



Program for Campus Housing Phase 2
December 2007
VOLUME 2
AMENDED

December 7, 2007

Matthias Mueller, Project Manager
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State of Utah
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Reference: Southern Utah University
Master Planning and Programming Services
DFCM Project No. 07032730

Dear Matthias,

Design West, in association with KCB Architecture and Lewis Young Robertson & Burningham, is pleased to submit the following deliverables in compliance with the DFCM Professional Services Agreement dated December 7, 2007.

Volume 1: Master Plan for Campus Housing Phases 2 & 3
Volume 2: Program for Campus Housing Phase 2

Fifteen (15) copies of each document are provided along with
Fifteen (15) CDs of each document in PDF format with linked pages and files.

Deliverables related to Additional Services are as follows:
ALTA / Topographic Survey: Nolte Engineering
Geotechnical Survey: Gordon Spilker Huber Geotechnical
Water Flow Analysis: Cedar City Fire Department
Renderings (2): Bowen Studios
Report on Trip to University of Nebraska: KCB Architecture
Cost Modeling: Parametrix
Food Service Report: Miller & Jedziewski

On behalf of Design West's Master Planning and Programming team, I would like to thank you, Dale Orton, and the entire Southern Utah University team, for this opportunity to be of service.

Sincerely,



Anthony A. Wegener, President
Design West Architects

TITLE PAGE

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DFCM Project No.: 07032730
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Project: Master Planning and Programming for Campus Housing
DFCM Project No. 07032730

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INTRODUCTION

Southern Utah University (SUU) has over four decades of commitment to providing excellent living-learning experiences for students living on campus. The programs and commitments to the student, while living on campus, have demonstrated a long track record of success. However, some of the existing housing inventory has become outdated and aged. Maintenance concerns and the inability to compete with current market demands and off-campus housing amenities have necessitated the decision to replace the older housing inventory with new product. This programming document is a summary of the requirements desired by the University for this replacement housing. The purpose is to provide SUU with a written statement setting forth the design objectives, constraints, and criteria for this project, including 1) site requirements, 2) space requirements, 3) space relationships, and 4) design standards outlining specifications of desired material and building systems.

NOTE: A separate “companion” document describes the market analysis, demand analysis and financial analysis of this replacement housing. These analyses contributed to the decisions made in this program in order to meet the market requirements, student demand and financial viability.

PROGRAM EXECUTIVE SUMMARY

The existing inventory of on-campus student housing at Southern Utah University includes facilities that are no longer maintainable (regarding materials and building systems) from a practical, as well as a financial point of view. It is impractical to expect that the Manzanita Court and Juniper Hall facilities be maintained in a safe and feasible manner for even the next two to three years. Further, from the research compiled by Lewis Young Robertson & Burningham (LYRB) including the market analysis, student demand analysis and financial analysis (compiled in Volume 1 of this report), it has been substantiated and documented that the Manzanita Court housing units in particular, but followed soon by Juniper Hall, must be replaced. With that said, the question may be asked: “Replaced with what?”

After extensive studies of student housing at similar campuses in the Intermountain West and throughout the United States (*see Appendix A*) for “lessons learned” at the recent housing constructed at Utah State University in Logan, Utah, and *see Appendix A* for “lessons learned” at recently revamped and new construction of student housing at University of Nebraska, in Lincoln, Nebraska, after in-depth analyses of the surrounding competitive market of off-campus student housing in the Cedar City area, and after numerous student focus groups and student surveys involving hundreds of SUU students and staff, it was concluded that there is a demand of over 1,200 beds for on-campus housing. The current inventory of Manzanita Court, Juniper Hall and Eccles Living Learning Center (2007) has 755 beds (excluding the 30 beds at Ponderosa), demonstrating the need for additional student housing and the demand is there to fill that need. Students have demonstrated the desires to live on campus with new facilities constructed in semi-suites and apartment style-units. From the findings of these studies, and compiling the information from the demand model and financial model, this program has been developed to address the replacement and future expansion of on-campus housing facilities at SUU.

STUDENT HOUSING PHILOSOPHY

The requirements of this master planning and programming assignment included the following:

1. Conduct focus group interviews with students, faculty and staff to evaluate the campus community's views of the project with respect to proposed elements, operating philosophies, fee levels and other critical levels.
2. Conduct a detailed survey of residents and non-residents to test the demand for living on-campus.

Opinions were gathered and recommendations were made. It was clearly stated by SUU Housing staff that their mandate was to house freshmen students, yet the overwhelming preference was for the apartment style living, followed by suites then semi-suites. This preference is guided by the student experience prior to their arrival on campus. Most students have grown up living in private bedrooms, with all of the amenities (to include, in some cases, a private bath), and they expect nothing less from their college experience.

A successful college experience however, is rooted in students getting and feeling connected with the University community. Student success lies in the connections that they make both in the classroom and outside the classroom. Tinto (1986) and others have conducted research on the student connection. What is known is that the residential experience can have a significant impact on feelings of belonging and on student persistence, which positively impacts retention and graduation rates.

With those factors and a focus on first year residential living in mind it is preferred that the residential facilities being designed and built for Eccles Phase II, compel “connections.” Apartment style living is often referred to as cocoon living because residents only have to leave the confines of their assigned space to attend class. All other components of their on campus experience can be confined to what occurs behind their own front door, the cocoon that is their apartment.

First year students, compelled to live in semi-suite configurations are obligated, to some degree, to make connections. Connections occur in the common spaces- kitchen, hallways, laundry facilities, programming space, lobbies - within the facility, as well as in the dining hall. Their social circle is therefore not limited to those within their unit, thus creating greater opportunities to engage in meaningful conversations, to meet a variety of people like and unlike themselves, and to make important connections with peers as well as members of the residence life staff.

Students who agree to live on campus as first year students in semi-suite configurations, can then aspire to transition to apartment-style living, but only after they have made connections and meaning of their first year. This philosophy is the essence of the living/learning environments that define today's residential experience. Done correctly, residents of all ages:

- Learn how to better communicate with each other
- Learn about self-governance and the important traits of a democratic society
- Learn to value differences
- Learn about their role in society relative to behavior and expectations
- Learn to develop autonomy and independence while also appreciating the importance of interdependence

When done very well, the learning component also takes on an academic theme to include learning communities, faculty-in- residence and other partnership programs. While those pieces are not currently part of the residential program, the semi-suite design does allow these programs to occur when and if interest exists and funding is available. It is with this philosophy in mind that the project is directed not toward the student-preferred apartment lifestyle, but toward the semi-suite lifestyle.

If the semi-suite experience is done correctly (to include enhanced food service), the demand for apartment living on campus will increase, thus increasing the customer base for occupants in Eccles phase III (currently proposed as a combination of apartments and semi-suites, but subject to change) and campus meal plans. Furthermore, if the University implements on-campus residency requirement for all or some specific populations, this too will have a positive impact on demand.

The existing Eccles apartments are consistent with upper class or graduate residential facilities. If done correctly, the connections made during that first year residential experience will result in oversubscribed upper class halls and tremendous potential for auxiliary services campus-wide.

SUMMARY OF PROPOSED PROGRAM

SUU currently has a total of 755 beds (within the site under consideration by this study) in three distinct communities: **Juniper Hall** (built in 1962) with 265 dormitory units; **Manzanita Court** (built in 1962) with 190 apartment units, and **Eccles Living Learning Center** (built in 2005) with 300 apartment units (*NOTE: The Eccles apartment buildings and Living Learning Center comprise what shall be called the "Phase One" portion of the housing community, with future phases of student housing being called "Phase Two" and "Phase Three" respectively.)*

PHASE TWO

Phase Two Replacement Housing, the initial phase within this scope, shall demolish Manzanita Court completely and provide new housing in double-occupancy rooms for a total of 270 beds (minimum) in semi-suite style configuration. The **270 beds** are proposed be housed in **138 bedrooms** with 132 bedrooms in double-occupancy configuration and six (6) bedrooms in single-occupancy (for resident assistants). The total program area is anticipated to be approximately **56,700 s.f.** or a ratio of **210 g.s.f. per bed.**

All units shall be semi-suite design, with a maximum of four (4) students per two 2-bedroom arrangement sharing one (1) bathroom, with a common cluster lounge for student gathering, learning / study hall area, and recreation facilities at a ratio of 1 cluster lounge per 48 students each. Meal plans are integral with these units as there are no kitchen facilities excepting a kitchenette arrangement proposed for snacks etc. at the cluster lounge.

The same site of Manzanita Court will be used to construct the new housing, leaving existing infrastructure in place where at all possible. If infrastructure, including parking, landscaping, utilities etc. is modified in a different configuration, the scope of replacement shall include these costs within the scope of the project.

PHASE THREE

The Phase Three portion of this program will be the replacement of Juniper Hall. The site for Phase Three will be within the confines of the existing property containing Juniper Hall. Two (2) possible scenarios for the replacement housing in this phase will be considered:

1. SCENARIO NO. 1: 50% of the units to be 8-student / 4-bedroom / 2-bathroom apartment style with full kitchens and living room spaces similar to the existing Eccles Units in Phase One, AND 50% of the units to be semi-suites similar to Phase Two located in a separate building from the apartments. Combined buildings and unit types shall house **183 beds** (minimum) with 87 beds in semi-suites and 96 beds in twelve (12) apartments, configured in approximately **41,358 s.f.** of total program area. It is anticipated that the semi-suites will be programmed at approximately **210 s.f.** per bed, while the apartments are programmed at approximately **243 g.s.f.** per bed. Cluster lounges shall still be provided per the 1 to 48 student ratio. The semi- suite units will not have kitchens except a common kitchenette within the cluster lounge, and students will be provided with the meal plan to eat on- campus with food services. Again, the site available will be provided by the demolition of the current housing. Any future sites for additional housing are beyond the scope of this study but are addressed in the Site Analysis portion of this report.

2. SCENARIO NO 2: All units to be apartment style with 8-student / 4-bedroom / 2-bathroom units with full kitchens and living room spaces similar to the existing Eccles Units in Phase One. In this scenario, **170 beds** (minimum) in apartment units are programmed with a total program area of approximately **41,310 s.f.** Again, the apartments are programmed at the ratio of approximately **243 g.s.f.** per bed.

The cost model has been provided by LYRB and is included in the companion report. The construction cost analysis has been provided by Parmetrix, with costs for Phase Two. *See Appendix B.*

BUDGET RESTRAINTS

DFCM's Solicitation for Consultant Services (dated 13 March 2007), titled Master Planning and Programming Services for Campus Housing, Southern Utah University, identified the scope and construction budget for Phase Two as 80,000 s.f. and \$10,480,000 respectively. These figures represent a total construction cost of \$131.00/ s.f., which was immediately recognized by the programmers as unachievable. The project cost consultant projected a 2008 construction cost of \$203.97/s.f. (including \$9.00/s.f. for demolition and \$10.00/s.f. for site improvements). The programmers recommended a minimum bedroom size of 180 s.f. and a minimum area/bed of 210 s.f. / bed. In order to come close to the Solicitation construction budget of \$10,480,000, the area/bed would need to be reduced to 185 s.f. / bed and the bedroom size reduced to 160 s.f. / bedroom. The programmers could not recommend these reductions.

On 20 August 2007, SUU's Steering Committee agreed that the Solicitation construction budget was unachievable and established a maximum project budget for Phase Two of \$14,000,000. This project budget equates to an amended construction budget of approximately **\$12,100,000.00**, an increase of \$1,620,000 over the DFCM Solicitation construction budget.

LOOKING TO THE FUTURE

The goal of this Housing Program document is to provide a guide for design and construction professionals to create and construct new housing for students at SUU that will be attractive, safe, affordable, marketable and afford each a stimulating and inviting living-learning experience that can enhance their collegiate experience. Because of budget restraints and inflationary construction costs, this program simply replaces existing outdated facilities with new updated facilities within the same site, but does not put much of any dent into the plan for additional beds within the on-campus housing inventory (from 755 beds today to between 740 and 753 beds by the end of Phase Three).

This program strongly encourages SUU to acquire surrounding properties now, as part of a master planning effort, in order to plan for future expansion. This future expansion is crucial to anticipate now, for once these two phases are completed, there will be no further site remaining to develop additional housing needs of the university. And per the growth projections and anticipated success of new on-campus housing, those demand loads will still need to be met.

SUMMARY OF EXISTING FACILITIES

Existing Conditions – (Phase One):

SUU currently has a total of 755 beds (within the site under consideration by this study) in three distinct communities: **Juniper Hall** (built in 1962) with 265 dormitory beds; **Manzanita Court** (built in 1962) with 190 apartment beds, and **Eccles Living Learning Center** (built in 2005) with 300 apartment beds, not including the 30 single beds off site called **Ponderosa Apartments** (NOTE: The Eccles apartment buildings and Living Learning Center comprise what shall be called the “Phase One” portion of the housing community, with future phases of student housing being called “Phase Two” and “Phase Three” respectively.)

Both Juniper Hall and Manzanita Court are manifesting their age and need replacement.

Manzanita Court



Manzanita Court, a complex of three (3) 3-story building organized in 6-bed / 3-bedroom one-bath units with a small kitchen and a shared living space with other units within the building, in particular, has maintenance issues in plumbing and mechanical systems and structural slab concerns which cannot last beyond one additional year without substantial overhaul of its building systems. The value of overhauling the building systems verses demolition and replacement with new buildings was evaluated by SUU previously and it was determined that at this point, the only way forward is to replace Manzanita Court with new housing. To facilitate this decision, this program addresses the replacement of Manzanita Court first, in “Phase Two”, keeping Juniper Hall on line as long as possible.

Juniper Hall, a 3-story “winged”, traditional dormitory style unit of single and double occupancy rooms with shared toilet rooms and common areas located “down the hall”, though the same age as Manzanita Court, has building systems (mechanical, plumbing, structural) holding up enough to last beyond Manzanita. But, within an estimated two to three year period, it is anticipated that Juniper Hall will also need to be replaced due to the same reasons seen at Manzanita Court. This replacement housing of Juniper Hall will be “**Phase Three**”.

Juniper Hall



The scope of this programming document is to outline and plan for the replacement of these two existing facilities and replace on-site, using the same land as currently configured. The scope of this study was not to include acquisition of new lands surrounding the existing site, though this is highly recommended for the future. It is the opinion of this report that SUU should be taking steps for the future now, when funds are available, to acquire such properties for future expansion. Likewise, the scope of this study was not to address the possibility of placing future expansion on the site directly north of the existing facilities in the parking lot west of the library building. Though it is the opinion of this report that such investigation is worthy of consideration for future housing needs, such considerations need to be part of a much larger investigation into the overall campus master plan. *(NOTE: See more discussion of future expansion in the site programming section of this report).*

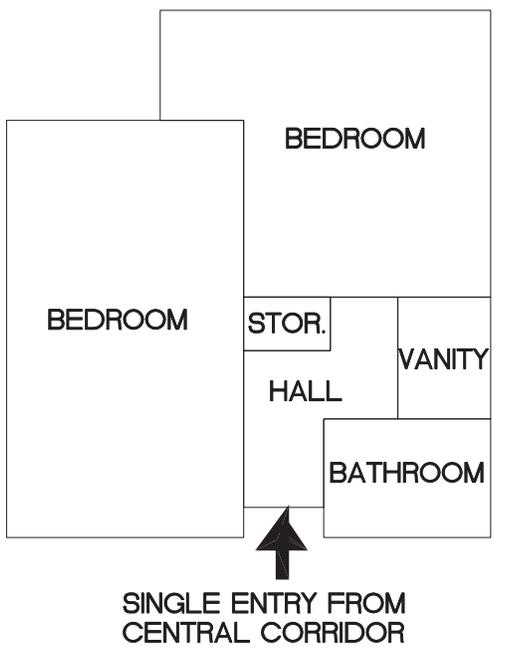
PROJECT DESCRIPTION

As determined by the demand model and the needs of the University, Phase Two Replacement Housing, the initial phase within this scope, shall provide new housing in double-occupancy rooms for a total of 282 beds (minimum) in semi-suite style configuration. The **270 beds** are proposed be housed in **138 bedrooms** with 132 bedrooms in double-occupancy configuration and six (6) bedrooms in single-occupancy (for resident assistants). The total program area is anticipated to be approximately **56,900 s.f.** or a ratio of **210 g.s.f.** per bed.

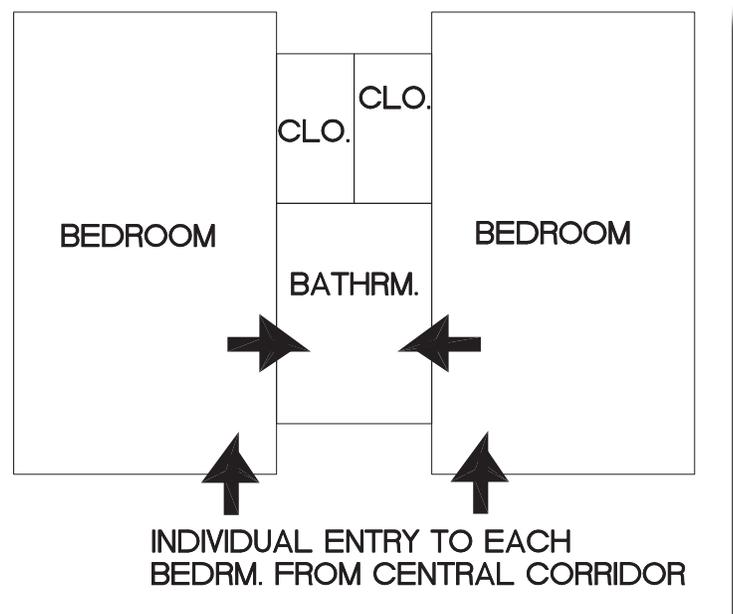
UNIT TYPE DEFINITIONS

For the purposes of this report, the following are definitions of the different unit housing types:

- **DORMITORY UNIT:** This is a bedroom (either single or double occupancy) with a single door to a central corridor. The bath room is typically located down the hall in a large community bathroom facility. No other living spaces are provided within the room itself.
- **SEMI-SUITE UNIT:** This refers to a housing unit where students share a bedroom with another student and those two students share a bathroom with another pair of students within a unit that often has a single door to a central corridor, with a common area between bedrooms and the shared bathroom area.
- **TRADITIONAL SEMI-SUITE UNIT:** Another option of the semi-suite is the more traditional approach two (2) double-occupancy rooms each with individual access directly from a central corridor, and between these two units would be situated a shared bathroom with “Jack-and-Jill” access of doors each side to the bathroom from the bedrooms.



Suites Unit



Traditional Suites

- **SUITE UNIT:** This unit type combines a cluster of bedrooms (either single or double occupancy) with shared bathrooms (usually one bathroom for two bedrooms) surrounding a common living space within the unit. The access from the central corridor is into this common living area and then surrounding this space are the bedrooms and bathrooms in a variety of configurations. *NOTE: There is no kitchen space provided in any of the semi-suite or suite style units.*
- **APARTMENT UNIT:** This unit type is similarly arranged with multiple bedrooms and bathrooms like the suite unit, only within the living space there is a common kitchen and dining area as well. These units do not require the meal plan as full kitchen facilities are provided within the unit itself.

For the purposes of this report, either of the suite options may be considered when determining the design of the units. See the discussion on the unit floor plan design.

In **PHASE TWO**, it is the desire of SUU to incorporate all units in a semi-suite design. This is essential to keep the meal services on campus functioning with a critical mass of users. The semi-suite designs will require students living in these units to participate in a meal plan of some kind. *NOTE: The exact meal plan options and their subsequent costs and impacts are NOT part of this programming document. See the Master Plan for discussions of student meal services and meal plan options.*

The semi-suite design is envisioned to configure the housing unit with a maximum of four (4) students per two 2-bedroom arrangement sharing one (1) bathroom, with a common cluster lounge for student gathering, learning / study hall area, and recreation facilities at a ratio of 1 cluster lounge per 48 students each. There will be no kitchen facilities within the housing units, excepting a kitchenette arrangement proposed for snacks etc. at the cluster lounge. These units will replace Manzanita Court. Manzanita will be demolished and the same site will be used to construct the new housing, leaving existing infrastructure in place where at all possible. If infrastructure, including parking, landscaping, utilities etc. is modified in a different configuration, the scope of replacement shall include these costs within the scope of the project.

The **PHASE THREE** portion will be the replacement of Juniper Hall. The site for Phase Three will be within the confines of the existing property containing Juniper Hall. Two (2) possible scenarios for the replacement housing in this phase will be considered:

SCENARIO NO. 1: 50% of the units to be 8-student / 4-bedroom / 2-bathroom apartment style with full kitchens and living room spaces similar to the existing Eccles Units in Phase One, AND 50% of the units to be semi-suites similar to Phase Two located in a separate building from the apartments. Combined buildings and unit types shall house **183 beds** (minimum) with 87 beds in semi-suites and 96 beds in apartments, configured in approximately **41,358 s.f.** of total program area. It is anticipated that the semi-suites will be programmed at approximately **210 s.f.** per bed, while the apartments are programmed at approximately **243 g.s.f.** per bed. Cluster lounges shall still be provided per the 1 to 48 student ratio. The semi-suite units will not have kitchens except a common kitchenette within the cluster lounge, and students will be provided with the meal plan to eat on-campus with food services. Again, the site available will be provided by the demolition of the current housing. Any future sites for additional housing are beyond the scope of this study but are addressed in the Site Analysis portion of this report.

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PHASE TWO DESCRIPTION

Phase Two, therefore, will include the following facilities:

- A total of 270 beds in SEMI-SUITE-style configuration in double occupancy rooms, organized into 4-bed / 2-bedroom / 1-shared bathroom units.
- All common spaces will be provided on each floor outside of the units.
- A cluster lounge for a maximum of 48 students with facilities for television / recreational spaces, gathering sitting areas, study rooms and general congregating flex-space to be used in common of twelve (12) units (maximum).
- Support spaces including a laundry room per floor, vending areas, housekeeping closets, bicycle storage, building storage and circulation.

The site shall not extend beyond existing facilities occupied by Manzanita Court. Efforts shall be taken to keep existing parking, trees, sidewalks etc. in place as much as possible. However, a reconfiguration of parking and infrastructure may be considered providing the scope carries the burden of such improvements. Site planning must be sensitive to the surrounding facilities of Eccles as well as the community at large.

PROPOSED COSTS

The cost model has been provided by LYRB and is included in the companion report. The construction cost estimate has been provided by Parametrix with costs for Phase Two at approximately \$14,000,000.00.

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PROJECT GOALS

The project goals are as follows:

1. Develop new and attractive student housing responding to the needs and desires of the students and incorporating a living/learning environment of academic, social and support spaces.
2. Provide safe, clean and comfortable housing which will promote and augment the student educational experience.
3. Provide a sense of community and place, including gathering spaces for students to interact and expand their own sense of “community”.
4. Replace existing Manzanita Court with new state-of-the-art facilities with technological amenities competitive with modern off-campus housing facilities, with efficient utilities and building systems.
5. Provide housing primarily for entering freshmen in a roommate situation. Eccles will be designated for continuing freshmen and upper classmen.

For further understanding of student desires, market analyses, demand models and financial models with associated goals, see Volume 1 for the Master Plan of student housing at SUU.

For this document, see the Master Plan Executive Summary for conclusions and recommendations made for the housing at SUU. *See Appendix C.*

OVERALL GOAL

In summary, the goal of this programming effort is to provide students at SUU with housing that will be attractive, safe, affordable, and marketable and afford each a stimulating and inviting living-learning experience that can enhance their collegiate experience, and to provide the **best value** in housing (best quality for the budget provided) for the university.

PROGRAM METHODOLOGY AND FORMAT

This programming document is a result of an accumulation of data and information collected and assimilated into an intelligent direction or program of how to proceed forward in designing new student housing for SUU. The method of arriving at these conclusions within this report, reflecting the goals outlined above, include:

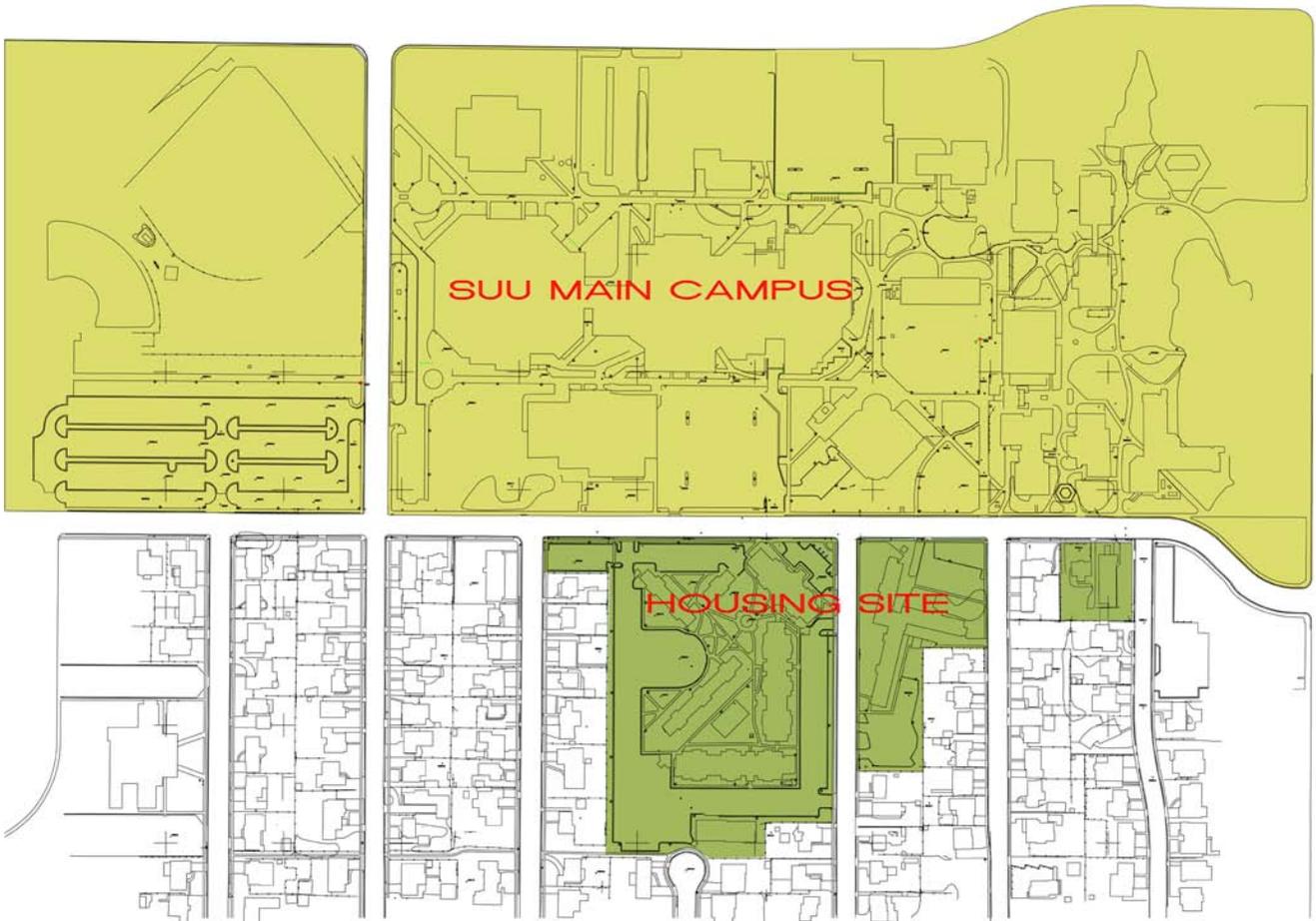
1. A joint effort with the Master Planning Team in collecting student surveys, student focus groups, R.A. focus groups, housing staff focus groups, SUU administration focus groups and input.
 2. Working closely in numerous meetings with the SUU Steering Committee to understand the philosophy, goals and objectives of the university regarding replacement on-campus housing facilities.
 3. Coordinating information from the Demand Model, Financial Model, Meal Plan assessment etc. to determine the needs and demands for on-campus replacement student housing and how that is translated into a building program.
 4. Coordinating information from consultants, including civil engineering site surveys, geotechnical reports with new boring samples and studies, input from building engineers of electrical, mechanical, plumbing and communication building systems to arrive at site design programming conclusions and recommendations.
 5. Coordinating desires from students and housing staff and university administration to determine space requirements, sizes, materials, fixtures, furnishings, space arrangements and adjacencies to arrive at a building program.
 6. Coordinating desire from housing staff and physical facilities personnel on the housing and university levels to conclude and recommend outline specifications of minimum requirements.
 7. Meeting with cost estimator consultants to confirm construction costs and cost impacts of program decisions.
 8. Meeting with other universities, particularly Utah State University at Logan, Utah and University of Nebraska at Lincoln, Nebraska, to obtain information regarding “lessons learned” from similar replacement housing projects on these campuses.
- NOTE: See Appendix A for Lessons Learned at USU and see Appendix A for Lessons Learned at University of Nebraska.*

This has been a coordinating effort to bring all of the information presented and desired into one document that provides the “path forward” for new student housing at Southern Utah University.

SITE ANALYSIS

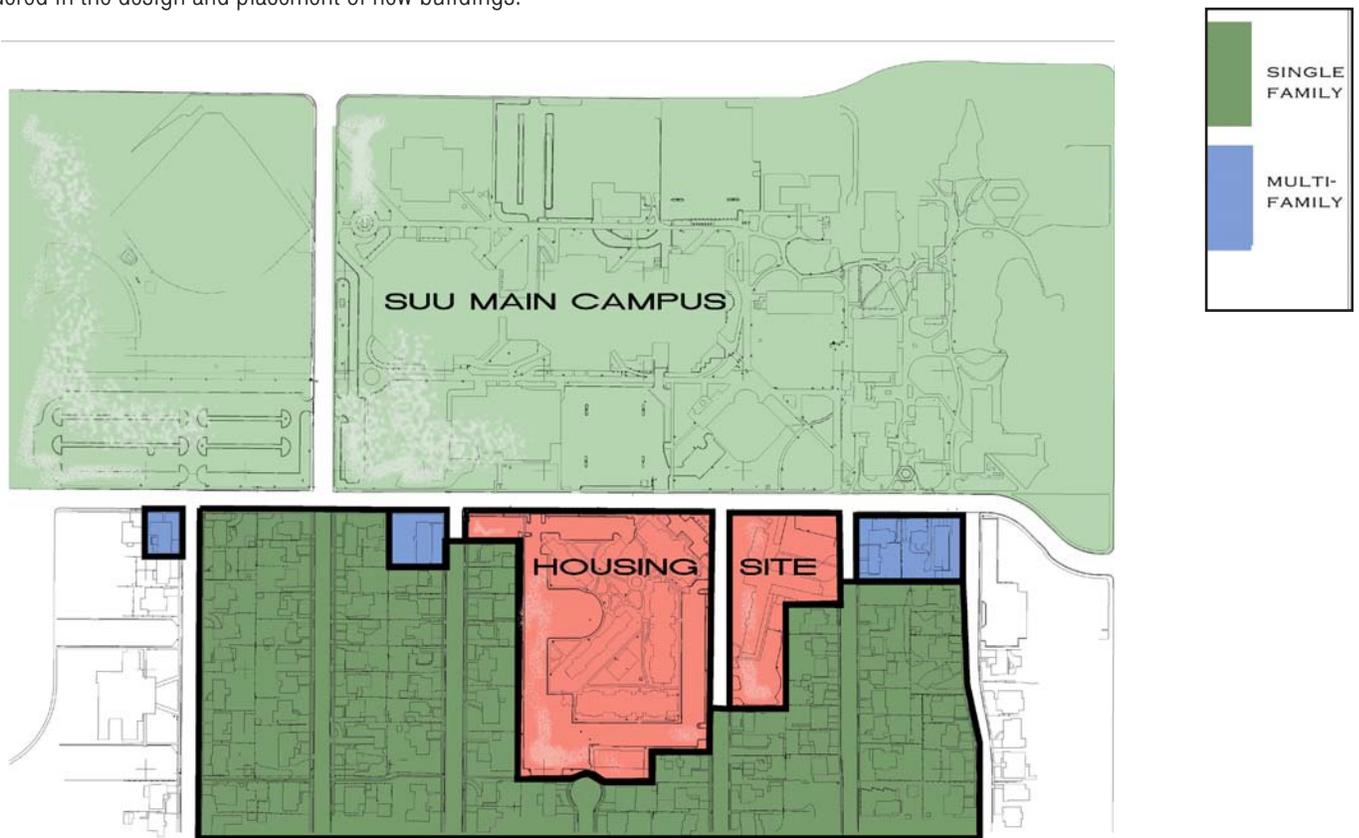
SITE LOCATION

The site is located at the intersection of 200 South Street and 500 West Street in Cedar City, Utah, on the south side of campus, directly south of the student services and library buildings.



The existing on-campus student housing site is surrounded by neighborhoods of single family housing in surrounding neighborhoods to the west, south and east. The houses are for the most part single-story dwellings with backyards with mature landscaping adjacent to the site. The academic facilities of SUU are located directly to the north across 200 South Street. There are a few two-story apartment complexes within the immediate neighborhood and a faculty parking lot adjacent to the housing parking lot located at the northwest corner of the site.

The surrounding properties are all residential housing lots that do not belong to SUU. Sensitivities to the surrounding community shall be considered in the design and placement of new buildings.



POSSIBLE EXPANSION TO THE NORTH

For the purposes of this study, the existing housing site is the site. A variety of options and phasing schemes were proposed using sites owned by SUU (such as the parking lot north of the existing housing just west of the Library), but were dismissed as not reasonable or not meeting the overall campus master plan for those parcels.

At some point in the future, when the overall campus master planning efforts are revisited, this parking lot should be considered for housing purposes for the future. Situating housing in this area would be a natural link between the current housing site and the student center and library, thus bridging on-campus housing more directly to and within the campus itself. But, for this study, the scope of the site has been limited to the existing land currently occupied by the on-campus housing facilities. *(NOTE: See Appendix D for alternate site plans and schemes proposed, but not accepted as viable options for the University. These are only ideas and possibilities of housing options, not necessarily any preference or desire to be implemented - just ideas.)*

ON-CAMPUS STUDENT HOUSING COMMUNITIES

LEGEND

	MANZANITA APTS.
	JUNIFER HALL
	ECCLES - PHASE ONE



The on-campus student housing includes four (4) existing communities:

1. Manzanita Court, consisting of three (3) 3-story buildings housing students in apartment style units, located on the west end of the site.



2. Eccles Living Learning Center (ELLC), consisting of three (3) 3- and 4-story buildings housing students in apartment style units, located east and south of Manzanita Court along the west edge of 500 West Street, which also includes the main gathering spaces for the entire housing site, including meeting rooms, computer lab, and mail center, as well as the housing office and staff offices.



3. Juniper Hall, consisting of one (1) 2-winged 3-story building housing students in traditional double occupancy dormitory style units, located on the southeast corner of 200 South Street and 500 West Street.



4. Ponderosa Apartments, consisting of one (1) 2-story 40-bed apartment community located 1 block east of Juniper Hall on 200 South Street. *NOTE: For the purposes of this study, the units and site for Ponderosa Apartments are not within this scope.*

EXISTING SITE CONDITIONS

EXISTING SITE SURVEY

Nolte Engineering was engaged to provide an ALTA Survey. That document titled Topographic Survey, is included under *Appendix E*, along with an explanatory letter. Note that the title report component of the ALTA Survey was deleted from Nolte's scope of work, as directed by SUU. The survey is therefore not technically an ALTA Survey. Note also that the nine lots along 500 West, upon which most of Phase 1 (Eccles) is constructed, were officially eliminated from the survey. Even so Nolte has included the outline of the Phase 1 buildings for clarity.

The survey provides topography and identifies all surface features on the site, including manholes, fire hydrants, power poles, etc. (refer to the survey legend for a complete listing)

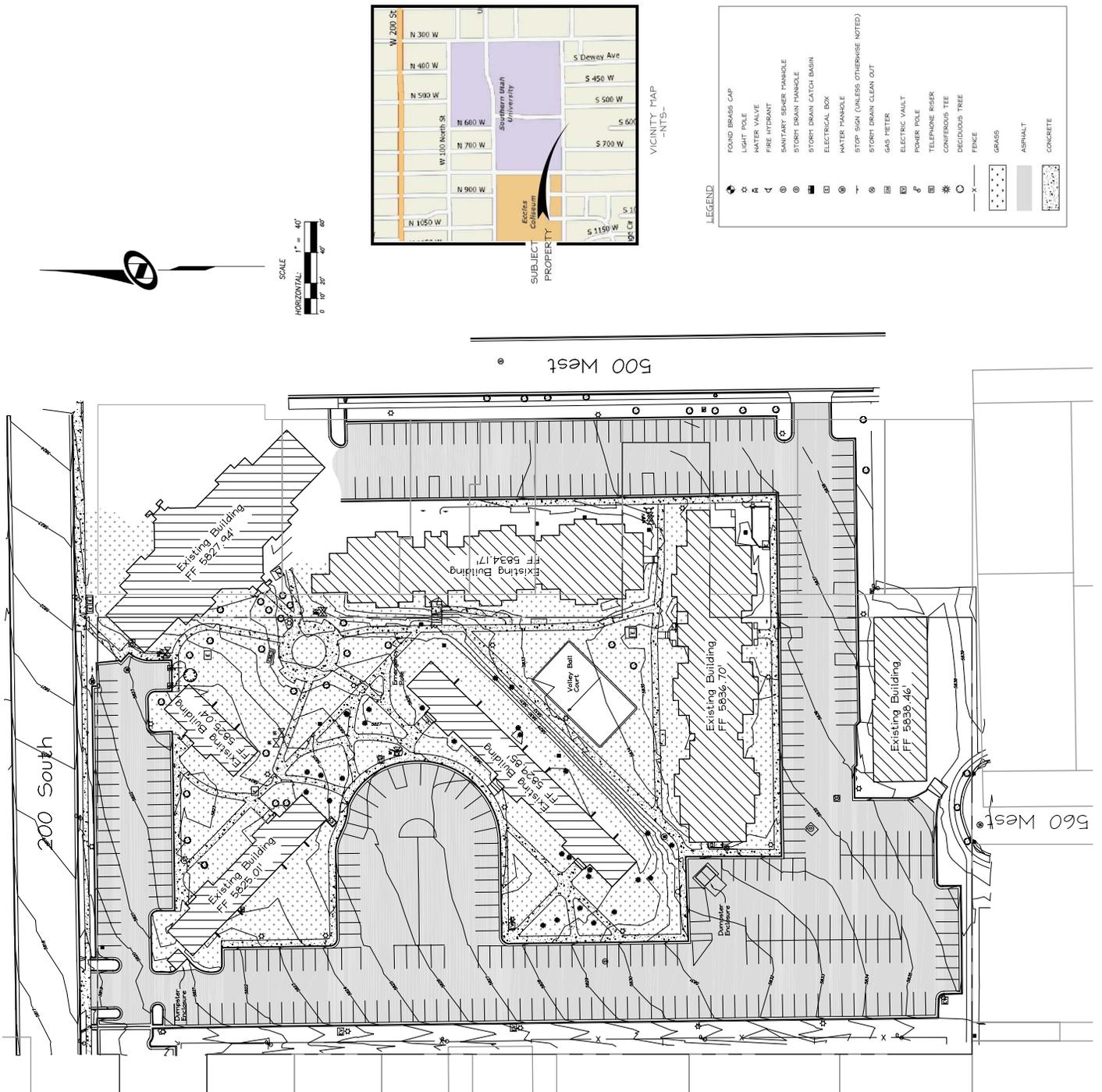
Note: Fences, other lines of possession and street improvements do not match the parcel lines as surveyed since the deed descriptions were written without the section being surveyed. Nolte recommends that boundary line agreements be made with adjoining property owners in order to resolve discrepancies.

The site is relatively level, though there is a gradual fall from southeast to northwest across the site. The Manzanita Court buildings have the 1st floor units ½ level below grade. This may be considered within the new design, although all facilities and paths across the site to the facilities and from building-to-building shall be fully accessible meeting all State and local accessibility standards and guidelines.



Existing parking lots collect water within storm drain systems, which are in place and are desired to remain in place. Existing buildings have perimeter drainage systems that collect the water from downspouts to storm drain systems in underground landscape piping. New buildings shall be required to provide underground piping around perimeter of downspouts collecting water into underground storm drain systems away from building perimeters.

EXISTING GRADING AND DRAINAGE



EXISTING LANDSCAPING

Existing landscaping and parking facilities are established on the site. Established trees are present along 200 South Street to the North and 500 West Street to the East. Additionally there are large mature evergreen / coniferous trees surrounding the Manzanita Courts buildings. It is strongly desired that all designs of new construction provide a mature ambience to the site and where at all possible, maintain and preserve street trees and mature conifer trees within the site where at all possible. Emphasis of new landscaping shall be in xeriscape / draught-tolerant plantings where possible and blend into existing campus landscaping standards.

TREE PRESERVATION PLAN



EXISTING UTILITIES

All utilities (sewer, water, gas, power, telephone, data communications, etc.) are on site or within the surrounding public streets at 200 South. See *Appendix F* for the civil utility survey plan for existing utility locations.

Steam heat systems for heating have previously been brought to the site from the campus boiler located at the library (across the street to the north). The underground steam pipe system feeds to the west of Buildings A and B of Eccles Living Learning Center (ELLC) and end at the mechanical room of Building C to the south. A tap into this system on the west side of Building A was anticipated for future building replacements at Manzanita Court.

Electrical service has been brought to the interior of the site as well with electrical lines running north-south along the same west side of Buildings A and B of ELLC. There is an existing step-down transformer directly north of Building C's north central exit to the interior courtyard. When electrical service was brought into the site to service ELLC, it was anticipated that Manzanita Court would be replaced and tapped into this utility within the site.

NOTE: See the mechanical and electrical narratives of this report for further analysis and scope for utilities on site and possible design directions to provide utilities and connections to the new building(s).

UTILITY IMPACT FEES AND ANTICIPATED IMPACT ON EXISTING UTILITY LOADS

The proposed Phase 2 housing will replace Manzanita facilities. Because the new facilities are similar in nature to the existing, there should be no impact on existing utility loads.

Southern Utah University does not pay impact fees.

EXISTING UTILITY LOCATION

Existing utilities are identified and located on an as-built drawing prepared by Insite Engineering PC, dated August 1, 2004. (*Refer to Appendix F*)

Water: Given that some of the water lines are over 45 years old, it is anticipated that a new water service will be required.

Fire - Water Flow Analysis: A water flow analysis was provided by Mike Phillips, Cedar City Fire Marshall. VBFA provided an analysis of Mike Phillips report. (*Refer to Appendix G*)

Sewer: It is anticipated that a new sewer line may be required, extending from 200 South to the new construction. Some of the existing sewer lines are Orangeburg and should be replaced. Any and all existing sewers that may run under new buildings will have to be brought up to new condition.

Central Heating: 80# steam and condensate lines are available to provide heating. Capacity is adequate.

EXISTING SITE CLIMATIC CONDITIONS

Buildings and built-environments surround the site with mature trees on all sides within the city of Cedar City. The site is at elevation 5834 feet. The site is part of the high desert with mostly a arid, dry climate of approximately 15 inches of rain per year with most coming in the form of winter snow storms and spring and fall rain storms. Summers are hot and dry, with monsoon moisture common producing thunderheads in late July and August.

Wind patterns are primarily from the northwest to the southeast with stiff south winds prior to incoming storms. Canyon breezes, especially in the evening push from east to west across the site, though stiff winds are rare due to the large trees that disperse the nightly breezes.

The sun spans across the site from the east (over the mountains) to the west with solar gain primarily from the south and southwest orientations.

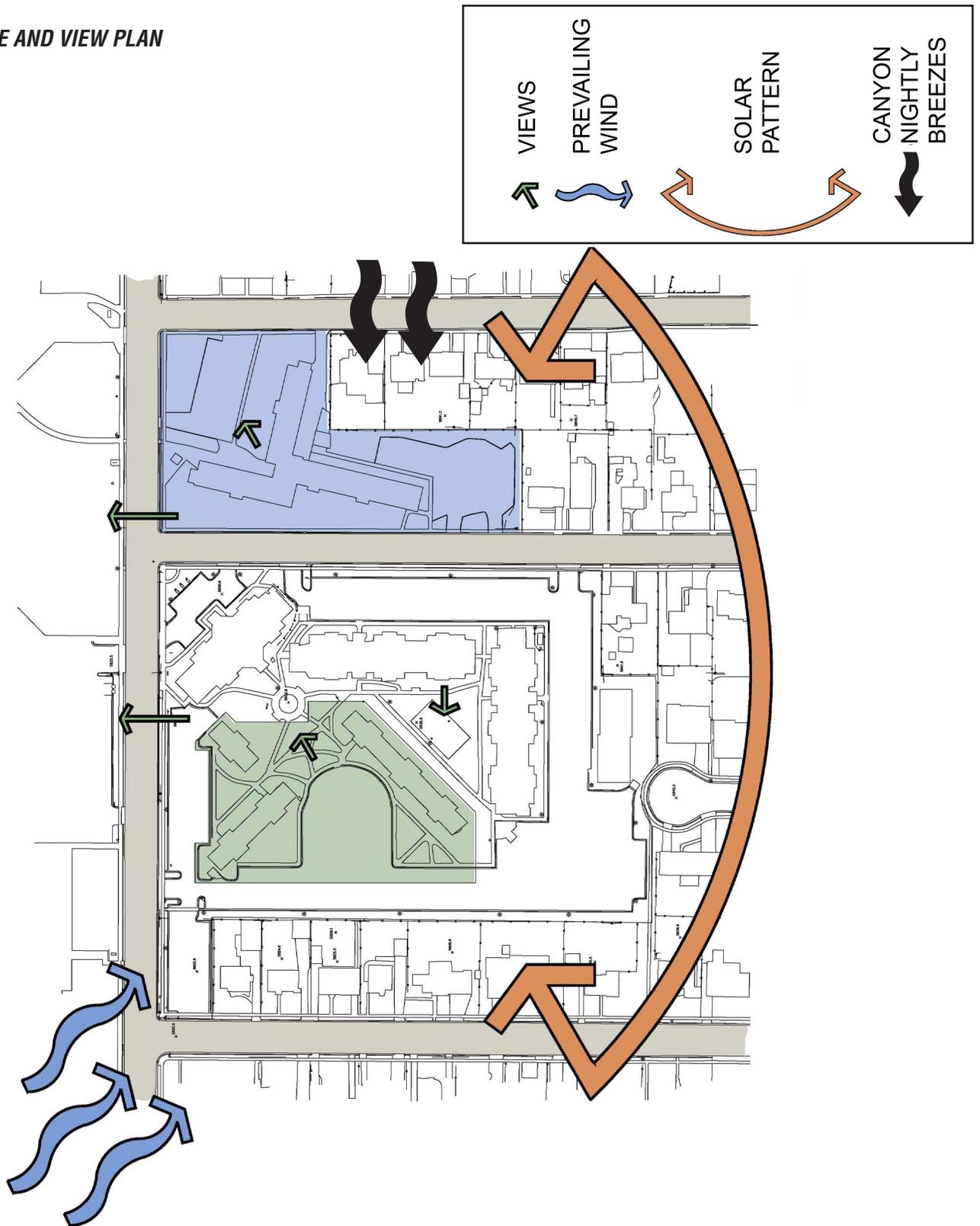
Good design practices require that the new building(s) be organized to maximize solar gain and minimize adverse affects of prevailing winds. Additionally, orientation should keep in mind natural light and maximizing the effect of natural light within the building interiors and common spaces.

EXISTING SITE VIEWS

The primary views are to the north back to the campus at large and the Library Building to the northeast. Additionally, especially from the third floor, there are view to the east to the mountains and Cedar Breaks National Monument. But for the most part, views are internal to courtyards, green open spaces and landscaped plazas within the site.

Good design will address views and orient buildings such that the majority of all bedrooms and lounge spaces face toward views of either campus, the mountains or interior green open space amenities.

SITE CLIMATE AND VIEW PLAN



DEMOLITION PLAN – PHASE TWO

The proposed demolition sequence is to remove and demolish in their entirety the three (3) buildings comprising Manzanita Court as part of Phase TWO construction. The demolition can be phased per contractor preference. Building A is a stand alone building pod (single staircase / lounge) located at the northeast end of the site. Building B-C is a two-pod building to the northwest, and Building D-E-F is a three-pod building to the southwest.

All structures, including foundations and basement mechanical rooms shall be demolished in their entirety with removal of all utilities under buildings. Abandoned utility lines shall be removed or capped and filled with concrete as necessary. Asbestos abatement and other hazardous materials shall be abated and removed per the HAZMAT recommendations and reports. *See Appendix H for additional information and reports of existing building materials that may require special removal prior to full building demolition of the existing structures.*

DEMOLITION REQUIREMENTS

Schedule:

Abatement and demolition are critical activities in the project schedule

Abatement and demolition must be scheduled to commence immediately following the departure of students at the conclusion of the 2007/2008 academic year, in order to give the contractor reasonable time to complete the project ahead of the start of the 2009/2010 academic year.

Basic Demolition:

The existing Manzanita and Juniper Hall buildings are constructed of concrete and masonry block. Parametrix estimated approximately \$9.00/sf to demolish the buildings. The basic demolition costs included in the Parametrix estimates (*Appendix B*) are as follows:

Manzanita: \$347,490

Juniper: \$436,500

Abatement of Hazardous Materials:

On May 19, 2006, laboratory documents pertaining to asbestos sampling in student housing buildings Manzanita and Juniper at Southern Utah University were reported to Bob Anderson, of DFCM. The reports indicated significant quantities of ACM (asbestos contain material). *Those reports were provided to the programmers and are included under Appendix H.*

On October 8, 2007, Matthias Mueller of DFCM provided preliminary abatement cost assumptions, prepared by Bob Anderson. *A copy of that email is included under Appendix H.* In summary the estimated costs are as follows:

Manzanita: \$362,312

Juniper: \$456,036

Design West was directed to include the preliminary abatement assumptions in the construction cost for Phase Two.

Bob Anderson has noted that an accurate, comprehensive survey of ACMs in Manzanita and Juniper is a prerequisite to obtaining a demolition permit from the State of Utah. The survey would cost approximately \$12,000 to \$15,000 and is not included in the cost of Phase Two.

DEMOLITION BEYOND BUILDINGS

Surrounding parking and sidewalks, as well as landscape that are outside the building zones should be encouraged to remain in place. Any damage of existing or re-configuration of existing facilities beyond the building zone shall be replaced as part of this scope and design.

DEMOLITION PLAN: PHASE 2

PHASE TWO



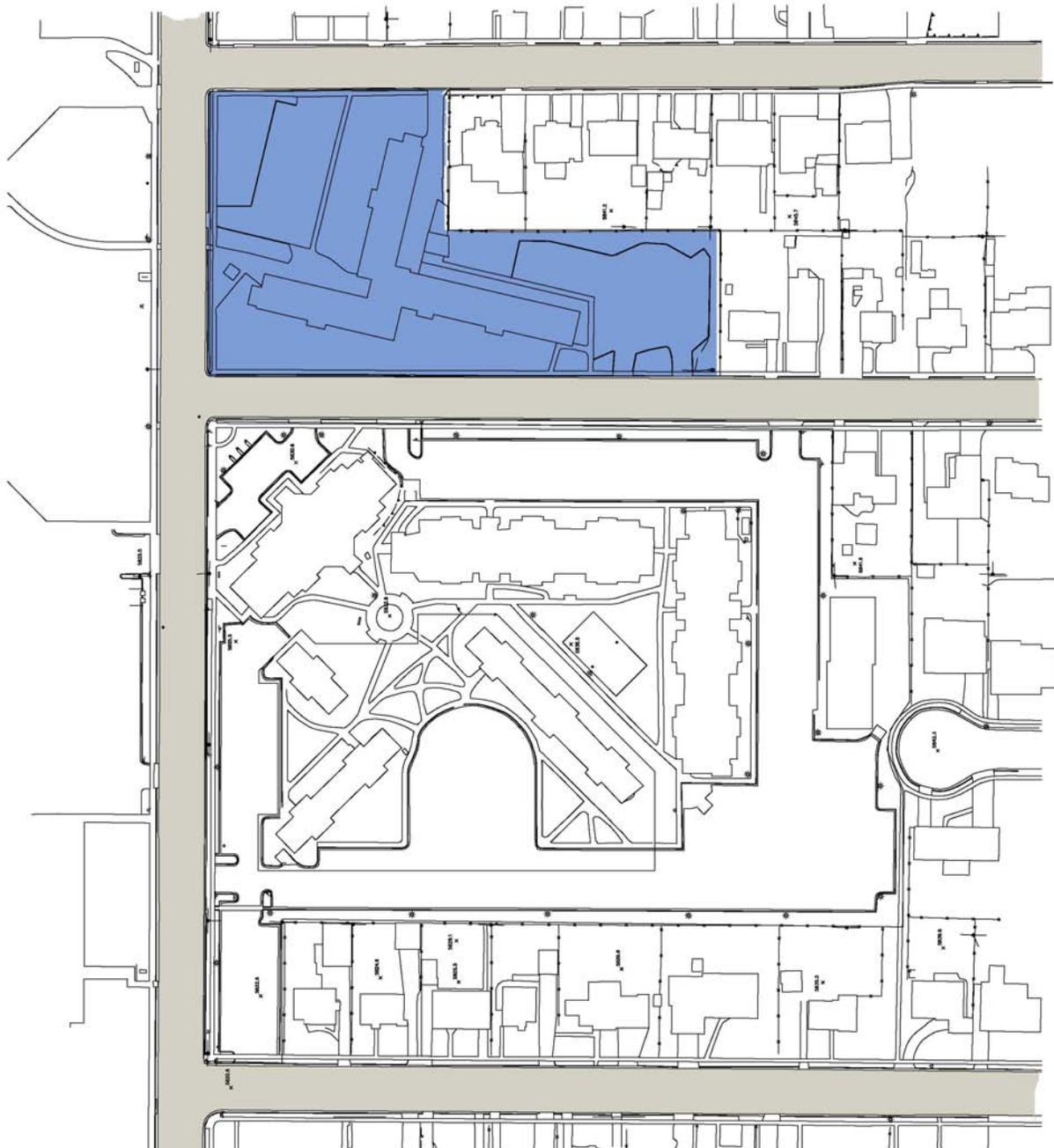
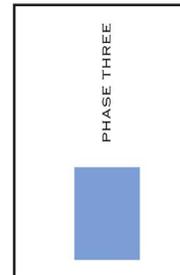
DEMOLITION PLAN – PHASE THREE

In Phase Three, the Juniper Hall structure as well as the surrounding concrete drive, parking, and out buildings including the hot-tub structure as well as mechanical enclosures shall be demolished in their entirety. See the same HAZMAT studies provided by SUU for Juniper Hall with recommendations of how to handle hazardous materials. *See Appendix H.*

As with Manzanita Court, the entire structure shall be removed, including basements, footings and foundations etc. as part of Phase Three.

The surrounding street trees and landscape around Juniper Hall outside the building zone are strongly desired to remain in place.

DEMOLITION PLAN: PHASE 3



PHASE TWO SITE DESIGN

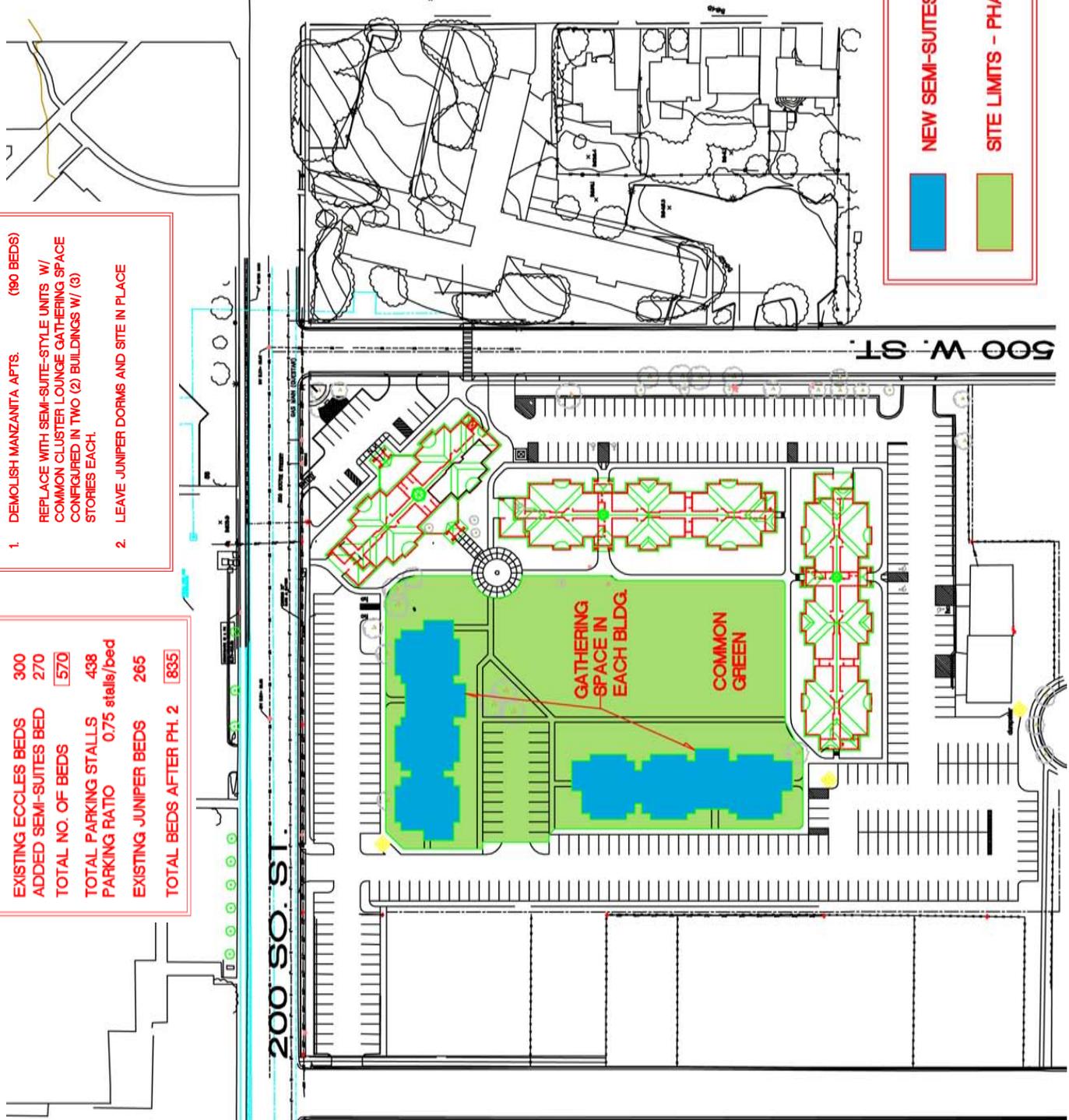
Scheme A

PHASE TWO SUMMARY:

1. DEMOLISH MANZANTA APTS. (190 BEDS)
 REPLACE WITH SEMI-SUITE-STYLE UNITS W/
 COMMON CLUSTER LOUNGE GATHERING SPACE
 CONFIGURED IN TWO (2) BUILDINGS W/ (3)
 STORIES EACH.
2. LEAVE JUNIPER DORMS AND SITE IN PLACE

TABULATION - PHASE TWO

EXISTING ECCLES BEDS	300
ADDED SEMI-SUITES BED	270
TOTAL NO. OF BEDS	570
TOTAL PARKING STALLS	438
PARKING RATIO	0.75 stalls/bed
EXISTING JUNIPER BEDS	265
TOTAL BEDS AFTER PH. 2	835



The intent of Phase Two, is to keep utilities, infrastructure and parking in place where possible in the area of the Manzanita Court buildings, demolishing those buildings, and replacing with new housing structures accommodating the program requirements of this report. The ELLC will have all facilities remain in place and will be occupied during construction of Phase Two. Care shall be taken to keep students and visitors safe from construction of the new facilities at all times.

The examples shown in this program are preliminary and schematic in nature and are to be used as such and not to be construed in any way as the preferred or ultimate desired design by SUU. These site planning examples simply show the application of the program to the site in a way that is feasible and meets programming intent. The final design is open to any number of creative alternatives and site configurations by the designer. The BEST VALUE is desired to provide SUU with the best building and site design for the budget. Numerous buildings or one large building may be considered. Neither is preferred or desired, and all options that are viable to the program intent are to be considered and not excluded. For the purposes of this exercise, these programming diagrams for the site model have shown two (2) buildings of 3-stories each. As noted, this is only one of many possibilities and should not be considered the only option.

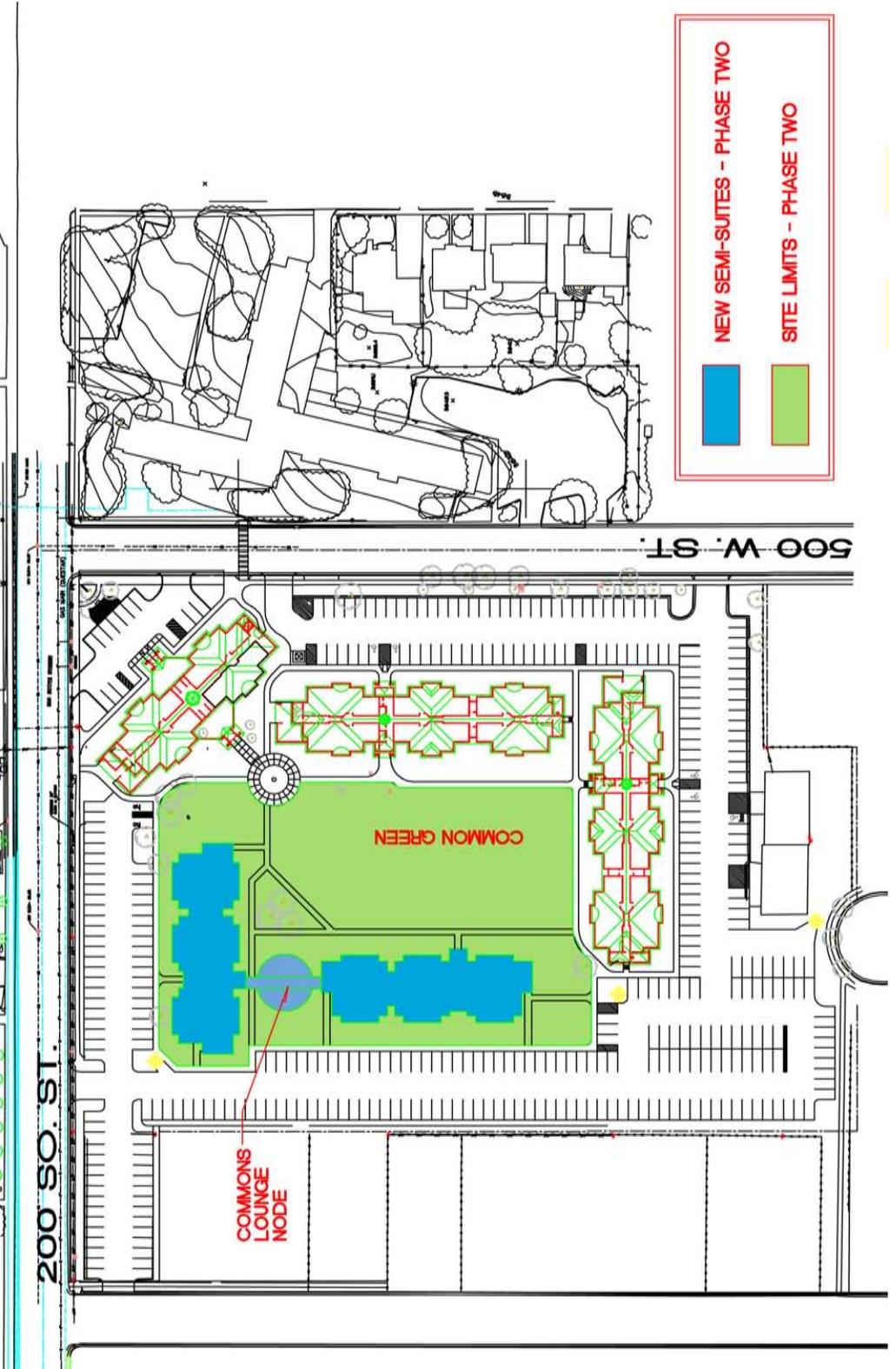
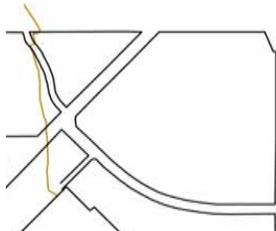
With the site plan options, the internal parking lot within the existing Manzanita Court buildings is anticipated for construction staging as well as possible demolition and reconstruction. In Scheme "A" example shows where parking is reconfigured with stalls between two buildings, but buildings oriented in a way to provide a quad of green, or a large rectangular and usable open space area for both Eccles and new Phase Two students.

PHASE TWO SITE DESIGN

Scheme B

- PHASE TWO SUMMARY:
1. DEMOLISH MANZANITA APTS. (190 BEDS)
REPLACE WITH SEMI-SUITE-STYLE UNITS W/
COMMON CLUSTER LOUNGE GATHERING SPACE
CONFIGURED IN TWO (2) BUILDINGS W/ (3)
STORIES EACH.
 2. LEAVE JUNIPER DORMS AND SITE IN PLACE

TABULATION - PHASE TWO	
EXISTING ECCLES BEDS	300
ADDED SEMI-SUITES BEDS	270
TOTAL NO. OF BEDS	570
TOTAL PARKING STALLS	422
PARKING RATIO	0.72 stalls/bed
EXISTING JUNIPER BEDS	265
TOTAL BEDS AFTER PH. 2	835



NEW SEMI-SUITES - PHASE TWO

SITE LIMITS - PHASE TWO

In Scheme “B”, as another suggestion, the example is shown where the interior parking lot is removed entirely and the new buildings are organized in a rectilinear arrangement with a connecting hub of common space / gathering space with bridges to each of two buildings. In this scenario, the cluster lounges and building entries would focus in on this central hub and then branch out to the individual building wings. This orientation permits the same creation of a large rectangular usable and spacious “quad” or open green space. Though parking is reduced, the arrangements of the buildings and the functional and visually pleasing open space are preferred.

Orientation of new buildings is encouraged to emphasize streetscapes on the exterior of the site and courtyards and landscaped common areas on the interior of the site with windows viewing to common green space. Building configurations are encouraged to be situated on the site to maximize the use of common areas and exterior gathering places for students. The building orientation shall be such that no two buildings are situated directly across from each other (except across large open spaces) so that windows and views between units can be maximized for natural light, privacy and access to common spaces. Building height will be limited to 3-story construction where at all possible with setbacks and height restrictions being sensitive to surrounding residential neighborhoods and Cedar City zoning standards as well as SUU campus design standards.

NOTE: Though Building C of Eccles (ELLC) is 4- stories, this building was permitted by the city because of its distance away from surrounding neighborhoods and street frontages. The newly proposed buildings will be closer to neighboring houses and views into their backyards, or more adjacent to street frontages and therefore will be required to maintain a 3-story height similar in massing to that of Buildings A and B of ELLC.

VEHICULAR SITE CIRCULATION

The parking lot layout in Phase Two is already established and is encouraged to remain in place unless there is a good design reason to be proposed to do otherwise. That having been said, all options are on the table for consideration to provide SUU with the BEST VALUE design within the budget allotted.

With the parking lot in place, vehicular circulation flows from the public streets (either from the north end at 200 South Street or at the southeast end of the site at 500 South) with access to parking lots at the south edge and west edge of the site. This pattern of circulation for Phase Two is anticipated to remain in place requiring no new approaches or street improvements.

Accessible parking and associated requirements shall be part of this scope meeting all requirements of the Building Code.

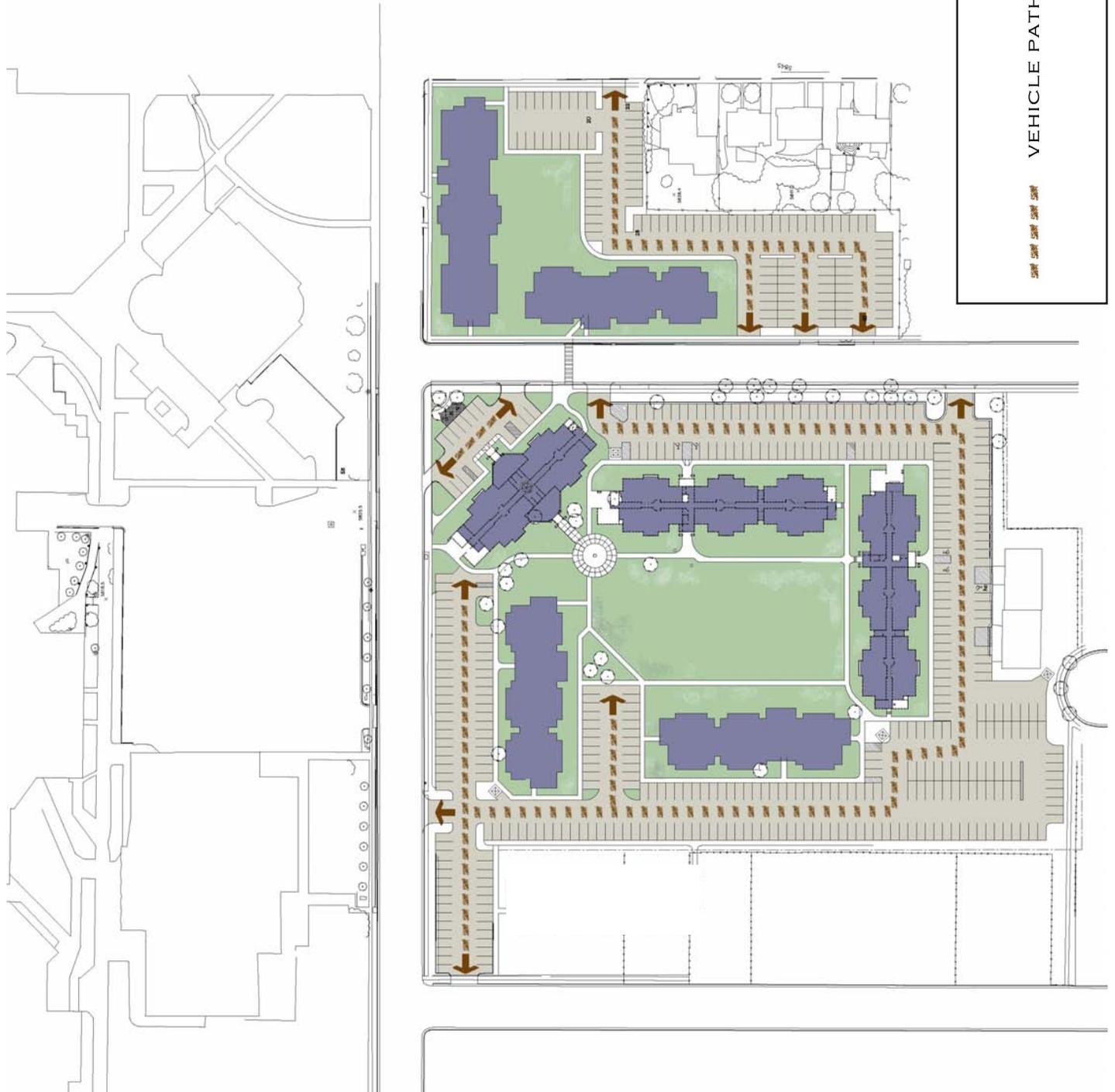
EMERGENCY VEHICLE SITE CIRCULATION

Emergency vehicles may access the site from both 200 South Street and 500 West Street and may circulate within the parking lots to the south and west to provide access on all sides of the site. This circulation path is shown on the attached site plan as a possible solution for fire vehicle access to the new buildings.

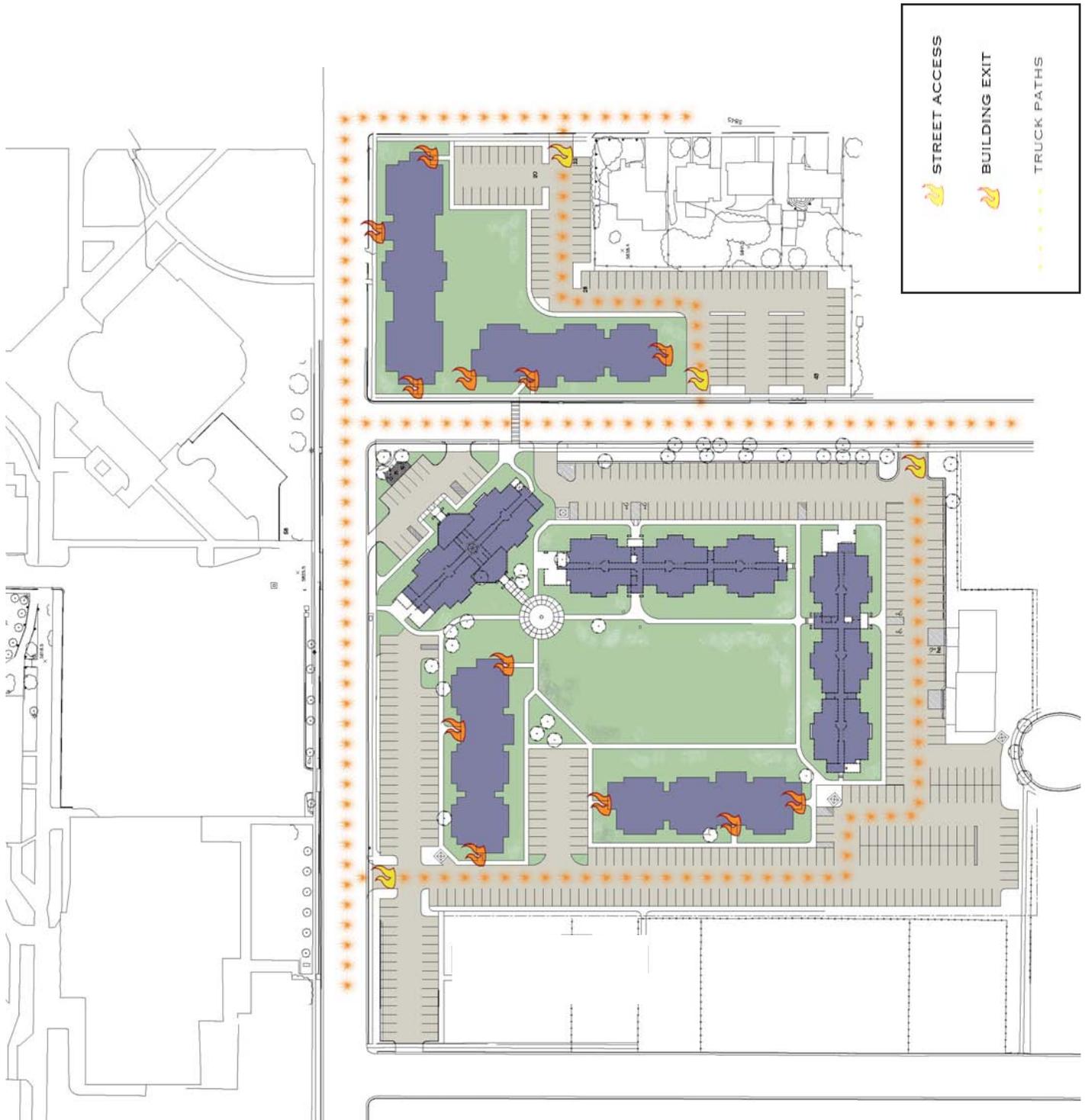
Good design will coordinate with local fire officials and SUU for locations of fire hydrants and fire lane access to the buildings. The final design shall meet the requirements of the local fire marshal and SUU officials.

Egress points are indicated from the hypothetical buildings with access to the public sidewalks from points as required by code for emergency exiting.

VEHICLE CIRCULATION PLAN



EMERGENCY VEHICLE CIRCULATION PLAN



PEDESTRIAN SITE CIRCULATION

The site plan should be very pedestrian-friendly with access to each building and to the campus to the north without crossing parking and vehicular circulation on site. Sidewalks are desired to provide pedestrian access between buildings and to interconnect at the ELLC Building A plaza for circulation to Building A for mail delivery, gatherings at the multi-purpose room, the computer lab and housing office.

The design should investigate and provide clearer and direct access to campus across 200 South Street and propose alternate locations of crosswalks and or other solutions to this design problem.

The open green-space quad in the middle of the site is encouraged to provide gathering and outdoor recreational opportunities without crossing with sidewalks or paths.

ACCESSIBILITY SITE CIRCULATION

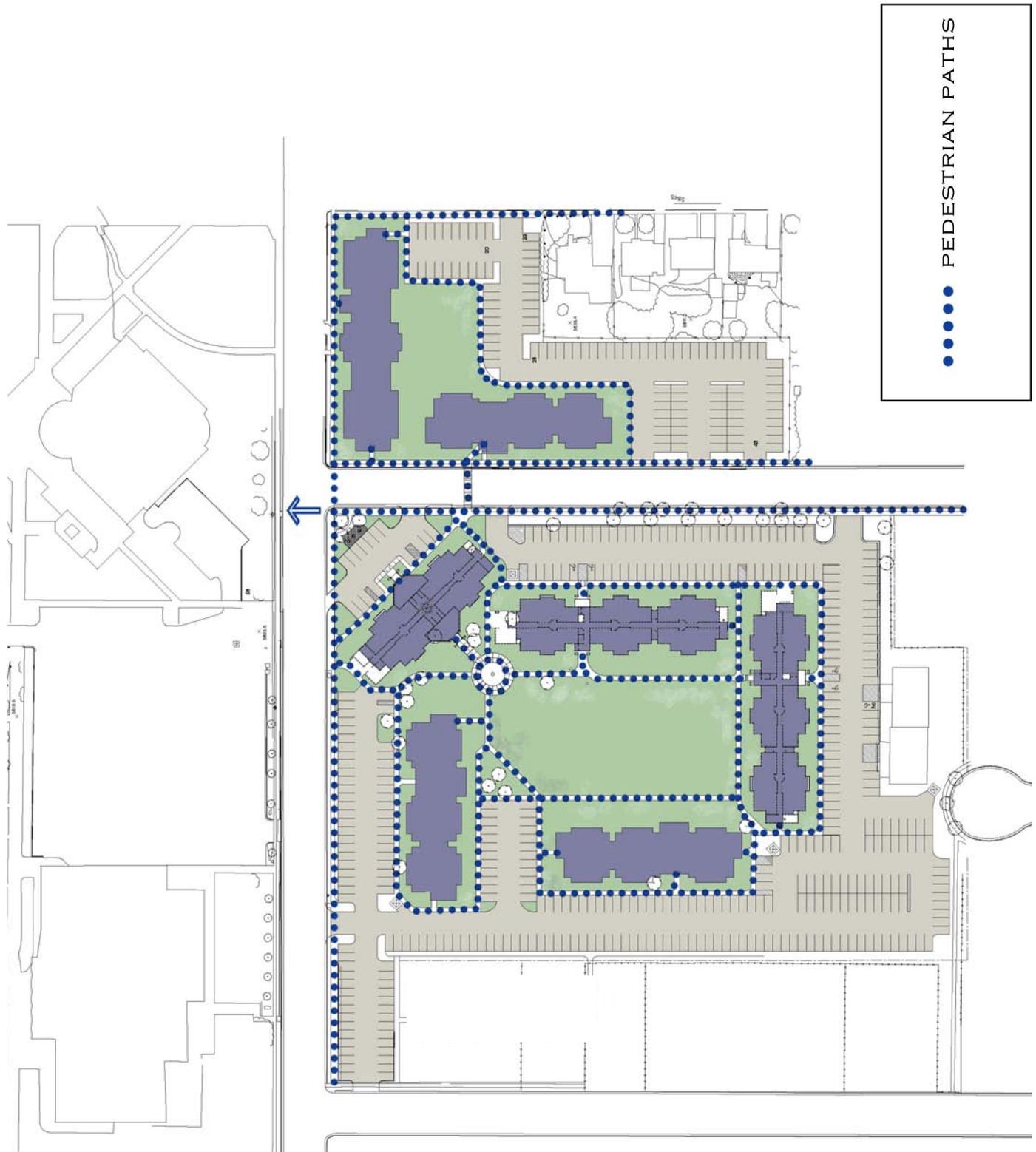
The site grading, though relatively flat, does slope to the west and north and must be dealt with in the site design to provide barrier free circulation for accessibility and visitability of all buildings and amenities. Code requirements meeting IBC and ANSI A117.1-2003 requirements and state of Utah adaptations applicable shall comply to this project as well as FAIR HOUSING requirements from FHA.

At least two (2) points of access and egress from each building shall be accessible as noted on the accessibility site plan. Paths from accessible parking to building entrances and into each building shall be accessible. The main entrance to each building is encouraged to have push-pad entry assist doors for visitability.

Stairs may need to be provided at secondary entrances or sidewalks. These are to be provided as dictated by the site design meeting code requirements of proper railing and stair configuration.

Ramps and accessible curb cuts with truncated domes and dimensions as outlined by code are to be provided to assure a barrier-free site.

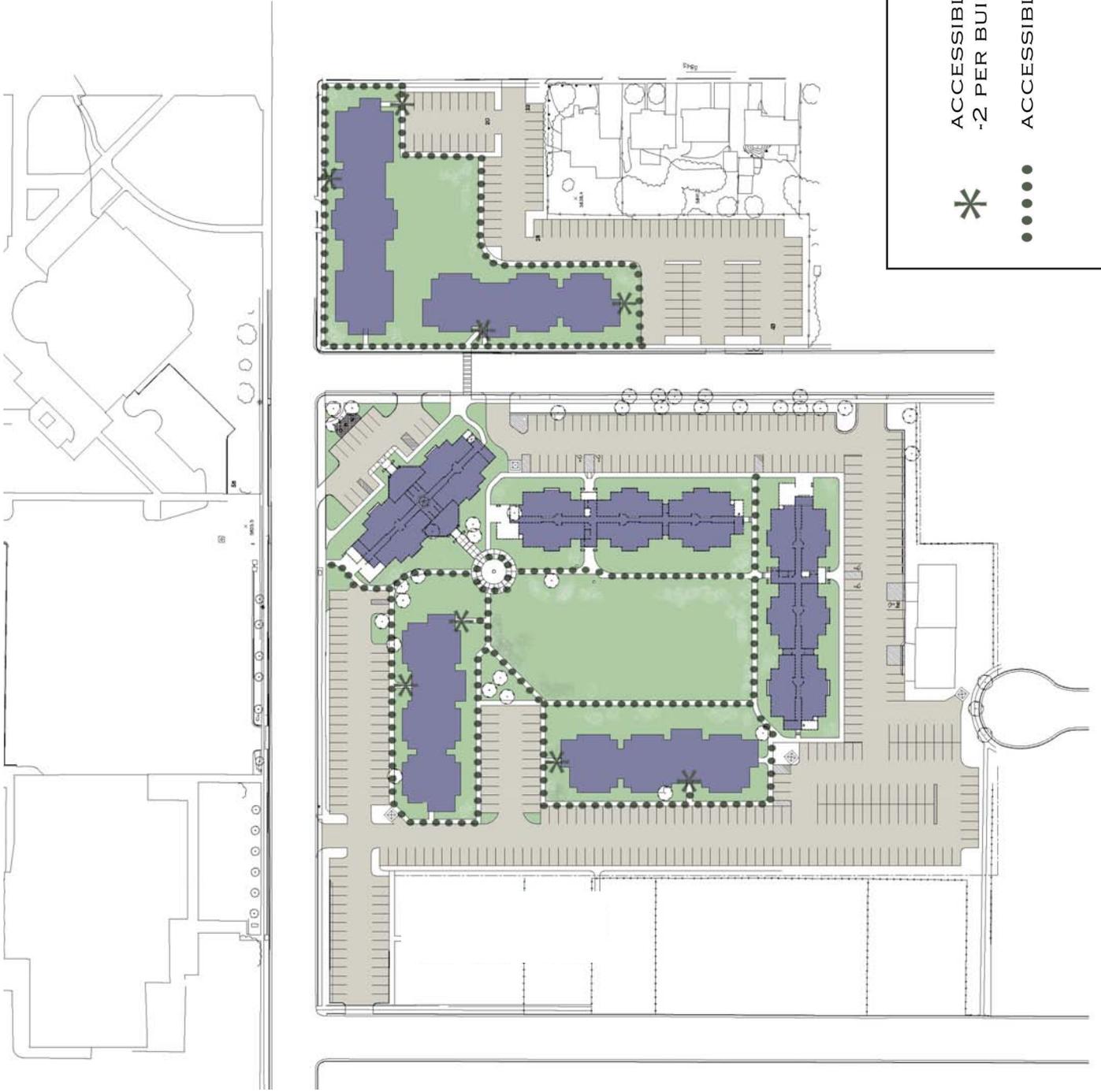
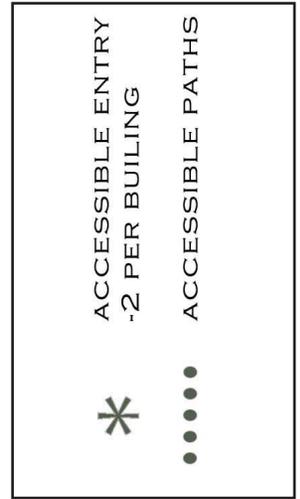
PEDESTRIAN SITE CIRCULATION PLAN



ACCESSIBILITY SITE CIRCULATION PLAN

ACCESSIBLE ENTRY
-2 PER BUILDING

ACCESSIBLE PATHS



PARKING REQUIREMENTS

Parking tabulations have been shown for each site scheme. In all cases, the parking required shall meet the Cedar City zoning requirements of 1.3 stalls per bedroom or 0.65 stalls per bed/student with double occupancy rooms. Parking configurations in site design options may not be reduced below this ratio.

At this point, the 30 stalls noted in the northwest corner of the site are considered faculty parking and are NOT included in this scope. An open policy of parking passes is encouraged so that all students living in on-campus parking may park in ANY parking on campus, not just the parking at the site.

That having been said, there is an on-going discussion with SUU regarding how to manage and supervise the parking lots associated with the overall campus parking plan. At the writing of this report, these discussions may permit students in the housing areas to parking in any of the parking lots on campus as well for a nominal fee. Thus, it can be shown that the 1.3 stalls per bedroom may be met by including the parking lots across the street on campus north of 200 South Street.

Thus, the intent of good site design for parking is to keep the following in mind:

1. Provide 1.3 stalls per bedroom where at all possible within the site areas of Phase Two and Phase Three.
2. Maintain existing parking lots and infrastructure where possible.
3. Keep parking toward the rear of the site and away from streetscapes to provide a pedestrian-friendly and landscaped “campus feel” around the new housing buildings.
4. Do not sacrifice functional open space for additional parking stalls. Maximized usable and meaningful open space surrounding the buildings is more important than facilitating more parking stalls.
5. The ratio of 1.3 stalls per bedroom or approximately 0.65 stalls per student need not be exceeded.
6. Provide accessible parking stalls at convenient locations for accessibility to all buildings per code requirements.

The tabulation for number of beds and total parking provided for Phase Two / Scheme “A” site plan is as follows:

TABULATION - PHASE TWO	
EXISTING ECCLES BEDS	300
ADDED SEMI-SUITES BED	270
TOTAL NO. OF BEDS	570
TOTAL PARKING STALLS	438
PARKING RATIO	0.75 stalls/bed
EXISTING JUNIPER BEDS	265
TOTAL BEDS AFTER PH. 2	835

The tabulation for number of beds and total parking provided for Phase Two /Scheme “B” site plan is as follows:

TABULATION - PHASE TWO	
EXISTING ECCLES BEDS	300
ADDED SEMI-SUITES BEDS	270
TOTAL NO. OF BEDS	570
TOTAL PARKING STALLS	422
PARKING RATIO	0.72 stalls/bed
EXISTING JUNIPER BEDS	265
TOTAL BEDS AFTER PH. 2	835

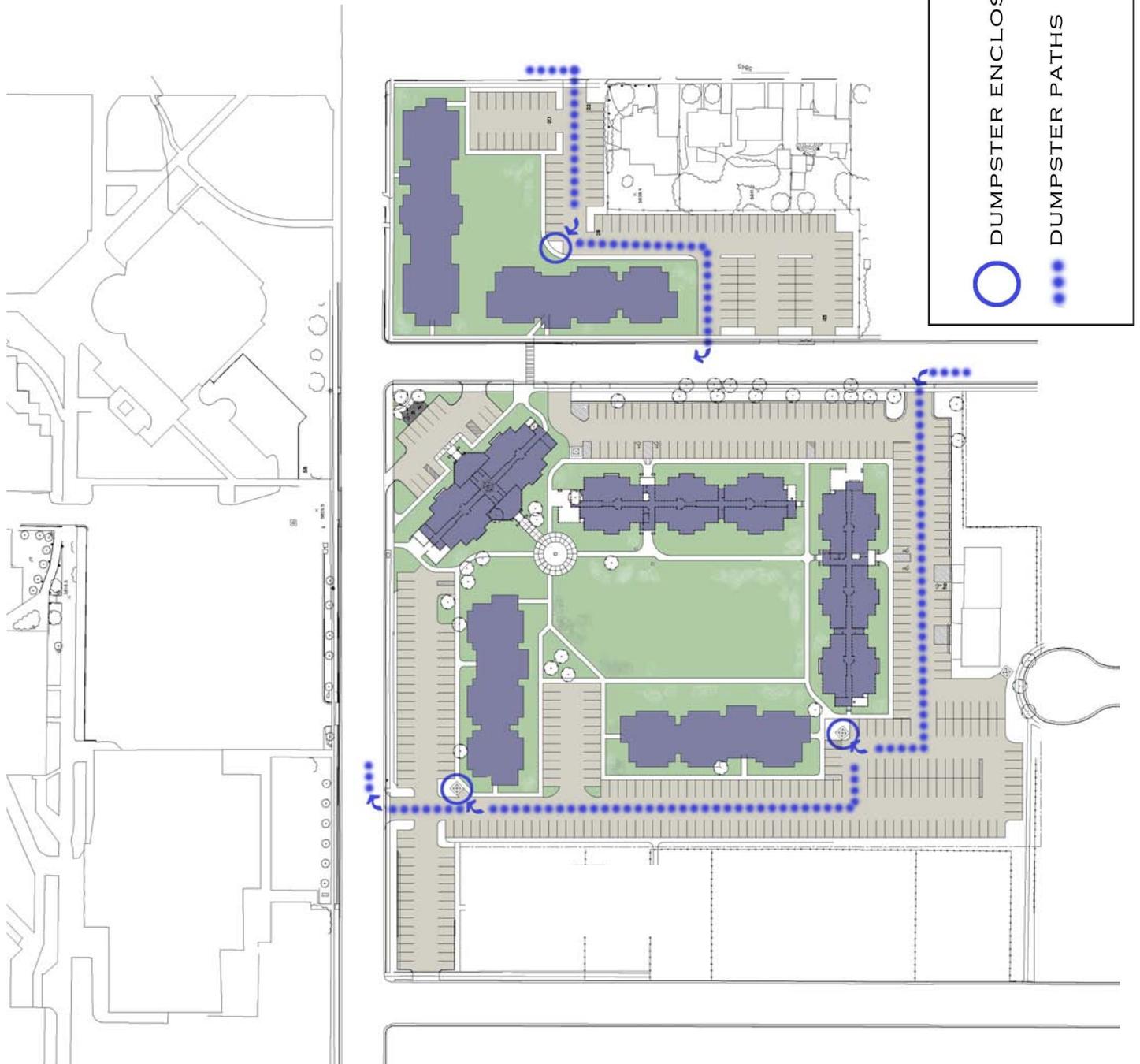
SERVICE ACCESS AND DUMPSTER LOCATIONS

There will be no dock or service access required to the buildings. This is not in the scope of this program.

Dumpster locations are existing enclosures on site and either may remain in place or may be reconfigured to accommodate not only the new facilities, but also the existing units at the ELLC. A dumpster enclosure is shown at the northwest end of the site and at the southwest end of the site. There shall be at least these two dumpsters to remain or be relocated to fit the new design.

A clear path through the parking lot with access for front loading dump trucks is to be provided to these dumpsters with the dumpsters configured on an angle as coordinated with SUU physical facilities and with the sanitation contractor requirements. Good design would recommend a single pass through the site without requiring backing up or looping back through the site.

SERVICE CIRCULATION PLAN



IMPACT ON NEIGHBORS

With the sensitivities to the surrounding neighborhoods high on the priority list for SUU, the design shall be such that impacts to the surrounding neighbors are minimized. By placing the buildings within the interior of the site and away from neighboring backyards, by respecting height limitations, and by keeping all circulation to 200 South Street and 500 West Street and not interconnecting with the neighborhood streets to the west or the south, such good-neighbor policies can be maintained.

SUU is a good community player in the larger scene of Cedar City life and this project is projected to continue that practice.

MASTER PLAN ANALYSIS

This document and the programming requirements indicated here-in reflect the Master Plan for on campus student housing at SUU. Volume 1 (Master Plan) and Volume 2 (Programming) are companion documents that provide a full vision for the housing needs of SUU.

The programmers have reviewed the Campus Master Plan for SUU and see no impact on the Campus Master Plan in what is being proposed within this programming document. The housing replacement was envisioned and this report implements that vision.

STATE ENERGY CONSERVATION REQUIREMENTS

The site and building design process will be required to follow State of Utah Energy Conservation requirements, including the International Energy Conservation Code 2006, and incorporate energy efficiency design practices and procedures of site and building design to maximize the efficiency of these new facilities.

SOIL CONDITIONS

Geotechnical reports indicate the plastic nature of the soils on site. It is crucial that foundation systems respond to the soil plasticity and that grading and drainage be positively flowing away from all foundations to assure no moisture is draining and gathering around building perimeters.

Creative solutions will be required in site designing of grading and drainage to meet the needs of the soils recommendations. *NOTE: See the Geotechnical report in Appendix I attached to this report.*

PHASE THREE SITE DESIGN:

Phase Three site design is planned for either of two options as noted:

Scheme A: 50% suites and 50% apartments

Scheme B: 100% apartment units.

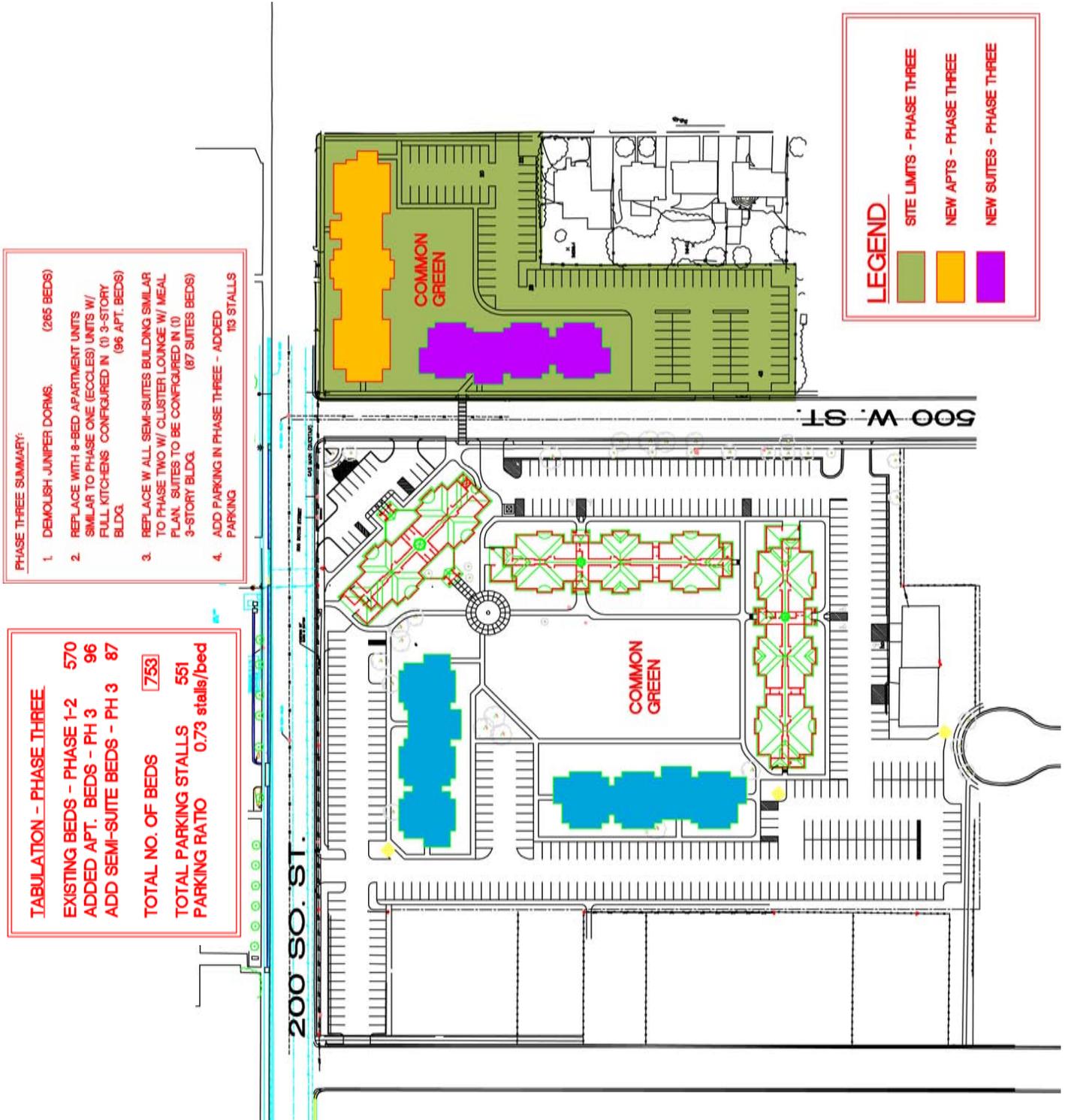
Phase Three – Scheme A is proposed to demolish all existing facilities, including buildings, parking lots, hot tub / laundry facilities etc. and replace with two buildings with one (1) housing apartment style units and one (1) housing semi-suite style units as indicated by the building program with a 50% / 50% split between the unit types.

The same good design practices and methods, sensitivities to neighboring residential buildings and mature landscape areas, as well as utility infrastructure maintainability and sensitive soils conditions, will be applicable with Phase Three as it is with Phase Two.

Buildings are encouraged to create streetscapes along 200 South and 500 West Streets, respectively, with interior parking located within the interior of the block. Landscaped areas and pedestrian-oriented building fronts are required. Pedestrian linkage across 500 West with sidewalks and nodes of contact between Eccles and the new buildings is crucial. Since this phase will still be linked to Building “A” (the ELLC), pedestrian access that is direct and strongly linked shall be required.

Phase Three – Scheme B is proposed to demolish the same facilities, but replace with 100% apartment units. The attached site plans show how parking and new buildings can be configured to keep the streetscapes in place and linkages strong with the campus to the north and ELLC to the west, with parking to the south or interior of the block.

Scheme A



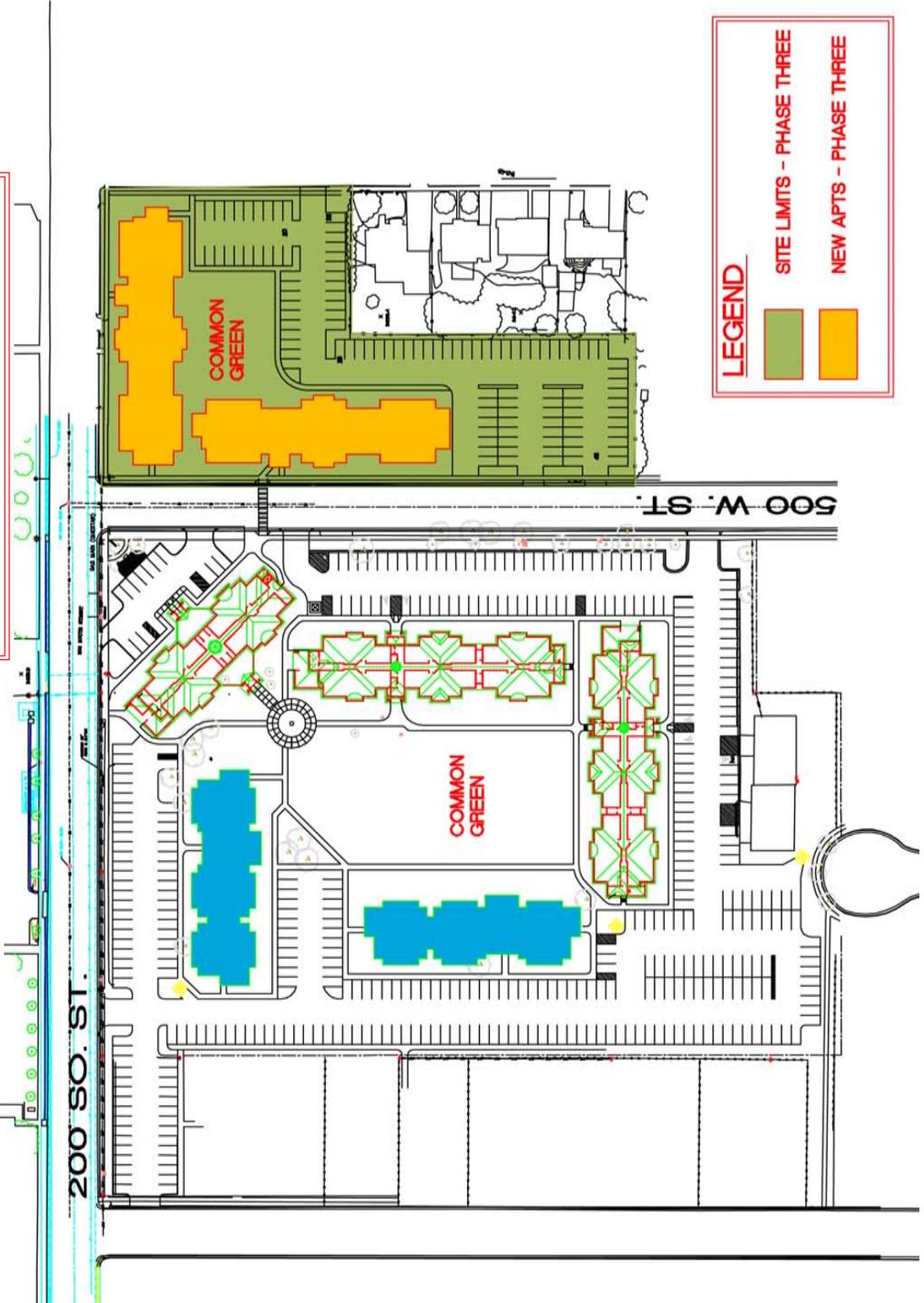
Scheme B

PHASE THREE SUMMARY:

1. DEMOLISH JUNIPER DORMS. (265 BEDS)
2. REPLACE WITH 8-BED APARTMENT UNITS SIMILAR TO PHASE ONE (ECCLES) UNITS W/ FULL KITCHENS CONFIGURED IN (2) BUILDINGS W/ 3-STORIES EACH (170 BEDS)
3. ADD PARKING WITH ADDED APTS - ADDED 113 STALLS

TABULATION - PHASE THREE

EXISTING BEDS - PHASE 1-2 570
 ADDED APT. BEDS - PH 3 170
 TOTAL NO. OF BEDS **740**
 TOTAL PARKING STALLS 551
 PARKING RATIO 0.74 stalls/bed



FUTURE SITE CONSIDERATIONS

Though not part of this report's scope, it is the recommendation of the authors that as SUU grows into a larger campus population, the needs for on-campus student housing will continue to increase. Phases Two and Three as noted above, will maximize the existing site currently available to the University. It is therefore prudent for funds to be set aside or earmarked for SUU to purchase property, either in a larger block of land on the periphery of campus as yet to be determined, or more likely to purchase the adjacent house lots surrounding Phase Two to the west and Phase Three to the east and south, such that additional housing can be planning, extending these phases into future phases. The goal eventually would be to house students on sites from Dewey on the east and 700 West Street on the west, and from 200 South Street on the north, south to the current edge of the ELLC property.

Additionally, as noted above, SUU should consider using the parking lot north of the existing housing site adjacent to the Library and the student services building as a potential location for future housing. This is a natural extension of the existing housing community and would bridge the student housing more directly into the heart of campus and provide students immediate and adjacent access to the food services facilities, student union, and library functions of campus.

TESTING AND SURVEYING

- 1. SURVEY:** An ALTA civil survey of the site has been provided by Nolte Engineers. This survey includes surface contours and property description, as well as utility easements and public utility lines adjacent to the site. *See the attached survey in Appendix E.*
- 2. HAZARDOUS MATERIALS ASSESSMENT:** The Hazardous Materials assessment for the demolition of structures on site shall be provided prior to any demolition. This scope does not include such an assessment and will be provided by others.
- 3. GEOTECHNICAL SURVEY:** The Soils report and geotechnical engineering summary of existing soils conditions on site and recommendations are provided by Bill Gordon of Gordon Spilker Huber Geotechnical Consultants, Inc. (GSH) and their findings are included in this report. *See Appendix I.*
- 4. TITLE SEARCH:** The land in question is already owned by the State of Utah.
- 5. ARCHEOLOGICAL SURVEY:** Per past investigations it is not likely that this site is an archeologically sensitive area.
- 6. UTILITY FEASIBILITY STUDY:** The existing facilities constructed for the ELLC in 2004 brought new utilities to the site including steam heating system lines from the campus boiler across the street at the Library Boiler Room. These utilities were anticipating the additional new housing proposed and are sized and are feasible to use for the new construction. For replacement utilities at Manzanita, the sewer and water lines from 200 South Street feeding the existing housing are old and impractical to be used for new buildings. The sewer and water lines should be considered to be installed "new" and be included in this scope.
NOTE: See the mechanical and electrical site and building systems for utility conditions and connections to new buildings.

BUILDING REQUIREMENTS FOR PHASE TWO

STUDENT HOUSING PHILOSOPHY

The requirements of this master planning and programming assignment included the following:

1. Conduct focus group interviews with students, faculty and staff to evaluate the campus community's views of the project with respect to proposed elements, operating philosophies, fee levels and other critical levels.
2. Conduct a detailed survey of residents and non-residents to test the demand for living on-campus.

Opinions were gathered and recommendations were made. It was clearly stated by SUU Housing staff that their mandate was to house freshmen students, yet the overwhelming preference was for the apartment style living, followed by suites then semi-suites. This preference is guided by the student experience prior to their arrival on campus. Most students have grown up living in private bedrooms, with all of the amenities (to include, in some cases, a private bath), and they expect nothing less from their college experience.

SENSE OF COMMUNITY

A successful college experience however, is rooted in students getting and feeling connected with the University community. Student success lies in the connections that they make both in the classroom and outside the classroom. Tinto (1986) and others have conducted research on the student connection. What is known is that the residential experience can have a significant impact on feelings of belonging and on student persistence, which positively impacts retention and graduation rates.

With those factors and a focus on first year residential living in mind it is preferred that the residential facilities being designed and built for Eccles Phase II, compel "connections." Apartment style living is often referred to as cocoon living because residents only have to leave the confines of their assigned space to attend class. All other components of their on campus experience can be confined to what occurs behind their own front door, the cocoon that is their apartment.

First year students, compelled to live in semi-suite configurations are obligated, to some degree, to make connections. Connections occur in the common spaces- kitchen, hallways, laundry facilities, programming space, lobbies - within the facility, as well as in the dining hall. Their social circle is therefore not limited to those within their unit, thus creating greater opportunities to engage in meaningful conversations, to meet a variety of people like and unlike themselves, and to make important connections with peers as well as members of the residence life staff.

Students who agree to live on campus as first year students in semi-suite configurations, can then aspire to transition to apartment-style living, but only after they have made connections and meaning of their first year. This philosophy is the essence of the living/learning environments that define today's residential experience. Done correctly, residents of all ages:

- Learn how to better communicate with each other
- Learn about self-governance and the important traits of a democratic society
- Learn to value differences
- Learn about their role in society relative to behavior and expectations
- Learn to develop autonomy and independence while also appreciating the importance of interdependence.

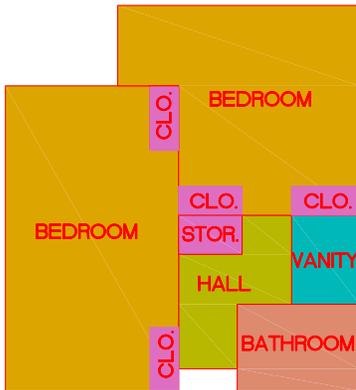
When done very well, the learning component also takes on an academic theme to include learning communities, faculty-in- residence and other partnership programs. While those pieces are not currently part of the residential program, the semi-suite design does allow these programs to occur when and if interest exists and funding is available. It is with this philosophy in mind that the project is directed not toward the student-preferred apartment lifestyle, but toward the semi-suite lifestyle.

If the semi-suite experience is done correctly (to include enhanced food service), the demand for apartment living on campus will increase, thus increasing the customer base for occupants in Phase Three (currently proposed as a combination of apartments and semi-suites, but subject to change) and campus meal plans. Furthermore, if the University implements on-campus residency requirement for all or some specific populations, this too will have a positive impact on demand.

The existing Eccles apartments are consistent with upper class or graduate residential facilities. If done correctly, the connections made during that first year residential experience will result in oversubscribed upper class halls and tremendous potential for auxiliary services campus-wide.

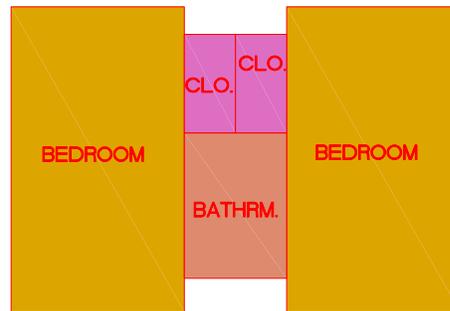
RESIDENTIAL UNITS

Residential units for suite-style housing are anticipated to be approximately 588 gross s.f. Within each residential unit, the following spaces are to be provided:



**Suites
Option 1**

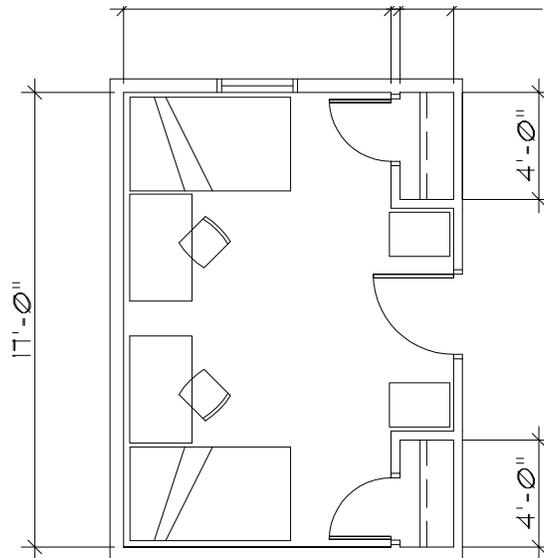
- * BEDROOM SIZE = 180 S.F.
- * SINGLE ENTRY TO UNIT FROM CORRIDOR
- * SECURITY ONE BEDRM. FROM OTHER
- * COMMON HALL W/ BEDRM. ACCESS
- * PRIVATE BATH / NO JACK-N-JILL



**Suites
Option 2**

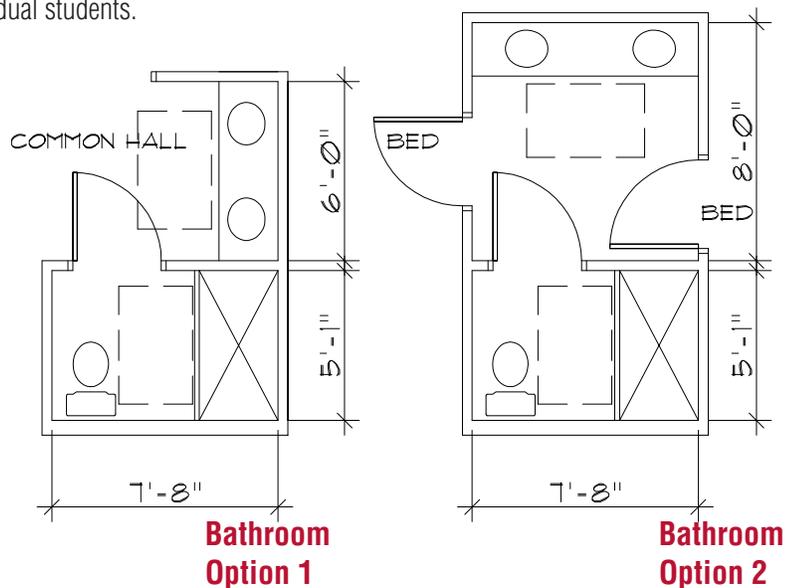
- * BEDROOM SIZE = 200 S.F.
- * BEDRM. ENTRY DIRECTLY FROM CORRIDOR
- * CIRCULATION WITHIN BEDROOMS
- * NO COMMON HALL
- * JACK-N-JILL BATH (ACCESS FROM BOTH SIDES)
- * LACK OF SECURITY BEDRM.-TO-BEDRM.

Bedrooms: (2) bedrooms of equal size of 180 s.f. per bedroom. Each bedroom to accommodate two (2) students. Each student shall be provided with one voice/data port, one bed, one desk, one chair, a dresser. Additional above and beyond the 180 s.f., each student shall be provided with a private closet with a door. This closet space to be approximately 2' x 5' for a total of 10 net s.f. Each bedroom will be individually locked with key-card access. *NOTE: Closets, for the purposes of this scope, though desired, do not require having doors, but are encouraged.*



Bathrooms: Provide one (1) shared bathroom area within the unit for a total of four (4) students each. Each bathroom shall be compartmentalized for maximum use of multiple students. Each bathroom shall have a shower stall (minimum 36" x 36") with a toilet in one compartment and two (2) lavatories and associated mirror and counter spaces outside the enclosed portion of the bathroom. All bathrooms and lavatories shall meet Fair Housing requirements of adaptability / accessibility. Bathrooms shall have ceramic tile flooring throughout. *NOTE: Bathtubs are not desired by the University.*

It is crucial that compartmentalized bathrooms be incorporated into the design such that three (3) unique stations can be used at the same time by three (3) individual students.



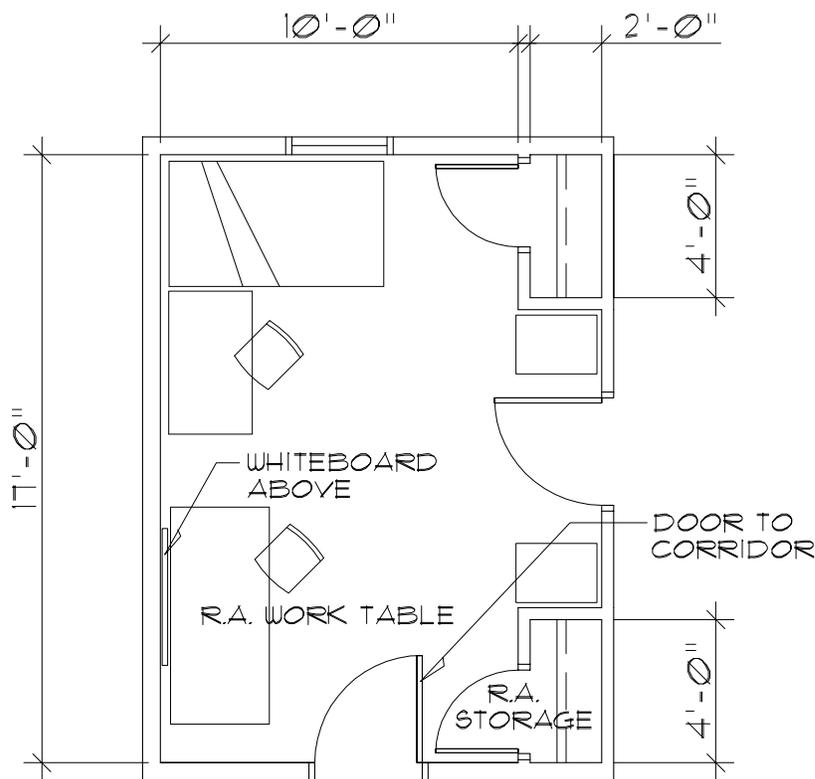
In the “traditional semi-suite” design the bathroom is centrally located between the two bedrooms with doors from each side directly between the bedroom and bathroom in a “Jack and Jill” configuration. Though this is not the best for room security as one room can never be locked off from the other bedroom (as access can still be obtained through the bathroom), this layout is most efficient and does place the circulation within the bedroom. When this configuration is used, the bedroom size should be increased to 200 s.f. for each room in order to accommodate the added circulation.

In the “semi-suites unit” design, the bathroom is more apartment-like with vanities in a common hallway area and the toilet and shower compartment have access from the hallway instead of directly from the bedroom. Though slightly less efficient, due to the hallway, the privacy, sense of community within community, and security between bedrooms (where both bedrooms can be individually locked and secured), is increased. This is why bedrooms in this scenario are to be programmed at 180 s.f.

Common Storage: A storage closet held in common of approximately 2'-6" x 5'-0" (13 s.f.) shall be provided.

RESIDENT ASSISTANTS

Resident Assistant Bedroom: Resident Assistants (RA) are student-employed residents who supervise and assist students within the housing community (usually one (1) per floor). The RA bedroom will be a single-occupancy bedroom, but will remain the same size as the typical semi-suite style bedroom and will still have two (2) closets – one (1) closet to be used for typical personal needs, while the other closet to be used for RA supplies and special storage for the housing community. The R.A.'s bedroom will be unique in that it will be provided with a door directly to the corridor as well as a door into the unit to access the bathroom area of the unit.



For this program, there shall be at least one (1) RA bedroom for every forty (40) students.

Resident Assistant / Hall Director Work Space: Additionally, for each building, there shall be one (1) work space that is dedicated to the RAs for that building. This work space shall be approximately 150 s.f. similar to a study space, with work table and chairs to be used for 1) special projects, 2) meeting space of RAs, and 3) private consultations etc. It is anticipated that this space be located on the main floor near the central lobby / elevator / cluster lounge area.

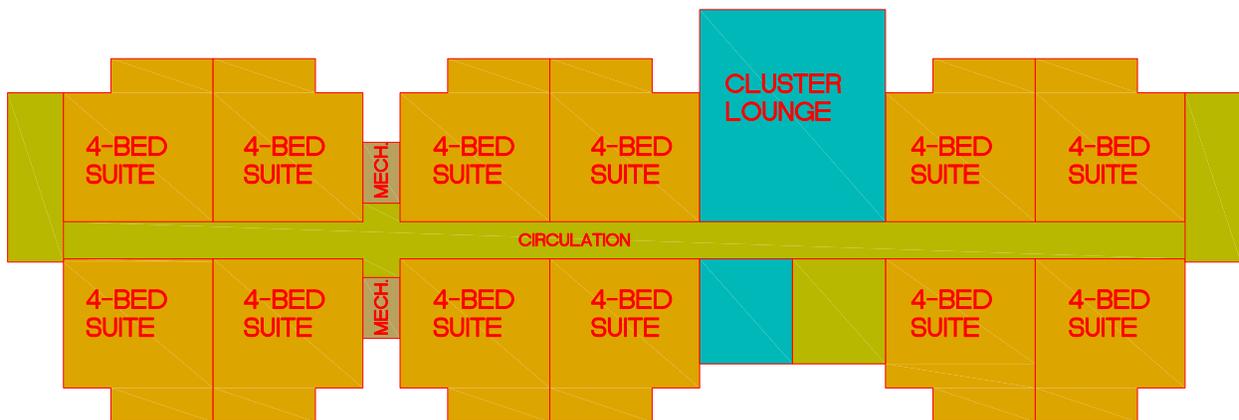
BUILDING SPACES

The residential units may be configured in pods of up to twelve (12) semi-suite style units for each cluster lounge space, or as design dictates to provide a cluster lounge for 48 students. Buildings shall be no more than 3 stories in height, meeting the local Cedar City zoning criteria. The use of an articulated corridor to units from a centrally located building entry with lobby / elevator circulation and cluster lounge adjacent to the entry are required.

These building schematic plans are only possible ideas and are by no means the only solution to this program. They are a suggestion of how it could be done to meet the desired programming needs. Designs are encouraged to offer better and more creative solutions to the meet the programming needs.

The building plan is based on a centrally placed double loaded corridor with rooms of semi-suites arranged each side, with centrally placed common amenities such as the lobby, elevator, cluster lounge, study space and other support facilities.

Mechanical and electrical spaces are placed as required by the mechanical and electrical design with the provision that all mechanical and electrical spaces have access directly to the corridor without having to enter the living units.



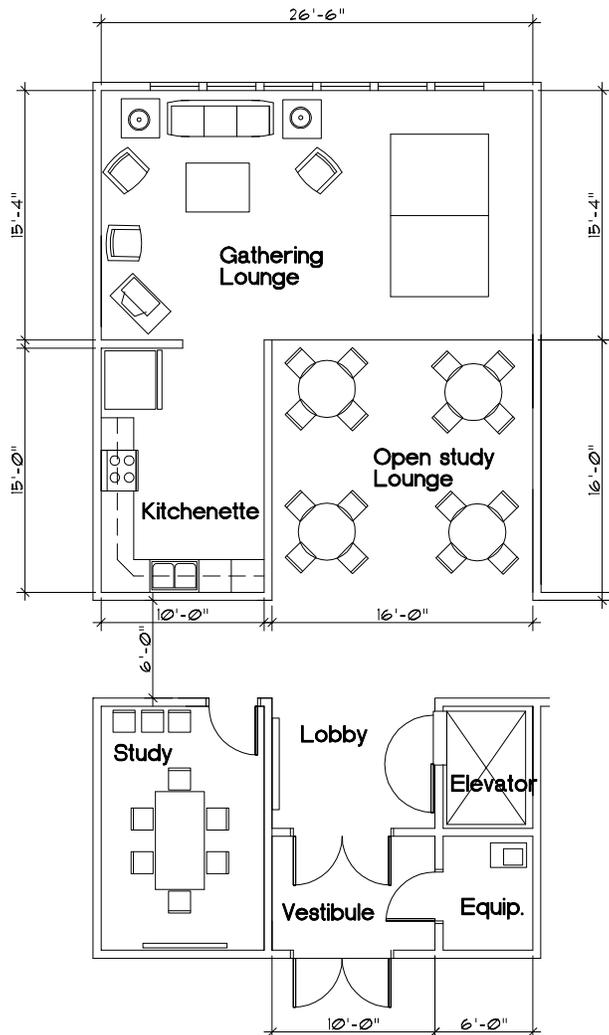
Proposed Building Floor Plan Suites

TABULATION:	
NO. OF UNITS PER FLOOR	12
NO. OF FLOORS	3
TOTAL UNITS PER BLDG.	36
TOTAL BEDS PER BLDG.	144
(BASED ON DBL. OCCUPANCY - NOT COUNTING RA BEDROOMS AS SINGLE OCCUPANCY)	
TOTAL AREA PER FLOOR	10,000 S.F.
TOTAL AREA PER BLDG.	30,000 S.F.
TOTAL AREA PER BED	210 S.F. / BED

ADDITIONAL SPACES

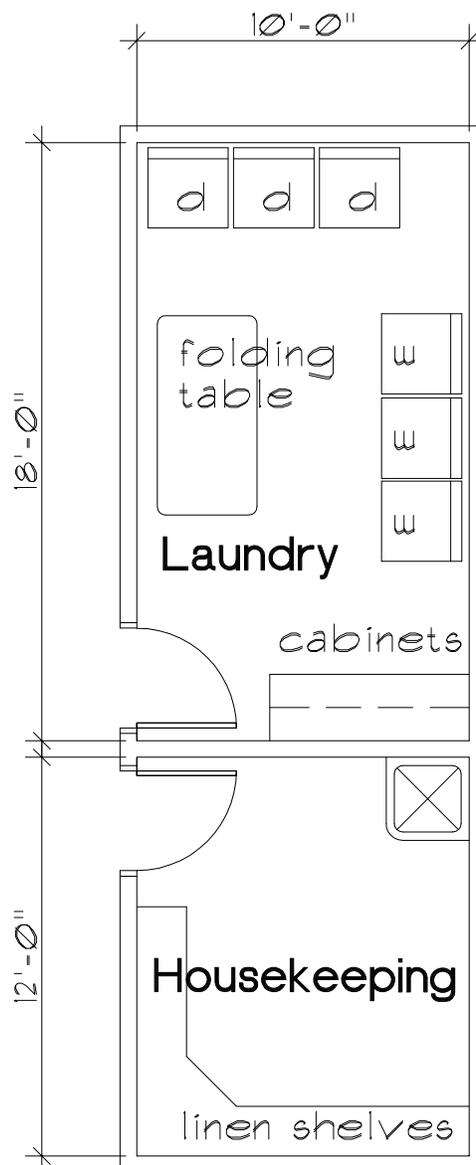
Additional spaces outside the housing unit shall be provided as follows:

Cluster Lounge / Study Area: A gathering area dedicated for recreation / social interaction as well as study areas for group study (both informal or open and formal or enclosed within a room adjacent to the cluster lounge) shall be provided for a maximum of 48 students. This area shall be provided within the building such that a student passes through this space in route to the housing units. The area shall be centrally located and convenient to all units. This area anticipates activities to include TV / lounge furniture as well as game room, as well as a kitchenette of 150 s.f. minimum for snack and light refreshment preparation. The space shall be open as much as possible with extensive amount of natural light. The area is anticipated between 850 and 900 gross s.f. not including circulation. A gas-fired zero-clearance direct-vent fireplace is encouraged, though not required, and should be designed within the lounge / gathering place as a focal point feature within the space. If a fireplace is not used as a focal peace, some other design feature should be incorporated into the space to give a draw to the gathering place. Textures of materials, including brick and stone, as well as color on walls are encouraged to bring warmth and vitality and uniqueness to this space.



Laundry Facility: A centrally located laundry room shall be provided on each floor with one (1) washer and (1) dryer for every 16 students. It is NOT recommended to have one large laundry facility. Convenience is critical to each unit and thus, it shall be required to have laundry rooms located on each floor. Laundry rooms shall also include a counter with cabinets for storage of supplies. Additionally, these spaces shall include room for a folding table, for laundry sorting and folding, and a space for a vending machine. (NOTE: The exact location for vending machines is not determined at this time. Programming space for vending shall be accommodated in both the laundry rooms or at the main or secondary vestibule entry areas of the building on the main floor. It is anticipated that one (2) vending machines per building or wing are all that will be required.)

This room has a program space requirement of approximately 180 s.f. Proper ventilation of all gas-fired appliances and fresh air in-take make-up air for dryer exhaust fans are required for the laundry room to be balanced climatically and function properly. The washers and dryers themselves shall be provided by others (not in contract) while the hook ups, utilities, mechanical systems and power requirements are part of this scope.



Janitor Closet / Building Storage: Each floor of each building shall have one (1) janitor / housekeeping space of approximately 120 sq. ft. This space shall have wall-to-wall and floor-to-ceiling shelving for cleaning supplies and linen storage. Additionally, this space shall have a floor mounted janitor mop sink with a hose bib connection to the faucet and a mop rack mounted above. Washable surfaces on the surrounding walls are encouraged to be provided per code.

It is encouraged to place the Janitor / Housekeeping space adjacent to the laundry room facility on each floor.

Hall Director Apartment: This program requires that within the overall project, one hall director apartment be incorporated within one building. This housing unit is encouraged to be centrally located to the main entrance and near the R.A. / Hall Director work room space, and thus be located on the main floor of the building.

The Hall Director Apartment shall include:

1. A living room space of approximately 120 s.f.
2. A full kitchen with an associated dining space adjacent to the kitchen of approximately 150 s.f.
3. A bedroom with an inside minimum dimension of 10 feet in any direction of 130 s.f. In association with this bedroom, but beyond the bedroom programmable space, a closet to be provided with at least 6 linear feet of shelf and rod.
4. A bedroom with an inside minimum dimension of 10 feet in any direction of 100 s.f. In association with this bedroom, but beyond the programmable space, a closet to be provided with at least 4 linear feet of shelf and rod.
5. A bathroom accommodating a tub/shower combination, a toilet and a vanity with one (1) lavatory, of approximately 50 s.f.
6. A laundry closet off of a hallway accommodating a washer and dryer of approximately 20 s.f.
7. A storage closet for general storage purposes off of the living areas or hallway of approximately 25 s.f.

Bike Storage: Bike storage shall be considered outside of the building enclosed square footage with bike racks located on sidewalk areas designated for bike storage. Such areas shall be conveniently placed to building entrances. These areas, though not required, are encouraged to be sheltered by building canopies or roof structure extensions for weather-protection and can be designed in an incorporated entry element to the building. No secured bike storage room is required or desired.

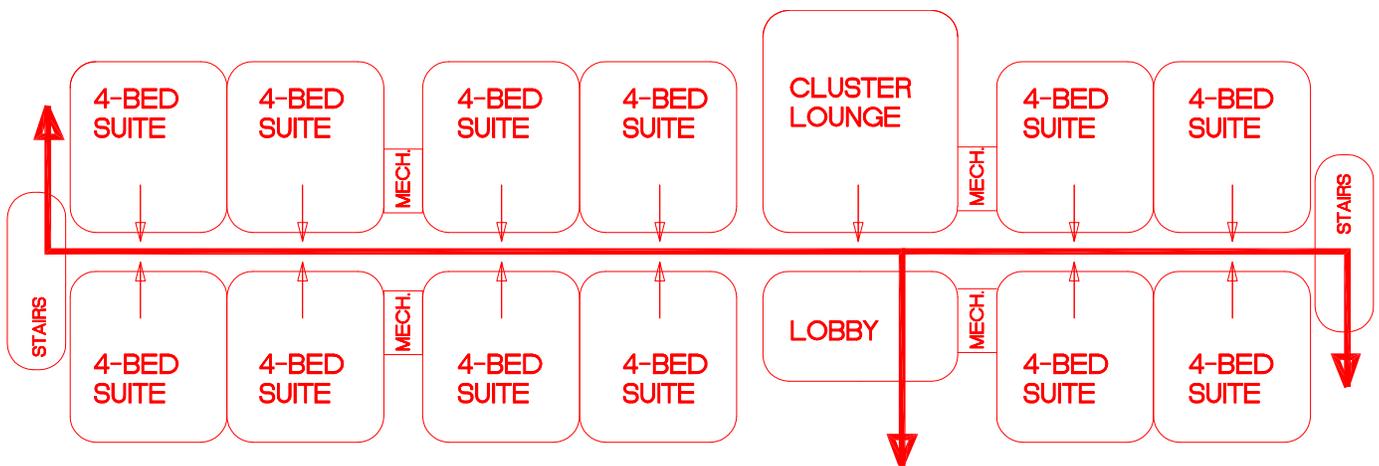
Mechanical / Electrical Rooms: Mechanical and Electrical rooms shall be provided per design requirements. However, these spaces shall be required to have access directly from public corridors and NOT within the housing units. It is the intent that maintenance personnel have access to these spaces at all times without any need to enter the student living spaces. Security keyed access for maintenance personnel only shall be required for these spaces.

Telecommunication rooms and electrical rooms with heat-producing equipment shall have HVAC systems designed to accommodate additional heat gain. These spaces shall require additional ventilation and air conditioning as appropriate to the final design requirements.

OTHER INTERIOR REQUIREMENTS (non-space specific)

Horizontal Circulation: Circulation is desired to be provided by central lobby entrance with access to corridors and stairways. Corridors must meet code requirements for fire ratings of walls and ceilings and meet egress and fire safety requirements. Corridors are preferred to be articulated with color and indentations at unit entries or other offsets to avoid the stagnant and long double-loaded corridor design. Emphasis should be placed on entries to units with accent wall treatments and with accent lighting at each unit door.

Entry vestibules shall be encouraged at all outside door entries into the building. The main or secondary entry, near the cluster lounge / lobby area of the building, is encouraged to be sized large enough to accommodate possible vending machine locations.



Vertical Circulation: Stairs are to be located as required by design and code criteria to meet egress requirements. Typically stairs are to be located at the ends of buildings and depending on building configuration, also at a midpoint, such as a lobby or cluster lounge element or node of a building. Stairways are to be served directly by the corridor and egress directly to the exterior per code requirements.

Elevators are to be provided at central lobby areas adjacent to the cluster lounge areas. Though one (1) elevator meets minimum requirements, it is encouraged to provide two (2) elevators banked together, in each building. Elevators shall meet accessibility requirements for all floors.



Trash Collection: Trash collection within the building is not required, but shall be provided outside the building (no trash chutes desired) with dumpster enclosures situated near building side stairway exits. *See site design for discussion of trash collection.*

Ceiling Height: The ceiling height shall be a minimum of 9'-0" at all bedroom spaces, cluster lounge / lobby / gathering places though higher ceilings are encouraged. The bedroom spaces must be 9'-0" high to allow for future needs of accommodating bunk-bed furniture or triple-occupancy bedrooms during special events (such as summer sports and conference programs). There is no compromise in this requirement. Structural and mechanical duct distribution systems will be required to be designed to allow for 9'-0" ceilings throughout bedroom spaces.

Bathroom areas, corridors, support spaces, laundry rooms, etc. may be reduced to 8'-0" ceiling height. However, at no point shall any ceiling through the project be less than 8'-0" (including furred down areas).

Use of Standard fixtures: The use of standard fixtures (plumbing, lighting, hardware etc.) is strongly preferred by SUU maintenance personnel and are encouraged to be used throughout for ease of maintenance and replacement requirements. *See specifications.*

Durable Materials: Durable materials are highly desired to be used with all-brick exteriors, impact resistant sheet-rock in corridor and circulation areas, or the use of OSB sheathing full height at corridor walls prior to installation of gypsum board to address impact resistance within corridors. Tile floors and wainscots in bathrooms are encouraged for durability at wet areas and bathroom. It is highly preferred to increase and offer the design of more durable materials throughout the spaces for a low maintenance / high durability life-cycle of the building. *See outline specifications.*

Carpet tile systems are encouraged and preferred, instead of rolled carpet goods as they are easier to maintain and replace if stained or ruined, without the removal of the carpet throughout the entire room or space.

Use of Color: The interior surfaces are encouraged to offer multiple color schemes in floor coverings, wall surfaces, etc. in corridors and common spaces as well in housing units to add variety and enliven the living spaces.

Foundation systems: Due to the soil conditions, deep foundations and crawl spaces under the buildings may be required along with dewatering storm drainage foundation drainage systems. The soils report delineates the issues associated with constructing buildings on this site. Creative solutions to foundation systems and the uniqueness of the soil conditions shall be a requirement of the design. One option may be the use of deep foundations. Others might include post-tension slab/foundation systems, helical pier systems, and crawl space designs. This program only points to the need for investigation of creative and cost-effective solutions of sound engineering to deal with the existing soil conditions on site. *See the Site Conditions section of this report.*

ADA and Fair Housing Requirements: Since it is anticipated that all floors be serviced by an elevator, all units / bedrooms throughout the building will be required to meet code for accessibility, adaptability, and visitability standards and guidelines. The IBC code requirements as well as the American National Standard Accessible and Usable Buildings and Facilities 2003 shall apply to this project. Also, student housing falls under requirements of Fair Housing Guidelines and as such will be required to meet door widths, clear floor space and height requirements throughout.

Some of these requirements include (but not inclusive):

1. 2'-10" door width for 32" clear passage width at all passage doors.
2. Lever hardware at all doors.
3. ADA rated non-grasping faucets.
4. 30" x 48" clear floor space at showers, toilets, vanities, kitchen sinks and appliances (at common kitchens). Such clear floor space to be outside of door swing areas and centered on plumbing fixtures or appliances.
5. 18" height to outlets.
6. 44" height to thermostats.

Fully accessible units with grab bars at toilets and showers, fold-down transfer shower seats, adjustable shower head and controls, etc. meeting fully accessible living spaces per building codes and accessible standards adopted by the State of Utah, shall be provided. It is the desire of SUU that the required amount of the fully-accessible units be located at the main level and near the main entrances to accommodate students with accessibility needs.

By no means is this section of this report meant to be inclusive of all requirements relating to accessibility. Instead, it is the intent to bring to the designer's attention the need to address these issues within the confines of good design to meet all legal and enforceable requirements addressing accessibility, adaptability, and visitability throughout the building(s).

Fire Alarm Systems: The buildings shall not require a central panel for fire alarms. The Simplex alarm panel recently installed at the Manzanita Court buildings will be used in the new building design. Designers shall coordinate with SUU Physical Facilities personnel for reusing the newly installed alarm panel system.

OTHER SPACE REQUIREMENTS - NON SPECIFIC

ROOM TYPE	FINISH (see finish schedule below)	SPECIAL REQ'MTS.
OTHER SUPPORT ELEMENTS (for each bldg.)		
Bicycle Storage	Exterior	<ol style="list-style-type: none"> 1. Provide covered space (preferred to be at exterior overhand or roof) for each building near the secondary entrance of the building with accessible sidewalk access. 2. Approximately 200 s.f. exterior programmable space. 3. Provide racking system to lock / store a minimum of (20) bikes on bike racks.
Trash Collection	Exterior	<ol style="list-style-type: none"> 1. Provide trash collection space at end of building adjacent to nearby exterior dumpster space. 2. No trash chutes required
Elevator	F1, raised laminate wall panels, stainless ceiling per elevator standard finishes	<ol style="list-style-type: none"> 1. Provide a minimum of one (1) elevator per building for a fully elevated building – all floors. NOTE: Two (2) elevators banked together are preferred. If two (2) buildings are connected together with one (1) common area for elevators, then two (2) elevators are mandatory! 2. Elevator shaft size to be a minimum 6'-0" x 8'-4" interior clear dimension or as dictated by final design. 3. Provide (1) elevator equipment room on the main floor with power and ventilation requirements.
Secondary Vestibules	F2, B2, W1, C1	<ol style="list-style-type: none"> 1. All entries, including side entries, to have an energy lock double door vestibule system. 2. Doors to be full glass for maximum light penetration into the corridors. 3. These secondary vestibules may be designed to accommodate the vending machine location.
OTHER DESIGN CRITERIA (Not specific to individual spaces)		
Window Placement		<ol style="list-style-type: none"> 1. A variety of window placements are encouraged. Windows are desired (but not required) to be placed in sets of one (1), two (2) and three (3) for a variety and articulation of the exterior elevations. 2. Each bedroom shall have at least (1) operable window of a minimum 15 s.f. to meet egress requirements and natural light and ventilation for each space. 3. It is desired to have half of the bedrooms to have at least (2) operable windows grouped together with each individual window of a minimum 15 s.f. 4. Cluster lounges and study spaces are encouraged to have storefront glass or windows with the maximum amount of natural light possible. 5. Design to be sensitive to long hallways without natural light. Light and windows to puncture the corridors at the stair elements, cluster lounges, lobby areas and other places as possible. 6. Use good design practices with building orientation to maximize positive solar gain with the use of natural light penetrating interior spaces.

Exterior Finishes and Building Aesthetics		<ol style="list-style-type: none"> 1. Exterior finish of buildings shall be 100% brick veneer or stone or masonry combinations with precast elements as dictated by the design. 2. No stucco or EIFS systems shall be permissible. 3. Design of the façade desired (but not mandatory) to be articulated with positive and negative spaces in a design appropriate and compatible with the surrounding collegiate environment. 4. A collegiate design of shapes and massings and roof lines is encouraged to be compatible with the surrounding architecture and to continue the campus feel of SUU. 5. It is anticipated to use a pitched roof / though not mandatory. Roof may use architectural grade shingles. 6. Building massing shall NOT exceed 3 story construction and must meet Cedar City zoning requirements for building height.
Building Entryway		<ol style="list-style-type: none"> 1. Building is encouraged to have a primary entry with architectural elements of canopies, columns or other features to establish a hierarchy of architectural vocabulary to establish a sense of entry. 2. Entry shall incorporate electronic key access with accessible automatic opener push pad at main entry to buildings. 3. Main entry is encouraged to be adjacent to the cluster lounge element of the building and the elevator for easy circulation and for students to interact with each other through the cluster lounge space. 4. Entry shall draw students and visitors to the building.
Corridor Design	F1, B1, W1, C2	<ol style="list-style-type: none"> 1. Long straight corridors are not desired. Instead, offsets and articulation of walls within the corridor are encouraged. 2. Durable materials of impact-resistant sheet rock or gypsum board over OSB sheathing full height, and heavy-duty corner guards are desired. 3. Multiple use of paint colors are encouraged emphasizing and articulating the offsets and elements within the corridor to keep from being monotonous.
Accessibility		<ol style="list-style-type: none"> 1. All rooms throughout the building shall meet the requirements for accessibility as dictated by State and Building Code requirements as well as Fair Housing requirements. 2. 2% of total number of units to be fully accessible and be located within the project, with exact location to be determined by the design. It is SUU's preference that these units for the convenience of the students, be placed on the 1st floor (main on-grade level) These units shall be provided with proper clear floor space, grab bars roll-in showers or adaptable shower/tub combinations meeting full accessible requirements per code.
Energy Efficiency		<ol style="list-style-type: none"> 1. This project shall be governed by the State Energy Code requirements and shall meet or exceed all envelope and equipment and lighting energy efficiency design guidelines. 2. The International Energy Conservation Code 2006 is applicable for this project. 3. Efforts to increase efficiencies are encouraged with good design practices to increase building performance.
Security		<ol style="list-style-type: none"> 1. All exterior doors to have electronic card key access. 2. All unit doors to be programmed with electronic card key access. 3. All bedroom doors to be individually controlled with electronic card key access. 4. Maintenance and storage and mechanical spaces to be accessed with electronic card keys. 5. Video surveillance at the building entries and cluster lounges.
Landscaping		<ol style="list-style-type: none"> 1. Landscape plantings shall be of species similar to those currently used on campus and at adjacent student housing sites. 2. The desire is to create one uniform landscape environment as if this project were landscaped in one phase. 3. Existing mature trees to be kept in place where at all possible. 4. Outdoor picnic areas and other amenities are encouraged.

		<ol style="list-style-type: none"> 5. Use extensively drought tolerant and native plants throughout to accent the buildings. 6. Xeriscape design is encouraged.
Soil conditions		<ol style="list-style-type: none"> 1. The existing site has known issues of collapsible soils and footing and building foundation systems and dewatering of site around building shall be part of this scope. 2. See the attached soils report and geotechnical engineering recommendations.
Mechanical Systems		<ol style="list-style-type: none"> 1. ASHRAE standards shall be consulted for design of the heating, cooling and ventilation systems. The systems shall be appropriate for residential building occupancy and function levels. 2. The system shall incorporate a "stand alone" chilled water system with a chiller mounted on the site, properly screened from view. 3. The system shall also have steam heat supplied from steam pipes from SUU central steam plant system. The steam pipe system is already on site and can be tapped into for service to the new buildings. 4. On-site boilers for domestic hot water to be included with domestic hot water pipe distribution separate from the steam heat distribution. 5. Alternate systems may be considered, and are encouraged for creative ways to effectively deliver state-of-the-art mechanical systems meeting energy code requirements, but the above is basis for this program design. 6. All spaces shall meet SMACNA standards for ventilation and fresh air requirements for each space. 7. See mechanical description of scope of work attached to this report.
Fire Suppression		<ol style="list-style-type: none"> 1. Each of the proposed buildings shall require a wet-pipe and standpipe sprinkler system meeting State Fire Code and Building Code requirements. 2. The system shall be appropriate for the occupancy and function of the building. 3. The system shall be equipped with a detector check and alarm valves, monitored by tamper switch control valves and located at both positive and negative flow points. 4. All sprinkler heads throughout shall be fully recessed as a standard of SUU housing requirements. 5. Fire department connections to be located and provided per local fire marshal requirements.
Plumbing systems		See mechanical narrative.
Lighting systems		See electrical narrative.
Codes		Applicable codes as adopted by the State of Utah at the time of design and construction.
Sound Transmission		<ol style="list-style-type: none"> 1. Minimum STC (sound transmission class) for walls, partitions and floor/ceiling assemblies separating dwelling units shall be a rating of 54 for airborne noise. 2. The minimum impact insulation class for floor/ceiling assemblies between or around dwelling units shall be a rating of 60.

BUILDING REQUIREMENTS FOR PHASE TWO

MECHANICAL SYSTEMS

The design and construction of the Phase II and Phase III of the New Student Housing Community at Southern Utah University shall comply with the current Utah State Division of Facilities and Construction Management’s updated Design Criteria as well as the current Southern Utah University Design Standards.

The mechanical and plumbing systems for the buildings shall be energy conservative and suitable for the building occupancy. Systems and equipment shall have a proven history of providing efficiency and optimal energy conservation. Per the Governors directive, the building systems shall be 20% more energy efficient than current codes. Building shall be designed to meet the state High Performance Building Standard as outlined in the DFCM Design Requirements manual.

Automatic temperature controls shall be suitable for the building systems and occupancy. The control system shall be an electronic DDC system tied to the central campus control system for main mechanical rooms and public spaces. The new controls shall be 100% compatible and integrated with the existing campus system. Individual living quarters shall be controlled using residential grade, programmable thermostats.

Provide complete operation and maintenance manuals at the completion of the project as well as a complete set of record drawings and specifications.

All equipment shall be clearly labeled. Equipment, piping and duct work shall be painted and labeled as required by Southern Utah University design guidelines.

Design Conditions

The mechanical system shall be designed to maintain comfort condition in accordance with the Utah State Energy Code, DFCM A/E Design Guide, and SUU Design and Construction Standards.

- Elevation: 5623 Ft.
- Latitude/ Longitude: 38’ N, 113’ W
- Ambient: (ASHRAE 2-1/2%, 97%):
 - Summer 93°F DB, 59°F WB
 - Winter 8°F DB
- Indoor Conditions:
 - Summer 75°F
 - Winter 72°F

• Envelope U-Values:

Building envelope shall be designed in coordination with mechanical systems in order to achieve energy performance of 20% better than ASHRAE 90.1-2001 and meet the High Performance Building standard.

- Ventilation Rates: ASHRAE 2-1 – 2001
- Internal Heat Gain:
 - People: ASHRAE Estimates for Level Activity
 - Equipment: ASHRAE Estimates for Following;
 - Computers
 - Copy Machines
 - TV Monitors

- Lights: Assume 2.5 Watts / Sq. Ft. general. Adjust for special occupancy or task requirement.

Applicable Codes

The mechanical system throughout the building shall be designed and installed in accordance with the most recently adopted of the following codes and standards:

- Life Safety Code
- International Building Code (IBC) including all appendices
- International Mechanical Code (IMC)
- International Residential Code (IRC)
- International Plumbing Code (IPC)
- International Energy Conservation Code (IECC)
- International Fuel Gas Code (IFGC)
- National Electric Code (NEC)
- National Fire Protection Association (NFPA)
- ASHRAE 90.1 – 2001-2003
- ASHRAE Standard for Ventilation 62.1 2001
- ASHRAE Guides and Standards (ASHRAE)
- State of Utah Boiler and Pressure Vessel Rules and Regulations
- American Society of Mechanical Engineers (ASME)
- American Standards Association (ASA)
- American Society of Testing Materials (ASTM)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- Occupational Safety and Health Administration (OSHA)
- DFCM Indoor Air Quality Criteria
- Utah State Division of Facilities and Construction Management (DFCM) – Architect / Engineer Design Guide
- Southern Utah University Design Guide

Heating, Ventilating and Air Conditioning

The buildings shall be heated, cooled and ventilated with systems suitable for the building function and occupancy in accordance with ASHRAE and DFCM standards. Primary HVAC systems for the buildings shall be a four pipe fan coil system..

Heating System

Heating shall be a hot water systems served by the campus central steam plant. Existing steam and condensate lines cross the street in a corrugated pipe near the intersection of 500 West St. and 200 South St.. These utilities have been extended from that point via direct burial to serve the existing Manzanita apartments. These existing lines shall be modified to serve the new buildings in Phase II. Direct buried steam and condensate lines have been extended to serve the existing Juniper Dorms. Direct buried steam and condensate lines shall be insulated to match existing underground system and comply with SUU Design Standards. These existing lines shall be modified to serve the new buildings in Phase III. Steam to hot water heat exchangers shall be installed in each building. The heat exchangers shall be designed for a least 60% redundancy.

Heating water shall be distributed to the heating coils at individual fan coil units. The heating water distribution system shall consist of 2 base mounted centrifugal pumps, bladder type expansion tanks, air separators, and chemical treatment at each building. Heating water pumps shall be sized for 100% pump redundancy, with variable frequency drives for each pump.

Cooling System

Cooling shall be provided by a grade mounted air cooled chiller. The air cooled chiller shall be located in a way to shield it as much as possible from the view of high traffic areas, and the adjacent buildings, while still maintaining adequate service and airflow clearances. Chillers shall be located to minimize noise intrusion into new buildings and existing buildings on site. Low noise fans and sound attenuation shall be incorporated into the design. One chiller will be required to serve the buildings in Phase II and another chiller will be required to serve the buildings in Phase III.

Chilled water shall be pumped to each fan coil chilled water coil. Chilled water distribution system shall consist of 2 base mounted central pumps, bladder type expansion tank, air separator, and glycol feed system. Chilled water pumps shall be sized for 100% pump redundancy. The chilled water system shall be designed with adequate glycol percentage for freeze protection.

Computer server / telecommunication rooms shall be provide with independent, dedicated cooling units.

Water treatment of the hydronic systems shall be provided by West Water and Energy Systems, or other University approved water treatment service organization. Water treatment for heating water systems shall consist of basic corrosion inhibitor. Water treatment for the chilled water system shall be a glycol freeze protection, including a glycol storage tank, and glycol feed pump.

Air Systems

Air systems for the buildings shall consist of constant volume fan coil units. Each assembly area shall have a dedicated fan coil unit. Suites shall have a dedicated fan coil unit. Public corridors and common spaces shall be grouped together and served by a fan coil unit. Each fan coil unit shall be provided with a heating water coil and a chilled water coil. Outside air shall be ducted to each fan coil units serving public spaces. Operable windows may be utilized in residential units where available to provide outside air ventilation as allowable by code.

Roof mounted belt driven exhaust fans shall be provided for the toilet rooms, custodial closets, elevator rooms and kitchens. Rooms with similar use, function and schedule may be combined in the same fan systems. The exact number and location of the fans shall be determined during the design. Exhaust ducts shall be routed to roof fans. Building exhaust fans shall be controlled via the BMS.

Outside air ventilation shall comply with ASHRAE Standard 62.1 – 2001. Outside air shall be set to the minimum ventilation rate required for the space served. The number and location of fresh air inlets shall be determined during design.

The air handling system in public spaces shall be controlled by a DDC control system that is 100% integrated into the campus central control system. Fan coil units serving individual student suites shall be stand alone residential style thermostats.

All duct work shall be insulated metal duct with volume dampers for each diffuser or grille. Common and public space air distribution systems shall be designed to provide a quit and comfortable working environment. Return air shall be ducted to each fan coil unit.

Plumbing Systems

Plumbing systems shall be designed to meet the International Plumbing Code as adopted by the State of Utah, DFCM Guidelines and Southern Utah University Design and Construction Standards.

Domestic hot water shall be provided via steam to hot water heat exchangers during the winter months and by gas fired domestic water boilers and storage tanks for the summer and shoulder seasons. The water heating equipment shall be located in the central mechanical room of each building. Provide adequate flue and combustion air for gas fired equipment. Provide a hot water re-circulating line and pump.

Plumbing fixtures shall be manufactured by the same source. Provide the ADA compliant fixtures as required by code, and where called out in the individual space requirements. Provide water closets, sinks, lavatories, and any other fixtures as detailed in the Individual Space Outlines.

Provide floor mounted service sinks in the custodial closets indicated in the Individual Space Outlines.

Provide mixing valves on the ADA plumbing fixtures.

Water closets shall be mounted flush valve type with elongated bowl and open front seats.

Floor drains shall be provided in all bathrooms, custodial closets, mechanical equipment rooms and kitchens. Provide trap primers for all floor drains and sinks per IPC. Provide trap primers in an accessible location for maintenance.

Water treatment of the hydronic systems shall be provided by West Water and Energy Systems, or other University approved water treatment service organization. Water treatment for heating water systems shall consist of basic corrosion inhibitor. Water treatment for the chilled water system shall be a glycol freeze protection, including a glycol storage tank, and glycol feed pump.

Exterior Hydrants shall be provided for landscape and hose connections.

Fire Protection Systems

Fire sprinkler protection shall be provided suitable for the building type and occupancy. The entire building shall be sprinkled. The system shall comply with the NFPA, the SUU Campus Fire Marshall and the Utah State Fire Marshall standards and requirements.

The main fire alarm panels shall be installed adjacent to the buildings primary front entrance, which will be used by the fire department. The exact location shall be determined during design after reviewing and consulting with SUU's Campus Fire Marshall.

The fire sprinkler test for the inspector shall be piped into a drain or sewer to prevent water damage.

The fire sprinkler test for the inspector shall be of the simulated sprinkler head type, and not the glass bulb type.

All fire related doors shall be supplied with magnetic door hold open and tied into the fire alarm panel. Upon activation of the fire alarm or a power failure, they shall release.

The contractor shall provide documentation of the acceptability of all fire-safing materials used.

Commissioning

The owner will obtain the services of an outside commissioning agent to provide complete commissioning services for this project. The AE team will have the responsibility of cooperating with the commissioning agent during each phase of the project to ensure a complete commissioning process. The AE team shall provide the necessary documentation, including drawings, specifications, shop drawings, and submittals to the commissioning agent in order to assist them in their efforts. It will be the responsibility of the commissioning agent for a complete an accurate commissioning product.

ELECTRICAL SYSTEMS

The electrical system shall conform to the latest applicable rules of the National Electrical Code, NFPA 70, and the following:

Medium Voltage Service & Distribution

It is anticipated that the existing transformer used to feed the old buildings will be reused. There is a possibility that a larger transformer will be required due to the increased size and load of the new buildings. The existing system is fed from a new sectionalizer located south east of Building A. It is fed with 12.5 kV power from the campus power system with #2 AWG conductor which has an ampacity of 165 Amps which is 3570 kW. The total diversified load as per NEC 220 is 805 kW for buildings A, B, and C. The pad mounted transformer for building be re-used to feed new buildings if it is of adequate capacity for the new loads, other wise it must be replaced. If it is desired to add an additional transformer, the existing transformer must be replaced with a transformer with loop feed terminations and a four way loadbreak, V blade switch to allow a feeder extension from the existing transformer to the new.

Service Entrance

Each building will consist of a Main Distribution Panel with copper conductors in raceway to panelboards located in each apartment's mechanical closet. Each building will be separately metered. Panelboards serving the residential units shall have feed thru lugs with full size bolt-on circuit breakers. Additional spaces will be provided for future expansion.

Branch Circuits

Branch circuit conductors shall be copper non metallic sheathed cable with ground (Romex) not smaller than No. 12 AWG. Nonmetallic sheathed cables (Type NM) with ground conductors shall be installed in areas permitted by NFPA 70. Assembly areas will contain metal clad cabling. All wiring shall be concealed except as required for connection to equipment. Lighting and convenience outlets shall be on the same circuit in residential apartments. All living units will contain residential grade wiring devices, and all common areas will contain commercial grade wiring devices. Interior feeders shall be copper. Convenience outlets on opposite sides of party walls shall be offset.

Convenience Outlets

The location and number of convenience outlets shall conform to the latest applicable rules of the National Electric Code, and as specified in program documents.

Kitchen Area

All kitchen counter outlets will be on separate circuits, and will be mounted at 4 foot centers to provide adequate circuits in the kitchen area. GFI convenience outlets will be provided for all kitchen counter top outlets.

Laundry Area

One outlet for ironing (on a separate circuit) shall be provided in addition to the washer and dryer requirements. Dryer outlet shall be a 30 ampere 125/250 volt, 3 pole, 4 wire, NEMA 14-30R outlet.

Bedrooms

All branch circuits that supply 125-volt, single phase, 15 and 20 ampere outlets installed in dwelling unit bedrooms shall be protected by an arc-fault circuit interrupter(s). This applies to receptacle, smoke detector, and lighting circuits installed in the bedrooms. Spacing of outlets shall comply with NEC requirements for residences.

Office Areas

Isolated ground convenience outlets will be provided for computers in office areas and in computer labs.

Lighting Fixtures

16.5.1 Residential Living Areas

Interior light fixtures in apartments shall be residential type incandescent except for fluorescent surface fixture in the kitchen area. The kitchen will have a separately switched downlight over the bar. Bedrooms will have 3 lamp surface fixtures, hallway and entries will have 1 lamp surface fixtures.

16.5.2 Residential Common Areas

Common areas, including hallways, stairwells, and lobbies will have fluorescent fixtures with electronic ballasts and T-8 lamps. Fluorescent lamps shall have a color rendering index of 76 or above and a color temperature between 3400 and 4500k. Emergency battery packs supplied in selected recessed fluorescent fixtures shall provide emergency lighting.

Office Areas

All lighting fixtures in common area space will be fluorescent fixtures with electronic ballasts. Fluorescent lamps shall have a color rendering index of 76 or above and a color temperature between 3400 and 4500k. Emergency battery packs supplies in selected recessed fluorescent fixtures shall provide emergency lighting.

Exterior Areas

Exterior fixtures will conform to existing campus standards, and will utilize energy saving metal halide lamps. Parking area lighting will utilize cut-off lenses to minimize light trespass to adjoining properties. All exterior lighting fixtures will be controlled by photo cells and or timeclocks.

16.7 Voice/Data

Two each 4" conduits were provided to existing Manzanita Court buildings when Eccles buildings A, B, and C were built from the telephone and cable TV distribution pedestals located on 500 West Street south of where the overhead power line crosses 500 West to feed the Maintenance building. One of these conduits is for the use the telephone service provider, Qwest in Cedar City. Designer will need to coordinate with the service provider to have them provide the necessary cables in the 4" conduit, and all distribution gear in the building that will be required. A 2' x 2' closet will be required at a minimum for the Qwest distribution equipment.

A 4" conduit for SUU communications was provided to existing Manzanita Court buildings, when Eccles buildings A, B, and C were built from the new 12.6 kV sectionalizer #2 located south and west of building A at the north end of the circle walk way. Designer will need to coordinate with SUU campus communications to have them detail the necessary cables that must be provided as part of the project in the 4" conduit, and all distribution gear in the building that will be required. A 2' x 4' closet with doors across the 4' side will be required at a minimum for the cable TV distribution equipment.

The telephone system shall conform with the Telecommunications Industry Association (TIA/EIA) Standard 570A for structured wiring in residences. This approach prepares the apartments to take full advantage of broadband services available today and those coming in the future.

All telephone system wiring shall be Category 5e or better, concealed home run style from telecommunication room to each telephone/data jack location. Bedrooms, living rooms will each have one telephone/data outlet. Each kitchen area will have one wall mounted telephone jack.

Campus telephones will be provided at each main entrance to buildings to allow visitors to call their hosts.

Cable Television

Two each 4" conduits were provided to existing Manzanita Court buildings when buildings the Eccles Buildings (A, B, and C) were built from telephone and cable TV distribution pedestals located on 500 West Street south of where the overhead power line crosses 500 West to feed the Maintenance building. One of these conduits is for the use the Cable TV provider, which at the present time is Bresnan Communications in Cedar City. Designer will need to coordinate with the service provider to have them provide the necessary cables in the 4" conduit, and all distribution gear in the building that will be required. A 2' x 4' closet with doors across the 4' side will be required at a minimum for the cable TV distribution equipment.

Cable television jack will be provided in living room. Cable television will be homerun back to telecommunication closet in building. RG-6 60% shielding cable is required for all in house wiring. Each outlet, at the internal connection pint, shall be equipped with a barrel wall plate.

A visual inspection of all installed cables shall be performed prior to wall covering to inspect cables for staples or tack place in or on the cable. Prior to acceptance of the completed system a commissioning test shall be performed using a known signal source and measuring and recording the signal strength at each outlet.

Fire Alarm System

Simplex non-coded, addressable-analog system with manual and automatic alarm initiation will be furnished for all common areas and comply with the latest edition of NFPA 72.

Smoke Detectors

Residential Smoke detectors shall be wired to un-switched 120-volt AC circuit in each living unit. Smoke detectors shall be located and connected in accordance with the latest edition of NFPA 72. Residential smoke detectors will not be connected to building addressable system per code. Residential Smoke detectors shall be connected so that all unit detectors alarm when any individual detector goes into alarm. Units that are designated ADA compliant shall include visual strobe alarm attachments.

CODE ANALYSIS

The buildings shall meet all requirements of the current building codes enforced by the State of Utah at the time of design and construction. At this point, for the sake of this report, the anticipated code analysis of the proposed programmed buildings shall meet the requirements of the 2006 International Building Code (IBC) with all adopted amendments and addenda approved by the State of Utah, including the 2006 International Plumbing Code (IPC), the 2006 International Mechanical Code (IMC), the International Fire Code (IFC) and the latest National Electrical Code (NEC).

Additionally, the American National Standard for Accessible and Usable Buildings and Facilities 2003, Fair Housing Guidelines from FHA, and the International Energy Conservation Code 2006 are applicable to this project.

See Appendix J for the Code Analysis and requirements of the proposed buildings.

EXTERIOR FINISH CONSIDERATIONS

Architectural style encouraged to be harmonious with Eccles.

See Appendix K for existing photographs of Eccles Living Learning Center (ELLC).

Exterior elevations are encouraged, BUT NOT REQUIRED, to be compatible and harmonious with existing campus vernacular of architectural styles, including the use of colors and materials selected. It is not essential to mimic any design already existing, but to be compatible with the ELLC buildings which will remain in place. It is encouraged to design elevations with massing and articulation of facades (both horizontally and vertically) with positive and negative massing spaces to add richness and hierarchy to the building mass. Straight rectangular boxed massing, are also acceptable and may be appropriate with the overall design scheme.



Exterior Building Materials

Stucco systems (traditional 3-coat stucco, EIFS synthetic stucco systems, etc.) of any kind are not permissible. The design is encouraged to have a 100% brick solution full height with brick color to be compatible with ELLC. It is not necessary or even desired to match Eccles but be pleasing and contextual to the existing buildings.

Vinyl windows (for individual windows) and storefront aluminum glass and curtain wall systems with aluminum full-light doors are acceptable and encouraged.

A hierarchy of window design are encouraged on the buildings as well. Individual windows are encouraged at bedrooms with multiple windows (three (3) windows together) used at cluster lounges or other open common spaces, and full height-storefront or curtain-wall floor-to-ceiling glass are acceptable as well at cluster lounges where design dictates. SUU desires natural lighting to be a driving force behind the design of the spaces and its articulation into the common spaces, the corridors and other interior portions of the building should be viewed as good design practice.

Architectural grade 50-year asphalt shingles are anticipated to be the roofing system with aluminum fascia and soffit. Standing seam metal roof systems and color schemes of aluminum fascia and soffit are open to the design aesthetics.

BUILDING MASSING

The Cedar City zoning ordinance requires no building to exceed 3-stories in height. It is essential that a good design be respectful to its surroundings. In this case, there are single-story, single-family dwellings to the west, south and east of the site and keeping a respectful distance from backyards is a requirement of this project. No building program will exceed three stories in height.

This type of building lends itself to stacking of units for the ease and economies of plumbing and mechanical systems. Though not required to stack, it is anticipated that the rooms will be similar from floor-to-floor for the most part.

The stacking diagram shows one possible way of organizing the building into a 3-story element and is only a suggestion. By no means is this the only way to do it and the final design is encouraged to be creative in ways of articulating the building as appropriate.



MASSING STUDY/RELATIONSHIPS TO SURROUNDING BUILDINGS

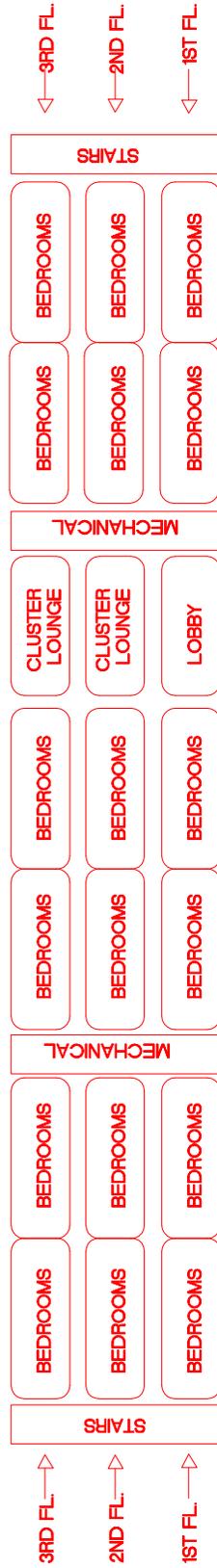
The site has been used exclusively for student housing ever since the Manzanita Court and Juniper Hall buildings were constructed in 1962. The neighboring buildings surrounding the site are from the same period of construction dating to 50 years ago. These structures are for the most part single family houses on individual lots. Most of the homes are of a rambler style massing with a low pitched gable roof design. The homes use a variety of residential construction materials of siding, brick, stone etc. None of the homes are historical in nature or are of a uniquely identifiable historical character of architecture. A Utah rambler vernacular architecture of the mid-20th century is the style of architecture in the surrounding context of the site.

With the history of student housing being located on this site for 45 years now, the University and the surrounding neighbors have come to accept each other as “good neighbors”. With no change in use, but just a replacement of housing units, the intent is to keep the “good neighbor” relationship continuing into the future.

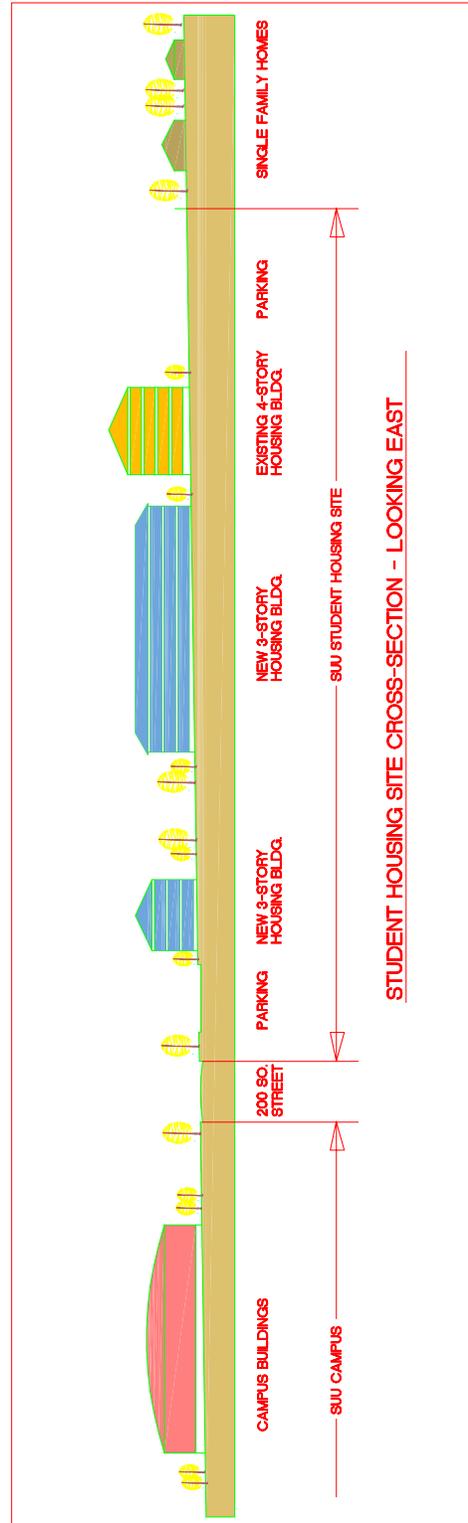
The surrounding historical architectural context is minimal, but compatible materials of brick and asphalt shingles, sloping roofs and residential detailing will help to keep the historical context of the neighborhood in tact.

The height is the critical concern. Per the attached Site Massing Section, three story massing is anticipated. However, with this massing, it is recommended that the placement of new three-story buildings does not take place any closer to neighboring properties than is already in existence with existing buildings. The parking lot areas surrounding the site provide a substantial setback from the neighbors and maintain the historical context of what has already existed on the site for now nearly half a century.

Stacking Diagram



Site Massing Section



MASSING FEEL

The overall design of the buildings is desired to feel a part of the existing campus fabric and textures. The buildings should “feel” like that fit the site and the surrounding environment and setting. Pitched roofs are not required, though permissible. If flat roof designs are appropriate to the overall design of the building, they will be acceptable. The key is to have a design that is appropriate for the site.

All expressions are open for consideration. The only hard criteria are that no building shall exceed 3-stories in height.



The rendering is only ONE example of what may be appropriate. It is only used for illustration of a generic 3-story building on site adjacent to the ELLC. It is certainly not the only solution and creative and exciting design solutions are encouraged to find the way to deliver SUU with the BEST VALUE of best design for the budget on this site.

PROGRAM SPACE REQUIREMENTS

PROGRAM ELEMENT	QUANTITY	UNIT AREA (sq. ft.)	TOTAL AREA (sq. ft.)
4-bed / 2-bedroom – 1-bath units			
Double Bedroom	2	190	380
Interior Hallway	1	55	55
Bathroom	1	50	50
Dressing / Vanity area	1	50	50
Storage closet	1	13	13
One closet per bed	4	10	40
Unit subtotal		588 s.f.	
Total units	68	588 s.f.	39,984 s.f.
NOTE: Within this count of bedrooms, there will be six (6) RA bedrooms that take the space of a typical double bedroom but will have only single occupancy and will meet other requirements of the RA program needs. But, for space purposes, these RA bedrooms are treated as a double bedroom.			
Requirements per floor			
Cluster Lounge / gathering space / TV / recreation	1	400	400
Enclosed study area	1	150	150
Open study area	1	200	200
Laundry Room	1	180	180
Housekeeping closet / Janitor	1	120	120
Vending area	1	Part of laundry	Part of laundry
Kitchenette	1	150	150
Floor subtotal		1,200	
Maximum floors (3) per building (assume (2) buildings)	6	1,200	7,200 s.f.
Support spaces per Building (assume (2) buildings)			
Bicycle storage	2	exterior	exterior
Trash	2	exterior	exterior
Misc. Building Storage	2	100	200
RA work room	2	150	300
Hall Director Apartment	1	700	700
Subtotal			1,200 s.f.
Building Net Total			48,384 s.f.
Building Gross total w/ a net to gross ratio of approximately 85% (NOTE: This ratio is as high as it is as circulation is already accounted for in the unit sq. ft. noted above)			56,900 s.f.
NOTE: The mechanical, telecom/electrical, common corridors, common stairs, lobby/bldg entry, elevator, secondary vestibule spaces as outlined in the Individual Space Information, are included within this 15% ratio of common circulation and support spaces.			
Total number of beds			270
Sq. feet per bed			210 s.f. / bed

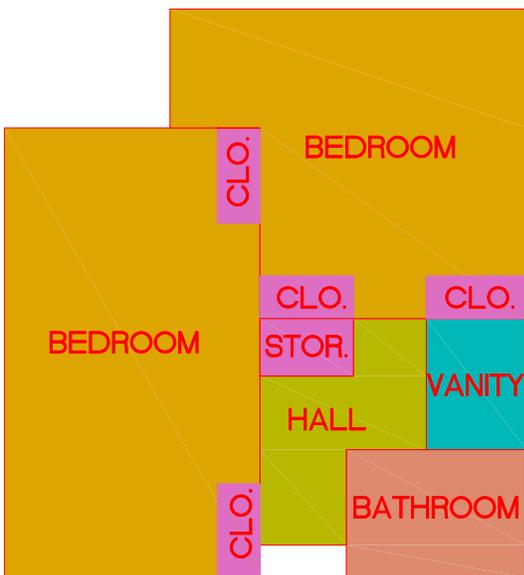
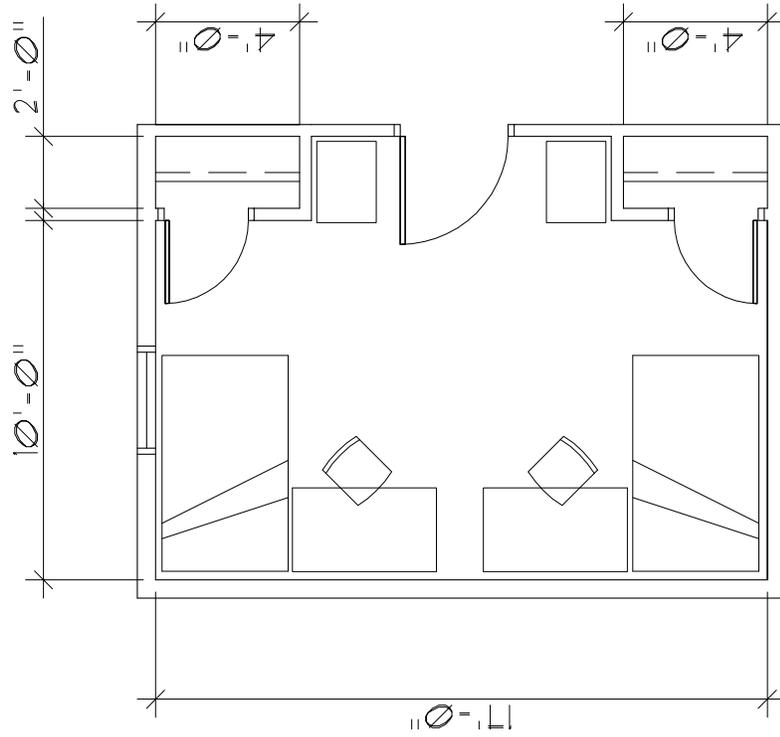
INDIVIDUAL SPACE INFORMATION

The following are room-by-room descriptions of programmable space in a tabulated form for each space noted in the Program Space Requirements.

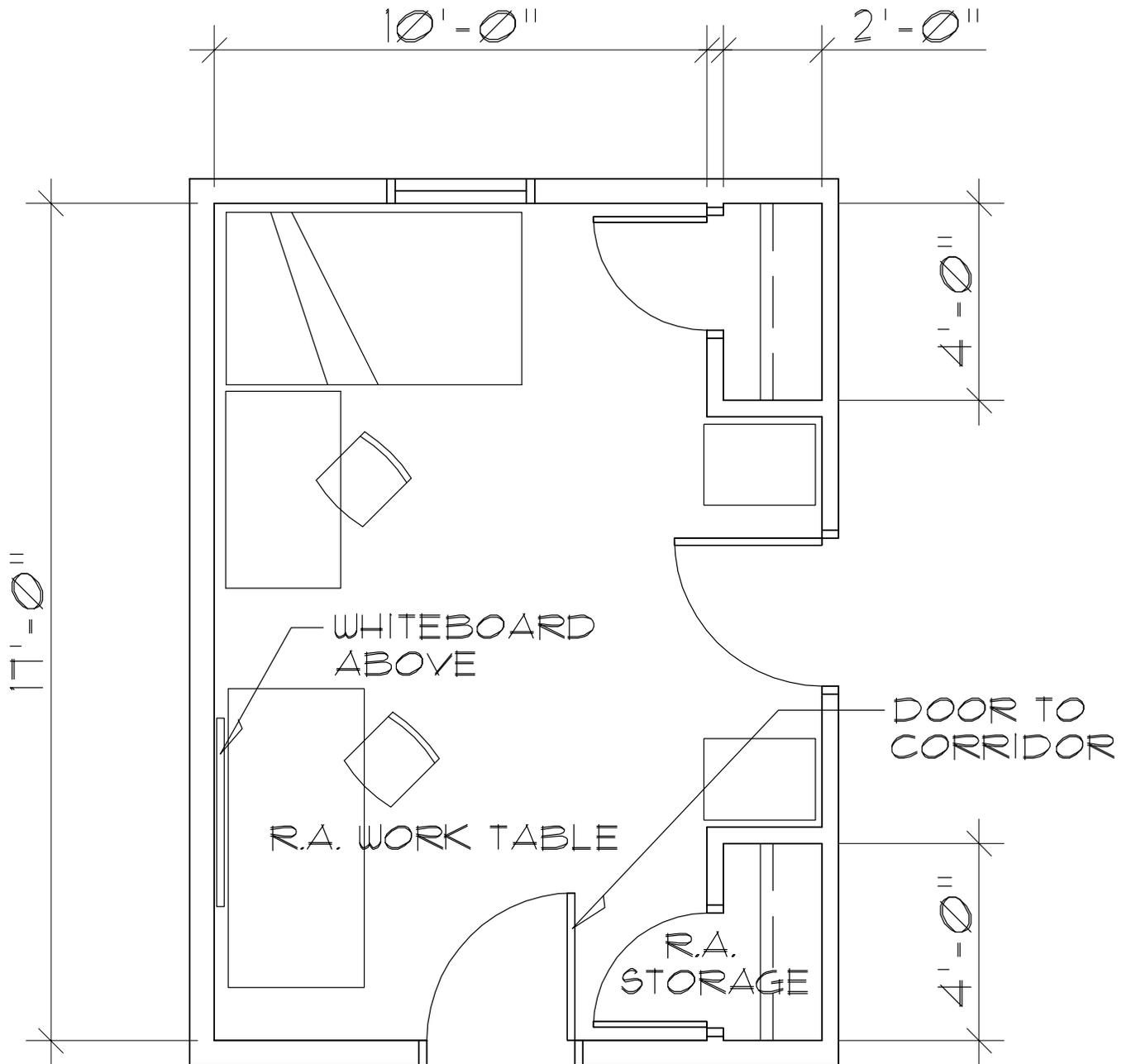
Finishes noted within the individual space information references the schematic Finish Schedule which follows these tables.

Individual Space Information

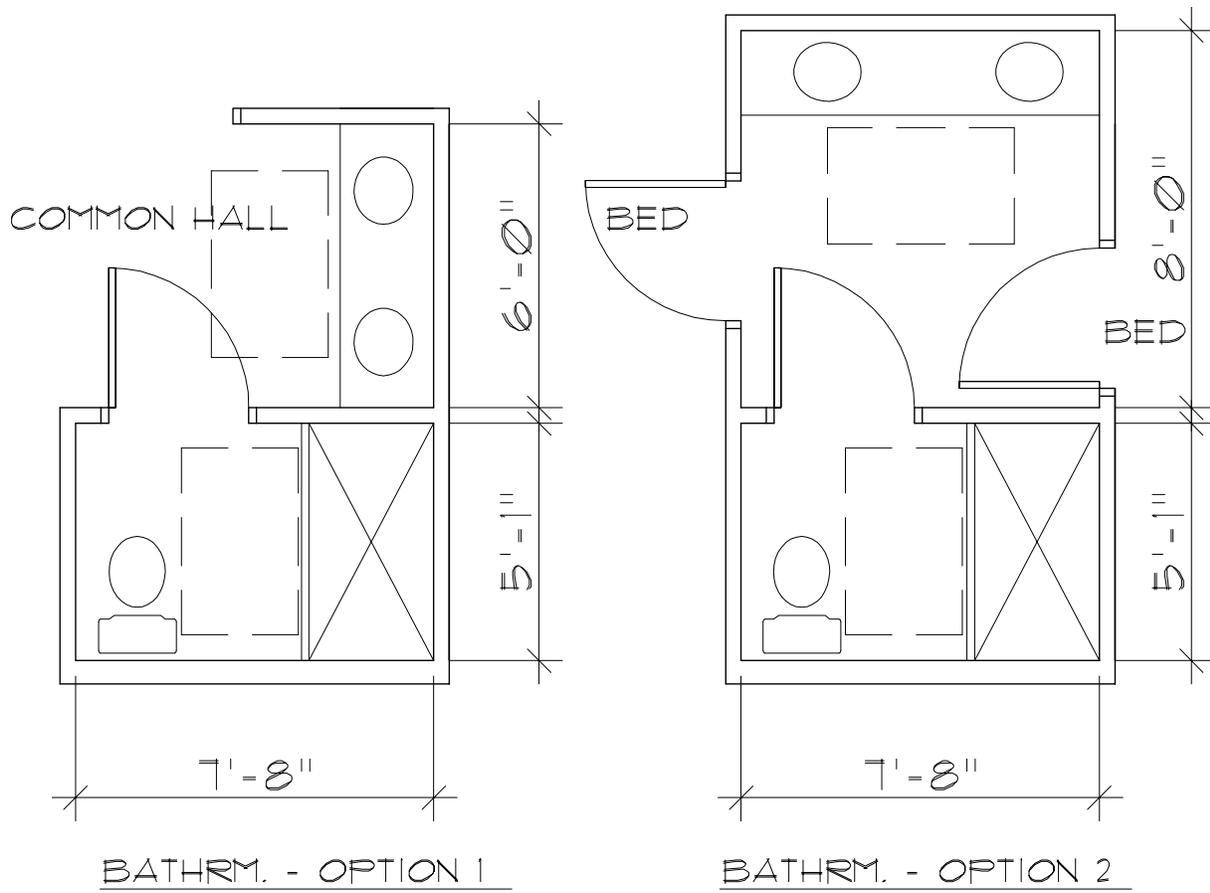
BEDROOM:	NOTE: In each space, finish notes are identified which refer to the finish schedule. These finishes are recommended to be typical for each individual space throughout the space.
	Finishes: F1, B1, W1, C1
Size of space required	180-200 s.f. for double occupancy rooms 12 foot minimum dimension
Function and use of space	Bedroom sleeping space for two (2) students / adjacent to bathroom areas within a semi-suite arrangement
Furniture required	(2) twin beds, (2) desks, (2) chairs, (2) dressers
Fixtures required	(2) closets w/ fixed shelf and hanging rod
Equipment – fixed	Electronic keyed access with solid-core wood door
Equipment – not fixed	none
Power required	Typical convenience outlets w/ (5) duplex outlets per bed / (10) outlets per bedroom
Lighting required	One (1) overhead ceiling light w/ switch at door
Hours of operation	24 hours
No. of occupants - actual	2
Number of occupants - code	2
Ceiling height	9 ft
Floor finishes	carpet
Ceiling finishes	Painted gypsum board
Wall finishes	Painted gypsum board
Special finishes	none
Data outlets / locations	One (1) data port per bed / (2) per bedroom
Power outlets / locations	Typical convenience outlets w/ (3) duplex outlets per bed / (6) outlets per bedroom / evenly distributed around the room on all four walls. Coordinate locations with typical desk and bed configuration.
Voice outlets / locations	One (1) telephone port per bed / (2) per bedrm.
AV outlets / locations	One (1) cable TV port per bedroom
Acoustical requirements	STC 54
AV system requirements	None
Space layout requirements	Flexible for furniture requirements with multiple layouts.
Items that will be provided by owner (NIC)	Furnishings as required.
Occupancy group - code	R2
Code considerations	Window to exterior for light and ventilation and egress. Fair Housing requirements and door widths.
Recommended foot candle lighting level	5 foot candles (fc) average with task lighting at desk and other study areas.



R.A. BEDROOM:	FINISHES: F1, B1, W1, C1
Size of space required	180-200 s.f. for double occupancy rooms 12 foot minimum dimension – assume one (1) R.A. bedroom per 30-36 students.
Function and use of space	Bedroom sleeping space for one (1) R. A. student with an additional specific door directly to the central corridor from the bedroom.
Furniture required	(1) twin bed, (1) desk, (2) chairs, (1) dresser, (1) work table 30" x 72"
Fixtures required	(2) closets w/ fixed shelf and hanging rod with one (1) closet to store R.A. specific items.
Equipment – fixed	Electronic keyed access with solid core wood door
Equipment – not fixed	none
Power required	Typical convenience outlets w/ (6) outlets in this single-occupancy bedroom.
Lighting required	One (1) overhead ceiling light w/ switch at door
Hours of operation	24 hours
No. of occupants - actual	1
Number of occupants - code	2
Ceiling height	9 ft
Floor finishes	carpet
Ceiling finishes	Painted gypsum board
Wall finishes	Painted gypsum board
Special finishes	One (1) 48" x 48" white board / bulletin board
Data outlets / locations	Two (2) data ports
Power outlets / locations	Typical convenience outlets w/ (10) outlets per bedroom / evenly distributed around the room on all four walls.
Voice outlets / locations	Two (2) voice outlets
AV outlets / locations	One (1) cable TV port per R.A. bedroom
Acoustical requirements	STC 54
AV system requirements	None
Space layout requirements	Flexible for furniture requirements with multiple layouts.
Items that will be provided by owner (NIC)	Furnishings as required.
Occupancy group - code	R2
Code considerations	Window to exterior for light and ventilation and egress. Fair Housing requirements and door widths.
Recommended foot candle lighting level	5 foot candles (fc) average with task lighting at desk and other study areas.



BATHROOM	FINISHES: F3, B3, W2, C1
Size of space required	Compartmentalized with toilet and shower in one compartment of 50 s.f. and vanity / lavatories in separate compartment
Function and use of space	Toilet and shower compartment
Furniture required	None
Fixtures required	One (1) toilet One (1) shower stall of standard size with fiberglass insert standard durable finishes
Equipment – fixed	Exhaust fan, curtain rod, robe hook, toilet paper dispenser
Equipment – not fixed	none
Power required	One (1) duplex outlet with GFCI rating
Lighting required	One (1) overhead ceiling light w/ switch at door
Hours of operation	24 hours
No. of occupants - actual	1
Number of occupants - code	1
Ceiling height	8 ft
Floor finishes	Ceramic tile
Ceiling finishes	Painted gypsum board
Wall finishes	Painted gypsum board above ceramic tile wainscot – minimum 48” height – all walls
Special finishes	Solid surface, fiberglass surround full height at shower stall.
Data outlets / locations	none
Power outlets / locations	One (1) duplex outlet with GFCI rating
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	None
Space layout requirements	Functional with clear floor space to allow for toilet and shower – meeting Fair Housing requirements.
Items that will be provided by owner (NIC)	None
Occupancy group - code	R2
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle lighting level	5 foot candles (fc) average, with 30 fc task lighting at sink and/or mirror.



VANITY AREA	FINISHES: F1, F2, B1, W1, C1
Size of space required	Compartmentalized from toilet / shower area in separate area of 50 s.f.
Function and use of space	Vanity / mirror dressing area with (2) lavatories or a ratio of (1) lavatory per two (2) students.
Furniture required	None
Fixtures required	Vanity area with built-in plastic laminate countertop and one (1) set of (3) drawers per lavatory, w/ one (1) mirror per lavatory – mirror to be full length of countertop – wall-to-wall
Equipment – fixed	none
Equipment – not fixed	none
Power required	One (1) duplex outlet with GFCI rating per lavatory
Lighting required	One (1) valance fixture over each mirror
Hours of operation	24 hours
No. of occupants - actual	1
Number of occupants - code	1
Ceiling height	9 ft
Floor finishes	Carpet
Ceiling finishes	Painted gypsum board
Wall finishes	Painted gypsum board
Special finishes	Mirror to be full length of countertop area. Countertop to be plastic laminate.
Data outlets / locations	none
Power outlets / locations	One (1) duplex outlet with GFCI per lavatory
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	None
Space layout requirements	Functional with clear floor space to allow for lavatories meeting Fair Housing requirements.
Items that will be provided by owner (NIC)	Extra shelving
Occupancy group - code	R2
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle lighting level	30 fc average.

CLOSET STORAGE	FINISHES: F1, B1, W1, C1
Size of space required	One (1) individual closet per bed w/ 4 linear feet of shelf and hanging rod at bedrooms. Closet areas are not included in bedroom s.f. programmable area. One (1) common storage area for four beds to be used in common for all – 13 s.f. w/ 5 linear feet of shelf and 3 linear feet of hanging rod
Function and use of space	Storage within housing unit
Furniture required	None
Fixtures required	Fixed shelf and hanging rod
Equipment – fixed	none
Equipment – not fixed	none
Power required	none
Lighting required	None in individual closet / one (1) ceiling light fixture per common closet area.
Hours of operation	24 hours
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	8 ft
Floor finishes	Carpet
Ceiling finishes	Painted gypsum board
Wall finishes	Painted gypsum board
Special finishes	none
Data outlets / locations	none
Power outlets / locations	none
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	none
AV system requirements	none
Space layout requirements	n/a
Items that will be provided by owner (NIC)	none
Occupancy group - code	R2
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle lighting level	5 fc average.

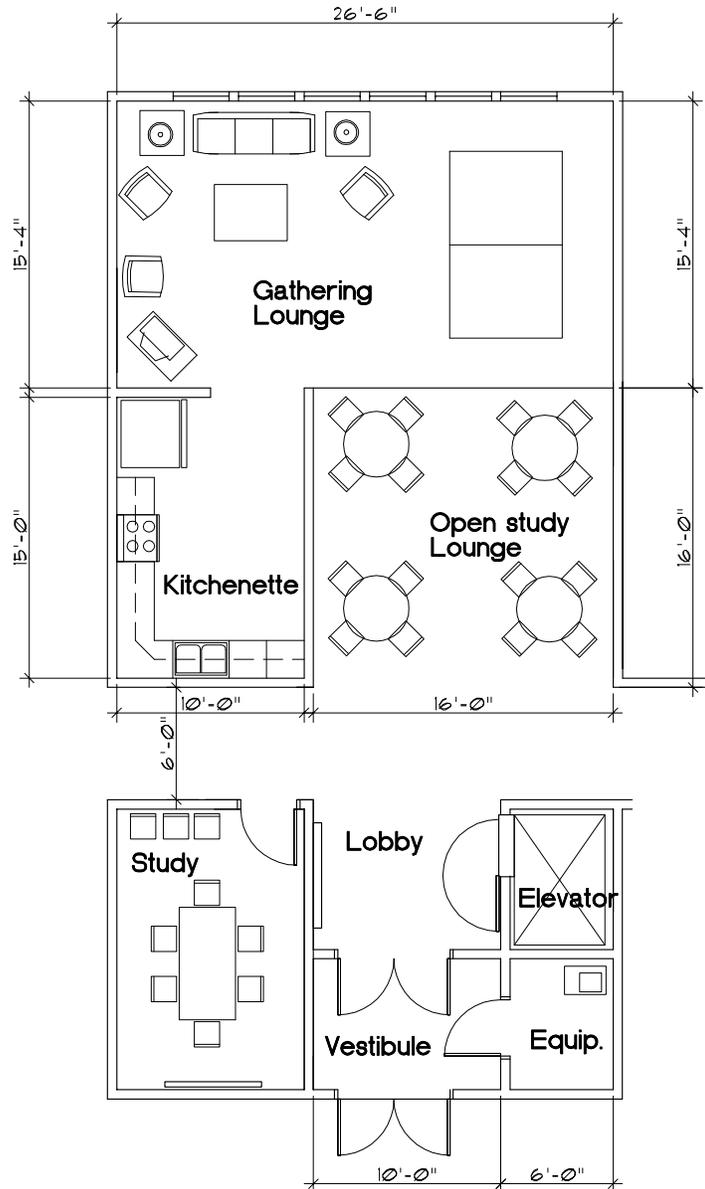
CLUSTER LOUNGE	FINISHES: F1, B1, W1, C2
Size of space required	Minimum 400 s.f. for gathering lounge (not including study spaces, kitchenette, lobby) dedicated for hang-out space
Function and use of space	Gathering place for students, adjacent to building lobby or main entrance.
Furniture required	Love seats, couches, chairs, tables for lounge space with ping-pong table or pool table and other recreational furnishings
Fixtures required	none
Equipment – fixed	Blocking, power and cable connection for flat-screen TV
Equipment – not fixed	none
Power required	Standard convenience outlets
Lighting required	Lighting in two settings (full lighting and half-lighting) Natural light is crucial with large windows with views and natural light penetrating the space.
Hours of operation	24 hours
No. of occupants - actual	48
Number of occupants - code	40
Ceiling height	9 ft minimum
Floor finishes	Carpet
Ceiling finishes	Acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	Accent color on walls and focal feature such as a fireplace or gathering area.
Data outlets / locations	Wireless Internet access within the space
Power outlets / locations	Standard convenience duplex outlets
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	Flexible furniture arrangements for a variety of layouts
Items that will be provided by owner (NIC)	Furnishings as required.
Occupancy group - code	R2 (auxiliary gathering space less than 50 people)
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle lighting level	20 fc average.

ENCLOSED STUDY AREA	FINISHES: F1, B1, W1, C2
Size of space required	Minimum 150 s.f. with a minimum dimension of 10 s.f.
Function and use of space	Enclosed study space for students adjacent to be separate from the cluster lounge area.
Furniture required	Central table with ten (10) chairs in center of room
Fixtures required	none
Equipment – fixed	White board mounted on longitudinal wall
Equipment – not fixed	none
Power required	Standard convenience outlets
Lighting required	Lay-in light fixtures
Hours of operation	8AM to 12AM or as dictated by Housing staff
No. of occupants - actual	10
Number of occupants - code	1.5
Ceiling height	9 ft minimum
Floor finishes	Carpet
Ceiling finishes	Acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	Accent color on walls
Data outlets / locations	Wireless Internet access within the space / one (1) Data port.
Power outlets / locations	Standard convenience duplex outlets
Voice outlets / locations	none
AV outlets / locations	One (1) AV outlet for portable projector at transverse wall
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	Central table in middle of room with seating for ten (10) students
Items that will be provided by owner (NIC)	Furnishings as required.
Occupancy group - code	R2 (auxiliary gathering space less than 50 people)
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle lighting level	10 foot candles (fc) average, with task lighting at desk and/or study areas or 30 fc average. 30 fc average may not meet energy code.

OPEN STUDY AREA	FINISHES: F1, B1, W1, C2
Size of space required	Minimum 200 s.f. open alcove area adjacent to the cluster lounge
Function and use of space	Informal gathering study space for students, adjacent to and open with cluster lounge. Adjacent to view windows and natural light.
Furniture required	A minimum of three (3) tables with four (4) chairs each in a flexible layout
Fixtures required	none
Equipment – fixed	none
Equipment – not fixed	none
Power required	Standard convenience outlets
Lighting required	Lay-in light fixtures
Hours of operation	8AM to 12AM or as dictated by Housing staff
No. of occupants - actual	12
Number of occupants - code	2
Ceiling height	9 ft minimum
Floor finishes	Carpet
Ceiling finishes	Acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	Accent color on walls
Data outlets / locations	Wireless Internet access within the space / one (1) Data port.
Power outlets / locations	Standard convenience duplex outlets
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	Flexible for a variety of table layouts
Items that will be provided by owner (NIC)	Furnishings as required.
Occupancy group - code	R2 (auxiliary gathering space less than 50 people)
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle lighting level	10 foot candles (fc) average, with task lighting at desk and/or study areas or 30 fc average. 30 fc average may not meet energy code.

KITCHENETTE AREA	FINISHES: F2, B2, W3, C1
Size of space required	Minimum 150 s.f. adjacent and partially open to the cluster lounge and open study spaces, but screened from public view.
Function and use of space	Kitchenette with service area with preparation of food area to serve in the cluster lounge adjacent
Furniture required	none
Fixtures required	Plastic laminate countertop and cabinets (above and below) on two full walls.
Equipment – fixed	none
Equipment – not fixed	(1) Full-size side-by-side refrigerator/freezer, (1) 4-burner stove / oven (1) double compartment kitchen sink (accessible) (1) dishwasher (1) countertop mounted microwave
Power required	Standard convenience outlets with GFCI outlets
Lighting required	Lay-in light fixtures
Hours of operation	8AM to 12AM or as dictated by Housing staff
No. of occupants - actual	2
Number of occupants - code	1.5
Ceiling height	9 ft minimum
Floor finishes	Vinyl tile
Ceiling finishes	Acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	Accent color on walls
Data outlets / locations	none
Power outlets / locations	GFCI convenience duplex outlets at counter per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	Two (2) walls to have countertop and cabinets
Items that will be provided by owner (NIC)	Kitchen appliances as required.
Occupancy group - code	R2 (auxiliary)
Code considerations	Fair Housing clear floor space / door widths / with 34" countertop height above finish floor and clear open work space 30" wide. Under sink open cabinet for accessibility. Each appliance to have 30" x 48" clear floor space centered on each appliance for accessibility.
Recommended foot candle lighting level	30 fc average with under cabinet lights on counters and sinks to 50 fc.

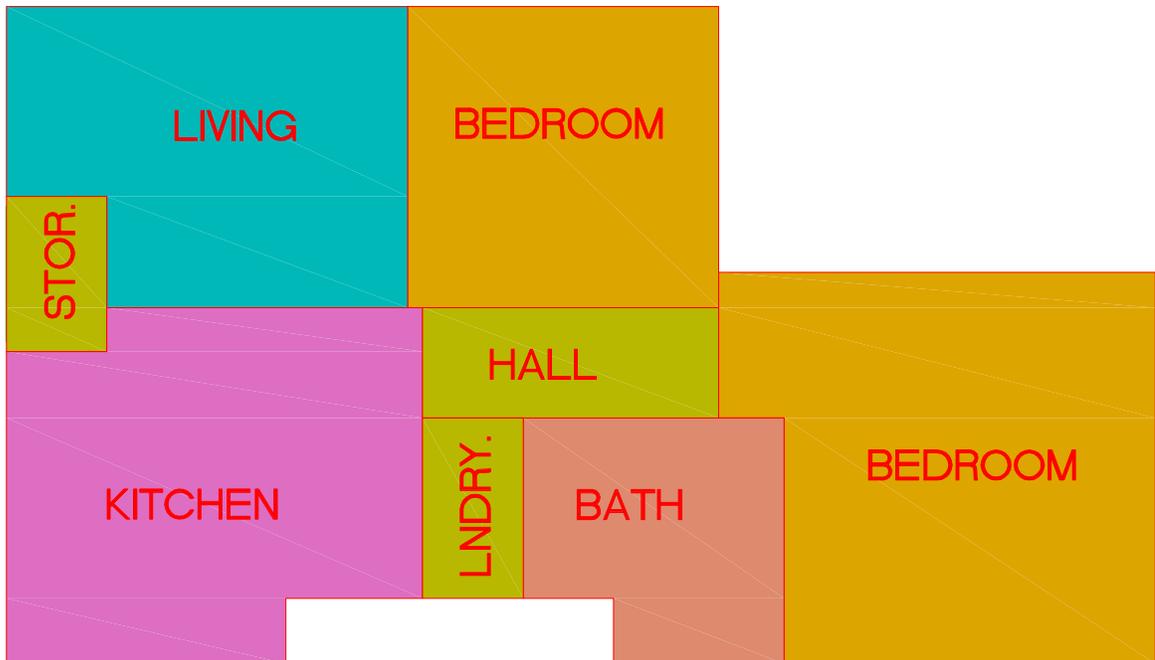
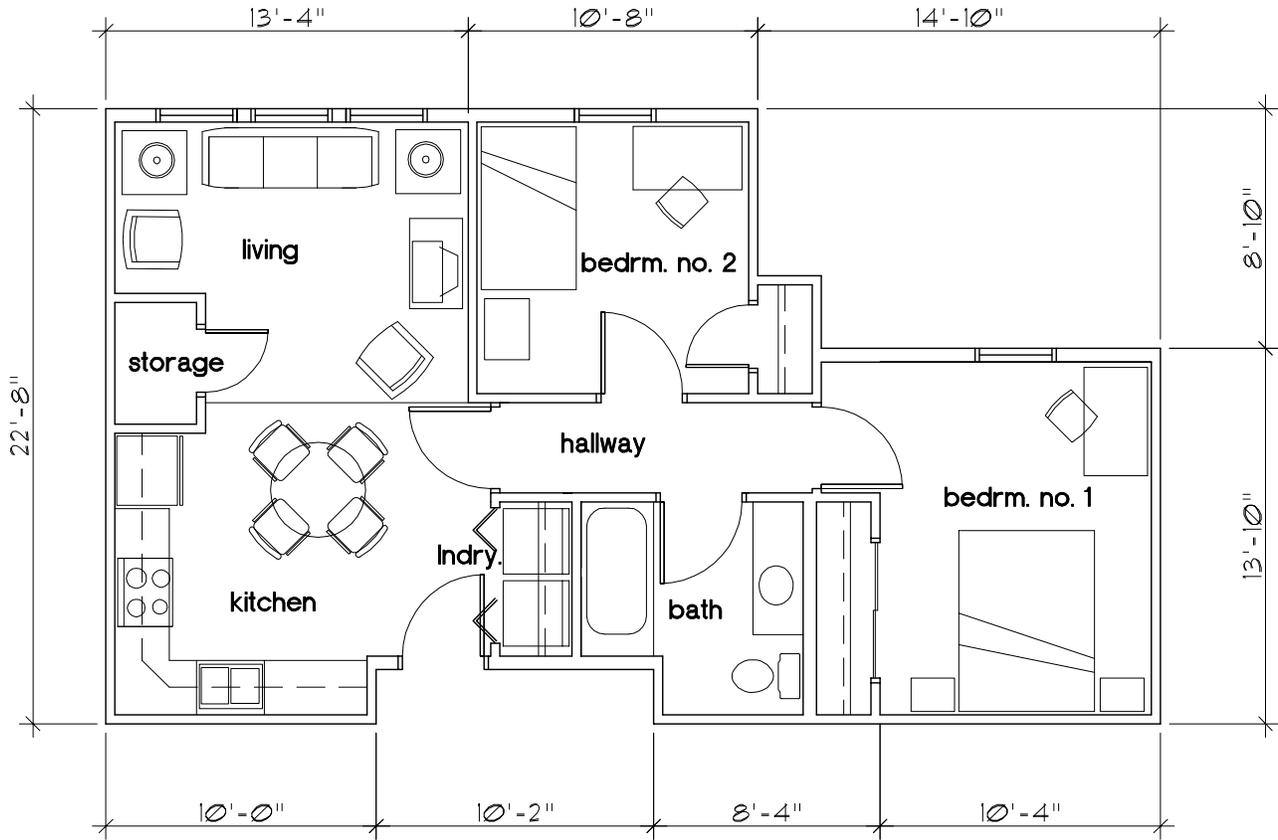
Individual Space Information



HALL DIRECTOR / R.A. WORK SPACE	FINISHES: F1, B1, W1, C2
Size of space required	Minimum 200 s.f. near entry / lobby on the main floor adjacent to the cluster lounge, but in a separate enclosed and secure space – assume one space per building.
Function and use of space	Work space and planning room / meeting space for Hall Director and Residence Assistants with electronic security keyed access in enclosed space.
Furniture required	A minimum of four (4) tables with four (4) chairs each in a flexible layout.
Fixtures required	none
Equipment – fixed	Two (2) white boards centered on two (2) walls.
Equipment – not fixed	none
Power required	Standard convenience outlets
Lighting required	Lay-in light fixtures
Hours of operation	As dictated by Housing staff
No. of occupants - actual	16
Number of occupants - code	2
Ceiling height	9 ft minimum
Floor finishes	Carpet
Ceiling finishes	Acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	Accent color on walls
Data outlets / locations	Two (2) Data ports.
Power outlets / locations	Standard convenience duplex outlets
Voice outlets / locations	One (1) telephone port.
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	Flexible for a variety of table layouts
Items that will be provided by owner (NIC)	Furnishings as required.
Occupancy group - code	R2 (auxiliary gathering space less than 50 people)
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle lighting level	5 foot candles (fc) average, with task lighting at desk and/or study areas or 30 fc average. 30 fc average may not meet energy code. See individual areas for specific use areas.

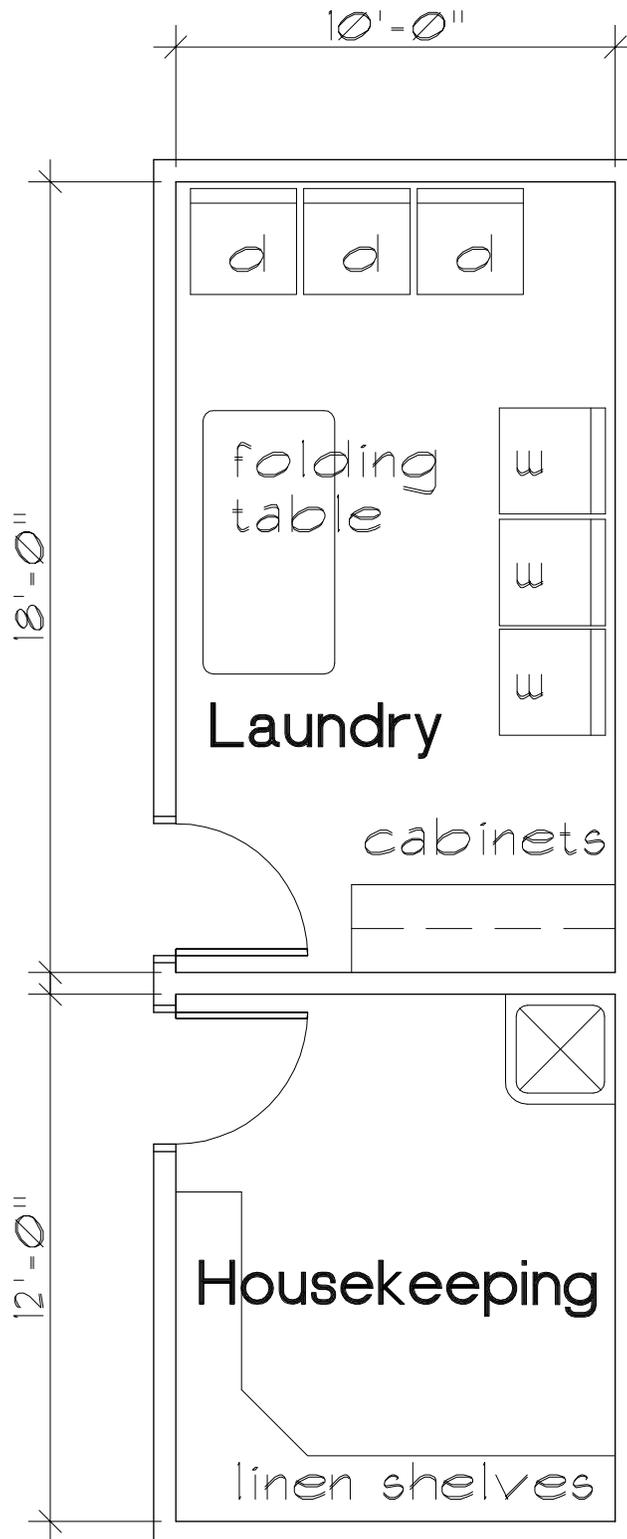
HALL DIRECTOR APARTMENT	FINISHES: Match bathroom and bedroom finishes within the semi-suite units.
Size of space required	Minimum 700 s.f. near entry / lobby on the main floor adjacent to the cluster lounge AND work space for the Hall Director and R.A. (one apartment per project)
Function and use of space	Two bedroom family apartment for Hall Director near the main entry of one building – (1) apartment for the project.
Furniture required	Fully furnished apartment.
Fixtures required	none
Equipment – fixed	One (1) 30" x 30" white board.
Equipment – not fixed	21 c.f. refrigerator, electrical stove/range, disposal at kitchen sink, washer and dryer
Power required	Standard convenience outlets and power for appliances
Lighting required	Similar to housing unit fixtures
Hours of operation	24 hours
No. of occupants - actual	4
Number of occupants - code	7
Ceiling height	9 ft minimum
Floor finishes	Similar to student housing units.
Ceiling finishes	Painted Gypsum board
Wall finishes	Painted gypsum board
Special finishes	Accent color on walls
Data outlets / locations	One (1) data port in living room and one (1) in master bedroom.
Power outlets / locations	Standard convenience duplex outlets
Voice outlets / locations	One (1) telephone port in kitchen / living area and one (1) in master bedroom.
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	<ol style="list-style-type: none"> 1. Living Room of a minimum area of 120 s.f. with no dimension less than 10 feet. 2. Kitchen to be a full kitchen with refrigerator, stove/range, two-compartment sink with disposal, and dining area for four (4) people at a table of 150 s.f. 3. Master bedroom of 130 s.f. with no dimension less than 10 feet with a closet (beyond this s.f. programmable space) with 6 linear feet minimum of shelf/rod). 4. Second bedroom of 100 s.f. with no dimension less than 10 feet with a closet (beyond this s.f. programmable space) with 4 linear feet minimum of shelf/rod). 5. Bathroom centrally placed with tub/shower combination, toilet and vanity with one (1) lavatory of approximately 50 s.f. 6. Laundry closet with washer and dryer of approximately 20 s.f. 7. Storage closet of minimum 25 s.f.
Items that will be provided by owner (NIC)	Furnishings as required.
Occupancy group - code	R2 (apartment)
Code considerations	Fair Housing clear floor space / door widths
Recommended foot candle	5 foot candles (fc) average, with task lighting at desk and/or study areas.

Individual Space Information



LAUNDRY ROOM	FINISHES: F4, B4, W4, C3
Size of space required	180 s.f. minimum programmable space at each floor serving a maximum of 48 students
Function and use of space	Common laundry for 48 students (one room per floor). NOTE: Common laundry at one central location for multiple floors is NOT desired.
Furniture required	One (1) 30" x 60" folding table
Fixtures required	6 ft. of countertop and cabinets (above and below).
Equipment – fixed	none
Equipment – not fixed	(3) washers per room (3) dryers per room (1) space for vending machine (space only – optional as to whether vending will be placed in this room or at entry vestibule areas)
Power required	Standard convenience outlets with GFCI outlets and power and ventilation requirements for laundry equipment.
Lighting required	Lay-in light fixtures
Hours of operation	8AM to 12AM or as dictated by Housing staff
No. of occupants - actual	2
Number of occupants - code	2
Ceiling height	8 ft minimum
Floor finishes	Vinyl tile or Commercial sheet vinyl
Ceiling finishes	Acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	Accent color on walls
Data outlets / locations	none
Power outlets / locations	GFCI convenience duplex outlets at counter per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	See space plan.
Items that will be provided by owner (NIC)	Laundry appliances and table as required.
Occupancy group - code	R2 (auxiliary)
Code considerations	Proper / adequate ventilation and make-up air for gas appliances and for dryer vents venting directly to the outside. Fair Housing clear floor space / door widths. All appliances shall be accessible including button controls. Clear floor space of 30" x 48" centered on each appliance for accessibility.
Recommended foot candle lighting level	30 fc average.

HOUSEKEEPING / JANITOR CLOSET	FINISHES: F4, B4, W4, C3
Size of space required	120 s.f. minimum at each floor
Function and use of space	Housekeeping storage and janitorial storage. This space envisioned to be adjacent or near the laundry room for each floor. NOTE: One common large single housekeeping space in a building is NOT desired.
Furniture required	none
Fixtures required	Three (3) walls with full height / full length adjustable wire shelving (5) thus, for paper and janitorial supplies. One (1) floor mounted mop sink with hose bib and hooks for mops above
Equipment – fixed	none
Equipment – not fixed	none
Power required	Standard convenience outlets with GFCI outlets per code.
Lighting required	Lay-in light fixtures
Hours of operation	Open by staff only – not accessible to students.
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	8 ft minimum
Floor finishes	Vinyl tile
Ceiling finishes	Acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	FRP or laminate wainscot at mop sink.
Data outlets / locations	none
Power outlets / locations	GFCI convenience duplex outlets per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	See space plan.
Items that will be provided by owner (NIC)	
Occupancy group - code	R2
Code considerations	
Recommended foot candle lighting level	3 fc average,



MISC. BUILDING STORAGE	FINISHES: F2, B5, W5, C3
Size of space required	100 s.f. per building.
Function and use of space	Maintenance storage for the building. This space to be located where dictated by design. NOTE: It is envisioned that this space may be incorporated into a partial basement space adjacent to building mechanical systems room also possibly located in a partial basement.
Furniture required	none
Fixtures required	none
Equipment – fixed	none
Equipment – not fixed	none
Power required	Standard convenience outlets with GFCI outlets per code.
Lighting required	Ceiling mounted fluorescent lighting
Hours of operation	Open by staff only – not accessible to students.
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	8 ft minimum
Floor finishes	Vinyl Tile
Ceiling finishes	Gypsum board taped only
Wall finishes	Gypsum board taped only
Special finishes	none
Data outlets / locations	none
Power outlets / locations	GFCI convenience duplex outlets per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	none
Items that will be provided by owner (NIC)	
Occupancy group - code	R2
Code considerations	
Recommended foot candle lighting levels	3 fc average.

MECHANICAL	FINISHES: F2, B5, W5, C4
Size of space required	As required by mechanical building design. All mechanical equipment (furnaces, fan coils, water heaters etc. to be fully accessible outside of housing spaces).
Function and use of space	Mechanical equipment rooms with direct access to corridor. Individual mechanical rooms envisioned to be located throughout the building between housing units. One large centrally located mechanical room is envisioned to be located possibly in a partial basement as required by design at location convenient with connection to steam lines from site.
Furniture required	none
Fixtures required	none
Equipment – fixed	none
Equipment – not fixed	none
Power required	Standard convenience outlets with GFCI outlets per code.
Lighting required	Ceiling mounted fluorescent lighting
Hours of operation	Open by staff only – not accessible to students.
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	8 ft minimum
Floor finishes	Vinyl Tile
Ceiling finishes	Gypsum board taped only
Wall finishes	Gypsum board taped only
Special finishes	none
Data outlets / locations	none
Power outlets / locations	GFCI convenience duplex outlets per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	none
Items that will be provided by owner (NIC)	
Occupancy group - code	R2
Code considerations	Meet mechanical code requirements.
Recommended foot candle lighting level	3 fc average.

TELECOM / ELECTRICAL ROOMS	FINISHES: F2, B5, W5, C4
Size of space required	As required by telecom and electrical building design. All electrical equipment and telecommunication building services. One (1) telecom room is anticipated to be located on 2 nd floor of each building that can have cabling up to the 3 rd floor and down to 1 st floor. One (1) electrical service room anticipated on 1 st floor below the telecommunication room on the 2 nd floor. Final design to be determined – this is only a suggestion!
Function and use of space	Electrical and telecommunication equipment rooms with direct access to corridor, with exact location dictated by design requirements.
Furniture required	none
Fixtures required	none
Equipment – fixed	Cable tray for telecom cabling down corridor to each space.
Equipment – not fixed	none
Power required	Standard convenience outlets with GFCI outlets per code.
Lighting required	Ceiling mounted fluorescent lighting
Hours of operation	Open by staff only – not accessible to students.
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	8 ft minimum
Floor finishes	Vinyl tile
Ceiling finishes	Gypsum board taped only
Wall finishes	Gypsum board taped only
Special finishes	none
Data outlets / locations	none
Power outlets / locations	GFCI convenience duplex outlets per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	none
Items that will be provided by owner (NIC)	
Occupancy group - code	R2
Code considerations	National Electrical Code requirements.
Recommended foot candle lighting level	3 fc average.

COMMON CORRIDORS	FINISHES: F1, B1, W1, C2
Size of space required	Minimum of 5 feet wide with articulation of wall placement and colors to break up length of corridor.
Function and use of space	Circulation and building egress requirements
Furniture required	none
Fixtures required	none
Equipment – fixed	Cable tray for telecom cabling down corridor to each space.
Equipment – not fixed	none
Power required	Standard convenience outlets per code.
Lighting required	Lay-in fluorescent lighting
Hours of operation	24 hours.
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	9 ft minimum
Floor finishes	Carpet
Ceiling finishes	Lay-in acoustical ceiling tile.
Wall finishes	Painted gypsum board
Special finishes	Minimum of six (6) accent colors / Impact-resistant sheet rock on walls / heavy-duty corner guards
Data outlets / locations	none
Power outlets / locations	Convenience duplex outlets per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	none
Items that will be provided by owner (NIC)	
Occupancy group - code	R2
Code considerations	Fire rating and existing requirements per code. Provide fire extinguishes in recessed cabinets per code. Provide exit signs and emergency lighting requirements per code.
Recommended foot candle lighting level	5 fc average.

COMMON STAIRWAYS	FINISHES: F1, B1, W1, C2
Size of space required	Minimum of 4 feet wide at ends of corridor per code.
Function and use of space	Circulation and building egress requirements
Furniture required	none
Fixtures required	none
Equipment – fixed	none
Equipment – not fixed	none
Power required	Standard convenience outlets per code.
Lighting required	Surface mounted fluorescent lighting
Hours of operation	24 hours.
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	9 ft minimum
Floor finishes	Carpet with extruded aluminum nose guards
Ceiling finishes	Painted gypsum board
Wall finishes	Painted gypsum board
Special finishes	Accent wall paint color / Impact-resistant sheet rock on all walls / heavy-duty corner guards / 2" extruded aluminum nosing guards.
Data outlets / locations	none
Power outlets / locations	Convenience duplex outlets per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	none
Items that will be provided by owner (NIC)	
Occupancy group - code	R2
Code considerations	Fire rating and existing requirements per code. Exit lighting and emergency lighting per code.
Recommended foot candle lighting level	5 fc average.

LOBBY / BLDG. ENTRY	FINISHES: F2, B2, W1, C1
Size of space required	Minimum 150 s.f. with 70 s.f. vestibule at main entry of building with elevator and elevator equipment adjacent to the lobby. Provide space for possible vending machine area within the entry vestibule or secondary entry vestibule (exact location to be determined – may be placed at laundry area).
Function and use of space	Circulation and building entrance / elevator area to be immediate and adjacent to the lobby / lobby to be adjacent to the cluster lounge.
Furniture required	none
Fixtures required	none
Equipment – fixed	none
Equipment – not fixed	Vending machine area may be placed at entry vestibule (1) location per building as required if desired by SUU.
Power required	Standard convenience outlets per code.
Lighting required	Lay-in fluorescent lighting
Hours of operation	24 hours.
No. of occupants - actual	0
Number of occupants - code	0
Ceiling height	9 ft minimum
Floor finishes	Carpet at lobby / vinyl tile or ceramic tile at vestibule w/ walk-off floor mats.
Ceiling finishes	Lay-in acoustical ceiling tile
Wall finishes	Painted gypsum board
Special finishes	Accent wall paint color / Impact-resistant sheet rock on all walls / heavy-duty corner guards
Data outlets / locations	none
Power outlets / locations	Convenience duplex outlets per code.
Voice outlets / locations	none
AV outlets / locations	none
Acoustical requirements	STC 54
AV system requirements	none
Space layout requirements	none
Items that will be provided by owner (NIC)	
Occupancy group - code	R2
Code considerations	Fire rating and existing requirements per code. Exit signage and emergency lighting per code.
Recommended foot candle lighting level	5 fc average.

SCHEMATIC FINISH SCHEDULE

*NOTE: This schedule is only a suggestion of possible options reflected desired finishes. The exact Finish Schedule shall be dictated by final design. **The finishes have been noted in the room-by-room Individual Space Information.***

MARK	DESCRIPTION	NOTES
FLOOR FINISHES		
F1	DIRECT GLUE CARPET TILE	30" x 30" minimum in a variety of level loops, cut piles and combinations of the two with accent colors and textures as indicated by the design.
F2	VINYL TILE	12" x 12" vinyl or equal
F3	CERAMIC TILE	A variety of sizes as dictated by design.
F4	COMMERCIAL SHEET VINYL	Seamless with integral base
BASE FINISHES		
B1	CARPET BASE	4" accent solid color
B2	RUBBER COVERED BASE	4" covered base w/ integral molded corner pieces
B3	CERAMIC TILE COVERED BASE	4" high covered
B4	INTEGRAL SHEET VINYL	Integral with commercial sheet vinyl
B5	NO BASE REQUIRED	Mechanical rooms and building storage areas
WALL FINISHES		
W1	PAINTED GYPSUM BOARD	Use multiple colors and accent colors in corridors, cluster lounge common areas and living spaces – with light texture finish
W2	CERAMIC WAINSCOT	A variety of sizes of ceramic tile wainscot to 48" high w/ painted gypsum board above.
W3	LAMINATE WAINSCOT	Plastic laminate glued to wall at wet areas such as kitchenette and laundry room, and vending areas to 48" high w/ painted gypsum board painted above.
W4	FIBERGLASS REINFORCED PANEL (FRP)	FRP panel at wet areas of janitor mop sink.
W5	GYPSUM BOARD TAPED ONLY	Mechanical rooms and building storage areas.
CEILING FINISHES		
C1	PAINTED GYPSUM BOARD	Light texture
C2	2' X 2' LAY-IN ACOUSTICAL CEILING TILE	Tegular edge in corridors and public common areas.
C3	2' X 4' LAY-IN ACOUSTICAL CEILING TILE	Flush edge fissured tile
C4	GYPSUM BOARD – TAPED ONLY	Taped only at mechanical and maintenance storage areas.

OUTLINE SPECIFICATIONS

Note: Designers to refer to SUU design guidelines for standards. Unless noted otherwise, the University Design Standards will govern.

SPEC SECTION	MATERIAL	LOCATION	REMARKS
02080	Piped Utilities	Site	2-pipe high-pressure steam system from SSU Library across the street to the north is already on site and feeding the Eccles LLC. This scope is to tap into these lines and connect to the new buildings at the Manzanita Site. See Mechanical.
02230	Site Clearing	Site	The site essentially is the area surrounding the existing Manzanita Court buildings. There are three (3) 3-story buildings that will be demolished and cleared from site completely. The scope includes efforts to keep existing sidewalks, parking lots and mature trees from damage during demolition and to maintain these existing features for the duration of the project.
02300	Earthwork	Site	Excavation for trenching of utility lines as well as footings and foundations for new buildings is included in this scope. NOTE: The existing soils are collapsible soils. Previous soils reports have indicated the need to keep water away from all excavations and to have no slab-on-grade structures. Helical piers or other deep foundation support systems will be required.
02510	Water Distribution	Site	Water utility is on site serving the Eccles LLC and Manzanita. New water lines stubbed off of the existing service will be required and extended to the new buildings.
02530	Sanitary Sewerage	Site	Sanitary sewer lines existing on site. New sewer lines stubbed off of the existing service will be required and extended to the new buildings.
02551	Hydronic Distribution	Site	On site – stub to new buildings for a full and complete distribution system.
02553	Natural Gas Distribution	Site	On site – stub to new buildings for a full and complete distribution system.
02555	Steam Distribution	Site	On site servicing the Eccles LLC. Tap into lines and finish 2-pipe steam system to new buildings for a full and complete distribution system.
02620	Subdrainage	Site	The site requires a drainage system around the perimeter of the new buildings for dewatering – per the soils report requirements.
02630	Storm Drainage	Site	Existing storm drainage exists within the parking lots surrounding the site. Provide storm boxes and distribution around building and connect to existing systems.
02741	Hot-mix Asphalt Paving	Site	Existing parking lots to remain. Patch and repair asphalt paving as required. If new parking lots are designed, new pavement to be installed with pavement profiles per soils report recommendations with minimum 3" thick asphalt paving on 6" road base or as indicated by the geotechnical report.
02751	Cement Concrete Pavement	Site	New sidewalks around new buildings to tie into surrounding site, buildings, and parking. Sidewalks to meet ADA requirements of barrier-free accessibility. All exterior concrete shall include fiber mesh at the rate of

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			1.5 lbs per cubic yard.
02800	Site Accessories	Site	Benches, trash receptacles, decorative landscape lighting, etc. at new buildings to match existing site accessories. Assume two (2) site benches and (2) trash receptacles per building.
02810	Irrigation Systems	Site	All new landscaping around new construction to blend with existing and install irrigation system throughout.
02920	Lawns and Grasses	Site	Grass areas around building similar to Eccles LLC landscaping for fully landscaped site. Sod areas to be used in the quad / recreational green spaces. Xeriscape drought-tolerant grasses and shrubs are encouraged for water preservation and matching native plant materials around building edges and entrances.
02930	Exterior Plants	Site	Plants and shrubs required around building perimeter with accented entryways to building with perennials and annual flower beds and shrubbery. Continuous concrete curb edging between shrubs and lawn areas is preferred.
02950	Restoration	Site	Maintain and keep all mature trees in place where at all possible and restore landscaping around these areas, particularly the conifer trees at the southwest corner of the site. Picnic areas within the trees to be enhanced as an amenity.
03300	Cast-in-place Concrete	Building Foundations	Foundation system in conjunction with deep foundation support systems dictated by the soils report. The exact design to be determined by designers. All foundation systems are acceptable but must show adherence to soils report requirements.
03400	Pre-cast Concrete	Exterior window sills and headers	May use pre-cast window sills and headers at all exterior windows.
03532	Gypsum Cement Underlayment	Topping Slab	May use light-weight concrete or gypcrete topping slab over plywood decking at all floor systems.
04810	Unit Masonry	Exterior building veneer	May use structural brick and brick veneer systems matching color scheme of surrounding buildings for a full-height brick exterior finish all sides of the building. NOTE: DO NOT use stucco systems on exterior as was done at Eccles LLC. Detailing and design of brick systems to help achieve a "collegiate" feel to the campus.
05500	Metal Fabrications	Structural steel / misc. steel and metal	Structural steel beams and columns as dictated by the building design. Metal steel angles and misc. steel members as required by the design.
05510	Metal stud framing	Interior non-bearing wall systems	It is strongly encouraged that All interior non-bearing walls to be light gage metal stud framing – typical throughout. NOTE: As a betterment, structural metal stud framing throughout is desired.
05521	Pipe and Tube Railings	Stair and other railing systems	All stairs and other railings required in the design to be steel pipe and tube railings with factory finish powder coat painted finishes. When railings are embedded in sidewalk concrete, an 8" stainless steel post extension shall be welded to the leg of the railing to be imbedded (SUU design standard ARCH-17).
06100	Rough Carpentry	Building framing systems	May use Type-V one-hour construction for the basis of design for the framing system. May use wood framing walls, floor systems, and roof truss systems. WALLS: Exterior walls and interior bearing walls and shear walls encouraged to be 2x6 wood construction with 7/16" (minimum) OSB exterior sheathing. FLOORS: Floors encouraged to be open-web wood floor joists accommodating mechanical and electrical

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			<p>systems without the need for furred-down ceilings. Floor trusses to span from exterior walls to central corridor walls such that no walls within the units are bearing. May use ¾" (minimum) OSB or plywood floor decking systems.</p> <p>ROOFS: Roof may be framed with pre-engineered pre-fabricated wood trusses with 5/8" (minimum) OSB or exterior rated plywood roof decking. Bearing to outside walls and corridor walls to keep interior walls non-bearing is encouraged.</p>
06165	Sheathing	Building framing systems	Exterior rated plywood decking and sheathing or OSB decking and sheathing equivalents at bearing wall, shear wall, and decking conditions as dictated by the structural design.
06174	Wood "I" Joists	Building Framing Systems	Pre-engineered wood "I" joists may be used in floor and roof assemblies as dictated by the design.
06185	Structural Glued-Laminated Timber	Building Framing Systems	Glu-laminated beams may be used for structural floor and roof bearing systems as dictated by the design.
06190	Pre-Fabricated Wood Trusses	Building Framing Systems	Pre-fabricated, pre-engineered wood truss systems may be used at floor and roof framing as dictated by the design. Provide fire rating assemblies as required by code.
06200	Finish Carpentry	Wood trim and millwork	Finish carpentry may include wood trim and moldings, millwork and cabinetry at kitchens, bathroom vanities, shelving and rods for storage, and other misc. detailing, trim work, chair rails, crown molding, etc. as dictated by the design. May use full plywood cabinets with wood veneer finish. May use plastic laminate countertops at vanities and plastic laminate countertops at kitchens. Interior shelving to be plywood shelving with wood veneer or melamine laminated finish. Shelving edges may be finished with ¼" hardwood strip glued to the shelf exposed edge.
07131	Waterproofing	Exterior Building Systems	Bituminous exterior waterproofing or other approved waterproofing systems are required at building perimeter to assure water is shed away from foundation systems, as dictated by design solution.
07210	Building Insulation	Insulation Systems	<p>Building to be insulated for maximum energy efficiency meeting or exceeding building code and energy code requirements, and for sound attenuation requirements as noted below:</p> <p>EXTERIOR WALLS: May use minimum R-19 fiberglass batt insulation.</p> <p>ROOF: May use minimum R-38 fiberglass or blown-in insulation at bottom chord of roof trusses.</p> <p>INTERIOR WALLS: May use R-15 or required sound insulation between sleeping rooms and at corridors adjacent to housing units to maintain an STC rating of 54 or greater.</p> <p>FLOORS: May use sound insulation between housing units to maintain an STC rating of 60 or greater.</p> <p>CRAWL SPACE: May use R-38 fiberglass batt insulation between floor trusses w/ vapor barrier if crawl spaces are determined to be part of the final design. NOTE: Crawl spaces are NOT mandatory.</p>
07270	Firestopping	Fire Stopping Systems	May use firestopping at all penetrations of floors and walls to maintain one-hour and two-hour fire rated assemblies as dictated by code. Provide manufacturer or UL listing for each assembly.
07311	Asphalt Shingles	Roofing Systems	May use architectural-grade 50-year or better asphalt shingles on felt roofing paper. Shingles to be rated for 90 mph wind rating. Use ELK Brand or approved

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			equal. NOTE: Pitched roofs are NOT mandatory and other roofing membrane systems that are appropriate for flat roofs are acceptable per final design requirements.
07460	Aluminum Soffit and Fascia	Soffit and Fascia Systems	May use aluminum fascia, drip edge and continuously vented soffits at all fascias and soffits of roof systems.
07600	Flashing and Sheet Metal	Flashing systems	May use metal flashing and sheet metal at flashing conditions of roofs and exterior wall systems as required by design solution.
07920	Joint Sealants	Sealants	May use joint sealants and caulking for water-tight building exterior and as required by design solution. Sealants to be silicone with a 50-year rating.
08110	Hollow Metal Work	Door systems	Hollow-metal frames at all door systems are desired.
08211	Flush Wood Doors	Door Systems	Flush, solid-core wood doors throughout interior of building– stained finish or as dictated by design solution – are desired.
08311	Access Doors	Door Systems	Metal access doors and panels as required. Meet fire-rating assembly requirements.
08411	Aluminum Storefronts	Door and Window Systems	May use aluminum storefront glazed door and window systems at entries to buildings, cluster lounges and open public spaces of the building as required by the design solution.
08620	PVC Windows	Window Systems	May use single-hung PVC windows in bedroom and living spaces. Provide flashing and flanges as required by manufacturer. Windows to have stops. Standard screens to be supplied for operable windows. Windows to be energy efficient with low-E glass and double-pane insulated glazing.
08710	Finish hardware	Door Systems	Finish hardware to be commercial grade. Keyed doors to be provided at all building entry doors, unit doors, individual bedroom doors, laundry rooms, housekeeping rooms, maintenance rooms and bike storage rooms with locks to have electronic key system. Provide accessible automatic door system at main entrance of each building.
08800	Glass and Glazing	Window Systems	Glass and glazing to be low-E double-pane insulated glass with energy efficiency requirements of the energy code compliance. Tempered and safety glass to be provided as dictated by the design solution.
09250	Gypsum Board Assemblies	Wall and Ceiling assemblies	Walls and ceilings to meet Type V – one-hour construction code requirements. Use 5/8" type "X" rated gypsum board throughout. Ceiling heights shall be a minimum of 9'-0" throughout at primary spaces as noted in the individual space information tabulations, including throughout all living spaces and corridors. No furred down areas are permissible. Coffered ceilings and vaulted spaces desired at common areas, building entries, lobbies etc. Provide UL listings or other approved fire rated assemblies. Install gypsum board on resilient clips and hangers and sound attenuation isolators to maintain minimum STC ratings of walls and ceilings as required by STC rating design.
09300	Ceramic Tile	Interior Finishes	May use ceramic tile at all unit bathrooms. May use ceramic or porcelain tile at building lobbies and entryways.
09511	Acoustical Panel Ceilings	Interior Finishes	May use lay-in acoustical ceiling tile in common corridors and common areas such as cluster lounges. Accent with coffered sheet rock ceiling elements to break up monotony of long corridor elements of lay-in grid systems. May use a variety of grid sizes in cluster lounges and building entries. Suspend from structure

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			above with seismic bracing as required by code.
09660	Resilient Tile flooring, wall base, and corner gaurds	Interior Finishes	May use commercial grade vinyl tile or sheet vinyl floor covering at housekeeping, secondary entrances, maintenance rooms, storage rooms, laundry rooms, and other auxillary spaces. In these areas where vinyl is applied, use integral coved base at sheet goods or vinyl base. At all corridor outside corners use vinyl heavy-duty corner guards extending up 4 feet minimum. Use sheet vinyl floor covering at common kitchens and vanity wet areas within the units.
09681	Carpet Tile	Interior Finishes	Use carpet tile in all unit living rooms, bedrooms, bedroom closets, hallways. Use carpet tile in all corridors, cluster lounges, stairways etc. Use carpet base accent color at all carpeted areas (not rubber base). Stair nosings to be extruded aluminum. NOTE: Carpet rolled goods are not desired.
09900	Painting	Interior Finishes	Unless noted otherwise, all interior walls to be painted. In bedroom spaces assume one (1) color throughout. In corridors and public spaces such as cluster lounges assume a variety of colors for major accent walls and articulation of corridor spaces.
10400	Building Signs	Interior Finishes	Each unit door, maintenance door, laundry, housekeeping, electrical, mechanical, stairway, egress signage etc. shall be provided meeting university standards and requirements.
10520	Fire Extinguishers	Fire Extinguishers	Provide semi-recessed fire extinguisher cabinets and fire extinguishers as required by fire code.
10550	Mailboxes	Mailboxes	Mailboxes to be reconfigured as required by the University. Manzanita boxes are located at the Eccles LLC. The new units will be reconfigured in the same facility with new boxes as required.
10800	Toilet Accessories	Interior Finishes	Provide toilet paper dispenser, grab bars, towel racks, shower curtain rods, robe hooks and other toilet room accessories.
11900	Appliances	Appliances	Appliances in each common area kitchen to include: full-height refrigerator, range/ cooktop, surface-mounted microwave, dishwasher, but NO disposal. Laundry room facilities will be provided by others (not in this scope).
12500	Window Coverings	Interior Finishes	May use vinyl mini-blind window coverings at all unit windows of bedrooms and living spaces.
13200	Fireplace	Interior Finishes	Fireplaces are not required, but may be used as a focal point in cluster lounge gathering areas.
13916	Fire Sprinkler System	Fire Sprinkler System	The buildings will be protected with a fire sprinkler wet-pipe suppression system with associated fire alarm meeting fire code requirements for the building type of construction. System to be design-build by certified fire engineer and to be pre-approved by State Fire Marshal. Fire sprinkler heads shall be FULLY RECESSED throughout – no exceptions!
14240	Hydraulic Elevators	Elevators	All floors shall be served by elevators throughout for a fully accessible building. This dictates that all spaces throughout shall meet Fair Housing requirements and code requirements for a fully accessible building. Assume one (1) elevator per building minimum, with two (2) desired by SUU. NOTE: If one building with wings is combined with a common core element, then two (2) elevators shall be required at this common core element.

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15000	Mechanical Systems	Mechanical	Use high pressure steam provided by SUU existing pipe distribution system already located on site with a chiller for cooling system and domestic hot water distribution with boiler – all at University standard meeting all code and SUU requirements. See mechanical narrative.
16000	Electrical Systems	Electrical	See electrical narrative. NOTE: because of the desire for interior non-bearing walls to be of metal stud construction, it is strongly desired by SUU that romex wiring NOT be used on this project, but to use MC cable instead.
	Fire Alarm Systems	Electrical	Fire alarm systems shall match the Simplex alarm panel system recently installed on campus and at Manzanita Court. No new central alarm panel for the new buildings will be required.