

Architectural Program

Kansas State University

Department of Housing and Dining Services

New Residence Hall and Dining Center



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Introduction

1.1 Executive Summary

This Architectural Program for the *Department of Housing and Dining Services New Residence Hall and Dining Center* is intended to convert the on-campus housing needs of the university into architectural space needs. The purpose of this document is to guide the architect selected in the development of designs for a new residence hall, dining center, and existing facility improvements for Goodnow Hall and Marlatt Hall.

This program was developed and edited in a series of meetings with the Department of Housing and Dining Services and Campus Planning and Facilities Management staff of Kansas State University during the winter of 2013. In addition to information provided by the university and staff, the program also includes information drawn from the Housing and Dining Services Master Plan developed by Ayers Saint Gross and from the author's experience as an architect consultant.

The program includes an introduction, description of the scope of work, space projections, project budget, project schedule, funding source, proposed massing plan, and design considerations. Supporting information is provided in an Appendix and includes space summaries and descriptions, definitions, diagrams, and site evaluations. In its entirety, this document is designed to provide a space needs analysis that can be measured to evaluate the suitability of new construction and of expansion and remodeling.

After reviewing the Kansas State University 2025 Visionary Plan and Housing and Dining Services Master Plan documents, the Department of Housing and Dining Services has decided to increase the amount of on-campus housing at the university.

Enrollment growth and demand for on-campus housing at Kansas State University are key factors driving the need for additional housing and dining space. Current student housing is at capacity. Ayres Saint Gross has conducted master planning services for the university. That study has identified significant deficits within the number of on-campus student rooms which should be provided. A November 2012 Market Research and Demand Projections Report established a current need for 450 additional beds for on-campus underclassmen. Future projections through 2025 estimate demand for 1,163 residents beyond current housing capacity. The increase in demand for student rooms directly impacts the serving capacity of existing dining centers. Dining centers lack the space to adequately serve the projected resident population.

The Kramer Complex, which currently includes two residence halls and one dining center, needs to expand to meet both current and future resident needs. The following is recommended due to the Housing and Dining Services Master Plan assessment:

- New residence hall that accommodates 450 students in 2-bed student rooms,
- New dining center to serve 1,850 patrons,
- Goodnow Hall and Marlatt Hall facility improvements.

These recommendations were confirmed through an analysis and input process involving Kansas State University, Department of Housing and Dining Services, and students. The following methods were used:

- An analysis of enrollment and housing trends,
- Analysis of student survey data,

- Work sessions and student focus groups,
- Analysis of comparison institutions,
- And a review of local off-campus rental opportunities for students.

Guiding principles in the design of the new work should explore how to create a centralized dining, retail, and academic core within the entire complex. Convenient access to the dining center from the two existing and new residence halls is important. The department envisions spaces that will encourage active student life experience and a residence hall environment that provides planned and spontaneous community events at the room, floor, and building level. The buildings must be efficient, utilizing flexible space to meet the informational, educational, and cultural needs of students well into the twenty-first century.

A total project cost of \$70,000,000 has been established. Schedule and Phasing of the Work is envisioned as follows:

<u>Phase</u>	<u>End Date</u>
Programming	April 2013
Architect/Engineer Selection	May 2013
Design Documents	November 2013
Construction of New Facilities	December 2014
Renovation of Existing Facilities	August 2016
Final Occupancy	August 2016

1.2 Project Overview and Objectives

Kansas State University is committed to being ranked in the top 50 research institutions in the nation through expanding its strong undergraduate programs, graduate offerings, research programs, and enrollment. The residential program is, therefore, a partner in that growth. This work for programming and space needs assessment is the initial stage of the Housing and Dining Services effort to respond to University Master Planning objectives. Together with the Housing and Dining Services Management Team, and the Campus Planning and Facilities Management Group, BG Architecture a division of BG Consultants developed this program with written description of key considerations, numeric and written space program, conceptual expansion diagrams, cost estimate and supporting data.

This program is an evolution of a master planning and programming effort by Ayers Saint Gross, Ricca Newmark/Envision, and MGT of America, Inc. to assist in the development of a Housing and Dining Services Master Plan. The objective of the team was to establish demand for student housing.

Estimated growth of enrollment is projected to be one percent per year for each class through 2025. Assuming current enrollment projections and a housing participation rate of 25 percent of the total enrollment at Kansas State University, the demand for on-campus housing will grow to 6,632 residents by 2025. Current design capacity is 5,469 residents, an increase of 1,163. It is the recommendation of Ayers Saint Gross, Ricca Newmark/Envision and MGT that a new facility for freshmen and sophomores be constructed. This will be the initial step for underclassmen on-campus living which will reduce the use of overflow and leased spaces, thus shifting the population in the Jardine Apartments to upperclassmen.

In February 2013, Kansas State University engaged BG Architecture a division of BG Consultants and Orazem and Scalora Engineering PA to compile and finalize the programming for a new residence hall, dining center, and renovation of existing Marlatt and Goodnow Halls.

This report includes a description of the need for a new residence hall, new dining center, and existing residence hall renovations. It also includes the architectural program spaces, numeric program, allocated budget, and facility design criteria.

1.3 Current Conditions and Pressing Demand

The Department of Housing and Dining Services operates:

- Nine residence halls,
- Two scholarship houses,
- Thirty-seven apartment buildings,
- One community center,
- Four dining centers,
- One restaurant and coffee shop,
- Five retail stores,
- One retail bakery,
- One central food and supply warehouse,
- One technology center,
- Two academic resource centers,
- One maintenance shop,
- One central administrative building.

The department has over 1.7 million gross square feet of cumulative building area and operates 12 months a year. They employ 300 classified and unclassified employees and 750 student employees in the following functional units: dining services, facilities management, resident life, apartment living, and administrative services which includes information technology, summer conferences and, marketing.

The department provides on-campus living accommodations for 3,800 residence hall students and 1,350 apartment occupants. These on-campus residents are a mix of undergraduate, graduate, married students, and families.

The west housing complex facilities, known as the Kramer Complex, include the Kramer Dining Center, Marlatt Hall, and Goodnow Hall. Kramer is 39,097 square feet and was built in 1960. It had limited renovations on the first floor in 2000. This work was restricted to the academic center, marketing office and the convenience store on the first floor. Marlatt Hall was built in 1964 and consists of approximately 124,872 square feet with 599 residents. Goodnow Hall, approximately 124,872 square feet with 606 residents, was constructed in 1960. Both Marlatt and Goodnow Halls have had minor updates, however, both facilities are aging and are in need of upgraded fire systems, infrastructure and other improvements to meet the needs of current and incoming students.

Increasing enrollment over the last 10 years has led to an increased need for on-campus housing. At this point in time, the number of students requesting on-campus housing exceeds the number of beds available. The demand is great enough, that the department is renting an apartment complex to help meet the students' housing demands.

In addition to the lack of bed space, the Kramer Dining Center has become antiquated in regards to the dining and food service needs. Current capacity is barely adequate for Goodnow and Marlatt Halls. As a result, adding a third residence hall to the complex requires providing a new facility capable of meeting current, proposed, and future dining and food service demand.

The residence halls don't have the capacity to house the current demand. The addition of 450 beds will help fill the current demand for underclassmen housing. Additionally, support for the increased resident beds will necessitate an increase in dining center food service capacity.

1.4 Site Map

The Housing and Dining Services Kramer Complex is located on the west edge of the campus on the corner of Claffin Road and Denison Avenue. Located at a prominent intersection on campus, the complex is highly visible as an entrance to the university. The final design should relate to both the existing complex and the core campus. Additional considerations should be given to storm water drainage, utilities, pedestrian circulation, vehicular circulation, parking, landscaping, play areas, lighting, and public safety.

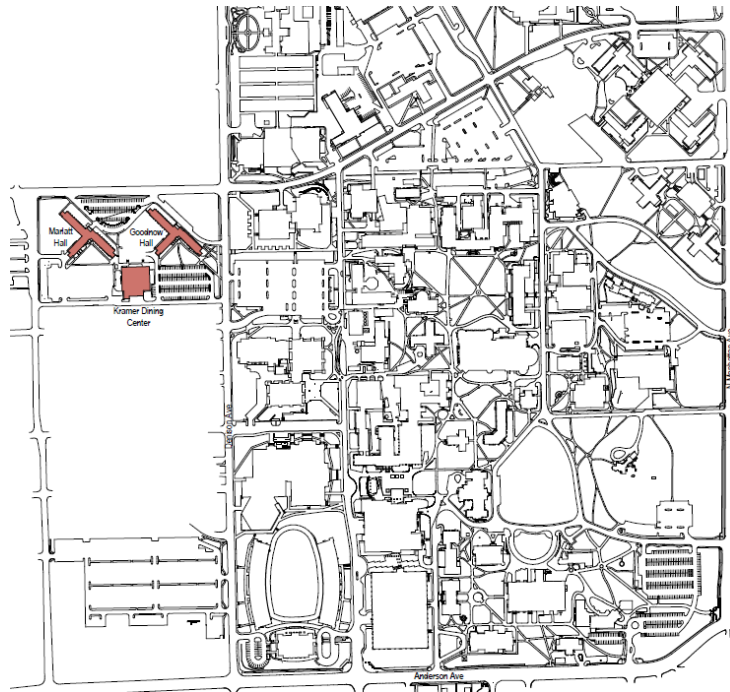


Figure 1 – Site Context Map

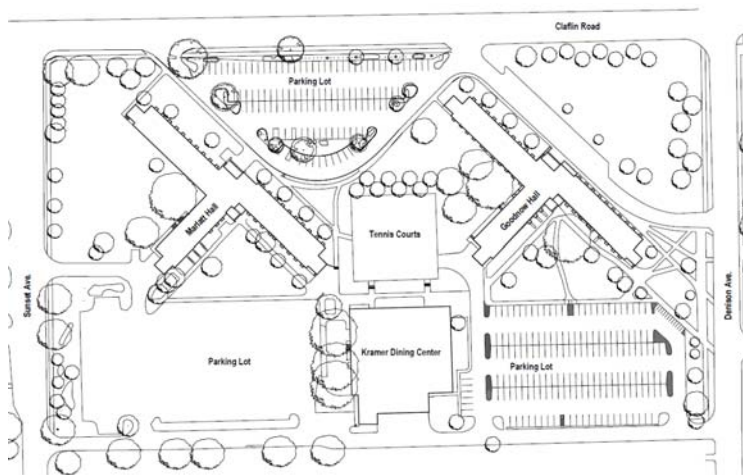


Figure 2 – Existing Kramer Complex

Considerations

2.1 Principle Considerations

Kansas State University's Department of Housing and Dining Services accommodates demand for on-campus living as an integral part of a students' academic and social life. These students contribute to the vitality of university life. The new facilities for residential living can be designed to meet enrollment demands while promoting strong retention of existing students. The descriptions for these residential living facilities are as follows:

Dining Center

A new 57,996 square foot Dining Center Facility will be constructed to serve 1,850 patrons. The dining services portion of the existing Kramer building (approximately 20,000 square feet) will continue to serve 1,200 residents while the construction of the new facility takes place. It will be necessary to use the existing kitchen until the kitchen in the new construction is operational. The existing Kramer Dining Center building will remain. Current classroom, marketing, and resource center areas will remain in the existing dining center. It will no longer be used for dining or as a kitchen. These vacated areas will be remodeled and repurposed at a future date and are not part of this project. A phasing plan to identify a strategy for continuing foodservice throughout the project will be necessary.

This facility is envisioned as the social and hospitality core of the complex. Well considered designs will respond to resident hall adjacencies, indoor pedestrian circulation opportunities, and quality of space. Concept development to strengthen an award winning, dining services program is required. Plans should account for flexibility with service platforms so that changes in demand can be accommodated and still integrate with the kitchen. This flexible design should also address the flow of food preparation and the interaction of patrons within the dining experience. Careful consideration should explore the transition between public space, servery, and support areas.

The diversity of students at Kansas State University requires facilities that adapt to their dining needs and choices. All-you-care-to-eat, retail, and grab-n-go choices will be offered to the students. The objective is to develop a dining venue that provides innovative concepts, with dining environments designed to provide flexibility in accommodating future trends.

The following programmed spaces create the core of the Dining Center:

- Production Kitchen,
- Production Bakery,
- Dish Room,
- Dock,
- Storage,
- Laundry,
- Offices,
- Dining Room,
- Production Platform Areas with concepts, such as: Grab-n-Go Express; American Classics; South/Central American; Global Table (Pan Asian/Med); Broiler – BBQ; Hearth Pizza/Pasta; Bread Board Deli; Soup/Salads and Compose; Display/Teaching,
- Other spaces include a central convenience store, meeting spaces, and a mail room.

As part of a multi-facility complex, the dining center should be centralized for convenient access from all resident halls. All dining services and retail areas should be on a single floor; preferably at grade level. It

is anticipated that in the future one additional residence hall may be constructed. Site placement of the dining center is to address connectivity and adjacency opportunities with a future residence hall.

Residence Hall

A new 129,036 square foot Residence Hall will be constructed to serve 450 residents not including a Faculty-in-Residence apartment, Residence Life Coordinator apartment, and Assistant Residence Life Coordinator apartment. It is anticipated that this facility will not exceed six stories above grade. Particular attention will be given to the scale and massing of the building and its relationship with the new and existing structures. Placement and orientation of the residence hall should be sensitive to its context within the complex and the campus as a whole.

The residence hall is intended primarily for freshman students with a light mix of upper classman. The building program hierarchy is organized into six levels of community. From smallest to largest they are: Cluster Community, Pod Community, RA Community, Floor Community, Building Community, and Complex Community. Space organization should anticipate an RA Community of 44 residents and 1 Resident Advisor. The student rooms will be organized into Cluster Communities of 10 and 12 residents in 2-bed units that share restrooms. Each Cluster will be paired with another creating a Pod Community of 22 residents around a small lounge space. Therefore, two pods will comprise an RA Community totaling 45 residents. The total number of RA Communities is anticipated to be 10. Each RA Community is expected to provide area dedicated to study. Multiple RA Communities will comprise a Floor Community that will include a floor lounge for larger gatherings. The Building Community includes lounges, space for recreation, laundry areas, front desk, and support areas. At every community level the design should promote social interaction from the spontaneous to the planned. Create environments that encourage students to meet each other and get out of their rooms to socialize.

Marlatt and Goodnow Improvements

The continual need for modernization is an important aspect to maintaining the life span, safety, and environmental comfort of existing facilities. Primary improvements to Marlatt and Goodnow Halls will include: HVAC (convectors at Marlatt, Convectors and piping at Goodnow), sprinklers, lighting, ceilings, plumbing, fire alarm, selective door replacement, selective floor replacement, re-roof of Goodnow Hall and ADA improvements at entry areas and interior spaces as validated during on-site investigations. Recent facility elevator upgrades at both buildings have included new elevator car controls. However, the successful architect and engineer should address existing non-compliance of the elevator cabs in both buildings. Assessment for accessibility will include restroom improvements to meet ADA requirements in accordance with housing requirements at a place of education. When complete each building is required to meet ADA and building code requirements.

Utilities

The Kansas State University Central Power Plant produces chilled water and steam. This plant currently provides utility service to the Kramer Housing Complex which includes Marlatt Hall, Goodnow Hall and the Kramer Dining Center. It is anticipated that the heating and cooling source for the new Residence Hall and new Dining Center will be provided by the Central Power Plant.

Complex Connectivity

Design solutions should include indoor connection between the Dining Center and the surrounding residence halls. Current access to Kramer Dining Center requires patrons to travel outdoors from resident halls into the facility. Design solutions should explore opportunities to create enclosed and conditioned walkways between buildings. It is desirable that such walkways not restrict pedestrian or bicycle traffic at the grade level.

Site Considerations

Careful site planning of buildings is critical. The dining hall should be easily accessible to all existing, new and future resident hall locations. The existing Kramer Dining Center rests south of and between Marlatt Hall and Goodnow Hall. Parking lots currently are to the east and west of the existing Dining Center. A tennis court lies north of the Dining Center and may be utilized for construction. The east parking lot area has been envisioned as the ideal site for the new residence hall and dining center.

Exterior green space and courtyards are important to the interaction of residents. A variety of these spaces should be created and where they exist they should be maintained if possible. Building massing should create multiple outdoor spaces that minimize the bulk of the buildings. Create larger open spaces for socializing and informal recreation. Where courtyards are incorporated, they should include a combination of outdoor seating, pedestrian walkways and landscaping.

Student housing should connect easily to the academic core by means of bicycles, pedestrian paths, and shuttle lines. The primary pedestrian circulation path from the campus to the project site crosses Denison Avenue, creating a potentially dangerous situation. The design of this primary path should address the safety of pedestrians across Denison Avenue. Kansas State University is a bicycle friendly campus. The number of bicycle racks should equal a 1:2 to 1:5 ratio of the number of beds in each residence. Anticipate locating bicycle racks dispersed appropriately near entry areas without disrupting pedestrian movement or creating an eyesore. Demographically, many of the residents within the existing residence housing complex are pursuing degrees in Engineering or Architecture. The new building design should address and respond to this demographic.

There are currently four parking lots on site. Evaluate the impact of parking area lost due to new construction. Where possible, provide new resident parking. Housing and Dining Services provides bussing for its residents between the dining centers, therefore design solutions should incorporate bus access on site including a covered bus stop. Additional consideration must be made for service and food delivery to the dining center. Options should explore whether the existing southeast driveway connection to Denison Avenue should be maintained.

Site considerations will account for drainage, new and existing utilities, as well as pedestrian and vehicular circulation. Landscaping beyond finish grading and seeding is separate from this scope of work. It is anticipated that site landscaping will be performed when the finish grade is completed around the Dining Center and Residence Hall.

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Program Space

The following spaces are to be integrated into the design of the new facility and in light of the design considerations established in this document. Spaces dedicated to each use will be indicated as follows: Dining Center (DC) and Residence Hall (RH). All other spaces not otherwise indicated are intended for general Housing and Dining Services use and assignment.

The proposed additions to the residence housing complex will be composed of the following spaces:

3.1 Numeric Program

	Qty	Capacity	SF per space	TOTAL NASF	SF per occupant	Gross Factor	TOTAL GSF	TOTALS
DINING CENTER ALLOCATED SPACE								
DINING (DC)								19,680
Dining Rooms [630]	-	875	-	13,120	15	1.5	19,680	
FRONT OF HOUSE SUPPORT (DC)								2,310
Janitor's Closet [635]	1	-	40	40	300	1.5	60	
Furniture Storage [635]	1	2	600	600	300	1.5	900	
Public Restroom, Men's [X03]	1	-	450	450	-	1.5	675	
Public Restroom, Women's [X03]	1	-	450	450	-	1.5	675	
SERVERY (DC)								9,518
Platform #1 Classics [630]	1	-	500	500	-	1.5	750	
Platform #2 Grille/Broiler [630]	1	-	500	500	-	1.5	750	
Platform #3 Hearthstone [630]	1	-	375	375	-	1.5	562	
Platform #4 Global Cuisine [630]	1	-	425	425	-	1.5	638	
Platform #5 Carvery/Deli [630]	1	-	480	480	-	1.5	720	
Platform #6 Salad/Soup Bar [630]	1	-	480	480	-	1.5	720	
Platform #7 Bakery/Dessert [630]	1	-	225	225	-	1.5	338	
Platform #8 Beverage [630]	1	-	120	120	-	1.5	180	
Platform #9 Beverage [630]	1	-	120	120	-	1.5	180	
Platform #10 Other Self-Serve Bar [630]	1	-	120	120	-	1.5	180	
Queuing and General Circulation [630]	-	200	3,000	3,000	15	1.5	4,500	

Architectural Program | New Residence Hall and Dining Center

	Qty	Capacity	SF per space	TOTAL NASF	SF per occupant	Gross Factor	TOTAL GSF	TOTALS
DEMONSTRATION/TEACHING (DC)								2,250
Demonstration/Teaching Kitchen [550]	1	30-40	1,500	1,500	50	1.5	2,250	
RETAIL (DC)								4,500
Convenience Store/Emporium [660]	1	-	3,000	3,000	-	1.5	4,500	
FOOD AND SUPPLIES STORAGE (DC)								5,580
Receiving/Ice/Soda Rack [635]	1	1	240	240	200	1.5	360	
Ambient Food Storage and Small Equipment [635]	1	11	2,100	2,100	200	1.5	3,150	
Walk-in Refrigeration [635]	1	5	900	900	200	1.5	1,350	
Walk-in Freezer [635]	1	2	480	480	200	1.5	720	
Alcohol [635]								<i>Ancillary space included Ambient Food Storage NASF</i>
Paper [635]								<i>Ancillary space included in Ambient Food Storage NASF</i>
Uniforms and/or Linen [635]								<i>Ancillary space included with Laundry NASF</i>
PRODUCTION (DC)								5,715
Cold Production [635]	1	7	1,300	1,300	200	1.5	1,950	
Hot Production [635]	1	8	1,500	1,500	200	1.5	2,250	
Cart Marshalling [635]	1	3	500	500	200	1.5	750	
Potwashing (if in kitchen) [635]								<i>Ancillary space included in Dishroom NASF</i>
Production Offices								
Assistants/Flex Work Stations [310]	1	4	350	350	100	1.5	525	
Student Employee Manager [310]	1	2	160	160	100	1.5	240	
INGREDIENT ROOM & TEST KITCHEN (DC)								1,950
Ingredient Measuring & Assembly [635]	1	2	300	300	200	1.5	450	
Test Kitchen [635]	1	2	360	360	200	1.5	540	
Ambient Storage [635]	1	-	50	50	200	1.5	75	
Refrigerated Storage [635]	1	-	50	50	200	1.5	75	
Conference [350]	1	30	540	540	18	1.5	810	

Architectural Program | New Residence Hall and Dining Center

	Qty	Capacity	SF per space	TOTAL NASF	SF per occupant	Gross Factor	TOTAL GSF	TOTALS
PRODUCTION BAKERY (DC)								1,715
Ambient Food Storage [635]	1	1	120	120	200	1.5	180	
Refrigerated Ingredient Storage [635]	1	1	96	96	200	1.5	144	
Frozen Ingredient Storage [635]	1	1	120	120	200	1.5	180	
Mix and Form [635]	1	1	200	200	200	1.5	300	
Baking [635]	1	1	220	220	200	1.5	330	
Cooling/Marshalling [635]	1	1	165	165	200	1.5	248	
Finish Cooler [635]	1	1	96	96	200	1.5	144	
Finish Freezer [635]	1	1	96	96	200	1.5	144	
Work Desk [635]	1	1	30	30	100	1.5	45	
SANITATION (DC)								2,769
Tray Drop & Dishroom (w/Potwashing) [635]	1	7	1,450	1,450	200	1.5	2,175	
Chemical Storage [635]	1	1	80	80	200	1.5	120	
Recycling/Composting/Trash Room [635]	1	1	200	200	200	1.5	300	
Cart Washing [635]	1	1	80	80	200	1.5	120	
Janitor's Closet [635]	1	1	36	36	200	1.5	54	
OFFICES (DC)								900
Reception [310]	1	2	180	180	100	1.5	270	
Manager/Director Office [310]	1	1	120	120	100	1.5	180	
Professional Offices [310]	3	1	100	300	100	1.5	450	
SUPPORT (DC)								1,110
Break Room [635]	<i>Ancillary space included in the Dining Center back of house Total GSF</i>							
Men's Locker [635]	1	2	120	120	50	1.5	180	
Men's Restroom [635]	1	-	120	120	-	1.5	180	
Women's Locker [635]	1	2	120	120	50	1.5	180	
Women's Restroom [635]	1	-	180	180	-	1.5	270	
Laundry [635]	1	-	200	200	-	1.5	300	

Architectural Program | New Residence Hall and Dining Center

	Qty	Capacity	SF per space	TOTAL NASF	SF per occupant	Gross Factor	TOTAL GSF	TOTALS
FACILITY AND MAINTENANCE (DC)	<i>The following areas are ancillary and included in the Total GSF</i>							
Mechanical/Circulation/Misc.								
RESIDENCE HALL ALLOCATED SPACE								
HOUSING COMPLEX (RH)								900
Central Mailroom [935]	1	30	600	600	20	1.5	900	
BUILDING COMMUNITY (RH)								11,303
Main Lobby								
Front Desk [310]	1	2	135	135	100	1.5	203	
Front Desk Storage [315]	1	1	80	80	300	1.5	120	
Office [310]	2	2	110	220	100	1.5	330	
Main Lounge [650]	1	67	1,000	1,000	15	1.5	1,500	
Storage Space [935]	1	4	1,200	1,200	300	1.5	1,800	
Resident Life Program Storage [315]	1	1	100	100	300	1.5	150	
Recreation Room [670]	1	20	300	300	15	1.5	450	
Study Room [410]	6	5	100	600	20	1.5	900	
Laundry [935]	1	7	1,300	1,300	200	1.5	1,950	
Faculty-in-Residence Apartment [950]	1	5	1,000	1,000	200	1.5	1,500	
Living Room [950]	1	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Bedroom [950]	2	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Kitchen [950]	1	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Bathroom [950]	1	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Storage and Closets [950]	<i>Ancillary space included in RLC Apartment Total NASF</i>							
Residence Life Coordinator (RLC) Apartment [950]	1	5	1,000	1,000	200	1.5	1,500	
Living Room [950]	1	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Bedroom [950]	2	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Kitchen [950]	1	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Bathroom [950]	1	<i>Ancillary space included in RLC Apartment Total NASF</i>						
Storage and Closets [950]	<i>Ancillary space included in RLC Apartment Total NASF</i>							
Assistant Residence Life Coordinator (ARLC) Apartment [950]	1	3	600	600	200	1.5	900	
Living Room [950]	1	<i>Ancillary space included in ARLC Apartment Total NASF</i>						

Architectural Program | New Residence Hall and Dining Center

	Qty	Capacity	SF per space	TOTAL NASF	SF per occupant	Gross Factor	TOTAL GSF	TOTALS	
Bedroom [950]	1			<i>Ancillary space included in ARLC Apartment Total NASF</i>					
Kitchen [950]	1			<i>Ancillary space included in ARLC Apartment Total NASF</i>					
Bathroom [950]	1			<i>Ancillary space included in ARLC Apartment Total NASF</i>					
Storage and Closets [950]				<i>Ancillary space included in ARLC Apartment Total NASF</i>					
FLOOR COMMUNITY (RH)								10,500	
Floor Lounge [650]	5	67	1,000	5,000	15	1.5	7,500		
Study Area [410]	10	13	200	2,000	15	1.5	3,000		
Trash Room [X04]				<i>Ancillary space included in the Total GSF</i>					
IT Closet				<i>Ancillary space included in the Total GSF</i>					
RA COMMUNITY (RH)								104,953	
RA Unit w/Bath [920]	10	1	400	4,000	200	1.5	6,000		
Student Room (2 bed) [910]	225	2	230	51,750	115	1.5	77,625		
Shared Bathroom [919]	40	10	260	10,400	26	1.5	18,928		
Breakout Area [680]	20	5	80	1,600	15	1.5	2,400		
FACILITY AND MAINTENANCE (RH)								1,380	
Maintenance Shop/Office [935]	1	2	560	560	300	1.5	840		
Housekeeping Break Room [935]	1	8	120	120	15	1.5	180		
Storage [935]	1	1	240	240	300	1.5	360		
<i>The following areas are ancillary and included in the Total GSF</i>									
IT Head End Room				<i>Provide (1) 25 square foot room. May serve Dining Center and Residence Hall or be stand alone.</i>					
IT Closet (IT) [036]				<i>Provide (1) per floor or per wing</i>					
Power Closet (P)				<i>Provide (1) per floor or per wing</i>					
Custodial Rooms (JC) [021]				<i>Provide a minimum of (1) per floor</i>					
Restrooms (R) [023]				<i>Provide as per Code Requirements</i>					
Elevator (E) [012]				<i>Provide (2) elevators accessible to all floors</i>					
Mechanical/Circulation/Misc.									

	Qty	Capacity	SF per space	TOTAL NASF	SF per occupant	Gross Factor	TOTAL GSF	TOTALS
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Numeric Program Summary

Total Gross Square Footage by Space Allocation for New Construction

Dining Center (DC)							57,996	
Residence Hall (RH)							129,036	
Cumulative New Construction Gross Square Footage								187,032
Total New Construction NASF								122,469
Combined Marlatt Hall and Goodnow Hall GSF								252,278
Total Residence Housing Complex GSF								439,310
Total New Construction Building Efficiency Ratio (Percentage of Net Assignable Building Space or NASF/GSF)								65%
Average Building Efficiency Ratio of this Building Type								53%-68%

3.2 Allocated Budget

The total project costs have been established not to exceed \$70,000,000. The following items reflect anticipated costs based on projected market conditions and current trends in residence hall and dining center design and construction:

Project Costs Summary

Item	Cost
A. Dining Center Construction	\$12,875,112
B. Residence Hall Construction	\$23,871,660
C. Marlatt/Goodnow Hall Renovations	\$7,185,060
D. Building Construction Sub-Total	\$43,931,832
E. Dining Center Furniture, Fixture, and Equipment (FF & E)	\$6,077,454
F. Residence Hall Furniture, Fixture, and Equipment (FF & E)	\$1,125,000
G. FF & E Contingency (20% of E-F)	\$1,440,491
H. Construction Contingency (15% of A-B)	\$5,512,016
I. Construction Contingency (20% of C)	\$1,437,012
J. Total Building Construction Costs	\$59,523,805
K. Site Improvement and Landscaping (4% of D)	\$1,757,273
L. Total Construction Cost	\$61,281,078
M. Fees and Testing (15% of D)	\$6,589,775
N. Total Construction Soft Costs	\$6,589,775
O. Total Project Costs	\$67,870,853
P. 2014 Inflation (3%)	\$69,906,979

3.3 Funding

Housing fees and revenue bonds are the funding sources. The Department of Housing and Dining receives no funding from the State of Kansas, City of Manhattan, or Kansas State University sources. The primary source of revenue for all departmental functions is residence hall and apartment contracts.

3.4 Maintenance

Housing will maintain the buildings through operational fees. Using the KBOR-FY 2007 formula with the FY 2013 revisions, this building will require 13.36 FTE for salaries of \$474,280. The utility rate is figured at \$654,500 (187,000 gross square foot at \$0.57/sf). The total expenses for this building are \$1,235,370.

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Project Schedule

4.1 Schedule and Phasing of the Work

The New Residence Hall and Dining Center project will require continued occupancy of the 1,205 residents assigned to Goodnow and Marlatt Halls throughout standard scheduled periods of occupancy. Renovations to the existing residence halls will need to be evaluated and timed appropriate to availability or staged according to completion of the new residence hall. In addition, dining service operations are required to remain uninterrupted throughout construction. To maintain continuity of dining center operations, it is anticipated that the existing Kramer Dining Center will remain in service until the new dining center can provide dining services.

Anticipated Timeline

<u>Phase</u>	<u>End Date</u>
Programming	April 2013
Architect/Engineer Selection	May 2013
Design Documents	November 2013
Construction of New Facilities	December 2014
Renovation of Existing Facilities	August 2016
Final Occupancy	August 2016

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Facility Design

5.1 Architectural Design

The existing Kramer Complex is reflective of the traditional or archetypal dormitories and dining centers of the 1960's. A successful design will provide modern facilities that address human scale and is sensitive to the character of the existing residence halls while creating its own identity. To strengthen the idea of the campus as a cohesive whole, solutions should address mediating the common palette of materials, colors, and massing of existing residence halls and the adjacent campus buildings.

The new Residence Hall should be designed in units 50-70 feet wide and is anticipated not to exceed 6 stories in height. At seven or eight stories, buildings must meet restrictive high-rise fire code requirements. Designs should meet or exceed minimum STC (Sound Transmission Class) and IIC (Impact Insulation Class) ratings for this building type. Minimum standards may be obtained from the *Guide to Airborne, Impact, and Structure Borne Noise Control in Multifamily Dwellings*, published by the U.S. Department of Housing and Urban Development. Control of noise transmission especially in student rooms should be integral to both horizontal and vertical enclosing assemblies. To create unique and celebrated interior spaces it has been envisioned that the new dining center and residence hall will intersect to create an entirely distinctive space on campus for resident living.

Building Elements Criteria

It is anticipated that any of the following, or a combination of the following, structural building systems will be used: steel-frame and wood-composite construction, concrete or brick masonry units with post tensioned concrete floor slabs, concrete or steel frame with post-tensioned concrete floor slabs. It should be noted that the ideal system will be cost efficient and practical to the needs for clear floor area. Systems that promote the greatest degree of future interior adaptation and flexibility for dining service needs will be given priority. The Residence Hall construction may be of light gauge bearing wall construction with light gauge joists. Minimum floor load capacity will meet applicable building codes.

A minimum of two elevators should be provided. The elevators will have a 5,000 pound capacity, be an electric traction passenger/freight service type elevator, service connection between all floors and entrance level, and be ADA compliant.

Applicable Codes and Regulations

The new construction will meet all applicable codes and standards as currently adopted by OFPM. These include the following:

- International Building Code (IBC),
- International Building Fire Code (IFC),
- International Mechanical Code (IMC),
- International Plumbing Code (IPC),
- International Fuel Gas Code (IFGC),
- International Energy Conservation Code (IECC),
- National Fire Protection Association (NFPA), National Fire Codes and Standards,
- Kansas Fire Prevention Code,
- Americans with Disabilities Act Accessibility Guidelines (ADAAG) and ADA Standards for Accessible Design,

- Kansas Food Code and U.S. Food and Drug Administration (FDA) Food Code,
- Kansas Statutes and Regulations for Office of Facilities and Property Management (OFPM) and Kansas State Fire Marshal (KSFM),
- Kansas State Boiler Code KSA 44-913,
- ANSI / ASME A17.1 Elevator Code.

Other Applicable Codes, Standards and References

- Guide to Airborne, Impact, and Structure Borne Noise Control in Multifamily Dwellings
- Code of Federal Regulations 29 CFR 1910 Occupational Safety and Health Standards,
- State of Kansas, Office of Facilities and Property Management (OFPM) Building Design and Construction Manual,
- Kansas State University Design Guidelines and Standards,
- Department of Housing and Dining Services Design Guidelines and Standards.

Building Code Highlights

General Building Requirements are indicated as follows:

- Occupancy Classifications
 - Group A-2 (Dining Center)
 - Group R-2 (Residence Halls)
- Construction Type
 - Type II or III construction is anticipated.
- Sprinkler Requirements: Required Groups A-2 and R-2.
- Minimum Plumbing Fixture Required based on Use Group Classifications A-2 for the Dining Center and R-2 for the Residence Hall.
- Accessibility
 - An accessible route is required throughout each building except in mechanical spaces.
- Emergency Egress Lighting
 - Emergency lighting is required at one (1) footcandle along the exit path, minimum, extending to the public way.
- Fire Extinguishers
 - Fire Extinguishers are required per Section 906 of the International Fire Code.

5.2 Mechanical and Systems Design

The following is a brief description of the proposed mechanical, electrical, and plumbing systems. This narrative is based on analysis of the program requirements for new construction and existing building renovations.

HVAC Systems

1. Chilled water and steam will be piped through tunnels to each building. Existing piping and tunnels serving Goodnow and Marlatt Hall will remain. Variable speed pumps will circulate chilled water to building loads.
2. Renovation work:
 - A. Goodnow Hall – replace 2-pipe system piping, fan coil units and unit ventilators, toilet exhaust and make-up air systems.
 - B. Marlatt Hall– replace fan coil units and unit ventilators, toilet exhaust and make-up air systems. 2-pipe system piping was replaced in a previous project.
3. The new building areas will be served by four-pipe systems.
4. All new fan coil units and unit ventilators will be scheduled per the Owner's standards.

5. A Johnson Controls Direct Digital Control system will monitor all utility meters and control the operation of all HVAC systems.

Electrical Systems

1. Each building will have a dedicated underground electrical service originating at a pad-mounted transformer provided by Westar Energy. Electrical services for Goodnow and Marlatt Hall will remain; the electrical service for Kramer will be modified or replaced; the new dormitory building will be served by a new electrical service.
2. A natural gas-fueled generator will provide emergency power for life safety systems, elevators and critical loads in all buildings.
3. Renovation work:
 - A. Goodnow Hall - replace fire alarm system and corridor lighting; add emergency power distribution system from the central emergency generator.
 - B. Marlatt Hall - replace fire alarm system and corridor lighting; add emergency power distribution system from the central emergency generator.
4. Electrical distribution equipment including switchboards, step-down transformers and branch panels will be strategically located in each new building. This equipment will be manufactured by Square D per the Owner's standard.
5. Lighting and lighting controls for all new and renovated spaces will be designed in accordance with the International Energy Code. Exit signage and emergency egress lighting will meet the requirements of the International Building Code.

Plumbing Systems

1. New sanitary sewer, storm sewer and water services will be extended to the new buildings from site mains. The plumbing design will meet the requirements of the University standards and the International Plumbing Code.
2. Plumbing fixture manufacturers will be provided per the Owner's standards for each fixture type.

Fire Protection System

1. Renovation work:
 - A. Goodnow Hall – new fire sprinkler service and system to serve entire building.
 - B. Marlatt Hall - new fire sprinkler service and system to serve entire building.
2. Existing standpipes will remain.
3. The fire protection systems will be designed to meet the requirements of NFPA 13 and 14, the University Standards and the City of Manhattan.

5.3 Design Collaboration

This project requires coordination with multiple groups and committees. The design team is expected to meet with representatives from the State of Kansas, Kansas State University, and the Department of Housing and Dining Services. Following is a representative sample of key groups that the design team will work with:

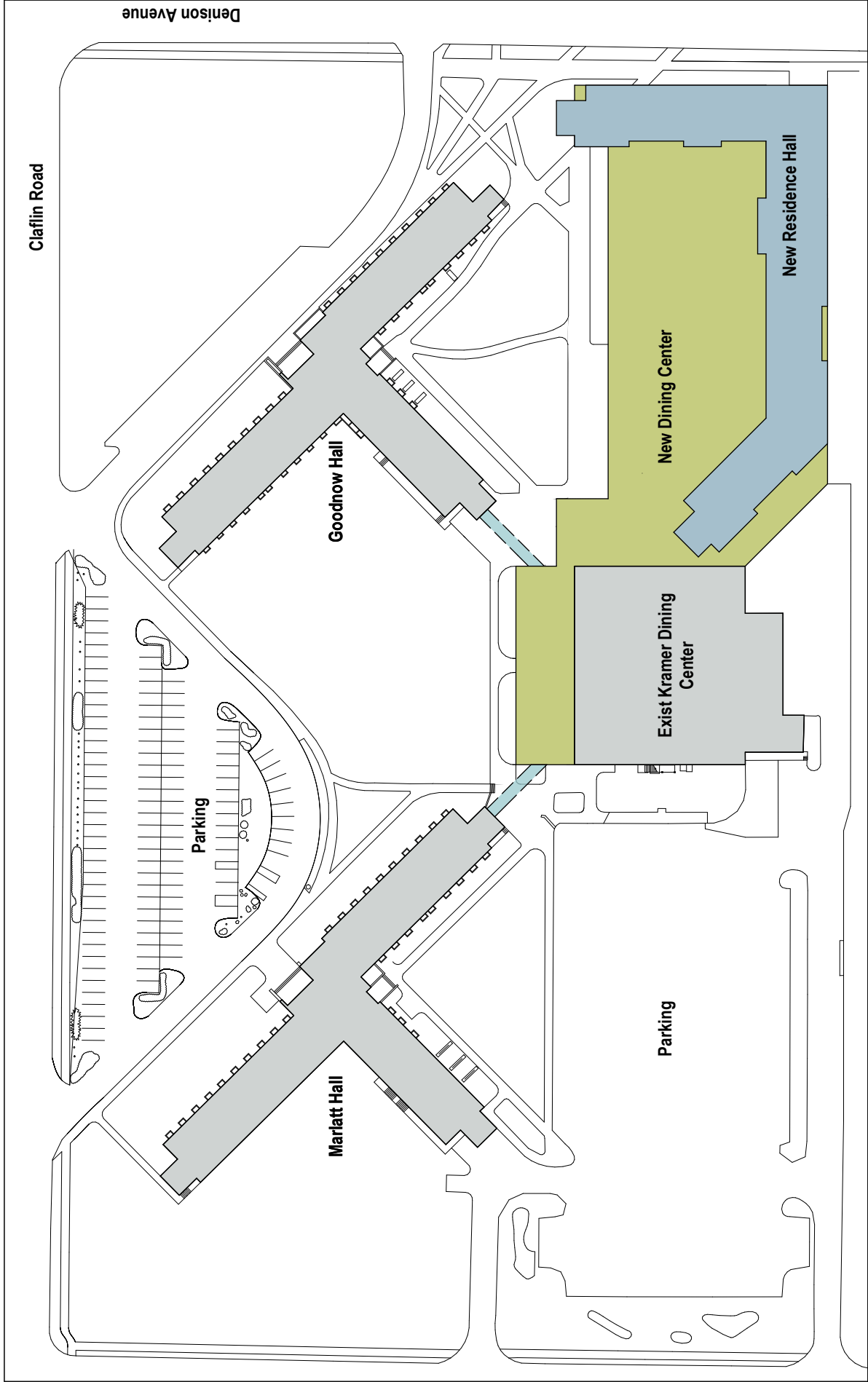
- Kansas Department of Administration: Office of Facilities and Procurement Management,
- Kansas Office of the Governor: Kansas Commission on Disability,
- Kansas Historical Society,
- KSU Department of Housing and Dining,
- KSU Student Resident Organizations,

- KSU Campus Planning and Facilities Management,
- KSU Campus Master Plan Committee,
- KSU Planning Advisory Committee,
- KSU Committee on Disability Housing Accommodations,
- KSU Landscape Advisory Committee.

Proposed Conceptual Plans

The following diagrams and conceptual site plans have been developed as a potential design solution. The drawings illustrate possible suitable development of the site. Some program requirements may have changed.

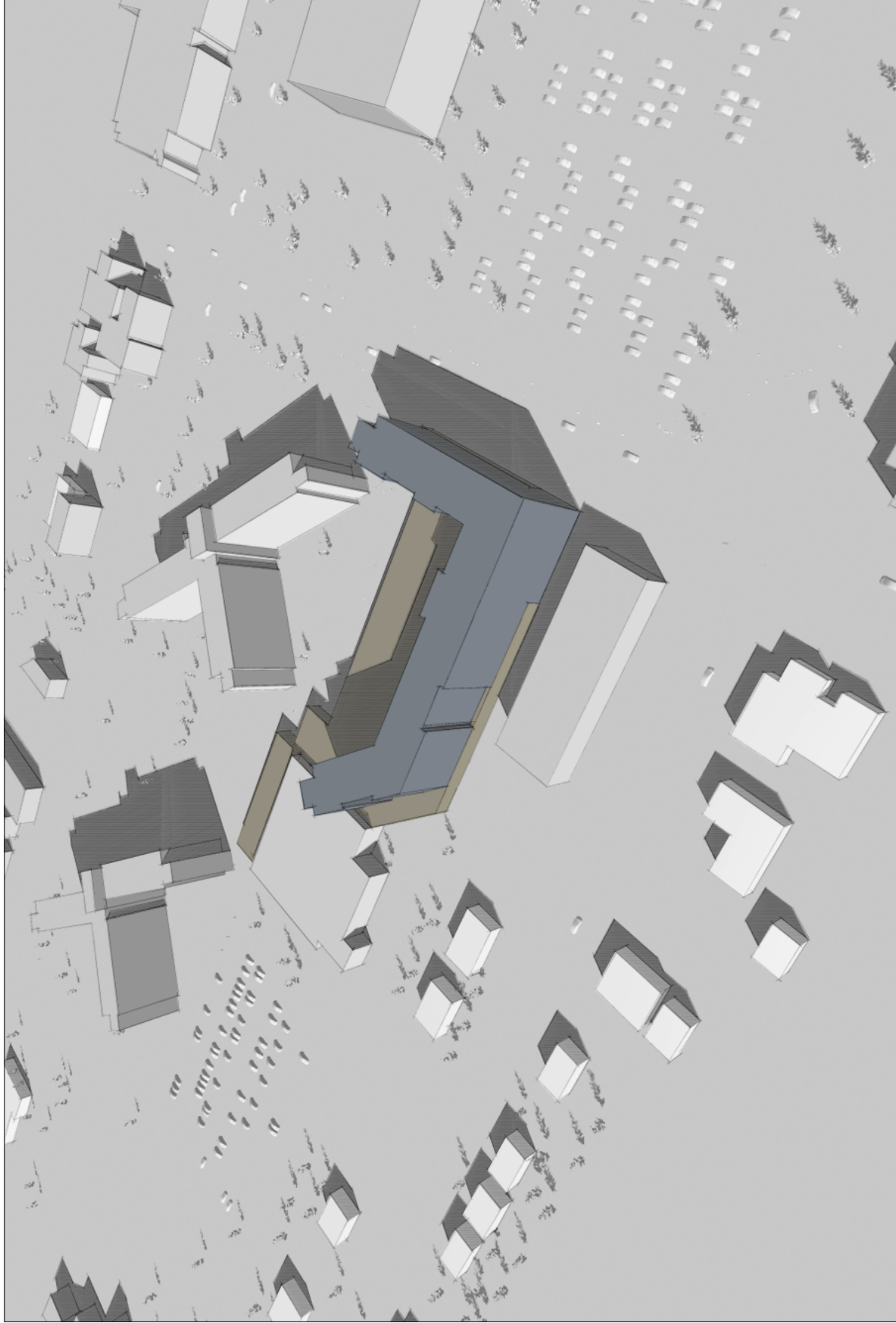
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May 29, 2013



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May 29, 2013

DEPARTMENT OF HOUSING AND DINING SERVICES NEW RESIDENCE HALL AND DINING CENTER - Kansas State University

PROPOSED CONCEPT PLANS - Site Massing - Aerial

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Appendix A

New Residence Hall and Dining Center summary.

Figure A-1. New Residence Hall and Dining Center Construction summary.

Gross Sq. Ft. (GSF)		187,032		100%	
Net Usable Sq. Ft. (NUSF)		168,329		*90% *10%	
Net Assignable Sq. Ft. (NASF)				66%	
Estimated Space Use Category Allocation Usable space based upon its primary use (See Appendix D)				Total Non-Assignable 34%	
				Non-Assignable (NSF) *24% *10%	
100 Classroom 0%	200 Laboratory 0%	300 Office 2%	400 Study 2%	500 Special Use 1%	600 General Use 37%
700 Support 0%	800 Health Care 0%	900 Residential 60%	000 Unclassified 0%		
Estimated Program Defined Space Types of spaces as organized in the numeric program (See Numeric Program)					
Dining Front of House 18%	Dining Back of House 11%	Retail 2%	Resource Centers 0%	Marketing Suite 0%	General Academic Space 1%
RH Housing Complex 1%	RH Building Community 5%	RH Floor Community 6%	RH RA Community 54%	Building Services Space used to support building cleaning and public hygiene functions	Circulation Spaces required for physical access to floors or subdivisions of space within the building, whether partitioned or not
				Mechanical Spaces of a building designed to house mechanical equipment and utility services, and shaft areas	Structural Includes walls, floor structure and other building components

*Anticipated values reflect common percentages for the building type and construction developed during the programming phase.

Figure A-2. Total New Construction Net Assignable Square Feet Allocation.

Space Type	Associated NASF	Percent of Total NASF
Space Committed to Dining Services	38,664	32%
Space Committed to Housing	83,805	68%

Figure A-3. Approximate Square Foot Costs of Construction.

Represented Levels of Construction	Associated Sq. Ft.	Approximate Cost per Sq. Ft.
New Dining Center Construction	57,996	*\$255.30
New Residence Hall Construction	129,036	*\$212.75
Renovation Construction	252,278	*\$34.18

*Approximate Cost per Sq. Ft. values are based upon the anticipated Scope of Work associated with each level of Construction and as based upon the general concept developed during the programming phase. These values include contingency. FF & E is not included.

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Appendix B

The following section defines detailed space requirements for programmed areas as determined by evaluation of existing and proposed conditions for each space. This information is provided as a means to guide the success of the New Residence Hall and Dining Center project. Listed requirements are minimums and establish a base standard for each space and some items suggest that code requirements may not be sufficient for the space. Further discussion with Kansas State University Housing and Dining Services, Campus Planning and Facilities Management, and other consultants is anticipated for clarification.

General Building Requirements

General Criteria: All spaces should be designed for adaptability to technology, comfort, safety and energy efficiency.

Site Work: Landscaping should be integral to the overall design concept and should be carefully planned to serve more than one purpose. Provide site lighting for walks, driveways, parking areas, and roadways. Provide perimeter building lighting for security purposes. Exterior lighting should be designed to balance security and safety needs with respect for the night sky.

Building Envelope: Materials located near grade should be durable and vandal resistant. Recommended materials include concrete, masonry and stone. Less durable materials should be limited to upper story and low traffic locations.

Windows: Recommended window types include double hung, single hung, sliding, projected or fixed. Limit stops should restrict window openings to a maximum of eight inches. Glazing selection should consider orientation.

Roofing: Approved roofing systems and colors may be obtained from Kansas State University Standards.

Wall Construction, Interior: Walls will be designed to be scuff and impact resistant. Surfaces will be easily cleanable. Wall bumpers and or corner guards will be provided where appropriate to accommodate the anticipated traffic flow. Graffiti resistant coatings are recommended for areas subject to vandalism.

Floors: Interior floors shall be durable, slip-resistant, easily cleaned and selected for sound control. Floor finish will be appropriate to use and as approved by Housing and Dining Services.

Ceilings: Ceiling heights shall be established during design with a minimum 9'-0" height in resident rooms. Recommended ceiling systems should permit access for maintenance.

Doors and Hardware: Doors shall be 36" wide clear opening by 84" high. Minimum 60" wide clear opening (36" leaf minimum) by 84" high at primary entrances. Other storage and support spaces are to have 42" or 48" doors. Doors and door hardware will be heavy-duty grade. All hardware shall be ADA compliant.

Acoustics: Design for allowable sound transmission ratings for walls and floors.

Air Conditioning: All spaces are to be conditioned.

Convenience Outlets: Due to the growing trend towards personal laptops and other handheld electronic devices, all spaces shall be evaluated for relative need for additional power outlets for user access. These are to be generously provided.

Lighting: Lighting should be designed appropriate to space activities and needs.

Daylighting: Where possible, natural daylight is to be integrated as an important element within the building design and as a requirement for resident living bedroom units. Light wells, atriums, skylights, perimeter circulation paths with interior spaces receiving "borrowed" light are a few opportunities that may be explored.

Mechanical Systems: Provide all spaces with appropriate air change and ventilation.

Sustainability: The Department of Housing and Dining Services is committed to being a leader in promoting sustainable design. Although LEED certification is not an expectation for this project, environmental issues are important and should be addressed in the final solutions. General strategies include utilizing environmentally responsible site development, minimizing water use, minimizing energy consumption, utilizing recycled, recyclable and environmentally sustainable materials, and providing improved air quality and comfort for building occupants.

Accessibility: All floors and spaces shall accommodate users according to ADA guidelines. Sleeping units on levels served by an elevator or an accessible entrance are required to be Type B units, as defined by the code and ICC/ANSI A117.1-03. Additionally, a certain number of the units are required by the code to be fully accessible.

Finish Criteria: In general, all finishes shall be durable, smooth and cleanable to the greatest extent possible. Considerations should be made for activities and amount of use anticipated. All architectural finishes for service areas such as restrooms, mechanical, electrical, and storage rooms shall be durable and damage resistant as appropriate for their intended use. Materials should be selected for their durability, design effectiveness, first cost versus life-cycle costs, and subsequent maintenance impacts.

PROGRAM | DETAILED SPACE REQUIREMENTS

DINING CENTER ALLOCATED SPACE

DINING ROOMS

This is a front of house facility space. The dining rooms accommodate eating and relaxation. The design must coordinate with food delivery and bussing services. The dining area should be capable of being subdivided by plan or partition to close off portions during off-peak serving periods. Anticipate some areas to be partitioned for meetings, gatherings and other functions.

SQUARE FOOTAGE REQUIREMENT – 13,120
NASF

REQUIREMENTS

- Natural daylighting or views are recommended.
- Florescent, recessed, track and dimmable lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Hot and cold water.
- Drinking fountain.
- Humidity control.
- Air Filtration.
- Balanced air supply.
- Odor control.
- Separate HVAC
- Key lock and closed CKT TV security.

- Telephone, data connection, public address system, video/cable, network TP and audio system connections.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT, exposed, skylight
 - Floor: carpet tile, ceramic tile, wood, sheet vinyl
 - Wall Finish: Washable, tackable surface, acoustic panels, glass
- Ceiling height varies.

PROXIMITY SUGGESTIONS

- Servery.
- Queuing.
- Dishwashing.
- Convenience Store/Emporium.

JANITORS CLOSET

This is a front of house facility support space. Locate small spaces strategically within the building area for custodial sinks, equipment and supplies.

SQUARE FOOTAGE REQUIREMENT - 40 NASF

REQUIREMENTS

- Florescent lighting.
- Convenience outlets
- Hot and cold water.
- Key lock security.

PROXIMITY SUGGESTIONS

- None.

FURNITURE STORAGE

This is a front of house facility support space. Space should be designed to facilitate the storage for chairs, tables, and other furnishings.

SQUARE FOOTAGE REQUIREMENT - 600 NASF

REQUIREMENTS

- Florescent lighting.
- Convenience outlets.
- 110V/20A/3 phase.
- Intercom and public address system connections.
- Key lock security.
- Recommended finishes:
 - Ceiling: drywall
 - Floor: sheet vinyl
 - Wall Finish: drywall
- Fix temperature.
- 10'-12' ceiling height.

PROXIMITY SUGGESTIONS

- Dining Rooms.

PUBLIC RESTROOMS

This is facility support space. Restrooms should be located on each floor and the capacity of restrooms calculated according to the number of patrons in the area. This area should be accessible for as long as the building is unlocked.

SQUARE FOOTAGE REQUIREMENT - 900 NASF

REQUIREMENTS

- Fluorescent lighting.
- Humidity control.
- Air filtration
- Balanced air supply.
- Odor Control.
- Convenience outlets.
- Hot and cold water.
- Public address system connections.

- Limit sound transference to adjacent rooms.
- Recommended finishes:
 - Ceiling: Vinyl Tile on aluminum grid
 - Floor: Ceramic Tile, slip resistant
 - Wall Finish: Washable, Ceramic Tile.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None.

SERVERY

This is a front of house dining facility space, consisting of 10 different serving platforms. The serving area accommodates the order and delivery of food. The design of the serving area will impact serving capacity and must be coordinated with the queuing and dining areas. This area should only be accessible to the public during dining hall hours. Servery platforms should include integral dry, refrigerated, and frozen storage adequate for peak meal service.

SQUARE FOOTAGE REQUIREMENT – 3,345 NASF

REQUIREMENTS

- 10 separate serving platforms.
 - Classics
 - Grille/Broiler
 - Hearthstone
 - Global Cuisine
 - Carvery/Deli
 - Salad/Soup Bar
 - Bakery/Dessert
 - Beverage
 - Beverage
 - Other Self-Serve Bar
- Natural daylighting is optional.
- Fluorescent, recessed and track lighting.
- Humidity control.
- Balanced air supply.
- Hot and cold water.
- Steam vent.
- Gas.
- Telephone, intercom data, audio and public address system connections.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Closed CKT TV security.
- Washable finishes.
- Recommended finishes:
 - Ceiling: transparent, ACT, skylights, exposed, shaped
 - Floor: ceramic tile

- Wall Finish: ceramic tile, glass
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Queuing.
- Dining Rooms.
- Dishwashing.
- Preparation Areas.
- The Bakery/Dessert Servery should be adjacent to the Production Bakery, which may be exhibition style.

QUEUING AND GENERAL CIRCULATION

This is a front of house dining facility space. The design of the queuing area will impact serving capacity and must be coordinated with the servery and dining rooms.

SQUARE FOOTAGE REQUIREMENT – 3,000 NASF

REQUIREMENTS

- Natural daylighting is optional.
- Fluorescent, recessed, track and dimmable lighting.
- Humidity control.
- Balanced air supply.
- Drinking fountain.
- Telephone, intercom, network TP, Video/Cable, data, audio and public address system connections.
- Convenience outlets.
- 110V/20A/1 phase power.
- Closed CKT TV security.
- Washable finishes.
- Recommended Finishes:
 - Ceiling: Absorptive, ACT, skylights, exposed
 - Floor: Carpet tile, wood and ceramic tile.
 - Wall Finish: acoustic, ceramic tile, glass, shaped
- 12'-14' ceiling height.

PROXIMITY SUGGESTIONS

- Servery.
- Dining Rooms.

DEMONSTRATION/TEACHING KITCHEN

This is a front of house dining facility space. This space is to accommodate a demonstrative and learning environment. Include 30-40 seats. May function as a service platform for special events.

SQUARE FOOTAGE REQUIREMENT – 1,500 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent, recessed and track lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Fixed temperature control.
- Balanced air supply.
- Separate HVAC.
- Hot and cold water.
- Steam vent.
- Washable finishes.
- Key lock and alarmed door security.
- Sound isolation from adjacent spaces.
- Telephone, intercom, video/cable, data connection, audio and public address system connections.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: ceramic tile, ceramic tile
 - Wall Finish: ceramic tile, glass, shaped
- 10'-12' ceiling height.

PROXIMITY SUGGESTIONS

- Servery.

CONVENIENCE STORE/EMPORIUM

This is a retail space. This business space may have longer access hours than the dining hall and must be accessible accordingly. This area does not include seating, which is assumed to be shared with a component of the main dining room. If located on a different level than dining rooms, space requirements must increase to accommodate 75-100 seats.

SQUARE FOOTAGE REQUIREMENT – 3,000 NASF

REQUIREMENTS

- Natural daylighting or views is recommended.
- Fluorescent, recessed, track and dimmable lighting.
- Convenience outlets.
- Humidity control.
- Balanced air supply.
- Separate HVAC.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Hot and cold water.
- Compressed air.
- Shem vent hood.
- Gas.

- Drinking fountain.
- Key lock, alarmed door and closed CKT TV security.
- Telephone, video/cable, data connection, intercom, network TP, audio system and public address system connections.
- Medium sound isolation from surrounding spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT, skylight, exposed, shaped
 - Floor: wood, ceramic tile
 - Wall Finish: ceramic tile, glass, shaped
- Varies ceiling height.

PROXIMITY SUGGESTIONS

- Centrally accessible to Residence Halls.
- Dining Rooms.

RECEIVING/ICE/SODA RACK

This is a back of house dining facility support space and is part of food and supplies storage.

SQUARE FOOTAGE REQUIREMENT - 240 NASF

REQUIREMENTS

- Natural daylighting is not recommended.
- Cold water.
- Fluorescent lighting.
- Public address system connections.
- Humidity control.
- Balance air supply.
- Odor control.
- Hot and cold water.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Medium sound isolation from adjacent spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: drywall
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- Key lock security.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Receiving.

AMBIENT FOOD STORAGE AND SMALL EQUIPMENT

This is a back of house dining facility support space and is part of food and supplies storage. This storage area includes space for ambient storage for general use, ingredient room/test kitchen, and production bakery. Ancillary spaces included are alcohol and paper storage.

SQUARE FOOTAGE REQUIREMENT – 2,270 NASF

REQUIREMENTS

- Fluorescent lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Humidity control.
- Air filtration.
- Balanced air supply.
- Odor control.
- Public address system connections.
- Medium sound isolation from adjacent spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: drywall, ACT
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- Key lock security.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Food Preparation.
- Receiving.

WALK-IN REFRIGERATION

This is a back of house dining facility support space and is part of food and supplies storage.

SQUARE FOOTAGE REQUIREMENT - 900 NASF

REQUIREMENTS

- Fluorescent lighting.
- 208V/40A/3 phase power.
- Washable finishes.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Food Preparation.

- Receiving.

WALK-IN FREEZER

This is a back of house dining facility support space and is part of food and supplies storage.

SQUARE FOOTAGE REQUIREMENT - 480 NASF

REQUIREMENTS

- Fluorescent lighting.
- 208V/40A/3 phase power.
- Washable finishes.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Food preparation.
- Receiving.

COLD PRODUCTION

This is a back of house dining facility support space and is part of the production area.

SQUARE FOOTAGE REQUIREMENT – 1,300 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- Humidity control.
- Air filtration.
- Balanced air supply.
- Odor control.
- Garbage disposal.
- Intercom, data, and public address system connections.
- Hot and cold water.
- Medium sound isolation from adjacent spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Food storage.

- Cart Marshalling.
- Hot Production.
- Potwashing (if in kitchen).
- Production Offices.

HOT PRODUCTION

This is a back of house dining facility support space and is part of the production area.

SQUARE FOOTAGE REQUIREMENT – 1,500 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Humidity control.
- Air filtration.
- Balanced air supply.
- Odor control.
- Steam.
- Public address system connections.
- Medium sound isolation from adjacent spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- Hot and cold water.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Food Storage.
- Cold Production.
- Cart Marshalling.
- Potwashing (if in kitchen).
- Production Offices.

CART MARSHALLING

This is a back of house dining facility support space and is part of the production area.

SQUARE FOOTAGE REQUIREMENT - 500 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent lighting.
- Convenience outlets.
- Public address system connections.

- Washable finishes.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Cold Production.
- Hot Production.
- Potwashing (if in kitchen)
- Production Offices.

PRODUCTION OFFICES

This is a back of house dining facility support space and is part of the production area. These areas are determined by staffing requirements.

SQUARE FOOTAGE REQUIREMENT - 510 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Convenience outlets.
- 110V/20A/1 phase power.
- Humidity control.
- Balanced air supply.
- Key lock security.
- Telephone, data connection, audio and public address system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: ceramic tile
 - Wall Finish: Drywall, glass, washable
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None

INGREDIENT MEASURING AND ASSEMBLY

This is a back of house dining facility support space and is part of the ingredient room and test kitchen.

SQUARE FOOTAGE REQUIREMENT - 300 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208/40A/3 phase power.
- Telephone, network TP, data and public address system connections.

- Medium sound isolation from surrounding spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- Hot and cold water.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Test Kitchen.
- Ambient Storage.
- Refrigerated Storage.

TEST KITCHEN

This is a back of house dining facility support space and is part of the ingredient room and test kitchen.

SQUARE FOOTAGE REQUIREMENT - 360 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Balanced air supply.
- Odor control.
- Gas.
- Drinking fountain.
- Telephone, intercom, network TP video/cable, and public address system connections.
- Hot and cold water.
- Key lock security.
- Washable finishes.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Ingredient Measuring and Assembly.
- Ambient Storage.
- Refrigerated Storage.

CONFERENCE

This is a back of house dining facility support space and is part of the test kitchen area. A small meeting

room for up to 30 occupants. Used for formal meeting, training, and teleconference activities.

SQUARE FOOTAGE REQUIREMENT -540 NASF

REQUIREMENTS

- Design for flexibility.
- Recommended ceiling height is 10'-12'.
- Natural daylighting is optional.
- Controlled views into space are recommended.
- Data and power to accommodate a variety of multimedia presentations and tele- and videoconferences including telephone, intercom, network TP, video/cable, audio, and public address system connections.
- Public address system connections.
- Generous convenience outlets.
- 110V/20A/1 phase power.
- Dimmable and track lighting.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: carpet tile
 - Wall Finish: washable, drywall, glass.
- White boards, tackable surface, and projection screens.
- Acoustical separation from surrounding spaces.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None.

REFRIGERATED STORAGE

This is a back of house dining facility support space and includes refrigerated storage for the test kitchen and production bakery.

SQUARE FOOTAGE REQUIREMENT - 242 NASF

REQUIREMENTS

- Fluorescent lighting.
- 110V/20A/1 phase and 208/40A/3 phase power.
- Humidity control.
- Balanced air supply.
- Key lock and alarmed door security.
- Washable finishes.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None.

FROZEN STORAGE

This is a back of house dining facility support space and includes both ingredient storage and finish storage for the production bakery.

SQUARE FOOTAGE REQUIREMENT - 242 NASF

REQUIREMENTS

- Fluorescent lighting.
- 110V/20A/1 phase and 208/40A/3 phase power.
- Humidity control.
- Balanced air supply.
- Key lock and alarmed door security.
- Washable finishes.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None.

MIX AND FORM

This is a back of house dining facility support space and is part of the production bakery.

SQUARE FOOTAGE REQUIREMENT - 200 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208/40A/3 phase power.
- Humidity control.
- Balanced air.
- Gas.
- Medium sound isolation from surrounding spaces.
- Telephone, intercom, data, audio, and public address system connections.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: ceramic tile
 - Wall Finish: ceramic tile

- Hot and cold water.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Ambient Food Storage.
- Refrigerated Ingredient Storage.
- Frozen Ingredient Storage.
- Baking.
- Cooling/Marshalling.
- Finish Cooler.
- Finish Freezer.
- The Bakery/Dessert Servery should be adjacent to the Production Bakery, which may be exhibition style.

BAKING

This is a back of house dining facility support space and is part of the production bakery. Production Bakery may be exhibition style.

SQUARE FOOTAGE REQUIREMENT - 220 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208/40A/3 phase power.
- Telephone, intercom, data, and public address system connections.
- Humidity control.
- Balanced air supply.
- Gas.
- Drinking fountain.
- Minimum sound isolation from surrounding spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- Hot and cold water.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Ambient Food Storage.
- Refrigerated Ingredient Storage.
- Frozen Ingredient Storage.
- Mix and Form.
- Cooling/Marshalling.
- Finish Cooler.
- Finish Freezer.

- The Bakery/Dessert Servery should be adjacent to the Production Bakery, which may be exhibition style.

COOLING/MARSHALLING

This is a back of house dining facility support space and is part of the production bakery.

SQUARE FOOTAGE REQUIREMENT - 165 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208/40A/3 phase power.
- Telephone, intercom, data, audio, and public address system connections.
- Humidity control.
- Balanced air supply.
- Gas.
- Hot and cold water.
- Medium sound isolation from surrounding spaces.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Ambient Food Storage.
- Refrigerated Ingredient Storage.
- Frozen Ingredient Storage.
- Mix and Form.
- Baking.
- Finish Cooler.
- Finish Freezer.
- The Bakery/Dessert Servery should be adjacent to the Production Bakery, which may be exhibition style.

FINISH COOLER

This is a back of house dining facility support space and is part of the production bakery.

SQUARE FOOTAGE REQUIREMENT - 96 NASF

REQUIREMENTS

- Fluorescent lighting.

- 110V/20A/1 phase and 208V/40A/3 phase power.
- Fixed temperature.
- Key lock and alarmed door security.
- Minimal sound isolation.
- Washable finishes.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Ambient Food Storage.
- Refrigerated Ingredient Storage.
- Frozen Ingredient Storage.
- Mix and Form.
- Baking.
- Cooling/Marshalling.
- Finish Freezer.

FINISH FREEZER

This is a back of house dining facility support space and is part of the production bakery.

SQUARE FOOTAGE REQUIREMENT - 96 NASF

REQUIREMENTS

- Fluorescent lighting.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Balanced air supply.
- Key lock and alarmed door security.
- Washable finishes.
- Minimum sound isolation.
- Recommended finishes:
 - Ceiling: stainless steel
 - Floor: stainless steel, ceramic tile
 - Wall Finish: stainless steel
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Ambient Food Storage.
- Refrigerated Ingredient Storage.
- Frozen Ingredient Storage.
- Mix and Form.
- Baking.
- Cooling/Marshalling.
- Finish Cooler.

WORK DESK

This is a back of house dining facility support space and is part of the production bakery.

SQUARE FOOTAGE REQUIREMENT - 30 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Florescent and task lighting.
- Telephone, data connection and public address system connections.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None.

TRAY DROP & DISH ROOM

This is a back of house dining facility support space and is a part of sanitation. Included in this space is potwashing.

SQUARE FOOTAGE REQUIREMENT – 1,450 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Air filtration.
- Special ventilation.
- Balanced air supply.
- Odor control.
- Separate HVAC.
- Compressed air.
- Gas.
- Drinking fountain.
- Telephone, intercom, data, audio and public address system connections.
- Washable finishes.
- Recommended finishes:
 - Ceiling: ACT
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- Hot and cold water.
- Humidity control
- 10'-12' ceiling height.

PROXIMITY SUGGESTIONS

- Chemical Storage.
- Recycling/Composting/Trash Room.
- Cart Washing.

CHEMICAL STORAGE

This is a back of house dining facility support space and is a part of sanitation.

SQUARE FOOTAGE REQUIREMENT - 80 NASF

REQUIREMENTS

- Fluorescent lighting.
- Fixed temperature.
- Hot and cold water.
- Convenience outlets.
- 110V/20A/1 phase and 208V/40A/3 phase power.
- Fixed temperature.
- Hot and cold water.
- Intercom and public address system connections.
- Key lock and alarmed door security.
- Recommended finishes:
 - Ceiling: drywall
 - Floor: ceramic tile
 - Wall Finish: ceramic tile
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Tray Drop and Dishroom.
- Recycling/Composting/Trash Room.
- Cart Washing.

RECYCLING/COMPOSTING/TRASH ROOM

This is a back of house dining facility support space and is a part of sanitation.

SQUARE FOOTAGE REQUIREMENT - 200 NASF

REQUIREMENTS

- Convene ice outlets.
- 110V/20A/1 phase and 208/40A/3 phase power.
- Humidity control.
- Special ventilation.
- Air filtration.
- Balanced air supply.
- Odor control.
- Hot and cold water.
- Telephone, intercom, data, and public address system.
- Washable finishes.
- Recommended finishes:
 - Ceiling: drywall

- Floor: ceramic tile
- Wall Finish: ceramic tile
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Tray Drop and Dishroom.
- Chemical Storage.
- Cart Washing.
- Exterior site trash bins.

CART WASHING

This is a back of house dining facility support space and is a part of sanitation.

SQUARE FOOTAGE REQUIREMENT - 80 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent lighting.
- Convenience outlets.
- 208V/20A/3 phase power.
- Public address system connections.
- Hot and cold water.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- Tray Drop and Dishroom.
- Chemical Storage.
- Recycling/Composting/Trash Room.

JANITOR'S CLOSET

This is a back of house dining facility support space. Small spaces strategically located within the building area for custodial sinks, equipment and supplies.

SQUARE FOOTAGE REQUIREMENT - 36 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- Hot and cold water.
- Key lock security.

PROXIMITY SUGGESTIONS

- None

RECEPTION

This is a back of house dining facility support space for the office suite.

SQUARE FOOTAGE REQUIREMENT - 180 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Florescent, track, dimmable and quiet lighting.
- Convenience outlets.
- 110V/20A/1 phase power.
- Humidity control
- Air filtration, balanced air supply.
- Telephone, intercom, video/cable, data, audio and public address system connections.
- Key lock security.
- Sound isolation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: carpet tile, VCT
 - Wall Finish: Drywall tackable, glass
- 10'-12' ceiling height.

PROXIMITY SUGGESTIONS

- Manager/Director Office.
- Professional Offices.

PROFESSIONAL OFFICES

This is a back of house dining facility support space for the office suite which includes professional offices and manager/director office.

SQUARE FOOTAGE REQUIREMENT - 420 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent and track lighting.
- Convenience outlets.
- 110V/20A/1 phase power.
- Humidity control.
- Balanced air supply.
- Key lock security.
- Telephone, data, video/cable, audio and public address system connections.
- Acoustical separation from surrounding spaces.
- White board and mirror.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: carpet tile, VCT
 - Wall Finish: Drywall, glass

- 10'-12' ceiling height.

PROXIMITY SUGGESTIONS

- Reception.
- Professional Offices.

BREAK ROOM

This is a back of house dining facility support space. This is a non- assignable net square foot space.

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Data connection and public address system connections.
- Convenience outlets.
- Key lock security.
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None

LOCKERS

This is a back of house dining facility support space and should be provided for both men's lockers and women's lockers.

SQUARE FOOTAGE REQUIREMENT - 240 NASF

REQUIREMENTS

- Natural daylighting not recommended.
- Fluorescent lighting.
- Convenience outlets.
- Public address system connections.

ADJACENCY SUGGESTIONS

- Restrooms

RESTROOM

This is a back of house dining facility support space. Restrooms should be located on each floor and the capacity of restrooms calculated according to the number of students/staff in the area.

SQUARE FOOTAGE REQUIREMENT - 300 NASF

REQUIREMENTS

- Fluorescent lighting.

- Humidity control.
- Air filtration
- Balanced air supply
- Odor Control.
- Convenience outlets.
- Hot and cold water.
- Public address system connections.
- Limit sound transference to adjacent rooms.
- Recommended Finishes:
 - Ceiling: Vinyl Tile on aluminum grid
 - Floor: Ceramic Tile, slip resistant
 - Wall Finish: Washable, Ceramic Tile.
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Lockers

LAUNDRY

This is a back of house dining facility support space. Ancillary space included in the laundry is uniforms and or linen storage.

SQUARE FOOTAGE REQUIREMENT - 200 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Cold and hot water.
- Humidity control.
- Special ventilation.
- Balanced air supply.
- Compressed air.
- Gas.
- Telephone, intercom, data, audio and public address system connection.
- Convenience outlets.
- 110V/20A/1 Phase, 208V/40A/3 Phase power.
- Key lock and closed CKT TV security.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Washable, VCT
 - Wall Finish: Washable, Drywall.
- 8'-10' ceiling height.

IT HEAD END ROOM

This is support space. IT Head End Rooms serve as dedicated spaces for data and communication systems. Provide a minimum of one dedicated space in the new facility. This room may be stand alone or shared between the Dining Center and Residence Hall.

SQUARE FOOTAGE REQUIREMENT - 25 NASF

REQUIREMENTS

- Exposed ceiling is recommended.
- Direct access to common circulation space.
- Must satisfy University IT support infrastructure requirements.

PROXIMITY SUGGESTIONS

- None.

HALLWAYS AND CORRIDORS

This is facility support space. Pedestrian circulation spaces provide opportunities for impromptu meetings and informal discussion. These spaces should be regarded as opportune for social and academic interactions.

REQUIREMENTS

- Designed to provide opportunities for impromptu discussions and casual interactions.
- Sound-absorbent materials may be applied to the upper portion of walls for sound control.
- Lower portions of walls should be of durable and impact resistant finishes.
- Floors of hallways should be smooth to minimize noise and to aid the movement of carts and wheelchairs.
- Floors should have a non-skid surface, especially near exterior entrances.
- Public address system connections.

PROXIMITY SUGGESTIONS

- None.

RESIDENCE HALL ALLOCATED SPACE

CENTRAL MAILROOM

This is residential support space dedicated to the housing complex and is to be located on the main floor. The space should be organized for ease of sorting and distribution of mail and packages. The space is utilized daily and must be accessible 24 hours a day.

SQUARE FOOTAGE REQUIREMENT - 600 NASF

REQUIREMENTS

- Fluorescent and task lighting.
- Convenience outlets.
- Key lock and closed CKT TV security is required.
- Data connection and public address system connections.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: VCT
 - Wall Finish: Washable
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Front Desk.

PROXIMITY SUGGESTIONS

- Retail Operations.
- Central access to Residence Halls.

FRONT DESK

This is residential support space dedicated to the building community and is to be located on the main floor. The space is used as the central hub of security, information, and communication for the dormitory.

SQUARE FOOTAGE REQUIREMENT - 135 NASF

REQUIREMENTS

- ADA accessible reception desk for (2) desk stations.
- Natural daylighting is recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- Closed CKT TV security.
- Telephone, data connection and public address system connections.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall

- 10'-12' ceiling height.

ADJACENCY SUGGESTIONS

- Storage.
- Main Lounge.

PROXIMITY SUGGESTIONS

- Office.
- Mail Room.

FRONT DESK STORAGE

This is residential support space dedicated to the building community and is to be located on the main floor. The space is utilized daily and must be accessible 24 hours a day.

SQUARE FOOTAGE REQUIREMENT - 80 NASF

REQUIREMENTS

- Fluorescent lighting.
- Convenience outlets.
- Key lock security.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: VCT
 - Wall Finish: Washable
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Front Desk.

PROXIMITY SUGGESTIONS

- Entry.

OFFICE

This is residential support space dedicated to the building community and is to be located on the main floor. Offices should be organized to facilitate a conversation zone at the door, a collaborative space for 2-3 people and a concentrated work area. The space is utilized daily and must be accessible 24 hours a day.

SQUARE FOOTAGE REQUIREMENT - 200 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent and task lighting.
- Convenience outlets.

- Key lock security.
- Telephone, data connection and public address system connections.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall
- Medium acoustical separation from surrounding spaces.
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Front Desk.

PROXIMITY SUGGESTIONS

- Entry.
- Main Lounge.

MAIN LOUNGE

This is residential support space dedicated to the building community. A meeting space for students, parents, and staff and should be located near the primary entry of the building. This space should be designed to represent a welcome area designed for comfort and interaction.

SQUARE FOOTAGE REQUIREMENT – 1,000 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent, task and recessed lighting.
- Drinking fountain.
- Convenience outlets.
- Audio clean power
- Key lock and closed CKT TV security.
- Telephone, data connection, public address system, network tp, video/cable, and audio system connections.
- Casual seating/lounge area.
- Soft flooring for comfort and acoustics or ceramic tile for ease of cleaning.
- 12'-14' ceiling height.

ADJACENCY SUGGESTIONS

- Entry.
- Office.
- Front Desk.

PROXIMITY SUGGESTIONS

- Main circulation.

STORAGE

This is residential support space dedicated to the building community.

SQUARE FOOTAGE REQUIREMENT – 1,200 NASF

REQUIREMENTS

- Fluorescent lighting.
- Convenience outlets.
- Key lock security.
- Public address system connections.
- Exposed ceiling.
- Washable finishes.
- 12'-14' ceiling height.

ADJACENCY SUGGESTIONS

- Circulation.
- Exterior.

PROXIMITY SUGGESTIONS

- None

RESIDENCE LIFE PROGRAM STORAGE

This is residential support space dedicated to the building community. This space is utilized for storage of craft supplies for building events.

SQUARE FOOTAGE REQUIREMENT - 100 NASF

REQUIREMENTS

- Fluorescent lighting.
- Convenience outlets.
- Key lock security.
- Public address system connections.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Washable, VCT
 - Wall Finish: Washable, Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Circulation.

PROXIMITY SUGGESTIONS

- None.

RECREATION ROOM

This is residential support space dedicated to the building community.

SQUARE FOOTAGE REQUIREMENT - 300 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- Key lock and closed CKT TV security.
- Video/cable, data connection, public address system and audio system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Rubber
 - Wall Finish: Washable
- 12'-14' ceiling height.

ADJACENCY SUGGESTIONS

- None.

PROXIMITY SUGGESTIONS

- None.

STUDY ROOM

This is residential support space dedicated to the building community. The space has continuous use 24 hours a day.

SQUARE FOOTAGE REQUIREMENT - 600 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- Key lock and closed CKT TV security.
- Video/cable, data connection and public address system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- None.

PROXIMITY SUGGESTIONS

- None.

LAUNDRY

This is residential support space dedicated to the building community with public access 24 hours a day.

SQUARE FOOTAGE REQUIREMENT – 1,300 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Cold and hot water.
- Humidity control.
- 110V/20A/1 Phase, 208C/40A/3 Phase, and convenience outlets.
- Key lock and closed CKT TV security.
- Video/cable, data connection, and public address system connections.
- Reduce acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Washable, VCT
 - Wall Finish: Washable, Drywall
- 12'-14' ceiling height.
- Floor drains.

ADJACENCY SUGGESTIONS

- None.

PROXIMITY SUGGESTIONS

- Recreation Room.
- Study Room.
- Lobby.
- Retail.

FACULTY-IN-RESIDENCE APARTMENT

This is a residence apartment. The Faculty-in-Residence program provides faculty and their families the opportunity to live and interact with students while residing in a specifically designed apartment in the student's residence hall.

SQUARE FOOTAGE REQUIREMENT – 1,000 NASF

REQUIREMENTS

- 2 bed rooms.
- Living room.
- Bathroom.

- Kitchen.
- Natural lighting is required.
- Fluorescent and task lighting.
- Cold and hot water.
- Convenience outlets.
- Key lock security.
- Telephone, video/cable, data connection and public address system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Exterior entrance.

PROXIMITY SUGGESTIONS

- Office.
- Front desk.

**RESIDENCE LIFE COORDINATOR (RLC)
APARTMENT**

This is a residence apartment.

SQUARE FOOTAGE REQUIREMENT – 1,000 NASF

REQUIREMENTS

- 2 bed rooms.
- Living room.
- Bathroom.
- Kitchen.
- Natural lighting is required.
- Fluorescent and task lighting.
- Cold and hot water.
- Convenience outlets.
- Key lock security.
- Telephone, video/cable, data connection and public address system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Exterior entrance.

PROXIMITY SUGGESTIONS

- Office.

- Front desk.

**ASSISTANT RESIDENCE LIFE COORDINATOR
(ARLC) APARTMENT**

This is a residence apartment.

SQUARE FOOTAGE REQUIREMENT - 600 NASF

REQUIREMENTS

- 1 bedroom.
- Living room.
- Bath.
- Kitchen.
- Natural lighting is required.
- Fluorescent and task lighting.
- Cold and hot water.
- Convenience outlets.
- Key lock security.
- Telephone, video/cable, data connection and public address system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Student Rooms.

PROXIMITY SUGGESTIONS

- Lobby.

FLOOR LOUNGE

This is residential support space dedicated to the floor community. A meeting study and gathering space for students. This space should be designed for flexibility and interaction.

SQUARE FOOTAGE REQUIREMENT – 5,000 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Convenience outlets.
- Closed CKT TV security.
- Telephone, data connection, video/cable, and public address system connections.
- Casual seating/lounge area.
- Soft flooring for comfort and acoustics.

- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet, Carpet Tile or VCT
 - Wall Finish: Washable, Drywall
- 12'-14' ceiling height.

ADJACENCY SUGGESTIONS

- Main Circulation.

PROXIMITY SUGGESTIONS

- Student Rooms.

STUDY AREA

This is residential support space dedicated to the floor community. The space has continuous use 24 hours a day located at each floor.

SQUARE FOOTAGE REQUIREMENT – 2,000 NASF REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Convenience outlets.
- Key lock and closed CKT TV security.
- Data connection and public address system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- None.

PROXIMITY SUGGESTIONS

- Student Rooms.

TRASH ROOM

This is residential support space dedicated to the floor community. The space has continuous use 24 hours a day and is located at each floor.

REQUIREMENTS

- Humidity control.
- Air filtration
- Balanced air supply.
- Odor Control.
- Washable finishes.
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- None.

PROXIMITY SUGGESTIONS

- Exterior site Trash Bins.
- Elevator.

RA UNIT W/BATH

This is a residence and residential support space dedicated to the resident community. An RA should be provided for every two Pod Communities.

SQUARE FOOTAGE REQUIREMENT – 4,000 NASF

REQUIREMENTS

- 2 bed space.
- Natural lighting is required.
- Fluorescent lighting.
- Convenience outlets.
- Key lock security.
- Telephone, video/cable, data connection and public address system connections.
- Acoustical separation from surrounding spaces.
- Hot and cold water.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile, VCT
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- None.

PROXIMITY SUGGESTIONS

- Lobby.
- Study Rooms.

STUDENT ROOM (2 BED)

This is residence space. The student rooms should be arranged to provide a semi-private area for changing.

SQUARE FOOTAGE REQUIREMENT – 51,750 NASF

REQUIREMENTS

- 2 bed space.
- Natural lighting is required.
- Fluorescent lighting.
- Convenience outlets.
- Key lock security.

- Telephone, video/cable, data connection and public address system connections.
- Acoustical separation from surrounding spaces.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile, VCT
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Bathrooms.

PROXIMITY SUGGESTIONS

- Lobby.
- Study Rooms.

SHARED BATHROOM

This is residential support space dedicated to the resident community. Each restroom serves a single Cluster Community. Bathrooms should be arranged to permit a shared sink area with individual privacy for water closet and bathing areas. The space has continuous use 24 hours a day located at each floor.

SQUARE FOOTAGE REQUIREMENT –10,400 NASF

REQUIREMENTS

- These spaces are to have water closets. No urinals will be permitted.
- Natural lighting is recommended.
- Fluorescent and task lighting.
- Humidity control.
- Air filtration.
- Balanced air supply.
- Odor Control.
- Convenience outlets.
- Hot and cold water.
- Public address system connections.
- Limit sound transference to student rooms.
- Recommended Finishes:
 - Ceiling: Vinyl Tile on aluminum grid
 - Floor: Ceramic Tile, slip resistant
 - Wall Finish: Washable, Ceramic Tile.
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Student Rooms.

PROXIMITY SUGGESTIONS

- Lobby.
- Study Rooms.

BREAKOUT AREA

This is residential support space dedicated to the resident community. Each breakout area serves two Cluster Communities. The space has continuous use 24 hours a day located at each floor.

SQUARE FOOTAGE REQUIREMENT – 1,600 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Convenience outlets.
- Closed CKT TV security.
- Data connection and public address system connections.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: Carpet Tile
 - Wall Finish: Drywall
- 8'-10' ceiling height.

ADJACENCY SUGGESTIONS

- Student Rooms.

PROXIMITY SUGGESTIONS

- RA Unit.
- Lobby.

MAINTENANCE SHOP/OFFICE

This is facility support space dedicated to Facilities and Maintenance. This space is to accommodate both an office space and a facilities workshop.

SQUARE FOOTAGE REQUIREMENT – 560 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent and task lighting.
- Convenience outlets.
- Key lock and closed CKT TV security.
- Telephone, data connection, and public address system, access.
- Acoustical separation from surrounding spaces.
- Hot and cold water.
- Recommended Finishes:
 - Ceiling: ACT, exposed
 - Floor: Washable, VCT
 - Wall Finish: Washable, Drywall
- 12'-14' ceiling height.

ADJACENCY SUGGESTIONS

- Mechanical room.
- Exterior.
- Isolate from other spaces.

PROXIMITY SUGGESTIONS

- None.

HOUSEKEEPING BREAK ROOM

This is facility support space dedicated to Facilities and Maintenance.

SQUARE FOOTAGE REQUIREMENT - 120 NASF

REQUIREMENTS

- Natural daylighting is recommended.
- Fluorescent lighting.
- Telephone, data connection and public address system connections.
- Convenience outlets.
- Key lock security.
- Recommended Finishes:
 - Ceiling: ACT
 - Floor: carpet tile, VCT
 - Wall Finish: Drywall
- 8'-10' ceiling height.

PROXIMITY SUGGESTIONS

- None.

STORAGE

This is facility support space dedicated to Facilities and Maintenance.

SQUARE FOOTAGE REQUIREMENT - 240 NASF

REQUIREMENTS

- Fluorescent lighting.
- Convenience outlets.
- Key lock security.
- Washable finishes.

PROXIMITY SUGGESTIONS

- Maintenance Office.

HEAD END ROOM

This is support space. IT Head End Rooms serve as dedicated spaces for data and communication systems. Provide a minimum of one dedicated space in the new facility. This room may be stand alone or shared between the Dining Center and Residence Hall.

SQUARE FOOTAGE REQUIREMENT - 25 NASF

REQUIREMENTS

- Exposed ceiling is recommended.
- Direct access to common circulation space.
- Must satisfy University IT support infrastructure requirements.

PROXIMITY SUGGESTIONS

- None.

IT CLOSET

This is facility support space. These spaces are dedicated rooms for university data and communication systems. Provide one per floor or per wing. Such spaces should be stacked from floor to floor.

REQUIREMENTS

- Exposed ceiling is recommended.
- Direct access to common circulation space.
- Must satisfy University IT support infrastructure requirements.

PROXIMITY SUGGESTIONS

- None.

POWER CLOSET

This is facility support space. Dedicated rooms for university power systems. Provide one per floor or per wing. Such spaces should be stacked from floor to floor.

REQUIREMENTS

- Exposed ceiling is recommended.
- Direct access to common circulation space.
- Must satisfy University IT support infrastructure requirements.

PROXIMITY SUGGESTIONS

- None.

CUSTODIAL ROOM

This is facility support space. Small spaces strategically located within the building area for custodial sinks, equipment and supplies.

ELEVATOR

This is facility support space. An elevator to accommodate passengers and freight with compliant ADA compliance is required. Provide a minimum of two elevators. The elevators shall access all floors, with the possibility of a roof stop.

PROXIMITY SUGGESTIONS

- Centrally located.

HALLWAYS AND CORRIDORS

This is facility support space. Pedestrian circulation spaces provide opportunities for impromptu meetings and informal discussion.

REQUIREMENTS

- Designed to provide opportunities for impromptu discussions and casual interactions.
- Sound-absorbent materials may be applied to the upper portion of walls for sound control.
- Lower portions of walls should be of durable and impact resistant finishes.
- Floors of hallways should be smooth to minimize noise and to aid the movement of luggage carts and wheelchairs.
- Floors should have a non-skid surface, especially near exterior entrances.

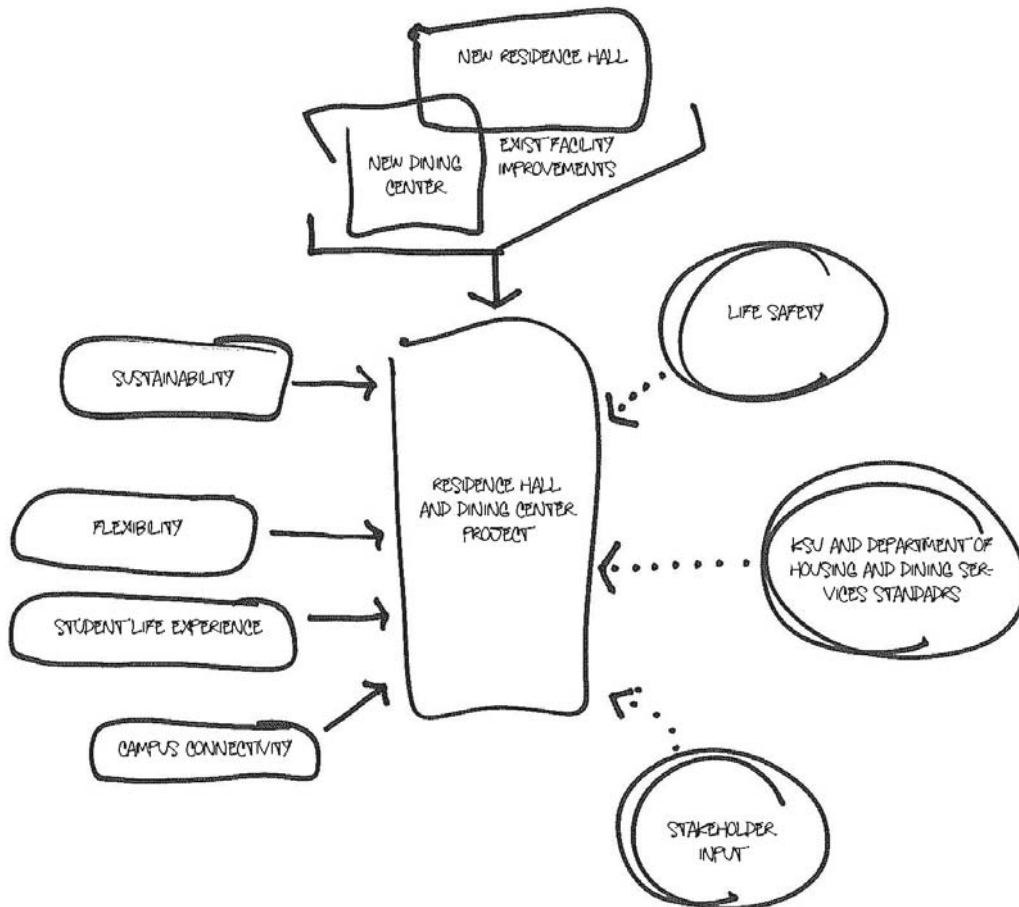
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Appendix C

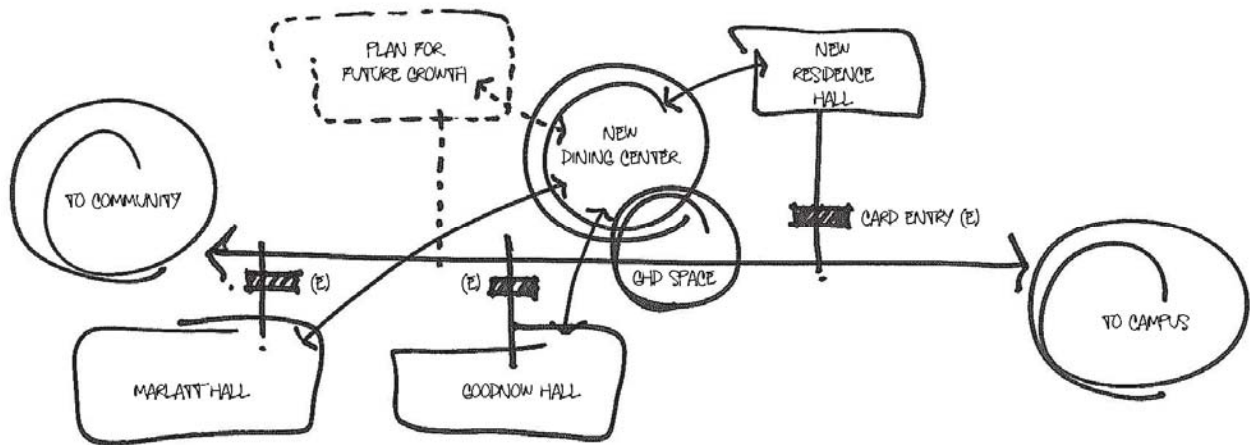
The following section provides bubble relationship diagrams for various spaces, areas, and uses as examined through analysis of existing facilities and trends in student life spaces. This is not exhaustive of all spaces or possibilities and was used during programming to prioritize needs. These diagrams are provided as a visual tool for guiding the designer in understanding the global organizing principles as well as needs, within individual spaces, that drove the program.

SPACE AND RELATIONSHIP BUBBLE DIAGRAMS

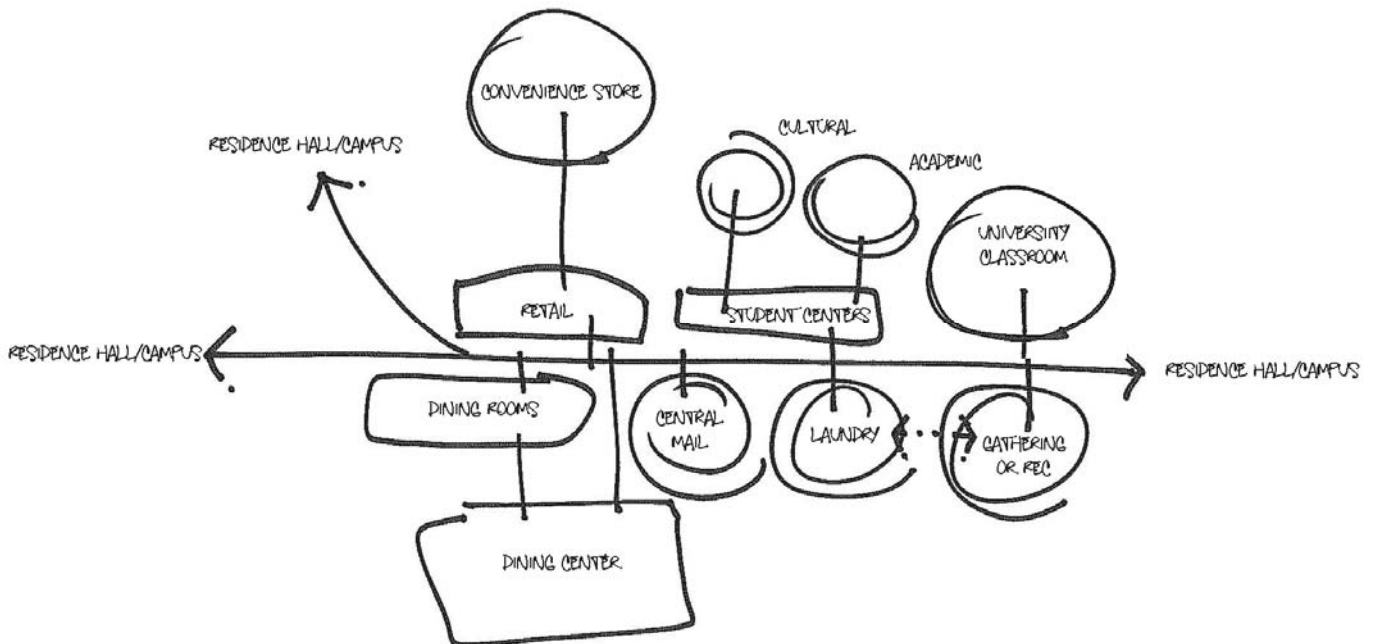
1. Project Concept Diagram



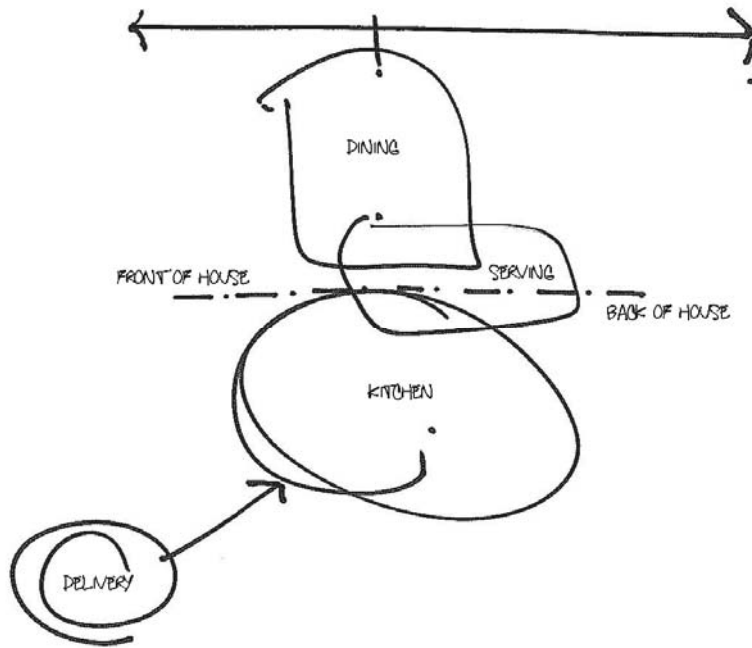
2. Housing Complex Relationship Diagram



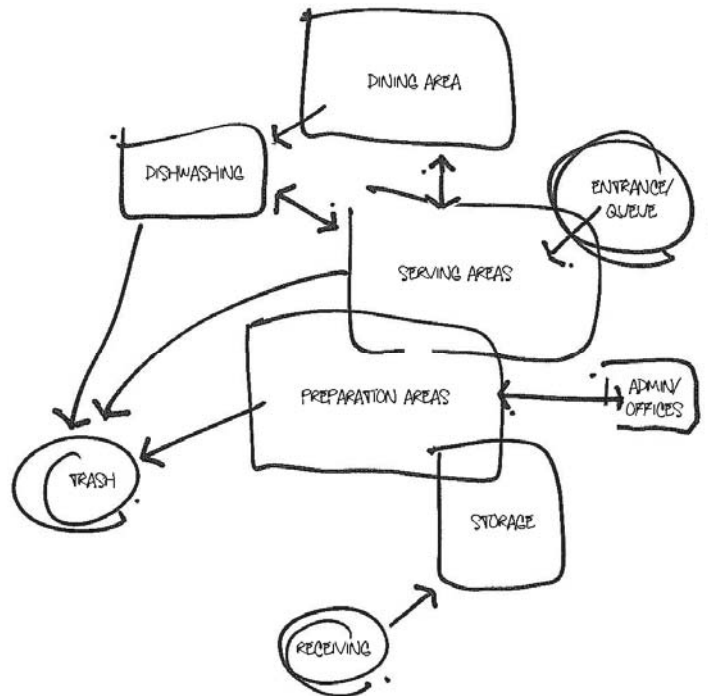
3. Student Life Experience Concept Diagram



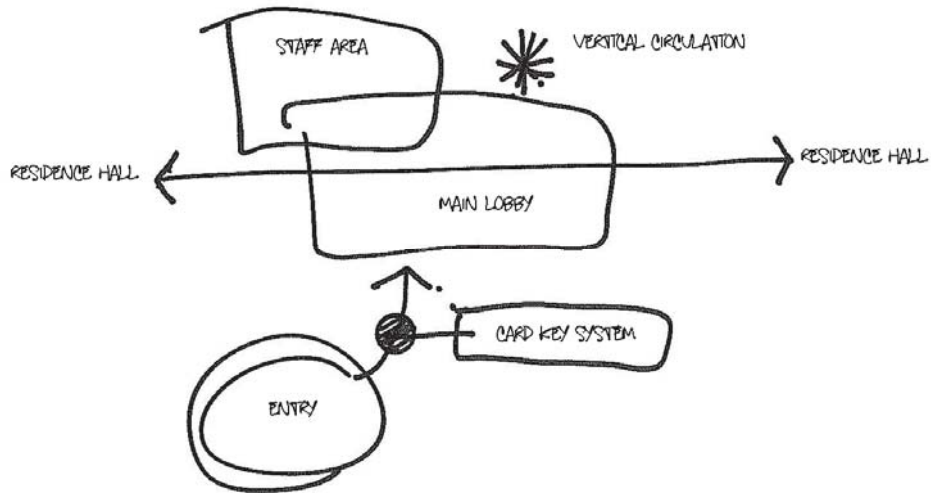
4. Dining Center Concept Diagram



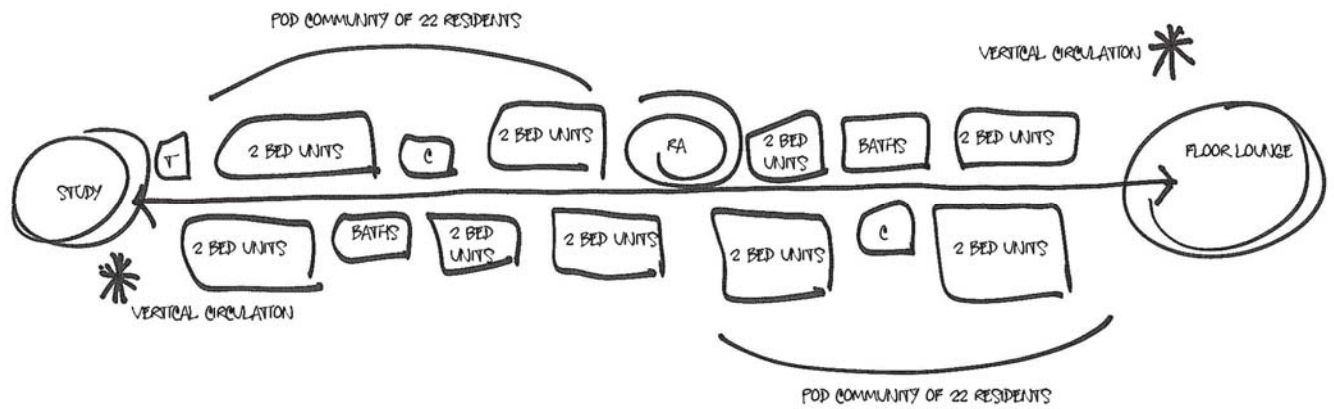
5. Dining Center Flow Diagram



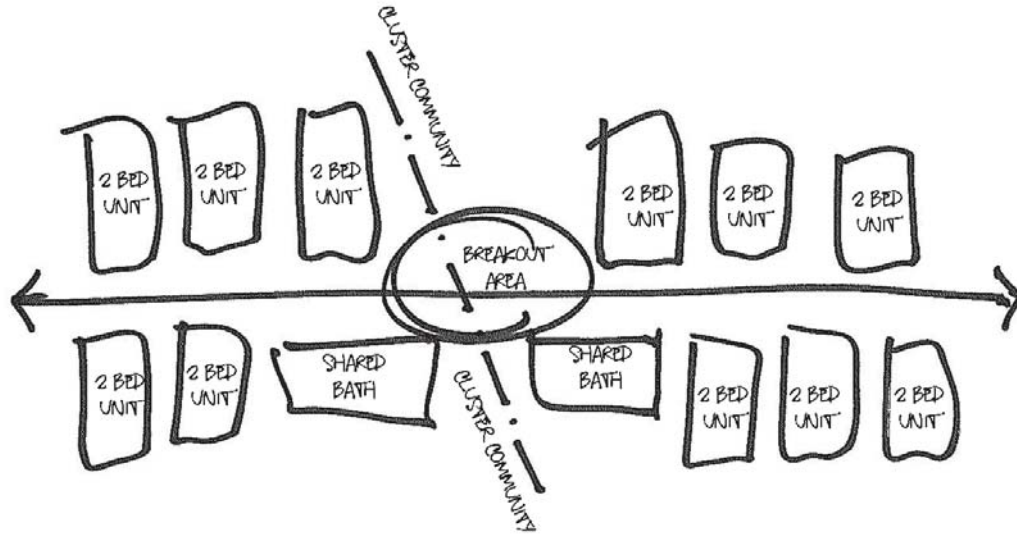
6. Residence Hall Main Lobby Concept Diagram



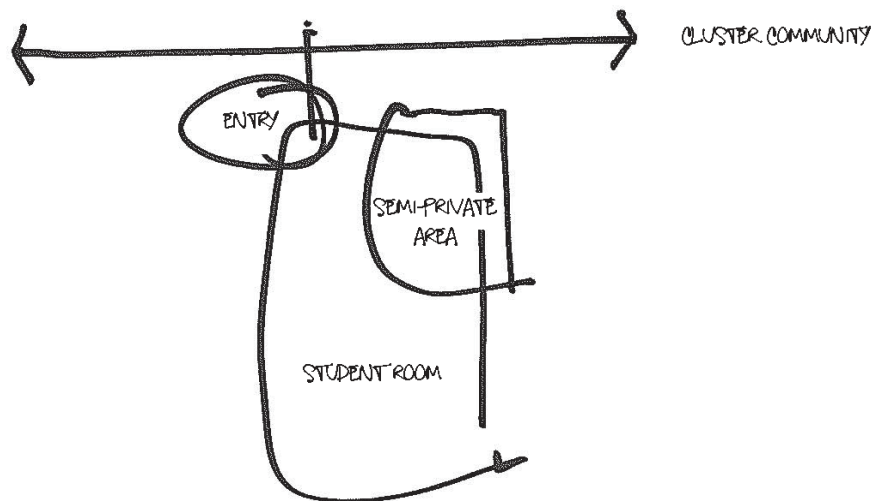
7. RA Community Concept Diagram



8. Pod Community Concept Diagram



9. Student Room Concept Diagram



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Appendix D

The following section provides definitions of building area and definitions of space use codes. This appendix references the Postsecondary Education Facilities Inventory and Classification Manual (FICM) 2006.

The following terms are defined and acronyms associated as used in the preceding text:

Gross Area (GSF)

Gross area is the sum of all areas on all floors of a building included within the outside faces of its exterior walls, including all vertical penetration areas, for circulation and shaft areas that connect one floor to another. This area is computed by physically measuring or scaling measurements from the outside faces of exterior walls, disregarding cornices, pilasters, buttresses, etc., that extend beyond the wall faces. Such area excludes light wells, or portions of upper floors eliminated by spaces or lobbies that rise above single-floor ceiling height.

$GSF = \text{Net Usable Area} + \text{Structural Space}$

Structural Area

Structural area is the difference between the exterior or Gross Area and the interior or Net Usable Area, the floor area upon which the exterior and interior walls sit and the unusable areas in attics and excavated basements.

$\text{Structural Area} = \text{Gross Area} - \text{Net Usable Area}$

Net Usable Area

Net usable area is defined as the aggregate interior area of a building and is the sum of the Assignable Area and Non-assignable area.

$\text{Net Usable Area} = \text{Net Assignable Square Footage} + \text{Non-assignable Area}$

Net Assignable Square Footage (NASF)

Net assignable square feet (NASF) is the sum of floor space within interior walls of rooms that is assigned to, or available for assignment to, occupants for use, excluding non-assignable spaces defined as building service, circulation, mechanical, and structural areas. NASF is determined by Space Use Codes and Functional Category Code data fields. All rooms not specifically excluded are assignable and must be measured and coded according to academic discipline or administrative assignment (CIP), Space Use Codes, and Functional Category Codes. Rooms that are specifically excluded are Non-Assignable Areas. The 10 Major Assignable Space Use Categories are as follows: classrooms, laboratories, offices, study areas, special use space, general use areas, support rooms, health care, residential, and unclassified space.

$\text{Net Assignable Square Footage} = \text{Sum of the 10 major Space Use Categories of Assignable Space}$

Non-Assignable Areas

This space is not assigned directly to support programs but is essential to the operation of the building and not assigned directly to people or programs. The three major space use categories are building service, circulation and mechanical.

Building Service: This includes rooms used for building protection, care, and maintenance, such as custodial closets, trash rooms, guardrooms, custodial locker rooms, and custodial storage/supply rooms. Equipment storage areas are Assignable Areas.

Circulation: This is space that provides physical access to assignable rooms. Included are corridors, public stairways, elevators, escalators, loading platforms, tunnels, bridges, fire towers, etc. Walls do not always bound circulation areas. Exceptions are halls in office suites and similar settings that are used to circulate from room to room and are not general access space. This space is part of the Assignable area.

Mechanical – This includes areas that house mechanical equipment, utility services, and shaft areas. Examples are mechanical service shafts, air ducts, IT closets, mechanical rooms, etc.

Non-assignable Area = Sum of the Three Major Space Use Categories of Non-assignable Space

Space Use Codes

All usable space is designated as assignable or non-assignable and is labeled according to its primary use. These space use codes encompass 13 categories. All assignable space is classified into 1 of the 10 major assignable use categories and all non-assignable space is classified into 1 of the 3 major non-assignable use categories.

Classrooms (100 series): General purpose classrooms, lecture halls, recitation rooms, seminar rooms, and other spaces used primarily for scheduled non-laboratory instruction.

- 110 Classroom
- 115 Classroom Service

Laboratory Facilities (200 series): Not used.

Office Facilities (300 series): Offices and conference rooms specifically assigned to each of the various academic, administrative, and service functions.

- 310 Office
- 315 Office Service
- 350 Conference
- 355 Conference Room Service

Study Facilities (400 series): Study rooms, stacks, open-stack reading rooms, and library processing spaces.

- 400 Study Room
- 420 Stack
- 430 Open-Stack Study Room
- 440 Processing Room
- 455 Study Service

Special Use Facilities (500 series): Military training rooms, athletic and physical education spaces, media production rooms, clinics, demonstration areas, field buildings, animal quarters, greenhouses, and other room categories that are sufficiently specialized in their primary activity or function to merit a unique room code.

- 530 Media Production
- 535 Media Production Service
- 550 Demonstration
- 555 Demonstration Service
- 590 Other (All Purpose)

General Use Facilities (600 series): Assembly rooms, exhibition space, food facilities, lounges, merchandise facilities, recreational facilities, meeting rooms, child and adult care rooms, and other facilities that are characterized by a broader availability to faculty, students, staff, or the public than are special use areas.

- 610 Assembly
- 615 Assembly Service
- 620 Exhibition
- 625 Exhibition Service
- 630 Food Service
- 635 Food Facility Service
- 640 Day Care
- 645 Day Care Service
- 650 Lounge
- 655 Lounge Services
- 660 Merchandising
- 665 Merchandising Services
- 670 Recreation
- 675 Recreation Services
- 680 Meeting Room
- 685 Meeting Room Service

Support Facilities (700 series): Computing facilities, shops, central storage areas, vehicle storage areas, and central service space that provide centralized support for the facility.

- 710 Central Computer or Telecommunications
- 715 Central Computer or Telecommunications Service
- 720 Shop
- 725 Shop Service
- 730 Central Storage
- 735 Central Storage Service
- 740 Vehicle Storage
- 745 Vehicle Storage Service
- 750 Central Service
- 755 Central Service Support
- 760 Hazardous Materials Storage
- 770 Hazardous Waste Storage
- 775 Hazardous Waste Service
- 780 Unit Storage

Health Care Facilities (800 series): Not Used.

Residential Facilities (900 series): Housing facilities for students, faculty, staff, and visitors to the campus.

- 910 Sleep/Study Without Toilet or Bath
- 919 Toilet or Bath
- 920 Sleep/Study With Toilet or Bath
- 935 Sleep/Study Service
- 950 Apartment
- 955 Apartment Services
- 970 House

Unclassified (000 series): Spaces available for assignment, temporarily out of use due to remodeling, or potentially assignable such as in new buildings or shell space.

- 050 Inactive Area
- 060 Alteration or Conversion Area
- 070 Unfinished Area

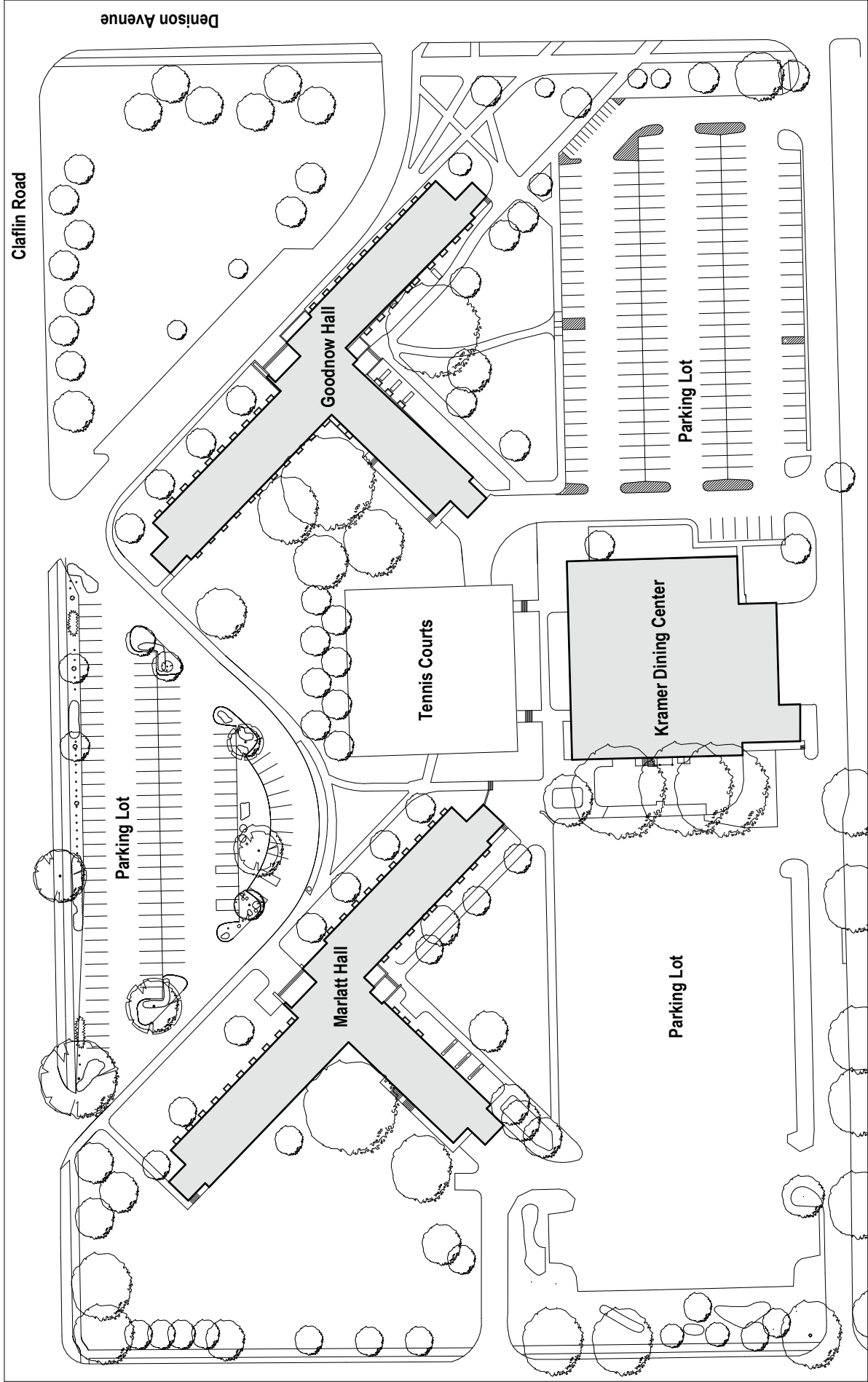
Nonassignable Area (WWW, XXX, and YYY series): Nonassignable spaces used to support building services, circulation, and mechanical area.

- W01 Bridge/Tunnel
- W02 Elevator
- W03 Escalator
- W04 Loading Dock
- W05 Lobby
- W06 Public Corridor
- W07 Stairway
- X01 Custodial Supply Closet
- X02 Janitor Room
- X03 Public Restroom
- X04 Trash Room
- Y01 Central Utility Plant
- Y02 Fuel Room
- Y03 Shaft
- Y04 Utility/Mechanical Space

Appendix E

As pressing demands for growth continue to impact the University, campus wide master planning will continue to organize future construction. Areas for circulation, parking, utilities infrastructure, and university buildings will continue to play an important role in this planning effort. The areas proposed in the concept design are sensitive to University master planning issues and have been generally approved through consensus as appropriate for Housing and Dining Services Facility needs. Early evaluations of the site have revealed limitations in placement of the building expansion massing. The following diagrams serve as a graphic means to communicate the observations made at the time this program was developed and are intended to portray site limitations, opportunities, and constraints relevant to this project.

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May 29, 2013



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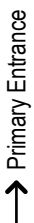
Diagram Key



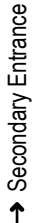
Tree



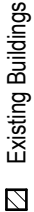
Sun Path



Primary Entrance



Secondary Entrance

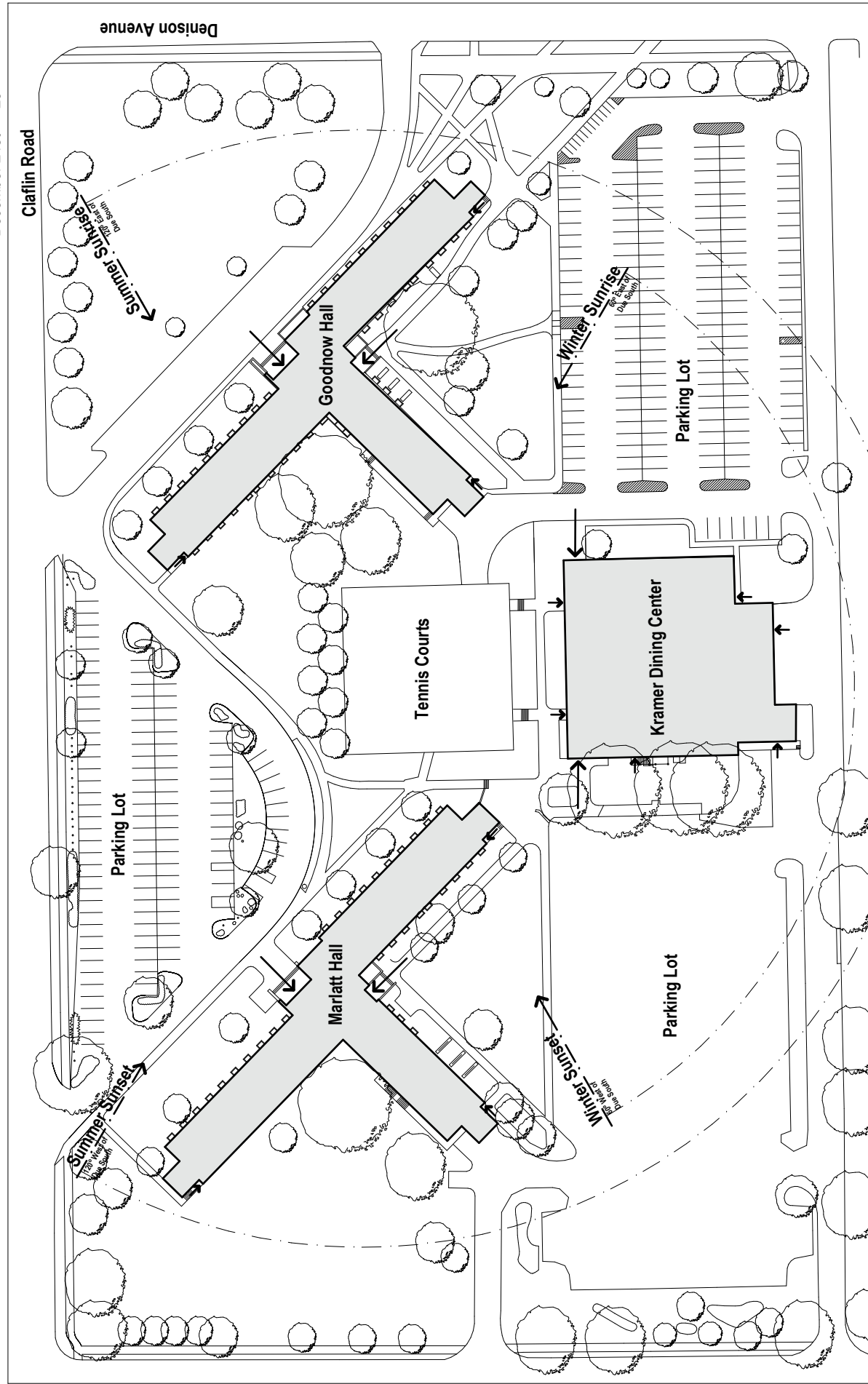


Existing Buildings

Sun Altitude Calculation

June 21st = 73°

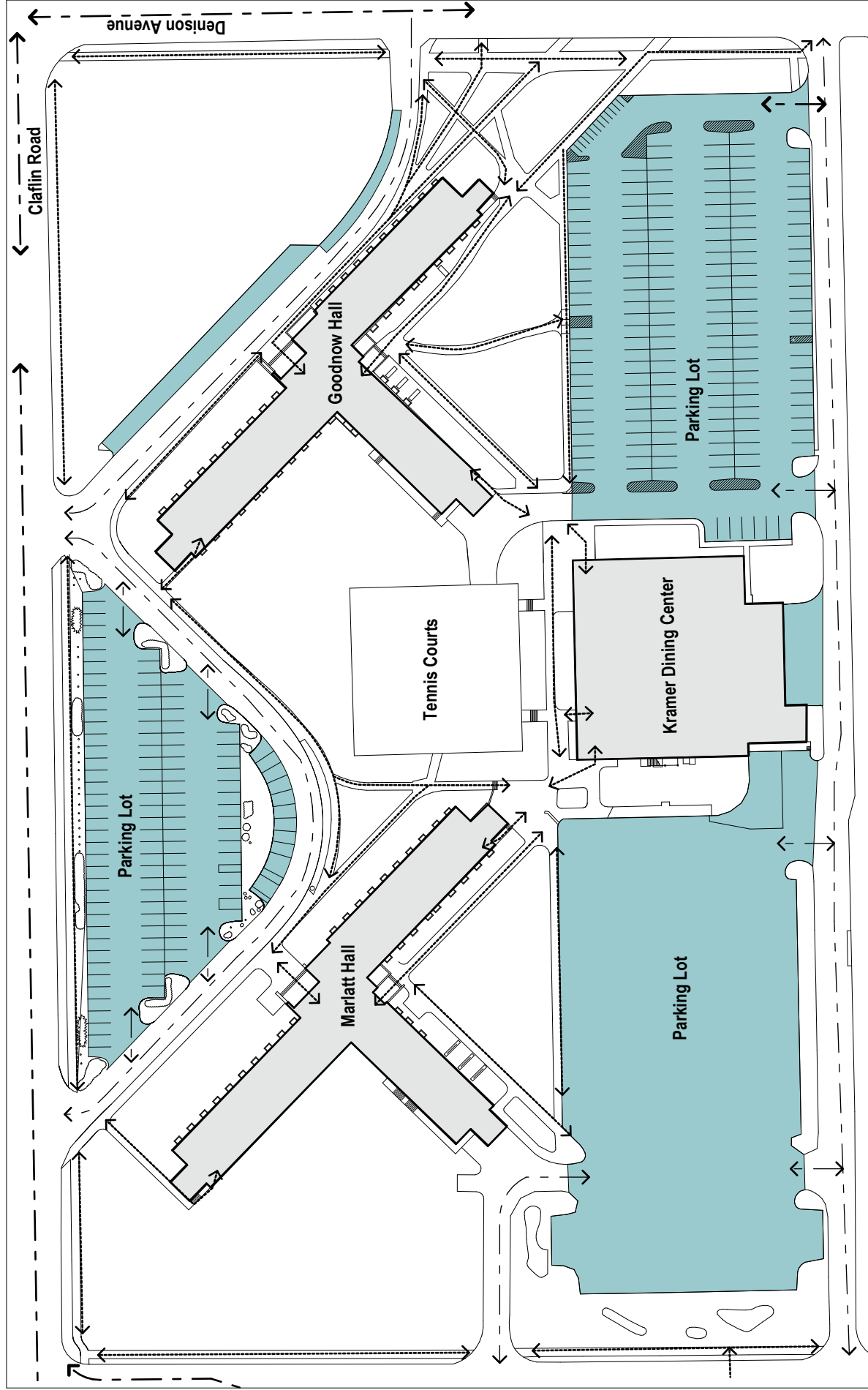
December 21st = 28°



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Diagram Key

- Light Vehicle Traffic
- Pedestrian Traffic
- Vehicle Traffic
- █ Proposed Building
- █ Parking
- █ Existing Buildings



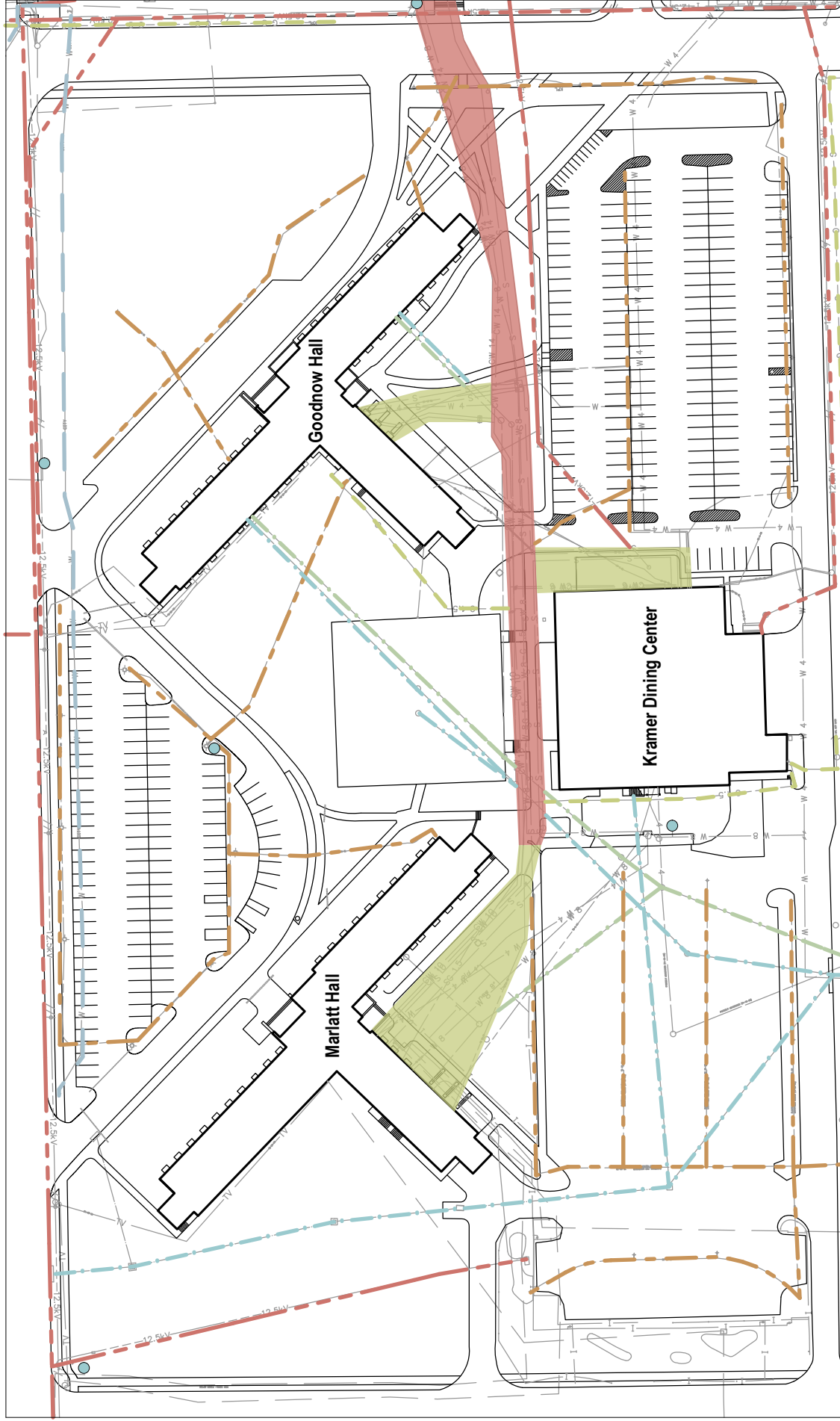
May 29, 2013



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Diagram Key

- Major Utility Corridor
- Specific Building Utility Corridor
- High Voltage Electrical
- Overhead Power Lines
- Street Light Power Lines
- Sanitary Sewer
- Storm Water
- City Water
- Gas
- Data and Communications
- Fire Hydrant



May 29, 2013