PROGRAM DOCUMENT
JANUARY 9, 2009

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

DFCM PROJECT NO. 08015750

CANNONDESIGN | ARCHITECTURAL nexus

Architectural Facilities Program

CANNONDESIGN | ARCHITECTURAL nexus

UNIVERSITY OF UTAH STUDENT LIFE CENTER
University of Utah
Salt Lake City, Utah
DFCM No. 08015750
U of U No. 0999-12689

University of Utah
Review Signatures

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

1/23/09
Jerry Bastford — Date
Assistant Vice President, Student Affairs

27 Jan 09
Michael Beck — Date
Architect, Campus Design and Construction

1.23.09
Mary Bohlig — Date
Director, Campus Recreation Services

1-22-09
Annie Christiansen — Date
Dean of Students

1.27.09
Tami Cleveland — Date
Campus Planner, Facilities Planning

1/27/09
Basim Motiwala — Date
Student and former ASUU Officer

1/27/09
Spencer Pearson — Date
Alumni and former ASUU Officer

1/26/09
Patti Ross — Date
Special Assistant to Senior Vice President for Academic Affairs

1/23/09
Barbara Snyder — Date
Vice President, Student Affairs

Division of Facilities Construction & Management, State of Utah
Review Signatures

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

2/3/09
Rick James — Date
Program Director

CANNONDESIGN | ARCHITECTURAL nexus

Architectural Facilities Program

UNIVERSITY OF UTAH STUDENT LIFE CENTER
University of Utah
Salt Lake City, Utah
DFCM No. 08015750
U of U No. 0999-12689

University of Utah
Review Signatures

We have reviewed the University of Utah Student Life Center Program and warrant that it adequately represents our request for a facility to fulfill our mission and programmatic needs. All appropriate parties in the agency have reviewed it for completeness and accuracy.

2/13/09
Corry Higgins — Date
Director, Plant Operations

2/12/09
John McNary — Date
Director, Campus Design and Construction

2/18/09
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Associate Vice President, Facilities Management

2/20/09
Arnold B. Combe — Date
Vice President, Administrative Services

Participants

The following is a list of various individuals and groups represented during the Programming Phase.

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1.0 Executive Summary

1.1 UNIVERSITY OF UTAH CAMPUS RECREATION SERVICES MISSION STATEMENT AND GOALS

Mission Statement

Campus Recreation Services is dedicated to educational enrichment, development of the complete individual and the discovery of lifelong happiness.

Goals

Quality Service
Campus Recreation Services is committed to providing quality programs, facilities, and services.

Student Focused
Campus Recreation Services is dedicated to meeting the needs of students.

Knowledgeable Staff/Professional Development
Campus Recreation Services provides professional development, leadership, and a knowledgeable staff through continuous quality training.

Safe Environment
Provide a safe, accommodating and secure environment for the University community.

Increased Visibility
Be creative in meeting the needs of participants, building a positive image, and increasing patron satisfaction.

Promotion of Physical Activity
Campus Recreation Services encourages the University community to make quality choices in the use of discretionary time.

Diversity
Provide a variety of programs and facilities to meet the needs of the University's diverse population.

Campus Community Interaction
Provide opportunities to establish relationships that foster a sense of belonging.

1.2 PROGRAMMING PROCESS SUMMARY/ANALYSIS AND CONCLUSIONS

Programing Process Summary

Campus Recreation at the University of Utah is currently spread throughout several facilities on campus. A need to have one building that encompasses all aspects of the recreation program was the stimulus for the Student Life Center. The new building will not only unite campus recreation, it will be a key element in the recruitment and retention of future students to the University of Utah.

A key component of the programming process was to establish goals and a vision for the facility. The programming process consisted of a series of meetings on the University of Utah campus with the Steering Committee, Programming Committee, Student Leaders, Recreation Staff, and the Programming Team. The goal of these meetings was to define the Program for the facility and to create a conceptual Site Plan for the facility. The highlights of this process are as follows:

June 16-17 2008:
The first round of user group meetings was an introduction to Recreation Centers and the types of spaces typical to this building type. It included tours of the existing facilities used by Recreation with the various user groups. The Programming Team toured the Fieldhouse, the HPER complex, and the Outdoor Recreation Facility. Each group was allowed to discuss the shortcomings of the existing facility, the needs of their program for the future, and how these can be met in the Student Life Center.

July 8-9, 2008:
The second round of user group meetings focused on the program for the Student Life Center. Keith Fuchigami of Cannon Design presented an initial Program Model based on the discussions during the first round of meetings. He presented the proposed program to each of the groups and described the differences in each of the models. The primary concern was how to reconcile the budget with the Program. The largest impact on the budget was the new 50 Meter pool for Athletics. Both the size and the cost of the pool would have major implications on the Program and Budget for the Student Life Center. The discussion presented the option of pushing the construction of the pool to Phase II of the project.

August 12-13, 2008:
The third round of user group meetings began to refine the Program and develop the individual spaces in more detail. Doug Cook of Counsilman Hunsaker presented a variety of pools to the user groups, including both recreation and competition pools. He also presented typical maintenance costs for different pool types. Initial Site Concepts were presented that explored how to locate the 50 Meter Pool on the site. In order to fit the pool, several program elements that would typically be on the ground floor, including the gymnasiums, would have to move to the second floor. This would have a large impact on the building, including the exiting requirements and the structure of the building, and therefore impact the cost.

September 16-17, 2008:
The fifth round of user group meetings began to look at the requirements for each of the spaces in the Program Model. A Programming Workbook, which included Room Data Sheets and Prototype Layouts, was distributed to each of the groups to review. Revised site concepts were presented and the relationship between the building and the site was discussed.

October 21-22, 2008:
The User Groups provided feedback on the Programming Workbook after the last round of meetings. The comments were incorporated into the book and discussed during this round. The Site Concepts were further developed and four different diagrams were presented to the groups. The relationship to the bridge and campus housing across the bridge was a primary concern. The Master Plan envisions a connection between the Student Life Center and the bridge, which Facilities would like to incorporate in one of the schemes.

November 18, 2008:
Copies of the draft Program were distributed to the committees and the Recreation Staff. The Programming Team described the various components of the report and asked everybody to provide comments prior to the next meeting. New site concepts were presented which showed the jogging track wrapping around the Outdoor Recreation Area and a connection to the Legacy Bridge. A site section was presented to show the different elevations of the site and how to connect to the Legacy Bridge. The Programming Team also presented conceptual design images of the building.

December 9, 2008:
This was the last full meeting with the campus committees and the Programming Team and was considered a wrap-up meeting. The review comments of the draft that had been received and the necessary revisions to the report that were necessary based on a few of the comments were reviewed. The Programming Team also reported on meetings that had taken place with the Office of Space Planning, Fire Marshal, and Parking to review the project. The summary comments from the Student Leaders on the Project Committee were also reviewed.

December 15, 2008:
A special meeting was held at the University Services Building in order to bring to resolution the matter of the boundary between the existing Utes Soccer Field and the proposed Student Life Center as it relates to fire access. In short, the proposed program is large enough that providing an appropriate landscape buffer and a code compliant fire access lane at the south side of the project was not practical within the project limits provided by the Master Plan without bringing a larger group into the discussion.

Given the practical limits of building width associated with the large program blocks that comprise the Student Life Center, it was necessary to bring together key University stakeholders from a variety of departments in order to facilitate decision making. Attendees included Rick James (DFCM), Mike Perez (UU Facilities), Chris Hill (UU Athletics) Michael Beck (UU Campus Design & Construction), Tami Cleveland (UU Planning) and Mike Halligan (State/Campus Fire Marshal) as well as Kenner Kingston (Architectural Nexus) from the Programming Team.

Several opportunities to solving the dilemma were discussed and included the following:

1. Student Life Center width reduction via playing court safety zone and/or corridor width reductions that are less than optimal but would not create regulatory violations.

2. Student Life Center service access schematic development that would compress the activities areas associated with the outdoor pool functions but permit fire access further east from the west end of the site than previously envisioned.

3. Front setback reconsideration to allow for the north side of the building to align with the adjacent Dumke Gymnastics Center rather than the HPER North Building as indicated in the Master Plan. Note: Approved Re: Appendix Section 6.2 CAMPUS MASTER PLAN HPER MALL NORTH SET BACK VARIANCE.

4. Fire access variance with SLC Fire for the portion of the south face of the building that lacks compliant fire access per IFC 503, Fire Apparatus Access Roads.

5. Soccer field width and perimeter zone reductions that are less than optimal but would not create regulatory violations.

Conclusions, impacts and potentials associated with these five items are depicted graphically in Section 2.5.4 EMERGENCY AND SERVICE ACCESS.

Analysis and Conclusions:
The programming process produced three different sized programs for the building, a small program to fit within the budget, a medium sized program, and a large program including everything on the wish list for the facility. The User Groups felt the medium sized program was the best to proceed with to get a facility with the majority of program elements desired by the students and to fit within the budget. The medium program includes space for a recreation pool, which could be built initially, or in a later phase of the project. The medium program was tested on the site allocated by the Master Plan for The Student Life Center (See Section 4.1 of this report for the Program Models). The test showed that the program will fit but it takes up the entire site. The challenge is that it leaves no room for expansion, which is common with these types of facilities. It also does not allow for any outdoor recreation fields adjacent to the building, which would complement the programs of Campus Recreation and create a Recreation Complex for the Campus.

Conclusions from the Student Leaders on the Programming Committee:

1. The ability to expand the Student Life Center in the future is integral to the long term success of the Center. With the construction of the new Residence Hall to the south of the Center and the proximity to the Huntsman Center, the Student Life Center has great potential for reaching a varied audience, but in time, there will most likely be a need as well as an opportunity for expansion to the original Student Life Center.

2. There is agreement that the extension of the Eccles Legacy Bridge through the Student Life Center to the HPER Mall as called for in the Master Plan would be a unique addition to the Center, and offers a unique design opportunity. This should be included in the design for the Center and the cost should be factored in to the overall construction cost for the project.

3. Obtaining LEED certification is a necessary and desirable quality. A minimum goal should be for a LEED Silver certification. After speaking with the University's Office of Sustainability, they feel that the focus of the effort should be on energy efficiency. Over time, this will be a good investment as it will save on operations and maintenance costs. A building that is built substantially on student fees should be designed and built in line with the future, not the past ways of thinking.

4. In concurrence with the other committees that have been involved with this programming and planning process, there is a preference for Scheme E of the Block Plans for the Student Life Center as shown in Section 4.2 of this report.

1.3 PROJECT DESCRIPTION

1.3.1 Total Facility Summary

The Student Life Center will centralize the Recreation Department. The current programs are located in various facilities throughout the campus. The new facility will become the hub for student recreation and a place for social interaction on campus. The site for the Student Life Center is at a crucial location, at the base of the George S. Eccles 2002 Legacy Bridge and the major gateway to campus. The Student Life Center will strengthen campus identity and be an icon for the campus.

Campus Recreation Services is currently housed in three separate facilities on campus. The primary facility, the Einar Nielson Field House (FH) is seventy years old and was built when student enrollment was 4000. Current student enrollment is over 28,000. The other two facilities include the Health, Physical Education and Recreation Complex (HPER) and the Outdoor Recreation Program (ORP). The Field House is 51,000 square feet, the Outdoor Recreation Program is 650 square feet, and the HPER, which is a shared use facility with Academics and Athletics, is approximately 160,000 square feet. Campus Recreation anticipates participation growth of 30-40%. The ORP continues to grow by approximately 10% annually and they anticipate even faster growth in the new facility. The program growth at the HPER Complex is limited because it is a shared use facility and Campus Recreation is only given time in the building after academics and athletics. The new facility is crucial to the continued growth and development of services and programs to meet the recreation needs of the university community.

Campus Recreation will be the only department to utilize the facility at this time. Both Student Health and Athletic Training have requested to have a small presence in the facility. It is the belief of the University that these two programs would complement the mission of the facility, but at this time, their involvement has not been confirmed. Campus Recreation will serve as the administrators of the facility. They will have 12 full time staff, including a director, associate director, business manager, and program coordinators for the following areas: intramural sports, sport clubs, staff, facility management, outdoor adventures (2), marketing, facility management, and the wellness / fitness program. Participants to the facility will include members of the University community, including students, staff, faculty and their respective significant others and children. These users will engage with the facility and programs in their personal pursuit of health, fitness, sports, competition, and socialization. Annual participation is projected at 500,000.

The programs and services offered in the Student Life Center will include various recreation spaces, including two gymnasiums, 3 multipurpose rooms for aerobics, yoga or spinning, a fitness and weight room, racquetball courts, a wellness center and a jogging track. Distributed cardio spaces will also be designated throughout the building. The building will house the Outdoor Recreation Program which has been at a separate location until now. The Outdoor Recreation Program is one of the most popular programs in the recreation department. It represents and celebrates the nature of the outdoors that is prevalent throughout the State. The building will have a climbing wall connected to the Outdoor Recreation Program, and be located to advertise the nature of the activities offered inside the facility. The Student Life Center will also be the home for the staff of the Recreation Department and an office area will be located off the lobby of the building. Various other departments have expressed interest in being a part of the Student Life Center. An athletic training center and health center may be located in the building in conjunction to the wellness center.

The proposed site for the Student Life Center is based on the Master Plan for the campus. It is located in the south campus precinct at the eastern end of the HPER mall. The site is currently the location of the women's softball field. The field will be relocated across the HPER mall to the north along with new recreation fields. The Master Plan calls for the

building to be an extension of the George S. Eccles 2002 Legacy Bridge and provide a pedestrian connection between the bridge and the HPER mall.

The proposed site has several limiting conditions. The Utes Soccer Field is located to the south of the proposed site and is to remain in its existing location. The total width allowed for the building is determined by the setback off the HPER mall to the north and the soccer field to the south. This width does not allow for a double loaded corridor with gymnasiums on both sides. The height of the building is restricted to sixty feet due to a nearby telecommunications tower.

This type of building should always plan for expansion in the future. As the student population grows and as the building becomes more popular, additional space will be needed. The constraints of the site currently do not allow for expansion. If the entire site, including the Ute Soccer field were available, the planning of the Student Life Center would be different. The building would be better sited on a north south access with expansion space provided to the west.

1.3.2 Project Cost Summary

The following document summarizes an estimated total project budget for the University of Utah Student Life Center. Please refer to Section 5.1 for the complete detailed Project Cost Estimate.

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

January 9, 2009
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PROGRAM CONSTRUCTION COST ESTIMATE

MASTER SUMMARY

SECTION	AREA	UNIT	COST/SF	COST
CURRENT CONSTRUCTION COST:				
SITE	160,000	SF	14.34	$2,293,661
BUILDING (MODEL B)	145,000	GSF	251.13	$36,413,444
BRIDGE CONNECTION	6,000	GSF	330.00	$1,980,000
TOTAL (Construction)				$40,687,105
BUILDING OPTIONS:				
Model A: Delete (1) Gym - Deduct	(7,700)	GSF	(240.00)	($1,848,000)
Model C: Add (1) Gym - Add	9,100	GSF	240.00	$2,184,000

NOTES: Costs are for Construction only.
Costs are Based on a Competitive Bid Basis.
Costs are Based on Current Costs and Do Not Included Inflation.
Costs are for a LEED Silver Facility.

1.3.3 Program and Space Summary

The assignable spaces in the Space Program Models for the building are defined by the following categories or zones:

- Activity spaces:
  - Gymnasiums
  - Fitness / Weight Room
  - Multi-purpose Rooms
  - Racquetball Courts
  - Climbing / Bouldering Walls
- Outdoor Recreation spaces:
  - Equipment Rental, Storage, and Maintenance
  - Support Spaces
- Administrative spaces:
  - Reception
  - Offices
  - Conference Room
  - Support Spaces
- Wellness, Health, and Athletic Training spaces:
  - Offices
  - Spaces for Massage Therapy, Personal Training, Examination, Training, and Exercise
- Entry and Lounge spaces:
  - Entry Lobby and Lounge
  - Control Counter and Control Offices
  - Juice Bar and Vending
- Support spaces:
  - Locker Rooms
  - Restrooms
  - Equipment Storage / Checkout / Laundry
  - Custodial and Building and Grounds Maintenance spaces
- Pool spaces:
  - Pool and Pool Deck
  - Pool Filtration
  - Pool Storage
  - Pool Offices
  - Pool Toilets

The assignable spaces in the Space Program Models also includes storage spaces assigned to individual activity spaces (gymnasiums, weight / fitness room, multi-purpose rooms) and restrooms for the pool and on the second floor of the building. Area is also included for the lobby and lounge in the assignable area. Because these spaces are included in the assignable area, the net or assignable area has been increased by an efficiency factor of 70% in order to calculate the gross area for the building. If they were not included in the assignable area, an efficiency factor of 65% to 68% would have been used, instead. The inclusion of these spaces in the assignable area was discussed with the DFCM representative for the project, Rick James, and he approved their inclusion in the net area due to the specialized nature of the Student Life Center as a recreation facility.

In addition to the indoor assignable spaces, outdoor space for socializing and barbecues adjacent to the pool and the pool deck is desired. It is also important that space is provided for parking for the loading and unloading of equipment that is rented from Outdoor Recreation, and needs to be directly adjacent to the outdoor recreation area. The existing parking around the north and east sides of the Virginia Tanner Dance Building (which will be demolished to provide space for the Student Life Center) is appropriate for this.

1.3.4 Project Schedule

There are substantial milestones that need to be met during the design and construction of the Student Life Center. The first milestone will be the selection of the Design Team. Once the team is in place, Schematic Design will begin. This list includes suggested time periods for the various phases of the project. Note that this schedule is tentative and is to be confirmed by the Division of Facilities Construction Management (DFCM) and the University of Utah.

Schematic Design Phase	12 weeks
Design Development Phase	16 weeks
Construction Document Phase	24 weeks
Plan Check Review/Approvals Secured	9 weeks
Bidding/Award Contract	6 weeks
Construction	18 months
BUILDING OPEN	

Table of Contents - Section 2

2.0 Site Analysis

2.1 SITE LOCATION

The site of the Student Life Center is located on the eastern edge of the HPER Mall on the University of Utah campus, which is within a 5 minute walking distance to the Fort Douglas Housing and the site of the proposed South Campus Housing development. The existing Utes Soccer Field, which is directly south of the Student Life Center, will be preserved in its current location.

In terms of vehicular traffic, the project site can be reached by driving east from downtown Salt Lake City on either 100 South Street or 400/500 South Street via Wasatch Drive and from Wasatch Drive to Ballif Road. From points south and east of the University traffic enters the campus by way of Foothill Boulevard which also connects to Wasatch Drive. Additionally, the campus is serviced by various Utah Transit Authority (UTA) bus routes as well as a UTA light rail line known as the University Trax line; the University Trax line connects to the larger UTA Trax system which services the greater Salt Lake City metropolitan area.

The site is situated near the intersection of Wasatch Drive and Mario Cappecchi Drive (formerly known as Medical Drive).

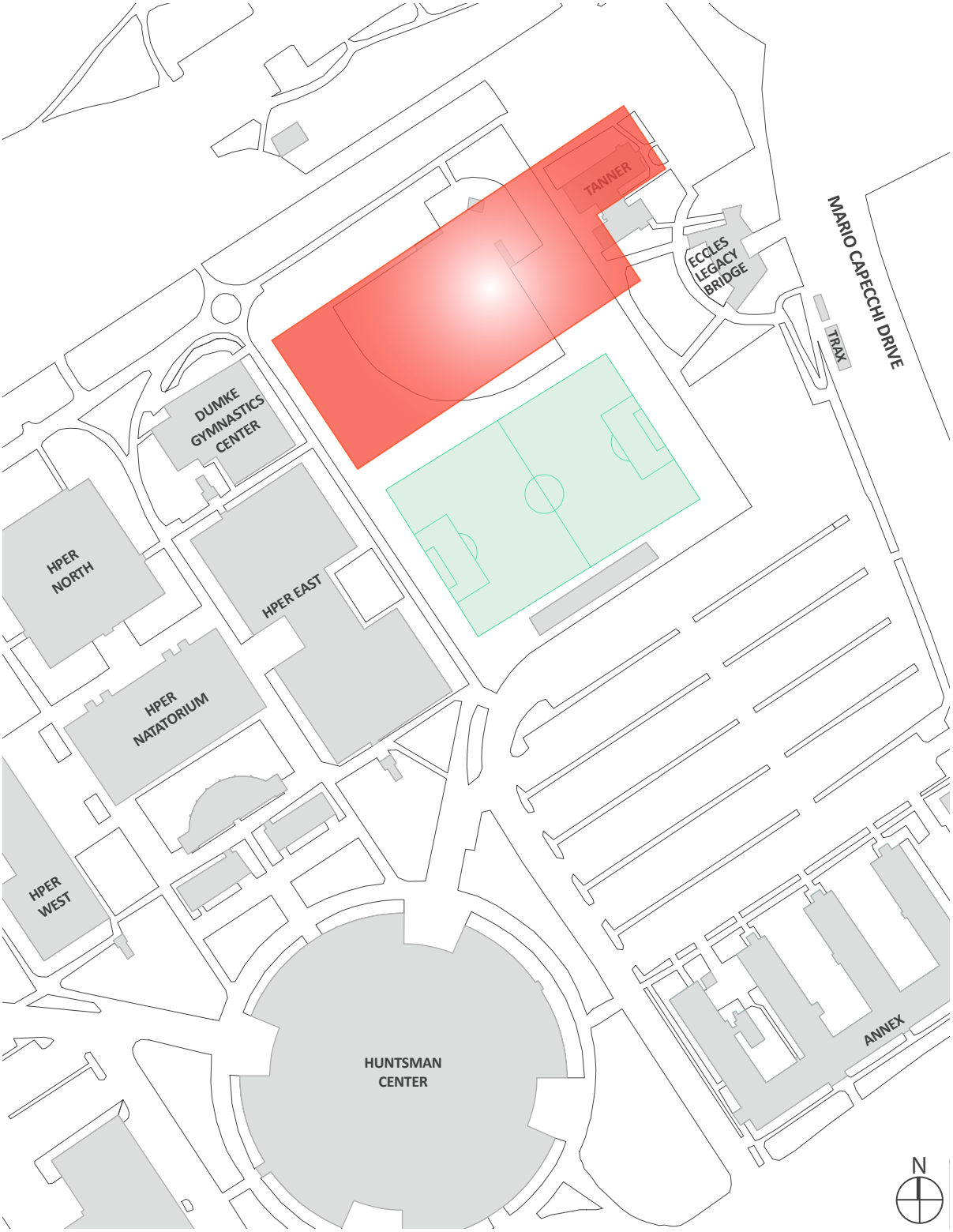
The project site itself is located immediately to the northwest of the existing Virginia Tanner Dance building (Building 101) which is adjacent to the George S. Eccles 2002 Legacy Bridge; and northeast of the Dumke Gymnastics Center (Building 097) and the HPER East (Building 091). This site is currently occupied by the Women's Softball Field.

The site is bordered directly by the following structures, roads, and parking lots:

Northeast:	Virginia Tanner Dance building (Building 101)
Northwest:	Ballif Road and further northwest is a university parking lot
Southeast:	University parking that is adjacent to the Trax line
Southwest:	Dumke Gymnastics Center (Building 097) and HPER East (Building 091)

This site and its relationship to the surroundings are illustrated on the following SITE LOCATION MAP.

Site Location Map



2.2 EXISTING SITE CIRCULATION

Vehicular Access

The primary vehicle access to the site is from Wasatch Drive to Ballif Road. Access to the site via Ballif Road is limited as it only allows vehicular traffic one means of ingress and egress; compelling vehicular traffic will enter the site only from the east. Located at the opposite end of Ballif Road is a vehicular round-about which redirects traffic back to the east. Vehicular parking for the site is accessed from surface parking lots located to the northeast directly adjacent to Virginia Tanner Dance building (Building 101) as well as to the northwest on the northwest side of Ballif Road. The proposed site for the University of Utah Student Life Center is currently occupied by a softball diamond, bleachers, dug-outs, and field houses. Additionally, to the northeast of the site is a well landscaped area with pedestrian paths that meets the George S. Eccles 2002 Legacy Bridge.

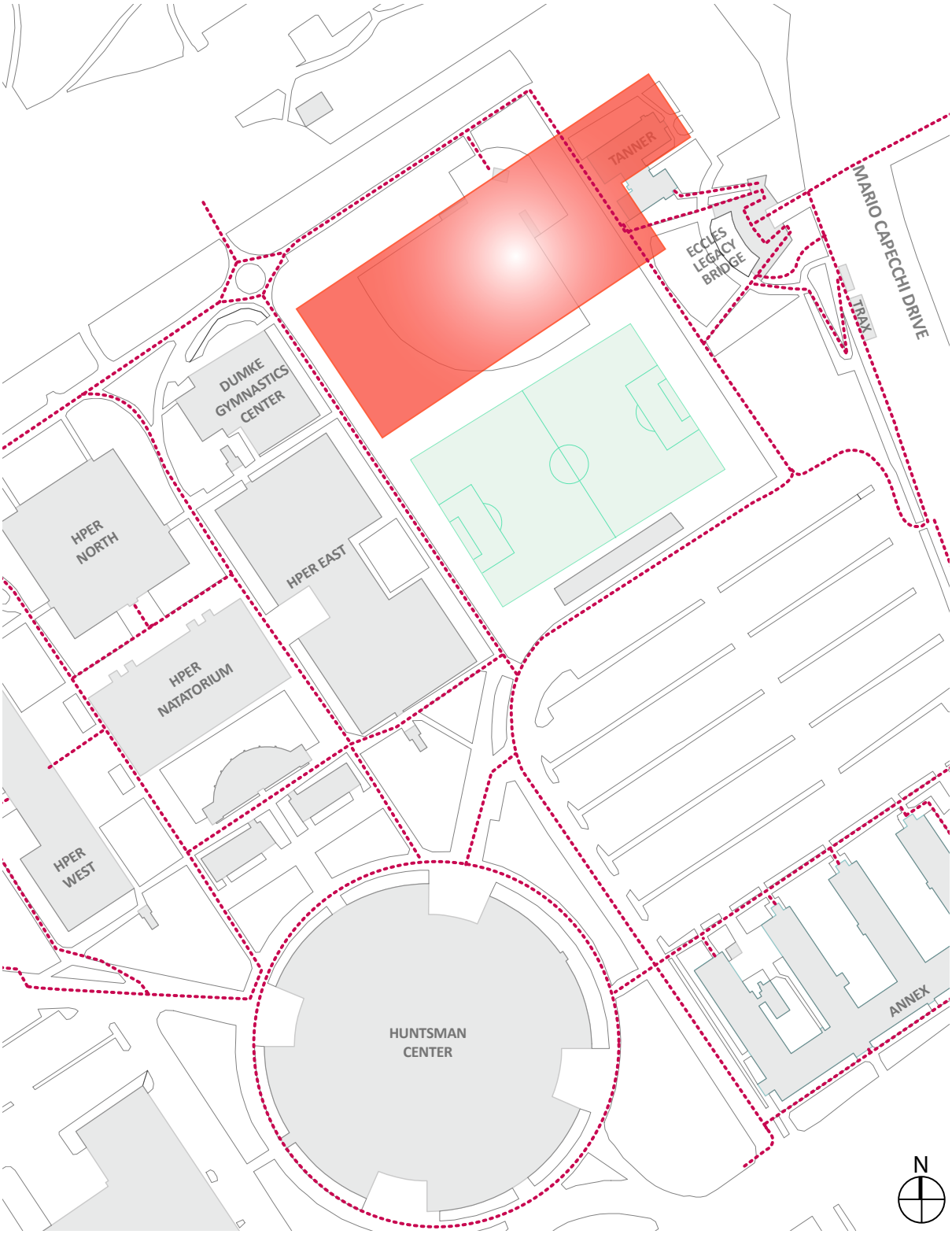
The University of Utah is widely serviced by the Utah Transit Authority both in terms of busses and light rail. A light rail stop located to the southeast of the site further connects it to the greater Salt Lake Valley. Additionally, the University Campus Shuttle services the University of Utah campus area with lines Green, Yellow, and Red servicing the site from a Fort Douglas stop.

Pedestrian Access

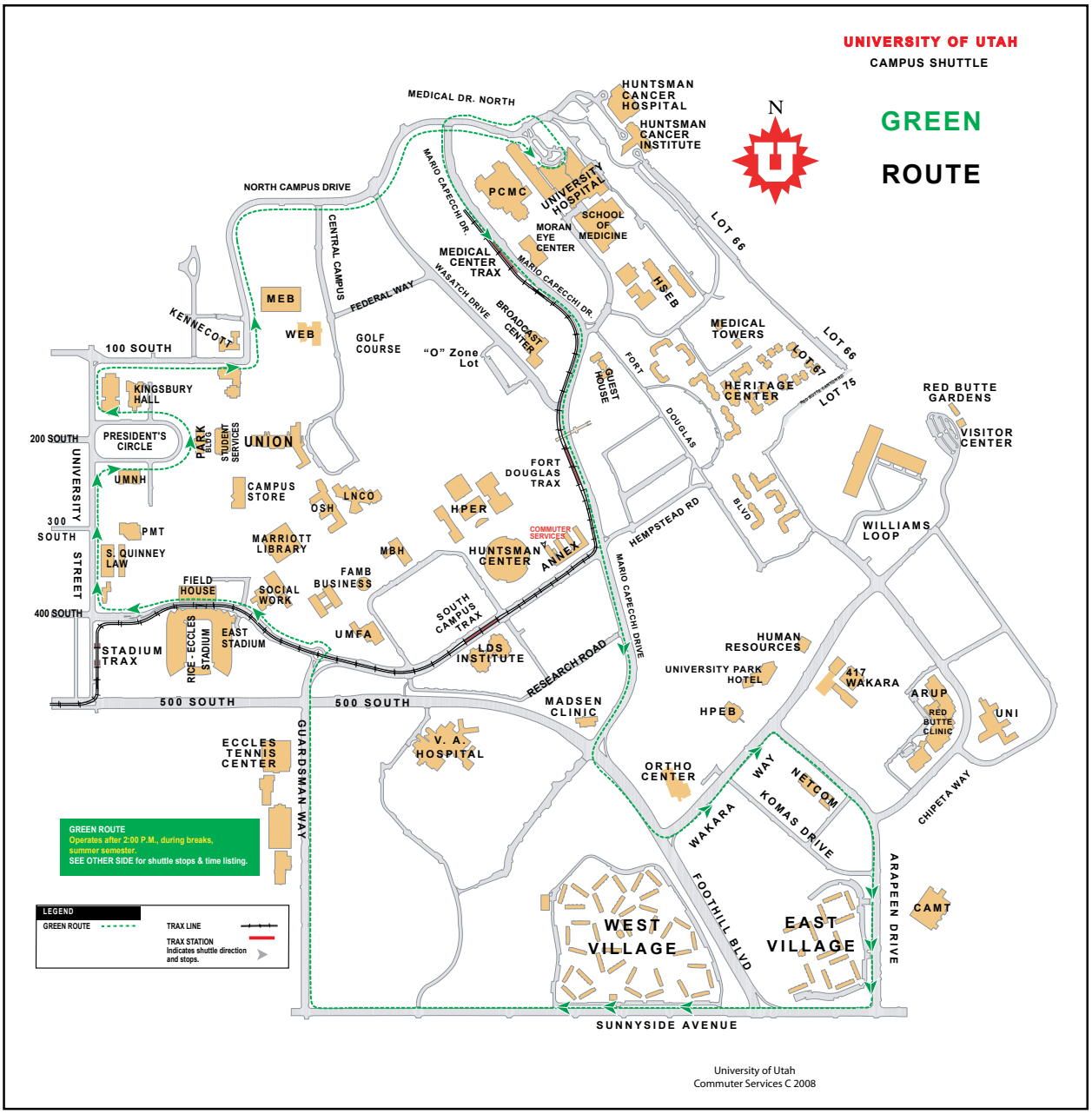
While vehicular transportation is widely used throughout the University of Utah campus, walking is the major mode of circulation by faculty, staff, and students. Access to the numerous buildings, adjacent parking lots, parking structures, UTA bus stops, and campus shuttle bus stops within this area of campus is by walking. Many pedestrian sidewalks and circulation ways are currently developed, but people tend to navigate between destinations by the shortest route, whether on sidewalks, through parking lots, or along the sides of the roads where sidewalks are provided.

The following drawing titled EXISTING SITE CIRCULATION illustrates the existing pedestrian and vehicular circulation ways in and around the University of Utah Student Life Center site. Campus Shuttle routes and schedules have been included on a separate drawing titled CAMPUS SHUTTLE HSC SCHEDULE, obtained from the University of Utah's web site.

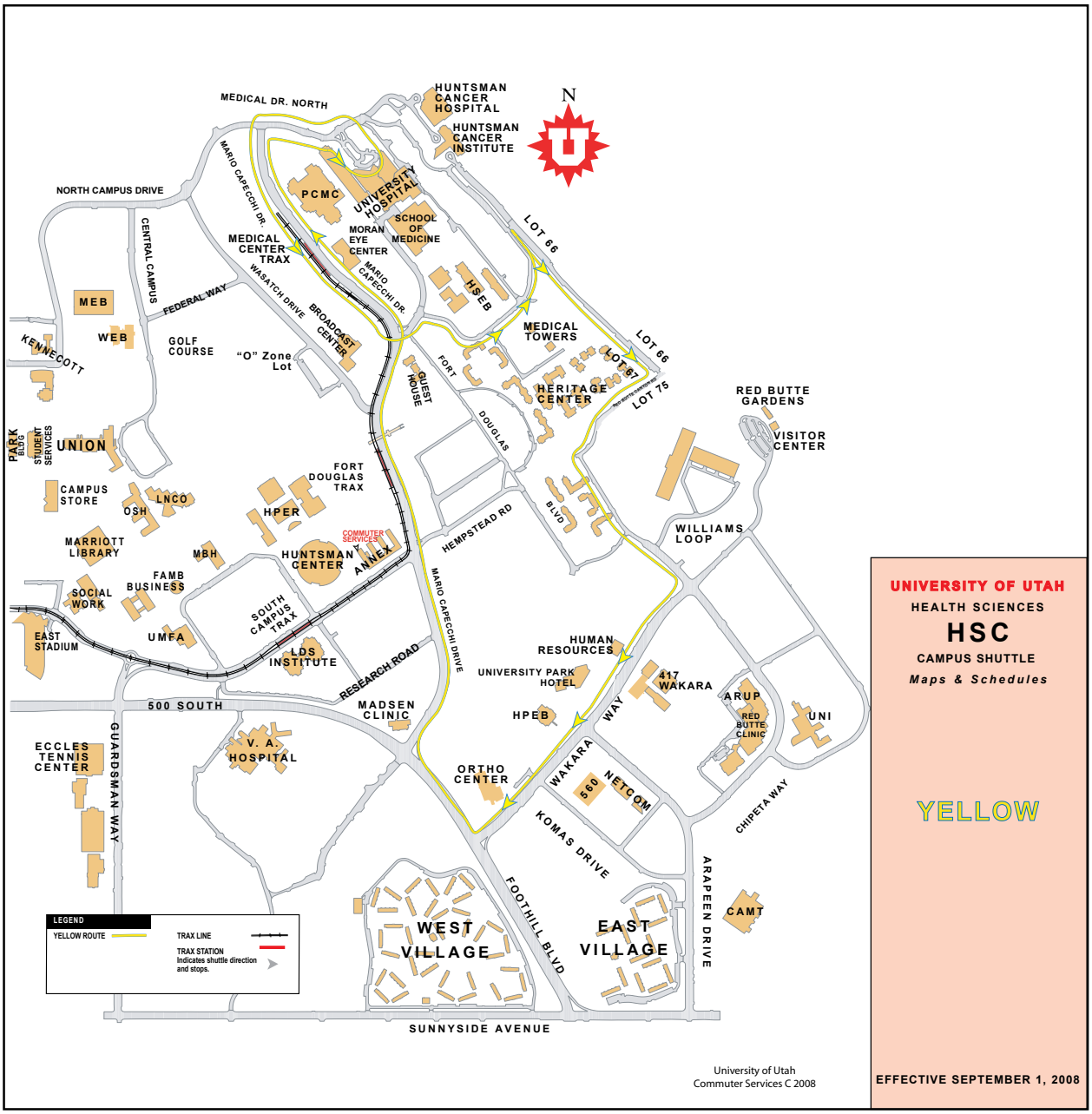
Existing Site Circulation



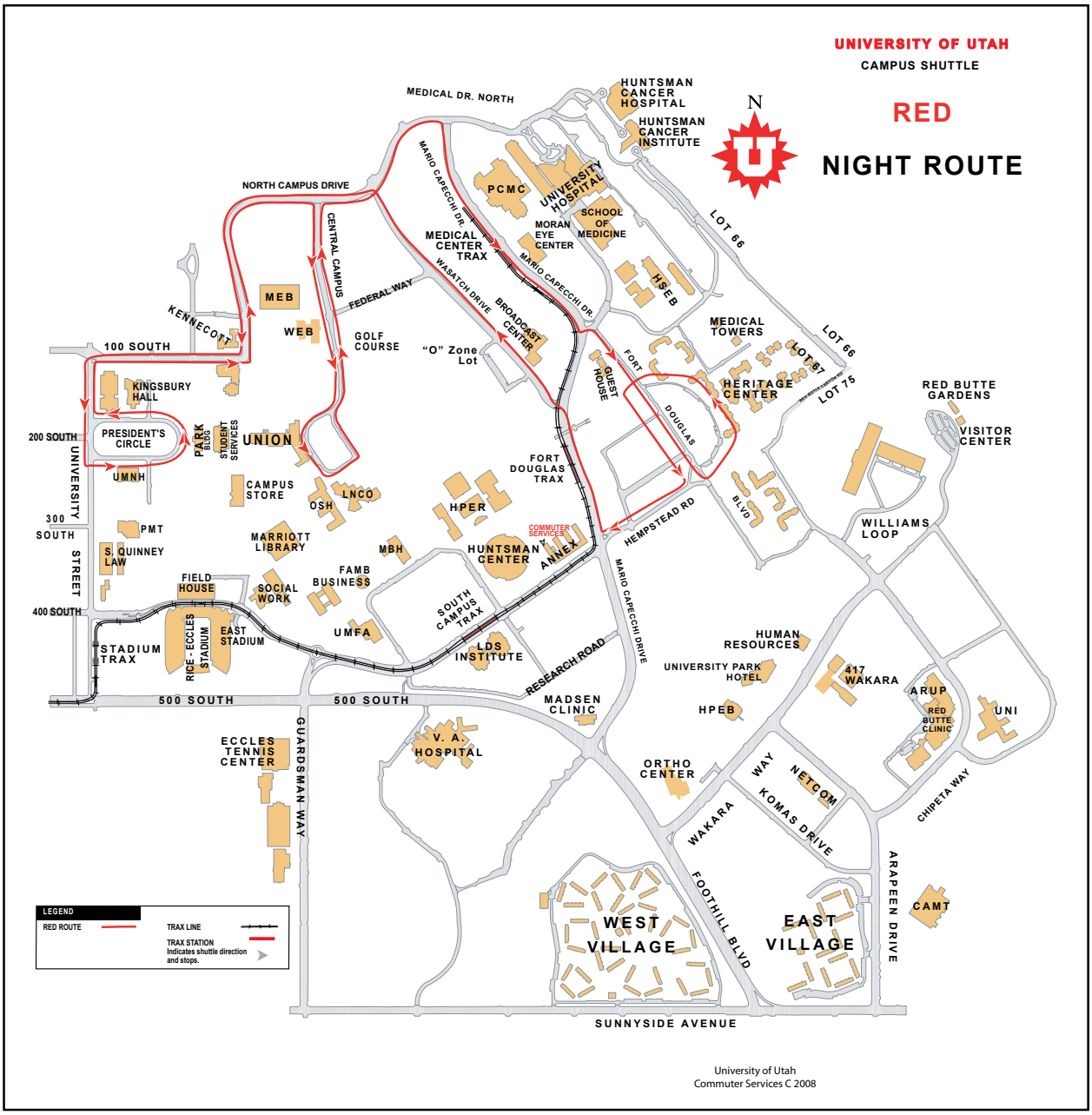
Campus Shuttle Schedule - Green Route



Campus Shuttle Schedule - Yellow Route



Campus Shuttle Schedule - Red Night Route



2.3 EXISTING SITE CONDITIONS AND PROGRAM REQUIREMENTS

2.3.1 Climate, Views, Key Open Spaces and Construction Access and Staging

Climate

The climate of Salt Lake City and therefore the site under consideration for this project ranges from winter cold low temperatures of 0 degree F to highs of 20 degrees F and to summer lows of 70 degrees F to highs of over 100 degrees F. Typical relative humidity is low, ranging from 15 to 30 %. Prevailing winds are from the northwest. Winter storms typically follow the prevailing wind pattern and come from the northwest. These storms are preceded by strong winds from the south and then changing to winds from the north as the cold front moves from north to south through the valley. This condition is sometimes reversed with cold fronts moving from south to north. The setting sun in summer months induces a solar heat gain which makes interior functions adjacent to west facing windows problematic unless mitigated by architectural and mechanical systems.

The building design must mitigate these climatic conditions. Particular attention shall be given to the safety of pedestrians using circulation paths on the north side of building during winter months from the HPER Mall, which will be the primary access location for patrons, by means of covered canopies and/or snow melt systems. Architectural programmatic design criteria are discussed in 3.3.1 CLIMATE, VIEWS, AND KEY OPEN SPACEs and architectural and mechanical programmatic design criteria are discussed in 3.3.3 MECHANICAL.

SALT LAKE CITY NWSFO CLIMATE REPORT

INTERNATIONAL STATION METEOROLOGICAL CLIMATE SUMMARY

LAT: 40 47 N	LONG: 111 57 W	ELEV: 4222 (ft) 1287 (m)

	TEMPERATURE (Deg. F)					PRECIPITATION (Inches)					WIND (KTS)		
	MEANS			EXTREME		PRECIP.			SNOWFALL		PREVAIL		MAX
	MAX	MIN	AVG	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	DIR	SPD	GST
JAN	37	19	28	62	-22	1.3	2.9	.1	13	10	SSE	9	60
FEB	43	24	34	69	-14	1.2	2.8	.1	10	11	SSE	9	47
MAR	52	31	41	78	2	1.8	4.0	.1	11	42	SSE	9	54
APR	62	38	50	85	15	2.0	4.6	.4	6	26	SSE	9	60
MAY	72	46	59	93	25	1.7	4.8	.1	1	8	SSE	9	60
JUN	83	54	69	104	35	.9	2.8	T	T	T	SSE	9	82
JUL	93	62	78	107	40	.8	2.6	T	T	T	SSE	9	64
AUG	90	61	76	104	37	.9	2.7	T	0	0	SSE	9	64
SEP	80	51	65	100	27	1.1	7.0	T	T	4	SSE	9	62
OCT	66	40	53	89	16	1.3	3.9	0	2	20	SSE	9	62
NOV	50	30	40	75	-14	1.3	2.6	T	6	27	SSE	8	51
DEC	38	22	30	67	-15	1.4	4.4	.1	13	35	SSE	8	52
ANNUAL	64	40	52	107	-22	15.6	24.3	8.7	63				

Views

The project site has partially blocked views of the Salt Lake Valley and the Great Salt Lake to the west due to the adjacent University buildings of the HPER Complex, however unobstructed views can be had from the foothills to the north and the Wasatch Mountains to the east. The proposed Athletic Track Facility to the north will not obstruct views of the foothills.

Key Open Spaces

The Long Range Development Plan of 1997 and its Supplement, published in 2004, suggest that Key Open Spaces be created in order to provide emphasis to destinations, building entries, view points, etc. This desire is further emphasized in the University of Utah Campus Master Plan.

These open spaces are defined by the figure-ground relationship between building facades and are punctuated by trees and similar landscape elements. They provide large open spaces with walkways, turf areas, and opportunities for special paving treatments, seating, sculpture, and fountains. These spaces are used for gathering, eating, sitting, people watching, and provide an opportunity for building patrons to enjoy framed urban views to a varied outer environment of mountains near and far and larger views of the sky.

Existing open spaces near and around the site of the Student Life Center, such as the open space to the northeast of the site adjacent to the pedestrian bridge and the open spaces to the north maintain critical views of the University and the surrounding landscape. These view corridors should be acknowledged in the design of the Student Life Center both in terms of the physical structure of the building as well as the potential open spaces associated with the building.

Additional open space that is to be used in conjunction with the Student Life Center, such as the existing Utes Soccer Field to the northeast of the building will be preserved as such.

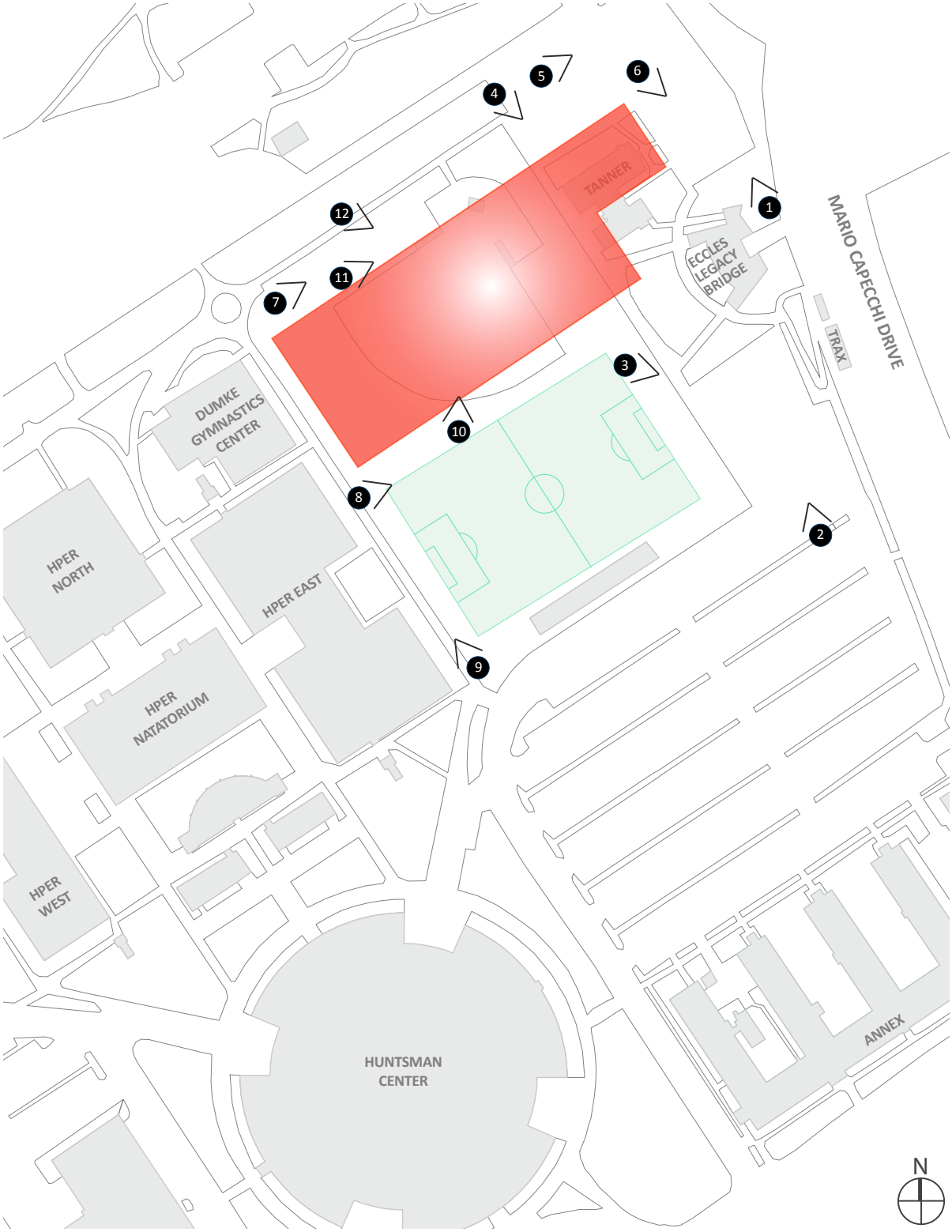
The adjacent drawing titled EXISTING SITE CONDITIONS illustrates the significant aspects of climate, views, and open spaces as well as the view point of a number of photographs taken on-site from a variety of vantage points.

Construction Access and Staging

In order to preserve a safe and functioning campus environment during construction of the Student Life Center the following items should be considered by the design team.

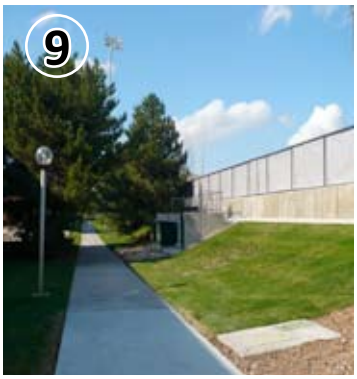
1. Construction staging for the project: The location and number of vehicles on the site pertaining to the construction of the Student Life Center should be handled in a clean and orderly fashion. The University of Utah Commuter Services directs that the most likely location for this staging will be the site for the proposed University track.
2. Construction access and haul routes to the site: The pathway system around the site is narrow and can be difficult to negotiate with large vehicles. The University of Utah Commuter Services has stated that primary construction access should come from the north with second and tertiary access from adjacent parking lots and pathways. Special attention should be given to preserving the surrounding site and repairs should be made to any location damaged during construction.
3. Safe access to parking west of Wasatch Drive: Continued safe access into the student parking lots and stalls west of Wasatch Drive during construction must be maintained.
4. Fire truck access to the site during construction: Fire truck access for the site during construction must be maintained. A clear plan indicating fire truck access and emergency routes should be developed and the defined route must remain clear during the entire duration of construction.

Existing Site Conditions Key Plan



Existing Site Conditions

Existing Site Conditions



Views from the Student Life Center

2.3.2 Preliminary Soils Report Summary

A Geotechnical Evaluation of the site for the Student Life Center was undertaken by Robert Wenzel Jr. of Western Technologies Inc. This report is based upon several borings made at the proposed site for the Student Life Center and is provided to ascertain, in general, the appropriateness of this site for this intended use.

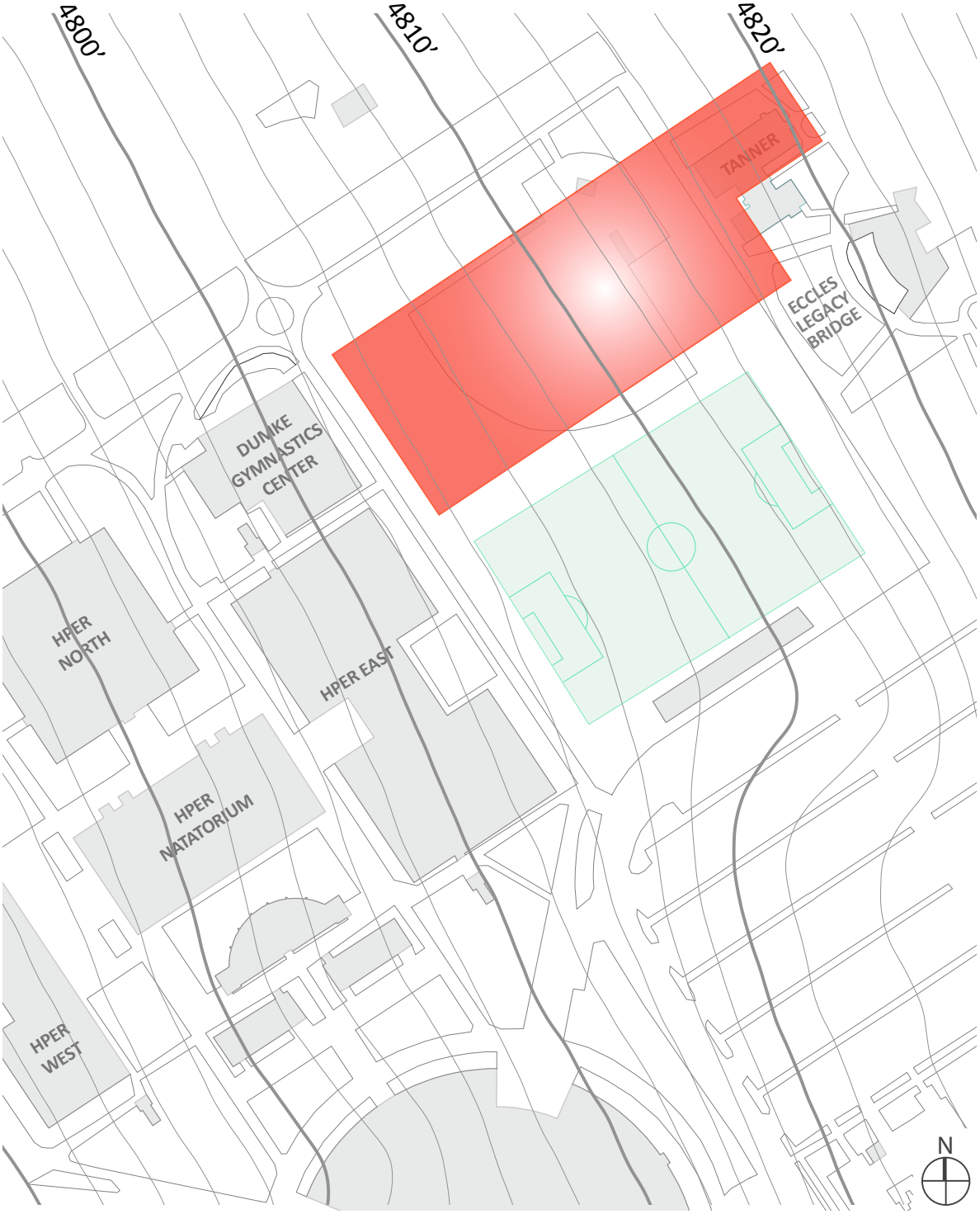
The Soils Report determined that the site is suitable for this use. A copy of the report is included in Appendix Section 6.1 Soils Report.

A final Soils Report, including a number of additional borings in more specific locations, must be conducted when the Schematic Design has progressed to a point where the final building configuration and location is established. This final Soils Report's conclusions and recommendations shall be used by the structural engineer to design the structure of this project.

2.3.3 LIDAR Survey Summary

A LIDAR survey of the proposed site for the Student Life Center is included on the following page. This survey has been provided by Phoebe B. McNeally, Ph.D., Director of the Digit Lab at the University of Utah. The survey was performed in April 2004. This survey shows the existing surface and subsurface attributes of the site and is to be used for definition of existing site conditions during the programming phase of this project. The spacing of the LIDAR points was approximately 1 meter. The illustration included on the following page represents the LIDAR STUDY in plan and has been reduced in size in order to fit the page formatting constraints of this document.

LIDAR Survey



2.4 SITE UTILITIES

Site Civil Utilities

Proposed Relocations

The existing site area contains utilities that serve the existing structure that is to be removed. The utilities, water, sewer, and natural gas are to be terminated at the mains. The sewer lateral is to be abandoned. The water lateral is to be capped at the main. The natural gas service line is to be capped at the main.

Storm Drain

The existing site consists of parking and playing fields. The improvements proposed for the facility will not increase the storm drain run off for the parking areas. The facility itself will replace turf areas with hardscape. The storm water run off from this hardscape is to be captured and diverted to bio-swale areas. The bio-swale area will be capable of recharging the ground for the 10-year, 24-hour expected rain fall event. Provision for the storm water run-off from the 100-year recurrence, 24-hour event is to be made such that it has a safe path of discharge to surrounding areas. Locations of the bio-swale retention areas are to be such that they are sensitive to the existing HPER buildings to the west. Locations should preferably be as far to the east as possible.

Sanitary Sewer

The existing sanitary sewer mains in the area of the new facility have adequate capacity to accept discharge from the facility. Sizing of the sewer laterals to the facility are to be capable of carrying the backwash flow from the pool filters without causing a surcharge of pressure in the existing sewer main. Preventing a surcharge is to be accomplished through flow restriction of the pool filter backwash cycle or detention within the facility using a concrete receiver. This receiver would nominally be 4 foot by 4 foot by 6 feet deep with the sanitary sewer connected to the receiver basin.

Culinary Water

Culinary water and fire protection water to the facility are to be connected to the existing main located in the HPER Mall on the north edge of the facility. Adequate capacity for service to the facility is available in this water main. A fire main of 8” minimum diameter is to be installed around the perimeter of the facility to provide fire hydrants for the fire department vehicle access routes required by the IFC. It is anticipated that four fire hydrants will be added to the loop for the facility. These hydrants are to be constructed to University standards and verification of placement is to be coordinated with the Campus Fire Marshal. Location of the hydrants is to be coordinated with the final definition of the access for fire department use. The loop is to be continuous around the building for hydraulic considerations even though that piping passes beneath the adjacent athletic field to the south of the proposed structure.

High Temperature Hot Water (HTW)

The proposed facility is to be connected to campus high temperature water. University standards are to be strictly adhered to for the connection to the mains. The connection will require the installation of an underground concrete vault where shut-off valves for the laterals are to be located. The existing HTW mains in the HPER mall located north of the proposed facility are currently proposed to be installed in a concrete tunnel. A concrete tunnel is to be extended from the new HPER mall tunnel to the proposed Student Life Center facility. The material to be used for the new facility is to match the latest University Design Standards. The current standards provide for schedule 40 steel pipe. Connection of the high temperature water piping to the facility requires an entry pit or a basement area for the piping to enter the building. High temperature hot water lines serving the building shall be sized for 50% future expansion.

Chilled Water

The proposed facility is to be connected to chilled water through the HPER tunnel chilled water loop. An 8 inch chilled water line is in the Campus Master Plan for this building. Water shall be supplied at 44°F and shall be returned to the system at 54°F. This piping is to be located in the HPER mall tunnel and connected to the proposed facility through the same tunnel as the HTW or may be direct buried per the campus standards. Chilled water lines to the building shall be sized for 50% future expansion.

Natural Gas

The need for natural gas has not been requested for the planned facility.

Site Electrical Utilities and Telecommunications

Site Medium Voltage Service and Distribution

The new Student Life Center shall be designed for connection to the campus 12,470V distribution system which presently does not exist in the near vicinity of the new building. There are plans under a separate project to provide a new feeder from the Red Butte Substation to feed the existing HPER complex, however the timing and funding for this project is presently unknown. If this new feeder does become available in time for this project, then connect to this feeder for the Student Life Center. If the new 12,470V feeder is not available in time for the project, then the contingency plan is to design for initial connection to the 7,200V system which is available in existing manholes 35 or 36 located north and east of the new building. This will require careful coordination with campus facilities to ensure that the 7,200V feeder has adequate capacity at the time of design and construction. Dual-tap transformer(s) shall be specified so that when the 12,470V feeder is available, the transition to that system can easily be made. Fully involve the campus engineering and electrical shop on the final design approach to ensure that it meets that latest utilities master plan and is coordinated with any other simultaneous projects.

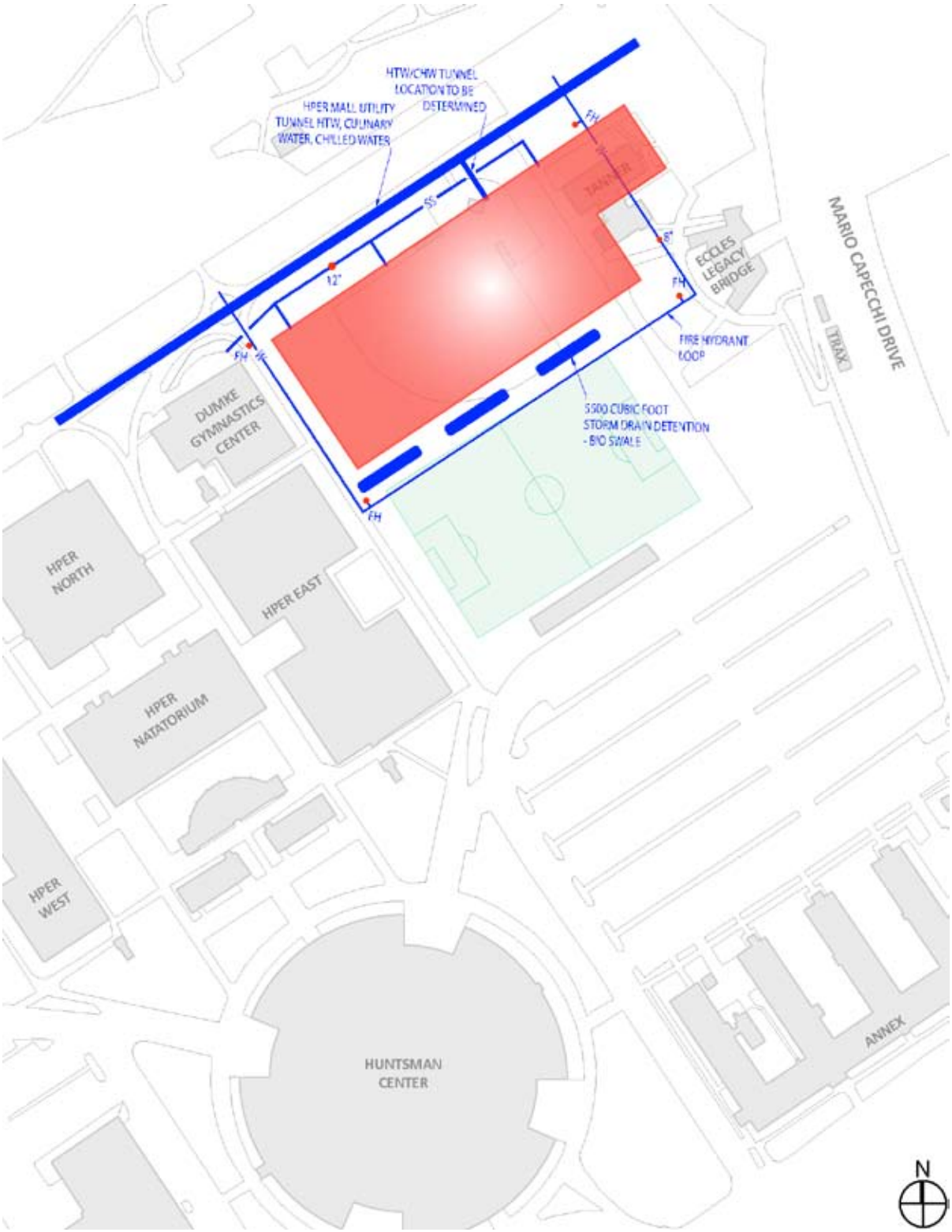
The proposed location for the new facility sits over the top of an existing 7,200V power duct bank, running between manholes 35 and 351 at the west end of the new building. If the building cannot be situated such that this duct bank may remain undisturbed, then a new duct bank will be required. The new duct bank shall run between these two manholes further west (outside of new building footprint) and consist of a minimum of (6) 5” ducts, concrete encased, with new cabling in one duct spliced in manhole 35, and connected to an existing switch in manhole 351. Depending on where the new service transformer(s) for the building will sit, a new manhole can be installed in this new run as a means to branch off of this duct bank to feed the new switch and transformer(s) required for the project.

The campus preference is to use above-ground, pad-mounted transformers and switches as opposed to vault-mounted equipment for improved safety and maintainability. Locate the pad-mounted equipment in screened enclosures in coordination with the architectural design and building aesthetics. Provide new VFI, solid-dielectric type switch to serve the transformer(s) for the new building. Consider two service transformers to provide 277/480V and 120/208V secondary services to the building, as the campus discourages the use of indoor, dry-type step-down transformers.

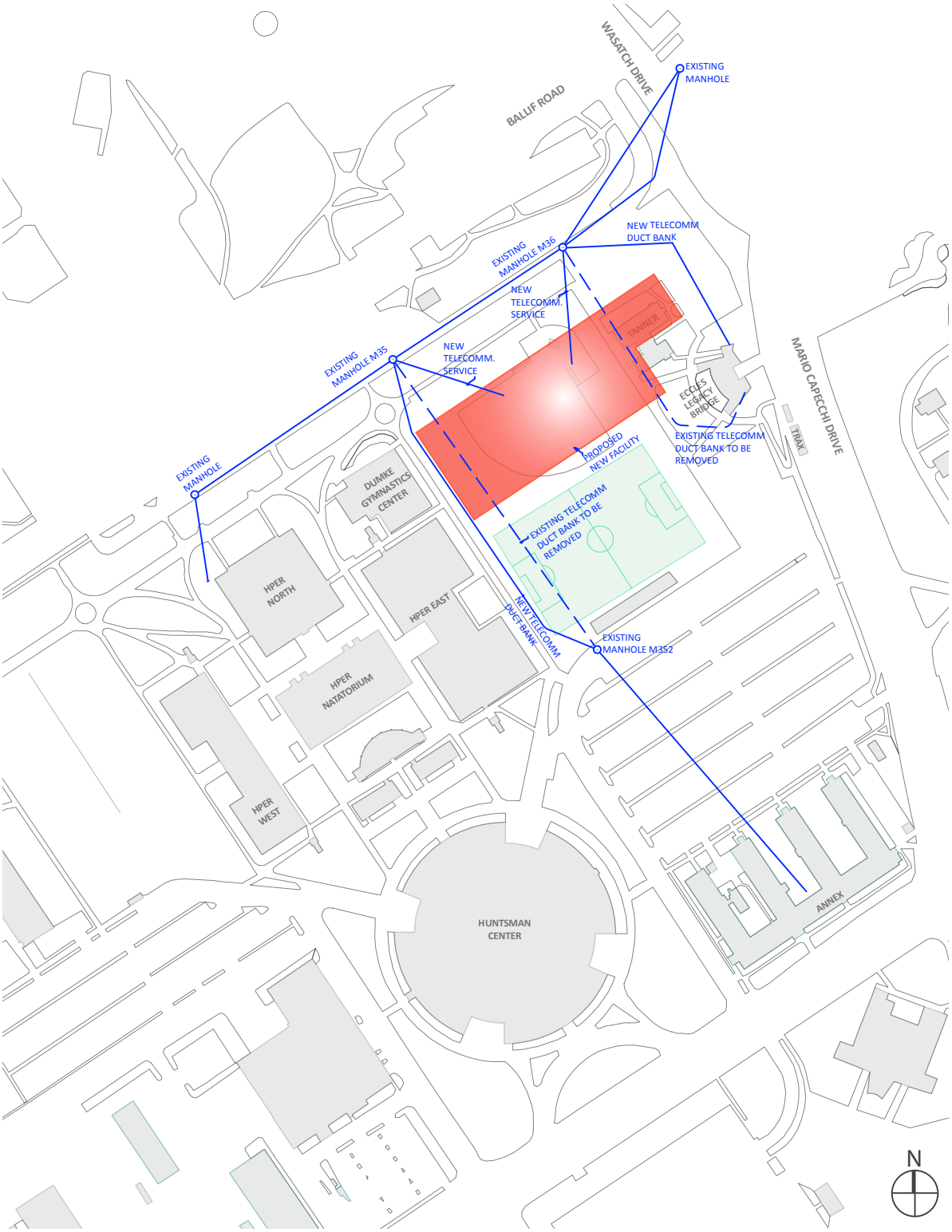
All new duct banks shall be consist of 5” conduits, concrete encased, with at least one spare conduit. Maintain a looped system on all existing and new feeders. Comply with all other Campus Design Standards for new duct banks and manholes.

The following drawings both titled ELECTRICAL SITE UTILITIES - TELECOMMUNICATIONS PLAN and ELECTRICAL SITE UTILITIES - POWER PLAN illustrate the utilities for this project.

Civil Site Utilities



Electrical Site Utilities - Telecommunications Plan

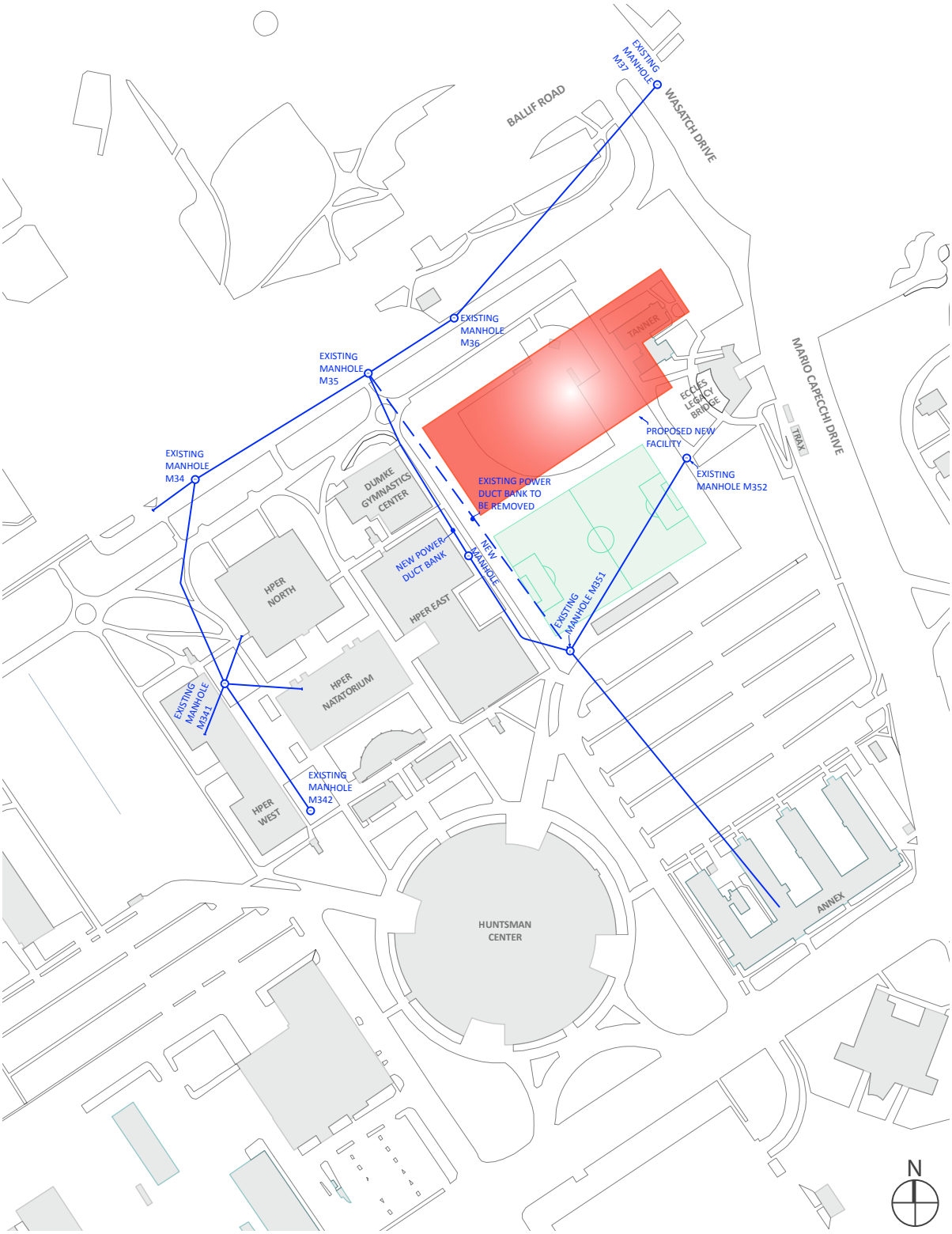


Site Telecommunications

Similar to the power utilities, the planned building location puts the building over the top of existing telecommunications duct banks. On the west side a ductbank runs between manholes 35 and 352 (located northwest and southwest of the new building, respectively) and then continues south to the Annex Building. Provide a new duct bank consisting of (6) 4" conduits between these two manholes, running around (west of) the new building footprint. On the east side a duct bank from manhole 36 runs south to feed the Tanner Building and Legacy Bridge. The Tanner service will be removed as part of the demolition of that building, but the Legacy Bridge will require a re-routed service around the east side of the new building to maintain telephone lines to the elevator and emergency phones at the bridge. A duct bank of (2) 4" conduits will be sufficient for that purpose. Coordinate with campus Netcom for the relocation / replacement on the existing telecommunications lines.

Provide dual service entrance into the building from existing telecommunications manholes 35 and 36 (located northwest and northeast of the new building, respectively). Provide (4) 4" conduits from each manhole into the main telecommunications room for the new building.

Electrical Site Utilities - Power Plan



2.5 PROPOSED SITE CONSIDERATIONS

2.5.1 University of Utah Campus Master Plan [1] - Programmatic Requirements

The 2008 University of Utah Campus Master Plan has identified the Student Life Center as one of the "Transformative Projects" for the campus to be undertaken over the next 20 years.

According to the Campus Master Plan, the Student Life Center is a critical project in terms of consolidating University wide recreation facilities as well as a critical linkage between the Fort Douglas student housing to the east and the greater campus to the west. This will be accomplished by a "positive interface" with the HPER Mall, which will also receive a new design as part of a separate project at an unspecified point in the future.

Student Life Center

The Campus Master Plan defines the Student Life Center as:
"A large-scale, multipurpose recreation facility which features 150,000 square feet of indoor exercise equipment with cardio machines, circuit and free weight areas, a climbing wall, natatorium with lap pool, leisure pool, running track, sports courts for basketball, soccer, volleyball, lacrosse, multi-purpose room / dance studio, wellness clinic, racquetball courts, locker rooms, classroom and meeting rooms, administrative offices, and a student lounge zone."

The site for the Student Life Center is at present occupied by the Women's Softball Field, which is located adjacent to the HPER Mall on its east end. The softball field will be ultimately be displaced by the Student Life Center and relocated in the proposed Central Playing Fields (See Campus Master Plan). Additionally, the Virginia Tanner Creative Dance facility (Building #101) will be demolished to allow for the Student Life Center.

The Campus Master Plan indicates that there exists the potential of connection between the "upper" and "lower" areas of campus by way of the HPER Mall and the George S. Eccles 2002 Legacy Bridge; the Student Life Center will play a critical role in the success of this initiative. The connection will occur as pedestrian circulation flows through the structure proper. While the circulation corridor might be thought of as a divisor, creating two sections of the building, it actually perpetuates the converse. The passage through the building tends to connect or even unify not only the structure but its uses alike, ultimately reinforcing the fact that this building facilitates activity and recognizes the user/pedestrian as most important.

The north façade of the Student Life Center is intended to front the HPER Mall which helps to define the Mall, but also allows entrance and engagement to passersby.

Parking for the Student Life Center will be accommodated at Lot # 22, which is adjacent the Huntsman Center and at Lot #24, located to the north side of the HPER Mall. The Campus Master Plan indicates that by 2025, both parking lots will be displaced by campus developments.

1 The updated Campus Master Plan, replacing the Long Range Development Plan, was approved by the University's Board of Trustees on June 9th, 2008 and by the State Board of Regents on September 5, 2008. http://www.campusmasterplan.utah.edu/

2.5.2 Parking - Access and Requirements

Introduction

The University of Utah in the forthcoming Campus Master Plan has indicated that parking comes at a premium cost as the majority of faculty, staff and students overwhelmingly drive private vehicles which require parking facilities. As the University continues to expand and diversify its educational goals and portfolio, existing parking lots are sacrificed to make way for new building and the site for the new Student Life Center is no exception.

Proposed Strategies

The current design strategy for the Student Life Center claims a small portion of surface parking lot #23 which is east of the softball diamond and north of the pedestrian bridge. Lot# 23 will continue to service the site as the majority of parking will remain. Additional parking can be found in adjacent proximities to service the Student Life Center.

The University of Utah Campus Master Plan has indicated that surface parking Lots #24 & #25 which are north of the site are currently under-utilized and therefore can serve as a means of parking for the new Student Life Center. This strategy can alleviate the potential backups in parking as a result of the loss of Lot #23 east of the site. In addition to Lots #24 & #25, Lot #22 which is adjacent to the Huntsman Center Arena will serve to accommodate parking requirements for the new Student Life Center. The Campus Master Plan indicates that by 2025 Lots #22 &#24 will be displaced. The Student Life Center team is committed to promoting the use of alternative modes of transportation both in the near and long term future, consistent with the Sustainability goals stated in the 2008 Campus Master Plan.

2.5.4 Emergency and Service Access

Service Access

The site and its neighboring buildings can be accessed by service vehicles by way of Wasatch Drive to Ballif Road, which is located directly to the north of the existing site and parallel to the HPER Mall. Ballif Road is the only means of vehicular ingress or egress for the site of the Student Life Center.

Emergency Access

Emergency access to the site can be found to the north of the site by way of Ballif Road, to the east of the site by way of Wasatch Drive, to the south of the site by way of the soccer field and limited access to the west due to the relative close proximity of the Dumke Gymnastics Center (Building 097) and HPER East (Building 091).

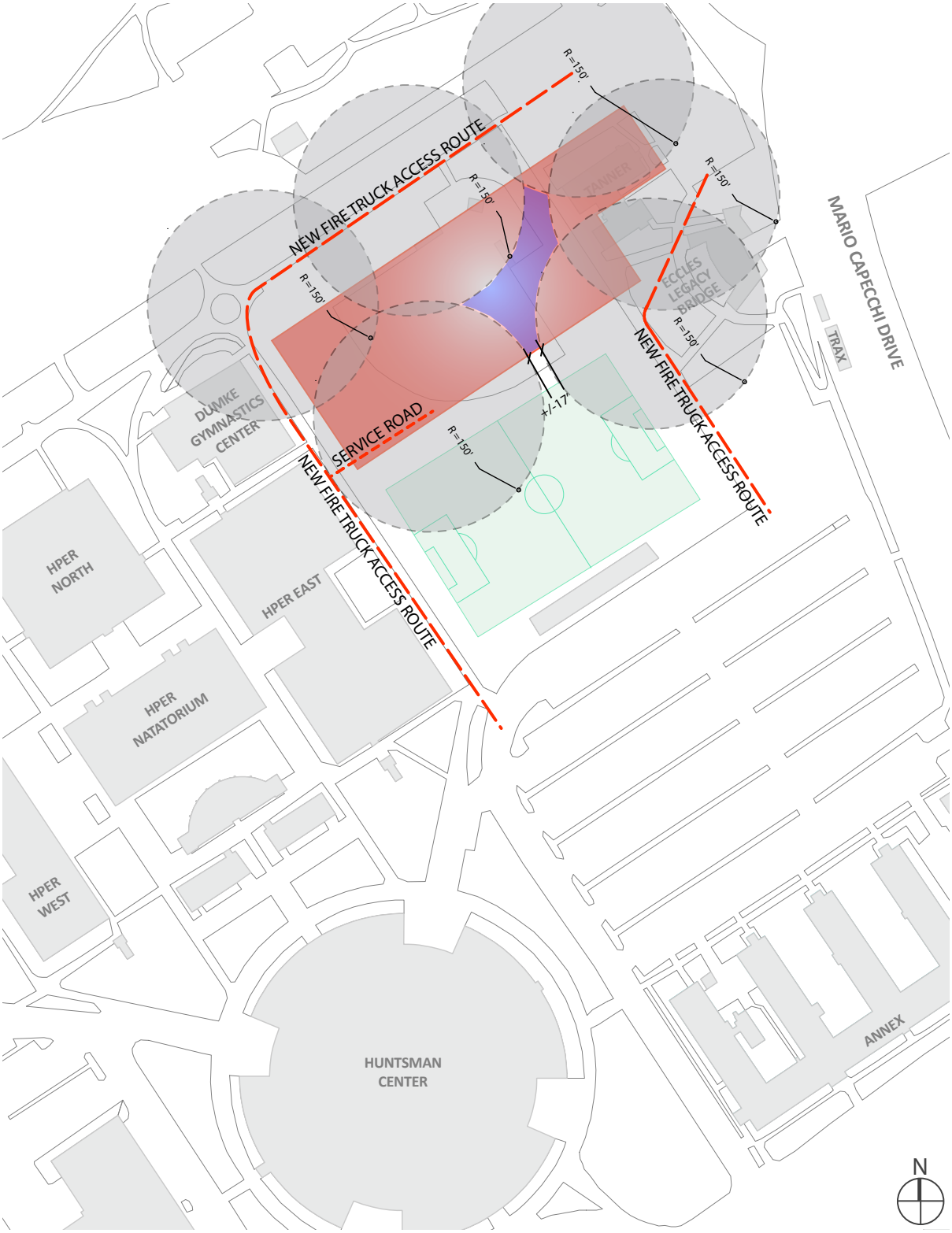
The University of Utah Campus Master Plan indicates that service access is to be found by way of Parking Lot #77 via a new service drive which will be located between the existing HPER buildings and the west boundary of the Student Life Center.

Primary access for fire apparatus shall be provided at the Ballif Road and the proposed service access discussed in the previous paragraph. The 2006 International Fire Code, Section 503 requires fire apparatus access roads shall be provided when any portion of the exterior wall of the first story of a building is located more than 150 feet from the primary access.

The resolution of the fire apparatus access shall be made by discussions with the University of Utah Fire Marshal who will then coordinate with the State Fire Marshal and the Salt Lake City Fire Department Chief during the Schematic Design Phase of the project.

The following drawing titled EMERGENCY AND SERVICE ACCESS illustrates the significant aspects of the site in regards to emergency and service access.

Emergency and Service Access



2.5.5 Eccles Broadcast Center Microwave Transmitter Exposure

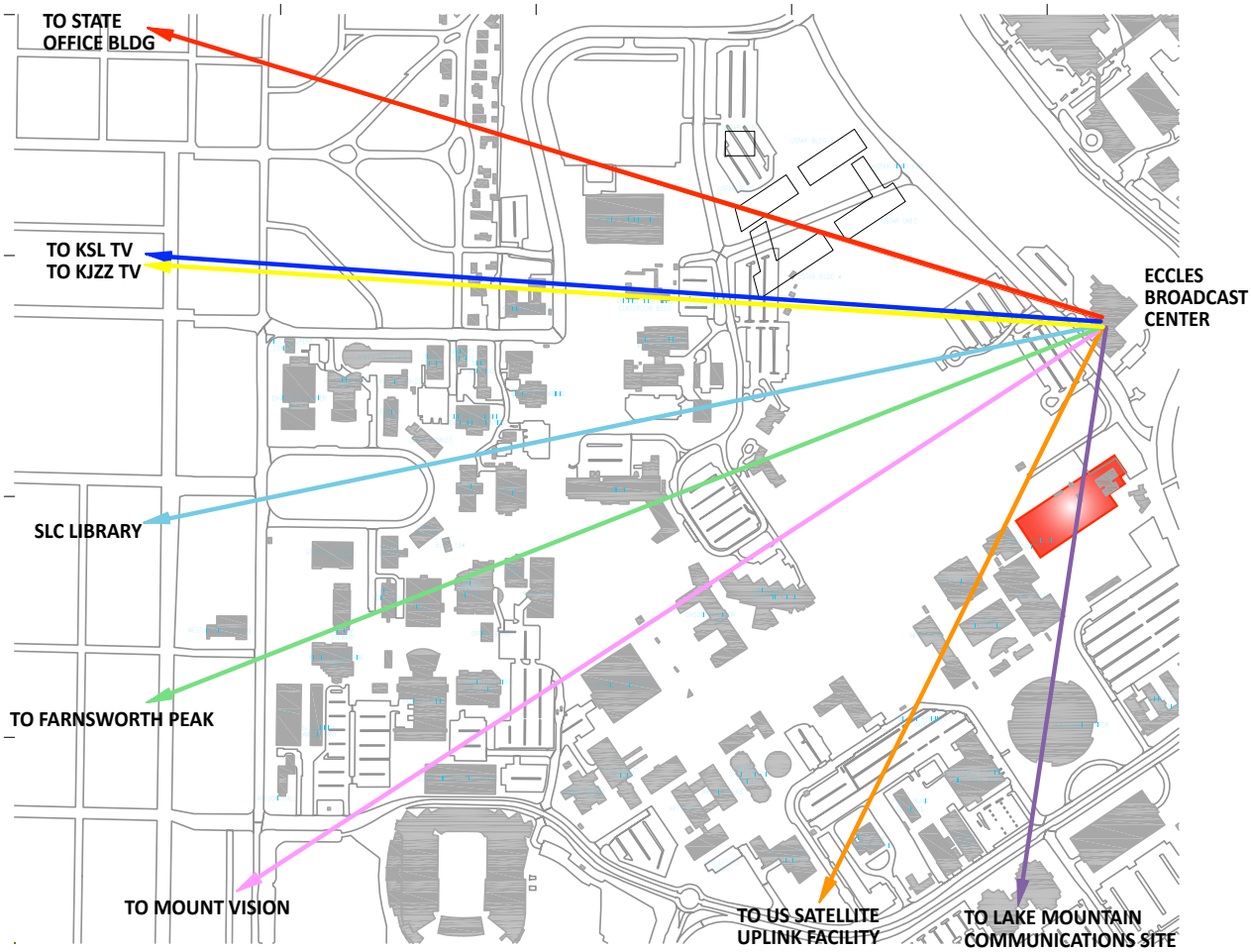
An Existing Microwave Antenna Pattern Site Plan with associated US Satellite Uplink & Lake Mountain Communications Site Microwave Antenna Elevations was produced by Ken Garner Engineering Inc. on September 7, 2007 for the University of Utah. The plans and elevations indicate the following:

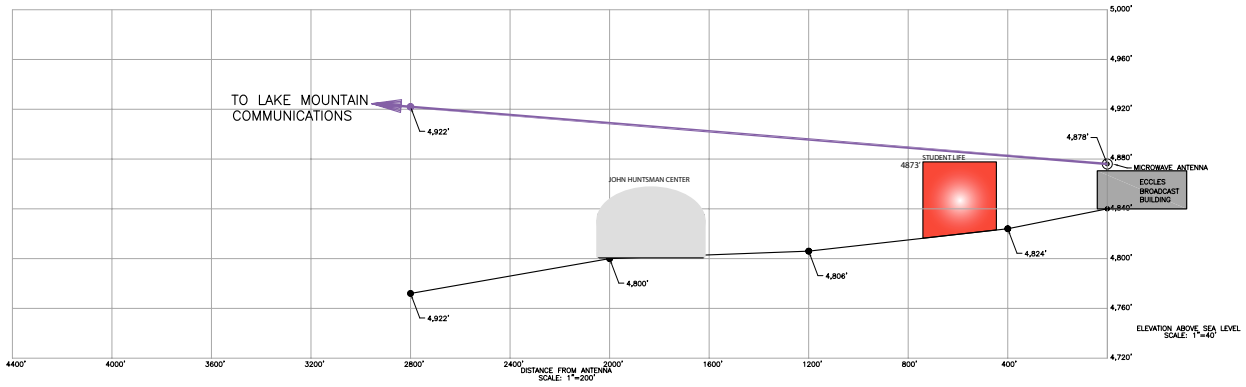
Line of Sight Microwave Communication Transmission Beams

- Transmission beams emanate from the Eccles Broadcast Center in a south-westwardly direction across the project site of the Student Life Center.
- Height restrictions – The Student Life Center is approximately 55'-0" tall measured from grade elevation (4,820') to the highest point of the Student Life Center (el. 4,875'). The nearest point that the transmission beams approach the Student Life Center is approximately at elevation 4,885', 10' above the building. At its current height, the Student Life Center will not impede broadcasting transmission.

Lastly, all information should be confirmed by the owner during the design phase of the Student Life Center in order to ensure that broadcasting will not be interrupted.

Eccles Broadcast Center Microwave Transmission Study





LAKE COMMUNICATIONS SITE MICROWAVE ANTENNA ELEVATION

2.5.5 Site Rendering

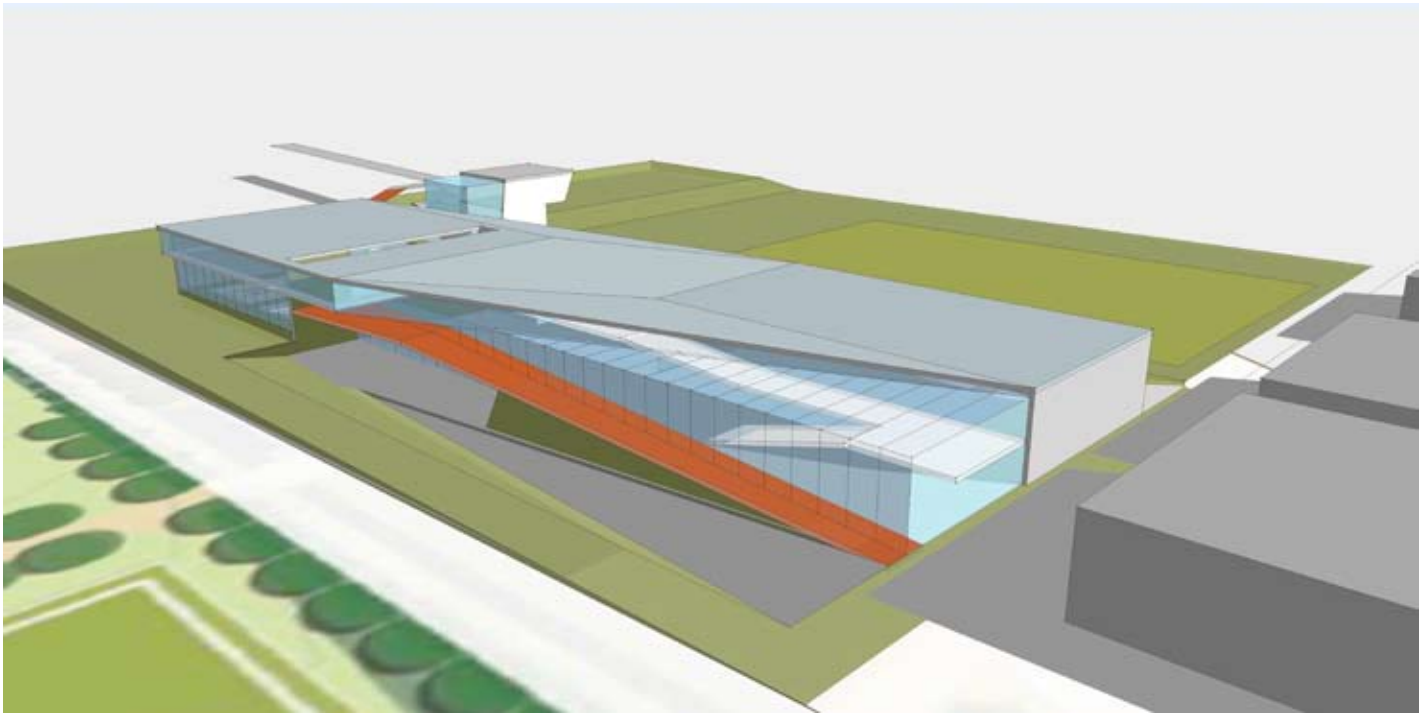


Table of Contents - Section 3

3.0 Total Facility Building Analysis

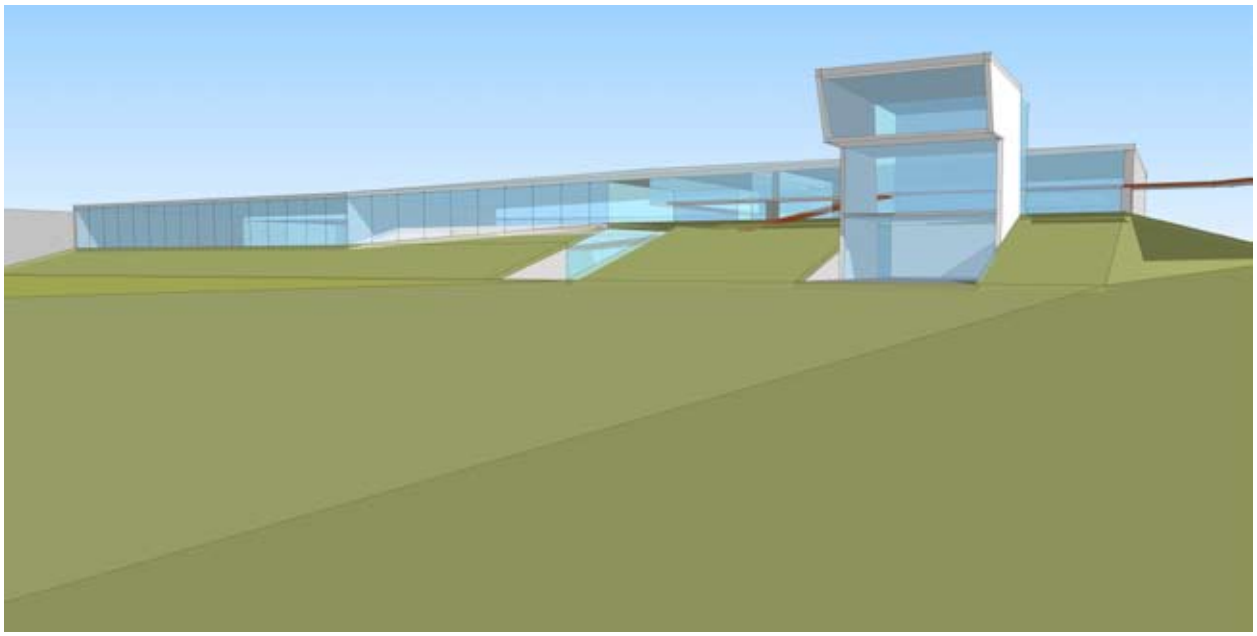
3.1 ARCHITECTURAL PLANNING ISSUES

3.1.1 Building Forms and Massing

Recreation buildings are typically characterized by large volumes and extensive wall planes. The two gymnasiums are the largest elements and smaller, lower volumes should be layered in front of these elements to maintain a human scale in the design. The Outdoor Recreation Program, with the adjacent climbing wall, should be a prominent element on the east side of the building, advertising the activity inside to those passing by on Wasatch Drive. The interior spaces should be open to various program elements creating an exciting environment throughout the building. Window glazing should be used to break up the solid planes and should be prominent along the HPER mall, creating visual connections between the indoor and outdoor activities. The fitness and multipurpose rooms should be located to take advantage of the views to the mountains. A design that includes plazas, low walls and landscaping will create a human scale to the building and engage the HPER mall.

Perspective View Looking East

Perspective View Looking North



3.1.2 External Relationships/Circulation

The new Student Life Center will have a large impact on student life at the University of Utah. The building will have external relationships with student housing, recreation, and other student life buildings, including the Student Union, the HPER complex, and the proposed HPER mall. The building is located such that it can become a pedestrian connection between student housing to the east and south and the rest of campus. It is located on a major circulation spine and will serve as a gateway to the campus.

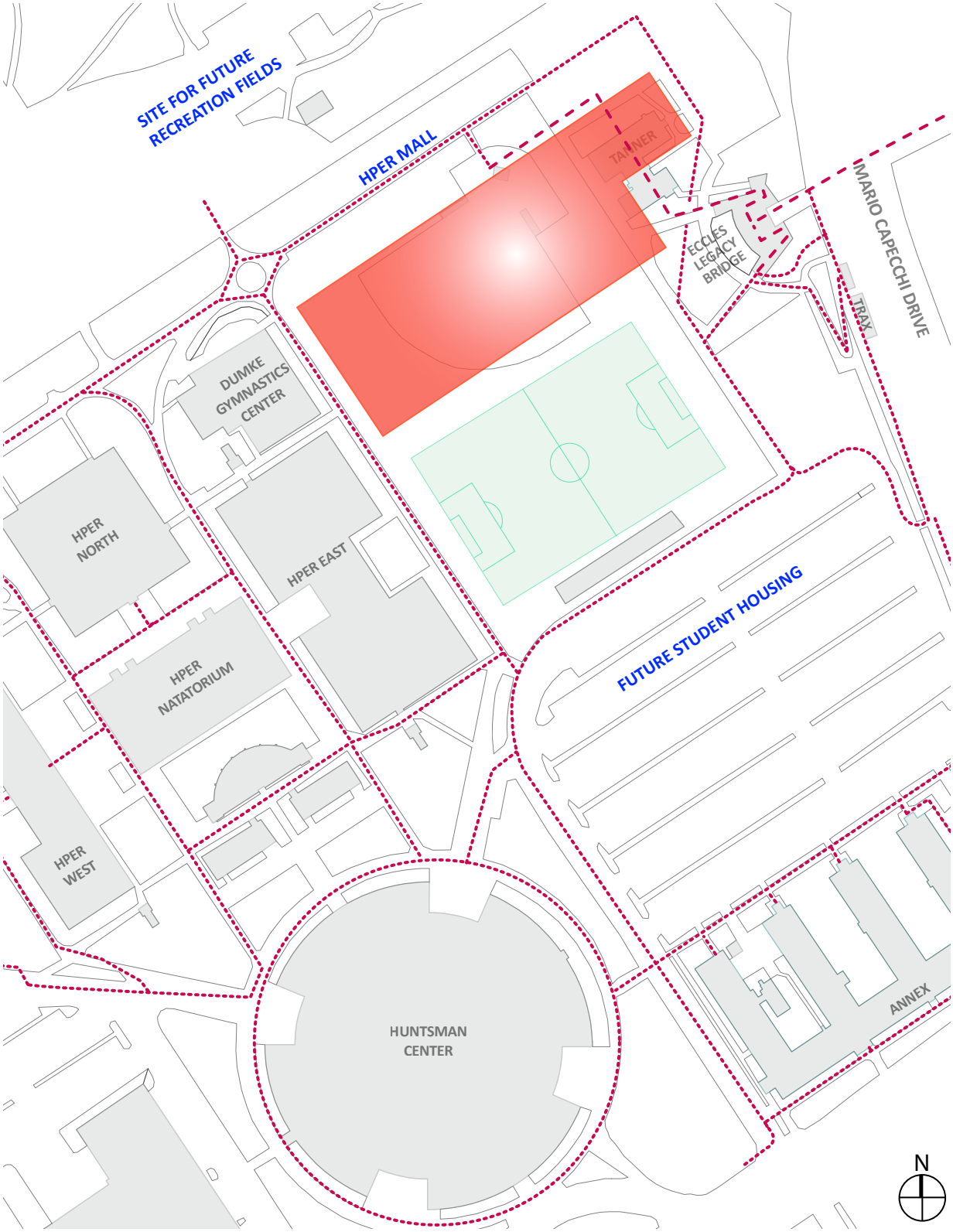
The proposed location for the Student Life Center is along a major circulation route for students approaching campus. They approach from a variety of directions, including student housing across Wasatch Drive, the TRAX station to the south of the site, and future residential halls planned to the south of the site. The Student Life Center should acknowledge and integrate these circulation patterns in its design.

The majority of student housing is located east of the site across Wasatch Drive. The existing circulation path for students is to cross the Legacy Bridge, pass the proposed site for the Student Life Center, and use the HPER mall to connect to the rest of campus. The transition from the Legacy Bridge to the HPER mall can be an exciting connection through the building and allow students glimpses of the activity taking place inside.

A TRAX station is located southeast of the site and riders currently walk through parking lots to reach the HPER mall. New student housing is planned to replace these parking lots and will shift the circulation patterns north towards the Student Life Center. The design should allow students approaching from the south to pass through the building with glimpses into the lobby and outdoor recreation area. This passage can combine with the students approaching from the east off the Legacy Bridge.

New recreation fields are planned north of the site across the HPER mall. Once expansion space is available, additional recreation fields to be used for intramural sports should be located to the south of the building at the current Ute's soccer field. The student housing located to the south would be in close proximity to the fields and the building. A north south connection through the building will become a major circulation corridor for a variety of people on campus.

External Relationships/Circulation



3.1.3 Internal Relationships/Circulation

The program spaces for the Student Life Center include large recreation spaces such as the two gymnasiums (19,760 SF and 13,520 SF), the weight / fitness room (13,300 SF on the ground floor), and the pool and pool deck (11,600 SF). These spaces should be, as much as possible, located on the ground floor of the facility. Other ground floor spaces should include the entry lobby and lounge, the locker rooms (required by code to open directly to the pool deck), the equipment issue / storage / laundry, the pool support spaces, and the outdoor recreation spaces including the climbing and bouldering walls. The site area as defined in the Master Plan does allow for the location of these spaces on the ground floor. Spaces that are appropriate for the 2nd floor of the facility are the jogging track, the multi-purpose rooms, a portion of the weight / fitness room (6,700 SF), and the wellness / health / athletic training spaces. The racquetball courts can be located on the 2nd floor but a ground floor location is preferable. The administration suite can be located on either floor, but may be more appropriately located on the ground floor adjacent to the entry lobby.

The width of the site for the Student Life Center as outlined in the Master Plan is 200'. This width is the very minimum for allowing for an east-west circulation corridor through the middle of the site with program spaces on either side of the corridor. The width of the gymnasiums alone is 105' – 106' and with a corridor width of 20', this leaves 74' – 75' for program spaces on the other side of the corridor. This is sufficient width for spaces such as the weight / fitness room or the entry lobby / lounge, but there is not enough site width to place a gymnasium on both sides of a circulation corridor. The east-west circulation corridor may be crossed with north-south corridors as necessary in order to provide access into spaces such as the locker rooms, racquetball courts, and multi-purpose rooms.

The width of the main east-west circulation corridor or spine should have be a minimum of 20' to allow for not only circulation but also room for stretching and distributed cardio-vascular equipment. If stretching and cardio-vascular equipment areas are included in the main circulation corridor, enough clear width needs to be maintained for circulation purposes to satisfy Code requirements for the required width of the corridor (15' is recommended for the width for purely circulation purposes). Portions of the main east-west corridor may also contain seating areas for sitting, lounging, and studying. This can also be accommodated with "nooks" off of the main circulation corridor. The north-south cross corridors should have a minimum width of 15'. If any of these cross corridors are also used for stretching or to place cardio-vascular equipment in them, this width should be increased to 20'.

Vertical circulation in the form of stairs and elevators should be located at strategic points along the main circulation corridor. Stairs are recommended at both the east and west ends of the corridor with an additional stair at the entry lobby area. Elevators are minimally recommended at the entry lobby area and at the west end of the circulation corridor or cross corridor. The elevator at the west end of the corridor may be required to be a 3-stop elevator if the building is laid out with the west portion of the facility having 3 floors (see the description of block plan schemes C, D, and E in Section 4.2 of this Report). One of the elevators should be sized to accommodate 5,000 pounds of weight that can be used to transport equipment between floors, such as cardio-vascular equipment. The other elevator can be sized to accommodate 2,500 pounds of weight which will also accommodate the disabled in a wheelchair and an emergency ambulance gurney (for emergency purposes). A third elevator may need to be provided at the east end of the circulation corridor at the outdoor recreation area.

Space should be provided for the pool and pool deck (which can be added in a Phase II of the project) along with the pool support spaces (filtration, storage, aquatic coordinator and lifeguards). The most appropriate location for the pool is at the west end of the site so that the mass of the rest of the Student Life Center is on the east side of the pool and deck and will not cast shadows in the afternoon on the pool. This is important if the pool is to remain as an outdoor pool so that afternoon sunbathing is not affected by shadows. Additional outdoor space adjacent to the pool deck should be

provided for social space and for barbecues. The east-west circulation corridor can terminate at its west end at the pool area. The most appropriate location for the outdoor recreation spaces is at the east end of the site in the area currently occupied by the Virginia Tanner Dance Building. The parking lot on the north and east sides of the Tanner Building will remain and can be used to provide pick-up and drop-off access and parking for customers that are renting equipment from Outdoor Recreation. The climbing and bouldering walls should be located adjacent to the outdoor recreation spaces as these walls will be supervised by the Outdoor Recreation staff. We recommend extending the site that is outlined in the Master Plan to include the area that is occupied by the Tanner Dance Building.

The most appropriate location for the main entrance to the Student Life Center is at the north side of the site for the building facing the HPER Mall. This is the location that is outlined in the Master Plan. Since this facility is a single point of entrance / secured entrance type of facility the location for the main entrance is very important. The entrance could be located in the middle of the facility or closer to the point where the continuous pedestrian connection from the Legacy Bridge (as described below) comes through the facility and meets the HPER Mall. Secondary entrances should be provided to the outdoor recreation area on the east side of the facility, and the pool on the west side of the facility, especially if the pool is to remain as an outdoor pool. This is important if the pool is to be rented out to groups that do not require access into the remainder of the Student Life Center.

The Master Plan advocates that the Student Life Center provide continuous pedestrian through circulation from the Eccles Legacy Bridge to the HPER Mall. If the extension of the Legacy Bridge is to take place from the top level of the bridge, it is possible to provide this continuous pedestrian connection at the roof level of the Student Life Center with the controlled circulation between the 2 portions of the Student Life Center taking place at the ground floor level. The Student Life Center is a one controlled entrance type of facility and any pass-through from the bridge must not breach this controlled access and circulation through the facility. If the extension through to the Student Life Center from the bridge is at the level of the bridge and the roof of the Student Life Center, it will be necessary to transition from this elevation to the ground level once the pass-through happens through the Student Life Center. A stair and probably an elevator should be provided for this transition at the northeast side at the end of the pass-through, the Student Life Center (see block plan schemes C, D and E in Section 4.2 of this Report for the location of the pass-through and the transition stair). An alternative location for this pass-through is between the outdoor recreation / climbing wall area on the east side of the Student Life Center site and the remainder of the Student Life Center building that continues to the west. This assumes that the Legacy Bridge traffic will circulate to the bottom of the west side of the bridge by the existing stairs and elevator of the bridge. This alternative is inconsistent with the Campus Master Plan.

3.1.4 Codes, Regulations and Safety

Codes and Regulations

The project will be designed and constructed in accordance with the current applicable laws, codes, and requirements of regulatory agencies having jurisdiction including but not limited to the following:

- 2006 International Building Code
- 2005 International Fire Code
- 2006 International Mechanical Code
- 2006 International Plumbing Code
- 2006 National Electric Code
- 2006 International Energy Conservation Code
- 2006 International Fuel Gas Code
- State and Local Health Departments
- Utah Uniform Buildings Standards Act Rules, R156-56
- ASHRAE Indoor Air Quality Standard 62-1989
- AHRAE 90.1
- ADA Act Title III, 1991
- NFPA 101 Life Safety Code
- ANSI A117.1 Accessible and Usable Facilities, 2003
- ADA P.L. 101-336
- Laws, Rules, and Regulations of the Utah State Fire Marshall
- DFCM design criteria for Architects and Engineers
- University of Utah Design Standards
- Sheet Metal and Air Conditioning Contractor National Association (SMACNA)
- American Society of Testing Materials (ASTM)

Code Analysis

IBC Occupancy Group

The gymnasiums, the racquetball courts, the fitness / weight room, the climbing and bouldering walls, and the jogging track will each be classified as type A-3 occupancy. The remainder of the building is classified as type B-2 occupancy. The most stringent of these occupancy types is A-3, so this occupancy type will be used for the overall classification purposes for the building.

Construction Type

The type of construction is based on the occupancy classifications noted above and the program size of the building. Both Type I and Type II construction were considered. The allowable square footage was the deciding factor. Type I construction allows for unlimited floor area and building height. Type II construction is limited with allowable increases based on the building frontage and the installation of an automatic sprinkler system. The Program Model for the Student Life calls for 127,984 square feet.

Due to the shortcomings of Type II construction, the building will be of Type IB fire resistive construction which provides unlimited allowable floor area and building height. This will allow the building to accommodate future expansion. If the location of the building is greater than 10 feet, but less than 30 feet away from other structures, the construction type will require one-hour rated exterior non-bearing walls, non-combustible and fire resistive interior walls, and 2-hour rated floors/floor-ceilings, and roof structure.

The Student Life Center will be fire sprinklered and have smoke detectors. This is not required but will allow for openings in interior walls between activity spaces and the lobbies or hallways.

Occupancy Load

The occupant loads are per the International Building Code with variances based on the understanding that this facility is for student recreation. The variances require that the occupant load be posted and a letter from the University confirming that the occupancy will be limited as posted. The variances are listed below. They need to be approved by DFCM and the State Fire Marshall and have been used at similar building types within both the California State System and the University of California System. The Programming Team has had initial meetings with the State Building Official, Enzo Calfa and the Campus Building Official, Mike Halligan to discuss the negotiated loads proposed. They are willing to work with the design team to reach an agreement on the proposed occupant loads.

- Gymnasium and MAC Court occupancy negotiated at 150/court (300 for 2-court gym)
- Jogging Track negotiated at 1/100 SF
- Racquetball Courts negotiated at 8 people per court

The occupant loads are listed in the table attached at the end of this section.

Plumbing Fixture Count

The calculation for the minimum number of plumbing fixtures is based on the occupant loads discussed above. These loads are applied to the fixture count calculations as outlined in Table 2902.1, Minimum Number of Required Plumbing Fixtures, of the International Building Code.

The calculations are as follows:

Group A3 Occupancy (gymnasiums, jogging track, fitness / weight room, rock climbing and bouldering walls, and racquetball courts):

The areas that are based on variances to the Building Code include the gymnasiums, jogging track, and racquetball courts. The load for the 3-court gymnasium is based on 3 courts at 150 people per court. The total load is 450 occupants. The load for the 2-court gymnasium is 300 occupants, and the jogging track is 41 occupants. The racquetball courts have 8 people per court. The load for the 3 courts is 24 people. The total load for these activity areas is 815 occupants.

The Fitness Center, distributed cardiovascular spaces, and climbing and bouldering walls have a total square footage of 21,850 square feet:

21,850 square feet / 30 square feet per occupant = 728 occupants
729 occupants + 815 occupants = 1,543 occupants

Assume 772 males:

Water closets for males: 1 per 150 males. 6 water closets required.
Urinals for males: 1 per 150 males. 6 urinals required.
Lavatories for males: 1 per 2 water closets. 3 lavatories required.

Assume 772 females:
Water closets for females: 1 per 75 females. 11 water closets required.
Lavatories for females: 1 per 2 water closets. 6 lavatories required.

Drinking fountains: 1 for first 150 occupants. 1 per 300 occupants after the first 150. 6 required.

Group B Occupancy (Administrative Office area and recreation area with occupant load less than 50):
17,370 square feet / 200 square feet per occupant = 87 occupants.

Assume 43 males:
Water closets for males: 1 per each 150 males. 1 water closet required.
Urinals for males: 1 per each 150 males. 1 urinal required.
Lavatories for males: 1 per 2 water closets. 1 lavatory required.

Assume 43 females:
Water closets for females: 1 per each 75 females. 1 water closet required.
Lavatories for females: 1 per 2 water closets. 1 lavatory required.

Drinking Fountains: 1 per 150 occupants. 1 required.

Total Required Fixtures (A3 + B occupancy requirements)
Water Closets for Males: 7 required
Urinals for Males: 7 required
Lavatories for Males: 4 required

Water Closets for Females: 12 required
Lavatories for Females: 7 required

Where six or more stalls are provided within a multiple-accommodation toilet room, at least one shall be a standard side-transfer toilet stall, and at least one additional stall shall be 36 inches wide with an outward swinging self-closing door and parallel grab bars.

Drinking Fountains: 7 required

The Salt Lake Valley Health Department provides the requirements for an aquatic facility. The occupant load and shower requirements are based on the square footage of pool water surface area. The proposed leisure pool has 6,000 square feet of pool water. The occupant load is one bather per 24 square feet of pool water surface area. 6,000 / 24= 250 occupants. One shower shall be provided for every 50 occupants. 250 / 50 = 5 showers total. The building should have 3 for females and 3 for males. Showers must be provided within 300 feet of the pool. There are additional water closet, urinal, and lavatory requirements based on the pool. However, the number of fixtures required falls within the number being provided for the recreation facility.

There is a summary of these fixture counts attached at the end of this section.

Disabled Access Requirements
All portions of the building shall be made accessible to the physically handicapped as prescribed in the Americans with Disabilities Act, Title III. These elements include, but are not limited to, accessible entrances and pathways, doorways, washroom facilities, toilets, and lockers.

An accessible path of travel should be provided from the parking lot and other approaches to the building from campus. All primary entrances to the building shall be made accessible to the physically handicapped. This includes the type of lock or latch, type and location of hardware, door size and location, floor level, and size of threshold. Passageways leading to sanitary facilities shall have clear access width as specified in the ADA. All doorways leading to such sanitary facilities shall be accessible and identified per ADA requirements.

Multiple accommodation toilet facilities shall be made to meet ADA requirements. Their layout should provide adequate wheelchair clearance and clear space at all fixtures. Grab bars should be provided and the compartment doors should be located and sized per the requirements. The washroom fixtures and equipment should be mounted at the recommended heights, and specified to meet ADA requirements. Accurate amounts of accessible urinals, water closets and lavatories are to be provided. Other equipment, including hot water and drain pipes, shall be protected as specified in the ADA. A disabled access shower should be provided in each locker room, including a fold down shower seat and grab bars. Lockers should also be provided to meet the needs of the physically disabled. Their size and location should allow easy access and a side bench should be provided.

Egress Requirements
Occupant loads for each space were determined as described in the Occupant Load section above. The egress component widths in inches are determined by multiplying the occupant load by 0.2 for stairs and 0.15 for other egress components, per Table 1005.1 of the IBC. If the occupant load per each story falls between 1 and 500 occupants, a minimum of 2 exits per story are required per Table 1018.1. If the occupant load is between 501 and 1000 occupants, a minimum of 3 exits per story are required. If the occupant load is more than 1000, a minimum of 4 exits are required.

Travel distance in a sprinklered building is 250’ per IBC Table 1015.1. The corridors are not required to have an hourly rating in a sprinklered building. Dead ends in corridors may not exceed 20 feet. The required rating of exit stair enclosures is based on the construction type and is to be a minimum of 1 hour, per IBC Section 1019.1.

Parking Requirements
Accessible parking is to be provided per IBC Section 1106. These parking spaces should be provided as near as practical to a primary entrance and shall be sized in accordance to Section 1106 and the American with Disabilities Act. An accessible path of travel should connect the parking lot to the entrance of the Student Life Center.

Occupancy Load Calculations

University of Utah
Student Life Center

No.	Space	Model SF	Load Factor	Occupant Load	Per Code
	ACTIVITY ZONE				
	Gymnasiums				
1	Four-court Gymnasium - 84' courts *	0			
2	Four-court Gymnasium Storage	0			
3	Three-court Gymnasium - 84' courts *	19,760	*	450	1317
4	Three-court Gymnasium Storage	500			
5	Two-court Gymnasium - 84' courts *	13,520	*	300	901
6	Two-court Gymnasium Storage	400			
7	One-court MAC Gymnasium - 84' court *	0	*		
8	One-court MAC Gymnasium Storage	0			
9	Elevated Jogging Track *	4,109	100	41	395
	Gymnasiums Assignable Area (ASF)	**38,289**			
	Specialized Activity Spaces				
10	Fitness / Weight Room	20,000	50	400	
11	Fitness / Weight Room Storage	400			
12	Fitness / Weight Second Floor Storage	200			
13	Fitness / Weight Room Control Counter	120	100	1	
14	Fitness Coordinator's Office	110	100	1	
15	Fitness / Weight Room Work / Repair Room	200	100	2	
16	Multi-purpose Room 1	2,500	50	50	
17	Multi-purpose Room 1 Storage	200			
18	Multi-purpose Room 2	2,000	50	40	
19	Multi-purpose Room 2 Storage	200			
20	Multi-purpose Room 3	1,000	50	20	
21	Multi-purpose Room 3 Storage	150			
22	Racquetball Court 1 *	800	100	8	53
23	Racquetball Court 2 *	800	100	8	53
24	Racquetball Court 3 *	840	100	8	56
25	Rock Climbing Wall with Safety / Landing Area	750	50	15	
26	Bouldering Wall with Safety / Landing Area	750	50	15	
27	Climbing / Bouldering Wall Registration Counter	120	100	1	
28	Rock Climbing & Bouldering Storage	200			
29	Classroom	800	20	40	
	Specialized Activity Spaces Assignable Area (ASF)	**32,140**			
	Actvity Zone Assignable Area (ASF)	**70,429**			

No.	Space	Model SF	Load Factor	Occupant Load	Per Code
	Outdoor Recreation Zone				
30	Associate Director's Office	110	100	1	
31	Staff Office 1	110	100	1	
32	Office Support	110	100	1	
33	Library / Meeting-Work Room / Student Staff Space	400	100	4	
34	Entry / Equipment Display	400			
35	Equipment Storage / Maintenance Area	4,000			
36	Toilet / Changing Room	80			
	Outdoor Recreation Zone Assignable Area (ASF)	**5,210**			
	Administrative Office Suite				
37	Director's Office	150	100	1	
38	Staff Office 1	110	100	1	
39	Staff Office 2	110	100	1	
40	Staff Office 3	110	100	1	
41	Staff Office 4 (Business Manager)	110	100	1	
42	Administrative Assistant	110	100	1	
43	Administration Work Room / Staff Room	240	100	2	
44	Conference Room	400	20	20	
45	Computer Server (IT) Office	110			
46	Computer Server Room	100			
47	Administration Reception Area	200	100	2	
48	Administration Storage	100			
49	Intramurals Office / Work Area	110	100	1	
	Administration Office Suite Assignable Area (ASF)	**1960**			
	Wellness Component				
50	Entry Lobby / Information Resource Area	300	100	3	
51	Wellness Director's Office	110	100	1	
52	Personal Training / Fitness Room	750	100	7	
53	Massage Therapy / Assessment	120	100	1	
54	Wellness Storage	100			
55	Health Educator Office 1	110	100	1	
56	Health Educator Office 2	110	100	1	
57	Registered Nurse / Nurse Practitioner Office	110	100	1	
58	Examination Room 1	120	100	1	
59	Health Storage	100			
60	Athletic Training Office	110	100	1	
61	Examination Room 2	120	100	1	
62	Training Tables	270	100	2	
63	Exercise Space	400	100	4	
64	Athletic Training Storage	100			
	Wellness Component Assignable Area (ASF)	**1100**			

No.	Space	Model SF	Load Factor	Occupant Load	Per Code
	Entry / Lounge Area				
65	Entry Lobby / Lounge	3,500			
66	Juice Bar	500	200	2	
67	Vending Area	100			
68	Control Counter	200	100	2	
69	Control Office	110	100	1	
70	Staff Office 1	110	100	1	
71	Staff Office 2	110	100	1	
72	Treatment	120	100	1	
	Entry / Lounge Area Assignable Area (ASF)	**4,750**			
	Support Zone				
73	Men's Locker Room	2,000			
74	Women's Locker Room	2,000			
75	Assisted Change (Universal) Locker Room	190			
76	Men's Restroom - 2nd Floor	260			
77	Women's Restroom - 2nd Floor	270			
78	Universal Restroom - 2nd Floor	80			
79	Recreation Equipment Checkout / Storage	800			
80	Laundry	120			
81	Student Employees' Work Space	300	100	3	
82	Maintenance Storage / Office	400			
83	Custodial (distributed)	160			
84	Grounds Maintenance	80			
	Support Zone Assignable Area (ASF)	**6,660**			
	Total Building Occupant Load			**1473**	**4248**

* The number shown in the occupant load column reflects a Negotiated Occupant Load. The number in the per code column reflects the occupant load per code.

The occupant load is based on Model B of Space Program Model - Alternate 1

Fixture Counts

University of Utah
Student Life Center

Occupancy Type	Space	Program Area ASF	Occupants	Drinking Fountains
Group - B				
	Multi-purpose Room 1	2,500		
	Multi-purpose Room 2	2,000		
	Multi-purpose Room 3	1,500		
	Classroom	800		
	Associate Director's Office	110		
	Staff Office	110		
	Office Support	110		
	Library / Meeting-Work Room /Student Staff Space	400		
	Entry / Equipment Display and Rental	400		
	Equipment Storage / Maintenance Area	4,000		
	Director's Office	150		
	Staff Office 1	110		
	Staff Office 2	110		
	Staff Office 3	110		
	Staff Office 4 (Business Manager)	110		
	Administrative Assistant	110		
	Administration Work Room / Staff Room	240		
	Conference Room	400		
	Computer Server (IT) Office	110		
	Computer Server Room	100		
	Administration Reception Area	200		
	Intramurals Office / Work Area	110		
	Entry Lobby / Information Resource Area	300		
	Wellness Director's Office	110		
	Personal Training / Fitness Room	750		
	Massage Therapy / Assessment	120		
	Health Educator Office 1	110		
	Health Educator Office 2	110		
	Registered Nurse / Nurse Practitioner Office	110		
	Examination Room 1	120		
	Athletic Training Office	110		
	Examination Room 2	120		
	Training Tables	270		
	Exercise Space	400		
	Control Counter	200		
	Control Office	110		
	Staff Office	110		
	Staff Office	110		
	Treatment	120		
	Student Employees' Work Space	300		
	Administration Zone ASF	**17,370**		

Occupancy Type	Space	Program Area ASF	Occupants	Drinking Fountains
Group - A3				
	Three-court Gymnasium - 84' courts	19,760	450	
	Two-court Gymnasium - 84' courts	13,520	300	
	One-court MAC Gymnasium - 84' court	0		
	Elevated Jogging Track	4,109	41	
	Racquetball Court 1 *	800	8	
	Racquetball Court 2 *	800	8	
	Racquetball Court 3 *	840	8	
			815	
	Fitness / Weight Room	20,000		
	Fitness / Weight Room Control Counter	120		
	Fitness Coordinator's Office	110		
	Rock Climbing Wall with Safety / Landing Area	750		
	Bouldering Wall with Safety / Landing Area	750		
	Climbing / Bouldering Wall Registration Counter	120		
	Activity Zone ASF	**21,850**		
Summary - Group B (Based on CPC 2007 Table 4-1)				
Load Factor:	200	(CPC Table A)		
Area:	17370			
Occupants:	87			
Male/Female	43			
	WC	Urinals	Lav	D.F.
Male	1	1	1	1
Female	1		1	
Summary - Group A-3 (Based on CPC 2007 Table 4-1)				
Load Factor:	30	(CPC Table A)		
Area:	21850			
Occupants:	1543			
Male / Female	772			
	WC	Urinals	Lav	D.F.
Male	6	6	3	1394
Female	11		6	6

Occupancy Type	Space	Program Area ASF	Occupants	Drinking Fountains
Total Required				
	WC	Urinals	Lav	D.F.
Male	7	7	4	7
Female	12		7	
Total Provided Male				
Male	WC	Urinals	Lav	
Locker Room	4	4	5	
New RR (OR)	1	1	1	
New RR (2)	3	2	3	
Total	**8**	**7**	**9**	
Total Provided Female				
Female	WC		Lav	
Locker Room	8		5	
New RR (1)	1		1	
New RR (2)	5		3	
New LR (1)				
Total	**14**		**9**	
	WC (provided/ required)	**Urinals**	**Lav**	**D.F.**
Male	8/7	7/7	9/4	tbd
Female	14/12		9/7	
Pool Area	per Salt Lake Valley Health Dept.			
New Pool	6000			
Total SF	6000			
Occupant Load Factor	24			
	250	occupants		
Male/ Female	125			
	WC	**Urinals**	**Lav**	
Male	2	1	2	
Female	3		3	
Showers Required	3	showers each, 6 total		

The fixture count is based on Model B of Space Program Model - Alternate 1

3.1.5 Testing and Inspections

The testing and inspection requirements for the Student Life Center will based on the State of Utah, Division of Facilities Construction and Management requirements. They will also be dependent on the International Building Code and applicable State amendments.

The architects and engineers will perform periodic observations during the construction phase. These observations are meant to determine if the construction is in alignment with the contract documents. Special observations and testing will be coordinated with the A/E team but will be contracted by the Owner.

3.2 SPACE PLANNING ISSUES

Expansion Issues

The site area for the Student Life Center that is outlined in the Master Plan (with an expanded site area to include the Virginia Tanner Dance Building site) will accommodate the Space Program Models A and B (including the pool and its support spaces) in a 2-story facility, but will not accommodate Model C unless a portion of the facility is 3-story. This is not feasible as large portions of the site have a 60' – 75' height limitation and 3-stories in a facility with recreation spaces in it will exceed this height limitation. The pool and pool deck along with the pool support spaces are planned for a Phase II of the project, so the "dry" portion of the facility should be sited so that the pool spaces may be added in an expansion at the west side of the site. The Master Plan does not call for a building on the Soccer Stadium site in the future, but it also does not address this as a site for potential expansion of the Student Life Center. Any future expansion to the Student Life Center will depend on what will happen with the Ute's Soccer Field on the south side of the Student Life Center site. If the Ute's Soccer Field is relocated to the area on the north side of the HPER Mall which is designated for playing fields in the Master Plan, this could free up a large space not only for expansion of the Student Life Center (on the east side of the Soccer Field site), but also provide outdoor recreation fields directly adjacent to the Student Life Center. These fields will also provide a buffer / green space between the Student Life Center and the future student housing that is planned for the parking lot south of the Ute's Soccer Field. It is highly recommended by the Steering and Programming Committees for the Student Life Center project that in the future, the Soccer Field site be considered for expansion and outdoor recreation space for the Center.

Design Flexibility

The overall layout of the Student Life Center lends itself to some flexibility in terms of the location of some of the activity spaces in facility, although it is highly recommended that the pool (Phase II) be located on the west side of the site and the Outdoor Recreation on the east side of the site. See Section 3.1.3 INTERNAL RELATIONSHIPS / CIRCULATION for a description of the recommended locations for these program elements. The majority of the other activity spaces in the facility between these two areas should be located on the ground floor of the facility with a selected number of activity spaces located on the 2nd floor (see 3.1.3 INTERNAL RELATIONSHIPS / CIRCULATION).

A number of the spaces that are in the Space Program Models should be programmed and designed with flexibility of use in mind. Some of these spaces include:

- **One-Court or Two-Court MAC Gymnasium:** May also be used for large group fitness classes besides the traditional use for basketball, volleyball, badminton, and soccer.
- **Multi-Purpose Rooms:** May also be used as classrooms and meeting rooms besides the traditional use for group fitness classes.
- **Wellness / Health / Athletic Training Spaces:** A number of the spaces that are programmed individually for each of these groups may be used interchangeably by all groups as their layouts are similar. These include the massage therapy and examination rooms. This also may be appropriate for the personal training / fitness room and the exercise space.
- **Circulation, Corridors, and Hallways:** These should be laid out with enough width to provide room for stretching areas and cardio-vascular equipment.

3.3 BUILDING DESIGN CRITERIA

3.3.1 Architectural

Criteria

The proposed Student Life Center will be built at the location of the existing Ute's softball field on the University of Utah campus. Vehicular access to the site will be from Wasatch Drive located to the east of the building. A service and loading area will be provided at the east side of the building in the existing parking lot and adjacent to the Outdoor Recreation Center. In addition to providing an area to pick up rental equipment, it will provide access for servicing the boilers and water heaters in the building. Fire Department access is required and needs to be determined on the site. To the north of the Student Life Center, a pedestrian walkway, the HPER mall, will connect to the other end of campus. The main entry to the Center will create an outdoor plaza off this walkway. The plaza will contain bicycle parking for the building. Future expansion space should be planned for the building; however, the current site does not allow space for expansion.

Humanism

A key aspect of the Student Life Center is the opportunity for social interaction. The lobby and all of the main circulation spaces should create a welcoming and user-friendly ambiance. It should function for casual relaxation and conversation as well as high traffic flow related to recreation uses. The Student Life Center should be accessible to the entire University community and should incorporate all ADA requirements for disabled accessibility.

Functional Design

The specific requirements for all of the individual spaces of the Student Life Center are outlined in the INDIVIDUAL ROOM DATA SHEETS, Section 4.3 of this report. The first floor of the building will contain the 3-court gymnasium, the 2-court MAC, the weight/fitness center, locker rooms, equipment storage/issue and laundry area, the outdoor recreation center, and mechanical rooms. The administrative zone is also located on the first floor off the lobby. These program elements will be arranged on either side of a circulation spine running east to west through the building. The second floor of the building will contain the wellness center, three multi-purpose rooms, the jogging track, and distributed cardio-vascular areas.

It is important for the building to have an open environment. This is necessary for the building to function efficiently; allowing for staff supervision and easy orientation for new users. A graphics program should be developed to aid in way finding and create a visual theme for the building.

Environment

The Student Life Center offers the opportunity for developing indoor / outdoor relationships. This environment can be developed through the creation of an entry plaza located off the HPER mall, which is the main pedestrian circulation through campus. This would connect the building to the rest of campus and the student housing located across Wasatch Drive. The use of glazing on the exterior walls can also create a connection to the outdoors; drawing people in to use the facility. The external relationships and circulation are discussed in more detail earlier in this section.

Exterior Materials

The suggested palette of exterior materials includes brick masonry units, pre-cast concrete panels, and glass. These materials are suggested both for their durability and their architectural expression – one that addresses the quality expected at the University of Utah. The exterior materials should also be compatible with other campus buildings, as well as celebrate the active and social nature of a recreation building.

Natural Lighting

Natural light is an important element in this type of facility. A system of clerestories can bring natural light into the circulation spaces and the large program spaces, such as the 3-court gymnasium. Translucent material can be used to bring in light where direct sunshine or glare would compromise the program functions. The upper portion of the 3-court gymnasium could include a window wall, which would bring additional light to the jogging track.

On the exterior of the building, a system of trellises and shading elements could provide additional sun control and help define outdoor spaces such as the entry plaza.

Interior Environment

The interior finishes of the Student Life Center should include some “warmer” elements. These elements can be introduced in the entry lobby, and continue throughout the building in the main circulation spine. These “warmer” elements could include natural materials, such as wood or stone, and/or materials with recycled content. The use of color and texture in the floor or wall finishes and furniture fabrics can also add to the “warmth” of these spaces. The materials chosen should enhance the ambience of the space, and also be durable enough to withstand the activities of a recreation environment.

The various systems of the building are discussed in the following sections. These systems have an aesthetic impact and should be designed to complement the architecture of the building. For example, the long span structural members in the gymnasium have a significant impact on the visual quality of that space. Deeper trusses further apart tend to have a more pleasing effect than closely spaced joists. Similarly, the exposed duct work and lighting in the large open spaces should be carefully organized to complement the structure and the configuration of the space.

3.3.2 Structural

Structural Overview

The structural design for this project shall provide a building system which will integrate with the program requirements for space layout, as well as with the architectural and building service needs, while meeting current code standards for vertical and horizontal load carrying capacity. User needs in terms of current flexibility of the spaces and future adaptability of use shall be considered. The level of user comfort as determined by the vibration performance of the structure should also be addressed.

Structural / Service Coordination

Layout of the structural grid will need to respect the planning modules established for the various building and gymnasium functions. During the design phase, a completely integrated approach to building systems is recommended. Distribution of HVAC, plumbing and electrical services must be carefully coordinated with the structural elements, particularly at framing intersections and major crossover points. The depth and configuration of long span roof structure over the gymnasium shall be coordinated with air ducts and other services. This close coordination must be achieved in order to avoid conflicts between building systems and limit penetrations of major structural members.

Codes and Standards

The building structure shall be designed in accordance with the 2006 International Building Code (IBC 2006).

Codes and standards that apply to the design of this building are:

- 2006 International Building Code
- ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
- DFCM Design Manual, March 15, 2006
- American Institute of Steel Construction (AISC) with Commentary
- ACI 318 Building Code Requirements for Structural Concrete
- American Iron and Steel Institute (AISI) Specifications for the design of Cold-Formed Steel Structural Members
- American Welding Society (ANSI/AWS) D1.1 Structural Welding Code
- Steel Joist Institute (SJI) for open web joists and girders
- Steel Deck Institute (SDI) for metal floor and roof decks

Geotechnical and Foundation Design Criteria

A geotechnical report for the proposed building has been completed by Western Technologies, Inc., dated December 9, 2008. The foundations of the building shall be designed and constructed in accordance with the parameters specified in this geotechnical report.

The report indicates the soil profile at the site consists of 4 to 15 feet of fill material over interlayered sands, gravels, and sandy clay layers with intermittent cobbles and boulders to the depth explored of 70.5 feet below grade. Groundwater was not encountered to the depth explored.

The depth of the fill material is shallower at the east end of the site and increases toward the west. The existing fill soils are considered as undocumented fill and should not be used to support the building foundations or floor slabs. They should be removed and replaced with compacted structural fill.

The geotechnical report indicates that the building can be supported on conventional spread footings designed for an allowable bearing pressure of 2,500 pounds per square foot. The spread footings should be founded on compacted structural fill with a minimum depth of 2 feet below the bottom of the footings. Native soils below the structural fill shall be prepared as specified in the geotechnical report prior to placement of the compacted structural fill. The compacted structural fill should extend a minimum of 2 feet beyond the edges of all footings. The minimum recommended footing widths are 48 inches for spot footings and 36 inches for continuous footings. Estimated total and differential settlements for footings designed according to the recommended parameters are less than 1 inch and ¾ inch respectively.

The geotechnical report states that it may be acceptable to re-use existing fill as compacted structural fill below floor slabs, but these soils will most likely be unsuitable for structural fill below footings. Re-use of existing fill materials as compacted structural fill must be approved by the geotechnical engineer. The engineering characteristics and gradation of compacted structural fill shall comply with the limits specified in the geotechnical report. Structural fill shall be compacted to the minimum densities specified in the geotechnical report.

The Student Life Center is located quite close to the East Bench Fault Zone associated with the Wasatch Fault. The nearest mapped faults are approximately ¼ mile to the west of the building site in the East Bench Fault Zone. The geotechnical report does not indicate any evidence of faults running through the building site. Geologic seismic hazard mapping indicates that this site could experience severe lateral ground shaking. For the Student Life Center building, the contour maps in the IBC indicate that short period spectral accelerations (Ss) are 1.561 g with one second spectral accelerations (S1) equal to 0.616.

Basis of Structural Design

Loading Criteria

The structural systems in the facility shall be designed to meet the requirements of the 2006 International Building Code (IBC), Minimum Design Loads for Buildings ASCE 7-05 and the Design Requirements Manual adopted by the Utah State Building Board. Copies of the Design Requirements Manual can be obtained from the Division of Facilities Construction Management (DFCM). Section 3.1 deals with enhancements of building code requirements and section 3.4 lists general design requirements. The following minimum requirements should be anticipated:

- **Wind Velocity:** 90 mph, Exposure “B” or “C”, for the building structure, as appropriate to the site. Exposure “C” shall be used for elements and components including the exterior cladding system.

- **Seismicity:** 2006 IBC and ASCE 7-05 Seismic requirements with a “Seismic Importance Factor” of I = 1.25 for an occupancy category III building.

- **Roof Snow Load:** 43 psf ground snow load (Pg) plus snow drift where appropriate. Snow Load Importance Factor I=1.1 in accordance with Table 7.4, ASCE 7-05. Design roof snow load (Pf) for flat roofs shall be 33 psf. The elevation of the building site is less than 5,000 feet.

- **Floor Design Live Loads:** Floor design live loads shall be in accordance with the latest edition of the DFCM Design Criteria Manual and as follows:

1. 100 psf at assembly areas, gymnasiums, and corridors
2. 80 psf plus 20 psf movable partition load at office areas
3. Areas of concentrated standard file storage - 125 psf
4. Heavy storage areas – 250 to 350 psf as appropriate
5. Mechanical Equip. Rooms – 125 psf, minimum, or more as required by the actual equipment weight

Areas where heavy load concentrations exceed the normal loading requirements shall be designed for the specific load case.

The more stringent requirement between the 2006 IBC, the DFCM Design Criteria Manual and the loads given above shall govern.

Structural System Selection and Cost Comparison
The structural system chosen for the building shall be selected based upon the following criteria:

- A cost comparison of at least two structural systems shall be investigated. The comparison should be broken down in detail with each component of cost significance being listed separately.

- Various structural systems comparing building construction time, material availability, coordination of various trades, lead times for ordering materials, appearance, owner preference, span length, maintenance costs, flexibility for future remodeling, and compatibility with surrounding buildings should be considered when choosing the final structural systems for the building.

- The structural system comparison shall include considerations of vibration performance of the finished structural system to provide the vibration environment needed to comply with the criteria in the DFCM Design Standards. Special attention shall be given to the vibration performance of suspended floor structures at the running track and at multi-purpose rooms where aerobic exercise activities take place. These areas should be designed for a higher level of vibration performance that considers the comfort of building occupants and is consistent with generally accepted vibration guidelines.

- Present plans are for any free weights to be located on the ground floor slab on grade, and not on suspended floor structures. If, as the design develops, free weights will be located on a suspended floor structure, the design of the floor structure shall consider the impact load of free weights on the floor structure. The floor structure shall be designed to resist damage from the impact of the weights.

- Damage to the building structure and its contents due to lateral earthquake and/or wind loads should be evaluated between various structural systems. Damage control to building non-structural systems is a pertinent and important consideration when selecting the building structural system.

More rigid shear wall and / or braced frame lateral force resisting systems generally experience a lower degree of lateral drift from earthquake forces than more flexible systems such as moment resistant frames. This lower degree of lateral drift can result in greater damage control to a buildings non-structural elements and contents than a more flexible move-

ment frame type lateral force resisting system. On the other hand, the more rigid lateral force resisting systems impose higher earthquake acceleration forces on the non-structural elements and contents. The non-structural elements need to be designed to resist the acceleration forces imposed on them during an earthquake. One clear advantage of moment frame lateral force resisting system that needs to be considered is that they provide almost unlimited programmatic and planning flexibility initially and during the life of the building.

Cast-in-place reinforced concrete shear wall lateral systems usually work most economically with a cast in place reinforced concrete structural floor framing system while diagonally braced steel lateral systems are usually most economical in conjunction with composite steel floor framing systems.

All cost comparisons between structural systems shall include interface costs between other building components such as architectural finishes, exterior enclosure systems, mechanical systems, and electrical systems. Life cycle costing methods shall be used where applicable.

Future Building Expansion

- Future vertical expansion is not anticipated, but this topic must be discussed and decided upon by the design team in the early phases of the design process.

- Future horizontal expansion of the structure is a possibility and merits further consideration during the design phase. It is anticipated that any future horizontal expansion of the building will be separated from the building by and expansion/seismic joint, and the structure of the future addition will not impose load on the structural elements of the original building.

Earthquake Design

The proposed structure shall be designed according to the requirements of the 2006 International Building Code and "Minimum Design Loads for Buildings" ASCE 7-05. Based on previous experience on buildings at the University of Utah campus, the nearest fault is most likely located to the east of the site. The location of the fault should be verified by the geotechnical investigation and report. Spectral acceleration values for the site taken from the 2006 IBC maps are Ss = 1.561 and S1 = 0.616. These spectral acceleration values shall be verified during the design process. The geotechnical report indicates that the building site is classified as soil site class C.

College buildings with an occupant load greater than 500 are classified as Occupancy Category III buildings. An Earthquake Importance Factor, "IE" of 1.25 shall be used in earthquake design analysis according to Table 11.5-1 of ASCE 7-05.

Wind Design

College buildings with an occupant load greater than 500 are classified as Occupancy Category III buildings. A Wind Importance Factor, "IW" of 1.15 shall be used in wind design analysis according to Table 6-1 of ASCE 7-05.

Roof Snow Load Design

College buildings with an occupant load greater than 500 are classified as Occupancy Category III buildings. A Snow Load Importance Factor, "IS" of 1.10 shall be used in snow load design analysis according to Table 7-4 of ASCE 7-05.

Testing and Inspections

The Architect/Engineer, and the selected testing lab, shall perform periodic construction observations, testing, and special inspections, as outlined in Chapter 17 of the International Building Code. The design engineer shall list all required special inspections on the contract drawings, and perform periodic construction observations as required by the A/E agreement. Costs for special inspections and testing services will be paid for directly by the Owner.

3.3.3 Mechanical

Codes and Standards

The HVAC System shall comply with the following codes and design standards:

- University of Utah Design Standards, June 2006
- DFCM Design Criteria B, March 2006
- University of Utah Campus Central /Chilled Water Plant, Design Manual
- International Building Code, 2006
- International Mechanical Code, 2006
- International Plumbing Code, 2006
- International Fire Code, 2006
- Utah Energy Code, ASHRAE 90.1, 2004

Design Criteria

	Summer	Winter
Design Temperatures, dry bulb	97°F	0°F
Design Temperatures, Wet bulb	62°F	-
Site Elevation 4810 feet		

Typical Indoor Design Conditions:	
Summer:	75°F
Winter:	72°F
Humidity:	Humidification is not required for facility

Gym, Fitness/Weight, Multipurpose and Racquetball areas Indoor Design Conditions:	
Summer:	68°F
Winter:	68°F
Humidity:	Humidification is not required

Internal Equipment Heat Gains

In addition to people and lighting loads, heat gains in all rooms should be based on anticipated equipment to be used in each room together with appropriate diversities. The following equipment heat gain rates for certain areas should be considered for preliminary load estimates:

People

Athletics:	710 BTUH, Sensible
	1090 BTUH, Latent
Office:	250 BTUH, Sensible
	200 BTUH, Latent

Lights

Office:	1.1 watts/ft2
Gymnasium/ Multipurpose	1.4 watts/ft2
Office Areas	1 desktop with LCD Monitor per office seat 1 copy machine per office group

Internal load calculations will be required when more specific design information becomes available in order to maintain indoor design requirements.

Ventilation/Indoor Air Quality

Comply with ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality, for minimum ventilation requirements. Reset the outdoor air intake flow and/or space or zone airflow as operating conditions change. Design a ventilation system that results in an air-change effectiveness greater than or equal to 0.9 as determined by ASHRAE 129-1997. Develop and implement an IAQ Construction Management Plan that includes high efficiency filters (Minimum Efficiency Reporting Value (MERV) 8, as determined by ASHRAE 52.2-1999) for systems used during construction. Provide MERV 13 filters at the air handlers when project is complete. In addition to toilet exhaust, provide exhaust for janitor closets and dedicated copy rooms at the rate of 0.5 cfm/ft2. These rooms must maintain a negative pressure between the adjoining spaces. The goal of the project is to provide the amount of ventilation air based on actual occupancy in lieu of CFM/ft2.

Commissioning

Reference University of Utah Design Standards and DFCM Design Requirements for Commissioning. Coordinate with commissioning agent retained for the project, and comply with requirements for building commissioning detailed in DFCM Solicitation for Commissioning Services.

As part of the DFCM High Performance Building Requirements a commissioning agent will be an integral part of the design and construction of the mechanical systems. The commissioning agent is to focus on key systems identified in the contract documents as well as include systems that DFCM from past experience, deem to have been problematic. The commissioning agent validates that the key systems will comply with the Design Process, DFCM's Project Constraints, and the Basis of Design at each phase of the project.

With respect to the mechanical systems the Design Engineering shall participate with the Commissioning Agent during design process and shall specify the mechanical and plumbing system installer are part of the commissioning. The following systems shall be included but not be limited to during the commissioning process:

- Preparation of Testing Procedures
- Verify proper operation of the Demand control ventilation using CO2 Sensors
- Air Handlers
- Exhaust Systems
- Fire Damper, Fire/Smoke Damper and Smoke Damper Operation
- High Temperature Hot Water System
- Chilled Water System
- High Temperature Hot Water & Chilled Water Metering
- Domestic Hot Water System
- Work directly with the Test & Balancing Contractor to ensure proper air & water flow
- Automatic Temperature Control Sequence of Operation Verification

Measurement and Verification
Install continuous metering equipment for high temperature water BTU consumption and the chilled water. Flow measuring devices must meet the University of Utah requirements.

Heating
The building shall be heated with heat from the Campus High Temperature Water Plant HPER Mall Zone 3. High temperature water shall be supplied at 425°F and shall be returned at 250°F. high temperature water shall be supplied to the primary side of the heat exchangers. The secondary (building side) of the heat exchangers shall require building pumps for water distribution to the building mechanical systems. The maximum allowable pressure drop from the HTW mains, into the building and through the heat exchangers is 20 psig. The design of the HTW system shall conform to the University of Utah Design Standards. Locate building service, isolation valves and heat exchange in main level HTW mechanical room. This room shall be ventilated and exhaust shall be provided to the exterior. All pumps and variable frequency drives shall be located in a separate mechanical room outside the HTW room.

The building shall be designed for a variable flow secondary heating hot water system. Control valves shall be two way with tight shut off. Provide a glycol hot water heating system for preheat coils with appropriate heat exchanger and pumps.

High temperature hot water shall be used for heating, domestic hot water, and pool water heating.

Air Conditioning
The building shall be air conditioned with chilled water from the Campus Chilled Water Plant through the HPER tunnel chilled water loop. An 8 inch chilled water line is in the master plan for this building. Water shall be supplied at 44°F and shall be returned to the system at 54°F. A tertiary pumping system shall be utilized in the building and chilled water valves shall be two way tight shut off. See campus design manual for piping instructions.

Air Handling

System Design
The building systems shall consist of variable volume supply air systems from multiple air handlers located indoors in a basement mechanical room. Mechanical room design must provide space for chilled water and high temperature water equipment for future expansion. Areaways to the exterior will be provided for both fresh air and relief air. The separation of fresh air to relief air shall be a minimum of 25’-0” apart. Each air handler shall be provided with an outside / return air mixing section, filters with a MERV 13 rating, pre-heat coils, supply air fans, and chilled water coils.

Air handlers shall be designed to accommodate similar functions and shall generally be sized and ductwork routed so that the emergency shut down of any one air handler shall not affect the entire building.

Each air handler shall be located such that routine maintenance can take place. Space shall be provided for filter and coil removal without removing any piping or equipment. In general, the space adjacent to an air handler shall be equal to the length of the longest coil in the air handler.

Air shall be distributed throughout the office, fitness, weight room and multipurpose areas of the building shall be through a medium pressure supply duct system and ducted return air system, and use variable speed return/relief fans.

Each independent controlled space shall be provided with a variable volume reheat box. Reheat shall be hot water from the building hot water heating piping system. Each space shall be controlled from a space thermostat that shall control the variable volume box and its reheat coil to maintain space temperature.

Offices and Recreational Areas
Design criteria for the office space HVAC system is based on the following:

- Office / lobby areas shall be served by recirculating VAV air handling units provided with outdoor air economizer controls.

- Gymnasium shall be served with an air handling unit with hot water heating, chilled water cooling, MERV 13 filters, and mixing section with outside air dampers and return dampers. Air handling units will be capable of 100% outside air for full economizer control. A variable speed drive will be utilized to control the fan output.

- Exercise / multipurpose / racquetball areas will be served by VAV air handling units. The air handling units will have chilled water cooling and economizer operation. A variable speed drive will be utilized to control the fan output. Each zone shall be served by a VAV Reheat Box with a hot water coil.

- The climbing wall shall be conditioned using air from a VAV air handling unit. Air will be distributed at multiple levels to ensure proper cooling and ventilation around the climbing wall. An exhaust fan will be located at the high point to remove hot air. This fan shall be controlled through a temperature sensor that is adjustable through the building automation system.

General Exhaust
Each toilet shall be exhausted to atmosphere via roof mounted exhaust fans. Exhaust for janitor closets and dedicated copy rooms will be exhausted at the rate of 0.5 cfm/ft2.

Electrical and Elevator Machine Rooms
Each room shall be provided with chilled water fan coil units for cooling.

Controls
Provide individual room temperature controls.

The control system shall be a direct digital control (DDC) system with electric driven actuators. The direct digital control system shall monitor, control, and adjust the building controls from an in-building location. The following items of equipment shall be monitored and/or controlled:

- All central HVAC equipment including air handling units, heat exchangers, pumps, variable speed drives, and exhaust fans.

- All decentralized HVAC equipment such as variable air volume units, reheat coils, thermostats, meters, air and water temperature sensors, and system pressure sensors.

The control system shall be connected to the campus Metasys or Staefa “Smart” network or to the campus telecommunications Ethernet network.

3.3.4 Plumbing

Codes and Standards

The Plumbing System shall comply with the following codes and design standards:

- University of Utah Design Standards, June 2006
- DFCM Design Criteria B, March 2006
- University of Utah Campus Central /Chilled Water Plant, Design Manual
- International Building Code, 2006
- International Mechanical Code, 2006
- International Plumbing Code, 2006
- International Fire Code, 2006
- Utah Energy Code, ASHRAE 90.1, 2004

Plumbing Systems

A new water service shall be provided for domestic water to the building. A new duplex water softening system shall be provided in this project to supply softened water to the domestic hot water heating system. Salt supply to the water softening system shall be by Step Savers or equivalent, pneumatic delivery system. Salt is delivered through a 2 inch pipe to a standard indoor salt storage reservoir.

Primary and backup roof drainage for the building shall be provided.

Sanitary sewer shall be discharged to the sanitary sewer main on the site.

Domestic Hot Water
Domestic hot water shall be generated with water from the campus high temperature water system. A minimum of two high temperature water heat exchangers shall be provided to generate the domestic hot water for the building. A building side circulating pump shall be provided around the heat exchanger to smooth out the domestic hot water temperatures. The building hot water temperature off the heat exchanger shall be set for 140°F. A domestic hot water mixing station shall be provided downstream from the heat exchangers. This mixing station shall moderate the temperature to building at 120°F. The building shall be provided with recirculating hot water pumps which shall be piped into the domestic hot water mixing station.

Fire Protection
Provide fire sprinkler protection throughout building. System to comply with NFPA, campus fire marshal and State of Utah Fire Marshal requirements. Conduct a fire flow analysis per DFCM criteria during the design phase to confirm this assumption.

Sprinkler Occupancy Hazard Classifications are as follows:

Office and Public Areas	Light Hazard
Gymnasium/Lockers Exercise/Multipurpose/Racquetball	Light Hazard
Service Areas	Ordinary Hazard, Group 1
Mechanical Equipment Rooms	Ordinary Hazard, Group 1
Building Service Areas	Ordinary Hazard, Group 1
Electrical Equipment Rooms	Ordinary Hazard, Group 1
General Storage Areas	Ordinary Hazard, Group 1

Minimum Density for Automatic-Sprinkler Piping Design: As follows: (Reduce design areas with quick response heads when applicable)

Light-Hazard Occupancy	0.10 gpm over 1500 ft2. area
Ordinary-Hazard, Group 1 Occupancy	0.15 gpm over 1500 ft2. area
Ordinary-Hazard, Group 2 Occupancy	0.20 gpm over 1500 ft2. area
Special Occupancy Hazard	As determined by authorities having jurisdiction.

Maximum Protection Area per Sprinkler: As follows (except as modified by authorities having jurisdiction)

Office Space	225/400 ft2
Storage Areas	130/400 ft2
Mechanical Equipment Rooms	130 ft2
Electrical Equipment Rooms	130 ft2
Other Areas:	Extended coverage sprinklers are to be used where applicable. Preaction sprinklers will be provided in racquetball courts or squash courts because of the risk of damage from player activity. These will be located in the rear third of the court using concealed heads.

According to NFPA 13 recommendations, unless otherwise indicated Components and Installation: Capable of producing piping systems with 175-psig minimum working-pressure rating, unless otherwise indicated. All piping and components are Schedule 40 minimum, 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.

Provide fire sprinkler protection throughout building. System to comply with NFPA 13, campus fire marshal and State of Utah Fire Marshal requirements.

3.3.5 Electrical/Technology Systems

Electrical Codes and Standards

Codes which are applicable to the design of the electrical systems are listed below. Comply with each of the latest adopted publications.

- ASHRAE 90.1 Energy Code
- DFCM, Division of Facilities Construction and Management, Design Criteria
- DFCM, High Performance Building Rating System
- EIA/TIA, Electronics Industries Association/Telecommunications Industry Association
- IBC, International Building Code
- IESNA, Illuminating Engineering Society of North America
- NFPA, National Fire Protection Association (applicable sections including but not limited to):
  NFPA 70, National Electrical Code
  NFPA 72, National Fire Alarm Code
- UL, Underwriters Laboratories
- Utah State Fire Marshal Laws, Rules and Regulations
- University of Utah Design Standards

Building Power Systems

Low Voltage Service and Distribution
As discussed under Site Electrical section, consider both 277/480V and 120/208V service voltages to the building and avoid the use of indoor, dry-type step-down transformers The electrical service shall be initially sized for a minimum 10 watts/square foot for 277/480V loads and 3 watts/square foot for 120/208V loads. Verify loads with final design and allow for 50% spare growth capacity on each system.

Provide a new main electrical room located near the transformers. The main switchboards shall have Square D “Powerlogic” type digital metering to monitor all important electrical parameters of the building such as volts, amps, kVA, demand, power factor and harmonic distortion. This meter shall have the capability to be remotely monitored per campus standards. The switchboards shall have provisions to add breakers for future load growth. The main switchboards shall distribute power to the various branch panelboards for lighting, outlets and miscellaneous loads. For power quality, separate loads onto different feeders based on load type, such as motors, lighting, and outlets.

Motor control centers shall be provided for areas where 3 or more motors are grouped. All 3-phase motors shall be provided with phase-loss protection. Variable frequency drives shall be provided where required for mechanical equipment and be in compliance with DFCM and Campus requirements. The VFD’s shall have filters to isolate the damaging harmonics from the electrical distribution system.

New branch panelboards shall be provided in new, vertically stacked electrical rooms. Locate the electrical rooms centrally as much as possible in order to make new and future circuit runs shorter and less costly. More than one electrical room per floor shall be used when the branch circuit runs are excessively long resulting in unacceptable voltage drop. Panelboards serving normal lighting and appliance circuits shall be located on the same floor as the circuits they serve, making circuit identification and future work more convenient for the campus. Panelboards serving the 120/208V system shall be

provided with insulated grounding bus bars, in addition to the equipment grounding bus, for equipment that requires an insulated/isolated grounding conductor. Provide at least 50% spare capacity for future growth and flexibility.

Outlet and lighting branch circuits shall be loaded to no more than 80% of what is allowed by NFPA 70. Dedicated circuits shall be provided where the load requires. On average, 6 outlets per circuit shall be used. No more than 4 computer terminals per circuit will be allowed. In some cases, fewer outlets shall be on a circuit as required by the loads. Outlets with dedicated branch circuits (one outlet per circuit) are required for exercise equipment, vending machines, copy machines, break room counters, refrigerators, dishwashers, A/V cabinets and other locations likely to have equipment requiring dedicated circuits. Each branch circuit homerun conduit shall have no more than 3 circuits. All 120V multi-wire branch circuits shall have a dedicated neutral conductor for each circuit per the campus standards.

Conductors shall be all copper and installed in raceways, minimum 0.75 diameter. MC cable is strictly prohibited on campus. Branch circuits shall be sized to prevent voltage drop exceeding 3% at the farthest load. The total voltage drop on both feeders and branch circuits shall be designed to not exceed 5%. This will ensure that all equipment in the building operates most efficiently and minimize power quality problems relating to voltage drop.

A fault current and coordination study shall be performed by a licensed electrical engineer to indicate available fault current at all points in the distribution system. New equipment shall be adequately rated for the amount of available fault current. System coordination shall be studied, and fuses or breakers selected to ensure minimum system outage due to overloads or fault currents. The breakers shall be set with adjustable long time, short time, instantaneous and/or ground fault settings for optimum system coordination. Demonstrate compliance with the NEC regarding selective coordination of over-current protective devices serving emergency systems.

Equipment and Furniture: Power shall be run to any equipment indicated in the program as requiring power and empty raceway. Obtain equipment cut sheets and shop drawings and incorporate requirements into the design to ensure that the proper power and conduit is run to the equipment.

Power Quality and Reliability

Transient voltage surge suppression (TVSS) and “noise” protection shall be provided at service equipment and on branch panelboards that serve sensitive electronic equipment. To the greatest extent possible, TVSS units shall be integral to the panelboard or switchboard to ensure that lead lengths do not raise the clamping voltage and negate the use of the TVSS unit. The TVSS shall protect the sensitive electronics from disturbances that are generated inside or outside of the building.

Provide a Lightning Risk Assessment per the NFPA 780. The result of the evaluation will indicate if a lightning protection system is recommended. A system of lightning rods on the roof with down conductors to a counterpoise ground is proposed. The system shall have a UL Master Label and comply with NFPA 780.

Many power quality problems can be attributed to grounding. Poor grounding can cause equipment failures. The grounding system shall be installed per NFPA 70, DFCM and Campus requirements. An insulated equipment grounding conductor shall be provided in all feeder and branch circuit conduits. Other guidelines shall be followed, such as IEEE Standard 1100-1999, Power and Grounding Sensitive Electronic Equipment.

Outlets

The program space data sheets shall be used as a guideline for placing outlets, however, adjustments shall be made to suit the end users' needs during the design and review process with campus personnel. Where requirements cannot be identified, the following shall be used as a general guideline:

Classrooms and other Instructional Spaces: Provide outlets for instructor's station, audio/visual equipment and each student. Ensure that there is at least one outlet for each 10' of wall space. Provide floor outlets, poke-throughs or under-floor duct where stations or equipment cannot be served directly from the wall without crossing aisle space and where no access floor is provided.

Offices/Workstations: For each workstation, provide one outlet dedicated to computer terminals and one normal outlet, and one additional normal outlet for every 10' of wall space.

Commons Areas and Lounges: Provide power outlets for laptop computers, at least one duplex for each group of 4 seats, but no less than one outlet per each 12' of wall space. Provide floor outlets where stations or equipment cannot be served directly from the wall without crossing aisle space.

Conference Rooms: One outlet for every 10' of wall space, plus one outlet dedicated to computer terminals on two walls. Include at least one floorbox underneath conference room table for power and data.

Multi-Purpose Rooms: Outlets for audio/visual equipment, plus one outlet for every 10' of wall space.

Weight and Fitness Rooms: Dedicated outlets for fitness equipment (verify voltage requirements), outlets for TV monitors, plus convenience outlets every 12' of wall space. Provide a grid of underfloor duct for flexibility in determining floor outlet locations based on equipment locations.

Gymnasiums: Dedicated outlets for scoreboards and backstops (verify voltage requirements), plus convenience outlets every 25' of wall space. Include dedicated outlets or connections to divider curtains in the roof structure.

Running Track: Outlets on 25' centers around track.

Vending Rooms: One dedicated power outlet for each vending machine, plus one data outlet for each group of 4 vending machines.

Juice Bar: Outlets for specific equipment based on food service requirements.

Breakrooms: Outlets on dedicated circuits every 4' on counter top plus dedicated outlets for refrigerator, microwave, and disposal (switched at counter top), plus one outlet for every 10' of other wall space in room.

Counter Tops (in general): One outlet every 4'; GFI where within 8' of a sink.

Restrooms: One GFI outlet near sink

Locker/Shower Rooms: One GFI outlet on a dedicated circuit near each grooming counter top.

Telephone/Data Closets: At least 6 quad outlets on emergency power with circuit density to allow for at least 50 VA per square foot.

Electrical Rooms: At least one outlet on emergency power.

Corridors, Lobbies: Provide at least one outlet every 25', on alternating sides of the corridor or lobby.

Stairs: One outlet at the landing of each level.

Storage Rooms (small), Janitors Closets: One outlet on each wall.

Outdoor Recreation Program: Sufficient outlets for convenience and equipment repair.

Equipment Checkout/Repair Rooms: Dedicated outlets for specific equipment, outlets on 24" centers above counters, and outlets on 10' centers on every wall.

Rock Climbing Area: Outlets on 25' centers.

Building Exterior: One WP/GFI outlet near each entrance.

Emergency Service and Distribution
An emergency diesel generator shall be provided and sized to power the emergency lighting, fire alarm, elevators and other life safety loads in the building. It shall also serve stand-by (optional) loads such as data closets – equipment and cooling, and the security system. Locate the generator outdoors on grade in a screened enclosure. The fuel tank shall be sized for a minimum of 24 hours at full load to keep the emergency and standby loads operational during extended outages. Two transfer switches shall be used: one for life-safety loads and one for the stand-by (optional) yet important loads. Metering and annunciation shall be provided at the generator, and interfaced with the building management system.

Lighting

General
The basis for design shall be the IES and its Recommended Practices, such as RP-6-01 "Sports and Recreational Area Lighting, RP1-93 "Office Lighting", RP3-00 "Lighting for Educational Facilities", and RP-33-99 "Lighting for Exterior Environments"; Utah State Health Department Requirements or Codes where applicable, i.e. pools, spas, and pool decks. For exterior lighting, indirect lighting, and other specialized task lighting, a point-by-point plot of illuminance establishing conformance with the recommended practices shall be furnished. Ballasts shall be 10% THD to minimize system harmonics. The amount of different lamp types shall be minimized, making replacement and maintenance easier. Comply with Unversity of Utah design standards for technology preferences. Lamps shall comply with EPA TCLP requirements.

ASHRAE 90.1 requirements shall be met and exceeded to meet the overall project requirement to beat this energy code by at least 10%. This will ensure compliance with the State High Performance Rating System, and contribute to the LEED credits sought for this building. Energy savings design techniques such as daylighting control, occupancy sensors, centralized and de-centralized control systems, energy efficient lamps/ballasts shall be used where practical to maximize energy efficiency.

Parking, Pedestrian, and Street Lighting
Use only campus standard lighting fixtures and poles for walkways, parking and roadways, compatible with the campus surroundings. All exterior lighting fixtures shall be full cut-off to avoid sky glow and light trespass conditions. Control exterior lighting utilizing combination photocell and time schedule control.

Design parking areas to comply with RP-20-98, except that the minimum illuminance shall exceed 1 footcandle with a 15:1 uniformity. Design pedestrian areas to comply with RP-8 (average to minimum uniformity ratio less than 4 to 1), except that the average horizontal illuminance shall be increased to 1 footcandle and the average vertical illuminance to 1 footcandle.

Interior Lighting
Quantitative and qualitative factors must be considered when designing lighting systems for the interior environments of this facility. Refer to the schedule below, the cited references and to room data sheets for the desired illuminance levels for each space, and balance this with the requirements for energy conservation. Both horizontal and vertical illumination is important for sports type facilities. Just as important are considerations for quality of light, such as uniformity ratio, glare reduction, color rendering, and contrast.

Fluorescent lamps should be considered for use to the greatest extent possible, with the 4' T8 lamp being the campus preference based on maintenance and cost. HID sources may be considered where needed to provide the required illuminance levels in large volume spaces, but the issues of restrike time and the desirability of instant on need to be addressed. Incandescent sources should be avoided altogether.

For offices, classrooms and meeting rooms, pendant indirect lighting should be strongly considered, but must be carefully coordinated in rooms with projectors so that the fixtures will not interfere with the projected image. Select luminaires for areas where VDTs are planned which are designed to minimize veiling reflections, and provide multilevel lighting control and task lighting to reduce the illuminance on the VDT. In addition, in rooms with audio visual, design lighting with variable or switched levels as indicated with a separate controlled zone to reduce glare and illuminance on the audio visual display. In rooms with projectors, provide a separate bank of lighting control switches or station near the instructor position for ease of controlling lighting during presentations.

For spaces where glare control is not required, fluorescent, lay-in fixtures may be used. This includes corridors, workrooms, restrooms, common areas, equipment rooms, and storage rooms. Recessed fluorescent downlights shall be used in areas where aesthetics call for an upgraded appearance, such as in main lobbies.

All interior lighting shall be controlled by some automatic means. This shall include occupancy sensors for smaller enclosed areas and relay control with clock and / or timer supervision for larger areas. Gymnasiums should be design for multiple zones and light level control with occupance sensors to allow energy reduction when the maximum light output is not needed. Uniformity must be maintained when in reduced lighting modes. The corridors and common areas shall be controlled through the building management system with local wall switch override. Wherever natural daylight is provided, incorporate daylighting controls to promote energy savings by using artifical lighting only as needed. This can be accomplished with automatic dimming, stepped switching or simple on/off control depending on the functional needs of the space. All lighting shall be "instant on" to facilitate quick response to demand and power interruptions.

Exit and emergency lighting shall comply with the IBC. Emergency lighting for means of egress to 1 fc average, 0.3 fc minimum, shall be provided. Emergency lighting shall be included in restrooms, electrical rooms, and communication rooms.

Lighting Summary

University of Utah
Student Life Center

Typical Area	Illuminance in Footcandles	Comments
Classrooms	1	bilevel switched
Climbing Wall	30	lighted from above, glare controlled
Conference Room	50	daylight responsive, if possible
Control Counters	50	
Custodial Rooms	10	
Elevated Jogging Track	25	
Equipment Display / Storage Areas	30	
Examination Rooms	50	dimmable with tasklight
Fitness / Weight Rooms	50-60	indirect
Grounds Maintenance Rooms	30	
Gymnasiums	80/50	bilevel switched, impact proof
Indoor Pool, In Water	5-20 fc	Utah Department of Health Code
Indoor Recreation Pool and Deck	5-30 fc	Utah Department of Health Code
Juice Bar	30	
Laundry Room	30	
Library / Meeting-Work Room / Student Staff Spaces	50	
Lobbys	30	daylight responsive, if possible
Locker Rooms	40	
Maintenance Areas	30	
Massage Therapy / Assessments	50	dimmable
Multi-Purpose Rooms	60-40	indirect
Offices	50	daylight responsive, if possible
Personal Training / Fitness Rooms	30	dimmable
Racquetball Courts	80	impact proof
Registered Nurse / Nurse Practitioner Offices	50	
Restrooms	30	Utah Department of Health Code
Rock Climbing Wall Areas	50	
Storage Rooms	10	
Toilet / Changing Rooms	30	Utah Department of Health Code
Vending Area	30	

Fire Alarm

Campus Fire Alarm and Life Safety

An addressable / intelligent fire alarm system shall be provided, complying with Utah State Fire Marshall's "Rules and Regulations", U of U Campus fire marshal requirements and the ADA. The system shall be FCI by Nelson Fire as requested in the Campus Guidelines, and shall be connected into the central fire alarm system.

Telecommunications Pathways

General
Comply with the latest University of Utah Design Standards for Communications Wiring Systems. This document is made part of this program by reference. Coordinate all design with the Campus Netcom department.

Site Service
Provide new (4) 4" duct banks form two separate manholes into the building as discussed in the Site Telecommunications portion of the program.

Riser Distribution
Stacked telecommunications closets shall be provided to serve each floor of the building. Coordinate size, equipment layout and wall space with the Campus Netcom department. Closets shall be located such that when cabling is routed through the raceway system provided, the distance will not exceed 290 feet to the furthest outlet. Provide a minimum of four 4" conduits from the MDF to the stacked IDF locations and four 4" sleeves between floors. If possible, stack the MDF below the IDFs. Provide both normal and emergency circuits to each IDF, 3 each, with one fourplex per circuit. Twenty-four hour HVAC is required in each closet and shall be supplied with emergency power.

Horizontal Distribution
Provide a cable tray distribution network throughout each floor and into the IDF closets. Extend the cable tray around inside of the IDF closet to allow cables to be routed within the room. Consider ease of access to the tray system when the building is in full operation. Limit cable tray routing to be above corridors, common and similar areas. Where ceilings are exposed or inaccessible, then provide a bridge of equivalent conduit connecting the cable trays in the accessible ceiling areas. Do not load the cable tray and raceway system to more than 50% of what is allowed by cable fill requirements of NFPA 70.

Voice / Data Drops
Each voice/data outlet location or "drop" shall consist of a 4" square box with mud ring and two ¾" conduits stubbed to the nearest cable tray. Locations will be coordinated with the users during design. As a minimum, provide one voice / data drop for each workstation, fax machine, copy machine, desk, computer terminal and teaching station. Within each drop may be installed up to (4) cables for voice and data per location. Where wireless networks are being considered for student access, still allow sufficient empty raceways for future hardwired connections should the wireless system have insufficient bandwidth for evolving applications.

Other Empty Conduit Systems
Provide empty conduit and boxes for other low-voltage signal and communications wiring systems that may be provided in this or other contracts, such as audio/visual systems.

Technology Systems Codes and Standards

Codes which are applicable to the design of the technology systems are listed below. Comply with each of the latest adopted publications. They are part of this program by reference and are not restated in the program narrative.

- ADA, Americans with Disabilities Act
- DFCM, Division of Facilities Construction and Management, Design Criteria
- EIA/TIA, Electronics Industries Association/Telecommunications Industry Association
- IBC 2000, International Building Code
- NFPA, National Fire Protection Association (applicable sections including but not limited to):
  NFPA 70, National Electrical Code
  NFPA 72, National Fire Alarm Code
- UL, Underwriter's Laboratories
- IEEE Compliance: Comply with applicable requirements of IEEE 208
- University of Utah Design Criteria
- Utah State Fire Marshal Laws, Rules and Regulations
- Standard Broadcast Wiring and Installation Practices", as excerpted from "Recommended Wiring Practices," Sound System Engineering, (2nd Edition), D. Davis
- The Basics of Audio and Visual Systems Design, Revised Edition, Ray Wadsworth / International Communications Industries Association, INC.

General Requirements

All technology systems including security systems, and audio and video (AV) systems will be specified by qualified technology consultants under contract to the project Architect, and working with all architectural and engineering (A & E) team members. All technology systems will be installed by qualified sub contractors under contract to the project General Contractor. The work of technology systems installation will proceed as part of the overall building construction work, to be completed with all building trades under the general contract. The voice/data structured cabling systems will be furnished and installed by the Owner's designated representative.

Structured Cabling Systems

General

Voice/data cabling (structured cabling systems) will include copper station cabling, copper and fiber backbones, all terminations, wall plates, patch panels, cross connects, racks, and wire management.

Voice and data service will originate from the designated campus demarcation, and will be comprised of a combination of copper cabling, and single and multimode fiber. This cabling will terminate in the main telecommunications room, or MDF. From the MDF, a backbone of copper cable, and a combination of multimode and single mode fiber cabling will be provided to each subsequent wiring closet, or IDF on each of the floors for voice and data signal distribution. From that point, copper horizontal cabling will be provided to each of the voice/data outlet "drops".

Typical Voice / Data Outlet
Design each typical voice / data outlet with 3 each category 6e or higher, RJ-45 data outlets. More or fewer outlets may be required to serve specific needs in specialty areas. All outlet wall plates shall be one gang with provisions for up to six RJ-45 outlets labeled to comply with University of Utah standards. Match color of electrical devices. Cable each RJ-45 data outlet with a 4 pair Category 6e or higher cable. If systems furniture is installed coordinate location of 3 each RJ-45 outlets with cabling for each workstation.

Wireless Network
The University of Utah desires that the building include a wireless LAN. Provide data outlets at University of Utah designated locations for wireless access points.

Telephone Outlet
Design telephone outlets for elevator panels, wall phones, and other required uses. Install 4 pair Category 6e cable in a suitable plate for the application.

Voice and Data System Active Electronics and Passive Devices
All active voice and data system electronics including, but not limited to, hubs, routers, servers, PBX's, etc. will be provided from a separate budget and are not part of the construction budget. All passive devices including, but not limited to cabling, termination devices, wall plates, patch panels, connectors, open frame equipment racks, cable runway, and cable management systems are part of the construction budget.

Security Systems

General
All security systems will comply with established campus standards. Systems will annunciate alarm conditions to, and be completely monitored by, the University of Utah campus police department.

Card Access
A complete access control system will be provided to control entry to all perimeter entry / exit points, and at select sensitive interior spaces including, but not limited to, multiple locations in all gymnasiums for the convenient use of staff. Card readers will be the proximity type, and will comply with established campus standards. Card readers will report to central door controllers. Coordinate door hardware to minimize the aesthetic impact to the appearance of the building.

Video Surveillance
A complete video surveillance system will be provided for visual monitoring and recording of all building entry / exit points, at select main building thoroughfares, elevator lobbies, and at select sensitive interior areas including but not limited to storage cubbies, locker room entrances, and entrances into large activity areas such as gymnasiums and multi-purpose rooms. Pan / tilt / zoom cameras will be specified for viewing of owner designated subject areas, and installed in appropriately rated enclosures. Signals from cameras will be connected to a central switching / multiplexing system with large screen flat panel monitors. All camera images will be digitally recorded by DVR's that are local area network accessible.

Intrusion Detection
A complete intrusion detection system will be specified for electronic monitoring and status reporting of all building entry / exit points, select building thoroughfares, and at select sensitive interior areas. Sensing devices will include door position switches, motion sensors, and glass break sensors. All sensing devices will report to a zoned monitoring panel for specific location identification of an alarm condition. The intrusion detection system will be integrated with the video surveillance system for priority viewing of security breach areas.

Emergency Phones
Emergency (Blue Light) telephones will be specified. Provide density and alarm annunciation based on established campus standards. At a minimum, without implying limitation, locate telephones in outdoor parking in pedestrian areas at highly visible locations, and at the end of each building corridor on all levels.

Audio and Video Systems

General
Audio and video systems will be specified for full compliance with established campus standards. Systems will be specified for consistency with manufacturers and models identified by Campus Audio / Visual Services.

Facility-wide Paging System
A complete paging system will be provided throughout the entire facility. The paging system input will be any telephone set, as well as a single microphone located at the entry / lobby reception desk. The paging system will provide one-way public announcements to all areas of the building for general paging, and to notify building occupants of emergencies. Areas to be served by paging speakers include, but are not limited to activity areas, lobbies, corridors, restrooms, locker rooms, meeting areas, indoor pool, outdoor pool deck, and all areas that are occupied by the general public or staff. Located speakers shall provide a minimum 85 dBA sound pressure level at three feet above the floor, with no more than 14% articulation loss of consonants to all areas. The paging system will consist of approximately 8 zones. An emergency paging system will override the sound systems in individual rooms. “Standard” paging will not override the sound systems in individual rooms.

Facility-wide Digital Signage System
Provide a digital signage system throughout the building. Design approximately 40” diagonal or larger LCD flat panel monitors at elevator lobbies and public lobbies on each floor with appropriate mounting hardware. Specify remote, small form factor central processing units to be located at each monitor position, for IP addressable, Ethernet distribution of content and basic monitor control. Specify a central digital signage management software package and all required hardware. Include provisions for visual signage of public address announcements for compliance with the American’s with Disabilities Act.

Gymnasium – 1 Court
Provide a professional grade voice reinforcement and music playback audio system for faithful reproduction of media source devices and public address announcers. The audio system will be equipped with several wireless microphones, multiple microphone inputs, CD player with pitch control, an input for a portable MP3 player, mixing systems, digital signal processors, power amplifiers, and speaker systems. The speaker systems will be designed for high quality voice reinforcement, and high fidelity music playback. The speaker systems will include low frequency woofers, and will provide for high power playback of full frequency music. In addition, speaker systems will provide for highly intelligible voice reinforcement. Provide systems capable of 105 dBA, with 40 Hz to 17 KHz frequency response + 2 dB, and no more than

a 12% ALCONs. Locate mixers, source devices, and appropriate processors in an equipment rack. In compliance with the Americans with Disabilities Act, a wireless assisted listening system will be provided. Override audio system when a facility-wide page is in progress.

Gymnasiums – 2 Court, 3 Court, and 4 Court

Provide each gymnasium an audio system for voice reinforcement of a public address announcer. Each audio system will be equipped with one wireless microphone system including a body pack transmitter and head worn microphone, two wired microphone inputs, two inputs for portable media devices, an input for a portable MP3 player, mixers, processors, power amplifiers and speaker systems. The speaker systems, will be capable of high power playback of music. Provide systems capable of 100 dBA, with 150 Hz to 17 KHz frequency response + 2 dB. Locate mixers, source devices, and appropriate processors in an equipment rack. In compliance with the Americans with Disabilities Act, a wireless assisted listening system will be provided. Override audio system when a facility-wide page is in progress.

Library Meeting/Work Room and Administration Conference Room

Design each room with fixed audio and video systems. Provide projectors in a 16:9 format, with recessed, electric roll-up projection screens. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1366 X 768. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be “washed out” by ambient room lighting. Include all video system calculations in the construction drawings.

Provide audio systems for the playback of portable and fixed media source audio only. Voice reinforcement systems are not required. Provide wall and / or floor mounted computer video, composite video and S-video inputs, with their associated audio signals, to the permanently mounted projector / audio system. Provide an audio system output for connection to a portable assisted listening system for compliance with the Americans with Disabilities Act. Provide resident source devices including, but not limited to, computers and DVD players, with an input for portable MP3 players. Provide an integrated, wall-mounted control system to control all AV system functions and room lighting.

30 – Person Classroom

The 30-person classroom will be provided with fully integrated audio, video, and control system. Provide a projector in a 16:9 format, with a recessed, electric roll-up projection screen. Size projection screen using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Locate the projection screen in close coordination with seating layouts to assure appropriate viewing sight lines. Provide a projector with a minimum native resolution of 1366 X 768. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be “washed out” by ambient room lighting. Include all video system calculations in the construction drawings.

Provide an audio system for the playback of portable and fixed media source audio only. Voice reinforcement systems are not required. Provide lecture/instructor’s desk mounted computer video, composite video and S-video inputs, with their associated audio signals, to the permanently mounted projector/audio system. Provide an audio system output for connection to a portable assisted listening system for compliance with the Americans with Disabilities Act. Provide resident source devices including, but not limited to, computers and DVD players, with an input for portable MP3 players. Provide an integrated control system to control all AV system functions and room lighting. Locate touch panel interface on the lectern/instructor’s desk.

Multi-purpose Rooms 1, 2, 3
Design each room with fixed audio and video systems. Provide projectors in a 16:9 format, with recessed, electric roll-up projection screens. Size projection screens using industry-wide accepted mathematical formulas appropriate for the nearest and furthest viewers. Locate projection screens in close coordination with seating layouts to assure appropriate viewing sight lines. Provide projectors with a minimum native resolution of 1366 X 768. As with screen sizing, utilize industry-wide accepted mathematical formulas to calculate the required light output for each projector to assure that images will not be "washed out" by ambient room lighting. Include all video system calculations in the construction drawings.

Provide audio systems for the playback of portable and fixed media source audio and for voice reinforcement. Provide wall and / or floor mounted computer video, composite video and S-video inputs, with their associated audio signals, to the permanently mounted projector / audio system. Provide an audio system output for connection to a portable assisted listening system for compliance with the Americans with Disabilities Act. Provide wired and wireless microphones for voice reinforcement systems. Provide resident source devices including, but not limited to, computers and DVD players, with an input for portable MP3 players. Provide an integrated, wall-mounted control system to control all AV system functions and room lighting.

Fitness/Weight Room, Personal Training/Fitness Room, Exercise Space, and Lounge
Provide a music playback system throughout each room. Include speaker systems which faithfully reproduce full range music frequencies. Locate equipment in a non-public area, and locate controls remotely, as directed by the Institution. Override audio system when a facility-wide page is in progress.

Climbing Wall
Provide a music playback system at the climbing wall connected to the climbing wall counter. Include speaker systems which faithfully reproduce full range music frequencies. Locate equipment in a non-public area, and locate controls remotely, as directed by the Institution.

TV Distribution System

An RF TV distribution system will be provided for distribution of audio and video signals throughout the building. The TV distribution system will be provided with cable, amplifiers, splitters, directional couplers, terminators, outlets, and connectors. The system will be the broadband type, for distribution of low resolution, modulated audio and video signals onto a carrier frequency. A minimum 750 MHz bandwidth will be specified, and all outlets will be provided with between +5 and +10 dBu at each building television outlet. TV outlets will be located in all public areas, classrooms, multipurpose rooms, meeting rooms, conference rooms, gymnasiums, weight room, rock climbing area, vending, laundry, equipment check-out, repair and storage rooms, and corridors.

Clock System

Provide battery operated clocks throughout the building, and a GPS receiver / transmitter at a central location. Specify clocks to be correctable by the GPS receiver / transmitter via a wireless connection directly to each clock.

3.3.6 Pool Requirements

Swimming Pool Executive Summary

The Aquatic Center at The University of Utah Student Life Center will be designed to meet the needs of the University for the next fifty years. It is important to provide maximum flexibility for programming, which will be the key to maximum utilization.

The Student Life Center shall feature an indoor combination lap and recreation pool with a spa or an indoor lap pool, an outdoor recreation pool, and a spa as described in the two (2) options in Section 2. The pools will be constructed of cast-in-place or pneumatically applied concrete. The interior of the pools will be tile or Diamond Brite/Pebble Tec. All loose and deck equipment will be as required by the applicable Health Department Regulations and the requirements of the NCAA i.e., ladders, grab rails, safety ropes and anchors, lifeguard chairs, stanchions, deck anchors, etc. The filtration system will be a high rate pressure sand system or a regenerative media system. Miscellaneous maintenance and first aid equipment will be provided that meets the applicable Health Department Regulations.

The natatorium and swimming pools will meet the following performance standards:

Overhead lighting:

Lap Pool	=	100 foot candles
Recreation Pool	=	50 foot candles
Spa	=	50 foot candles

Water Temperature:

Lap Pool	=	78 - 82 degrees F.
Recreation Pool	=	84 - 86 degrees F.
Spa	=	100 - 104 degrees F.

Air Temperature = 84 - 86 degrees F.

Relative Humidity = 50%

Reverberation Time = 2.0 to 3.0 seconds

Turnover Rate of Filtration System:

Lap Pool	=	5.5 hours
Recreation Pool	=	3.0 hours
Spa	=	15 minutes

Free Chlorine Level = 1.0 - 3.0 ppm

pH level = 7.4 - 7.6

Swimming Pool Program

Option 1

Option 1 features an indoor combination lap and recreation pool that will be approximately 5,000 square feet. The lap area will have dimensions of approximately 75'-1 1/2" x 45' with a minimum depth of 4 feet and a maximum depth of 12 feet. Six 7' - 6" wide lanes will be marked with black or midnight blue floor markers across the pool. A 12" deep deck level gutter system will be provided around the perimeter of the pool for recirculation of pool water. Rope anchors will be provided in the pool for floating lane lines. The recreation area will be approximately 1,600 square feet and have the following amenities: water volleyball, water basketball, rock climbing wall, vortex, and numerous social spaces. This area will have a minimum depth of 3'-0" and a maximum depth of 4' - 0". A large stair system will be provided. Equipment to be provided will include (not all inclusive): starting blocks, deck mounted water polo goals, pace clocks, movable guard stands that are 42" tall, one handicap lift, maintenance equipment, and safety equipment. An emergency shut off switch will be provided near the pool to control the recirculation pump. The water temperature in this pool will be kept between 84-86 degrees.

Option 1 also features a spa that will be approximately 200 square feet and accommodate approximately twenty (20) users. The spa will be 3'-0" deep. The spa will be raised approximately 18" above the deck level. Skimmers will be provided for recirculation of the spa water. An emergency shutoff switch and timer will be provided near the spa. The water temperature in the spa will be kept between 100-104 degrees.

Option 2

Option 2 features an indoor lap pool with dimensions of approximately 75'-1 1/2" x 45' with a minimum depth of 4 feet and a maximum depth of 12 feet. Six 7' - 6" wide lanes will be marked with black floor markers across the pool. A 12" deep rollout gutter system will be provided around the perimeter of the pool for recirculation of pool water. Wall targets and floor markers will be provided for a competitive race course. Rope anchors will be provided in the pool for floating lane lines. A stair alcove system for easy entry and exit will also be provided. Equipment to be provided will include (not all inclusive): starting blocks, deck mounted water polo goals, movable guard stands, pace clocks, handicap lift, maintenance equipment, and safety equipment. The water temperature I this pool will be kept between 78-82 degrees.

Option 2 features an outdoor recreation pool that will be approximately 5,000 square feet and have the following amenities: water volleyball, water basketball, rock climbing wall, vortex, and numerous social spaces. The pool will have a minimum depth of 3'- 0" and a maximum depth of 5' - 0". A 12" deep deck level gutter system will be provided for recirculation of pool water. A large stair system will be provided. Equipment to be provided will include (not all inclusive): movable guard stands that are 42" tall, one handicap lift, maintenance equipment, and safety equipment. An emergency shut off switch will be provided near the pool to control the recirculation pump. The water temperature in this pool will be kept between 84-86 degrees.

Option 2 also features a spa that will be approximately 200 square feet and accommodate approximately twenty (20) users. The spa will be 3'-0" deep. The spa will be raised approximately 18" above the deck level. Skimmers will be provided for recirculation of spa water. An emergency shut off switch and hydrotherapy jet timer will be provided near the spa. The water temperature in the spa will be kept between 100-104 degrees.

If option two is chosen, the two pools should be located to promote a visual connection between the two. Windows and sliding doors can be placed to allow the two pool decks to open up to each other when weather permits. This will create a larger pool area and allow users access to swim in either pool.

Swimming Pool Systems and Equipment

Pool Construction

Pool shells of cast-in-place or pneumatically applied concrete will be provided depending on the results of the geotechnical investigation, construction staging, cost, and site access. An option to use either method may be included if appropriate for the soil conditions. Different swimming pool contractors use different methods of concrete pool shell construction.

Hydrostatic Relief Systems

A means of stabilizing the pool shell when abnormal subsurface hydrostatic pressure occurs will be provided, which otherwise can cause the pool shell to float when the swimming pool is empty. This hazard is minimized if a full basement surrounds the pool tank; however, if the pool walls rest in an unexcavated mass, the danger does exist.

The design of a hydrostatic relief system is usually based upon the predictable levels of the subsurface water table. Because other developments can also create a hazardous situation when the pool is empty, it is important to understand these various dangers and to design a comprehensive system that will prevent destructive forces from developing. Various systems have been developed including automatic check valves, concrete ballast, dehydration systems, refilling systems and gravity drains. The primary issue, as in any preventative action task, is to understand the various kinds of hazard and damage that may occur.

Even a benign water table is not justification to dismiss the potential problem. An unnatural hydrostatic pressure condition can develop if a break occurs in a water pipe in either the fresh water system or the pool water system. This rapid introduction of water into the otherwise “dry” substrata can create an unstable condition for the pool shell.

In the case of the fresh water line, the condition can go undetected for months in certain circumstances. For this reason the pool will feature some means of draining the substrata below the pool shell.

In addition to a conventional automatic hydrostatic relief mechanism(s), it is recommended that a sight well be provided in the pool deck, adjacent to filter room or immediately outdoors of the natatorium. Such a feature will allow the visual inspection of the water table under the pool and in the case of the outdoor sight sump, dewatering can be conveniently executed.

Pool Finish

The interior finish for the indoor pools and spa will be unglazed ceramic mosaic tile. The interior finish for the outdoor pools will be Diamond Brite / Pebble Tec with a tile trim. Specialty tile will be provided for the perimeter tile band, gutter nosing, wall targets, recessed steps, floor lane markings, depth markings, warning signs, and construction joint installation bands.

Deck Signage

Depth markings and warning signs for the pool and spa deck will be required by code in contrasting ceramic tile. Depth markings will be shown in standard and / or metric measurements. “NO DIVING” signs will be provided at all pool areas with a depth of water 5’-0” or less. Depth markers will be provided per code at not more than 25 ft intervals.

Overflow Recirculation Systems
In modern swimming pools, the purpose of the perimeter overflow system is to receive and capture water at the pool surface. This water is then transferred to the filter plant, either by direct suction connection, or through a surge tank, which helps stabilize the water displacement in the swimming pool. A 12" deep rollout gutter will be installed on the lap pool and a 12" deep deck level gutter will be installed on the recreation pools. The spa will utilize a skimmer system. A surge tank will be required for all pools utilizing a gutter system.

Filtration Systems
The filters will be high rate pressure sand filters operating at a flow rate of up to 15 GPM per square foot of filter area. While many manufacturers rate their system at 20 GPM / sq. ft., field experience has shown that the lower flow rate results in better water quality. The system will be designed to completely turn over the lap pool water every 5.5 hours, the recreation pool water every 3 hours. A regenerative media filtration system will be discussed as the project moves forward. Chemicals for sanitizing the water will be injected into the filtration system piping in the filter room.

Filter room and filter face piping will be PVC Schedule 80 piping used throughout the pool and spa piping system (8 in. or smaller) because of its non-corrosive quality; however, only molded fittings are recommended. All flanges will be reinforced with a steel ring molded into the flange to avoid cracking due to vibration. Heat exchanger by-pass piping will be copper or CPVC.

Pumping Equipment
Horizontally mounted centrifugal pumps will be utilized for all the pool and spa recirculation and feature pumps, and will be certified by the National Sanitation Foundation (NSF) and bear the certification mark. Pump casing will be cast iron fitted with a replaceable bronze case wear ring. Pump impeller will be enclosed type of cast bronze, statically and dynamically balanced, and trimmed for the specified design conditions. A hair and lint strainer will be provided, for each pump, constructed of fiberglass or epoxy coated stainless steel construction with a clear observation top. Pressure gauges will be installed on the discharge of the pumps and compound gauges will be provided at the intake port of the pumps, after the hair and lint strainer.

Piping Systems
Exposed piping in the filter room and surge tank will be Schedule 80 PVC for strength and resistance to corrosion. All piping below the floor of the pool shell will be encased in concrete and will be Schedule 40 PVC.

All valves will be identified in the filter room. Valves will be described as to their function and referenced in the operating instruction manual and wall mounted piping diagram to be prepared by the contractor.

The pools and spa will utilize a combination of floor and wall inlets.

Chemical Treatment Systems
Calcium hypochlorite will provide the primary chemical sanitizing for the pools and spa. The halogen requirement of the pools will be automatically monitored and controlled by a Chemtrol or Acu-trol chemical controller capable of monitoring 0 to 6 parts per million of chemical and showing Oxidation Reduction Potential (ORP) in addition to the two traditional readings of sanitizer and pH.

Muriatic Acid will be provided as the pH Buffering System. Chemical feeders for muriatic acid will be peristaltic type pumps. Two (2) fifteen (15) gallon acid drums or one (1) 55 gallon acid tank by LMI will be provided. Chemical feed pumps will be furnished and connected to the filtered water return lines to the pool(s) as shown on the pool plans. The pumps will be capable of feeding a solution to the pool(s) to maintain pH level against the back pressure involved and will be fully adjustable while in operation.

An Ultraviolet Dechloramination and Disinfection System will be provided so that the pool and spa water will be monitored and treated by UV sterilization in the range of 220nm to 400nm to kill bacteria, viruses, molds and their spores and to continuously remove chloramines. The concentration of free chlorine residual will at all times meet the requirements of the Health Department authority having jurisdiction over the swimming pool. Any proposed UV system must have a UL listing on the complete system and be listed under NSF Standard 50.

Water Chemistry Monitoring and Control Systems

A programmable chemical automation system will be furnished for the pools and spa for continuous monitoring of water chemistry (ORP/HRR, PPM, pH and Temperature), Langelier Saturation Index, and for automatic control of the chemical feeders, heater, and water level. Installation of the system will be as specified by the manufacturer. A factory-authorized representative will provide training to the owner and the training will be video taped per the specifications. Such a system will not only improve the water quality of the pool, but will also improve the overall environment of the natatorium because of the greater degree of chemical balance of the water. This can result in much less aggressive atmospheric conditions.

Inserts and Anchor Sockets

A. Anchors for grab rails and stair railings will be provided.
B. Anchors for backstroke stanchions and water polo goals will be provided.
C. Heavy-duty cup anchors for all floating lane lines will be provided.
D. Anchors for starting blocks will be provided.
E. Anchors for the handicap lift will be provided.
F. Anchors for the volleyball net and basketball goals will be provided.

Deck Equipment

A. Grab rails and recessed steps for the pool will be provided as required. These will be provided by stainless steel grab-rails set in chrome plated bronze wedge anchors and escutcheons with setscrews. Recessed steps in the pool wall will be provided.
B. Backstroke and recall rope stanchions will be provided. The backstroke stanchions will be fitted with pennants and the recall stanchions with a rope.
C. 24” x 32” track start starting platforms will be provided for the pool. These may be removed from the deck when not in use. Diving from the starting platforms should be restricted to supervised practice or competition of athletic teams.
D. Deck mounted water polo goals will also be provided.
E. Lifeguard chairs to meet the minimum standards of State regulations will be provided in portable (wheeled) units that may be stored out of the way during periods when lifeguards are not required.

F. A surge tank access hatch will be furnished and installed over the surge tank. The access hatch will be a single door 2 ft.-6 in. x 2 ft.6 in with 1" fillable pan to receive ceramic tile and grout or concrete deck fill. The frame will be 1/4 inch extruded aluminum with built in neoprene cushion and continuous anchor flange. Door will be 1/4" aluminum plate reinforced with aluminum stiffeners as required.
G. Surge tank ladder rungs will be 1/2 inch Grade 60 steel encased with co-polymer polypropylene plastic.
H. Handicap lift(s) will be provided to meet ADA guidelines.

Loose Equipment

A. 6" diameter floating lane lines will be provided with an adequate number of storage reels.
B. Lane line storage reels will be fabricated from a heavy-duty aluminum reel joined together by a 1-1/2 inch aluminum axle. This unit must ride easily on four hard rubber wheels.
C. 31" octagonal pace clocks will be provided on portable carts with battery power.

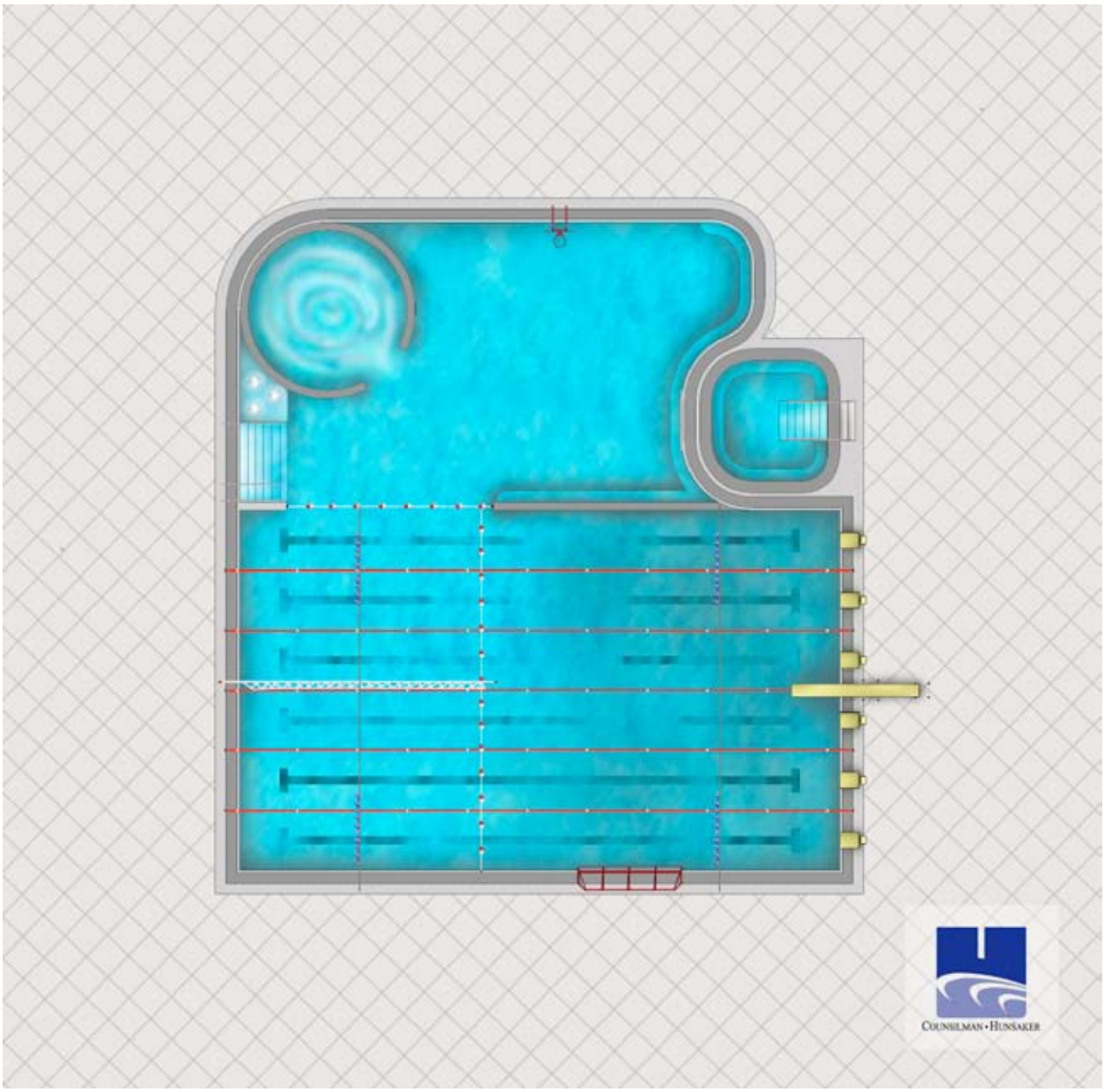
Maintenance Equipment

A. Wall brush will be a flexible polyethylene material with five (5) rows of nylon bristles. Pool brush holder will be permanent mold cast aluminum with hydrofoil flap.
B. Skimming net head will consist of one-piece molded plastic frame with a reinforced, integral handle bracket suitable for quick attachment to a standard 11/4 or 1 1/2 inch diameter handle using bolts and wing nut.
C. Adjustable telescopic and stainless steel poles to will be provided.
D. Testing kit to feature liquid reagents, color comparator, waterproof instructions and treatment charts, chemistry guide and watergram. Test kit to have the ability to test for free and total chlorine (0.5 – 5.0 ppm), bromine (1-10 ppm), pH (7.0 – 8.0), acid and base demand, total alkalinity, calcium hardness, and cyanuric acid.
E. A vacuum cleaner will be provided with pump and strainer.
F. Stainless steel cleaner will be provided.

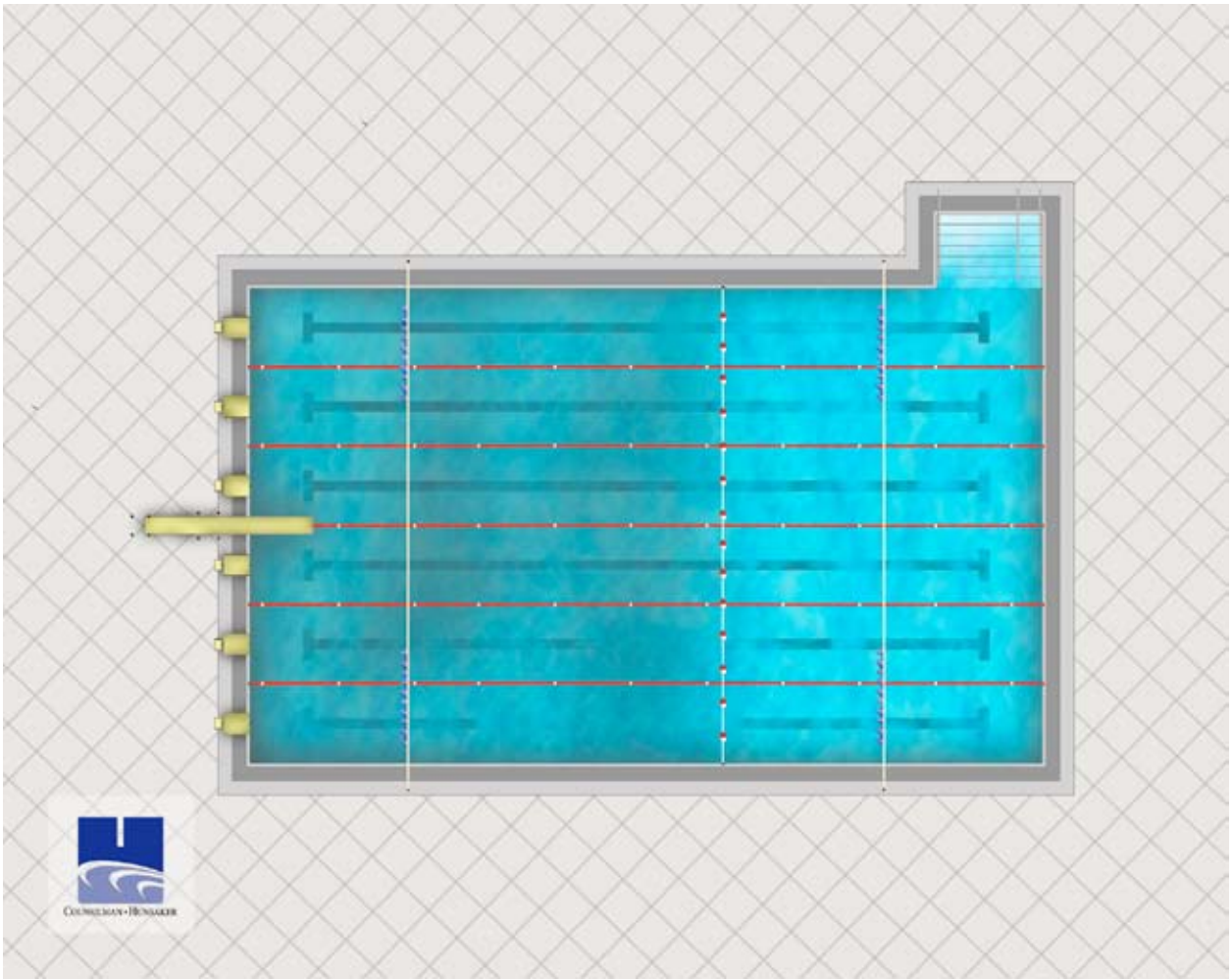
Safety Equipment

A. Ring buoys and extension ropes will be provided.
B. Life hook and an aluminum extension pole will be provided.
C. Spineboards will be provided with head immobilizer, head strap, body straps, side roll ups, adhesive strips, and required staples.
D. A first aid kit will be a 24 unit kit per American Red Cross standards as manufactured by Swift First Aid, or equal.
E. Rescue tubes for each lifeguard chair will be provided.
F. A safety eye wash station will be a self-contained system in which eyewash bottles are securely positioned in a portable holder. Eyewash bottles will be 32 ounces and easily removable from case, and will contain a sterile, saline solution with the ability to neutralize a varying quantity acids or caustics.
G. A safety eyeglasses dispenser station containing ten (10) pairs of safety glasses will be provided.

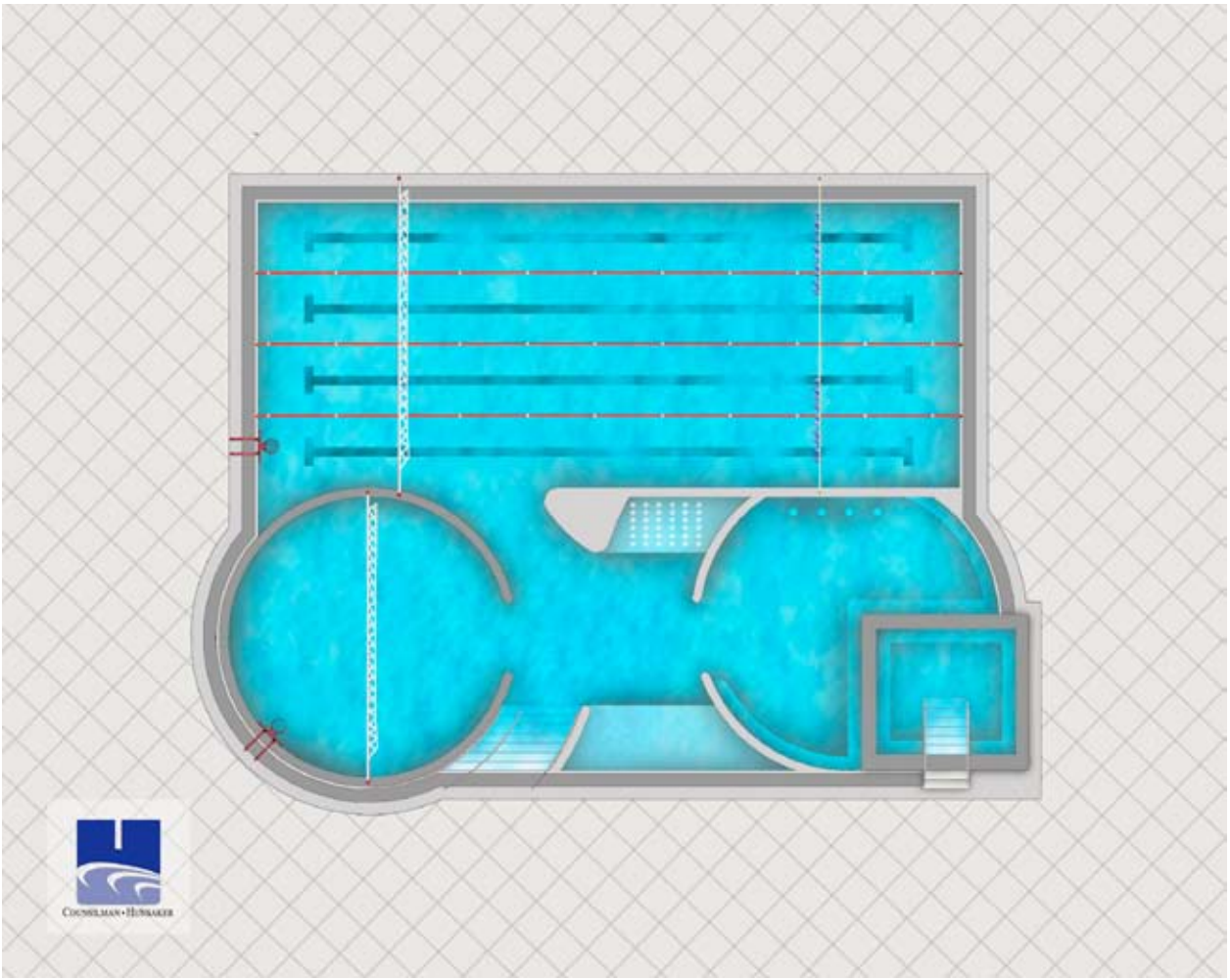
Multipurpose Pool Plan - Option 1



Lap Pool - Option 2



Leisure Pool Plan - Option 2



3.3.7 Food Service

As illustrated in the drawing on the following page, the Student Life Center will include a proposed juice bar to meet the following requirements.

The curved front bar is to include a granite top with a plastic laminate front die as per architect. Bar stools should be provided with serving rails at one end. Various tables with chairs with matching granite tops are proposed.

The back bar should be stainless steel with a granite top and plastic laminate on the front doors.

Item S-24 is a glass door refrigerator with lights to hold bottled specialty juices. Space will also be provided for dietary supplement sales (protein, carb drinks, bars, etc. including supplement additives. Also include an ice maker/dispenser to provide ice for drinks. Next there should be 2 each vita mix juice mixers with tray slides under to hold glasses in glass racks. Next there would be a drop-in freezer cabinet. Across the top there should be a glass shelf as shown. Hanging from ceiling in front of back bar is an illuminated menu board with colored pictures of various juices and sandwiches. To the right of the freezer should be a pour-over coffee maker which uses airpots.

A proposed refrigerated sandwich bar is to be located between the front bar and back bar. It has been suggested that healthy sandwiches be provided. A small conveyor toaster and a sandwich steamer for hot sandwiches will be included. No hood is needed. On the left end, include a place to store sandwich buns.

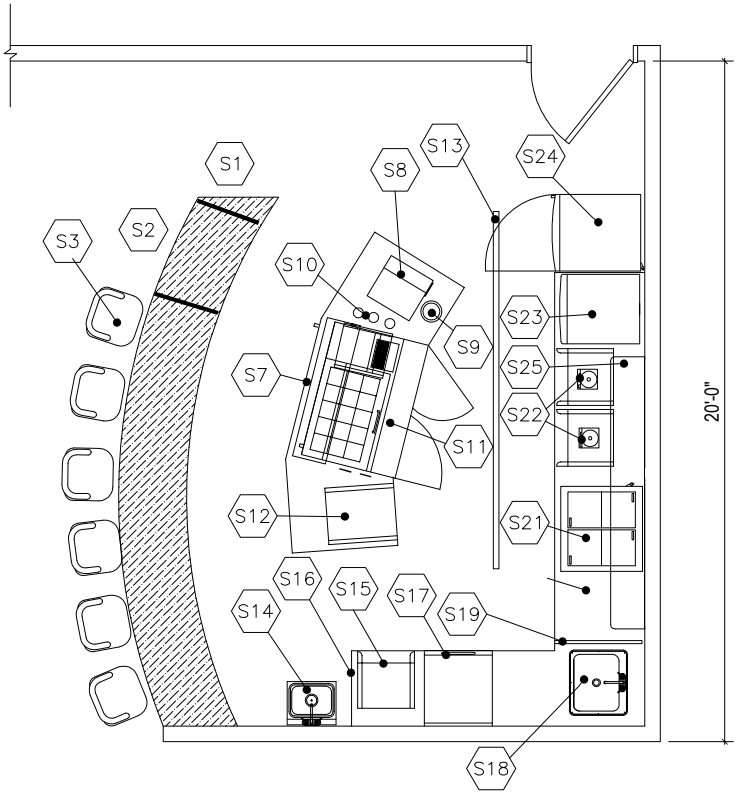
A drop-in sink and an under counter commercial dishwasher with a wash time under 2 minutes is to be included. Space for additional glass racks is requested to be near the dishwasher.

A stainless steel hand sink with a soap dispenser and a towel dispenser is required by the board of health.

Juice Bar Equipment Schedule

Equipment Schedule					
Item No	Qty	Equipment Category	Manufacturer	Model Number	Equipment Remarks
S1	1	Bar, Granite Top	Custom		
S2	2	Serving Rails			
S3	6	Bar Stools			
S4		Not used			
S5		Not used			
S6		Not used			
S7	1	Sandwich Counter w/ Serving Shelf	Custom		
S8	1	Sandwich Steamer	Roundup		
S9	1	Refuse Drop			
S10	3	Dressings			
S11	1	Refrigerator, Sandwich/Salad Prep	True Food Service	TSSU-48-15M-B	
S12	1	Bun Storage			
S13	1	Menu Board			
S14	1	Sink, Hand	Advance TABCO	7-PS-50	
S15	1	Glass Storage	Custom		
S16	1	Counter, L Shaped	Custom		
S17	1	Warewasher, Undercounter, High Temp	Hobart US Foodservice	LX18H+BUILDUP	
S18	1	Sink, Drop-In	Advance TABCO	DI-1-2012	
S19	1	Divider Guard			
S20		Spare Number			
S21	1	Drop-In, Freezer/Plate Chiller	Randell	9552A	
S22	1	Drink Machine	Vita-Mix		
S23	1	Ice Maker/Dispenser	Follett	11OCT400A	
S24	1	Display Case, Refrigerated	True Food Service	GDM-23RF	
S25	1	Wall Shelf	Custom		
S26	1	Cofee Maker, Airpot, Pourover	Bunn-O-Matic	23000	

Juice Bar Plan



3.3.8 System Commissioning Controls

Mechanical

As part of the DFCM High Performance Building Requirements a commissioning agent will be an integral part of the design and construction of the mechanical systems. The commissioning agent is to focus on key systems identified in the contract documents as well as include systems that DFCM from past experience, deem to have been problematic. The commissioning agent validates that the key systems will comply with the design process, DFCM's project constraints, and the basis of design at each phase of the project.

With respect to the mechanical systems the Design Engineering shall participate with the Commissioning Agent during design process and shall specify the mechanical and plumbing system installer are part of the commissioning. The following systems shall be included but not be limited to during the commissioning process:

- Preparation of Testing Procedures
- Verify proper operation of the Demand control ventilation using CO2 Sensors
- Air Handlers
- Exhaust Systems
- Fire Damper, Fire/Smoke Damper and Smoke Damper Operation
- High Temperature Hot Water System
- Chilled Water System
- High Temperature Hot Water & Chilled Water Metering
- Domestic Hot Water System
- Work directly with the Test & Balancing Contractor to ensure proper air & water flow
- Automatic Temperature Control Sequence of Operation Verification

Electrical

As part of the LEED and the State's High Performance Building System, commissioning will be an integral process of the design and construction. Participate fully with the Commissioning Agent during design, and specify that the electrical systems installers are part of the commissioning. As a minimum, the following systems shall be included in the commissioning process:

- Medium voltage equipment (transformers, switches, cables)
- Main switchgear
- Lighting Control Devices and Systems
- Generators and Transfer Switches
- Motor Controllers
- Variable Frequency Controllers
- Fire Alarm Systems
- Security Systems

3.3.9 Value Engineering

The Owner will conduct value engineering workshops during the review of the Schematic Design phase and the design development design phase of this project. These value engineering sessions will consist of project presentation, evaluation, recommendations, and Design Team response sessions. Participation in these value engineering sessions by the selected Design Team (architects, engineers, etc.) is a requirement of this program. The Owner may contract with an independent firm to provide cold team services or the Owner may request that the Design Team provide a cold team to participate in the value engineering sessions. The Owner will provide compensation for the Cold Team.

3.3.10 Sustainability

Sustainable Features Overview

Sustainable – or "green design" – seeks to reduce the consumption of non-renewable resources, minimize waste, and create healthy, productive environments. An integrated, holistic approach and sustainable strategies can be applied at every stage of the building life cycle, from initial site selection and building design through construction and operations. Sustainable design principles seek to:

- Optimize site potential
- Protect and conserve water
- Minimize non-renewable energy consumption
- Enhance indoor environmental quality
- Use environmentally preferable products
- Optimize operational and maintenance practices

The U.S. Green Building Council has utilized these principles to develop the Leadership in Energy and Environmental Design (LEED®) Rating System. LEED was created to define "green design", establishing a national standard of measurement that recognizes achievement in integrated, whole-building design practices by calculating performance points in five categories. Based on total points earned, a building can attain LEED certification at one of four levels. The first level, Certified, requires 26-32 points. LEED Silver requires 33-38 points, Gold requires 39-51 points and Platinum requires 52-69 points.

The State of Utah has an energy efficiency program called the High Performance Building Rating System (HPBRS). Many of the goals of the HPBRS are similar to those described in LEED. The HPBRS is specific to the climate of Utah and has some additional prerequisites that need to be met.

The Student Life Center at the University of Utah will be designed to be a sustainable building. This project is under the requirements of the DFCM High Performance Building Rating System, and is also under consideration for LEED Silver Certification as requested by the Steering Committee. Currently 32 LEED points have been identified for inclusion in the project, with several others to be investigated during the design process (see attached checklist). Some key features are outlined below.

Sustainable Sites

- Site selection will not disturb greenfields and natural habitats.
- Bicycle storage and on-site shower facilities available for cyclists.
- Highly reflective roofing and paving materials reduce heat-island effect.
- Low-cutoff exterior light fixtures avoid contributing to night-sky pollution.

Water Efficiency

- High-efficiency plumbing fixtures, and waterless fixtures reduce potable water usage by 30%.

Energy & Atmosphere

- Building System Commissioning verifies implementation and performance.
- Insulated, low-E coated glass reduces energy costs.
- No ozone-depleting CFC-based refrigerants.

- Energy cost savings targeted at 20%-30% above prerequisite standard by optimizing system and envelope performance.
- Natural ventilation strategies will be investigated in select spaces to minimize cooling loads.

Materials & Resources

- Construction waste recycled or reused.
- Building materials contain significant recycled content.
- 20% of building materials extracted, processed, and manufactured regionally.

Indoor Environmental Quality

- Carbon dioxide monitoring system provides feedback on space ventilation performance.
- Low VOC-content paints, carpets, adhesives and sealants.
- Natural daylighting throughout the building.
- 2-week building filtering and "flush-out" prior to occupancy to remove any chemical contaminants from construction.

Mechanical/Plumbing Sustainable Design Requirements

Energy Efficiency

Comply with the High Performance Building Rating System of the DFCM Design Requirements. DFCM will engage a separate Energy Specialist to perform an energy analysis of the proposed building according to Appendix G of Standard 90.1. The analysis will consider reducing energy use in each of the following categories: lighting, cooling, heating, pumps, internal loads, and external loads.

In order to conserve energy, the following design and control methods shall be evaluated for incorporation into the building:

- Window blinds, heat absorbing or reflective glazing, external shading devices, and heavyweight structure
- Energy efficient motors should be used for all items of equipment
- Variable air volume systems should be used wherever permitted
- Variable speed drives shall be used in lieu of inlet vane control
- A heat recovery system of the glycol runaround type or molecular sieve heat wheel should be considered

Sustainability

The building shall be constructed to meet sustainable design, construction and operation.

Air Handling Systems

Central station custom air handling systems shall be designed to meet all of the above heating, cooling, ventilation and exhaust requirements of the project. Each supply system shall have multiple fans arranged such that if one fan is down, the other fan can still supply some air to the space. Air supply systems shall be variable volume with variable frequency control type with hot water reheat and cooling coils.

Air Intakes and Exhaust

Air intakes shall be positioned to avoid short circuiting of exhaust air back into the building. Every effort shall be made to minimize any entrainment of fumes by strategic location of air intakes.

Electrical/Lighting Sustainable Design Requirements

General
The following general areas shall be addressed in the electrical design in order to meet sustainable design criteria:

Light Pollution Reduction: Design exterior lighting using full cut-off luminaires. Do not exceed 80% of the lighting power densities for exterior areas and 50% for building facades and landscape features as defined in ASHRAE/IESNA Standard 90.1-2004, Exterior Lighting Section.

Optimize Energy Performance: The lighting power density for the project shall be at least 10% better than the requirements listed in ASHRAE/IESNA Standard 90.1-2004. The most energy efficient lamp and ballast combinations that are feasible for the project should be used. Give consideration for maintenance and lamp replacement according to campus standards. A variety of lighting control methods and lighting power reduction techniques shall be considered, based on type and use of each space, including the following:

1. Corridors and Common Areas: Provide a lighting relay control system that controls lights based on time of day occupancy. For after hours, override switches may be used that turn lights on for no longer than one hour at a time.

2. Enclosed Spaces (offices, conference rooms, equipment rooms, etc.): Provide occupancy sensors with local "off" override switches.

3. Daylighting Areas: For corridors and common areas with daylighting, provide indoor photocells to turn on/off artificial illumination, or to provide stepped switching based on the amount of natural daylighting available. For normally occupied interior spaces, consider the use of a photocell and continuous dimming.

4. Exterior Areas: Control exterior lighting through a photocell and timeclock combination. Campus environments should have a minimal level of security lighting throughout the dark night hours.

5. Task/Ambient Lighting: Energy consumption can be greatly reduced by reducing the ambient lighting and providing additional, separately controlled lighting for individual tasks.

Controllability of Lighting: Maximize the use of lighting controls by ensuring that at least 90% of the occupants have individual controllability of lighting in their respective work area. Where open office furniture is used, then separately switched task lighting mounted in the systems furniture is preferred. For shared multi-occupant spaces, provide variable lighting controls to allow adjustment that meets group needs and preferences.

LEED®-NC

LEED®- NC Version 2.2 Registered Project Checklist

University of Utah Student Life Center

Salt Lake City, Utah

s	?	No			
6	3	5	**Sustainable Sites**		**14** Points
Y			Prereq 1	**Construction Activity Pollution Prevention**	Required
1			Credit 1	**Site Selection**	1
		1	Credit 2	**Development Density & Community Connectivity**	1
		1	Credit 3	**Brownfield Redevelopment**	1
1			Credit 4.1	**Alternative Transportation**, Public Transportation Access	1
1			Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
1			Credit 4.3	**Alternative Transportation**, Low-Emitting and Fuel-Efficient Vehicles	1
	1		Credit 4.4	**Alternative Transportation**, Parking Capacity	1
		1	Credit 5.1	**Site Development,** Protect or Restore Habitat	1
		1	Credit 5.2	**Site Development,** Maximize Open Space	1
		1	Credit 6.1	**Stormwater Design,** Quantity Control	1
	1		Credit 6.2	**Stormwater Design,** Quality Control	1
	1		Credit 7.1	**Heat Island Effect,** Non-Roof	1
1			Credit 7.2	**Heat Island Effect,** Roof	1
1			Credit 8	**Light Pollution Reduction**	1

Yes	?	No			
3	2		**Water Efficiency**		**5** Points
1			Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
	1		Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
	1		Credit 2	**Innovative Wastewater Technologies**	1
1			Credit 3.1	**Water Use Reduction**, 20% Reduction	1
1			Credit 3.2	**Water Use Reduction**, 30% Reduction	1

Yes	?	No			
6	3		**Energy & Atmosphere**		**17** Points
Y			Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required
Y			Prereq 2	**Minimum Energy Performance**	Required
Y			Prereq 3	**Fundamental Refrigerant Management**	Required
4			Credit 1	**Optimize Energy Performance**	1 to 10
	1		Credit 2	**On-Site Renewable Energy**	1 to 3
1			Credit 3	**Enhanced Commissioning**	1
1			Credit 4	**Enhanced Refrigerant Management**	1
	1		Credit 5	**Measurement & Verification**	1
	1		Credit 6	**Green Power**	1

continued…

Yes	?	No			
5	3	5	**Materials & Resources**		13 Points
Y			Prereq 1	**Storage & Collection of Recyclables**	Required
		1	Credit 1.1	**Building Reuse**, Maintain 75% of Existing Walls, Floors & Roof	1
		1	Credit 1.2	**Building Reuse**, Maintain 100% of Existing Walls, Floors & Roof	1
		1	Credit 1.3	**Building Reuse**, Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1	**Construction Waste Management**, Divert 50% from Disposal	1
1			Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
		1	Credit 3.1	**Materials Reuse**, 5%	1
		1	Credit 3.2	**Materials Reuse**,10%	1
1			Credit 4.1	**Recycled Content**, 10% (post-consumer + ½ pre-consumer)	1
	1		Credit 4.2	**Recycled Content**, 20% (post-consumer + ½ pre-consumer)	1
1			Credit 5.1	**Regional Materials**, 10% Extracted, Processed & Manufactured Regionally	1
	1		Credit 5.2	**Regional Materials**, 20% Extracted, Processed & Manufactured Regionally	1
	1		Credit 6	**Rapidly Renewable Materials**	1
1			Credit 7	**Certified Wood**	1

Yes	?	No			
11	2	2	**Indoor Environmental Quality**		15 Points
Y			Prereq 1	**Minimum IAQ Performance**	Required
Y			Prereq 2	**Environmental Tobacco Smoke** (ETS) **Control**	Required
1			Credit 1	**Outdoor Air Delivery Monitoring**	1
	1		Credit 2	**Increased Ventilation**	1
1			Credit 3.1	**Construction IAQ Management Plan**, During Construction	1
1			Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
1			Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
1			Credit 4.2	**Low-Emitting Materials**, Paints & Coatings	1
1			Credit 4.3	**Low-Emitting Materials**, Carpet Systems	1
1			Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber Products	1
1			Credit 5	**Indoor Chemical & Pollutant Source Control**	1
1			Credit 6.1	**Controllability of Systems**, Lighting	1
		1	Credit 6.2	**Controllability of Systems**, Thermal Comfort	1
1			Credit 7.1	**Thermal Comfort**, Design	1
1			Credit 7.2	**Thermal Comfort**, Verification	1
	1		Credit 8.1	**Daylight & Views**, Daylight 75% of Spaces	1
		1	Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1

Yes	?	No			
2	3		**Innovation & Design Process**		5 Points
1			Credit 1.1	**Innovation in Design**: Educational Outreach Program	1
	1		Credit 1.2	**Innovation in Design**: Green Housekeeping Products - "Green Seal" Rating	1
	1		Credit 1.3	**Innovation in Design**: Double Regional Materials (40%)	1
	1		Credit 1.4	**Innovation in Design**: Recycled Content (30%)	1
1			Credit 2	**LEED® Accredited Professional**	1

33	16	12	**Project Totals** (pre-certification estimates)	69 Points

Certified 26-32 points **Silver** 33-38 points **Gold** 39-51 points **Platinum** 52-69 points

Table of Contents - Section 4

4.0 SPACE PROGRAM

4.1 SPACE PROGRAM AREA AND HEAD COUNT SUMMARY

Three space program models (A, B, and C) have been created for this study. Each of the program models is for a "dry" facility without any pool designated as Alternate 1. The pool has been added to the program models in 3 different alternates: Alternate 2 if the pool is an outdoor pool, Alternate 3 if the pool is an indoor pool, and Alternate 4 if there are 2 pools; one that is indoor (lap pool) and the other that is outdoor (recreation pool). The difference between the space program models is in the number and size of the gymnasiums in each of the program models. Model A has a 3-court gymnasium and a 1-court MAC Gymnasium. Model B has a 3-court gymnasium and a 2-court MAC gymnasium. Model C has a 4-court gymnasium and a 2-court MAC gymnasium. The remainder of the spaces for the facility are the same for all 3 of the program models.

These final space program models are the results of the evolution of program models that were developed during the course of the study. The spaces in these programs are a result of input from many focus group meetings with students, Recreation staff, Facilities and Planning, and Student Affairs administration. The 3 program models were developed with 3 different scenarios of construction cost as the determinant of the size of each of these models. Model A has a total of 86,539 square feet of assignable area (123,627 gross square feet), and its projected cost is within the $34.8 million construction budget that has currently been approved for the Student Life Center project. But this Model has been determined to fall short of the recreation needs of the size of the University of Utah's student population especially in the size of the gymnasiums. A pool is not within the current construction budget for the facility even if Model A is used. An outdoor pool will add $2.2 million to the cost of Model A, and an indoor pool will add $6.9 million to the cost of Model A. Model B is considered the ideal Model for the Student Life Center with the proper amount of gymnasium space but is approximately $2 million more than the $34.8 million construction budget. But since it has been considered as the ideal Model, it has been used as the Program to test the site that has been designated for the Student Life Center in the Master Plan and to plan block plan layouts for the facility. Model C is considered larger than necessary at this time, but it does include enough gymnasium space that a future expansion of the facility would not be of a high priority. This Model is approximately $4.5 million more than the $34.8 million construction budget. A sizable portion of the construction and project budget for the facility, approximately 65%, will be provided through an increase in student fees. The remainder is requiring private fund-raising. The 3 program models have also been developed so that there are different goals for the fund-raising in terms of the size of the facility that can be built and whether the pool can be added to the project.

The assignable (net) building area versus the total building envelope area (gross) is discussed in Section 1.3.2. An efficiency factor of 70% (versus 65%-68%) has been used to determine the gross area from the net area. This is a higher than normal efficiency factor but it is because support spaces such as the lobby and lounge, storage areas for activity spaces, and restrooms have been listed as a part of the assignable or net building area.

The current student population of the University of Utah is approximately 28,600. Model A will provide approximately 4.3 square feet of indoor recreation space per student. This will increase to 4.6 square feet per student in Model B and 4.9 square feet per student in Model C. The ideal would be to provide approximately 8.5 square feet of indoor recreation space per student, but there are very few colleges and universities in the United States that provided that amount of space for their student populations. Many institutions provide in the 3.5 square feet per student range, so 4.6 square feet (Model B) is above the average for most universities. The addition of an outdoor pool to the facility will add an additional 0.5 square feet per student to the facility, and the addition of an indoor pool will add an additional 0.7 square feet per student to the facility.

Space Program Models - Alternate 1 (without Recreation Pool)
October 28, 2008

University of Utah
Student Life Center

No.	Program Space	Model A	Model B	Model C	Remarks
	Activity Zone				
	Gymnasiums				
1	Four-court Gymnasium - 84' courts	0	0	26,000	104' x 250'
2	Four-court Gymnasium Storage	0	0	600	
3	Three-court Gymnasium - 84' courts	19,760	19,760	0	104' x 190'
4	Three-court Gymnasium Storage	500	500	0	
5	Two-court Gymnasium - 84' courts	0	13,520	13,520	104' x 130', MAC Gymnasium
6	Two-court Gymnasium Storage	0	400	400	
7	One-court MAC Gymnasium - 84' court	8,320	0	0	80' x 104', MAC Gymnasium
8	One-court MAC Gymnasium Storage	200	0	0	
9	Elevated Jogging Track	4,109	4,109	4,109	6,848 SF @ 60%, 3 lane track, 8 laps per mile
	Gymnasiums Assignable Area (ASF)	**32,889**	**38,289**	**44,629**	
	Specialized Activity Spaces				
10	Fitness / Weight Room	20,000	20,000	20,000	includes distributed cardio areas, separate weight area
11	Fitness / Weight Room First Floor Storage	400	400	400	
12	Fitness / Weight Room Second Floor Storage	200	200	200	
13	Fitness / Weight Room Control Counter	120	120	120	
14	Fitness Coordinator's Office	110	110	110	
15	Fitness / Weight Room Work / Repair Room	200	200	200	
16	Multi-purpose Room 1	2,500	2,500	2,500	50 person capacity for Group Fitness classes
17	Multi-purpose Room 1 Storage	200	200	200	
18	Multi-purpose Room 2	2,000	2,000	2,000	40 person capacity for Group Fitness classes
19	Multi-purpose Room 2 Storage	200	200	200	
20	Multi-purpose Room 3	1,000	1,000	1,000	30 person capacity for Group Fitness classes
21	Multi-purpose Room 3 Storage	150	150	150	
22	Racquetball Court 1	800	800	800	
23	Racquetball Court 2	800	800	800	
24	Racquetball Court 3	840	840	840	convertible to Squash Court with movable glass back wall
25	Rock Climbing Wall with Safety / Landing Area	750	750	750	
26	Bouldering Wall with Safety / Landing Area	750	750	750	
27	Climbing / Bouldering Wall Registration Counter	120	120	120	
28	Rock Climbing & Bouldering Storage	200	200	200	
29	Classroom	800	800	800	seating for 30
	Specialized Activity Spaces Assignable Area (ASF)	**32,140**	**32,140**	**32,140**	
	Actvity Zone Assignable Area (ASF)	**65,029**	**70,429**	**76,769**	
	Outdoor Recreation Zone				
30	Associate Director's Office	110	110	110	
31	Staff Office 1	110	110	110	
32	Office Support	110	110	110	
33	Library / Meeting-Work Room / Student Staff Space	400	400	400	
34	Entry / Equipment Display and Rental	400	400	400	
35	Equipment Storage / Maintenance Area	4,000	4,000	4,000	
36	Toilet / Changing Room	80	80	80	1 toilet, 1 urinal, 1 sink
	Outdoor Recreation Zone Assignable Area (ASF)	**5,210**	**5,210**	**5,210**	

No.	Program Space	Model A	Model B	Model C	Remarks
	Administrative Office Suite				
37	Director's Office	150	150	150	
38	Staff Office 1	110	110	110	
39	Staff Office 2	110	110	110	
40	Staff Office 3	110	110	110	
41	Staff Office 4 (Business Manager)	110	110	110	
42	Administrative Assistant	110	110	110	
43	Administration Work Room / Staff Room	240	240	240	
44	Conference Room	400	400	400	seats 18-20
45	Computer Server (IT) Office	110	110	110	
46	Computer Server Room	100	100	100	
47	Administration Reception Area	200	200	200	reception seating, reception counter, space behind counter
48	Administration Storage	100	100	100	
49	Intramurals Office / Work Area	110	110	110	
	Administration Office Suite Assignable Area (ASF)	**1960**	**1960**	**1960**	
	Wellness / Health / Athletic Training Component				
50	Entry Lobby / Information Resource Area	300	300	300	
51	Wellness Director's Office	110	110	110	
52	Personal Training / Fitness Room	750	750	750	
53	Massage Therapy / Assessment	120	120	120	
54	Wellness Storage	100	100	100	
55	Health Educator Office 1	110	110	110	
56	Health Educator Office 2	110	110	110	
57	Registered Nurse / Nurse Practitioner Office	110	110	110	
58	Examination Room 1	120	120	120	
59	Health Storage	100	100	100	
60	Athletic Training Office	110	110	110	
61	Examination Room 2	120	120	120	
62	Training Tables	270	270	270	
63	Exercise Space	400	400	400	
64	Athletic Training Storage	100	100	100	
	Wellness Component Assignable Area (ASF)	**2930**	**2930**	**2930**	
	Entry / Lounge Area				
65	Entry Lobby / Lounge	3,500	3,500	3,500	
66	Juice Bar	500	500	500	
67	Vending Area	100	100	100	
68	Control Counter	200	200	200	
69	Control Office	110	110	110	
70	Staff Office 1 (Facility Coordinator)	110	110	110	
71	Staff Office 2 (Evening Manager)	110	110	110	
72	Treatment	120	120	120	
	Entry / Lounge Area Assignable Area (ASF)	**4,750**	**4,750**	**4,750**	
	Support Zone				
73	Men's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 4 toilets, 4 urinals, 5 sinks
74	Women's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 8 toilets, 5 sinks
75	Assisted Change (Universal) Locker Room	190	190	190	2 - 3 locker footprints, 1 shower, 1 toilet, 1 sink
76	Men's Restroom - 2nd Floor	260	260	260	3 toilets, 2 urinals, 3 sinks
77	Women's Restroom - 2nd Floor	270	270	270	5 toilets, 3 sinks
78	Universal Restroom - 2nd Floor	80	80	80	1 toilet, 1 sink
79	Recreation Equipment Checkout / Storage	800	800	800	
80	Laundry	120	120	120	1-60 lb. capacity washer, 1-75 lb. capacity dryer, sink
81	Student Employees' Work Space	300	300	300	

No.	Program Space	Model A	Model B	Model C	Remarks
	Support Zone, cont'd.				
82	Maintenance Storage / Office	400	400	400	
83	Custodial (distributed)	160	160	160	2 @ 80 SF each, 1 per floor, with a custodial sink
84	Grounds Maintenance	80	80	80	access directly to the outside
					.
	Support Zone Assignable Area (ASF)	**6,660**	**6,660**	**6,660**	
	Total Building Assignable Area (ASF)	**86,539**	**91,939**	**98,279**	
	Total Building Envelope Area (GSF)	**123,627**	**131,341**	**140,399**	70% Building Efficiency
	Student Life Center Construction Cost @ $280 / SF	**$34.6 m**	**$36.8 m**	**$39.3 m**	

Space Program Models - Alternate 1A with Health and Athletic Training (without Recreation Pool)
October 28, 2008

University of Utah
Student Life Center

No.	Program Space	Model A	Model B	Model C	Remarks
	Activity Zone				
	Gymnasiums				
1	Four-court Gymnasium - 84' courts	0	0	26,000	104' x 250'
2	Four-court Gymnasium Storage	0	0	600	
3	Three-court Gymnasium - 84' courts	19,760	19,760	0	104' x 190'
4	Three-court Gymnasium Storage	500	500	0	
5	Two-court Gymnasium - 84' courts	0	13,520	13,520	104' x 130', MAC Gymnasium
6	Two-court Gymnasium Storage	0	400	400	
7	One-court MAC Gymnasium - 84' court	8,320	0	0	80' x 104', MAC Gymnasium
8	One-court MAC Gymnasium Storage	200	0	0	
9	Elevated Jogging Track	4,109	4,109	4,109	6,848 SF @ 60%, 3 lane track, 8 laps per mile
	Gymnasiums Assignable Area (ASF)	**32,889**	**38,289**	**44,629**	
	Specialized Activity Spaces				
10	Fitness / Weight Room	20,000	20,000	20,000	includes distributed cardio areas, separate weight area
11	Fitness / Weight Room First Floor Storage	400	400	400	
12	Fitness / Weight Room Second Floor Storage	200	200	200	
13	Fitness / Weight Room Control Counter	120	120	120	
14	Fitness Coordinator's Office	110	110	110	
15	Fitness / Weight Room Work / Repair Room	200	200	200	
16	Multi-purpose Room 1	2,500	2,500	2,500	50 person capacity for Group Fitness classes
17	Multi-purpose Room 1 Storage	200	200	200	
18	Multi-purpose Room 2	2,000	2,000	2,000	40 person capacity for Group Fitness classes
19	Multi-purpose Room 2 Storage	200	200	200	
20	Multi-purpose Room 3	1,000	1,000	1,000	30 person capacity for Group Fitness classes
21	Multi-purpose Room 3 Storage	150	150	150	
22	Racquetball Court 1	800	800	800	
23	Racquetball Court 2	800	800	800	
24	Racquetball Court 3	840	840	840	convertible to Squash Court with movable glass back wall
25	Rock Climbing Wall with Safety / Landing Area	750	750	750	
26	Bouldering Wall with Safety / Landing Area	750	750	750	
27	Climbing / Bouldering Wall Registration Counter	120	120	120	
28	Rock Climbing & Bouldering Storage	200	200	200	
29	Classroom	800	800	800	seating for 30
	Specialized Activity Spaces Assignable Area (ASF)	**32,140**	**32,140**	**32,140**	
	Actvity Zone Assignable Area (ASF)	**65,029**	**70,429**	**76,769**	
	Outdoor Recreation Zone				
30	Associate Director's Office	110	110	110	
31	Staff Office 1	110	110	110	
32	Office Support	110	110	110	
33	Library / Meeting -Work Room / Student Staff Space	400	400	400	
34	Entry / Equipment Display and Rental	400	400	400	
35	Equipment Storage / Maintenance Area	4,000	4,000	4,000	
36	Toilet / Changing Room	80	80	80	1 toilet, 1 urinal, 1 sink
	Outdoor Recreation Zone Assignable Area (ASF)	**5,210**	**5,210**	**5,210**	

No.	Program Space	Model A	Model B	Model C	Remarks
	Administrative Office Suite				
37	Director's Office	150	150	150	
38	Staff Office 1	110	110	110	
39	Staff Office 2	110	110	110	
40	Staff Office 3	110	110	110	
41	Staff Office 4 (Business Manager)	110	110	110	
42	Administrative Assistant	110	110	110	
43	Administration Work Room / Staff Room	240	240	240	
44	Conference Room	400	400	400	seats 18-20
45	Computer Server (IT) Office	110	110	110	
46	Computer Server Room	100	100	100	
47	Administration Reception Area	200	200	200	reception seating, reception. counter, space behind counter
48	Administration Storage	100	100	100	
49	Intramurals Office / Work Area	110	110	110	
	Administration Office Suite Assignable Area (ASF)	**1960**	**1960**	**1960**	
	Wellness Component				
50	Entry Lobby / Information Resource Area	300	300	300	
51	Wellness Director's Office	110	110	110	
52	Personal Training / Fitness Room	750	750	750	
53	Massage Therapy / Assessment	120	120	120	
54	Wellness Storage	100	100	100	
	Wellness Component Assignable Area (ASF)	**1380**	**1380**	**1380**	
	Entry / Lounge Area				
65	Entry Lobby / Lounge	3,500	3,500	3,500	
66	Juice Bar	500	500	500	
67	Vending Area	100	100	100	
68	Control Counter	200	200	200	
69	Control Office	110	110	110	
70	Staff Office 1 (Facility Coordinator)	110	110	110	
71	Staff Office 2 (Evening Manager)	110	110	110	
72	Treatment	120	120	120	
	Entry / Lounge Area Assignable Area (ASF)	**4,750**	**4,750**	**4,750**	
	Support Zone				
73	Men's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 4 toilets, 4 urinals, 5 sinks
74	Women's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 8 toilets, 5 sinks
75	Assisted Change (Universal) Locker Room	190	190	190	2 - 3 locker footprints, 1 shower, 1 toilet, 1 sink
76	Men's Restroom - 2nd Floor	260	260	260	3 toilets, 2 urinals, 3 sinks
77	Women's Restroom - 2nd Floor	270	270	270	5 toilets, 3 sinks
78	Universal Restroom - 2nd Floor	80	80	80	1 toilet, 1 sink
79	Recreation Equipment Checkout / Storage	800	800	800	
80	Laundry	120	120	120	1-60 lb. capacity washer, 1-75 lb. capacity dryer, sink
81	Student Employees' Work Space	300	300	300	
82	Maintenance Storage / Office	400	400	400	
83	Custodial (distributed)	160	160	160	2 @ 80 SF each, 1 per floor, with a custodial sink
84	Grounds Maintenance	80	80	80	access directly to the outside
					,
	Support Zone Assignable Area (ASF)	**6,660**	**6,660**	**6,660**	

No.	Program Space	Model A	Model B	Model C	Remarks
	Total Building Assignable Area (ASF)	**84,989**	**90,389**	**96,729**	
	Total Building Envelope Area (GSF)	**121,413**	**129,127**	**138,184**	70% Building Efficiency
	Construction Cost @ $280 / SF	**$34.0 m**	**$36.2 m**	**$38.7 m**	
	Health Zone				
55	Health Educator Office 1	110	110	110	
56	Health Educator Office 2	110	110	110	
57	Registered Nurse / Nurse Pratitioner Office	110	110	110	
58	Examination Room 1	120	120	120	
59	Health Storage	100	100	100	
	Health Zone Assignable Area (ASF)	**550**	**550**	**550**	
	Health Zone Envelope Area (GDF)	**786**	**786**	**786**	70% Building Efficiency
	Health Construction Cost @ $280 / SF	**$0.2 m**	**$0.2 m**	**$0.2 m**	
	Athletic Training Zone				
60	Athletic Training Office	110	110	110	
61	Examination Room 2	120	120	120	exam table, chair, counter with sink, overhead cabinets
62	Training Tables	270	270	270	4 training tables, counter with sink, cabinets, ice machine
63	Exercise Space	400	400	400	stretching, balance, fitness equipment
64	Athletic Training Storage	100	100	100	
	Athletic Training Zone Assignable Area (ASF)	**1000**	**1000**	**1000**	
	Athletic Training Envelope Area (GSF)	**1429**	**1429**	**1429**	70% Building Efficiency
	Athletic Training Construction Cost @ $280 / SF	**$0.4 m**	**$0.4 m**	**$0.4 m**	
	Total Student Life Center Construction Cost	**$34.6 m**	**$36.8 m**	**$39.3 m**	

Space Program Models - Alternate 2 (with Outdoor Recreation Pool)
October 28, 2008

University of Utah
Student Life Center

No.	Program Space	Model A	Model B	Model C	Remarks
	Activity Zone				
	Gymnasiums				
1	Four-court Gymnasium - 84' courts	0	0	26,000	104' x 250'
2	Four-court Gymnasium Storage	0	0	600	
3	Three-court Gymnasium - 84' courts	19,760	19,760	0	104' x 190'
4	Three-court Gymnasium Storage	500	500	0	
5	Two-court Gymnasium - 84' courts	0	13,520	13,520	104' x 130', MAC Gymnasium
6	Two-court Gymnasium Storage	0	400	400	
7	One-court MAC Gymnasium - 84' court	8,320	0	0	80' x 104', MAC Gymnasium
8	One-court MAC Gymnasium Storage	200	0	0	
9	Elevated Jogging Track	4,109	4,109	4,109	6,848 SF @ 60%, 3 lane track, 8 laps per mile
	Gymnasiums Assignable Area (ASF)	**32,889**	**38,289**	**44,629**	
	Specialized Activity Spaces				
10	Fitness / Weight Room	20,000	20,000	20,000	includes distributed cardio areas, separate weight area
11	Fitness / Weight Room First Floor Storage	400	400	400	
12	Fitness / Weight Room Second Floor Storage	200	200	200	
13	Fitness / Weight Room Control Counter	120	120	120	
14	Fitness Coordinator's Office	110	110	110	
15	Fitness / Weight Room Work / Repair Room	200	200	200	
16	Multi-purpose Room 1	2,500	2,500	2,500	50 person capacity for Group Fitness classes
17	Multi-purpose Room 1 Storage	200	200	200	
18	Multi-purpose Room 2	2,000	2,000	2,000	40 person capacity for Group Fitness classes
19	Multi-purpose Room 2 Storage	200	200	200	
20	Multi-purpose Room 3	1,000	1,000	1,000	30 person capacity for Group Fitness classes
21	Multi-purpose Room 3 Storage	150	150	150	
22	Racquetball Court 1	800	800	800	
23	Racquetball Court 2	800	800	800	
24	Racquetball Court 3	840	840	840	convertible to Squash Court with movable glass back wall
25	Rock Climbing Wall with Safety / Landing Area	750	750	750	
26	Bouldering Wall with Safety / Landing Area	750	750	750	
27	Climbing / Bouldering Wall Registration Counter	120	120	120	
28	Rock Climbing & Bouldering Storage	200	200	200	
29	Classroom	800	800	800	seating for 30
	Specialized Activity Spaces Assignable Area (ASF)	**32,140**	**32,140**	**32,140**	
	Actvity Zone Assignable Area (ASF)	**65,029**	**70,429**	**76,769**	
	Outdoor Recreation Zone				
30	Associate Director's Office	110	110	110	
31	Staff Office 1	110	110	110	
32	Office Support	110	110	110	
33	Library / Meeting-Work Room / Student Staff Space	400	400	400	
34	Entry / Equipment Display and Rental	400	400	400	
35	Equipment Storage / Maintenance Area	4,000	4,000	4,000	
36	Toilet / Changing Room	80	80	80	1 toilet, 1 urinal, 1 sink
	Outdoor Recreation Zone Assignable Area (ASF)	**5,210**	**5,210**	**5,210**	

No.	Program Space	Model A	Model B	Model C	Remarks
	Administrative Office Suite				
37	Director's Office	150	150	150	
38	Staff Office 1	110	110	110	
39	Staff Office 2	110	110	110	
40	Staff Office 3	110	110	110	
41	Staff Office 4 (Business Manager)	110	110	110	
42	Administrative Assistant	110	110	110	
43	Administration Work Room / Staff Room	240	240	240	
44	Conference Room	400	400	400	seats 18-20
45	Computer Server (IT) Office	110	110	110	
46	Computer Server Room	100	100	100	
47	Administration Reception Area	200	200	200	reception seating, reception counter, space behind counter
48	Administration Storage	100	100	100	
49	Intramurals Office / Work Area	110	110	110	
	Administration Office Suite Assignable Area (ASF)	**1960**	**1960**	**1960**	
	Wellness / Health / Athletic Training Component				
50	Entry Lobby / Information Resource Area	300	300	300	
51	Wellness Director's Office	110	110	110	
52	Personal Training / Fitness Room	750	750	750	
53	Massage Therapy / Assessment	120	120	120	
54	Wellness Storage	100	100	100	
55	Health Educator Office 1	110	110	110	
56	Health Educator Office 2	110	110	110	
57	Registered Nurse / Nurse Practitioner Office	110	110	110	
58	Examination Room 1	120	120	120	
59	Health Storage	100	100	100	
60	Athletic Training Office	110	110	110	
61	Examination Room 2	120	120	120	
62	Training Tables	270	270	270	
63	Exercise Space	400	400	400	
64	Athletic Training Storage	100	100	100	
	Wellness Component Assignable Area (ASF)	**2930**	**2930**	**2930**	
	Entry / Lounge Area				
65	Entry Lobby / Lounge	3,500	3,500	3,500	
66	Juice Bar	500	500	500	
67	Vending Area	100	100	100	
68	Control Counter	200	200	200	
69	Control Office	110	110	110	
70	Staff Office 1 (Facility Coordinator)	110	110	110	
71	Staff Office 2 (Evening Manager)	110	110	110	
72	Treatment	120	120	120	
	Entry / Lounge Area Assignable Area (ASF)	**4,750**	**4,750**	**4,750**	
	Support Zone				
73	Men's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 4 toilets, 4 urinals, 5 sinks
74	Women's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 8 toilets, 5 sinks
75	Assisted Change (Universal) Locker Room	190	190	190	2 - 3 locker footprints, 1 shower, 1 toilet, 1 sink
76	Men's Restroom - 2nd Floor	260	260	260	3 toilets, 2 urinals, 3 sinks
77	Women's Restroom - 2nd Floor	270	270	270	5 toilets, 3 sinks
78	Universal Restroom - 2nd Floor	80	80	80	1 toilet, 1 sink
79	Recreation Equipment Checkout / Storage	800	800	800	
80	Laundry	120	120	120	1-60 lb. capacity washer, 1-75 lb. capacity dryer, sink
81	Student Employees' Work Space	300	300	300	

No.	Program Space	Model A	Model B	Model C	Remarks
	Support Zone, cont'd.				
82	Maintenance Storage / Office	400	400	400	
83	Custodial (distributed)	160	160	160	2 @ 80 SF each, 1 per floor, with a custodial sink
84	Grounds Maintenance	80	80	80	access directly to the outside
					,
	Support Zone Assignable Area (ASF)	**6,660**	**6,660**	**6,660**	
	Total Building Assignable Area (ASF)	**86,539**	**91,939**	**98,279**	
	Total Building Envelope Area (GSF)	**123,627**	**131,341**	**140,399**	70% Building Efficiency
	Construction Cost @ $280 / SF	**$34.6 m**	**$36.8 m**	**$39.3 m**	
	Outdoor Recreation Pool Building (separate building from the Student Life Center)				
OP1	Pool Filtration	1,000	1,000	1,000	
OP2	Pool Storage	800	800	800	
OP3	Aquatic Director's Office	110	110	110	
OP4	Lifeguards' Office	150	150	150	
OP5	Men's Pool Toilet	80	80	80	
OP6	Women's Pool Toilet	80	80	80	
	Outdoor Rec. Pool Bldg. Assignable Area (ASF)	**2,220**	**2,220**	**2,220**	
	Outdoor Pool Building Envelope Area (GSF)	**2523**	**2523**	**2523**	88% Building Efficiency
	Outdoor Pool Bldg. Construction Cost @$280/SF	**$0.7 m**	**$0.7 m**	**$0.7 m**	
OP7	**Outdoor Pool Construction Cost (11,600 SF)**	**$1.5 m**	**$1.5 m**	**$1.5 m**	Pool and Pool deck
	Total Student Life Center Construction Cost	**$36.8 m**	**$39.0 m**	**$41.5 m**	

Space Program Models - Alternate 3 (with Indoor Recreation Pool)
October 28, 2008

University of Utah
Student Life Center

No.	Program Space	Model A	Model B	Model C	Remarks
	Activity Zone				
	Gymnasiums				
1	Four-court Gymnasium - 84' courts	0	0	26,000	104' x 250'
2	Four-court Gymnasium Storage	0	0	600	
3	Three-court Gymnasium - 84' courts	19,760	19,760	0	104' x 190'
4	Three-court Gymnasium Storage	500	500	0	
5	Two-court Gymnasium - 84' courts	0	13,520	13,520	104' x 130', MAC Gymnasium
6	Two-court Gymnasium Storage	0	400	400	
7	One-court MAC Gymnasium - 84' court	8,320	0	0	80' x 104', MAC Gymnasium
8	One-court MAC Gymnasium Storage	200	0	0	
9	Elevated Jogging Track	4,109	4,109	4,109	6,848 SF @ 60%, 3 lane track, 8 laps per mile
	Gymnasiums Assignable Area (ASF)	**32,889**	**38,289**	**44,629**	
	Specialized Activity Spaces				
10	Fitness / Weight Room	20,000	20,000	20,000	includes distributed cardio areas, separate weight area
11	Fitness / Weight Room First Floor Storage	400	400	400	
12	Fitness / Weight Room Second Floor Storage	200	200	200	
13	Fitness / Weight Room Control Counter	120	120	120	
14	Fitness Coordinator's Office	110	110	110	
15	Fitness / Weight Room Work / Repair Room	200	200	200	
16	Multi-purpose Room 1	2,500	2,500	2,500	50 person capacity for Group Fitness classes
17	Multi-purpose Room 1 Storage	200	200	200	
18	Multi-purpose Room 2	2,000	2,000	2,000	40 person capacity for Group Fitness classes
19	Multi-purpose Room 2 Storage	200	200	200	
20	Multi-purpose Room 3	1,000	1,000	1,000	30 person capacity for Group Fitness classes
21	Multi-purpose Room 3 Storage	150	150	150	
22	Racquetball Court 1	800	800	800	
23	Racquetball Court 2	800	800	800	
24	Racquetball Court 3	840	840	840	convertible to Squash Court with movable glass back wall
25	Rock Climbing Wall with Safety / Landing Area	750	750	750	
26	Bouldering Wall with Safety / Landing Area	750	750	750	
27	Climbing / Bouldering Wall Registration Counter	120	120	120	
28	Rock Climbing & Bouldering Storage	200	200	200	
29	Classroom	800	800	800	seating for 30
	Specialized Activity Spaces Assignable Area (ASF)	**32,140**	**32,140**	**32,140**	
	Actvity Zone Assignable Area (ASF)	**65,029**	**70,429**	**76,769**	
	Outdoor Recreation Zone				
30	Associate Director's Office	110	110	110	
31	Staff Office 1	110	110	110	
32	Office Support	110	110	110	
33	Library / Meeting-Work Room / Student Staff Space	400	400	400	
34	Entry / Equipment Display and Rental	400	400	400	
35	Equipment Storage / Maintenance Area	4,000	4,000	4,000	
36	Toilet / Changing Room	80	80	80	1 toilet, 1 urinal, 1 sink
	Outdoor Recreation Zone Assignable Area (ASF)	**5,210**	**5,210**	**5,210**	

No.	Program Space	Model A	Model B	Model C	Remarks
	Administrative Office Suite				
37	Director's Office	150	150	150	
38	Staff Office 1	110	110	110	
39	Staff Office 2	110	110	110	
40	Staff Office 3	110	110	110	
41	Staff Office 4 (Business Manager)	110	110	110	
42	Administrative Assistant	110	110	110	
43	Administration Work Room / Staff Room	240	240	240	
44	Conference Room	400	400	400	seats 18-20
45	Computer Server (IT) Office	110	110	110	
46	Computer Server Room	100	100	100	
47	Administration Reception Area	200	200	200	reception seating, reception counter, space behind counter
48	Administration Storage	100	100	100	
49	Intramurals Office / Work Area	110	110	110	
	Administration Office Suite Assignable Area (ASF)	**1960**	**1960**	**1960**	
	Wellness / Health / Athletic Training Component				
50	Entry Lobby / Information Resource Area	300	300	300	
51	Wellness Director's Office	110	110	110	
52	Personal Training / Fitness Room	750	750	750	
53	Massage Therapy / Assessment	120	120	120	
54	Wellness Storage	100	100	100	
55	Health Educator Office 1	110	110	110	
56	Health Educator Office 2	110	110	110	
57	Registered Nurse / Nurse Practitioner Office	110	110	110	
58	Examination Room 1	120	120	120	
59	Health Storage	100	100	100	
60	Athletic Training Office	110	110	110	
61	Examination Room 2	120	120	120	
62	Training Tables	270	270	270	
63	Exercise Space	400	400	400	
64	Athletic Training Storage	100	100	100	
	Wellness Component Assignable Area (ASF)	**2930**	**2930**	**2930**	
	Entry / Lounge Area				
65	Entry Lobby / Lounge	3,500	3,500	3,500	
66	Juice Bar	500	500	500	
67	Vending Area	100	100	100	
68	Control Counter	200	200	200	
69	Control Office	110	110	110	
70	Staff Office 1 (Facility Coordinator)	110	110	110	
71	Staff Office 2 (Evening Manager)	110	110	110	
72	Treatment	120	120	120	
	Entry / Lounge Area Assignable Area (ASF)	**4,750**	**4,750**	**4,750**	
	Support Zone				
73	Men's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 4 toilets, 4 urinals, 5 sinks
74	Women's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 8 toilets, 5 sinks
75	Assisted Change (Universal) Locker Room	190	190	190	2 - 3 locker footprints, 1 shower, 1 toilet, 1 sink
76	Men's Restroom - 2nd Floor	260	260	260	3 toilets, 2 urinals, 3 sinks
77	Women's Restroom - 2nd Floor	270	270	270	5 toilets, 3 sinks
78	Universal Restroom - 2nd Floor	80	80	80	1 toilet, 1 sink
79	Recreation Equipment Checkout / Storage	800	800	800	
80	Laundry	120	120	120	1-60 lb. capacity washer, 1-75 lb. capacity dryer, sink
81	Student Employees' Work Space	300	300	300	

No.	Program Space	Model A	Model B	Model C	Remarks
	Support Zone, cont'd.				
82	Maintenance Storage / Office	400	400	400	
83	Custodial (distributed)	160	160	160	2 @ 80 SF each, 1 per floor, with a custodial sink
84	Grounds Maintenance	80	80	80	access directly to the outside
	Support Zone Assignable Area (ASF)	**6,660**	**6,660**	**6,660**	
	Total Building Assignable Area (ASF)	**86,539**	**91,939**	**98,279**	
	Total Building Envelope Area (GSF)	**123,627**	**131,341**	**140,399**	70% Building Efficiency
	Construction Cost @ $280 / SF	**$34.6 m**	**$36.8 m**	**$39.3 m**	
	Indoor Recreation Pool Zone				
IP1	Indoor Recreation Pool and Deck	11,600	11,600	11,600	
IP2	Pool Filtration	1,000	1,000	1,000	
IP3	Pool Storage	800	800	800	
IP4	Aquatic Director's Office	110	110	110	
IP5	Lifeguards' Office	150	150	150	
IP6	Men's Pool Toilet	80	80	80	
IP7	Women's Pool Toilet	80	80	80	
	Indoor Rec. Pool Zone Assignable Area (ASF)	**13,820**	**13,820**	**13,820**	
	Total Indoor Rec. Pool Envelope Area (GSF)	**19,743**	**19,743**	**19,743**	
	Indoor Pool Construction Cost @ $350 / SF	**$6.9 m**	**$6.9 m**	**$6.9 m**	
	Total Student Life Center Construction Cost	**$41.5 m**	**$43.7 m**	**$46.2 m**	

Space Program Models - Alternate 4 (with Indoor and Outdoor Recreation Pools)
October 28, 2008

University of Utah
Student Life Center

No.	Program Space	Model A	Model B	Model C	Remarks
	Activity Zone				
	Gymnasiums				
1	Four-court Gymnasium - 84' courts	0	0	26,000	104' x 250'
2	Four-court Gymnasium Storage	0	0	600	
3	Three-court Gymnasium - 84' courts	19,760	19,760	0	104' x 190'
4	Three-court Gymnasium Storage	500	500	0	
5	Two-court Gymnasium - 84' courts	0	13,520	13,520	104' x 130', MAC Gymnasium
6	Two-court Gymnasium Storage	0	400	400	
7	One-court MAC Gymnasium - 84' court	8,320	0	0	80' x 104', MAC Gymnasium
8	One-court MAC Gymnasium Storage	200	0	0	
9	Elevated Jogging Track	4,109	4,109	4,109	6,848 SF @ 60%, 3 lane track, 8 laps per mile
	Gymnasiums Assignable Area (ASF)	**32,889**	**38,289**	**44,629**	
	Specialized Activity Spaces				
10	Fitness / Weight Room	20,000	20,000	20,000	includes distributed cardio areas, separate weight area
11	Fitness / Weight Room First Floor Storage	400	400	400	
12	Fitness / Weight Room Second Floor Storage	200	200	200	
13	Fitness / Weight Room Control Counter	120	120	120	
14	Fitness Coordinator's Office	110	110	110	
15	Fitness / Weight Room Work / Repair Room	200	200	200	
16	Multi-purpose Room 1	2,500	2,500	2,500	50 person capacity for Group Fitness classes
17	Multi-purpose Room 1 Storage	200	200	200	
18	Multi-purpose Room 2	2,000	2,000	2,000	40 person capacity for Group Fitness classes
19	Multi-purpose Room 2 Storage	200	200	200	
20	Multi-purpose Room 3	1,000	1,000	1,000	30 person capacity for Group Fitness classes
21	Multi-purpose Room 3 Storage	150	150	150	
22	Racquetball Court 1	800	800	800	
23	Racquetball Court 2	800	800	800	
24	Racquetball Court 3	840	840	840	convertible to Squash Court with movable glass back wall
25	Rock Climbing Wall with Safety / Landing Area	750	750	750	
26	Bouldering Wall with Safety / Landing Area	750	750	750	
27	Climbing / Bouldering Wall Registration Counter	120	120	120	
28	Rock Climbing & Bouldering Storage	200	200	200	
29	Classroom	800	800	800	seating for 30
	Specialized Activity Spaces Assignable Area (ASF)	**32,140**	**32,140**	**32,140**	
	Actvity Zone Assignable Area (ASF)	**65,029**	**70,429**	**76,769**	
	Outdoor Recreation Zone				
30	Associate Director's Office	110	110	110	
31	Staff Office 1	110	110	110	
32	Office Support	110	110	110	
33	Library / Meeting-Work Room / Student Staff Space	400	400	400	
34	Entry / Equipment Display and Rental	400	400	400	
35	Equipment Storage / Maintenance Area	4,000	4,000	4,000	
36	Toilet / Changing Room	80	80	80	1 toilet, 1 urinal, 1 sink
	Outdoor Recreation Zone Assignable Area (ASF)	**5,210**	**5,210**	**5,210**	

No.	Program Space	Model A	Model B	Model C	Remarks
	Administrative Office Suite				
37	Director's Office	150	150	150	
38	Staff Office 1	110	110	110	
39	Staff Office 2	110	110	110	
40	Staff Office 3	110	110	110	
41	Staff Office 4 (Business Manager)	110	110	110	
42	Administrative Assistant	110	110	110	
43	Administration Work Room / Staff Room	240	240	240	
44	Conference Room	400	400	400	seats 18-20
45	Computer Server (IT) Office	110	110	110	
46	Computer Server Room	100	100	100	
47	Administration Reception Area	200	200	200	reception seating, reception counter, space behind counter
48	Administration Storage	100	100	100	
49	Intramurals Office / Work Area	110	110	110	
	Administration Office Suite Assignable Area (ASF)	**1960**	**1960**	**1960**	
	Wellness / Health / Athletic Training Component				
50	Entry Lobby / Information Resource Area	300	300	300	
51	Wellness Director's Office	110	110	110	
52	Personal Training / Fitness Room	750	750	750	
53	Massage Therapy / Assessment	120	120	120	
54	Wellness Storage	100	100	100	
55	Health Educator Office 1	110	110	110	
56	Health Educator Office 2	110	110	110	
57	Registered Nurse / Nurse Practitioner Office	110	110	110	
58	Examination Room 1	120	120	120	
59	Health Storage	100	100	100	
60	Athletic Training Office	110	110	110	
61	Examination Room 2	120	120	120	
62	Training Tables	270	270	270	
63	Exercise Space	400	400	400	
64	Athletic Training Storage	100	100	100	
	Wellness Component Assignable Area (ASF)	**2930**	**2930**	**2930**	
	Entry / Lounge Area				
65	Entry Lobby / Lounge	3,500	3,500	3,500	
66	Juice Bar	500	500	500	
67	Vending Area	100	100	100	
68	Control Counter	200	200	200	
69	Control Office	110	110	110	
70	Staff Office 1 (Facility Coordinator)	110	110	110	
71	Staff Office 2 (Evening Manager)	110	110	110	
72	Treatment	120	120	120	
	Entry / Lounge Area Assignable Area (ASF)	**4,750**	**4,750**	**4,750**	
	Support Zone				
73	Men's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 4 toilets, 4 urinals, 5 sinks
74	Women's Locker Room	2,000	2,000	2,000	160 locker footprints, 7 showers, 8 toilets, 5 sinks
75	Assisted Change (Universal) Locker Room	190	190	190	2 - 3 locker footprints, 1 shower, 1 toilet, 1 sink
76	Men's Restroom - 2nd Floor	260	260	260	3 toilets, 2 urinals, 3 sinks
77	Women's Restroom - 2nd Floor	270	270	270	5 toilets, 3 sinks
78	Universal Restroom - 2nd Floor	80	80	80	1 toilet, 1 sink
79	Recreation Equipment Checkout / Storage	800	800	800	
80	Laundry	120	120	120	1-60 lb. capacity washer, 1-75 lb. capacity dryer, sink
81	Student Employees' Work Space	300	300	300	

No.	Program Space	Model A	Model B	Model C	Remarks
	Support Zone, cont'd.				
82	Maintenance Storage / Office	400	400	400	
83	Custodial (distributed)	160	160	160	2 @ 80 SF each, 1 per floor, with a custodial sink
84	Grounds Maintenance	80	80	80	access directly to the outside
					.
	Support Zone Assignable Area (ASF)	**6,660**	**6,660**	**6,660**	
	Total Building Assignable Area (ASF)	**86,539**	**91,939**	**98,279**	
	Total Building Envelope Area (GSF)	**123,627**	**131,341**	**140,399**	70% Building Efficiency
	Construction Cost @ $280 / SF	**$34.6 m**	**$36.8 m**	**$39.3 m**	
	Indoor Recreation Pool Zone				
IP1	Indoor Recreation Pool and Deck	6,400	6,400	6,400	
IP2	Pool Filtration	1,000	1,000	1,000	
IP3	Pool Storage	800	800	800	
IP4	Aquatic Director's Office	110	110	110	
IP5	Lifeguards' Office	150	150	150	
IP6	Men's Pool Toilet	80	80	80	
IP7	Women's Pool Toilet	80	80	80	
	Indoor Rec. Pool Zone Assignable Area (ASF)	**8,620**	**8,620**	**8,620**	
	Total Indoor Rec. Pool Envelope Area (GSF)	**12,314**	**12,314**	**12,314**	70% Building Efficiency
	Indoor Pool Construction Cost @ $350 / SF	**$4.3 m**	**$4.3 m**	**$4.3 m**	
OP7	**Outdoor Pool Construction Cost (9,000 SF)**	**$1.2 m**	**$1.2 m**	**$1.2 m**	Pool and pool deck
	Total Student Life Center Construction Cost	**$40.1 m**	**$42.3 m**	**$44.8 m**	

4.2 BUILDING ORGANIZATION

Five alternative Block Plan Schemes were created during the programming process to test the designated site for the Student Life Center to see if the Space Program (Model B) could be accommodated on the site. Space Program Model B as shown in Section 4.1 of this Report was used as the basis to create the Block Plans.

The Block Plans that have been created for the Student Life Center are organized along an east-west 20' wide circulation spine that transverses most of the length of the building. The west end of this circulation spine is anchored by the location for the pool and pool deck and the pool support spaces, which may be placed in a second phase for the project. The east end of the circulation spine is anchored by a wing that includes the outdoor recreation spaces and the climbing and bouldering walls. The two gymnasiums have been sited along the south side of the circulation spine. The north side of the spine contains a large portion of the fitness / weight room and the entry lobby / lounge. The juice bar and administration spaces are located adjacent to the entry lobby / lounge. The location of the entry lobby and the main entrance to the facility can either be in the middle of the block or closer to the east end of the block where the pass-through from the Legacy Bridge transverses the facility. The 2nd Floor Block Plans generally contain the jogging track (around a portion of the perimeters of the 3-court gymnasium, the fitness / weight room, or the outdoor recreation / climbing wall area), the multi-purpose rooms or the racquetball courts, and the wellness / health / and athletic training spaces. The multi-purpose rooms are generally located on top of the locker rooms for both program stacking and structural framing reasons (columns are okay in the locker rooms). The locker rooms should be located so that when the pool is added to the west end of the facility, the locker rooms will be able to open directly to the pool deck, as required by Code. The locker rooms and the pool could be located on a lower level than the main or entrance level of the building which would respond to the grade differential between the east and west ends of the project site and the fill soil conditions of the site.

A description of the possible scenarios for a pass-through to the Student Life Center from the Eccles Legacy Bridge is discussed in Section 3.1.3. These scenarios will require the separation of the outdoor recreation / climbing wall at the west end of the facility from the remainder of the facility into its own wing. It is important that a direct and secured connection is maintained between these 2 portions of the building even if there is a pass-through from the Bridge at this point. The pass-through must not breach the secured circulation within the facility as it is important to remember that the Student Life Center is a one secured point of entry type of facility through the entry lobby. Each of the Block Plan Schemes show a pass-through to the Student Life Center. Schemes A, B, and C assume that the traffic from the Bridge will take the stairs or elevator that are a part of the west end of the Bridge to the ground level and pass through the Student Life Center at the ground or first floor level of the Center. Schemes D, and E assume that the traffic from the Bridge will continue from the upper level of the Bridge (the level at which the Bridge crosses Mario Capecchi Drive) with an elevated walkway that will pass though the Student Life Center at the roof level of the Center, and then transfers to the ground level through a set of stairs at the northeast end of the pass-through to the Center. See the brief descriptions below for each of the Block Plan Schemes for further clarification of these pass-through possibilities.

Block Plan Schemes A and B were created before preliminary Geotechnical information was received in regards to the fill condition of the soil at the site for the Student Life Center and its bearing capacity to take the weight of the new building. These two Schemes thus assumed a first floor to be built on the existing pad of the softball field at approximately elevation +4818' above sea level. Schemes C, D, and E were created after information was received from the preliminary geotechnical report that there was up to 14 to 15 feet of fill at the west end of the site and the fill tapered to existing grade at the east end of the site at the west side of the Virginia Tanner Dance Building. This fill soil is not compacted soil and is thus not suitable to bear the weight of the Student Life Center and would have to be removed in order to create a suitable pad on which to build the Center. Schemes C, D, and E thus assume a lower building level at approximately +4804'

above sea level (the existing grade at the west end of the site) with a main or first floor level on top of this at +4818' and a Second Floor level at +4836. The roof level at the pass-through from the Eccles Legacy Bridge is at approximately a +4851 elevation. A Site Section through the building in Scheme E follows the Scheme E Block Plan and shows these floor elevations.

The following are brief descriptions of each of the Block Plan Schemes:

Scheme A:
The east-west circulation corridor / spine terminates at the west end at the locker rooms and at the east end at the outdoor recreation / climbing wall area. The pass-through to the building from the Legacy Bridge takes place at the first floor level which will require that the secured passage between the outdoor recreation wing of the Student Life Center and the rest of the Center to be at the second floor level. The racquetball courts are located adjacent to the climbing / bouldering walls. This location for the racquetball courts did not meet with the approval of the various groups from the University that were involved in the Programming process (Project Committees). The two gyms are located on the south side of the main circulation and the fitness / weight room (2/3 of the program area for this space), the entry lobby, juice bar, and the administration area are located on the north side of the main circulation. The entry lobby is located on the northwest side of the pass-through between the 2 wings of the building. The location of the locker rooms that terminate the west end of the circulation spine do not allow for a view into the pool from the spine, which is a negative for this Scheme. The pool is located at the far west end of the site and this area should be reserved for the pool if it is added in a second phase for the project. The pool as shown on this Scheme would also allow room for an additional outdoor recreational area. A sand volleyball court is shown in this area. The second floor has 2 of the multi-purpose rooms on top of the locker rooms, a mezzanine area for the fitness / weight room (1/3 of the area for this space), the wellness area, the 3rd multi-purpose room on top of the administration area, and the jogging track.

Scheme B:
This Scheme is similar to Scheme A except that the locker rooms are located on the south side of the pool off of a cross corridor from the main circulation corridor. This allows for a view into the pool from the west end of the main circulation corridor. The other difference is that the racquetball courts are no longer with the climbing and bouldering walls in the outdoor recreation wing of the building and are now located at the east side of the pool. The 3 multi-purpose rooms are located on the second floor above the locker rooms and the pool support facilities. The outdoor recreational area with the sand volleyball court had to be eliminated in this Scheme because of the lack of space for this area.

Scheme C:
This Scheme recognizes the necessity of removing the fill dirt from the site and thus creates a lower level at the existing grade at the west end of the site. This lower level includes space for the pool, outdoor recreation space (sand volleyball court), the pool support facilities, and the locker rooms. The main or first floor level for the building will sit over a portion of this lower level with 2 of the multi-purpose rooms over the locker rooms, and the 3rd multi-purpose room and the equipment storage / issue area sitting over the pool support facilities. The rest of the first floor is organized along the east-west main circulation corridor or spine with the gymnasiums on the south side of this corridor, and the entry lobby, juice bar, administration area, and the fitness / weight room (2/3 of the program area for this space) on the north side of the main circulation spine. The entry lobby is located in the middle of the north side of the building, which is a different location from Schemes A and B, but more in keeping with what is recommended in the Master Plan for the entrance to the Student Life Center. It is also a more central location for the entry lobby in terms of the program spaces within the building. The second floor locates the racquetball courts on top of the 2 multi-purpose rooms, the wellness / health /

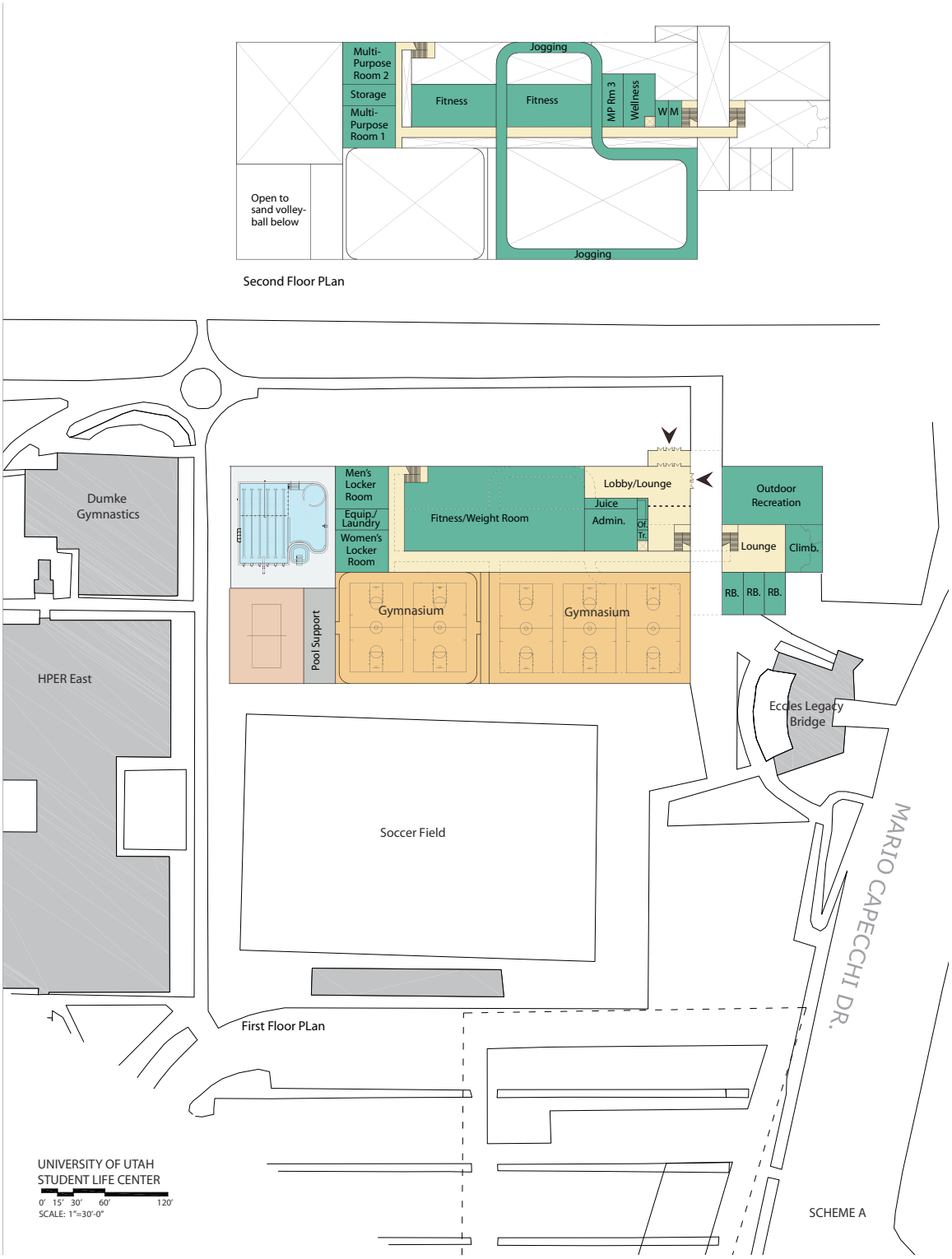
athletic training area on top of the administration area, the mezzanine level of the weight / fitness room (1/3 of the program area for this space), and the jogging track. There is the pass-through from the Eccles Legacy Bridge that separates the main wing of the building with the outdoor recreation wing on the east side of the pass-through passageway and this takes place at the first floor level of the building. The outdoor recreation area also includes the rock climbing and bouldering walls. The connection between the two wings of the building takes place at the second floor level.

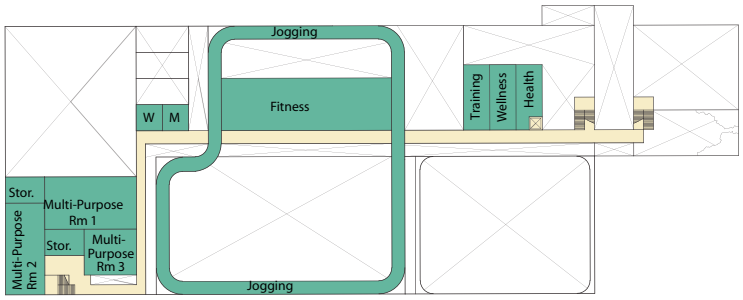
Scheme D:

This Scheme is very similar to Scheme C except that it includes a large space for mechanical equipment on the lower level of the building to the east of the pool, pool support spaces, and the locker rooms. The 2-court gymnasium and the entry lobby, juice bar, and administration area sit over this mechanical space on the First Floor of the building. The juice bar has been located on the west side of the lobby instead of the south side of the lobby as shown in Schemes A, B, and C. This was a request of the project committees and allows direct access into the administration area from the lobby. The layout for the pool on this Scheme shows the concept where the lap pool is an indoor pool and the leisure portion of the pool is an adjacent outdoor pool. This still leaves some room for an outdoor recreation area for socializing and barbecues, but not enough room to fit a sand volleyball court. The second floor of this Scheme is similar to Scheme C except the jogging track has been simplified so that the turns in the track only happen in the four corners and not with the additional jog in the track at the Second Floor corridor that is shown in Scheme C. This Scheme also shows a possible connection from the Eccles Legacy Bridge from the upper level of the bridge and passing through the Student Life Center at the roof level of the Center, with a transition stair from this pass-through to the ground level at the northeast end of the pass-through.

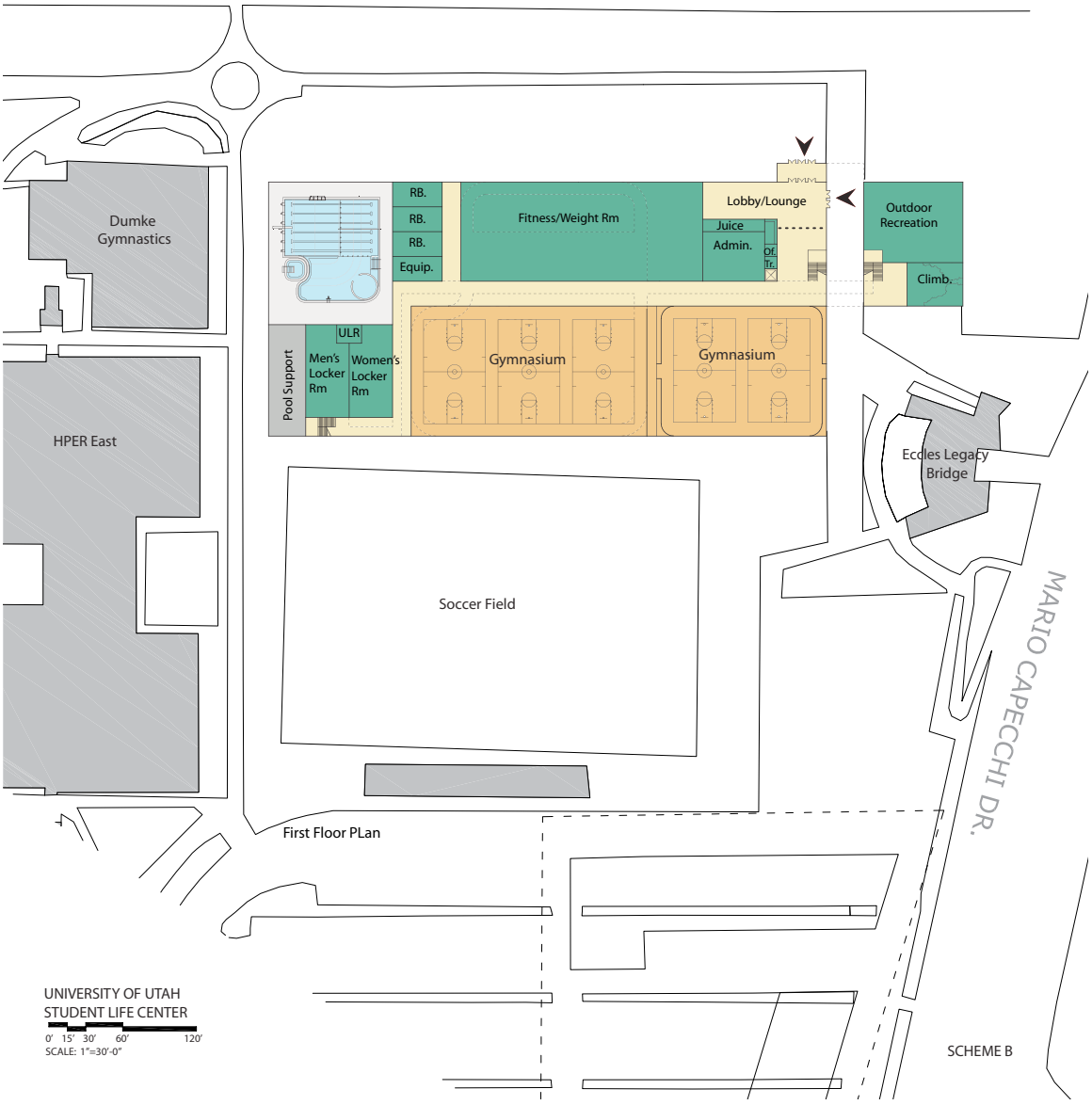
Scheme E:

This Scheme is very similar to Scheme D, except that it incorporates a few differences at the request of the Project Committees. The racquetball courts (along with the equipment storage / issue) have been relocated from the second floor and now sit on the first floor over the pool support spaces. Multi-purpose Room 2 has been located on the second floor in place of the racquetball courts and sits over the other 2 multi-purpose rooms that are located on the first floor. The other big difference is that the jogging track goes around not only the fitness / weight room, but the pass-through area between the 2 wings of the building, the outdoor recreation area, the rock climbing and bouldering wall area, and the north side of the 3-court gymnasium. This was also at the request of the Project Committees and provides a more interesting path for the track through the building with better views from the track to the outside vistas. It also gives a more interesting view of the building and its activities within from Mario Capecchi Drive; with views of the jogging track and the rock climbing wall. The pool layout on this Scheme shows the one pool concept versus the 2 pool concept shown in Scheme D. This Block Plan Scheme is the preferred option of the Project Committees with the most consensuses of where the major program elements of the building should be located and in what adjacencies to each other. An east-west Site Section through this Scheme follows this Scheme's Block Plan and helps to explain the different levels of the building and their floor elevations.

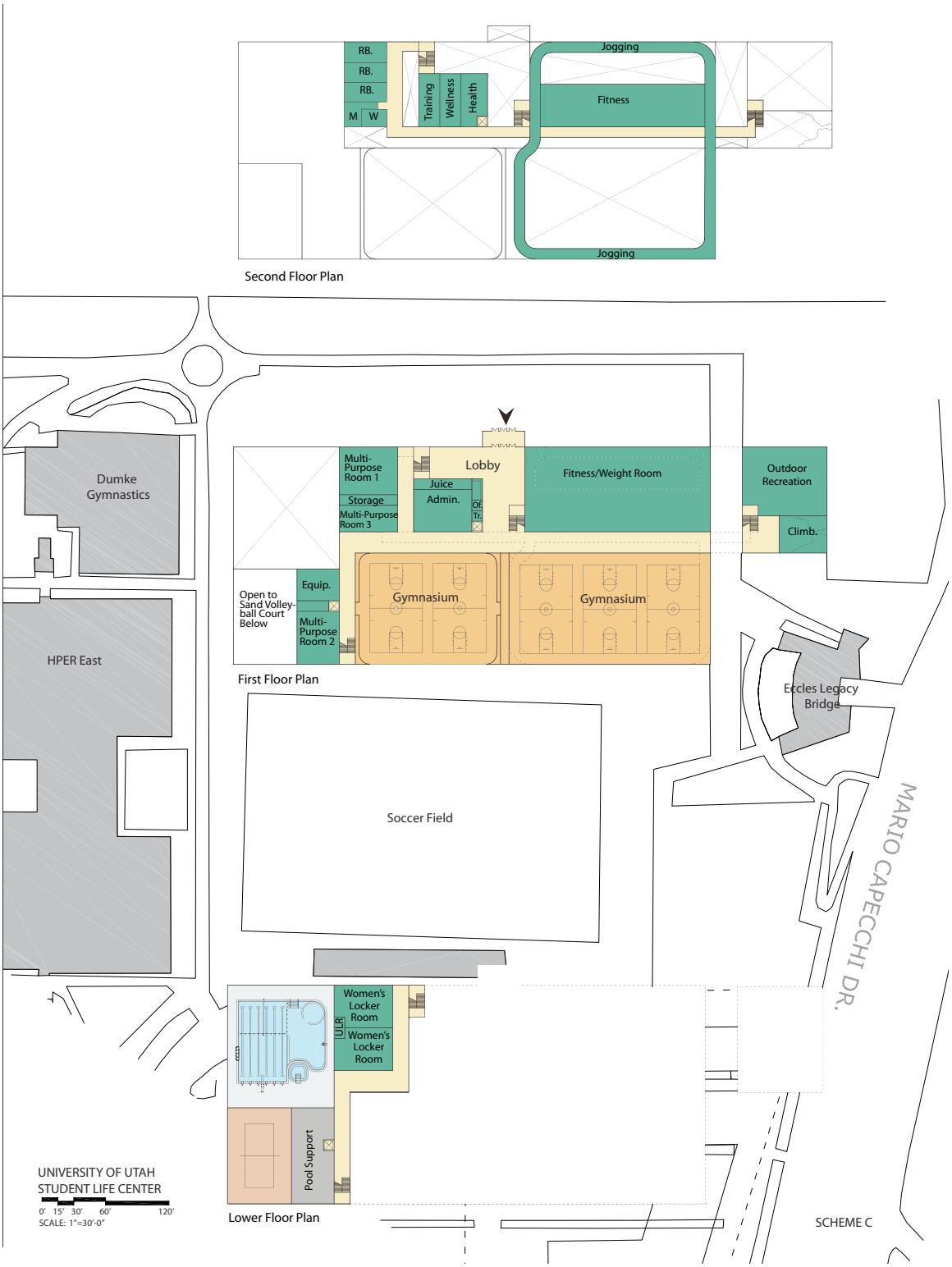

Multi-Purpose Room 2
Storage
Multi-Purpose Room 1
Fitness
Fitness
Jogging
MP Rm 3
Wellness
W
M
Open to sand volley-ball below
Jogging
Second Floor PLan
Dumke Gymnastics
HPER East
Men's Locker Room
Equip./ Laundry
Women's Locker Room
Fitness/Weight Room
Lobby/Lounge
Juice
Admin.
Off. Tr.
Outdoor Recreation
Lounge
Climb.
RB.
RB.
RB.
Pool Support
Gymnasium
Gymnasium
Eccles Legacy Bridge
Soccer Field
MARIO CAPECCHI DR.
First Floor PLan
UNIVERSITY OF UTAH
STUDENT LIFE CENTER
0' 15' 30' 60' 120'
SCALE: 1"=30'-0"
SCHEME A

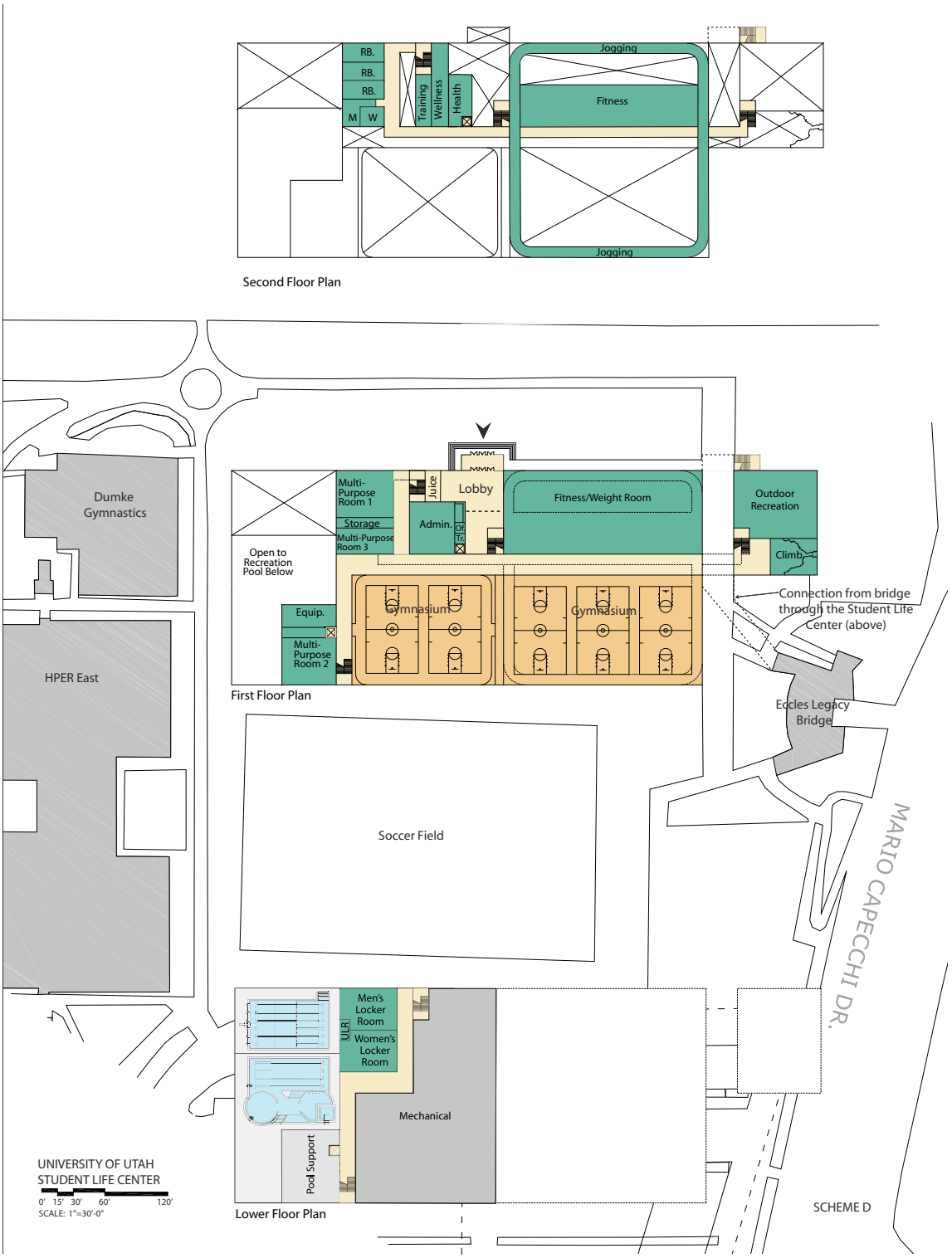


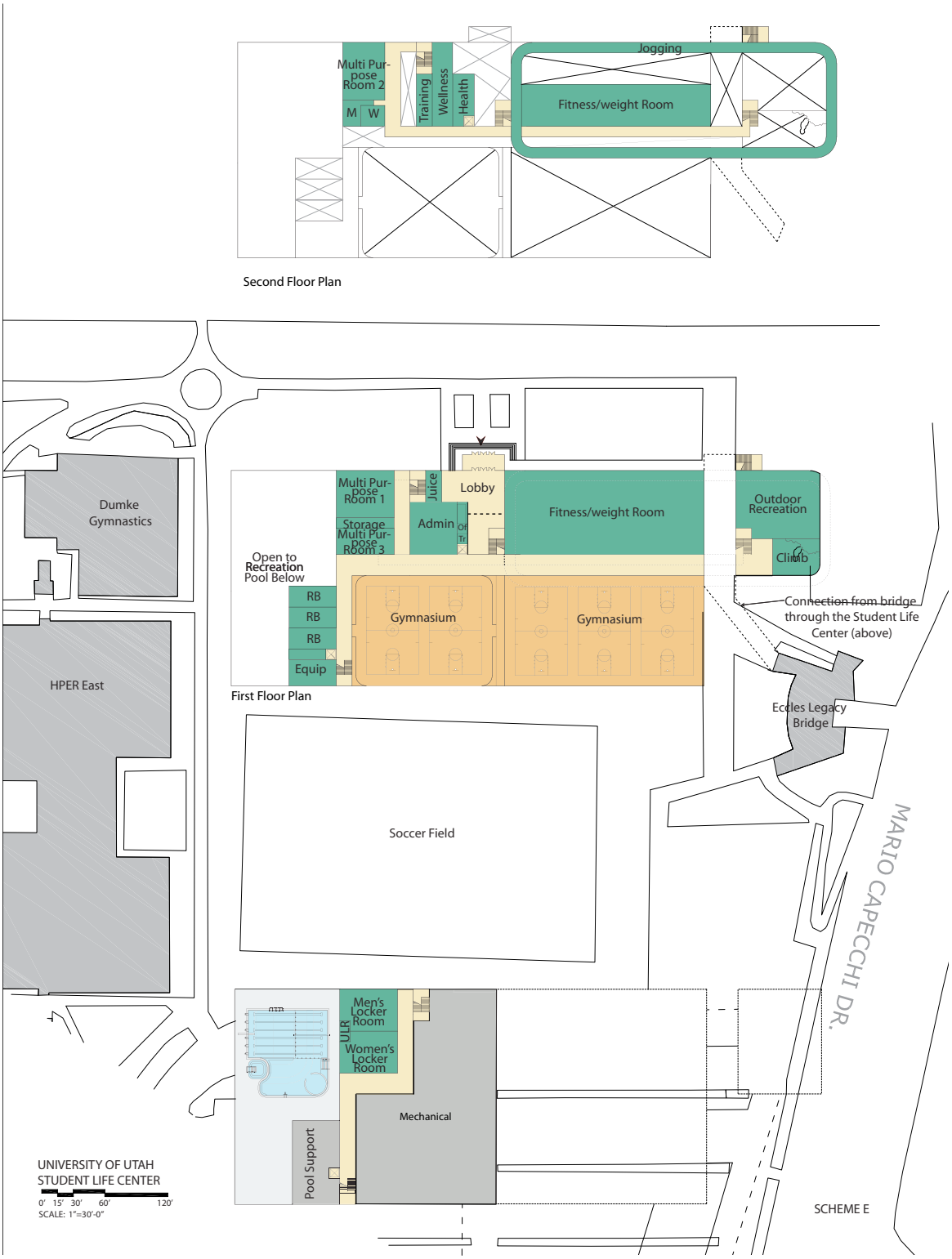
Second Floor PLan



First Floor PLan


RB.
RB.
RB.
M
W
Training
Wellness
Health
Jogging
Fitness
Jogging
Second Floor Plan
Dumke Gymnastics
HPER East
Multi-Purpose Room 1
Storage
Multi-Purpose Room 3
Lobby
Juice
Admin.
Of.
Tr.
Fitness/Weight Room
Outdoor Recreation
Climb.
Open to Sand Volley-ball Court Below
Equip.
Multi-Purpose Room 2
Gymnasium
Gymnasium
First Floor Plan
Eccles Legacy Bridge
Soccer Field
MARIO CAPECCHI DR.
Women's Locker Room
ULR
Women's Locker Room
Pool Support
Lower Floor Plan
UNIVERSITY OF UTAH
STUDENT LIFE CENTER
0' 15' 30' 60' 120'
SCALE: 1"=30'-0"
SCHEME C


RB.
RB.
RB.
M
W
Training
Wellness
Health
Jogging
Fitness
Jogging
Second Floor Plan
Dumke Gymnastics
HPER East
Multi-Purpose Room 1
Juice
Lobby
Fitness/Weight Room
Outdoor Recreation
Storage
Admin.
Elev.
Multi-Purpose Room 3
Climb
Open to Recreation Pool Below
Gymnasium
Gymnasium
Equip.
Multi-Purpose Room 2
First Floor Plan
Connection from bridge through the Student Life Center (above)
Eccles Legacy Bridge
Soccer Field
MARIO CAPECCHI DR.
Men's Locker Room
ULR
Women's Locker Room
Mechanical
Pool Support
Lower Floor Plan
UNIVERSITY OF UTAH
STUDENT LIFE CENTER
0' 15' 30' 60' 120'
SCALE: 1"=30'-0"
SCHEME D


Multi Pur-pose Room 2
Training
Wellness
Health
M
W
Jogging
Fitness/weight Room
Second Floor Plan
Dumke Gymnastics
HPER East
Multi Pur-pose Room 1
Juice
Lobby
Storage
Admin
Multi Pur-pose Room 3
Fitness/weight Room
Outdoor Recreation
Climb
Open to Recreation Pool Below
RB
RB
RB
Equip
Gymnasium
Gymnasium
First Floor Plan
Connection from bridge through the Student Life Center (above)
Eccles Legacy Bridge
Soccer Field
MARIO CAPECCHI DR.
Men's Locker Room
Women's Locker Room
UP
DN
Mechanical
Pool Support
UNIVERSITY OF UTAH
STUDENT LIFE CENTER
0' 15' 30' 60' 120'
SCALE: 1"=30'-0"
SCHEME E

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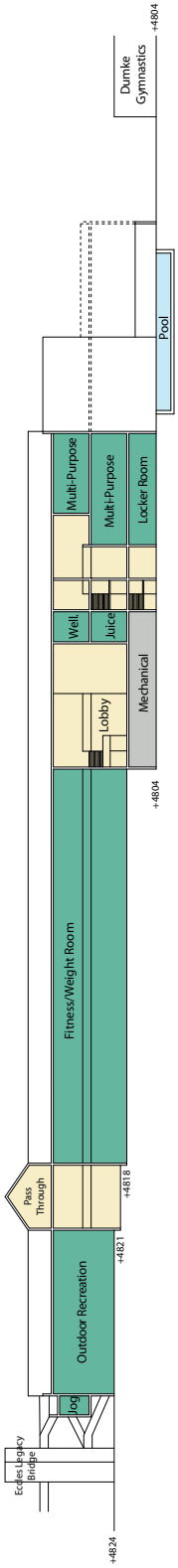

EAST-WEST SECTION THROUGH SITE - SCHEME E

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

0' 15' 30' 60' 120'
SCALE: 1"=30'-0"

4.3 INDIVIDUAL ROOM DATA SHEETS AND PROTOTYPE ROOM LAYOUTS

Summary

The Room Data Sheets and the Prototype Room Layouts that follow are the results of a collaborative effort between Cannon Design / Architectural Nexus, the Steering Committee, the Programming Committee and focus group meetings. These Data Sheets and Prototype Room Layouts are intended to serve as a guideline for the design of the Student Life Center, and summarize the decisions that were made during the Programming Phase. The Data Sheets and the Room Layouts are for the Spaces that are listed in the Space Program Models.

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No. 1

ROOM DATA — FOUR- COURT GYMNASIUM

General Information	Use/Function	Four-recreational basketball sized Gymnasium, which will also accommodate volleyball and badminton. 50' x 84' basketball courts
	Assignable Area	26,000 square feet
	Capacity	Per Code: Negotiate an occupant load of 400 occupants versus 15 sf / occupant = 1,733 occupants
	Key Dimensions	H: 30'-0" min. W: 104'-0" L: 250'-0"
	Adjacencies	Four – Court Gymnasium Storage
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Resilient wood. 2nd grade maple / ventilated rubber base. Vinyl composition tile or sealed concrete at the drinking fountains.
	Walls	Masonry up to 18'-0" min. height, drywall above is OK
	Ceiling	Exposed structure, acoustical metal decking
	Doors	Hollow metal
	Natural Light	Desired at north wall and at the Jogging Track level, allow as much natural light and visibility into the Gym as possible without affecting the play in the Gym.
	Acoustics	Acoustical metal decking At the walls and at the exposed structure, if required.
	Special Requirements	Capability to be divided by using divider curtains. Open (viewable) from other adjacent spaces. All equipment and clocks should be impact resistant. 3 rows of fixed seating along long court sides of the Gym.
Engineering Systems	Lighting	H.I.D., two levels – 70 fc / 50 fc (50fc average), clear to 30'-0", can also be fluorescent fixtures but will require more fixtures than H.I.D. Lighting to be "instant on".
	Electrical	600 amps, 3-phase, 480/277 for lights, power for backstops and divider curtain, power for scoreboards, power in the walls and floor for control of backstops, divider curtain, and scoreboards
	Mechanical	Air conditioned, thermostat control, 3 changes per hour peak period usage
	Plumbing	Recessed drinking fountains with chilled water and cuspidors in the common area outside of the Gymnasium, or inside of the Gymnasium
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on any doors directly to the outside of the facility
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	Independent sound system which can also connect into the sound system controlled at the front counter. PA connected to the front counter.
FFE	Fixed Equipment	8 power operated retractable basketball backstops with glass backboards and snap back rims, 3 ceiling mounted power operated divider curtain, floor plates for volleyball and badminton poles, 8 wall mounted scoreboards, protected wall clocks, built in cubbies located near entrance outside of gymnasium for backpacks
	Movable Equipment	4 sets volleyball standards with padding and 8 nets, 8 volleyball officiating stands with padding, 12 sets badminton standards with 24 nets, service lift to be stored in the Four-Court Gymnasium Storage.

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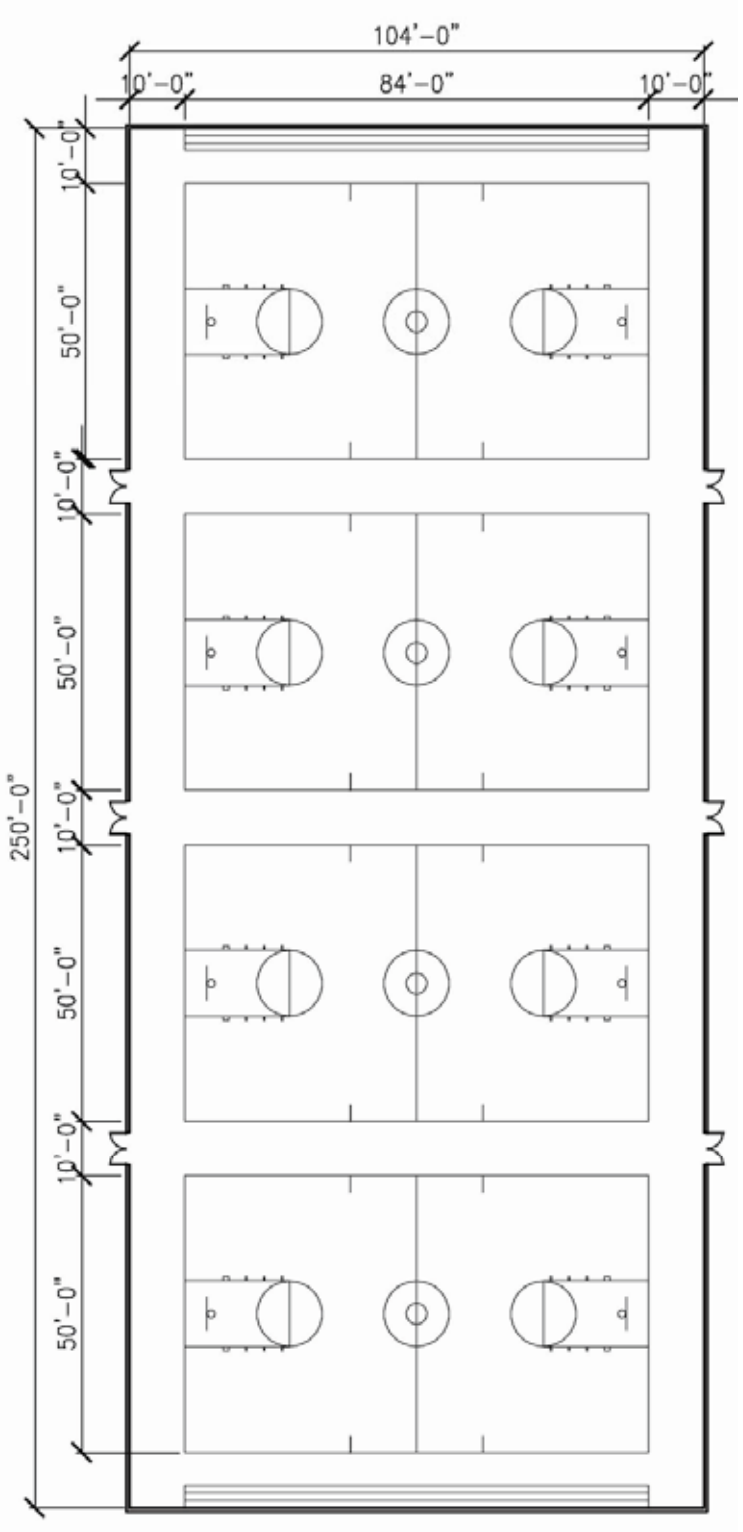
No. 1

PROTOTYPE LAYOUT — FOUR-COURT GYMNASIUM

SCALE: 1" = 30'-0"



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No. 2

ROOM DATA — FOUR-COURT GYMNASIUM STORAGE

General Information	Use/Function	Storage for the Four-Court Gymnasium
	Assignable Area	600 square feet
	Capacity	Per Code: 300 sf / occupant = 2 occupants
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 60'-0"
	Adjacencies	Four-Court Gymnasium
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete / rubber base at drywall surfaces
	Walls	Masonry or drywall. Solid, durable surface up to 7'-0" min.
	Ceiling	Exposed structure
	Doors	Hollow metal, double doors, or metal roll-up door, 6'-0" min. opening
	Natural Light	None
	Acoustics	None
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Ventilation, air changes per Code
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarm on any doors directly to the exterior of the facility
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	To be determined
	Movable Equipment	Metal shelving, lift for the changing of the Gym lights and maintenance, floor cleaning equipment, sports equipment for use in the Gym

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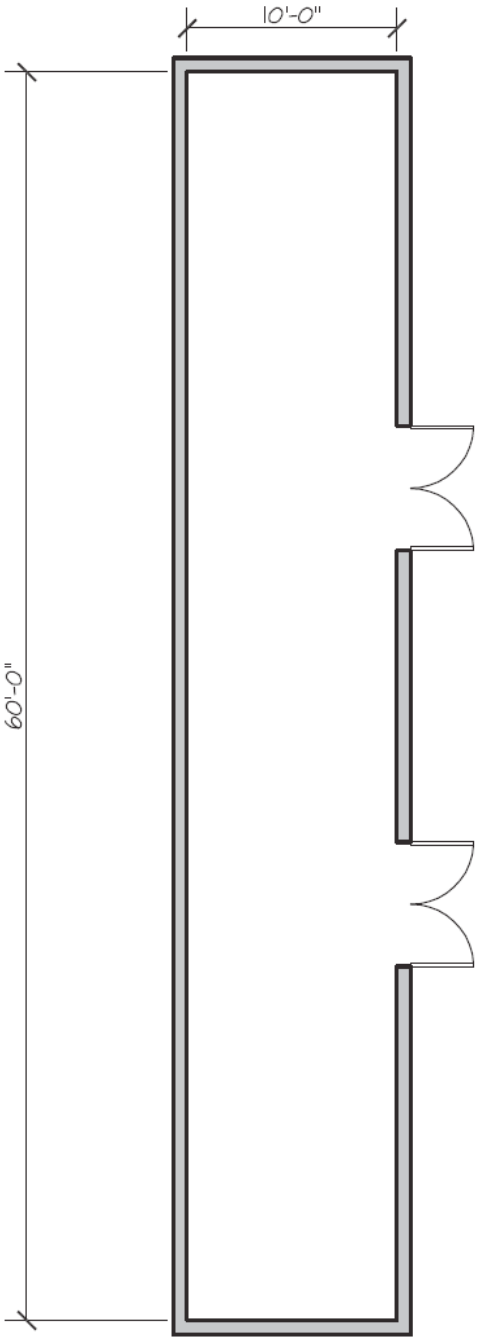
No. 2

PROTOTYPE LAYOUT

FOUR-COURT GYMNASIUM STORAGE

SCALE: 1/8" = 1'-0"



No. 3

ROOM DATA — THREE-COURT GYMNASIUM

General Information	Use/Function	Three-recreational basketball sized Gymnasium, which will also accommodate volleyball and badminton. 50' x 84' basketball courts
	Assignable Area	19,760 square feet
	Capacity	Per Code: Negotiate an occupant load of 300 occupants versus 15 sf / occupant = 1,317 occupants
	Key Dimensions	H: 30'-0" min. W: 104'-0" L: 190'-0"
	Adjacencies	Three-Court Gymnasium Storage, Jogging Track
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Resilient wood. 2nd grade maple / ventilated rubber base. Vinyl composition tile or sealed concrete at the drinking fountains.
	Walls	Masonry up to 18'-0" min. height, drywall above is OK
	Ceiling	Exposed structure, acoustical metal decking
	Doors	Hollow metal
	Natural Light	Desired at north wall and at the Jogging Track level. Allow as much natural light and visibility into the Gym as possible without affecting the play in the Gym.
	Acoustics	Acoustical metal decking At the walls and at the exposed structure, if required.
	Special Requirements	Capability to be divided by using divider curtains. Open (viewable) from other adjacent spaces. All equipment and clocks should be impact resistant. 3 rows of fixed seating along long court sides of the Gym.
Engineering Systems	Lighting	H.I.D., two levels – 70 fc / 50 fc (50 fc average), clear to 30'-0", can also be fluorescent fixtures but will require more fixtures than H.I.D. Lighting to be "instant on" .
	Electrical	600 amps, 3-phase, 480/277 for lights, power for backstops and divider curtain, power for scoreboards, power in the walls and floor for control of backstops, divider curtain, and scoreboards
	Mechanical	Air conditioned, thermostat control, 3 changes per hour peak period usage
	Plumbing	Recessed drinking fountains with chilled water and cuspidors in the common area outside of the Gymnasium or inside of the Gymnasium
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on any doors directly to the outside of the facility
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	Independent sound system which can also connect into the sound system controlled at the front counter. PA connected to the front counter.
FFE	Fixed Equipment	6 power operated retractable basketball backstops with glass backboards and snap back rims, 2 ceiling mounted power operated divider curtain, floor plates for volleyball and badminton poles, 6 wall mounted scoreboards, protected wall clocks, built in cubbies located near entrance outside of gymnasium for backpacks
	Movable Equipment	3 sets volleyball standards with padding and 6 nets, 3 volleyball officiating stands with padding, 9 sets badminton standards with 18 nets, service lift to be stored in the Three-Court Gymnasium Storage.

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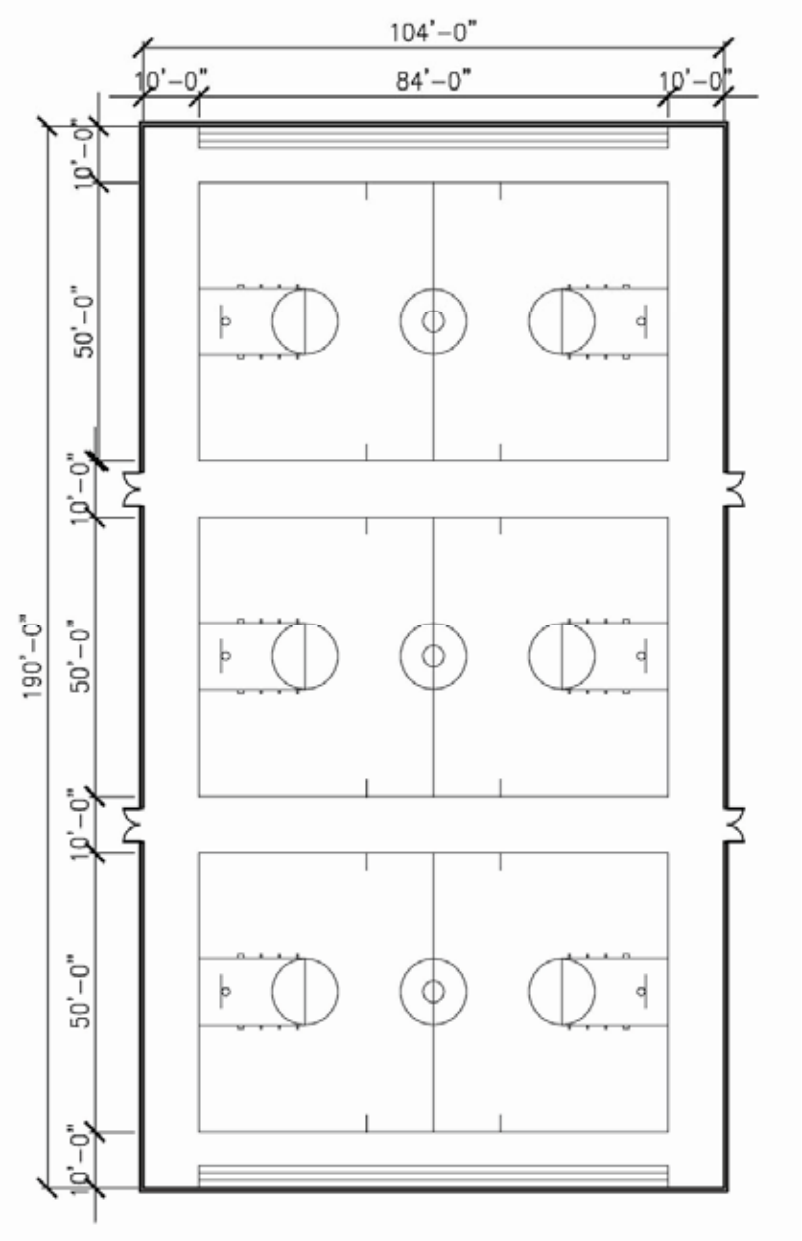
No. 3

PROTOTYPE LAYOUT

THREE-COURT GYMNASIUM

SCALE: 1" = 30'-0"



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No. 4

ROOM DATA — THREE-COURT GYMNASIUM STORAGE

General Information	Use/Function	Storage for the Three-Court Gymnasium
	Assignable Area	500 square feet
	Capacity	Per Code: 300 sf / occupant = 1.67 occupants
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 50'-0"
	Adjacencies	Three-Court Gymnasium
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete / rubber base at drywall surfaces
	Walls	Masonry or drywall. Solid, durable surface up to 7'-0" min.
	Ceiling	Exposed structure
	Doors	Hollow metal, double doors, 6'-0" min. opening
	Natural Light	None
	Acoustics	None
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Ventilation, air changes per Code
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarm on any doors directly to the exterior of the facility
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	To be determined
	Movable Equipment	Metal shelving, lift for the changing of the Gym lights and maintenance, floor cleaning equipment, sports equipment for use in the Gym

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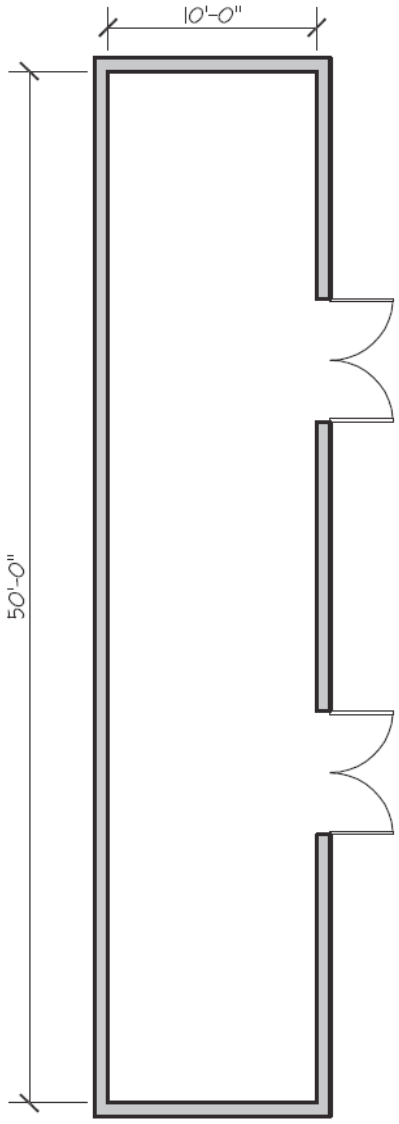
No. 4

PROTOTYPE LAYOUT

THREE-COURT GYMNASIUM STORAGE

SCALE: 1/8" = 1'-0"



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No. 5

ROOM DATA — TWO-COURT GYMNASIUM

General Information	Use/Function	Two-recreational basketball sized Gymnasium, which can also accommodate volleyball (3), badminton (6), and indoor soccer / hockey (1). Rounded corners and permanent recessed goals and fixed players box with spectator seating on one side of the Gym if used for indoor soccer / hockey. 50' x 84' basketball courts
	Assignable Area	13,520 square feet (13,604 SF if 2 recessed goal areas are added for indoor soccer / hockey: 13,520 SF + 84 SF)
	Capacity	Per Code: Negotiate an occupant load of 300 occupants versus 15 sf / occupant = 901 occupants
	Key Dimensions	H: 30'-0" min. W: 104'-0" L: 130'-0" Recessed goals (2) W: 3'-6" L: 12'-0"
	Adjacencies	Two-Court Storage, Jogging Track
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Athletic resilient wood. 2nd grade maple / ventilated rubber base or synthetic flooring. Vinyl composition tile or sealed concrete at the drinking fountains if they are inside of the Gymnasium
	Walls	Masonry up to 18'-0" min. height, drywall above is OK
	Ceiling	Exposed structure, acoustical metal decking
	Doors	Hollow metal to the exterior, glass or partial glass doors into the gym from the interior
	Natural Light	Desired at north wall and at the Jogging Track level, allow as much natural light and visibility into the Gym as possible without affecting the play in the Gym
	Acoustics	Acoustical metal decking At the walls and at the exposed structure, if required.
	Special Requirements	Capability to be divided by using a divider curtain. Open (viewable) from other adjacent spaces. All equipment and clocks should be impact resistant. 3 rows of fixed seating along long court sides of the Gym if not used for soccer / hockey.
Engineering Systems	Lighting	H.I.D., two levels – 70 fc / 50 fc (50 fc average), clear to 30'-0", can also be fluorescent fixtures but will require more fixtures than H.I.D. Lighting to be "instant on" .
	Electrical	600 amps, 3-phase, 480/277 for lights, power for backstops and divider curtain, power for scoreboards, power in the walls and floor for control of backstops, divider curtain, and scoreboards
	Mechanical	Air conditioned, thermostat control, 3 changes per hour peak period usage
	Plumbing	Recessed drinking fountains with chilled water and cuspidors in the common area outside of the Gymnasium or inside of the Gymnasium
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on any doors directly to the outside of the facility
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	Independent sound system which can also connect into the sound system controlled at the front counter. PA connected to the front counter.
FFE	Fixed Equipment	4 power operated retractable basketball backstops with glass backboards and snap back rims, 1 ceiling mounted power operated divider curtain, floor plates for volleyball and badminton poles (if desired), 4 wall mounted scoreboards, protected wall clocks
	Movable Equipment	3 sets volleyball standards with padding and 6 nets, 3 volleyball officiating stands with padding, 6 sets badminton standards with 12 nets (if desired), service lift to be stored in the Two-Court Gymnasium Storage.

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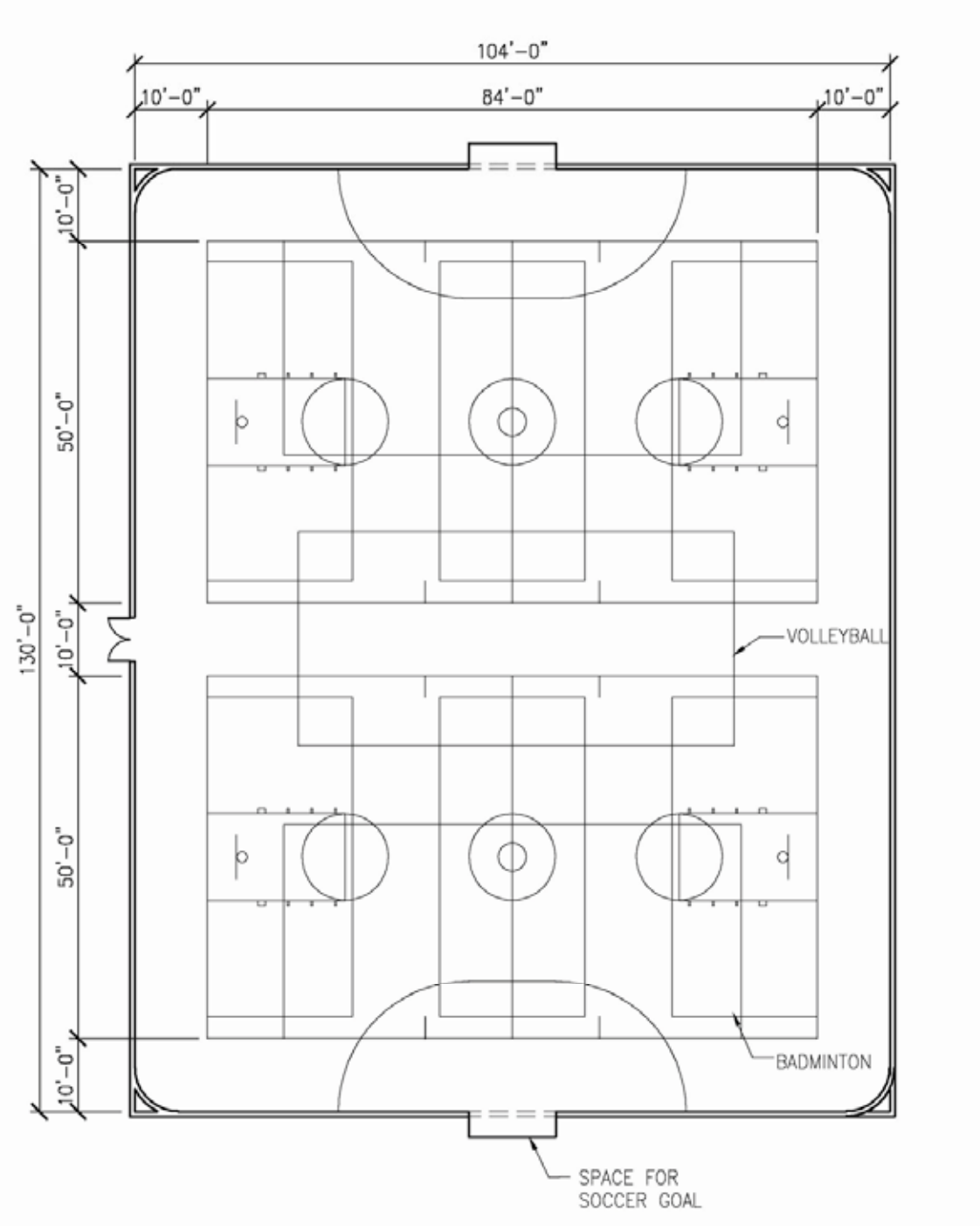
No. 5

PROTOTYPE LAYOUT — TWO-COURT GYMNASIUM

SCALE: 1" = 20'-0"



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No. 6

ROOM DATA — TWO-COURT GYMNASIUM STORAGE

General Information	Use/Function	Storage for the Two-Court Gymnasium
	Assignable Area	400 square feet
	Capacity	Per Code: 300 sf / occupant = 1.33 occupant
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 40'-0"
	Adjacencies	Two-Court Gymnasium
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete / rubber base at drywall surfaces
	Walls	Masonry or drywall. Solid, durable surface up to 7'-0" min.
	Ceiling	Exposed structure
	Doors	Hollow metal, double doors, or metal roll-up door, 6'-0" min. opening
	Natural Light	None
	Acoustics	None
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Ventilation, air changes per Code
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarm on any doors directly to the exterior of the facility
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	To be determined
	Movable Equipment	Metal shelving, lift for the changing of the Gym lights and maintenance, floor cleaning equipment, sports equipment for use in the Gym

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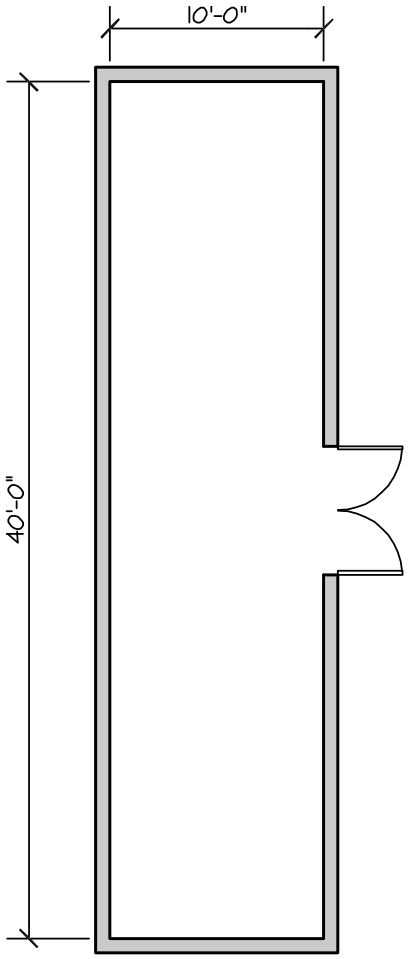
No. 6

PROTOTYPE LAYOUT

TWO-COURT GYMNASIUM STORAGE

SCALE:1/8”=1’-0”



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No. 7

ROOM DATA — ONE-COURT MAC GYMNASIUM

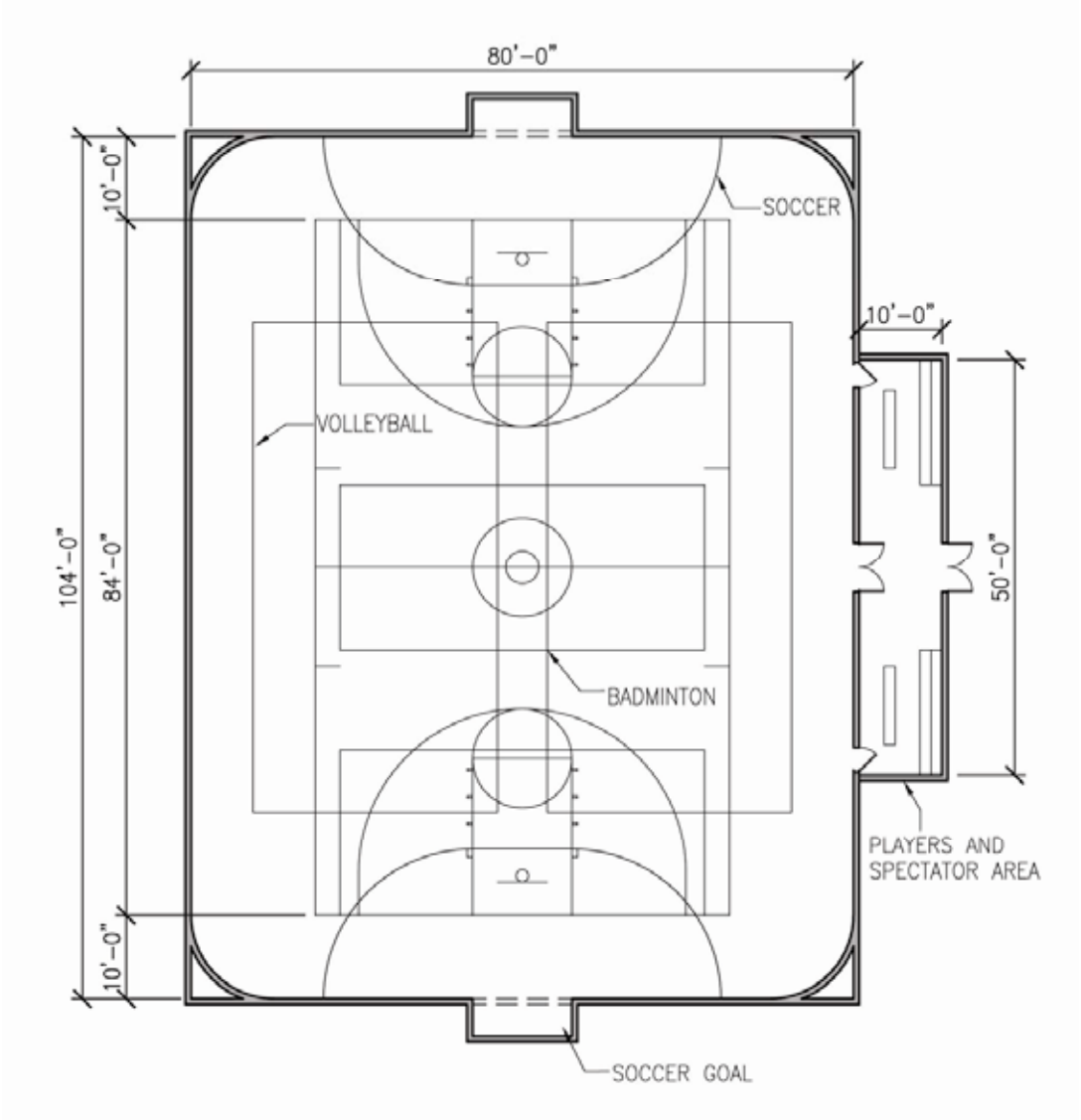
General Information	Use/Function	One-recreational basketball sized Gymnasium, which will also accommodate volleyball (2), badminton (3). To be used for indoor soccer / hockey as an alternative to Two-Court Gymnasium – Rounded corners and permanent recessed goals and fixed players box with spectator seating on one side of the Gym, 50' x 84' basketball court
	Assignable Area	8,320 square feet (8,404 SF if 2 recessed goal areas added for indoor soccer / hockey: 8,320 SF + 84 SF)
	Capacity	Per Code: Negotiate an occupant load of 150 occupants versus 15 sf / occupant = 555 occupants (if only used for Recreational purposes). If Gym is used for movies or banquets, occupant load may be up to 800 occupants
	Key Dimensions	H: 30'-0" min. W: 80'-0" L: 104'-0", Recessed goals (2) W: 3'-6" L: 12'-0"
	Adjacencies	One-Court MAC Gymnasium Storage
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Athletic resilient wood. 2nd grade maple / ventilated rubber base
	Walls	Masonry up to 18'-0" min. height, drywall above is OK
	Ceiling	Exposed structure, acoustical metal decking
	Doors	Hollow metal to the exterior, glass or partial glass doors into the gym from the interior
	Natural Light	Desired at north wall, allow as much natural light and visibility into the Gym as possible without affecting the play in the Gym, ability to black out natural light for movies, etc.
	Acoustics	For events (movies, speakers, banquets). Acoustical metal decking. At the walls and at the exposed structure
	Special Requirements	Accessible directly from the outside for events in Gym. All equipment and clocks should be impact resistant
Engineering Systems	Lighting	H.I.D., two levels – 70 fc / 50 fc (50 fc average), clear to 30'-0", can also be fluorescent fixtures but will require more fixtures than H.I.D. Specialized lighting with controls as required for events in the Gym
	Electrical	600 amps, 3-phase, 480/277 for lights, power for backstops, power for scoreboards, power in the walls and floor for control of backstops and scoreboards
	Mechanical	Air conditioned, thermostat control, 3 changes per hour peak period usage
	Plumbing	Recessed drinking fountains with chilled water and cuspidors in the common area outside of the Gymnasium
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on any doors directly to the outside of the facility
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	Independent sound system controllable for events which can also connect into the sound system controlled at the front counter. PA connected to the front counter. Control booth for movies. Permanent speakers at ceiling area or at upper parts of walls
FFE	Fixed Equipment	2 power operated retractable basketball backstops with glass backboards and snap back rims, floor plates for volleyball and badminton poles, 2 wall mounted scoreboards, protected wall clocks, large drop-down projection screen
	Movable Equipment	2 sets volleyball standards with padding and 4 nets, 2 volleyball officiating stands with padding, 3 sets badminton standards with 6 nets, service lift to be stored in the Gymnasium Storage

No. 7

PROTOTYPE LAYOUT

ONE-COURT MAC GYMNASUIM

SCALE: 1" = 20'-0"



No. 8

ROOM DATA — ONE-COURT MAC GYMNASIUM STORAGE

General Information	Use/Function	Storage for the One-Court MAC Gymnasium
	Assignable Area	200 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 20'-0"
	Adjacencies	One-Court MAC Gymnasium
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete / rubber base at drywall surfaces
	Walls	Masonry or drywall. Solid, durable surface up to 7'-0" min.
	Ceiling	Exposed structure
	Doors	Hollow metal, double doors, or metal roll-up door, 6'-0" min. opening
	Natural Light	None
	Acoustics	None
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Ventilation, air changes per Code
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarm on any doors directly to the exterior of the facility
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	To be determined
	Movable Equipment	Metal shelving, lift for the changing of the Gym lights and maintenance, floor cleaning equipment, sports equipment for use in the Gym

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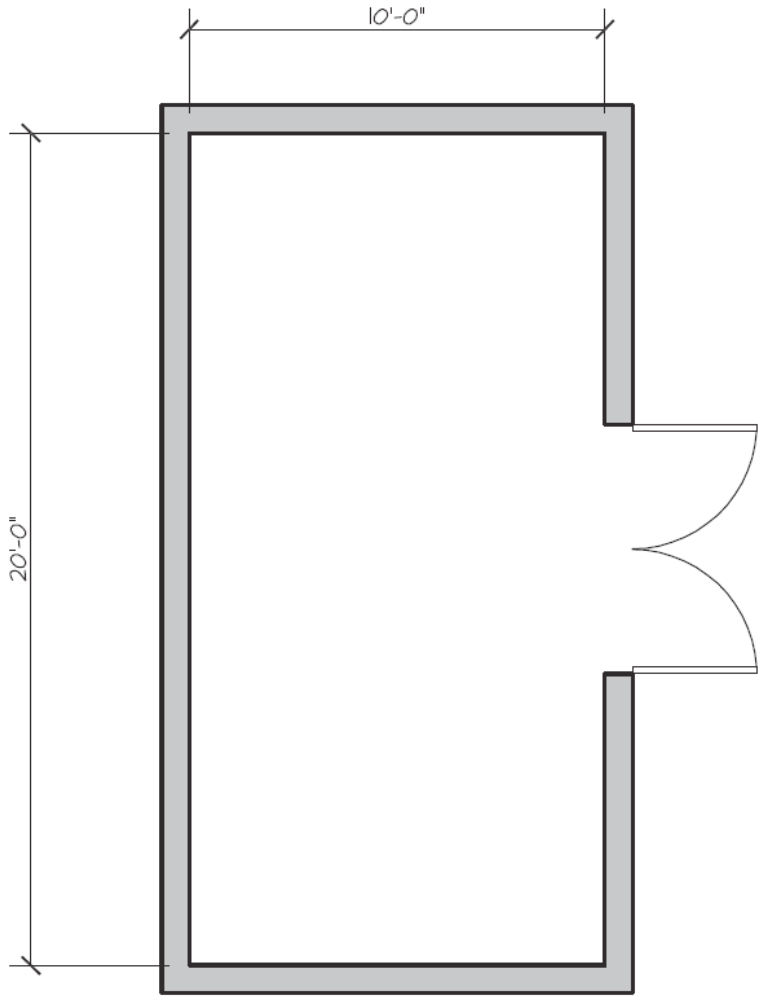
No. 8

PROTOTYPE LAYOUT — ONE-COURT GYMNASIUM STORAGE

SCALE:1/4”=1’-0”



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No. 9

ROOM DATA — ELEVATED JOGGING TRACK

General Information	Use/Function	3-lane track for jogging, walking, and cardio-vascular warm-up, above the inside perimeter of one of the Gymnasiums and/or parts of the upper level of the facility
	Assignable Area	4,109 square feet (Track area of 6,848 square feet taken at 60%), 8 laps per mile (center of middle lane of the Track)
	Capacity	Per Code: Negotiate an occupant load of 100 occupants versus 15 sf / occupant = 456 occupants
	Key Dimensions	H: 12'-0" min. W: 10'-2" L: 692'-4" outside perimeter of track
	Adjacencies	Above Gymnasiums, Fitness / Weight Room, Entry Lobby / Lounge
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Rubber, embossed synthetic track surfacing –poured. Vinyl compositon tile or sealed concrete at the drinking fountains.
	Walls	Masonry or drywall, glass
	Ceiling	Exposed structure
	Doors	None
	Natural Light	Windows
	Acoustics	At the walls if required
	Special Requirements	Track does not go outside of the perimeter building walls. Stretching areas at the corners of the Track, or adjacent to the Track
Engineering Systems	Lighting	Fluorescent, 25 fc, in addition to the lighting in the Gym or the other portions of the building that the Track will go through
	Electrical	Convenience outlets at the walls, outlets for pace clocks
	Mechanical	Air conditioned, 3 changes per hour peak period usage
	Plumbing	Drinking fountains with chilled water in common areas adjacent to the Track
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone for emergencies
	Data	Potential for digital display installation
	TV	Potential for digital display installation
	Other Technology	None
FFE	Fixed Equipment	Pace clock, jogging directional signs
	Movable Equipment	To be determined

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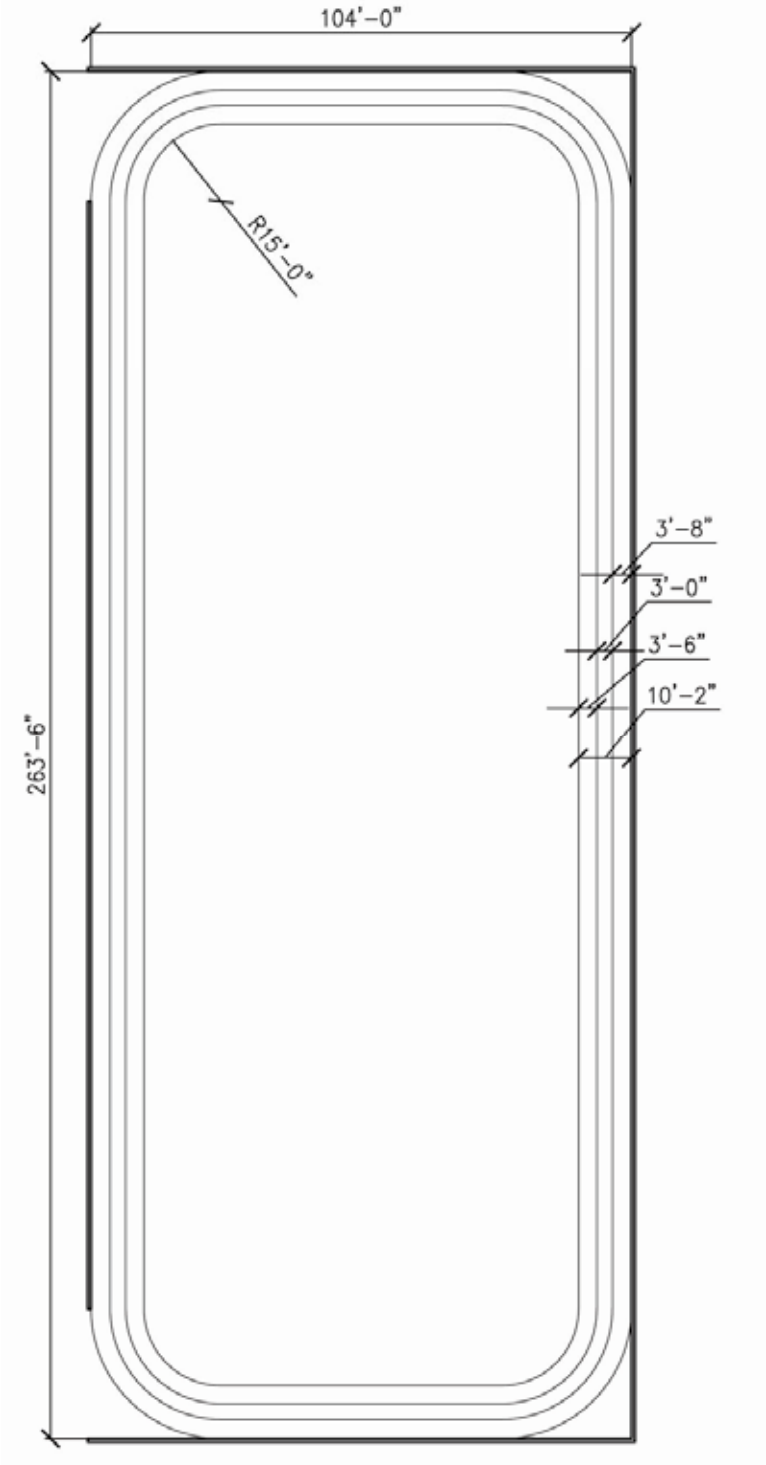
No. 9

PROTOTYPE LAYOUT

ELEVATED JOGGING TRACK

SCALE: 1/32" = 1'-0"



No. 10

ROOM DATA — FITNESS / WEIGHT ROOM

General Information	Use/Function	Space for fitness exercising with equipment – free weights, cardio-vascular equipment, selectorized equipment, with stretching areas
	Assignable Area	20,000 square feet total, some of the area should be on a mezzanine level or distributed throughout the facility versus all of the area in one room
	Capacity	Per Code: 50 sf / occupant = 400 occupants (20,000 SF)
	Key Dimensions	H: 12'-0" to 15'-0" min. W: to be determined L: to be determined
	Adjacencies	Fitness / Weight Room Control Counter, Fitness Coordinator's Office, Fitness / Weight Room Storage, Fitness / Weight Room Work Room, Entry Lobby / Lounge
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Carpet and / or rubber tiles, rubber tiles are required at free weight area / rubber tile base or wainscot up to 18" min. on wall and column surfaces. Vinyl composition tile or sealed concrete at the drinking fountains in the room or at adjacent common areas
	Walls	Masonry or drywall, glass, mirrors
	Ceiling	Drywall soffit, acoustical tiles
	Doors	Solid core wood or glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Independent sound system, door width adequate to move equipment in and out of the room, good view to and from the Entry Lobby / Lounge and the circulation spaces of the facility
Engineering Systems	Lighting	Indirect, fluorescent, 60 fc
	Electrical	Extensive convenience outlets at the walls and in the floor, some equipment will require 220 V dedicated circuits (treadmills)
	Mechanical	Air conditioned, thermostat control, 100% exhaust or filter, 10 changes per hour- average, (15 changes per hour at peak periods – occupancy sensors), ceiling fans
	Plumbing	Drinking fountains with chilled water within the room.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on any doors directly to the outside of the facility
Technology	Voice	Telephone at the control counter
	Data	Internet connection / wireless
	TV	Cable outlets, individual cables at cardio machines
	Other Technology	Independent sound system with controls at control counter, which can also connect into the sound system controlled at the front counter. PA connected to the front counter
FFE	Fixed Equipment	Lockers or storage cubicles near room entrance, central assistance / control counter, wall mirrors, wall or ceiling-hung televisions, speakers, and sound systems
	Movable Equipment	Cardio-vascular equipment, selectorized equipment, free weight equipment, mats

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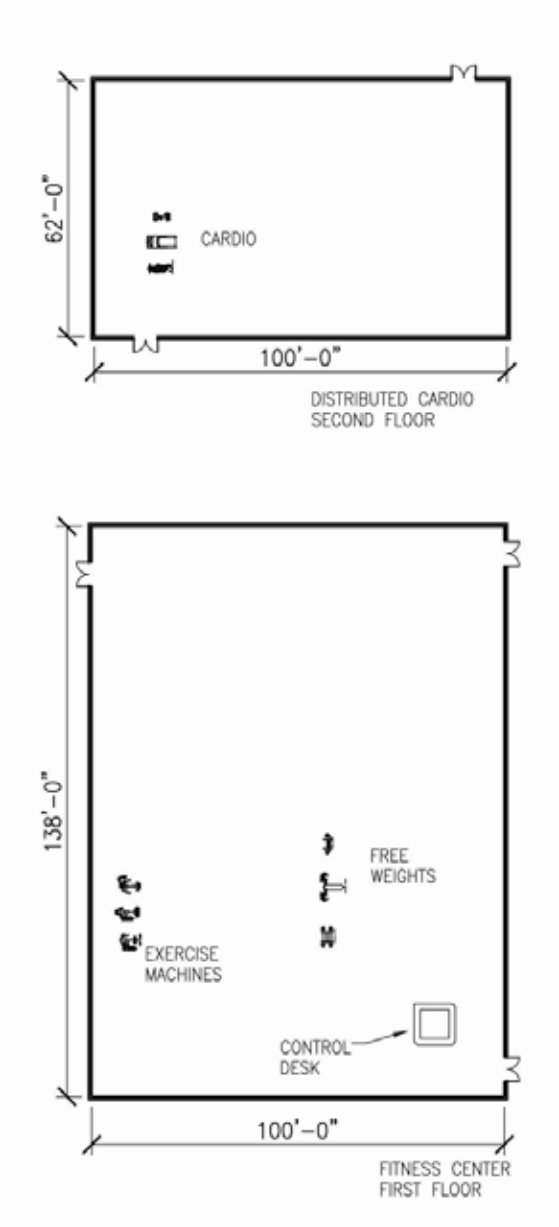
No. 10

PROTOTYPE LAYOUT

FITNESS / WEIGHT ROOM

SCALE: 1" =40'-0"



NOTE: THESE LAYOUTS ONLY REPRESENT THE POSSIBLE SIZE OF THE EXERCISE AREAS ON THE FIRST & SECOND FLOORS OF THE FACILITY. THE ACTUAL LAYOUT OF THE EXERCISE ROOM AREAS WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT.

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No. 11

ROOM DATA — FITNESS / WEIGHT ROOM STORAGE

General Information	Use/Function	Storage for the Fitness / Weight Room
	Assignable Area	400 square feet
	Capacity	Per Code: 300 sf / occupant = 1.33 occupants
	Key Dimensions	H: 12'-0" min. W: 16'-0" L: 25'-0"
	Adjacencies	Fitness / Weight Room, Fitness / Weight Room Work / Repair Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete / rubber base
	Walls	Drywall or masonry
	Ceiling	Exposed structure
	Doors	Solid core wood, double doors
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	Connect to Work / Repair Room
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	Sound system board, if provided for the Fitness / Weight Room
FFE	Fixed Equipment	Sound system board, shelving and storage cabinets if built-in
	Movable Equipment	Shelving and storage cabinets if not built-in

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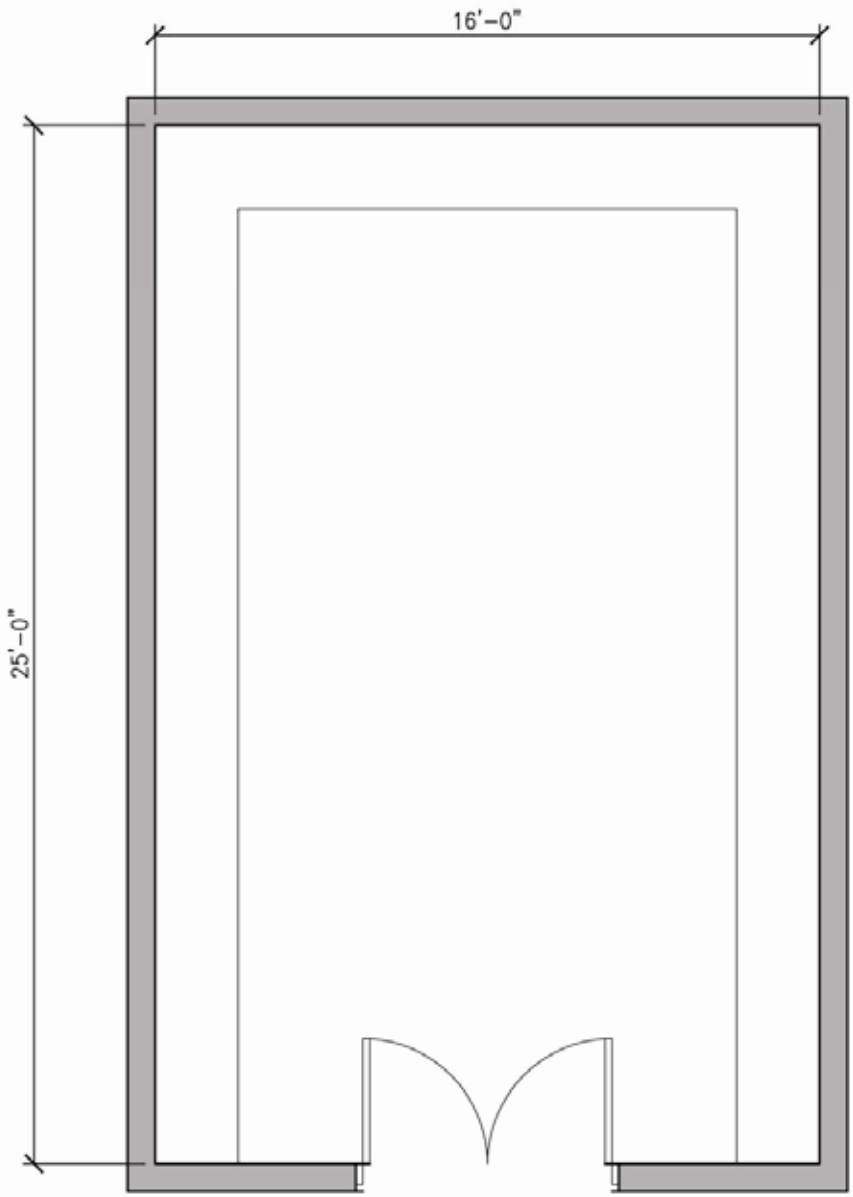
No. 11

PROTOTYPE LAYOUT — FITNESS/WEIGHT ROOM STORAGE

SCALE: 1/4" = 1'-0"



No. 12

ROOM DATA — FITNESS / WEIGHT ROOM STORAGE

General Information	Use/Function	Storage for the Fitness / Weight Room
	Assignable Area	200 square feet
	Capacity	Per Code: 300 sf / occupant = 0.67 occupants
	Key Dimensions	H: 12'-0" min. W: 16'-0" L: 25'-0"
	Adjacencies	Fitness / Weight Room, Fitness / Weight Room Work / Repair Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete / rubber base
	Walls	Drywall or masonry
	Ceiling	Exposed structure
	Doors	Solid core wood, double doors
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	Connect to Work / Repair Room
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	Sound system board, if provided for the Fitness / Weight Room
FFE	Fixed Equipment	Sound system board, shelving and storage cabinets if built-in
	Movable Equipment	Shelving and storage cabinets if not built-in

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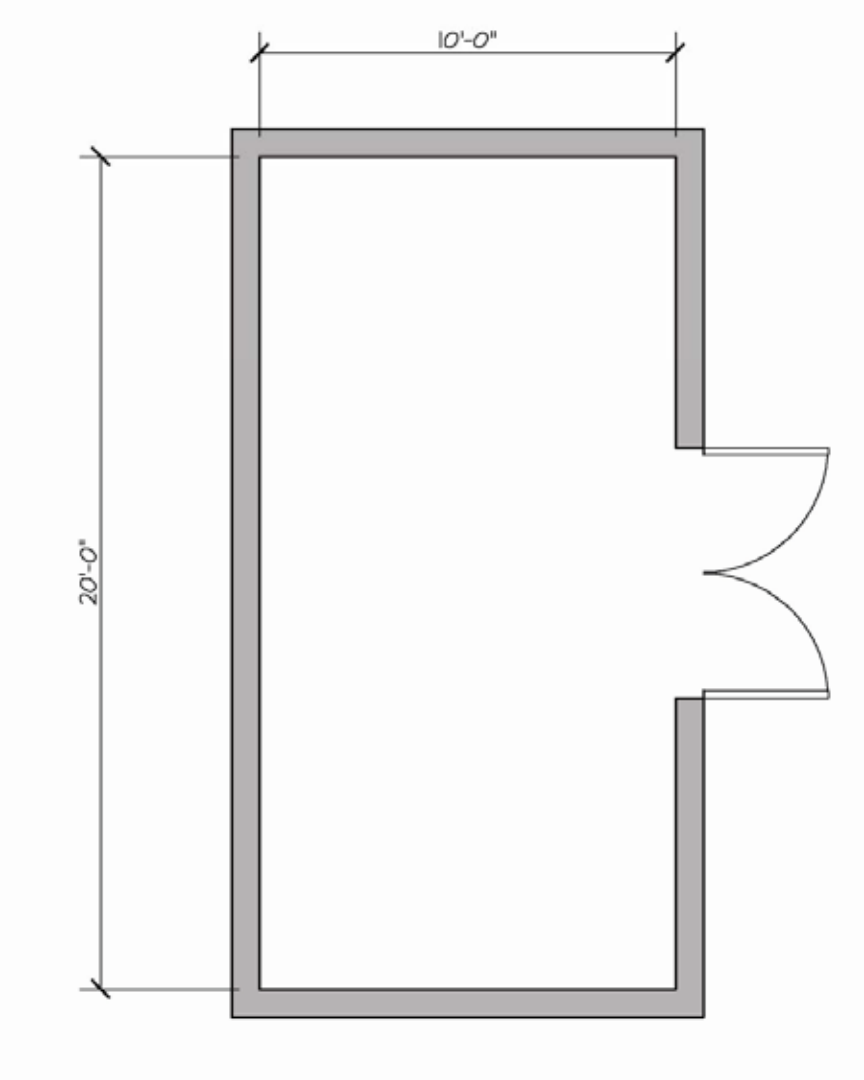
No. 12

PROTOTYPE LAYOUT — FITNESS/WEIGHT ROOM SECOND FLOOR STORAGE

SCALE: 1/4" = 1'-0"



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No. 13

ROOM DATA — FITNESS / WEIGHT ROOM CONTROL COUNTER

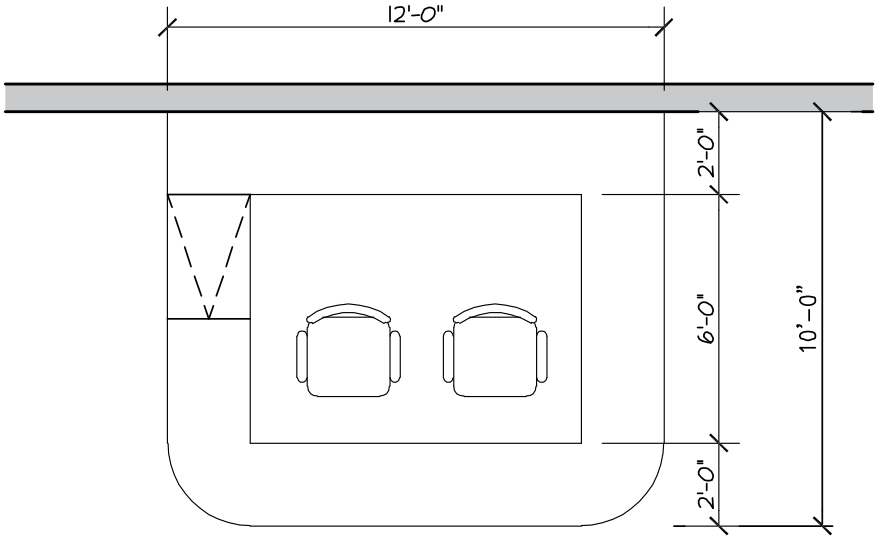
General Information	Use/Function	Control and information counter for the Fitness / Weight Room
	Assignable Area	120 square feet
	Capacity	Per Code: 100 sf / occupant =1.2 occupants
	Key Dimensions	H: 12'-0" min. W: 10'- 0" L: 12'-0"
	Adjacencies	Fitness / Weight Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet or rubber tiles/ rubber base or rubber tile base
	Walls	Masonry or drywall on adjacent walls
	Ceiling	Exposed structure or drywall
	Doors	None, except counter flip-top with low door for access behind counter
	Natural Light	Desired
	Acoustics	In the walls and at the ceiling
	Special Requirements	Main control and information counter for the Fitness / Weight Room. Space at counter for telephone and computer
Engineering Systems	Lighting	Fluorescent, 60 fc, or H.I.D., or decorative lighting
	Electrical	Convenience outlets at the Control Counter
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Control counter (dual height for standing transactions and for disabled access)
	Movable Equipment	2 counter chairs, computer

No. 13

PROTOTYPE LAYOUT

FITNESS / WEIGHT ROOM CONTROL COUNTER

SCALE: 1/4" = 1'-0"



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No. 14

ROOM DATA — FITNESS COORDINATOR'S OFFICE

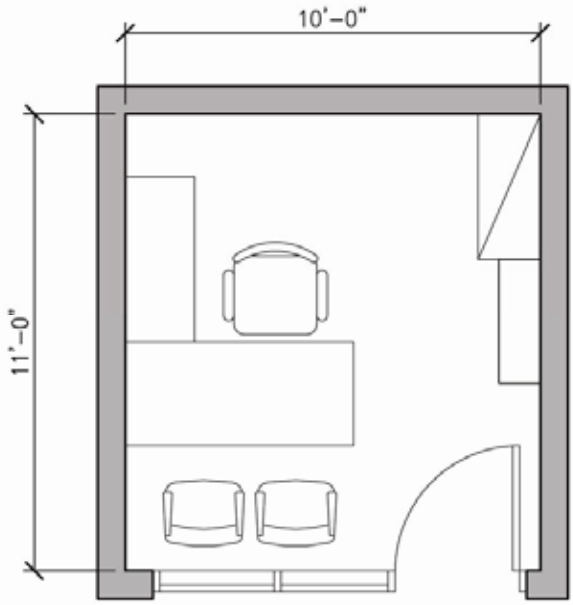
General Information	Use/Function	Office for the Fitness Coordinator
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Fitness / Weight Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass (with maximum view into the Fitness / Weight Room for monitoring)
	Ceiling	Acoustical tile
	Doors	Solid core wood and glass (for view into the Fitness / Weight Room for monitoring)
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Overall view of the Fitness / Weight Room
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	May require cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 14

PROTOTYPE LAYOUT

FITNESS COORDINATOR'S OFFICE

SCALE: 1/4" = 1'-0"



No. 15

ROOM DATA — FITNESS / WEIGHT ROOM WORK / REPAIR ROOM

General Information	Use/Function	Work Area for the Fitness / Weight Room for fitness equipment repair
	Assignable Area	200 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 9'- 0" min. W: 12'-6" L: 16'-0"
	Adjacencies	Fitness / Weight Room, Fitness / Weight Room Storage
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base, or sealed concrete / rubber base
	Walls	Masonry of drywall
	Ceiling	Exposed structure
	Doors	Solid core wood to the inside, hollow metal with louvers if doors to the outside of the building
	Natural Light	Optional
	Acoustics	In the walls
	Special Requirements	Connected to the Fitness / Weight Room Storage
Engineering Systems	Lighting	Fluorescent
	Electrical	Convenience outlets at the walls, 220 V outlets required
	Mechanical	Air conditioned, good ventilation is essential
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on doors to the outside
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Work counter, work bench
	Movable Equipment	Desk if not built-in work counter, work chair, shelving, storage cabinet

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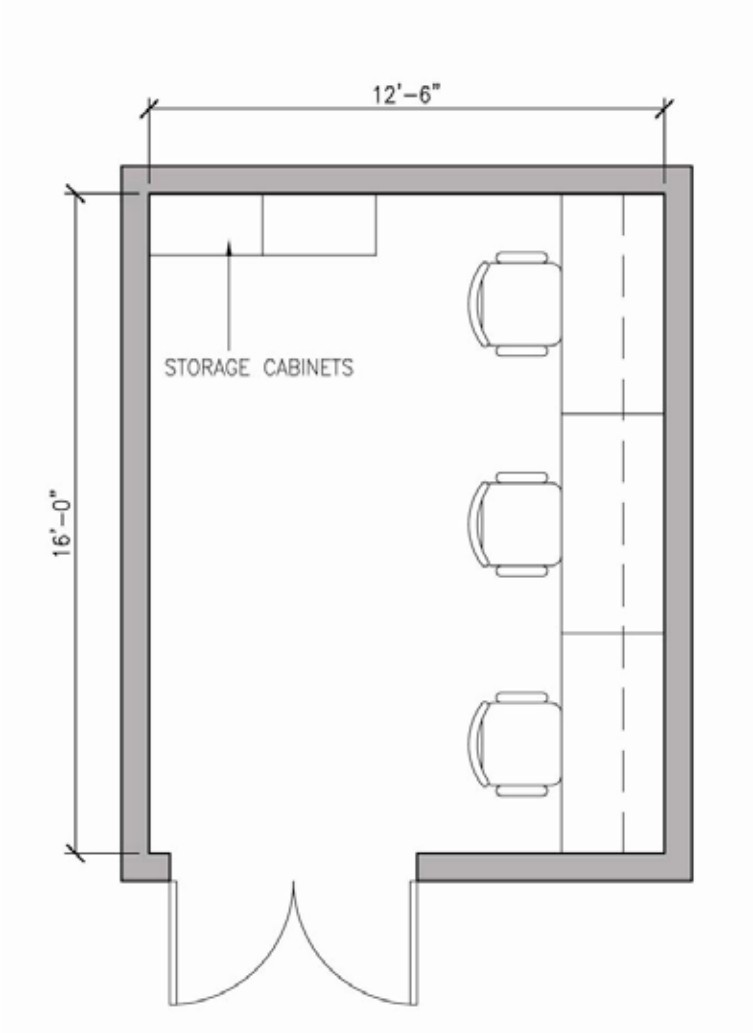
No. 15

PROTOTYPE LAYOUT — FITNESS / WEIGHT ROOM WORK / REPAIR ROOM

SCALE: 1/4" = 1'-0"



No. 16

ROOM DATA — MULTI-PURPOSE ROOM 1 (GROUP FITNESS)

General Information	Use/Function	Space for group fitness activities, also small meetings – to be created by renovating the existing 2nd Floor Exercise Room. Room to be used for Spinning classes.
	Assignable Area	2,500 square feet
	Capacity	Per Code: 50 sf / occupant = *** occupants
	Key Dimensions	H: 12'-0" to 15'-0" W: 29'-0" L: 62'-0" Bench / bag storage area: 3'-0" x 17'-8"
	Adjacencies	Fitness Room 1 Storage, Fitness Room 2, Fitness Room 3
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Athletic resilient wood, 2nd grade maple, possibly a parquet pattern / ventilated rubber base
	Walls	Masonry or drywall, glass, mirrors on 2 walls – 12" min. above the floor
	Ceiling	Drywall soffit, acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Independent sound system. Design and treatment must address a high volume audio environment inside and not transferring the sound to the outside. Vibration criteria for the floor structure is important.
Engineering Systems	Lighting	Indirect, fluorescent, two levels, 60 fc / 40 fc, independently controlled
	Electrical	Convenience outlets at the walls and for a clock – coordinate the location of the outlets with the mirrors and for disabled access requirements
	Mechanical	Air conditioned, thermostat control,10 changes per hour (average, 12 changes per hour at peak periods – occupancy sensors). Ceiling fans if there is a ceiling height of a minimum of 12'-0".
	Plumbing	Drinking fountains with chilled water at the outside of the room.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless – OK to have data jacks / lines if the room is also used as a meeting room
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Clock, wall mirrors, window blinds for both the interior and exterior windows, built-in sound system and speakers, built-in bench with bag storage cubicles under it, hooks above bench for jackets, dance bar at one wall.
	Movable Equipment	Spinning bicycles, aerobic steps, individual folding mats, other group fitness equipment, floor covering

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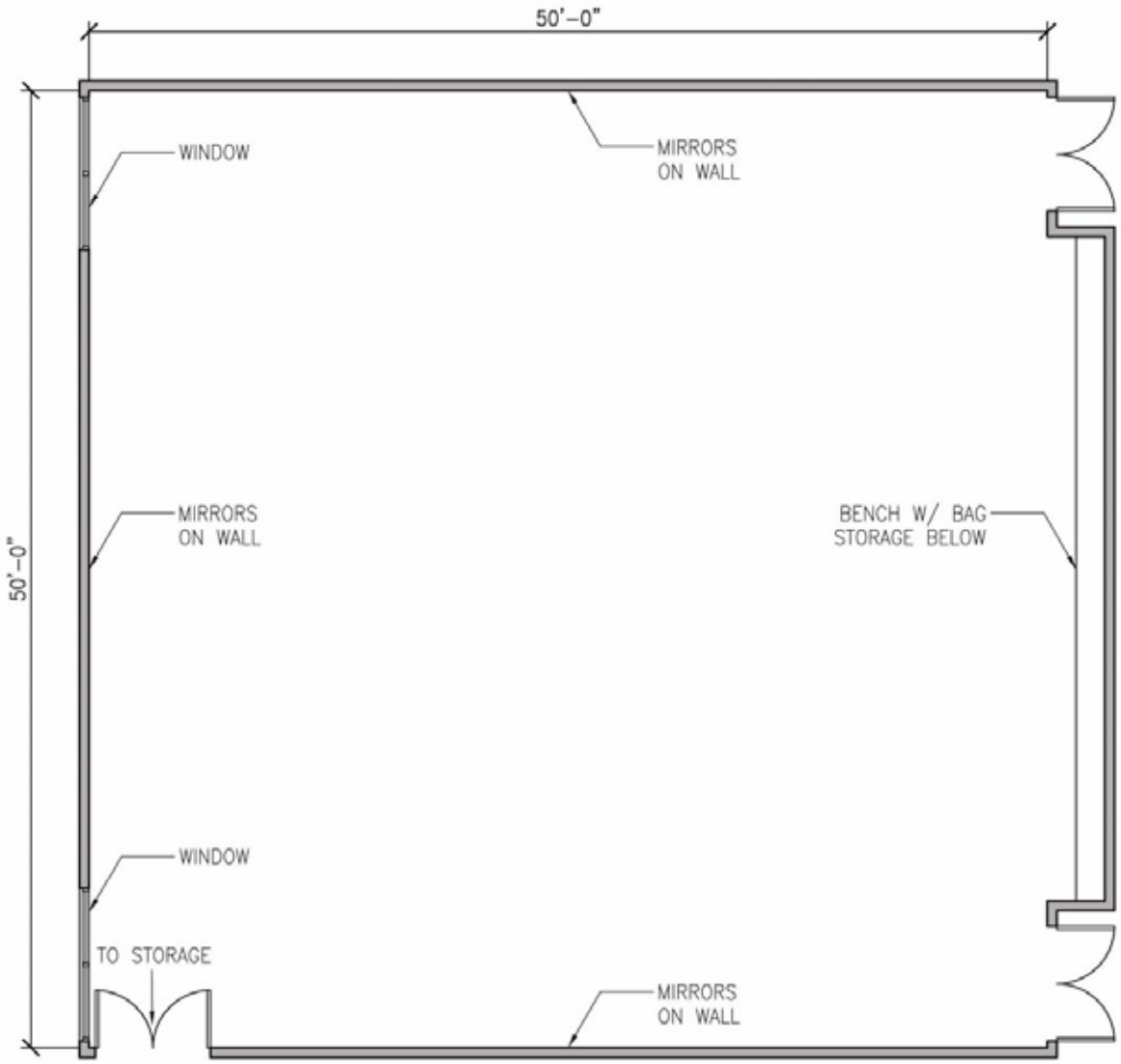
No. 16

PROTOTYPE LAYOUT — MULTI-PURPOSE ROOM 1 (GROUP FITNESS)

SCALE: 1/8”



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No. 17

ROOM DATA — MULTI-PURPOSE ROOM 1 STORAGE

General Information	Use/Function	Storage for furnishings and equipment used in Multi-purpose Room 1
	Assignable Area	200 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 20'-0"
	Adjacencies	Multi-purpose Room 1
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile or sealed concrete / rubber base
	Walls	Drywall or masonry
	Ceiling	Exposed structure
	Doors	Solid core wood, double door
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Shelving and storage cabinets, if built-in
	Movable Equipment	Shelving and storage cabinets, if not built-in, furnishings and equipment for use in Multi-purpose Room 1

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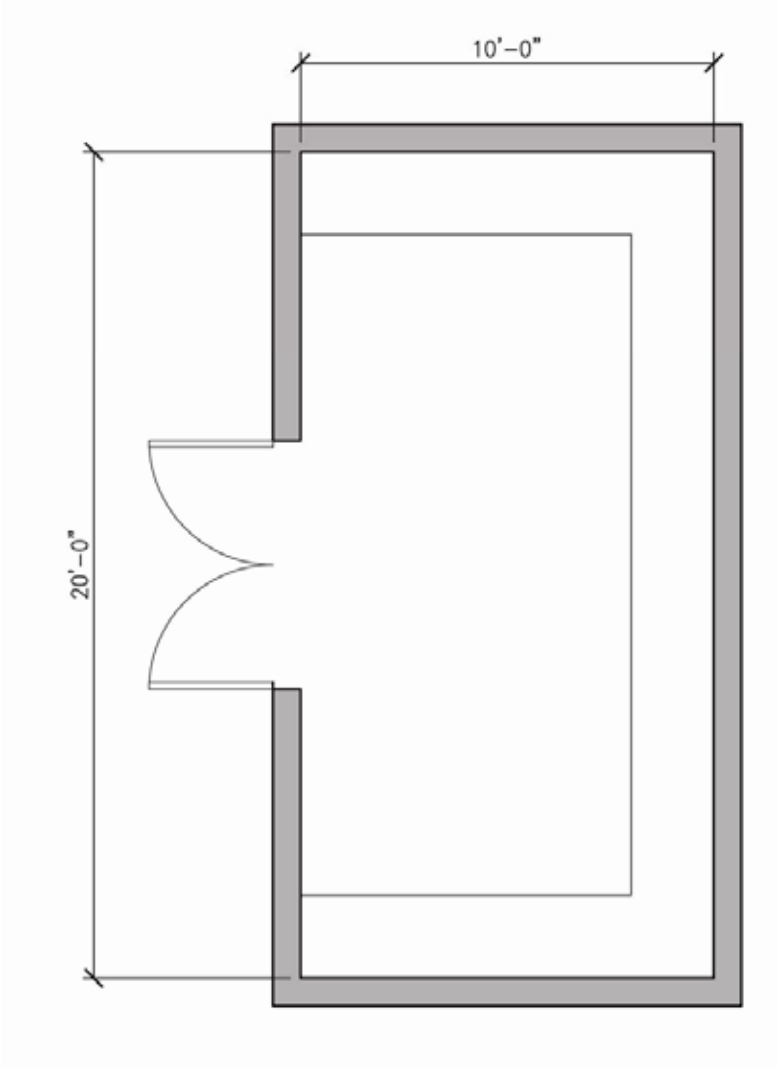
No. 17

PROTOTYPE LAYOUT

MULTI-PURPOSE ROOM 1 STORAGE

SCALE: 1/4" = 1'-0"



No. 18

ROOM DATA — MULTI-PURPOSE ROOM 2 (GROUP FITNESS)

General Information	Use/Function	Space for group fitness activities, also small meetings – to be created by renovating the existing 2nd Floor Exercise Room
	Assignable Area	2,000 square feet
	Capacity	Per Code: 50 sf / occupant = **** occupants
	Key Dimensions	H: 12'-0" to 15'-0" W: 34'-0" L: 62'-0" Bench / bag storage area: 3'-0" x 22'-8"
	Adjacencies	Fitness Room 2 Storage, Fitness Room 1, Fitness Room 3
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Athletic resilient wood, 2nd grade maple, possibly a parquet pattern / ventilated rubber base
	Walls	Masonry or drywall, glass, mirrors on 2 walls – 12" min. above the floor
	Ceiling	Drywall soffit, acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Independent sound system. Design and treatment must address a high volume audio environment inside and not transferring the sound to the outside. Vibration criteria for the floor structure is important.
Engineering Systems	Lighting	Indirect, fluorescent, two levels, 60 fc / 40 fc, independently controlled
	Electrical	Convenience outlets at the walls and for a clock – coordinate the location of the outlets with the mirrors and for disabled access requirements
	Mechanical	Air conditioned, thermostat control, 10 changes per hour (average, 12 changes at peak periods – occupancy sensors). Ceiling fans if there is a ceiling height of a minimum of 12'-0".
	Plumbing	Drinking fountains with chilled water at the outside of the room.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless – OK to have data jacks / lines if the room is also used as a meeting room
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Clock, wall mirrors, window blinds for both the interior and exterior windows, built-in sound system and speakers, built-in bench with bag storage cubicles under it, swing away wall-mounted martial arts bag holders if room is used martial arts, hooks above bench for jackets, dance bar at one wall.
	Movable Equipment	Aerobic steps, individual folding mats, other group fitness and martial arts equipment, floor covering

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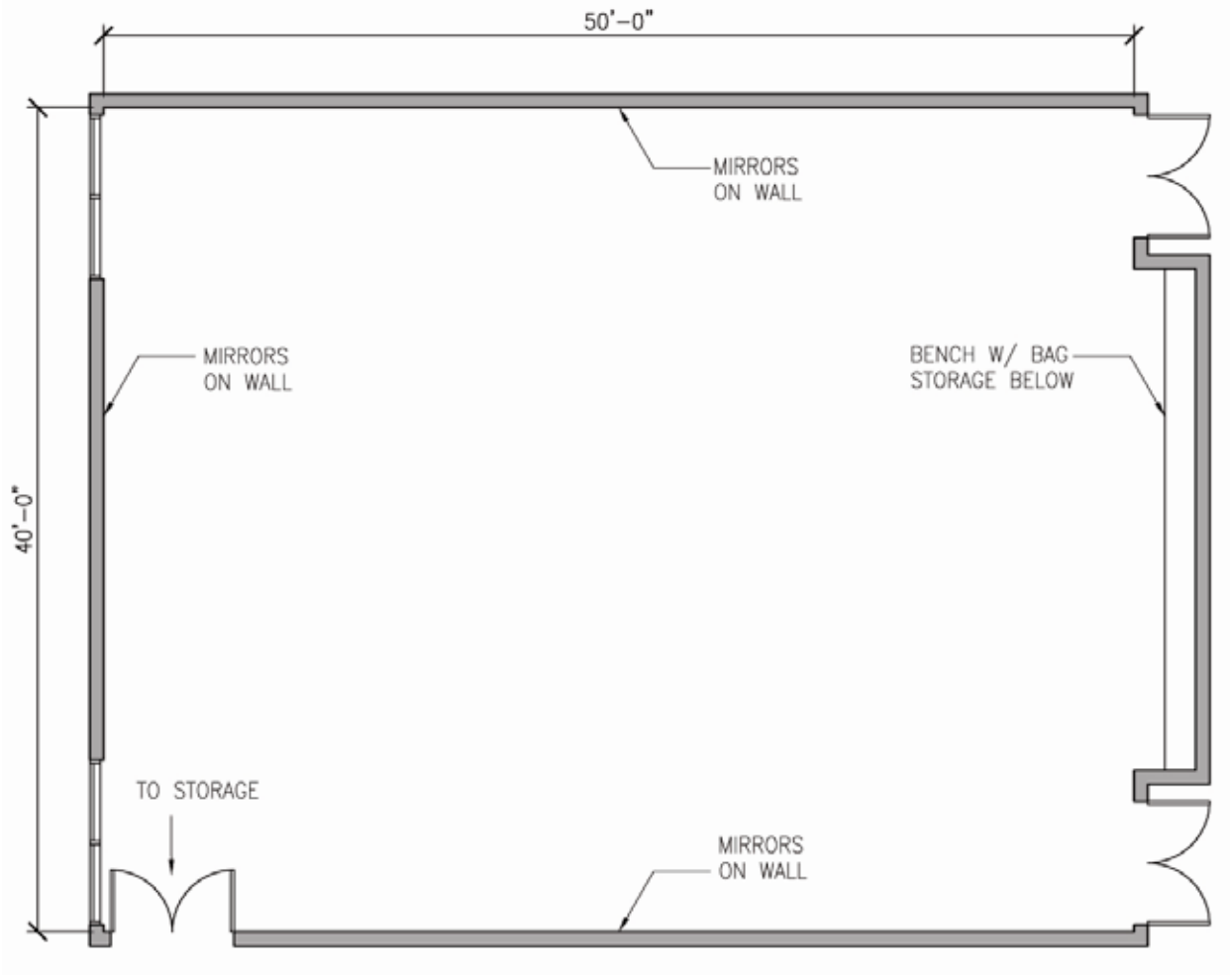
No. 18

PROTOTYPE LAYOUT — MULTI-PURPOSE ROOM 2 (GROUP FITNESS)

SCALE: 1/8"=1'-0"



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No. 19

ROOM DATA — MULTI-PURPOSE ROOM 2 STORAGE

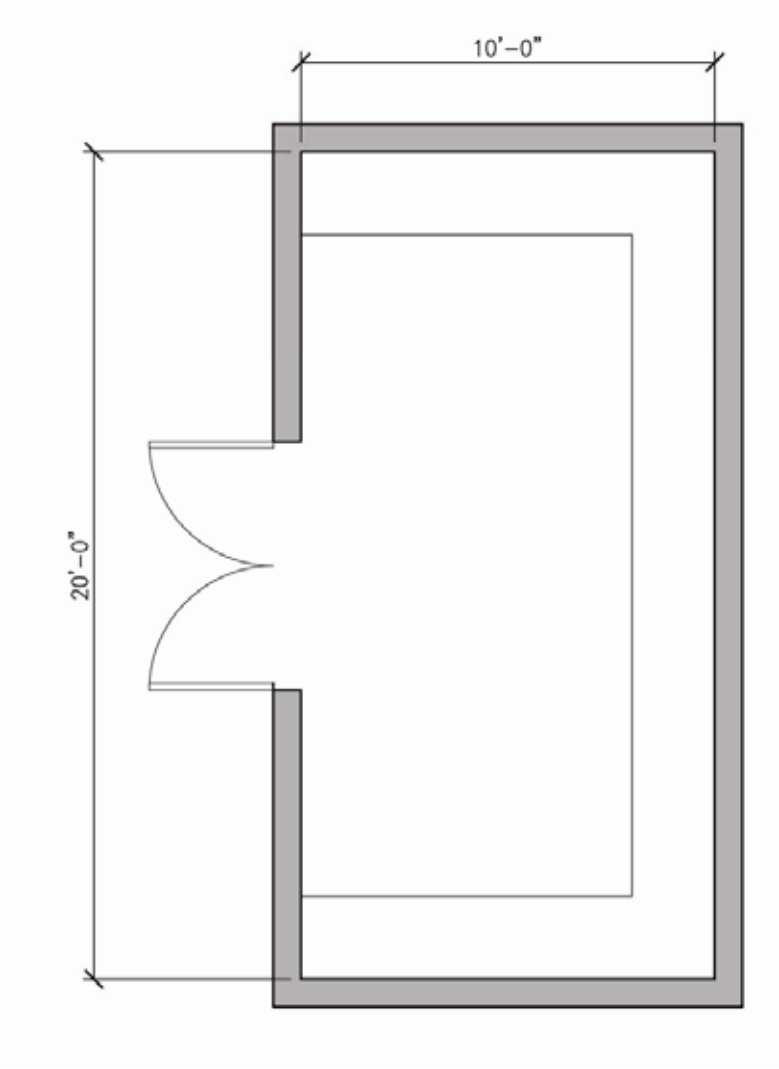
General Information	Use/Function	Storage for furnishings and equipment used in Mulit-purpose Room 2
	Assignable Area	200 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 20'-0"
	Adjacencies	Multi-purpose Room 2
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile or sealed concrete / rubber base
	Walls	Drywall or masonry
	Ceiling	Exposed structure
	Doors	Solid core wood, double door
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Shelving and storage cabinets, if built-in
	Movable Equipment	Shelving and storage cabinets, if not built-in, furnishings and equipment for use in Multi-purpose Room 2

No. 19

PROTOTYPE LAYOUT

MULTI-PURPOSE ROOM 2 STORAGE

SCALE: 1/4" = 1'-0"



No. 20

ROOM DATA — MULTI-PURPOSE ROOM 3

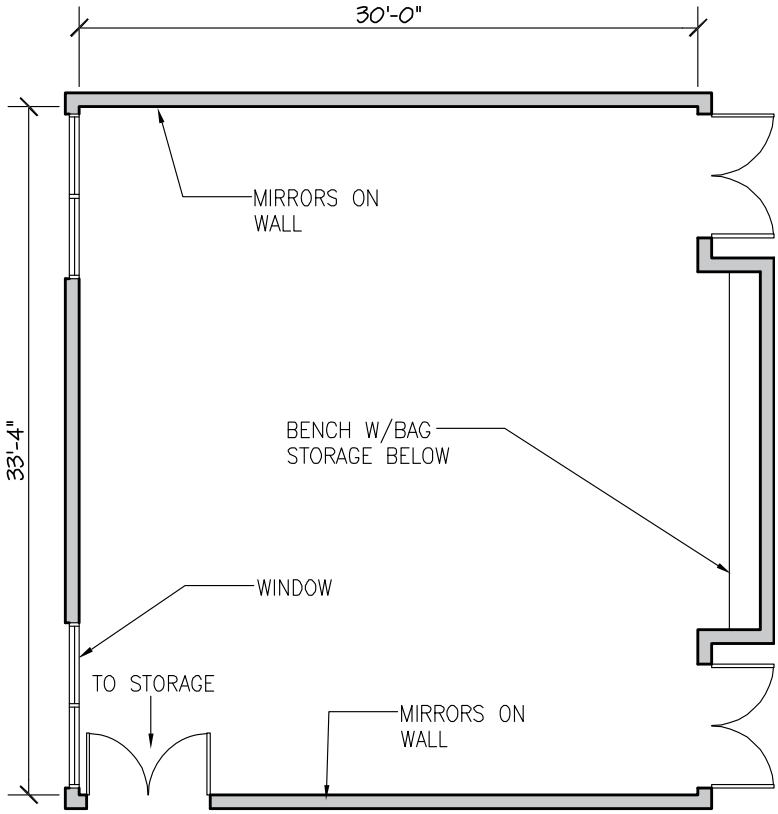
General Information	Use/Function	Space for group fitness activities, also small meetings – to be created by renovating the existing 2nd Floor Exercise Room
	Assignable Area	1,000 square feet
	Capacity	Per Code: 50 sf / occupant = *** occupants
	Key Dimensions	H: 12'-0" to 15'-0" W: 37'-0" L: 62'-0" Bench / bag storage area: 3'-0" x 25'-8"
	Adjacencies	Fitness Room 3 Storage, Fitness Room 1, Fitness Room 2
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Athletic resilient wood, 2nd grade maple, possibly a parquet pattern / ventilated rubber base
	Walls	Masonry or drywall, glass, mirrors on 2 walls – 12" min. above the floor
	Ceiling	Drywall soffit, acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Independent sound system. Design and treatment must address a high volume audio environment inside and not transferring the sound to the outside. Vibration criteria for the floor structure is important.
Engineering Systems	Lighting	Indirect, fluorescent, two levels, 60 fc / 40 fc, independently controlled
	Electrical	Convenience outlets at the walls and for a clock – coordinate the location of the outlets with the mirrors and for disabled access requirements
	Mechanical	Air conditioned, thermostat control, 10 changes per hour (average, 12 changes at peak periods – occupancy sensors). Ceiling fans if there is a ceiling height of a minimum of 12'-0".
	Plumbing	Drinking fountains with chilled water at the outside of the room.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless – OK to have data jacks / lines if the room is also used as a meeting room
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Clock, wall mirrors, window blinds for both the interior and exterior windows, built-in sound system and speakers, built-in bench with bag storage cubicles under it, hooks above bench for jackets, dance bar at one wall.
	Movable Equipment	Aerobic steps, individual folding mats, other group fitness equipment, floor covering

No. 20

PROTOTYPE LAYOUT

MULTI-PURPOSE ROOM 3 (GROUP FITNESS)

SCALE: 1/8”=1’-0”



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No. 21

ROOM DATA — MULTI PURPOSE ROOM 3 STORAGE

General Information	Use/Function	Storage for furnishings and equipment used in Multi-purpose Room 3
	Assignable Area	150 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 15'-0"
	Adjacencies	Multi-purpose Room 3
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile or sealed concrete / rubber base
	Walls	Drywall or masonry
	Ceiling	Exposed structure
	Doors	Solid core wood, double door
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Shelving and storage cabinets, if built-in
	Movable Equipment	Shelving and storage cabinets, if not built-in, furnishings and equipment for use in Multi-purpose Room 3

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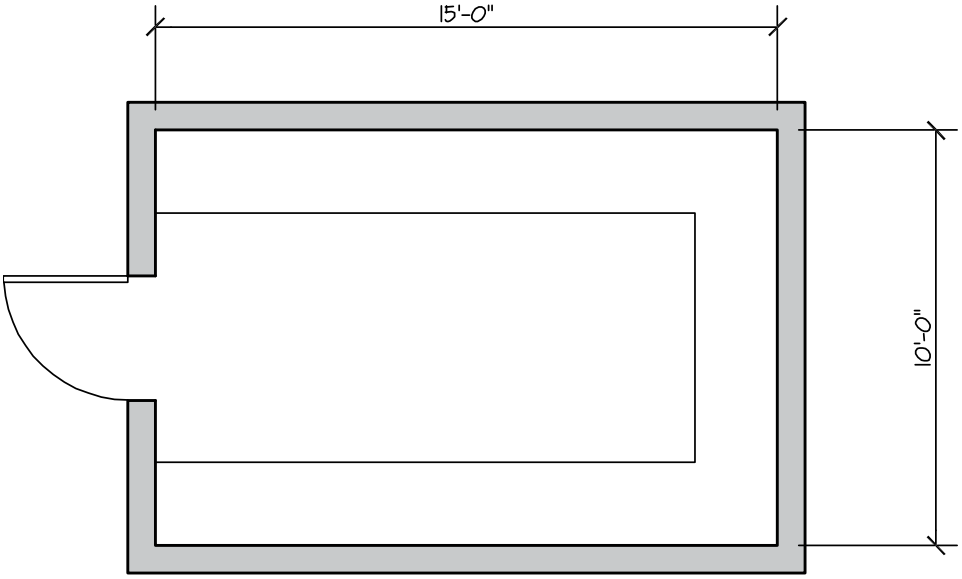
No. 21

PROTOTYPE LAYOUT

MULTI-PURPOSE ROOM 3 STORAGE

SCALE: 1/4" = 1'-0"



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No. 22

ROOM DATA — RACQUETBALL COURT 1

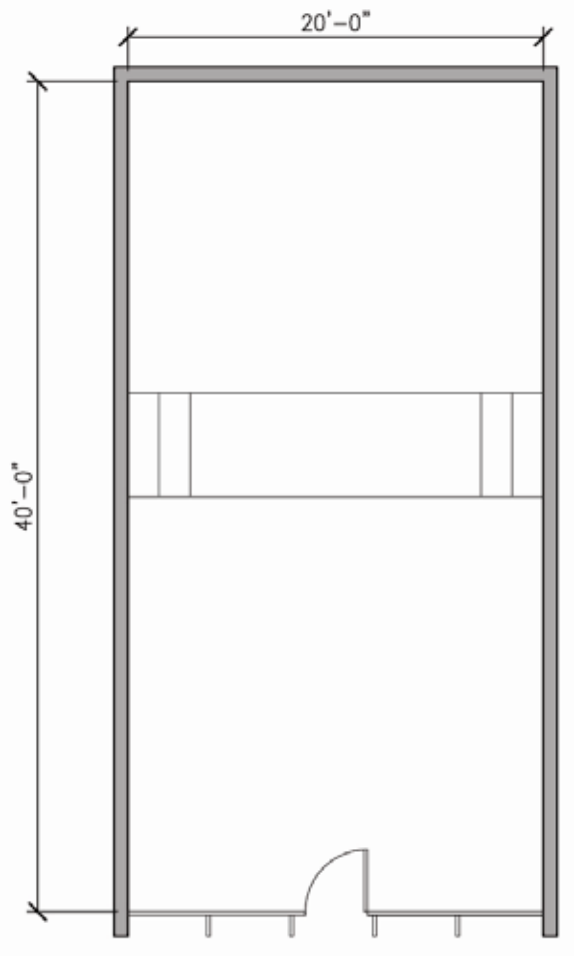
General Information	Use/Function	Space for Racquetball
	Assignable Area	800 square feet
	Capacity	Per Code: Negotiate an occupant load of 8 occupants versus 15 sf / occupant = 53 occupants
	Key Dimensions	H: 20'-0" W: 20'-0" L: 40'-0"
	Adjacencies	Racquetball Courts 2 - 6
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Resilient wood, 2nd grade maple
	Walls	Laminated panels at the front and side walls, fixed glass back wall
	Ceiling	Laminated panels
	Doors	Glass with recessed handles
	Natural Light	Glass back wall
	Acoustics	In the walls and above the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	H.I.D., 100 fc minimum
	Electrical	Convenience outlets at the walls of the adjacent circulation area
	Mechanical	Air conditioned, ceiling or wall registers at the rear of the Court
	Plumbing	Chilled water fountain and cuspidor located in the adjacent circulation area
	Fire Protection	Fire sprinklers and smoke detectors with flush covers, located in the back portion of the ceiling if possible
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	Sound/ PA system within courts for tournament play.
FFE	Fixed Equipment	Personal storage box in the rear of one of the side walls, wallyball wall inserts if used for wallyball
	Movable Equipment	None

No. 22

PROTOTYPE LAYOUT

RACQUETBALL COURT 1

SCALE: 1/8”



No. 23

ROOM DATA — RACQUETBALL COURT 2

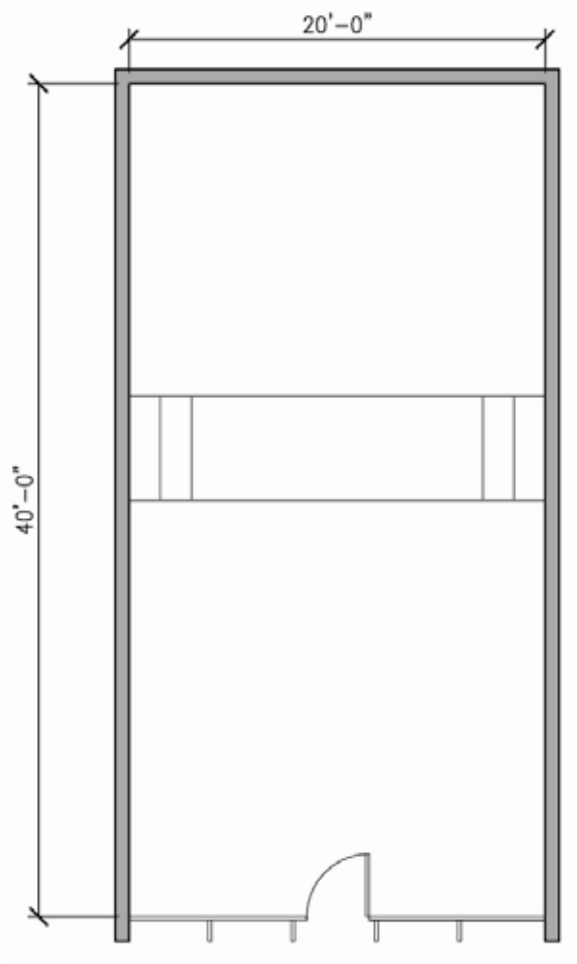
General Information	Use/Function	Space for Racquetball
	Assignable Area	800 square feet
	Capacity	Per Code: Negotiate an occupant load of 8 occupants versus 15 sf / occupant = 53 occupants
	Key Dimensions	H: 20'-0" W: 20'-0" L: 40'-0"
	Adjacencies	Racquetball Courts 1 and 3
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Resilient wood, 2nd grade maple
	Walls	Laminated panels at the front and side walls, fixed glass back wall
	Ceiling	Laminated panels
	Doors	Glass with recessed handles
	Natural Light	Glass back wall
	Acoustics	In the walls and above the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	H.I.D., 100 fc minimum
	Electrical	Convenience outlets at the walls of the adjacent circulation area
	Mechanical	Air conditioned, ceiling or wall registers at the rear of the Court
	Plumbing	Chilled water fountain and cuspidor located in the adjacent circulation area
	Fire Protection	Fire sprinklers and smoke detectors with flush covers, located in the back portion of the ceiling if possible
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	Sound/ PA system within courts for tournament play.
FFE	Fixed Equipment	Personal storage box in the rear of one of the side walls, wallyball wall inserts if used for wallyball
	Movable Equipment	None

No. 23

PROTOTYPE LAYOUT

RACQUETBALL COURT 2

SCALE: 1/8"



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No. 24

ROOM DATA — RACQUETBALL COURT 3

General Information	Use/Function	Space for Racquetball that can be converted into a space for Squash with a movable glass wall
	Assignable Area	840 square feet
	Capacity	Per Code: Negotiate an occupant load of 8 occupants versus 15 sf / occupant = 56 occupants
	Key Dimensions	H: 20'-0" W: 21'-0" L: 40'-0"
	Adjacencies	Racquetball Courts 2 and 3
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Resilient wood, 2nd grade maple
	Walls	Laminated panels at the front and side walls, movable and fixed glass back wall
	Ceiling	Laminated panels
	Doors	Glass with recessed handles
	Natural Light	Glass back wall
	Acoustics	In the walls and above the ceiling
	Special Requirements	Movable glass back wall that moves in 8'-0" for Squash Floor and wall striping for both Racquetball and for Squash
Engineering Systems	Lighting	H.I.D., 100 fc minimum
	Electrical	Convenience outlets at the walls of the adjacent circulation area
	Mechanical	Air conditioned, ceiling or wall registers at the rear of the Court
	Plumbing	Chilled water fountain and cuspidor located in the adjacent circulation area
	Fire Protection	Fire sprinklers and smoke detectors with flush covers, located in the back portion of the ceiling if possible
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	Sound/ PA system within courts for tournament play
FFE	Fixed Equipment	Personal storage box in the rear of one of the side walls
	Movable Equipment	Removable telltale at the bottom of the front wall for Squash

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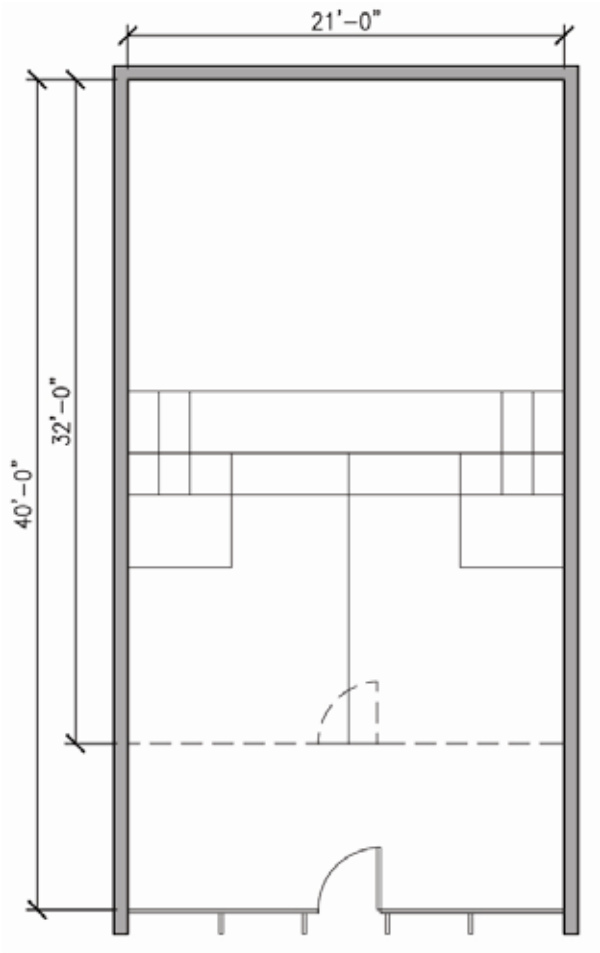
No. 24

PROTOTYPE LAYOUT

RACQUETBALL COURT 3

SCALE: 1/8”



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No. 25

ROOM DATA — ROCK CLIMBING WALL WITH SAFETY / LANDING AREA

General Information	Use/Function	Space for a synthetic structure climbing wall for general recreation and classes with a safety zone at the base of the wall. Needs to be in a visible, but secure area with a maximum available ceiling height. Space for the Rock Climbing Wall may be combined with the space for the Bouldering Wall.
	Assignable Area	750 square feet
	Capacity	Per Code: 50 sf / occupant = 15 occupants
	Key Dimensions	H: 25'-0" min. W: 15'-0" L: 50'-0"
	Adjacencies	Outdoor Recreation area
	Access	To be determined
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Synthetic cushioned flooring, tapered with greater thickness at the Climbing Wall (12") and thinner at the edge of the landing area (4" min.).
	Walls	Synthetic "real rock" type structure for the Climbing Wall
	Ceiling	Exposed structure or drywall above the Climbing Wall
	Doors	None
	Natural Light	Desired, but needs to be controlled so that it does not negatively affect the climbing that takes place on the Wall.
	Acoustics	None
	Special Requirements	Sufficient safe area (10' min.) around the climbing surface. Safety area can be separated from the adjacent floor surface by recessing the safe area, or being higher than the adjacent floor surface.
Engineering Systems	Lighting	Fluorescent, 75 fc, specialty lighting to be determined
	Electrical	Convenience outlets behind the wall or if there is a storage area as a part of the rear of the climbing structure
	Mechanical	Air conditioned. Heating and cooling for this high ceiling space will require special attention so that heating and cooling is evenly distributed throughout the space as much as possible.
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Rock climbing wall
	Movable Equipment	Climbing ropes, harnesses / webbing, helmets

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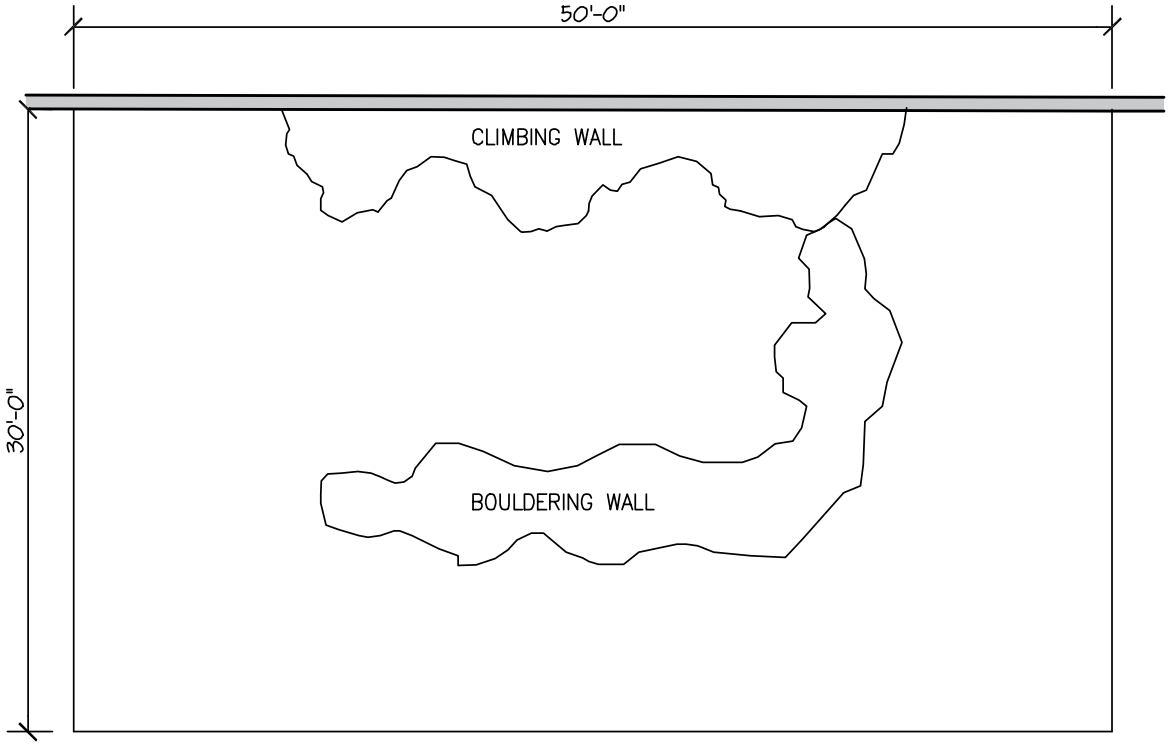
No. 25

PROTOTYPE LAYOUT — ROCK CLIMBING WALL WITH SAFETY LANDING AREA

SCALE: 1/8" = 1'-0"



NOTE: THIS LAYOUT COMBINES THE AREAS FOR BOTH THE ROCK CLIMBING WALL AND THE BOULDERING WALL AND REPRESENTS THE POSSIBLE SIZE OF THE AREA FOR THE 2 WALLS. THE ACTUAL LAYOUT OF THE WALLS WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT. THIS LAYOUT SHOWS AN ALTERNATE LAYOUT WITH THE ROCK CLIMBING WALL AND THE BOULDERING WALL CONNECTED TO EACH OTHER.

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No. 26

ROOM DATA — BOULDERING WALL WITH SAFETY LANDING AREA

General Information	Use/Function	Space for a synthetic structure bouldering wall for general recreation and classes with a safety zone at the base of the wall. Needs to be in a visible, but secure area with a maximum available ceiling height. Space for the Bouldering Wall may be combined with the space for the Rock Climbing Wall.
	Assignable Area	750 square feet
	Capacity	Per Code: 50 sf / occupant = 15 occupants
	Key Dimensions	H: 25'-0" min. W: 15'-0" L: 50'-0"
	Adjacencies	Outdoor Recreation area
	Access	To be determined
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Synthetic cushioned flooring, tapered with greater thickness at the Bouldering Wall (12") and thinner at the edge of the landing area (4" min.).
	Walls	Synthetic "real rock" type structure for the Bouldering Wall
	Ceiling	Exposed structure or drywall above the Bouldering Wall
	Doors	None
	Natural Light	Desired, but needs to be controlled so that it does not negatively affect the bouldering that takes place on the Wall.
	Acoustics	None
	Special Requirements	Sufficient safe area (10' min.) around the bouldering surface. Safety area can be separated from the adjacent floor surface by recessing the safe area, or being higher than the adjacent floor surface.
Engineering Systems	Lighting	Fluorescent, 75 fc
	Electrical	Convenience outlets behind the wall or if there is a storage area as a part of the rear of the climbing structure
	Mechanical	Air conditioned. Heating and cooling for this high ceiling space will require special attention so that heating and cooling is evenly distributed throughout the space as much as possible.
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Bouldering wall
	Movable Equipment	Ropes, harnesses / webbing, helmets if required for bouldering.

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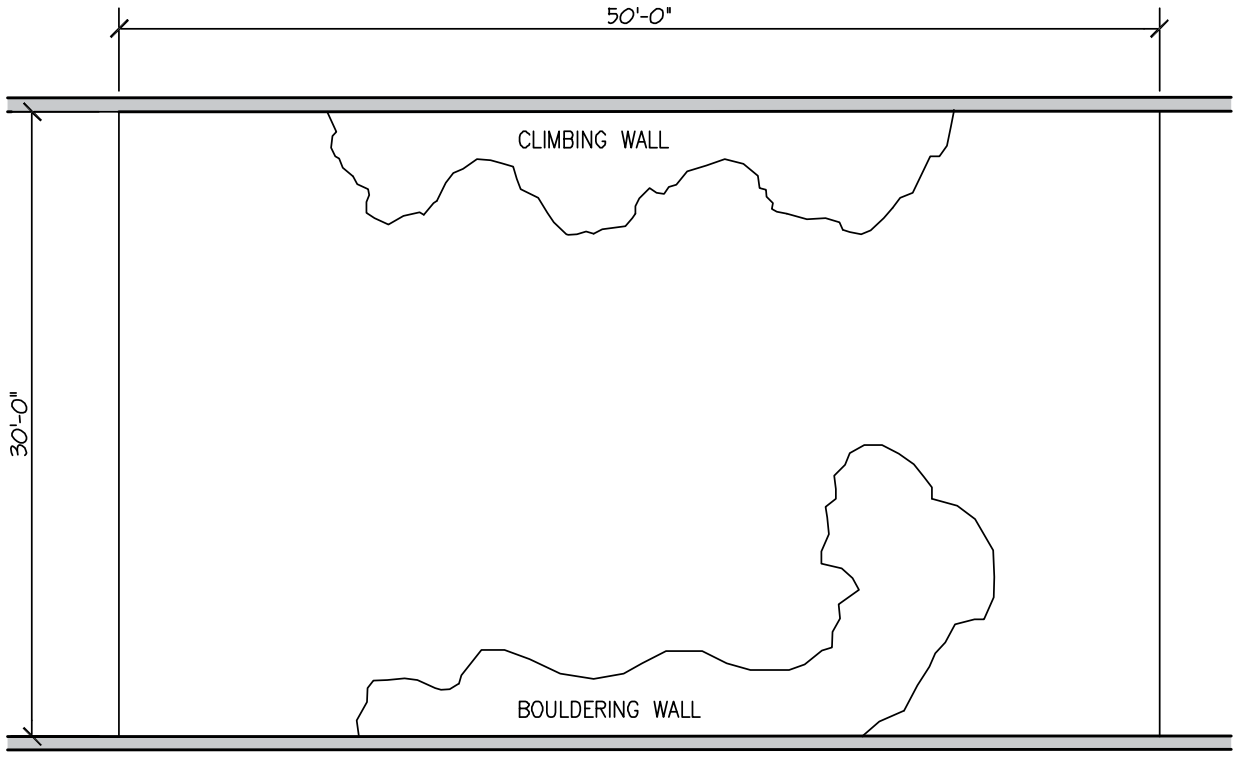
No. 26

PROTOTYPE LAYOUT — BOULDERING WALL WITH SAFETY LANDING AREA

SCALE: 1/8" = 1'-0"



NOTE: THIS LAYOUT COMBINES THE AREAS FOR BOTH THE ROCK CLIMBING WALL AND THE BOULDERING WALL AND REPRESENTS THE POSSIBLE SIZE OF THE AREA FOR THE 2 WALLS. THE ACTUAL LAYOUT OF THE WALLS WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT. THIS LAYOUT SHOWS AN ALTERNATE LAYOUT WITH THE ROCK CLIMBING WALL AND THE BOULDERING WALL SEPARATE FROM EACH OTHER.

No. 27

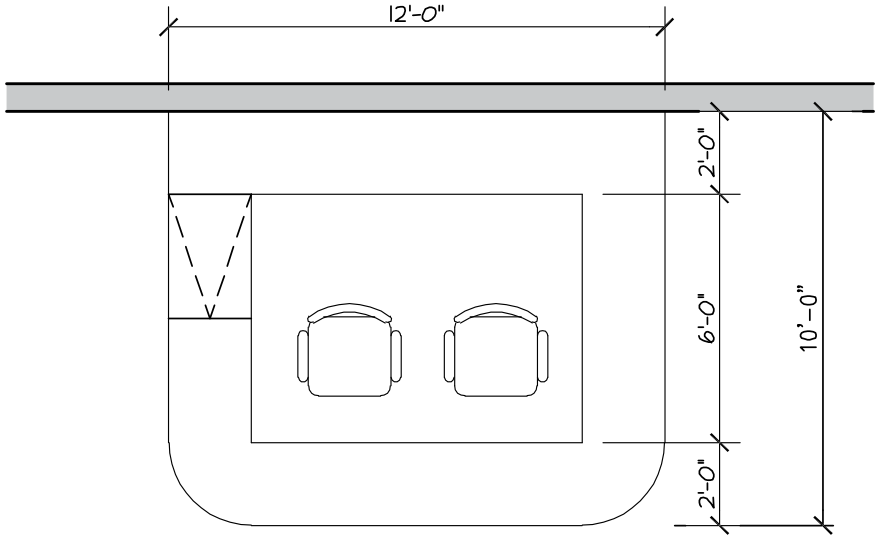
ROOM DATA — CLIMBING / BOULDERING WALLS REGISTRATION COUNTER

General Information	Use/Function	Registration, control and information counter for the Rock Climbing Wall and the Bouldering Wall
	Assignable Area	120 square feet
	Capacity	Per Code: 100 sf / occupant =1.2 occupants
	Key Dimensions	H: 12'-0" min. W: 10'- 0" L: 12'-0"
	Adjacencies	Rock Climbing Wall, Bouldering Wall
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet or vinyl composition tile / rubber base
	Walls	Masonry or drywall on adjacent walls
	Ceiling	Exposed structure or drywall
	Doors	None, except counter flip-top with low door for access behind counter
	Natural Light	Desired
	Acoustics	In the walls and at the ceiling
	Special Requirements	Main registration, control and information counter for the Climbing and Bouldering Walls.. Registration for use of the Climbing and Bouldering Walls to take place at this counter Cash transactions may take place at this counter (drop safe may be required) Space at counter for telephone and computer
Engineering Systems	Lighting	Fluorescent, 60 fc, or H.I.D., or decorative lighting
	Electrical	Convenience outlets at the Registration Counter
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Registration counter (dual height for standing transactions and for disabled access)
	Movable Equipment	2 counter chairs, computer

No. 27

PROTOTYPE LAYOUT — CLIMBING / BOULDERING WALL REGISTRATION COUNTER

SCALE: 1/8" = 1'-0"



No. 28

ROOM DATA — ROCK CLIMBING & BOULDERING STORAGE

General Information	Use/Function	Storage for furnishings and equipment used at the Rock Climbing and Bouldering Walls
	Assignable Area	200 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 20'-0"
	Adjacencies	Rock Climbing and Bouldering Walls
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile or sealed concrete / rubber base
	Walls	Drywall or masonry
	Ceiling	Exposed structure
	Doors	Solid core wood, double door
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls, 110 and 220 V
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Shelving and storage cabinets, if built-in
	Movable Equipment	Shelving and storage cabinets, if not built-in, furnishings and equipment for Rock Climbing and Bouldering Walls

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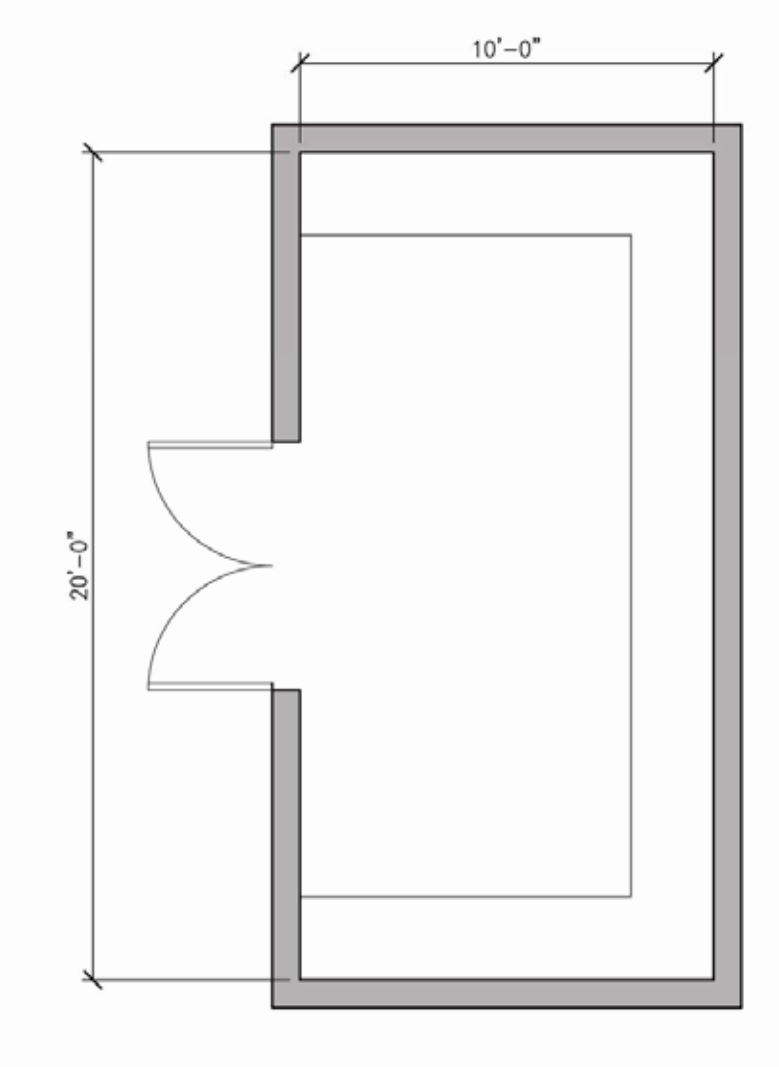
No. 28

PROTOTYPE LAYOUT — ROCK CLIMBING & BOULDERING STORAGE

SCALE: 1/4" = 1'-0"



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No. 29

ROOM DATA — CLASSROOM

General Information	Use/Function	Classroom for the Student Life Center
	Assignable Area	800 square feet
	Capacity	Per Code: 20 sf / occupant = 40 occupants maximum (room to be used for classes up to 30)
	Key Dimensions	H: 9'-0" min. W: 27'-0" L: 29'-6"
	Adjacencies	Located so that it is accessible to a large part of the Student Life Center
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall
	Ceiling	Drywall and acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 70 fc / 50 fc (50 fc average), independently controlled
	Electrical	Convenience outlets at the walls and at counters
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	PA system connected to the front counter
FFE	Fixed Equipment	Window blinds, retractable projection screen, marker boards
	Movable Equipment	Ceiling mounted projector, video/disk player, classroom desks or tables, classroom chairs

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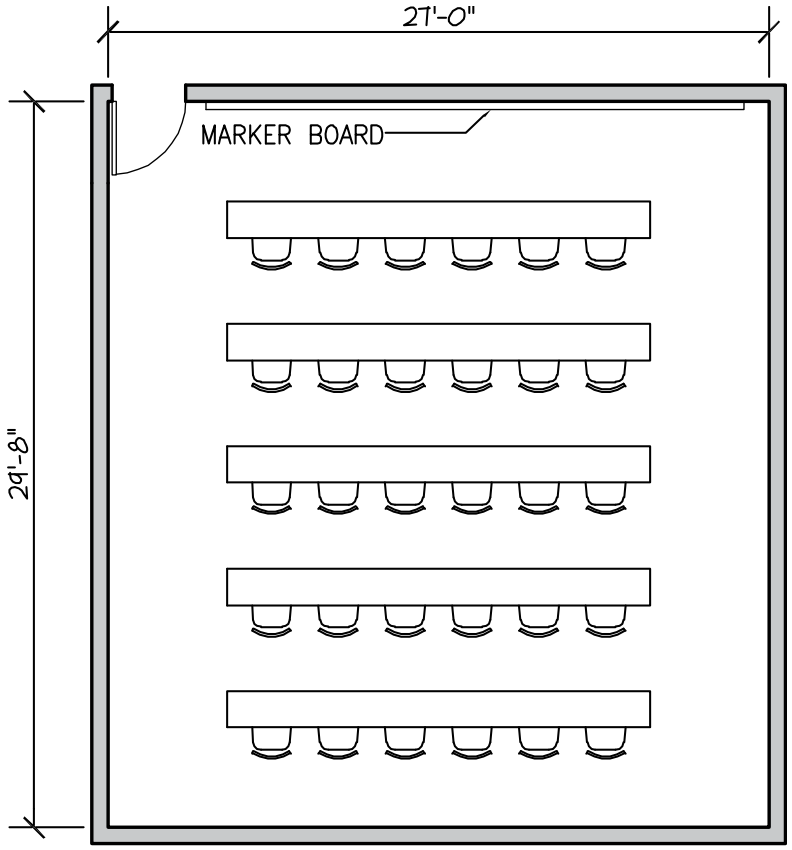
No. 29

PROTOTYPE LAYOUT — CLASSROOM

SCALE: 1/8" = 1'-0"



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No. 30

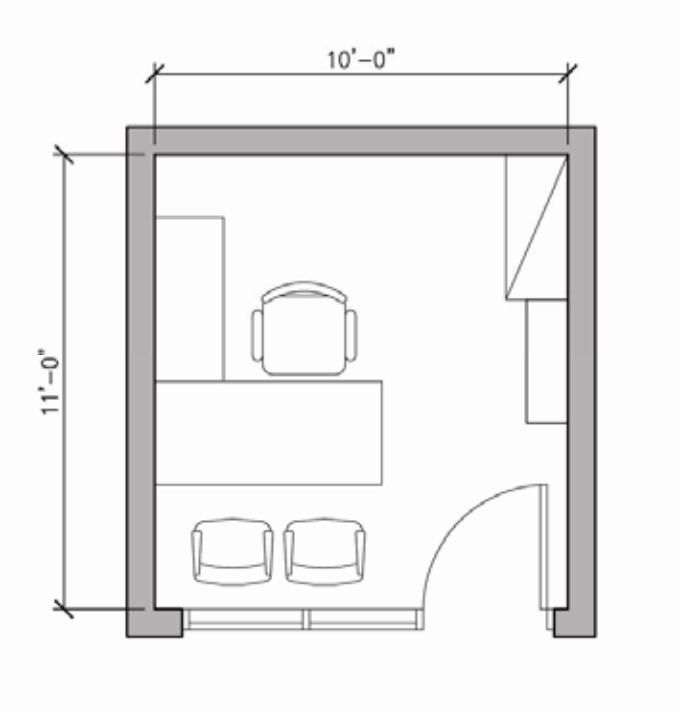
ROOM DATA — ASSOCIATE DIRECTOR'S OFFICE

General Information	Use/Function	Office space for the Associate Director (Outdoor Recreation)
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Outdoor Recreation spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet or vinyl composition tile / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 30

PROTOTYPE LAYOUT — ASSOCIATE DIRECTOR'S OFFICE

SCALE: 1/4" = 1'-0"



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No. 31

ROOM DATA — STAFF OFFICE

General Information	Use/Function	Office for Outdoor Recreation Staff
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Outdoor Recreation spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet or vinyl composition tile / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

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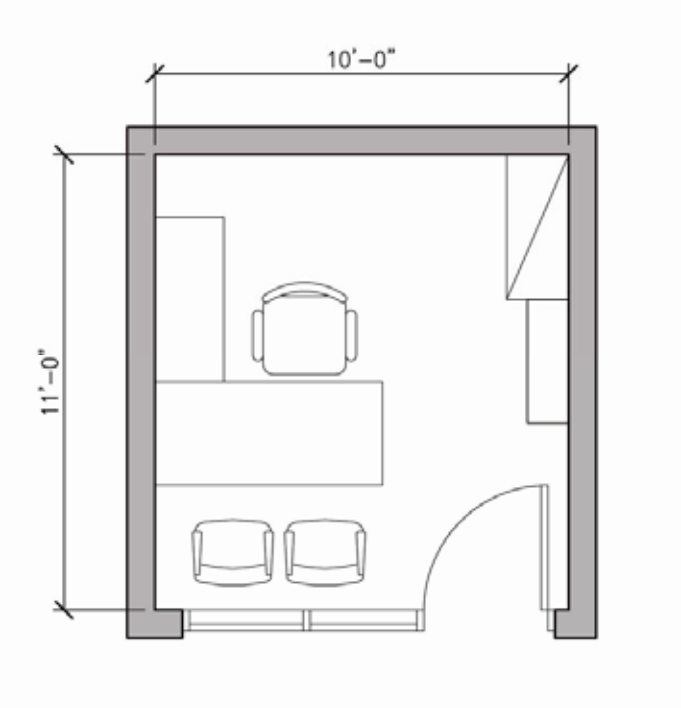
No. 31

PROTOTYPE LAYOUT — STAFF OFFICE

SCALE: 1/4" = 1'-0"



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No. 32

ROOM DATA — OFFICE SUPPORT

General Information	Use/Function	Office support for the Outdoor recreation Area
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant =1.1 occupants
	Key Dimensions	H: 9'-0" W: 12'-0" L: 10'-0"
	Adjacencies	Outdoor Recreation Offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Administration Storage accessible from this Work Room.
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls and at the counter for equipment and appliances
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone
	Data	Data connection to copier, if required
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds, counter, shelving, mailboxes / cubbies (if this is the location for these), marker board
	Movable Equipment	Copy machine, fax machine, computer, printer.. Timeclock (if this is the location for this)

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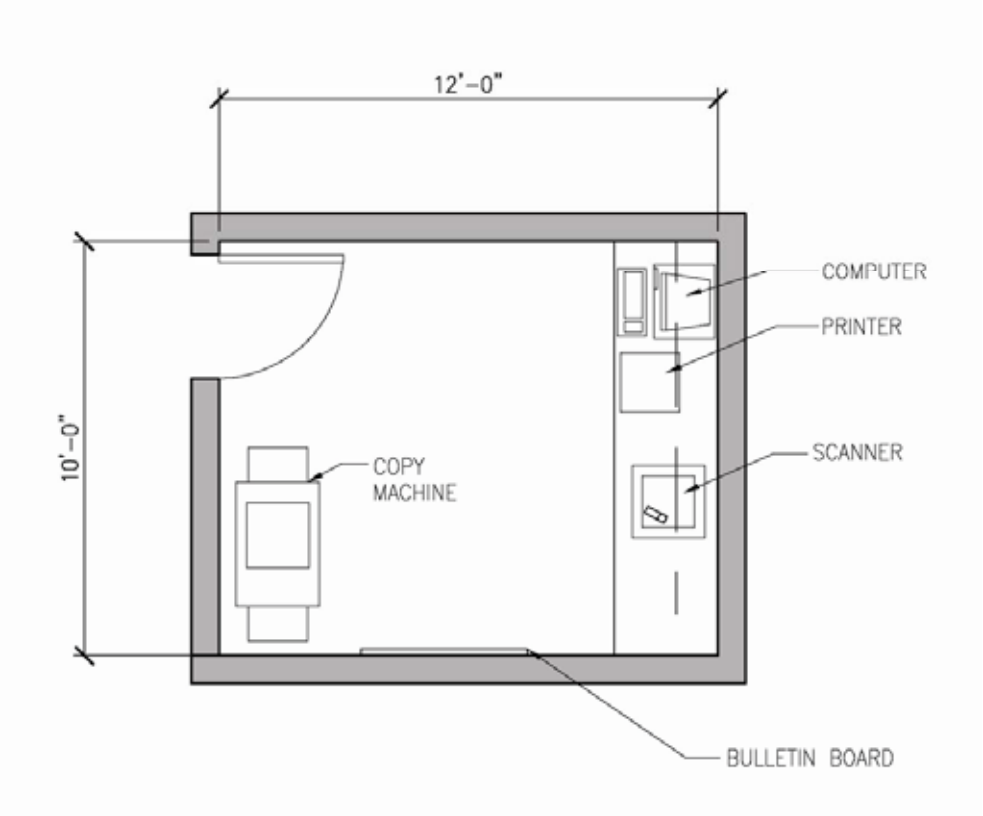
No. 32

PROTOTYPE LAYOUT — OFFICE SUPPORT

SCALE: 1/4" = 1'-0"



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No. 33

ROOM DATA — LIBRARY / MEETING-WORK ROOM / STUDENT STAFF SPACE

General Information	Use/Function	Resource Library and Meeting / Work Room for the Outdoor Recreation area. Space for Student Staff to use as an Office Area.
	Assignable Area	400 square feet
	Capacity	Per Code: 100 sf / occupant = 4 occupants
	Key Dimensions	H: 9'-0" min. W: 20'-0" L: 20'-0"
	Adjacencies	Other Outdoor Recreation spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet or vinyl composition tile / rubber base
	Walls	Masonry or drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls and at the counter for equipment and appliances
	Mechanical	Air conditioned
	Plumbing	Hot and cold water for countertop sink with garbage disposal
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephones
	Data	Internet connections / wireless
	TV	Cable outlet
	Other Technology	PA connected to Student Life Center control counter
FFE	Fixed Equipment	Window blinds, retractable projection screen, marker and bulletin boards, counter with overhead cabinets, bookcases, work counter if built-in
	Movable Equipment	Ceiling mounted projector, video/disk player Conference table (2 modules) 10 conference chairs 2 desks if not built-in, 2 desk chairs, 2 – 3 computers, printer Under counter refrigerator, microwave, coffee servers, fax machine, scanner, postal machine, scale

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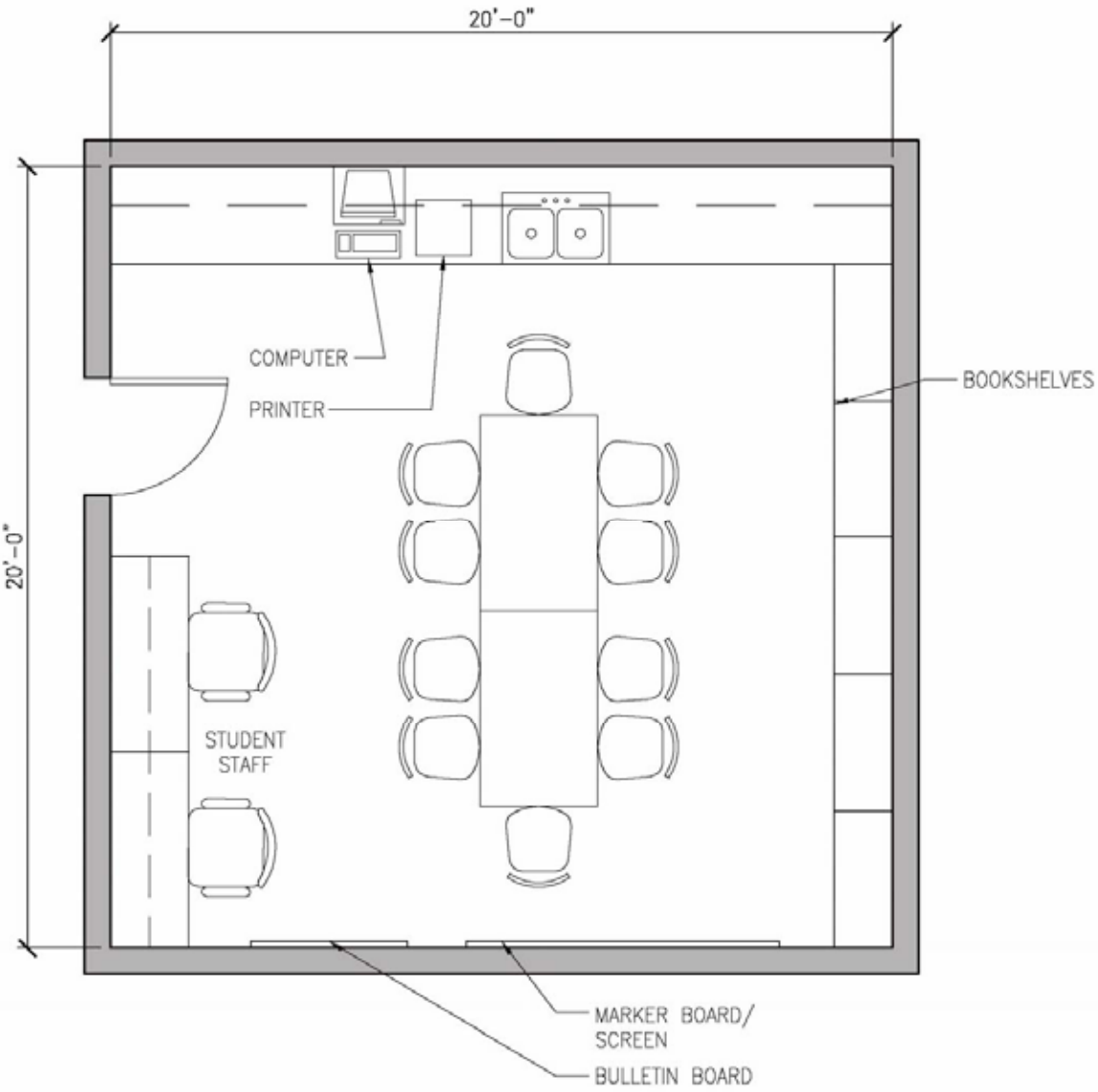
No. 33

PROTOTYPE LAYOUT

LIBRARY / MEETING-WORK ROOM / STUDENT STAFF SPACES

SCALE: 1/4" = 1'-0"



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No. 34

ROOM DATA — ENTRY/ EQUIPMENT DISPLAY & RENTAL

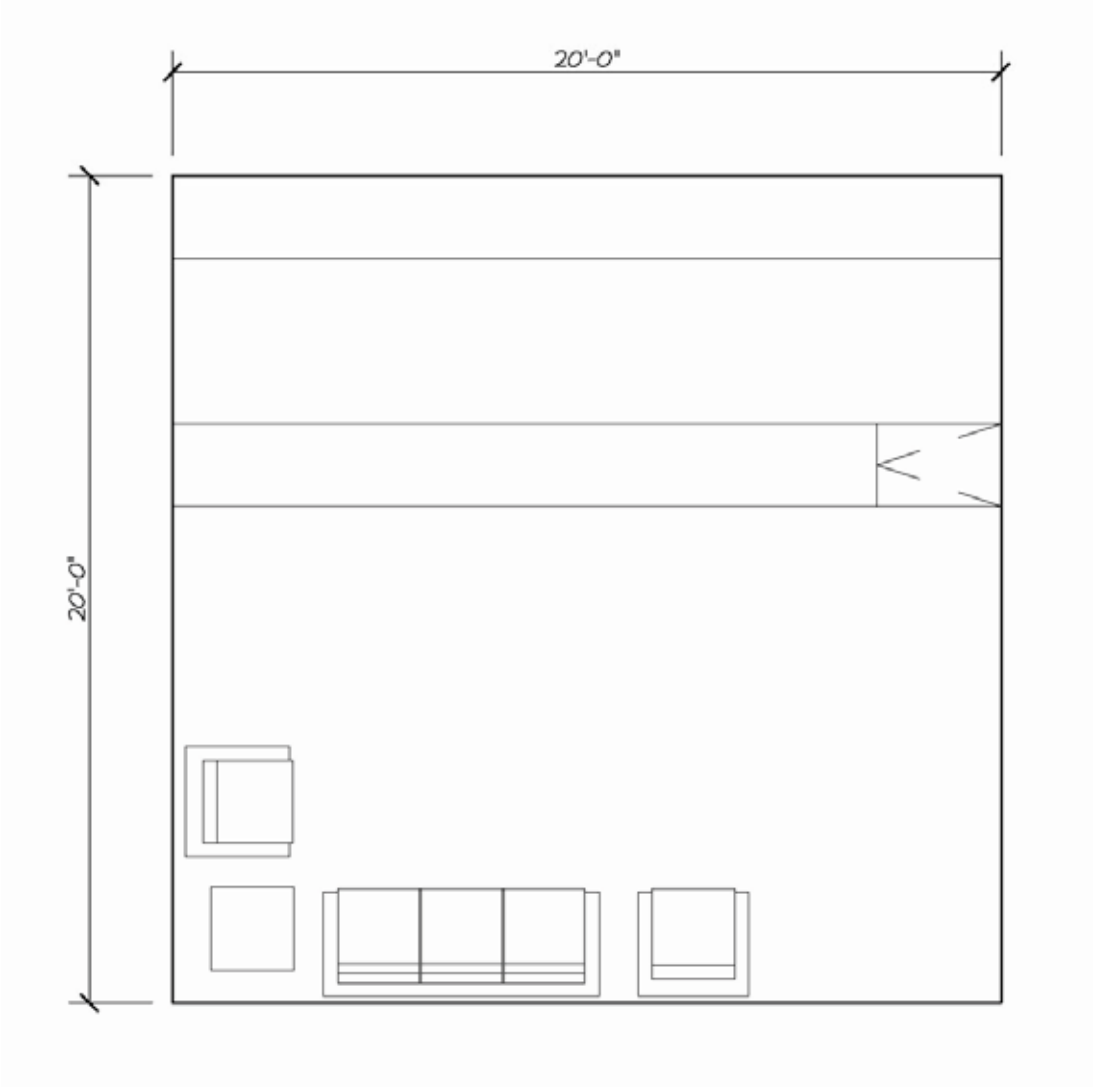
General Information	Use/Function	Entry lobby and space for display and renting of recreation equipment for the Outdoor Recreation area
	Assignable Area	400 square feet
	Capacity	Per Code: 15 sf / occupant = 26.67 occupants
	Key Dimensions	H: 12'-0" W: 20'-0" L: 20'-0"
	Adjacencies	Other Outdoor Recreation spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Indoor / outdoor carpet / rubber base
	Walls	Masonry or drywall (at the front counter area)
	Ceiling	Acoustical tile in front counter
	Doors	Solid core wood from inside of the Student Life Center, hollow metal and metal roll-up counter door to the outside of the building
	Natural Light	Optional
	Acoustics	In the walls and at the ceiling at the front counter area
	Special Requirements	Counter for renting and display of recreation equipment with wall / cabinets to display equipment in the rear of the sales area. Storage area for equipment behind the front counter area. ID card reader access, charge card transactions required
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenient outlets at walls and any counters, may require both 110 and 220 V
	Mechanical	Air conditioned
	Plumbing	To be determined
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on doors to the outside of the building; security cameras.
Technology	Voice	Telephone
	Data	Internet / wireless. Data may be required for cash register at front counter
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Display counters, cabinets, and shelves, storage cabinets, bulletin boards
	Movable Equipment	Storage shelves and cabinets if not built-in, cash register, drop safe, couches, chairs or stools.

CANNONDESIGN | ARCHITECTURAL nexus

No. 34

PROTOTYPE LAYOUT — ENTRY/ EQUIPMENT DISPLAY & RENTAL

SCALE: 1/4" = 1'-0"



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE EQUIPMENT DISPLAY / STORAGE AREA. THE ACTUAL LAYOUT WILL EVOLVE DURING THE PROGRAMMING PHASE WITH INPUT FROM THE OUTDOOR RECREATION STAFF.

No. 35

ROOM DATA — EQUIPMENT STORAGE/ MAINTENANCE AREA

General Information	Use/Function	Space for the main functions of the Outdoor Recreation Program; renting of recreation equipment, maintenance and cleaning area, bike storage and repair area, and storage space.
	Assignable Area	4,000 square feet
	Capacity	Per Code: 300 sf / occupant = 13.33 occupants
	Key Dimensions	H: 15'-0" minimum, but as tall as possible to allow for tall shelving and high storage in the Storage Area W: 50'-0" L: 80'-0"
	Adjacencies	Other Outdoor Recreation spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base at front counter area Sealed concrete / no base at storage and maintenance area
	Walls	Masonry or drywall (at the front counter area)
	Ceiling	Acoustical tile in front counter area, exposed structure in Storage area
	Doors	Solid core wood from inside of the Student Life Center, hollow metal and metal roll-up counter door to the outside of the building
	Natural Light	Optional
	Acoustics	In the walls and at the ceiling at the front counter area
	Special Requirements	Ventilation and cooling capabilities at the Laundry area, isolated concrete base for the washer and dryer, may want to insulate for sound and vibration. To be determined.
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Multiple convenience outlets at walls and any counters, may require both 110 and 220 V
	Mechanical	Air conditioned, exhaust and dryer vent to the exterior of the building
	Plumbing	Hot and cold water for laundry sink and washer, laundry sink, hose bibs throughout the room, floor drains throughout the room, commercial stainless steel sink with garbage disposal.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on doors to the outside of the building; security cameras.
Technology	Voice	Telephone
	Data	Internet / wireless. Data may be required for cash register at front counter
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Cabinets, and shelves, storage cabinets, bulletin boards; 1 heavy-duty commercial washer (60 lb. capacity min.), and 1 commercial dryer (75 lb. capacity min.), countertop for folding
	Movable Equipment	Storage shelves and cabinets if not built-in,

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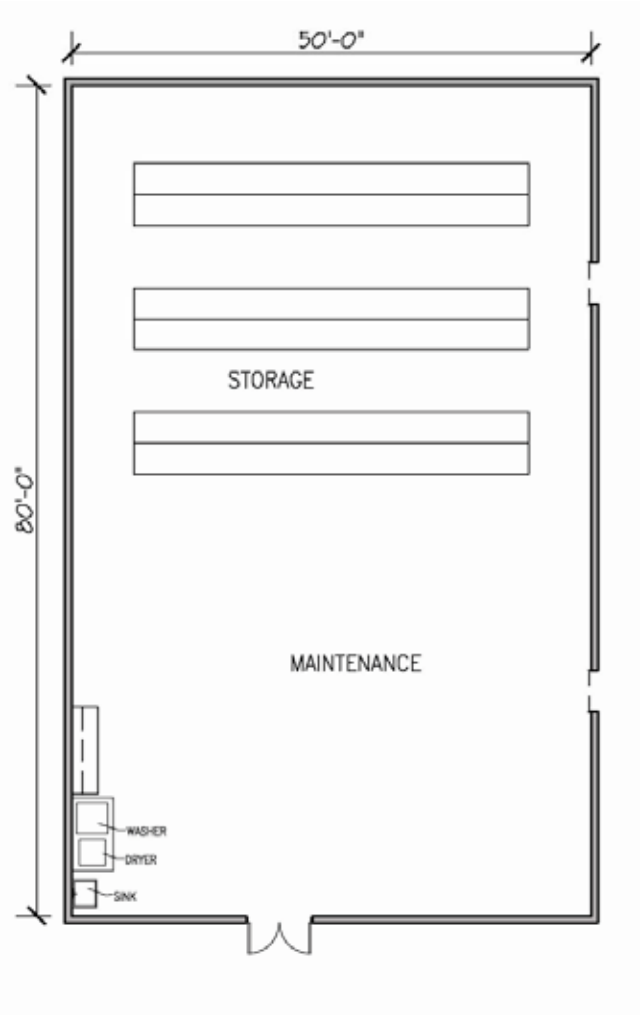
No. 35

PROTOTYPE LAYOUT — EQUIPMENT STORAGE / MAINTENANCE AREA

SCALE: 1/16" = 1'-0"



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE MAINTENANCE AREA. THE ACTUAL LAYOUT WILL EVOLVE DURING THE PROGRAMMING PHASE WITH INPUT FROM THE OUTDOOR RECREATION STAFF.

CANNONDESIGN | ARCHITECTURAL nexus

No. 36

ROOM DATA — TOILET / CHANGING ROOM

General Information	Use/Function	Toilet / Changing Room for the Outdoor Recreation area
	Assignable Area	80 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 8'-0" L: 10'-0"
	Adjacencies	Other Outdoor Recreation spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Hollow metal, epoxy paint finish
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Water closet, lavatory sink
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 10 changes per hour (average)
	Plumbing	Hot and cold water, wall hung water closet, counter-mounted lavatory sink, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Toilet accessories (toilet paper holder, seat cover dispenser, trash receptacle, feminine napkin dispenser/disposal, soap dispenser, paper towel dispenser or a hand dryer), lavatory counter with mirror
	Movable Equipment	None

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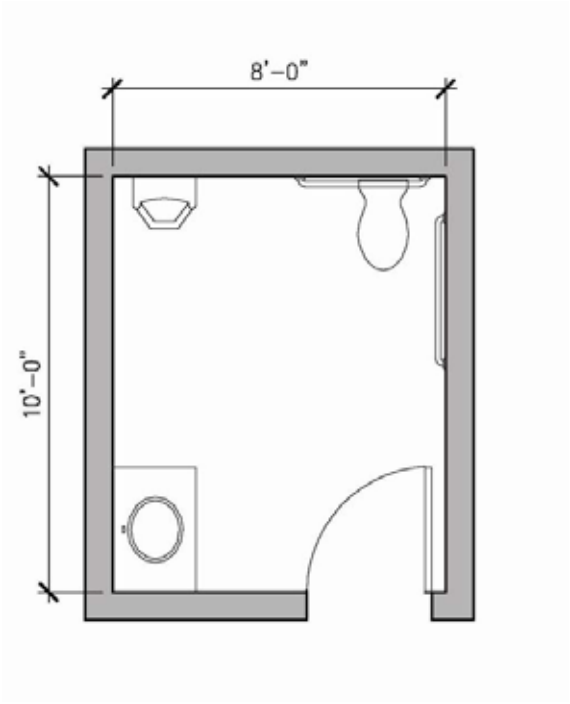
No. 36

PROTOTYPE LAYOUT

TOILET / CHANGING ROOM

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 37

ROOM DATA — DIRECTOR'S OFFICE

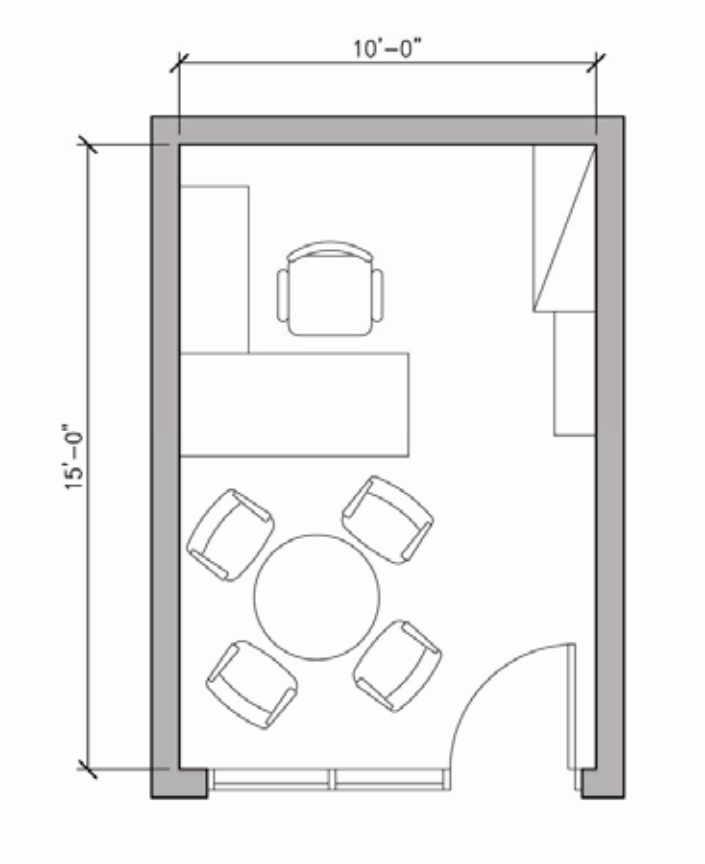
General Information	Use/Function	Office space for the Recreation Director
	Assignable Area	150 square feet
	Capacity	Per Code: 100 sf / occupant = 1.5 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 15'-0"
	Adjacencies	Other Administration area offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Space for small conference table
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 4 guest chairs, lateral file cabinet, bookcase, computer, printer, small conference table

No. 37

PROTOTYPE LAYOUT

DIRECTOR'S OFFICE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 38

ROOM DATA — STAFF OFFICE 1

General Information	Use/Function	Office space for the Recreation staff
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Administration area offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

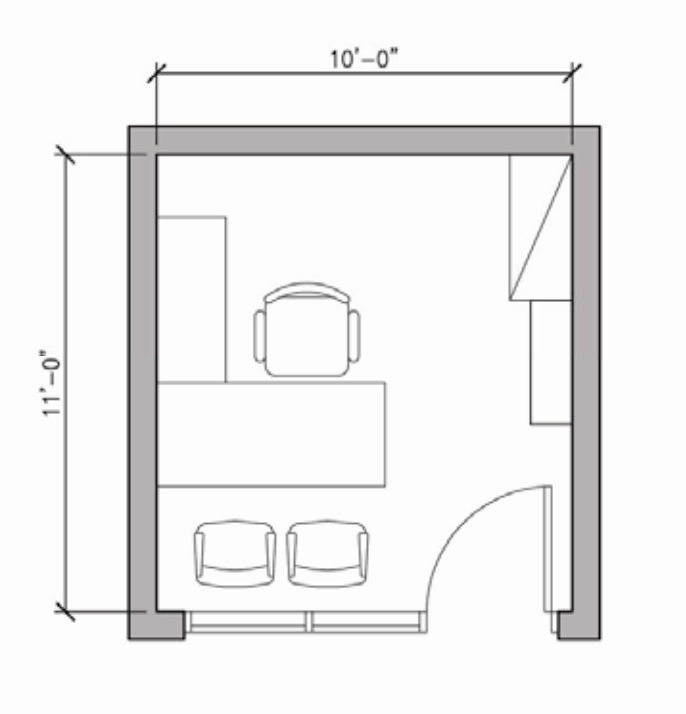
CANNONDESIGN | ARCHITECTURAL nexus

No. 38

PROTOTYPE LAYOUT

STAFF OFFICE 1

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 39

ROOM DATA — STAFF OFFICE 2

General Information	Use/Function	Office space for the Recreation staff
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Administration area offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

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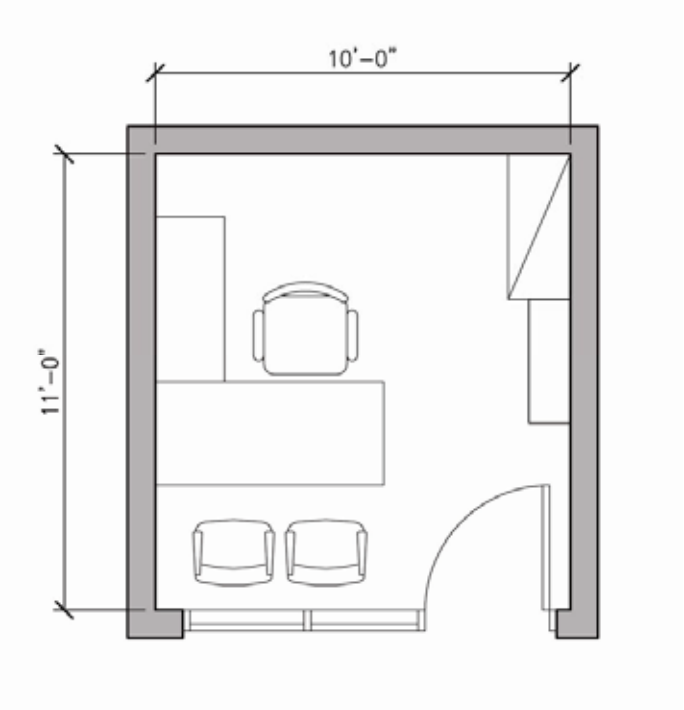
No. 39

PROTOTYPE LAYOUT

STAFF OFFICE 2

SCALE: 1/4" = 1'-0"



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No. 40

ROOM DATA — STAFF OFFICE 3

General Information	Use/Function	Office space for the Recreation staff
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Administration area offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

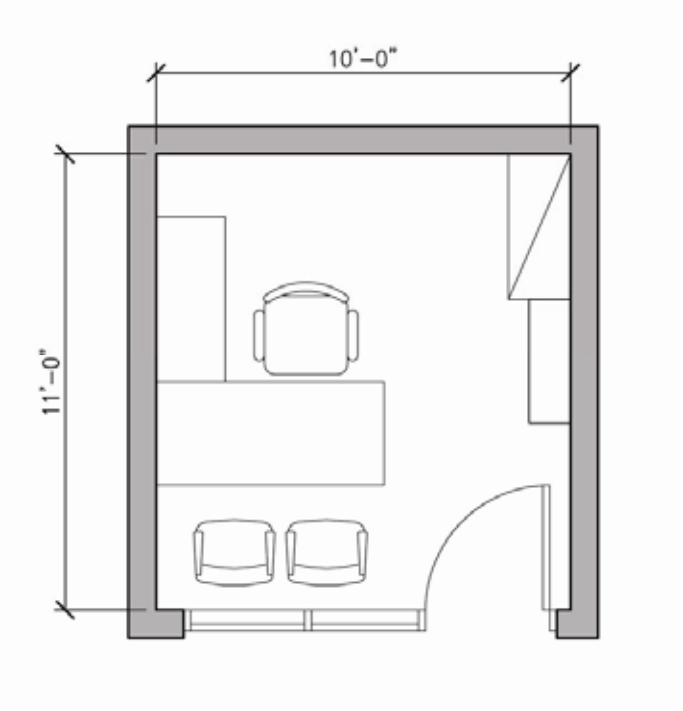
CANNONDESIGN | ARCHITECTURAL nexus

No. 40

PROTOTYPE LAYOUT

STAFF OFFICE 3

SCALE: 1/4" = 1'-0"



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No. 41

ROOM DATA — STAFF OFFICE 4 (BUSINESS MANAGER)

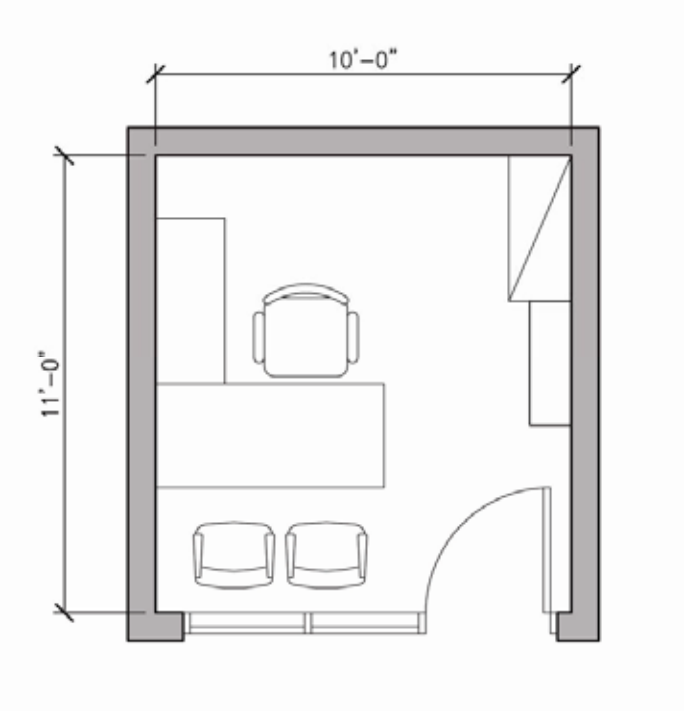
General Information	Use/Function	Office space for the Business Manager
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Administration area offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 41

PROTOTYPE LAYOUT

STAFF OFFICE 4-(BUSINESS MANAGER)

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 42

ROOM DATA — ADMINISTRATIVE ASSISTANT

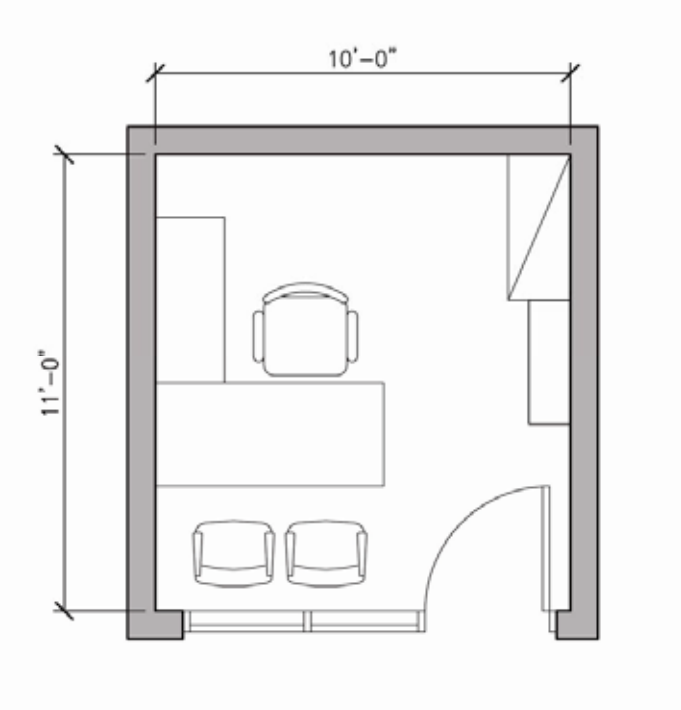
General Information	Use/Function	Office space for the Administrative Assistant for the Administration suite
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Administration area offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

CANNONDESIGN | ARCHITECTURAL nexus

No. 42

PROTOTYPE LAYOUT — ADMINISTRATIVE ASSISTANT

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 43

ROOM DATA — ADMINISTRATION WORK ROOM / STAFF ROOM

General Information	Use/Function	Work Room and Staff Room for the Administration area
	Assignable Area	240 square feet
	Capacity	Per Code: 100 sf / occupant =2.4 occupants
	Key Dimensions	H: 9'-0" W: 12'-0" L: 20'-0"
	Adjacencies	Administration area Offices, Administration Storage
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Administration Storage accessible from this Work Room.
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls and at the counter for equipment and appliances
	Mechanical	Air conditioned
	Plumbing	Hot and cold water for countertop sink with garbage disposal
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone
	Data	Data connection to copier, if required
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds, counter, shelving, mailboxes / cubbies (if this is the location for these), marker board
	Movable Equipment	Under counter refrigerator, microwave, water cooler, copy machine, fax machine, postal machine, scale, coffee maker, computer, printer, poster machine, laminating machine, table, 4 chairs. Timeclock (if this is the location for this)

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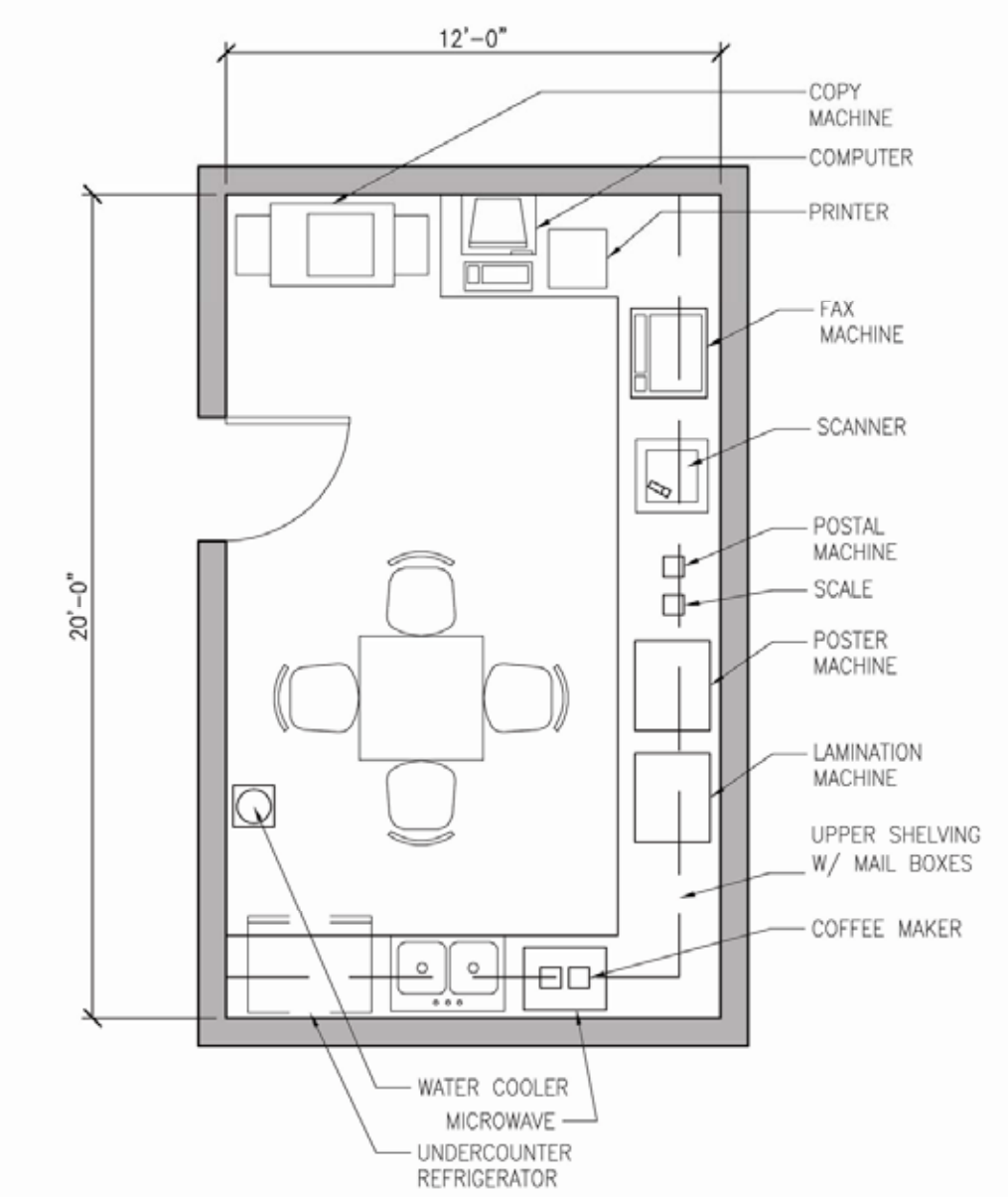
No. 43

PROTOTYPE LAYOUT — ADMINISTRATION WORK ROOM / STAFF ROOM

SCALE: 1/4"



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No. 44

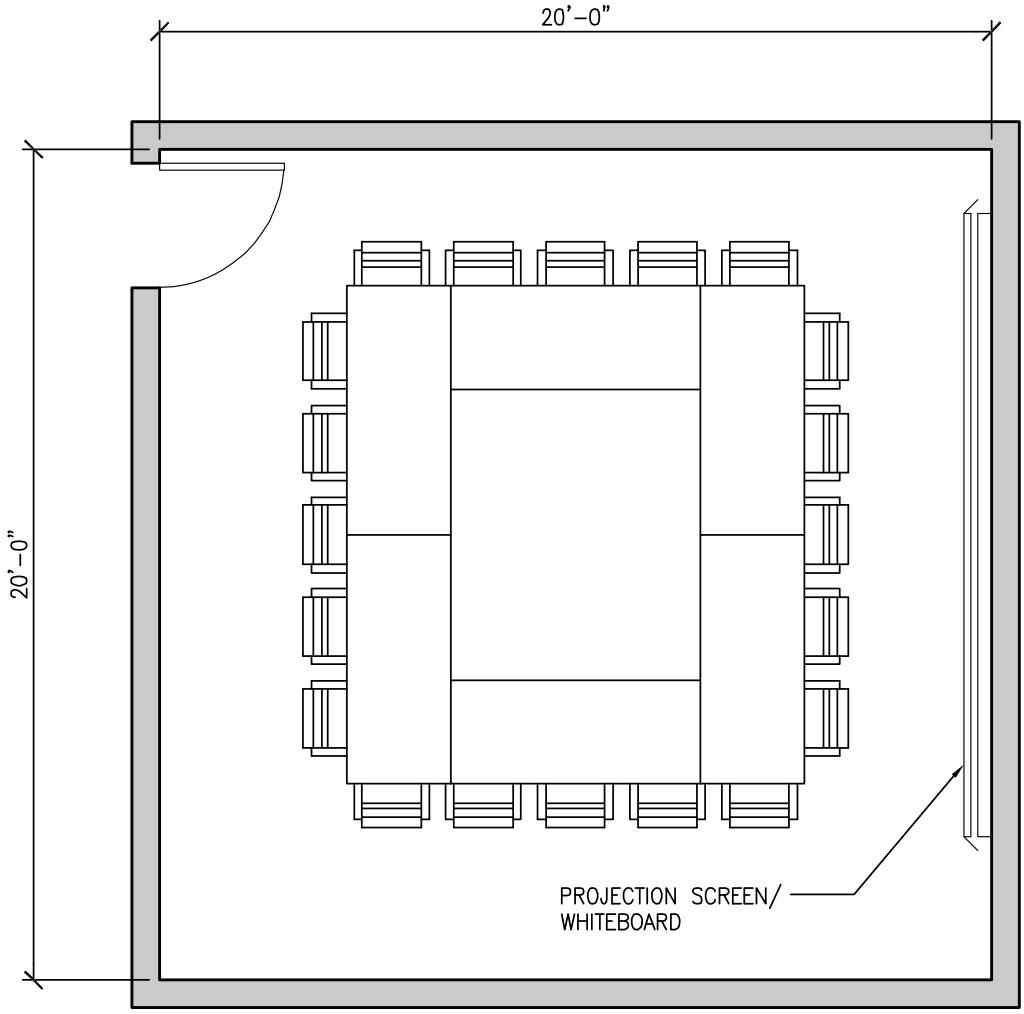
ROOM DATA — CONFERENCE ROOM

General Information	Use/Function	Conference Room for the Administration area: 18 - 20 person capacity
	Assignable Area	400 square feet
	Capacity	Per Code: 15 sf / occupant = 26.67 occupants
	Key Dimensions	H: 9'-0" W: 20'-0" L: 20'-0"
	Adjacencies	Administrative area offices, Administration Reception Area
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Drywall, acoustical tile
	Doors	Solid core wood, or glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	PA system connected to the front control counter
Engineering Systems	Lighting	Fluorescent, two levels, 70 fc / 50 fc (50 fc average), independently controlled
	Electrical	Convenience outlets at the walls, outlets in the floor
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephones
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	PA system connected to the front control counter
FFE	Fixed Equipment	Window blinds, retractable projection screen, marker boards
	Movable Equipment	Ceiling mounted projector, video/disk player Conference tables (4 - 6 modules), 20 conference chairs

No. 44

PROTOTYPE LAYOUT — CONFERENCE ROOM

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 45

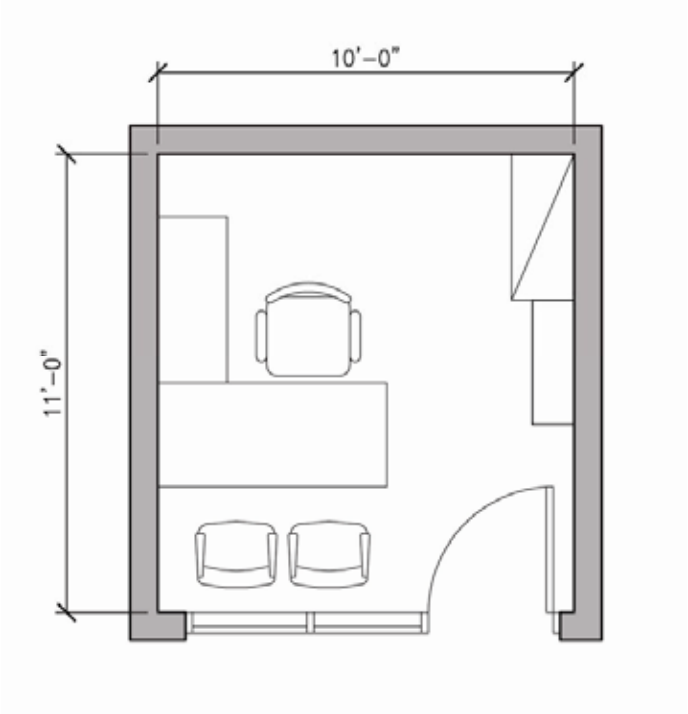
ROOM DATA — COMPUTER SERVER (IT) OFFICE

General Information	Use/Function	Office space for the IT Coordinator
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Administration area offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 45

PROTOTYPE LAYOUT — COMPUTER SERVER (IT) OFFICE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 46

ROOM DATA — COMPUTER SERVER ROOM

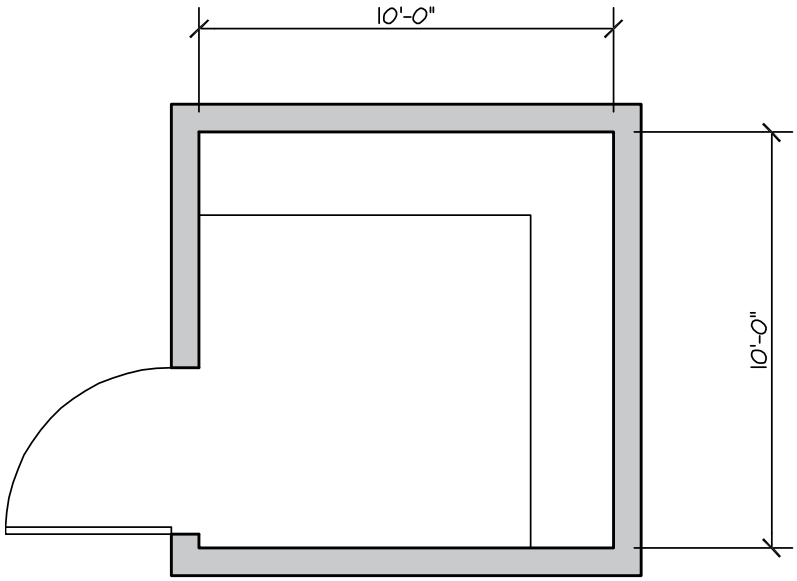
General Information	Use/Function	Room for the Computer Server (IT) equipment
	Assignable Area	100 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 10'-0" min. W: 10'-0" L: 10'-0"
	Adjacencies	Administration area offices, Computer Server (IT) Office
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood, 4'-0" width
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	None
	Movable Equipment	Shelves

No. 46

PROTOTYPE LAYOUT

COMPUTER SERVER ROOM

SCALE: 1/4" = 1'-0"



No. 47

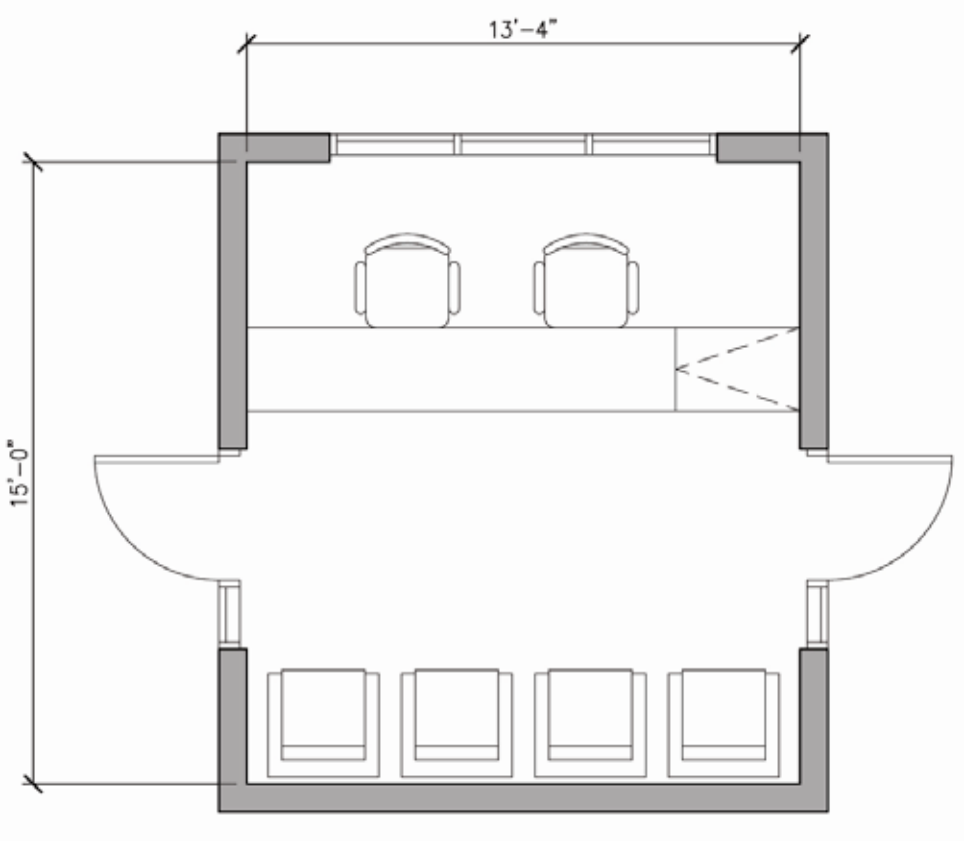
ROOM DATA — RECEPTION / GUEST SEATING AREA

General Information	Use/Function	Reception / Guest Seating Area for the Administration area
	Assignable Area	200 square feet
	Capacity	Per Code: 100 sf / occupant = 2 occupants
	Key Dimensions	H: 9'-0" W: 13'-4" L: 15'-0"
	Adjacencies	Administration area Offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Glass or solid core wood
	Natural Light	Windows desired
	Acoustics	In the walls and at the ceiling
	Special Requirements	Cash transactions will take place at this counter (drop safe may be required)
Engineering Systems	Lighting	Fluorescent, 50 fc, task lighting if there is a reception counter
	Electrical	Convenience outlets at the walls, outlets at a reception counter if required
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection, wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Reception counter
	Movable Equipment	Guest seating, 2 reception counter chairs

No. 47

PROTOTYPE LAYOUT — ADMINISTRATION RECEPTION AREA

SCALE: 1/4"=1'-0"



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No. 48

ROOM DATA — ADMINISTRATION STORAGE

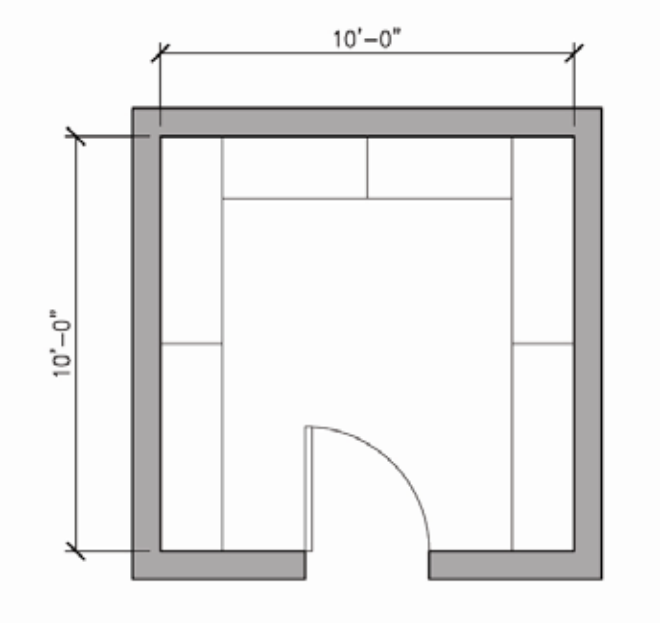
General Information	Use/Function	Storage for the Administration area
	Assignable Area	100 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 10'-0" min. W: 10'-0" L: 10'-0"
	Adjacencies	Administration area offices, Work Room / Staff Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	None
	Movable Equipment	Shelves, file cabinets, storage cabinets, hand truck

No. 48

PROTOTYPE LAYOUT

ADMINISTRATION STORAGE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 49

ROOM DATA — INTRAMURALS WORK AREA

General Information	Use/Function	Work area / Office for Intramurals
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1.8 occupants
	Key Dimensions	H: 9'-0" W: 12'-0" L: 15'-0"
	Adjacencies	Intramurals Storage, Student Work Areas, Administration Offices
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 60 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	4 telephones, minimum
	Data	4 internet connections, minimum, wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds, counter(s) with overhead shelves
	Movable Equipment	4 desks if not built-in, 4 desk chairs, lateral file cabinets, 4 computers, printer

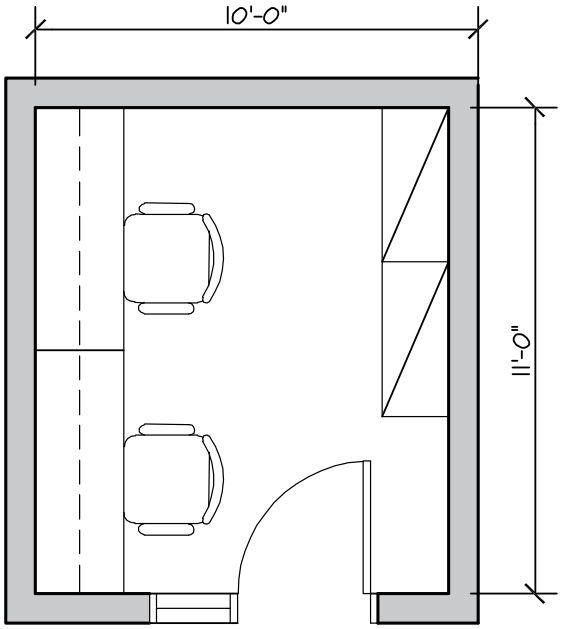
CANNONDESIGN | ARCHITECTURAL nexus

No. 49

PROTOTYPE LAYOUT

INTRAMURALS OFFICE / WORK AREA

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 50

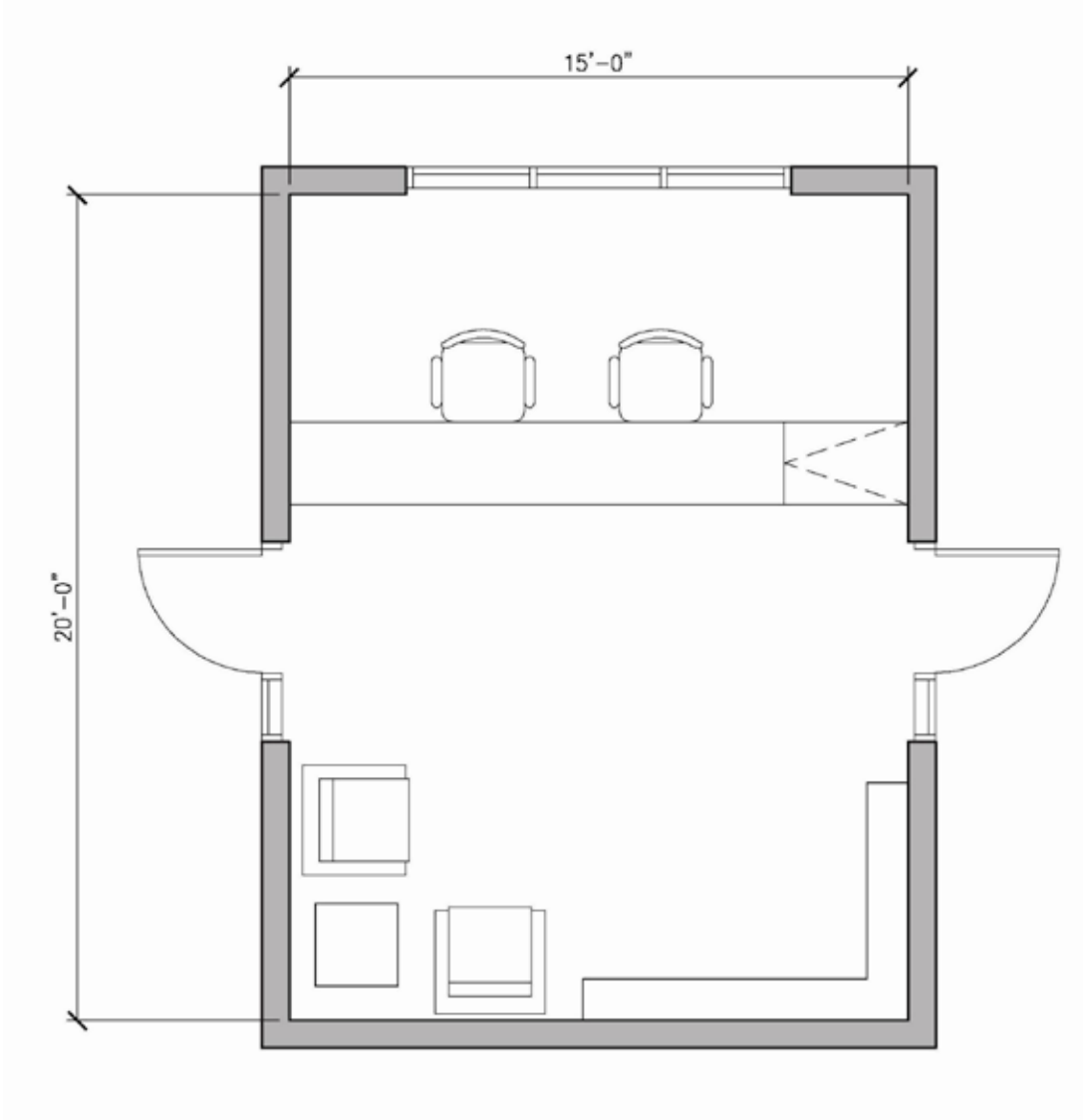
ROOM DATA — ENTRY LOBBY / INFORMATION RESOURCE AREA

General Information	Use/Function	Entry Lobby and an Information Resource Area for the Wellness, Health, and Athletic Training component of the facility. Space to serve as a waiting area with seating and an information counter, with book and display cases with information books and pamphlets on Wellness, Health, and Athletic Training.
	Assignable Area	300 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'- 0" min. W: 15'-4" L: 20'-0"
	Adjacencies	Other Wellness, Health, and Athletic Training spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Masonry of drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Desired
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls and at the counter
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephones (2)
	Data	Internet connection / wireless
	TV	Cable
	Other Technology	To be determined
FFE	Fixed Equipment	Reception counter, book shelves and/or display shelves
	Movable Equipment	Book shelves and/or display shelves, if not built in. 2 lounge chairs, 2 chairs for the information counter

No. 50

PROTOTYPE LAYOUT — ENTRY LOBBY / INFORMATION RESOURCE AREA

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 51

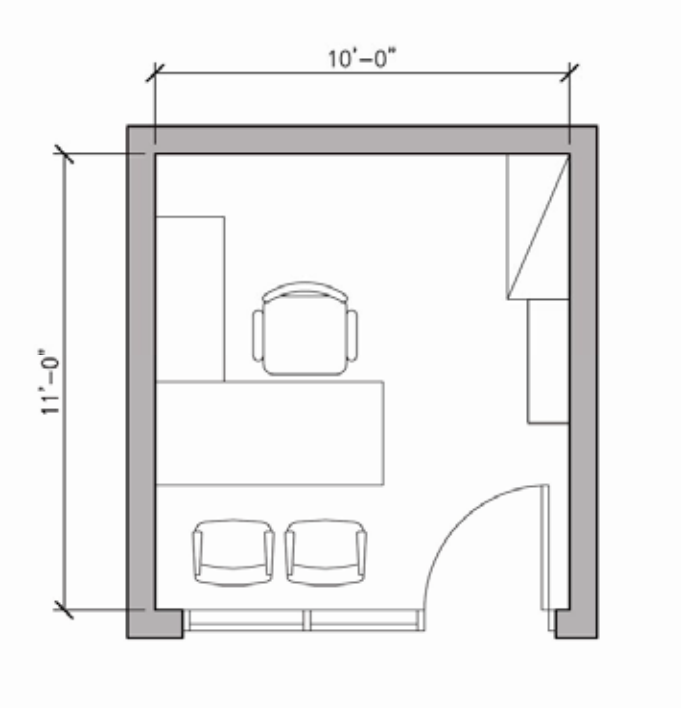
ROOM DATA — WELLNESS DIRECTOR'S OFFICE

General Information	Use/Function	Office space for the Wellness Director
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Wellness area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 51

PROTOTYPE LAYOUT — WELLNESS DIRECTOR'S OFFICE

SCALE: 1/4" = 1'-0"



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No. 52

ROOM DATA — PERSONAL TRAINING / FITNESS ROOM

General Information	Use/Function	Small space for Personal Training and fitness exercising with equipment for the Wellness area – cardio-vascular equipment, selectorized equipment, free weights
	Assignable Area	750 square feet
	Capacity	Per Code: 50 sf / occupant = 15 occupants
	Key Dimensions	H: 12'-0" to 15'-0" min. W: 25'-0" L: 30'-0"
	Adjacencies	Other Wellness Zone spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet and / or rubber tiles (rubber tiles required if there is a free weight area) / rubber base or rubber tile wainscot up to 18" min. on wall and column surfaces.
	Walls	Masonry or drywall, glass, mirrors
	Ceiling	Drywall soffit, acoustical tiles
	Doors	Solid core wood or glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Independent sound system, door width adequate to move equipment in and out of the room
Engineering Systems	Lighting	Indirect, fluorescent, 80 fc
	Electrical	Extensive convenience outlets at the walls and in the floor, some equipment may require 220 V dedicated circuits (treadmills)
	Mechanical	Air conditioned, thermostat control, 100% exhaust or filter, 10 changes per hour (average, 15 changes per hour at peak periods – occupancy sensors), ceiling fans
	Plumbing	Drinking fountains with chilled water, cuspidors in the common area outside of this Room
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	Independent sound system which can also connect into the sound system controlled at the front counter. PA connected to the front counter
FFE	Fixed Equipment	Lockers or storage cubicles in room near the entrance, wall mirrors, wall or ceiling-hung televisions, speakers, and sound systems
	Movable Equipment	Cardio-vascular equipment, selectorized equipment, free weight equipment, mats

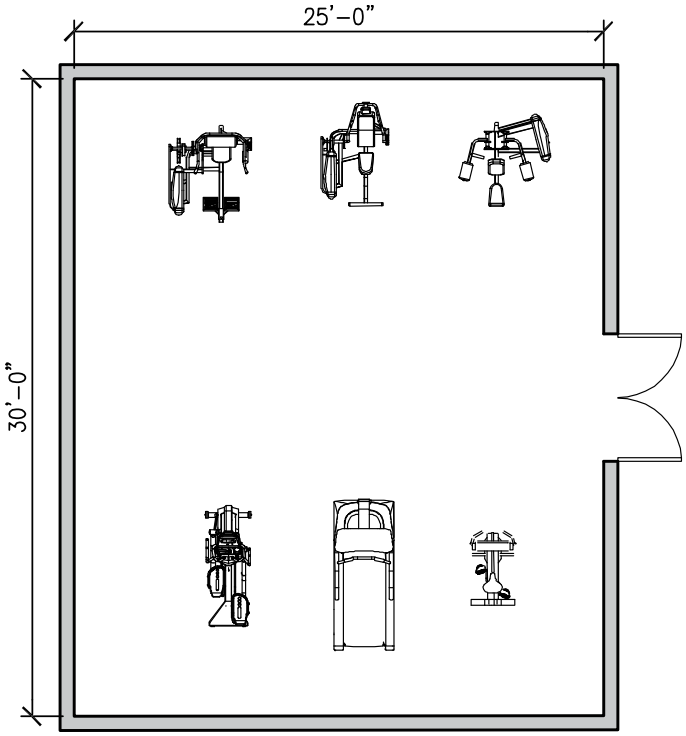
CANNONDESIGN | ARCHITECTURAL nexus

No. 52

PROTOTYPE LAYOUT

PERSONAL TRAINING / FITNESS ROOM

SCALE: 1/8" = 1'-0"



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE PERSONAL TRAINING / FITNESS ROOM. THE ACTUAL LAYOUT OF THE PERSONAL TRAINING / FITNESS ROOM WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT

No. 53

ROOM DATA — MASSAGE THERAPY/ASSESSMENT

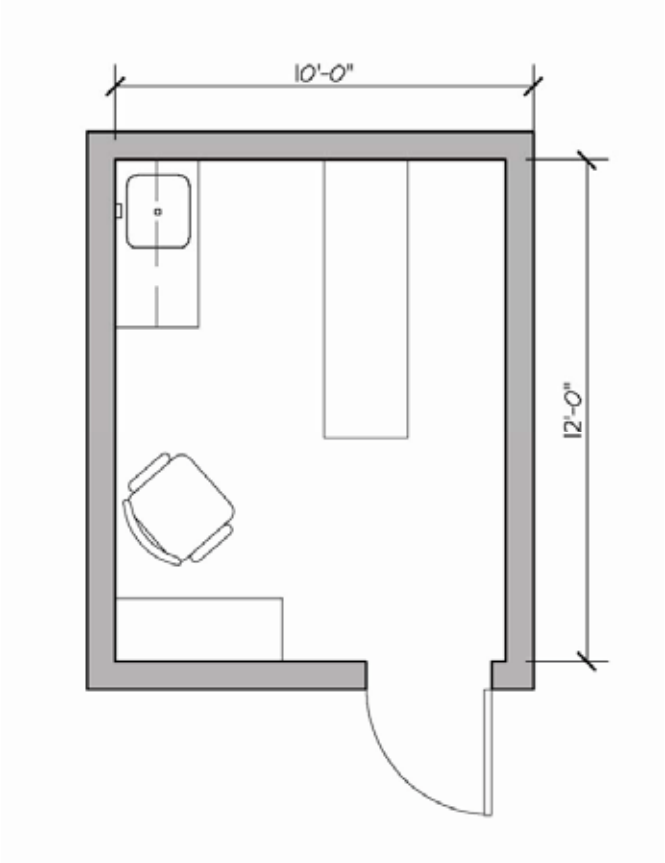
General Information	Use/Function	Room for Massage Therapy
	Assignable Area	120 square feet
	Capacity	Per Code: 50 sf / occupant = 2.4 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 12'-0"
	Adjacencies	Personal Fitness, and other Wellness area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Multiple convenience outlets at the walls and at the counter
	Mechanical	Air conditioned, individual temperature control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone
	Data	Internet connection
	TV	None
	Other Technology	Stereo
FFE	Fixed Equipment	Small countertop with overhead cabinets, Built-in area with bag storage cubicles and hooks to hang jackets.
	Movable Equipment	Massage table, chair , bookshelf, wall mirror

No. 53

PROTOTYPE LAYOUT

MASSAGE THERAPY / ASSESSMENT

SCALE: 1/4" = 1'-0"



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No. 54

ROOM DATA — WELLNESS STORAGE

General Information	Use/Function	Storage for the Wellness area
	Assignable Area	100 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 10'-0" min. W: 10'-0" L: 10'-0"
	Adjacencies	Wellness Director's Office and other Wellness area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	None
	Movable Equipment	Shelves, file cabinets, storage cabinets, hand truck

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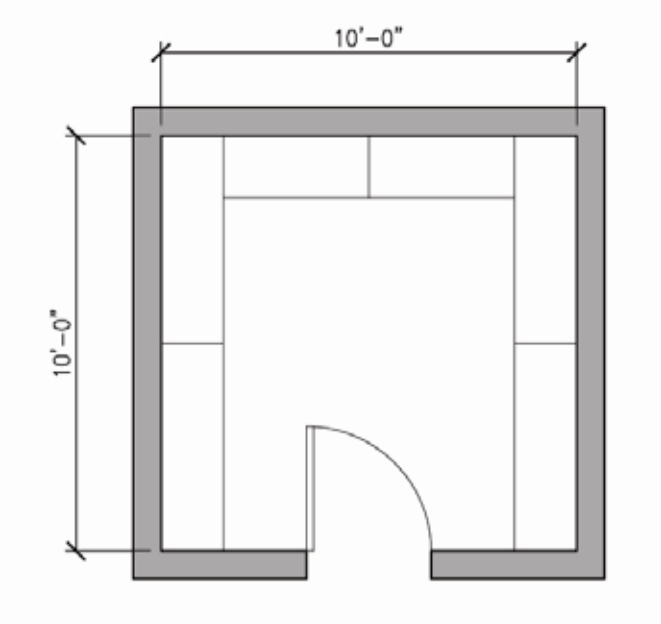
No. 54

PROTOTYPE LAYOUT — WELLNESS STORAGE

SCALE: 1/4" = 1'-0"



No. 55

ROOM DATA — HEALTH EDUCATOR OFFICE 1

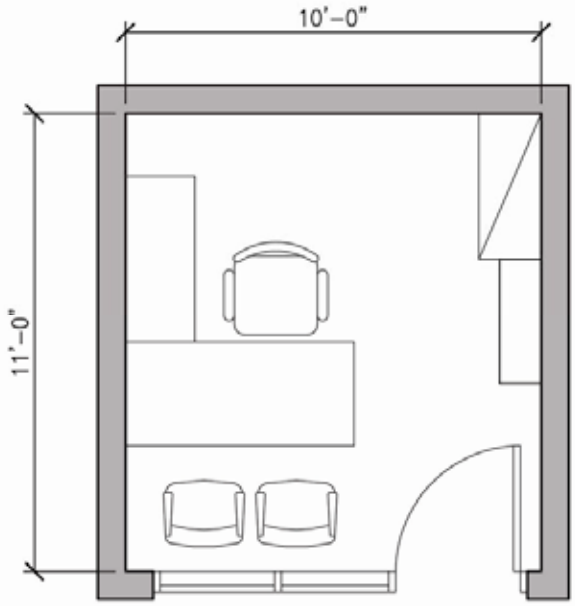
General Information	Use/Function	Office space for a Health Educator.
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Wellness area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 55

PROTOTYPE LAYOUT

HEALTH EDUCATOR OFFICE

SCALE: 1/4" = 1'-0"



No. 56

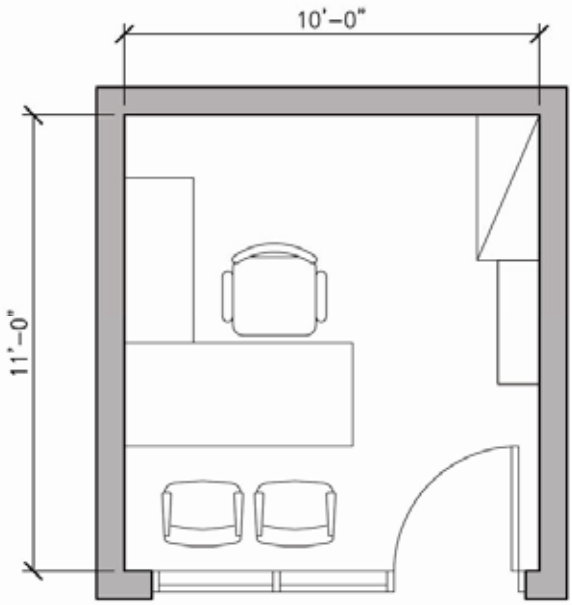
ROOM DATA — HEALTH EDUCATOR OFFICE 2

General Information	Use/Function	Office space for a Health Educator.
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Wellness area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 56

PROTOTYPE LAYOUT — HEALTH EDUCATOR OFFICE

SCALE: 1/4" = 1'-0"



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No. 57

ROOM DATA — NURSE PRACTITIONER OFFICE

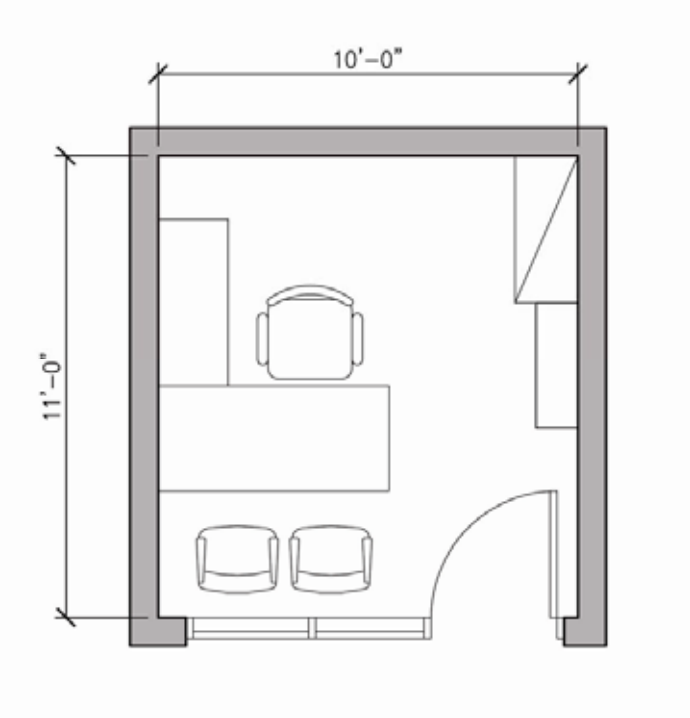
General Information	Use/Function	Office space for a Nurse Practitioner
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other Health area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 57

PROTOTYPE LAYOUT

HEALTH EDUCATOR OFFICE

SCALE: 1/4" = 1'-0"



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No. 58

ROOM DATA — EXAMINATION ROOM 1

General Information	Use/Function	Examination Room
	Assignable Area	120 square feet
	Capacity	Per Code: 50 sf / occupant = 2.4 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 12'-0"
	Adjacencies	Health area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Multiple convenience outlets at the walls and at the counter
	Mechanical	Air conditioned, individual temperature control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone
	Data	Internet connection
	TV	None
	Other Technology	Stereo
FFE	Fixed Equipment	Small countertop with overhead cabinets, Built-in area with bag storage cubicles and hooks to hang jackets.
	Movable Equipment	Massage table, chair , bookshelf, wall mirror

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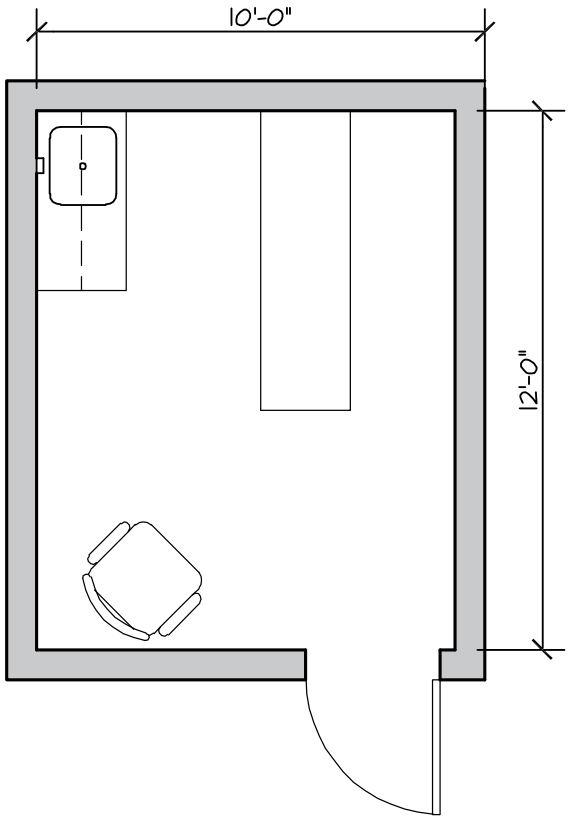
No. 58

PROTOTYPE LAYOUT — EXAMINATION ROOM

SCALE: 1/4" = 1'-0"



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No. 59

ROOM DATA — HEALTH STORAGE

General Information	Use/Function	Storage for the Health area
	Assignable Area	100 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 10'-0" min. W: 10'-0" L: 10'-0"
	Adjacencies	Health Educator Office and other Health area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 10 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	None
	Movable Equipment	Shelves, file cabinets, storage cabinets, hand truck

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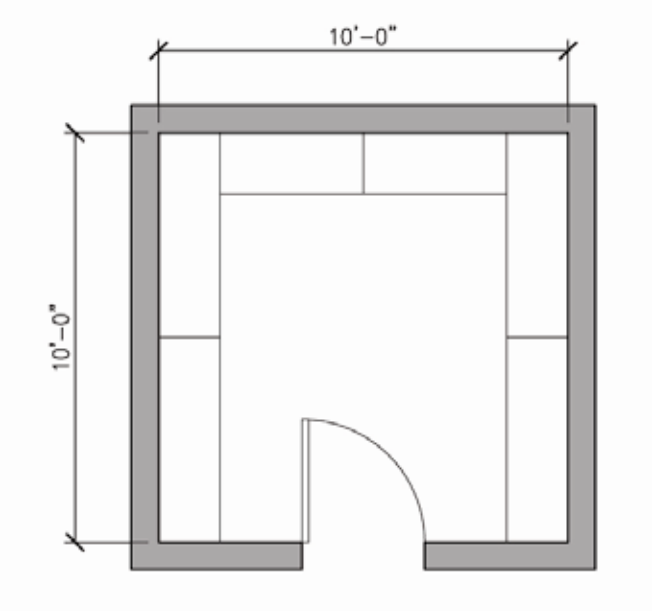
No. 59

PROTOTYPE LAYOUT — HEALTH STORAGE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 60

ROOM DATA — ATHLETIC TRAINING OFFICE

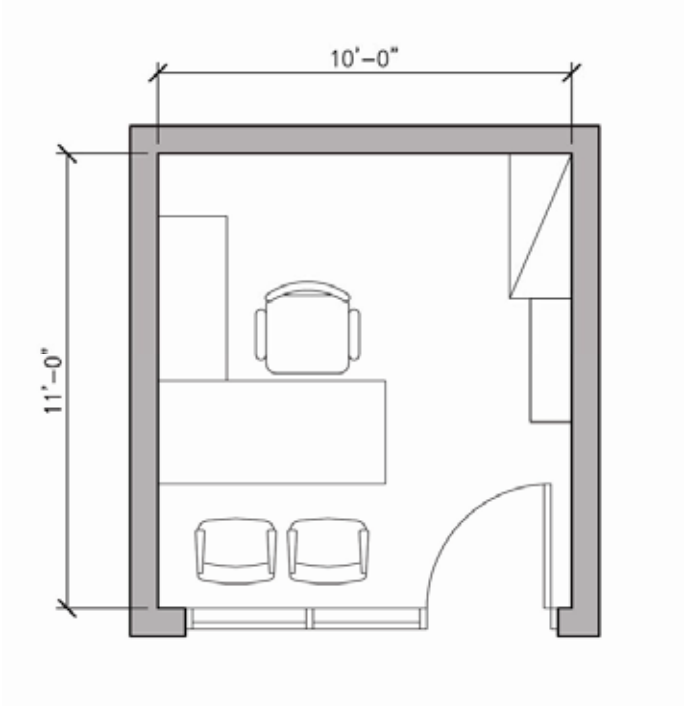
General Information	Use/Function	Office space for an athletic trainer.
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Other athletic training area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. 60

PROTOTYPE LAYOUT

ATHLETIC TRAINING OFFICE

SCALE: 1/4" = 1'-0"



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No. 61

ROOM DATA — EXAMINATION ROOM

General Information	Use/Function	Examination Room for the Athletic Training area
	Assignable Area	120 square feet
	Capacity	Per Code: 50 sf / occupant = 2.4 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 12'-0"
	Adjacencies	Other Athletic Training spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Multiple convenience outlets at the walls and at the counter
	Mechanical	Air conditioned, individual temperature control
	Plumbing	Hot and cold water for countertop sink, countertop sink
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Small countertop with overhead cabinets
	Movable Equipment	Examination table, chair

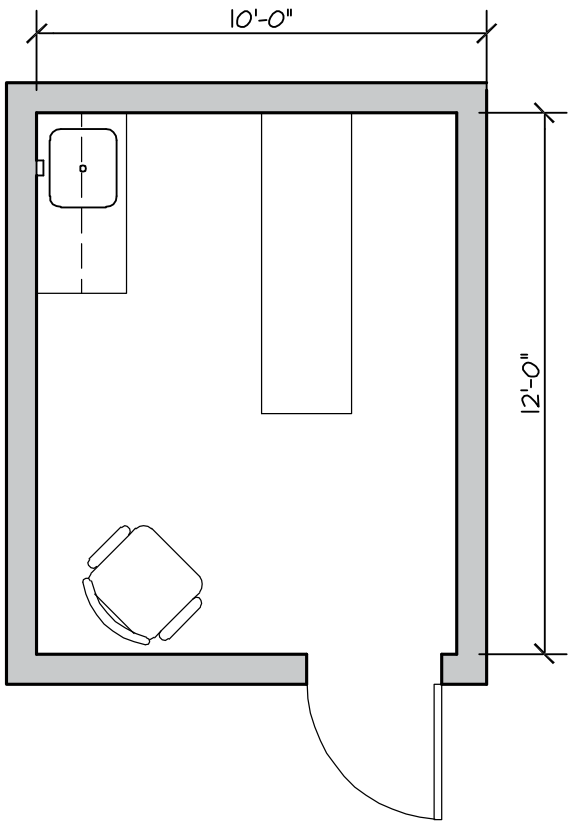
CANNONDESIGN | ARCHITECTURAL nexus

No. 61

PROTOTYPE LAYOUT

EXAMINATION ROOM 2

SCALE: 1/4" = 1'-0"



No. 62

ROOM DATA TRAINING TABLES

General Information	Use/Function	Space for treatment in the Athletic Training area
	Assignable Area	270 square feet
	Capacity	Per Code: 50 sf / occupant = 5.4 occupants
	Key Dimensions	H: 9'-0" min. W: 14'-0" L: 19'-4"
	Adjacencies	Other Athletic Training area spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	Desired
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Multiple convenience outlets at the walls and at the counter
	Mechanical	Air conditioned, individual temperature control
	Plumbing	Hot and cold water for countertop sink and ice machine, countertop sink
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Countertop with overhead cabinets
	Movable Equipment	Four treatment tables, four treatment cabinets, chair, storage cabinet, ice machine

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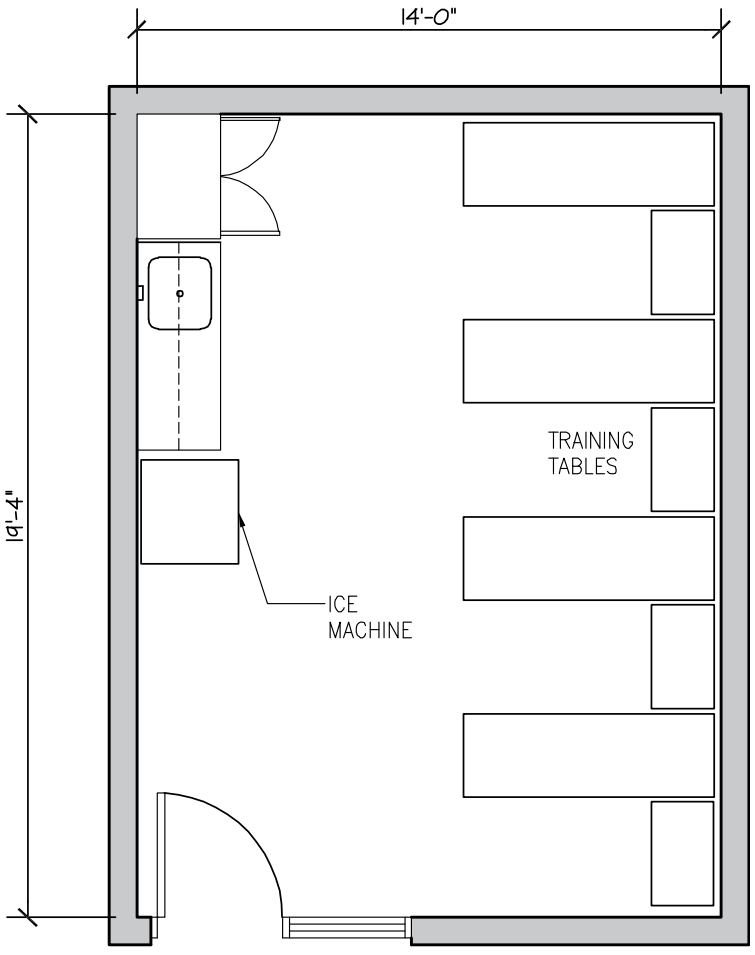
No. 62

PROTOTYPE LAYOUT

TRAINING TABLES

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 63

ROOM DATA — EXERCISE SPACE

General Information	Use/Function	Small exercise space for fitness exercising with equipment for the Athletic Training area – cardio-vascular equipment, selectorized equipment, free weights
	Assignable Area	400 square feet
	Capacity	Per Code: 50 sf / occupant = 8 occupants
	Key Dimensions	H: 12'-0" to 15'-0" min. W: 16'-0" L: 25'-0"
	Adjacencies	Other Athletic Training spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet and / or rubber tiles (rubber tiles required if there is a free weight area) / rubber base or rubber tile wainscot up to 18" min. on wall and column surfaces.
	Walls	Masonry or drywall, glass, mirrors
	Ceiling	Drywall soffit, acoustical tiles
	Doors	Solid core wood or glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Independent sound system, door width adequate to move equipment in and out of the room
Engineering Systems	Lighting	Indirect, fluorescent, 80 fc
	Electrical	Extensive convenience outlets at the walls and in the floor, some equipment may require 220 V dedicated circuits (treadmills)
	Mechanical	Air conditioned, thermostat control, 100% exhaust or filter, 10 changes per hour (average, 15 changes per hour at peak periods – occupancy sensors), ceiling fans
	Plumbing	Drinking fountains with chilled water, cuspidors in the common area outside of this Room
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	Independent sound system which can also connect into the sound system controlled at the front counter. PA connected to the front counter
FFE	Fixed Equipment	Lockers or storage cubicles in room near the entrance, wall mirrors, wall or ceiling-hung televisions, speakers, and sound systems
	Movable Equipment	Cardio-vascular equipment, selectorized equipment, free weight equipment, mats

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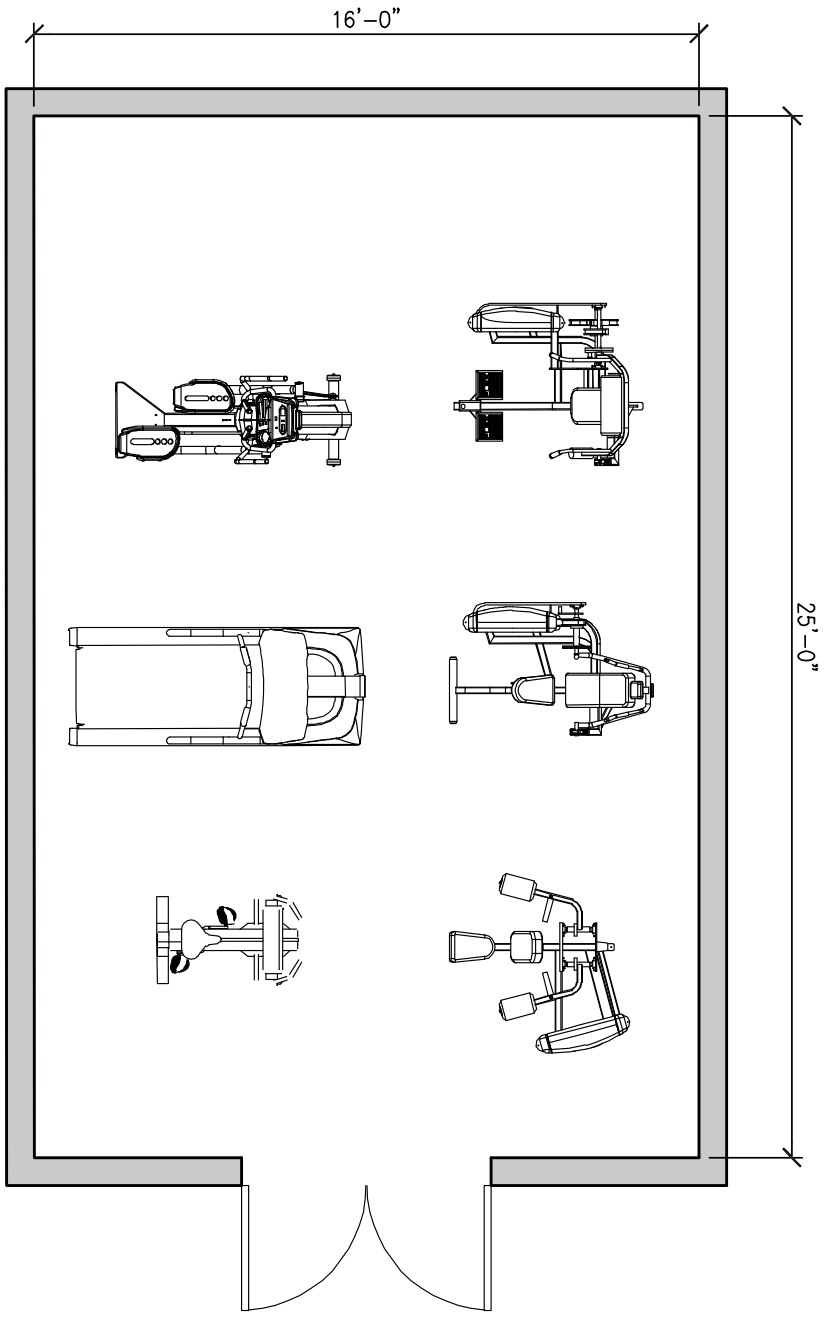
No. 63

PROTOTYPE LAYOUT

EXERCISE SPACE

SCALE: 1/4" = 1'-0"



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No. 64

ROOM DATA — ATHLETIC TRAINING STORAGE

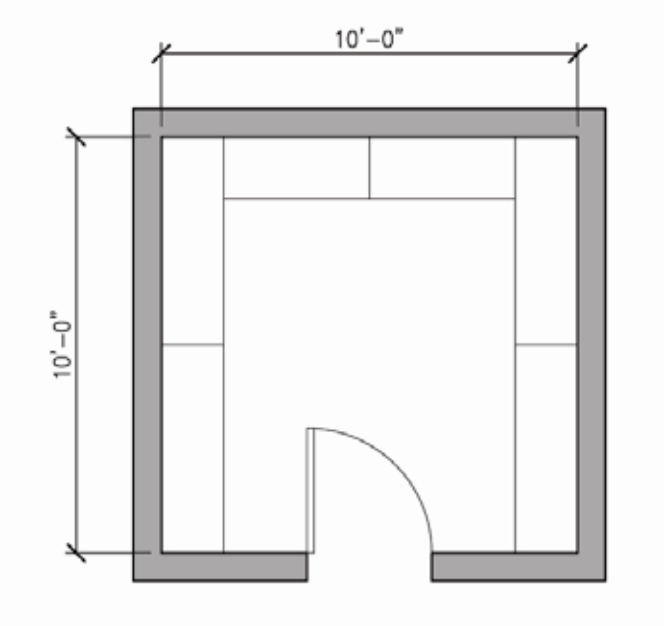
General Information	Use/Function	Storage for the Athletic Training area
	Assignable Area	100 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 10'-0" min. W: 10'-0" L: 10'-0"
	Adjacencies	Administration area offices, Work Room / Staff Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	None
	Movable Equipment	Shelves, file cabinets, storage cabinets, hand truck

No. 64

PROTOTYPE LAYOUT

ATHLETIC TRAINING STORAGE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 65

ROOM DATA — ENTRY LOBBY/ LOUNGE

General Information	Use/Function	Entry Lobby for the facility before the entry turnstiles, also space for informal social interaction and seating for the Juice Bar (if the Juice Bar is before the turnstiles). Area is combined with the area for the Lounge.
	Assignable Area	3,500 square feet
	Capacity	Per Code: 15 sf / occupant = 233.34 occupants
	Key Dimensions	H: 15'-0" min. W: to be determined L: to be determined
	Adjacencies	Control Counter and Office, Lounge
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Hard surface such as slate, quarry tile, terrazzo / base to match floor surface
	Walls	Masonry or drywall, glass (use as much glass as possible based on direction that the glass wall is facing)
	Ceiling	Exposed structure and drywall
	Doors	Glass
	Natural Light	Windows
	Acoustics	In walls and at the ceiling
	Special Requirements	Turnstiles and gates
Engineering Systems	Lighting	Fluorescent 60 fc, or H.I.D., or decorative lighting
	Electrical	Convenience outlets at walls and in the floor, power for the turnstiles
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms at the entry doors
Technology	Voice	Telephones at control counter, area for public telephones, if required (1 regular, 1 to meet ADA requirements) in the Lobby
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	PA / sound system for throughout the building and controlled at the Control counter
FFE	Fixed Equipment	Turnstiles, gates. Window blinds, if required
	Movable Equipment	Lobby seating – side chairs and end tables, tables and chairs for the Juice Bar seating (if the Juice Bar is before the turnstiles)

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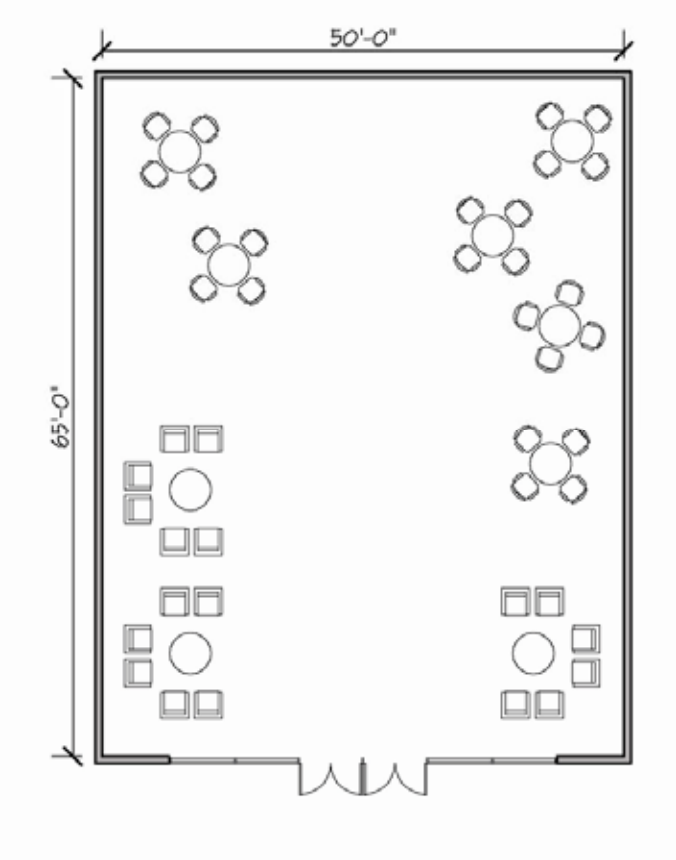
No. 65

PROTOTYPE LAYOUT — ENTRY LOBBY/ LOUNGE

SCALE: 1/8" = 1'-0"



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE ENTRY LOBBY
THE ACTUAL LAYOUT OF THE ENTRY LOBBY WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT

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No. 66

ROOM DATA — JUICE BAR

General Information	Use/Function	Juice Bar
	Assignable Area	500 square feet
	Capacity	Per Code: 30 sf / occupant = 16.67 occupants
	Key Dimensions	H: 9'-0" min. W: 15'-0" L: 20'-0"
	Adjacencies	Entry Lobby, Lounge. To be located before the turnstiles / security point
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Quarry tile, non-slip finish / quarry tile base
	Walls	Masonry or drywall
	Ceiling	Acoustical tile, drywall
	Doors	Solid core wood
	Natural Light	Windows desired
	Acoustics	In the walls and at the ceiling
	Special Requirements	Electronic message board
Engineering Systems	Lighting	Fluorescent, 60 fc
	Electrical	Convenience outlets at the walls, outlets for Juice Bar equipment
	Mechanical	Air conditioned
	Plumbing	Hot and cold water as required for the Juice Bar equipment, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Refrigerator, sink, work counter, service counter
	Movable Equipment	Cash registers, safe, ice machine

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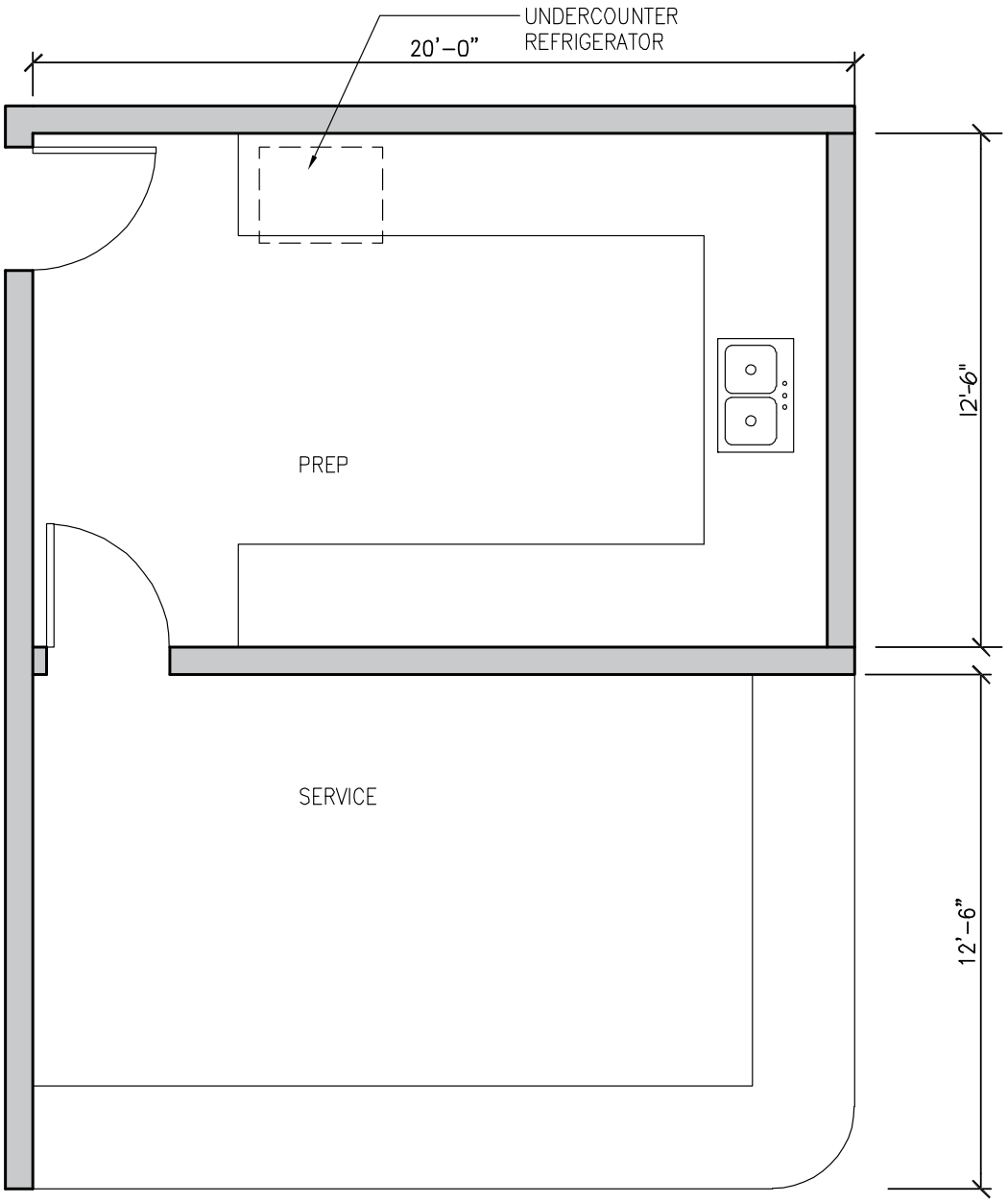
No. 66

PROTOTYPE LAYOUT — JUICE BAR

SCALE: 1/4" = 1'-0"



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No. 67

ROOM DATA — VENDING AREA

General Information	Use/Function	Space for vending machines
	Assignable Area	100 square feet
	Capacity	Per Code: 30 sf / occupant = 3.33 occupants
	Key Dimensions	H: 9'-0" min. W: 6'-0" L: 16'-0"
	Adjacencies	Located adjacent to the Entry Lobby / Lounge areas
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall
	Ceiling	Acoustical tile or drywall
	Doors	None
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 60 fc
	Electrical	Convenience outlets at the walls for the vending machines
	Mechanical	Air conditioned
	Plumbing	Hot and cold water as required for the vending machines, floor drains may be required
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	Internet connection if required for the vending machines
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	None
	Movable Equipment	Vending machines (3 – 5)

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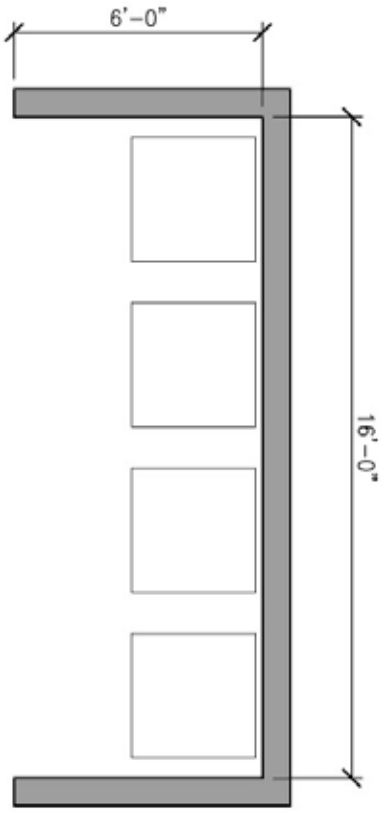
No. 67

PROTOTYPE LAYOUT — VENDING AREA

SCALE: 1/4" = 1'-0"



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No. 68

ROOM DATA — CONTROL COUNTER

General Information	Use/Function	Control counter for entry into the secured area of the facility
	Assignable Area	200 square feet
	Capacity	Per Code: 100 sf / occupant = 2 occupants
	Key Dimensions	H: 12'-0" min. W: 7'- 0" L: 29'-0"
	Adjacencies	Control Office, Entry Lobby, Lounge
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Masonry or drywall
	Ceiling	Exposed structure or drywall
	Doors	None, except counter flip-top with low door for access behind counter
	Natural Light	Desired
	Acoustics	In the walls and at the ceiling
	Special Requirements	Main control for the facility's lighting, security (monitoring of security cameras), and sound systems may be at counter or in Control Office. Central point for any paging or intercom systems. Cash transactions may take place at this counter (drop safe may be required) Space at counter for 6 telephones and computers
Engineering Systems	Lighting	Fluorescent, 60 fc, or H.I.D., or decorative lighting
	Electrical	Convenience outlets at the Control Counter, power for the turnstiles and Gates at the Control Counter
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Entrance and exit turnstiles or similar devices (gates), controls for the facility's security system
Technology	Voice	6 telephones
	Data	Internet connections (must have enough data lines for register / computer to access the University of Utah system) / wireless
	TV	Cable outlets
	Other Technology	To be determined
FFE	Fixed Equipment	Control counter (dual height for standing transactions and for disabled access) , turnstiles, gates
	Movable Equipment	4 - 6 control counter chairs, 4 – 6 computers

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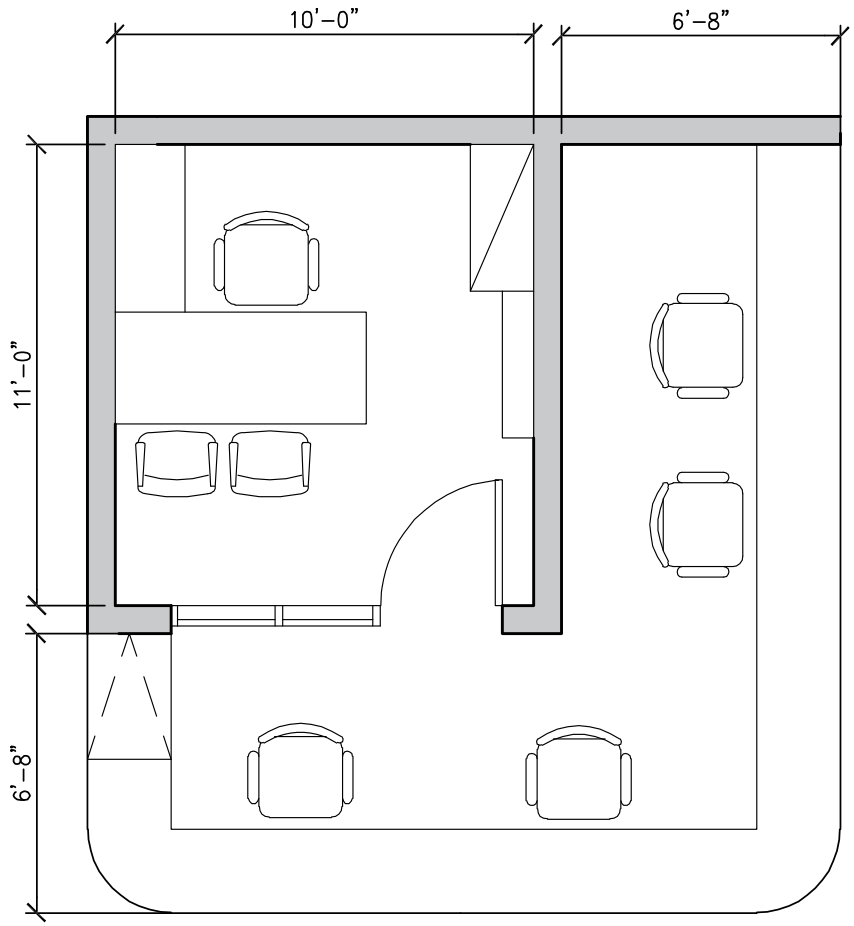
No. 68

PROTOTYPE LAYOUT — CONTROL COUNTER

SCALE: 1/4" = 1'-0"



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No. 69

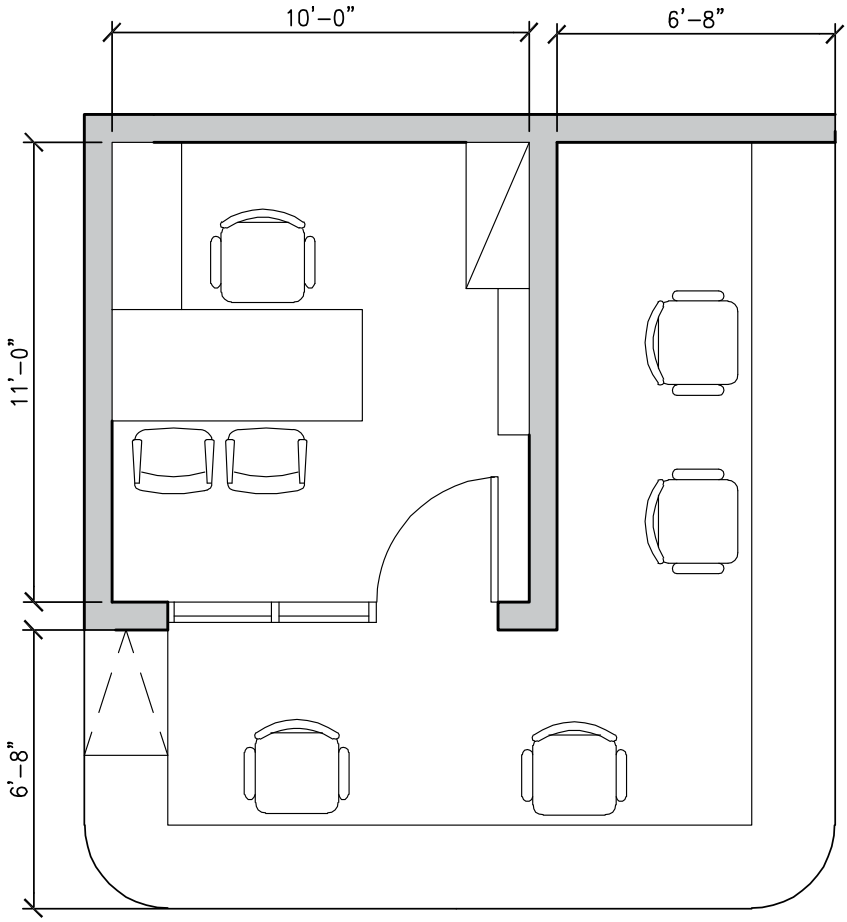
ROOM DATA — CONTROL OFFICE

General Information	Use/Function	Control Office for the facility, adjacent to the Control Counter at the secured entry point of the building
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'- 0" L: 11'-0"
	Adjacencies	Control Counter, Entry Lobby, Lounge
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Masonry or drywall, glass (allow as much transparency from the Office looking out to the Control Counter and the Entry Lobby and Lounge
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	Main control for the facility's lighting, security (monitoring of security cameras), and sound systems may be in the Control Office or at the Control Counter
Engineering Systems	Lighting	Fluorescent, 50 fc at the Office.
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinets, bookcase, computer, printer, drop safe (if not at the Control Counter)

No. 69

PROTOTYPE LAYOUT — CONTROL OFFICE

SCALE: 1/4" = 1'-0"



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No. 70

ROOM DATA — STAFF OFFICE

General Information	Use/Function	Office for Staff to be located in the Entry Lobby / Lounge area
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Entry Lobby, Lounge, Control Counter, Control Office
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

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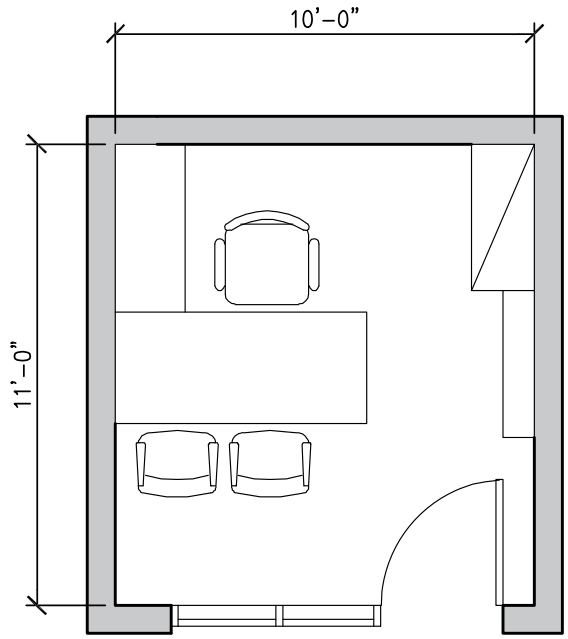
No. 70

PROTOTYPE LAYOUT — STAFF OFFICE

SCALE: 1/4" = 1'-0"



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No. 71

ROOM DATA — STAFF OFFICE

General Information	Use/Function	Office for Staff to be located in the Entry Lobby / Lounge area
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Entry Lobby, Lounge, Control Counter, Control Office
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood, glass
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

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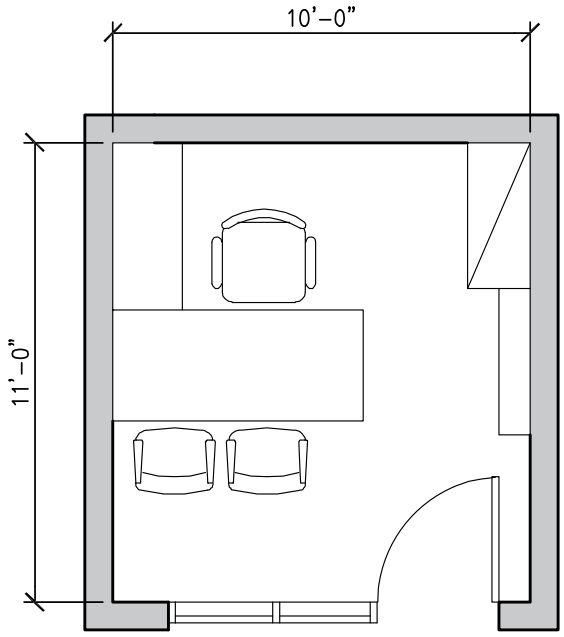
No. 71

PROTOTYPE LAYOUT — STAFF OFFICE

SCALE: 1/4" = 1'-0"



No. 72

ROOM DATA TREATMENT

General Information	Use/Function	Room for treatment of minor injuries. A holding space while waiting for Emergency personnel to arrive for further treatment.
	Assignable Area	120 square feet
	Capacity	Per Code: 50 sf / occupant = 2.4 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 12'-0"
	Adjacencies	Close to the Control Counter at the Entry Lobby
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Multiple convenience outlets at the walls and at the counter
	Mechanical	Air conditioned, individual temperature control
	Plumbing	Hot and cold water for countertop sink and ice machine, countertop sink
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	Telephone
	Data	Internet Connection / Wireless
	TV	None
	Other Technology	Intercom system connected to front desk.
FFE	Fixed Equipment	Small countertop with overhead cabinets
	Movable Equipment	Storage cabinet, therapy or examination table, chair, ice machine

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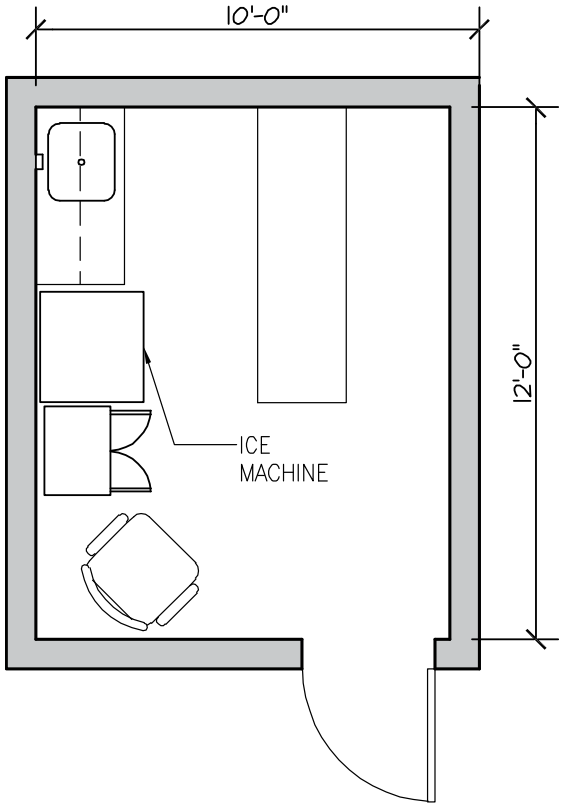
No. 72

PROTOTYPE LAYOUT TREATMENT

SCALE: 1/4" = 1'-0"



No. 73

ROOM DATA — MEN'S LOCKER ROOM

General Information	Use/Function	Locker Room with toilets and showers for the Men. 160 locker footprints.
	Assignable Area	2,000 square feet
	Capacity	Per Code: 30 sf / occupant = 66.67 occupants
	Key Dimensions	H: 9'-0" W: to be determined L: to be determined
	Adjacencies	Women's Locker Room, Assisted Change (Universal) Locker Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile at toilet and shower areas, moisture-resistant drywall with epoxy paint finish at locker area
	Ceiling	Plaster with smooth finish at shower area, moisture-resistant drywall at the other areas, epoxy paint finish
	Doors	Solid core wood from the adjacent common area, if there is a door. Hollow metal door out to the Pool Deck.
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Floor mounted, overhead-braced toilet partitions, wall mounted shower and urinal partitions, water closets, lavatory sinks, urinals, shower heads
Engineering Systems	Lighting	Fluorescent, 50 fc, moisture-resistant at the shower area
	Electrical	Convenience outlets at the walls and at the grooming counters, waterproof
	Mechanical	Air conditioned, 100% exhaust, 10 changes per hour at the locker area (average, 14 changes at peak periods – occupancy sensors), 10 changes per hour at the toilet and shower areas (average, 18 changes at peak periods – occupancy sensors)
	Plumbing	Hot and cold water, wall hung water closets and urinals, lavatory sinks, tamper-proof shower heads, floor drains. Water closet and urinal flush, and sink faucets to be sensor-type. Hose bibs in the toilet and shower areas for maintenance, drinking fountains.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Cameras at entrance.
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	PA system connected to the front control counter
FFE	Fixed Equipment	12" w. x 16" d. x 60" h. lockers (combination of Z-shaped double, and triple height), locker bases with continuous benches (with cutout for disabled access), toilet, urinal, and shower partitions, toilet and shower accessories (toilet paper holders, seat cover dispensers, paper towel dispensers or hand dryers, trash receptacles, soap dispensers, etc.), lavatory and grooming counters with mirrors, full length mirrors, baby changing shelf. Paper towel dispensers to be sensor-type
	Movable Equipment	Scale

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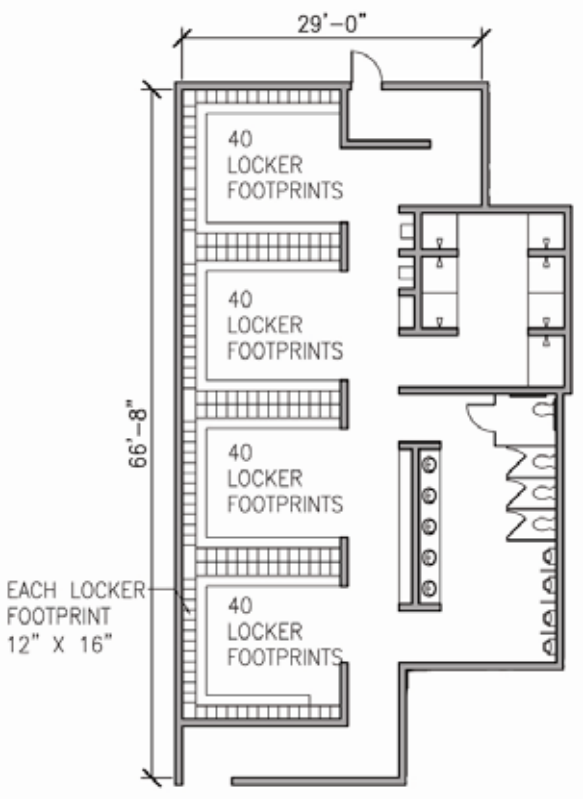
No. 73

PROTOTYPE LAYOUT — MEN'S LOCKER ROOM

SCALE: 1/16" = 1'-0"



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No. 74

ROOM DATA — WOMEN'S LOCKER ROOM

General Information	Use/Function	Locker Room with toilets and showers for the Women. 160 locker footprints.
	Assignable Area	2,000 square feet
	Capacity	Per Code: 30 sf / occupant = 66.67 occupants
	Key Dimensions	H: 9'-0" W: to be determined L: to be determined
	Adjacencies	Men's Locker Room, Assisted Change (Universal) Locker Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile at toilet and shower areas, moisture-resistant drywall with epoxy paint finish at locker area
	Ceiling	Plaster with smooth finish at shower area, moisture-resistant drywall at the other areas, epoxy paint finish
	Doors	Solid core wood from the adjacent common area, if there is a door. Hollow metal door out to the Pool Deck
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Floor mounted, overhead-braced toilet partitions, wall mounted shower partitions, water closets, lavatory sinks, shower heads. PA system connected to the front control counter
Engineering Systems	Lighting	Fluorescent, 50 fc, moisture-resistant at the shower area
	Electrical	Convenience outlets at the walls and at the grooming counters, waterproof
	Mechanical	Air conditioned, 100% exhaust, 10 changes per hour at the locker area (average, 14 changes at peak periods – occupancy sensors), 10 changes per hour at the toilet and shower areas (average, 18 changes at peak periods – occupancy sensors)
	Plumbing	Hot and cold water, wall hung water closets, lavatory sinks, tamper-proof shower heads, floor drains. Water closet flushes and sink faucets to be sensor-type. Hose bibs in the toilet and shower areas for maintenance, drinking fountains.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Cameras at entrance.
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	PA system connected to the front control counter.
FFE	Fixed Equipment	12" w. x 16" d. x 60" h. lockers (combination of Z-shaped double, and triple height), locker bases with continuous benches (with cutout for disabled access), toilet and shower partitions, toilet and shower accessories (toilet paper holders, seat cover dispensers, paper towel dispensers or hand dryers, trash receptacles, feminine napkin dispensers/disposals, soap dispensers, etc), lavatory and grooming counters with mirrors, full length mirrors, baby changing shelf. Paper towel dispensers to be sensor-type.
	Movable Equipment	Scale

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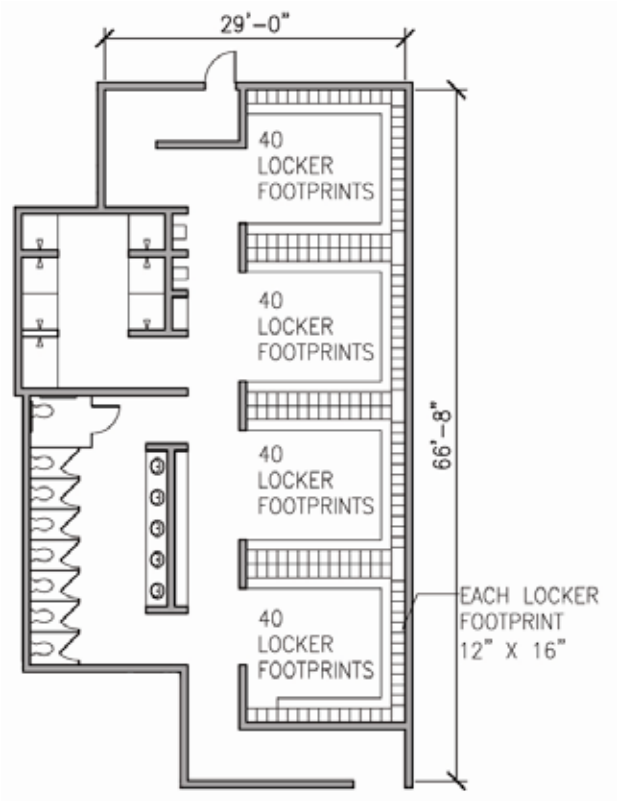
No. 74

PROTOTYPE LAYOUT — WOMEN'S LOCKER ROOM

SCALE: 1/16" = 1'-0"



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No. 75

ROOM DATA — ASSISTED CHANGE (UNIVERSAL) LOCKER ROOM

General Information	Use/Function	Privacy toilet / shower / changing room, with disabled access to be used as a Privacy Locker Room for the Student Life Center
	Assignable Area	190 square feet
	Capacity	Per Code: 30 sf / occupant = 6.33 occupants
	Key Dimensions	H: 9'-0" W: to be determined L: to be determined
	Adjacencies	Men's Locker Room, Women's Locker Room
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile at toilet and shower area, moisture-resistant drywall at other areas, epoxy paint finish
	Ceiling	Plaster with smooth finish at the shower area, moisture-resistant drywall at the other areas, epoxy paint finish
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Access to room to be controlled – lockable with checked-out key. Water closet, lavatory sink, shower head
Engineering Systems	Lighting	Fluorescent, 50 fc, moisture-resistant at the shower area
	Electrical	Convenience outlets at the walls and at the lavatory counter, waterproof
	Mechanical	Air conditioned, 100% exhaust, 10 changes per hour (average)
	Plumbing	Hot and cold water, water closet, lavatory sink, tamper-proof shower head, floor drains. Water closet flush and sink faucet to be sensor-type. Hose bib in the toilet and shower areas for maintenance
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	PA system connected to the front control counter.
FFE	Fixed Equipment	Two to three 12" w. x 16"d. x 60" h. lockers (single and double height), locker base with continuous bench (with cut out for disabled access), toilet and shower accessories (paper towel dispenser, toilet paper holder, seat cover dispenser, trash receptacle, hair dryer, feminine napkin dispenser/disposal, soap dispenser, etc.), vanity counter with mirror, full length mirror. Hand dryer may be used instead of paper towels
	Movable Equipment	Scale

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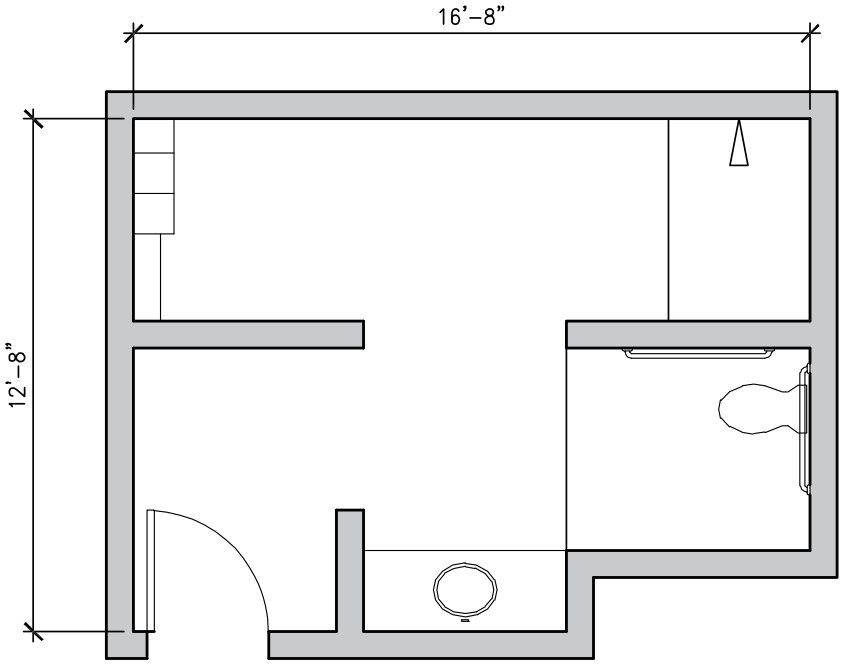
No. 75

PROTOTYPE LAYOUT — ASSITED CHANGE (UNIVERSAL) LOCKER ROOM

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 76

ROOM DATA — MEN'S RESTROOM – 2ND FLOOR

General Information	Use/Function	Men's Restroom for 2nd Floor spaces
	Assignable Area	260 square feet
	Capacity	Per Code: 100 sf / occupant = 2.6 occupants
	Key Dimensions	H: 9'-0" W: 12'-0" L: to be determined
	Adjacencies	Women's 2nd Floor Restroom
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Floor mounted, overhead-braced toilet partitions, wall mounted urinal partition, water closets, urinals, lavatory sinks. PA system connected to the front control counter
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 10 changes per hour
	Plumbing	Hot and cold water, wall hung water closets and urinals, lavatories, floor drains. Water closet and urinal flush, and sink faucets to be sensor-type. Hose bib for maintenance
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Provision for adding in the future
	Data	Provision for adding in the future
	TV	Provision for adding in the future
	Other Technology	PA system connected to the front control counter
FFE	Fixed Equipment	Toilet and urinal partitions, toilet accessories (toilet paper holders, seat cover dispensers, paper towel dispensers or hand dryers, trash receptacle, soap dispensers), lavatory counter with mirror
	Movable Equipment	None

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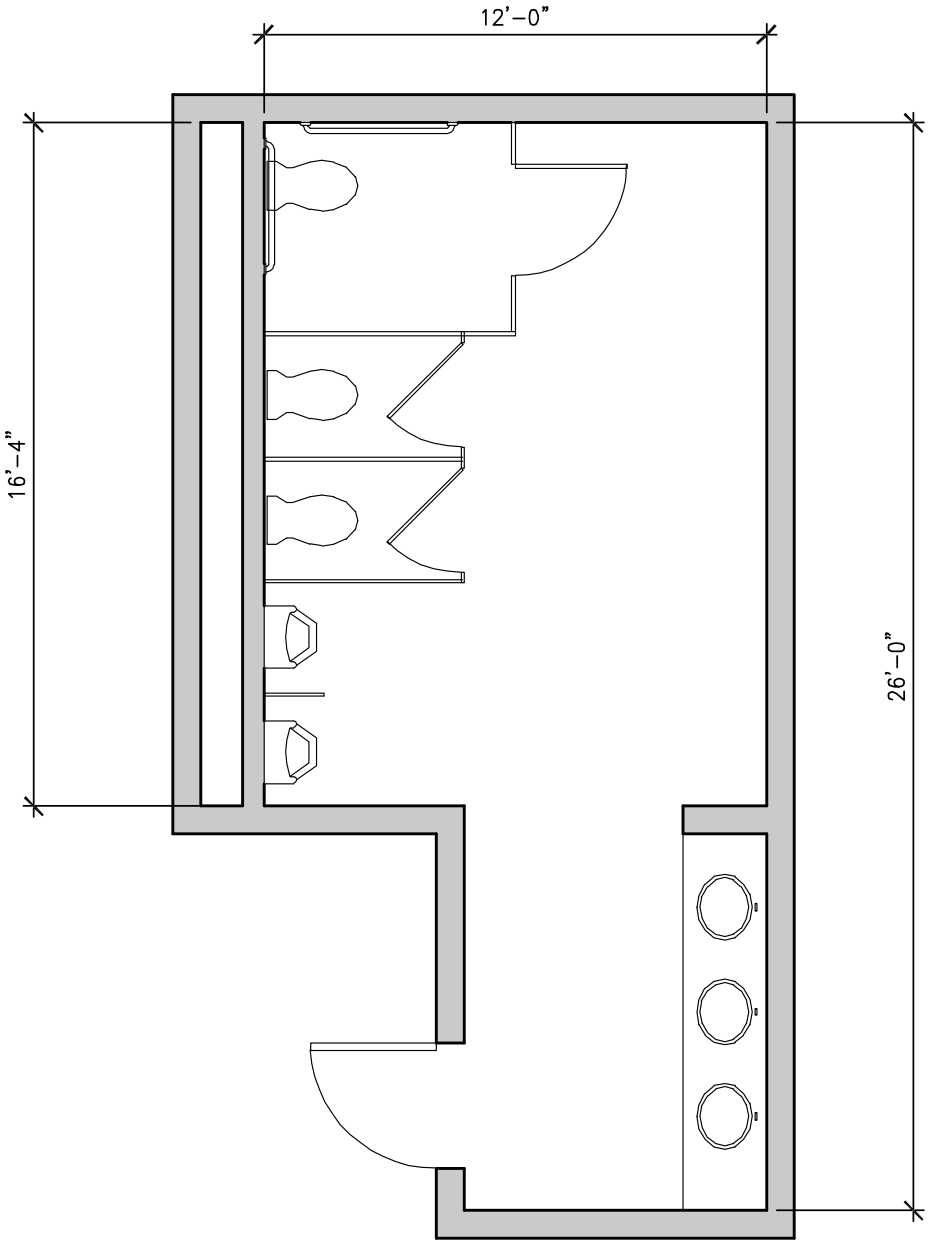
No. 76

PROTOTYPE LAYOUT — MEN'S RESTROOM – 2ND FLOOR

SCALE: 1/4" = 1'-0"



No. 77

ROOM DATA — WOMEN'S RESTROOM – 2ND FLOOR

General Information	Use/Function	Women's Restroom for the 2nd Floor spaces
	Assignable Area	270 square feet
	Capacity	Per Code: 100 sf / occupant = 2.7 occupants
	Key Dimensions	H: 9'-0" W: 12'-0" L: to be determined
	Adjacencies	Men's 2nd Floor Restroom
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Floor mounted, overhead-braced toilet partitions, water closets, lavatory sinks. PA system connected to front control counter
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 10 changes per hour
	Plumbing	Hot and cold water, wall hung water closets, lavatories, floor drains. Water closet flush and sink faucets to be sensor-type. Hose bib for maintenance
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Provision for adding in the future
	Data	Provision for adding in the future
	TV	Provision for adding in the future
	Other Technology	PA system connected to front control counter. Provision for future digital display
FFE	Fixed Equipment	Toilet partitions, toilet accessories (toilet paper holders, seat cover dispensers, paper towel dispensers or hand dryers, trash receptacle, feminine napkin dispenser/disposal, soap dispensers, etc.), lavatory counter with mirror
	Movable Equipment	None

7

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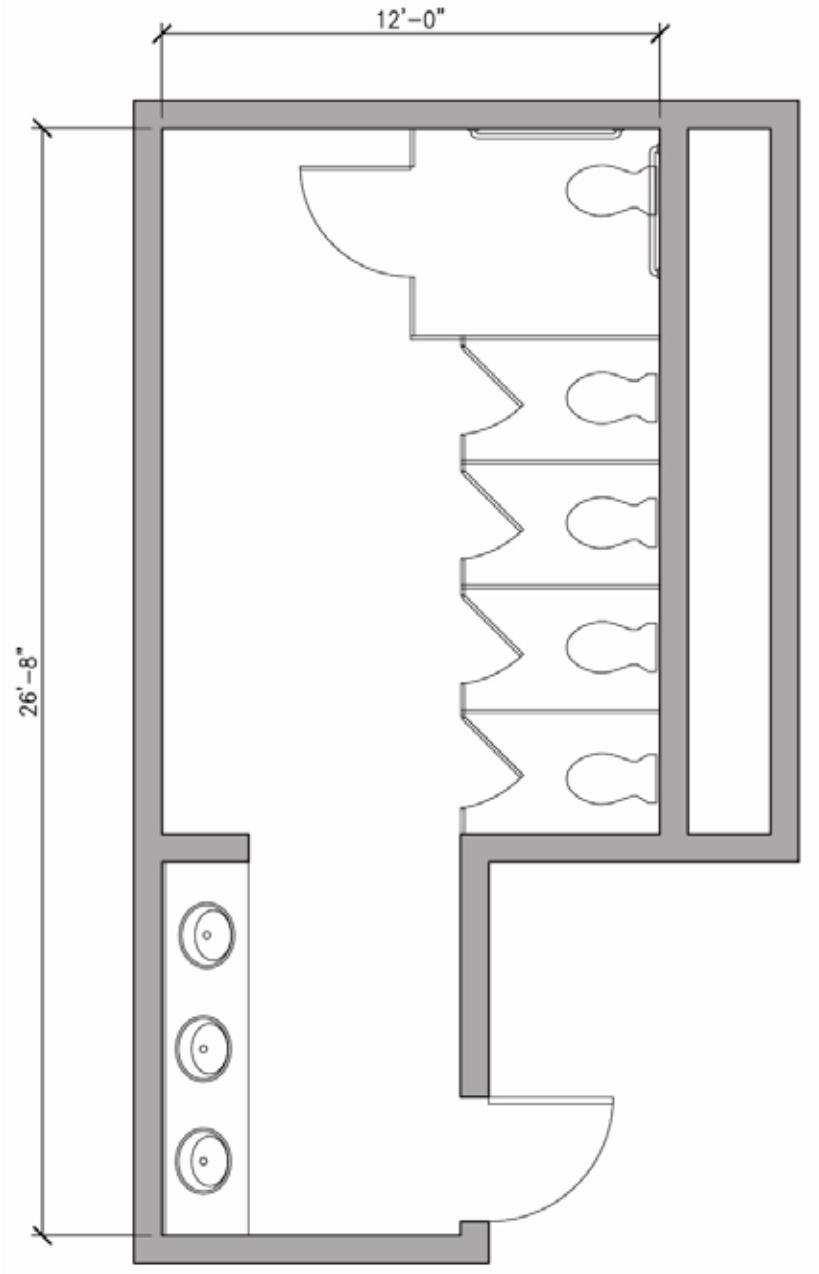
No. 77

PROTOTYPE LAYOUT — WOMEN'S RESTROOM – 2ND FLOOR

SCALE: 1/4" = 1'-0"



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No. 78

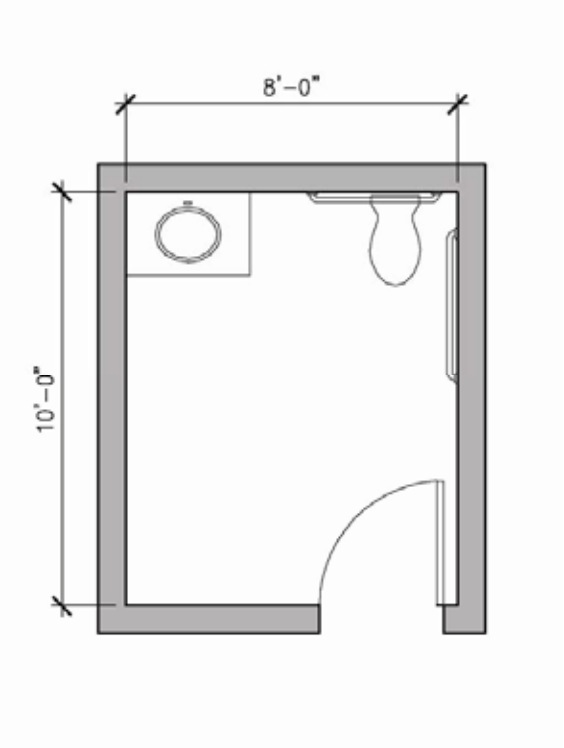
ROOM DATA — UNIVERSAL RESTROOM

General Information	Use/Function	Universal Restroom for the second floor
	Assignable Area	80 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 8'-0" L: 10'-0"
	Adjacencies	Other Outdoor Recreation spaces
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Hollow metal, epoxy paint finish
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Water closet, lavatory sink
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 10 changes per hour (average)
	Plumbing	Hot and cold water, wall hung water closet, counter-mounted lavatory sink, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Toilet accessories (toilet paper holder, seat cover dispenser, trash receptacle, feminine napkin dispenser/disposal, soap dispenser, paper towel dispenser or a hand dryer), lavatory counter with mirror
	Movable Equipment	None

No. 78

PROTOTYPE LAYOUT — ASSITED CHANGE (UNIVERSAL) LOCKER ROOM

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 79

ROOM DATA — RECREATION EQUIPMENT CHECKOUT / STORAGE

General Information	Use/Function	Space for sale and issuing of recreation equipment with attached storage space. Checkout area can also be used as an Office space
	Assignable Area	800 square feet
	Capacity	Per Code: 300 sf / occupant = 2.67 occupants
	Key Dimensions	H: 9'-0" W: 20'-6" L: 39'-0"
	Adjacencies	Close proximity to the Fitness / Weight Room and the Locker Rooms. Laundry accessible directly through this area.
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall, wire mesh partitions in the Storage area
	Ceiling	Acoustical tile in Checkout area, exposed structure in Storage area
	Doors	Solid core wood, metal roll-up counter door
	Natural Light	Optional
	Acoustics	In the walls and at the ceiling
	Special Requirements	Counter for sale and issuing of recreation equipment with wall / cabinets to display equipment in the rear of the sales area. Storage area for equipment behind the sale / issue area. Wire mesh partitions in the Storage area.
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenient outlets at walls and any counters
	Mechanical	Air conditioned
	Plumbing	To be determined
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless. Data may be required for cash register
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Display counters, cabinets, and shelves, storage cabinets
	Movable Equipment	Storage shelves and cabinets if not built-in, cash register, drop safe, chair or stool.

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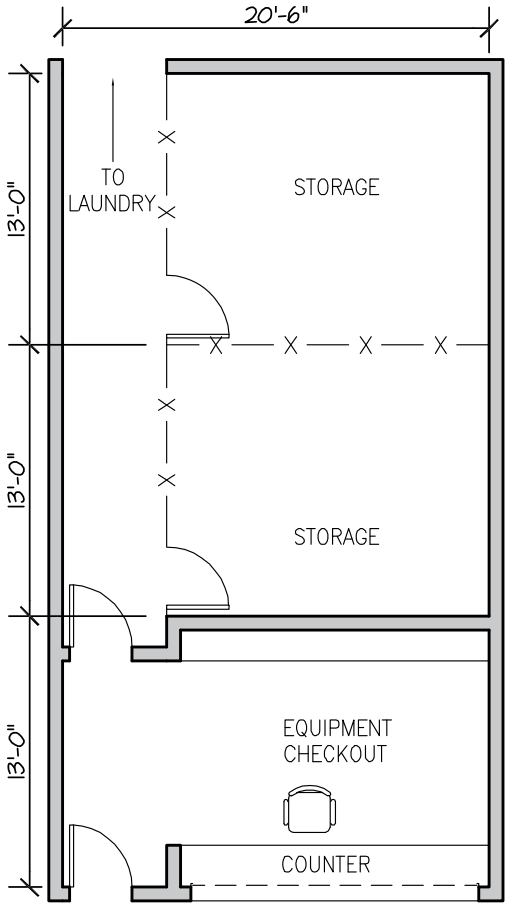
No. 79

PROTOTYPE LAYOUT — RECREATION EQUIPMENT / CHECKOUT / STORAGE

SCALE: 1/8" = 1'-0"



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No. 80

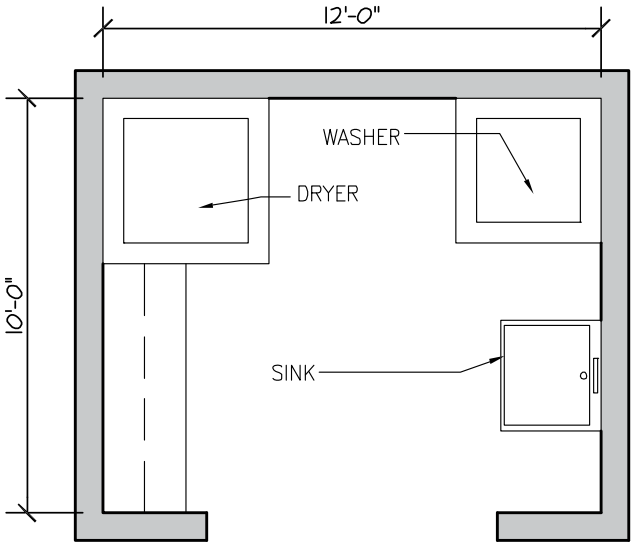
ROOM DATA — LAUNDRY

General Information	Use/Function	Laundry facility for the washing, drying of pieces that require laundering
	Assignable Area	120 square feet
	Capacity	Per Code: 300 sf / occupant = 1 occupant
	Key Dimensions	H: 12'-0" min. W: 10'-0" L: 12'-0"
	Adjacencies	Directly accessible to Recreation Equipment Checkout / Storage
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile or sealed concrete / rubber base
	Walls	Masonry or moisture-resistant drywall, epoxy paint finish
	Ceiling	Exposed structure, or moisture-resistant drywall, epoxy paint finish
	Doors	Solid core wood, if a door is required between the Recreation Equipment Storage and the Laundry
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Extensive ventilation and cooling capabilities, isolated concrete base for washer and dryer, insulated for sound and vibration
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets in the walls, 220 V for the equipment
	Mechanical	Air conditioned, exhaust and dryer vent to the exterior of the building
	Plumbing	Hot and cold water for laundry sink and washer, laundry sink, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	1 heavy-duty commercial washer (60 lb. capacity min.), and 1 commercial dryer (75 lb. capacity min.), countertop for folding
	Movable Equipment	Storage cabinet (may be overhead cabinets)

No. 80

PROTOTYPE LAYOUT — LAUNDRY

SCALE: 1/4" = 1'-0"



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No. 81

ROOM DATA — STUDENT EMPLOYEE WORK SPACE

General Information	Use/Function	Work area / Office for Student Employees
	Assignable Area	300 square feet
	Capacity	Per Code: 100 sf / occupant = 1.8 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 18'-0"
	Adjacencies	Adjacent to Administration Area, the Fitness/ Weight Room, or the Locker Rooms
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Carpet / rubber base
	Walls	Drywall, glass
	Ceiling	Acoustical tile
	Doors	Solid core wood
	Natural Light	Windows
	Acoustics	In the walls and at the ceiling
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	4 telephones, minimum
	Data	4 internet connections, minimum, wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds, counter(s) with overhead shelves, lockers (12" W x 16"D x 30"H half lockers and 15" high quarter lockers)
	Movable Equipment	4 desks if not built-in, 4 desk chairs, lateral file cabinets, 4 computers, printer

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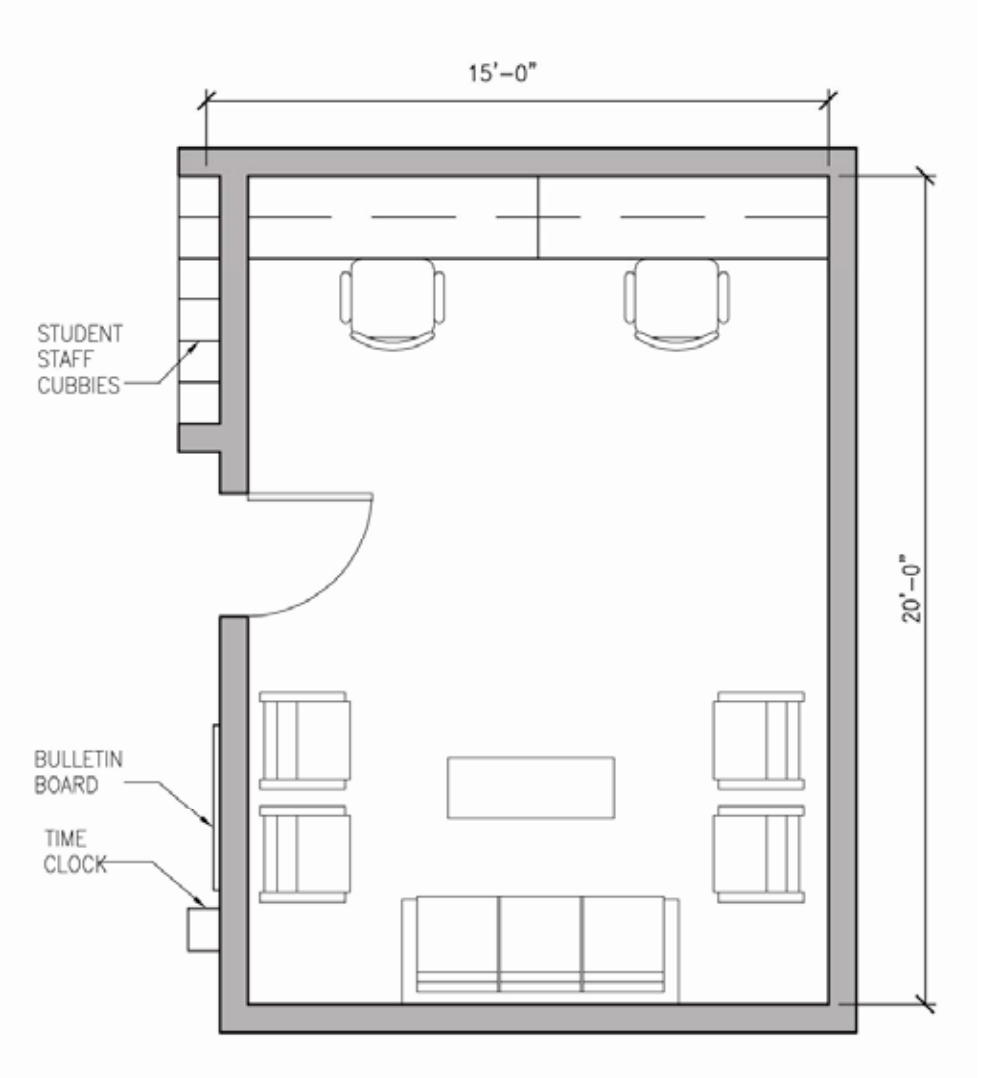
No. 81

PROTOTYPE LAYOUT — STUDENT EMPLOYEES' WORK SPACE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 82

ROOM DATA — MAINTENANCE STORAGE / OFFICE

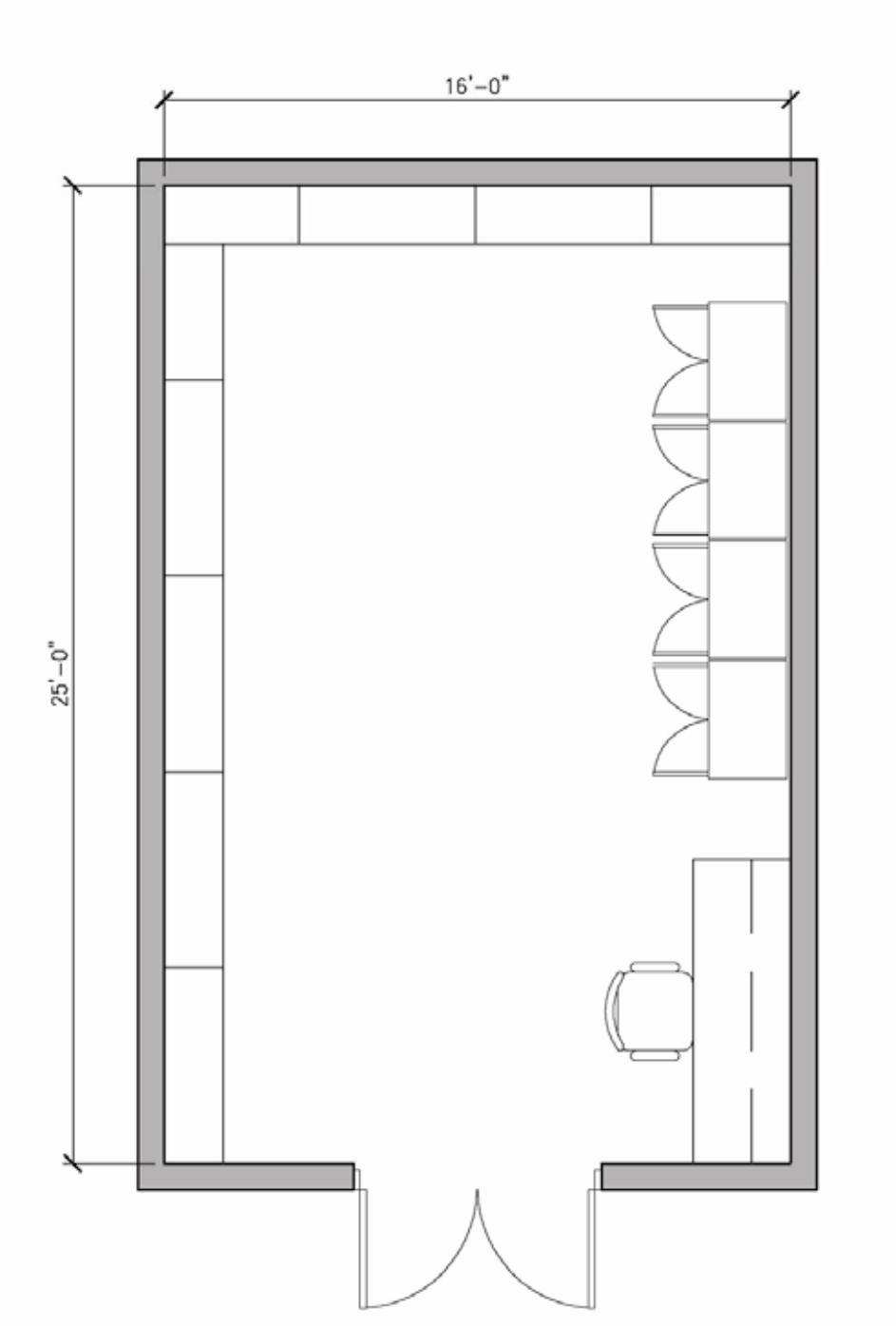
General Information	Use/Function	Storage Space and Office / Work Area for the Maintenance Staff
	Assignable Area	400 square feet
	Capacity	Per Code: 300 sf / occupant = 1.33 occupants
	Key Dimensions	H: 9'- 0" min. W: 16'-0" L: 25'-0"
	Adjacencies	Grounds Maintenance, Custodial space on the 1st Floor
	Access	To be determined
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base, or sealed concrete / rubber base
	Walls	Masonry of drywall
	Ceiling	Exposed structure
	Doors	Solid core wood
	Natural Light	Optional
	Acoustics	In the walls
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls, a few at 220 V
	Mechanical	Air conditioned
	Plumbing	May require a hose bib.
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection / wireless
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Work counter
	Movable Equipment	Work chairs (2), shelving, storage cabinets

CANNONDESIGN | ARCHITECTURAL nexus

No. 82

PROTOTYPE LAYOUT — MAINTENANCE STORAGE / OFFICE

SCALE: 1/4" = 1'-0"



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No. 83

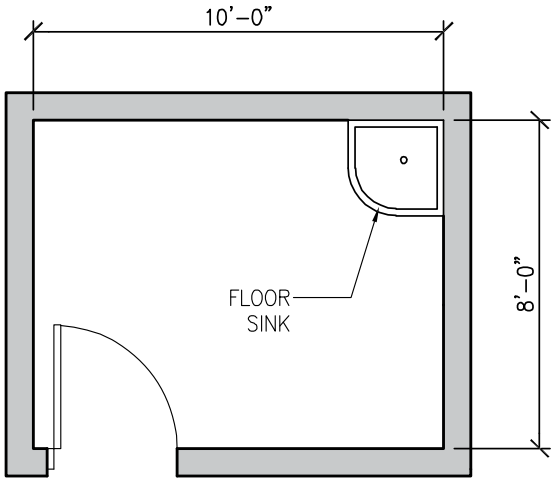
ROOM DATA — CUSTODIAL (DISTRIBUTED)

General Information	Use/Function	Custodial space – one on the 1st Floor, one on the 2nd Floor
	Assignable Area	80 square feet each
	Capacity	Per Code: 300 sf / occupant = 1 occupant for each room
	Key Dimensions	H: 9'-0" min. W: 8'-0" L: 10'-0"
	Adjacencies	To be determined
	Access	To be determined
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile, latex resin, or sealed concrete / rubber base or latex resin base
	Walls	Drywall, masonry, or concrete. Moisture-resistant drywall at the sink. Epoxy paint finish
	Ceiling	Exposed structure
	Doors	Solid core wood
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 40 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	Hot and cold water for the floor mop sink, floor mop sink, floor drain
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Floor mop sink, mop and broom holder
	Movable Equipment	Shelves, storage cabinets

No. 83

PROTOTYPE LAYOUT — CUSTODIAL (DISTRIBUTED - 1 PER FLOOR)

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. 84

ROOM DATA — GROUNDS MAINTENANCE

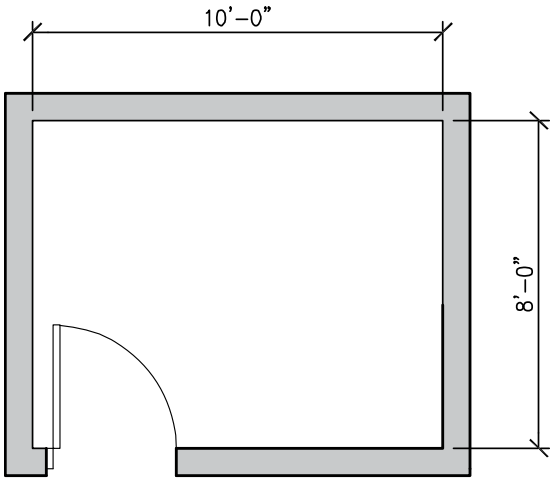
General Information	Use/Function	Space for Grounds Maintenance equipment opened directly to the outside of the building
	Assignable Area	80 square feet each
	Capacity	Per Code: 300 sf / occupant = 1 occupant for each room
	Key Dimensions	H: 9'-0" min. W: 8'-0" L: 10'-0"
	Adjacencies	To be determined
	Access	To be determined
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete / rubber base or no base (depending on wall material)
	Walls	Drywall, masonry, or concrete.
	Ceiling	Exposed structure
	Doors	Hollow metal, double door
	Natural Light	None
	Acoustics	In the walls
	Special Requirements	Accessible directly from the outside of the building
Engineering Systems	Lighting	Fluorescent, 40 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Ventilated, per Code
	Plumbing	Hose bid, if necessary
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined (may require alarm on doors)
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	To be determined
	Movable Equipment	To be determined

No. 84

PROTOTYPE LAYOUT

GROUNDS MAINTENANCE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. OP1

ROOM DATA — POOL FILTRATION

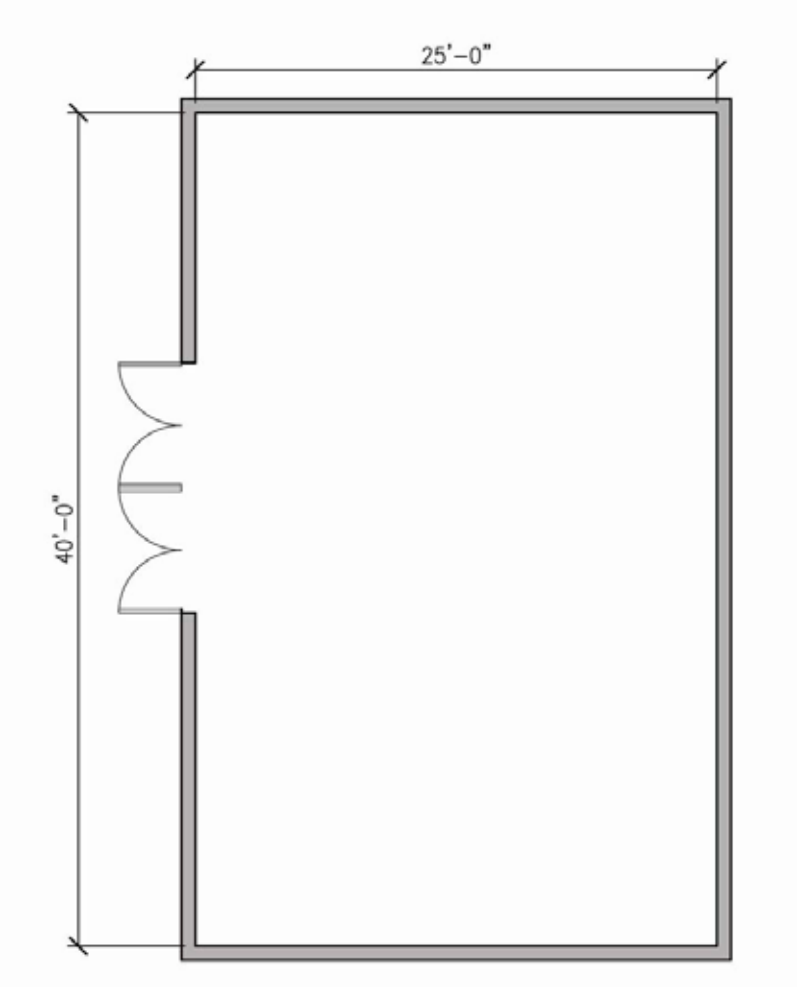
General Information	Use/Function	Location of mechanical / filtration equipment for the Outdoor Pool
	Assignable Area	1,000 square feet
	Capacity	Per Code: 300 sf / occupant = 3.33 occupants
	Key Dimensions	H: 12'-0" min. W: 25'-0" L: 40'-0"
	Adjacencies	Outdoor Pool and Deck, spaces in the Outdoor Pool Building - Pool Storage, Lifeguards' Office, Aquatic Director's Office, Men's and Women's Pool Toilets
	Access	None
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete
	Walls	Masonry, epoxy paint finish
	Ceiling	Exposed structure
	Doors	Hollow metal or stainless steel double doors
	Natural Light	None
	Acoustics	To be determined
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 40 fc
	Electrical	Power for filtration equipment
	Mechanical	Air changes per Code
	Plumbing	Plumbing as required for filtration equipment, emergency eye wash, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	As required for filtration equipment
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Filtration equipment
	Movable Equipment	To be determined

CANNONDESIGN | ARCHITECTURAL nexus

No. OP1

PROTOTYPE LAYOUT — POOL FILTRATION

SCALE: 1/4"



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE POOL FILTRATION ROOM. THE ACTUAL LAYOUT OF THE FILTRATION ROOM WITH THE FILTRATION EQUIPMENT WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT.

CANNONDESIGN | ARCHITECTURAL nexus

No. OP2

ROOM DATA — OUTDOOR POOL STORAGE

General Information	Use/Function	Storage for Outdoor Pool equipment
	Assignable Area	800 square feet
	Capacity	Per Code: 300 sf / occupant = 2.67 occupants
	Key Dimensions	H: 12'-0" min. W: 20'-0" L: 40'-0"
	Adjacencies	Outdoor Pool spaces – Outdoor Pool and Deck, Filtration Room, Lifeguards' Office, Aquatic Director's Office, Men's and Women's Pool Toilets. Important to be located adjacent to the Pool and the Pool Deck so that the lane line reels are easily accessible.
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete
	Walls	Masonry, epoxy paint finish
	Ceiling	Exposed structure
	Doors	Hollow metal or stainless steel double doors (6'-0" to 8'-0" min. width)
	Natural Light	None
	Acoustics	To be determined
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 40 fc
	Electrical	Convenience outlets at the walls, may require both 110 and 220 V
	Mechanical	Air changes per Code
	Plumbing	Hose bid, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection, wireless
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	To be determined
	Movable Equipment	Metal shelving, storage cart for high pressure deck hose, storage reels for lane lines if required, pool vacuum and other pool cleaning equipment

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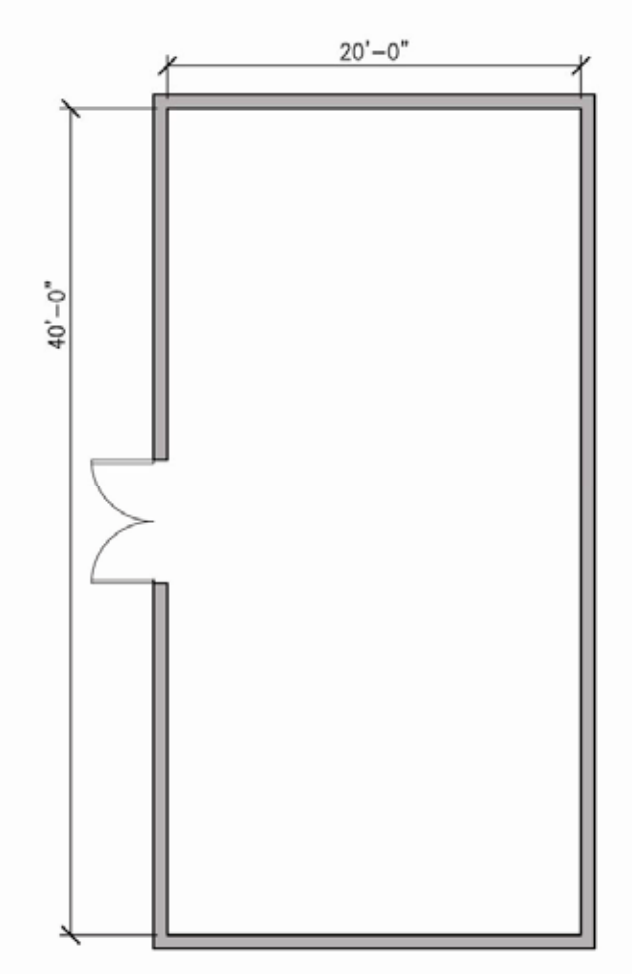
No. OP2

PROTOTYPE LAYOUT — POOL STORAGE

SCALE: 1/4”



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE POOL STORAGE ROOM. THE ACTUAL LAYOUT OF THE STORAGE ROOM WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT.

CANNONDESIGN | ARCHITECTURAL nexus

No. OP3

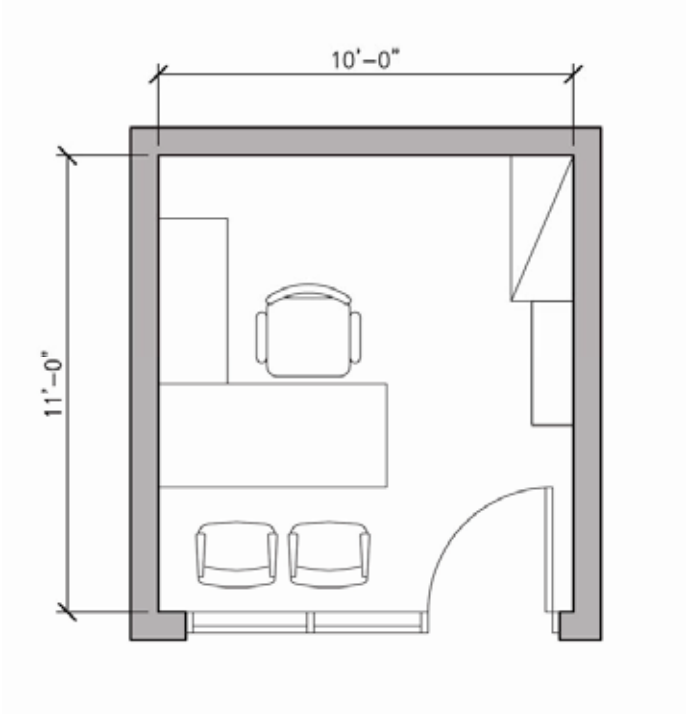
ROOM DATA — AQUATIC DIRECTOR'S OFFICE

General Information	Use/Function	Office space for the Aquatic Director for the Outdoor Pool
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Outdoor Pool and the Pool Deck, Lifeguards' Office
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall with epoxy paint finish, glass
	Ceiling	Drywall with epoxy paint finish, or ceramic coated acoustical tile
	Doors	Hollow metal, glass
	Natural Light	Windows and sidelights
	Acoustics	In the walls and at the ceiling
	Special Requirements	Adjacent to the Pool and the Pool Deck with a clear view from the Office to the Pool.
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection, wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. OP3

PROTOTYPE LAYOUT — AQUATICS COORDINATOR'S OFFICE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. OP4

ROOM DATA — LIFEGUARDS' OFFICE

General Information	Use/Function	Office for the Lifeguards for the Outdoor Pool, space for a cot for emergency situations
	Assignable Area	150 square feet
	Capacity	Per Code: 100 sf / occupant = 1.5 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 15'-0"
	Adjacencies	Pool and the Pool Deck, Aquatics Director's Office
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall with epoxy paint finish, glass
	Ceiling	Drywall with epoxy paint finish, or ceramic coated acoustical tile
	Doors	Hollow metal, glass
	Natural Light	Windows and sidelights.
	Acoustics	In the walls and at the ceiling
	Special Requirements	Adjacent to the Pool and the Pool Deck with a clear view from the Office to the Pool, space to fit a cot in this Office, 4 locker footprints.
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	2 telephone
	Data	2 internet connections, wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds, marker board, bulletin board
	Movable Equipment	2 desks, 2 desk chairs, 2 lateral file cabinets, 2 computers, printer Under counter refrigerator, microwave

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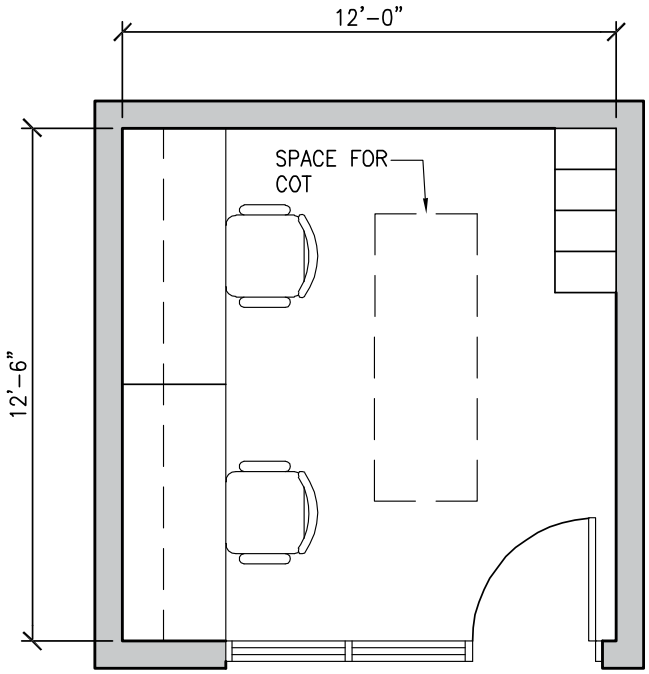
No. OP4

PROTOTYPE LAYOUT — LIFEGUARDS OFFICE

SCALE: 1/4”



CANNONDESIGN | ARCHITECTURAL nexus

No. OP5

ROOM DATA — MEN'S POOL TOILET

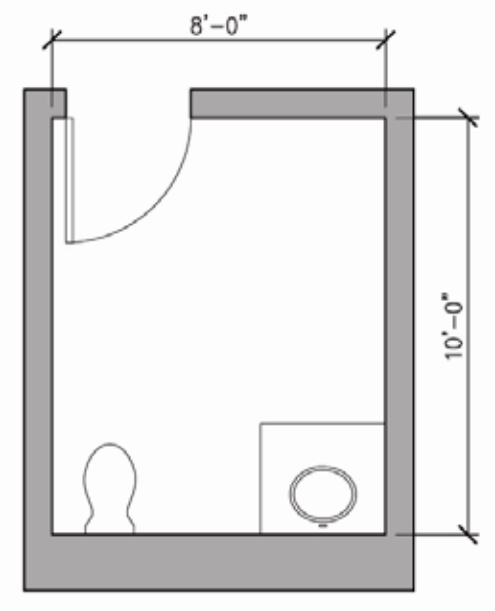
General Information	Use/Function	Men's Toilet for the Outdoor Pool, with direct access to the Pool Deck
	Assignable Area	80 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 8'-0" L: 10'-0"
	Adjacencies	Outdoor Pool and Deck, Women's Pool Toilet
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Hollow metal, epoxy paint finish
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Water closet, lavatory sink
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 15 changes per hour
	Plumbing	Hot and cold water, wall hung water closet, counter-mounted lavatory sink, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Toilet accessories (toilet paper holder, seat cover dispenser, trash receptacle, soap dispenser, paper towel dispenser or a hand dryer), lavatory counter with mirror
	Movable Equipment	None

No. OP5

PROTOTYPE LAYOUT

MEN'S POOL TOILET

SCALE: 1/4"



No. OP6

ROOM DATA — WOMEN'S POOL TOILET

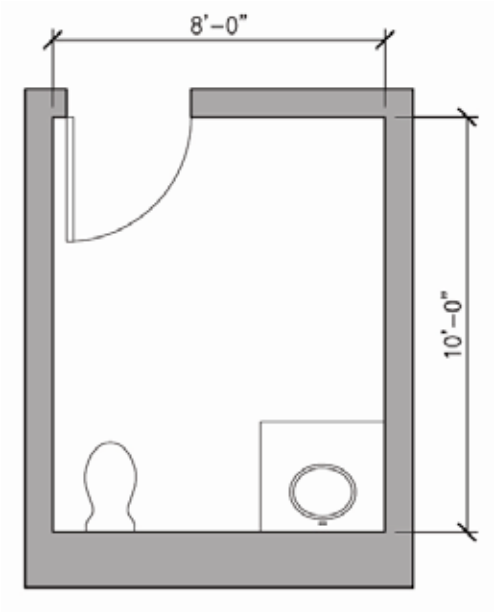
General Information	Use/Function	Women's Toilet for the Outdoor Pool, with direct access to the Outdoor Pool and Deck
	Assignable Area	80 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 8'-0" L: 10'-0"
	Adjacencies	Outdoor Pool and Deck, Men's Pool Toilet
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Hollow metal, epoxy paint finish
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Water closet, lavatory sink
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 15 changes per hour
	Plumbing	Hot and cold water, wall hung water closet, counter-mounted lavatory sink, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Toilet accessories (toilet paper holder, seat cover dispenser, trash receptacle, feminine napkin dispenser/disposal, soap dispenser, paper towel dispenser or a hand dryer), lavatory counter with mirror
	Movable Equipment	None

No. OP6

PROTOTYPE LAYOUT

WOMEN'S POOL TOILET

SCALE: 1/4"



No. OP7

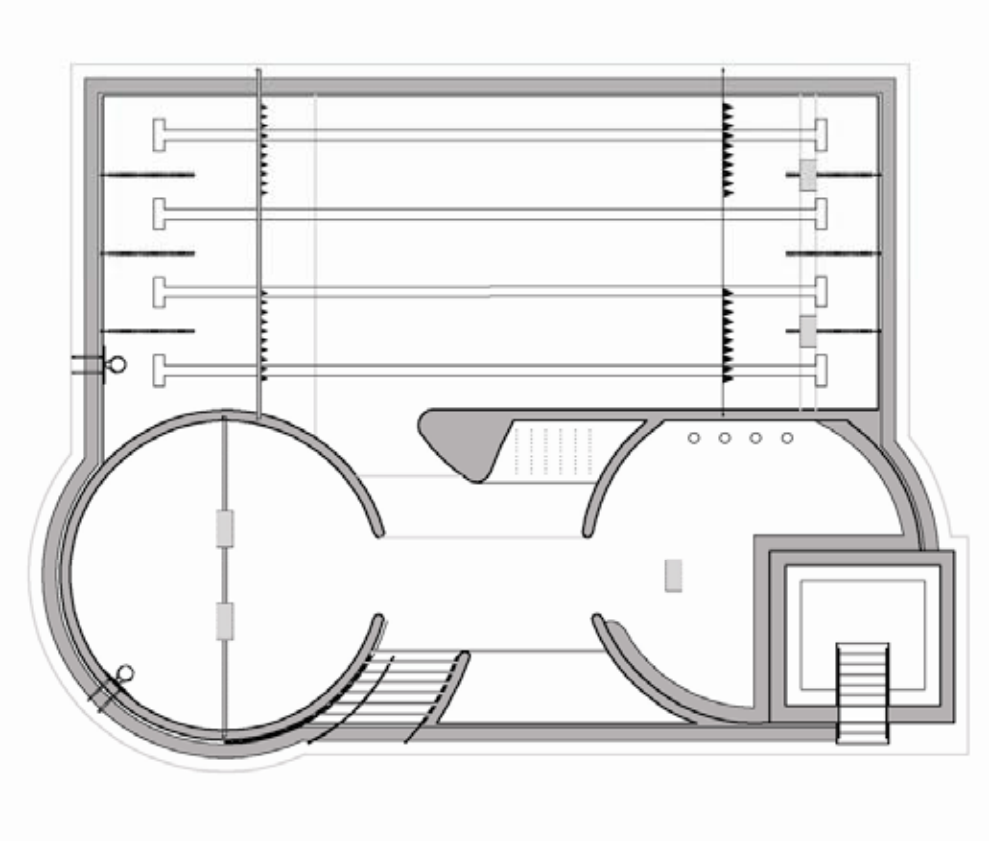
ROOM DATA — OUTDOOR RECREATION POOL AND DECK

General Information	Use/Function	Outdoor Recreation Pool and the Pool Deck area
	Assignable Area	11,600 square feet (Pool: 5,100 square feet, Spa: 225 square feet, Pool Deck: 6,275 square feet)
	Capacity	Per Code: 100 sf / occupant = 116 occupants Occupant load factor for calculating plumbing fixture requirements is 1 occupant for every 15 sf of Pool water surface area
	Key Dimensions	H: not applicable W: 100'-0" L: 116'-0"
	Adjacencies	Pool Filtration, Pool Storage, Aquatic Director's Office, Lifeguards Office, Men's and Women's Pool Toilets, Men's and Women's Locker Rooms
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Ceramic tile for the Pool, Slip-resistant concrete for the Pool Deck
	Walls	10'-0" high security wall / fence: masonry and wrought iron
	Ceiling	None
	Doors	Wrought iron gates. Pool to have a separate controlled access directly from the outside for I.D. verification for individuals bringing in kayaks.
	Natural Light	Not applicable
	Acoustics	Not applicable
	Special Requirements	25 yard long lap area, 6 lanes with 7'-0" dept in half of the lap area for water polo, and 13'-0" depth in one corner for 1 meter diving board, anchors for future 3 meter diving board. Recreation portion of the Pool to have a vortex, bubble couch, underwater benches and a shallow depth area for classes and games. 225 sf Spa. Rim flow gutters All metals in pool area should be non-ferous and appropriately protected from rust
Engineering Systems	Lighting	Lighting in Pool for safety purposes, lighting at the Pool Deck
	Electrical	Convenience outlets at perimeter walls, waterproof covers, 24" above deck
	Mechanical	Not applicable
	Plumbing	Drinking fountains, showers at Pool Deck, hose bibs every 20' at perimeter walls
	Fire Protection	Hose bibs
	Security	Alarms on gates, cameras
Technology	Voice	Telephones
	Data	Internet connection / wireless at Pool Deck
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Sockets, anchors for lane lines, grab rails
	Movable Equipment	Lane lines, lifeguard stands, pool covers and storage reels, portable disabled lift, pool vacuum, pool cleaning nets, water polo nets, water volleyball nets, signage, benches, bulletin boards

No. OP7

PROTOTYPE LAYOUT — OUTDOOR RECREATION POOL AND DECK

SCALE: 1/16”=1’-0”



CANNONDESIGN | ARCHITECTURAL nexus

No. IP1

ROOM DATA — INDOOR RECREATION POOL AND DECK

General Information	Use/Function	Indoor Recreation Pool and the Pool Deck area
	Assignable Area	11,600 square feet (Pool: 5,100 square feet, Spa: 225 square feet, Pool Deck: 6,275 square feet)
	Capacity	Per Code: 100 sf / occupant = 116 occupants Occupant load factor for calculating plumbing fixture requirements is 1 occupant for every 15 sf of Pool water surface area
	Key Dimensions	H: 25'-0" min. W: 100'-0" L: 116'-0"
	Adjacencies	Pool Filtration, Pool Storage, Aquatic Director's Office, Lifeguards Office, Men's and Women's Pool Toilets, Men's and Women's Locker Room
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Ceramic tile for the Pool, Slip-resistant ceramic tile or concrete for the Pool Deck
	Walls	Masonry, epoxy paint finish, possibly with ceramic tile wainscot, glass
	Ceiling	Exposed structure, epoxy paint finish
	Doors	Hollow metal (epoxy paint finish) or stainless steel. Pool to have a separate controlled access directly from the outside for I.D. verification for individuals bringing in kayaks.
	Natural Light	Windows
	Acoustics	At the walls and acoustical metal decking
	Special Requirements	25 yard long lap area, 6 lanes with 7'-0" dept in half of the lap area for water polo, and 13'-0" depth in one corner for 1 meter diving board Recreation portion of the Pool to have a vortex, bubble couch, underwater benches and a shallow depth area for classes and games. 225 sf Spa. Rim flow gutters All metals in pool area should be non-ferous and appropriately protected from rust
Engineering Systems	Lighting	H.I.D. indirect, two levels – 70 fc / 40 fc (40 fc average), clear to 25'-0"
	Electrical	Convenience outlets at walls, waterproof covers, 24" above floor
	Mechanical	Air conditioned, with single zone heating and ventilating with humidity control
	Plumbing	Drinking fountains, showers at Pool Deck, hose bibs every 20' at perimeter walls
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on doors to the outside of the building
Technology	Voice	Telephones
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Sockets, anchors for lane lines, grab rails
	Movable Equipment	Lane lines, lifeguard stands, pool covers and storage reels, portable disabled lift, pool vacuum, pool cleaning nets, water polo nets, water volleyball nets

CANNONDESIGN | ARCHITECTURAL nexus

No. IP1

ROOM DATA		INDOOR RECREATION POOL AND DECK
General Information	Use/Function	Indoor Recreation Pool and the Pool Deck area
	Assignable Area	11,600 square feet (Pool: 5,100 square feet, Spa: 225 square feet, Pool Deck: 6,275 square feet)
	Capacity	Per Code: 100 sf / occupant = 116 occupants Occupant load factor for calculating plumbing fixture requirements is 1 occupant for every 15 sf of Pool water surface area
	Key Dimensions	H: 25'-0" min. W: 100'-0" L: 116'-0"
	Adjacencies	Pool Filtration, Pool Storage, Aquatic Director's Office, Lifeguards Office, Men's and Women's Pool Toilets, Men's and Women's Locker Room
	Access	Disabled
	Occupancy Type	A-3
Finishes/ Treatments	Floor/Base	Ceramic tile for the Pool, Slip-resistant ceramic tile or concrete for the Pool Deck
	Walls	Masonry, epoxy paint finish, possibly with ceramic tile wainscot, glass
	Ceiling	Exposed structure, epoxy paint finish
	Doors	Hollow metal (epoxy paint finish) or stainless steel. Pool to have a separate controlled access directly from the outside for I.D. verification for individuals bringing in kayaks.
	Natural Light	Windows
	Acoustics	At the walls and acoustical metal decking
	Special Requirements	25 yard long lap area, 6 lanes with 7'-0" dept in half of the lap area for water polo, and 13'-0" depth in one corner for 1 meter diving board Recreation portion of the Pool to have a vortex, bubble couch, underwater benches and a shallow depth area for classes and games. 225 sf Spa. Rim flow gutters All metals in pool area should be non-ferous and appropriately protected from rust
Engineering Systems	Lighting	H.I.D. indirect, two levels – 70 fc / 40 fc (40 fc average), clear to 25'-0"
	Electrical	Convenience outlets at walls, waterproof covers, 24" above floor
	Mechanical	Air conditioned, with single zone heating and ventilating with humidity control
	Plumbing	Drinking fountains, showers at Pool Deck, hose bibs every 20' at perimeter walls
	Fire Protection	Fire sprinklers, smoke detectors
	Security	Alarms on doors to the outside of the building
Technology	Voice	Telephones
	Data	Internet connection / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Sockets, anchors for lane lines, grab rails
	Movable Equipment	Lane lines, lifeguard stands, pool covers and storage reels, portable disabled lift, pool vacuum, pool cleaning nets, water polo nets, water volleyball nets

CANNONDESIGN | ARCHITECTURAL nexus

No. IP2

ROOM DATA — POOL FILTRATION

General Information	Use/Function	Location of mechanical / filtration equipment for the Indoor Pool
	Assignable Area	1,000 square feet
	Capacity	Per Code: 300 sf / occupant = 3.33 occupants
	Key Dimensions	H: 12'-0" min. W: 25'-0" L: 40'-0"
	Adjacencies	Indoor Pool spaces – Indoor Pool and Deck, Pool Storage, Lifeguards' Office, Aquatic Director's Office, Men's and Women's Pool Toilets
	Access	None
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete
	Walls	Masonry, epoxy paint finish
	Ceiling	Exposed structure
	Doors	Hollow metal or stainless steel double doors
	Natural Light	None
	Acoustics	To be determined
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 40 fc
	Electrical	Power for filtration equipment
	Mechanical	Air changes per Code
	Plumbing	Plumbing as required for filtration equipment, emergency eye wash, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	As required for filtration equipment
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	Filtration equipment
	Movable Equipment	To be determined

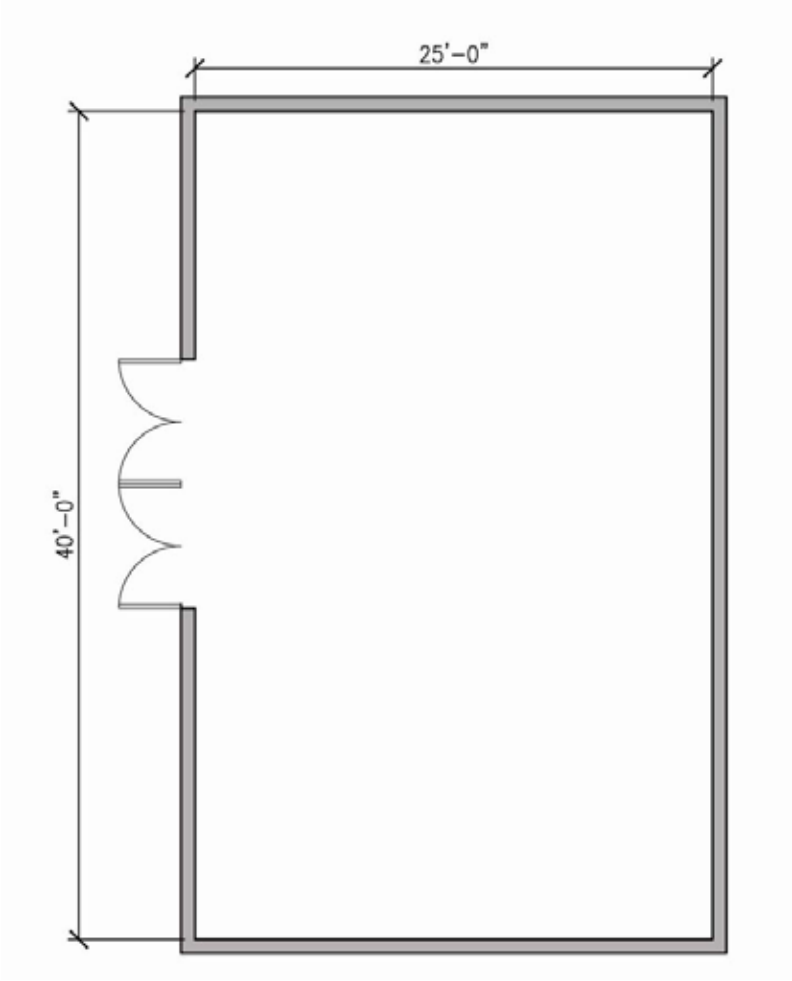
CANNONDESIGN | ARCHITECTURAL nexus

No. IP2

PROTOTYPE LAYOUT

POOL FILTRATION

SCALE: 1/4”



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE POOL FILTRATION ROOM. THE ACTUAL LAYOUT OF THE FILTRATION ROOM WITH THE FILTRATION EQUIPMENT WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT.

CANNONDESIGN | ARCHITECTURAL nexus

No. IP3

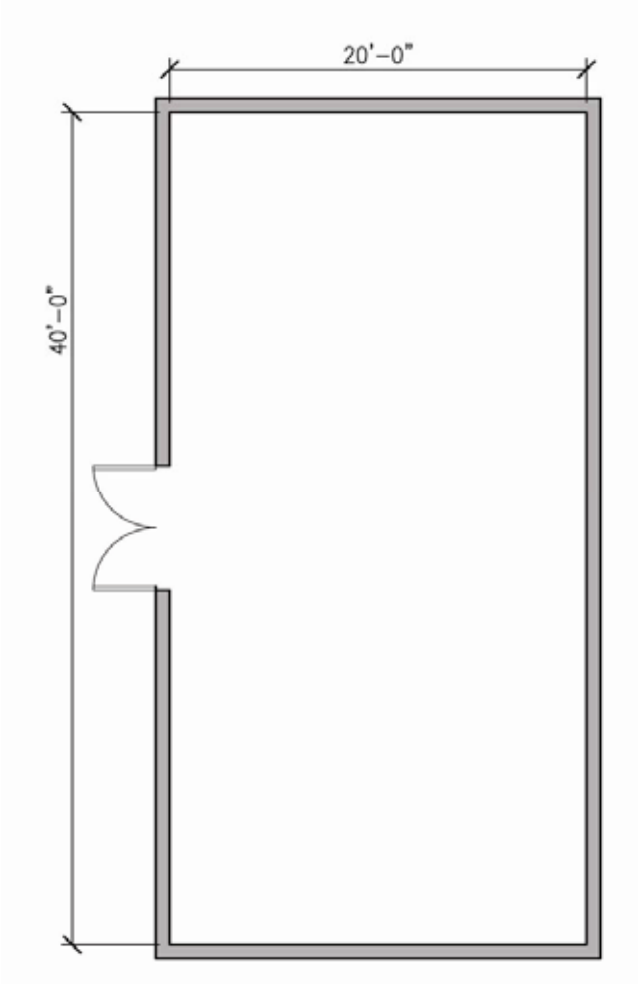
ROOM DATA — INDOOR POOL STORAGE

General Information	Use/Function	Storage for the Indoor Pool equipment
	Assignable Area	800 square feet
	Capacity	Per Code: 300 sf / occupant = 2.67 occupants
	Key Dimensions	H: 12'-0" min. W: 20'-0" L: 40'-0"
	Adjacencies	Indoor Pool spaces – Indoor Pool and Deck, Filtration Room, Lifeguards' Office, Aquatic Director's Office, Men's and Women's Pool Toilets. Important to be located adjacent to the Pool and Pool Deck so that the lane line reels are easily accessible.
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Sealed concrete
	Walls	Masonry, epoxy paint finish
	Ceiling	Exposed structure
	Doors	Hollow metal or stainless steel double doors, or metal roll-up door (6'-0" to 8'-0" min. width)
	Natural Light	None
	Acoustics	To be determined
	Special Requirements	To be determined
Engineering Systems	Lighting	Fluorescent, 40 fc
	Electrical	Convenience outlets at the walls, may require both 110 and 220 V
	Mechanical	Air changes per Code
	Plumbing	Hose bid, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection, wireless
	TV	None
	Other Technology	To be determined
FFE	Fixed Equipment	To be determined
	Movable Equipment	Metal shelving, storage cart for high pressure deck hose, storage reels for lane lines if required, pool vacuum and other pool cleaning equipment

No. IP3

PROTOTYPE LAYOUT — POOL STORAGE

SCALE: 1/4”



NOTE: THIS LAYOUT ONLY REPRESENTS THE POSSIBLE SIZE OF THE POOL STORAGE ROOM. THE ACTUAL LAYOUT OF THE STORAGE ROOM WILL BE FINALIZED DURING THE DESIGN PHASE OF THE PROJECT.

CANNONDESIGN | ARCHITECTURAL nexus

No. IP4

ROOM DATA — AQUATIC DIRECTOR'S OFFICE

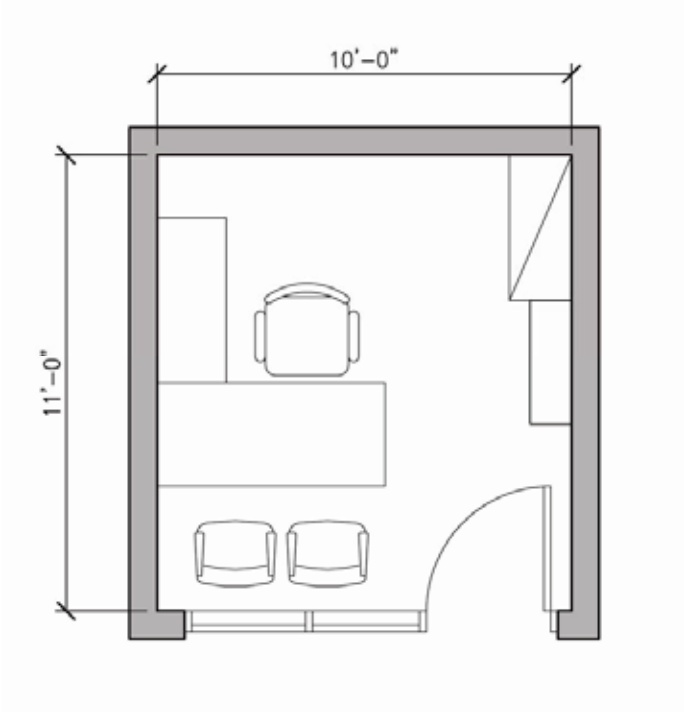
General Information	Use/Function	Office space for the Aquatic Director for the Indoor Pool
	Assignable Area	110 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 10'-0" L: 11'-0"
	Adjacencies	Indoor Pool and the Pool Deck, Lifeguards' Office
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall with epoxy paint finish, glass
	Ceiling	Drywall with epoxy paint finish, or ceramic coated acoustical tile
	Doors	Hollow metal, glass
	Natural Light	Windows and sidelights
	Acoustics	In the walls and at the ceiling
	Special Requirements	Adjacent to the Pool and the Pool Deck with a clear view from the Office to the Pool.
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, thermostat control
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	Telephone
	Data	Internet connection, wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds
	Movable Equipment	Desk, desk chair, 2 guest chairs, lateral file cabinet, bookcase, computer, printer

No. IP4

PROTOTYPE LAYOUT

AQUATICS COORDINATOR'S OFFICE

SCALE: 1/4" = 1'-0"



CANNONDESIGN | ARCHITECTURAL nexus

No. IP5

ROOM DATA — LIFEGUARDS' OFFICE

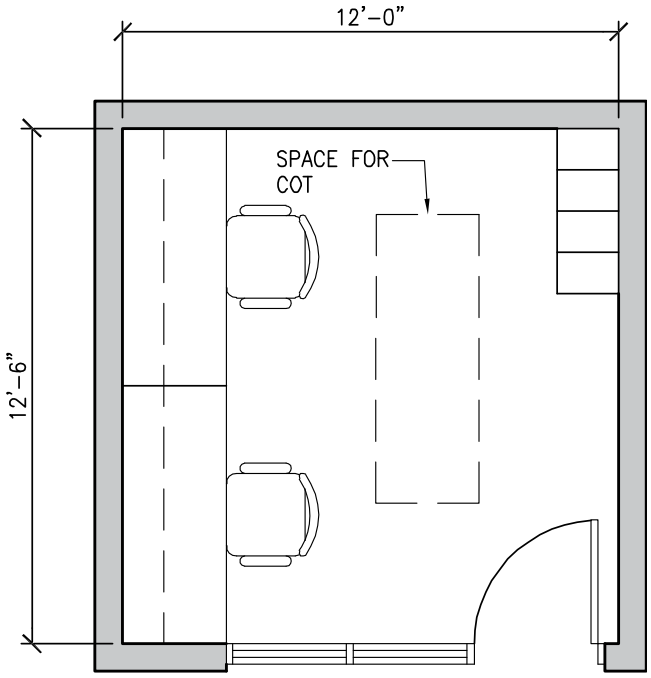
General Information	Use/Function	Office for the Lifeguards for the Indoor Pool, space for a cot for emergency situations
	Assignable Area	150 square feet
	Capacity	Per Code: 100 sf / occupant = 1.5 occupants
	Key Dimensions	H: 9'-0" W: 10'-0" L: 15'-0"
	Adjacencies	Indoor Pool and the Pool Deck, Aquatics Director's Office
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Vinyl composition tile / rubber base
	Walls	Masonry or drywall with epoxy paint finish, glass
	Ceiling	Drywall with epoxy paint finish, or ceramic coated acoustical tile
	Doors	Hollow metal, glass
	Natural Light	Windows and sidelights.
	Acoustics	In the walls and at the ceiling
	Special Requirements	Adjacent to the Pool and the Pool Deck with a clear view from the Office to the Pool. Space to fit a cot in this Office, 4 locker footprints
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned
	Plumbing	None
	Fire Protection	Fire sprinklers, smoke detectors
	Security	To be determined
Technology	Voice	2 telephones
	Data	2 internet connections / wireless
	TV	Cable outlet
	Other Technology	To be determined
FFE	Fixed Equipment	Window blinds, marker board, bulletin board, lockers (12" W. x 16" D. x 60" H. – full height lockers)
	Movable Equipment	2 desks, 2 desk chairs, 2 computers, printer

CANNONDESIGN | ARCHITECTURAL nexus

No. IP5

PROTOTYPE LAYOUT — LIFEGUARDS OFFICE

SCALE: 1/4”



CANNONDESIGN | ARCHITECTURAL nexus

No. IP6

ROOM DATA — MEN'S POOL TOILET

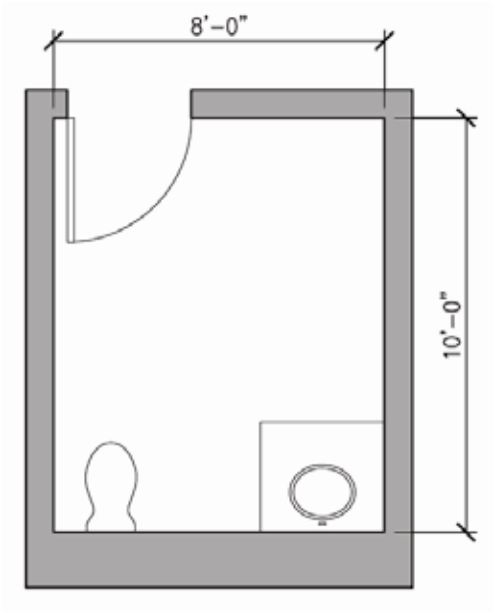
General Information	Use/Function	Men's Toilet for the Indoor Pool, with direct access to the Indoor Pool and Deck
	Assignable Area	80 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 8'-0" L: 10'-0"
	Adjacencies	Indoor Pool and Deck, Women's Pool Toilet
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Hollow metal, epoxy paint finish
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Water closet, lavatory sink
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 15 changes per hour
	Plumbing	Hot and cold water, wall hung water closet, counter-mounted lavatory sink, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Toilet accessories (toilet paper holder, seat cover dispenser, trash receptacle, soap dispenser, paper towel dispenser or a hand dryer), lavatory counter with mirror
	Movable Equipment	None

No. IP6

PROTOTYPE LAYOUT

MEN'S POOL TOILET

SCALE: 1/4"



CANNONDESIGN | ARCHITECTURAL nexus

No. IP7

ROOM DATA — WOMEN'S POOL TOILET

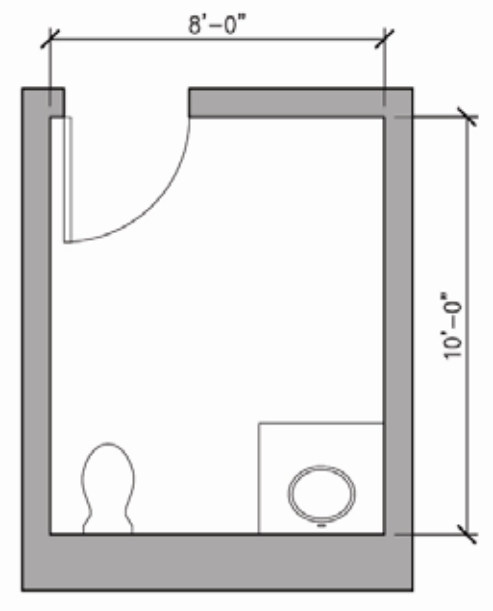
General Information	Use/Function	Women's Toilet for the Indoor Pool, with direct access to the Indoor Pool and Deck
	Assignable Area	80 square feet
	Capacity	Per Code: 100 sf / occupant = 1 occupant
	Key Dimensions	H: 9'-0" W: 8'-0" L: 10'-0"
	Adjacencies	Indoor Pool and Deck, Men's Pool Toilet
	Access	Disabled
	Occupancy Type	B
Finishes/ Treatments	Floor/Base	Ceramic tile, slip-resistant finish / unglazed ceramic tile base
	Walls	Ceramic tile
	Ceiling	Moisture-resistant drywall, epoxy paint finish
	Doors	Hollow metal, epoxy paint finish
	Natural Light	None
	Acoustics	In the walls and at the ceiling
	Special Requirements	Water closet, lavatory sink
Engineering Systems	Lighting	Fluorescent, 50 fc
	Electrical	Convenience outlets at the walls
	Mechanical	Air conditioned, 100% exhaust, 15 changes per hour
	Plumbing	Hot and cold water, wall hung water closet, counter-mounted lavatory sink, floor drains
	Fire Protection	Fire sprinklers, smoke detectors
	Security	None
Technology	Voice	None
	Data	None
	TV	None
	Other Technology	None
FFE	Fixed Equipment	Toilet accessories (toilet paper holder, seat cover dispenser, truash receptacle, feminine napkin dispenser/disposal, soap dispenser, paper towel dispenser or a hand dryer), lavatory counter with mirror
	Movable Equipment	None

No. IP7

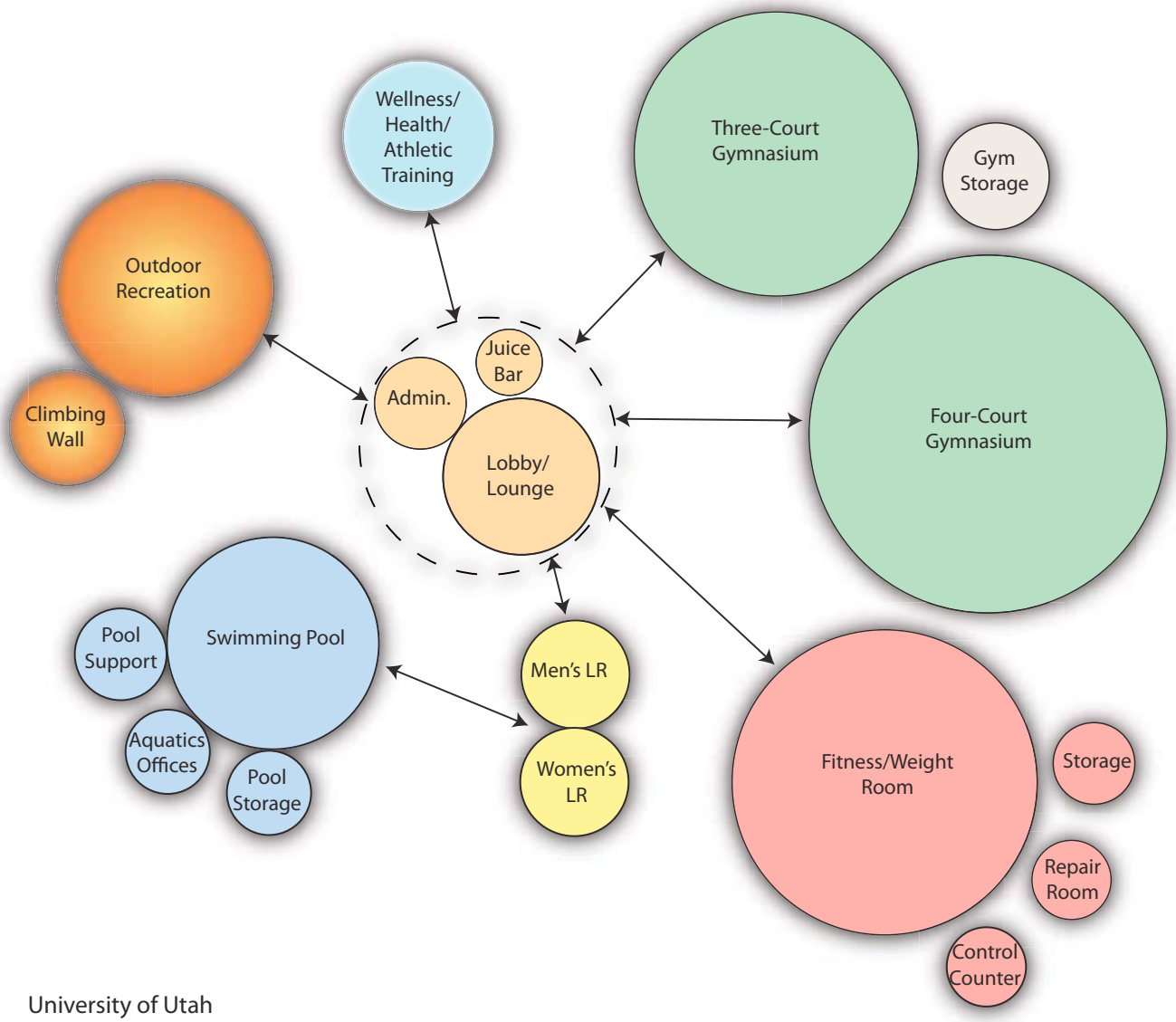
PROTOTYPE LAYOUT

WOMEN'S POOL TOILET

SCALE: 1/4"



4.4 ADJACENCIES AND RELATIONSHIPS



University of Utah
Student Life Center
Adjacency Diagram

For detailed adjacency requirements refer to the Room Data Sheets

Table of Contents - Section 5

5.0 Project Cost Estimate

5.1 GENERAL PROJECT COST ESTIMATE

The following Project Cost Estimate for the University of Utah Student Life Center was prepared by Parametrix, Inc.

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

January 9, 2009
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PROGRAM CONSTRUCTION COST ESTIMATE

MASTER SUMMARY

SECTION	AREA	UNIT	COST/SF	COST
CURRENT CONSTRUCTION COST:				
SITE	160,000	SF	14.34	$2,293,661
BUILDING (MODEL B)	145,000	GSF	251.13	$36,413,444
BRIDGE CONNECTION	6,000	GSF	330.00	$1,980,000
TOTAL (Construction)				$40,687,105
BUILDING OPTIONS:				
Model A: Delete (1) Gym - Deduct	(7,700)	GSF	(240.00)	($1,848,000)
Model C: Add (1) Gym - Add	9,100	GSF	240.00	$2,184,000

NOTES: Costs are for Construction only.
Costs are Based on a Competitive Bid Basis.
Costs are Based on Current Costs and Do Not Included Inflation.
Costs are for a LEED Silver Facility.

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

January 9, 2009
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PROGRAM CONSTRUCTION COST ESTIMATE

SITE SUMMARY

SECTION		AREA	UNIT	COST/SF	COST
SITE		160,000	SF	11.75	$1,880,050
SUB TOTAL		160,000	SF	11.75	$1,880,050
CONTRACTOR GENERAL CONDITIONS	6.0%			0.71	$112,803
CONTRACTOR BONDING	1.0%			0.12	$18,801
CONTRACTOR OVERHEAD & PROFIT	5.0%			0.59	$94,003
SUB TOTAL		160,000	SF	13.16	$2,105,656
DESIGN CONTINGENCY, ALLOW	10.0%			1.18	$188,005
TOTAL (Construction)		160,000	SF	14.34	$2,293,661

NOTES: Costs are for Construction only.
Costs are Based on a Competitive Bid Basis.
Costs are Based on Current Costs and Do Not Included Inflation.
Costs are for a LEED Silver Facility.

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

January 9, 2009
Page 3

PROGRAM CONSTRUCTION COST ESTIMATE

SITE DETAIL

SECTION	QUANTITY	UNIT	UNIT COST	COST
SITE				
ON-SITE				
Demolition, Existing Building	9,000	SF	15.00	$135,000
Demo, Clear & Grade	160,000	SF	2.00	$320,000
Cut & Fill Excavation	23,700	CY	7.50	$177,750
Landscaping & Irrigation	65,000	SF	5.00	$325,000
Concrete Retaining Wall	230	LF	280.00	$64,400
Concrete Paving	13,000	SF	8.00	$104,000
Site Specialties / Amenities	1	LS	50,000	$50,000
Sanitary Sewer Line	450	LF	80.00	$36,000
Storm Drain Detention Bio Swale	5,500	CF	12.00	$66,000
Fire Line w/ 4 Hydrants	1,100	LF	90.00	$99,000
Culinary Water Line	80	LF	60.00	$4,800
Chilled Water Line	80	LF	175.00	$14,000
High Temp Hot Water Line	80	LF	525.00	$42,000

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

January 9, 2009
Page 4

PROGRAM CONSTRUCTION COST ESTIMATE

SITE DETAIL

SECTION		QUANTITY	UNIT	UNIT COST	COST
SITE - Continued					
ON-SITE - Continued					
Remove Power / Telecom Ductbank		1,700	LF	25.00	$42,500
Power Ductbank w/ 1 Manhole		640	LF	225.00	$144,000
Telecom Ductbank		1,340	LF	90.00	$120,600
High Voltage Switch		1	EA	40,000	$40,000
Transformer		2	EA	30,000	$60,000
Site Lighting		1	LS	35,000	$35,000
				11.75	**$1,880,050**
SUB TOTAL		**160,000**	**SF**	**11.75**	**$1,880,050**
CONTRACTOR GENERAL CONDITIONS	**6.0%**			**0.71**	**$112,803**
CONTRACTOR BONDING	**1.0%**			**0.12**	**$18,801**
CONTRACTOR OVERHEAD & PROFIT	**5.0%**			**0.59**	**$94,003**
SUB TOTAL		**160,000**	**SF**	**13.16**	**$2,105,656**
DESIGN CONTINGENCY, ALLOW	**10.0%**			**1.18**	**$188,005**
TOTAL (Construction)		**160,000**	**SF**	**14.34**	**$2,293,661**

NOTES: Costs are for Construction only.
Costs are Based on a Competitive Bid Basis.
Costs are Based on Current Costs and Do Not Included Inflation.
Costs are for a LEED Silver Facility.

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING SUMMARY (MODEL B)

SECTION		AREA	UNIT	COST/SF	COST
ARCHITECTURAL		145,000	GSF	99.63	$14,446,520
STRUCTURAL		145,000	GSF	51.87	$7,521,140
MECHANICAL		145,000	GSF	32.62	$4,729,725
ELECTRICAL		145,000	GSF	21.72	$3,149,700
SUB TOTAL		145,000	GSF	205.84	$29,847,085
CONTRACTOR GENERAL CONDITIONS	6.0%				$1,790,825
CONTRACTOR BONDING	1.0%				$298,471
CONTRACTOR OVERHEAD & PROFIT	5.0%				$1,492,354
SUB TOTAL		145,000	GSF	230.54	$33,428,735
DESIGN CONTINGENCY, ALLOW	10.0%				$2,984,709
TOTAL (Construction)		145,000	GSF	251.13	$36,413,444

NOTES: Costs are for Construction only.
Costs are Based on a Competitive Bid Basis.
Costs are Based on Current Costs and Do Not Included Inflation.
Costs are for a LEED Silver Facility.

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

January 9, 2009
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PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING DETAIL (MODEL B)

SECTION	QUANTITY	UNIT	UNIT COST	COST
ARCHITECTURAL				
SITE				
Outdoor Rec Area / Pool Deck	14,200	SF	25.00	$355,000
			2.45	**$355,000**
ROOF				
Membrane Roofing System, Rigid Insul & Flashings	82,500	SF	10.00	$825,000
Skylight System	1,200	SF	90.00	$108,000
			6.43	**$933,000**
EXTERIOR WALLS				
Foundation Waterproofing w/ Rigid Insul	20,400	SF	7.50	$153,000
Brick Veneer, Metal Studs, Batt Insul & Gypsum Bd	69,400	SF	33.00	$2,290,200
Metal Panels, Metal Studs, Batt Insul & Gypsum Bd	6,940	SF	48.00	$333,120
			19.15	**$2,776,320**
INTERIOR WALLS				
Metal Studs, Sound Insul & Gypsum Board	94,250	SF	9.00	$848,250
			5.85	**$848,250**

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STUDENT LIFE CENTER

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PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING DETAIL (MODEL B)

SECTION	QUANTITY	UNIT	UNIT COST	COST
ARCHITECTURAL - Continued				
DOORS AND WINDOWS				
Aluminum Windows / Curtainwall w/ Glass	19,100	SF	70.00	$1,337,000
Sun Shading Devices	3,420	SF	75.00	$256,500
Man Doors w/ Hardware	145	LEAF	1,600	$232,000
			12.59	**$1,825,500**
FINISHES				
Floor Finishes	133,400	SF	11.00	$1,467,400
Wall Finishes	409,100	SF	2.00	$818,200
Ceiling Finishes	133,400	SF	5.00	$667,000
			20.36	**$2,952,600**
SPECIALTIES				
Cabinets & Casework	600	LF	300.00	$180,000
Operable Walls	10,250	SF	45.00	$461,250
Acoustical Provisions	1	LS	300,000	$300,000
Bath / Locker Accessories	1	LS	175,000	$175,000
Misc Specialties	133,400	SF	1.50	$200,100
			9.08	**$1,316,350**

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

January 9, 2009
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PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING DETAIL (MODEL B)

SECTION	QUANTITY	UNIT	UNIT COST	COST
ARCHITECTURAL - Continued				
EQUIPMENT / SPECIAL CONSTRUCTION				
Juice / Sandwich Bar	1	LS	65,000	$65,000
Rock Climbing Wall	1	LS	300,000	$300,000
Basketball Backstops / Misc Equipment	1	LS	100,000	$100,000
Elevated Jogging Track	6,850	SF	70.00	$479,500
Swimming Pool w/ Spa (Exterior)	11,600	SF	200.00	$2,320,000
			22.51	**$3,264,500**
CONVEYING SYSTEM				
Elevator, 3 Stop / 2,500 LB	1	EA	75,000	$75,000
Elevator, 2 Stop / 5,000 LB	1	EA	100,000	$100,000
			1.21	**$175,000**

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STUDENT LIFE CENTER

January 9, 2009
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PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING DETAIL (MODEL B)

SECTION	QUANTITY	UNIT	UNIT COST	COST
STRUCTURAL				
FOUNDATION				
Concrete Footings w/ Reinforcing	920	CY	485.00	$446,200
Concrete Foundation Wall w/ Reinforcing	25,200	SF	24.00	$604,800
Structural Fill, Footings	5,520	CY	27.00	$149,040
Excavation and Backfill, Foundation	13,800	CY	22.00	$303,600
			10.37	**$1,503,640**
FLOORS				
Concrete Slab on Grade	82,500	SF	5.50	$453,750
Steel Structure, Decking & Concrete Slab on Deck	44,050	SF	31.00	$1,365,550
Steel Pan Stairs w/ Railings	11	FLT	23,500	$258,500
			14.33	**$2,077,800**
COLUMNS				
Steel Columns / Bracing	133,400	SF	3.00	$400,200
			2.76	**$400,200**

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STUDENT LIFE CENTER

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PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING DETAIL (MODEL B)

SECTION	QUANTITY	UNIT	UNIT COST	COST
STRUCTURAL - Continued				
ROOF				
Steel Structure & Decking	82,500	SF	19.00	$1,567,500
			10.81	**$1,567,500**
INTERIOR WALLS				
CMU Interior Walls	123,250	SF	16.00	$1,972,000
			13.60	**$1,972,000**

UNIVERSITY OF UTAH
STUDENT LIFE CENTER

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PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING DETAIL (MODEL B)

SECTION	QUANTITY	UNIT	UNIT COST	COST
MECHANICAL				
FIRE PROTECTION				
Fire Sprinkler System	133,400	SF	3.25	$433,550
			2.99	**$433,550**
PLUMBING				
Plumbing Fixtures w/ Piping	240	EA	3,300	$792,000
Plumbing Equipment & Specialties	133,400	SF	1.50	$200,100
			6.84	**$992,100**
HVAC				
HVAC Ductwork & Insulation	93,400	LB	7.00	$653,800
HVAC Grilles, Registers & Diffusers	445	EA	185.00	$82,325
HVAC Equipment	133,400	SF	10.00	$1,334,000
HVAC Piping & Specialties	133,400	SF	3.50	$466,900
HVAC Control System	133,400	SF	3.75	$500,250
HVAC Test & Balance / Commissioning	133,400	SF	2.00	$266,800
			22.79	**$3,304,075**

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STUDENT LIFE CENTER

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PROGRAM CONSTRUCTION COST ESTIMATE

BUILDING DETAIL (MODEL B)

SECTION		QUANTITY	UNIT	UNIT COST	COST
ELECTRICAL					
ELECTRICAL					
Light Fixtures		1,480	EA	335.00	$495,800
Devices (Outlets & Switches)		1,620	EA	120.00	$194,400
Gear (Panels & Transformers)		133,400	SF	2.50	$333,500
Emergency Generator		1	EA	125,000	$125,000
Feeder & Branch Circuitry		133,400	SF	5.25	$700,350
Lighting Control System		133,400	SF	1.00	$133,400
Fire Alarm System		133,400	SF	1.75	$233,450
Security System		133,400	SF	2.25	$300,150
Audio / Visual System		133,400	SF	3.75	$500,250
Electrical Specialties		133,400	SF	1.00	$133,400
Voice / Data System					In Other Budget
				21.72	**$3,149,700**
SUB TOTAL		**145,000**	**GSF**	**205.84**	**$29,847,085**
CONTRACTOR GENERAL CONDITIONS	**6.0%**				**$1,790,825**
CONTRACTOR BONDING	**1.0%**				**$298,471**
CONTRACTOR OVERHEAD & PROFIT	**5.0%**				**$1,492,354**
SUB TOTAL		**145,000**	**GSF**	**230.54**	**$33,428,735**
DESIGN CONTINGENCY, ALLOW	**10.0%**				**$2,984,709**
TOTAL (Construction)		**145,000**	**GSF**	**251.13**	**$36,413,444**

NOTES: Costs are for Construction only.
Costs are Based on a Competitive Bid Basis.
Costs are Based on Current Costs and Do Not Included Inflation.
Costs are for a LEED Silver Facility.

5.2 COMPARISON PROJECT COST SUMMARIES

The University at Utah
Student Life Center

Today's ENR rate																						
Area Factor=Salt Lake City			Boston University																			
			Rec Center		Hockey Arena		Osh Kosh		University of Alabama		Adelphi University		University of ME		GMU Multi & Locker Addition	
			GSF=	319,185	GSF=	281,781	GSF=	102,100	GSF=	148,290	GSF=	80,410	GSF=	86,000	GSF=	26,942
			Escalation Rate=	34%	Escalation Rate=	34%	Escalation Rate=	14%	Escalation Rate=	33%	Escalation Rate=	10%	Escalation Rate=	10%	Escalation Rate=	14%
			Area Adj. Rate=	-100%	Area Adj. Rate=	-100%	Area Adj. Rate=	-100%	Area Adj. Rate=	-100%	Area Adj. Rate=	-100%	Area Adj. Rate=	-100%	Area Adj. Rate=	-100%
CSI Division	Total CV	CV	Adjusted CV	$/SF	Adjusted CV	$/SF	Adjusted CV	$/SF	Adjusted CV	$/SF	Adjusted CV	$/SF	Adjusted CV	$/SF	Adjusted CV	$/SF
01 General Require. & CM Fee	$ 23,231,589	$10,454,215	$ 3,592,716	$ 11.26	$ 4,071,745	$ 12.76	$ 182,637	$ 1.79	$ 519,072	$ 3.50	$ 187,145	$ 2.18	$ 251,396	$ 2.92	$ 117,257	$ 4.35
03 Concrete & Precast	$ 21,916,584	$ 7,334,000	$ 2,520,417	$ 7.90	$ 2,724,208	$ 8.53	$ 280,860	$ 2.75	$ 583,551	$ 3.94	$ 176,308	$ 2.05	$ 176,308	$ 2.05	$ 71,820	$ 2.67
04 Masonry	$ 6,983,335	$ 2,546,000	$ 874,963	$ 2.74	$ 1,283,234	$ 4.02	$ 151,200	$ 1.48	$ 474,445	$ 3.20	$ 60,509	$ 0.70	$ 450,215	$ 5.24	$ 53,743	$ 1.99
05 Metals	$ 25,619,562	$14,201,000	$ 4,880,344	$ 15.29	$ 5,735,031	$ 17.97	$ 209,896	$ 2.06	$ 828,433	$ 5.59	$ 310,370	$ 3.61	$ 213,336	$ 2.48	$ 61,071	$ 2.27
06 Wood and Plastics	$ 3,307,786	$ 1,206,000	$ 414,456	$ 1.30	$ 639,899	$ 2.00	$ 81,119	$ 0.79	$ 72,617	$ 0.49	$ 19,668	$ 0.23	$ 85,394	$ 0.99	$ 14,535	$ 0.54
07 Thermal & Moisture	$ 9,511,383	$ 4,684,000	$ 1,609,713	$ 5.04	$ 1,610,641	$ 5.05	$ 129,360	$ 1.27	$ 264,122	$ 1.78	$ 117,104	$ 1.36	$ 121,820	$ 1.42	$ 79,936	$ 2.97
08 Doors & Windows	$ 5,262,391	$ 3,131,000	$ 1,076,006	$ 3.37	$ 968,439	$ 3.03	$ 128,520	$ 1.26	$ 483,711	$ 3.26	$ 144,097	$ 1.68	$ 88,003	$ 1.02	$ 33,223	$ 1.23
09 Finishes	$ 11,525,510	$ 6,525,000	$ 2,242,394	$ 7.03	$ 2,087,746	$ 6.54	$ 446,334	$ 4.37	$ 554,049	$ 3.74	$ 367,567	$ 4.27	$ 181,024	$ 2.10	$ 70,110	$ 2.60
10 Specialties	$ 1,721,900	$ 528,000	$ 181,454	$ 0.57	$ 129,561	$ 0.41	$ 29,190	$ 0.29	$ 94,101	$ 0.63	$ 89,509	$ 1.04	$ 15,052	$ 0.18	$ 5,008	$ 0.19
11 Equipment	$ 4,139,300	$ 1,848,000	$ 635,087	$ 1.99	$ 1,025,831	$ 3.21	$ 42,871	$ 0.42	$ 130,839	$ 0.88	$ 37,228	$ 0.43	$ 5,118	$ 0.06	$ -	$ -
12 Furnishings	$ 1,039,250	$ 131,000	$ 45,020	$ 0.14	$ 276,648	$ 0.87	$ 24,803	$ 0.24	$ 15,056	$ 0.10	$ 34,218	$ 0.40	$ -	$ -	$ -	$ -
13 Special Constructions	$ 5,195,006	$ 3,705,000	$ 1,273,268	$ 3.99	$ 681,138	$ 2.13	$ 1,722	$ 0.02	$ 325,889	$ 2.20	$ -	$ -	$ 76,765	$ 0.89	$ 24,429	$ 0.91
14 Elevators	$ 1,285,000	$ 316,000	$ 108,597	$ 0.34	$ 344,349	$ 1.08	$ 29,194	$ 0.29	$ 16,363	$ 0.11	$ 15,052	$ 0.18	$ 6,422	$ 0.07	$ 11,678	$ 0.43
15 HVAC & Controls	$ 18,186,864	$ 9,954,000	$ 3,420,811	$ 10.72	$ 3,459,301	$ 10.84	$ 293,708	$ 2.88	$ 1,062,683	$ 7.17	$ 451,156	$ 5.25	$ 197,882	$ 2.30	$ 117,483	$ 4.36
15 Plumbing	$ 3,918,874	$ 1,697,000	$ 583,194	$ 1.83	$ 839,223	$ 2.63	$ 59,714	$ 0.58	$ 156,149	$ 1.05	$ 109,578	$ 1.27	$ 50,173	$ 0.58	$ 50,481	$ 1.87
15 Fire Protection	$ 13,914,572	$ 940,000	$ 2,466,462	$ 7.73	$ 476,315	$ 1.49	$ 23,750	$ 0.23	$ 134,944	$ 0.91	$ 59,806	$ 0.70	$ 13,547	$ 0.16	$ 93,962	$ 3.49
16 Electrical	$ 2,683,680	$ 7,177,000	$ 323,042	$ 1.01	$ 3,134,885	$ 9.82	$ 217,143	$ 2.13	$ 518,088	$ 3.49	$ 267,121	$ 3.11	$ 108,675	$ 1.26	$ 81,294	$ 3.02
Estimating Cont. Adj.-10%							$ -	$ -	$ 201,086	$ 1.36	$ -	$ -	$ -	$ -	$ -	$ -
Sub Total-Bldg. Cost	$159,442,586	$76,377,215	$ 26,247,944	$ 82	$ 29,488,194	$ 92	$ 2,332,020	$ 23	$ 6,435,198	$ 43	$ 2,446,436	$ 28	$ 2,041,130	$ 24	$ 886,029	$ 33
02 Sitework	$ 17,621,192	$ 7,929,536	$ 2,725,080	$ 8.54	$ 3,330,653	$ 10.43	$ 911,586	$ 8.93	$ 287,095	$ 1.94	$ 543,600	$ 6.32	$ 543,600	$ 6.32	$ 543,600	$ 20.18
Total Construction Cost	$177,063,778	$84,306,751	$ 28,973,024	$ 91	$ 32,818,847	$ 103	$ 3,243,606	$ 32	$ 6,722,293	$ 45	$ 2,990,036	$ 35	$ 2,584,730	$ 30	$ 1,429,629	$ 53

Total Project Cost

* Adjusted Construction Value = Bid Date results adjusted to represent Salt Lake City in today's dollars.

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6.0 Appendix

6.1 SOILS REPORT

The following report was prepared by Western Technologies, Inc. under a separate contract held by the University of Utah.

GEOTECHNICAL EVALUATION
PROPOSED STUDENT LIFE BUILDING
UNIVERSITY OF UTAH
SALT LAKE CITY, UTAH

WT JOB NO. 2138JT096

Western Technologies Inc.
The Quality People
Since 1955

SALT LAKE CITY – UTAH
420 West Lawndale Drive
Salt Lake City, Utah 84115-2917
(801) 972-3650 • fax 972-3653

Prepared for:

University of Utah Campus Design and Construction

December 9, 2008

REGISTERED PROFESSIONAL ENGINEER
No. 343872
ROBERT EDWARD WENZEL, JR.
STATE OF UTAH

Robert E. Wenzel, Jr., P.E.
Geotechnical Engineer

Warren D. Clyde, P.E.
Principal

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Since 1955

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Salt Lake City, Utah 84115-2917
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December 9, 2008

University of Utah Campus Design and Construction
1795 East South Campus Drive, Room 201
Salt Lake City, Utah 84112-9403

Attn: Mr. Michael Beck, A.I.A
Project Manager

Re: Geotechnical Evaluation
Proposed Student Life Building
University of Utah
Salt Lake City, Utah

WT Job No. 2138JT096

Western Technologies, Inc. (WT) has completed the geotechnical evaluation for the proposed Student Life Building to be located at the University of Utah in Salt Lake City, Utah. This study was performed in general accordance with our proposal number 2138PT234, dated October 6, 2008. The results of our evaluation, including the boring location diagram, boring logs, laboratory test results, and geotechnical recommendations are attached.

We appreciate being of service to you in the geotechnical engineering phase of this project and are prepared to assist you during the construction phases as well. If design conditions change, or if you have any questions concerning this report or any of our materials testing, special inspection, or consulting services, please do not hesitate to contact us. We look forward to working with you on future projects.

Sincerely,
WESTERN TECHNOLOGIES INC.
Geotechnical Engineering Services

Robert E. Wenzel, Jr., P.E.
Geotechnical Engineer

Copies to: Addressee (5)

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GEOTECHNICAL EVALUATION
PROPOSED STUDENT LIFE BUILDING
UNIVERSITY OF UTAH
SALT LAKE CITY, UTAH

WT JOB NO. 2138JT096

1.0 PURPOSE

This report contains the results of our geotechnical evaluation for the proposed Student Life Building to be located at the University of Utah in Salt Lake City, Utah. The purpose of these services is to provide information and recommendations regarding:

- Foundation design parameters, including footing types, depths, allowable bearing capacities, and estimated settlements
- Lateral earth pressures
- Earthwork, including site preparation, fill placement, and suitability of existing soils for fill materials
- Drainage
- Pavements
- Seismic considerations
- Corrosivity
- Excavation conditions
- Cut and fill slopes
- Slabs-on-grade
- Groundwater
- Geologic hazards

Our services included obtaining information on site conditions, performing field and laboratory testing, performing engineering analyses, providing recommendations for use in foundation, floor slab, and on-site pavement design, and presenting earthwork guidelines. Results of the field exploration, field tests, and laboratory tests are presented in the Appendices.

2.0 PROJECT DESCRIPTION

Based on information provided by Mr. Kenner Kingston, Nexus, Inc. and Mr. Jeff Miller, Reaveley Engineers, on October 2, 2008, the proposed student life building will consist of a high bay, one story section and a two story section building. The high bay, one story section will be constructed with a slab-on-grade floor using steel frame construction. The two story section will be slab on grade for the lower floor with the second floor elevation to be at the level of the existing grade of the dance building to the east. In addition, the loads are based upon the assumption that a swimming pool will not be

located in the structure. Maximum column loads are estimated by Reaveley Engineers to be 280 Kips, however, this estimated load will vary. For our report purposes, WT assumed the maximum wall and column loads to be 8 to 14 klf and 280 to 300 kips, respectively. We anticipate no extraordinary slab-on-grade criteria. On-site asphalt or Portland cement concrete paved areas for service driveways and rigid pavement sections for loading/unloading and dumpster areas will be constructed. Any off-site improvements have not been included as part of this evaluation. Should any of our information or assumptions not be correct, the Client will notify WT immediately.

3.0 SCOPE OF SERVICES

3.1 Field Exploration

Six (6) borings were drilled to depths ranging from 13.5 to 70.5 feet below existing grade in the proposed building area. The borings were at the approximate locations shown on the attached Boring Location Diagram. A field log was prepared for each boring. These logs contain visual classifications of the materials encountered during drilling as well as interpolation of the subsurface conditions between samples. Final logs, included in Appendix A, represent our interpretation of the field logs and may include modifications based on laboratory observations and tests of the field samples. The final logs describe the materials encountered, their thicknesses, and the locations where samples were obtained.

The Unified Soil Classification System was used to classify soils. The soil classification symbols appear on the boring logs and are briefly described in Appendix A. Local and regional geologic characteristics were used to estimate the seismic design criteria and evaluate geologic hazards.

3.2 Laboratory Analyses

Laboratory analyses were performed on representative soil samples to aid in material classification and to estimate pertinent engineering properties of the on-site soils for preparation of this report. Testing was performed in general accordance with applicable ASTM test methods. The following tests were performed and the results are presented in Appendix B.

- Water Content
- Dry Density
- Gradation
- Plasticity
- Minus #200 Sieve
- Soluble Chlorides Content
- Consolidation

3.3 Analyses and Report

Analyses were performed and this report was prepared for the exclusive purpose of providing geotechnical engineering and/or testing information and recommendations. The scope of services for this project does not include, either specifically or by implication, any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such contamination, other studies should be undertaken. We are available to discuss the scope of such studies with you.

This geotechnical engineering report includes a description of the project, a discussion of the field and laboratory testing programs, a discussion of the subsurface conditions, and design recommendations as required to satisfy the purpose previously described.

4.0 SITE CONDITIONS

4.1 Surface

At the time of our exploration, the site was being used as an existing dance building and softball field. The existing dance building was a two-story wood framed building located on the east side of the proposed building footprint. The softball field consisted of a masonry call box building and concrete dugouts with chainlink fence surrounding the field. The far west side of the proposed building was landscaped grass. The ground surface was primarily flat but sloped downward from the dance building to the softball field with a drop of approximately 10 feet and then is flat across the softball field to the west end of the site. At the west end the site drops another 10 to 15 feet down to a sidewalk. Site drainage trended to the north and west as sheet surface flow. Other site features include numerous underground power, sewer, water, gas and phone lines through out the building area.

4.2 Subsurface

As presented on the Logs of the Borings, surface soils consisted of 4 to 15 feet of clayey sand and sandy clay with gravel fill. This fill was in a loose to medium dense condition and was deepest at the west end of the site, where the softball field had been raised and leveled. Soils below the fill consisted of interlayered sands, gravels and sandy clay layers with intermittant cobbles and boulders to the total depth expolored of 70.5 feet. The granular soils were medium dense to very dense and the clay was firm to hard.

4.3 Groundwater

Groundwater *was not* encountered at the time of exploration to the total depth explored of 70.5 feet. These observations represent the groundwater conditions at the time of measurements and may not be indicative of other times. Groundwater levels can be expected to fluctuate with

varying seasonal and weather conditions, groundwater withdrawal and recharge, local irrigation practices, and future development.

4.4 Geology and Geologic Hazards

The site is located on the eastern slope of the Wasatch Mountains of the central Wasatch Front Range section of the Middle Rocky Mountains Province. The Wasatch Range mountains trend north-south and include broad alluvial valley bottoms and low hills in the north, and rugged mountains cut by deep valleys in the south. The site is located on Quaternary Provo Formation and Younger Lake Bottom Sediments and Bonneville and Alpine Formations, which consists of clays, silts, and sands (Utah Geological Survey, 1983). The general area is bounded by the Wasatch Mountains to the east and the Great Salt Lake to the west.

The site is located within a north-south trending belt of seismicity known as the Intermountain Seismic Belt. Several fault lines are located east and west of the site. The nearest map faults are approximately ¼-miles to the west, in the East Bench Fault Zone. Although this area has not experienced a large earthquake in historic times, it is possible that the maximum credible earthquake that can be generated would have a moment magnitude of 7.0 or greater. According to the Utah Geological Survey Map, *Ground-Shaking Map for a Magnitude 7.0 Earthquake on the Wasatch Fault, Salt Lake City, Utah – Metropolitan Area*, 2002, accelerations of 0.8g to 0.9g could be expected for a magnitude 7.0 earthquake. The Salt Lake County Public Works – Planning Department map, *Surface Rupture and Liquefaction Potential Special Study Areas, Salt Lake City, Utah*, 1995, rates the site as having a "very low" liquefaction potential. Surface rupture is not anticipated at the site.

5.0 GEOTECHNICAL PROPERTIES & ANALYSIS

5.1 Laboratory Tests

Laboratory test results (see Appendix B) indicate that native subsoils near shallow foundation level exhibit low compressibility at existing water contents. Slight collapse was measured when the water content is increased. This is likely due to sample disturbance of the sandy soil.

Near-surface soils are of nil to low plasticity. These soils typically exhibit low expansion potential when recompacted, confined by loads approximating floor loads and saturated. Slabs-on-grade supported on recompacted native soils have a low potential for heaving if the water content of the soil increases.

5.2 Field Tests

Native subsoils near shallow foundation level exhibited moderate to high resistance to penetration using the standard penetration test method (ASTM D1586) and Ring-lined barrel sampling

(ASTM D3550). These soils correlate to have moderate to high bearing capacity in their present condition.

6.0 RECOMMENDATIONS

6.1 General

Recommendations contained in this report are based on our understanding of the project criteria described in Section 2.0, Project Description, and the assumption that the soil and subsurface conditions are those disclosed by the borings. Others may change the plans, final elevations, number and type of structures, foundation loads, and floor levels during design or construction. Substantially different subsurface conditions from those described herein may be encountered or become known. Any changes in the project criteria or subsurface conditions shall be brought to our attention in writing.

6.2 Design Considerations

Existing fill soils were found to be 4 to 15 feet thick from the east to west side of the site. These soils are considered as undocumented fill and should not be used to support the proposed building. The fill soils should be removed and the foundations placed upon the native gravel or sand soils. Based upon the preliminary building location and grading, it appears that most of the fill will be removed for the building excavation. However, once final grading plans are developed the Client should carefully review amount of fill that may remain below the structure with the Geotechnical Engineer. If the existing fill is located below foundations and slabs, it should be removed and replaced with engineered fill. The existing fill may be used as engineered fill provided it meets the requirements of engineered fill as specified in Section 4.8 Materials and is approved by Western Technolgies. However, based upon our observations, the existing fill is most likely unsuitable for re-use under footings, but may be acceptable below slabs and as structure backfill material. The engineered fill placed below footings must be of uniform gradation to provide even bearing capacity for the structure.

Dense native soils were encountered in the borings at shallow foundation level, however the type and consistency of the native soils at shallow foundation level ranged from loose to very dense sands or stiff to hard clay. Additionally, cobble and boulders will be encountered and high column loads are predicted for interior spot footings. These conditions may result in unacceptable total and differential settlement amounts. Therefore, a minimum over-excavation and replacement is recommended to ensure footings are placed upon a uniform bearing surface and mitigate unacceptable settlement potentials.

The dense soils and oversized materials, greater than three inches, could present construction difficulties for foundation, utility trenches and other excavations. In cut areas and excavations,

exposed oversized materials should be removed and wasted. In fill areas, the upper 3 feet below bottom of footings should be reasonably free of oversized materials.

Additionally, existing fill soils may also be located adjacent to or under the existing buildings. Due to access restraints, WT could not sample soils next to the building. After demolition and removal of the foundations, additional fill soils may have to be overexcavated to suitable native soils prior to foundation construction. Therefore, WT should be contacted to observe foundation soils prior to concrete placement to determine compliance with the soils report.

6.3 Foundations

The proposed structure can be supported by conventional shallow spread footing type foundations bearing on properly prepared compacted engineered fill. The depth and lateral extent of the engineered fill is presented in Section 7.4 of this report.

Alternative footing depths and allowable bearing capacities are presented in the following tabulation:

Footing Depth Below Finished Grade (ft)*	Allowable Bearing Capacity (psf)**
1.0 interior	2500
2.5 exterior	2500

* Finished grade is the lowest adjacent grade for exterior footings for frost protection and floor level for interior footings.

** Allowable bearing capacities assume fulfillment of **Earthwork** recommendations.

The allowable bearing capacities apply to dead loads plus design live load conditions. The allowable bearing capacity may be increased by one-third when considering total loads that include wind or seismic. Recommended minimum widths of column and wall footings are 48 inches and 36 inches, respectively.

Thickened slab sections can be used to support interior partitions, provided that:

- loads do not exceed 900 plf,
- thickened sections have a minimum width of 12 inches, and
- thickness and reinforcement are consistent with structural requirements.

We anticipate that total differential settlement of the proposed structure, supported as recommended, should be less than 1 inch and ¾-inch, respectively. Additional foundation movements could occur if water from any source infiltrates the foundation soils. Therefore,

proper drainage should be provided in the final design and during and post construction.

All footings, stem walls, and masonry walls should be reinforced to reduce the potential for distress caused by differential foundation movements. The use of joints at openings or other discontinuities in masonry walls is recommended.

We recommend that the geotechnical engineer or his representative observe the footing excavations before reinforcing steel and concrete are placed. This observation is to assess whether the soils exposed are similar to those anticipated for support of the footings. Any soft, loose or unacceptable soils should be undercut to suitable materials and backfilled with approved fill materials or lean concrete. Soil backfill should be properly compacted.

6.4 Lateral Design Criteria

Lateral loads may be resisted by concrete interface friction and by passive resistance. For shallow foundations bearing on properly compacted fill at this site, we recommend the following lateral resistance criteria:

- Coefficient of Friction..... 0.35
- Passive Pressure.....300 psf/ft

The frictional resistance and the passive pressure may be combined without reduction in determining the total lateral resistance.

6.4.1 Earth Retaining Structures

a. Unrestrained Structures

Earth retaining structures less than 20 feet in height, above any free water surface, with level backfill and no surcharge loads may be designed using the equivalent fluid pressure method. Recommended equivalent fluid pressures and coefficients of base friction are:

- Active:
  - Undisturbed subsoil ..... 35 psf/ft
  - Compacted granular backfill ..... 30 psf/ft
  - Compacted site soils backfill..... 30 psf/ft
- Passive:
  - Shallow wall footings ..... 300 psf/ft
  - Shallow column footings ..... 350 psf/ft
- Coefficient of base friction 0.35*

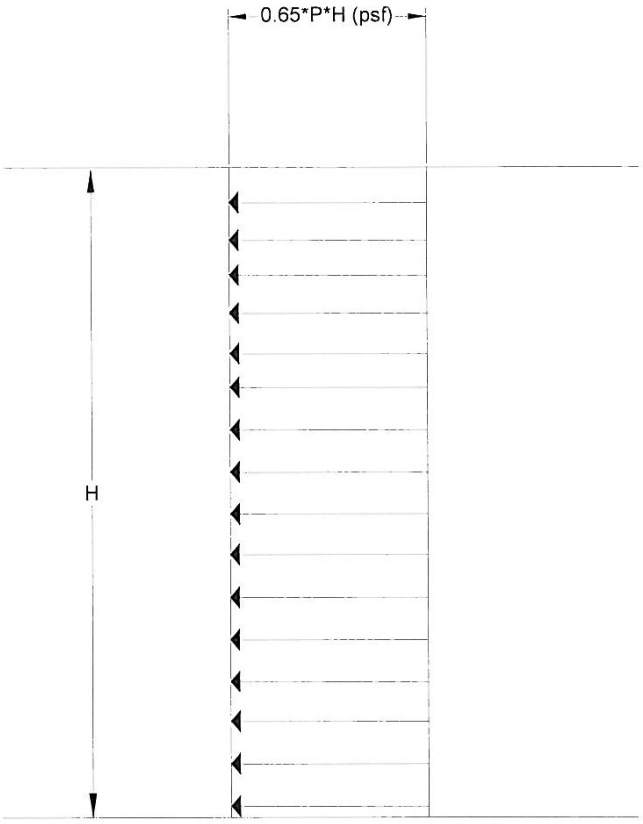
*The coefficient of base friction should be reduced to 0.30 when used in conjunction with passive pressure.

b. Restrained Structures

Where the design includes restrained elements less than 20 feet in height, the following pressures are recommended:

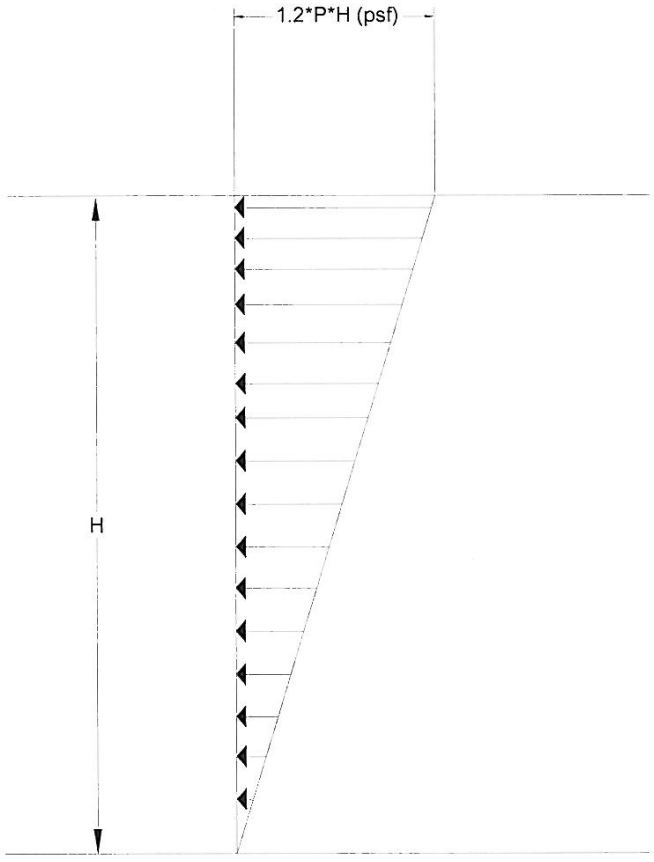
- At-rest:
  - Undisturbed subsoil..... 60 psf/ft
  - Compacted granular backfill ..... 50 psf/ft
  - Compacted site soils backfill..... 65 psf/ft

The following pressure distribution should be used, where P is the at-rest pressures shown above and H is the total wall height:



c. Additional Pressure From Seismic Events for Unrestrained Structures

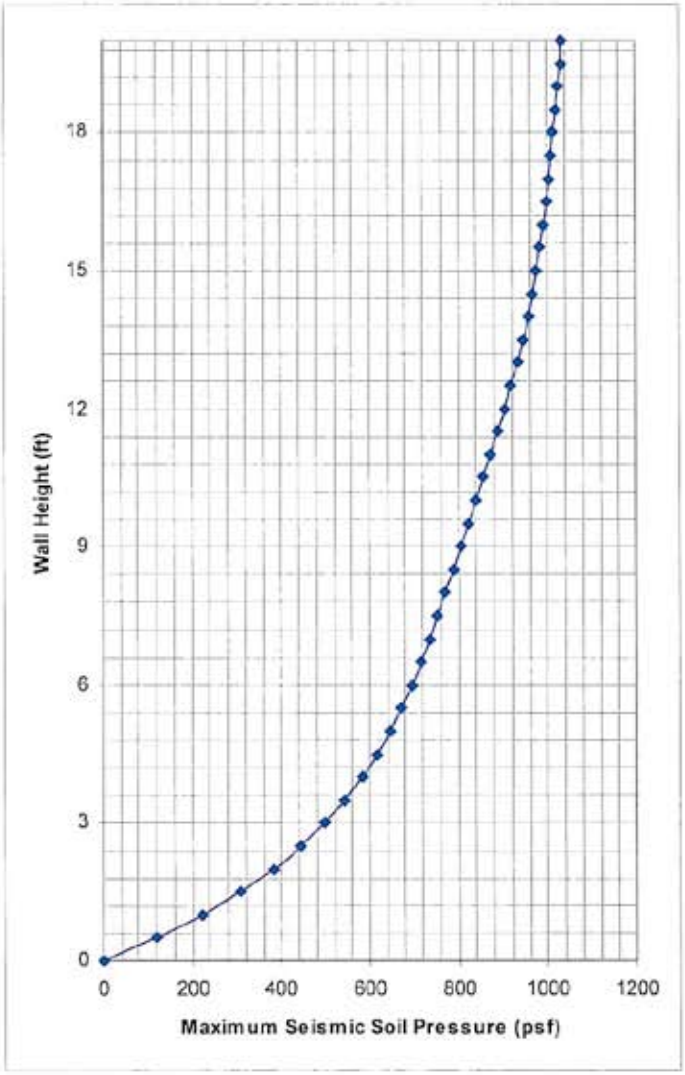
Lateral loads due to a seismic event should be added to the active static pressures and may be represented by the following distribution:



The above distribution assumes a ground response spectrum in accordance with the 2006 International Building Code. Where P is the pressure for active conditions given above in Section 6.4.1.a. Unrestrained Structures and H is the total height of the wall.

d. Additional Pressure From Seismic Events for Restrained Structures

Lateral loads due to a seismic event should be added to the at-rest static pressures for restrained walls and may be represented by the following distribution using the Ostadan and White Method:



The above distribution assumes a ground response spectrum in accordance with the 2006 International Building Code.

We recommend a free-draining soil layer or manufactured geosynthetic material, be constructed adjacent to the back of any retaining walls. A filter may be required between the soil backfill and drainage layer. This drainage zone should help prevent development of hydrostatic pressure on the wall. This vertical drainage zone should be tied into a gravity drainage system at the base of the wall. It is important that all backfill be properly placed and compacted. Backfill should be mechanically compacted in layers. Flooding or jetting should not be permitted. Care should be taken not to damage the walls when placing the backfill. Backfills should be observed and tested during placement.

Fill against footings, stem walls, basement walls and retaining walls should be compacted to densities specified in **Earthwork**. Medium to high plasticity clay soils should not be used as backfill against retaining walls. Compaction of each lift adjacent to walls should be accomplished with hand-operated tampers or other lightweight compactors. Overcompaction may cause excessive lateral earth pressures that could result in wall movements.

6.5 Seismic Considerations

For structural designs based upon the International Building Code 2006, the following criteria will apply. The soil site class is C. S_s, the spectral acceleration for short periods, is 1.556g. S_1, the spectral acceleration for a 1-second period, is 0.613g. F_a and F_v, in accordance with Table 1613.5.3 (1) and 1613.5.3 (2), are 1.0 and 1.3, respectively.

Based upon the dense sandy, gravelly soils and absence of groundwater, liquefaction is not a concern at the site.

6.6 Conventional Slab-on-Grade Support

Floor slabs can be supported on properly placed and compacted fill or approved natural soils. The slab subgrade should be prepared by the procedures outlined in this report. A minimum 6-inch layer of granular base course should be provided beneath all slabs to help prevent capillary rise and a damp slab. The recommended modulus of subgrade reaction (k) is 250 pounds per cubic inch.

If moisture sensitive equipment, product, floor coverings, or impermeable floor coverings are to be placed on interior slabs-on-grade, consideration should be given to the use of a vapor retarder. Final determination on the use of a vapor retarder should be left to the slab designer.

All concrete placement and curing operations should follow the American Concrete Institute manual recommendations. Improper curing techniques and/or high slump (high water-cement ratio) could cause excessive shrinkage, cracking or curling. Concrete slabs should be allowed to cure adequately before placing vinyl or other moisture sensitive floor covering.

6.7 Drainage

A major cause of soil problems is moisture increase in soils below structures. Therefore, it is extremely important that positive drainage be provided during construction and maintained throughout the life of the proposed development. Infiltration of water into utility or foundation excavations must be prevented during construction. No planters or other surface features that could retain water adjacent to the building should be constructed.

In areas where sidewalks or paving do not immediately adjoin the structure, protective slopes should be provided with an outfall of about 5 percent for at least 10 feet from perimeter walls. Backfill against footings, exterior walls, and in utility and sprinkler line trenches should be well compacted and free of all construction debris to minimize the possibility of moisture infiltration.

If planters and/or landscaping are adjacent to or near the structure, we recommend the following:

- Planters should be sealed.
- Grades should slope away from the structure.
- Only shallow rooted landscaping should be used.
- Watering should be kept to a minimum.

6.8 Corrosivity

Based upon our experience and local material availability, we recommend Type II Portland cement be used for all concrete on and below grade.

6.9 Pavements

The on-site soils are considered as good quality materials for support of pavements. The types of traffic anticipated to use the facility include passenger vehicles and small to medium size trucks. On this basis, a daily traffic value of 2 Equivalent 18-kip Single Axle Loads (ESAL) was estimated for passenger car parking and drives (light duty) and a daily traffic value of 5 ESALS were used for major access drives. A resilient modulus (M_r) of 22,500 pounds per square inch was assigned to the on-site soil. A reliability value of 70 percent was assigned to the facility that corresponds to occasional interruption of traffic for pavement repairs. Based upon these parameters, the resulting pavement sections according to the AASHTO procedure for a 20-year design life are:

Traffic Area	Pavement Thickness (inches)	Untreated Base Course (inches)
Asphalt Concrete		
Light Duty Parking Areas	3	4
Major Access Drives	4	6
Portland Cement Concrete		
Light Duty Parking Areas	4	4
Major Access Drives	5	6

The "design life" of a pavement is defined as the expected life at the end of which reconstruction of the pavement will need to occur. Normal maintenance, including crack sealing, slurry sealing, and/or chip sealing, should be performed during the life of the pavement.

Due to the high static loads imposed by parking trucks in loading and unloading areas and at dumpster locations, we recommend that a rigid pavement section be considered for these areas. A minimum 6 inch thick Portland cement concrete pavement over 4 inches of basecourse is recommended.

Bituminous surfacing should be constructed of dense-graded, central plant-mix, asphalt concrete. Asphalt and base course material should conform with specification requirements of Utah Department of Transportation specifications.

Material and compaction requirements should conform to recommendations presented under **Earthwork**. The gradient of paved surfaces should ensure positive drainage. Water should not pond in areas directly adjoining paved sections.

7.0 EARTHWORK

7.1 General

The conclusions contained in this report for the proposed construction are contingent upon compliance with recommendations presented in this section. Any excavating, trenching, or disturbance that occurs after completion of the earthwork must be backfilled, compacted and tested in accordance with the recommendations contained herein. It is not reasonable to rely upon our conclusions and recommendations if any future unobserved and untested trenching, earthwork activities or backfilling occurs.

Fills or underground facilities such as basements, utilities, and foundations were observed and such features will be encountered during construction. These features should be demolished in accordance with the recommendations of the geotechnical engineer. Any loose or disturbed soils resulting from demolition should be removed and replaced or recompacted as engineered fill and any excavations should be backfilled in accordance with recommendations presented herein.

7.2 Site Clearing

Strip and remove any existing vegetation, organic topsoils, debris, foundations, fill soils and any other deleterious materials from the building and pavement areas. The building area is defined as that area within the building footprint plus 5 feet beyond the perimeter of the footprint. All exposed surfaces should be free of mounds and depressions that could prevent uniform compaction.

Sloping areas steeper than 5:1 (horizontal:vertical) should be benched to reduce the potential for slippage between existing slopes and fills. Benches should be level and wide enough to accommodate compaction and earth moving equipment.

7.3 Excavation

The on-site fill soils should be able to be excavated with conventional equipment. The native granular soils contain cobbles and boulders and will require heavy-duty equipment. Hard to very hard deposits may require specialized equipment (hoe-ram, rippers, etc.) or blasting to perform excavations. Contractors, especially those digging utilities trenches, should satisfy themselves as to the hardness of the deposits and equipment required.

The soils to be penetrated by the proposed excavations may vary significantly across the site. Our soil classifications are based solely on the materials encountered in widely spaced exploratory test borings. The contractor should verify that similar conditions exist throughout the proposed area of excavation. If different subsurface conditions are found at the time of construction, we should be contacted immediately to evaluate the conditions encountered.

7.3.1 Temporary Excavations and Slopes

Excavations into the on-site soils will encounter a variety of conditions. The individual contractor should be made responsible for designing and constructing stable, temporary excavations as required to maintain stability of both the excavation sides and bottom. All excavations should be sloped or shored in the interest of safety following local, and federal regulations, including current OSHA excavation and trench safety standards.

For this site, the soils can be considered Type C soils when applying the OSHA regulations. OSHA recommends a maximum slope inclination of 1.5:1 (horizontal:vertical) for Type C soils.

Slopes may need to be flattened depending on conditions exposed during construction. If there is not enough space for sloped excavations, shoring should be used. Underpinning may be required to protect adjacent structures, pavements or utilities, especially if excavations are deeper than existing foundations.

If any excavation, including a utility trench, is extended to a depth of more than 20 feet, it will be necessary to have the side slopes designed by a professional engineer.

As a safety measure, it is recommended that all vehicles and soil piles be kept a minimum lateral distance back from the crest of the slope at least equal to the slope height. The exposed slope face should be protected against the elements.

7.4 Foundation Preparation

After the existing fill has been removed, in footing areas, remove existing soils to a minimum depth of 2 feet below the bottom of the footing. Removal should extend a minimum of 2 feet beyond the footing edges. After removal of existing fill soils to suitable native subgrade and prior to any required engineered fill placement, scarify, moisten or dry as required, and compact all subgrade soils to a minimum depth of 12 inches. Replace with engineered fill material, the existing fill on site may be used as engineered fill provided it meets the requirements of engineered fill as described in Section 7.8 and is approved by the Geotechnical Engineer (WT). However, based upon our observations, the existing fill is most likely unsuitable for re-use under footings, but may be acceptable below slabs and as structure backfill material. The engineered fill placed below footings must be of uniform gradation to provide even bearing capacity for the structure.

7.5 Conventional Interior Slab Preparation

After removal of existing fill soils to suitable native subgrade and prior to any required engineered fill placement, scarify, moisten or dry as required, and compact all subgrade soils to a minimum depth of 12 inches. The subgrade preparation is to be accomplished in a manner that will result in uniform water contents and densities after compaction.

7.6 Exterior Slab Preparation

Compacted subgrade soils expand due to frost heaving. Therefore, exterior concrete grade slabs may heave, resulting in cracking or vertical offsets. To reduce the potential for damage, we recommend:

- Use of fill with low expansion potential
- Placement of effective control joints on relatively close centers
- Moisture-density control during placement of subgrade fills

- Provision for adequate drainage in areas adjoining the slabs
- Use of designs which allow vertical movement between the exterior slabs and adjoining structural elements
- Place and compact a minimum of 6 inches of roadbase under all exterior slabs

In those locations where slab movement should be minimized, we recommend that the slab edge be constructed with a stem or key that is a minimum of 6 inches in width and extends a minimum of 12 inches below finished grade. Stems should also be provided at all joints where infiltration of water may occur. All joints should be sealed with an elastomeric joint sealant.

7.7 Pavement Preparation

The subgrade should be scarified, moistened as required, and recompacted for a minimum depth of 8 inches prior to placement of fill and pavement materials.

7.8 Materials

Clean on-site native soils with low-expansive potentials and minus six inches or imported materials may be used as fill material for the following:

- foundation areas
- interior slab areas
- pavement areas
- backfill

Imported soils should conform to the following:

- Gradation (ASTM C136):

	percent finer by weight
6"	100
4"	85-100
¾"	70-100
No. 4 Sieve	50-100
No. 200 Sieve	25 (max)

- Maximum expansive potential (%)* 1.5
- Maximum soluble sulfates (%) 0.10

*Measured on a sample compacted to approximately 95 percent of the ASTM D698 maximum dry density at about 3 percent below optimum water content. The sample is confined under a 100 psf surcharge and submerged.

Oversize material, greater than 6 inches, may be used in the lower portions of the building pad, below 5 feet, provided that the particles are distributed throughout the fill and no nesting of

oversize material occurs. Acceptance of the quantity of oversize material shall be at the discretion of the geotechnical engineer.

7.9 Placement and Compaction

a. Place and compact fill in horizontal lifts, using equipment and procedures that will produce recommended water contents and densities throughout the lift.

b. Uncompacted fill lifts should not exceed 8 inches.

c. Materials should be compacted to the following:

	Minimum Percent Material Compaction (ASTM D1557)
• On-site soil, reworked and fill:	
Below footings	95
Below slabs-on-grade	95
Below pavement	95
Below post-tensioned elements	95
• Imported soil:	
Below footings	95
Below slabs-on-grade	95
Below pavement	95
• Fill placed greater than 5 feet thick	98
• Aggregate base course below slabs-on-grade	95
• Aggregate base below pavement	95
• Nonstructural backfill	90

Imported and on-site granular soils with low expansion potential should be compacted within a water content range of 1 percent below to 3 percent above optimum.

7.10 Cut and Fill Slopes

The stability of any cut or fill slopes at the project site will dependent upon the properties of the materials comprising the slope face and the susceptibility of slope soils to erosion. For permanent cut slopes in the typical site soil matrix encountered and less than six feet in vertical height, slopes no steeper than 1.5:1 (horizontal:vertical) are recommended. Fill slopes should not be steeper than 1.5:1. It is assumed that appropriate slope erosion protection and/or planting will be utilized.

Where exposed slopes are predominantly made up of bare soil, slopes should be covered as quickly as possible with temporary or permanent protection in order to avoid unnecessary soil loss. If during construction rains are anticipated, flows over graded or disturbed areas should be

minimized by diverting upslope surface water through the use of berms, ditches, or other diversion devices.

Where soil slopes are 3H:1V or flatter, revegetate with native vegetation or provide other available ground covers such as netting, spray or hand-applied mulches, or crushed rock. For slopes of 2H:1V to 3H:1V, protection should consist of spray or hand-applied mulches, jute or excelsior vegetation, erosion matting, other equivalent ground covers.

Erosional activity, if allowed to form and propagate, will increase soil loss and could result in loss of support to structures, streets and other facilities. Periodic maintenance and prompt repair of erosional features is important to prevent soil loss. The effectiveness of erosion control measures should be evaluated after heavy or prolonged rains.

7.11 Compliance

Recommendations for slabs-on-grades, foundations, and pavement elements supported on compacted fills or prepared subgrade depend upon compliance with **Earthwork** recommendations. To assess compliance, observation and testing should be performed under the direction of a geotechnical engineer.

8.0 LIMITATIONS

This report has been prepared based on our understanding of the project criteria as described in Section 2.0. Others may make changes in the project criteria during design or construction, and substantially different subsurface conditions may be encountered or become known. The conclusions and recommendations presented herein shall not continue to be valid unless all variations are brought to our attention in writing, and we have had an opportunity to assess the effect such variations may have on our conclusions and recommendations and respond in writing.

The recommendations presented are based upon data derived from a limited number of samples obtained from widely spaced borings. The attached logs are indicators of subsurface conditions only at the specific locations and times noted. The geotechnical engineer necessarily makes assumptions as to the uniformity of the geology and soil structure between borings, but variations can exist. Accordingly, whenever any deviation or change is encountered or become known during design or construction, WT shall be notified in writing. WT shall review the matter, and issue a written response regarding the validity of the conclusions and recommendations presented herein.

This report does not provide information relative to construction methods or sequences. Any person reviewing this report must draw his/her own conclusions regarding site conditions as they relate to the employment or development of construction techniques. This report is valid for one year after the date of issuance unless there is a change in circumstances or discovered variations justifying an earlier

expiration of validity. After expiration, no person or entity has any right to rely on this report without further review and reporting by WT under a separate contract.

The recommendations contained herein may be based upon government regulations in effect at the time of this report. Future changes or modifications to these regulations may require modification of this report.

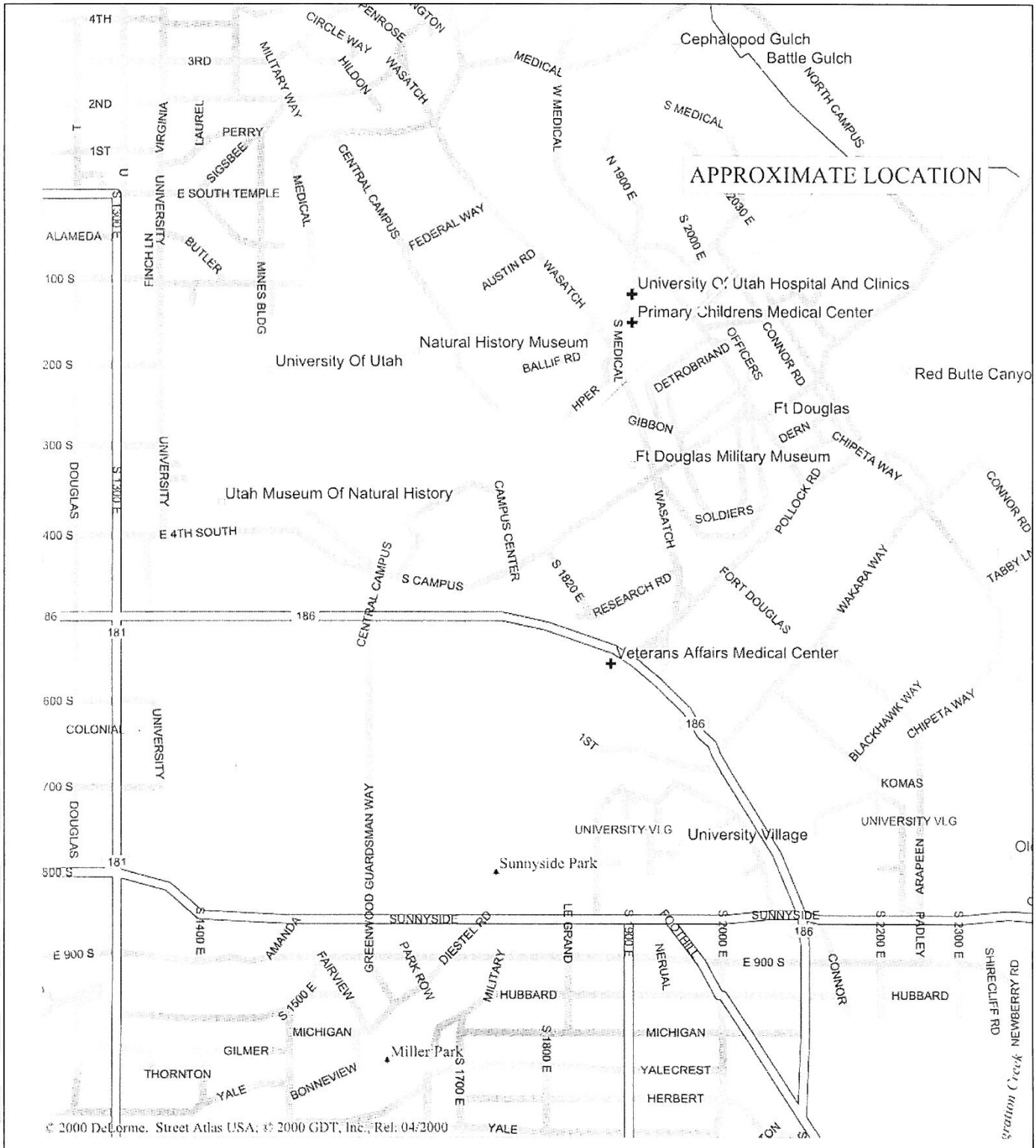
9.0 OTHER SERVICES

The geotechnical engineer should be retained for a general review of final plans and specifications to evaluate compliance with our recommendations.

The geotechnical engineer should also be retained to provide observation and testing services during excavation, earthwork operations, foundation and construction phases of the project. Observation of footing excavations should be performed prior to placement of reinforcing and concrete to confirm that satisfactory bearing materials are present.

10.0 CLOSURE

We prepared this report as an aid to the designers of the proposed project. The comments, statements, recommendations and conclusions set forth in this report reflect the opinions of the authors. These opinions are based upon conditions at the location of specific tests, observations and data developed to satisfy the scope of services defined by the contract documents. Work on your project was performed in accordance with generally accepted industry standards and practices by other professionals providing similar services in this locality. No other warranty, express or implied, is made.



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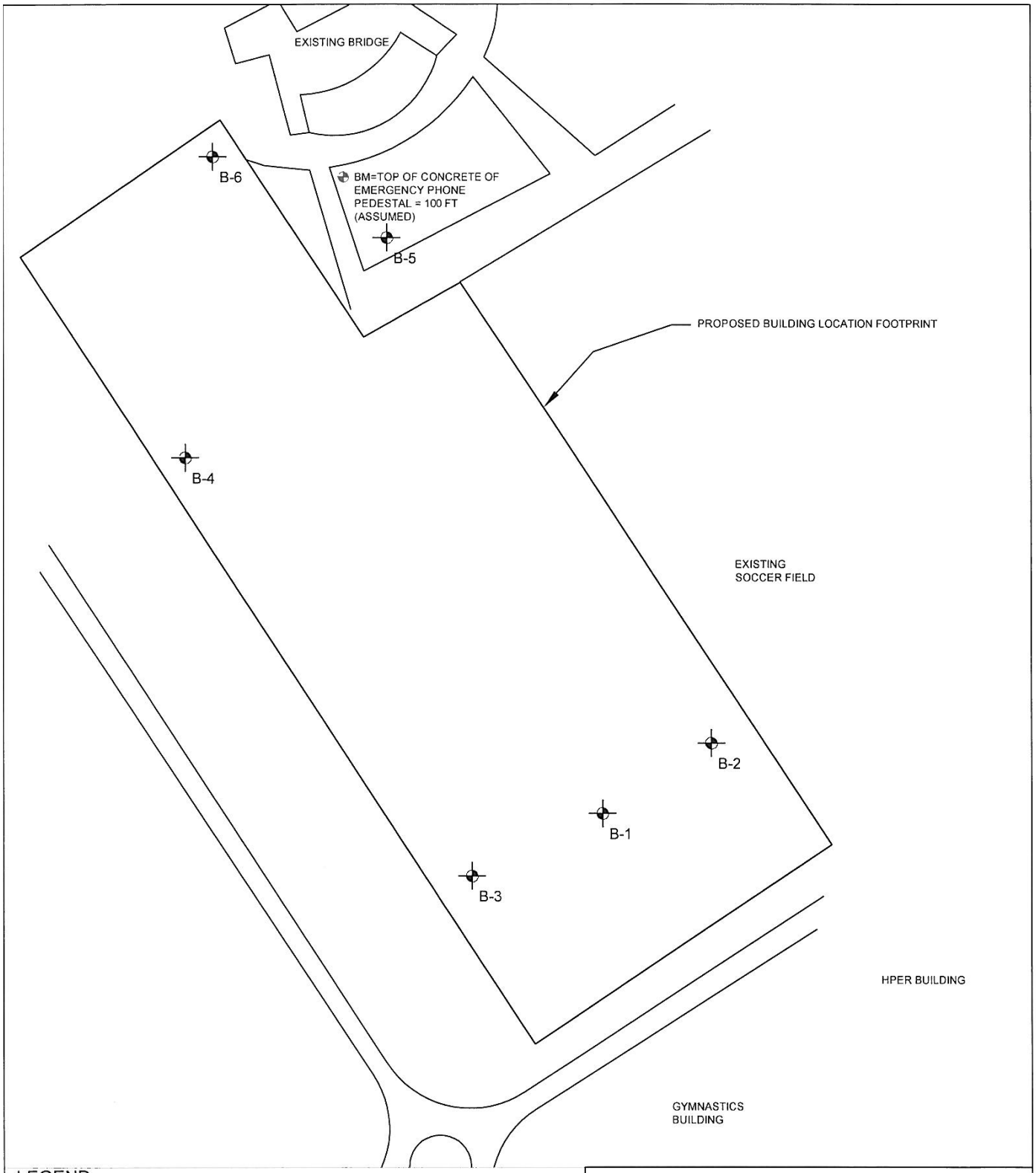
Not to scale

STUDENT LIFE CENTER	
Site Vicinity Map	
Western Technologies, Inc.	
Job No. 2138JT096	Plate: 1


EXISTING BRIDGE
B-6
BM=TOP OF CONCRETE OF EMERGENCY PHONE PEDESTAL = 100 FT (ASSUMED)
B-5
PROPOSED BUILDING LOCATION FOOTPRINT
B-4
EXISTING SOCCER FIELD
B-2
B-1
B-3
HPER BUILDING
GYMNASTICS BUILDING
LEGEND
APPROXIMATE BOREHOLE LOCATION
APPROXIMATE BENCHMARK LOCATION
Not to scale
STUDENT LIFE CENTER
Boring Location Diagram
Western Technologies, Inc.
Job No. 2138JT096
Plate: 2

Allowable Soil Bearing Capacity	The recommended maximum contact stress developed at the interface of the foundation element and the supporting material.
Backfill	A specified material placed and compacted in a confined area.
Base Course	A layer of specified material placed on a subgrade or subbase.
Base Course Grade	Top of base course.
Bench	A horizontal surface in a sloped deposit.
Caisson	A concrete foundation element cast in a circular excavation which may have an enlarged base. Sometimes referred to as a cast-in-place pier.
Concrete Slabs-On-Grade	A concrete surface layer cast directly upon a base, subbase or subgrade.
Crushed Rock Base Course	A base course composed of crushed rock of a specified gradation.
Differential Settlement	Unequal settlement between or within foundation elements of a structure.
Engineered Fill	Specified material placed and compacted to specified density and/or moisture conditions under observations of a representative of a soil engineer.
Existing Fill	Materials deposited through the action of man prior to exploration of the site.
Existing Grade	The ground surface at the time of field exploration.
Expansive Potential	The potential of a soil to expand (increase in volume) due to absorption of moisture.
Fill	Materials deposited by the actions of man.
Finished Grade	The final grade created as a part of the project.
Gravel Base Course	A base course composed of naturally occurring gravel with a specified gradation.
Heave	Upward movement
Native Grade	The naturally occurring ground surface.
Native Soil	Naturally occurring on-site soil.
Rock	A natural aggregate of mineral grains connected by strong and permanent cohesive forces. Usually requires drilling, wedging, blasting or other methods of extraordinary force for excavation.
Sand and Gravel Base	A base course of sand and gravel of a specified gradation.
Sand Base Course	A base course composed primarily of sand of a specified gradation.
Scarify	To mechanically loosen soil or break down existing soil structure.
Settlement	Downward movement.
Soil	Any unconsolidated material composed of discrete solid particles, derived from the physical and/or chemical disintegration of vegetable or mineral matter, which can be separated by gentle mechanical means such as agitation in water.
Strip	To remove from present location.
Subbase	A layer of specified material placed to form a layer between the subgrade and base course.
Subbase Grade	Top of subbase.
Subgrade	Prepared native soil surface.

STUDENT LIFE CENTER	
Definition of Terminology	
Western Technologies Inc.	
Job No.: 2138JT096	Plate: A-1

COARSE-GRAINED SOILS

LESS THAN 50% FINES*

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
GW	WELL-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LESS THAN 5% FINES	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO 4 SIEVE SIZE
GP	POORLY-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LESS THAN 5% FINES	
GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, MORE THAN 12% FINES	
GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, MORE THAN 12% FINES	
SW	WELL-GRADED SANDS OR GRAVELLY SANDS, LESS THAN 5% FINES	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO 4 SIEVE SIZE
SP	POORLY-GRADED SANDS OR GRAVELLY SANDS, LESS THAN 5% FINES	
SM	SILTY SANDS, SAND-SILT MIXTURES, MORE THAN 12% FINES	
SC	CLAYEY SANDS, SAND-CLAY MIXTURES, MORE THAN 12% FINES	

NOTE: Coarse-grained soils receive dual symbols if they contain 5% to 12% fines (e.g., SW-SM, GP-GC).

FINE-GRAINED SOILS

MORE THAN 50% FINES

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
OL	ORGANIC SILTS OR ORGANIC SILT-CLAYS OF LOW PLASTICITY	
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDS OR SILTS, ELASTIC SILTS	SILTS AND CLAYS LIQUID LIMIT MORE THAN 50
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY	
PT	PEAT, MUCK AND OTHER HIGHLY ORGANIC SOILS	HIGHLY ORGANIC SOILS

NOTE: Fine-grained soils may receive dual classification based upon plasticity characteristics.

SOIL SIZES

COMPONENT	SIZE RANGE
BOULDERS	Above 12 in.
COBBLES	3 in. – 12 in.
GRAVEL	No. 4 – 3 in.
Coarse	3/4 in. – 3 in.
Fine	No. 4 – 3/4 in.
SAND	No. 200 – No. 4
Coarse	No. 10 – No. 4
Medium	No. 40 – No. 10
Fine	No. 200 – No. 40
*Fines (Silt or Clay)	Below No. 200

NOTE: Only sizes smaller than three inches are used to classify soils

CONSISTENCY

CLAYS & SILTS	BLOWS PER FOOT*
VERY SOFT	0 – 2
SOFT	2 – 4
FIRM	4 – 8
STIFF	8 – 16
VERY STIFF	16 – 32
HARD	Over 32

RELATIVE DENSITY

SANDS & GRAVELS	BLOWS PER FOOT*
VERY LOOSE	0 – 4
LOOSE	4 – 10
MEDIUM DENSE	10 – 30
DENSE	30 – 50
VERY DENSE	Over 50

*Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1 3/8 inch ID) split spoon (ASTM D1586).

PLASTICITY OF FINE GRAINED SOILS

PLASTICITY INDEX	TERM
0	NON-PLASTIC
1 – 7	LOW
8 – 25	MEDIUM
Over 25	HIGH

DEFINITION OF WATER CONTENT

DRY
SLIGHTLY DAMP
DAMP
MOIST
WET
SATURATED

STUDENT LIFE CENTER	
Method of Classification	
Western Technologies Inc.	
Job No.: 2138JT096	Plate: A-2

The number shown in "**BORING NO.**" refers to the approximate location of the same number indicated on the "Boring Location Diagram" as positioned in the field by pacing from property lines and/or existing features.

"**TYPE SIZE BORING**" refers to the exploratory equipment used in the boring wherein **HSA = hollow stem auger**.

"N" in Blows/Foot" refers to the number of blows of a 140-pound weight, dropped 30 inches, required to advance a two-inch-outside diameter split-barrel sampler a distance of 1 foot. Standard Penetration Test (ASTM D1586). Refusal to penetration is defined as more than 100 blows per foot.

"**R" in Blows/Foot**" refers to the number of blows of a 140-pound weight, dropped 30 inches, required to advance a 2.42-inch-inside-diameter ring sampler a distance of 1 foot. Refusal to penetration is considered more than 50 blows per foot.

"**Sample Type**" refers to the form of sample recovery, in which **N = Split-barrel sample**, **R = Ring sample**, **G = Grab Sample**.

"**Dry Density, pcf**" refers to the laboratory-determined dry density in pounds per cubic foot. The symbol "**NR**" indicates that no sample was recovered. The symbol "**DU**" indicates that determination of dry density was not possible.

"**Water Content**, %" refers to the laboratory-determined moisture content in percent (ASTM D2216).

"**Unified Classification**" refers to the soil type as defined by "Method of Soil Classification". The soils were classified visually in the field and, where appropriate, classifications were modified by visual examination of samples in the laboratory and/or by appropriate tests.

These notes and boring logs are intended for use in conjunction with the purposes of our services defined in the text. Boring log data should not be construed as part of the construction plans nor as defining construction conditions.

Boring logs depict our interpretations of subsurface conditions at the locations and on the date(s) noted. Variations in subsurface conditions and soil characteristics may occur between borings. Groundwater levels may fluctuate due to seasonal variations and other factors.

The stratification lines shown on the boring logs represent our interpretation of the approximate boundary between soil types based upon visual field classification. The transition between materials is approximate and may be far more or less gradual than indicated.

STUDENT LIFE CENTER	
Boring Log Notes	
Western Technologies Inc.	
Job No.: 2138JT096	Plate: A-3

DATE DRILLED: **10-30-2008**

DRILL RIG TYPE: **CME 55**

BORING TYPE/SIZE: **HSA/6"**

BORING NO. B-1

LOCATION: **See Boring Location Diagram**

ELEVATION: **86.4 Ft**

FIELD ENGR: **WDC**

WATER CONTENT (%)	DRY DENSITY (LBS/CU.FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT. R or N	BLOWS/FT. C	DEPTH (FT.)	USCS	GRAPHIC	SOIL DESCRIPTION
							*		* TOP OF BORING: TOPSOIL
11.5	115.1	R		23		5			FILL; clayey sand and sandy clay with gravel, brown, medium dense, asphalt pieces
3.8	112.3	R		30					
15.4	95.9	R		11		10			
		R		12					
		R		86/10"			SM		SILTY SAND WITH GRAVEL; red-brown, very dense, damp, with sandstone cobbles
		R		50/2"		15			
		N		53		20			
							SC		SANDY CLAY WITH GRAVEL; red-brown, dense to very dense, with cobbles
		N		50/5.5"		25			
		N		46		30			
		N		50/2"		35			
		N		50/4"		40	SM		SILTY SANDY GRAVEL; red-brown, very dense, damp
		N		50/5.5"		45			
						50			**(this soil will be continued on the next page)**

GROUNDWATER ENCOUNTERED NO: X YES: ____ DEPTH: ____ DATE: 10-30-2008

NOTES

STUDENT LIFE CENTER

Boring Log

Western Technologies Inc.

Job No.: 2138JT096 | Plate: A-4

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

DATE DRILLED: **10-30-2008**

DRILL RIG TYPE: **CME 55**

BORING TYPE/SIZE: **HSA/6"**

BORING NO. B-1

LOCATION: **See Boring Location Diagram**

ELEVATION: **86.4 Ft**

FIELD ENGR: **WDC**

WATER CONTENT (%)	DRY DENSITY (LBS/CU.FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT. R or N	BLOWS/FT. C	DEPTH (FT.)	USCS	GRAPHIC	SOIL DESCRIPTION
		N		50/5.5"		55	SM		(this soil has been continued from the previous page)
		N		50/6"		60			
		N		50/4"		65			
		N		50/4"		70			
		N		50/3"		75			**Terminated At 70.5 Feet**
						80			
						85			
						90			
						95			
						100			

GROUNDWATER ENCOUNTERED NO: X YES:____ DEPTH:____ DATE:10-30-2008

NOTES

STUDENT LIFE CENTER

Boring Log

Western Technologies Inc.

Job No.: 2138JT096 | Plate: A-4

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION

DATE DRILLED: 10-30-2008

DRILL RIG TYPE: CME 55

BORING TYPE/SIZE: HSA/6"

BORING NO. B-2

LOCATION: See Boring Location Diagram

ELEVATION: 86.2 Ft

FIELD ENGR: WDC

WATER CONTENT (%)	DRY DENSITY (LBS/CU.FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT. R or N	BLOWS/FT. C	DEPTH (FT.)	USCS	GRAPHIC	SOIL DESCRIPTION
							*		* TOP OF BORING: TOPSOIL
		N	■	36		5			FILL; clayey sand and sandy clay with gravel, brown, loose to dense
		N	■	50					
		N	■	9		10			
		N	■	7					
		N	■	72		15	SM		SILTY SAND WITH GRAVEL; red-brown, very dense, damp, with sandstone cobbles
		N	■	50/5"		20	CL		SANDY CLAY WITH GRAVEL; red-brown, hard, damp to moist, with occasional cobbles
		N	■	69		25			
									Terminated At 26.5 Feet
						30			
						35			
						40			
						45			
						50			

GROUNDWATER ENCOUNTERED NO: X YES: ____ DEPTH: ____ DATE: 10-30-2008

NOTES

STUDENT LIFE CENTER

Boring Log

Western Technologies Inc.

Job No.: 2138JT096 | Plate: A-5

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION

DATE DRILLED: **10-30-2008**

DRILL RIG TYPE: **CME 55**

BORING TYPE/SIZE: **HSA/6"**

BORING NO. B-3

LOCATION: **See Boring Location Diagram**

ELEVATION: **86.1 Ft**

FIELD ENGR: **WDC**

WATER CONTENT (%)	DRY DENSITY (LBS/CU.FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT. R or N	BLOWS/FT. C	DEPTH (FT.)	USCS	GRAPHIC	SOIL DESCRIPTION
							*		* TOP OF BORING: TOPSOIL
		N		8		5			FILL; clayey sand and sandy clay with gravel, brown, loose
		N		7					
		N		5					
		N		8		10			
12.1	112.3	R		8					
8.6	102.8	R		8		15	SM		SILTY SAND WITH GRAVEL; red-brown, loose to very dense, damp, with sandstone cobbles
		N		50/4"		20			
		N		85		25			...clayey
									Terminated At 26.5 Feet
						30			
						35			
						40			
						45			
						50			

GROUNDWATER ENCOUNTERED NO: X YES: ____ DEPTH: ____ DATE: 10-30-2008

NOTES

STUDENT LIFE CENTER

Boring Log

Western Technologies Inc.

Job No.: 2138JT096 | Plate: A-6

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

DATE DRILLED: **10-30-2008**

DRILL RIG TYPE: **CME 55**

BORING TYPE/SIZE: **HSA/6"**

BORING NO. B-4

LOCATION: **See Boring Location Diagram**

ELEVATION: **94.2 Ft**

FIELD ENGR: **WDC**

WATER CONTENT (%)	DRY DENSITY (LBS/CU.FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT. R or N	BLOWS/FT. C	DEPTH (FT.)	USCS	GRAPHIC	SOIL DESCRIPTION
							*		* TOP OF BORING: TOPSOIL
		N		63		5			FILL; clayey sand and sandy clay with gravel, brown, dense to loose, damp to moist
		N		6					
		R		4					
		R		14		10			
							GM		SILTY SANDY GRAVEL; red-brown, very dense, damp
		R		91		15			
7.8	122.2	R		90/10.5"		20	GC		CLAYEY GRAVEL; brown, very dense, moist
							CL		SANDY CLAY; red-brown, firm, moist to wet
		N		6		25			
							GM		SANDY CLAYEY GRAVEL; red-brown, very dense, moist to wet
8.0	138.9	R		91		30			
							GM		SILTY SANDY GRAVEL; red-brown, very dense, damp
		N		50/5"		35			**Terminated At 35.5 Feet**
						40			
						45			
						50			

GROUNDWATER ENCOUNTERED NO: X YES: ____ DEPTH: ____ DATE: 10-30-2008

NOTES

STUDENT LIFE CENTER

Boring Log

Western Technologies Inc.

Job No.: 2138JT096 | Plate: A-7

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

DATE DRILLED: **10-30-2008**

DRILL RIG TYPE: **CME 55**

BORING TYPE/SIZE: **HSA/6"**

BORING NO. B-5

LOCATION: **See Boring Location Diagram**

ELEVATION: **94.2 Ft**

FIELD ENGR: **WDC**

WATER CONTENT (%)	DRY DENSITY (LBS/CU.FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT. R or N	BLOWS/FT. C	DEPTH (FT.)	USCS	GRAPHIC	SOIL DESCRIPTION
							*		* TOP OF BORING: TOPSOIL
		N		8					FILL; clayey sand and sandy clay with gravel, brown, loose, moist
		N		8		5	CL		SANDY CLAY WITH GRAVEL; stiff, moist, red-brown
3.6	129.0	R		83			GM		SILTY SANDY GRAVEL; red-brown, very dense to medium dense, damp
		R		47		10			
						15			**Auger Refusal At 13.5 Feet**
						20			
						25			
						30			
						35			
						40			
						45			
						50			

GROUNDWATER ENCOUNTERED NO X YES:____ DEPTH:____ DATE: 10-30-2008

NOTES **Auger refusal due to either large cobbles or weathered rock**

STUDENT LIFE CENTER

Boring Log

Western Technologies Inc.

Job No.: 2138JT096 | Plate: A-8

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

DATE DRILLED: 10-30-2008

DRILL RIG TYPE: CME 55

BORING TYPE/SIZE: HSA/6"

BORING NO. B-6

LOCATION: See Boring Location Diagram

ELEVATION: 100 Ft

FIELD ENGR: WDC

WATER CONTENT (%)	DRY DENSITY (LBS/CU.FT)	SAMPLE TYPE	SAMPLE	BLOWS/FT. R or N	BLOWS/FT. C	DEPTH (FT.)	USCS	GRAPHIC	SOIL DESCRIPTION
							*		* TOP OF BORING: TOPSOIL
		N		5					FILL; clayey sand and sandy clay, brown, loose, moist
		N		7		5	CL		SANDY CLAY; brown, firm, moist, calcarious
		N		24			SM		SILTY SAND WITH GRAVEL TO SILTY GRAVEL WITH SAND; brown to gray to red-brown, medium dense to very dense, damp
		N		73		10			
		N		60		15			
		N		54		20			
							CL		SANDY CLAY; brown, stiff, moist
		N		19		25	SM		SILTY SAND WITH GRAVEL; interbedded with sandy clay, brown, medium dense to stiff, moist
13.7	111.4	R		23		30			
12.3	115.5	R		23		35			
							GM		SILTY GRAVEL WITH SAND; interbedded with clayey gravel, brown to red-brown, medium dense, damp to moist
		N		24		40			
									Terminated At 41.5 Feet
						45			
						50			

GROUNDWATER ENCOUNTERED NO: X YES:____ DEPTH:____ DATE: 10-30-2008

NOTES

STUDENT LIFE CENTER

Boring Log

Western Technologies Inc.

Job No.: 2138JT096 | Plate: A-9

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION

PHYSICAL PROPERTIES

Boring No.	Depth (ft)	Soil Class.	Particle Size Distribution (%) Passing by Weight					Atterberg Limits		Consolidation			Remarks
			¾"	#4	#10	#40	#200	LL	PI	Surcharge (KSF)	Total Comp. (%) In-Situ	Total Comp. (%) After Saturation	
B-1	2.5	SC	100	80	80	80	40	24	9				
B-1	5	SM					11	NP	NP				3
B-1	7.5	CL					54	24	7				3
B-1	10	CL					75	31	14				3
B-1	20	SM					20	NP	NP				3
B-1	30	SC	85	74	67	59	46	26	10				
B-1	45	SM	85	61	50	36	23	NP	NP				
B-1	55	SM	91	75	61	42	30	NP	NP				
B-2	5	SC	100	70	-	-	37	21	5				
B-2	15	SM	92	53	42	30	19	NP	NP				
B-2	25	CL	100	81	78	71	59	35	18				
B-3	11.5	SC	93	81	76	64	46	23	6	0.4	-0.95		
										0.8	-1.43		
										1.6	-1.83	-2.23	4
										3.2		-3.73	
										6.4		-5.62	
										12.8		-8.21	
										6.4		-7.93	5
										3.2		-7.65	5
B-3	15	SM	95	74	62	46	14	NP	NP				
B-3	25	SM	88	65	58	49	28	NP	NP				
B-4	20	GC	64	40	33	23	16	24	6				
B-4	25	CL	100	92	89	79	53	26	8				
B-4	30	GM	70	40	31	20	14	NP	NP				
B-5	5	CL	100	92	89	82	69	26	12				
B-6	5	CL					58	14	7				3
B-6	10	SM					12	NP	NP				3

NOTE: NP – nonplastic

REMARKS

Classification / Particle Size

1. Visual
2. Laboratory Tested
3. Minus #200 Only
4. Submerged to Approximate Saturation
5. Unloading

STUDENT LIFE CENTER

Physical Properties

Western Technologies Inc.

Job No.: 2138JT096 | Plate: B-1

PHYSICAL PROPERTIES

Boring No.	Depth (ft)	Soil Class.	Particle Size Distribution (%) Passing by Weight					Atterberg Limits		Consolidation			Remarks
			¾"	#4	#10	#40	#200	LL	PI	Surcharge (KSF)	Total Comp. (%) In-Situ	Total Comp. (%) After Saturation	
B-6	20	GM	77	48	38	28	16	NP	NP				
B-6	25	CL					62	20	14				3
B-6	30	SM	89	72	65	51	34	NP	NP				
B-6	35	GM	54	37	30	22	14	NP	NP				
B-6	40	ML					57	NP	NP				3

NOTE: NP – nonplastic

REMARKS

Classification / Particle Size

1. Visual
2. Laboratory Tested
3. Minus #200 Only
4. Submerged to Approximate Saturation
5. Unloading

STUDENT LIFE CENTER

Physical Properties

Western Technologies Inc.

Job No.: 2138JT096 | Plate: B-2

6.2 CAMPUS MASTER PLAN HPER MALL NORTH SET BACK VARIANCE

This section of the appendix, “Campus Master Plan HPER Mall North Setback Variance” was discussed in section 1.2 PROGRAMMING PROCESS SUMMARY / ANALYSIS AND CONCLUSIONS under the December 15, 2008 heading. Please see that section for additional information about this document.

THE UNIVERSITY OF UTAH

Facilities Planning

1795 E South Campus Drive, Room 228 Salt Lake City, Utah 84112-9404 (801) 585-6751 FAX (801) 581-6081

To: The Student Life Center Programming Team
From: Tami Cleveland, Campus Planner
Date: December 17th, 2008
RE: Request for Campus Master Plan HPER Mall north setback variance

On December 15th, 2008, the Student Life Center Programming Team of Cannon Architects and Architectural Nexus requested a variance from the HPER Mall setback line, which is identified in the 2008 Campus Master Plan as a line parallel to the north wall face of HPER North (Bldg #92). The Programming team has identified a building width constraint within the current site bounds located north of and adjacent to the Women's Soccer Field near the west end of the Legacy Bridge. The width of the identified Student Life Center Program spaces and the required fire access are barely accommodated within the bounds of the current site. In order to better accommodate the Student Life Center Program, the proposed variance is a setback line that aligns with the north wall of the Dumke Gymnastics Center (Bldg #97).

Facilities Planning acknowledges the site constraints of the Student Life Center project that have been identified in the Programming effort and approves a revision to the HPER Mall setback that will allow the Student Life Center building footprint to build to and extend no further north than a setback line that aligns with the north wall of the Dumke Gymnastics Center (Bldg #97), parallel to the HPER Mall. Facilities Planning authorizes this variance for the Student Life Center project, noting that the HPER Mall setback line, which is identified in the 2008 Campus Master Plan as a line parallel to the north wall face of HPER North (Bldg #92) will remain the set back line for all future projects located on the north side of HPER Mall. Associate Vice President for Facilities Management, Mike Perez, concurs.

The purpose of Facilities Management project review of the site is to ensure compliance with the guidelines of the Campus Master Plan, to promote better site design, to integrate projects more effectively into their surrounding environment, to improve internal vehicular and pedestrian circulation, to encourage quality and innovative site planning techniques, to ensure a harmonious relation among the buildings and uses, harmonious relation between such area and buildings and adjacent campus precincts, and to protect the health, safety, convenience, and general public welfare. All requests for variances to the Campus Master Plan guidelines are facilitated by the Facilities Planning office.