' x 7' wood door, locking

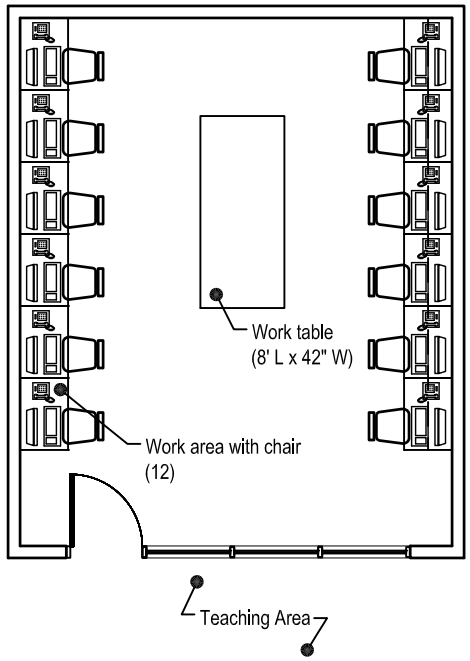
Equipment: 12 computers; 12 telephones

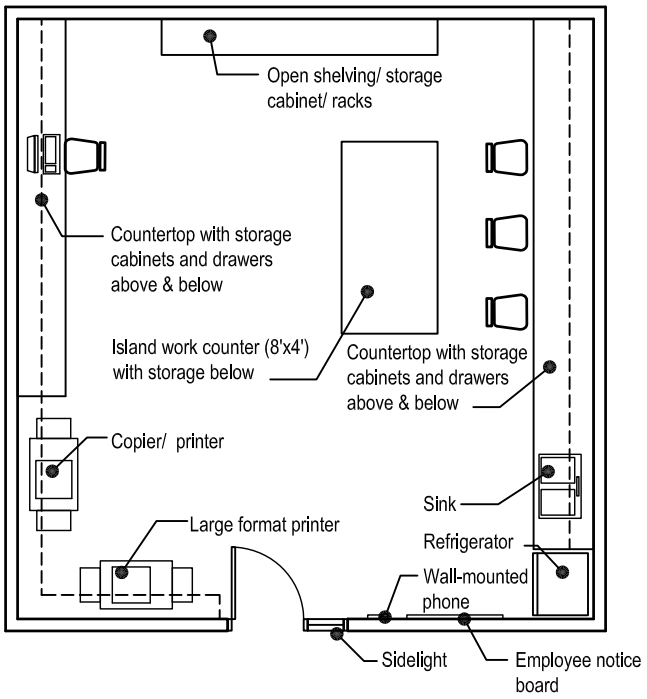
Furnishings: 12 work areas, 3'' wide, for shared use by up to 60 REC's, ALC's & Zone Managers; with open shelves or bins above worksurface
12 desk chairs
8'L x 42"W table

Mechanical: Dedicated HVAC zone

Electrical: Duplex electrical outlets per code
12 sets of electrical and voice / data outlets for computers & telephones
Fluorescent parabolic lighting

Notes: Work spaces at room perimeter, with table in center





E304 PUBLICITY/WORK ROOM/STORAGE

AREA: 600 NSF

Occupants: None

Function: Enclosed room for storing & preparing materials used by Office of Student Involvement for engaged learning activities

Adjacency: Accessed from Teaching Area

Environment:

Floor: Sealed concrete or VCT (easy to clean / maintain)
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment:
Computer; telephone; copier / printer; large format printer
Millwork cabinets / countertop, 24" & 30"D, with storage cabinets & drawers above & below
Millwork island, 4' x 8' with storage below; some flat file drawers & vertical slots for posters & large format items
Kitchen sink in millwork cabinet for food preparation & artwork / project clean-up
Refrigerator

Furnishings:
Chairs / stools for workstations at countertops & island
Open shelving and storage cabinets / racks

Mechanical: Dedicated HVAC zone; exhaust

Electrical:
Duplex electrical outlets per code
Electrical & voice / data outlets as needed for equipment
Fluorescent parabolic lighting

Notes:
Requires some open space for storage of chairs, tables, & other items
Space designed for ease of cleaning & maintenance

E305 TEACHING AREA

AREA: 1,500 NSF

Occupants: Up to 50 students and staff

Function: Open / flexible space at entry to OSI office; used for OSI engaged learning activities, which include art projects, cooking demonstrations, AV presentations, etc.
Secondary function as student lounge space

Adjacency: High-visibility location open to / adjoining public corridor at entry to OSI office space. Must be able to be secured after-hours with sliding glass walls, movable partitions, security grilles, etc.

Environment:

- **Floor:** Easy-to-clean hard surface flooring (i.e. smooth rubber)
- **Walls:** Painted gypsum board
- **Ceiling:** Lay-in acoustic tile; 10' height minimum
- **Windows:** Exterior windows or natural light desired
  Interior windows to Director, Coordinator & Student Leader offices, allowing visual supervision of Teaching Area
- **Door:** Must be able to be secured after-hours with sliding glass walls / doors, movable partitions, security grilles, etc.

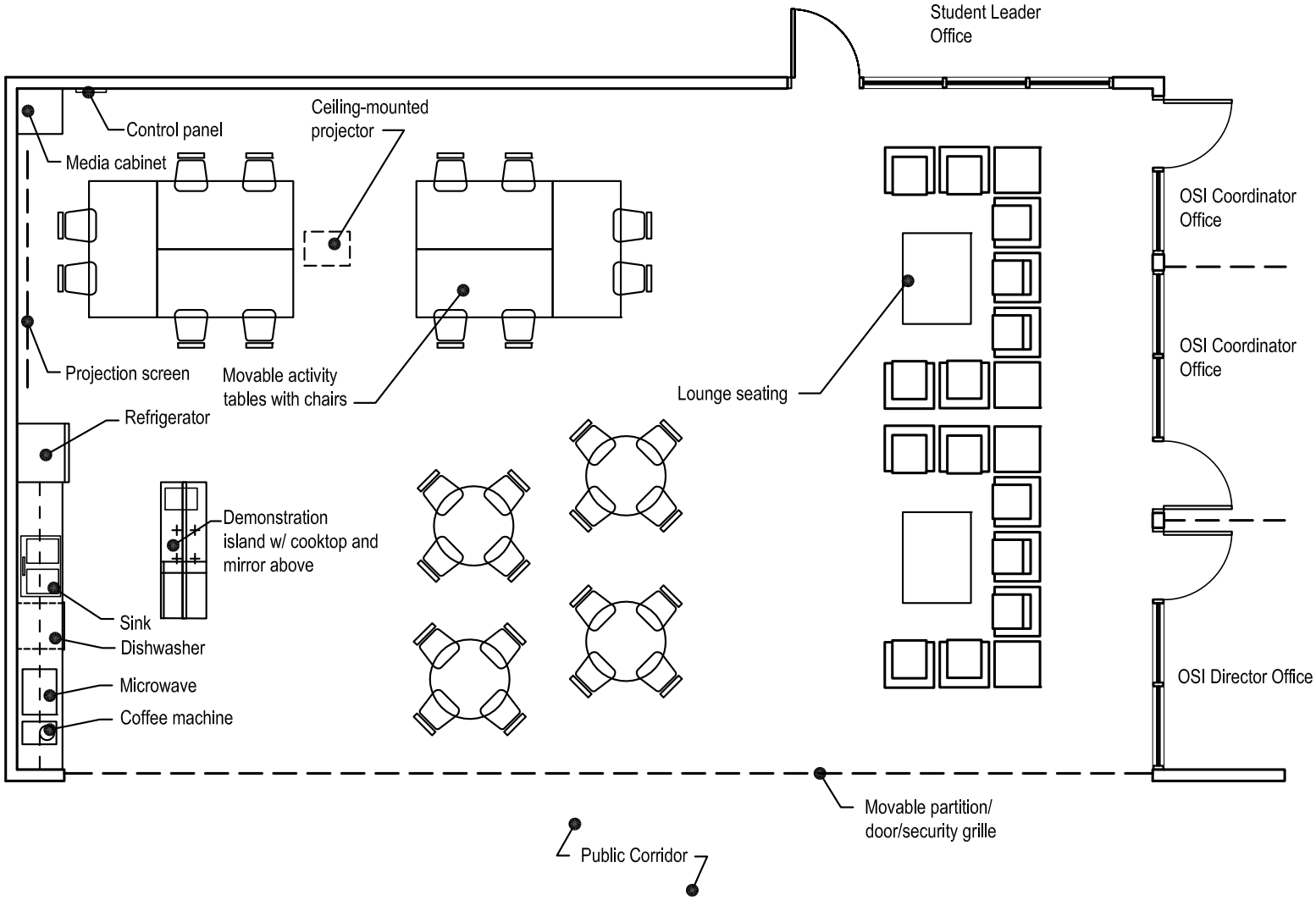
Equipment: Cooking area: Demonstration island with cooktop; with mirror above; millwork cabinets / countertop, 24"D, behind island, with storage cabinets & drawers above & below; kitchen sink; dishwasher; microwave; refrigerator; oven (all appliances electric)
AV presentation area: Ceiling-mounted projector & projection screen
Media cabinet / credenza & wall-mounted control station

Furnishings: Movable activity tables with chairs
Lounge seating groupings

Mechanical: Dedicated HVAC zone; exhaust at cooking area

Electrical: Duplex electrical outlets per code
Electrical & voice / data outlets as needed for cooking & AV equipment
Lighting to support activities & presentation capabilities

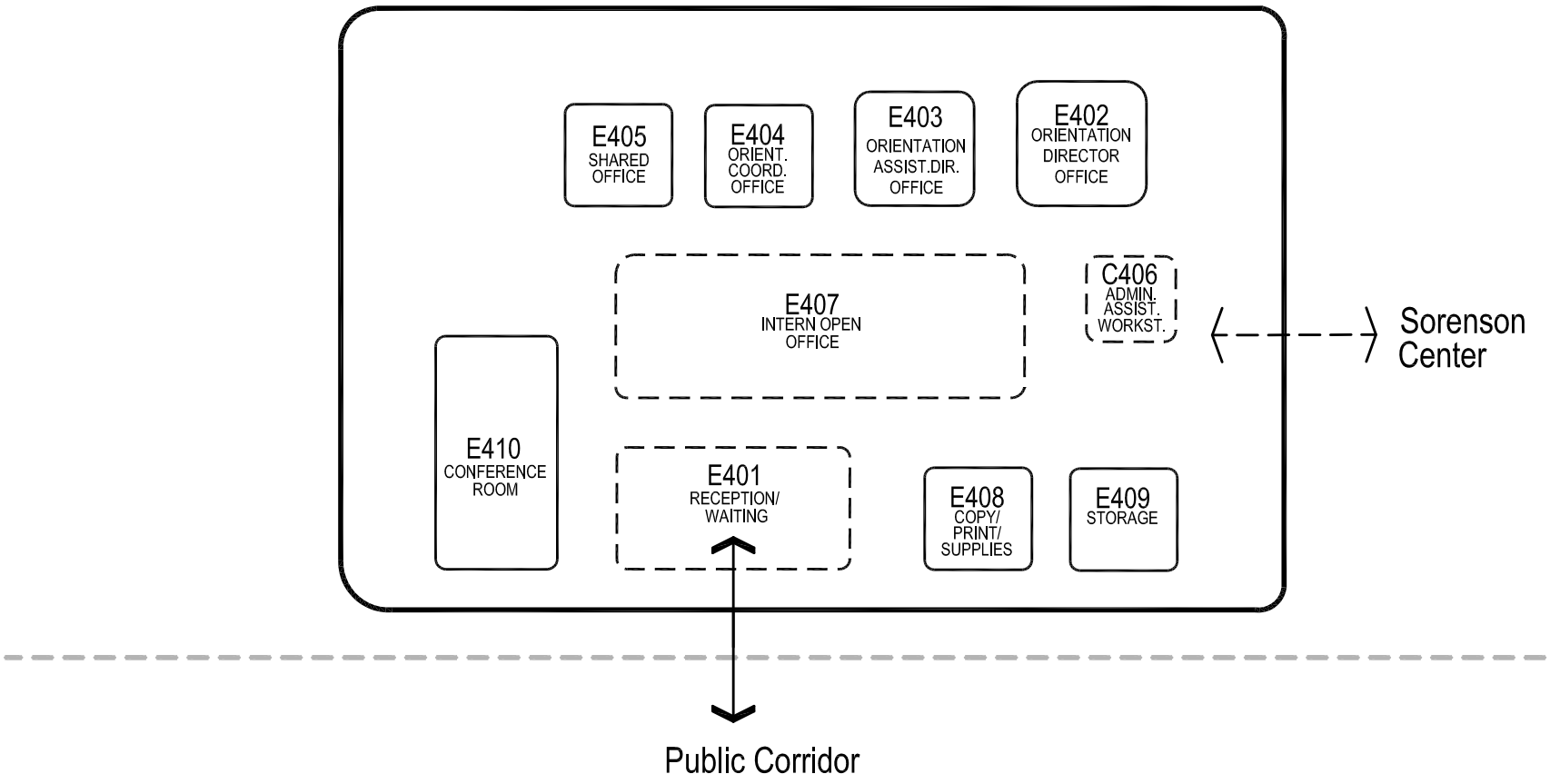
Notes: Space designed for ease of cleaning & maintenance


Student Leader Office
Control panel
Ceiling-mounted projector
Media cabinet
OSI Coordinator Office
OSI Coordinator Office
Projection screen
Movable activity tables with chairs
Lounge seating
Refrigerator
Demonstration island w/ cooktop and mirror above
Sink
Dishwasher
Microwave
Coffee machine
OSI Director Office
Movable partition/ door/security grille
Public Corridor

ORIENTATION

TOTAL AREA: 1,624 GSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING: public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting controls	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
E	**Student Life**															
	Orientation															
E401	Reception / Waiting	1	200	200	266	325	8 AM-5 PM	public	Y	Y	Y	30	72-74°F		
E402	Orientation Director Office	1	150	150	200	243	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E403	Orientation Asst. Director Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E404	Orientation Coordinator Office	1	120	120	160	195	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E405	Orientation Shared Office	1	100	100	133	162	8 AM-5 PM	controlled	Y	M	Y	50	72-74°F		
E406	Administrative Asst. Workstation	1	64	64	90	109	8 AM-5 PM	controlled	Y	M	M	50	72-74°F		
E407	Intern Open Office	1	400	400	532	649	8 AM-5 PM	controlled	Y	M	M	50	72-74°F		
E408	Copy / Print / Supplies	1	120	120	160	195	8 AM-5 PM	controlled	N	N	N	30	72-74°F		
E409	Storage Room	1	150	150	200	243	8 AM-5 PM	secure	N	N	N	15	55-85°F		
E410	Conference Room	1	200	200	266	325	8 AM-5 PM	controlled	M	M	M	50	72-74°F		
				1,624	2,164	2,641										



ORIENTATION
ADJACENCY DIAGRAM

E401 RECEPTION/WAITING

AREA: 200 NSF

Occupants: 1 occupant and up to 4 waiting visitors

Function: Entry, reception & waiting area for Orientation office

Adjacency: Entry point to Orientation office space; easy-to-find location in non-controlled portion of building
Adjacent to other Student Life offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Glass storefront or windows separating Reception from public corridor
Door: Wood door or storefront system glass door; locking

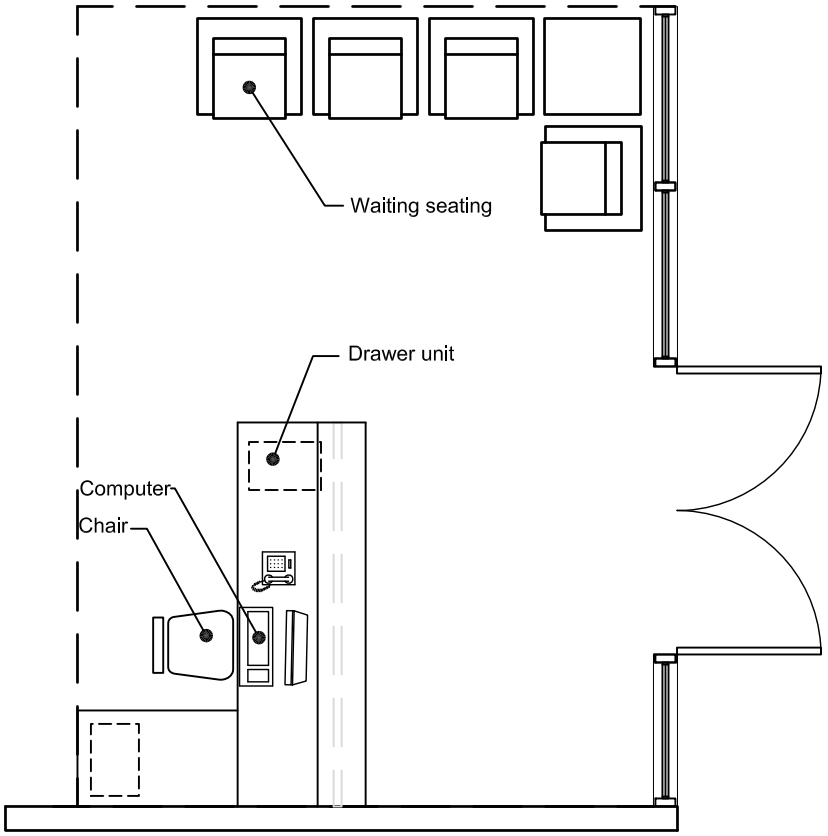
Equipment: Computer & telephone at reception station

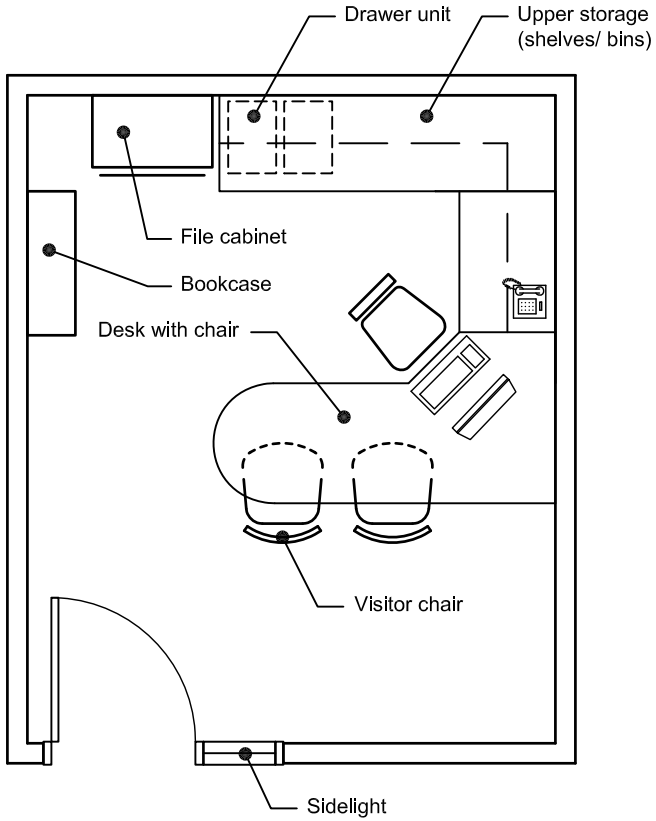
Furnishings: 50 SF systems furniture reception station with drawer units and transaction counter
Desk chair
4 waiting chairs with occasional table(s)

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
Voice / data outlets for reception station equipment
Fluorescent parabolic lighting

Notes: This area could be shared with another Student Life group





E402 ORIENTATION DIRECTOR OFFICE

AREA: 150 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E403 ORIENTATION ASST. DIRECTOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easily accessed from Reception / Waiting
Adjacent to Director Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

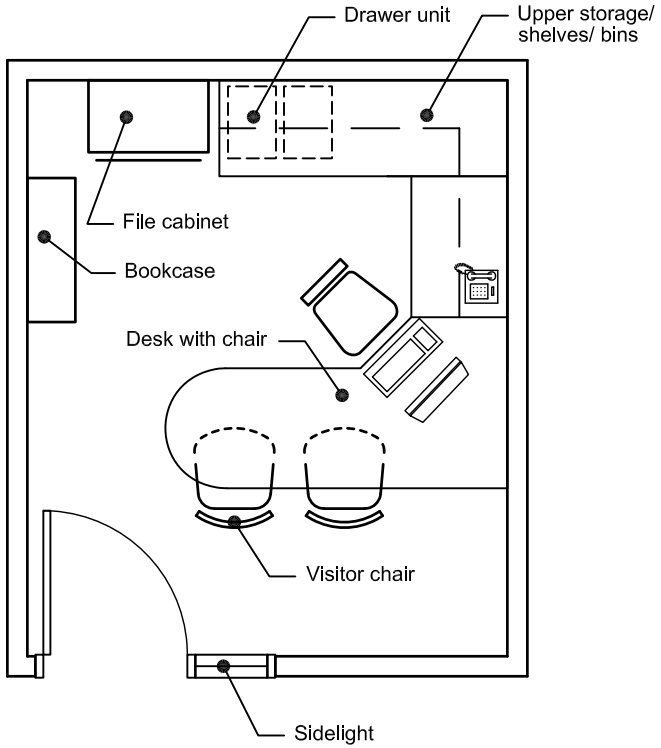
Equipment: Computer; telephone

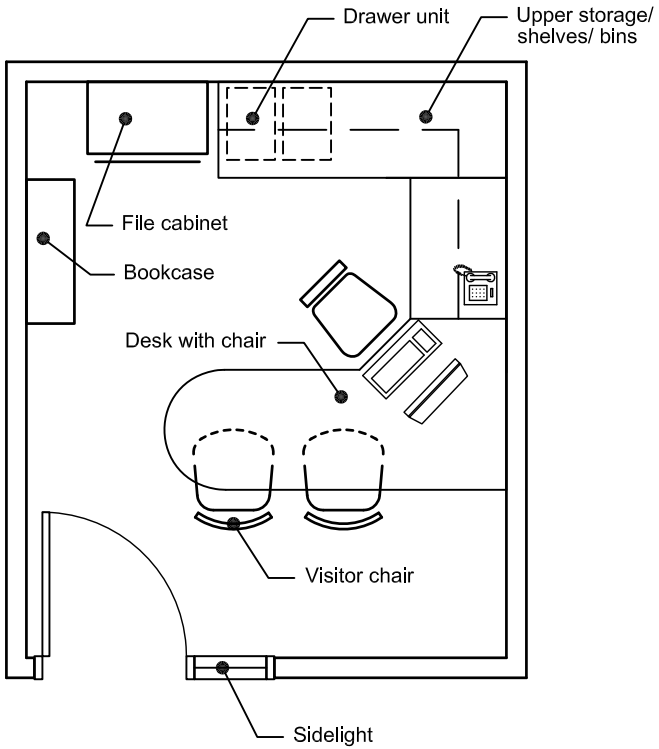
Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:





E404 ORIENTATION COORDINATOR OFFICE

AREA: 120 NSF

Occupants: 1 occupant, with up to 2 visitors

Function: Private office

Adjacency: Easily accessed from Reception / Waiting
Adjacent to Assistant Director Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
2 visitor chairs
Bookcase / file cabinet

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:

E405 ORIENTATION SHARED OFFICE

AREA: 100 NSF

Occupants: 1 occupant, with 1 visitor

Function: Office shared by part-time staff

Adjacency: Easily accessed from Reception / Waiting
Adjacent to Coordinator Office

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings
Sidelight at entry door
Door: 3' x 7' wood door, locking

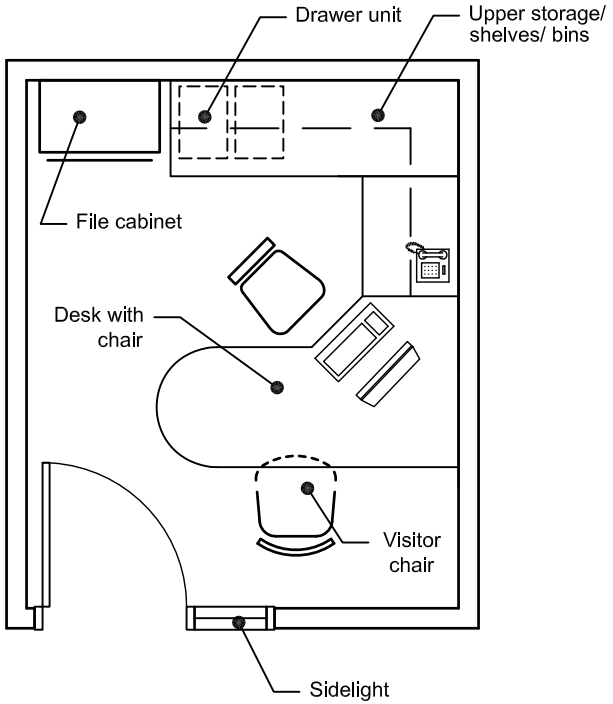
Equipment: Computer; telephone

Furnishings: Systems furniture U-shaped desk with shelves / bins above and drawer units below
Desk chair
Visitor chair
Bookcase / file cabinet

Mechanical: Shared HVAC zone

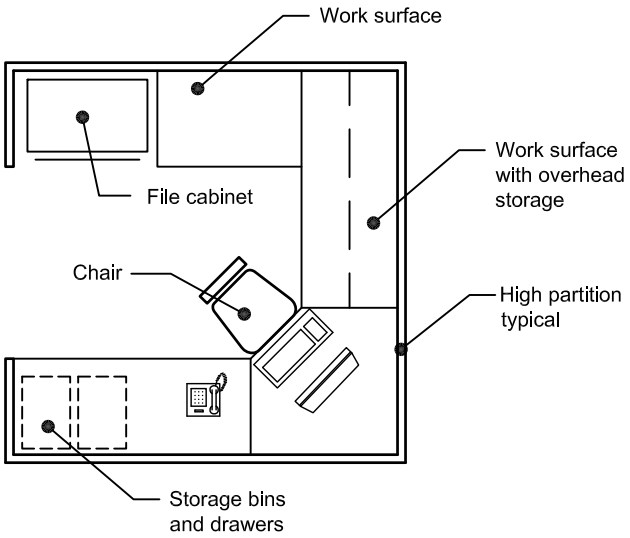
Electrical: Duplex electrical outlets per code
2 sets of voice / data outlets for furniture layout flexibility
Fluorescent parabolic lighting

Notes:



E406 ADMINISTRATIVE ASST. WORKSTATION

AREA: 64 NSF



Occupants: 1 occupant

Function: Open office workstation

Adjacency: Adjacent to Director & Assistant Director offices

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired in open office area
Door: None

Equipment: Computer; telephone

Furnishings: U-shaped open office workstation with shelving, storage bins, and drawers
Desk chair
File cabinet

Mechanical: Shared HVAC zone

Electrical: Electrical and voice / data outlets for computer, telephone, workstation task lighting, and other miscellaneous equipment
Fluorescent parabolic lighting

Notes:

E407 INTERN OPEN OFFICE

AREA: 400 NSF

Occupants: Up to 10 occupants

Function: Enclosed room with 10 work spaces for shared use by up to 20 Orientation Student Leaders
Informal meeting space

Adjacency: Adjacent to Orientation Coordinator Office
Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Exterior windows with window coverings desired
Sidelight at entry door
Door: 3' x 7' wood door, locking

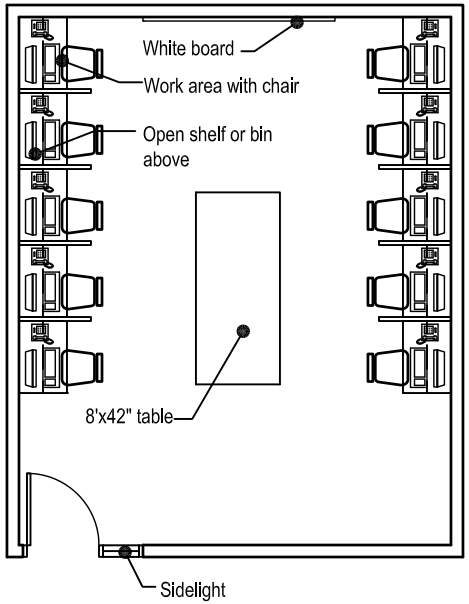
Equipment: 10 computers; 10 telephones
White board, 6'W x 5'H

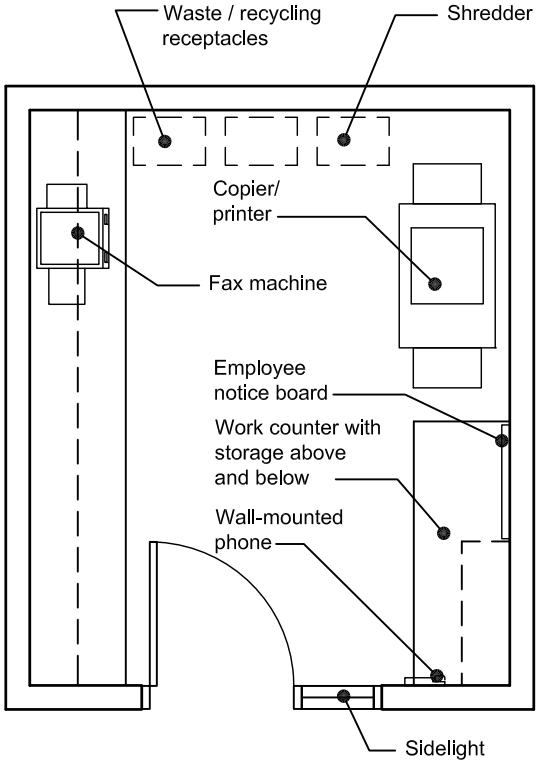
Furnishings: 10 work areas, 3'' wide, with open shelf or bin above worksurface
10 desk chairs
8'L x 42"W table

Mechanical: Shared HVAC zone

Electrical: Duplex electrical outlets per code
10 sets of voice / data outlets for computers/telephones
Fluorescent parabolic lighting

Notes: Work spaces at room perimeter, with table in center





E408 COPY/PRINT/SUPPLIES

AREA: 120 NSF

Occupants: None

Function:
Enclosed room for shared office equipment
Workspace for collating, assembling, etc.
Office supply storage

Adjacency: Central location within Orientation office space, easily accessible by all staff

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment:
Copier / printer; fax machine; shredder
Wall-mounted telephone
Millwork countertops with storage cabinets and/or drawers above and below
Employee notice board

Furnishings: Waste and recycling receptacles

Mechanical:
Dedicated HVAC zone
Exhaust

Electrical:
Electrical wall outlets per code
Electrical and voice / data outlets for copier / printer, fax machine and telephone
Electrical outlets above countertop
Fluorescent parabolic lighting

Notes:

E409 STORAGE ROOM

AREA: 150 NSF

Occupants: None

Function: Enclosed storage room for frequently-accessed files & materials

Adjacency: Central location within Orientation office space, easily accessible by all staff

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile; 10' height
Windows: None
Doors: 3' x 7' wood door, locking

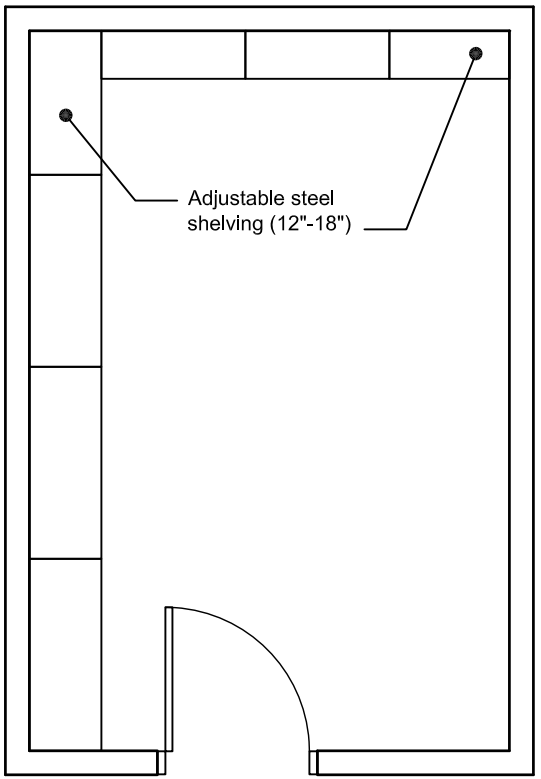
Equipment: None

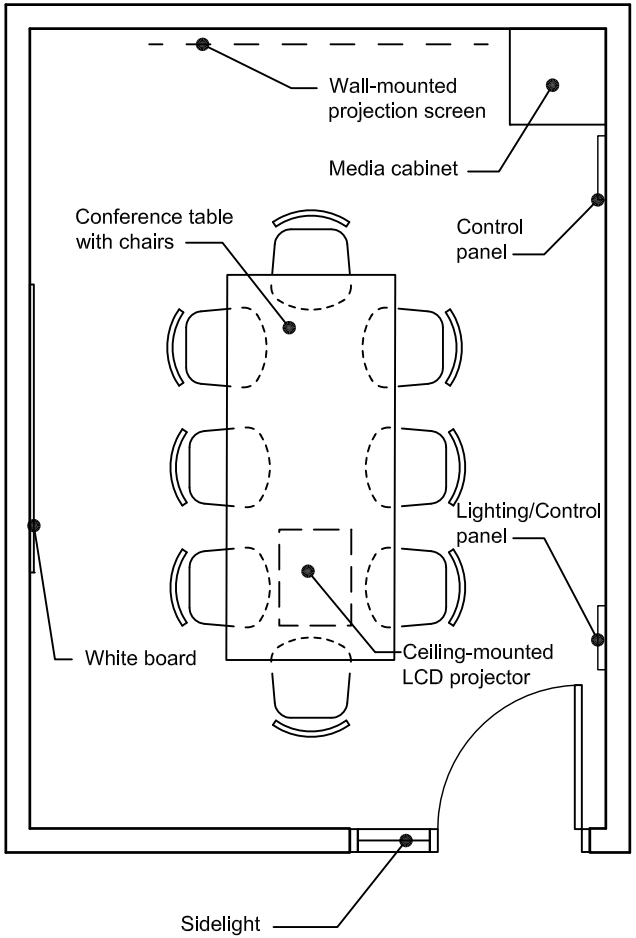
Furnishings: Adjustable steel shelving units, 12"-18" deep, in a portion of room
File cabinets in a portion of room

Mechanical: Minimal ventilation

Electrical: Duplex electrical outlets per code
Compact fluorescent lighting

Notes: Requires some open space for storage of equipment / large items





E410 CONFERENCE ROOM

AREA: 200 NSF

Occupants: Up to 8 people

Function: Enclosed room for meetings and staff training

Adjacency: Easily accessed from Reception / Waiting

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Lay-in acoustic tile & painted gyp. board; 10' height
Windows: Exterior windows with room-darkening window coverings desired
Sidelight at entry door
Doors: 3' x 7' wood door, locking

Equipment:
White board, 6'W x 5'H
Projection screen
Ceiling-mounted LCD projector
Media cabinet / credenza & wall-mounted control station
Telephone

Furnishings: 42" W x 8' L table with 8 chairs

Mechanical: Dedicated HVAC zone

Electrical:
Duplex electrical outlets per code
Electrical & data connections for ceiling-mounted projector and AV control station
Electrical & data connections for telephone
Light fixtures that allow for varying light levels & support the use of AV

Notes: Possible option to use flat panel monitor in place of projector & projection screen – confirm during design

4F: REFLECTION CENTER

The Reflection Center will provide campus community members with open access to a space for meditation, solitude and quiet reflection. The specific needs and parameters of the space were not finalized during programming and must be discussed further during building design.

As currently programmed, the Center will serve three primary purposes. The Meditation Room will be used for silent individual contemplation, prayer and reflection. The Prayer Room is described as a space for individual religious expression and will possibly serve as a venue for appropriate group events. A third function will be to host group discussions such as workshops, guest speakers, and related student meetings and activities.

To support the quiet nature of the Reflection Center, it should be in a somewhat remote area of the building such as the top floor, but it must be easy to access and easy for first-time visitors to locate. It should have proximity (vertical is acceptable) to the Wellness Center, which will have oversight of the Center.

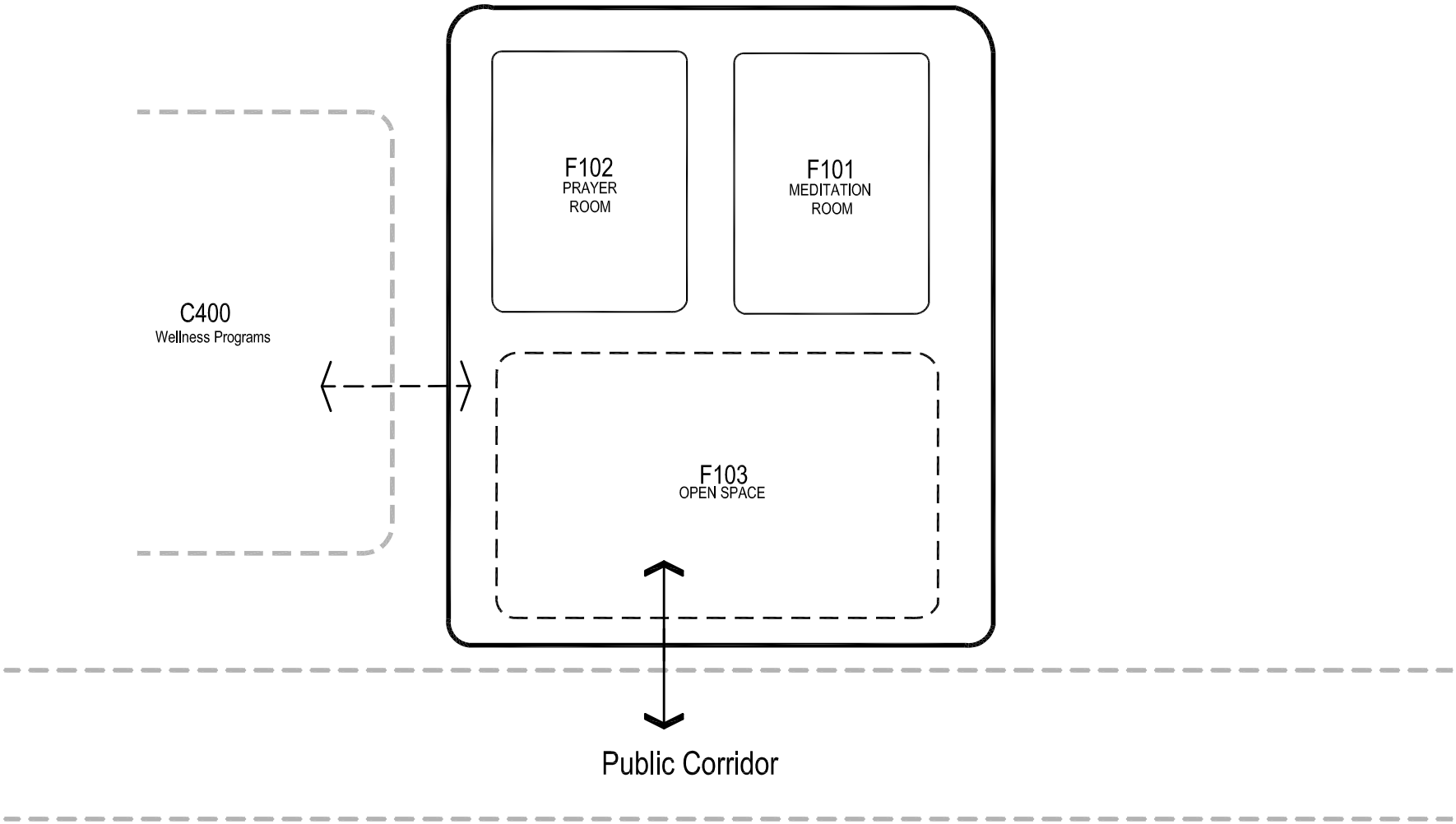
The Reflection Center's design must support its spiritual functions. Exterior windows with mountains views are desirable.

The interior space should have screened or limited visibility from the public corridor.

REFLECTION CENTER

TOTAL AREA: 2,000 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	LIGHTING				HVAC		
								public, controlled, secure	daylighting	daylighting controls	view	footcandle target	temp range	ventilation > code	exhaust
F	**Reflection Center**														
F101	Meditation Room	1	500	500	625	763	6 AM-11 PM	public	Y	Y	M	30	72-74°F		
F102	Prayer Room	1	500	500	625	763	6 AM-11 PM	public	Y	Y	M	30	72-74°F		
F103	Open Space	1	1,000	1,000	1,180	1,440	6 AM-11 PM	public	Y	Y	M	30	72-74°F		
	Totals			**2,000**	**2,430**	**2,965**									



REFLECTION CENTER
ADJACENCY DIAGRAM

F101 MEDITATION ROOM

AREA: 500 NSF

Occupants: Up to 20 people

Function:
Quiet space for silent individual reflection and mediation
Open and accessible to all campus community members

Adjacency:
Quiet location in building
Access from Reflection Center Open Space
Adjacent to Prayer Room
Proximity to Wellness Center, which will manage the Reflection Center

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Painted gypsum board & lay-in acoustic tile; 10' height minimum
Windows: Exterior windows with window coverings desired
Inspiring exterior view is desired
Interior windows allowing partial visibility into Meditation Room from public corridor and/or Reflection Center Open Space
Door: Wood door or storefront system glass door; locking

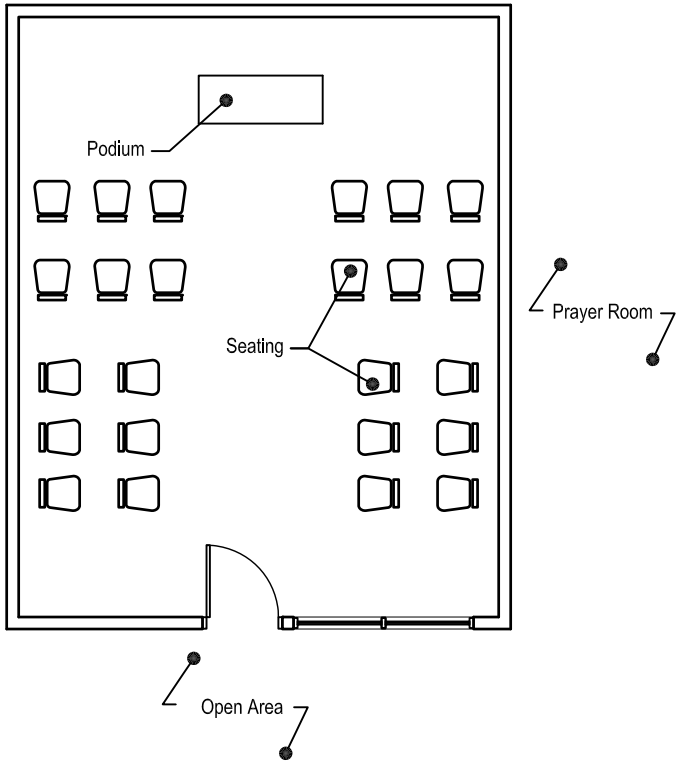
Equipment:
AV projection system & control station, built-in so as not to be visible
Sound system with built-in speakers

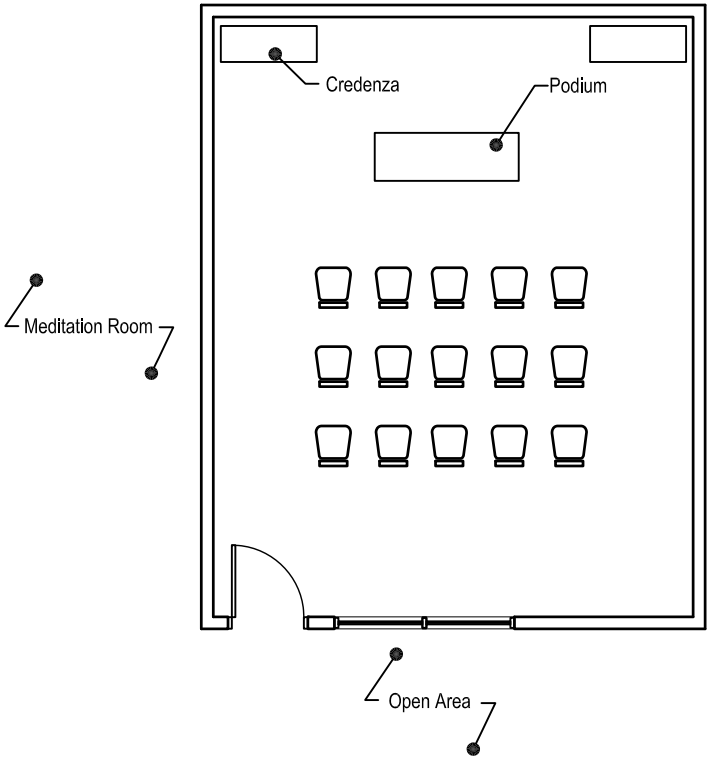
Furnishings: To be determined; possibilities include chairs, lounge seating, table(s), occasional tables

Mechanical: Dedicated HVAC zone

Electrical:
Duplex electrical outlets per code
Electrical and voice / data outlets for equipment
Light fixtures that allow for varying light levels & that also support the use of AV

Notes: Room requirements will be finalized during design





F102 PRAYER ROOM

AREA: 500 NSF

Occupants: Up to 20 people

Function:
Enclosed room for individual religious expression, and possible small groups events, gatherings, or services
Open and accessible to all campus community members

Adjacency:
Quiet location in building
Access from Reflection Center Open Space
Adjacent to Meditation Room
Proximity to Wellness Center, which will manage the Reflection Center

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Painted gypsum board & lay-in acoustic tile; 10' height minimum

Windows:
Exterior windows with window coverings desired
Inspiring exterior view is desired
Interior windows allowing partial visibility into Prayer Room from public corridor and/or Reflection Center Open Space

Door: Wood door or storefront system glass door; locking

quipment:
AV projection system & control station, built-in so as not to be visible
Sound system with built-in speakers

Furnishings: To be determined; possibilities include chairs, lounge seating, table(s), occasional tables

Mechanical: Dedicated HVAC zone

Electrical:
Duplex electrical outlets per code
Electrical and voice / data outlets for equipment
Light fixtures that allow for varying light levels & that also support the use of AV

Notes: Room requirements will be finalized during design

F103 OPEN SPACE

AREA: 1,000 NSF

Occupants: Up to 40 people

Function:
Open space at entry point to Reflection Center
Small group events, gatherings, or services (group discussions, workshops, guest speakers, student meetings & activities)
Open and accessible to all campus community members

Adjacency:
Quiet location in building
Access from public corridor
Meditation & Prayer Rooms are accessed from this space
Proximity to Wellness Center, which will manage the Reflection Center

Environment:

Floor: Carpet tile
Walls: Painted gypsum board
Ceiling: Painted gypsum board & lay-in acoustic tile; 10' height minimum
Windows: Exterior windows with window coverings desired
Inspiring exterior view is desired
Interior windows allowing visibility from public corridor
Door: Wood door or storefront system glass door; locking

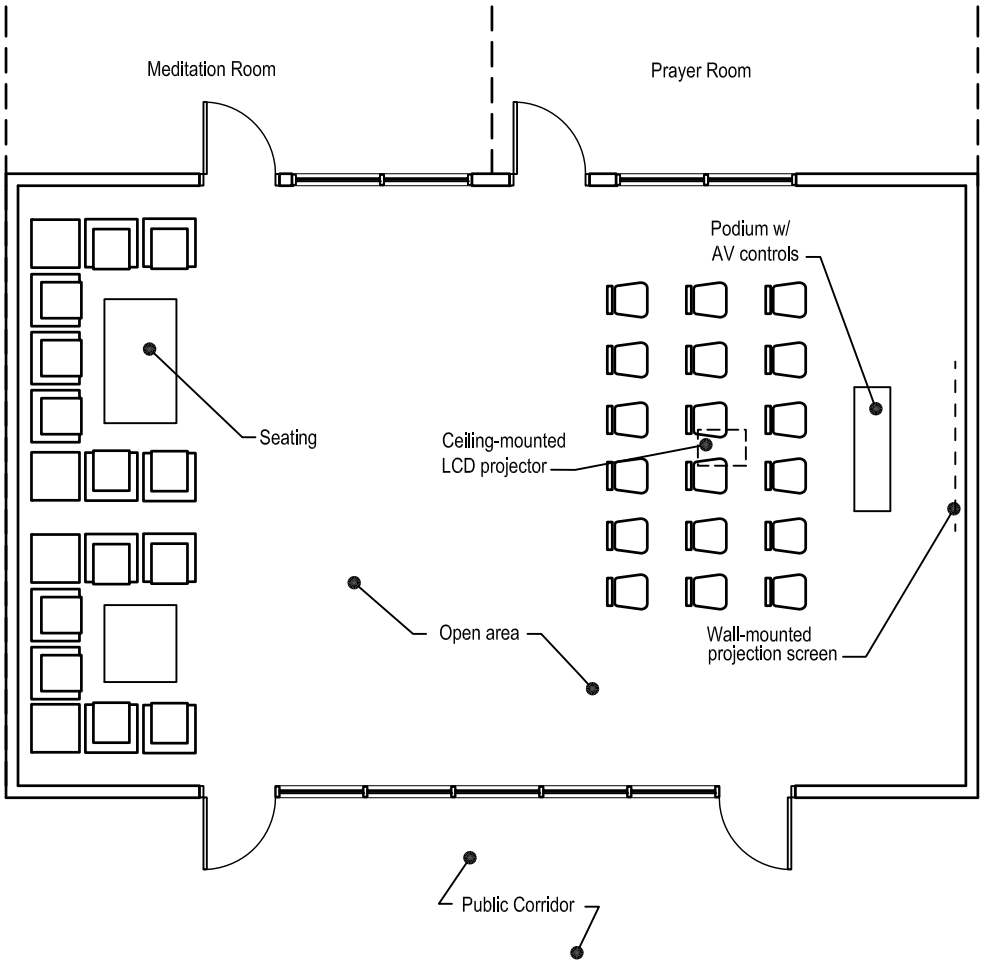
Equipment: AV projection system & control station, built-in so as not to be visible
Sound system with built-in speakers

Furnishings: To be determined; possibilities include chairs, lounge seating, table(s), occasional tables

Mechanical: Dedicated HVAC zone

Electrical:
Duplex electrical outlets per code
Electrical and voice / data outlets for equipment
Light fixtures that allow for varying light levels & that also support the use of AV

Notes: Room requirements will be finalized during design



4G: SUPPORT SPACE

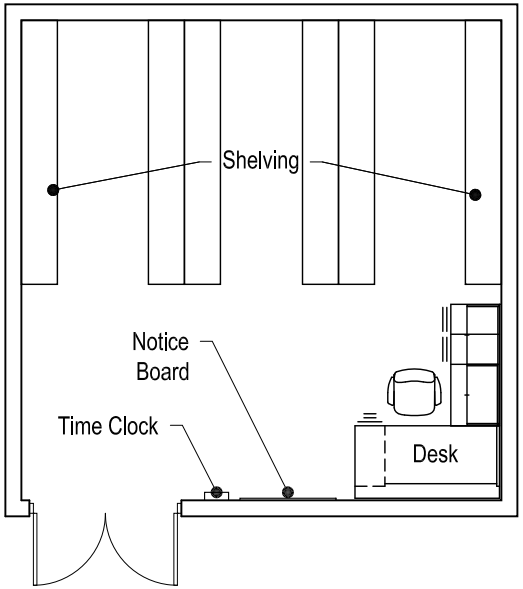
This category includes spaces that support the primary functions and operations of the Student Life Center: restrooms, locker rooms, custodial / maintenance spaces, equipment check-out and storage space.

These components have varying adjacency needs; each should be carefully located to provide for the smooth flow and functioning of the building's activities, visitors and staff.

G: SUPPORT SPACE

TOTAL AREA: 6,770 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting control	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
G	**Support Space**															
G101	Maintenance Storage/Office	1	400	400	532	649	6 AM-11 PM	secure		N	N	N	50	72-74°F		
G102	Student Employees' Work Space	1	600	600	750	915	6 AM-11 PM	secure		M	M	M	50	72-74°F		
G103	Men's Locker Room	1	1,250	1,250	1,475	1,800	6 AM-11 PM	public		M	M	N	30	72-74°F		Y
G104	Women's Locker Room	1	1,250	1,250	1,475	1,800	6 AM-11 PM	public		M	M	N	30	72-74°F		Y
G105	Asstd. Change (Univ'l.) Locker Rm	1	190	190	253	308	6 AM-11 PM	public		M	M	N	30	72-74°F		Y
G106	Men's Restrooms	3	240	720	958	1,168	6 AM-11 PM	public		M	M	N	30	72-74°F		Y
G107	Women's Restrooms	3	300	900	1,197	1,460	6 AM-11 PM	public		M	M	N	30	72-74°F		Y
G108	Universal Restrooms	2	80	160	224	273	6 AM-11 PM	public		M	M	N	30	72-74°F		Y
G109	Rec. Equip. Checkout/ Storage	1	800	800	1,000	1,220	6 AM-11 PM	secure		N	N	N	15	72-74°F		Y
G110	Laundry	1	180	180	239	292	6 AM-11 PM	secure		M	M	N	30	65-80°F		Y
G111	Custodial Closets	4	80	320	448	547	6 AM-11 PM	secure		N	N	N	15	55-85°F		Y
	Totals			**6,770**	**8,551**	**10,432**										



G101 MAINTENANCE STORAGE/OFFICE

AREA: 400 NSF

Occupants: Building maintenance employees

Function: Office for building maintenance supervisor & staff
Building maintenance / supply storage

Adjacency: Near building service entrance & elevator l
Easy access to all building spaces from this space
Low visibility location

Environment:

Floor: VCT
Walls: CMU / gypsum board
Ceiling: Acoustical tile; 10' height
Windows: None
Doors: Pair of 3'x7' doors, locking, to accommodate large equipment

Equipment: Computer, telephone
Time clock
Employee notice board

Furnishings: Systems furniture desk with chair
Adjustable storage shelving

Mechanical: Shared HVAC zone

Electrical: Electrical outlets per code; electrical and voice/ data outlets for computer, telephone and time clock

Notes: Requires some open space for large equipment

G102 STUDENT EMPLOYEES' WORK SPACE

AREA: 600 NSF

Occupants: Student staff members

Function: Shared office space for student employees; space to do paperwork, store belonging & take breaks

Adjacency: Near student employee entrance; low visibility

Environment:

Floor: Carpet tile
Walls: Gypsum board
Ceiling: Acoustical tile; 10' height
Windows: Possible sidelight at entry door, to be determined during design
Doors: 3' x 7' wood in hollow metal frame

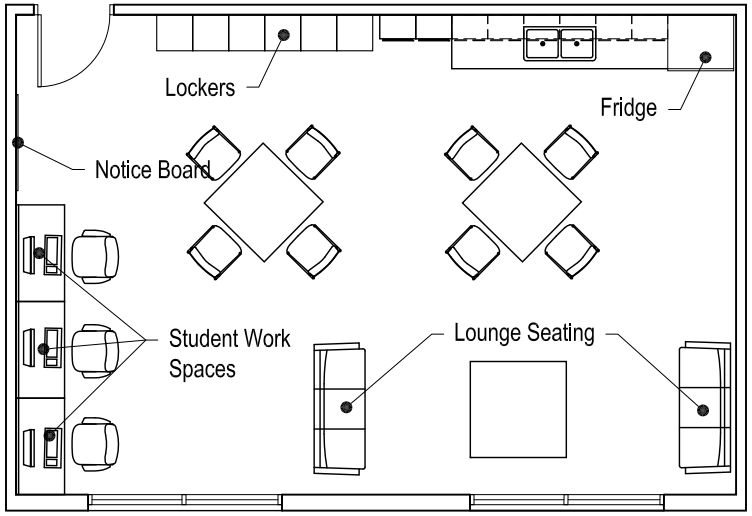
Equipment: Base and wall cabinets with sink
Refrigerator; microwave
24 lockers, 4-tier, 18"W x 18"D
3 computers
Employee notice board

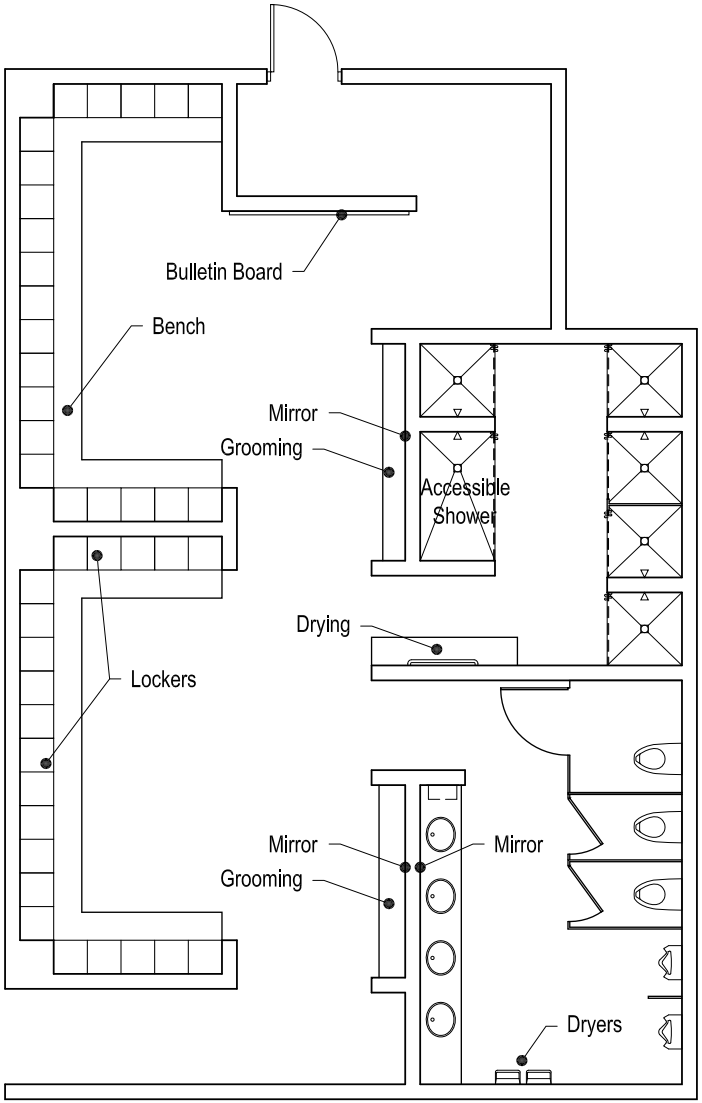
Furnishings: (3) 4'W work spaces with desk chairs
Tables and chairs
Lounge seating

Mechanical: Shared HVAC zone

Electrical: Electrical and voice/ data outlets for computer, telephone, wireless

Notes:





G103 MEN'S LOCKER ROOM

AREA: 1,250 NSF

Occupants: Up to 42 people

Function: Main locker room for recreational users

Adjacency: Men's restroom
Easy access to building activity spaces

Environment:

Floor: Ceramic tile or anti-microbial Carpet tile at lockers
Walls: Ceramic tile / moisture resistant gypsum board
Ceiling: Moisture resistant gypsum board / plaster in showers; 10' height minimum
Windows: None
Doors: 3' x 7' wood doors in hollow metal frames

Equipment: Lockers, benches, grooming shelves, hair dryers, mirrors, towel hooks, shower curtains and rods

Furnishings: None

Mechanical: Dedicated HVAC zone; exhaust; plumbing fixtures

Electrical: Electrical outlets at counter heights and for maintenance

Notes: If swim suit spinners are required, provide power and drain

G104 WOMEN'S LOCKER ROOM

AREA: 1,250 NSF

Occupants: Up to 42 people

Function: Main locker room for recreational users

Adjacency: Women's restroom
Easy access to building activity spaces

Environment:

Floor: Ceramic tile or anti-microbial Carpet tile at lockers
Walls: Ceramic tile / moisture resistant gypsum board
Ceiling: Moisture resistant gypsum board / plaster in showers; 10' height minimum
Windows: None
Doors: 3'x 7' wood doors in hollow metal frames

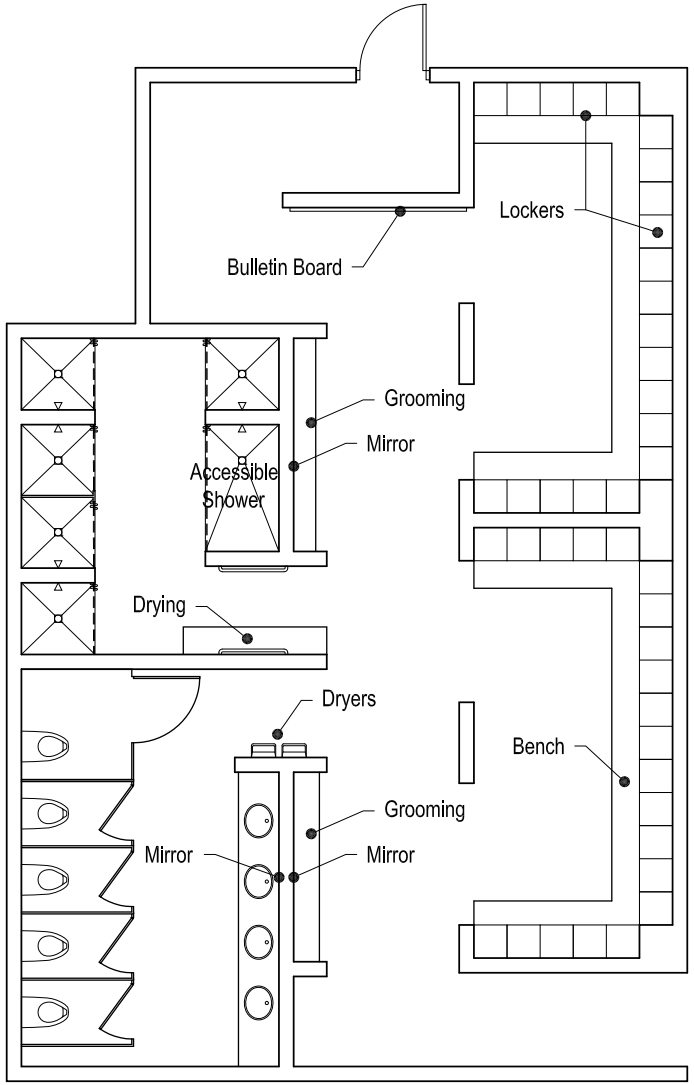
Equipment: Lockers, benches, grooming shelves, hair dryers, mirrors, towel hooks, shower curtains and rods

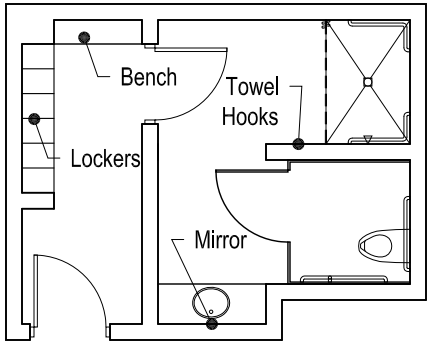
Furnishings: None

Mechanical: Dedicated HVAC zone; exhaust; plumbing fixtures

Electrical: Electrical outlets at counter heights and for maintenance

Notes: If swim suit spinners are required, provide power and drain





G105 ASSTD. CHANGE (UNIV'L) LOCKER ROOM

AREA: 190 NSF

Function: Locker room for those requiring assistance
Family changing room

Adjacency: Men's and women's locker rooms

Environment:

Floor: Ceramic tile or anti-microbial Carpet tile at lockers
Walls: Ceramic tile / moisture resistant gypsum board
Ceiling: Moisture resistant gypsum board / plaster in showers; 10' height
Windows: None
Doors: 3'x 7' wood doors in hollow metal frames

Equipment: Lockers, benches, grooming shelves, hair dryers, mirrors, towel hooks, shower curtains and rods

Furnishings: None

Mechanical: Dedicated HVAC zone; exhaust; plumbing fixtures

Electrical: Electrical outlets at counter heights and for maintenance

Notes: If swim suit spinners are required, provide power and drain

G106 MEN'S RESTROOM

AREA: 240 NSF

Occupants: 3 people

Function: Main men's restroom

Adjacency: Men's locker room

Environment:

Floor: Ceramic tile
Walls: Ceramic tile, wet wall minimum
Ceiling: Moisture resistant gypsum board; 10' height
Windows: None
Doors: 3'x7' wood door in hollow metal frame

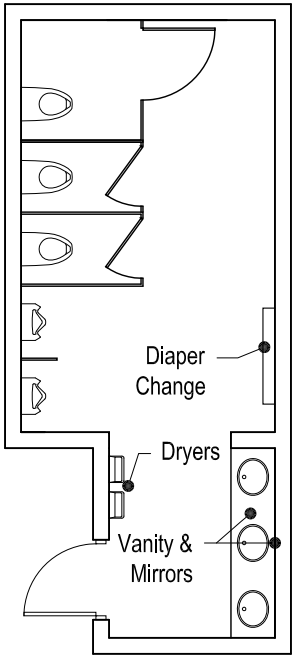
Equipment: Plumbing fixtures, toilet partitions, floor drains, toilet accessories, mirrors, counter, diaper changing cabinet

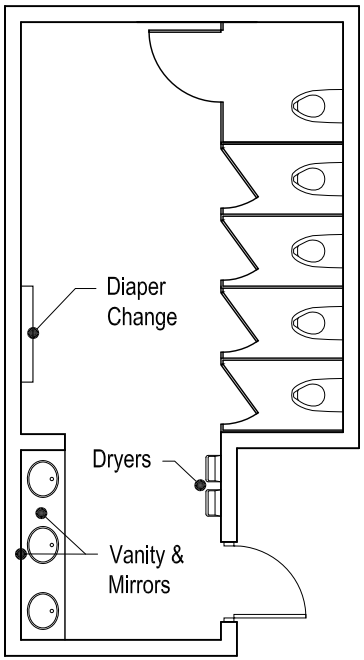
Furnishings: None

Mechanical: Dedicated HVAC zone; exhaust

Electrical: Electrical outlets at the counter and for maintenance

Notes: Determine if some toilet accessories will be provided by the owner





G107 WOMEN'S RESTROOM

AREA: 300 NSF

Occupants: 3 people

Function: Main women's restroom

Adjacency: Women's locker room

Environment:

- **Floor:** Ceramic tile
- **Walls:** Ceramic tile, wet wall minimum
- **Ceiling:** Moisture resistant gypsum board; 10' height
- **Windows:** None
- **Doors:** 3'x7' wood door in hollow metal frame

Equipment: Plumbing fixtures, toilet partitions, floor drains, toilet accessories, mirrors, counter, diaper changing cabinet

Furnishings: None

Mechanical: Dedicated HVAC zone; exhaust

Electrical: Electrical outlets at the counter and for maintenance

Notes: Determine if some toilet accessories will be provided by the owner

G108 UNIVERSAL RESTROOM

AREA: 80 NSF

Occupants: 2 people

Function: Unisex or family restroom

Adjacency: Main men's and women's restrooms

Environment:

Floor: Ceramic tile
Walls: Ceramic tile, wet wall minimum
Ceiling: Moisture resistant gypsum board; 10' height
Windows: None
Doors: 3'x7' wood door in hollow metal frame

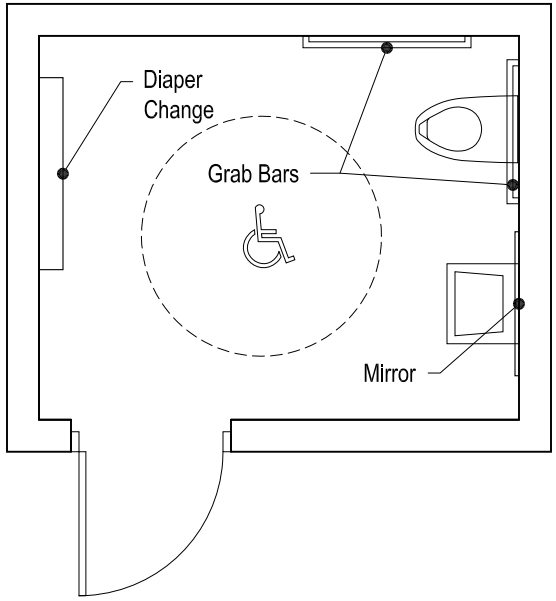
Equipment: Plumbing fixtures, floor drains, toilet accessories, mirrors, counter, diaper changing cabinet

Furnishings: None

Mechanical: Dedicated HVAC zone; exhaust

Electrical: Electrical outlets at the counter and for maintenance

Notes: Determine if some toilet accessories will be provided by the owner



G109 REC. EQUIP. CHECKOUT/STORAGE

AREA: 800 NSF

Occupants: 3 staff members

Function: Storage and distribution of recreation equipment and towels

Adjacency: Proximate to locker rooms, fitness spaces and Laundry

Environment:

Floor: Sealed Concrete
Walls: CMU / gypsum board
Ceiling: Exposed structure / acoustical tile; 10' height minimum
Windows: None
Doors: Pair of 3' x 7' wood doors to accommodate equipment and laundry carts. Coiling overhead door at service counter / window

Equipment: Built-in counter with base cabinets and service counter / window
2 computers & 1 telephone at the service counter / window

Furnishings: Shelving and cabinets

Mechanical: Shared HVAC Zone

Electrical: Electrical outlets per code; electrical and voice / data outlets for computers
Fluorescent lighting, 50 fc.

Notes: If recreational items will be sold, provide retail display casework and cash drawer

G110 LAUNDRY

AREA: 180 NSF

Occupants: 1 staff member

Function: Laundry facilities; primary function is laundering towels used in activity areas

Adjacency: Equipment Checkout / Storage

Environment:

Floor: Sealed Concrete
Walls: CMU / moisture resistant gypsum board
Ceiling: Exposed structure / moisture resistant gypsum board; 10' height
Windows: None
Doors: 3' x 7' wood; wider if necessary to accommodate laundry carts

Equipment: Counter for folding, space for laundry carts

Furnishings: Minimum 1 heavy-duty commercial washer (60 lb. capacity) and 1 commercial dryer (75 lb. capacity min.)
Storage shelving / cabinets for laundry products

Mechanical: Shared HVAC Zone; exhaust; ventilation for dryer

Electrical: Electrical outlets for washer / dryer

Notes: Determine if dryer will be electric or gas. Provide a concrete curb for the washer and dryer with a trench drain behind.

G111 CUSTODIAL CLOSET

AREA: 80 NSF

Occupants: None

Function: Housekeeping storage

Adjacency: Generally adjacent to toilets and/or locker rooms
Locate 1 Custodial Closet on each floor

Environment:

Floor: Sealed concrete
Walls: CMU / Gypsum board
Ceiling: Exposed structure or drywall; 10' height
Windows: None
Doors: 3'x7' wood door in hollow metal frame

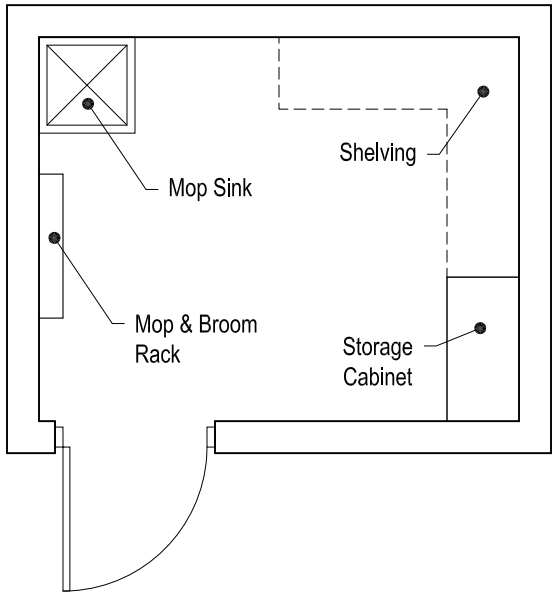
Equipment: Mop sink; mop and broom racks

Furnishings: Shelving; storage cabinet

Mechanical: Shared HVAC zone; ventilation

Electrical: Electrical outlets per code

Notes: Provide FRP panels on the walls around the mop sink



4H: WHIRLPOOLS

The program contains three whirlpools for the relaxation and enjoyment of campus community members. These facilities will be in the controlled-access portion of the building. All three could be placed indoors, or one could be located exterior to the building. They should be in an easy to find, but fairly low-visibility location, with easy proximity to the locker rooms. They should have screened visibility from adjoining corridors or access ways, to allow visual access but with a sense of privacy. During programming, discussions favored an upper floor location, with exterior mountain views.

WHIRLPOOLS

TOTAL AREA: 1,800 NSF

ID	SPACE	SPACE QTY.	NSF/ SPACE	TOTAL NSF	DEPT. GSF	GROSS SF	HOURS	SECURITY	public, controlled, secure	LIGHTING: daylighting	LIGHTING: daylighting control	LIGHTING: view	LIGHTING: footcandle target	HVAC: temp range	HVAC: ventilation > code	HVAC: exhaust
H	**Whirlpools**															
H101	Whirlpool Spa	3	300	900	1,197	1,460	6 AM-11 PM	controlled		Y	N	Y	30	72-74°F		Y
H102	Pool Deck	1	900	900	1,125	1,373	6 AM-11 PM	controlled		Y	N	Y	30	72-74°F		Y
	Totals			**1,800**	**2,322**	**2,833**										

H101 WHIRLPOOL SPA

AREA: 300 NSF

Occupants: 10 people

Function: Relaxation

Adjacency: Pool Deck, whirlpool equipment and storage spaces
Men's and women's restrooms / locker rooms

Environment:

- **Floor:** Ceramic tile
- **Walls:** CMU / ceramic tile
- **Ceiling:** Plaster; 10' height minimum
- **Windows:** Exterior windows with view desired
- **Doors:** None

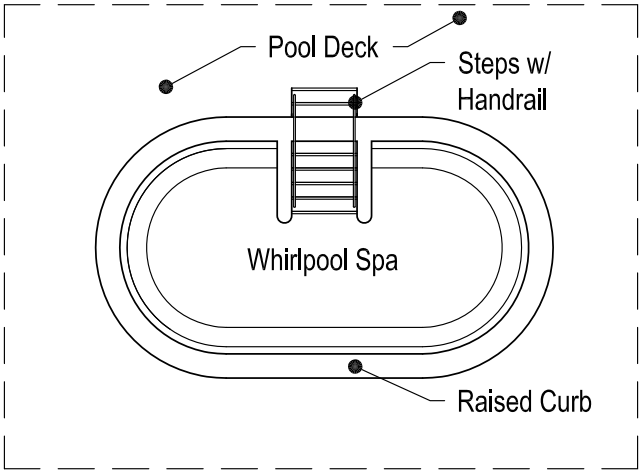
Equipment: Ladder sleeves

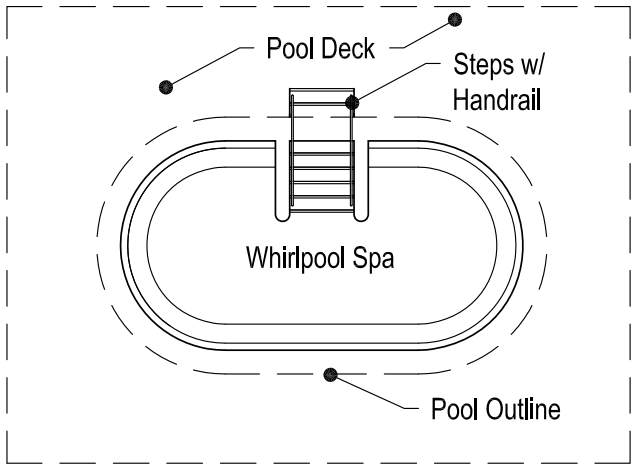
Furnishings: None

Mechanical: Pool equipment

Electrical: Built-in lighting, whirlpool equipment power and controls

Notes:





H102 POOL DECK

AREA: 900 NSF

Occupants: 10 people

Function: Circulation around the whirlpool

Adjacency: Whirlpool Spa, pool equipment and storage spaces, Men's and women's restrooms / locker rooms

Environment:

Floor: Ceramic tile or slip-resistant concrete
Walls: Masonry w/ epoxy paint or gypsum board with ceramic tile, glass
Ceiling: Plaster; 10' height minimum
Windows: Exterior windows with view desired; aluminum fame
Doors: Glass with frames of aluminum, hollow metal w/ epoxy finish or stainless steel

Equipment: Moisture resistant clock; wall-mounted flat-screen TV(s)

Furnishings: Life-saving apparatus; pool cleaning equipment
Benches or chairs

Mechanical: HVAC with humidity control

Plumbing: Floor drains, hose bibbs

Electrical: Convenience outlets at 24" above floor w/ waterproof covers, cable TV outlet(s)

Notes:

5: COST OPINION

The Student Life Center and Parking Structure Project program cost opinion is summarized below.

Student Life Center	Cost Opinion
Construction cost	$32.8 million
Soft costs	$6.2 million
Parking Structure	
Construction cost	$7.1 million
Soft costs	$0.8 million
Campus Connectors	
Allowance	$1.8 million
TOTAL	$48.6 million

New Central Plant. The figures above include the cost of a new central plant that will serve the Student Life Center and several future buildings in this area of the campus.

Campus Connectors. The campus connectors are an extension of the internal walkway system that exists on the UVU campus. They will connect the Student Life Center and Parking Structure to the existing system so that there is a continuous internal pathway from the new building to the PE and Liberal Arts buildings and Library. The needed length and cost of the connectors are estimated and will be finalized during design of the project.

Construction Cost is defined as the cost of constructing the building and developing the site.

Total Project Cost includes construction cost plus soft costs. Soft costs include items such as testing and inspections; furnishings, fixtures and equipment; design fees; and a construction contingency fund.

The cost opinion is in current dollars (April 2011). It does not include an inflation factor.

The program cost opinion is $0.6 million above the total project budget of $48 million. The project scope will be adjusted as necessary during design to fit within the project budget.

The cost opinion was developed by assigning costs per gross square foot (GSF) for each space type in the program. The costs per GSF were based on a 16-division cost breakdown. The following pages contain the program space list showing the Cost / GSF and total cost for each space.

UVU Student Life Center & Parking Structure — Cost Opinion Summary

		TOTAL NSF	TOTAL GROSS SF	COST/ GSF	COST
A	Entry & Lounge	8,800	11,991	$175	$2,100,712
B	Activity Spaces	76,302	104,078	$179	$18,630,316
C	Campus Recreation	8,528	13,522	$197	$2,667,729
D	Student Activities	11,364	17,678	$171	$3,017,919
E	Student Life	9,644	14,656	$168	$2,461,612
F	Reflection Center	2,000	2,965	$180	$534,055
G	Support Space	6,770	10,432	$246	$2,568,226
H	Whirlpools	1,800	2,833	$285	$807,510
Student Life Center Construction Cost		125,208	178,155	$184	$32,788,079
Student Life Center Soft Costs					$6,159,240
			STALL QTY.	COST/STALL	COST
Parking Structure Construction Cost			550	$12,841	$7,062,643
Parking Structure Soft Costs					$800,000
			EST. GSF	COST/GSF	COST
Campus Connectors			9,000	$200	$1,800,000
Central Plant					(included in above costs)
Student Life Center & Parking Structure Total Project Cost					**$48,609,962**

Program Component Cost Summary

		TOTAL NSF	TOTAL GROSS SF	COST/ GSF	COST
A	**Entry & Lounge**	8,800	11,991	$175	$2,100,712
B	**Activity Spaces**				
B100	Gymnasium, MAC Gym, Indoor Track	42,500	57,299	$178	10,222,173
B200	Weight / Cardio	12,245	16,556	$170	$2,809,046
B300	Multipurpose	12,120	16,882	$170	$2,864,077
B400	Climbing / Bouldering	2,325	3,409	$250	$852,573
B500	Games	7,112	9,932	$190	$1,882,448
		76,302	*104,078*	*$179*	*$18,630,316*
C	**Campus Recreation**				
C100	Campus Rec Administration	1,122	1,837	$168	$309,182
C200	Intramurals	746	1,232	$166	$204,550
C300	Outdoor Adventure Center	4,082	6,314	$231	$1,457,293
C400	Wellness Programs	2,578	4,138	$168	$696,703
		8,528	*13,522*	*$197*	*$2,667,729*
D	**Student Activities**				
D100	Student Activities Staff	2,080	3,382	$163	$549,694
D200	Student Government	2,870	4,564	$169	$772,449
D300	Clubs & Organizations	2,964	4,610	$174	$800,128
D400	Shared Spaces	3,450	5,122	$175	$895,648
		11,364	*17,678*	*$171*	*$3,017,919*
E	**Student Life**				
E100	Dean of Students Administration	1,080	1,752	$170	$297,909
E200	Student Media	4,050	5,962	$170	$1,016,494
E300	Office of Student Involvement	2,890	4,301	$164	$706,323
E400	Orientation	1,624	2,641	$167	$440,886
		9,644	*14,656*	*$168*	*$2,461,612*
F	**Reflection Center**	2,000	2,965	$180	$534,055
G	**Support Space**	6,770	10,432	$246	$2,568,226
H	**Whirlpools**	1,800	2,833	$285	$807,510

A. Entry & Lounge

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
A	**Entry & Lounge**				
A101	Control Counter	200	325	$200	$64,904
		200	325		$64,904
A201	Entry Lobby / Lounge	3,000	4,026	$180	$724,680
A202	Social Lounge	4,500	6,039	$165	$996,435
		7,500	10,065		$1,721,115
A301	Vending Area	100	162	$165	$26,773
A302	Food Venue	1,000	1,440	$200	$287,920
		1,100	1,602		$314,693
	Totals	**8,800**	**11,991**		**$2,100,712**

B. Activity Spaces

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
B	**Activity Spaces**				
	Gymnasiums, MAC Courts & Indoor Track				
B101	Four-court Gym - 84' courts	26,000	34,892	$195	$6,803,940
B102	Four-court Gym Storage	600	915	$180	$164,700
B103	MAC Gymnasium - 84' Court	7,200	9,662	$190	$1,835,856
B104	Spectator/Athlete Seating/Boxes	1,000	1,440	$280	$403,088
B105	MAC Gymnasium Storage	200	325	$180	$58,414
B106	Elevated Jogging Track	7,500	10,065	$95	$956,175
		42,500	57,299		$10,222,173
	Weight / Cardio				
B201	Free Weights	3,355	4,502	$170	$765,410
B202	Machine Weights	3,850	5,167	$170	$878,339
B203	Cardio Equipment	4,600	6,173	$170	$1,049,444
B204	Cardio/Weight Room Storage	240	389	$160	$62,308
B205	Cardio/Weight Work/Repair Rm	200	325	$165	$53,546
		12,245	16,556		$2,809,046
	Multipurpose				
B301	MP Room - Aerobics	3,600	5,051	$170	$858,636
B302	MP Room - Aerobics Storage	240	389	$165	$64,255
B303	MP Room - Dance	4,600	6,173	$170	$1,049,444
B304	MP Room - Dance Storage	240	389	$165	$64,255
B305	MP Room - Yoga/Pilates	1,600	2,245	$170	$381,616
B306	MP Room - Yoga/Pilates Storage	120	195	$165	$32,127
B307	MP Room - Spinning	1,600	2,245	$170	$381,616
B308	MP Room - Spinning Storage	120	195	$165	$32,127
		12,120	16,882		$2,864,077

C. Campus Recreation

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
C	**Campus Recreation**				
	Campus Recreation Administration				
C101	Director of Campus Rec Office	150	243	$170	$41,376
C102	Asst. Dir. of Campus Rec Office	120	195	$165	$32,127
C103	Fitness / Aerobics Coord. Office	120	195	$165	$32,127
C104	Summer Camp Coord. Wkstation.	64	109	$165	$18,036
C105	Staff Workstation	128	219	$165	$36,073
C106	Future Office	240	389	$165	$64,255
C107	Conference Room	300	487	$175	$85,187
		1,122	1,837		$309,182
	Intramurals				
C201	Intramurals Coordinator Office	240	389	$165	$64,255
C202	Staff Workstation	256	437	$165	$72,146
C203	Copy / Print / Supplies	150	243	$170	$41,376
C204	Office Storage	100	162	$165	$26,773
		746	1,232		$204,550

C. Campus Recreation

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
C	**Campus Recreation**				
	Outdoor Adventure Center (OAC)				
C301	Retail Area	800	1,220	$170	$207,400
C302	Resource Area	600	915	$165	$150,975
C303	Shop / Mechanics	600	915	$160	$146,400
C304	OAC Director Office	150	243	$165	$40,159
C305	OAC Coordinator Office	120	195	$165	$32,127
C306	OAC Store Manager Office	120	195	$165	$32,127
C307	OAC Asst. Store Manager Office	120	195	$165	$32,127
C308	OAC Trip Coordinator Office	120	195	$165	$32,127
C309	OAC Climbing Wall Coord. Wkstn.	80	137	$165	$22,546
C310	Trip Leader Workstation	72	123	$165	$20,291
C311	Multipurpose Room	500	763	$165	$125,813
C312	Storage / Staging	800	1,220	$160	$195,200
	Not included in total Gross Square Feet:				
C313	Outdoor Storage	2,000	2,000	$160	$320,000
C314	Outdoor Staging / Loading	0	0	$0	$0
C315	RV Dump Station	0	0	$100,000	$100,000
		4,082	6,314		$1,457,293

C. Campus Recreation

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
C	**Campus Recreation**				
	Wellness Programs				
C401	Reception / Waiting	200	325	$175	$56,791
C402	Copy / Print / Supplies	120	195	$180	$35,048
C403	Resource Materials	48	82	$165	$13,527
C404	Wellness Coordinator Office	120	195	$165	$32,127
C405	Wellness Asst. Coordinator Office	240	389	$165	$64,255
C406	Intern Open Office	200	325	$165	$53,546
C407	Personal Training Assessment	100	162	$165	$26,773
C408	Health Risk Appraisal	300	487	$165	$80,319
C409	Biofeedback / Massage	100	162	$165	$26,773
C410	Interview Room	300	487	$165	$80,319
C411	Multipurpose Room	500	763	$165	$125,813
C412	Demonstration Kitchen	150	243	$210	$51,112
C413	Storage	200	325	$155	$50,301
		2,578	4,138		$696,703
	Campus Rec Total	**9,528**	**14,522**		**$2,667,729**

D. Student Activities

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
D	**Student Activities**				
	Student Activities Staff				
D101	Reception / Waiting	200	325	$170	$55,168
D102	Assistant Dean of Students Office	150	243	$175	$42,593
D103	Coord. of Finance & Oper. Office	120	195	$165	$32,127
D104	Director of Student Activities Office	150	243	$165	$40,159
D105	Clubs & Orgs Coordinator Office	120	195	$165	$32,127
D106	Academic Senate Coord. Office	120	195	$165	$32,127
D107	Independent Branch Coord. Office	120	195	$165	$32,127
D108	Intern Shared Office	180	292	$155	$45,271
D109	Dance/Cheer Coordinator Office	120	195	$165	$32,127
D110	Dance/Cheer Coord. Workstation	80	137	$160	$21,862
D111	Office Supplies / Storage	120	195	$170	$33,101
D112	Work Room	300	487	$155	$75,451
D113	Dance/Cheer Storage Room	300	487	$155	$75,451
		2,080	3,382		$549,694
	Student Government				
D201	Student Body President Office	120	195	$175	$34,075
D202	Activities VP Office	100	162	$175	$28,396
D203	Senate VP Office	100	162	$175	$28,396
D204	Executive VP Office	100	162	$175	$28,396
D205	Student Council Workstation	800	1,366	$170	$232,288
D206	Publicity / Work Room	750	1,144	$170	$194,438
D207	Storage Room	900	1,373	$165	$226,463
		2,870	4,564		$772,449

D. Student Activities

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
D	**Student Activities**				
	Clubs & Organizations				
D301	Clubs & Orgs VP Office	100	162	$175	$28,396
D302	VP Assistant Workstation	64	109	$175	$19,130
D303	Ambassador Office	150	243	$175	$42,593
D304	Student Lounge / Work Area	600	915	$170	$155,550
D305	Clubs & Orgs Conf. Room	300	487	$175	$85,187
D306	Multipurpose Room	750	1,144	$175	$200,156
D307	Publicity / Work Room	750	1,144	$175	$200,156
D308	Storage Room	250	406	$170	$68,961
		2,964	4,610		$800,128
	Shared Spaces				
D401	Reception / Lounge	900	1,373	$180	$247,050
D402	Copy / Print / Supplies	150	243	$175	$42,593
D403	Student Council Conference Rm	1,500	2,105	$175	$368,288
D404	Student Activities Conf Rm	300	487	$175	$85,187
D405	Staging Area	600	915	$167	$152,531
		3,450	5,122		$895,648
	Student Activities Total	**11,264**	**17,516**		**$2,991,000**

E. Student Life

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
E	**Student Life**				
	Dean of Students / Judicial Affairs				
E101	Reception / Waiting	200	325	$170	$55,168
E102	Dean of Students Office	170	276	$170	$46,893
E103	Assistant Dean Office	150	243	$170	$41,376
E104	Judicial Affairs Office	120	195	$170	$33,101
E105	Ombudsman Office	120	195	$170	$33,101
E106	Copy / Print / Supplies	120	195	$170	$33,101
E107	Hearing Room	400	649	$170	$110,337
		1,080	1,752		$297,909
	Student Media				
E201	Reception / Waiting	200	325	$180	$58,414
E202	Coordinator Office	120	195	$165	$32,127
E203	Assistant Coordinator Office	120	195	$165	$32,127
E204	Advertising Director Office	120	195	$165	$32,127
E205	Advertising Staff Office	200	325	$170	$55,168
E206	Editor-in-Chief Office	100	162	$170	$27,584
E207	Newsroom	2,200	2,952	$170	$501,908
E208	Layout Room	300	487	$170	$82,753
E209	Website / Broadcast Room	200	325	$170	$55,168
E210	Conference Room	400	649	$170	$110,337
E211	Storage Closet	10	17	$165	$2,818
E212	Reporter Lockers	80	137	$190	$25,962
		4,050	5,962		$1,016,494

E. Student Life

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
E	**Student Life**				
	Office of Student Involvement				
E301	OSI Director Office	150	243	$170	$41,376
E302	OSI Coordinator Office	240	389	$165	$64,255
E303	Student Leader Office	400	649	$160	$103,846
E304	Publicity / Work Room / Storage	600	915	$175	$160,125
E305	Teaching Area	1,500	2,105	$160	$336,720
		2,890	4,301		$706,323
	Orientation				
E401	Reception / Waiting	200	325	$170	$55,168
E402	Orientation Director Office	150	243	$165	$40,159
E403	Orientation Asst. Director Office	120	195	$170	$33,101
E404	Orientation Coordinator Office	120	195	$165	$32,127
E405	Orientation Shared Office	100	162	$165	$26,773
E406	Administrative Asst. Workstation	64	109	$165	$18,036
E407	Intern Open Office	400	649	$165	$107,092
E408	Copy / Print / Supplies	120	195	$170	$33,101
E409	Storage Room	150	243	$165	$40,159
E410	Conference Room	200	325	$170	$55,168
		1,624	2,641		$440,886
	Student Life Total	**9,644**	**14,656**		**$2,461,612**

F. Reflection Center

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
F	**Reflection Center**				
F101	Meditation Room	500	763	$190	$144,875
F102	Prayer Room	500	763	$180	$137,250
F103	Open Space	1,000	1,440	$175	$251,930
	Totals	**2,000**	**2,965**		**$534,055**

G. Support Space

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
G	**Support Space**				
G101	Maintenance Storage/Office	400	649	$170	$110,337
G102	Student Employees' Work Space	600	915	$165	$150,975
G103	Men's Locker Room	1,250	1,800	$275	$494,863
G104	Women's Locker Room	1,250	1,800	$275	$494,863
G105	Asstd. Change (Univ'l.) Locker Rm	190	308	$275	$84,781
G106	Men's Restrooms	720	1,168	$300	$350,482
G107	Women's Restrooms	900	1,460	$300	$438,102
G108	Universal Restrooms	160	273	$300	$81,984
G109	Rec. Equip. Checkout/ Storage	800	1,220	$160	$195,200
G110	Laundry	180	292	$215	$62,795
G111	Custodial Closets	320	547	$190	$103,846
	Totals	**6,770**	**10,432**		**$2,568,226**

H. Whirlpools

ID	SPACE	TOTAL NSF	GROSS SF	COST/ GSF	COST
H	**Whirlpools**				
H101	Whirlpool Spa	900	1,460	$365	$533,024
H102	Pool Deck	900	1,373	$200	$274,500
	Totals	**1,800**	**2,833**		**$807,510**

6: APPENDIX

A. UVU Design Standards & Preferences
B. UVU IT Infrastructure & Cabling Specifications
C. Student Life Center Potential Classess
D. Student, Faculty & Staff Survey Results
E. Project Meeting Notes
F. Site Survey
G. Site Geotechnical Report

Design Standards

UVU Preferences

Division 02

Contact with Space Development at 801-863-8467 must be made to schedule time to evaluate existing conditions.

Division 03

Cast in place concrete: Use 5 ft by 10ft panes. Medium density overlay, Class 1 or better mill-release agent treated and edge sealed. Match existing form tie pattern. Mock-up panels are required.

Minimum sidewalk width accepted is 5 feet. Preferred width is 10 feet. Medium broom finish.

Sidewalks that will support vehicular traffic must be 6 inches thick.

Division 04

Brick shall be Interstate Brick "Chippewa" with a matte texture, face flashed
Weeps: Cell-vent from Dur-o-wal. Vent shall fill the full height of head joint.

Mortar shall be gray.

Division 08

Access to storage closets, electrical rooms, mechanical rooms etc.; shall not be through classrooms.

Doors: Solid Core Red Oak similar to VT industries with "Grassland" stain. Office and Classroom doors shall have window lites.

Exceptions: Library Wood is White Oak. New buildings may choose color. Consult with owner for approval.

Door Hardware:

Offices, Classrooms, Closets:

Sargent 10 line with LL trim. Verify Keyway with Owner prior to order.
Restroom entry doors, where used, shall have double key dead bolt.

Mechanical Rooms, Electrical Rooms:

Best 9K Varsity Series 15D trim US 10 finish or color selected for project.
Best lock cylinders are 7 pin keys.

Exit Devises: Sargent 8800 series
Closers: LCN 4040 or 4041

Proximity card reader for secure areas. Contact Lock Shop for compatibility.

Division 09

Acoustical Panes: USG "Radar" 2 x 4 with white grid. 2 x 2 tegular edged tile are acceptable in approved areas.

Carpet Tile: Provide selection for owner. The following carpet patterns are being used on campus now.

Interface as out lined below.

Interface Chenille Warp Nostalgia	**Interface** Chenille Warp Reflections	**Interface** Urban Grid Mint
Interface Entropy Variations	**Interface** Chenille Warp Flashback	**Interface** Tonal Barley
Interface Wind Valley	**Interface** Entry Level (Walk-off) Olive	**Interface** Urban Grid II Brown

Paint

Sheen: Satin
Colors: Provide Draw-downs for review and approval.

The following colors have been used on campus:

November Rain (Columbia Paint & Coatings)
2142-60

Timothy Straw
2149-40

Chestertown Buff
HC-9

Sierra Ridge
AC-11

Lenox Tan
HC-44

Sea Haze
2137-50

Chalk White
2126-70

Black
2132-10

Other Colors

Dark Bronz Tone
Oyster White
Dove White

Division 10

Marker boards shall be dry erase type. 5 foot tall boards are preferred.

Division 14

Elevator flooring shall not be carpeted. Hard cleanable surfaces are preferred.

Division 21

Exposed fire line shall be painted red.

Division 22

Flush valves shall be Sloan. Fixtures shall be Kohler or approved equivalent.

Sinks shall have Moen manual faucets 8413 with low flow aerator.

Urinals shall have auto flush valves.

Wall mounted fixtures are preferred.

Keyed hose bibs shall be installed in each toilet room.

Division 23

Call 801-863-8325 before any cutting or shut down.

Division 25

Contact Central Plant at 801-863-8325 to verify systems.

Division 26

Sidewalk lighting: Moldcast Landscape Chandelier: LC175MHDBZ480VFS2LXN
Parking Area Lighting: Moldcast CC-M-LC-400MH-DBZ-480V-FS2

Sidewalk pole: Moldcast PS5 5S14-188
Parking Area pole: Spaulding lighting, Inc. Square straight aluminum – tenon mount cut to 28 feet by manufacturer.

Troffer lights: 24 cell prismatic lens. T8 with electronic ballast. Three tube.

New projects may submit alternate fixtures for review and approval.

Division 27

Data Cable: See IT specification.

Cable tray: Ladder type: steel

IT: Please contact Eddie Sorensen at 801-863-8941 for a current copy of the IT design standard.

Division 33

Irrigation

Controllers will be Rainbird ESP-SAT 2W, wall or pedestal mounted (Stainless Steel only).

Spray heads in lawn areas shall be Rainbird 1804 prs series type
Spray heads in shrub areas shall be Rainbird 1812 prs series type
Rotors in lawn areas shall be Hunter I-20, I-25, or I-40 gear driven heads
Head to Head coverage, no exceptions
Funny pipe connections are permitted with exception of heads that exceed flow rate of pipe.
Lateral swing joints on all 1" or larger inlets on heads must be used.

Valves shall be Rainbird PESB electric remote control scrubber valves 1"-2"
2" valves not exceed 60 gpm.
2" isolation valves shall be in a valve box
No more than 2 valves in any valve box
All control wire shall be 14 ga. (Red: hot, White: common, Blue: spare)
Spare wire shall run through all valve boxes to the furthest point or points from controller.
Maxicom wire shall be 14-2 or PE-39 communication wire.

PVC pipe shall be schedule 40 for all 2" through ¾" pressure rated pipe
PVC pipe shall be schedule 40 or gasket pressure rated pipe class 200 for all 2-1/2" through 6" pipe.
Fittings on 2-1/2" and larger shall have Harco or cast iron fittings.
Pipe smaller than 2" shall have glued fittings only
Thrust blocks shall be used at all bends in pipe over 2"
Any connection point off of the 6" main line shall be equipped with a 2' nut type isolation gate valve.
Sleeves shall be used anywhere that pipe is traveling under concrete

UVU Water Department shall inspect all pipe, head and valve layout drawings and/or shop drawings prior to any burial of systems. This includes controllers and isolations including Maxicom installation. Contact: Russ Clegg 801-362-9515 or Jack Boswell 801-376-5942.

All main lines and lateral lines shall be pressure checked at a minimum of 150 psi for a period of no less than 2 hours.

All main lines drains shall have a 12" x 12" or larger gravel sump. All main line drains shall have a 2" pvc pipe with a 2" snug cap on top.

All lateral drains shall have a gravel sump of at least 12" x 12", unless released by the Water Master.

All Maxicom system wiring shall be completed with Super Serviseal closures, or approved alternate.

All field wiring shall be competed with waterproof connection an all splices at valves and in field.

A pull box shall be installed at all field and Maxicom wire connections that do not occur in valve boxes or above-ground enclosures.

All grounding connections in ground will be completed with Cadweld grounding connection "one shot" ground rod connectors.

Contractor must be Glue Certified; certificate shall be presented to UVU prior to beginning work. Contractor must be licensed and insured.

All changes proposed to layout, design, and materials must be approved by UVU prior to installation.

Utah Valley University
IT Infrastructure and Cabling Specifications
For All New Construction and Remodeled Spaces

Cable TV, Media, Voice and Data (10Gig Solution)

Revised 04/13/11

The purpose of this document is to define UVU IT Infrastructure and Cabling specifications and standards.

All new construction and/or remodels on UVU campus will, at least, include the infrastructure necessary for the installation of technology weather the technology itself will be purchased as part of the building project or at a future date.

Bonding
All bonding must comply with current TIA/EIA 607 standards.

Testing and Documentation
All voice/data and fiber cables must be tested and certified to run at minimum speeds as set buy cable manufacture. Each cable must be documented and recorded in a database and supplied to UVU in a digital format. CAD drawings documenting the voice/data/fiber systems will also need to be supplied to UVU. **All work must meet 569 Pathways Standards.**

Certification and Warranty All voice/data/fiber work must have both installers guarantee as well as a manufacturer's warrantee. Each fiber will be tested at both 850nM and 1300nM multimode, or 1310nM and 1550nM singlemode. All work will be in compliance with UVU standards and stay in compliance of EIA/TIA standards. All state and local codes must also be followed. Any changes from these standards must have written permission from UVU IT. All contractors will keep UVU updated throughout the project.

Contractors, Sub-contractors and Installers
All contractors, sub-contractors and installers must be approved by UVU IT. All voice/data contractors, sub-contractors and installers must be Siemen CI's.

Abandoned Cable
All abandoned cable that isn't terminated at both ends must be removed by contractor before any cable can be placed. Abandoned cable can also be determined by UVU IT.

Communications Wire Drop and Termination Specification
Horizontal voice drop cable must be a blue cat5e wire, terminated on (2) USOC RJ-14c jacks. Blue and orange pairs must be terminated on jack 1. Green and brown pairs terminated on jack 2. Jacks must be mounted in the upper left of the double gang face plate on the work station end and terminated in the IDF/MDF on standard 110 style termination block. Horizontal data drop cables must be white 10G 6A terminated on angled RJ45 10G 6A jacks

and mounted in the lower left double gang face plate on the work station end and terminated in the IDF/MDF/Switch enclosure with flat RJ45 10G 6A jacks on a 48 port 10G 6A patch panel. Any unused face plate hole on the workstation end will be filled with a blank cover. All wire used at UVU will be plenum rated and terminated to 568B wiring standards. All wiring will be in a conduit or cable tray. (1) 10G 6A white patch cable will be supplied for every terminated horizontal data connection from the patch panel in the IDF/MDF (50% 3', 25% 5', and 25% 7'). The channel link must comply with the TIA/EIA standards for Cat 6A.

Communications Wire Drop and Termination Specification
All interactive equipment will have a minimum of 2 10G 6A terminated on angled RJ45 10G 6A jacks and one RG-6 coax drop.

Conduit
No Communications or Media conduit will be smaller than 1". All work must meet the 572 TIA/EIA standards.

Communications Conduit
All data/voice communication conduit runs will consist of 1" conduits that go from the termination box in the wall up into the ceiling and then stubs into the nearest cable tray. These conduit runs will have a maximum of (3) 90 degree bends. All termination boxes will be double gang with a double mud ring unless otherwise specked by UVU. All conduit ends will have insulating bushings to protect cables from abrasion.

Media Conduit
All media conduit runs consist of mix of 1" and 2" conduits depending on the application. These conduit runs will have a maximum of (3) 90 degree bends. All non floor box or M-box terminations will be double gang with a double mud ring unless otherwise specified by UVU. All conduit ends will have insulating bushings to protect cables from abrasion. All conduits will be run using as short of pathway as possible from the M-Box (direct runs). Any changes from these standards must have written permission from UVU Media.

Teacher Station Communications Conduit
Teacher Station data/voice communication conduit runs will consist of (2) 1" or (1) 2" conduit. The conduit will go from the in-floor termination box double gang box area through the floor then up the wall into the ceiling and then stubs into the nearest cable tray for data connectivity. These conduit runs will have a maximum of (3) 90 degree bends. All conduit ends will have insulating bushings to protect cables from abrasion.

Teacher Station Media Conduit
Teacher Station media conduit runs will consist of (1) 1" and (2) 2" conduit. The conduit will go from the in-floor termination box in the triple gang area across from the double gang data box and the single gang power location. The conduit will go through the floor, up the wall and into the ceiling, and stub into the nearest cable tray for data connectivity. These conduit runs will have a maximum of (3) 90 degree bends. All conduit ends will have insulating bushings to protect cables from abrasion. All media conduit will have pull string in place for A/V integrator. These conduits will run from the in-floor box to the main media J-

box. The in-floor box must be level with the floor and have the capability of placing a Teacher Station over it. It is recommended that Power, Data and media conduit land in the same in-floor box. The UVU recommended in-floor box is the FSR-FL-500-6 Series or equivalent.

Teacher Station Electrical Conduit
Electrical conduit will be ran and terminated in the in-floor box in the single gang area next to the double gang data box and across from the triple gang media box

Teacher Station (In-Floor Box)
The in-floor box must be level with the floor and have the capability of placing a Teacher Station over it. It is recommended that Power, Data and media conduit land in the same in-floor box. The UVU recommended box has three separate J-Boxes within the in-floor box: (1) single gang for power, (1) double gang for data and CATV and (1) triple gang for media A/V. The single and double gang boxes are across from the triple gang box. The UVU recommended in-floor box is the FSR-FL-500-6 Series or equivalent.

Standard Communications Drop
A standard drop is (1) voice cable and (2) data cables. (See UVU Communications Wire Drop and Termination Specification)

Raised Floor Communications Drop
A raised floor drop is (2-12) data cables to MUTOA points/termination boxes. MUTOA point/termination box jacks under the floor must be equally distributed around the room with a maximum patch cord to computer length of 25' (maximum of (12) data connections to any one location). All jacks including wall and Teacher Station data drops in a lab will terminate in the uplink patch panel located in the switch enclosure. A complete end to end/channel link solution will be provided which means patch cords on both ends. (See UVU Communications Wire Drop and Termination Specification)

Movable/Modular Furniture Communications Drop
Furniture will be connected to the hardwired jack via a patch cord with a coupler located in the furniture. No pertinent wiring will be allowed in furniture.

Wireless Access/IP camera drop
A wireless access/IP camera drop is (1) data cables, located above the drop ceiling or above 120" from floor. Purple patch cords will be provided for every terminated wireless access/IP camera connection from the Max patch panel in the MDF/IDF (50% 3', 25% 5', and 25% 7'). (See UVU Communications Wire Drop and Termination Specification)

Teacher Station Communications Drop
A teacher station drop is (6) data, (1) voice and (1) cable TV (double gang) This communications drop will also include (2) 20 amp duplex power outlets on one independent circuit (single gang). This will be terminated into one side of a in-floor box with the media conduit being terminated into the other side (Triple Gang). This in-floor box needs to be adequately sized to accommodate all connections without compromising the integrity of the

cables and be at least 4" in depth unless approved by UVU IT. The floor box must be level with the floor and have the capability of placing a teacher station over it. The UVU recommended in-floor box is the FSR-FL-500-6 Series or equivalent. (See UVU Communications Wire Drop and Termination Specification)

Front Wall Communications Drop
A front wall drop is (4) data cables, installed on the front wall near the center, above the drop ceiling or above 120" from floor. (See UVU Communications Wire Drop and Termination Specification)

Fiber
Multimode and singlemode fiber will be rated to the appropriate TIA/EIA standard to provide 10G. Each fiber cable will be terminated, documented and labeled at each end in its own RIC/LIU. All fiber terminations must be SC connectors. All fiber must be in conduit or plenum innerduct. All singlemode terminations will be fusion spliced pigtails. Multimode and singlemode duplex SC-LC fiber patch cords will be provided for a minimum of 25% of the installed fiber in the building (60% 1 Meter and 40% 3 Meter).

Fiber Uplinks
Fiber uplinks will be at least (24) strands of singlemode and at least (24) strands of multimode fiber to all IDF rooms from the MDF room, and (12) strands of singlemode and at least (12) strands of multimode fiber to all server room racks/enclosures from the MDF room. There must also be at least (12) strands of multimode fiber to each wall mount swing out switch enclosure.

Backbone Fiber Connection
Backbone fiber that connects a buildings main data room (MDF) to another campus buildings main data room (MDF) will be at least (144) strands of singlemode fiber. All fiber cables will be terminated in separate RIC/LIU's.

Wiring for Security Devices Proximity lock wiring (See UVU Locksmith for Specs). Security camera (See wireless access/IP camera drop).

Data/Network Equipment
Connectivity for each jack must be provided. All data equipment must be compatible with current UVU systems and standards. See UVU IT for current spec.

Raised Floor Area
Tiles must use stringer cross beam construction for support. Tiles need to be 2'x2' in size and non-concrete filled. Tiles will be held in place by friction and not individually attached using screws. Floor must have a minimum depth of 12" to allow for infrastructure placement without restricting air flow. Cable tray must be provided under raised floor area for cable management. Raised floor and cable tray must be properly grounded.

Computer Lab Raised Floors

All computer labs will have raised floor and follow all the specifications and standards that are outlined in the "Raised Floor Area" of this document. In a building where there are multiple computer labs those labs should be grouped together with a common raised floor. There should be enough conduits from under floor to switch enclosure to allow for required cable plus 50% room for growth. Computer labs can have carpet on top of raised floor tiles. Conditioned power must be supplied under computer lab raised floors to adequately support computer lab workstations.

Switch Enclosures
Computer lab switch enclosures will be located either in a common Data/Telecomm Rooms (IDF/MDF) type room that is shared by multiple labs or in a Wall Mount Swing Out Switch Enclosure.

Server Room
Server Rooms will have raised floor and follow all the specifications and standards that are outlined in the "Raised Floor Area" of this document. Tiles in the Server Room must have an anti-static finished tile surface (without carpet). Conditioned power that is protected with UPS and connected to a generator back up system must be supplied under server room raised floors to adequately support computer equipment that is installed in the server room (contact UVU IT Services to coordinate). All power distribution equipment such as transformers, UPS equipment, breaker panels, and PDU equipment will not be housed in the server room. Optimally the server room will be located adjacent to the buildings MDF. There must be a clear and easily accessible cable tray path that connects the server room with the MDF and there must be enough cable tray capacity between these two rooms to allow for 400% growth. The room will have a horizontal ladder/cable tray on all outside walls and extend just above the top of all the equipment racks/enclosures. Server rooms must have a 24/7 365 days a year HVAC system, controlled independently from the buildings HVAC system. The rooms HVAC system must be on the generator back up system. Temperature and humidity need to be monitored by both IT Services and Central Plant via TCP/IP. A secondary/backup heat displacement system that is manually controlled, reversible from outside supply to outside exhaust will be provided. Access will be proximity lock controlled as well as have video security monitoring. A ground bus connected to the main building ground will be provided. All walls must be covered with ¾" 8' high plywood, painted with a fire retardant paint.

Data/Telecomm Rooms (IDF/MDF)
Data/Telecomm Rooms consist of IDF and MDF rooms. Optimally these rooms are located in the central core of a building. When construction consists of multiple floors these Data/Telecomm Rooms must be stacked on top of each other. These rooms work best if they are rectangle in shape with a door in one end. There must be a minimum of (2) 4" x 12" holes or (4) 4" conduit sleeves in floor/ceiling with vertical ladder/cable trays connecting the rooms. The room will have a horizontal ladder/cable tray on all outside walls with a tee extending just above the top of racks. In general all horizontal copper cabling (except for computer labs) will terminate in one of these rooms. All copper data connections to these rooms can be no longer then 280' (permanent link). Each rack and one or more outlets on each wall must have (1) dedicated 20 amp circuit conditioned through a UPS and connected

to a generator back up system. Power transformers will not be housed in the IDF/MDF rooms. Rooms must have a 24/7 365 days a year HVAC system, controlled independently from the buildings HVAC system. The rooms HVAC system must be on the generator back up system. Temperature and humidity need to be monitored by both IT Services and Central Plant via TCP/IP. Access will be proximity lock controlled as well as have video security monitoring. A ground bus connected to the main building ground will be provided. These rooms need to be directly accessible from the hallway. All IDF and MDF walls must be covered with ¾" 8' high plywood, painted with a fire retardant paint.

IDF Rooms
All IDF rooms must be at least 140 square feet and centrally located on each floor and stacked vertically above each other and with the MDF room.

MDF Rooms
The MDF room must be at least 500 square feet and centrally located on the floor and stacked vertically above or below the IDF rooms.

Wall Mount Swing Out Switch Enclosure
Switch enclosures will be an enclosed standard 19" equipment rack with front and rear rack rails with a smoked glass front cover. Enclosure must lock and have a hinge in the front and rear for center swing out feature, with a door that will swing left or right. Enclosure must lock in front and rear and have wire management. Enclosure dimensions are 36" high with a center section no less than 18". Enclosures will be mounted in compliance with ADA standards, which is the bottom of the enclosure can be no lower then 80" from the floor. Each enclosure must have fiber uplink to MDF/IDF, (1) dedicated 20 amp circuit conditioned through a UPS and connected to a generator back up system, and a rack mount power strip. There should be enough conduit capacity from switch enclosure to the cable tray and to under the floor to allow for cabling, fiber and innerduct plus 50% room for growth.

Telco Racks
MDF/IDF racks must be 7 foot full size steel racks, with cable and power management. Each rack must have a full height vertical cable management system attached. Just above the highest patch panel and just below the lowest patch panel there must be a 2RU horizontal wire management panel. In between each patch panel there needs to be a 2U horizontal wire management panel. Each rack must have (1) dedicated 20 amp circuit conditioned through a UPS and connected to a generator back up system. Each rack must have a rack mount power strip. All racks must be properly grounded to TIA/EIA standards. Copper cable, fiber optic cable and data electronics must be terminated and installed in separate racks. There must be enough rack capacity to handle all cable and equipment plus allow for 50% growth.

Equipment Racks/Enclosures
Server room racks/enclosures must have an equipment mounting height of 42U for EIA-310-D 19" equipment. Cable and power management in the racks/enclosures must be provided. Each rack/enclosure must have (2) dedicated 20 amp circuits conditioned through a UPS and connected to a generator back up system. Each rack/enclosure must have (2) rack mount

power strips. Each equipment rack/enclosure will have fiber uplinks to the MDF room. All racks/enclosures must be properly grounded to TIA/EIA standards.

Patch Panels
48 port 10G 6A Patch Panel

Phone Feeder Cable
All feeder cable must be terminated in 110 style termination blocks. All feeder cable must be riser rated. All feeder cable must be fully tested for continuity. No defective pairs will be accepted.

Cable Tray
Cable tray must follow all major corridors of the building; it must be ladder type and must be sized appropriately to provide adequate capacity for cable spec plus 50% growth, minimum size to be 4"x12". The cable tray must penetrate all necessary walls in order to provide a continuous path. If it is not possible to continue the cable tray through the wall (4) 4" conduits must be provided in order to continue the path. Cable tray must extend into IDF/MDF rooms and will connect to ladder/cable tray on all outside walls with a tee extending to just above the top of racks of the IDF/MDF. Vertical ladder/cable trays will be used for any vertical rise of tray or when connecting rooms above or below tray. When a cable tray goes through a floor/ceiling there must be a minimum of (2) 4" x 12" rectangular holes or (4) 4" conduit sleeves in floor/ceiling with vertical ladder/cable trays connecting the rooms. A separate cable tray will be installed for all backbone hard sheath cable and inner duct. All cable trays will be properly grounded. There must be enough cable tray capacity to allow for 50% growth.

Cable TV Standard Drop
Digital Cable TV Option: IPTV specs to be determined. See owner.

Analog Cable TV Option: All Horizontal cable TV drops must be made with (1) white RG-6 plenum rated cable. All cable TV drops must be terminated with F-Conn Industries (part # FS6-R), Digicon (part # DS6.01-02), or equivalent RG6 F connector's.

In offices, cable TV outlets will be terminated along with (1) of the standard communications voice/data drops. It will be located with the standard communications voice/data drop opposite the hallway entrance to the office. It will consist of (1) coax F-type angled module located on the bottom right of double gang face plate.

In non media enhanced instructional space/labs, cable TV outlets will be terminated in the front corner of the instructional space/lab normally opposite the hallway entrance, and 12" from the ceiling in the media front side J-box. It will consist of a coax coupler with (1) F-type adapter located on the bottom of face plate with a flat blank cover in the top of the face plate. There shall also be a power outlet within 12" of cable TV box to provide power for display.

In media enhanced instructional space/labs, cable TV outlet will be terminated in the teacher station communications drop it will consist of a coax F-type angled module located on the bottom right of double gang face plate.

All RG6 cable TV drops will home run back to the nearest tap location in the hallway cable tray or Data/Telecomm room. No daisy chains, splitters or combiners are to be used in the distribution lines. Cable TV drops will normally not be any longer then 100' and may not exceed 150' maximum. A minimum RF level of 0 to +4 dB will be maintained at the wall output connection. Cable TV drops normally will be grouped in the hallway cable tray in groups of (4-6) drops per tap location. Each cable TV drop must be labeled at each tap location and sufficient open taps must be available for 25 percent growth.

Cable TV Distribution System

Analog Cable TV Option: This system will be integrated into the existing campus wide C-Cor 750 MHz bi-directional Mid-Split broadband distribution system, using C-Cor Bridging Amplifier's (part # FNB99DS-L08G6C1), or equivalent, and ½" plenum rated Commscope trunk cable (part # Commscope 2312 White), or equivalent, installed with no splices and terminated with Gilbert ½ " Trunk connectors (part # 500-CH-DU-03) , or equivalent. Amplifiers may be placed in phone/data rooms or hung from the cable tray (As specified by UVU).
This cable TV broadband RF distribution system will distribute campus audio and video signals throughout the building including all instructional space labs and all offices. The system will use broadband bi-directional bridging amplifiers, a main trunk line to maintain an independent distribution system to amplifiers and a building distribution trunk line with directional couplers (taps). Power is provided thru the trunk cable from the CS Building head-end unless the signal is provided to the building via fiber then a power supply will be required in the building. The building distribution trunk line will have appropriately spaced multi-outlet "0" loss directional couplers (taps). Taps will be Regal RTM-XXBCP, or equivalent, with XX being the appropriate dB drop value of 32, 26, 23, 20, 14, and 11 (part # RTM-XXBCP). Taps will normally serve a maximum of six individual cable TV drops and have (2) ports available for future UVU use. Taps will be mounted on the hallway cable trays or in the phone/data rooms with an appropriately designed output gain, so that a minimum RF level of 0 to +4 dB will be maintained at the wall television connection. The cable TV distribution system will provide all cable, amplifiers, splitters, directional couplers (taps), terminators, outlets, and connectors. It will be designed and engineered to established Cable TV standards. The design will include schematics as to where all amps and taps should be located as well as the proper values for the taps. Documentation, including as-builds to where all amps and taps are located as well as the values for the taps will be supplied to UVU. The complete cable TV distribution system will be bid as a single lump sum unit price.

UVU Media Technology Definitions
UVU media enhanced teaching environments consist of four types of instructional space: lecture halls, classrooms, labs and conference rooms. There are also three classifications or levels within the different types of instructional spaces: Premier, Standard and Basic. All new construction and/or remodels on UVU campus involving instructional space will include

the infrastructure necessary for such technology as laid out in this document weather the equipment will be installed with the project or at a later date.

Media Testing and Documentation
All media cabling must be tested and certified by the installer according to UVU specifications. Cable must be documented in a database and supplied to UVU in a digital format. CAD drawings documenting all media connections, settings and systems will need to be supplied to UVU upon substantial completion. All system interfaces must match existing campus system. In the case that UVU Media Engineering opts to do the classroom integrations proper infrastructure and resources we be put into place to accommodate their needs following the standards outlined in this document.

Media Certification and Warranty
If an AV integration company is used on a project they must have at least 5 years experience installing media equipment in the education environment and be accepted by UVU. All installations must be warranted by installer as specified in building program. All media integrators will follow UVU media standards and will stay in compliance with standards set fourth in the buildings program. Any deviance from these standards requires consent from UVU. Contractor and media integrator will keep UVU Media Engineering updated and informed throughout the building project. Warranties and guarantees will be provided at time of quote. All work performed will be guaranteed for 5 years, to be free of defect from installation error. Equipment warranties will be in effect for a period of 3 year from the time the building is turned over to UVU.

Media Wire and Termination Specification
All media cabling must be plenum rated (unless specified by UVU). Highest resolution signals will always be used. Each cable must be labeled on both ends first stating the origination and then the destination of the signal. All cable should be run in a cable management system following LVC standards, and will be organized in a professional manner approved by UVU. All cable will have enough length in order to allow for cable management without having any stress or strain to the cable or equipment connection. Cables will be terminated to length with a small service loop according to industry standards. All cabling should follow industry standards for length of run. VGA and DVI cables will be no longer than 45 feet without amplification. Cable used will be certified by UVU prior to use on any project. All cable clean-up will use Velcro straps instead of cable ties.

Media Integration
All media integration must meet or exceed ADA, Americans with Disabilities Act, standards as well as UVU campus standards as outlined in this document.
All cabling will be installed as per BiCSi specifications and will be managed, and supported according to industry and UVU standards In person coordination is also recommended with the UVU media department as to assure continuity throughout all campus technology installs. Both cabling and equipment integration will be done as part of the building construction process, providing UVU a turn-key solution upon completion of the building. In the event that the media integration is not done as part of the building construction, UVU media and one sub-contractor will be allowed in the building 4 months prior to substantial completion, allowing them to complete the media work along with the final stages of the building

construction process. UVU media will be compensated for labor and overtime costs through the building budget. All other UVU media projects and support priority needs will then be lowered.

Mounts
Plywood or wood stud backing will be in place for all equipment mounted on walls including flat panels. Mounts will span at least 3 studs. Chief brand mounts will be used with all security features added. Currently UVU uses the non universal RPM series (projector and flat panel specific) when mounting displays.

Media Control System
Crestron Control systems will be in place for easy control of all classifications of media systems. These systems will include touch panels with button interfaces, network control for all control systems, desktop executable files for IP control (x panels), and latest versions of Crestron Roomview. All programs will be compatible and interfaced with existing UVU systems including RoomView. Two way Serial RS232 control must be used before any other control option. Touch Panel Layouts will match existing UVU design schemes and control function. If iPad or other external controllers are required, the access for those interfaces will be limited to controlling the rooms they were designed to control.

Media Control System Programming
Only Crestron CAIP Certified programmers can bid or do any programming at UVU. UVU will maintain rights to all Media and Crestron programs and source code. Before substantial completion, programmer will deliver all final program files to the UVU liaison prior to building sign off.

Media Equipment
All media equipment, placement and system layouts must be compatible with current UVU systems and equipment standards. Campus standard equipment models must be used to accommodate easy support and issues such as bulb replacement etcetera…. All proposed models will be approved by UVU Media Engineering. A current list of brands and models being used can be requested from UVU Media Engineering. UVU is always open to new ideas and suggestions, but reserves the right to stick with tried and true brands and models.

Media Conduit Layout
(See Instructional Space Conduit Layout Plan)

Main Media J-box (M-box)
24”x24”x4” deep J-box will function as the main junction for all of the media A/V cabling in each room. (See Instructional Space/Lab Conduit Layout Plan) It is located on the front wall of the instructional space/lab above the ceiling grid. This box will have the following conduits connecting to it: (2) 2” and two (1)1” conduits from the Teacher Station media in-floor box, (1)1” conduit to the cable tray, 1” conduits to J-box’s on each side of the front wall (for display, speakers, CVS systems), 2” conduit that extends back above the ceiling (approx. 12’) from the front of the room to the projector position (See Projector Placement), 2” conduit to ceiling mounted document camera location above Teacher Station , 1” conduit to

IP camera location, and 1" conduit to motorized screen for low voltage control. There will also be 4 data ports present within or within 12" of the main media J-box. These jacks will be used for: projector monitoring, IP cameras and IPTV. A 20 amp duplex power outlet will also be placed on the front wall within 12" of the main media J-box.

1" Conduit to Hallway Cable Tray
1" conduit will run from the main media J-box to the hall cable tray. This conduit may be used for cable TV and other future room inputs and outputs.

1" Conduits to Each Side of the Front Wall
1" conduits will run from the main media J-box to double gang box's with a single gang mud ring's, which will be located on both sides of the front wall 24" from the side wall and 12" down from the ceiling. These boxes will be used for displays, flat panels, speakers, cable TV and RF receivers for CVS systems.

Projector Location
2"conduit will extend back (approx. 12ft) from the main media J-box above the ceiling from the front of the room to the projector position. Flex will then be used to get the conduit to the exact location; it will then be attached to a plenum enclosure in the ceiling over the projector location. The exact position will be determined by the display equipment selected. There will also be a 20 amp duplex mounted in the plenum enclosure in the ceiling (See projector manufacture and UVU specs for projector placement). The projector needs to be aliened with the motorized screen position.

Document Camera Conduit
1" conduit will run from the 24x24 main media J-box to a double gang J-box located above the ceiling grid over the Teacher Station. Flex will then be used to get the conduit to the exact location; it will then be attached to a plenum enclosure in the ceiling over the camera location. The exact position will be determined by the display equipment selected. There will also be a 20 amp duplex mounted in the plenum enclosure in the ceiling (See Document Camera manufacture and UVU specs for camera placement).

IP Camera Conduit
1" conduit will run from the 24x24 main media J-box to the back corner of the room opposite the entrance with a double gang J-box located above the ceiling grid 2' from the side wall.

Motorized Screen Conduit
1" conduit will run from the 24x24 main media J-box to the location of the screen. This will be used for low voltage control of screen. The screen will be offset to one side of the front wall, opposite the entrance with the projector and projector conduit placed accordingly. Power will also be present for screen.

Motorized Screen
A motorized screen will be mounted off to one the side of the room away from the entrance centered on the one side of the white board as to allow for projection on 16x10 whiteboard without seams. The motorized screen will be installed above the ceiling grid with

accommodations made in the drop ceiling. Screens will be tensioned and have built in low voltage controls LVC. The screen will be low voltage controlled from the room control system and from a front wall switch near the podium. Depending on the screen selected conduit may need to be run from the wall switch to the M-Box.

In-Wall Backing
Equipment backing will be installed in all necessary locations. Backing will be installed following equipment manufacture's guidelines and coordinated with the UVU department that owns the equipment, (UVU Facilities, UVU IT, Media Engineering, etc.).

Lighting
Ideally media enhanced areas have dimmable florescent and/or incandescent lighting that is RS 232 control via the room control system (Crestron Control). Typically the control system will have lighting presets and dimming controls in the front and back of the room. Lights should be arranged in stations or circuits as follows: The row of lighting in the front of the room should be one circuit. There should be incandescent directional lights pointed at the teacher station on another circuit. All other rows of lights will have inboards and outboards on separate circuits to provide various lighting scenes. If UVU decides to go with non dimmable lighting for any reason, the lights will be arranged so that the front row is one circuit. All other rows of lights will have inboards and outboards on separate circuits so that we can simulate light dimming. All circuits need to be controlled ether via RS 232 or relays from the room media control system. Lighting will be controlled from three locations the: media control system, a location on the front wall of the room and on the wall near the room entrance.

Teacher Station
Teacher Stations will be supplied as part of the infrastructure. They will be built to UVU's current campus standard. All dimensions and an example drawing will be supplied by UVU. The Teacher Station will have two 19 1/8" wide rack mounting areas on both sides of the Teacher Station. They can either be side by side or have a place for the teacher to sit in between them, depending on the application. If there is a space between the 2 rack mounting areas a 4" race way must be in place to allow for the routing of cables. The side of the Teacher Station nearest the class (Back of Teacher Station) will have locking doors for access to the back of all equipment and cable chase. If there is not access to the back of the rack side doors may also be required for access to equipment for cabling and maintenance. The front side of the Teacher Station (facing teacher) will have one locking door on the side nearest the side wall with the side nearest the center of the classroom being open for teachers to access the equipment easily. The Teacher Station will be placed over the Teacher Station in-floor box containing the power, data and media connectivity. Two data ports, using patch cords, along with a duplex power outlet will be extended to the top of the Teacher Station. There will also be auxiliary inputs available on the same surface supplied by the A/V contractor. Teacher station designs must be coordinated0 with UVU prior to construction.

Video Surveillance Systems (VSS)
Cameras will be specified for viewing of owner specified subject areas, and installed in appropriately rated enclosures. Cameras must be in place in all building entry/exit points as

well as MDF/IDF's. Other select building thoroughfares, elevators, lobbies and other select sensitive interior areas will also be covered. IP camera signals will tie in the central campus NVR VSS system. Software licensing and NVR storage space will be addressed as part of the building budget for all cameras in the project.

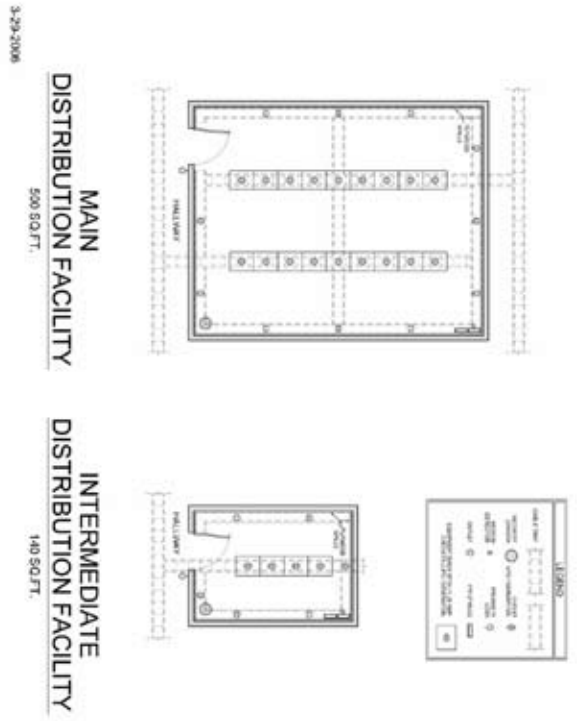
Digital Signage System (DSS)

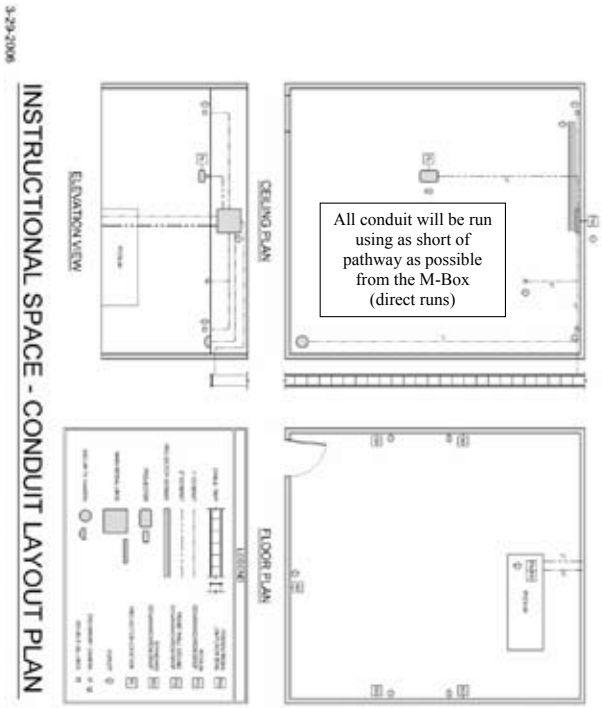
Flat panel displays will be installed throughout the building. Ideally, each display will be back-set into the walls to accommodate for ADA standards. Where this is not possible other considerations will be made for ADA requirements. Displays will be strategically placed throughout the building following a similar pattern to the VSS system. Each display location will have power and data present along with 2 homerun CAT5 cables for central distribution running to one central IDF (all cables to one IDF). These CAT5 runs must meet campus data specifications and be yellow in color. There are three different types of DSS: billboard, entertainment and interactive. Regular DSS billboard locations will be mounted portrait as to display posters. Entertainment displays are mounted landscape and are used in areas where people would congregate for entertainment purposes. Interactive displays are located near entrances and are used for way finding as well as for other interactive information.

Preferred Voice and Data Wiring Companies

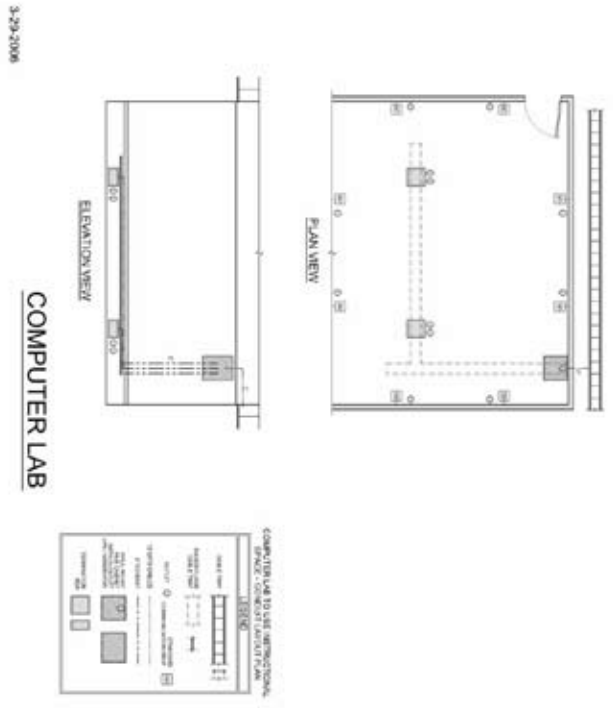
Only the following listed companies can bid on the voice and data wiring at UVU:

1. Americom Technology (Phone 892-0519 Fax 892-0585)
2. Cache Valley Electric (Brad Christensen, Phone 908-4179 Fax 908-7041)
3. Niels Fugal & Sons (Matt Pierce, Phone 785- 3152 Fax 796-5081)
4. IES Commercial, Inc. (Jason Cowdell, Phone 975-8183 Fax 972-9095)

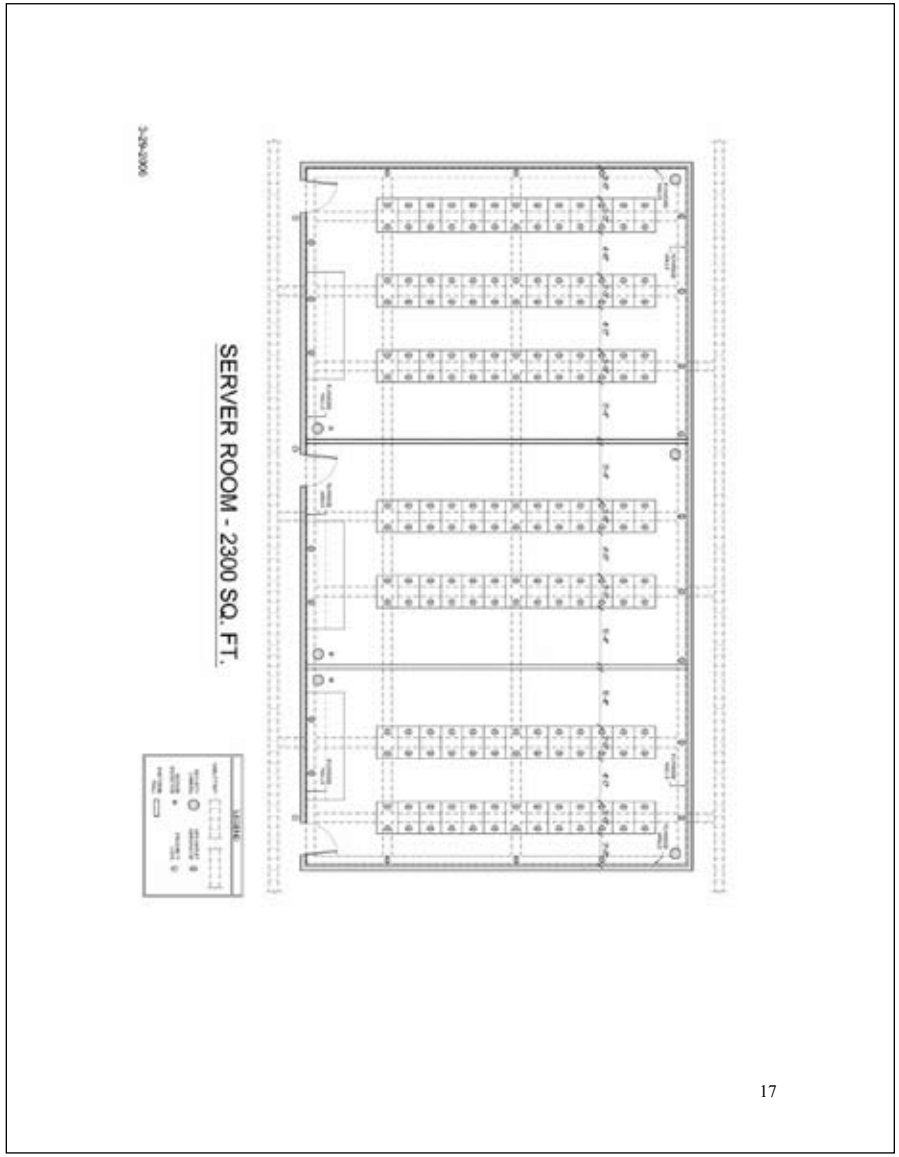



3-29-2006
INSTRUCTIONAL SPACE - CONDUIT LAYOUT PLAN
ELEVATION VIEW
CEILING PLAN
FLOOR PLAN
All conduit will be run using as short of pathway as possible from the M-Box (direct runs)

15


3-29-2006
COMPUTER LAB
ELEVATION VIEW
PLAN VIEW

16



17

Utah Valley University
Student Life Center

MHTN Architects / Hastings+Chivetta

POTENTIAL STUDENT LIFE CENTER CLASSES

Wellness

Personal Training
Fitness Assessment
Relaxation
Bio Feedback
Meditation
Body Image
Weight Loss
Nutrition & Diet
Healthy Food Preparation

Fitness

Aerobics
Pilates
Yoga
Combative
Self Defense
Spinning

Aquatics

Red Cross Life Safety
Water Aerobics
Learn To Swim
Water Rescue
Kayaking

Activity

Fitness Training
Rock Climbing
Bowling
Dancing

Outdoor Program

Spelunking
Canoeing
Rafting
Trip Preparation
Skiing
Snow Boarding
Mountain Biking
Hiking

Utah Valley University
Student Life Center Facilities Master Plan

Review meeting 2.24-25.2011

Agenda

- Workshop #1 summary
  - Goals & objectives
  - Project priorities
- Student survey results
- Faculty & staff survey results
- Survey analysis
- Program review
  - Survey
  - Recommendations

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Project Goals
Wellness

- “Anytime” access to recreational opportunities
- Don’t share with academics
- Ample equipment and availability
- More, dedicated wellness space
- Increase fitness, decrease stress
- Improve academics and overall college experience
- Space to become healthier and more active
- Teach space for wellness
- Incorporate with outdoor education/intramurals

Project Goals
Wellness

- A large, yet inviting and relaxing wellness center - a place where students want to gather
- Create adequate space to house a pool, jogging/walking track available for all students and faculty
- Provide massage chairs & equipment
- Provide more classrooms and facilities to be physically active
- Promote learning about health and wellness programs

Project Goals
Outdoor Recreation & Intramurals

- Provide indoor, multi-use facilities for variety of functions, intramural sports, events, and socializing/meeting new people
- Share insight on how to do it so there is no regret on planning 20 years from now
- Be a voice for UVU students
- Create a larger area for outdoor programs
- Increase the number of students involved in outdoor programs

Project Goals
Outdoor Recreation & Intramurals

- Provide indoor, multi-use facilities for variety of functions, sports, events and socializing
- Provide students a diverse, yet inclusive place to come together to play, relax, interact & learn
- Create an environment that “keeps students on campus”
- Create jobs for students to generate revenue for UVU

Project Goals
Special Events

- Create extra attraction to the University and promote school pride
- Encourage students to come back and be a part of the University
- Provide a safe, centralized space (like UCSB “Hub”)
- Accommodate hundreds and promote “hanging out”
- Create a social center that connects students to the University
- Keep students on campus (discourage “commuter campus” vibe)
- Accommodate all student life organizations

Project Goals
Special Events

- Non-traditional space with great sound and lighting
- Address diverse aspects of all students'
- Create a "home away from home" for all students - not just those in clubs and organizations
- Create shared programming space that can accommodate large groups
- Accommodate specialized storage needs as well as office space
- Functional and attractive food service establishment

Project Goals
Academics

- More space to accommodate a broader range of activity such as rock climbing
- Also provide batting cages, fencing lanes, pool, tennis and ropes course
- Promote a well-rounded physically active lifestyle
- Enhance student recruitment and retention
- Provide a restaurant where culinary arts students can cook and serve meals at an inexpensive price
- Provide a social gathering place
- Space for practical "classroom" teaching/education
- Promote school pride

Project Goals
Academics

- "Wow" factor with enough space for students to recreate
- Create sense of community that keeps students on campus
- Provide an indoor track
- Provide a space with childcare
- Promote student interaction
- Create opportunities for a variety of physical activity

Project Goals
Student Life

- Create a "destination" that will bring students back to and keep them on campus
- Create relaxing activity space and new programming opportunities
- Ample multi-purpose space focusing on student health and wellness
- "Commuter" student focus space
- Provide on-campus services like a barber shop, restaurants and a convenience store

Project Goals
Student Life

- Provide great training and leisure opportunities
- Bring together multiple learning activities, clubs, intramurals and small/large groups
- Provide space for UVUSA, clubs, newspaper and spirit squad to be functional and successful
- Accommodate 400+ people for orientation
- Create space for storage and work areas
- Promote physical fitness, mental health and awareness

Project Goals
Students

- Promote diverse student involvement
- Create a “student-centric”(no classrooms) facility
- Serve multiple interests
- Boost school spirit, pride and enthusiasm
- Promote healthy “you (U)”, more social awareness and interaction among students, faculty, staff and community

Project Goals
Students

- Create a welcoming
- Address diverse range of interests
- Create a centralized “hub” to bring together the diverse aspects of UVU culture”
- Keep students on campus for socializing, club activity, working out, etc.
- Eradicate the “commuter campus” feel!
- Provide for growth and future needs

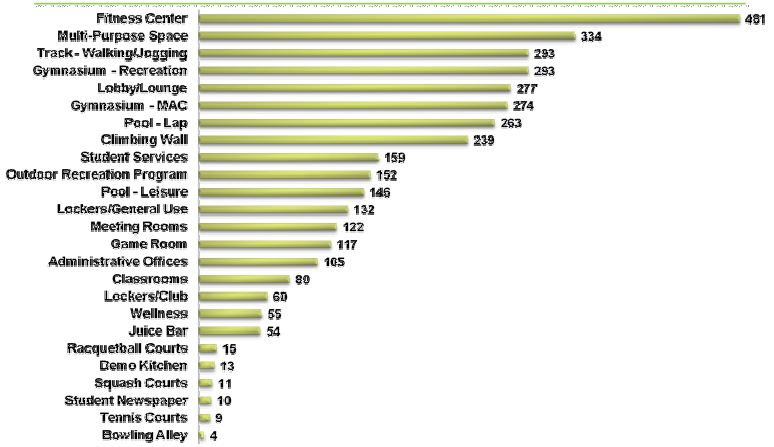
Project Goals
General Student Session

- Provide more lounge/lobby space for students studying or relaxing in between classes
- Provide access to computers after 7:00 PM
- Create a student focused place that will bring students back to and keep them on campus
- Focus on bringing non-traditional students together
- Address inclusive activities that are interesting to a variety of students

Project Goals
General Student Session

- Increase the excitement of the UVU campus
- Promote student ownership/branding of new space
- Provide a place to work out
- Keep students on campus
- Include a huge lounge area for study space on weekdays, events on weekends
- Individualized space for the Dance team with plenty of storage and a sound/performance system

Workshop results



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Agenda

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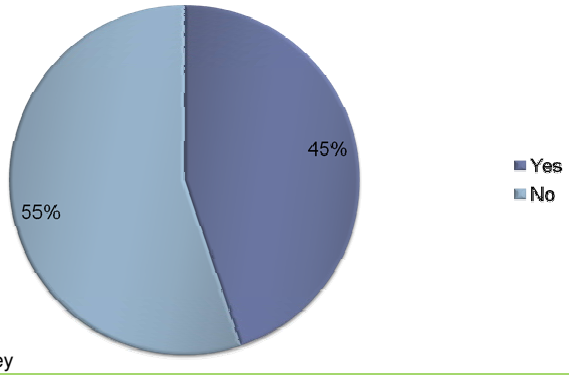
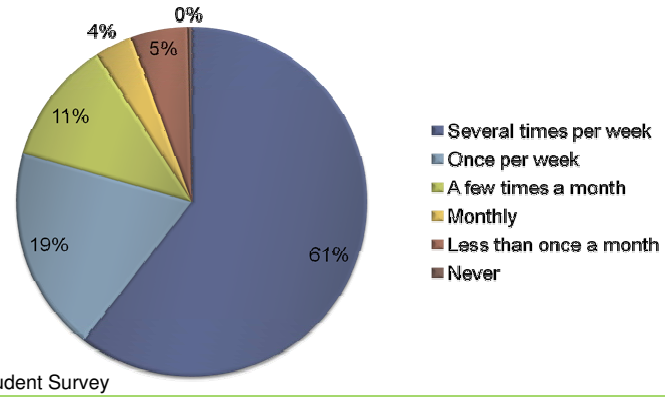
1. Are you currently using any recreation or fitness facilities offered ON CAMPUS at UVU?



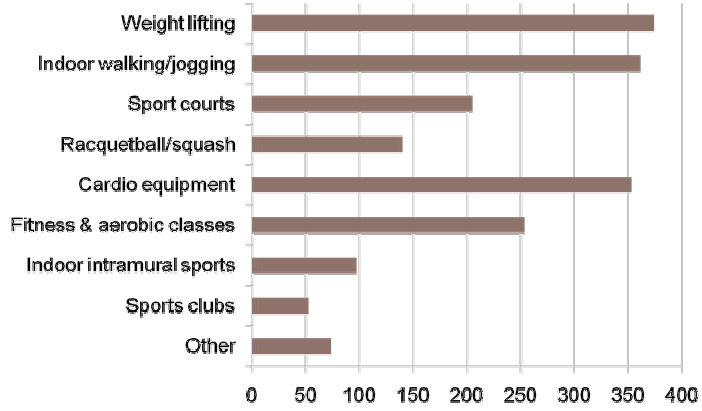
Student Survey

1b. Which ONE of the following statements best describes how often you are currently using recreational facilities and programs offered at UVU?



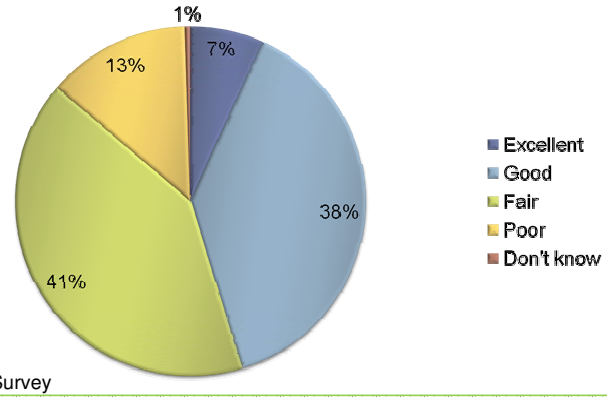
Student Survey

1a. From the following list please CHECK ALL of the recreational facilities and activities you have participated in while enrolled at UVU?



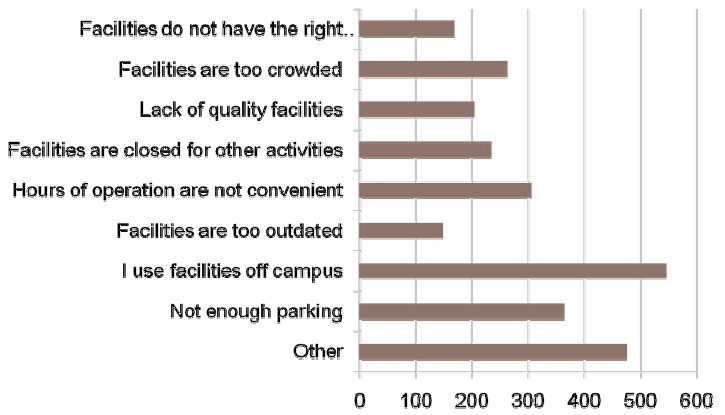
Student Survey

1c. Overall how would you rate the quality of the recreation facilities and programs provided by UVU?



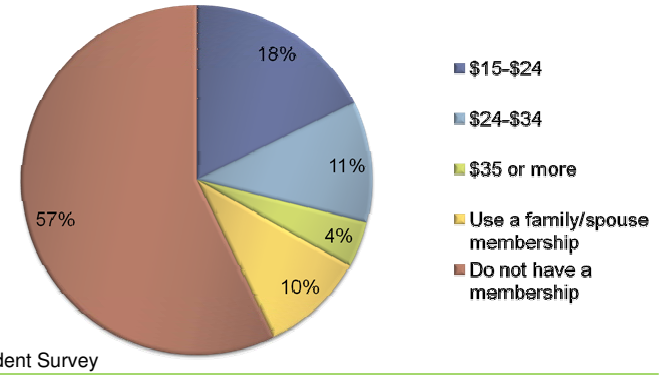
Student Survey

2. If you DO NOT use the recreation facilities and programs at UVU please check ALL reasons why?



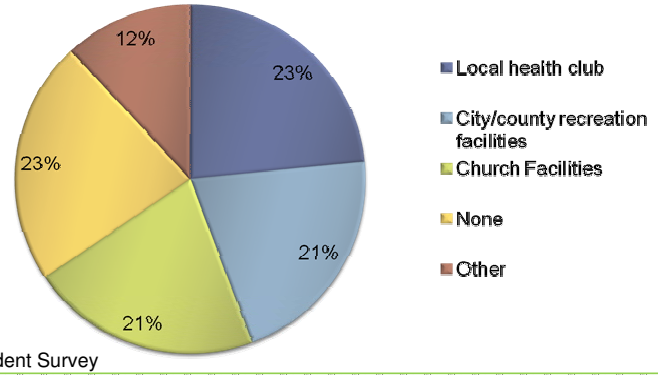
Student Survey

4. If you have a membership at a local health club or other public recreation facility, what are your monthly dues?



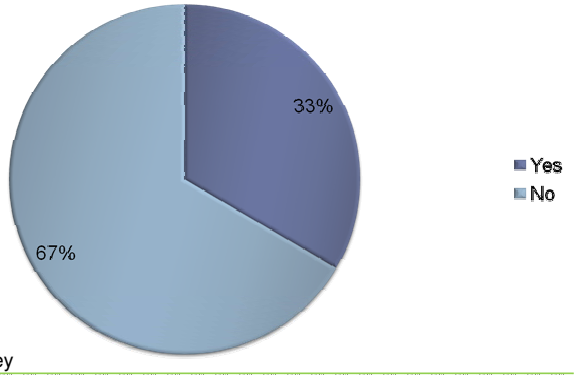
Student Survey

3. From the following list please CHECK ALL of the off-campus recreation facilities you are currently using?



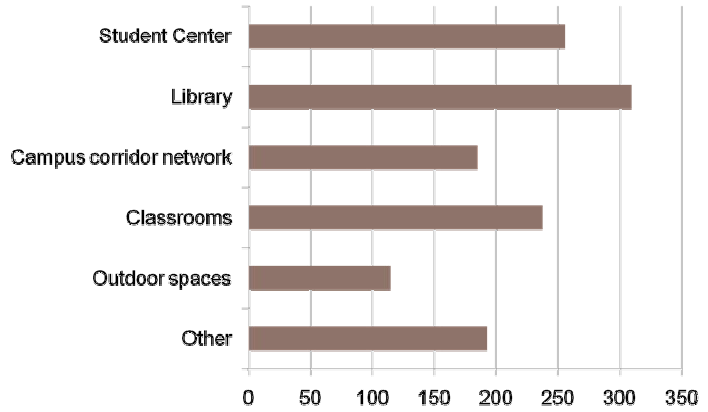
Student Survey

5. One of the primary goals of a campus recreation center/Student Life Center, aside from exercise, is to provide students with a place to socialize or meet friends. Do you currently have a place on campus where you spend time or socialize?

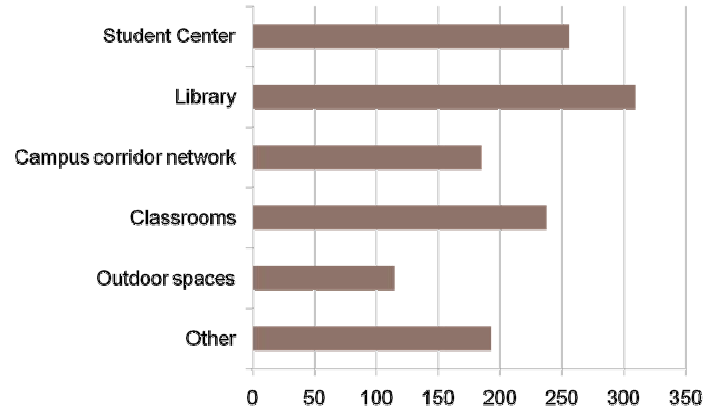


Student Survey

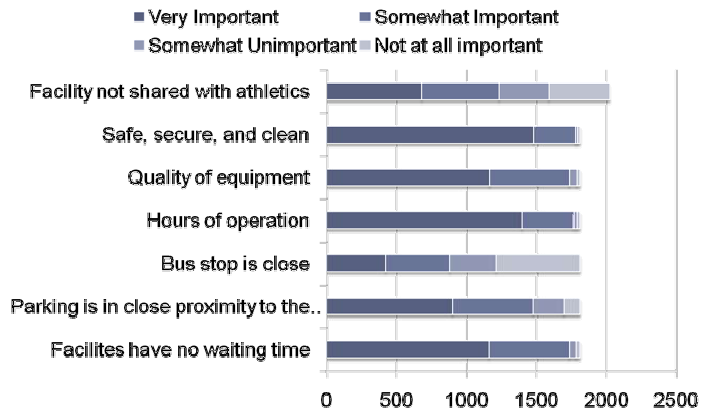
5a. If you answered YES TO question 6, please indicate location(s) where you socialize on campus?



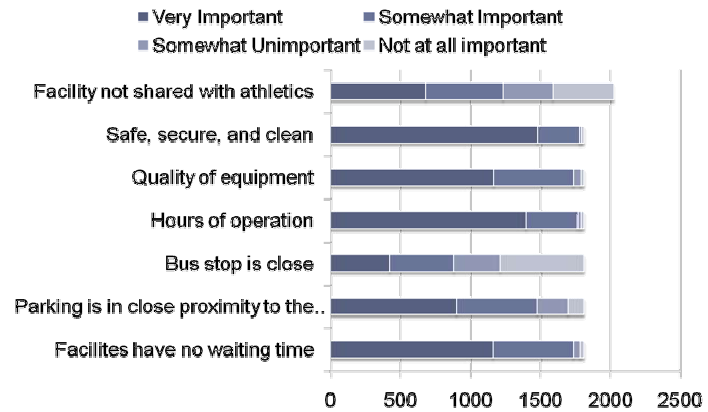
5a. If you answered YES TO question 6, please indicate location(s) where you socialize on campus?



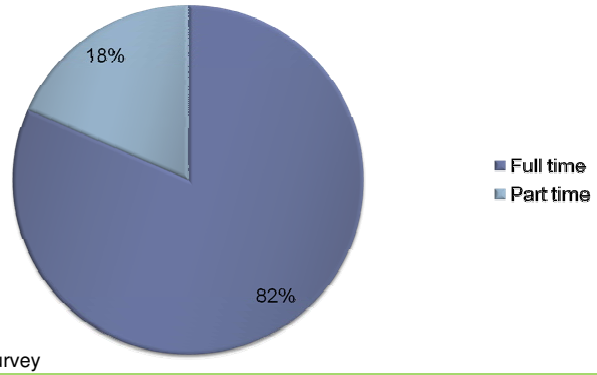
7. How important are the following criteria in deciding whether or not you would use a campus recreation center at UVU? SELECT ONE FOR EACH CRITERIA



7. How important are the following criteria in deciding whether or not you would use a campus recreation center at UVU? SELECT ONE FOR EACH CRITERIA

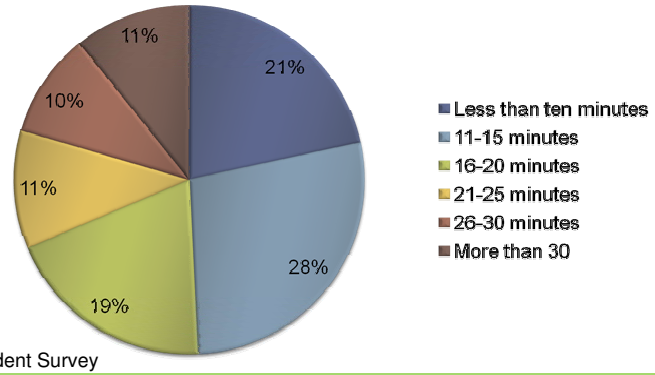


8a. Please check the one statement that best describes your student status at the University?



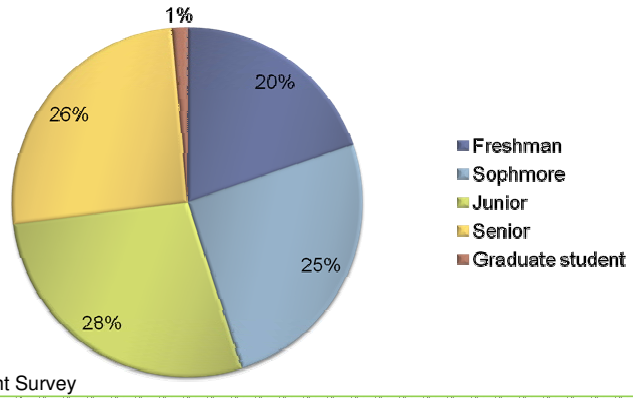
Student Survey

9. How long does it take you to get to the Campus?



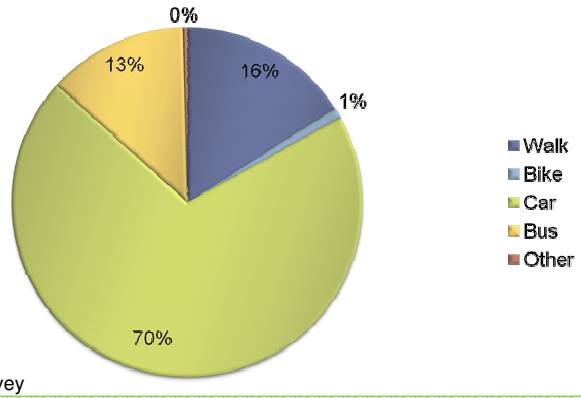
Student Survey

8b. Please check the one statement that best describes your student level at the University?



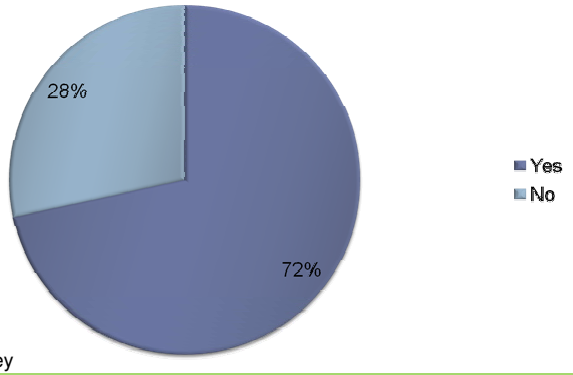
Student Survey

10. How do you get to campus?



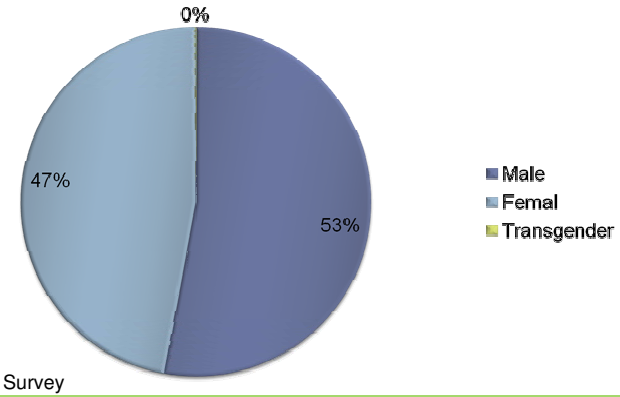
Student Survey

11. Do you Work?



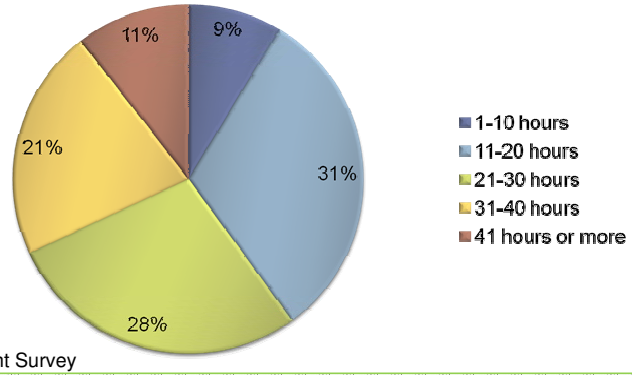
Student Survey

12. Please check your gender



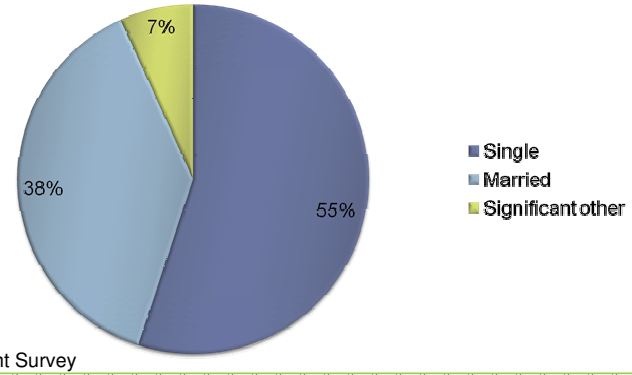
Student Survey

11a. If you answered yes to question 11 please answer question 11a. How many hours do you typically work per week?



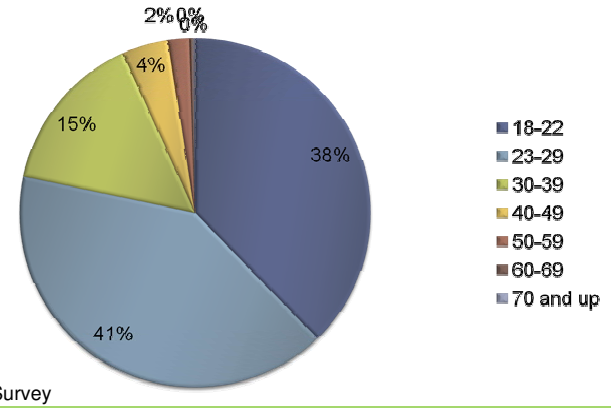
Student Survey

13. Please check your relationship status



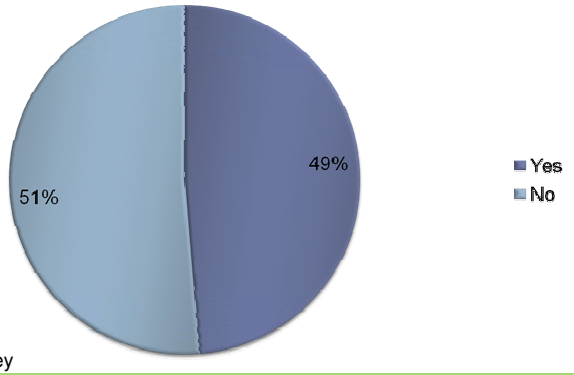
Student Survey

14. What is your age?



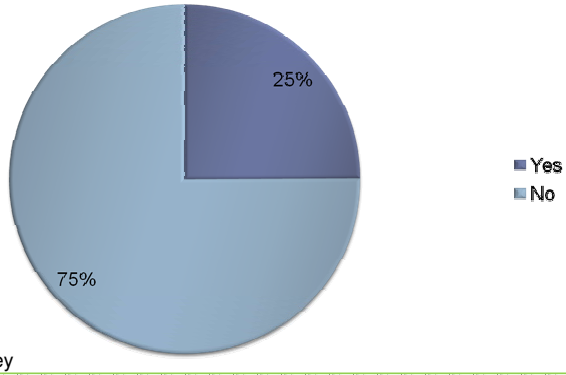
Student Survey

16. Would you pay additional fees for your spouse/significant other or dependent (16 years or older) to use the facility?



Student Survey

15. Do you have dependent children?



Student Survey

17. We are trying to determine what students want in a student life/recreation/wellness center as well as how often and what times you might use the facility. When the student life/recreation/wellness center is built and the facility is available to you on a daily basis, which activities would you participate in and how often would you use then each week?

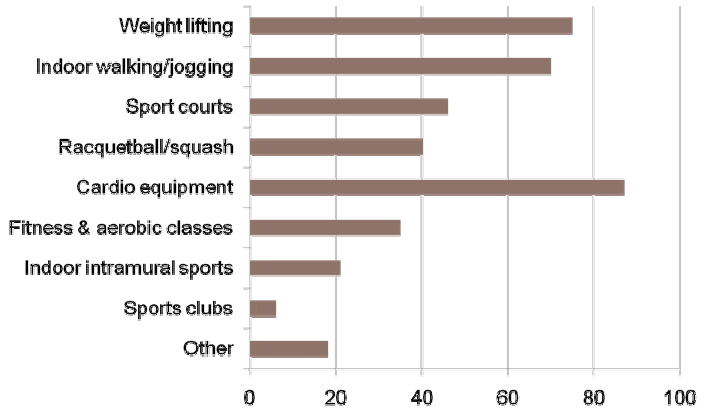
	PART A					PART B						
	How often would you participate?					What time of day would you be most likely to participate?						
ACTIVITY	Daily	1-4 Week	Once/ Week	Once/ Month	Never	6-8 a.m.	8-12 a.m.	12-1 p.m.	1-4 p.m.	4-6 p.m.	6-9 p.m.	9-12 p.m.
Basketball												
Free weights												
Weight machines												
Fitness (cardio machines such as treadmills, ellipticals, etc.												
Racquetball handball												
Squash												
Badminton												
Volleyball												
Lap swimming												
Indoor pool for recreational leisure swimming												
Water aerobics												
Whirlpool/hot tub												
Indoor jogging or walking												
Roller or floor hockey												
Indoor soccer												
Climbing wall												
Bouldering wall												
Outdoor equipment (tents, canoes, rafts)												
Aerobics												
Spinning/stationary cycling												
Yoga/Pilates												
Martial arts												
Bowling lanes												
Juice bar												
Lounge												
Locker rooms												
Outdoor areas for group gatherings, BBQ's etc.												
Game room (billiards, table tennis, wii)												
Personal training												
Massage												
Demo kitchen												

Student Survey

Agenda

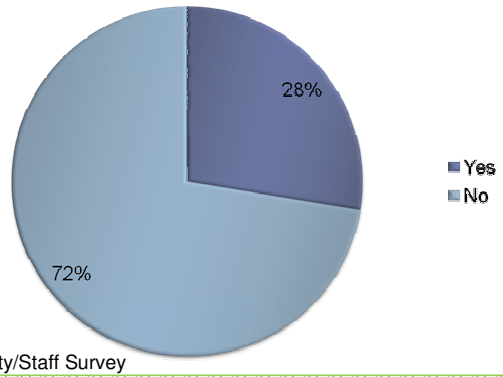
- Workshop #1 summary
  - Goals & objectives
  - Project priorities
- Student survey results
- Faculty & staff survey results
- Survey analysis
- Program review
  - Survey
  - Recommendations

1a. From the following list please CHECK ALL of the recreational facilities and activities you have participated in while working at UVU?



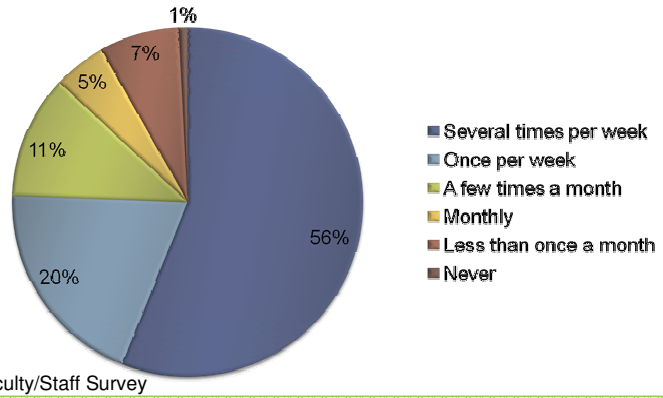
Faculty/Staff Survey

1. Are you currently using any recreation or fitness facilities offered ON CAMPUS at UVU?



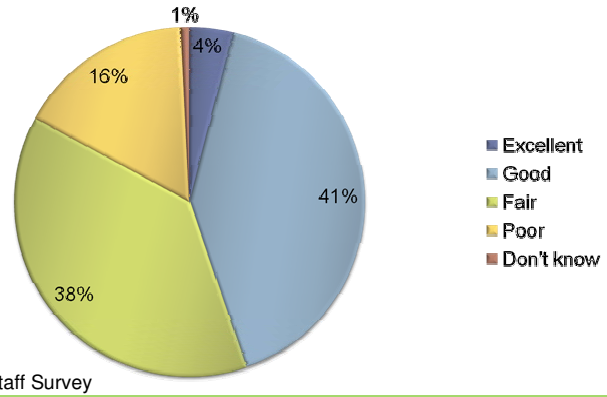
Faculty/Staff Survey

1b. Which ONE of the following statements best describes how often you are currently using recreational facilities and programs offered at UVU?



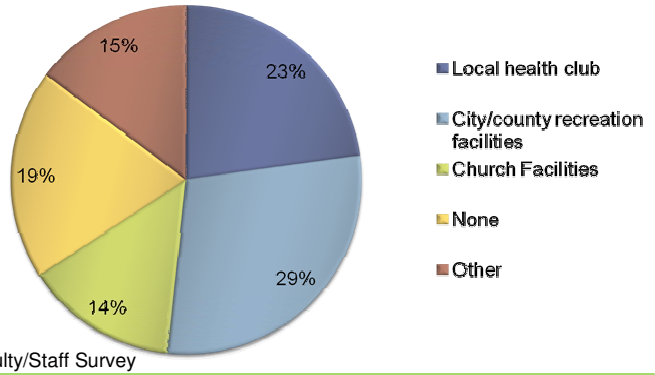
Faculty/Staff Survey

1c. Overall how would you rate the quality of the recreation facilities and programs provided by UVU?



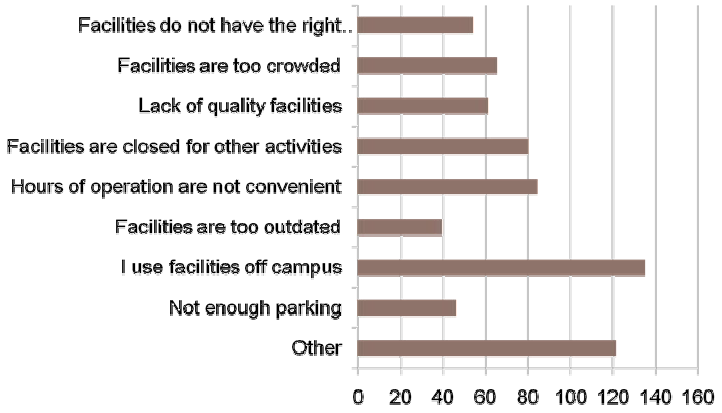
Faculty/Staff Survey

3. From the following list please CHECK ALL of the off-campus recreation facilities you are currently using?



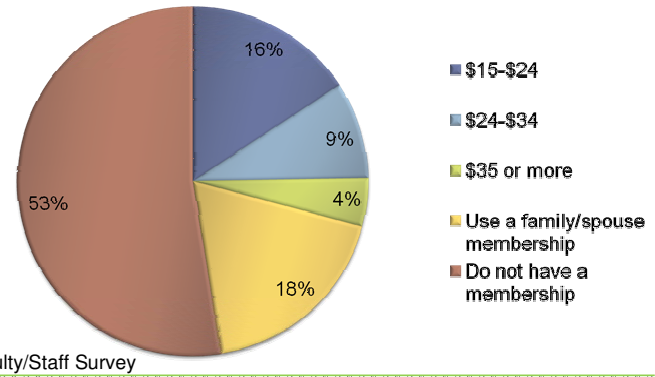
Faculty/Staff Survey

2. If you DO NOT use the recreation facilities and programs at UVU please check ALL reasons why?



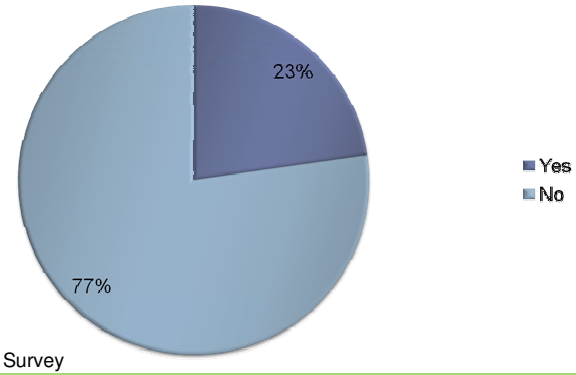
Faculty/Staff Survey

4. If you have a membership at a local health club or other public recreation facility, what are your monthly dues?



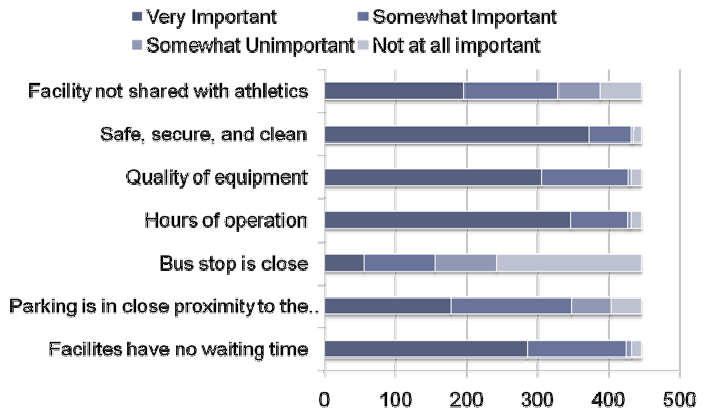
Faculty/Staff Survey

5. One of the primary goals of a campus recreation center/Student Life Center, aside from exercise, is to provide faculty with a place to socialize or meet with friends and colleagues. Do you currently have a place on campus where you spend time or socialize?



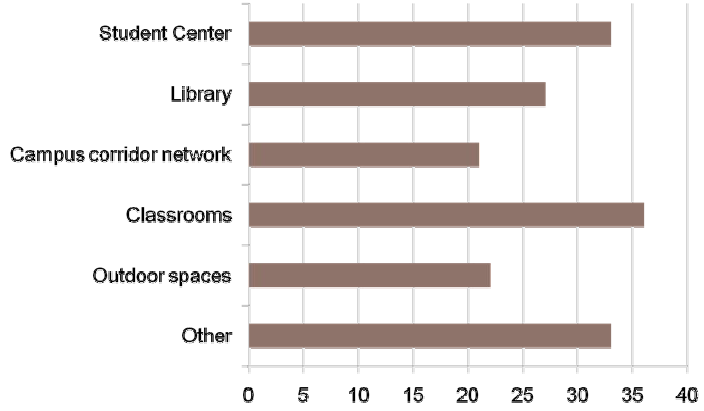
Faculty/Staff Survey

7. How important are the following criteria in deciding whether or not you would use a campus recreation center at UVU? SELECT ONE FOR EACH CRITERIA



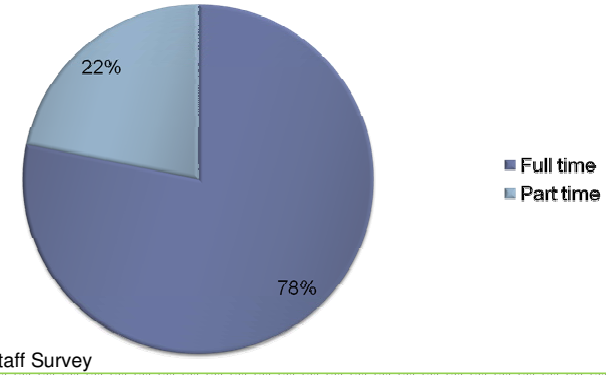
Faculty/Staff Survey

5a. If you answered YES TO question 6, please indicate location(s) where you socialize on campus?



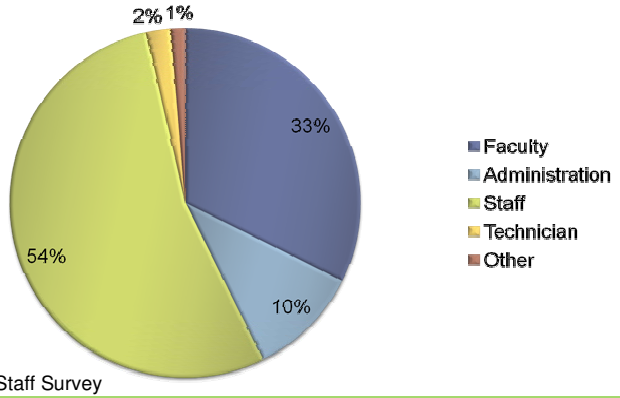
Faculty/Staff Survey

8a. Please check the one statement that best describes your employment status at the University?



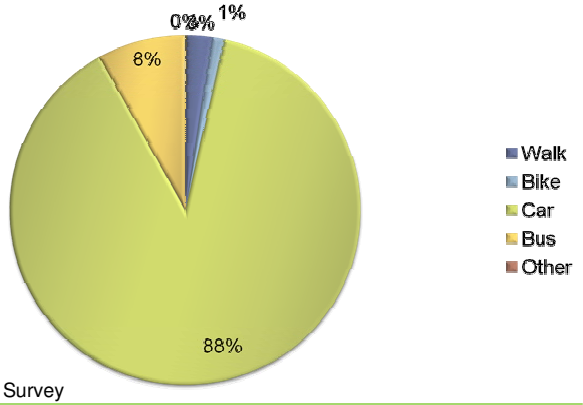
Faculty/Staff Survey

8b. Please check the one statement that best describes your employment level at the University?



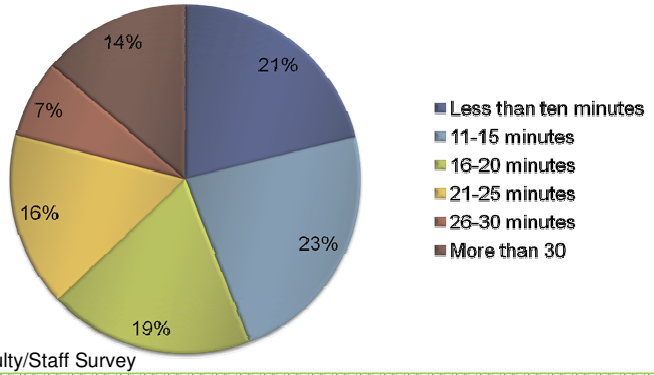
Faculty/Staff Survey

10. How do you get to campus?



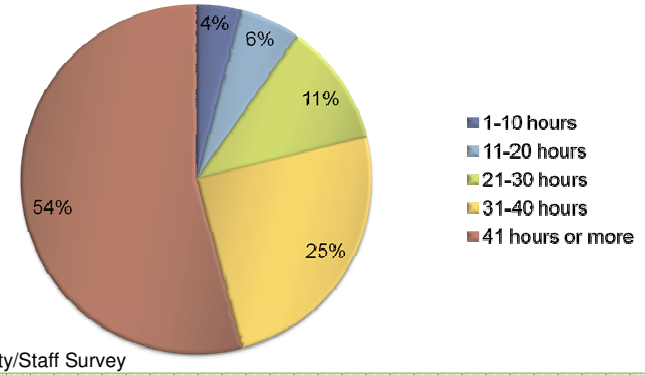
Faculty/Staff Survey

9. How long does it take you to get to the Campus?



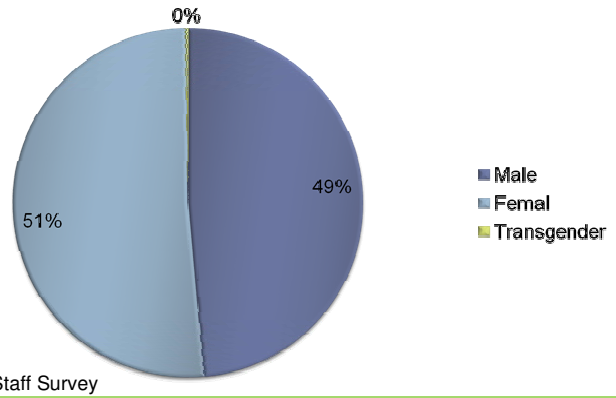
Faculty/Staff Survey

11. How many hours do you typically work per week?

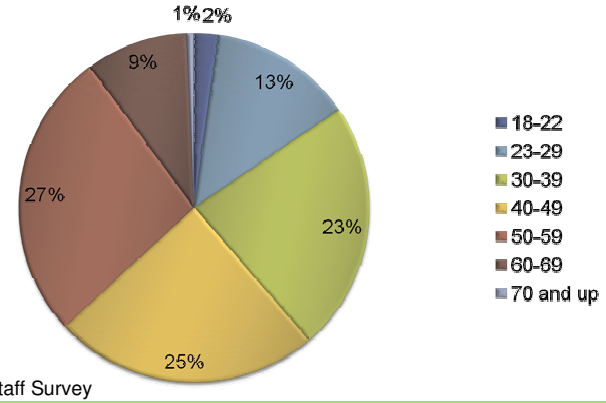


Faculty/Staff Survey

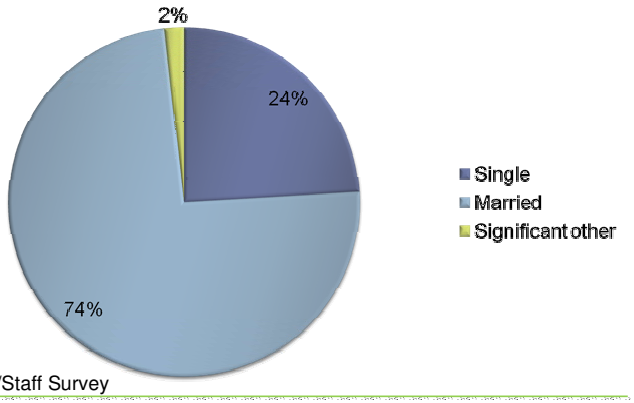
12. Please check your gender



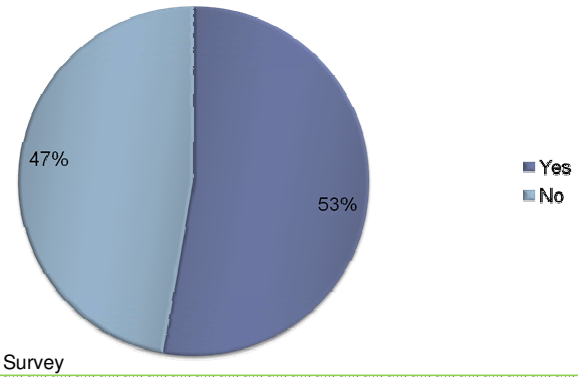
14. What is your age?



13. Please check your relationship status



15. Do you have dependent children?



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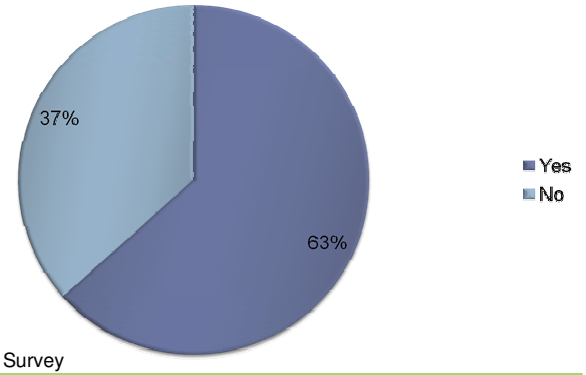

Faculty/Staff Survey

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ACTIVITY	Daily	3-4 Week	Once Week	Once Month	Never	6-8 a.m.	8-12 a.m.	12-1 p.m.	1-4 p.m.	4-6 p.m.	6-9 p.m.	9-12 p.m.
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Weight machines												
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Game room (billiards, table tennis, wii)												
Personal training												
Massage												
Demo kitchen												

Survey Analysis

FALL 2010 TOTAL HEADCOUNT	Actual	Rate	Adjusted
Full-Time 2009-2010 Fact Book Headcount	15,072	100%	15,072
Part-Time 2009-2010 Fact Book Headcount	13,693	50%	6,847
High School Students Deducted from Headcount	-4,376	100%	-4,376
TOTAL POPULATION	24,389		17,543

A normal travel range for recreation users is within 20 miles (25 minutes or less travel time)

369	Of respondents are outside travel range. Total Population lowered by		20.4%
Total Population =	17,543	Estimated students in driving range.	79.6%
Projected Users =	13,960	Survey represents	12.9% of Potential Users
48.6%	Percent of respondents would be willing to pay a fee for their dependents to use the facility.		

28765

Survey Respondents:	=	Freshman	Sophomore	Junior	Senior	Grad	Unidentified	=	TOTAL
1,807 Surveys		20%	25%	28%	26%	1%	0%		100%
		355	458	506	462	26	0		1807

FULL-TIME STUDENTS PARTICIPATING IN SURVEY	1,474	82%
PART-TIME STUDENTS PARTICIPATING IN SURVEY	333	18%
TOTAL SURVEY RESPONSES	1,807	100%

Survey Analysis

Question: How often would you participate?

ACTIVITY	A Never/ No Response	B Survey Response 1/mos	C Multiplier 0.231	D Survey Response 1/wk	E Multiplier 1.0	F Survey Response 2-4/wk	G Multiplier 3.0	H Survey Response Daily	I Multiplier 5.0	J Total Responses	K Survey Response 1/wk or more	L % of Users 1/wk or more	M Weekly Visits (C+E+G+I)	N Daily Visits (M ÷ 7)
BASKETBALL	1095	316	73.0	209	209	154	462	33	165	1807	836	46%	909	130
FREE WEIGHTS	575	199	46.0	321	321	582	1746	130	650	1807	2717	150%	2763	395
WEIGHT MACHINES	486	212	49.0	341	341	638	1914	129	645	1806	2900	161%	2949	421
CARDIO MACHINES	354	183	42.3	309	309	715	2145	246	1230	1807	3684	204%	3726	532
RB/HB	1016	464	107.2	196	196	111	333	20	100	1807	629	35%	736	105
SQUASH	1635	109	25.2	36	36	22	66	5	25	1807	127	7%	152	22
BADMINTON	1470	225	52.0	69	69	30	90	13	65	1807	224	12%	276	39
VOLLEYBALL	1138	405	93.6	165	165	70	210	29	145	1807	520	29%	614	88
LAP SWIMMING	721	322	74.4	321	321	278	834	165	825	1807	1980	110%	2054	293
LEISURE SWIMMING	524	465	107.4	389	389	296	888	133	665	1807	1942	107%	2049	293
WATER AEROBICS	1177	224	51.7	173	173	168	504	65	325	1807	1002	55%	1054	151
WHIRLPOOL/ HOT TUB	532	341	78.8	381	381	365	1095	188	940	1807	2416	134%	2495	356
WALKING	465	227	52.4	344	344	532	1596	239	1195	1807	3135	173%	3187	455
ROLLER OR FLOOR HOCKEY	1392	247	57.1	99	99	51	153	18	90	1807	342	19%	399	57
INDOOR SOCCER	1230	239	55.2	174	174	112	336	52	260	1807	770	43%	825	118
CLIMBING WALL	626	550	127.1	311	311	219	657	101	505	1807	1473	82%	1600	229
BOULDERING WALL	961	357	82.5	224	224	176	528	89	445	1807	1197	66%	1279	183
OUTDOOR EQUIPMENT	994	600	138.6	130	130	56	168	27	135	1807	433	24%	572	82
AEROBICS	1021	230	53.1	256	256	241	723	59	295	1807	1274	71%	1327	190
CYCLING	840	268	61.9	327	327	301	903	71	355	1807	1585	88%	1647	235
YOGA/PILATES	793	259	59.8	322	322	330	990	103	515	1807	1827	101%	1887	270

Survey Analysis

Question: What time of day would you participate?

ACTIVITY	TYPE	6 - 8 am 2 hr.	8am - 11:59 4 hr.	12-1 pm 1 hr.	1-4 pm 3 hr.	4-6 pm 2 hr.	6-9 pm 3 hr.	9 pm - 11:59 3 hr.	No Response	Peak Users	Percent of Responders	PEAK DEMAND PROJECTION: Daily Vistors (Survey)	Estimate of Total Visitors (Survey/14.3%)	Activity Duration	Peak Turnover Rate	Peak Demand	Peak Users per Turnover	Crossover Peak User Adjustment
MARTIAL ARTS	F	79	93	34	93	113	264	77	1054	264	14.6%	150	1158	1.0 hr.	3	169	56	
BOWLING LANES	S	38	41	42	89	143	667	235	552	667	36.9%	215	1664	1.0 hr.	3	614	205	
JUICE BAR	S	84	119	146	158	120	307	95	778	307	17.0%	254	1966	0.3 hr.	12	334	28	
LOUNGE	S	50	93	122	215	137	333	112	745	333	18.4%	346	2677	0.5 hr.	6	493	82	
LOCKER ROOMS	L	207	168	75	149	164	342	107	595	342	18.9%	543	4192	0.5 hr.	6	793	132	
OUTDOOR AREAS FOR GATHERINGS	O	36	33	66	102	225	507	90	746	507	28.1%	186	1433	1.5 hr.	2	402	201	
BILLARDS, TABLE GAMES		36	49	68	168	198	484	150	654	484	26.8%	286	2212	1.0 hr.	2	592	296	
PERSONAL TRAINING		146	121	48	104	134	282	82	890	282	15.6%	273	2111	0.5 hr.	4	329	82	
MASSAGE		77	119	65	173	199	390	110	674	390	21.6%	284	2193	0.3 hr.	8	473	59	
DEMO KITCHEN		38	63	75	96	109	196	52	1178	196	10.8%	88	680	1.0 hr.	3	74	25	
BIO FEEDBACK		45	76	55	83	97	153	53	1245	153	8.5%	65	503	0.5 hr.	6	43	7	
FITNESS ASSESSMENT		81	139	72	137	145	236	65	932	236	13.1%	103	793	0.3 hr.	12	104	9	
NUTRITION COUNSELING		73	130	92	142	145	219	66	940	219	12.1%	124	956	0.3 hr.	12	116	10	
WEIGHT MANAGEMENT		68	110	68	112	123	185	59	1082	185	10.2%	112	869	0.3 hr.	12	89	7	
DANCE CLASSES		27	81	40	101	128	357	74	999	357	19.8%	162	1249	1.0 hr.	3	247	82	
TANNING (SPRAY ON)		43	42	34	68	76	183	70	1291	183	10.1%	58	452	0.3 hr.	12	46	4	
GOLF SIMULATOR		31	50	44	86	93	211	67	1225	211	11.7%	94	725	1.0 hr.	3	85	28	
PUTTING GREEN		31	50	44	93	125	261	75	1128	261	14.4%	111	858	1.0 hr.	3	124	41	
E-MAIL STATIONS		35	96	86	112	89	160	56	1173	160	8.9%	183	1411	0.2 hr.	18	125	7	
BABYSITTING SERVICE		42	85	36	69	69	176	45	1285	176	9.7%	130	1007	1.0 hr.	3	98	33	
OUTDOOR INTRAMURALS		22	47	40	93	138	225	53	1189	225	12.5%	114	883	1.0 hr.	3	110	37	
MEETING ROOMS		25	58	61	142	113	191	60	1157	191	10.6%	106	817	1.0 hr.	3	86	29	
CLUB OFFICES		21	46	36	90	85	158	43	1328	158	8.7%	69	532	1.0 hr.	3	47	16	
BARBER / BEAUTY SALON		27	66	55	137	151	211	53	1107	211	11.7%	64	494	0.5 hr.	6	58	10	
TABLE TENNIS		19	48	83	107	117	290	86	1057	290	16.0%	128	988	0.3 hr.	12	159	13	

Survey Analysis

Question: What time of day would you participate?

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BASKETBALL	G	79	61	36	91	125	377	153	885	377	20.9%	130	1003	0.5 hr.	6	209	35		
FREE WEIGHTS	F	219	156	54	153	164	355	156	548	355	19.6%	395	3049	0.5 hr.	6	599	100	60%	60
WEIGHT MACHINES	F	226	169	63	156	178	364	164	487	364	20.1%	421	3255	0.5 hr.	6	656	109	60%	66
CARDIO MACHINES	F	258	196	58	175	187	367	169	397	367	20.3%	532	4113	0.5 hr.	6	835	139	60%	84
RB/HB	S	89	71	39	101	142	356	139	870	356	19.7%	105	812	1.0 hr.	3	160	53		
SQUASH	S	57	41	18	65	79	192	100	1255	192	10.6%	22	168	1.0 hr.	3	18	6		
BADMINTON	G	56	44	25	76	103	237	105	1161	237	13.1%	39	305	0.5 hr.	6	40	7		
VOLLEYBALL	G	56	54	36	98	131	358	120	954	358	19.8%	88	677	1.0 hr.	3	134	45		
LAP SWIMMING	A	228	125	41	122	147	340	146	658	340	18.8%	293	2267	0.5 hr.	6	427	71		
LEISURE SWIMMING	A	120	90	44	147	206	488	182	530	488	27.0%	293	2262	1.0 hr.	3	611	204		
WATER AEROBICS	A	133	103	40	91	109	279	115	937	279	15.4%	151	1163	1.0 hr.	3	180	60		
WHIRLPOOL/ HOT TUB	A	110	81	34	109	153	459	316	545	459	25.4%	356	2753	0.3 hr.	12	699	58		
INDOOR JOGGING OR WALKING	G	233	176	60	142	175	365	150	506	365	20.2%	455	3518	0.5 hr.	6	711	118		
ROLLER OR FLOOR HOCKEY	G	53	48	21	77	105	296	108	1099	296	16.4%	57	440	1.0 hr.	3	72	24		
INDOOR SOCCER	G	52	45	29	74	128	342	127	1010	342	18.9%	118	911	1.0 hr.	3	172	57		
CLIMBING WALL	S	69	93	49	131	191	474	132	668	474	26.2%	229	1766	0.5 hr.	6	463	77		
BOULDERING WALL	S	55	63	36	112	142	364	112	923	364	20.1%	183	1412	0.5 hr.	6	284	47		
OUTDOOR EQUIPMENT	O	57	84	67	137	142	244	92	984	244	13.5%	82	631	0.3 hr.	12	85	7		
AEROBICS	F	139	138	46	109	107	228	85	955	228	12.6%	190	1465	1.0 hr.	3	185	62		
SPINNING / STATIONARY CYCLING	F	168	143	40	106	121	261	108	860	261	14.4%	235	1818	1.0 hr.	3	263	88		
YOGA/PILATES	F	164	157	52	115	125	305	92	797	305	16.9%	270	2082	1.0 hr.	3	351	117		

Survey Analysis

Demand-Based Requirements for Peak Need							NIRSA Guidelines		
Activity	Peak Demand	Unit SF Need	Activity Type	Unit Need	Recom'd. Units	Total SF	Guideline per 1,000 Users		Total SF
FREE WEIGHTS	61.0	55/sf	Individual		61	3,355/sf	604/sf per 1,000		9,816/sf
WEIGHT MACHINES	70.16	55/sf	Individual		70	3,850/sf			
SUBTOTAL						7,205/sf			9,816/sf
CARDIO MACHINES	92.0	50/sf	Individual		92	4,600/sf	440/sf per 1,000		7,151/sf
SUBTOTAL						4,600/sf			7,151/sf
AEROBICS	70	50/sf	Individual		70	3,500/sf	773/sf per 1,000		12,562/sf
DANCE CLASSES	92	50/sf	Individual		92	4,600/sf			
YOGA / PILATES	126	50/sf	Individual		126	6,300/sf			
SPINNING / STATIONARY CYCLE	103	25/sf	Individual		103	2,575/sf			
MARTIAL ARTS	56	50/sf	Individual		56	2,800/sf			
SUBTOTAL						19,775/sf			12,562/sf
CLIMBING WALL	78	36/sf	pairs	38.8	39	1,404/sf	8.94 top ropes	9.0	324/sf
BOULDERING WALL	46	36/sf	Individual		46	1,656/sf	36/sf per 1,000		585/sf
SUBTOTAL						3,060/sf			909/sf
RB/HB	63	800/sf	Doubles (4)	15.7	16	12,800/sf	0.39 / 1,000	6.3	4,800/sf
SQUASH	6	592/sf	Doubles (4)	1.6	2	1,184/sf	0.07 / 1,000	1.1	592/sf
SUBTOTAL						13,984/sf			5,392/sf

Survey Analysis

Demand-Based Requirements for Peak Need							NIRSA Guidelines		
Activity	Peak Demand	Unit SF Need	Activity Type	Unit Need	Recom'd. Units	Total SF	Guideline per 1,000 Users		Total SF
BASKETBALL	34	6,500/sf	Team (20)	1.7	2	13,000/sf	0.45 / 1,000	7.3	45,500/sf
VOLLEYBALL	44	4,333/sf	Team (16)	2.7	3	12,999/sf			
INDOOR JOGGING OR WALKING	128	60/sf	Individual	1 per 20LF x 3'	128	7,679/sf			
GOLF SIMULATOR	31	300/sf	Group (4)	7.69	8	2,400/sf			
PUTTING GREEN	45	60/sf	Group (4)	11.28	11	660/sf			
BADMINTON	8	2,149/sf	Doubles (4)	1.9	2	2,151/sf			
SUBTOTAL						38,889/sf			45,500/sf
LAP SWIMMING	79	563/sf	7/Lane	11.3	11	6,193/sf	0.92 lane/1,000	15	8,445/sf
LEISURE SWIMMING	235	25/sf			235	5,875/sf			
WATER AEROBICS	72	50/sf	Individual		72	3,600/sf			
WHIRLPOOL / HOT TUB	62	8/sf	Individual		62	465/sf			
SUBTOTAL						16,133/sf			8,445/sf
LOCKER ROOMS	139.1	18/sf	Individual	139.1	139	2,502/sf	200/sf per 1,000	Men	3,250/sf
							177/sf per 1,000	Women	2,876/sf
SUBTOTAL						2,502/sf			6,127/sf
TOTALS						106,148/sf			95,901/sf

Agenda

- Workshop #1 summary
  - Goals & objectives
  - Project priorities
- Student survey results
- Faculty & staff survey results
- Survey analysis
- Program review
  - Survey
  - Recommendations

Survey Analysis

Demand-Based Requirements for Peak Need							NIRSA Guidelines	
Activity	Peak Demand	Unit SF Need	Activity Type	Unit Need	Recom'd. Units	Total SF	Guideline per 1,000 Users	Total SF
MAC GYMNASIUM								
ROLLER HOCKEY	23.3	7,200/sf	Team (20)	1.2	in below	0/sf		No guideline
INDOOR SOCER	53.8	7,200/sf	Team (20)	2.7	3	7,203/sf		No guideline
SPECIALTY SPACE								
MASSAGE	63.2	80/sf	Individual	63.2	63	5,040/sf		No guideline
DEMO KITCHEN	27.0	25/sf		27.0	27	675/sf		
MEETING ROOMS	29.5	30/sf		29.5	30	900/sf		
CLUB OFFICES	14.9	30/sf		14.9	15	450/sf		
BIO FEEDBACK	8.3	25/sf		8.3	8	200/sf		
BARBER / BEAUTY SALON	11.6	35/sf		11.6	12	420/sf		
FITNESS ASSESSMENT	10.7	50/sf	Individual	10.7	11	550/sf		No guideline
NUTRITION COUNSELING	10.8	120/sf		10.8	11	1,320/sf		
WEIGHT MANAGEMENT COUNSEL	8.7	120/sf		8.7	9	1,080/sf		
BILLARDS	307.4	25/sf	Team (4)	76.9	77	1,925/sf		No guideline
BOWLING	183.6	216/sf	Team (6)	45.9	46	9,936/sf		
TABLE TENNIS	14.8	135/sf	Team (4)	3.7	4	540/sf		
JUICE BAR / LOUNGE	107.3	40/sf	Individual	107.3	107	4,280/sf		No guideline
TANNING (SPRAY)	3.8	100/sf	Individual	3.8	4	400/sf		No guideline
PERSONAL TRAINING	82.8	64/sf	Individual	82.8	83	5,312/sf		No guideline
BABYSITTING SERVICE	33.2	40/sf						
E-MAIL STATION	6.2	10/sf	Individual	6.2	6	60/sf		No guideline
TOTALS						20,146/sf		0/sf

MHTN ARCHITECTS

Meeting Report 01

Project Name: Utah Valley University Student Life Center and Parking Structure

MHTN Project No.:	2011501
Phase:	Programming
Date:	13 January 2011
Time:	1:30 PM
Location:	Room 213 Sorenson Center
Purpose:	Define Project Scope and Parameters

Attendees	Representing	Phone	Email
☒ Jim Michaelis	UVU	801-863-8996	michaeji@uvu.edu
☒ Kurt Baxter	DFCM	801-538-3174	kbaxter@utah.gov
☒ Val Peterson	UVU	801-863-8424	petersva@uvu.edu
☒ Richard Portwood	UVU	801-863-8652	richard.portwood@uvu.edu
☒ Cory Duckworth	UVU	801-863-6158	duckwoco@uvu.edu
☒ Bob Rasmussen	UVU	801-863-8491	bobr@uvu.edu
☒ Frank Young	UVU	801-863-7201	frank.young@uvu.edu
☒ Denny Rucker	UVU	801-863-8326	ruckerde@uvu.edu
☒ Laird Bellon	UVU	801-863-8131	bellonla@uvu.edu
☒ John Brewer	UVU	801-863-8320	brewerjc@uvu.edu
☒ Eddie Sorensen	UVU	801-863-8941	sorensed@uvu.edu
☐ Susan Palmer	UVU	801-863-6158	palmersu@uvu.edu
☒ Sarah Miller	MHTN	801-326-3203	sarah.miller@mhtn.com
☒ Kyle Taft	MHTN	801-326-3204	kyle.taft@mhtn.com

Item

1.1 We met with the steering committee to discuss the project scope, process, communication protocols, roles and responsibilities, schedule, background information, and major issues.

1.2 The project program will include:

a. Student Life Center of approximately 160,000 square feet at an estimated construction cost of $200 per square foot for a total of $32,000,000
   i. The Student Life Center will be paid for using student fees of approximately $40 per semester.

b. Parking Structure with 534 cars at an approximate construction cost of $15,000 per stall for a total of $8,000,000
   i. The Parking Structure will be paid for using parking fees.
   ii. The parking structure is intended to support the center of campus, support campus and community events in the Sorenson Center, and should not be planned for another location.
   iii. The property across the street east of the selected site is not owned by UVU and should not be considered for the parking structure location.

1.3 The Student Life Center should be its own building, not a "phase 5" of the Sorenson Center. It should have connections to the main campus circulation corridor system.

1.4 The program should not consider any modifications to the Sorenson Center. Such modifications will be done as a separate project. Some programs and services may move out of the Sorenson Center and will leave a vacancy. The program should not worry about the use of such vacancies.

1.5 The program team will be responsible for:
   a. A site survey. It was felt that Great Basin left something to be desired on the Pope Science Building survey and UVU would prefer another civil engineer such as Psomas.
   b. A site geotechnical study. It was suggested that RBG from Provo would be a good choice for the geotechnical study.

1.6 The Pioneer House will remain in its current location for now. The program should make a recommendation regarding the site and how the Pioneer House impacts site development and maximizing value of the new facilities without compromising them including potential ties to current physical education and campus recreation facilities.

1.7 We reviewed the roles of each attendee:
   a. Eddie Sorensen: Responsible for campus communication infrastructure including IT, data, and telecomm. Travis Tasker will provide information regarding Media and AV standards.
   b. Cory Duckworth is Vice President for Student Life. He will provide general oversight to the project and its contents in representing student life. He will work closely with Bob Rasmussen and Richard Portwood. We should make sure his assistant Susan Palmer is copied on all minutes and communications.
   c. Kyle Tat is a principal at MHTN and will be the project manager, coordinating all consultants.
   d. Sarah Miller from MHTN is the project program coordinator. She will be in close contact with all user groups and project stakeholders to gather program information.
   e. Kurt Baxter from DFCM has contract responsibility for the project and otherwise will be an observer.
   f. Jim Michaelis is Associate Vice President for Facilities Planning and will be the project coordinator for UVU.
   g. John Brewer is Director of Public Safety for UVU and also is responsible for parking.
   h. Laird Ballon is Director of the Physical Plant and will be working with the team regarding HVAC capacity for the new facility.
   i. Frank Young is Senior Director of Campus Space Planning and will back up Jim when needed.
   j. Denny Rucker is Project Director in Engineering and works closely with issues relating to the campus electrical infrastructure.
   k. Bob Rasmussen is the Dean of Students and will represent Student Life along with Cory. Bob will be actively involved with the ideas and planning of the Student Life Center
   l. Richard Portwood is Student Body President at UVU and will be representing the student body and involving appropriate student groups to participate in the programming focus groups
   m. Val Peterson is Vice President for Administration and Legislative Affairs and will be representing the president's office in the programming effort.
   n. Two others were mentioned as participants or potential participants in the

programming process:
   i. Phil Clegg: Assistant Dean of Students
   ii. Jason Slack: Associate Professor for Exercise Science and Outdoor Recreation who could represent the academic side of the student life center.

1.8 There are several focus groups that were suggested by Richard, Bob, and Cory. These would include: Student Council, Generic Students, Community Health, and Recreation Management.

1.9 Students approved the project and have agreed to use their fees to fund it. They should have a strong voice regarding what will be in it.

1.10 As we proceed with focus groups Cory noted that we need to focus our attention, questions, and emphasis on the positive aspects of what will be included in the facility. We should not open up and discussion regarding the question of whether or not the project should be done. That decision has already been made and should not be broached at the focus groups. We should also not discuss anything to do with fees. That decision has also already been made.

1.11 The facility will not have a computer lab, rather multiple hot spots throughout the building will be the preference for connectivity.

1.12 The gyms need to be flexible and multi-functional.

1.13 The cardio area will need cable connections to TV and data connections for internet options for the machines such as treadmills, elliptical trainers, etc.

1.14 Before we begin the focus groups MHTN and Hastings + Chivetta will send copies of the questions we will be asking. Cory asked to review these before we begin.

1.15 The student life center is part of the holistic University strategy to serve students, engage students, and retain students. It is a key element in the entire strategy. Bob said he could assemble some of the original documentation that justifies the project and explains its necessity on campus. This information can be valuable for inclusion in the program in a summary and edited format to give future designers an understanding of the importance of the project.

1.16 The student life center should connect to the campus corridor system / Sorenson Center, while maintaining its own identity. Connectedness is a principle of how this building should fit into the campus.

1.17 Service access to existing buildings should be considered. Fire access lanes typically serve as service access lanes as well.

1.18 The building location must avoid manholes and utility locations. The roadway running just east of the site has every major utility that serves the campus.

1.19 The campus can provide updated utility locations based on the Pope Science Building construction.

1.20 MHTN will ask Hastings + Chivetta if there are recreation facilities we should visit. Some that were mentioned are UNLV, Sacramento State, and a couple of facilities in the Spokane / Pullman area.

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a. We discussed key issues from the group:
b. The program team needs to make recommendations regarding which programs should transfer from the Sorenson Center to the student life center. There needs to be a balance of offices vs. activity spaces.
c. The building will require good access and security control. A check point will be needed for access, fees, and credential review.
d. There is a serious lack of hot water capacity for the facility. The program team should make a recommendation of how the facility will get its chilled and hot water for HVAC. Should there be a new satellite central plant or should the building have a stand alone HVAC system?
e. Traffic flow must be considered relative to location of the parking structure.
f. Operation costs should be minimized.
g. The program should consider play fields on the top level. This will be a cost issue related to the cost estimate.
h. There is no height limit for the facilities, but seismic concerns will affect the height.

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04/13/11 - 1:51 PM

January 27, 2011

Utah Valley University Student Life Center - WPC Project # 23-7291.000

Attendees:

Jim Michaels – Facilities Associate VP

Bob Rasmussen – Dean of Students

Sarah Miller – MHTN Architects

Kyle Taft – MHTN Architects

Erik Kocher – Hastings+Chivetta Architects

Ron Dunn – Structural Engineer

Roger Hamlet – Mechanical Engineer

Ken Garner – Garner Engineering, Electrical

John Brewer – Director of Parking & Public Safety

Denny Rucker – Special Projects, Energy

Steve Jackson – Parking Enforcement Manager and Staffing

Curtis Olson – IT

Kevin Denton – IT

Dave Waldren – Civil

Jim – Parking Services

Tina – Parking Services

Barbara Young – Parking Services

Frank Young – Parking Services

Travis – Media Services

Background:

- Parking Structure – 534 Spaces
- Budget = $15,000 per space or 8 million dollars
- Site between student center and library
- Serves events in center of campus

Parking Structure Scope Discussion:

- Users? Combination staff, visitors – all fee paid
- Play with rates? Validation of visitors, discourage hourly student parking
- Preferential carpool, hybrid, electric car parking
- Proposal to eliminate remote free lot
- Need safe pedestrian way through parking areas
- No service stalls in parking structure, if possible
- 2 – 3% construction cost premium to design for future roof
- Need video surveillance at every level
- Emergency call stations at stairs and elevators
- Consider interference by cell phones for police radio's
- Concern with vehicle emissions entering garage from vehicles on street and in surface parking
- Consider occupancy sensors and daylight sensors for lighting
- Losing 201 surface parking spaces with proposed construction
- Secure ground level
- Exterior façade – match existing campus standard, some brick
- Match T2 Systems flex parking equipment
- Video Screens for marketing, campus maps
- Interactive video screens at pedestrian areas
- Building height limitation of 5 stories matches library
- Water lines for wash-down of floors
- College Survey - What would you do differently? (Steve Jackson)
  - Same manufacturer for parking equipment
  - More camera's
  - Use fast elevators
  - Smoke evacuation inadequate

MHTN ARCHITECTS

Meeting Report 03 (DRAFT)

Project Name: **Utah Valley University Student Life Center & Parking Structure**

MHTN Project No.: 2011501
Phase: Programming
Date: 07 February 2011
Time: 9:00, 10:45, 11:45, 1:15, 2:15, 3:15, 4:00
Location: Room 105A Sorenson Center
Purpose: Student Life Space Needs Interviews

Attendees	Representing	Phone	Email
☒ Jim Michaelis	UVU Facilities	801-863-8996	michaeji@uvu.edu
☒ Bob Rasmussen	UVU Dean of Students	801-863-8491	bobr@uvu.edu
☒ Phil Clegg	UVU Dean of Students	801-863-xxxx	xxxx@uvu.edu
☒ Bo Earls	UVU Campus Recreation	801-473-9084	earlsch@uvu.edu
☒ Rebeka Grulich	UVU Student Activities	801-863-8835	beka.grulich@uvu.edu
☒ Marissa King	UVU Clubs & Orgs	801-863-7039	marissa.king@uvu.edu
☒ Aimee Stanfield	UVU Wellness Center	801-863- xxxx	xxxx@uvu.edu
☒ Rebecca Hulgren	UVU Wellness Center	801-863- xxxx	xxxx@uvu.edu
☒ Brent Sumner	UVU Review (newspaper)	801-863- 6498	sumnerbr@uvu.edu
☒ Robbin Anthony	UVU Review (newspaper)	801-863- xxxx	xxxx@uvu.edu
☒ Kimberly Reynolds	UVU Outdoor Adventure	801-863- 8791	reynolkj@uvu.edu
☒ Robb Shirley	UVU Intramurals	801-863- 6018	robb.shirley@uvu.edu
☒ Andrew Stone	UVU Orientation	801-863- 6368	andrew.stone@uvu.edu
☒ Alexis Palmer	UVU Volunteer & S.L	801-863- 8681	palmeral@uvu.edu
☒ Grant Flygare	UVU Student Involvement	801-863- 6949	grant.flygare@uvu.edu
☒ Kris Coles	UVU Student Involvement	801-863- xxxx	xxxx@uvu.edu
☒ Sarah Miller	MHTN	801-326-3203	sarah.miller@mhtn.com
☒ Kyle Taft	MHTN	801-326-3204	kyle.taft@mhtn.com

Note: These notes represent the discussions held during the space needs interviews. They do not include space needs information outlined in responses to space needs questionnaires.

Item

2.1 9:00-10:30 AM. Student Government, Activities, Clubs & Orgs, Student Senate.

a. Campus Recreation will include the Outdoor Adventure Center, Intramurals, and the Wellness Center. Bo Earls will be the Director of Campus Rec. It would be beneficial for these groups to be near each other in the new building, but it is not essential.
b. Student Activities will fall under Phil Clegg and will include Student Government, Clubs & Organizations, Student Media and Student Activities staff (which will include Cheer & Dance).
c. The new building should include space for Phil Clegg (Assistant Dean of Students).
d. The Student Council Conference Room must accommodate 46 seated at the table(s). (34 Council members, 4 Advisors, 2 Media, plus 6 for growth). It should also accommodate additional chairs for students who may want to attend. The Council room must be easily accessible and located where it can be used for other

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functions. The current Council Room (SC 105A) is too small, which discourages general student attendance. The tables are configured in a large "U", which results in a lot of wasted space in the center. The new room should have nice finishes and furnishings, but must allow for flexible set-ups if possible. UVU would like to see photos that show possibilities for set-up and furnishings. The room should have a full AV set-up.
e. The Student Council is made up of Student Government (including the Senate), Activities, Clubs & Organizations, and others. It is the student representation decision-making body.
f. It would be good to have some separation between Student Government student and advisor areas, but they should be in the same general location.
g. Student workstations should provide openness, with views to each other. Some workstations will be shared. Storage should be below to avoid blocking visual access.
h. Student Activities will require sizable storage and staging areas, preferable adjacent to their offices and Publicity Room. Storage must accommodate large items such as popcorn and cotton candy machines, outdoor heaters, lawn chairs, etc. that are used in activities and events. The staging area must be adjacent to the Storage and is used to prepare for activities and events.
i. The initial program listing should include two Publicity Rooms – one for Clubs & Orgs and a second for Activities.
j. The sizes and arrangements of Activities spaces must support the functions of the groups. The ability to stage activities is hindered currently by the poor functionality of the spaces.
k. It would be beneficial to have Student Life groups such as Student Involvement, Volunteer & Service Learning, Clubs & Orgs., and Student Government, accessed from a central reception / lounge space, to encourage students to hang out together, get to know each other, collaborate, etc.
l. The Publicity / Work Room for Clubs & Orgs should be the same size as that for Activities. They can be the same size as the existing Publicity Room, but should be set up for greater functionality and efficiency.
m. Clubs & Orgs Coordinator should be close to the clubs student space.
n. Clubs & Orgs should have a dedicated conference room for 15 people.
o. Clubs & Orgs needs access to a Multipurpose Room for club activities such as service projects, socials and speakers for around 30 people. They thought a room about 25' x 30' that subdivides would work well.
p. Most of the Student Activities groups should be in a high visibility location such as a major circulation pathway.
q. Dance / Cheer requires an office for a full-time coordinator and a workstation for 2 part-time coordinator / assistants. These should be located with the Student Activities staff space. Dance / Cheer requires storage of about 350 NSF (mats, uniforms, costumes), which ideally will be located adjacent to a MAC Court where the materials will be used.
r. The initial program should include 1,000-1,500 SF for Judicial Affairs. This is a group that belongs organizationally within Dean of Students / Student Life. Judicial Affairs is being considered for location in the new building.

2.2 **10:45 AM. Wellness Center**.

a. Aimee has space needs information that she prepared previously. She will email it to Jim to send to MHTN / Hastings+Chivetta.
b. Wellness needs a very high-visibility location. Organizationally, they belong with Intramurals and the Outdoor Adventure Center. It would be beneficial for these groups to share resources such as reception, waiting, copier, etc., but it is not essential.

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c. The Wellness office space is now open from 8 AM – 5 PM. Activity hours may be extended in the future to 6 AM to 10 PM.
d. They described their space needs, which will be represented in the upcoming space list. They require dedicated space for their offices and some of their programs and activities. They could share space with the OAC and Intramurals if they were adjacent – reception, office support, etc.

2.3 **11:45 AM. Student Newspaper.** This group had a questionnaire response which listed their space needs, which were fairly extensive. They are in very minimal space currently. MHTN will send programming and layout information from other student newspapers / campuses, showing what is typical elsewhere.

a. The Student Newspaper has an important role as a lab / opportunity for students who are developing as writers, salespeople, web designers, layout designers, etc. The University supports giving students these leadership and writing opportunities.
b. Lockers should be provided for those who work at the Newspaper. They will share work space.
c. The Newspaper advisors have visited and like BYU's student newspaper office space.
d. Most student reporters will have their own laptops, but some reporter stations should have desktop computers. The reporter stations can be minimal in size – 30" wide.
e. The Newspaper has a weekly (Monday) publication, but may go to 3 days/week in the future.
f. The University currently offers a 4-year Communications degree with an emphasis on journalism.
g. The Newspaper office should be easy to find / locate. It does not require high-visibility. It is a destination, particularly for the advertising function.
h. The Newspaper will operate from 6 AM – 11 PM. It will not require 24/7 access.

2.4 **1:15 PM. Outdoor Adventure Center (OAC).**

a. OAC will need kitchen facilities for packaging and storing food in preparation for trips. They need a residential dishwasher and a commercial / industrial sink.
b. Their exterior loading / service area should be level with the interior floor, not raised.
c. Equipment rental transactions are handled at the retail sales computer in the front of their space. A computer at the back of their space will be used for trip preparation.
d. They need a cash register / greeting area with a small retail space at the front of their space.
e. In the middle of their space, they need a resource / trip planning area with lounge seating for 10 and an open-access computer station. It would be beneficial to have two tables for 8 in this space, for trip planning and informal meetings. There should be a TV for viewing trip videos. Groups of 8 - 25 people come in to discuss and plan trips.
f. At the rear of their space, they need a shop area for working on bicycles and other equipment that is used / rented by the OAC.
g. This group needs access to a shared conference space accommodating 25 people that can be used for training functions, first-aid classes, etc. It would ideal if it could be separated from the OAC space by a glass wall. It would be used 1-4 times per week, primarily in the late afternoon or evening. It could likely be shared with Wellness; they need a conference room like this, to be used primarily during the day.
h. The current need for outdoor, covered storage space is 1,000 SF (2 times the

current shed size of 20' x 25') and the future need is double that. Stored items will include canoes, kayaks, paddleboards, etc. Large equipment such as canoes will be stored in racks.
i. The existing indoor storage space is approximately 15' x 25' (375 SF) and the need is 3 times that size. It should have a concrete floor with floor drains and a hose bibb for post-trip clean-up.
j. The existing outdoor staging space works well when there are no vehicles parked in it.
k. They will need parking space for a golf cart and a canoe trailer. Their box trailer will be parked remotely.
l. OAC and Wellness are chance encounter / retail type spaces, so should be in a high visibility locations.
m. The Store Manager will be located with the OAC.
n. Bo's office (Director of Campus Rec) should be closer to the Intramurals / activity spaces, rather than the retail / chance encounter spaces.

2.5 **2:15 PM. Intramurals.** Intramural sign-up must be in the non-controlled area of the building. The Intramurals office space must have direct access to the controlled area where the activities occur.

a. Even though Intramurals sign-up is somewhat of a destination space, it should be in a high-visibility location in order to attract students to the programs / activities.
b. Intramurals sign-up will primarily be done on-line, but some sign-up will be done at the Control Desk and questions regarding Intramurals will be answered there.
c. The group thought an Intramurals sign-up kiosk would be a good idea. A kiosk could be used for information about OAC trips as well. The Bookstore has computer stations / kiosks that are very attractive; the design team should look at these.
d. The group discussed the offices needed and how to configure them. The Intramurals office suite should be at the access control point of the building (Control Desk) and will also include space for Bo (Director of Campus Rec). If possible, Wellness and OAC should be near also, to facilitate the Campus Rec Director managing these groups. The Director of Campus Rec office can be more remote from the Control Desk than the Intramurals offices.
e. The group decided there should be six shared workstations for Intramurals staff (student workers) to plan, manage, and market their activities. Two will be at the Control Desk. Two will be in a shared office located behind the Control Desk. Two may be located elsewhere in the facility to assist with the supervision of the activity spaces.
f. Intramurals will manage the building's control access point (Control Desk). If the building is open extended hours, the Intramurals staff will likely monitor the building.
g. The issuing of some equipment used in the building's activity spaces should be located at the Control Desk ("Issue Room"). The campus One-Card will be used for equipment check-out.
h. Equipment used on the fields will be stored near the fields.
i. The Control Desk should have a clean, uncluttered appearance. It should be designed to hide any paperwork from the view of the public.
j. The group discussed the number of offices needed for Campus Recreation and Intramurals offices, including future positions. These will be on the upcoming space list.
k. It would be beneficial if all activity / gym courts are a uniform size, so that they are equal from a size / configuration standpoint.

2.6 **3:15 PM. Orientation.** The Orientation office is a candidate for possible location in the new building. Orientation will likely use the large gathering spaces in the building. Andrew runs the orientation program with part-time student help. Andrew has a split position –half-time Orientation and half-time UVUSA Advisor.

a. Currently, there are 12 orientation sessions for a total of 2,500 students. This is expected to grow to up to 5,000 students in the future, but the individual session size will likely not increase.
b. Orientation is not a student-funded program, but is "hard-fund" by the University.
c. Activities staff members assist with Orientation events, which take place primarily during the summer.
d. We should plan for an average attendance of 400 people at orientation sessions, and a maximum of 600.
e. At orientation, attendees sit at round tables in the center of a large gathering space during the initial session(s). The perimeter of the room is lined with 35 booths / tables with information for attendees. The group leaves to tour the campus. Afterward, they return to the original room, where they are served a meal.
f. Orientation sessions may still occur in the Sorensen Center Ballroom, which is the current location. However, the University would prefer a venue in the new building, which will be a more dynamic and exciting facility.
g. Orientation may take place in a Multipurpose Room, or in one or more of the gymnasium spaces in the new building. The new building will require storage for platforms, tables, chairs, AV, etc. that will be used in these spaces.
h. If staged in the new building, orientation events must be accessible from the non-controlled portion of the building.
i. If Student Life Center court facilities are used for Orientation, one to two spaces must be reserved for spontaneous basketball use, either in gymnasiums (smaller half-courts) or in the MAC Courts. The pick-up basketball spaces do not need to be regulation size basketball courts.
j. The Orientation offices would fit well in the existing UVUSA space. Proximity to the spaces used for orientation would be beneficial.
k. There is a lot of prep work involved in orientation, assembling information packets and other materials. If the orientation offices are not located in the new Center, at a minimum it would be beneficial to have storage space near the Orientation spaces for these prepared materials. About 350 SF is needed.
l. Currently, materials used in orientation are purchased at the beginning of the year and are placed in storage space across the freeway. During orientation, materials are taken from storage and assembled in the UVUSA Publicity Room.
m. It would be beneficial for Orientation to be adjacent to UVUSA and Clubs & Organizations, in order for them to share work / assembly space and also conference / meeting space.
n. From May to September, Orientation uses student employees to make phone calls and serve as mentors to incoming students. Shared workstations, two with computers and two with telephones, would support these functions.

2.7 **4:00 PM. Office of Student Involvement.** This group promotes engaged learning through three programs: Resident Engagement, Action Learning and the Zone. Space needs were outlined in their questionnaire response. Discussion included:

a. Needs include office space for staff and Student Leaders. There are currently 26 Student Leaders who share 4 work spaces to plan and support their activities. With future growth, it is anticipated that 12 shared workspaces will be needed.
b. Space needs also include a high-visibility location for the Zone. This is an area for spontaneous or planned participation by students in 5-6 different activities held throughout the day. Currently, there are 6-7 students at one time in the Zone.

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Current hours are typically 10 AM – 1 PM, but this will be extended to 8 PM in the future. The Zone must have dedicated storage space nearby, for materials used on a daily basis in a variety of activities. Activities include: water coloring, cake decorating, cooking, tutoring and many others, The Zone will require sinks, electricity, and flexibility in its set-up to accommodate different activities.

2.8 **4:30 PM. Volunteer & Service Learning.** This program is currently in the Losee Center. They like their current space and it would be sufficient in size if the Office of Student Involvement were not co-located there as well. The space has five offices, a conference room and eight workstations.

a. This group works closely with Academics, as some classes require service.
b. It is likely that this group will stay in their current location. A high-visibility location is not necessary for them.

End of Meeting Report No. 02
Minutes will stand as recorded unless notified within 3 working days of any discrepancies or inaccuracies.

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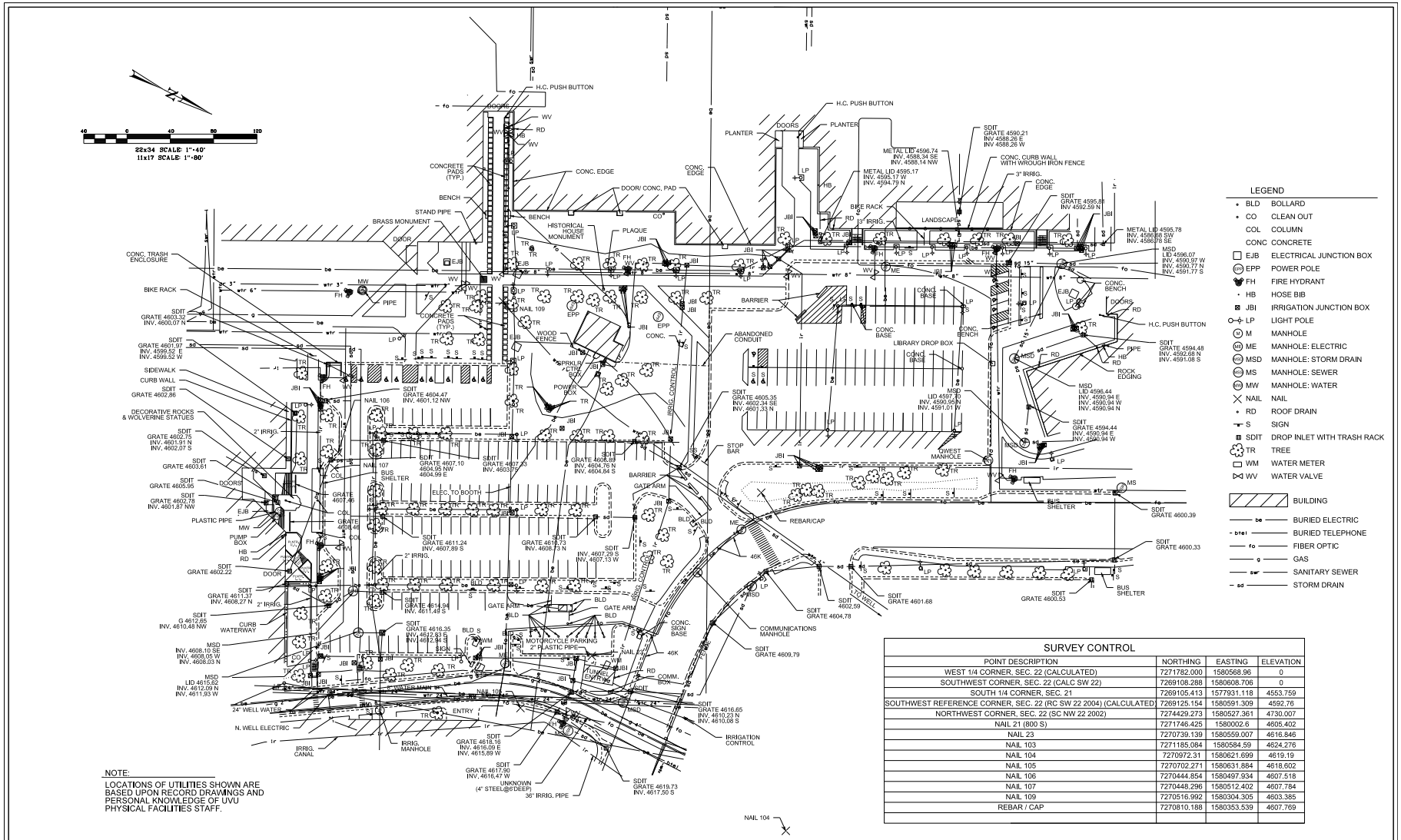

SURVEY CONTROL

POINT DESCRIPTION	NORTHING	EASTING	ELEVATION
WEST 1/4 CORNER, SEC. 22 (CALCULATED)	7271782.000	1580568.96	0
SOUTHWEST CORNER, SEC. 22 (CALC SW 22)	7269108.288	1580608.706	0
SOUTH 1/4 CORNER, SEC. 21	7269105.413	1577931.118	4553.759
SOUTHWEST REFERENCE CORNER, SEC. 22 (RC SW 22 2004) (CALCULATED)	7269125.154	1580591.309	4592.76
NORTHWEST CORNER, SEC. 22 (SC NW 22 2002)	7274429.273	1580527.361	4730.007
NAIL 21 (800 S)	7271746.425	1580002.6	4605.402
NAIL 23	7270739.139	1580559.007	4616.846
NAIL 103	7271185.084	1580584.59	4624.276
NAIL 104	7270972.31	1580621.699	4619.19
NAIL 105	7270702.271	1580631.884	4618.602
NAIL 106	7270444.854	1580497.934	4607.518
NAIL 107	7270448.296	1580512.402	4607.784
NAIL 109	7270516.992	1580304.305	4603.385
REBAR / CAP	7270810.188	1580353.539	4607.769

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PROVO, UTAH 84601-1343
801 374-5771 PROVO
801 521-5771 SALT LAKE CITY

NO.	AUTHORIZED BY	REVISION	MADE BY	DATE

DESIGNED BY CARL L. COOK
DRAWN BY CL BOYD
CHECKED BY CARL L. COOK
SCALE HORIZ.
VERT.
DATE MARCH 2011

OREM, UTAH

UTAH VALLEY UNIVERSITY

EXISTING TOPOGRAPHY

2011/04-004 PROJECT NO.
50 FILE DRAWER NO.
SHEET 1 OF SHEETS

PRELIMINARY
GEOTECHNICAL INVESTIGATION

UVU
STUDENT LIFE CENTER & PARKING STRUCTURE

Orem, Utah

Prepared for:
MHTN Architects, Inc.

April 2011

RB&G
ENGINEERING, INC.

201101-012

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ENGINEERING, INC.

April 4, 2011

Mr. Kyle Taft, AIA, LEED AP
MHTN Architects, Inc.
420 E South Temple, Suite 100
Salt Lake City, UT 84111

Re: UVU Student Life Center & Parking Structure

Dear Mr. Taft:

A Preliminary Geotechnical Investigation has been completed for the proposed Student Life Center & Parking Structure to be located on the Utah Valley University in Orem, Utah. The results of the study are summarized in the report transmitted herewith.

We appreciate the opportunity of providing this service for you. If there are any questions relating to the information contained herein, please call.

Sincerely,

RB&G ENGINEERING, INC.

Bradford E. Price, P.E.

bep/jal

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Preliminary
Geotechnical Investigation

UVU
Student Life Center & Parking Structure

Orem, Utah

Prepared for:
MHTN Architects, Inc.

April 2011

RB&G ENGINEERING, INC.

RB&G
ENGINEERING, INC.

UTAH VALLEY UNIVERSITY
STUDENT LIFE CENTER
AND PARKING STRUCTURE
Orem, Utah

Preliminary
Geotechnical Investigation

INTRODUCTION

This report outlines the results of a preliminary geotechnical investigation performed for the proposed Student Life Center and Parking Structure to be located on the Utah Valley University (UVU) Campus in Orem, Utah. Figure 1 is a vicinity map showing the location of the project relative to the surrounding area.

We understand that the layout and sizing of the proposed structures is preliminary and that the purpose of this investigation is to provide designers with subsurface soil and water conditions to assist in finalizing the proposed project.

RB&G Engineering performed the geotechnical investigation for the new library located north of the proposed site in 2006. During the initial phases of the library investigation, five borings were drilled in the parking lot east of the Liberal Arts Building. Three of these borings are located within the project site. A site plan showing the location of the 2006 borings (06-1 through 06-3), along with the 2011 borings (11-1 through 11-4), is shown on Figure 2. Information from previous investigations has been utilized, where applicable, during preparation of this report.

The information contained in the report is discussed under the following headings: (1) Geological and Existing Site Conditions, (2) Field and Laboratory Testing Procedures, (3) Subsurface Soil and Water Conditions, (4) Site Preparation and Compacted Fill Requirements, and (5) Foundation Considerations and Recommendations.

I. GEOLOGICAL AND EXISTING SITE CONDITIONS

The UVU Orem Campus is located between 800 South and 1200 South and between 600 West and Interstate 15 in Orem, Utah. The surface soils in this area have been mapped as Lacustrine

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sand deposits laid down during the regressive phase of ancient Lake Bonneville (upper Pleistocene). Previous campus investigations indicate that the subsurface soils will consist of interbedded sands, silts and clays.

The Wasatch Fault is located near the base of the Wasatch Mountain Range, about 4.5 miles east of the site. Utah County Natural Hazards Maps identify this area as having moderate liquefaction potential.

The Liberal Arts building is located immediately west of the northerly portion of the site, and the Sorensen Student Center building is located immediately south of the southerly portion of the project. No significant cracking was observed in foundation walls, suggesting that foundations are performing adequately.

The topography throughout the area slopes gently downward in a northwesterly direction. The elevation of the parking area east of the Liberal Arts building ranges from about 4601 feet at the southeast corner to 4597 feet at the northeast corner. The elevation of the parking lot north of the Sorensen Student Center ranges from about 4620 feet at the southeast corner to 4606 feet at the northwest corner.

As shown in Figure 2, a raised berm with grass and trees is located on the east side of the northerly portion of the site, and parking strips in the southern portion are also landscaped in lawn grass and trees. The pavement in parking areas shows significant cracking. Most concrete sidewalks in the area are in very good condition, with only a few cracks noted.

No major water conveyance facilities or other water bodies exist in the immediate vicinity, which would influence the groundwater level at this site. The groundwater level is, however, influenced by irrigation practices on the Provo-Orem bench located east of campus. Other than the information provided above, no conditions appear to exist at this site which would adversely affect foundation performance.

II. FIELD AND LABORATORY TESTING PROCEDURES

The subsurface investigation was performed using a CME 55 rotary drill rig with a tri-cone rock bit and NW casing to advance the boring and water as the drilling fluid. During the subsurface investigation, sampling was performed at three-foot intervals in the upper 25 to 30 feet and at five-foot intervals thereafter. Both disturbed and undisturbed samples were obtained during the

field investigations. Disturbed samples were obtained by driving a 2-inch split spoon sampling tube through a distance of 18 inches using a 140-pound weight dropped from a height of 30 inches. The number of blows required to drive the sampling spoon through each 6 inches of penetration is shown on the boring logs. The sum of the last two blow counts, which represents the number of blows to drive the sampling spoon through 12 inches, is defined as the standard penetration value. The standard penetration value, corrected for overburden and hammer energy, provides a good indication of the in-place density of sandy material; however, it only provides an indication of the relative stiffness of the cohesive material, since the penetration resistance of materials of this type is a function of the moisture content. Considerable care must be exercised in interpreting the standard penetration value in gravelly-type soils, particularly where the size of the granular particle exceeds the inside diameter of the sampling spoon. If the spoon can be driven through the full 18 inches with a reasonable core recovery, the standard penetration value provides a good indication of the in-place density of gravelly-type material.

It will be noted that it was not possible to drive the sampling spoon through the full 18 inches at some sampling locations. Where the sampling tube could not be driven through the full 18 inches, the number of blows to drive the spoon through a given depth of penetration is shown on the boring logs.

Undisturbed samples were obtained at select locations by pushing a thin-walled sampling tube into the subsurface material using the hydraulic pressure on the drill rig. The location at which the undisturbed samples were obtained is shown on the boring logs.

Miniature vane shear tests, which provide an indication of the undrained shearing strength of cohesive materials, were performed on samples of the clay soil during the field investigations. The results of these tests are shown on the boring logs as the torvane value in tsf.

Each sample obtained in the field was classified in the laboratory according to the Modified Unified Soil Classification System. The symbol designating the soil type according to this system, is presented on the boring logs. A description of the Modified Unified Soil Classification System is presented in the appendix, and the meaning of the various symbols, shown on the logs, can be obtained from this figure.

Laboratory tests performed during this investigation to define the characteristics of the subsurface material throughout the proposed site included:

- In-place dry unit weight
- Natural moisture content
- Atterberg Limits
- Mechanical analyses
- Unconfined compressive strength
- Consolidation tests

Testing was performed following procedures outlined in the American Society for Testing and Materials (ASTM) standards.

III. SUBSURFACE SOIL AND WATER CONDITIONS

2011 Investigation – Parking Structure Site

The characteristics of the subsurface material were evaluated by drilling four borings to depths of between 71 and 81.5 feet during this investigation at the approximate locations shown in Figure 2. The logs for the borings are presented in the appendix, and it will be observed that the soil profile consists of dense silty gravel with cobbles from the ground surface to about elevation 4600 feet, followed by medium dense to dense silty sand to about elevation 4594 feet. Each of the borings encountered loose silty sand and sandy silt between about elevation 4594 and 4584 feet. Firm lean clay was the predominant soil from about elevation 4594 to 4553 feet, followed by dense silty sand. The dense silty sand extended to the bottom of the borings for Borings 11-1, 11-2 and 11-3 (elev. 4530 to 4540 ft). The silty sand in Boring 11-4 extended to elevation 4545 feet, and was underlain by stiff lean clay to the bottom of the hole at 4539 feet.

Groundwater was encountered at a depth of about 4587 feet at the time the field investigation was performed (February/March 2011). It is recommended that a groundwater elevation of 4590 feet be used during design due to potential rise in the groundwater level as a result of seasonal and precipitation fluctuations.

2006 Investigation – Student Life Center Site

Three borings drilled during the 2006 study were also used to evaluate the characteristics of the subsurface material. These borings were drilled to depths of between 50 and 70 feet. The logs for the 2006 borings are presented in the appendix. It will be observed that the surface profile consists of a near surface zone of very loose to medium dense silty sand (SM) and sandy silt (ML) extending to depths varying from 8 to 24 feet (elev. 4584 to 4575 ft), followed predominantly by firm to stiff lean clay (CL) to a depth of between 37 and 51 feet (4561 to 4548 ft).

Groundwater was measured at a depth of between 8 and 13 feet below the existing ground surface (elev. 4588.5 and 4586.5 ft) at the time the field investigation was performed (March 2006).

The results of classification, density and moisture tests are presented on the boring logs, and the results of all laboratory tests, with exception of the consolidation tests, are summarized in Table 1, Summary of Test Data in the appendix.

It will be noted that the silty sand layers had 14 to 47% silt and the sandy silt layers 24 to 46% sand. The silt was non-plastic. The liquid limit of the lean clay ranged from 21 to 41, and the plasticity index varied from 10 to 15. The unconfined compressive strength typically ranged from 1300 to 2800 psf.

The compressibility characteristics of the lean clay were evaluated by performing five consolidation tests on samples obtained during the 2011 study, and four consolidation tests on samples obtained during the 2006 study. The results of these tests are also presented in the appendix.

During performance of the consolidation tests, each sample was permitted to absorb water at the beginning of the test to determine the effect of moisture on the compressibility characteristics of these materials. Expansive soils always experience an increase in void ratio on absorbing water. It will be observed from these tests that no increase in the void ratio occurred as the sample absorbed moisture. It is concluded from the consolidation and classification tests that the subsurface materials at this site do not have expansive characteristics.

IV. FOUNDATION CONSIDERATIONS AND RECOMMENDATIONS

A. FOUNDATION TYPES AND BEARING CAPACITIES

We understand that the proposed facilities will include a 6 story parking structure and a 3 to 4 story Student Life Center structure. We understand that preliminary planning places the floor level of the structures at the same elevation as the first floor of the Liberal Arts, Physical Education, and Sorensen Student Center buildings (~ elevation 4603 ft). We recommend that all exterior foundations be located at a depth below finished grade sufficient

to provide frost protection, which is about 2.5 feet in this area, and that interior footings be located at least 1 foot below floor level.

The magnitude of the structural loads is not known as of the preparation of this report; however, it has been assumed that the column loads could be as high as 700 kips, and wall loads up to 10 klf. Foundation options considered during this report include spread footings on native soil, compacted fill, or short aggregate piers, and deep foundations.

1. *Spread Footings on the Native Soil*

Liquefaction of the loose silty sand and sandy silt layers encountered between elevation 4586 and 4575 feet throughout the sites would result in a loss of shear strength, strain related settlement, and potential for lateral displacement. The liquefaction analysis is discussed in Section IV.B, and it is noted that the residual strength of the liquefied zones is estimated to be about 600 psf. The estimated total settlement from liquefaction is 1.5 inches with differential settlement of up to 1 inch for the parking structure site, and 2 inches of total settlement with up to 1.5 inches differential settlement for the Student Life Center site, following the design seismic event. Lateral spread analyses resulted in a potential lateral displacement of up to 6 inches for the parking structure and 16 inches for the Student Life Center. The lateral spread analyses assumed continuity of liquefiable zones for a significant distance west-northwest of the sites.

If the structures can tolerate this magnitude of settlement and potential lateral displacement, the allowable soil bearing capacities shown below can be used for foundation design.

Parking Structure Site

Shown in the following table is the allowable soil bearing capacity for footings located on the native soil at about elevation 4600 feet. The allowable bearing capacity for larger footings is limited by the low residual strength of the liquefied material following the design seismic event.

Footing Width (ft)	Continuous Footings	Square Footings
2	3500	3500
4	4200	4350
6	3200	5550
8	2700	6000
10	2400	4800
12	2200	4000
14	2050	3500
16	1950	3150

Student Life Center Site

Shown in the following table is the allowable soil bearing capacity for footings located on the native soil or compacted fill at about elevation 4600 feet. The allowable bearing capacity for larger footings is limited by the loose silty sand and low residual strength of the liquefied material following the design seismic event.

Footing Width (ft)	Continuous Footings	Square Footings
2	3500	3500
4	3300	4350
6	2600	5550
8	2250	4200
10	2040	3450
12	1900	3000
14	1800	2700
16	1725	2480

If the structures cannot tolerate the magnitude of settlement outlined above, options to support the structures include (1) spread footings on compacted fill, which would require over excavation and replacement of all of the unsuitable soils, (2) spread footings on short aggregate piers used to densify and increase the strength of the loose zones, or (3) deep foundations used to by-pass the loose zones. Foundation options are discussed separately below.

2. Spread Footings on Compacted Fill

Removing and replacing all of the loose silt and sand would result in a total foundation settlement of less than 1 inch and differential settlement less than 0.5 inch. This would require excavating between 17 and 20 feet below the floor elevation of 4603 feet to elevations ranging from 4586 to 4583 feet for the parking structure, and excavating between 19 and 28 feet below the floor elevation of 4603 feet to elevations ranging from 4584 to 4575 feet for the Student Life Center. Dewatering would be required to lower the groundwater from about 4587 feet to the base of the excavation.

The silty sand and non-plastic sandy silt can be used as backfill beneath the building footprint provided that it is moisture conditioned to within 2% of optimum moisture, placed in lifts not exceeding 8 inches in thickness, and compacted to an in-place unit weight equal to at least 95% of the maximum density as determined by ASTM D 1557. Imported fill should consist of granular soils having a maximum size of 4 inches with not

more than 30% passing the No. 200 sieve. The fines should have a plasticity index less than 6.

An allowable bearing capacity of 5000 psf can be used for footings greater than 5 feet wide, if this option is selected. Total settlement would not exceed 1 inch and differential settlement should be less than 0.5 inch.

If the spot footings are designed using an allowable bearing capacity of 5000 psf, column loads of 700,000 psf would require a 12 foot square footing and about 10 feet of granular fill over the lean clay. This requirement would be met for footings located above elevation 4596 feet.

3. *Spread Footings on Short Aggregate Piers*

A significant increase in bearing capacity can be obtained using short aggregate piers to reinforce the native soils beneath footings. Based upon the results of the subsurface investigation, it is our opinion that an allowable bearing capacity in the order of 4000 to 5000 psf can be achieved using an aggregate pier system. Piers should extend through the loose sand and silt zone and into the lean clay. Design and installation of aggregate piers requires a specialty contractor and the actual magnitude of soil improvement is dependent on the equipment and methods used. Specialty contractors that we are aware of with experience in this area include Geopier™ Foundation Company and Hayward Baker. We recommend that the specialty contractor's design be reviewed by the geotechnical engineer and that the geotechnical engineer observe installation periodically throughout construction.

4. *Deep Foundations*

Driven Piles

Consideration has been given to supporting the structure on driven piles extending 10 feet into the dense silty sand underlying the clay. It is anticipated that the piles would extend to between elevation 4530 and 4545 feet. Additional deeper borings will be required if this option is selected. The estimated pile length varies between about 55 and 70 feet. Axial compressive capacities for 12.75-inch, 14-inch, and 16-inch (outside diameter) closed-end concrete-filled steel pipe piles are summarized on the following table.

Pipe Pile Outside Diameter (inches)	Ultimate Skin Friction (kips)	Ultimate End Bearing (kips)	Allowable Capacity Assuming Factor of Safety = 2.25 (kips)
12.75	103	115	97
14.0	123	138	116
16.0	159	181	151

Pile layouts should be designed with a minimum center-to-center spacing of 3 pile diameters between piles. It will be noted that a factor of safety of 2.25 has been used to calculate the allowable capacities. This factor of safety assumes that PDA testing will be performed during driving of one pile for columns located near the four corners and center of the structure. If this option is selected, pile uplift and lateral capacities, along with estimated pile group settlement, can be evaluated. It is anticipated that group settlement will be tolerable for column loads less than 500 kips. We recommend that the geotechnical engineer's representative be present during pile installation.

Drilled Shafts

Drilled shafts have also been considered as a foundation option for supporting the structure. It has been assumed that the shafts will be drilled 10 feet into the dense silty sand referenced in the Driven Pile section above. Deeper borings would be required if this option is selected. Procedures outlined in FHWA-H1-88-042, Drilled Shafts: Construction Procedures and Design Methods, have been used to determine the ultimate axial compressive capacity (nominal resistance) of drilled shafts. Capacity analyses have been performed for straight-sided drilled shafts using soil parameters obtained from the borings. If allowable stress design methods are used, we recommend that a factor of safety of 2.5 be applied to the ultimate capacity to determine the allowable capacity. It has been assumed that high quality construction, good specifications and excellent inspection will exist for each foundation. The estimated capacities of the drilled shafts can be taken from the table below.

Shaft Diameter (ft)	Ultimate Side Resistance (kips)	Ultimate End Resistance (kips)	Total Ultimate Capacity (kips)	Allowable Capacity (kips)
3.0	228	314	542	217
3.5	265	427	692	277
4.0	303	558	861	344
4.5	341	706	1047	419
5.0	379	872	1251	500

The allowable uplift resistance of a single drilled shaft may be taken as the ultimate side resistance value shown on the table above divided by a factor of safety of 3.0. A

center-to-center spacing of at least three shaft diameters should exist to minimize interaction and overlapping stresses between shafts, which would result in reduced capacity.

The design of rebar and concrete should follow established guidelines. Due to the high water table and presence of loose granular layers, drilling mud or casing will likely be required for shaft excavation. Concrete should be placed by tremie methods to ensure that no voids exist within the shafts. Concrete used for shafts should have a relatively high slump (6 inches or greater) to allow workability and proper placement between reinforcement and the sides of the shafts. Within each shaft, concrete should be placed in a generally continuous manner to prevent cold joints and other problems associated with excessive waits between concrete trucks. It is essential that drilled shaft construction be carefully inspected to ensure that loose material is removed from the base and that the concrete is placed using proper procedures.

If the foundations for the proposed facilities are designed in accordance with the recommendations outlined above for spread footings on compacted fill or short aggregate piers, or deep foundations, the maximum settlement of any footing should not exceed one inch and differential settlement throughout the structure should not exceed 0.5 inch. It is generally recognized that the tolerable differential settlement for steel and concrete structures is about 0.002 times the column spacing. This criteria is tantamount to a differential settlement of about 0.5 inch for column spacings of 20 feet and 0.7 inch for column spacings of 30 feet. Since it is not anticipated that the column spacing will be less than 20 feet, a differential settlement of 0.5 inch should be satisfactory for the proposed facilities.

While all options discussed above will provide satisfactory support for non-seismic conditions, it is our opinion that supporting the structures on short aggregate piers will be the most efficient design if the structures cannot tolerate total settlement of 1.5 inches (parking structure) to 2 inches (Student Life Center) and 6 inches (parking structure) to 16 inches (Student Life Center) of lateral displacement during the design seismic event.

B. SEISMIC CONSIDERATIONS

The site is located at about latitude 40.2797° North and longitude 111.7153° West. Probabilistic peak ground acceleration (PGA) values are tabulated below:

Probabilistic ground motion values in %g.

	10%PE in 50 yr	2%PE in 50 yr
PGA	17.71	50.69
0.2 sec SA	42.23	115.09
1.0 sec SA	14.25	48.58

The allowable soil bearing pressure indicated above may be increased by one-third where seismic forces are involved in the structural loads. If the frictional resistance of the footings and floor slabs are used to resist seismic forces, we recommend a coefficient of friction of 0.40 be used to calculate these forces. See Section C below for recommendations related to resistance provided by passive earth pressures.

A liquefaction analysis has been performed for the site assuming a seismic event equal to 2/3's of the event having a probability of exceedence of 2% in 50 years. Tabulated below are the zones in each boring which have a factor of safety less than 1.

BORING NO.	ZONE (FT)
06-1	6 – 14
06-2	12 – 14
06-3	15 – 23
11-1	21 – 26
11-2	22 – 29
11-3	17 – 24
11-4	16 – 23

Liquefaction of the loose layers will result in a reduction of shear strength to an estimated value of about 600 psf, strain related settlement estimated to be in the order of 1.5 inches for the parking structure, and up to 2 inches for the Student Life Center, and lateral displacement of up to 6 inches for the parking structure and 16 inches for the Student Life Center. Removing the zone susceptible to liquefaction throughout the structure footprints, or supporting the structures on short aggregate piers will mitigate liquefaction concerns.

If the foundation recommendations are complied with, mitigating liquefaction concerns, the site will be classified as Site Class D, as per Section 1613 of the 2009 International Building Code.

C. LATERAL EARTH PRESSURES

It is not anticipated that earth-retaining structures will be required for the proposed facility. If earth-retaining structures are required, however, and if backfilling is performed using

granular material, and if the backfill behind the wall is horizontal, we recommend that the earth pressures be calculated using the following equation, along with the earth pressure coefficient outlined below:

$$P = \tfrac{1}{2}\,\gamma\,K\,H^2$$

Where P = total lateral force on wall, plf
K = earth pressure coefficient
γ = unit weight of soil (125 pcf)
H = height of retained soil against wall

The earth pressure coefficient used in designing the walls will depend upon whether the wall is free to move during backfilling operations, or whether the wall is restrained during backfilling. If the wall is free to move during backfilling operations and the backfill material is granular soil, we recommend an active earth pressure coefficient of 0.30 be used in the above equation to calculate the lateral earth pressures. If the walls are restrained from any movement during backfilling and the backfill material is granular soil, we recommend an at-rest earth pressure coefficient of 0.45 be used to calculate the lateral earth pressure.

The additional active earth pressure due to ground acceleration equal to two thirds of the MCE may be estimated using a coefficient of 0.19. The seismic ground motion will reduce the available passive resistance. This reduction may be accounted for as an earth pressure acting in the direction opposite the passive resistance, and computed using a coefficient of 0.54. The pressure diagrams for these forces may be roughly approximated as inverted triangles, such that the resultant forces of the seismic components act at heights of approximately 2H/3 above the base of the wall.

For non-yielding walls, the increase in earth pressure corresponding to the seismic event may be estimated using the equation $P_{EQ} = a_h \gamma H^2$, where a_h is a seismic coefficient of 0.34. This force is in addition to the at-rest pressure, and acts at a height of about 0.53H above the base of the wall.

It should be recognized that the pressures calculated by the above equation are earth pressures only and do not include hydrostatic pressures. Where hydrostatic pressures may exist behind a retaining structure, we recommend either the wall be designed to resist hydrostatic pressure, or that a drainage system be placed behind the wall to prevent the development of hydrostatic pressures.

D. FLOOR SLABS

We recommend that one foot of imported granular fill and a free-draining granular layer be placed beneath all floor slabs. The free-draining granular layer should be at least 4 inches thick and should have a maximum size less than 1 inch and not more than 5% passing a 200 sieve. The free-draining material should be densified using at least 4 passes of a smooth drum 5-ton vibratory roller or equivalent. If the above specifications are followed, the granular layer will prevent the accumulation of moisture beneath the floor slab and will also serve adequately as a base beneath the floor slabs. Where moisture sensitive flooring, such as tile flooring systems, is planned, it is recommended that a vapor retarder/barrier be placed directly beneath the concrete floor, in lieu of the free-draining granular layer. It is recommended that the vapor barrier conform to ASTM E 1745 Class A requirements. A subgrade modulus of 150 pci can be used for design.

V. SITE PREPARATION AND COMPACTED FILL REQUIREMENTS

As indicated above, the site is covered with asphalt parking, and it is recommended that the asphalt surface course be removed from beneath the entire footprint of the structures.

If the decision is made to over-excavate the site to the clay layer, excavated side slopes of 2 horizontal to 1 vertical can be used for dewatered areas. Stabilization of the subgrade clay will be required prior to placement of fill. Stabilization techniques are dependent upon conditions encountered and construction methods. Where very soft clay exists, it is anticipated that cobble rock will provide the most effective means of stabilization. Where cobble rock is required, it should consist of 3 to 8 inch rock placed in single lifts, tamped into the clay such that the voids are filled. Excess cobbles which cannot be tamped into the clay should be removed to prevent migration of fines into the voids, which would result in settlement. Placement of a geotextile fabric, such as Mirafi 600X or equivalent will be effective in stabilizing moderately soft areas. Dewatering should be performed such that the groundwater level is maintained at least 2 feet below the working surface.

We recommend that imported fill used to establish final grade throughout the site consist of granular soil having a maximum size of 6 inches with less than 30% passing a No. 200 sieve. We recommend that the material passing a No. 200 sieve have a plasticity index less than 6. The fill should be compacted to an in-place density equal to at least 95% of the maximum density as determined by ASTM D 1557.

Grading around each structure should be performed in such a manner that all surface water will flow freely from the area and that no ponding will occur adjacent to the structure which will permit deep percolation into the foundation area. Roof drains should extend well beyond the building lines to prevent seepage into the foundation soils. Sprinkler heads located adjacent to the building should be directed away from the structure to prevent the percolation of water into the foundation zone.

Backfilling around foundation walls should be performed using granular material densified to an in-place unit weight equal to at least 90% of the maximum laboratory density indicated above.

VI. LIMITATIONS

The conclusions and recommendations presented in this report are preliminary and are based upon the results limited field and laboratory tests. It should be recognized that soil materials are inherently heterogeneous and that conditions may exist throughout this site which could not be defined during this investigation. It is anticipated that additional borings will be drilled once the building layouts have been finalized and foundation options evaluated.

The information contained in this report is provided for the specific location and purpose of the client named herein and is not intended or suitable for reuse by any other person or entity whether for the specified use, or for any other use. Any such unauthorized reuse, by any other party is at that party's sole risk and RB&G Engineering, Inc. does not accept any liability or responsibility for its use.

Figures

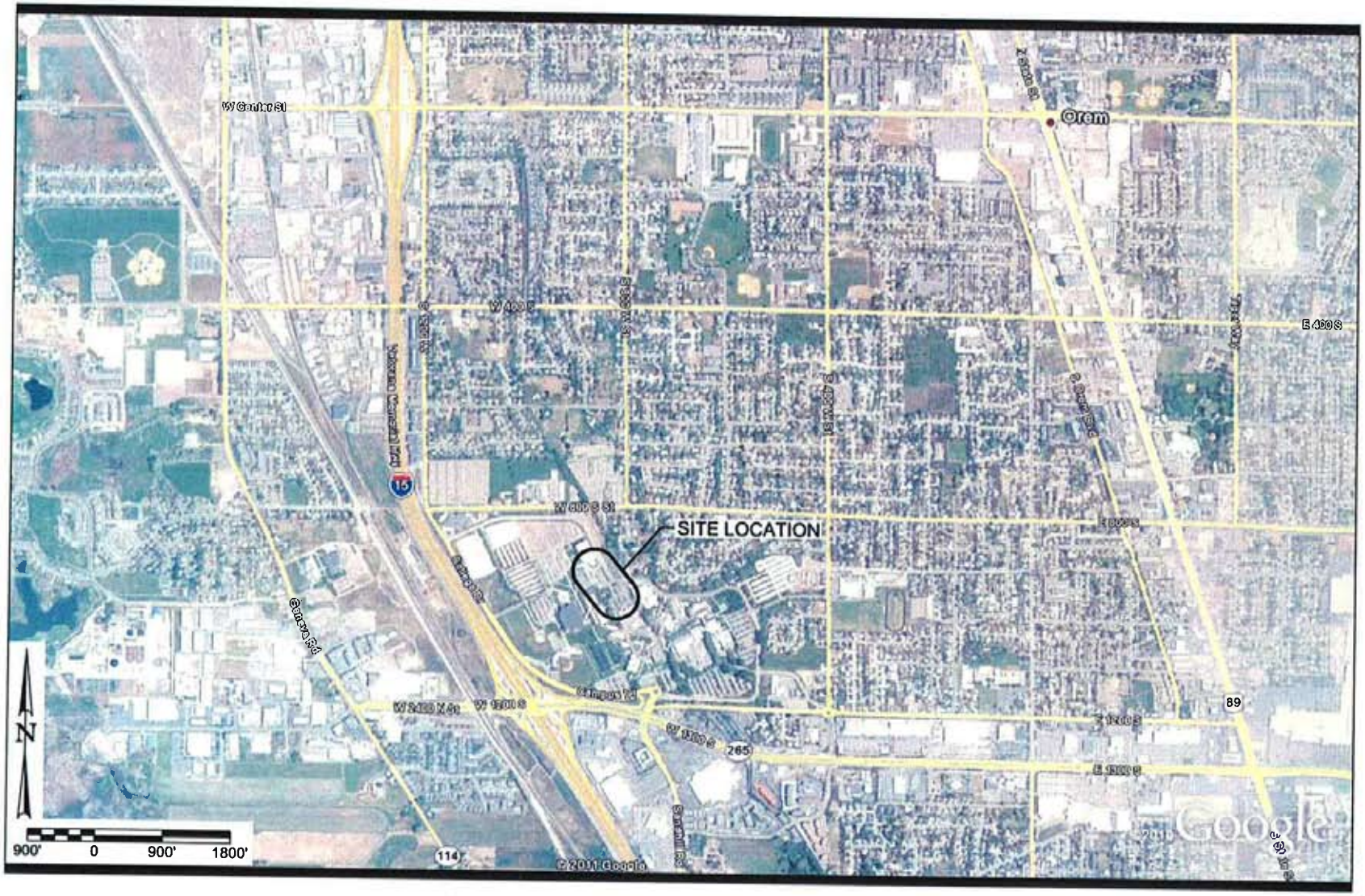

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Figure 1 VICINITY MAP

Utah Valley University Student Life Center & Parking Structure

Orem, Utah

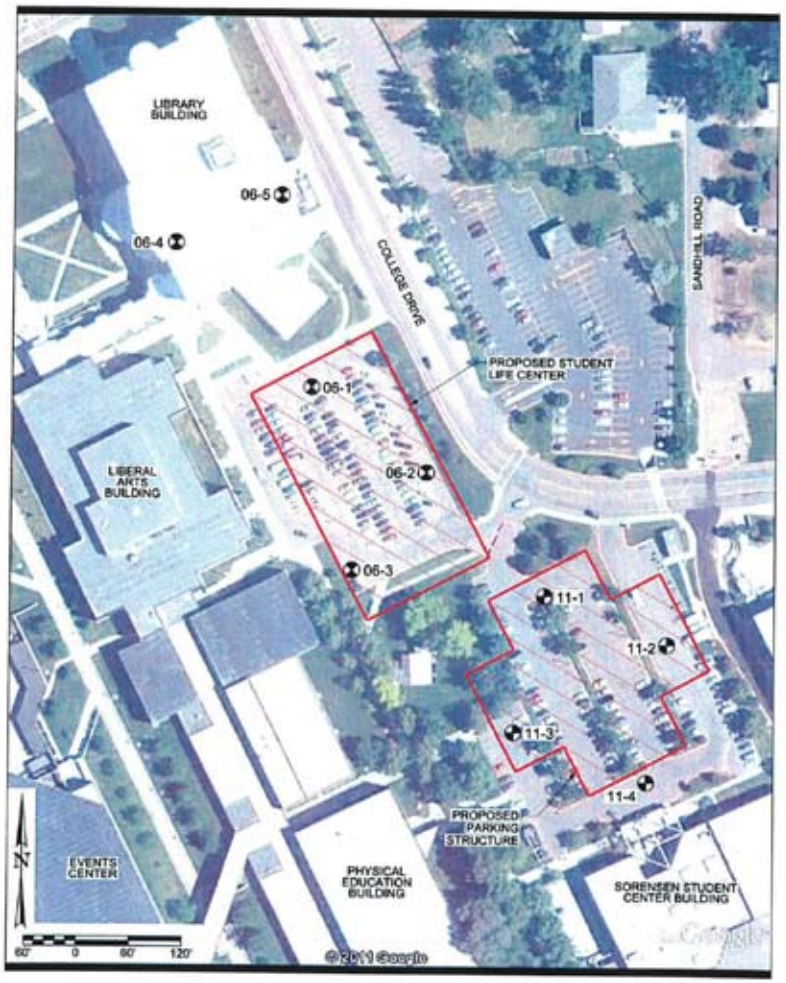

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Figure 2 SITE PLAN & TEST HOLE LOCATIONS

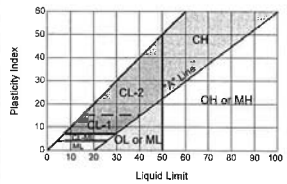
Utah Valley University Student Life Center & Parking Structure

Orem, Utah

Appendix

Unified Soil Classification System

Major Divisions			Group Symbols		Typical Names	Laboratory Classification Criteria		
COARSE-GRAINED SOILS *more than half of material is larger than No. 200 sieve*	Gravels *more than half of coarse fraction is larger than No. 4 sieve size*	Clean Gravels *little or no fines*	GW		Well graded gravels, gravel-sand mixtures, little or no fines	*For laboratory classification of coarse-grained soils*	$C_u = \frac{D_{60}}{D_{10}}$	Greater than 4
							$C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$	Between 1 and 3
			GP		Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW	
		Gravels With Fines *appreciable amount of fines*	GM*	d	Silty gravels, poorly graded gravel-sand-silt mixtures	Determine percentage of gravel and sand from grain-size curve. Depending on percentage of fines (*fraction smaller than No. 200 sieve size*), coarse-grained soils are classified as follows:	Atterberg limits below "A" line, or PI less than 4	Above "A" line with PI between 4 and 7 are borderline cases requiring uses of dual symbols
				u			Atterberg limits above "A" line, or PI greater	
			GC		Clayey gravels, poorly graded gravel-sand-clay mixtures			
	Sands *more than half of coarse fraction is smaller than No. 4 sieve size*	Clean Sands *little or no fines*	SW		Well graded sands, gravelly sands, little or no fines		$C_u = \frac{D_{60}}{D_{10}}$	Greater than 6
							$C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$	Between 1 and 3
			SP		Poorly graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW	
		Sands with Fines *appreciable amount of fines*	SM*	d	Silty sands, poorly graded sand-silt mixtures	Less than 5% GW, GP, SW, SP. More than 12% GM, GC, SM, SC. 5% to 12% Borderline cases requiring use of dual symbols**	Atterberg limits below "A" line, or PI less than 4	Above "A" line with PI between 4 and 7 are borderline cases requiring uses of dual symbols
				u			Atterberg limits above "A" line, or PI greater	
			SC		Clayey sands, poorly graded sand-clay mixtures			
FINE-GRAINED SOILS *more than half of material is smaller than No. 200 sieve*	Silts and Clays *liquid limit is less than 50*		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	*For laboratory classification of fine-grained soils*		
			CL	1	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays			
				2				
			OL		Organic silts and organic silt-clays of low plasticity			
	Silts and Clays *liquid limit is greater than 50*		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts			
			CH		Inorganic clays of high plasticity, fat clays			
			OH		Organic clays of medium to high plasticity, organic silts			
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils			



Plasticity Chart

NOTE: USCS Modified to include CL-type subcategories

*Division of GM and SM groups into subdivisions of d and U for roads and airfields only. Subdivision is based on Atterberg limits; suffix d used when liquid limit is 28 or less and the PI is 6 or less, the suffix U used when liquid limit is greater than 28.

**Borderline classification: Soils possessing characteristics of two groups are designated by combinations of group symbols. (For example GW-GC, well graded gravel-sand mixture with clay binder.)

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RB&G ENGINEERING, INC. 2/5/99

DRILL HOLE LOG

BORING NO. 11-1

SHEET 1 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 18.0' AFTER 24 HOURS: ▼ 23.5'

PROJECT NUMBER: 201101.012
DATE STARTED: 2/23/11
DATE COMPLETED: 2/23/11
GROUND ELEVATION: 4610.6'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4610			18	11,17,35,(99+		GM SM	lt. brown, wet SILTY GRAVEL W/SAND (fill)								
							dk. brown, moist, very dense								
			18	25,21,35,(99+		SM	gray-brown, very moist, very dense SILTY GRAVEL W/SAND possible cobbles		14.1		NP	35	51	14	
4605	5		9	15,20,38,(99+		SM	brown, moist, very dense								
			10	55,45,50/4"		GM	brown, moist, very dense SILTY GRAVEL W/SAND possible cobbles								
4600	10		10	12,14,17,(49)		SM	brown, moist, dense SILTY SAND								
4595	15		12	11,11,16,(38)		SM	brown, moist, dense								
			12	5,5,5,(13)		ML	brown, wet, med. dense		31.4		NP	0	46	54	
4590	20		18	3,2,4,(8)		ML	brown, wet, loose SANDY SILT								
			18	3,3,4,(9)		ML	brown, wet, loose		34.2		NP	0	31	69	
4585	25		18	2,3,4,(8)	0.30	CL	brown, very moist, firm								
			18	Pushed	0.55	CL-2	brown, very moist to wet, stiff LEAN CLAY	80.6	34.7	38	15				CT UC 1834 psf
4580	30		18	3,3,5,(9)	0.40	CL	brown, very moist, firm LEAN CLAY sandy silt layers								
4575	35		16	Pushed	0.65	SM	brown, wet SILTY SAND clay layers to 2" thick		22.8		NP	0	55	45	
4570	40						LEAN CLAY sandy silt layers								

DH_LOGV1_UVU SLC_PS.GPJ_US ENG.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE: 2,3,2,(6) Blow Count per 6" / 0.45 Torvane (tsf) / (N)60 Value
UNDISTURBED SAMPLE: PUSHED 0.45 Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 11-1

SHEET 2 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 18.0' AFTER 24 HOURS: ▼ 23.5'

PROJECT NUMBER: 201101.012
DATE STARTED: 2/23/11
DATE COMPLETED: 2/23/11
GROUND ELEVATION: 4610.6'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4565			18		3,4,8,(12) 0.20	CL	brown, wet, soft to firm								
							LEAN CLAY sandy silt layers								
4560	50		18		Pushed 0.85	CL-1	brown, wet, stiff	90.5	28.0	31	11				CT UC 2613 psf
							SANDY SILT many clay & sand lenses and/or layers								
4555	55		18		8,9,11,(19) 0.10 0.40	ML	brown, wet, med. dense								
4550	60		12		Pushed	SM	brown, wet								
			13		2,3,6,(8)	SM	brown, wet, loose (poor sample, flowing sand)								
							SILTY SAND occasional clay layers to 1" thick								
4545	65		18		9,33,35,(60)	SM	brown, wet, very dense								
4540	70		18		8,29,32,(53)	SM	brown, wet, very dense								
							BOH								
4535	75														
4530	80														
4525	85														

DH_LOGVI UVU_SLC_PS.GPJ US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE 2,3,2,(6) 0.45 — Blow Count per 6" / $(N_1)_{60}$ Value / Torvane (tsf)
UNDISTURBED SAMPLE PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 11-2

SHEET 1 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 24.0' AFTER 24 HOURS: ▼ N.M.

PROJECT NUMBER: 201101.012
DATE STARTED: 3/1/11
DATE COMPLETED: 3/1/11
GROUND ELEVATION: 4616.4'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							brown & gray, watery moist 4" ASPHALT								
4615			15		19,19,51,(99+)	GM GC	dk. brown, moist, very dense SILTY GRAVEL W/SAND (fill)								
							CLAYEY GRAVEL W/SAND possible cobbles								
	5		13		11,19,30,(99+)	GM	brown, moist, very dense		9.1		NP	53	34	13	
4610			13		15,40,57,(99+)	GM	brown, moist, very dense								
							SILTY GRAVEL W/SAND possible cobbles								
	10		11		37,60,50/2.5"	GM	brown, very moist, very dense								
4605			11		39,40,54,(99+)	GM	brown, very moist, very dense								
	15		8		14,20,17,(49)	SM	brown, very moist, dense								
4600							SILTY SAND								
	20		10		6,7,9,(21)	SM	brown, moist, med. dense								
4595			13		4,5,6,(13)	SM	brown, wet, med. dense SILTY SAND sandy silt layers		30.0		NP	0	56	44	
	25		13		3,4,5,(10)	ML	brown, wet, loose								
4590							SANDY SILT sand layers								
			18		3,2,6,(9)	ML	brown, wet, loose		34.0		NP	0	32	68	
	30		18		Pushed 0.35	ML	brown, wet, firm SILT W/SAND plastic		30.0	30	6				UC 1569 psf
4585															
	35		18		2,3,3,(6) 0.35	CL	brown, very moist, firm								
4580							LEAN CLAY sand lenses								
	40		18		Pushed 0.45	CL-2	brown, very moist, firm	82.4	32.6	36	15				CT
4575															

DH_LOGVI UVU_SLC_PS.GPJ US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE 2,3,2,(6) 0.45 — Blow Count per 6" / $(N_1)_{60}$ Value / Torvane (tsf)
UNDISTURBED SAMPLE PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 11-2

SHEET 2 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 24.0' AFTER 24 HOURS: ▼ N.M.

PROJECT NUMBER: 201101.012
DATE STARTED: 3/1/11
DATE COMPLETED: 3/1/11
GROUND ELEVATION: 4616.4'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4570					0.40	CL	brown, very moist, firm								
			18		3,6,10,	ML	brown, wet, med. dense SANDY SILT								
4565	50		18		Pushed 0.30	CL-1	brown, wet, firm LEAN CLAY silt & sand lenses and/or layers	85.9	29.0	30	10	0	4	96	CT UC 1669 psf
4560	55		17		5,4,6,(9) 0.35	CL	gray, wet, firm								
4555	60		18		9,12,17,(26) 0.90	CL	brown, wet, stiff LEAN CLAY sand layers to 1" thick								
4550	65		15		10,20,37,(49)	SM	brown, wet, dense SILTY SAND		18.1		NP	0	70	30	
4545	70		18		10,8,18,(22) 0.30	SM	brown, wet, med. dense SILTY SAND many clay layers to 2" thick								
4540	75		3		32,33,35,(55)	SM	brown, wet, very dense SILTY SAND								
4535	80		12		30,26,42,(54)	SM	brown, wet, very dense BOH								
4530	85														

DH_LOGV1_UVU_SLC_PS.GPJ_US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE 2,3,2,(5) — Blow Count per 6" / $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)
UNDISTURBED SAMPLE PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 11-3

SHEET 1 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 18.0' AFTER 24 HOURS: ▼ N.M.

PROJECT NUMBER: 201101.012
DATE STARTED: 2/28/11
DATE COMPLETED: 2/28/11
GROUND ELEVATION: 4606.9'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4605			13		25,17,16,(70)	GM	gray, very moist, dense 3" ASPHALT SILTY GRAVEL W/SAND (SLAG) (fill)								
	5		11		26,60,50/4"	GP-GM	lt. brown, very moist, very dense								
4600			12		18,20,16,(73)	GP-GM	lt. brown, very moist, dense GRAVEL W/SILT & SAND possible cobbles		8.3		NP	48	44	8	
	10		0		26,25,23,(81)	-	no recovery								
4595			12		8,8,10,(28)	SM	brown, moist, med. dense								
	15		16		5,5,4,(13)	SM	brown, very moist to wet, med. dense SILTY SAND occasional silt layers								
4590	▽														
	20		18		2,3,3,(8)	SM	brown, wet, loose		33.5		NP	0	61	39	
4585			17		Pushed	ML	brown, wet SILT W/SAND								
			18		1,2,5,(9)	ML	brown, wet, loose		33.6		NP	0	24	76	
	25		18		2,3,3,(7) 0.40	CL	brown w/rust layers, wet, firm LEAN CLAY sand lenses								
4580															
4575	30		18		Pushed 0.34	CL-2	brown, very moist, firm	87.6	32.0	38	15				CT UC 1647 psf
	35		18		5,6,7,(14) 0.30	CL	brown, very moist, firm LEAN CLAY sand layers to 2" thick								
4570							SILTY SAND								
	40		17		Pushed 0.30	SM CL-1	brown, wet		24.6		NP	0	62	38	UC
4565							brown, very moist to wet, firm LEAN CLAY sand layers to 0.5" thick		26.1	29	9	0	14	86	1354 psf

DH_LOGV1_UVU_SLC_PS.GPJ_US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE 2,3,2,(5) — Blow Count per 6" / $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)
UNDISTURBED SAMPLE PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 11-3

SHEET 2 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 18.0' AFTER 24 HOURS: ▼ N.M.

PROJECT NUMBER: 201101.012
DATE STARTED: 2/28/11
DATE COMPLETED: 2/28/11
GROUND ELEVATION: 4606.9'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4560			18		2,4,6,(10) 0.30	CL	brown, wet, firm — LEAN CLAY sand layers to 0.5" thick								
	50														
			18		0.42	CL	brown, wet, firm								
4555			18		Pushed	CL,ML,SM	brown, wet								
			16		7,10,16,(25) 0.23	CL,ML,SM	brown, wet, med. dense/soft — INTERBEDDED CLAY, SILT & SAND LAYERS TO 3" THICK								
	55														
4550			16		10,9,9,(17) 0.35	CL	brown, wet, firm — LEAN CLAY silt and/or sand lenses								
	60														
4545			17		15,12,22,(31)	SM	brown, wet, dense — SILTY SAND silt & clay lenses & layers								
	65														
4540			13		21,24,22,(41)	SM	brown, wet, dense		23.5		NP	0	80	20	
	70														
4535			17		23,31,36,(58)	SM	brown, wet, very dense — SILTY SAND								
	75														
4530			17		23,28,21,(41)	SM	brown, wet, dense — SILTY SAND silt layers to 2" thick								
							BOH								
4525	80														
4520	85														

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6" ($(N_1)_{60}$ Value); 0.45 — Torvane (tsf)
UNDISTURBED SAMPLE — PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 11-4

SHEET 1 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 18.0' AFTER 24 HOURS: ▼ 23.0'

PROJECT NUMBER: 201101.012
DATE STARTED: 2/24/11
DATE COMPLETED: 2/24/11
GROUND ELEVATION: 4609.6'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
			10		25,15,22,(79)	GP-GM	gray, very moist, very dense — 5" ASPHALT; GRAVEL W/SILT & SAND (SLAG) (fill)								
4605	5		9		16,28,50/5"	GM	brown, moist, very dense								
			14		25,44,57,(99+)	GM	brown, moist, very dense — SILTY GRAVEL W/SAND possible cobbles								
4600	10		12		30,28,22,(84)	GM	brown, moist, very dense								
			10		8,10,12,(33)	SM	brown, very moist, dense — SILTY SAND								
4595	15		13		5,6,7,(18)	ML	brown, very moist, med. dense								
			16		3,3,4,(9)	ML	brown, wet, loose — SANDY SILT sand layers								
4590	20		18		2,4,4,(10)	ML	brown, wet, loose		35.1		NP	0	41	59	
			18		2,3,3,(7) 0.30	CL	brown, very moist, firm								
4585	25														
4580	30		18		Pushed 0.60	CL	brown, wet, stiff — LEAN CLAY sand lenses								
4575	35		18		4,5,5,(11) 0.30	CL	brown, wet, firm								
4570	40		17		Pushed	ML	brown, wet — SANDY SILT		27.5		NP	0	33	67	
			17		4,4,4,(8) 0.30	SM CL	brown, wet — SILTY SAND brown, wet, firm — LEAN CLAY sand and/or silt lenses								
4565															

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6" ($(N_1)_{60}$ Value); 0.45 — Torvane (tsf)
UNDISTURBED SAMPLE — PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 11-4

SHEET 2 OF 2

PROJECT: UVU STUDENT LIFE CENTER & PARKING STRUCTURE
CLIENT: MHTN ARCHITECTS, INC.
LOCATION: SEE SITE PLAN
DRILLING METHOD: 08-CME-55 / N.W. CASING
DRILLER: T. KERN
DEPTH TO WATER - INITIAL: ▽ 18.0' **AFTER 24 HOURS:** ▼ 23.0'

PROJECT NUMBER: 201101.012
DATE STARTED: 2/24/11
DATE COMPLETED: 2/24/11
GROUND ELEVATION: 4609.6'
LOGGED BY: J. OLSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4560	50		18	4,6,7,(13) *0.50*	CL	brown, wet, firm	LEAN CLAY sand and/or silt lenses								
			18	Pushed *0.40*	CL-1	brown, wet, firm			27.4	33	14	0	4	96	UC 1534 psf
4555	55		17	5,10,13,(22) *0.20*	CL	brown w/rust layers, wet, soft	LEAN CLAY interbedded w/silty sand layers								
4550	60		17	25,38,41,(72)	SM	brown, wet, med. dense	SILTY SAND								
4545	65		16	9,10,15,(22) *0.55*	CL	brown w/rust, wet, stiff	LEAN CLAY interbedded w/silty sand layers								
4540	70		0	Pushed	-	no recovery (smashed end of shelby tube)	BOH								
4535	75														
4530	80														
4525	85														
4520															

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6" / $(N_1)_{60}$ Value / 0.45 — Torvane (tsf)
UNDISTURBED SAMPLE — PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 06-1

SHEET 1 OF 2

PROJECT: UTAH VALLEY STATE COLLEGE DIGITAL LEARNING CENTER
CLIENT: UTAH VALLEY STATE COLLEGE
LOCATION: SEE SITE PLAN
DRILLING METHOD: CME-55 NO. 2 / N.W. CASING
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 7.0' **AFTER 24 HOURS:** ▼ 9.2' 3/27/06

PROJECT NUMBER: 200601.007
DATE STARTED: 3/23/06
DATE COMPLETED: 3/23/06
GROUND ELEVATION: 4597.6'
LOGGED BY: G. PEASLEE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
						GM	brown 4" ASPHALT / 5" SILTY GRAVEL W/SAND								
4595			11	11,10,12	SM	brown, moist, med. dense									
	5		15	10,8,8	SM	dk. brown, moist, med. dense			15.2			0	53	47	
4590			16	2,2,1	SM	dk. brown, moist, very loose	SILTY SAND		22.5			0	58	42	
	10		3	0,0,0	SM	dk. brown, wet, very loose									
4585			16	1,1,2	ML	brown, wet, very loose	SANDY SILT		36		NP	0	46	54	
	15		19	1,1,2 *0.20*	CL	lt. brown, moist, soft	LEAN CLAY W/SANDY SILT LAYERS								
4580															
	20		17	Pushed *0.54*	CL	lt. brown, moist, stiff			82.5	34.5	37	14			CT UC
4575															
	25		14	8,4,4	CL	lt. brown, moist, firm	LEAN CLAY W/SILTY SAND LAYERS								
4570															
	30		18	Pushed *0.34*	CL	lt. brown, moist, firm									
4565															

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6" / $(N_1)_{60}$ Value / 0.45 — Torvane (tsf)
UNDISTURBED SAMPLE — PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 06-1

SHEET 2 OF 2

PROJECT: UTAH VALLEY STATE COLLEGE DIGITAL LEARNING CENTER
CLIENT: UTAH VALLEY STATE COLLEGE
LOCATION: SEE SITE PLAN
DRILLING METHOD: CME-55 NO. 2 / N.W. CASING
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 7.0' **AFTER 24 HOURS:** ▼ 9.2' 3/27/06

PROJECT NUMBER: 200601.007
DATE STARTED: 3/23/06
DATE COMPLETED: 3/23/06
GROUND ELEVATION: 4597.6'
LOGGED BY: G. PEASLEE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4560	40			12	3,9,11 *0.15*	CL	lt. brown, moist, stiff — LEAN CLAY W/SILTY SAND LENSES								
							SILTY SAND								
4555	45			15	4,9,12	SM	brown, wet, med. dense								
				14	17,29,30	SP-SM	gray-brown, moist, very dense — POORLY GRADED SAND W/SILT								
4550	50			14	11,22,17	SM	brown, moist, dense								
							SILTY SAND								
4545	55			19	10,20,60/5"	SM	brown, moist, very dense								
4540	60			18	10,32,40	SM	brown, moist, very dense								
4535	65			11	24,27,34	SM	brown, moist, very dense								
							SILTY SAND W/CLAY LAYERS								
4530				0	30,41,47	-	very dense								

DH_LOGV1_200601.007_LOGS.GPJ_US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE — 2,3,2 (6) ← Blow Count per 6" / $(N_1)_{60}$ Value; 0.45 ← Torvane (tsf)
UNDISTURBED SAMPLE — PUSHED 0.45 ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 06-2

SHEET 1 OF 2

PROJECT: UTAH VALLEY STATE COLLEGE DIGITAL LEARNING CENTER
CLIENT: UTAH VALLEY STATE COLLEGE
LOCATION: SEE SITE PLAN
DRILLING METHOD: CME-55 NO. 2 / N.W. CASING
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ N.M. **AFTER 24 HOURS:** ▼ N.M.

PROJECT NUMBER: 200601.007
DATE STARTED: 3/29/06
DATE COMPLETED: 3/29/06
GROUND ELEVATION: 4599.9'
LOGGED BY: G. PEASLEE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
							3" ASPHALT								
4595	5			15	16,46,50	SM	brown, moist, very dense — SILTY SAND W/GRAVEL		13.5			28	57	15	
				15	11,16,19	SM	brown, moist, dense		8.5			0	80	20	
				15	5,5,6	SM	lt. brown, moist, med. dense — SILTY SAND								
4590	10			15	3,2,2	SM	brown, wet, very loose		29.8			0	65	35	
				15	4,3,5	SM	brown, wet, loose								
4585	15			14	2,5,5	ML	brown, wet, loose — SANDY SILT		34.6		NP	0	29	71	
4580	20			17	3,2,3	CL	brown, wet, firm — SANDY LEAN CLAY								
4575	25			18	Pushed *0.54*	CL	brown, moist, firm								
							LEAN CLAY W/SAND LENSES								
4570	30			7	4,2,2	CL	brown, wet, soft								

DH_LOGV1_200601.007_LOGS.GPJ_US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE — 2,3,2 (6) ← Blow Count per 6" / $(N_1)_{60}$ Value; 0.45 ← Torvane (tsf)
UNDISTURBED SAMPLE — PUSHED 0.45 ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 06-2

SHEET 2 OF 2

PROJECT: UTAH VALLEY STATE COLLEGE DIGITAL LEARNING CENTER
CLIENT: UTAH VALLEY STATE COLLEGE
LOCATION: SEE SITE PLAN
DRILLING METHOD: CME-55 NO. 2 / N.W. CASING
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ N.M. AFTER 24 HOURS: ▼ N.M.

PROJECT NUMBER: 200601.007
DATE STARTED: 3/29/06
DATE COMPLETED: 3/29/06
GROUND ELEVATION: 4599.9'
LOGGED BY: G. PEASLEE

Elev. (ft)	Depth (ft)	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
			15	Pushed	CL SM									
			13	3,7,9	SM	brown, moist, med. dense SILTY SAND								
4560	40		17	3,5,10 0.60	CL	lt. brown, moist, stiff								
4555	45		14	3,19,22 0.39	CL	LEAN CLAY W/SAND LENSES lt. brown, moist, hard								
4550	50		12	7,10,16 0.20	CL	brown, moist, hard								
4545	55													
4540	60													
4535	65													

DH_LOGV1 200601_007_LOGS GP1 US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE 2,3,2(6) ← Blow Count per 6" ← $(N_1)_{60}$ Value; 0.45 ← Torvane (tsf)
UNDISTURBED SAMPLE PUSHED 0.45 ← Torvane (tsf)

OTHER TESTS
DC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG — BORING NO. 06-3

SHEET 1 OF 2

PROJECT: UTAH VALLEY STATE COLLEGE DIGITAL LEARNING CENTER
CLIENT: UTAH VALLEY STATE COLLEGE
LOCATION: SEE SITE PLAN
DRILLING METHOD: CME-55 NO. 2 / N.W. CASING
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 13.0' AFTER 24 HOURS: ▼ 13.0'3/29/06

PROJECT NUMBER: 200601.007
DATE STARTED: 3/28/06
DATE COMPLETED: 3/28/06
GROUND ELEVATION: 4599.3'
LOGGED BY: G. PEASLEE

Elev. (ft)	Depth (ft)	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
						3" ASPHALT								
			15	22,25,55	GM	gray-brown, moist, dense SILTY GRAVEL W/SAND								
4595	5		12	17,18,25	GP-GM	gray-brown, moist, dense POORLY GRADED GRAVEL W/SILT & SAND		5.8			69	25	6	
			17	Pushed	SM	SILTY SAND								
			11	4,5,6	SM	brown, moist, med. dense		18.6			0	78	22	
4590	10		10	5,6,7	SP	gray-brown, moist, med. dense POORLY GRADED SAND								
			11	3,4,6	SM	brown, wet, loose SILTY SAND								
4585	15		15	2,1,3	ML/SM	brown, wet, loose		31.5		NP	0	50	50	
4580	20		18	2,1,4	ML/SM	SANDY SILT TO SILTY SAND brown, wet, loose								
4575	25		18	Pushed 0.71	CL	brown, moist, stiff								
4570	30		17	Pushed	CL	LEAN CLAY W/SAND LENSES brown, moist								
			18	7,8,10	CL	brown, moist, very stiff								
4565														

DH_LOGV1 200601_007_LOGS GP1 US EVAL.GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE 2,3,2(6) ← Blow Count per 6" ← $(N_1)_{60}$ Value; 0.45 ← Torvane (tsf)
UNDISTURBED SAMPLE PUSHED 0.45 ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

DRILL HOLE LOG

BORING NO. 06-3

SHEET 2 OF 2

PROJECT: UTAH VALLEY STATE COLLEGE DIGITAL LEARNING CENTER
CLIENT: UTAH VALLEY STATE COLLEGE
LOCATION: SEE SITE PLAN
DRILLING METHOD: CME-55 NO. 2 / N.W. CASING
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 13.0' **AFTER 24 HOURS:** ▼ 13.0'3/29/06

PROJECT NUMBER: 200601.007
DATE STARTED: 3/28/06
DATE COMPLETED: 3/28/06
GROUND ELEVATION: 4599.3'
LOGGED BY: G. PEASLEE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4560	40			12	7,8,11 0.35	CL	lt. brown, moist, very stiff								
				17	Pushed	CL									
4555	45						LEAN CLAY W/SAND LENSES								
				14	5,6,9 0.20	CL	lt. brown, moist, stiff								
4550	50			5	4,5,17	CL	lt. brown, moist, very stiff								
4545	55														
4540	60														
4535	65														
4530															

DH_LOGV1 200601_007_LOGS GPJ US EVAL GDT 4/5/11

RB&G ENGINEERING, INC.

LEGEND:
DISTURBED SAMPLE — 2,3,2 (6) ← Blow Count per 6" / $(N_1)_{60}$ Value; 0.45 ← Torvane (tsf)
UNDISTURBED SAMPLE — PUSHED; 0.45 ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated Undrained Triaxial
CU = Consolidated Undrained Triaxial
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay
Chem. = pH, Resistivity, Sulfate, Chloride

RB&G ENGINEERING, INC.

Table 1

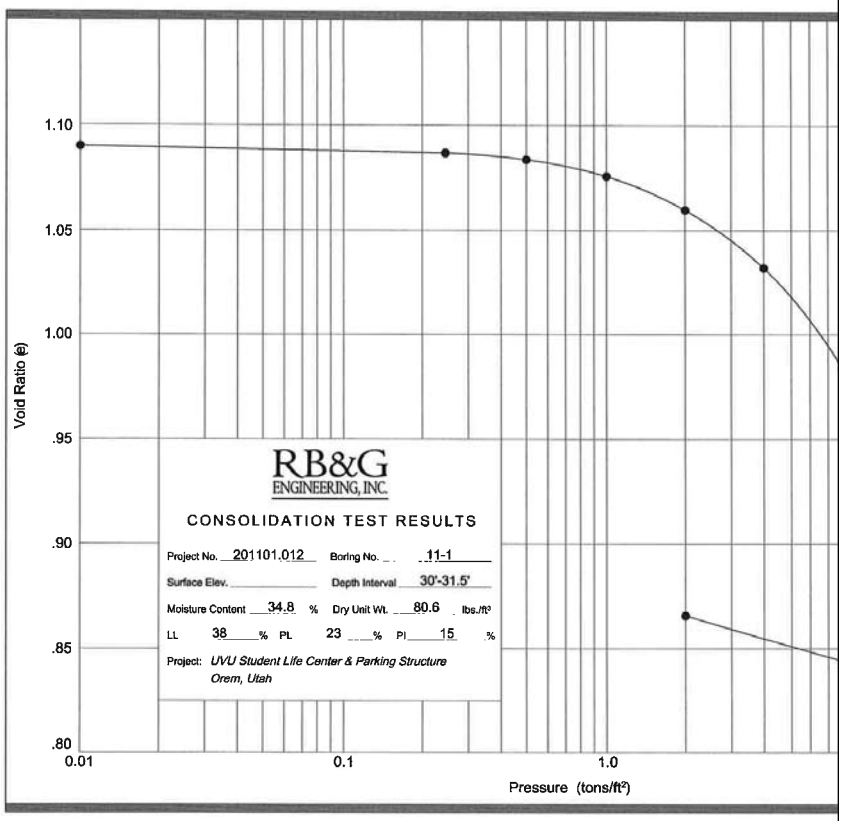
SUMMARY OF TEST DATA

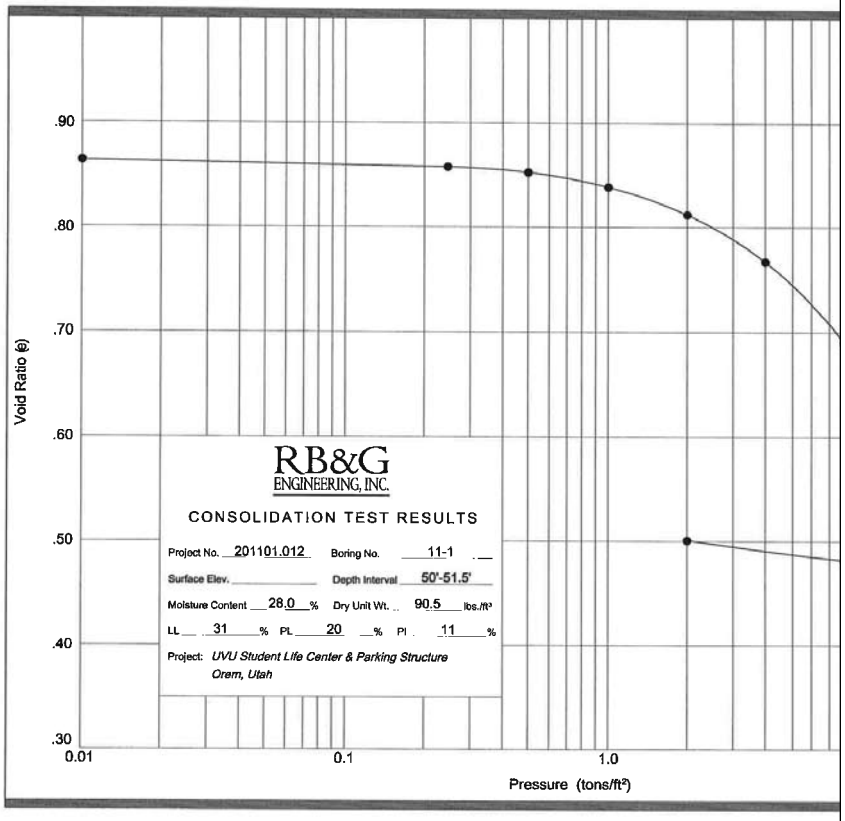
PROJECT LOCATION: UVU Student Center & Parking Structure; Orem Campus see site plan
PROJECT NO. 201101-012
FEATURE: Foundations

HOLE NO.	DEPTH BELOW GROUND SURFACE (ft)	IN-PLACE DRY UNIT WEIGHT (pcf)	IN-PLACE MOISTURE (%)	UNCONFINED OR UU TRIAXIAL COMPRESSIVE STRENGTH (psf)	ATTERBERG LIMITS LIQUID LIMIT (%)	ATTERBERG LIMITS PLASTIC LIMIT (%)	ATTERBERG LIMITS PLASTICITY INDEX (%)	MECHANICAL ANALYSIS PERCENT GRAVEL	MECHANICAL ANALYSIS PERCENT SAND	MECHANICAL ANALYSIS PERCENT SILT & CLAY	PERCENT FINER THAN 0.005 mm	UNIFIED SOIL CLASSIFICATION SYSTEM / (AASHTO CLASSIFICATION)
11-01	3-4.5		14.1				NP	35	51	14		SM
	18-19.5		31.4				NP	0	46	54		ML
	24-25.5		34.2				NP	0	31	69		ML
	30-31.5	80.6	34.7	uc 1834	38	23	15					CL-2
	40-41.5		22.8				NP	0	55	45		SM
	50-51.5	90.5	28.0	uc 2613	31	20	11					CL-1
11-02	3-4.5		9.1				NP	53	34	13		GM
	21-22.5		30.0				NP	0	56	44		SM
	27-28.5		34.0				NP	0	32	68		ML
	30-31.5	86.9	34.0	uc 1569	30	24	6					ML
	40-41.5	82.4	32.6		36	21	15					CL-2
	50-51.5	85.9	29.0	uc 1669	30	20	10	0	4	96		CL-1
	65-66.5		18.1				NP	0	70	30		SM
11-03	6-7.5		8.3				NP	48	44	8		GP-GM
	18-19.5		33.5				NP	0	61	39		SM
	22.5-24		33.6				NP	0	24	76		ML
	30-31.5	87.6	32.0	uc 1647	38	23	15					CL-2
	40-41.5(top)		24.6				NP	0	62	38		SM
	40-41.5(bottom)	95.3	26.1	uc 1354	29	19	9	0	14	86		CL-1
	65-66.5		23.5				NP	0	80	20		SM
11-04	21-22.5		35.1				NP	0	41	59		ML
	40-41.5		27.5				NP	0	33	67		ML
	50-51.5	92.8	27.4	uc 1534	33	19	14	0	4	96		CL-1

NP=Non-Plastic

H:\2011\012_UVU StudentLifeCtr&PrkngStruct\Lab Testing\Testing Summary


1.10
1.05
1.00
.95
.90
.85
.80
Void Ratio (e)
0.01
0.1
1.0
Pressure (tons/ft²)
RB&G
ENGINEERING, INC.
CONSOLIDATION TEST RESULTS
Project No. 201101.012
Boring No. 11-1
Surface Elev.
Depth Interval 30'-31.5'
Moisture Content 34.8 %
Dry Unit Wt. 80.6 lbs./ft³
LL 38 % PL 23 % PI 15 %
Project: UVU Student Life Center & Parking Structure
Orem, Utah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.60
.50
.40
.30
Void Ratio (e)
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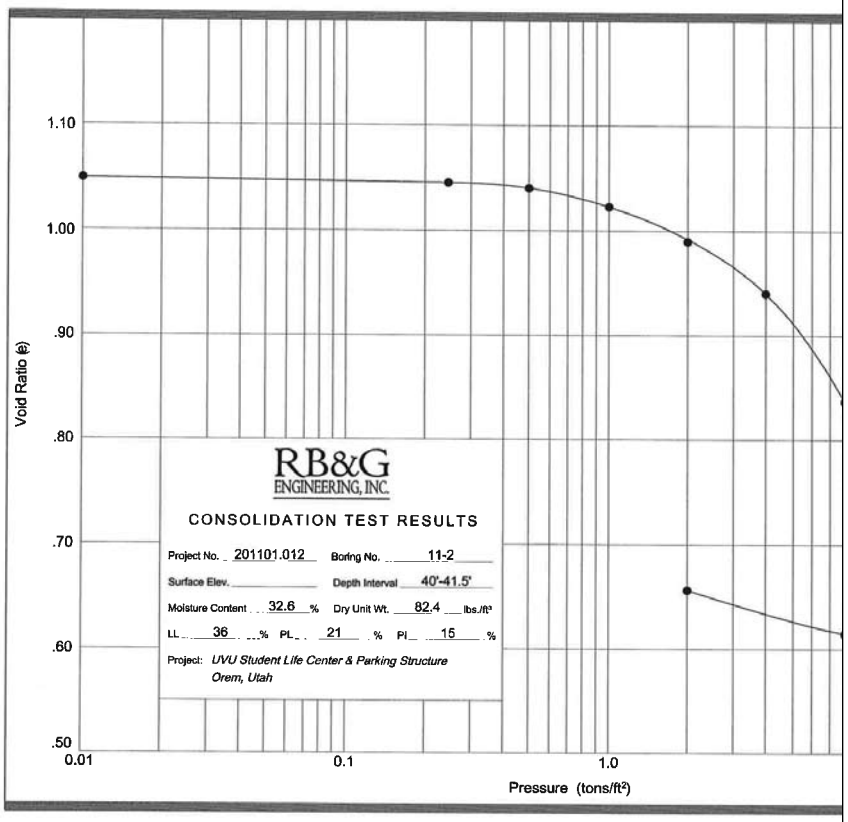
0.1
1.0
Pressure (tons/ft²)
RB&G
ENGINEERING, INC.
CONSOLIDATION TEST RESULTS
Project No. 201101.012
Boring No. 11-1
Surface Elev.
Depth Interval 50'-51.5'
Moisture Content 28.0 %
Dry Unit Wt. 90.5 lbs./ft³
LL 31 % PL 20 % PI 11 %
Project: UVU Student Life Center & Parking Structure
Orem, Utah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Void Ratio (e)
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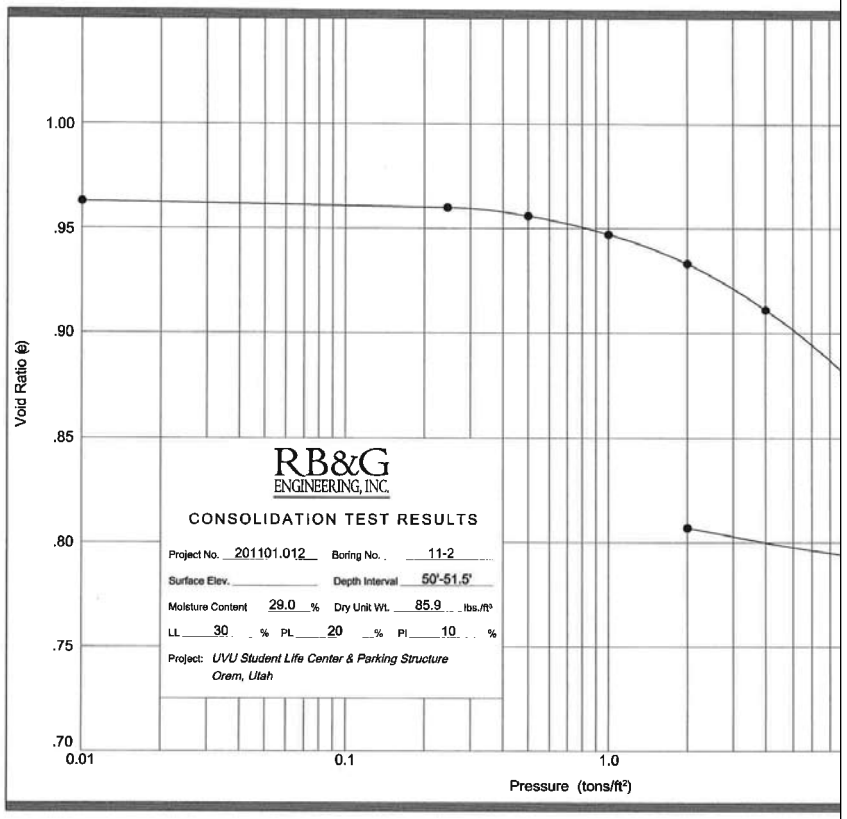
0.1
1.0
Pressure (tons/ft²)
RB&G
ENGINEERING, INC.
CONSOLIDATION TEST RESULTS
Project No. 201101.012
Boring No. 11-2
Surface Elev.
Depth Interval 40'-41.5'
Moisture Content 32.6 %
Dry Unit Wt. 82.4 lbs./ft³
LL 36 % PL 21 % PI 15 %
Project: UVU Student Life Center & Parking Structure
Orem, Utah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Void Ratio (e)
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0.1
1.0
Pressure (tons/ft²)
RB&G
ENGINEERING, INC.
CONSOLIDATION TEST RESULTS
Project No. 201101.012
Boring No. 11-2
Surface Elev.
Depth Interval 50'-51.5'
Moisture Content 29.0 %
Dry Unit Wt. 85.9 lbs./ft³
LL 30 % PL 20 % PI 10 %
Project: UVU Student Life Center & Parking Structure
Orem, Utah

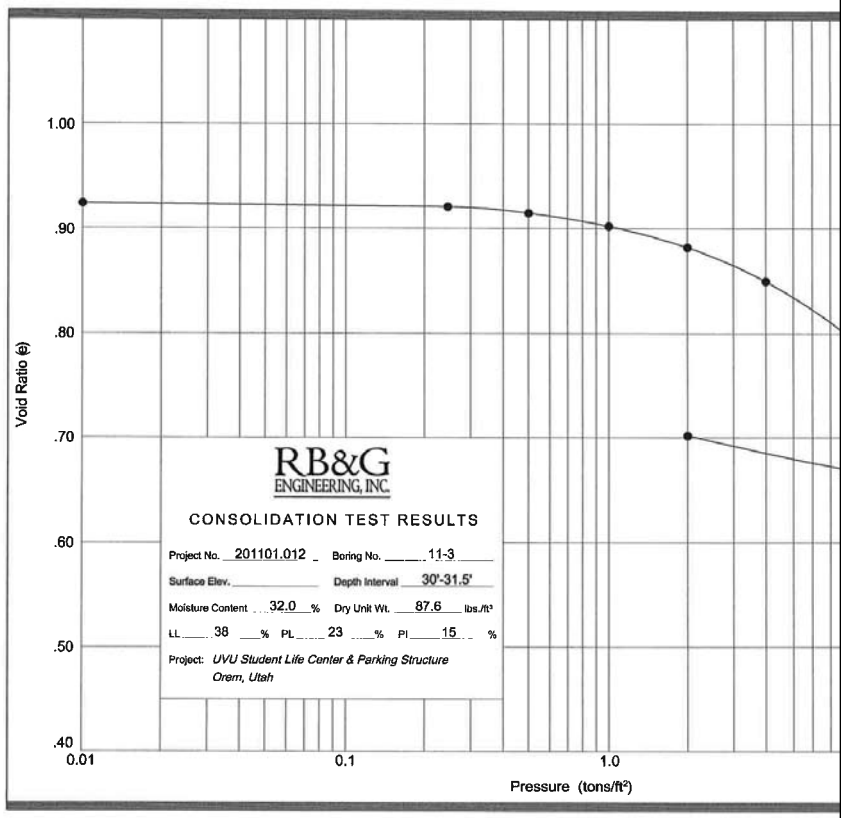

Table 1

SUMMARY OF TEST DATA

2006 BORING

PROJECT LOCATION Utah Valley State College Digital Learning Center, Orem, Utah

PROJECT NO. 200601-007

FEATURE Foundations

HOLE NO.	DEPTH BELOW GROUND SURFACE (ft)	STANDARD PENETRATION BLOWS PER FOOT	IN-PLACE		UNCONFINED COMPRESSIVE STRENGTH (psf)	ATTERBERG LIMITS			MECHANICAL ANALYSIS			UNIFIED SOIL CLASSIFICATION SYSTEM (modified)
			DRY UNIT WEIGHT (pcf)	MOISTURE (%)		LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX (%)	PERCENT GRAVEL	PERCENT SAND	PERCENT SILT & CLAY	
1	3-4.5	16		15.2					0	53	47	SM
	6-7.5	3		22.5					0	58	42	SM
	12-13.5	3		36.0				NP	0	46	54	ML
	20-21.5		82.5	34.5	*2160 / 665	37	23	14				CL
2	0.4-1.9	96		13.5					28	57	15	SM
	3-4.5	35		8.5					0	80	20	SM
	9-10.5	4		29.8					0	65	35	SM
	15-16.5	10		34.6				NP	0	29	71	ML
3	3-4.5	43		5.8					69	25	6	GP-GM
	7.5-9	11		18.6					0	78	22	SM
	15-16.5	3		31.5				NP	0	50	50	ML / SM
4	0.4-1.9	33				21	17	4				ML
	3-4.5	10		19.1				NP	0	42	58	ML
	6-7.5			26.6				NP	0	36	64	ML
	9-10.5		86.5	33.9		41	23	18				CL
	15-16.5			28.1	*2880 / 855	40	20	20				CL
5	0.5-2	67		11.5					25	51	24	SM
	6-7.5		103.1	23.0				NP	0	36	64	ML
	15-16.5		83.6	34.7	*2000 / 627	39	21	18				CL

NP=Nonplastic

*Torvane value used to estimate unconfined compressive strength.

RB&G ENGINEERING, INC.
Provo, Utah

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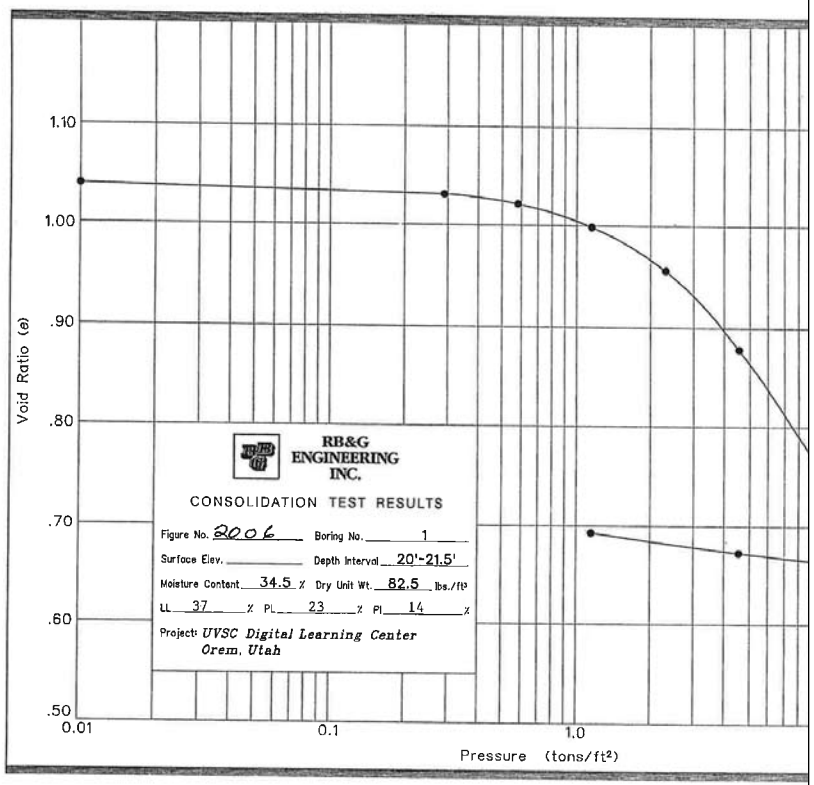
1.10
1.00
.90
.80
.70
.60
.50
Void Ratio (e)
0.01
0.1
1.0
Pressure (tons/ft²)
RB&G ENGINEERING INC.
CONSOLIDATION TEST RESULTS
Figure No. 2006
Boring No. 1
Surface Elev.
Depth Interval 20'-21.5'
Moisture Content 34.5 %
Dry Unit Wt. 82.5 lbs./ft³
LL 37 % PL 23 % PI 14 %
Project: UVSC Digital Learning Center
Orem, Utah