



UNIVERSITY OF ALABAMA
**SOUTH CAMPUS
RESIDENTIAL
DEVELOPMENT**
SEPTEMBER 2016



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SECTION 01.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The recommendation for new Tutwiler Residence Hall is to greatly improve the framework of student communities within a much larger physical organization that will be implemented through phased development in the South Campus Residential Development. Since February 2016, Perkins+Will collaborated with the Steering Committee for the Project at the University of Alabama to create a feasible strategy. This report provides the comprehensive summary of the Programming, Planning, and Pre-Schematic phases and should be used as the reference document for the Project.

Undergraduate residential life on campus is trending toward more community-style living for first year students. The first year experience is incredibly important to develop a communal framework that relates to the mission of student life.

Community living provides opportunities for students to form new relationships and encounter social challenges that assist in personal growth and development. This strategic mission is at the core principal of the overall programming and planning for the project. First year communities tend to provide more common and amenity space while providing shared bedrooms - encouraging students to spend the majority of their time with students in social or collaborative experiences.

The site for the new South Campus Residential Development at the University of Alabama is the site of the current Tutwiler Hall and abuts Bryant-Denny Stadium and Sorority Row. This location and these relationships will play a major role in the massing and design of the new residential hall.

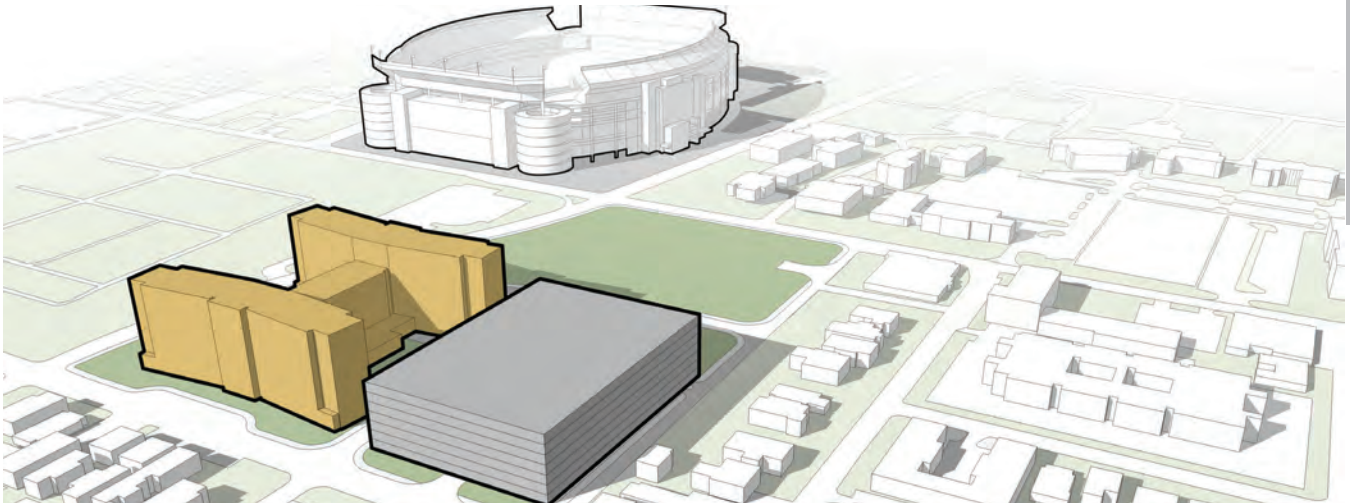
The process for this study has spanned a period of six months with six design workshops since early 2016. The Steering Committee from the university led the outcomes of the process with discussion and input from key stakeholders. The process included assessing the quantitative program needs, the development of a residential 'neighborhood',

workshops with students and site utilization analysis - leading to final recommendations for the project. Prior to this study, the university completed a *Student Housing Master Plan* by Brailsford & Dunlavey in February 2015 that recommended strategies for increasing housing on campus. These recommendations provided the foundation to consider redeveloping the site of the current Tutwiler Hall.

The recommendation from the study, based partly on significant increase in student enrollment rate, is to fully redevelop the Tutwiler property on south campus to increase undergraduate residential capacity to nearly 1600 beds, increase parking to 1600 spaces, and provide for future development of sorority houses or other uses as determined by the university.

The current Tutwiler Hall is the home to nearly 1,000 female undergraduate students, most of whom are affiliated with the surrounding sororities. While Tutwiler is organized to promote community-style living or neighborhoods, the site usage, neighborhood development, and deferred maintenance of the 40-year old building are factors that have recommended the redevelopment of the site for greater long-term value.

To accommodate the recommended concept without displacing residents of the existing Tutwiler Hall, the site development will be phased. This strategy allows for development without losing bed or parking capacity. For that reason, the new parking structure is best located in the southeast, the only available space of magnitude to accommodate structured parking in the first phase. As the second phase, the new residential hall will then be located



on the site of the current surface parking, in the southeast portion of the site. After these two major components of the site are developed, the existing Tutwiler Hall will be demolished and the north edge along Paul Bryant Drive will be made available for development of future sorority houses as subsequent phases.

Massing strategy for the new tower directly relates to the height of Bryant-Denny Stadium, whose height is not to be exceeded, but views into the stadium are encouraged. The mass comprises of two dominant towers connected by a lower cross-bar neighborhood. This concept was developed in response to program needs and flow of the residential 'neighborhoods'.

The linear form of the two dominant towers will be rotated slightly to reduce visual impact. The cross-bar will be maintained at a mid-rise height to provide massing interest and maintain it's individual identity, reflecting the uniqueness of the program it houses. The ground level 'podium' will be taller than the residential floors above, providing a foundation and base for the towers. The residential tower will be connected to the adjacent parking structure by a covered bridge on the second level (Level02).

The physical organization is fundamentally based several factors, one of the prime factors being the size of the neighborhoods, and a desire to not have neighborhoods become 'pass-throughs' for residents to access amenities.

Each neighborhood has internal washrooms within the building core to maximize perimeter glazing opportunities by bedrooms and common areas. Central social spaces and vertical circulation cores are located where neighborhoods abut as a larger social destination; while more private 'living rooms' and gathering spaces are located within each neighborhood.

The program was developed to primarily identify the size and support spaces for neighborhoods. The neighborhoods are programmed for 37 students with the exception of the cross-bar floors that have 48 beds. The majority of neighborhoods are assigned one residential advisor (RA) while cross-bar neighborhoods are assigned two RAs each.

The ground level (Level01) has one major entry, two loading and service docks, and is a mixed use hub for students. Program spaces are a combination of lounge and common spaces; administrative offices and support spaces for the Housing and Residential Communities (HRC) division of Student Affairs; an expanded version of the existing market and deli called Julia's Market; a large multipurpose room which will also serve as a storm shelter; a fitness center catering to the residents; administrative apartments; and support spaces for the building at large.

PROJECT TEAM / CLIENT TEAM

STEERING COMMITTEE

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Structural Design Group, Inc.



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PROGRAMMING AND
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PHYSICAL
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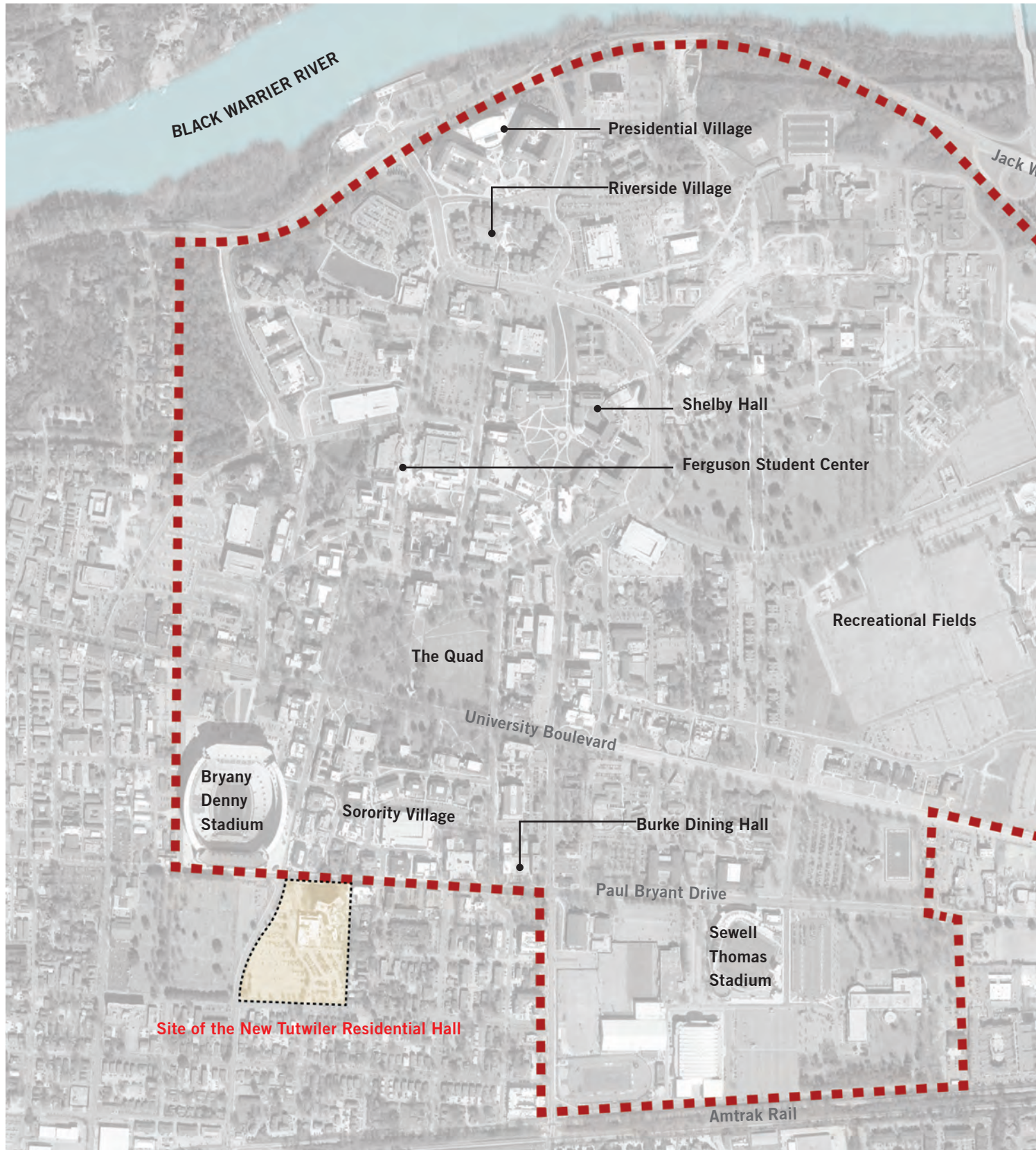
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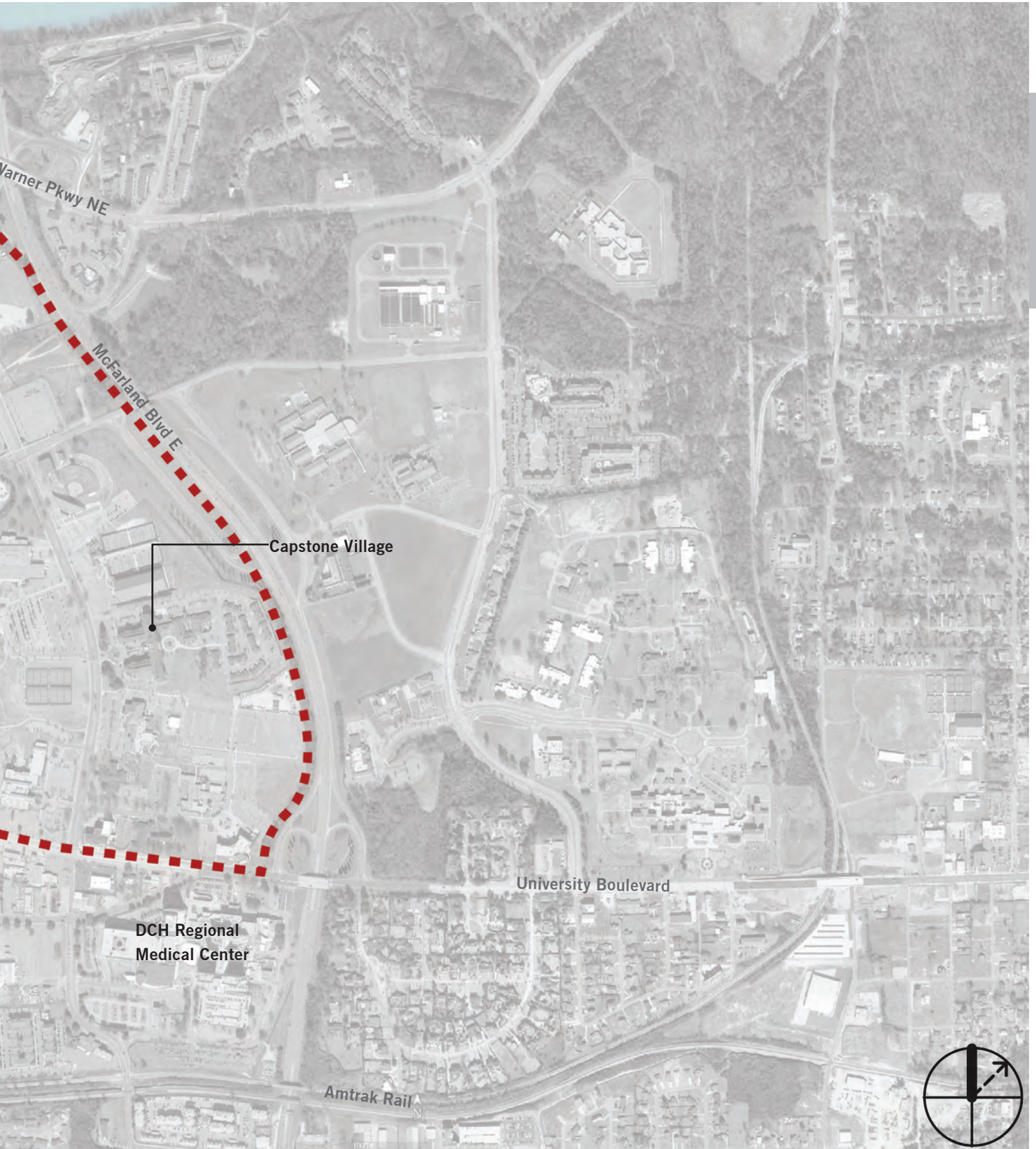
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APPENDIX

SECTION 02.

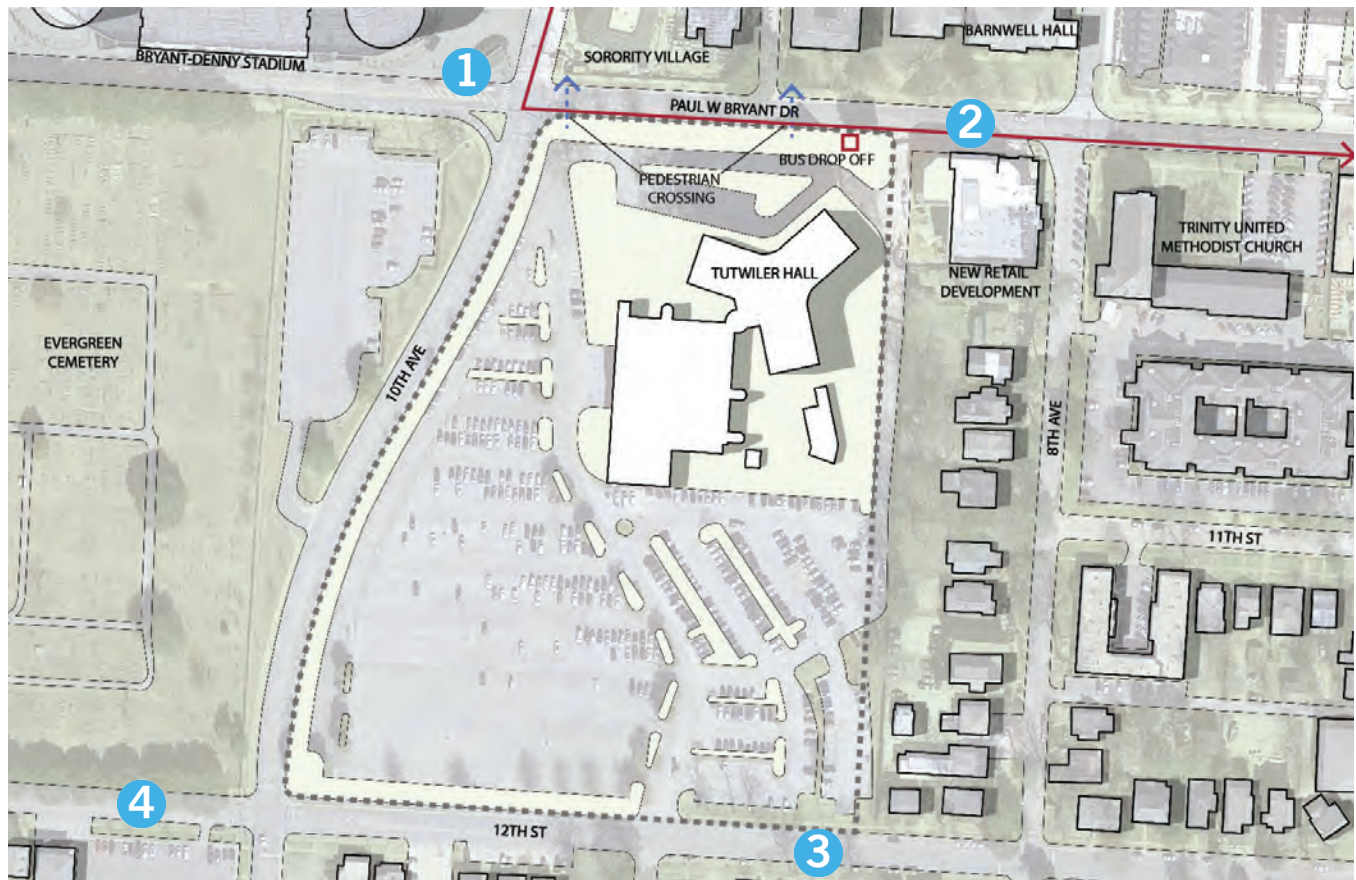
SITE CONTEXT AND CONCEPT

EXISTING CONDITIONS / SITE CONTEXT





EXISTING CONDITIONS / SITE



Existing Conditions



The site for the new Tutwiler Residential Hall is located in the southwest quadrant of campus. The north edge of the site is bounded by Paul Bryant Drive with Bryant-Denny Stadium to the northwest. Smaller scale private residential properties line the eastern boundary along 8th Avenue as well as to the South along 12th Street, and Evergreen Cemetery is located to the immediate West along 10th Avenue. There is an insignificant amount of slope from the Northeast corner of the site to the Southwest corner of the site which should allow for full building access from all directions.

The current Julia Tutwiler Hall resides on the northwest corner in clear view of the stadium with much of the support spaces expanding to the Southwest as one-story building mass. The large surface parking lot in the southwest area of the site serves the residents of Tutwiler hall and provides approximately 1,000 spaces.

Present-day policy requires the residents to vacate the parking area on football game days to open the area for tailgating activities. Significant pedestrian travel occurs to the North of the site as female residents make their way to the many sorority houses that abut the site. Current mid-street crossings are frequent toward Magnolia Drive and represent a significant safety concern.

As such, the new site design should encourage pedestrian traffic to the North of the site at controlled points where traffic semaphores and cross walks occur.

EXISTING CONDITIONS / SITE



Street View from NorthWest Corner / Paul Bryant Drive & 10th Avenue



Street View from SouthEast Corner / 12th Street



Street View from NorthEast Corner / Paul Bryant Drive



Street View from SouthWest Corner / 12th Street & 10th Avenue

The cemetery to the west is a significant landmark on campus but should not be considered a driver for planning within the housing development. The proximity to Bryant-Denny Stadium represents an important relationship and views toward the stadium are considered desirable.

Planning approaches are recommended to maximize possible stadium views while taking solar orientation into consideration. Parking should be contained within the site at a ratio of 1 parking space per bed within the residential building. This quantity of parking will require structured parking to be part of the final solution, ideally developed as an above grade structure and should be completely detached from the housing building.

Current campus bus routes travel southward along 10th Avenue and turn to the west along Paul W Bryant Drive. Development of site access points within the housing development should take into consideration present and planned bus drop-off locations around the site perimeter.

Privately owned retail development has been recently completed in the future at the northwest corner along 8th Avenue and will provide an important anchor to the revitalized housing development while encouraging pedestrian traffic in the correct locations.

EXISTING CONDITIONS / TUTWILER HALL



Aerial view of Brant-Denny Stadium with Tutwiler Hall



West access to Tutwiler Hall



Existing Tutwiler Hall



Main Entrance



Outdoor courtyard

EXISTING CONDITIONS / TUTWILER HALL



Front Desk



Laundry



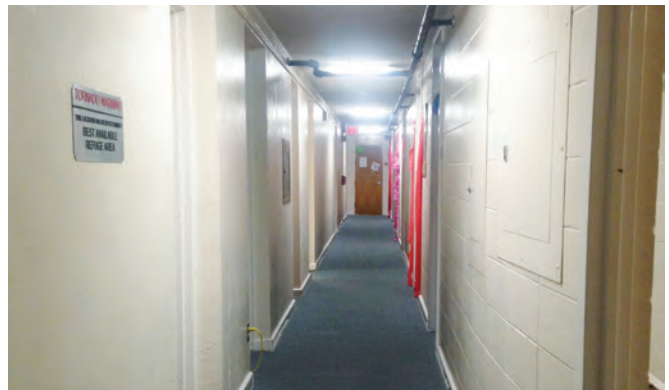
Common area/lounge/study



Julia's Market



Interior view of double bedroom



Hallway residential community

SITE CONCEPT STUDIES

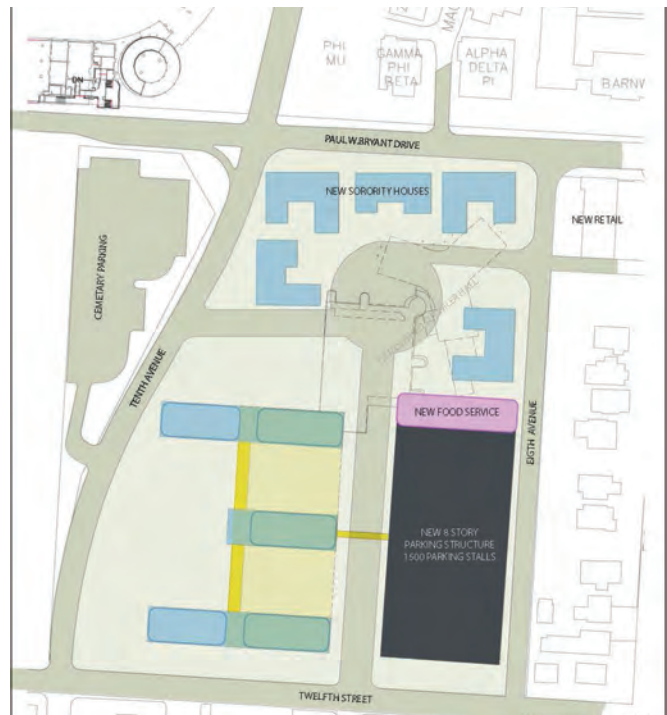
The site boundary is fixed by the perimeter roads on the south edge of campus. Within the boundary, the options for development of the site utilization, orientation, and massing are not limited even though the area for the main tower is confined to the southwest corner. Through the planning process multiple concepts were studied to determine the best fit for the program, the building size, and the use of outdoor space.

Through these studies, several key principles were identified:

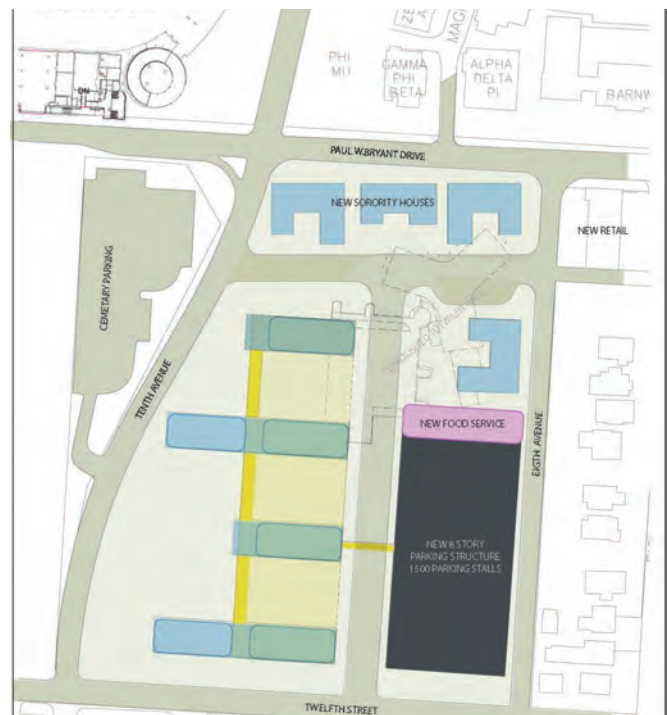
- The dominant edge of the tower bars should face the stadium
- The building footprint should be as efficient as possible
- The building footprint should provide as much additional site capacity to the north as possible
- The neighborhoods should have as few pass-through conditions as possible
- The racetrack footprint for neighborhoods in lieu of double-loaded corridors best utilizes the site width and length

Of the site studies, the concepts primarily focused on either a series of bars, bends, or courtyards. The linear bars suggest maintaining ground level passage through the main residence towers. The plan organizations that bend in form begin to suggest enclosing space, creating outdoor rooms. Courtyard concepts are easily understood, and sometimes define a very internal-based community.

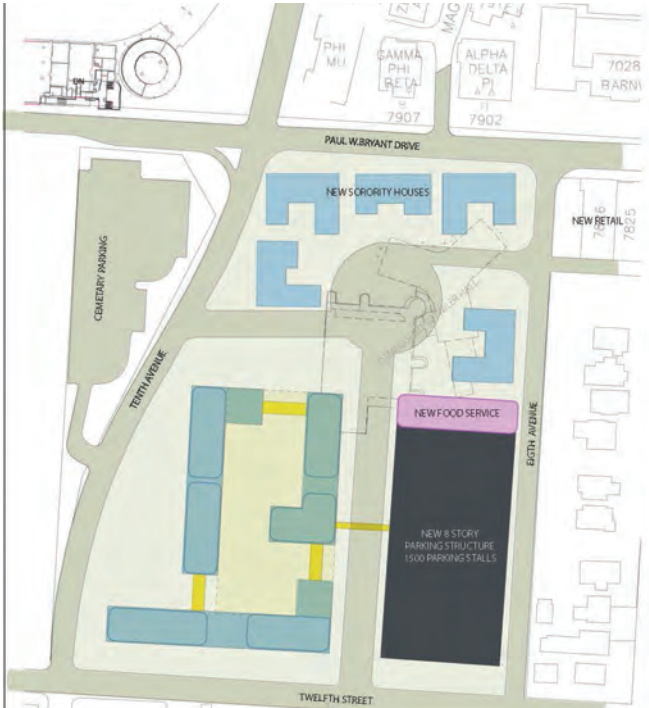
The direction that was suggested for further development locates the outdoor common space as being less insular than the courtyard concepts that exist in some of the recent residential developments on north campus. This site planning approach aligns with the vision of community neighborhoods that are openly integrated with the campus-at-large.



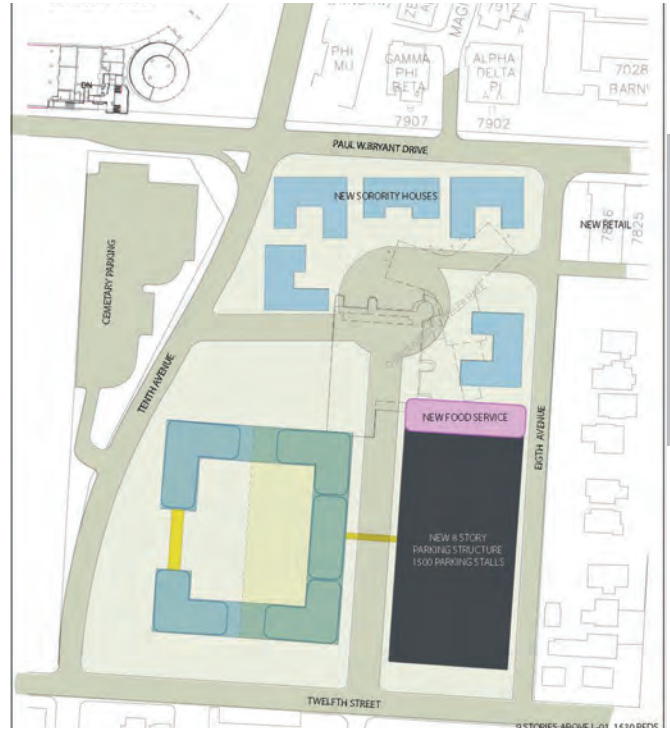
Concept 01a: Three Bars



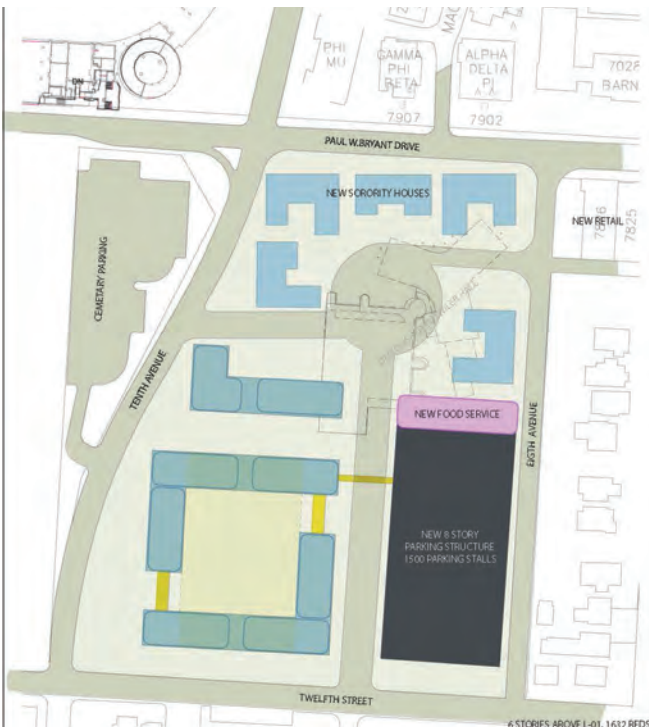
Concept 01b: Four Bars



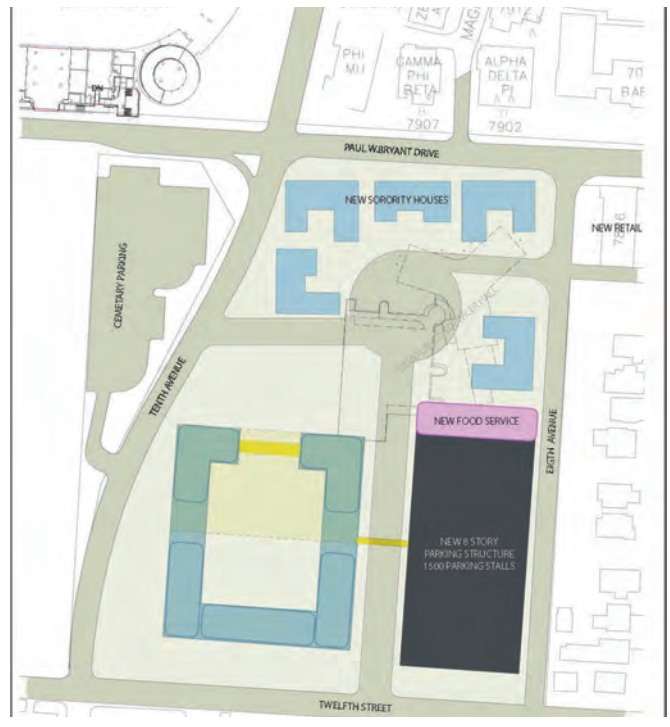
Concept 02a: Bends



Concept 03a: Courtyard West

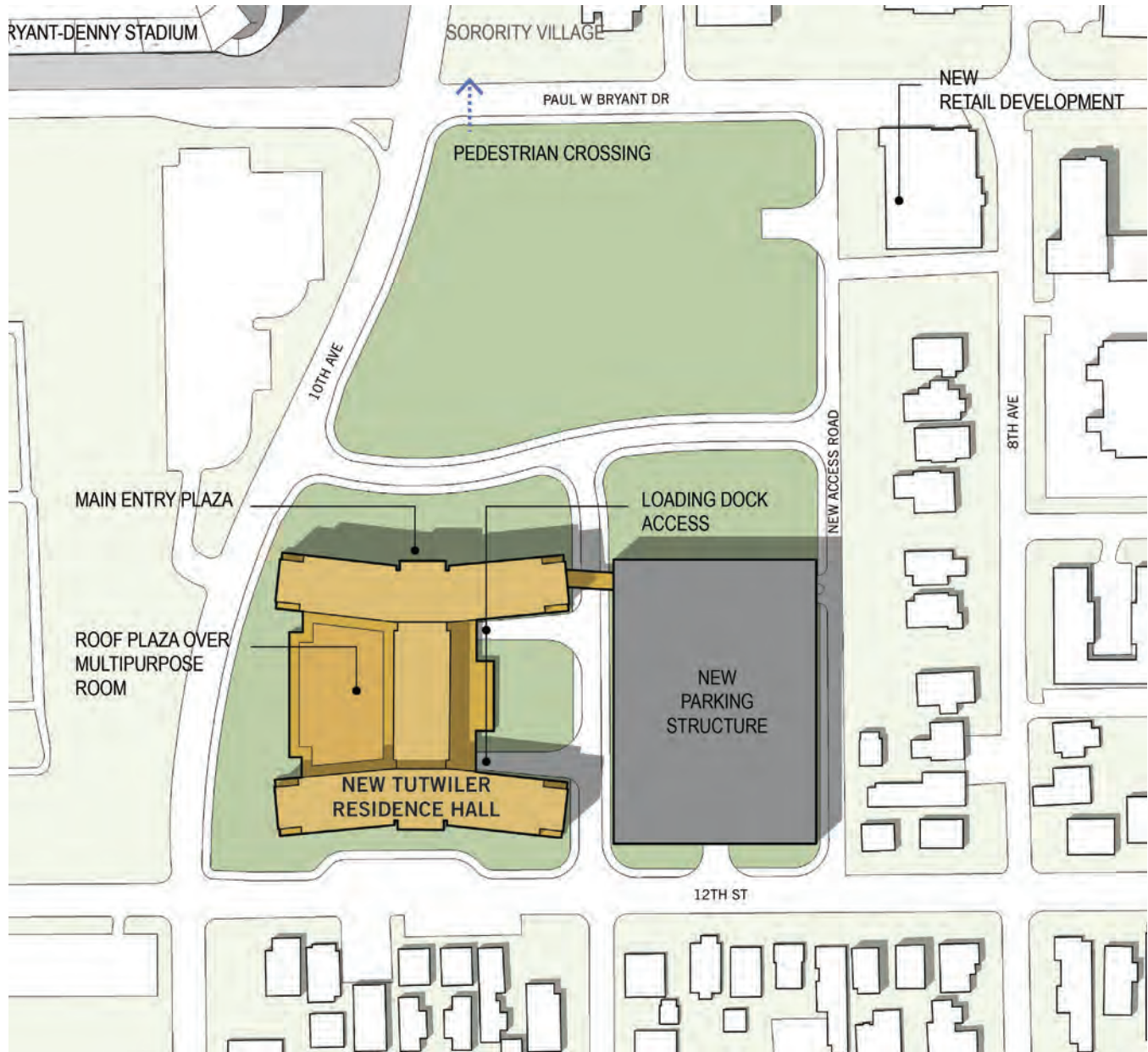


Concept 02b: Bends

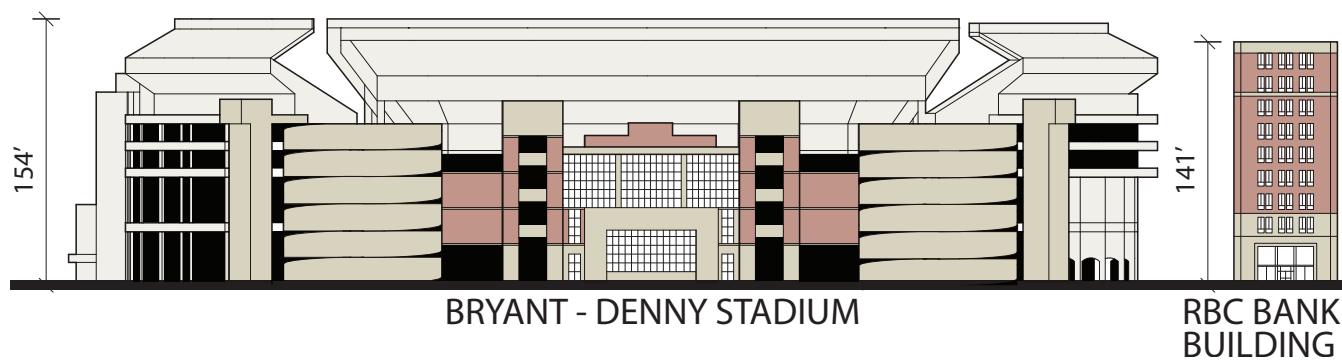


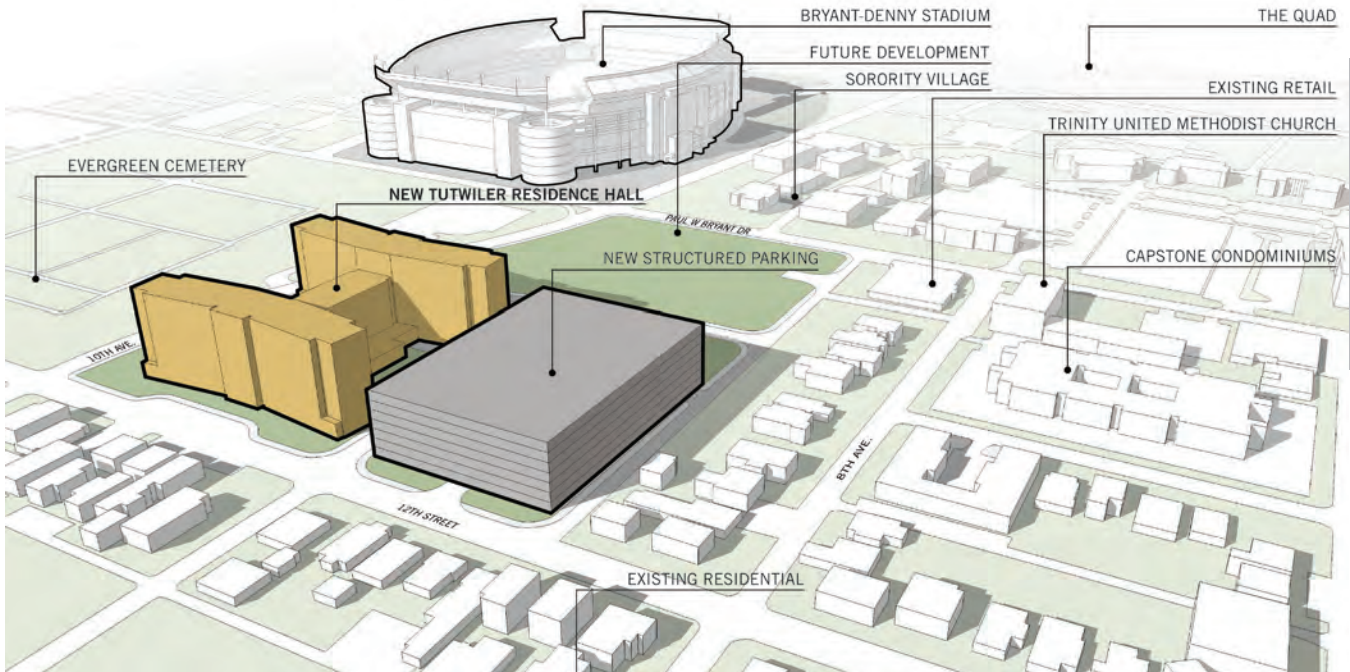
Concept 03b: Courtyard North

RECOMMENDED CONCEPT



Final Recommended Site Concept



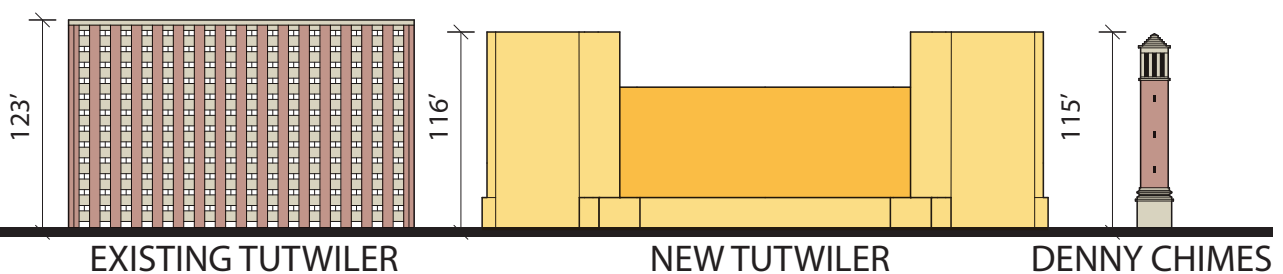


Southeast perspective view showing final recommended concept

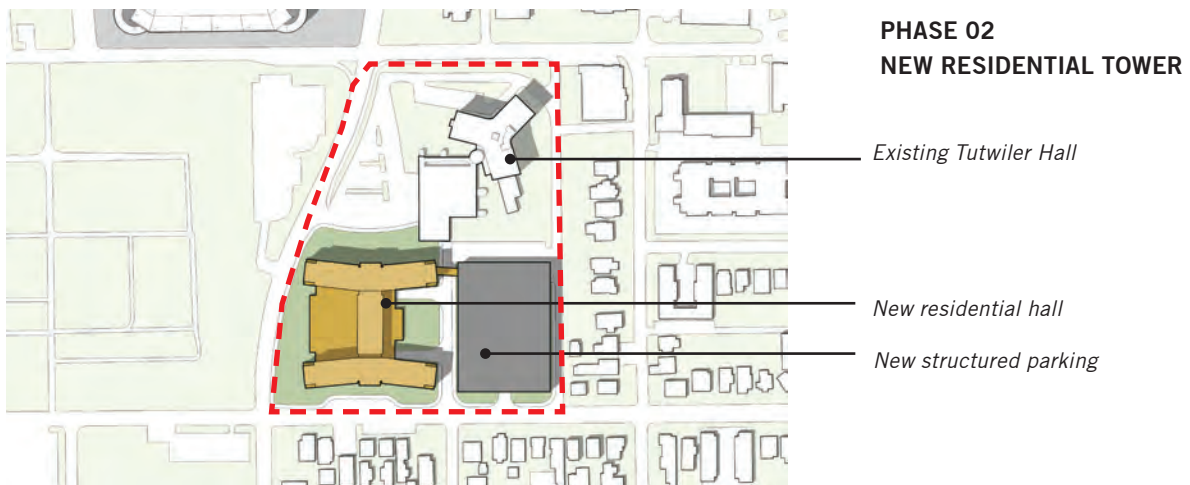
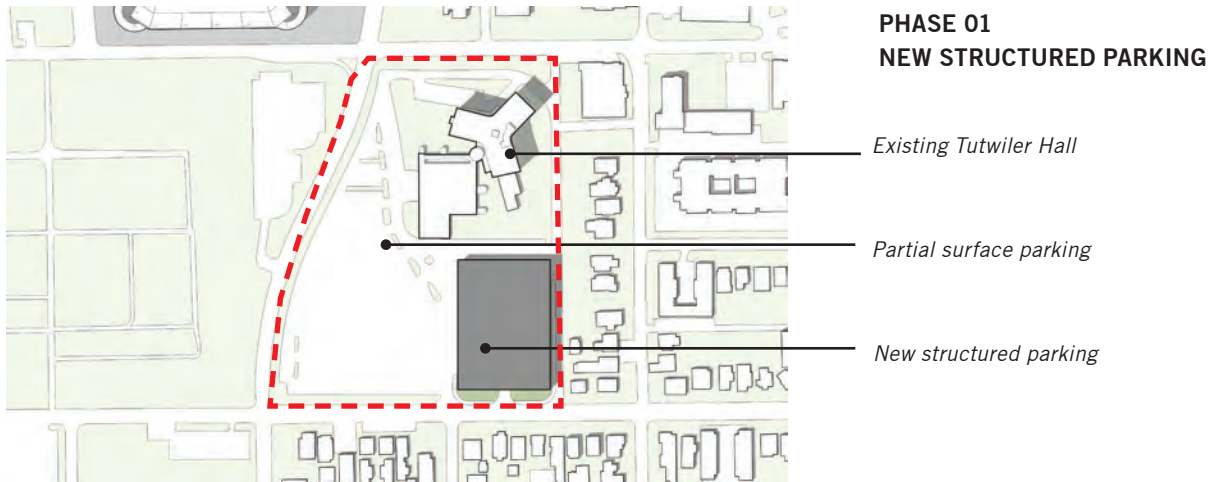
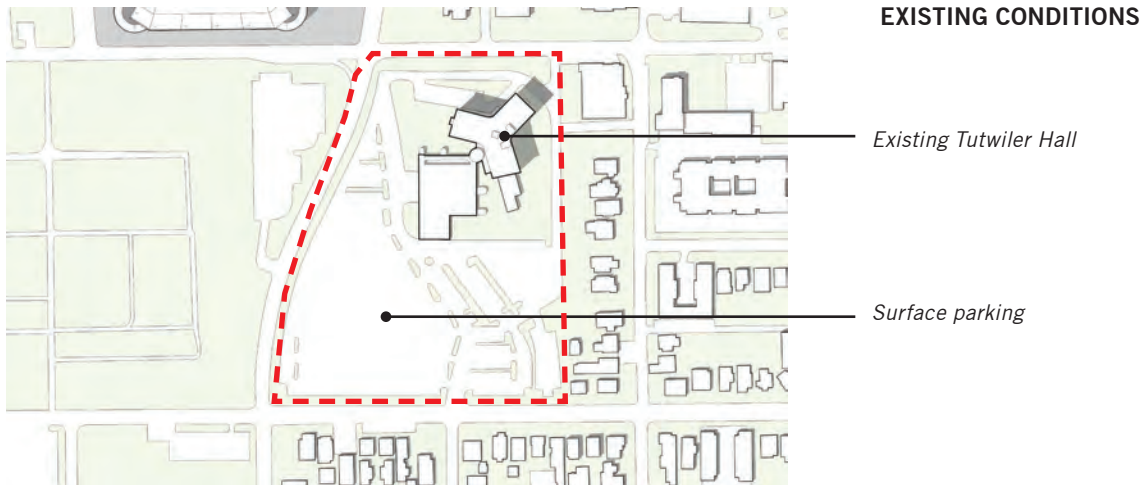
The New Tutwiler Residence Hall will need to be located on the southwest quadrant of the site, primarily to allow for the appropriate location of the parking structure while allowing Julia Tutwiler Hall to remain inhabitable during construction. The northern edge of the site lends itself well to development of future sorority houses which would be proximal the existing stock of sorority houses along “sorority row” to the north of Paul W Bryant Drive.

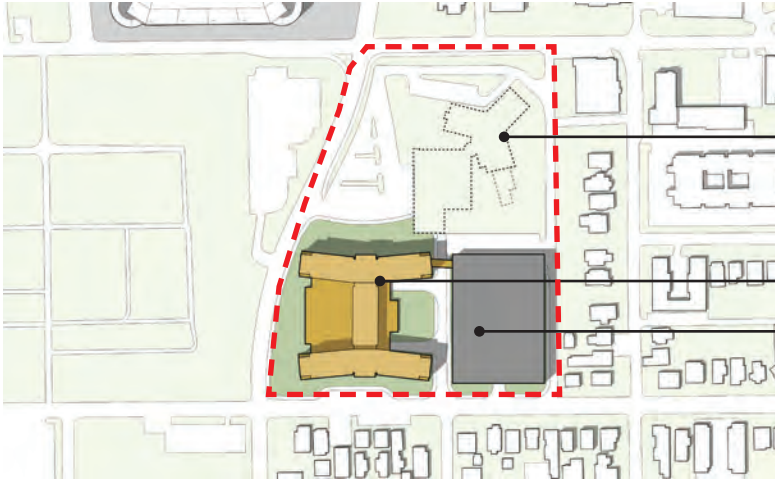
The final concept is therefore developed around a maximum height that does not exceed the top level of seating of the stadium. In order to continue the ease with which move-in day is handled, a large outdoor courtyard to the north should be designed to accommodate vehicle traffic at times. The courtyard should be designed in such a way to make it a useful amenity to students for both leisurely gatherings as well as officially programmed events.

The University of Alabama has a rich tradition of football culture and game day celebration, making Bryant-Denny Stadium a prominent landmark on the campus. The height of the new housing building should strive not to compete with the football stadium in height.



PHASED IMPLEMENTATION





PHASE 03 DEMOLITION OF EXISTING TUTWILER HALL

Demolition of Tutwiler Hall

New residential hall

New structured parking



PHASE 04 NEW TRANSIT LOOP AND PLAZA

New transit loop

New entry plaza

New residential hall

New structured parking



FINAL IMPLEMENTATION

SECTION 03.

PROGRAMMING AND PLANNING CONCEPTS

SPACE NEEDS ASSESSMENT

The New Tutwiler Residence Hall space program was derived from a combination of focus groups with University of Alabama stakeholders and Perkins+Will industry benchmarks

The quantitative program for the study was developed based on the findings of the 2015 *Student Housing Master Plan*, specific neighborhood-influenced relationships, and common spaces for the micro and macro scale of the project. The process of program development in a workshop environment that included direct dialogue with the Steering Committee and select stakeholders, and an iterative relationship to the plan development. Several key steps were purposely discussed:

- Assess residential unit typology options
- Assess and confirm the desired benchmark of space per bed
- Determine the Student:RA ratio, and the preferred RA unit relationship to student rooms
- Recommend types and sizes of common space programs
- Provide a comprehensive itemized space program

The outcome of the 2015 *Student Housing Master Plan* recommended that community-style living be expanded on campus, directly relating to the desire for neighborhoods that are scaled to thirty to forty (30-40) students. Each neighborhood is overseen by a Residential Advisor (RA). The student neighborhoods have an oversight structure within the building, including four Community Directors, an Area Director, and a Faculty-In-Residence. These six (6) leadership positions are housed on a lower level of the tower.

The neighborhoods are programmed to have Double-Occupancy rooms with lavatories; RA units are Single-Occupancy, with a water closet and a lavatory. The thirty-five (35) typical neighborhoods in the plan that form the majority of the project each have a neighborhood size of 37 students, and the six (6) “cross-bar” component of the plans that connect to the end-bars have neighborhoods of thirty-nine 48 students. These forty-one (41) total neighborhoods total a maximum capacity of 1,583 beds in the new development. These spaces are organized in a race-track plan intended to reduce the overall length of the corridor.

Within each neighborhood are individual washrooms, group study rooms, smaller corridor lounges and an open Living

Room style common space. These Living Rooms are located at the end of the neighborhoods in the typical neighborhood and in the cross-bars they are centrally located. In the typical neighborhood, these Living Rooms can be architecturally modified in form and materiality to differentiate design to align with its more engaging and social purpose.

In addition to Living Rooms, these neighborhoods have common ground through Social Kitchens, Laundry Rooms, and interconnecting stairs. Every two levels of neighborhoods are linked with an open stair that is intended to vertically connect communities. The value in these stair connections is important to the social framework in large-scale, high rise residence halls.

At the ground level are several differing program needs for the building and the campus. The Main Lounge can be at the north entry which will likely be the prime point of approach by students. Offices for Housing and Residential Communities can be adjacent to the entry, along with the Front Desk and the COP Office. Julia’s Market will remain on the site, and it will increase in size and capacity. Adjacent to the Market will be an outdoor plaza to maintain the ability to provide seating and programming options. A Classroom, a Music Practice Room, and a Paint Room will also be programmed on the ground level.

The largest singular space is a new Multipurpose Room that is sized for 400 seats in lecture style. Coupled with a Prefunction space and Storage space for tables and chairs, the Multipurpose space will provide the campus with an incredible resource for events. In addition to meeting the program needs for meetings and events, the Multipurpose Room can also provide the Storm Shelter requirement for the building which is a significant benefit.

Service spaces for the ground level will include the Mail Package Center, Central Custodial Rooms, Central Recycling and Waste locations, Bike Storage, Service Docks, and General StPorage space.

PROGRAM SUMMARY

Code	Program		Total NSF	Efficiency Factor	Program GSF
1.00	STUDENT RESIDENCE FLOORS	# of beds - 1,583	234,391	1.70	398,465
2.00	ADMINISTRATIVE RESIDENCES		7,800	1.70	13,260
3.00	GROUND LEVEL COMMONS		31,510	1.70	53,567
4.00	STAFF		4,097	1.70	6,965
5.00	SERVICES		18,390	1.70	31,263
TOTAL NET SQUARE FEET			296,188		
Assignable to Gross Efficiency:				1.70	
TOTAL GROSS SQUARE FEET:					504,430
GSF/Bed					319

Definitions	
Code	Letter / number reference for space groupings / individual spaces
Program	Program / service group or individual space name
Qty.	Number of space type to be included in the building
NSF	Net Square Footage - Area that accounts for useable area within a space
Occ/Space	Number of estimated occupants assigned to a particular space
Efficiency Factor (Factor will range from 1.15 to 1.5 depending upon building type)	Multiplier that accounts for area needed for common spaces: major circulation, stairs, elevators, toilet rooms, mechanical / electrical rooms and chases, custodial closets, exterior walls)
GSF	Gross Square Footage -Total building area measured from outside surfaces of exterior walls; Program NASF x Building Factor
GSF/ Bed	Estimated Gross Square Foot per bed
Est. Constr. Cost	Program Gross Square Foot x Cost / GSF

FULL PROGRAM

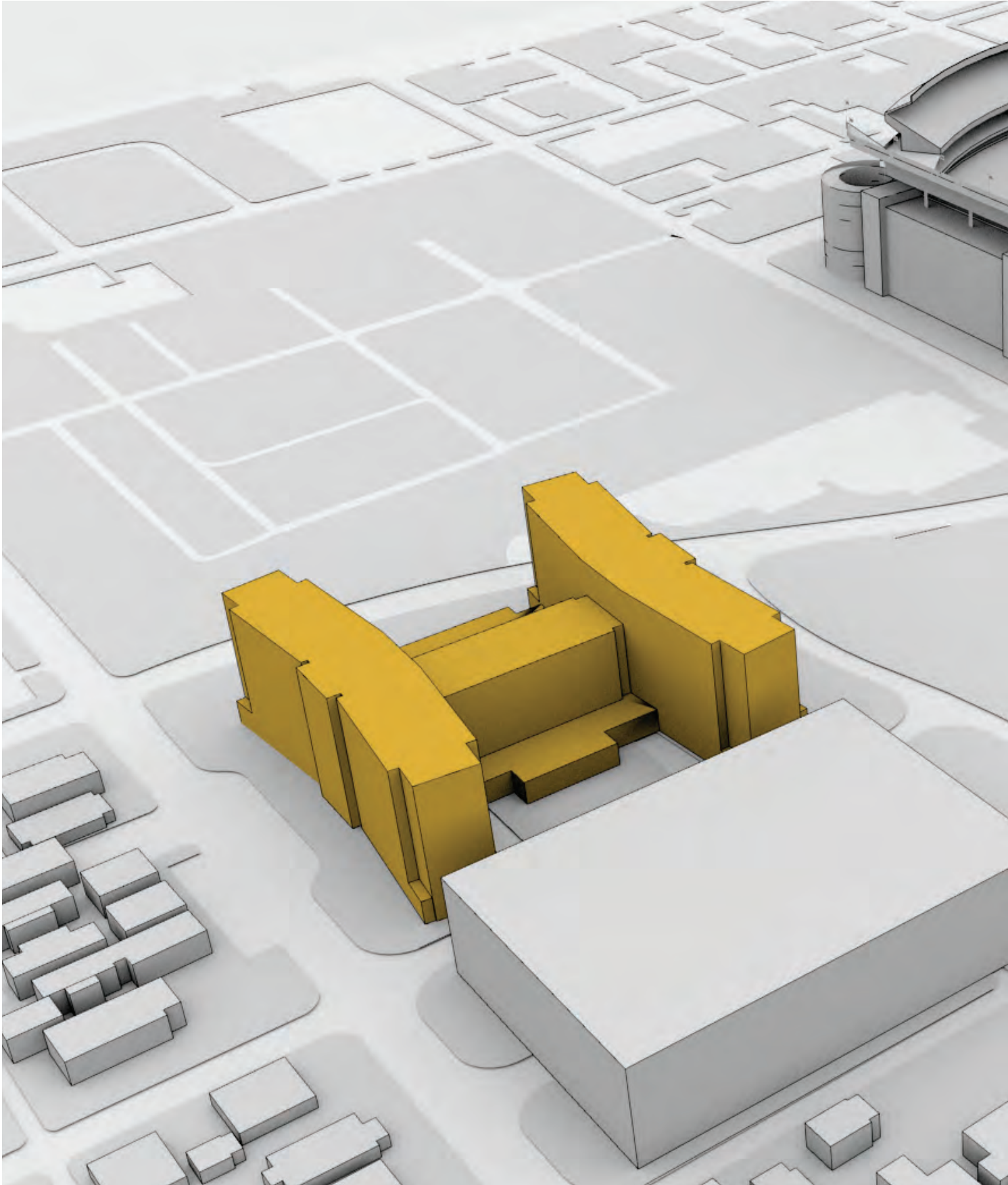
Code	Program	Qty.	Occ. / Space	Program NSF	Total NSF	Grossing Factor	Program GSF	Comments
			(# of beds)					
1.00	STUDENT RESIDENCE FLOORS		1583					
1.10	Typical Neighborhoods	35	37	155,470	155,470	1.70	264,299	
1.11	Doubles	18	36	3,402	3,402	1.70	5,783	
1.12	RA Units	1	1	190	190	1.70	323	
1.20	Neighborhood Commons					1.70		
1.21	End Commons	1		850	850	1.70	1,445	
1.22	Corridor Commons	4		440	440	1.70	748	
1.23	Corridor Lounge	1		190	190	1.70	323	
1.24	Group Study Room	1		292	292	1.70	496	
					0	1.70	0	
					0	1.70	0	
1.30	Cross-Bar Neighborhoods	6	48	35,766	35,766	1.70	60,802	
1.31	Doubles	23	46	4,347	4,347	1.70	7,390	
1.32	RA Units	2	2	324	324	1.70	551	
1.40	Neighborhood Commons					1.70		
1.41	Center Commons	1		944	944	1.70	1,605	
1.42	Corridor Commons	4			0	1.70	0	
1.43	Group Study Room	2		346	346	1.70	588	
					0	1.70	0	
1.50	Floor Commons			43,155	43,155	1.70	73,364	
1.51	Laundry	18		4,680	4,680	1.70	7,956	
1.52	Social Kitchen	9		7,605	7,605	1.70	12,929	
1.53	Living Rooms	18		14,400	14,400	1.70	24,480	
1.54	Group Study Rooms	9		7,470	7,470	1.70	12,699	
1.55	Open Stair Lounges	18		7,200	7,200	1.70	12,240	
1.56	Storage	18		1,800	1,800	1.70	3,060	
	Sub-total				234,391	1.70	398,465	
2.00	ADMINISTRATIVE RESIDENCES							
2.10	Area Director 2BR	1		1,000	1,000	1.70	1,700	
2.20	Community Director 2BR	4		1,000	4,000	1.70	6,800	
2.30	Faculty-in-Residence 2BR	1		1,000	1,000	1.70	1,700	
2.40	Commons	1		1,800	1,800	1.70	3,060	
	Sub-total	2			7,800	1.70	13,260	
3.00	GROUND LEVEL COMMONS							
3.10	Main Lounge	1		2,000	2,000	1.70	3,400	ground level
3.20	Event Suite				0	1.70	0	
3.21	Multipurpose Room	1	400	10,500	10,500	1.70	17,850	1200+ seats lecture style/650+ seats banquet style, divisible into two spaces (doubles as storm shelter)
3.22	Prefunction	1		3,560	3,560	1.70	6,052	
3.23	Community / Warming Kitchen	1		1,350	1,350	1.70	2,295	
3.24	MP Storage	1		1,700	1,700	1.70	2,890	
3.30	Julia's Market				0	1.70	0	
3.31	Retail Market	1		5,000	5,000	1.70	8,500	
3.31	Concourse Seating	1		1,500	1,500	1.70	2,550	
3.40	Fitness Center				0	1.70		
3.41	Yoga / Dance	1	400	1,600	1,600	1.70	2,720	
3.42	Cardiovascular Fitness	1		1,000	1,000	1.70	1,700	
3.43	Strength Training	1		800	800	1.70	1,360	
3.44	Stretching	1		600	600	1.70	1,020	
3.45	Storage	1		200	200	1.70	340	
3.50	Classroom	30		20	600	1.70	1,020	
3.60	Paint Room	1		600	600	1.70	1,020	

06 APPENDIX

UA SOUTH CAMPUS RESIDENTIAL DEVELOPMENT STUDY PRE-SCHEMATIC REPORT 31

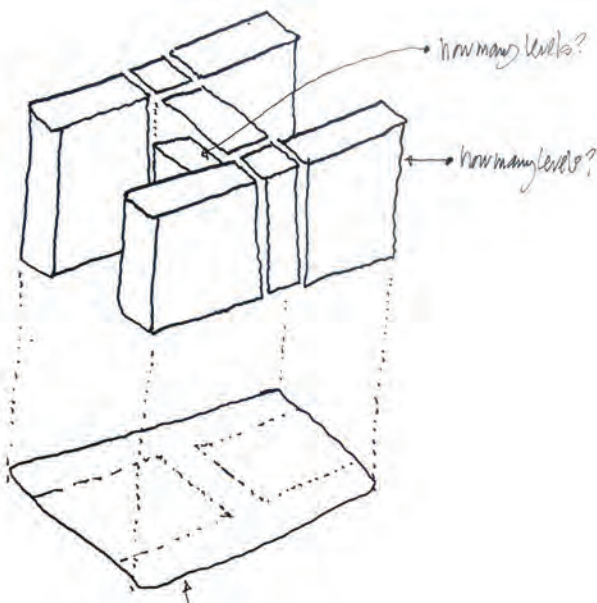
SECTION 04.

PHYSICAL ORGANIZATION

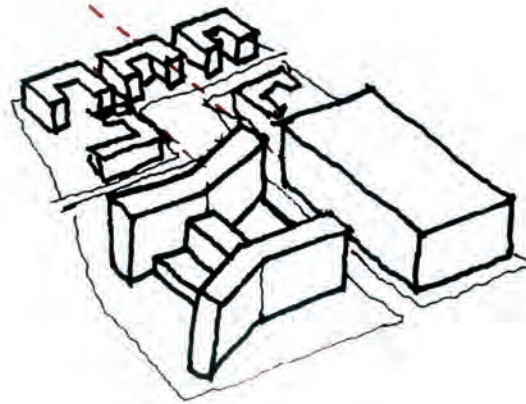




INTRODUCTION



Early Concept Sketch - Building Massing



Early Concept Sketch - Site Development

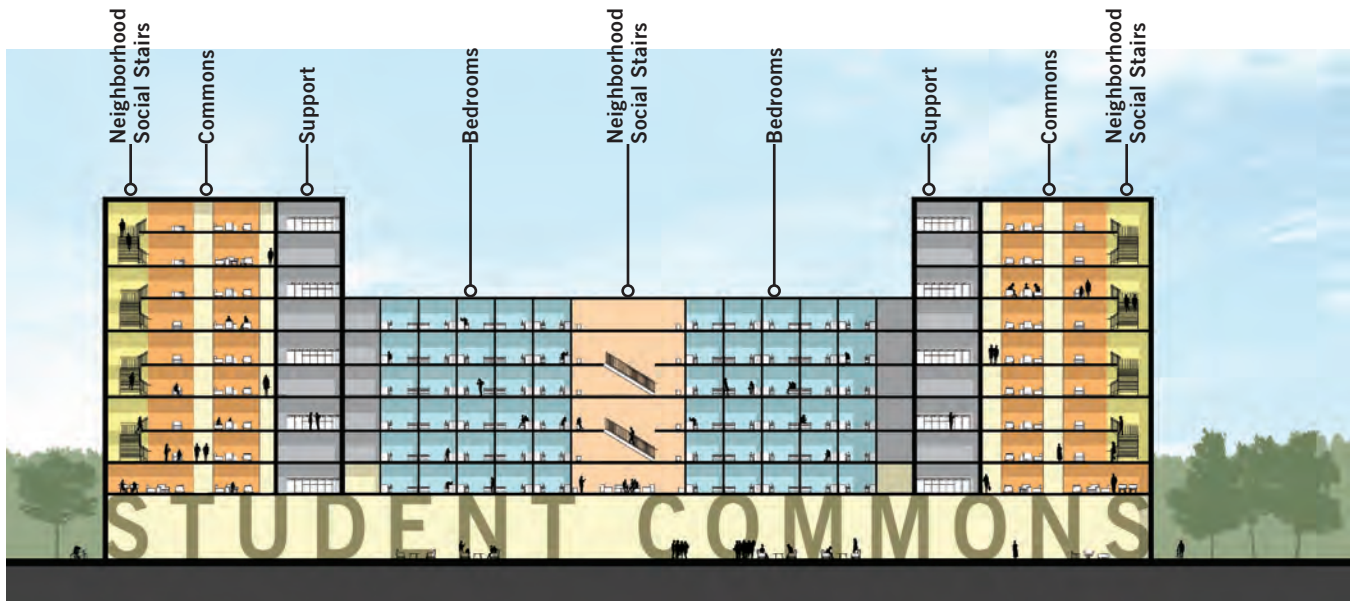
The strategy for developing the south campus site is to create an open and welcoming building form that anchors the southwest edge of campus. The project scale is very large within the immediate campus context, not including Bryant-Denny Stadium. Given this size in context, it is important to carefully consider strategies to manage scale. Within the overall framework, the massing hierarchy is organized by two dominant east-west towers, a mid-rise cross-bar, and a ground plane that expands below the majority of the footprint.

The building form is primarily developed to limit the amount of neighborhood pass-through conditions, which is possible with the exception of the cross-bar. With this as a driver, the length of the individual bar-length components directly relates to the length of a neighborhood. The subtle bend in the end-bars recalls Tutwiler Hall.

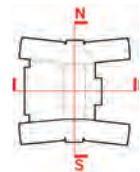
The position of the building leverages the opportunity for views into the stadium, a goal of the project. The east-west orientation of the dominant wings should provide the lowest energy loads relative to other possible positions on site. The compact footprint of the residential tower and the parking structure occupies approximately 50% of the site on the south, preserving the north site for development of sorority houses and future development.

Taller volume spaces on the ground floor can be located in the two open spaces on either side of the cross-bar. The height of each of these major program spaces is unencumbered by a floor above. The large Multipurpose Room on the west side can open up toward the cemetery with adequate open space for large events. Julia's Market on the east side has a smaller scaled open space for outdoor dining or events. On either side of the Market are the two major loading docks and service zones that will support the two vertical cores of the building.

INTRODUCTION



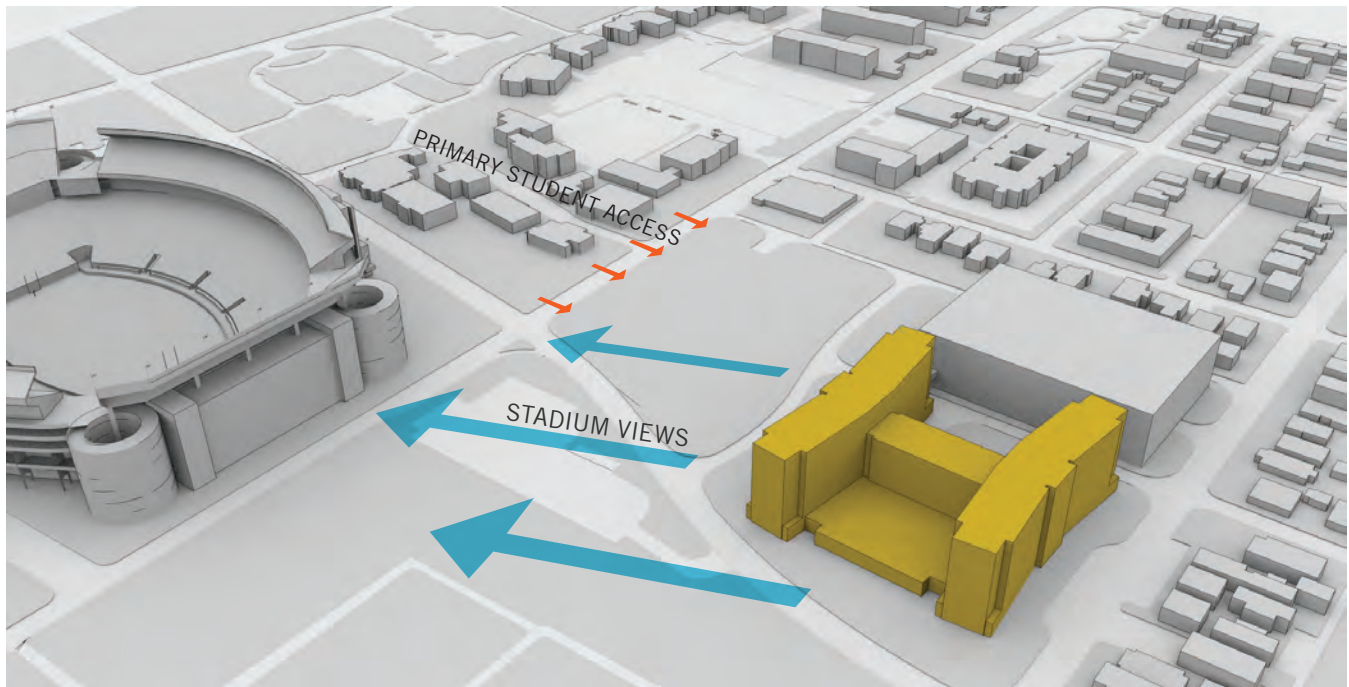
North-South Site Section



The cross-bar has a major positive role in the project. Its mid-rise scale is a welcome break between the high-rise towers and the ground plane. The roof of the cross-bar is positioned at a central position within the development so that its use as a common social space will be a premier destination. This mid-rise roof will truly be a see-and-be-seen space for the residential tower.

The main pedestrian approach to the building will be from the north of campus, and the front door will be aligned at the north core to allow entry and ease of access to the HRC offices, Julia's Market, and the Multipurpose Room. The transit approach will reroute buses from Paul Bryant Drive into the center of the site near the front door. Vehicular access to the new parking structure will be from 12th Street.

LEVEL 01 CONCEPT

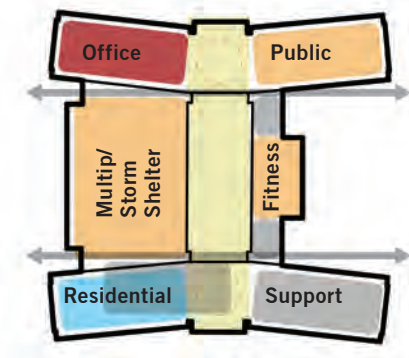


Primary site drivers defining space organization on Level 01 are relationship to the stadium, solar orientation, the relationship to the parking garage, and the ease of access at the main entry and service. Given the dominant height of the towers it is important to mitigate western exposure for excessive solar gain, which factored into their east-west orientation. With this orientation, the towers can maximize views to the stadium without exceeding its height.

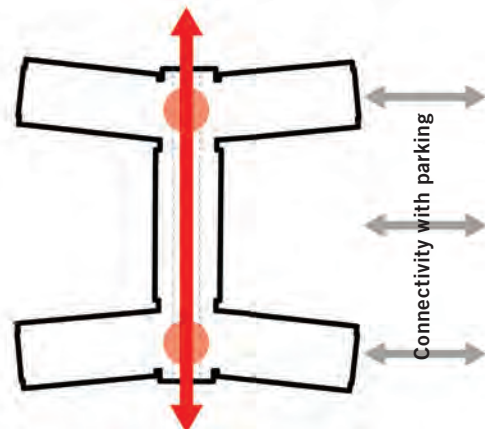
The orientation of the north tower to Sorority Row also becomes a dramatic backdrop and aids in guiding students to the main entry at the base. The north entry is a foundation

to the building organization by establishing the zones of mixed-use program on the ground level. The positioning of the storm shelter on the west complements its double-use as a large multipurpose room for events that relate to stadium access and outdoor space.

The relationship of the parking garage to the east is a driver with regard to topography. The perimeter roads and the need to connect an upper level bridge to Tutwiler were further studied during this process. The grading that established the relationship between the garage and Tutwiler was also a driver for the service docks and vehicle access.

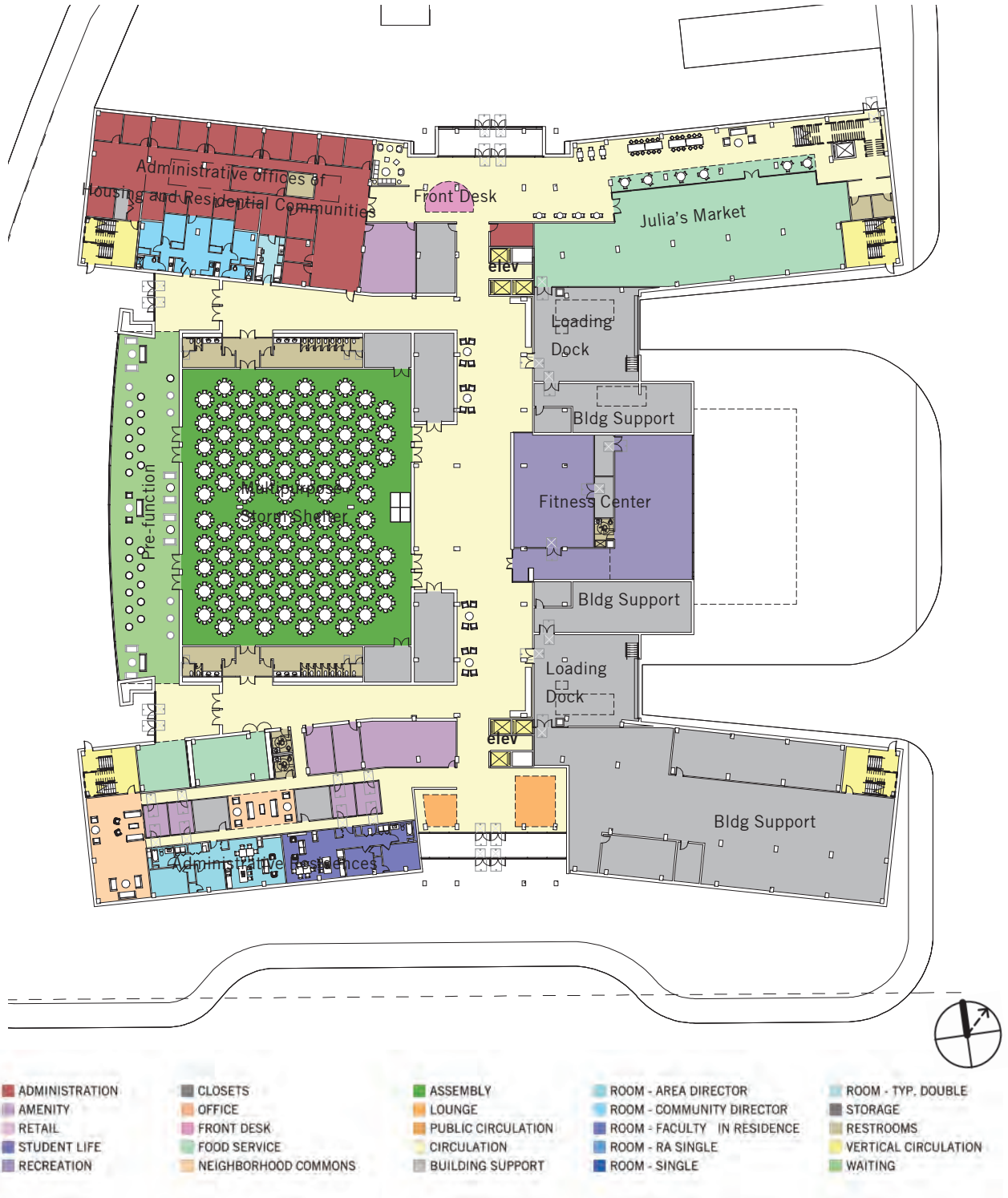


Space Organization

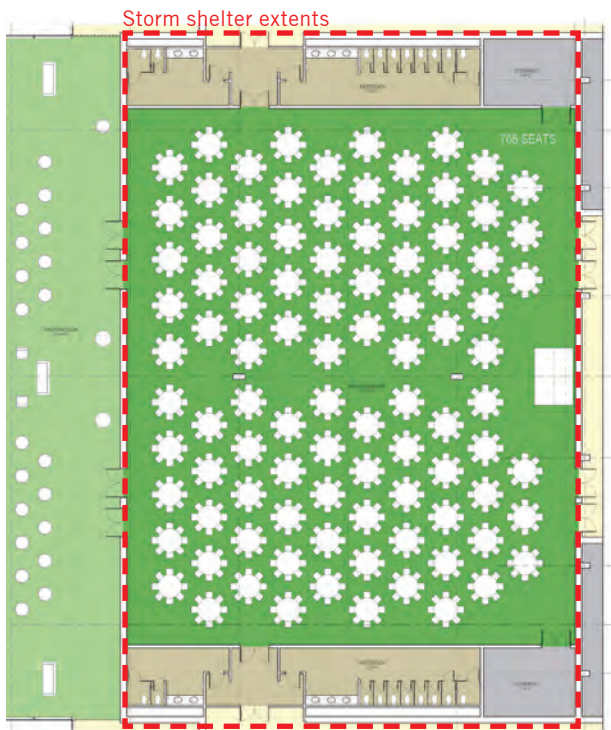


Circulation

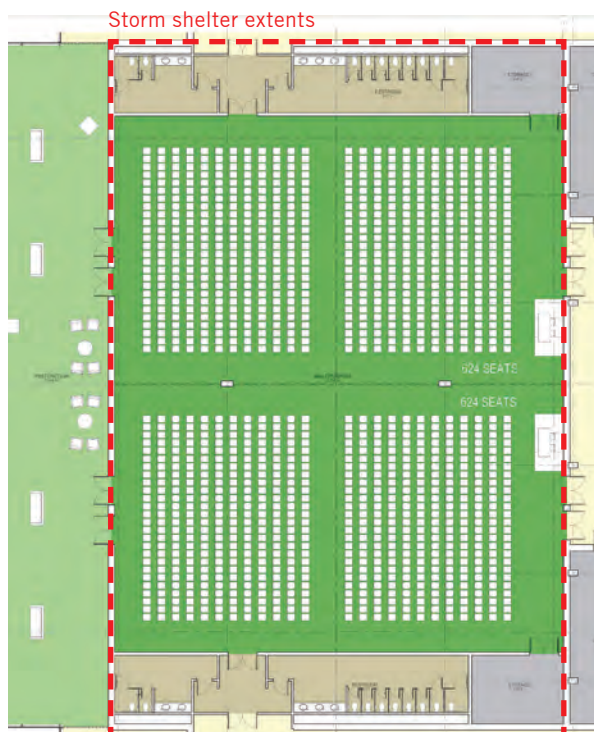
LEVEL 01 CONCEPT/ FLOOR PLAN



LEVEL 01 CONCEPT/ MULTIPURPOSE LAYOUT AND FURNITURE CONFIGURATIONS

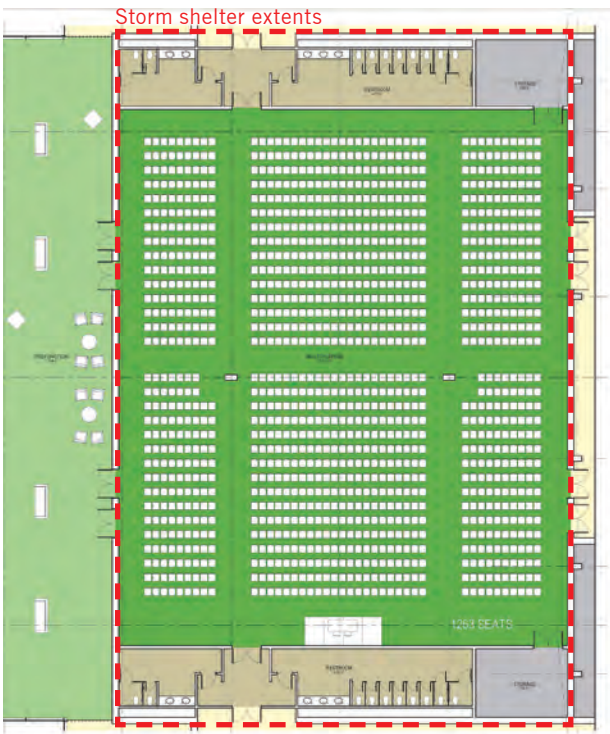


Banquet style configuration

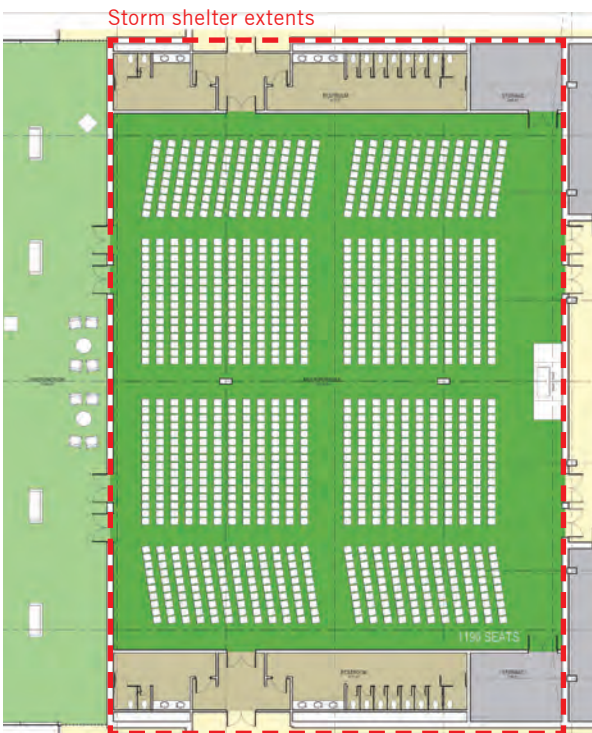


Divided Lecture Room Layout

LEVEL 01 CONCEPT/ MULTIPURPOSE LAYOUT AND FURNITURE CONFIGURATIONS

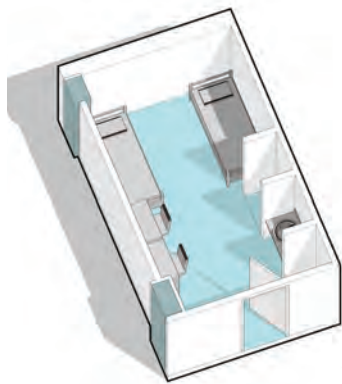
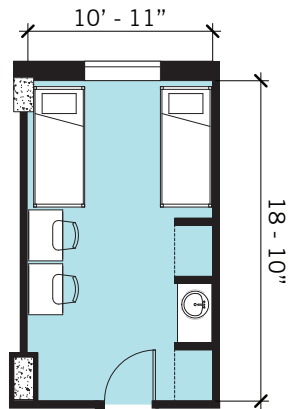


Lecture Room Configuration 01

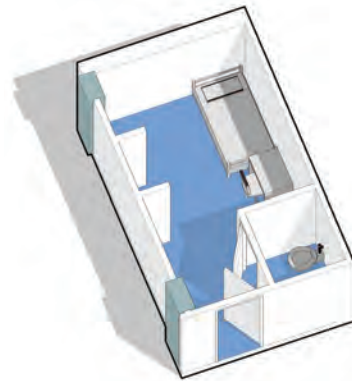
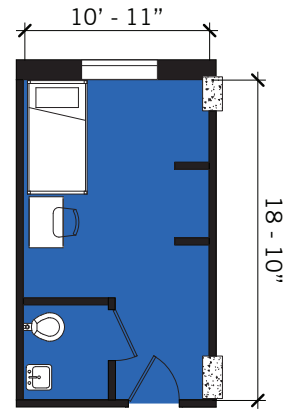


Lecture Room Configuration 02

RESIDENTIAL DEVELOPMENT/ BEDROOM



Typical Double Bedroom

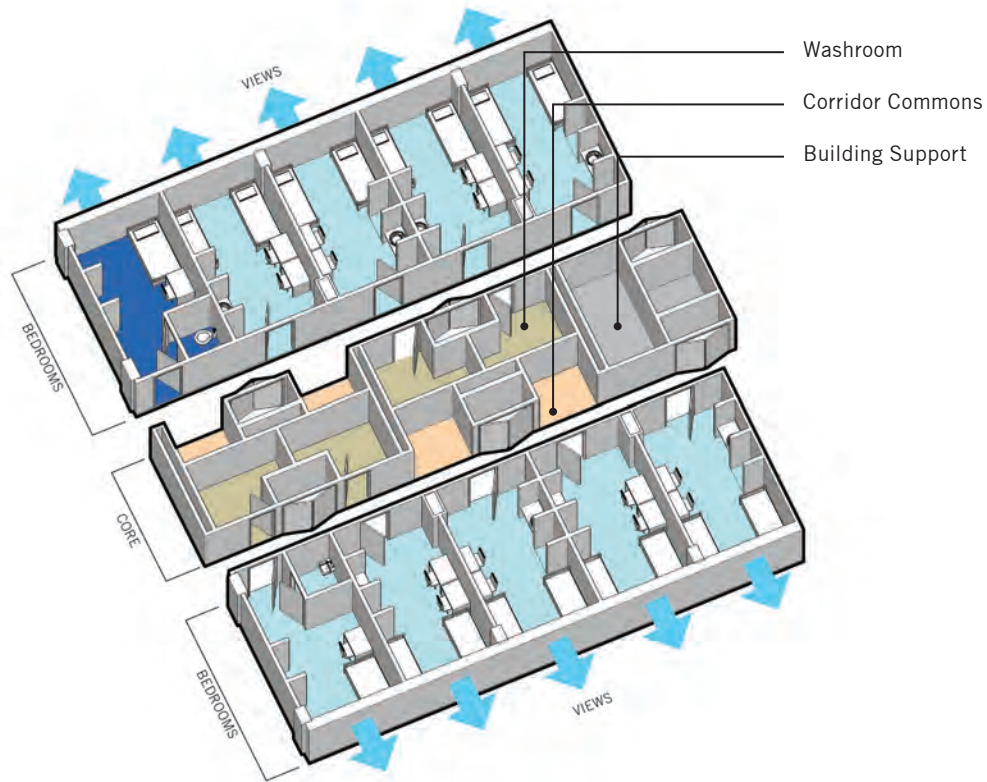


Typical RA Bedroom

The base unit for the residential hall is the two bedroom unit. A collection of bedrooms along with basic core facilities and common areas comprise of a “neighborhood”.

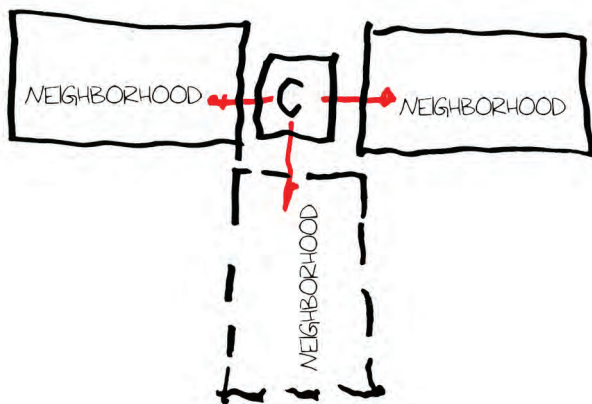


RESIDENTIAL DEVELOPMENT/ NEIGHBORHOOD

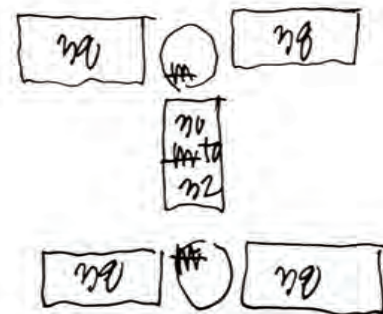


Typical Neighborhood Configuration

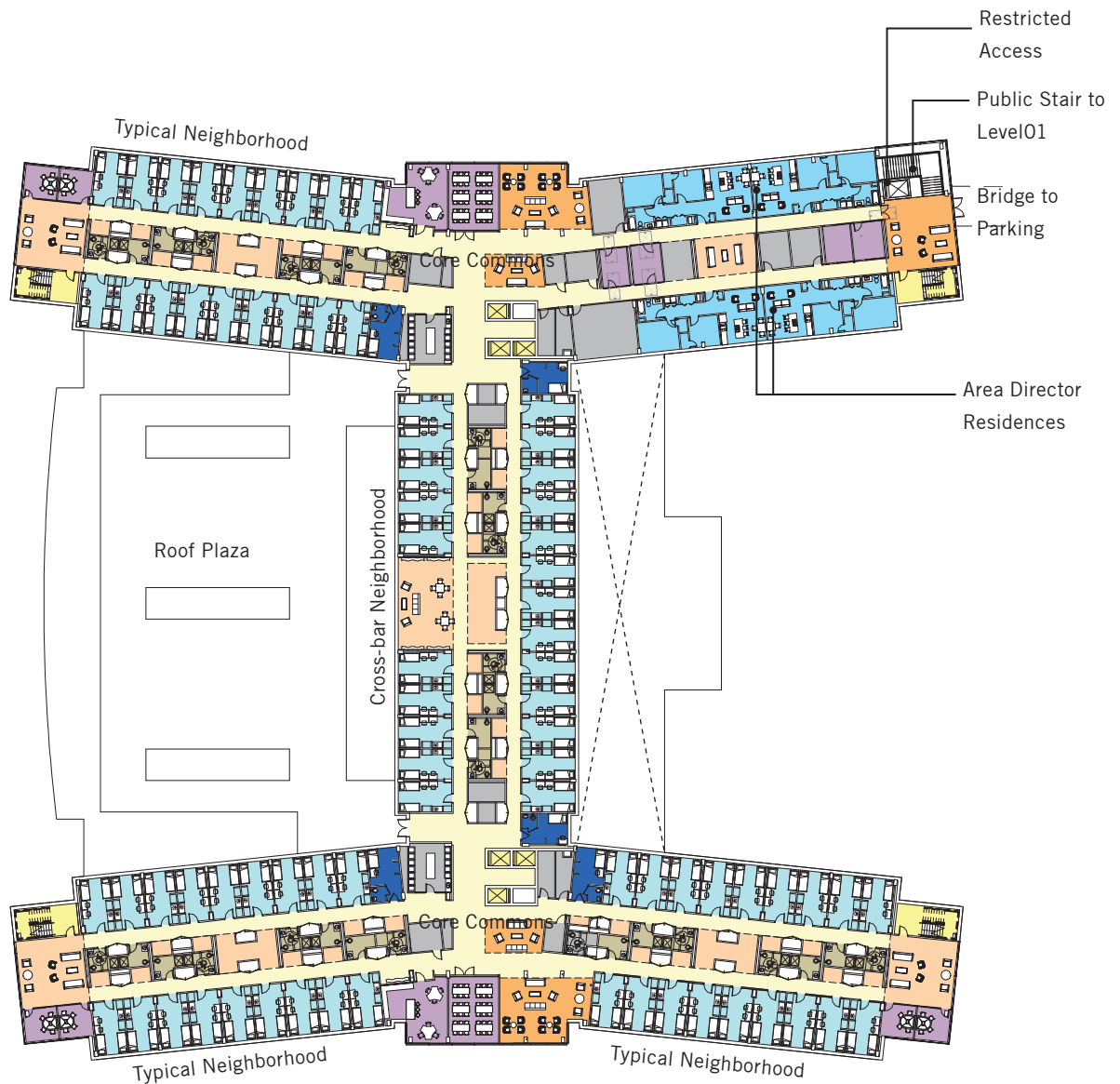
In order to achieve the appropriate number of beds within the allowed height, and to avoid having to travel through internal “neighborhoods”, the building will require two separate cores for elevators, one at each intersection of the crossbar and the wings running East and West.



Core to neighborhood connectivity sketch



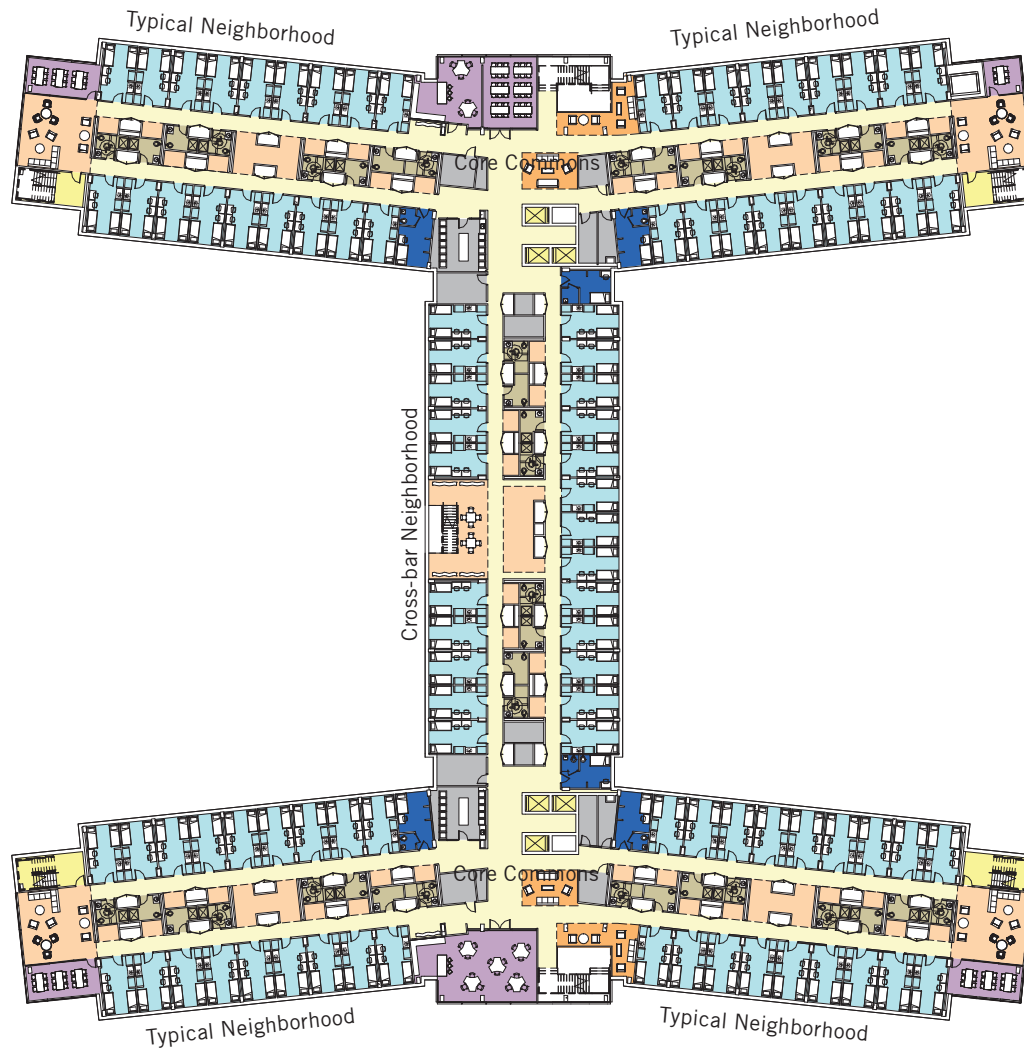
RESIDENTIAL DEVELOPMENT/ / LEVEL 02



- | | | | | |
|------------------|------------------------|----------------------|-------------------------------|------------------------|
| ■ ADMINISTRATION | ■ CLOSETS | ■ ASSEMBLY | ■ ROOM - AREA DIRECTOR | ■ ROOM - TYP. DOUBLE |
| ■ AMENITY | ■ OFFICE | ■ LOUNGE | ■ ROOM - COMMUNITY DIRECTOR | ■ STORAGE |
| ■ RETAIL | ■ FRONT DESK | ■ PUBLIC CIRCULATION | ■ ROOM - FACULTY IN RESIDENCE | ■ RESTROOMS |
| ■ STUDENT LIFE | ■ FOOD SERVICE | ■ CIRCULATION | ■ ROOM - RA SINGLE | ■ VERTICAL CIRCULATION |
| ■ RECREATION | ■ NEIGHBORHOOD COMMONS | ■ BUILDING SUPPORT | ■ ROOM - SINGLE | ■ WAITING |



RESIDENTIAL DEVELOPMENT/ / LEVEL 03 - LEVEL 07



■ ADMINISTRATION	■ CLOSETS	■ ASSEMBLY	■ ROOM - AREA DIRECTOR	■ ROOM - TYP. DOUBLE
■ AMENITY	■ OFFICE	■ LOUNGE	■ ROOM - COMMUNITY DIRECTOR	■ STORAGE
■ RETAIL	■ FRONT DESK	■ PUBLIC CIRCULATION	■ ROOM - FACULTY IN RESIDENCE	■ RESTROOMS
■ STUDENT LIFE	■ FOOD SERVICE	■ CIRCULATION	■ ROOM - RA SINGLE	■ VERTICAL CIRCULATION
■ RECREATION	■ NEIGHBORHOOD COMMONS	■ BUILDING SUPPORT	■ ROOM - SINGLE	■ WAITING



01
EXECUTIVE SUMMARY

02
SITE CONTEXT AND
CONCEPT

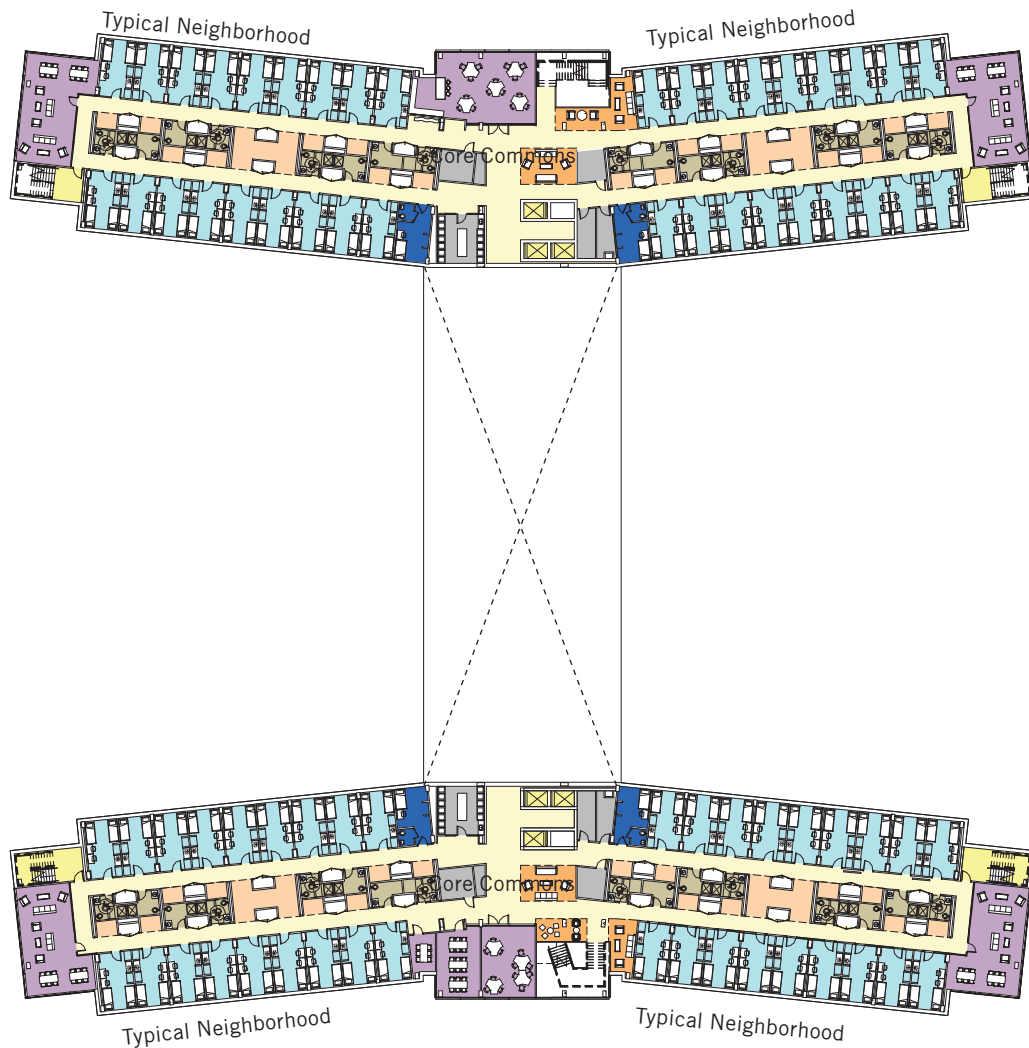
03
PROGRAMMING AND
PLANNING CONCEPTS

04
PHYSICAL
ORGANIZATION

05
TECHNICAL
RECOMMENDATIONS

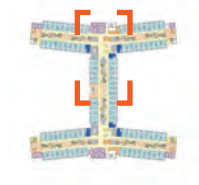
06
APPENDIX

RESIDENTIAL DEVELOPMENT/ / LEVEL 08 - LEVEL 10

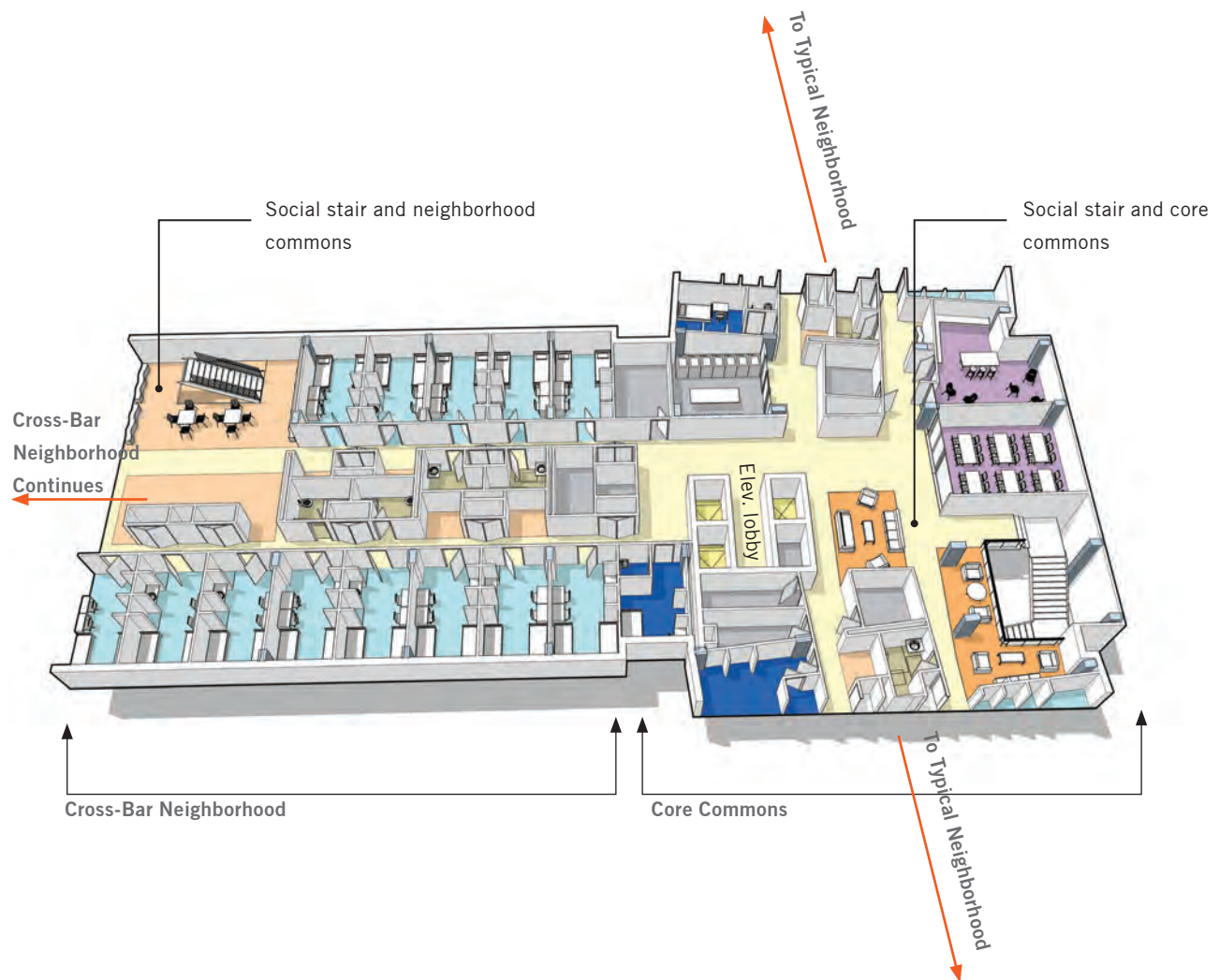


■ ADMINISTRATION	■ CLOSETS	■ ASSEMBLY	■ ROOM - AREA DIRECTOR	■ ROOM - TYP. DOUBLE
■ AMENITY	■ OFFICE	■ LOUNGE	■ ROOM - COMMUNITY DIRECTOR	■ STORAGE
■ RETAIL	■ FRONT DESK	■ PUBLIC CIRCULATION	■ ROOM - FACULTY IN RESIDENCE	■ RESTROOMS
■ STUDENT LIFE	■ FOOD SERVICE	■ CIRCULATION	■ ROOM - RA SINGLE	■ VERTICAL CIRCULATION
■ RECREATION	■ NEIGHBORHOOD COMMONS	■ BUILDING SUPPORT	■ ROOM - SINGLE	■ WAITING

RESIDENTIAL DEVELOPMENT / NEIGHBORHOOD CONFIGURATION

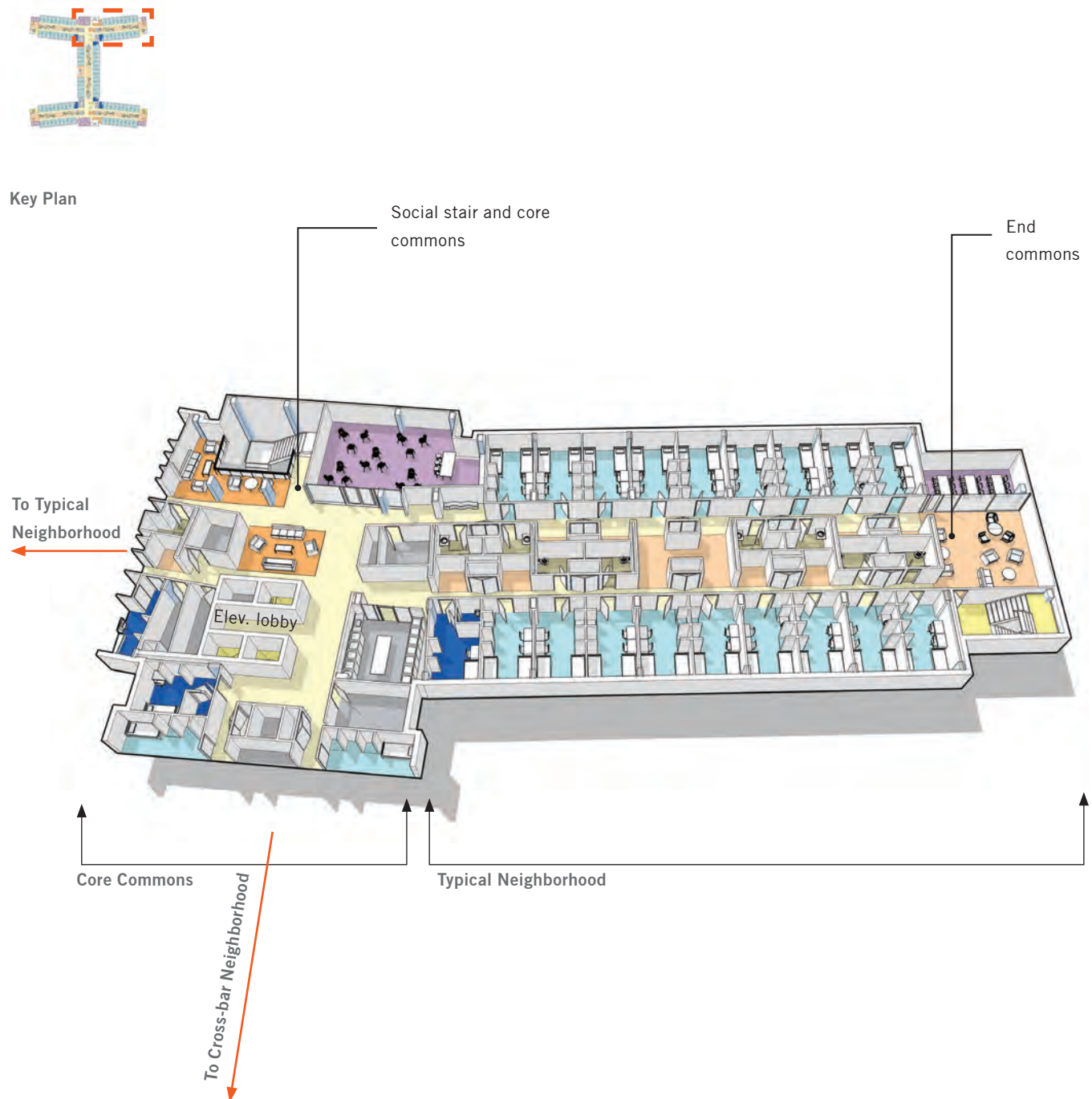


Key Plan



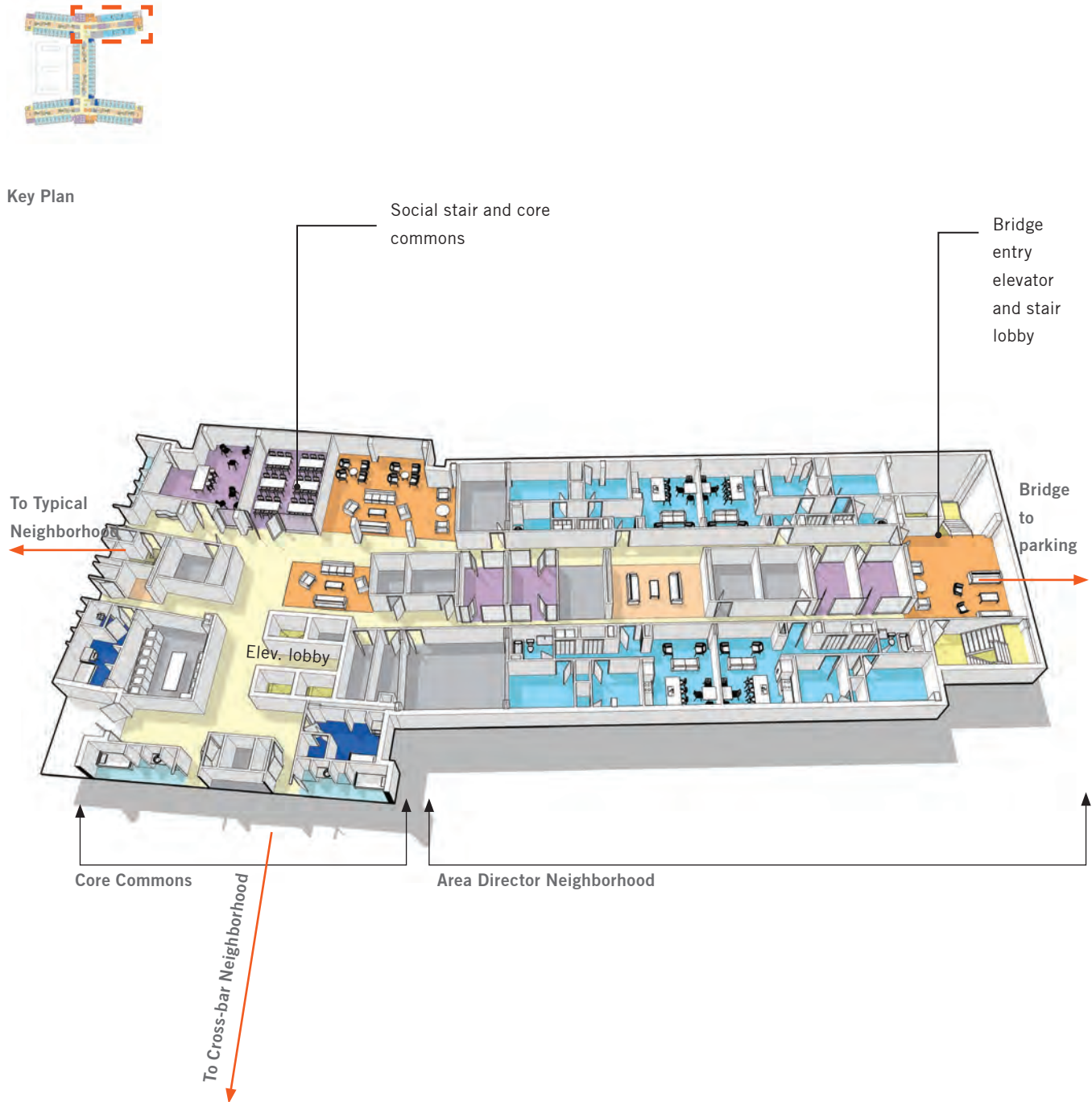
Cross-Bar Neighborhood and Core Commons

RESIDENTIAL DEVELOPMENT / NEIGHBORHOOD CONFIGURATION



Typical Neighborhood and Core Commons

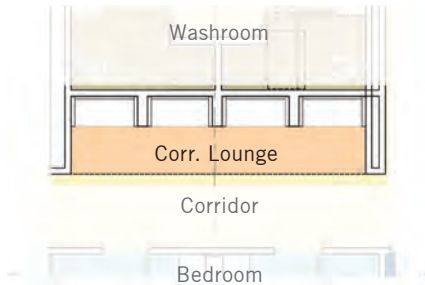
RESIDENTIAL DEVELOPMENT / NEIGHBORHOOD CONFIGURATION



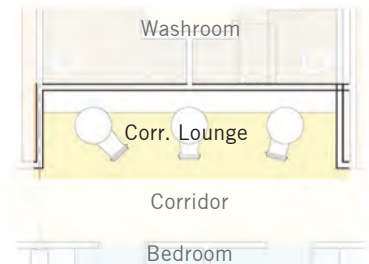
Area Director Neighborhood and Core Commons on Level02

RESIDENTIAL DEVELOPMENT/ CORRIDOR LOUNGES

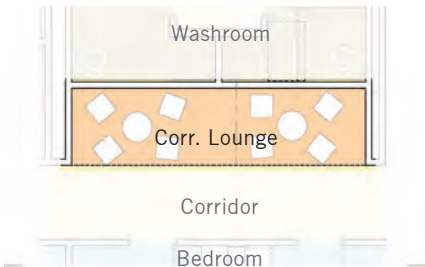
**Neighborhood
Corridor Lounge -
Option 01**



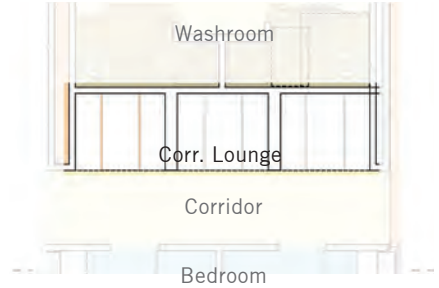
**Neighborhood
Corridor Lounge -
Option 03**



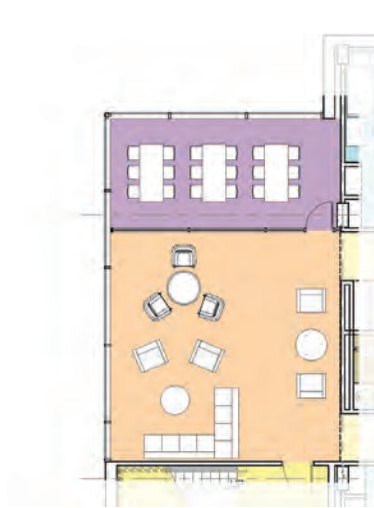
**Neighborhood
Corridor Lounge -
Option 02**



**Neighborhood
Corridor Lounge -
Option 04**



RESIDENTIAL DEVELOPMENT/ END COMMONS



Neighborhood End Commons
- Option01



Neighborhood End Commons
- Option02



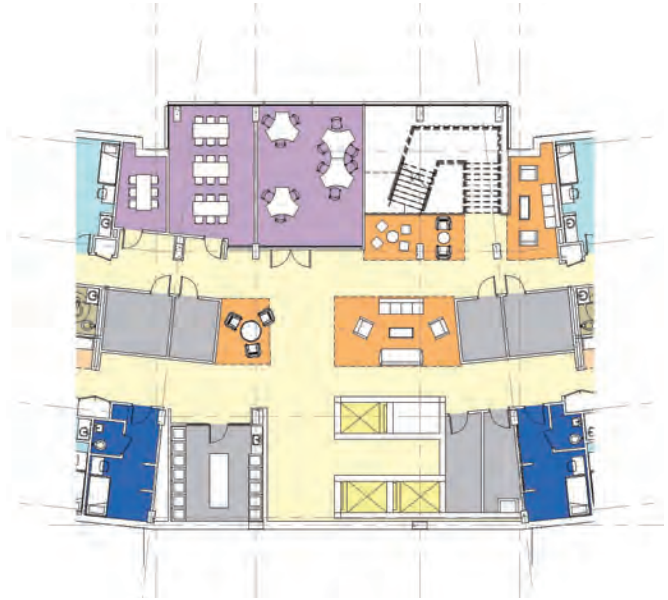
Neighborhood End Commons
- Option03



RESIDENTIAL DEVELOPMENT/ CORE COMMONS



Core Commons - Option01, Kitchen configuration



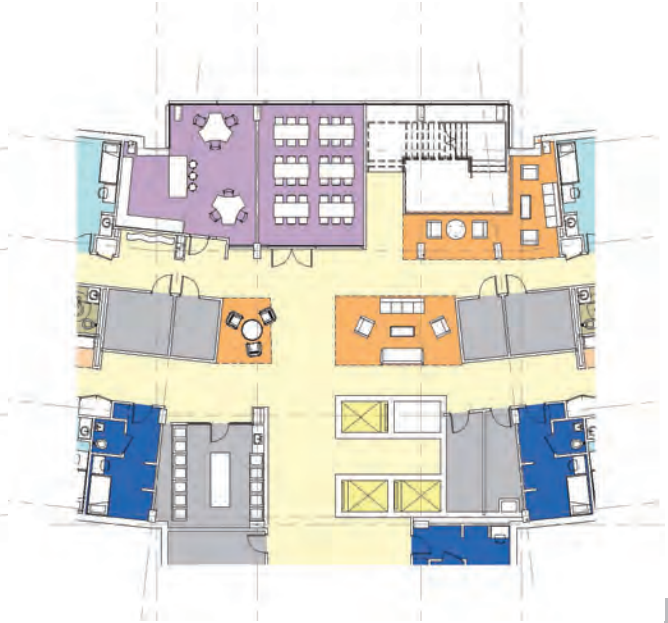
Core Commons - Option02 - Meeting room configuration



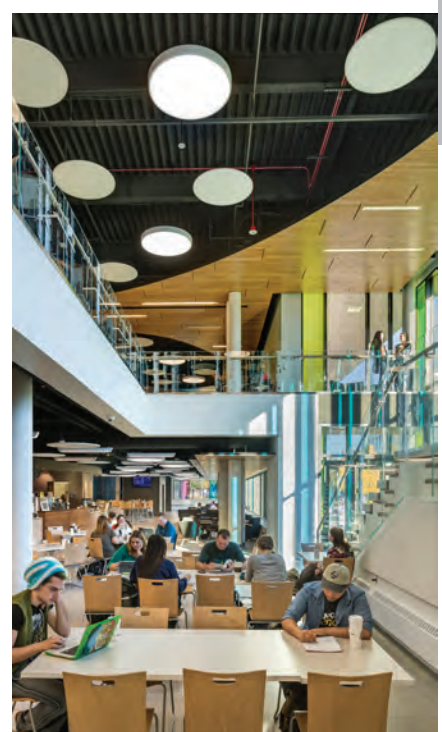
RESIDENTIAL DEVELOPMENT/ CORE COMMONS



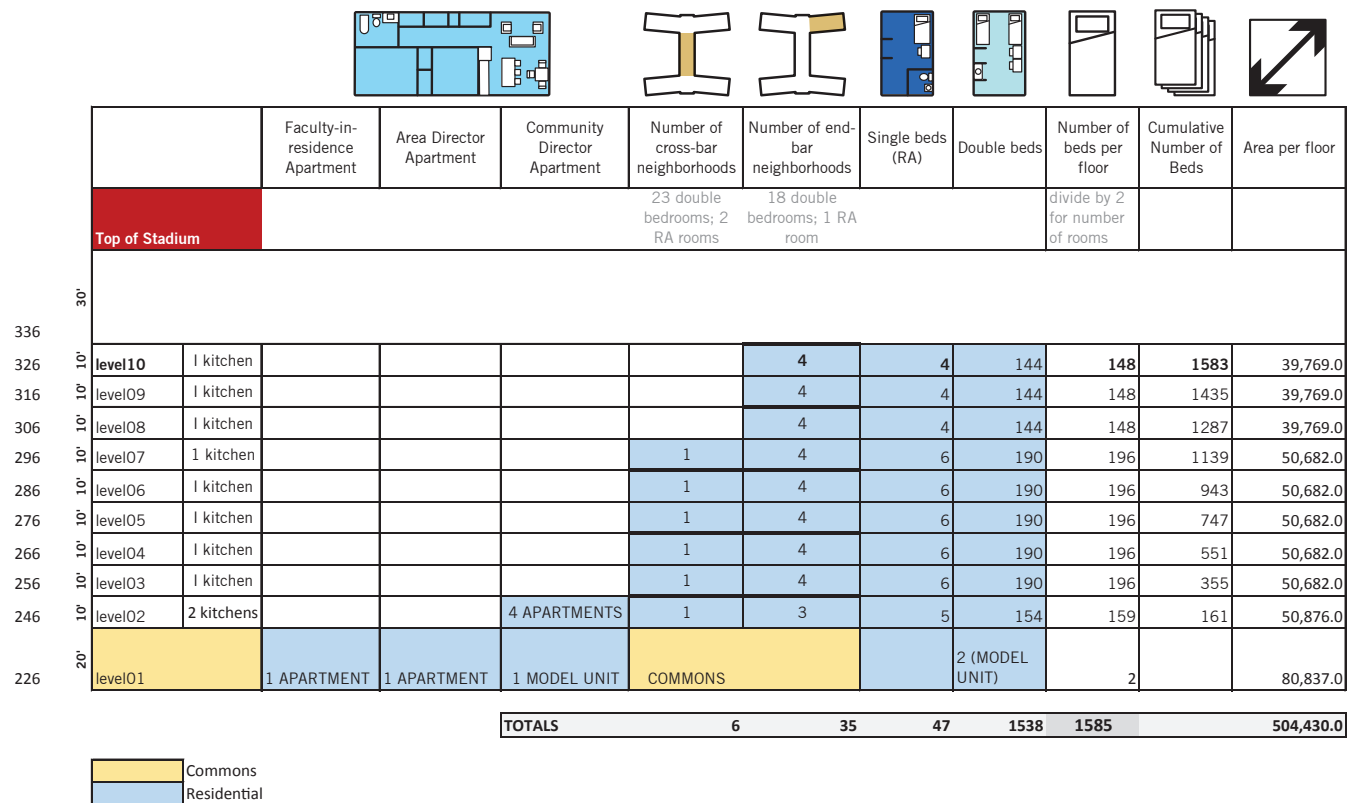
Core Commons - Option03 - Meeting room configuration with centrally located stair



Core Commons - Option04 - Combined kitchen and meeting room configuration



PHYSICAL ORGANIZATION/ AREA AND BED DISTRIBUTION



PHYSICAL ORGANIZATION/ STACKING DIAGRAM

LEVELS 8 - 10

144 Double
4 Single (RA)
4 End Bar Neighborhood

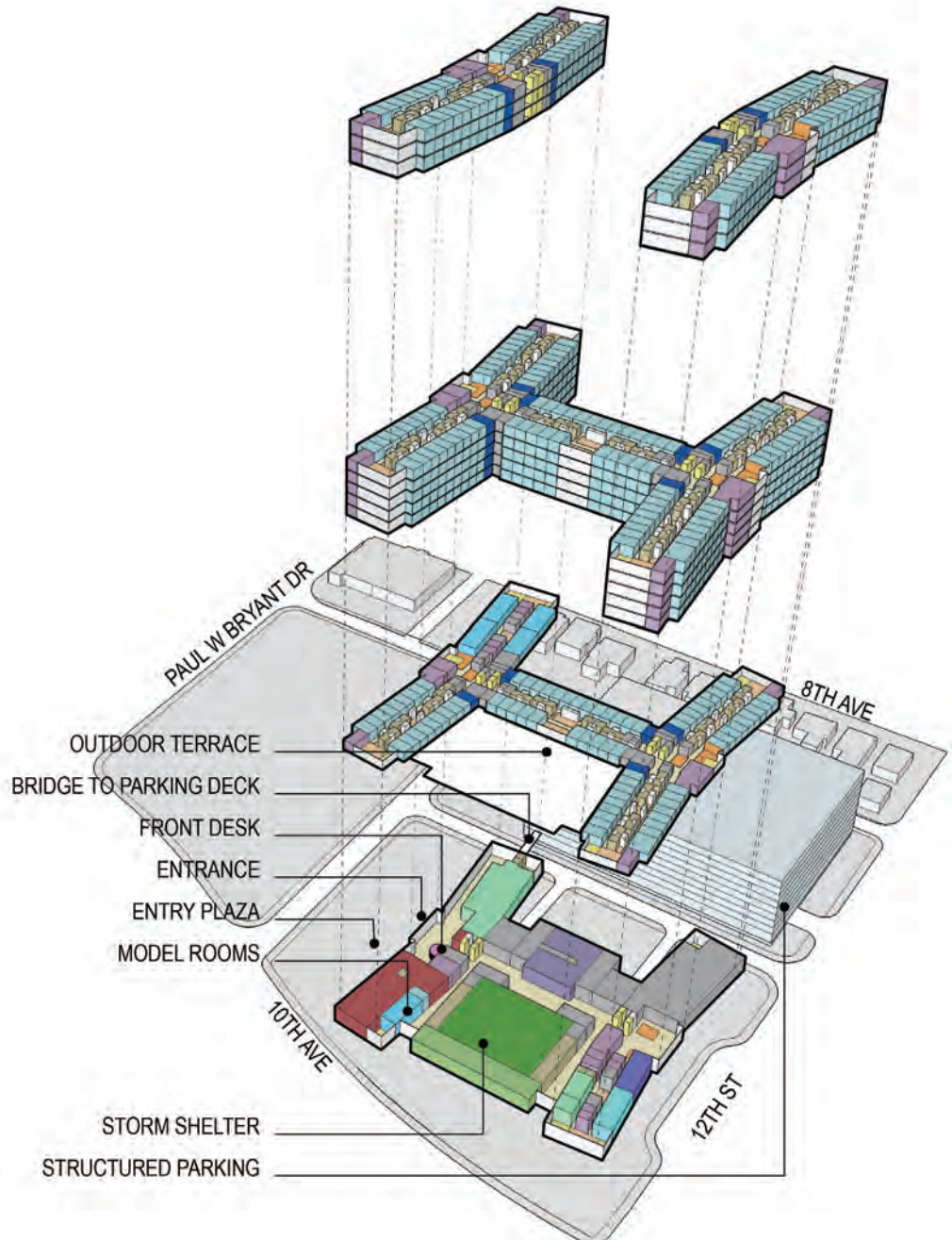
LEVEL 3 - 7

190 Double
6 Single (RA)
4 End Bar Neighborhoods
1 Cross Bar Neighborhood

LEVEL 2

4 Community Director Apartments
154 Double
5 Single (RA)
4 End Bar Neighborhoods
1 Cross Bar Neighborhood

GROUND FLOOR



PHYSICAL ORGANIZATION/ SECTION THROUGH CROSS-BAR



PHYSICAL ORGANIZATION/ SECTION THROUGH CORE COMMONS



01	EXECUTIVE SUMMARY
02	SITE CONTEXT AND CONCEPT
03	PROGRAMMING AND PLANNING CONCEPTS
04	PHYSICAL ORGANIZATION
05	TECHNICAL RECOMMENDATIONS
06	APPENDIX

SECTION 05.

TECHNICAL RECOMMENDATIONS

CODE ANALYSIS

INTRODUCTION

The project includes the design and construction of a new residence hall on the University of Alabama campus. The 504,430 gross square foot residential building will be 10 stories in height with a non-occupied penthouse level (not a high rise) and is anticipated to have 1206 units. The ground floor of the building will serve as lobby and entrance space for the upper floor units and will also contain areas for student activities, a large multipurpose space, and pre-function area.

APPLICABLE CODES AND STANDARDS

2009 International Building Code (SBC)

2009 International Plumbing Code

2009 International Mechanical Code

2009 International Fuel Gas Code

2009 International Fire Code

2011 National Electrical Code (NFPA 70)

2010 National Fire Alarm and Signaling Code (NFPA 72)

2008 ACC/NSSA Standard for the Design and Construction of Storm Shelters

ANSI/ASHREA/IESNA Standard 90.1-2007 Energy Standard for Buildings Except Low-Rise Residential

2010 ADA Standards for Accessible Design

Other National Fire Protection Association (NFPA) Standards, as referenced by the above codes

LIFE SAFETY CODE ANALYSIS

The following sections detail the project's compliance with the major fire protection, life safety, and accessibility provisions of the applicable codes.

USE AND OCCUPANCY CLASSIFICATION

Primary Occupancies

Primary Occupancy Groups (SBC 301)		
Description	SBC	Location
Multipurpose Space, Student Commons	Group A-3	Ground Floor
Residential	Group R-2	Ground – Floor 10
Building Service Areas, Storage	Group S-1	Ground Floor

BUILDING CONSTRUCTION

1. Construction Classification and Occupancy Approach

- a. The building will be constructed as a single structure.
- b. A separated mixed use approach will be used.
 - i. As otherwise required for Type IB construction, a 2-hour separation will be provided between floors such that the Group R-2, Residential, occupancies on the upper floors are separated from the assembly occupancy on the First Floor. This exceeds the separation required by SBC 508.4 for a separated mixed use approach.
 - ii. A 1-hour fire barrier separation will be provided between the Group R-2, Residential, units on the First Floor and the adjacent assembly spaces (SBC 508.4).

2. Building Height & Area

- a. The height and area of the buildings do not exceed the limitations of SBC 503. The full calculation is provided in the appendix.
- b. Due to the height of the building, it is required to be constructed of Type IB Construction.
- c. Since the floor level of the highest occupiable story is less than 75 feet above the lowest level of fire department access, the building is not a high rise. A penthouse level that has an area less than one-third of the area of the supporting roof is not considered a story for determining allowable building height. The penthouse is not permitted to be used for purposes other than shelter of mechanical equipment or vertical shaft openings in the roof (SBC 1510.2).

3. Construction Type

- a. Unless otherwise required to have a higher fire resistance rating by other sections of this report, building elements should comply with the following table (SBC Table 601). Accessible ceiling systems shall not be part of any rated assemblies or serve as fire protection.

Fire Resistance Rating of Building Elements Type IB Construction	
Building Element	Fire Resistance Rating
Primary Structural Frame	2 Hours
Interior Bearing Walls	2 Hours
Exterior Walls	See Section 3.2.3.4
Floor construction and secondary members	2 Hours
Roof construction and secondary members	1 Hour

TABLE 2: CONSTRUCTION TYPE FIRE RESISTANCE RATINGS

4. Nonbearing Exterior Walls

- a. Table 3 indicates the fire-resistance ratings required for the exterior walls based on fire separation distance (SBC 602). If any of the exterior walls are altered as a result of this project, they are required to comply with the indicated ratings and wall opening limitations. Existing exterior walls are not required to be altered.

Fire Resistance Rating for Exterior Walls Based on Fire Separation Distance	
Fire Separation Distance	Fire Resistance Rating
Less than 20 feet	1 Hour
20 feet or greater	0 Hour

TABLE 3: FIRE-RESISTANCE RATING FOR EXTERIOR WALLS

- b. The fire separation distance surrounding the building is at least 20 feet in all directions, and as such the exterior walls are not required to be fire- resistance-rated.

5. Exterior Wall Openings

- a. Table 4 indicates the maximum area of exterior wall openings based on fire separation distance (SBC 705.8). Unlimited unprotected exterior wall openings are permitted as the fire separation distance exceeds 20 feet in all directions.

Allowable Exterior Wall Openings Based on Fire Separation Distance	
Fire Separation Distance	Allowable area
0 to less than 3 feet	Not Permitted
3 feet to less than 5 feet	15%
5 feet to less than 10 feet	25%
10 feet to less than 15 feet	45%
15 feet to less than 20 feet	75%
20 + feet	No Limit

TABLE 4: MAXIMUM AREA OF EXTERIOR WALL OPENINGS

6. Interior Walls and Partitions

- a. Fire/Smoke Resistive Assemblies

Required Fire/Smoke Resistive Assemblies		
Type of Assembly	Construction	Code Reference
Corridors		
Group A – Assembly	No rating required	SBC 1020.1
Group R - Residential	30-minute fire partition	SBC 1020.1
Special Rooms/Incidental Uses		
Dwelling Unit Separation Walls	1 hour fire partition	SBC 420.2
Elevator Machine Room	2 hour fire barrier	SBC 3005.4
Nonsprinklered Electrical Room	2 hour fire barrier	NFPA 13, 8.15.10.3
Emergency Generator Room	2 hour fire barrier	NFPA 110, 7.2.1.1
Dry Type Transf. Room > 112.5 kVA	1 hour fire barrier	NFPA 70, 450.21(B)
Boiler room where the largest piece of equipment is > 15 psi and 10 hp	Smoke Tight	SBC 509.4
Dry Type Transformer Room > 35,000 V	3 hour fire barrier	NFPA 70, 450.42
Laundry rooms over 100 SF	Smoke Tight	SBC 509
Trash Collection Rooms	Smoke Tight	SBC 509
Shafts		
Connecting any number of stories	2 hour fire barrier	SBC 713.4

TABLE 5: FIRE/SMOKE RESISTIVE ASSEMBLIES

7. Corridor Walls

- a. Residential corridors are required to be provided with a minimum fire- rating of ½ hour. Corridor walls must be constructed as fire partitions in accordance with SBC Section 708 (SBC 1020.1). Doors in residential corridors are required to be provided with a minimum rating of 20-minutes (SBC Section 716.4). Door are also required to meet the requirements for a smoke and draft control door assembly per UL 1784. The air leakage rate is not to exceed 3 CFM/ft² of door opening at 0.10 in. water for both the ambient and elevated temperature tests (SBC 716.4.3.1). Duct penetrations in corridor walls are required to be protected in accordance with 717.5.4 including smoke dampers except where the duct is constructed of steel not less than 0.019 inches in thickness and there are no openings serving the corridor.

8. Dwelling Unit Separation Walls

- a. Residential dwelling unit separation walls are required to have a fire resistance rating of 1 hour (SBC 708.3). Since floors are required to have at least a 1-hour fire resistance

CODE ANALYSIS

rating based on the construction type of the structure, they inherently satisfy the dwelling unit separation requirement.

VERTICAL OPENINGS

1. **Vertical openings** should be protected by shaft enclosures in accordance with Table 5 unless permitted to remain unenclosed per IBC Section 713.

INTERIOR FINISHES

1. Wall and Ceiling Finishes

- a. Interior wall and ceiling finish ratings are classified in accordance with ASTM E 84 or UL 723. The flame spread and smoke-developed indexes must not be greater than that specified in Table 6 based on the occupancy classifications (SBC 803.1.1).

Minimum Interior Wall & Ceiling Finish Requirements			
Occupancy Classification	Exit Enclosures	Corridors, Exit Access Stairways/Ramps	Rooms and Enclosed Spaces
A-3	B	B	B
R-2 and S	C	C	C

TABLE 6: INTERIOR WALL & CEILING FINISH REQUIREMENTS

2. Interior Floor Finish

- a. In all areas, interior floor covering materials are required to comply with the requirements of the DOC FF-1 "pill test" (CPSC 16 CFR Part 1630) (SBC 804.4.1).

FIRE PROTECTION SYSTEMS

1. Automatic Sprinkler Systems

- a. An automatic sprinkler system is required to be installed throughout the building in accordance with NFPA 13 (SBC 903.2).

2. Standpipe Systems

- a. A Class I standpipe system is required to be installed throughout the building in accordance with NFPA 14 as the floor level of the highest story is more than 30 feet above the lowest level of fire department vehicle access (SBC 905.3.1(1)).

3. Fire Extinguishers

- a. Portable fire extinguishers are required in all occupancies and must be selected and installed in accordance with this section and NFPA 10 (SBC 906.1).
- b. The maximum travel distance to an extinguisher for Class A fire hazards (ordinary combustibles) is not permitted to exceed 75 feet. The maximum travel distance to an extinguisher for Class B fire hazards (flammable and combustible liquids) is not permitted to exceed 50 feet (SBC 906.3).

4. Fire Alarm and Detection Systems

- a. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 must be installed in Group R-2 occupancies (SBC 907.2.9.1).
- b. Single- or multiple-station smoke alarms must be installed and maintained in Group R-2 occupancies at the following locations (SBC 907.2.11.2):
 - i. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
 - ii. In each room used for sleeping purposes.
 - iii. In each story within a dwelling unit.

5. Carbon Monoxide Detection

- a. The project must include the installation of carbon monoxide detection in accordance with the requirements of NFPA 72 fossil-fuel burning equipment is present within the building (RSA 153:10-a, Saf-C 6015.04).

MEANS OF EGRESS

1. Occupant Load

- a. The number of occupants is computed at the rate of one occupant per unit of area as prescribed in Table 7 (SBC 1004.1.2). The occupant load is permitted to be increased from the occupant load established for the given use where all other requirements of the SBC are met (SBC 1004.2).

Occupant Load Factors	
Function of Space	Occupant Load Factor
Assembly – Fixed	# of seats
Assembly – Standing Space	5 net
Assembly – Unconcentrated (tables and chairs)	15 net
Business Areas	100 gross
Kitchen	200 gross
Dormitories	50 gross
Residential	200 gross
Support Storage, Building Service Areas	300 gross

TABLE 7: OCCUPANT LOAD FACTORS

- b. Refer to the project Life Safety Plans which illustrate the occupant loads for each floor of the building.

2. Egress Width Factors

- a. The required egress capacity for any means of egress component is based on the following capacity factors (SBC 1005.3):

Egress Width Factors	
Stairways	All Other Components (inches of width per person)
0.3	0.2

TABLE 8: EGRESS WIDTH FACTORS

3. Number of Exits

- a. The number of exits required from every story cannot be less than that specified in Table 9 (SBC 1006.3.1).

Minimum Number of Exits Required	
Occupant Load	Number of Exits Required
1 – 500	2
501 – 1,000	3
> 1,000	4

TABLE 9: MINIMUM NUMBER OF EXITS REQUIRED

4. Egress Capacity

- a. Refer to the project Life Safety Plans which illustrate the egress capacities for each floor of the building.

5. Exit Enclosures

- a. Exit enclosures shall not be used for any purpose other than means of egress. Stairs connecting 3-stories or less are permitted to have a 1-hour fire resistance rating (SBC 1023.2). Stairs connecting 4-stories or more are required to have a 2-hour fire resistance rating (SBC 1023.2).
- b. Penetrations into and openings through an exit enclosure are prohibited except for required exit doors and equipment serving the stair (SBC 1023.5).

6. Exit Discharge

- a. Exits shall discharge directly to the exterior, except where permitted below (SBC 1028.1).
- b. A maximum of 50 percent of the number and capacity of exit enclosures are permitted to egress through either (1) areas on the level of exit discharge or (2) a

vestibule (SBC 1028.1). The combined use of these two exceptions should not exceed 50 percent to the number and capacity of the required exits. At least one of the two stairs serving the residential floors will be required to discharge directly to the exterior.

- c. Where exit enclosures egress through areas on the level of exit discharge, the following must be met (SBC 1028.1(1)):
- iv. Occupants are provided with a free and unobstructed path of travel to an exterior egress door and such exits are readily visible and identifiable from the point of termination of the exit enclosure.
 - v. The entire area of the level of exit discharge is separated from areas below by construction having a fire rating equivalent to the exit enclosure served.
 - vi. All portions of the egress path are sprinkler protected.

7. Accessible Means of Egress

- a. Accessible means of egress are required to be provided from all accessible spaces within the building. Where more than one means of egress is required from any accessible space, the space must be serviced by not less than two accessible means of egress (SBC 1009.1).
- b. At least one required accessible means of egress is required to be an elevator, equipped with standby power, as the building has accessible floors located four or more stories above the level of exit discharge (SBC 1009.2.1).
- c. Exit stairways are permitted to serve as the other accessible means of egress in accordance with SBC 1009.3(5).
- d. A two-way communication system is required to be provided at the elevator landing on each accessible floor that is one or more stories above or below the level of exit discharge (SBC 1009.8.1).

8. Exit Access

- a. Two exits or exit access doorways are required to be provided from any space where one of the following conditions exists (SBC 1007.1.1):
- i. The occupant load exceeds the values listed in Table 10 (SBC 1006.3.2(2));

Spaces with One Exit or Exit Access Doorway	
Occupancy	Maximum Occupant Load
A	49
R-2	10
S	29

TABLE 10: SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

CODE ANALYSIS

- ii. The common path of egress travel exceeds the maximum limitations of Table 11 (SBC 1006.2.1);

Common Path of Egress Travel	
Occupancy	Maximum Common Path of Travel Distance
A	75 feet
R-2	125 feet
S	100 feet

TABLE 11: COMMON PATH OF EGRESS TRAVEL

- c. Two exit access doorways are required in boiler, incinerator, and furnace rooms where the area is over 500 square feet and any fuel-fired equipment exceeds 400,000 British thermal unit input (SBC 1006.2.2.1).
- d. Where two exits or exit access doorways are required from any portion of the exit access, the exit doors or exit access doorways are required to be placed a distance apart equal to not less than one-third³ of the length of the maximum overall diagonal dimension of the building or area served (SBC 1007.1.1(2)).
- e. Group A occupancies that have an occupant load or more than 300 are required to be provided with a main exit. The main exit is required to be of sufficient width to accommodate not less than one half of the occupant load. In assembly occupancies where there is no well-defined main exit or where multiple main exits exist, exits are permitted to be distributed around the perimeter of the building provided that the total width of egress is not less than 100 percent of the required width (SBC 1029.2).
- f. Group A occupancies that contain seats, tables, displays or other material are required to adhere to SBC Section 1029, Assembly.

9. Travel Distances

- a. Exit access travel distances must not exceed the maximum values specified in Table 12 (SBC 1017.2).

Exit Access Travel Distances	
Occupancy	Maximum Exit Access Travel Distance
A, R-2, S-1	250 feet

TABLE 12: EXIT ACCESS TRAVEL DISTANCES

10. Corridors

- a. Corridors in other than Group R occupancies within the building are not required to have a fire-resistance rating. Corridors within the Group R-2 occupancies are required to be constructed as ½-hour fire resistance rating fire partitions (SBC 1020.1).
- b. The width of corridors will not be less than

that specified in Table 13 (SBC 1020.2).

Criteria	Minimum Width
Access to and utilization of MEP equipment	24 inches
With a required occupancy capacity < 50 people	36 inches
Any areas not listed above	44 inches

TABLE 13: MINIMUM CORRIDOR WIDTH

- c. Where more than one exit or exit access doorway is required, the exit access must be arranged such that any dead ends in the corridor do not exceed that specified in Table 14 (SBC 1020.4).

Maximum Dead End Corridor Length	
Occupancy	Maximum Dead End Length ⁵
A	20 feet
R-2, S	50 feet

TABLE 14: MAXIMUM DEAD END CORRIDOR LENGTH

11. Exit Signage

- a. Exit and exit access doors are required to be marked by an approved exit sign readily visible from any direction of egress travel (SBC 1013.1). The path of egress travel to exits and within exits must be marked by readily visible exit signs to clearly indicate the direction of egress travel where the exit or path of travel is not immediately visible. Exit signs within corridors must be placed such that no point is more than 100 feet or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.
- b. Exit signs are not required in the following locations:
- In rooms or areas that require only one exit or means of exit access.
 - Main exterior exit doors that are obviously and clearly identifiable as exits where approved by the building official.

12. Egress Illumination

- a. The means of egress, including the exit discharge, must be illuminated at all times the building served by the means of egress is occupied (SBC 1008.1). Illumination for new stairs is required to be at least 10 ft-candle during conditions of stair use, measured at the walking surface. The illumination level must not be less than 1 foot-candle (11 lux) at the walking surface (SBC 1008.2.1)
- b. In the event of power supply failure, an emergency electrical system must automatically illuminate all of the following areas (SBC 1008.3):
- Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.

- ii. Corridors, interior exit stairways, and exit passageways.
 - iii. (Exterior egress components at other than the level of exit discharge until exit discharge is accomplished.
 - iv. Interior exit discharge elements.
 - v. Exterior landings for exit discharge doorways, ADA ramps and stairs.
- f. The emergency power system must provide power for a duration of not less than 90 minutes and must consist of storage batteries, unit equipment, or an on-site generator (SBC 1008.3.4). The initial illumination must be an average of 1 foot-candle (11 lux) and a minimum at any point of 0.1 foot-candle (1 lux) measured along the path of egress at the floor level. Illumination levels are permitted to decline to 0.6 foot-candle (0.6 lux) average and a minimum of 0.06 foot-candle (0.6 lux) at the end of the emergency lighting time duration (SBC 1006.4).

13. Accessibility

- a. The building is required to comply with the accessibility provisions of ICC/ANSI A117.1 (2003), the SBC Chapter 11, the Housing Act Design Manual and the Americans with Disabilities Act (ADA).
- b. At a minimum, at least 12 of the 348 units are required to be designed as fully accessible. 8 of these units are required to be without roll-in type showers and 4 are required to be with roll-in type showers (SBC Table IBC Table 1107.6.1.1 and 1107.6.2.2.1). The remainder of the units are required to be Type B units (SBC 1107.6.2.2.2). Due to the layout of the residential building, the bathrooms within the Type B units should be Option A bathroom types (ANSI A117.1 1004.11.3.1).

APPENDIX: HEIGHT AND AREA

The following analysis assumes a separated mixed use approach.

Construction Type	Occupancy (Limiting)	Tabular Area	Sprinkler Increase (200%)	Max Permitted	Actual Area	Compliant
IB	A-3, S-1	48,000 ft ²	96,000 ft ²	144,000 ft ²	19,575 ft ²	Yes
IB	R-2	Unlimited	--	Unlimited	11,125 ft ²	Yes

TABLE 15: AREA ANALYSIS

Construction Type	Occupancy (Limiting)	Tabular Height (st/ft)	Sprinkler Increase (1 st./20 ft.)	Actual Height (st/ft)	Compliant?
IB	A-3, S-1	11 st/160	12 st/160	1 / 15'	Yes
IB	R-2	11 st/160	12 st/160	7 / 79'	Yes

TABLE 16: HEIGHT ANALYSIS



CIVIL ANALYSIS & RECOMMENDATIONS

INTRODUCTION

The South Campus Residential Development Area (SCRD) is located in the southwest portion of The University of Alabama (UA) campus in Tuscaloosa, Alabama. The SCRD is bounded to the west by 10th Avenue, the north by Paul B. Bryant Drive (Bryant Drive), and south by 12th Street, all of which are City of Tuscaloosa public streets / rights-of-way. The SCRD borders privately owned and maintained student housing along the east boundary, with the exception of the recently constructed UA Retail Center at the northeast corner of the site along Bryant Drive. The SCRD currently is the location for Tutwiler Hall and adjoining existing surface parking lot.

SITE GRADING & ELEVATIONS

Currently, the existing finish floor elevation at the front door (facing north at the southeast corner of the site) of Tutwiler Hall is approximately 220.9 feet above mean sea level (MSL). The portion of the site north of Tutwiler Hall generally slopes in a northwest direction, with approximately 1.5 to 2.5 feet difference in elevation from the front of Tutwiler Hall to the intersection of Bryant Drive and 10th Avenue. The east side of the site predominately slopes towards the southeast corner of the Tutwiler Hall area, with the ultimate low point of the area at an elevation difference of approximately 2.5 to 3.5 feet. The low point of the site is generally at an elevation of 216.5 feet above MSL, which is due east of the service yard driveways along the east side of Tutwiler Hall. The west and south portion of the site generally slopes towards the middle and eastern area, with approximately 9 to 10 feet and 3 to 4 feet difference in elevation from the southwest and southeast portion of the site, respectively. The high point of the site is the southwest corner with an approximate elevation of 227 feet above MSL. Refer to the Topographical Survey performed by McGiffert and Associates, LLC (McGiffert Drawing Number 96-13) dated March 29, 2016 for additional information regarding ground elevations and other surface features on the site.

Based on the proposed footprint for the new Residential Hall, the new parking deck structure, and the configuration of the access roads and driveways associated with the SCRD, the preliminary finish floor elevation of the new structures will be as follows:

- New Residential Hall – first floor finish floor elevation of 226.00 ft above MSL
- New Parking Deck – first level finish floor elevation of 222.00 ft above MSL

The preliminary proposed elevations of the access and driveways associated with the SCRD, along with anticipated cross-sections of the area, are provided as Exhibit “XXXX” (McGiffert and Associates, LLC Drawing Number 238-16, Sheets 1 thru 3).

RESIDENTIAL HALL

The finish floor elevation of 226.00 for the new Residential Hall will generally be at grade with the southwest corner of the project area. This elevation will allow for proper drainage away from the building at all locations. Due to existing constraints associated with the adjoining property to the east, coordination with the new UA Retail Center, and maintain occupancy of the existing Tutwiler Hall occupied during construction, the north portion of the new Residence Hall will be approximately 6 to 7 feet above the elevation of the proposed east-west access street along the north side of the new Residence Hall. This difference in elevation will need to be addressed with the hardscape configuration and design of the proposed plaza area to the north. This condition will also require attention at any of the ingress / egress locations from the building at the northwest and northeast portions of the proposed new Residence Hall. The proposed loading dock at the new Residence Hall will be approximately 48 inches above finish grade, and be sloped toward the north-south access drive. This should provide for positive drainage from each of the two loading dock areas. Areas around the perimeter of the new Residence Hall will require proper design of grading and storm drainage to provide positive drainage away from the new structure.

PARKING STRUCTURE

The first level elevation of the proposed parking deck structure will be approximately 222.00 feet above MSL. This will provide for relatively mild gradients at each of the two ingress / egress locations, along with accommodating the proposed pedestrian connection between the new

parking structure and the new Residential Hall. Similar to the new Residential Hall, the north portion of the parking deck will initially be 5 to 6 feet above the elevation of the proposed east-west access street along the north side of the new Residence Hall and parking deck. Once the existing Tutwiler Hall is demolished, this portion of the SCRD site will be able to be regraded to match the north elevation of the parking deck. Portions of the east side of the parking deck will require the use of retaining walls and vehicle barriers (i.e. guardrails, jersey barriers, etc.) due to the relationship of the proposed new access road and the existing elevations of the adjoining properties. The height of the retaining wall will vary from 1 to 4 feet above the existing ground elevation along the east side of the proposed access drive. For vehicular and pedestrian safety, vehicle barriers will also be required along the retaining wall. In addition to the retaining wall, proper drainage in the form of new storm sewer mains, properly placed storm inlets, and a combination of trench drains and concrete flumes between the retaining wall and the adjoining properties will be needed in order to provide adequate drainage provisions from the adjoining properties. This will be critical in minimizing any drainage impacts on such adjoining properties.

SITE UTILITIES

From an existing utility standpoint, various existing utilities currently are located on site. Many of these utilities will become obsolete once the existing Tutwiler Hall is unoccupied and demolished. During construction, the proposed location and orientation of the proposed new parking deck structure and the new Residential Hall should have little impacts on the utilities currently serving the existing Tutwiler Hall.

The major utilities crossing the site that will need to be addressed as part of the SCRD will be the sanitary sewer, storm sewer, domestic / fire protection water distribution system, electrical / telecommunications, and natural gas systems. As much as possible, new utilities should be routed in a common corridor in or adjacent to roadways.

SANITARY SEWER

The existing sanitary sewer currently involves two separate

systems that are vital to the SCRD area. First, the sanitary sewer along the north portion of the site and the existing Tutwiler Hall is comprised of a combination of 6" to 10" diameter sewer mains which generally flow to the west to the intersection of Bryant Drive and 10th Avenue. The sewer then turns north along the east side of the Bryant-Denny Stadium. This portion of the existing sanitary sewer system appears to serve the auxiliary spaces of the exiting Tutwiler Hall located in the rear and west sides of such building. This sanitary sewer main could be abandoned once Tutwiler Hall is unoccupied and demolished.

The major sanitary sewer system in the area of the SCRD involves a large diameter UA owned and maintained sanitary sewer main and a separate City of Tuscaloosa owned and maintained sanitary sewer. The UA sewer main flows diagonally across the site generally in a southeasterly direction from Bryant Denny Stadium. This sanitary sewer main is comprised of 21" diameter concrete pipe sections with concrete manholes for access points, ultimately discharging to the City of Tuscaloosa sanitary sewer system in 12th Street. Currently, the only flow in this UA existing 21" sewer main is from Bryant-Denny Stadium. The City of Tuscaloosa sanitary sewer main is located along the east side of the site between the existing Tutwiler Hall and the newly constructed UA Retail Center. This particular sanitary sewer main is comprised of 15" PVC and clay pipe sections, and drains to the south along the east boundary line of the site, discharging into the same City of Tuscaloosa sewer system in 12th Street. This sanitary sewer main collects sewer flow from the existing Tutwiler Hall, the newly constructed UA Retail Center, along with various other UA buildings, residential areas, and commercial developments along Bryant Drive east of the SCRD area. Both of these two major sanitary sewer mains will be required to remain in service during and after the SCRD.

The City of Tuscaloosa 15" sanitary sewer main should be outside of any conflict areas with the SCRD, and therefore should not require any relocations or improvements. The UA 21" sanitary sewer main will require relocation due its current location being beneath and within the proposed footprint of both the new Residential Hall and the proposed parking structure. Relocation of this sanitary sewer main will need to be coordinated with the different aspects of the SCRD and future sites to the north, so as to eliminate any

CIVIL ANALYSIS & RECOMMENDATIONS

conflicts and minimize impacts on future development areas. The relocation of the sanitary sewer will likely be required to be done in phases as determined by the overall project schedule of the new parking deck and new Residential Hall. The new sanitary sewer system will be constructed in compliance with City of Tuscaloosa and The University of Alabama standards for sanitary sewer systems.

STORM SEWER

The existing storm sewer system in the area of the SCRD is comprised of various sizes and types of storm sewer mains. Concrete, PVC, clay, ductile iron pipes in sizes varying from 6" to 30" in diameter make up the existing storm sewer system in the area. Portions of the area outside of and southeast of the SCRD flows through the area, contributing to the storm sewer flows through the site. Generally, all of the storm sewer from off-site and from the existing drainage areas in the SCRD area flows in a northwestern direction to a 48" diameter storm sewer trunk line located along the east side of Bryant-Denny Stadium. Of most concern with the storm sewer system in the area is flash flooding at the intersection of Bryant Drive and 10th Avenue, and along the east and southeast areas of the existing Tutwiler Hall. The flooding is basically attributed to insufficient capacity of the existing storm system in the SCRD area and the aforementioned 48" diameter main trunk line along the east side of Bryant-Denny Stadium. This situation and condition of the storm sewer system is well known and documented by The University of Alabama. The University of Alabama currently has a separate storm drainage project in the planning and design stages to address the flash flooding issues in the area.

Similar to the sanitary sewer system, portions of the existing storm sewer system in the SCRD Area will require relocation to accommodate the new Residential Hall and the proposed parking deck structure. Coordination with the different aspects of the redevelopment, along with the sequence of other proposed utilities will be required as part of the storm sewer relocations.

DOMESTIC & FIRE WATER PROTECTION

The domestic and fire water protection system for the area will be served from the City of Tuscaloosa water distribution system. As part of the redevelopment, a proposed domestic and fire water protection distribution system will be needed to provide not only domestic water service for the new structures, but also irrigation and fire protection needs within the area. New City of Tuscaloosa water mains will be extended into the area, with the major feed from 10th Avenue. Fire hydrants will be needed for proper coverage, with locations coordinated with the City required fire department connection points (siamese post connections). All watermain extensions into the SCRD will follow the City of Tuscaloosa Watermain Extension Agreement policy as routinely utilized on The University of Alabama campus for water service.

NATURAL GAS

The natural gas distribution system into the SCRD will be an extension from the northeast corner of the site from a recently installed UA natural gas system just north of the Phi Mu sorority house. This UA natural gas main will be continued across Bryant Drive into the redevelopment area, and be connected to the UA natural gas main on the east side of the SCRD area. This new natural gas main will be installed in a manner to provide service to each of the proposed structures within the SCRD area.

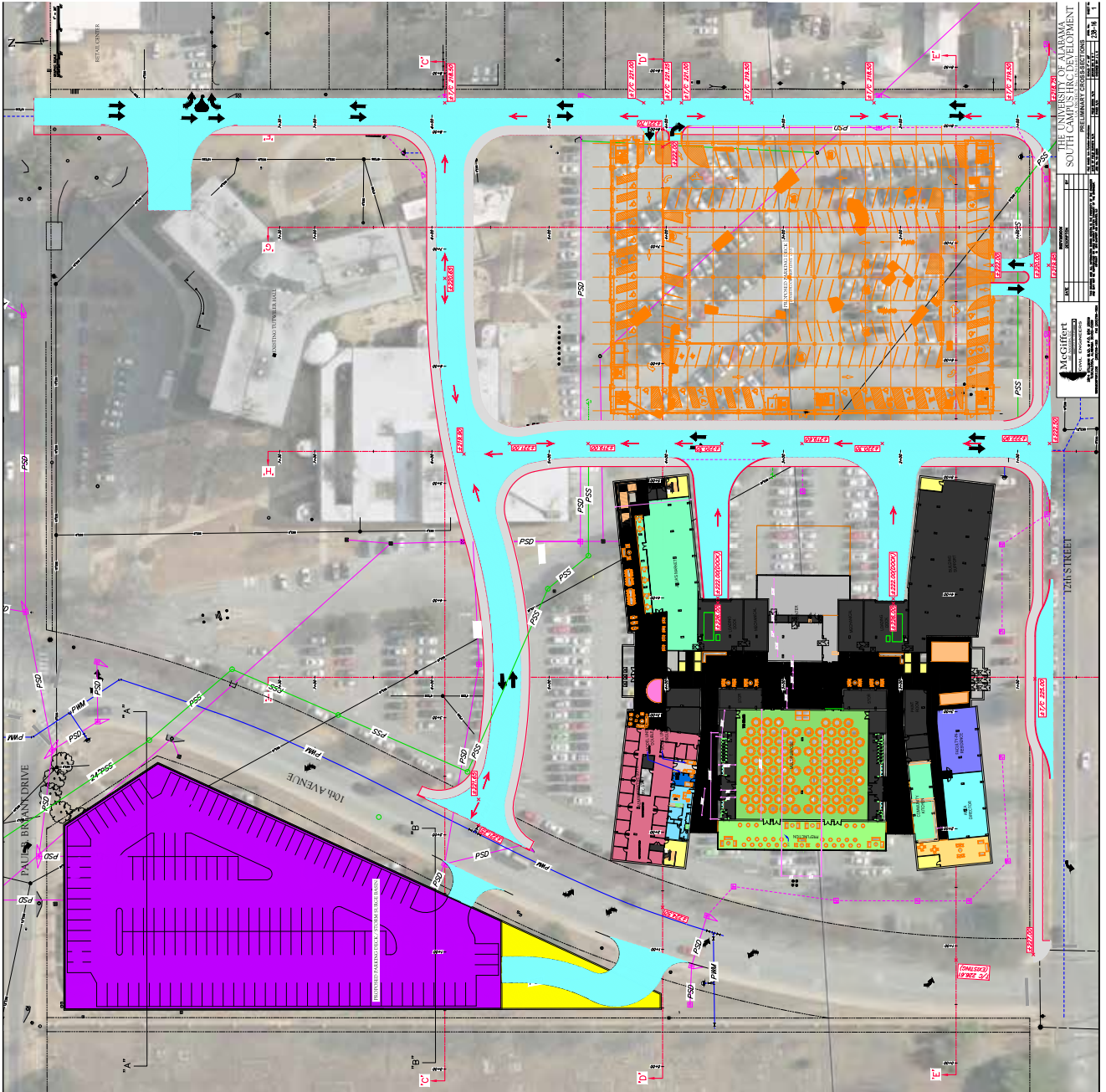
ELECTRICAL / TELECOMMUNICATION

Electrical / Telecommunications distribution systems will also need to be extended and upgraded within the SCRD area. Refer to the mechanical and electrical sections for additional information. Planning, design, and installation of these utilities will require coordination and sequencing with the new storm, sanitary and water distribution systems in the SCRD area.

For all subsurface conditions, refer to the geotechnical investigation and report performed by TTL, Inc. dated August 12, 2016.

70 UA SOUTH CAMPUS RESIDENTIAL DEVELOPMENT STUDY PRE-SCHEMATIC REPORT

CIVIL ANALYSIS & RECOMMENDATIONS



UA-New Tutwiler Residence Hall Preliminary Site Plan

STRUCTURAL ANALYSIS AND RECOMMENDATIONS

INTRODUCTION

The new structure is to be a replacement for the existing Tutwiler dorm located on the University of Alabama campus, just southeast of Bryant-Denny Stadium. The proposed new structure is shaped similar to a capital I. It consists of three tall bars for the residential areas and one level multipurpose infill areas between the bars. The north and south bars are 10 levels with the middle bar being 7 levels. The one level west infill area will also support a green roof terrace. A portion of this west infill area will be designated as a tornado shelter for the dorm residents.

APPLICABLE CODES AND STANDARDS

The new structure will be designed in accordance with the latest International Building Code along with the latest concrete, steel and masonry codes. The design of the tornado shelter will be in accordance with that latest ICC500 code for storm shelters. For the main structure, it will be designed for a 115 mph wind speed and the code prescribed seismic forces. The tornado shelter will be designed for a 250 mph wind speed.

BUILDING DESCRIPTION

FOUNDATION & SLAB

The foundations for the structure will be deep foundations due to the heavy loads and settlement potential of shallow foundations. Deep foundations possibilities include auger-cast piles and drilled piers.

The slab on grade will be 4" thick and reinforced with welded wire fabric.

MAIN SUPERSTRUCTURE

The 7 and 10 level portions will be an 8" cast-in-place (not post-tensioned) flat plate. This flat plate will be supported by concrete columns. Due to the taller first floor, the columns will be larger at the first level. The columns are typically spaced at every other dorm rooms' demising wall. They are also spaced at the exterior walls and the dorm room side of the corridor. The exterior columns will be 18x24 at the first level and 14x24 above. The interior columns will be 18x30 at the first level and 14x30 above. Due to the large openings

for stairs between floors, additional smaller columns will be included near these locations. Shallow beams may also be required to frame around these openings. Shear stud rails will be used for punching shear resistance at the columns. The roof of the building will also be an 8" thick flat plate. The concrete structure will provide the required fire rating through proper reinforcing coverage and member sizes.

It is anticipated that 16 gage, 3 5/8" steel studs will be used at the perimeter of the structure. Stud sizes will be determined once the skin system is designed. Interior walls will be light gage studs and gypsum board. If brick veneer is used for the skin, relief angles will be required at each floor. Deflection tracks at the top of all studs will be required.

For the one level portion on the east side of the building, the roof may be steel columns supporting steel beams and bar joists with metal deck. The amount of steel beams versus bars joists will vary depending upon the loading dock and mechanical room hanging loads.

For the one level portion of the west side of the building, the green roof will cover the tornado shelter. A single row of columns has been provided at the midpoint of the multi-purpose space. Rows of columns will also be provided at the north and south ends of the multi-purpose space.

LATERAL FORCE RESISTING SYSTEM

The lateral resistance to seismic and wind forces will be provided by concrete shafts at the stairs and elevators for the longitudinal direction of the north and south bars. Approximately 120' of shear walls will be required for each half of the north and south bars for lateral resistance in the transverse direction. This same amount of shear walls will be required in each direction for the middle bar.

EXPANSION JOINTS

Expansion joints between the north bar and middle bar and between the south bar and middle bar will be required. Joint width is approximately 6". Note that both shear wall lengths and expansion joint widths will be highly dependent upon the findings contained in the geotechnical report once it is completed.

TORNADO SHELTER

The tornado shelter will be enclosed with 12" thick concrete walls and openings in the wall will require FEMA doors or be shielded from missile impact. The roof structure will consist of a 12" heavily reinforced slab with beams extending 48" below the bottom of the slab. If brick is used for the façade, beams would be 24" wide spaced at 6' on center. The girders would be 48" wide and 60" tall (including the slab thickness). Serious consideration should be given to adding columns in this space.



ELECTRICAL ANALYSIS AND RECOMMENDATIONS

INTRODUCTION

New lighting, power and auxiliary systems as required to accommodate a new 10-level, 1,500 bed, residence hall conforming to the latest edition of the International Building Code, latest edition of the NFPA-101 Life Safety Code, latest Edition of NFPA-70 National Electrical Code, latest Edition of the NFPA-72 National Fire Alarm Code, Americans with Disabilities Act (ADA) and all local codes.

EXISTING CONDITIONS

The new building will be sited on an existing ground level parking lot. There are no known underground nor overhead electrical services through the proposed site requiring relocation. Telecommunications service to the new facility will be provided by way of a new underground telecommunications duct bank from an existing telecommunications manhole. Primary power service will be provided to the site from an existing padmounted 4-way S&C Vista medium voltage switch near the Kappa Kappa Gamma Sorority House to the North of the site. Primary power and telecommunications will be routed in a common, concrete encased duct bank and will be looped between Colonial drive on the west to the east side of the site.

PRODUCTS MATERIALS

All material will be new, approved by a nationally recognized testing lab, and of a quality consistent with the nature of this project.

MANUFACTURERS

- Switches and receptacles will be specification grade devices as manufactured by Hubbell, Bryant or Pass & Seymour.
- Secondary power distribution system equipment will be as manufactured by Square "D", GE, Cutler Hammer or ITE Siemens.
- Padmounted service transformers will be live front construction as manufactured by Cooper Power Systems.
- Medium voltage switches will be S&C padmounted Vista switches.
- Generator and automatic transfer switches will be as manufactured by Caterpillar, Kohler or Cummins.

LIGHTING MATERIALS:

- Indoor troffers, strip fixtures, surface mount fixtures, pendant mounted fixtures, wet location surface mounted fixtures and recessed downlights will be specification grade LED fixtures as manufactured by Acuity Brands, Hubbell or Thomas Lighting.
- Outdoor building mounted fixtures, parking area fixtures and building façade lighting will be LED fixtures as manufactured by Acuity Brands, Hubbell or Thomas.
- Exterior pedestrian fixtures will be the University of Alabama standard LED post-top fixtures.
- Street lighting fixtures will be the University of Alabama standard Holophane LED tear drop luminaires on Union Metal poles.
- All LED lamps will be 3500K for interior fixtures and 4000K for outdoor fixtures.

CONDUCTORS (600 VOLT)

- Conductors will be type THHN/THWN solid for AWG No. 10 and smaller.
- Conductors will be XHHW stranded for AWG No. 8 and larger.
- All conductors will be color coded by system.

CONDUCTORS (15 KV)

Conductors will be single stranded Class B annealed uncoated copper with extruded semi-conducting strand screen, ethylene propylene rubber (EPR) insulation (133% insulation level) with semi-conducting insulation shield (shielding with 5 mil copper tape with 25% nominal overlap) and outer PVC jacket equivalent to Okonite Okoguard-Okoseal Type MV-105 cable.

CONDUIT – METALLIC

- EMT conduit will be used where concealed and where exposed at 8'-0" or higher above finished floor. EMT conduit will not be allowed in areas exposed to mechanical damage.
- IMC or rigid steel conduit will be used in all cases where above grade at the building exterior and in all areas exposed to moisture or danger of mechanical damage.
- Rigid steel conduit will be required in all hazardous areas.
- Conduit will be ¾-inch minimum.

CONDUIT – NON-METALLIC

Non-metallic conduit shall be used for feeders and branch circuits where below grade, or in concrete slab on grade. Non-metallic conduit shall, however, convert to rigid metal conduit prior to leaving ground level slab or grade. Conduit adaptors shall be used for transition.

Non-metallic conduit shall be schedule 40 rigid PVC as manufactured by Carlon or equal.

Underground primary power and telecommunications duct banks will be concrete encased.

EXECUTION LIGHTING SYSTEMS

Interior Lighting:

- A combination of dimmable LED downlights and LED troffers will be provided within all meeting spaces, corridors and lobbies.
- 2' x 4' dimmable LED troffers will be provided within offices, collaboration areas, recreational areas and work areas.
- LED strip fixtures will be provided within electrical rooms, mechanical rooms, janitor's closets, storage rooms, laundry rooms and maintenance areas.
- LED downlights will be provided within restrooms and lounge areas.
- LED surface mounted fixtures will be provided within all dormitory bedrooms and bathrooms.
- LED recessed shower lights will be provided within all showers.
- Emergency egress and exit lighting will be provided per code.

Exterior Lighting:

- University of Alabama standard post-top LED luminaires on 13'-0" antique street lamps cast iron poles will be provided along all walkways.
- LED ground mounted façade lighting and landscape lighting will be provided.
- LED cut-off wall packs will be provided for building mounted security lighting at all exit doors.

- University of Alabama standard parking area pole mounted LED luminaires will be provided at all ground level parking areas.
- University of Alabama standard LED street lighting fixtures will be provided along all streets.

LIGHTING CONTROL

- Automatic lighting control will be provided within all interior areas of the building except for mechanical rooms, electrical rooms, dormitory bedrooms and bathrooms. Manual lighting control will be provided within these area.
- Automatic lighting control will be provided for all exterior lighting.
- The lighting control system will consist of programmable relay panels with remote override switches for preset on/off control of common area corridors, public restrooms, lobbies and exterior lighting. Offices, meeting rooms, storage rooms, etc. will be controlled by way of individual dimming room controllers with occupancy sensors and low voltage wall switches similar to the Wattstopper DLM system.

POWER DISTRIBUTION

Underground primary service will be provided from a new S&C 6-way medium voltage Vista switch to two (2) new 2500 KVA padmount service transformers.

BUILDING POWER SYSTEMS

- Two (2) 4,000 amp, 277/480V, 3-phase, 4-wire underground secondary electrical service feeds will be provided from the new padmount service transformers to two (2) new main switchboards within the building main electrical room.
- All distribution switchgear necessary to accommodate the building loads will be provided.
- Bus mounted surge suppression devices will be provided at the main switchgear and at all 277/480 volt, 3-phase, 4-wire lighting panels and at all 120/208V, 3-phase, 4-wire branch circuit panelboards.
- Power will be provided to all building systems and all equipment and devices requiring connection to the electrical system.

ELECTRICAL ANALYSIS AND RECOMMENDATIONS

STANDBY & EMERGENCY ELECTRICAL SYSTEMS

Standby and emergency power will be provided from a new 800 KW diesel generator with natural gas bi-fuel add-on package. Legally required standby, optional standby and emergency systems power distribution equipment will be provided as necessary to accommodate the building emergency, legally required standby and optional standby power system loads. ATS's shall be passive closed transition.

1. The following equipment will be connected to the life safety system:

- Emergency egress lighting
- Exit Signs
- Fire Alarm System
- Mass Notification System
- The following equipment will be connected to the optional standby system:
- Data room ductless split systems.

2. The following equipment will be connected to the legally required standby system:

- Elevators
- Fire Command Room
- Fire Pump
- Stair Pressurization Fans
- Storm Shelter

FIRE ALARM SYSTEM

A new Simplex 4100U fire alarm/voice communications system will be provided.

TELECOMMUNICATIONS SYSTEM

A complete telecommunications system empty raceway system and ground system will be provided throughout the building in order to accommodate structured cabling provided by others.

SECURITY/CCTV/ACCESS CONTROL SYSTEM

A complete security, access control and CCTV system empty raceway system will be provided throughout the building.

GROUNDING

A complete grounding electrode system in accordance with Article 250 of the National Electrical Code will be provided.

A properly sized insulated equipment grounding conductor will be provided with all feeders and branch circuits.

GUARANTEE

A written guarantee of the electrical systems shall be provided to the owner for one (1) year after final acceptance will be provided.

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MECHANICAL ANALYSIS AND RECOMMENDATIONS

INTRODUCTION

This narrative provides the schematic design intent for the mechanical systems for the South Campus Residential Development Residential Tower project.

APPLICABLE CODES AND STANDARDS

MECHANICAL PERFORMANCE CRITERIA

ANSI B31.9 - Building Services Piping.

ADA - American's with Disabilities Act.

ASHRAE 15 - Safety Code for Mechanical Refrigeration.

ASHRAE 62 - Ventilation for Acceptable Indoor Air Quality.

ASHRAE 90.1-2013 Energy Efficiency Standard

ASME - Boiler and Pressure Code.

Alabama Boiler Code

NFPA 90A - Installation of Air Conditioning and Ventilating Systems.

NFPA 96 – Standard for Ventilation Control for Commercial Cooking Operations.

NFPA 101 - Life Safety Code.

Local Mechanical Code (International Mechanical Code, 2015).

Local Building Code (International Building Code, 2015).

DESIGN CONDITIONS

1. Ambient design temperatures as follows:

- Summer: 95°F db, 78°F wb
- Summer 100% OSA Units: 81.5°F db, 75.5°F dew point
- Winter: 10°F

2. Indoor design temperatures as follows:

- Summer: 72°F, 50% RH
- Winter: 70°F, (No active low RH control.)
- Building Envelope Thermal Performance

3. Wall and Roof Insulation: Minimum values per ASHRAE 90.1 – 2013

4. Fenestration Performance: Based on UA's Standard Glass

Performance Data, which exceeds the minimum values required by ASHRAE 90.1 - 2013

DESIGN APPROACH

The design of the HVAC system for this project generally tracks the University's philosophy for mechanical systems. This project will be designed to provide indoor space conditions that provide occupant comfort; provide as many occupants as reasonable, and allowed by space and budget constraints, control over their respective space temperature; provide code required outside air ventilation rates; meet or exceed energy efficiency code requirements; avoid the installation of units with cooling coils above ceilings; use gas fired equipment as the primary heating fuel; provide centralized cooling plants in lieu of multiple DX units; provide centralized hot water plants for building heat; and connect all mechanical equipment to the campus Building Automation System (BAS). The HVAC systems will be designed to meet these goals, but also will be easy to operate and not overly complicated with features that often must be bypassed or cut out of the system due to failure to perform per the manufacture's promises.

HEATING, VENTILATION, AND AIR CONDITIONING

INTRODUCTION

The building will be equipped with a 4-pipe hydronic system, which will allow simultaneous heating or cooling, as required, in different parts of the building to maintain comfort conditions. Chilled water will be provided by water-cooled chillers and hot water provide by gas -fired water boilers. Conditioned air will be distributed to the building by a combination of central station air handlers, Energy Recovery Units (ERU's), packaged air handlers, fan coil units (FCU's), variable volume air terminal units with hot water reheat coils, and 4-pipe ceiling cassette units.

HVAC OPTIONS MATRIX

The University started its current residential housing initiative in 2005. Since then, the University has constructed 9 major residential projects. With each successive project, the University refined the mechanical system design criteria, adding features that were missing and deleting system types that were not optimal. The HVAC system design of the SCRD Residential Tower will incorporate all of the University's

best practices for residential projects that they have been developed over the past decade.

A few HVAC system options were explored and decisions made during the schematic design:

Dorm Room AC units: Install units in mechanical closets located across the corridor from the respective dorm rooms, as opposed to installing in room above the ceiling, or in mechanical closets adjacent to the dorm rooms.

Boilers: Locate boilers in the Residential Tower as opposed to in the Central Energy Plant located in the adjacent parking deck.

Boilers: Utilize 85% Efficient water boilers that can be sidewall vented and located in the residential tower, in lieu of dry back fired tube water boilers located in parking deck, or fire tube condensing boilers at either location.

Other system options yet to be selected are listed in the respective system sections below.

ENERGY SOURCES

The University's primary energy sources are natural gas and electricity. Both of these utilities are distributed throughout the camps with University owned and maintained distribution systems.

HEATING STRATEGY

The build will be heated with hot water. Hot water will be provided by six gas-fired, fire tube, 85% efficient, non-condensing boilers with sealed combustion chambers. The combustion air and flue vents will be ducted to the north wall with sidewall terminations that will be hidden from view by the loading dock.

The boilers will be piped in a once through pumping arrangement. The boilers will be piped in a primary – secondary pumping arrangement. The primary pumps will be constant volume and the secondary pumps will be variable volume. The secondary pumps will be modulated based on the position of the hot water heating coil valve which is most open. The primary and secondary piping systems will be decoupled with a hot water buffer tank.

Piping system will include an air/dirt separator, a side stream filter and a bladder expansion tank. Bladder tanks will be a maximum of 100 gallons, with multiple tanks provide as required.

The hot water system will be filled with a solution of 30% by volume propylene glycol to protect the central station air handler preheat coils from freezing.

All heating coils will be selected to operate at maximum capacity with 150°F entering water and a 25°F – 30°F temperature difference across the coil. The hot water supply temperature will be reset between 120°F to 150°F, based on outdoor temperature.

The Building Automation System (BAS) will reset the hot water supply temperature based on the outdoor air temperature. Boiler staging and firing rate will be controlled by the BAS. The boilers will have a Modbus communication interface with the BAS.

Final specification of the boilers will include a cost vs. benefit analysis of utilizing water to glycol heat exchanger packages at each preheat coil to limit the volume of the glycol system.

COOLING STRATEGY

Chilled water for cooling the building will be provided by water - cooled chillers. The chillers will be equal in capacity, each carrying approximately 50% of the total cooling load, with a third equally sized chiller for stand-by capacity. The chillers will be piped in a primary - secondary pumping arrangement. The primary side will be constant volume and the secondary side will be variable volume. Each chiller will have a dedicated primary pump and there will be two, 100% standby capacity secondary pumps. The secondary pumps will be modulated based on the position of the chilled water cooling coil valve which is most open.

Chilled water will be pumped underground from the parking deck to the residential tower in factory insulated piping. The carrier pipe will be schedule 40 steel pipe with welded joints. The casing will be extra heavy HDPE with fused, pressure tested field joints.

A 100-ton heat pump chiller will be provided to preheat the domestic water as required by the energy code.

Piping system will include an air/dirt separator, a side stream filter and a bladder expansion tank. Bladder tanks will be a maximum of 100 gallons, with multiple tanks provide as required.

The chillers will maintain a constant leaving water temperature, with a setpoint which will be adjustable by the Building Automation System (BAS)



MECHANICAL ANALYSIS AND RECOMMENDATIONS

Key chiller features will include LonTalk communications interface, marine heads on the condenser and evaporator barrels, and 2-5 year parts, refrigerant and labor warranty.

Final specification of the chillers will include a cost vs. benefit analysis for high efficiency chillers, chillers equipped with variable frequency drives. Additionally, magnet bearing chillers may be a consideration for higher efficiency and a smaller physical footprint.

Crossflow cooling towers, mounted on the top level of the parking deck will provide condenser water for the chillers. The cooling towers will be equipped with variable speed motors with VFD's, gearbox drive, stainless steel hot and cold water basins, interior service platform, access ladders with hand-rails with toe kick plate at top of the towers, and pre-piped single point return piping connections. The towers will be provided with double drift eliminators to limit drift, which might fall on cars parked on the upper level of the deck. Towers to be connected with an equalizing line with isolation valves to allow individual towers to be taken out of operation for service.

A plate and frame heat exchanger will be utilized to provide a water-side economizer for "free" cooling when the ambient wet bulb is below 50°F.

The chilled water plant will provide chilled water 24/7/365.

VENTILATION AND AIR CONDITIONING STRATEGY

Central Station Air Handlers

The central station air handlers and energy recovery units will have common construction specifications including double wall construction with R-13 spray foam insulation, 4" thick pleated filters in angle filter rack, hot water preheat coil, chilled water cooling coil with stainless steel cooling coil casing and drain pan, lights in access section, 24" access section between heating and cooling coils, internally spring isolated plug supply fans, and a 6" high base rail. All air handlers to installed a 4" high concrete housekeeping pad with a 2" deep stainless steel drain pan and neoprene pad isolators.

Final specification of the air handlers will include an analysis of belt-drive vs. direct drive plug supply fans, as well as single fans vs multiple fans, including "fan wall."

Air Handler AC-1:

(Number and size of air handlers will depend on layout and locations of mechanical spaces.)

AC-1 are medium pressure variable volume air handlers serving the entire first floor, excluding the storm shelter, the center core common areas surrounding the elevators at the of the east and west bars on Floors 2-10, as well as the common areas at the east and west bars on the north and south bars on floors 2 – 10. In addition to the common construction specifications, AC-1 will be equipped with an air blender section and a remote mounted, mixed flow relief fan for airside economizer operation. VAV air terminal Units with hot water rehear coils will provide temperature control for the various spaces served by AC-1.

AC-1 will be equipped with a minimum OSA damper and an air flow monitor. Minimum OSA will be not be reset by space CO2 sensor.

AC-1 supply fan speed will be modulated based on the air terminal unit with most open supply air control damper. Supply air temperature setpoint will be reset by outdoor temperature.

Relief fan will operate in the airside economizer control and its speed modulated to maintain building static pressure.

If reasonable and deemed to be a controllable system, the AC-1 air handlers medium supply ducts will be manifold together to provide system redundancy.

AC-1 air handlers will be installed in mechanical room(s) located on the first floor

Air Handler AC-2:

AC-2 is a single zone, low pressure variable volume air handler serving the storm shelter. The storm shelter normal operation, includes a folding partition that divides the room in half. AC-2 will be designed to provide individual air flow and temperature control to each half of the storm room. In addition to the standard construction specs, AC-2 will be equipped with an air blender section, a remote mixed flow relief fan for airside economizer operation, and two duct mounted volume dampers with air flow monitors and hot water reheat coils for the required two zone control.

AC-2 will be equipped with a minimum OSA damper and an air flow monitor. Minimum OSA will be reset by two space CO2 sensors.

AC-2 supply fan speed will be modulated based on the zone damper that is most open. Supply air temperature setpoint will be reset return air temperature and space humidity.

Relief fan will operate in the airside economizer mode and

its speed modulated to maintain storm shelter space static pressure.

AC-2 will be located within the storm shelter, connected to emergency power and be equipped with FEMA 361 weather louvers. The louvers will be sized based on air-side economizer operation during normal mode, or code required ventilation per person during emergency mode, whichever is greater.

Air Handlers AC-3 & 4:

(Number and size of air handlers will depend on layout and locations of mechanical spaces.)

AC-3 & 4 are low pressure, single zone air handlers that supply conditioned outside air (OSA) to floors 2-10 and exhaust the toilets and OSA from the same floors. In addition to the common construction specifications, AC-3 & 4 are equipped with an exhaust fan, a total energy recovery wheel and a hot water reheat coil.

The exhaust and supply fans will be constant volume. Supply air temperature setpoint will be reset by outdoor temperature. Energy wheel speed will be varied to maintain the discharge air temperature setpoint.

FCU'S AND PACKAGED AIR HANDLERS

Dorm Room FCU's:

Dorm rooms will be conditioned by dedicated vertical fan coil units (FCU's) installed in mechanical closets located across the hall from their respective dorm room. FCU's will be equipped with foil faced insulation, centrifugal supply fan with a variable speed EC motor (ECM), chilled water cooling with stainless steel coiling coil casing and drain pan, and a unit mounted disconnect switch.

Fan speed and supply air temperature will be modulated to meet space temperatures setpoint.

Apartments:

Apartment will be conditioned with VAV air terminal units served by AC-1.

Laundries, Study Rooms and Other Common Areas Floors 2-10.:

Laundries, Study Rooms, and other common areas, that cannot be conditioned by a VAV air terminal unit connected to AC-1, will be conditioned with a 4-pipe, ceiling cassette fan coil units.

Fan speed and supply air temperature will be modulated to

meet space temperature setpoint.

Data Closets and Electrical Rooms:

Data Closets and Electrical rooms will be conditioned with cooling only, Hi-Wall Mounted Fan Coils as manufactured by Multiaqua. Units will be wall mounted and unit located over the door. Units sized to provide required cooling with 52°F entering chilled water, so that adequate cooling is provided during water-side economizer operation.

Indoor units will drain into a remote, wall-mounted condensate pump, or a condensate drain riser.

MECHANICAL AUXILIARY SYSTEMS, EQUIPMENT, AND MATERIALS OF CONSTRUCTION

RANGE HOODS

Community Kitchens, equipped with cook tops, will be provided with an NPFA 96 approved range hood with fire suppression system and a grease exhaust duct system and exhaust fan, which also comply with NFPA 96 and IMC 2015.

Cooktops located in faculty apartments will be provided with a residential style range hood without a fire suppression system and will be ducted to outdoors.

EXIT STAIR TOWERS

Exit stair towers will be served with a stair pressurization system to maintain the stair towers under positive pressure relative to the space. A supply fan located on the roof and ducted down to supply grilles at the 8th and 3rd floors will be connected to emergency power and be activated by the Fire Alarm system in case of a fire event. A barometric relief damper will maintain the stair under a maximum positive pressure of 0.35" w.g. relative to the indoor space.

PUMPS:

The hot and chilled water pumps will all be vertical in-line, split coupled pumps equipped with an outside-balanced mechanical seal. Mechanical seals will have a carbon face rotating ring against a stationary ceramic seat and equipped with a seal flushing line. Pumps will be supported by overhead piping with spring isolators and will not be equipped with flexible connectors.



MECHANICAL ANALYSIS AND RECOMMENDATIONS

VFD'S:

All motors 5 HP and larger will be controlled by a variable frequency drive (VFD). The drives will be manufactured by ABB and will have a LonTalk communication interface. The drives will not be equipped with a unit mounted disconnect, nor will they have by-pass. A spare drive will be provided for each motor size used on this project. All motors served by a VFD will be inverter ready rated and shafts will be equipped with a grounding ring.

PIPING:

Hot and chilled water piping will be welded or screwed, schedule 40 black steel pipe, or Type L copper. Dielectric nipples will be installed between dissimilar metals.

All pipe welds will undergo ultrasonic testing (paid for by Owner, retesting paid for by Contractor) prior to flushing and clean, and application of pipe insulation.

Drain piping will be type L copper with soldered joints.

DUCT WORK:

Ductwork will be galvanized sheet metal. Medium pressure duct to have a SMACNA Class A seal and all other duct to have a Class C seal.

LAUNDRY DRYER EXHAUST:

On floors 2 – 7, the 4" galvanized dryer exhaust vents will be routed room above the ceiling of the adjacent Building Support room and terminate on the west wall with a sidewall cap with backdraft damper. On floors 8-10, the 4" galvanized dryer exhaust vents will be routed above the ceiling of the adjacent RA dorm room (ceiling will have to be lowered approximately 6") and terminate on the north or south wall and terminated with a sidewall cap with backdraft damper. As an option for symmetry, the vents on all floors can be routed same as described for floors 8-10.

Final specification of dryer vent exhaust vents will include analysis of a dryer vent system with a common exhaust duct serving stacked laundries in the east and west bars. Vent system will be equipped with a roof mounted exhaust fan that will modulated to maintain constant negative. The common exhaust system will require additional maintenance, would be the only similar system currently on campus and would require an accessible flat roof above the stacked laundries at the 9th floor level.

INSULATION:

Hot water piping will be insulated with fiberglass pipe insulation.

Chilled water piping will be insulated with urethane pipe insulation. Chilled water piping exposed outdoors will be heat traced and protected with an aluminum jacket.

Dorm Room Supply duct will be insulated with ½" thick duct liner.

Supply duct serving air handlers will be lined with 1" thick duct liner for the first 20' nearest the air handler and all other supply duct will be insulated with external duct wrap.

CONTROLS AND METERING

The BAS control system will be an extension of the existing campus-wide, Schneider Electric Network 8000 direct digital control system. All mechanical equipment will be controlled by the BAS and dynamic graphics provided for interface at the operator's workstation.

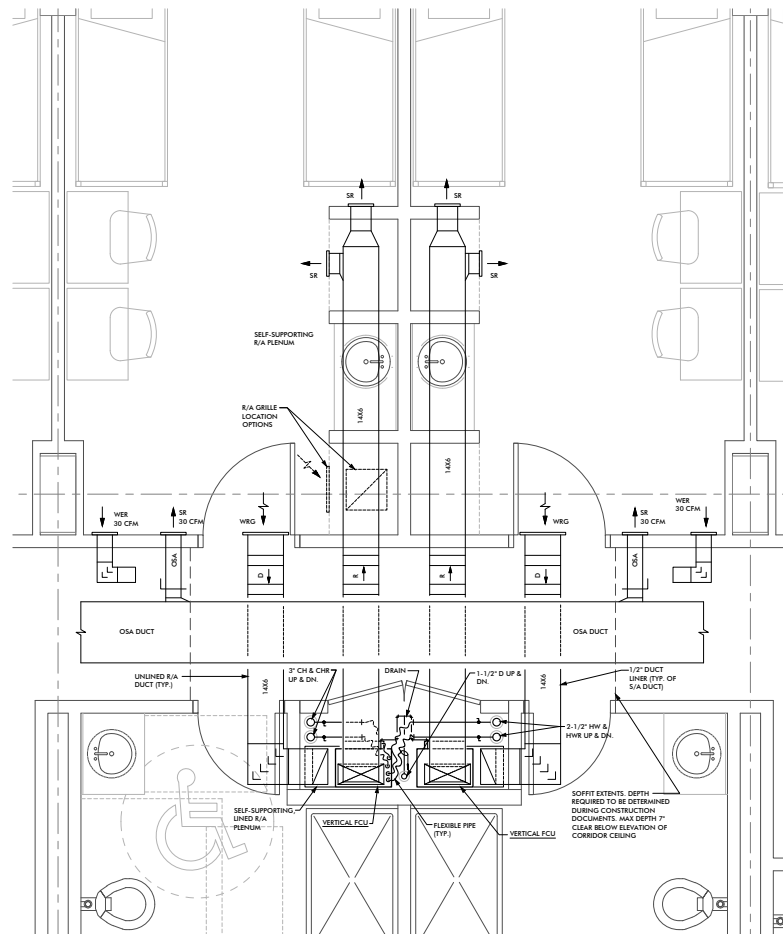
The chilled water will be arranged to allow measurement of the BTU/H used by the Residential Tower, but will not be installed until other buildings are connected to the CEP.

The natural gas and electrical meters will be provided respectively under the Plumbing and Electrical scope of work.

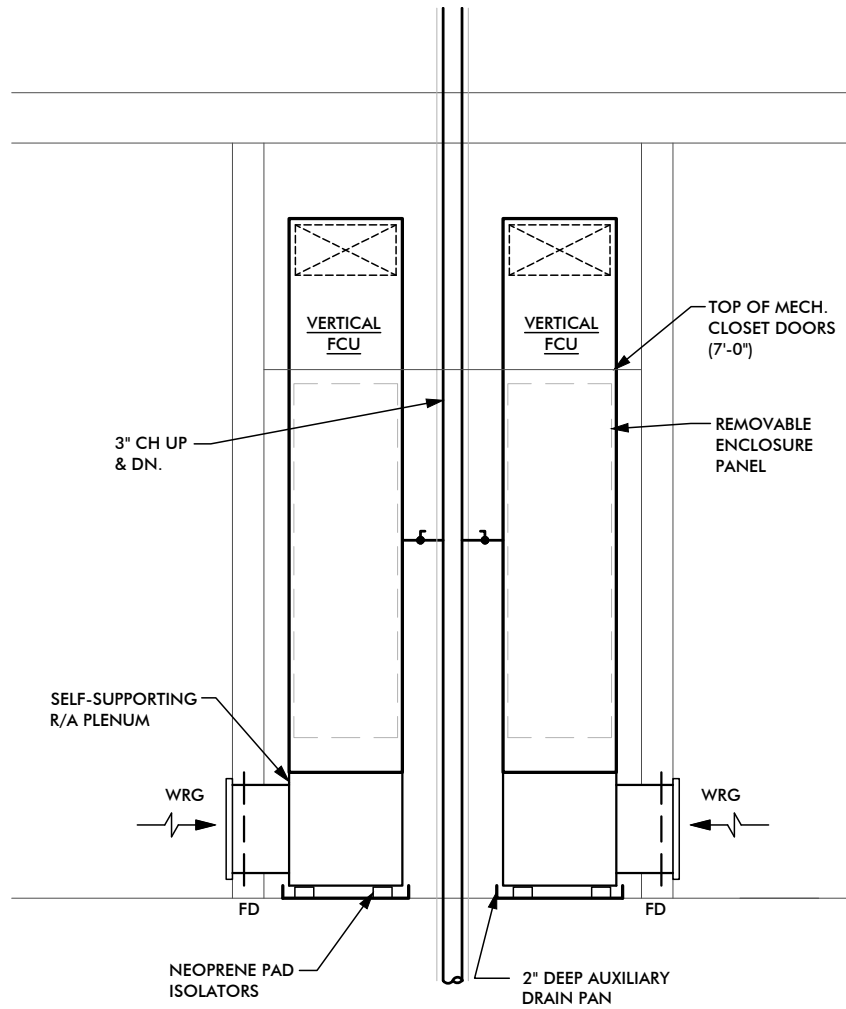
COMMISSIONING

All mechanical systems will be commissioned.

MECHANICAL ANALYSIS AND RECOMMENDATIONS



Typical Dorm Mechanical Closet - Across Hall Option



Typical Section Through Mechanical Closet at Bedrooms



PLUMBING ANALYSIS AND RECOMMENDATIONS

INTRODUCTION

The University of Alabama Tutwiler Dormitory will consist of a ground level with Nine floors of dorm units. At the ground level, there will be mechanical spaces, a catering area, administration area, Convince Store, and a storm shelter conforming to ICC 500. Floors two through seven will have an “H” shaped configuration. Floors eight through ten will have independent towers with no interconnecting link.

APPLICABLE CODES AND STANDARDS

International Plumbing Code 2015

International Building Code 2015

ANSI: American National Standards Institute, Inc.

ASHRAE: American Society of Heating, Refrigeration, and Air Conditioning Engineers.

ADA: Americans with Disabilities Act

ASME: American Society for Mechanical Engineers.

Boiler and Pressure code

ASSE: American Society of Sanitary Engineers.

ASTM: American Society of Testing and Materials.

AWWA: American Water Works Association.

CISPI: Cast Iron Soil Pipe Institute.

FM: Factory Mutual.

NAIMA: North American Insulation Manufacturers Association.

NEMA: National Electrical Manufacturers Association.

NFPA: National Fire Protection Association.

NSF: National Sanitation Foundation.

MSS: Manufacturers Standardized Society of the Valve and Fittings Industry.

PDI: Plumbing and Drainage Institute.

UL: Underwriters Laboratories, INC.

SANITARY SYSTEM

There will be dormitory rooms located on floors 2 through 10. Each floor, with dormitory rooms, will have publicly accessible, private bathrooms, kitchenette, laundry and a single janitor's closet. Each bathroom will consist of a wall hung water closet, lavatory and shower with acrylic surround, and centrally located floor drain. Dorm units will have a single lavatory. Kitchenettes will have a double bowl sink, dish washer and ice maker. Laundry rooms will have a washers, dryers and laundry tub. Dormitory units, laundry areas and bathrooms will “stack” with plumbing fixtures aligned between floors allowing for the design and installation of combination waste and vent stacks and pressurized risers. The pressurized risers will be type L copper with distribution and branch piping being PEX.

DOMESTIC WATER SERVICES

A flow test is required to determine the hydraulic availability of water. Given the height of the proposed facility, a domestic water booster pump will be required. The booster pump, will be located in the first floor mechanical space.

A water service will be brought into the first floor separate from the fire service. A second, separate water service will be brought into the storm shelter and be dedicated to plumbing fixtures located there and will not require a booster pump.

A backflow preventer, reduced pressure zone type, will be installed in proximity to mechanical equipment and serve as make up water for the hot and chilled water systems.

A backflow preventer, reduced pressure zone type will be installed in proximity to the water service and will be dedicated to irrigation requirements of the terrace located above the storm shelter. All piping down stream of this back flow preventer will be insulated and shall be painted purple.

Kitchen, catering and Laundry areas shall be provided with 125 degree Fahrenheit hot water. The Catering area will not be used for the cooking of food, nor will it be used for the washing of dishes and cutlery, and will therefore not require a grease separator. The Kitchen will be provided with double bowl sink, refrigerator with water and ice dispenser, and dish washer. The dishwasher will discharge to the tail piece of the adjacent sink through a counter mounted air gap fitting. The Refrigerators will be provided with a cold water connection via a wall supply box. Laundry areas will have electric dryers. Washers will be provided with cold and hot

water connections and a waste connection via a wall supply box.

Building domestic hot water will be supplied from three (3) Lochinvar armor units and storage tanks. Domestic hot water will be generated, stored at 140 degrees Fahrenheit and distributed at 125 deg Fahrenheit. Hot water will rise in common walls and plumbing chases up to the top level where the system will be recirculated. Within the storm shelter, there will be a standalone electric, tank style water heater to provide hot water needs for the bathroom group.

STORM WATER

Flat roof areas will require storm drainage with overflow protection. Rain leaders will be routed internally, down through the building and out to site. Overflow discharge points will be located near grade.

NATURAL GAS

Natural gas will be utilized for generating domestic hot water, mechanical hot water, and fueling an emergency generator. Natural gas will be distributed via a 2 pound system and sized for a pressure drop of 0.2 PSI across the system.

Piping penetrations through floor slabs (excluding slab on grade penetrations) and rated walls will be fire caulked. All penetrations two (2) inches and larger through the storm shelter shall be secured per ICC 500 guidelines.

All Plumbing systems shall be tested and balanced.

Plumbing systems shall be commissioned.

MATERIALS

1. Sanitary and Waste Piping, Below Grade or Below Slab on Grade:

- Cast iron hub and spigot.
- Pipe: service weight cast iron.
- Fittings: hub and spigot with neoprene gasket.

2. Sanitary Waste and Vent Above Slab on Grade:

- Cast Iron Pipe.
- Pipe: CISPI 301, hubless, service weight, bituminous coating.
- Fittings: Cast iron, bituminous coated.

- Joints: CISPI 310, neoprene gaskets and stainless steel clamp and shield assemblies. All standard duty hubless couplings shall meet CISPI 310 and be listed by NSF International.
- Approved manufacturers: Husky HD 2000, Mission Heavyweight or Clamp All-80.

3. Water Piping, Below Slab on Grade or Below Grade:

- Water piping: Copper tube.
- Copper Tubing:
- Pipe: ASTM B88, Type K soft copper.
- Fittings: ASME B16.22 wrought copper and bronze.
- Joints: "Sil-Fos".
- Piping to be installed to minimize the number of joints below grade of or below slab on grade.
- Encase all below ground copper piping in plastic sleeve or 1/2" unsplit foam insulation.

4. Water Piping, Above Grade:

- Water piping: copper tube.
- Copper Tubing (mains and risers):
- Pipe: ASTM B88, Type L, hard drawn.
- Fittings: ASME B16.22, wrought copper and bronze.
- Joints: ASTM B32, 95-5 solder, Grade 95TA, lead free with lead free flux.
- Crossed link Polyethylene PEX (Branch piping to fixtures with non-quick opening valves):
- Pipe: ASTM F-876/F-877
- Fittings: brass body
- Joints: compression

5. Natural Gas, Above Grade:

- Black Steel
- Pipe: ASTM A53, schedule 40
- Fittings: malleable iron, threaded
- Joints: threaded.



FIRE PROTECTION ANALYSIS AND RECOMMENDATIONS

INTRODUCTION

The University of Alabama Tutwiler Hall Dormitory will consist of a ground level with nine floors of dorm units. At the ground level, there will be mechanical space, a catering area and a storm shelter conforming with 2008 ICC 500. Each floor will vary in area with the ground floor occupying over 53,000 square feet and the upper floors having less area. Floors two through seven will have an “H” shaped configuration. Floors eight through ten will have independent towers with no interconnecting link. Due to the ground floor exceeding the 52,000 square foot floor area limitation in NFPA 13, the building will be divided into 2 zones that will continue up through each floor level and separate the two upper most towers on levels eight through ten. The storm shelter having its own separate zone.

APPLICABLE CODES AND STANDARDS

International Fire Code 2015

International Building Code 2015

NFPA 13: Sprinkler systems for Low Rise Residential.

NFPA 14: Standpipe and hose systems

NFPA 20: Stationary Pumps for Fire Protection

NFPA 70 – National Electrical Code

NFPA 101: Life Safety Code

FIRE SERVICE

A Fire service will be brought into the ground level, separate from the water service. Inside the ground level, the site water piping will be protected by a backflow preventer, double check detector type.

A flow test is required to determine the hydraulic availability of water. Given the height of the proposed facility, a fire pump will be required. The pump will be located at the ground level mechanical space and will provide flow and pressure to meet the hydraulic needs of the facility.

Fire protection will be a combined standpipe and wet system providing coverage for the entire building and will be designed to requirements of NFPA 13, NFPA 14, NFPA 20 along with being coordinated with the Tuscaloosa Fire Department

The storm shelter will have its own zone, independent from the rest of the ground floor. Supply piping for the standpipes will not be routed through the storm shelter.

Fire protection will be commissioned.

MATERIALS

1. Black Steel Pipe:

- All piping 1-1/2” and smaller shall be threaded, all piping larger than 1-1/2” with cut grooves or threaded and all welded piping, Schedule 40 black steel ASTM A53, ASTM A795, ASTM A135.
- Piping 2” and larger for roll grooving only, Schedule 10 ASTM A795, ASTM B36.10.
- Schedule 10 pipe may not be used for threading or cut grooving.

2. Cast iron threaded fittings ANSI B16.4 cast iron flanges and flanged fittings ANSI B16.1.

3. Malleable iron threaded fittings, ANSI B16.3.

4. Mechanical Grooved Couplings: Ductile iron housing clamps to engage and lock, “C” shaped elastomeric sealing gasket, ASTM A449 electroplated steel bolts, nuts and washers.

5. Sprinkler heads shall be concealed pendant in acoustical ceiling tiles and gypsum soffits.

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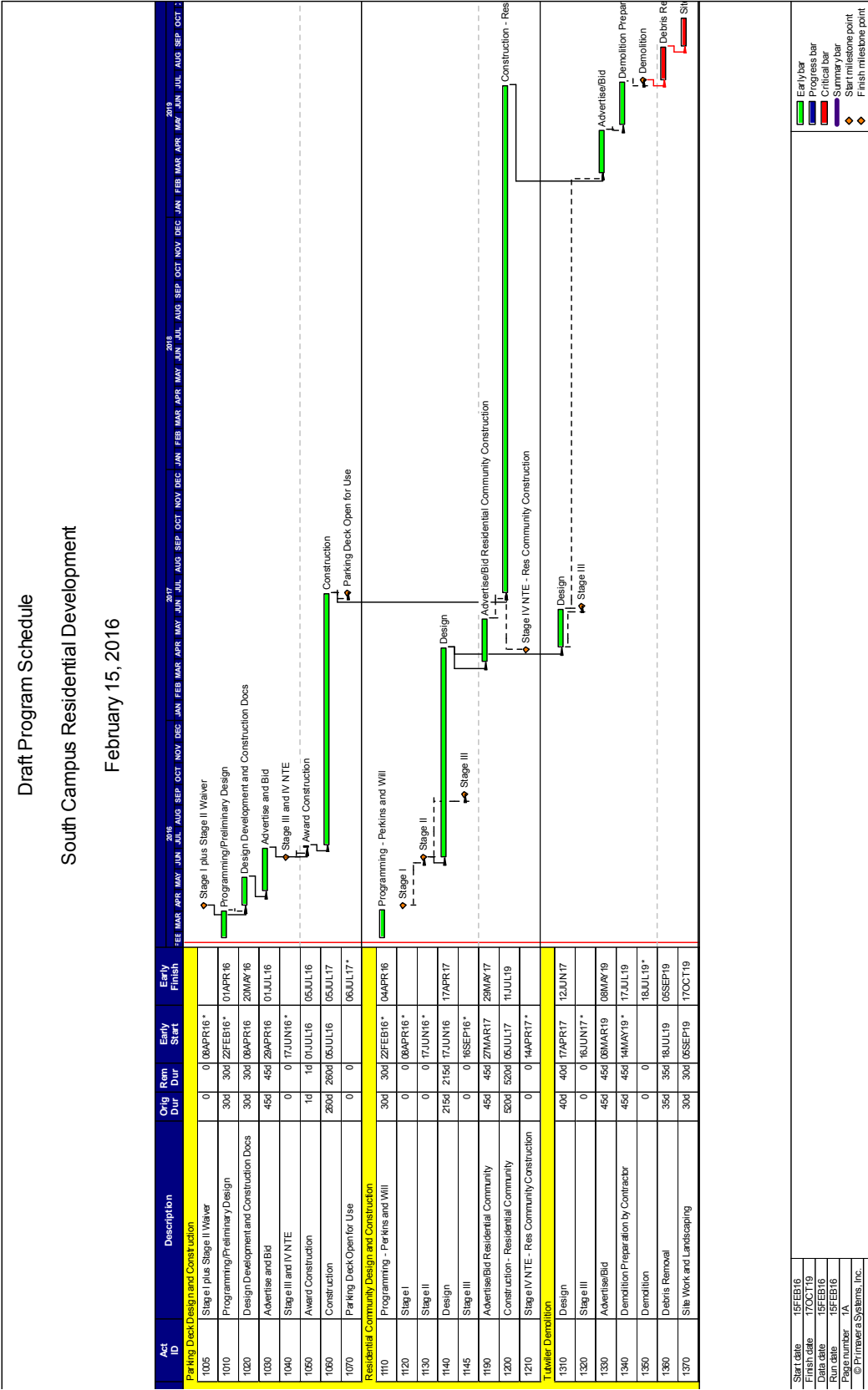
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SECTION 06a

PROJECT SCHEDULE

PROJECT SCHEDULE



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SECTION 06b

DECISION MATRIX

98 UA SOUTH CAMPUS RESIDENTIAL DEVELOPMENT STUDY PRE-SCHEMATIC REPORT

DECISION MATRIX / PRE-SCHEMATIC

University of Alabama South Campus Residential Development CONFIRMED DECISIONS MATRIX - SCHEMATIC DESIGN BUILDING PROGRAM					
PERKINS+WILL 2016.06.23					
	Student Residences	Administrative Residences	Student Life Commons	Staff	Services
2016.06.28 PHASE 2 - SCHEMATIC DESIGN DIRECTIVE AND SD WORKSHOP #01	1. Study increase in number of rooms 2. Study increase in room size without increasing footprint 3. Study option to provide solid tier in life main	1. more community director apartments on northeast wing as "gracehouse" for access to parking lot	1. include small fitness component that can fit in future 2. move (jill's main) to northeast wing to give more public (hallway) 3. add restrooms within neighborhood footprint 4. no terrace but level 01 - provide large terrace over multiple pool areas	1. add "model room" for single, double and 3 bedroom suite	1. Provide bridge between building and parking garage. 2. Use main building for public occupants to first level (cell stairs elevator)
2016.07.20 PHASE 2 - SCHEMATIC DESIGN DIRECTIVE AND SD WORKSHOP #02	1. 12" 18" deep bedrooms approved 2. cross bar neighborhood to have two BA bedrooms		1. large dining area full reg's and study (student feedback) 2. study rooms in middle of reg/food not needed (student feedback) 3. preferred neighborhood layout was with linear washrooms - stagger washrooms to provide smaller lounge areas	1. fitness center is a bar (cardio-light weights in expensive studio space preferred) and ample storage 2. model rooms to be built fully functional	1. plans reviewed and approved 2. preferred plan at 100 neighborhood 3. high ceilings in lobby per Dr. Brady (~10' ceiling height)
2016.08.18 PHASE 2 - SCHEMATIC DESIGN DIRECTIVE AND SD WORKSHOP #03	1. mechanical consult to move areas the full wing washrooms. P.W. to provide options with engineer and owner 4A updated plans. Shower with to be 42" min. 2 bedroom layout to change one wall to have bed 112" x 45" (user requested) 112x45 (36" x 45" in closer doors.		1. smaller fitness component 2. add 2000sq ft group ex. 2. add single user gymnasium (smaller room) near the fitness center 3. add suite to multiple pool spaces in plan	1. Model rooms to only include Bathrooms (preferred) as model of best and one double bedroom (Mandarin) 2. BA model room is not needed. Taylor to provide Pre-schematic building next time	1. Provide dimension of 11' at neighborhoods are desired to be acceptable wing width through

SECTION 06c

MEETING MINUTES

MEETING MINUTES

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University of Alabama

South Campus Residential Development: Workshop#01

By:	Perkins+Will	Date:	February 29, 2016
Meeting Date:	Feb 26, 2016	Project Name:	South Campus Residential Development
Meeting Time:	8:00am-12noon	Project Number:	154080.00
Meeting Location:	University of Alabama, Tuscaloosa Rose Administration Building Room 254	Attendees:	Ben Henson, UA Susanne K. Johnson, UA Steven Hoad, UA Matthew Kerch, UA Tim Leopore, UA Dan Wolfe, UA David Grady, UA David Demer, P+W Sumegha Shah, P+W Josh Vel, P+W
Department:			

Notes

1. The agenda overview was provided by P+W. Goals for the meeting were to:
 - a. Agree on the primary residential unit type (traditional double)
 - b. Discuss optimal community size
 - c. Discuss organizational strategies for pods
 - d. Identify types of major common spaces
 - e. Discuss site issues
 - f. Tour relevant buildings and spaces
2. General Design Goals and considerations
 - a. Create units that support a high level of engagement
 - b. Social space should focus on "lounge" opportunities. Common spaces should encourage high level of use.
 - c. Design should advocate shared living space for each "unit" (of 2 beds)
 - d. Concept of a smaller community within a larger community
 - e. A quality living experience rather than drive down the area per bed
 - f. Over 90% of students from Tutwiler Hall go into Sorority system
 - g. Preferable flooring in rooms – carpet
3. The primary residential unit type for the project will be a traditional double, and for planning purposes the plan diagrams that were presented by P+W are acceptable. Each double should accommodate two beds non-bunked, but students may choose to bunk the beds after move-in, each double should have:
 - a. Two loft beds

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- b. Two dressers
 - c. Two 2-position chairs
 - d. Two closets (without doors)
- 4. Additional unit types that will be required include
 - a. RA (single-occupancy bedroom)
 - b. Community Director (1BR, quantity 3-4, located within upper levels)
 - c. Area Director (2BR to 3BR, kitchen, laundry quantity 1, located on ground level)
- 5. The preferred ratio of RA:student is between 1:30 and 1:40.
- 6. Different scenarios of washroom plans were discussed, ranging from single rooms each with toilet, shower, sink; to having single rooms for each separate plumbing fixture, such as a toilet room, a shower room, and an open sink area. For WS2, P+W will develop options for both scenarios.
- 7. The ratio of washroom to student was discussed as being higher than what currently exists in Tutwiler (approx. 1:10). P+W will develop plans that have a ratio range of between 1:4 and 1:6.
- 8. The development of the pod was discussed. P+W shared some key recommendations from the B&D report which referenced Enriched Learning Programs (ELP). UA noted that they use the term Living Learning Community (LLC). The LLCs could be academic, thematic, honors, etc. The discussion recommended integrating group study rooms within the program. No classrooms are required.
- 9. P+W sketched a few organizational frameworks of pods for feedback. P+W will explore multiple strategies for WS2 that integrate a range of common space, aggregated as a single area as well as organized into multiple smaller areas. UA suggested that the "pods" be renamed "neighborhoods". Open discussion included an idea of connecting every two levels with an internal stair in a common area to encourage the feeling of smaller neighborhoods in the potential high-rise.
- 10. One detail that was discussed to be included in the neighborhood (either in the commons or solely with the washrooms) is a long counter for the women to dress and prep for the day. 98% of the women in Tutwiler are in sororities.
- 11. The target bed capacity for the program and the site is 1500. The minimum growth to be factored in is 20%, and the preferable is 50% (from current capacity of 1000 beds).
- 12. Move-in/move-out is a 2-day event that is well-organized on campus. Adequate space is needed at the entry sequence from front door to elevators.
- 13. New garage to accommodate parking ratio of 1:1
- 14. The discussion of common spaces to be programmed included:
 - a. 24-hour front desk (2 people)
 - b. 2 Multipurpose Rooms (200-250 banquet style, prefunction, storage, divisible partition, stage)
 - c. HRC Offices (12-15 offices, reception, conference room, break room, student work area)
 - d. COP (Community Oriented Police)
 - e. Julia's Market (dell-style)
 - f. Mail Package Center (2000sf)
 - g. Group Study Rooms- starting at 4-6 people and a range of sizes. Distributed on each floor
 - h. Paint Room

MEETING MINUTES

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- i. Laundry
 - j. Kitchen (need to explore options, floor kitchens, ground level kitchen)
 - k. Lounge
15. A Satellite or Regional Fitness Center (freestanding) will likely need to be programmed on site (15,000sf net, 20,000sf gross)
 16. A Future Food Operation (possibly freestanding) will need to be planned on site (Aramark is the university food service vendor).
 17. The South Campus site was discussed with regard to key influences.
 - a. Tutwiler needs to remain operational until equal capacity is built.
 - b. On-grade parking needs to remain operational until the new parking structure is built.
 - c. New construction should not exceed the height of the stadium (approximately 157')
 - d. Three new sorority houses should be planned on the site, similar to the plan developed by UA.
 - e. The transit path should be diverted through the north part of the site, similar to the plan developed by UA. Buses need to get off Bryant Drive.
 - f. Standard university fence will be required at the site perimeter.
 - g. Compactor, Waste Dumpster and Recycling Dumpster are all required at the Tutwiler replacement. Sorority houses each require a Waste Dumpster and Recycling Dumpster.
 - h. A central energy plant will need to be programmed within the parking structure.
 18. Energy use and sustainability
 - a. Building will be commissioned, but no LEED certification
 - b. Heat load is minimal. 4-pipe system works best for temperature fluctuations.
 - c. Non-operable windows preferable (ducted fresh air)
 - d. Mechanical unit location can be on ground floor or penthouse. No preference.
 19. Services
 - a. Main building – 2 garbage chutes with compactors
 - b. Data closets
 - c. Small sorority buildings (1) trash and (1) recycling dumpster (8 yards)
 - d. Print stations – at main level near front desk
 - e. Storage for furniture and mattresses (5% of total stock)
 20. Storm shelter requirement for entire building occupancy + 10% (review Alabama Building Commission)
 21. Following the meeting, the team toured the recently built area of refuge in a nearby parking structure, Tutwiler, the South Campus site, Presidential 1, and Presidential 2.
 22. The group confirmed dates for the next two workshops (exact times TBD, meeting invite to be set up by Ben Henson). The dates are:
 - a. WS2 = 24 March
 - b. WS3 = 13 April
 - c. A spreadsheet with the project metrics will need to be complete by 20 April

University of Alabama

South Campus Residential Development: Workshop#02

By:	Perkins+Will	Date:	March 24, 2016
Meeting Date:	March 24, 2016	Project Name:	South Campus Residential Development
Meeting Time:	8:30 am	Project Number:	154080.00
Meeting Location:	University of Alabama, Tuscaloosa Facilities Administration Building, Room 204	Attendees:	Ben Hanson, UA Susanne K. Johnson, UA Michael Rand, UA Steven Hobbs, UA Matthew Kerch, UA Tim Leopold, UA Dan Wolfe, UA David Grady, UA David Demott, P+W Sumagha Shah, P+W Josh Vel, P+W
Department:	8:30 am - 4:30 pm		

Notes

1. Review of decision matrix:

P+W presented the decision matrix that was developed from WS1 notes. UA requested some modifications, including:

- 1.1. Community director apartments should have 2 bedroom
- 1.2. Area director apartments should have 2 bedrooms
- 1.3. Multi-purpose space should accommodate 400 persons per room in lecture style without tables (divisible into two spaces of up to 200 ea. lecture style). Should flex between banquet and lecture style.
- 1.4. Julia's market may be stand-alone building and not a part of student life commons (if appropriate within the site context)
- 1.5. Move in process needs to be added to the decision matrix (bigger elevators vs more elevators or both)
- 1.6. Add storm shelter space to the matrix
- 1.7. Include non-operable windows to the decision matrix
- 1.8. Include mechanical 4 pipe system as a decision made
- 1.9. Sorority houses are to be 40,000 sf maximum, 4 levels high including a basement level
- 1.10. Transit stop from Bryant Drive and transportation loop needs to be evaluated with Transportation Services

2. Review of Neighborhoods:

P+W presented several options of neighborhoods that varied in size, location of sinks/vanities, organization of washrooms, and organization of common space. UA preferred Option Q2B for the majority of neighborhoods, with an average of 38 beds. UA preferred Option Q1 for the small neighborhoods in the central bar of the H-shape concept. One clarification is that the 38-bed neighborhoods are 39-beds, and the 32 bed neighborhoods are 31.

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bed neighborhoods. All calculations include the RA units. In all neighborhoods, the double-bedrooms will include vanities and the washroom configurations will modify based on notes below.

- 2.1. Steve Hood noted that options for the neighborhoods could be combined to achieve different things based on site constraints etc.
- 2.2. Dr Grady would like to consider eliminating lavatories in the central area if they are included in the bedrooms.
- 2.3. Steve Hood sees option Q2b as desirable with the sinks in the room, and noted that option Q1 could include sinks in the bedroom which would increase the square footage per bed to a number closer to option Q2. Option 3 is least desirable as flow of space appears awkward (see Appendix A)
- 2.4. The question of whether neighborhoods should be accessed through common space was discussed with a strong preference for not accessing neighborhoods through another neighborhood
- 2.5. A configuration about the vertical circulation core will inform the overall building shape (a pinwheel vs an H)
- 2.6. There may need to be multiple cores to accomplish the correct relationship to neighborhood identity
- 2.7. Showers, toilets, and sinks should be organized in single-use rooms rather than individual rooms as shown
- 2.8. Form of the corridor walls could take on shape or include more offsets—this could be consistent on certain floors and different on others as well as having an impact on building form.
- 2.9. Small group study rooms could be included in the central area along with the plumbing fixtures to activate the "racetrack"
- 2.10. The common space could include different program elements and provide a place for communicating stairs between two levels.
- 2.11. Could the center connector be the storm shelter? It may have many unintended consequences if that is the approach.
- 2.12. There is not an additional level of access control required at the neighborhood level.
- 2.13. Common space should have some replicated elements in order to maintain the integrity of the 38 bed neighborhoods
- 2.14. Plumbing should incorporate single use rooms with all three fixtures in the same room
- 2.15. The space for the satellite fitness center could be included in the level Q1 footprint of the building if appropriate.
- 2.16. There is not a preference for a building that is lower in number of stories.
- 2.17. Common space at cores should include:
 - 2.17.1. Group study for 4 to 6
 - 2.17.2. Laundry in distributed fashion (every other floor)
 - 2.17.3. Kitchen (every other floor or every 3rd floor)
 - 2.17.4. NO additional storage required
- 2.18. Common space within each neighborhood should have a more private 'living room' type of setting with tables for study and collaboration
- 2.19. Lounge space should be oriented around the 38 bed neighborhoods
- 2.20. Trash chutes should be oriented at each building core
- 2.21. Views of stadium should remain an important consideration
- 2.22. Accommodation for two chutes at each core (one of trash, one for recycling)

3. **Review of Site:**

P+W presented several options of site organization based on the footprint of Option 02B. In all options, the capacity of the site can increase beyond 1500 beds. The discussion of the site concepts was directly related to the neighborhood concepts, and the goal of not crossing a neighborhood to access another neighborhood. UA and P+W sketched options that worked toward the goal, and agreed on a strategy of an H-shaped concept for the Tutwiler replacement.

- 3.1. Most pedestrian access to the site is from the north.
- 3.2. The site will have a perimeter garden wall, similar to campus standard.
- 3.3. "H" concept with connector of some height less than the two east-west bars is desirable, this may best be served with two floors.
 - 3.3.1. As an option, study a "larger" neighborhood option spanning two floors of 30-beds each for "themed" chapters or houses within the cross-bar of the "H".
 - 3.3.2. Entry into building from 'residential plaza' should be welcoming – consider two-storied entry.
 - 3.3.3. Option for open-to-sky space for outdoor social activities will be desirable.
- 3.4. The multipurpose space on level 01 would benefit from the ability to be accessed separately while being integrated into other first floor amenities.
- 3.5. Include bike parking (up to LEED standards but LEED certification will not be pursued).
- 3.6. No sorority houses should face 8th Street.
- 3.7. Sorority Townhouses (16-20 bed) need to be identified on the site as a part of potential future growth.
- 3.8. Site setbacks – no code requirements but desirable setbacks are as follows: 42 feet along east fence (including access road), 15 feet along 10th street and 12th street (see Appendix B).
- 3.9. Parking needs to accommodate sorority housing as well – each sorority gets 3 spaces at least.
- 3.10. Satellite fitness center location could be one of the following.
 - 3.10.1. Part of student life commons on Level 01.
 - 3.10.2. Stand-alone building on the site or combined with food service building.
 - 3.10.3. In Barnwell building – decision to be taken within a month.

4. **Food Service discussion: Kristina Hopton-Jones (1:00pm – 1:30pm):**

- 4.1. Should include area for prepared meals, and a small area for fresh produce and grocery items. Would be best if included within the footprint of the new building at level 01. Include outdoor seating if possible.
- 4.2. 7,000 sf is desired for the concept to include:
 - 4.2.1. Grocery and convenience items.
 - 4.2.2. Display cooking area for deli style options.
 - 4.2.3. Back loaded coolers for drink storage.
 - 4.2.4. Offices for 1 person.
 - 4.2.5. Storage area needs to have an office area for pricing and inventory marking.
 - 4.2.6. Walk-in cooler, 3-compartment sink, grease trap.

5. **Custodial Services: Suzanne Craft (1:30pm – 2:00pm):**

- 5.1. From a custodial point of view, Presidential is the best designed building in the housing stock.
- 5.2. Include 1 custodial closet with plumbing at each building core, as well as a dry storage area 6'x10' for each space.

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- 5.3. Include 2 large equipment rooms on the ground floor near each core for heavy duty supplies, 1,000 sf each.
- 5.4. Include an office for custodial staff near the main storage area.
- 5.5. 2 compactors will be needed (one at each trash chute – no compactor required for recycling)
- 5.6. Trash chutes will need to be large enough to accommodate large pizza boxes.
- 5.7. Showers need to have standard size curtain (48"x72")

6. **HRC Staff: Matthew Kerch and HRC leadership (2:00pm – 3:15pm)**

- 6.1. Office needs:
 - 6.1.1. Front desk with visual access to the HRC office area if possible
 - 6.1.2. Conference room should hold 12 persons at a table
 - 6.1.3. One gender neutral restroom
 - 6.1.4. Common area to include 'hubbing' stations/collaborative tables/study area for students
- 6.2. Storage needs:
 - 6.2.1. Small storage rooms are needed at each level if possible (10'x10')
 - 6.2.2. Large storage room is needed on level 01 near the loading dock (5000sf)
 - 6.2.3. Work space is needed next to the large storage area.
- 6.3. Consider a Faculty in Residency apartment at the ground floor (2 bedroom)
- 6.4. Community Director apartments (4 in total) can be 1 bedroom but may want to stay at 2 bedroom – they can all be on the same floor – Level 02 will work
- 6.5. Area Director suite should be on Ground Level
- 6.6. Ground floor classroom near the multi-purpose room is desirable.
- 6.7. Include more 'single' units to accommodate medical requests – one per floor will suffice
- 6.8. Every neighborhood should have one ADA compliant room and bathroom

7. **Student Forum input – see sign-in sheet (3:30pm – 4:30pm):**

- 7.1. ADA room in each neighborhood is desirable
- 7.2. Open-to-sky space for outdoor social activities will be desirable
- 7.3. Recent renovations to Tutweiler are a good example for common space
- 7.4. Include classroom on every other floor with connective technology on every other floor
- 7.5. Kitchens can be open but need to consider noise and odor control and should be full kitchens
- 7.6. Kitchens should be designed to be as social as possible and should consider what other activities other than cooking that they can support.
- 7.7. Music practice rooms on level 01 would be desirable

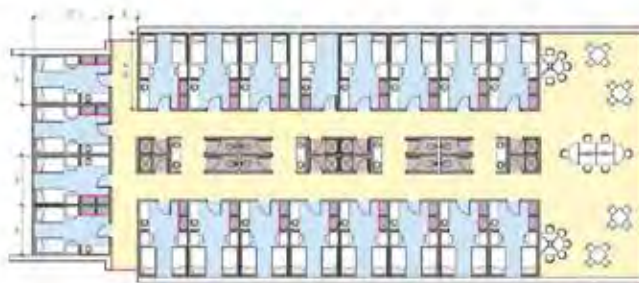
APPENDIX A: NEIGHBORHOOD OPTIONS



① Option 01 - 32 BED
327' x 170'



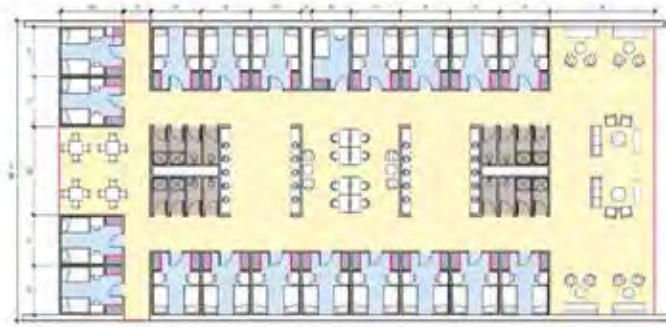
① Option 02 - 38 BED
382' x 153'



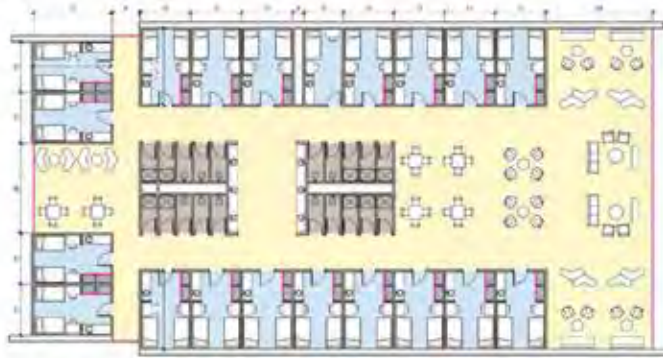
① Option 02b - 38 BED
382' x 153'

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① Option 03 - 34 BED
300' x 100'



① Option 03b - 34 BED
300' x 100'

Setback at Last Time:

MEETING MINUTES

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University of Alabama

South Campus Residential Development: Workshop#03

By:	Perkins+Will	Date:	April 19, 2016
Meeting Date:	April 13, 2016	Project Name:	South Campus Residential Development
Meeting Time:	8:30am-1:30pm	Project Number:	154080.00
Meeting Location:	University of Alabama, Tuscaloosa Rose Administration Building Room 254	Attendees:	Ben Henson, UA Steven Hood, UA Matthew Kirch, UA Tim Leopore, UA Dan Wolfe, UA David Grady, UA David Damon, P+W Sumegha Shah, P+W Josh Vel, P+W
Department:			

Notes

TRANSPORTATION SERVICES INPUT (see sign-in sheet) 8:30am – 10:30am

1. Concerns and Challenges

- a. Drive lane from Bryant to Starbucks
- b. Truck access - concerns about deliveries to supply store and retail
- c. Bus access - Buses currently drive down Colonial Drive and turn left onto Paul Bryant Drive
- d. On street parking on 12th Street causes crowding.
- e. Existing bus stop and crossing also causes a traffic issue
- f. 4 critical items to consider during site design
 - i. student 'move-in' (queuing of cars can be 20 vehicles long)
 - ii. Bus traffic
 - iii. Parking deck access
- g. Service access
 - i. Parking numbers
 - ii. How will sorority houses be accommodated?
 - iii. Big picture conversation for UA—should all freshman bring cars? University does not have Infrastructure as enrollment increases

2. Recommendations by Transportation services (to be reviewed)

- a. Option for Bus access
 - i. Left from 10th Street
 - ii. Prefer to avoid bus exit through alleyway as it will cause conflict with drive-through Starbucks
- b. Provide wide pathways around site at Paul Bryant Drive and 10th Street to deter students from meandering onto the roads
- c. Provide a gate at entrance on 12th street. Allow space for queuing area. Gate cut-through street as well.
- d. P+W to provide site plan to transportation services
- e. No traffic light at alleyway
- f. Dedicated service area was well received. COP parking will also be part of service area
- g. Moving pedestrian crossing at Magnolia Drive is a priority. Ideally this crossing will be moved further east, at 8th Avenue.
- h. Parking deck entry
 - i. Provide entry from within site or off alleyway at the south end of the parking deck. This will alleviate conflicts with service areas for the building
- i. Building entry
 - i. Should be in line of sight of the intersection. Move to west corner or perhaps to center of the building if removal of fitness component allows
 - ii. Provide easy access to pedestrian corners of 10th and Bryant as well as the intersection of the new roadway on the East of the site and Bryant from the main entry
- j. Bryant Street Setbacks
 - i. Provide setbacks at sorority houses (approximately 30 feet)
 - ii. Street edge needs to be pedestrian interaction at each sorority house along Bryant Street
 - iii. Public sidewalk should be on the outboard side of any site walls and/or fencing
 - iv. Extend concept wall (from retail) as site wall for site
- k. Parking capacity
 - i. How will sorority houses be accommodated?
 - ii. Big picture conversation for UA – should all freshman bring cars? University does not have infrastructure as enrollment increases
 - iii. Confirmed decision – for purposes of planning, 1:1 ratio for parking w.r.t. residential life
- l. UA is yet to determine the financial profile of the project (1400 beds vs 1700 beds), but for the purpose of this study the maximum capacity will be 1500 beds.
- m. Number of sorority houses
 - i. Assign locations for 4-6 Greek communities within a shared small townhouse – needs to be part of the “Greek row”. Could appear like one building, with each community including 16-20 beds.
 - ii. Move the minor East/West road within the site to the south

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EXECUTIVE COMMITTEE 10:30am – 12:30pm

Site Concepts Review

1. Will need 2 loading/service docks – one at each trash chute core.
2. Site concept reactions
 - a. H concept – not preferred.
 - b. Folded Out concept is a favorite as it harkens to some of the form of Tutwiler Hall today.
3. Service Zone for the building
 - a. Doesn't want to be accessed directly from 10th or 12th street as these are narrow streets with on street parking making the turns difficult
 - b. Flip the building along the north/south axis to place the service zone across from the parking garage
4. Storm Shelter
 - a. If spaces are used for purposes other than dedicated storm shelter, the square foot allocation per occupant is typically increased resulting in fewer occupants accommodated within the same footprint
 - i. The square footage allocation needs to be confirmed with the Alabama Building Authority
 - ii. Additional space may have to be allocated within the parking structure to make up the difference.
5. Regional fitness center will not be within the residence hall; it will either be a stand-alone building north of the parking garage, or part of another development on campus. For the purpose of this study, the fitness center will be shown north of the garage.
6. Requirements for Final Report:
 - a. Perspective massing view from 10th and 12th (from all four corners of the site)
 - b. Perspective massing view showing stadium in background
 - c. Ben Henson and Tim Leopard need the following for presentation to the Board:
 - i. General site plan
 - ii. Number of beds
 - iii. Quantitative Program
 - iv. Financial Proforma (to be provided by UA Residential Life)
7. Outdoor terrace opportunities
 - a. Cost is a factor
 - b. Security access is a challenge. Dedicated elevator will be preferred
 - c. Good potential as an event space
 - d. Provide as an add-alternate
 - e. Terrace over cross-bar is approved. Open to sky. With some sun protection device
 - f. Terrace at high roof is not considered as part of this study

Neighborhood Review

8. 1:5 RATIO max on washrooms (per Dr. Grady)
9. 39 beds in crossbar is preferred, 35 beds in end bars (review latest height matrix attached)
10. "Slice" concept for neighborhood ends is not acceptable if it suggests a balcony that can be accessed as this can present a significant risk management issue
11. Increase the level of visual interest in corridors – show different options.
12. Number of elevators – service size on all elevators. 3 at each bar end is sufficient

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13. Keep open stairs at end commons as well as in the crossbar.
14. Medical single room should be shown as a double and will be furnished for a single occupant if needed.
15. Community Director neighborhood to be moved to south-east corner of building.
16. Laundry on each floor is preferred.
17. Security
 - a. Card access at stair and elevator (control points), so first floor can be open access to public.
 - b. Tornado warning issue – need to confirm that students using egress stairs will not have to exit the building to access the storm shelter (Assuming the Multi-Purpose room serves this function)
18. Ground floor – show loading dock. Show all updates and changes.
19. Multipurpose wants to be able to close off from building for public use.
20. Multipurpose wants to have a higher floor to ceiling height.
21. Mechanical
 - a. No VRF units should be considered on this project.

HRC STAFF INPUT (see sign-in sheet) 1:30pm – 2:00pm

1. Outdoor seating may be desirable in front/north plaza.
2. Outdoor living room.
3. Bike racks @ 3-5% ratio.
4. Neighborhood commons between Area Director and Faculty-in-Residence and Area Coordinators could be connected as a social space.

ATTACHMENTS

1. Sign-in sheet
2. Approved Height Matrix
3. Approved and Signed Concept Plan outlining all key items discussed at the workshop

NEXT STEPS

- | | |
|-------------------|--|
| 04.19.2016 | Perkins+Will to provide Site Plan at large scale to UA |
| 04.22.2016 | UA Transportation Services to meet and review site plan and provide P+W feedback |
| 05.05.2016 | Draft#1 Report due to UA by P+W |
| 05.19.2016 | Draft#1 Comments back from UA |
| 05.27.2016 | Final Report due to UA by P+W |

MEETING MINUTES

PERKINS+WILL

University of Alabama

South Campus Residential Development: SD Workshop#01

By:	Perkins+Will	Date:	July 6, 2016
Meeting Date:	June 28, 2016	Project Name:	South Campus Residential Development
Meeting Time:	8:30am-1:30pm	Project Number:	154080.00
Meeting Location:	University of Alabama, Tuscaloosa Rose Administration Building Room 254	Attendees:	Ben Hanson, UA Taylor Thorne, UA Steven Howe, UA Matthew Kerch, UA Tim Leopano, UA Dan Wolfe, UA David Grady, UA David Damon, P+W Sumeet Shah, P+W Josh Vel, P+W Neil King, Evan Terry Associates Jason Coker, McGirt & Associates
Department:	-		

PARKING DECK AND CONNECTIVITY TO RESIDENCE HALL

- Bridge at north-east corner
 - On level 02, move community director apartments to north east corner.
 - Entry from bridge will feed into a "lobby" space that will include an elevator/vertical access to level 01. From a security standpoint, all parkers will be required to pass by the front desk for security to enter the main elevators and the the residence towers.
 - On level 01, P+W will look into shifting Julia's market into the northeast corner to create more revenue opportunities and exposure for JM
- Parking deck -
 - 13 feet on first floor (floor to floor ht.) - flat plate, cast-in-place concrete
 - 11 feet floor to floor above Level 2
 - No area of refuge required. Energy plant will be dropped 15'-0"
 - East elevation = spandrel panels. Other three elevations will be "articulated"
 - Most likely 2 interior ramps, similar to other recent parking structures on campus.
 - Central plant will likely be on the north side.
 - 75 degrees gets a 56 foot bay. Double radiuses to accommodate young drivers.
 - Elevators - one in northwest corner and one at center
 - Bridge will be located at north-east corner
- Storm drain elevation (50 year mark) is at 218'-0"
- Height comparison
 - Res hall
 - Level 1 = 226'-0"
 - Level 2 = 246'-0" (Bridge)

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- Deck
 - Level 1 - 222'-0"
 - Level 2 - 235'-0"
 - Level 3 - 246'-0" (Bridge)
- 9 feet of grade difference from south end of res hall to location of existing Tutwiler bookstore on north end
- Modify service drive between buildings down to 22 feet
- See attached PDF for section of service drive east of parking garage.

UNIT MODULE (Is this the sorority house bedroom study?)

- Tim's study
 - All for upper classman - a more privatized model
 - Tutwiler is all first years

NEIGHBORHOOD (see notes on plan)

- P+W to study neighborhood plan and options to expand depth of bedrooms
- Make corner room a single private room for RAs with a washroom
- UA directive - Feel of each floor doesn't need to be identical - use our imagination
- Review ways to increase bedroom sizes
- Enclosed study rooms in neighborhood can decrease in size and number
- Add RA rooms at inside corners of each neighborhood

OTHER

- On Level 01 - include in the program a model room for a typical double and a 2-bedroom suite (similar to the model rooms in Ridgecrest)
- Rec center -
 - 1000 square feet
 - Location option - current Julia's market location
 - design as a large yoga room or exercise room with the ability to convert to something else
 - Use by residents only.
 - No lockers; storage cubbies at maximum.
- Level 01 washrooms for Multipurpose Room / Storm Shelter
 - Washroom counts should accommodate population of building + 10%.
 - **Toilets need to be within the area of refuge.**
- Comment - main N-S corridor on Level 01 should not look like a back alleyway to the apartments on the south end.
- Sundeck over the multipurpose:
 - Access to sundeck needs to be incorporated, likely on north and south end of cross bar.
 - No green-roof. Raised planters and tree / Screen / wall system between deck and bedroom windows with plants on it.
 - Parapet / perimeter wall wants to be higher than 42"
 - No terrace on level 08

ROOM FINISHES

- Bedrooms

MEETING MINUTES

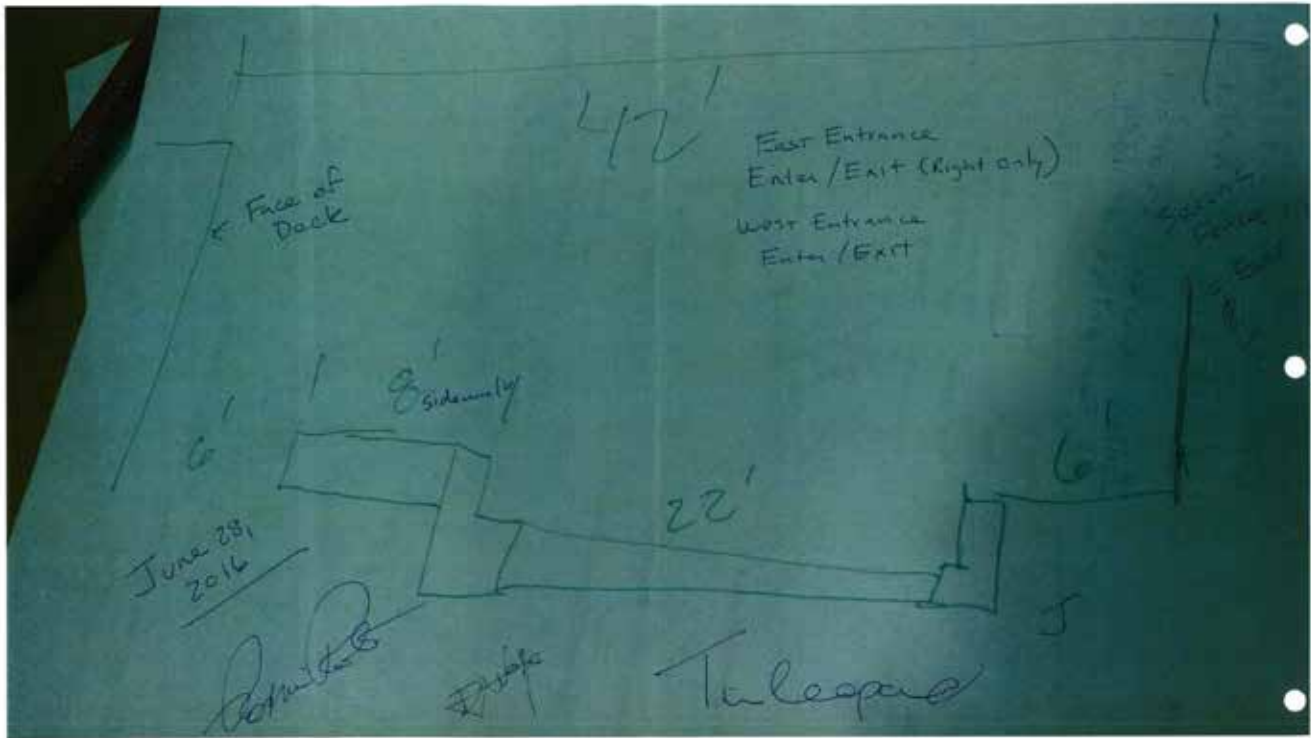
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- Carpet/LVT(kitchen) in rooms
- Dr.Grady – no carpet, LVT preferred
- Doors – solid core. Hollow metal frame. No sidelights. Peepholes from the inside out. Mirror on back of door.
- Abuse resistant GWB everywhere?
- Lavs – solid surface. Rounded with returns (NOT squared off) – with a small mold underneath. Integral bowl.
- Ceilings – If cast-in-place slab – high level finish or hat-channel with drywall finish. NO drop in (fan coil unit to be coordinated)
- Electronic locks for doors (wireless with battery backup)
- No corkboard or bulletin boards on doors
- 2" faux wood blinds – "milky way" color
-
- ★ Corridors
 - Tile ceiling in corridor
 - Bulkhead where there is an exit light. (ask josh)
- ★ Toilets
 - Porcelain tile in bathroom
 - Current res halls have acrylic
 - Common areas porcelain tile.
 - Fans (required by code)
- Common areas
 - Guardrails at stairs – stainless steel cables
 - Only corner guards, no chair rails or wainscoting

NEXT STEPS:

- Next meeting – July 20th
- Visioning exercise for next workshop with students (Dots on pictures)
- Taylor to provide floor plan from South Ridgecrest (for model units on Level Q1)
- **Tentative Schedule:**
 - Morning session – Breakout sessions with engineers
 - Lunchtime – Student visioning session – 12-20 students, 1.5 hour charrette. Visioning can be broken down by
 - wardrobes
 - bathrooms
 - bedroom furniture
 - desk furniture
 - amenities
 - Questions to ask: Where do they want power? Where do you want the TV? 2 hard data connections per room. Wireless in entire room as well.
 - Afternoon session – meet with executive team to review all updates

SECTION AT DRIVE EAST OF PARKING GARAGE



MEETING MINUTES

PERKINS+WILL

University of Alabama

South Campus Residential Development: SD Workshop#02

By:	Perkins+Will	Date:	July 20, 2016
Meeting Date:	July 20, 2016	Project Name:	South Campus Residential Development
Meeting Time:	8:30am-1:30pm	Project Number:	154080.00
Meeting Location:	University of Alabama, Tuscaloosa Rose Administration Building Room 254	Attendees:	See sign-in sheet
Department:			

BUILDING SYSTEMS REVIEW – 9:00a.m – 11:45.m**MECHANICAL AND PLUMBING****Mechanical System for Dorm Rooms – 4-pipe fan coil units**

1. Vertical stack
 - a. Floor mounted in closet outside dorm rooms. Option to move closet into corridor to lessen the impact on the room was discussed. Outside dimension of closet = 30" x 60" with 4" stud wall. Corridor rating around closet.
 - b. Ease of maintenance from corridor
 - c. Fresh air ducted directly to bedrooms from rooftop units
 - d. 2 units can be located in one closet
 - e. Fire dampers @ supply and return air
 - f. Housing HRC preferred option from maintenance perspective
 - g. Remote location option for FCU.
 - i. Routing duct work and crossing ducts in corridor is biggest issue.
 - ii. Must have supply and return ducts if unit not adjacent to room.
 - h.
 2. Horizontal
 - a. Mounted in ceiling above door and sidewall supply grille
 - b. Difficult to maintain
 - c. Efficient in area requirements
 - d. Requires a soffit ~ 1'-6" clear
 - e. Facilities preferred option to save room square footage.
 3. HRC request to review a medium pressure system using a VAV system
- Final decision on type of system to be determined by UA**

Central Plant in Parking Deck

1. Route building heating and chilled water piping underground to dorm and stub out to south for remaining buildings on campus.
2. Need to know future square footage of building on site that are to be served by central plant located in the parking deck.

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Mechanical Systems for Common Areas

1. Condition data and electrical units with 4-pipe Multi-Aqua wall mounted units instead of DX ductless split units. Chilled water will be available 24/7/365 so independent DX units not required.
2. Storm Shelter – 4-pipe air handler located within the storm shelter.
 - a. Served by emergency power.
 - b. Locate mechanical room on exterior wall for efficient access to storm louvers in exterior wall.
3. First Floor Common Areas
 - a. Floor to floor will be 18-20 feet so more than sufficient space for ductwork.
 - b. HRC runs res hall AC systems 24/7/365, so not need to segregate areas with independent AC units that can be shut down when areas are unoccupied.
 - c. Discussed using a single VAV reheat system to serve the remainder of first floor. Will consider paralleling two air handlers to provide backup cooling if one air handler is off line.
4. Res Hall floor Common Areas:
 - a. Discussed 2 systems:
 - i. Small package air handlers in closets – one for each thermal/usage zone (probably 2 per neighborhood).
 - ii. VAV system
 - b. Closet air handlers take up floor space.
 - c. Duct work for VAV system may not fit because of low floor to floor heights.
 - d. OSA to be provided with dedicated OSA air handlers if use closet units. Provided by VAV system if use that system.
5. Site

Building Plumbing

1. Central domestic hot water system.
2. Water heaters located in the Res Hall, not at parking deck.
3. 2 sprinkler heads per room
4. Lavatories in room will have hot water

ELECTRICAL

1. Separate electrical and data spaces. Each need a locking door. Electrical can share common space with mechanical but would prefer separate rooms.
2. Electrical rooms and data rooms will be located side by side at the north and south ends of the building and stack vertically.
3. Structure in this building slab thick enough to accommodate conduit. Preferred – 3 tier J-hooks for supporting data and cable wire down corridors.
4. Mass notification needs dedicated space – [need additional information on this](#)
5. Data closet min size = 10'-0"x12'-0"
 - a. Show on every third floor but reserve stacked spaces on all floors.
 - b. Wireless – VOIP on campus. Cable+telephone+data – one fiber – referred to as Resnet
 - c. Anticipating one OIT per 3 floors
6. 2 or max 3 circuits per bedroom – GFCI for lavatory – separate circuit
7. Number of load centers

MEETING MINUTES

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- a. @ 2 circuits per room = 1 load center per bank (each side)
- 8. 6 way medium voltage switch and 2 pad mounted transformers in electrical room on level 01 @ SE end. The new medium voltage switch will also be used to serve a new padmounted transformer that will be part of the new parking deck project. The new underground medium voltage duct bank coming from Colonial Drive should probably be included as a part of the McGiffert and Associates utility infrastructure project, so that it is in place in time to accommodate the new parking deck. We agreed to discuss this possibility with Randy Barton.
- 9. Flush mounted load centers located within the corridors will be utilized to serve the dormitory bedrooms. The current thought is that one load center can be used to provide power to up to nine (9) dormitory bedrooms.
- 10.
- 11. Transformers - 8x8 + switch 3-6x10 + clearance
- 12. 1 elevator @ each elevator bank will be on a generator
- 13. Area of rescue communication and elevator communication
 - a. Call boxes - either at area of refuge(stairwell) or elevator lobby on every floor above Level 01
 - b. Area of rescue will be blue phone type
 - c. Call boxes will dial-out directly to a programmed location, such that, a central master station will not be required UA has gotten this approved by the local authority having jurisdiction.
- 14. Generator
 - a. Location - discussed but not finalized - leaning towards locating in the structured parking deck
 - b. Generator will be in a tornado rated enclosure.
 - c. Generator will be Bi-fuel type

CIVIL AND SITE UTILITIES

- 1. Site conditions were reviewed and preferred level locations are:
 - a. Residential Hall Level 01 = 226'-0"
 - b. Parking Deck Level 01 = 222'-0"
 - c. Connector street between parking deck and residential hall = 222'-0"
- 2. Medium voltage switch (6 way) & 2 pad mount transformers @ SE corridor
 - a. Transformers will be ~8'x8'
 - b. Switch will need to be installed at time of parking deck
- 3. Heating/cooling/fire line piping will need to run underground - civil to be engaged immediately
- 4. Piping to run underground through between loading docks from parking deck to residential hall.
- 5. Sanitary sewer will connect to new re-located sewer line @ east of building
- 6. Storm drainage can go to east or west to tie into newly relocated storm sewer on both sides of new building - to be determined

STRUCTURAL

System Options

- 1. Mild steel reinforced flat plate (8")
 - a. Column sizes (spanning from slab to slab, assuming brick façade):
 - i. Level 01 - 18" - 24" (@ perimeter)
 - ii. Level 02 & above - 14" - 24" (@ perimeter)
 - iii. Interior columns will be 30" deep on all floors

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2. Concrete beam and slab (22-3/4")
 - a. Columns at exterior wall & corridor side of beams
3. Structural system at Storm Shelter was reviewed
 - a. The options for the 100' storm shelter roof span was an 80" joist at 18" on center with an 8" concrete slab, a W36x210 beam at 36" on center with an 8" concrete slab or a 66" deep x 36" wide concrete beam at 48" on center.
 - b. 2 columns to be added to the storm shelter along the central spine to reduce depth of structure
 - c. Steel beams + columns preferred system

Other

1. Seismic Exposure - possibly category B/C
2. Exterior Skin
 - a. Recommendations for CFMF depth (4" vs 6" to be determined)
 - i. 4" stud @ 12" O.C - 16ga/18ga
 - ii. 3-5/8" stud @ 12" O.C - 14ga
 - iii. 6" stud @ 16" O.C - 20gaStructural engineer prefers 18ga; architect prefers 16ga.
 - b. Study option for pre-cast panels
3. Issues
 - a. Expansion joints will be required and could be as large as 6"
 - b. Floor to floor openings will create challenges

STUDENT FOCUS GROUP – 12:00pm to 1:30pm

1. Lessons learned from existing Tutwiler residential hall
 - a. Room should be large enough to comfortably fit 2 desks
 - b. Room shape and size should be consistent
 - c. Rooms should be acoustically separated for privacy
 - d. Hard to stick things on under block
 - e. Floors were licky – linoleum
 - f. Ventilation issues appeared to be the cause for illness
 - g. Temperature control in bedrooms would be preferable if there are no operable windows
 - h. Computer lab/math lab was extensively used for voting/recruitment
2. Top three pros about existing Tutwiler
 - a. Location on campus
 - b. Intentional storage – though minimal, was preferred as it limited accumulation of belongings
 - c. Water pressure in showers
 - d. Density of students created comradery and defined the culture of Tutwiler.
3. Feedback on plans
 - a. Preferred washroom layout so they are more evenly distributed within neighborhood vs. stacked in the middle or one end

MEETING MINUTES

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- b. Prefer to have some mode of movement in the middle of the neighborhood to access opposite corridor
- c. Common spaces
 - i. Social
 - ii. Television is preferred for active use
 - iii. End commons should be closed off with doors to allow acoustic privacy for rooms adjacent to them
- d. Laundry every other floor and Kitchen on every other floor is optional. Large dining areas are not required as most sorority girls eat at their sorority homes.
- e. RA location being central is good for supervision
- f. Preferred glazing @ end neighborhoods
- g. No orange
- h. Study room in the middle of the neighborhood isn't very useful – neighborhoods will be very active and student movement will prevent "quiet" space – preferred location for study room is @ end commons. Common areas within the neighborhood (between bedrooms) will be more useful as smaller gathering areas for social use.
- i. Fitness
 - i. Pro – preferred Cardio machines and small weights – will be used as it is girls only
 - ii. Small open area for yoga/dance practice will be used consistently
- j. Paint room
 - i. Will be used to paint coolers
- ii. Neighborhood model study outcome
 - a. Preferred neighborhood option is with more linear washroom layout

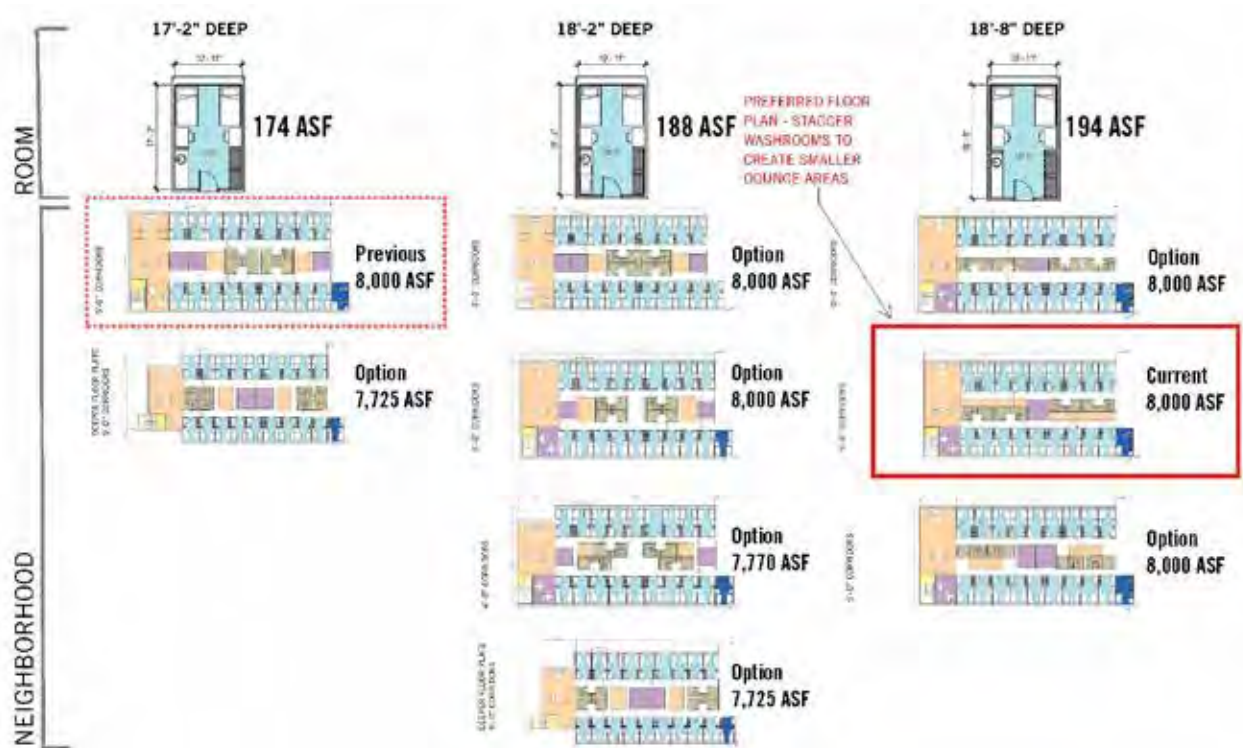
COMMITTEE MEETING – 2:00pm to 4:00pm

1. Make model rooms fully functional (plumbing etc.)
2. Level 1 washrooms should be designed with "washroom parity" – 2.5:1 in favor of women's washrooms
3. Stack lavs in bedrooms back to back
4. Preferred neighborhood option is as shown in image below (staggered washrooms). Perkins+Will to study further in conjunction with building system requirements.
5. Added columns in multi-purpose rooms are acceptable.
 - a. The column sizes need to be as small as possible and not wrapped
6. Next steps
 - b. Develop common area articulation @ ends of neighborhoods
 - c. Set up conference call w/UA for interface w/parking structure team
 - d. UA to confirm mechanical system for bedrooms for further plan development
5. It was noted that the room adjustments made in the previous workshop increased the rooms from 1459 to 1589.
6. Client preferred room layout that was 18'18" long.
7. P+W to verify runs distance for emergency exiting
8. Fitness/wellness area to have ample storage
9. P+W to study possibility of redefining neighborhood common space in to give some visual relief to the building massing

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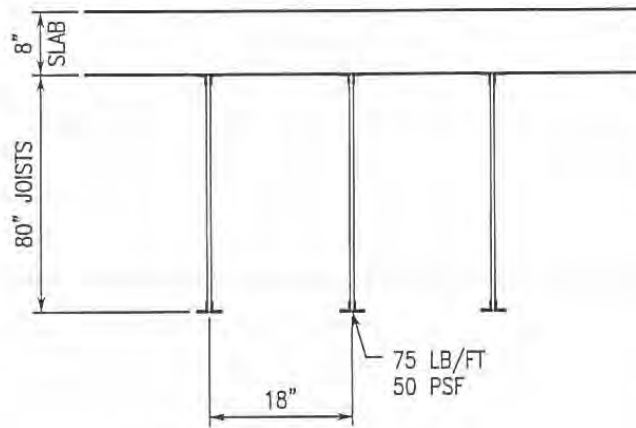
10. HRC wants high ceilings in lobby. 18' if possible
11. Discussed potential fireplace around Julia's market
12. UA to provide design team the final decision on mechanical system.

MEETING MINUTES

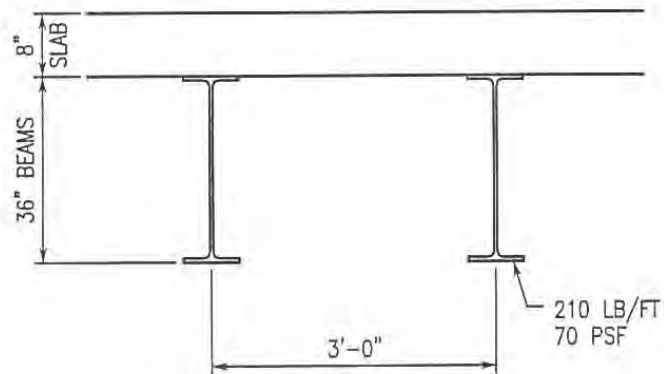


2016.07.20 -
STRUCTURAL
OPTIONS FOR
MULTIPURPOSE
ROOM

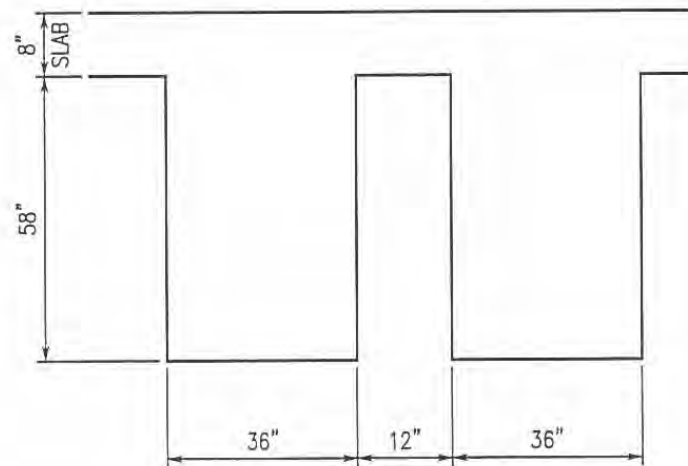
JOIST



STEEL BEAM



CONCRETE



MEETING MINUTES

PERKINS+WILL

University of Alabama

South Campus Residential Development: SD Workshop#02

By:	Perkins+Will	Date:	August 23, 2016
Meeting Date:	August 18, 2016	Project Name:	South Campus Residential Development
Meeting Time:	1:00pm-4:00pm	Project Number:	154080.00
Meeting Location:	University of Alabama, Tuscaloosa Rose Administration Building Room 254	Attendees:	See sign-in sheet
Department:			

Neighborhood Plan Review 1:00pm – 2:00pm

Review of full scale "taped" mockup at Presidential Residential Hall Basement

1. 2 bedroom configurations were reviewed.
 - a. Option selected by committee has 2 closets + lav on one wall and 2 desks on opposite wall
 - b. Planning to accommodate an 85" bed. Minimum clearance for bed requested is 92"
 - c. Lav to be located between 2 closets. Make allowance for 12" deep cubbies on both sides of lav wall.
 - d. Final dimensions reviewed were 36" closet + 46" lav + 36" closet + 92" clear for bed.
 - e. Outlets to be provided on demising walls between bedrooms and below window on exterior wall (Quad Outlet). No outlets on wing walls at closets. Outlets to be behind desk and on high on each wall next to beds. Also, provisions for outlet/TV cable high on one wall.
2. Mechanical closets to be moved across the hall adjacent to the washrooms.
3. Showers to be minimum 42" wide. Move doorway to washrooms to accommodate mechanical closet.
4. Corridor dimension of 5' was deemed to be acceptable during walkthrough.
5. Wall hung vanity in restroom.

P+W to review in conjunction with mechanical closet relocation and impact on washrooms and neighborhood in-house and with engineers and provide updated plans and dimension plans for updated "tape-off" layout

Committee Meeting 2:00pm – 4:00pm

Review of decision matrix

1. Electric fire pump confirmed
2. No student access through north of site to campus - redirect students along E. W. connector street
3. UA to develop the north plaza
4. Floor to floor to increase to 10'-8" on all levels above level 01
5. Add single use gender inclusive washroom near fitness center.
6. Add curve to multipurpose façade in plan

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7. Model rooms to only consist of Ridgecrest presidential model (2 bed) and one double bedroom (standard) - RA model room is not needed.
Taylor to provide P+W Presidential 2 building Revit file, as well as BDS
8. P+W to study 2 entries on either side of fitness component to accommodate move in. Consider option of Nana-wall to generate a design option.
9. *Michael Hard to provide dryer cut sheet*
10. Reduce number of kitchens at cores to one per floor (total 6 kitchens) - ok to cross through the cross-bar neighborhood to access kitchen (kitchens to be on level02, level03/04, level05/06, level07/08, level09 & level10). Total number of kitchens reduced from 10 to 6.
11. *Taylor to provide trash compactor cut sheet*
12. Reduce storage on Level01 SE wing to 2,500SF - add domestic boilers and fire pump in SE corner. Possible option to move mechanical rooms to SE wing to create move in entries.
13. Lavs in bedrooms to have solid surface integral bowl - no rim (bedroom lavs)
14. Public Restroom to be wall hung sinks.
15. Due to height of building, booster fans may be required on dryers

Review of design options

1. Neighborhood end commons - multiple options at different neighborhoods to be reviewed
2. Corridor commons - multiple options per neighborhood approved
3. Core commons - multiple options on different floors approved
4. Multipurpose
 - a. Vertical folding partition has better acoustical properties and occupies less floor space
 - b. Portable stage was acceptable
 - c. Warming kitchen is sufficient but maintain placeholder for community kitchen on level 01.

Final Deliverables and General

1. UA to provide P+W Revit model of stadium and site - P+W to send scope and schedule for 3d model based on receipt of Revit models. Ideally due to UA in 2 weeks
2. Final deliverable from P+W
 - a. Due date - week of 09.06.2016 - P+W to confirm final date
 - b. 1 set of fully dimensioned floor plans
 - c. Mechanical duct layout for one wing
 - d. Updated programming report
 - i. include design narratives from engineers
 - ii. include design options
3. Board meeting end of September

SECTION 06d

WORKSHOP #01

WORKSHOP #01 / 2016.02.26

**University of Alabama
South Campus Residential Development Programming
WORKSHOP 1
26 February 2016**

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AGENDA

1. PROJECT INTRODUCTION / KICKOFF
2. PROJECT GOALS / VISION DISCUSSION
3. PRELIMINARY PROGRAMMING / UNIT TYPE DISCUSSION
4. REVIEW OF UNIVERSITY STANDARDS / EX'G CONDITIONS DOCUMENTATION
5. NEXT STEPS

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SCHEDULE

PROPOSED TIMELINE /

Weeks	1	2	3	4	5	6	7	8	9	10	11	12
* Selection	Workshop 1				Workshop 2			Workshop 3			Presentation of Final Draft	Final Report Deliverable
	Project Kickoff with the full team				Review of three (3) planning concepts			Review of recommended concept				
	Project Goals and Vision				Program review and refinement			Discussion of refinements				
	Reconnaissance and Site Tour				Discussion of phasing and implementation			Consensus on program				
	Preliminary Programming with Residential Life leadership				Discussion and consensus on single strategy for further development			Consensus on phasing and implementation				
	Collection of Existing Conditions Documentation				Meeting with students			Discuss final documentation				

L.L.



STUDENT HOUSING MASTER PLAN RECAP

Recommendations

THE UNIVERSITY OF ALABAMA HOUSING MASTER PLAN

1. Develop an Enriched Learning Program (ELP) to promote an on-campus experience consistent with UA's vision
 - Automatic enrollment for all on-campus freshmen
 - Goal: Facilitate "bite-sized" communities for incoming students
 - Engagement through graduation
2. Strategically increase community-style beds in conjunction with ELP development
 - Renovation and/or new construction
 - Addresses freshman unit-type alignment AND
 - Non-freshman supply limitations
3. Leverage financial flexibility to narrow the spread between top-end and low-end rental rates.
 - Allow for more financial accessibility within Honors College housing

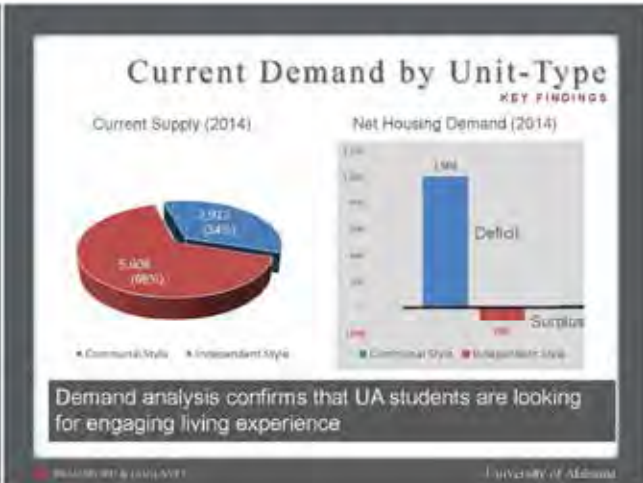
IMAGES BY STEPHEN VIT

University of Alabama

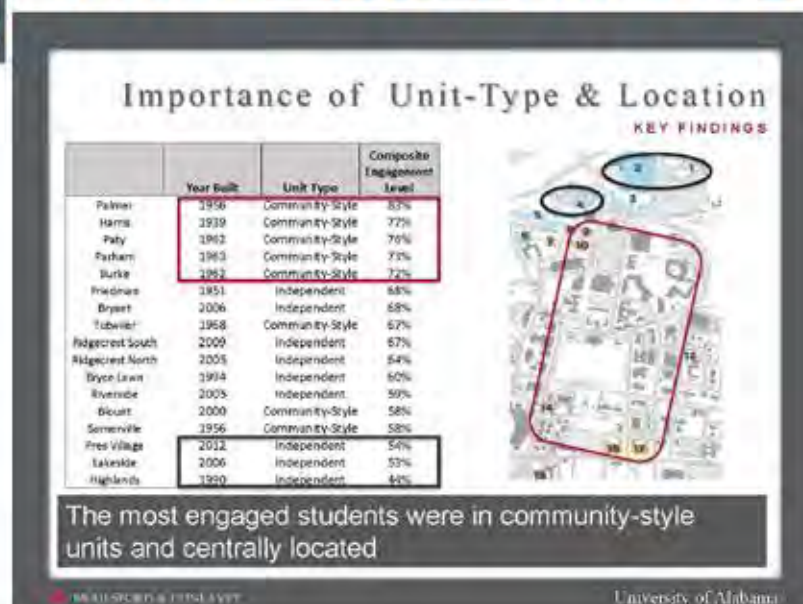
WORKSHOP #01 / 2016.02.26



STUDENT HOUSING MASTER PLAN RECAP



STUDENT HOUSING MASTER PLAN RECAP





STUDENT HOUSING MASTER PLAN RECAP



STUDENT HOUSING MASTER PLAN RECAP

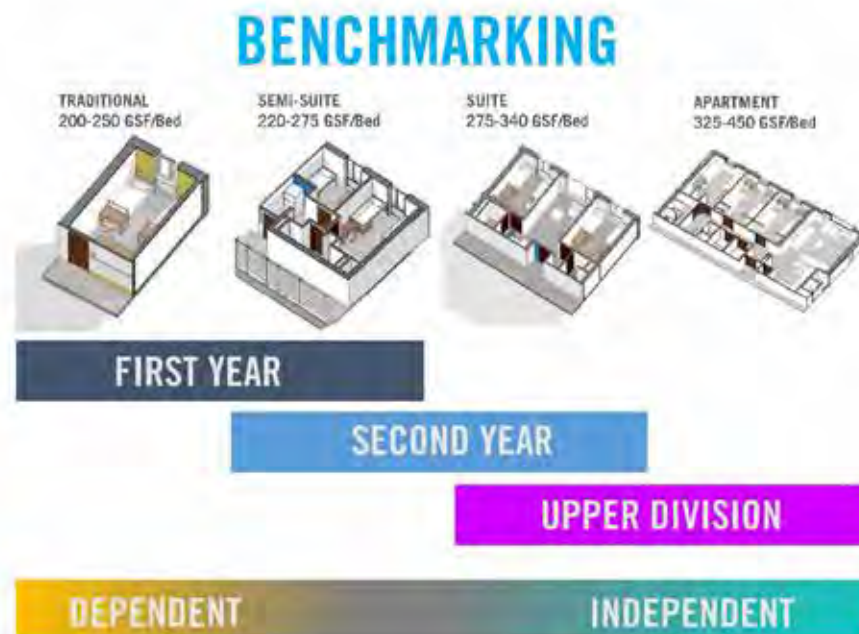


WORKSHOP #01 / 2016.02.26

6 KEY STEPS TO DEVELOP THE PROGRAM

- Step 1 Assess residential unit typology options
- Step 2 Assess and confirm the desired benchmark of space per bed
- Step 3 Determine the student:RA ratio, and the preferred RA unit relationship to student rooms
- Step 4 Benchmark similar common spaces at peer institutions
- Step 5 Recommend types and sizes of common space programs
- Step 6 Provide a comprehensive itemized space program

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UNIT TYPES



- Furniture Types and Sizes
- Dresser Options
- Closets vs Wardrobes
- Heating / Cooling Distribution System



UNIT TYPES

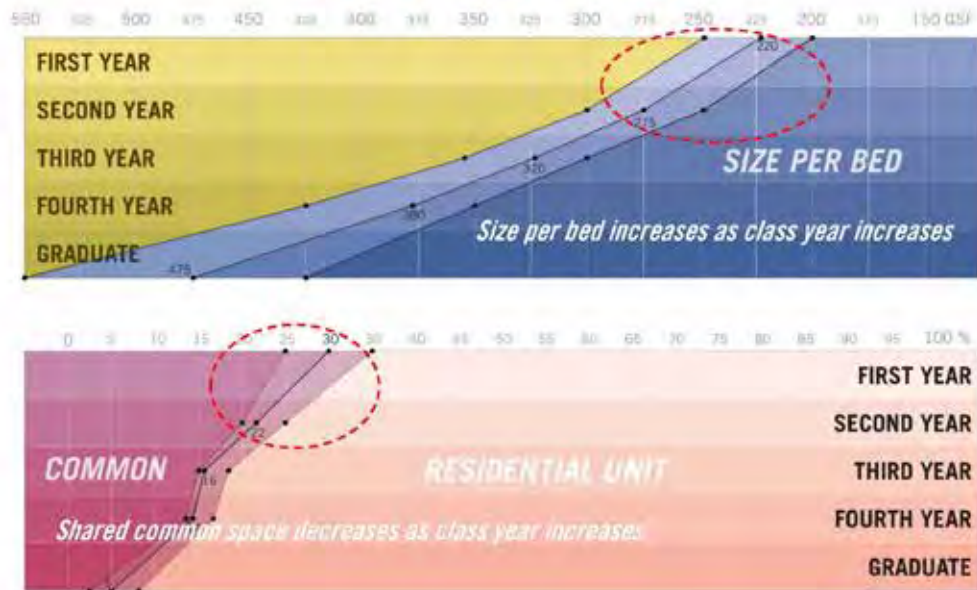


- Furniture Types and Sizes
- Dresser Options
- Closets vs Wardrobes
- Heating / Cooling Distribution System

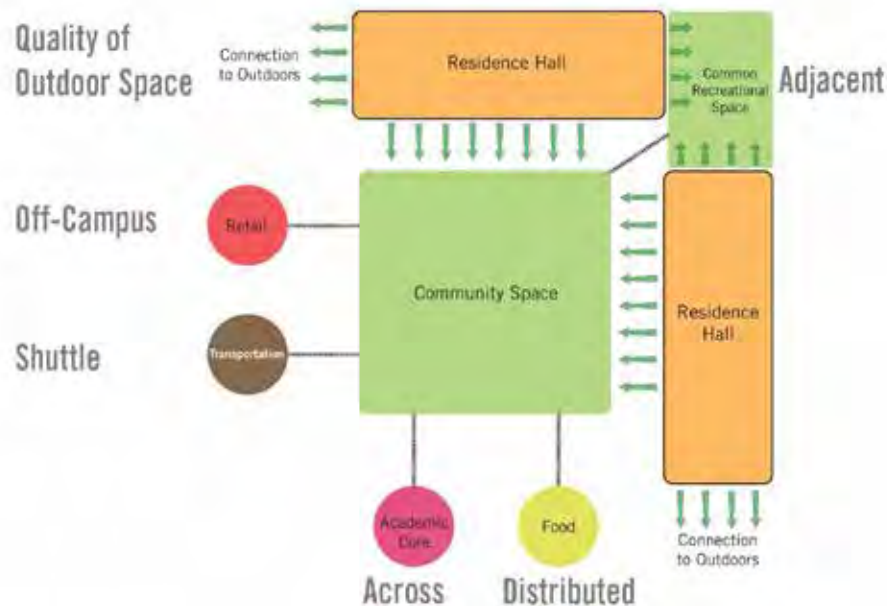


WORKSHOP #01 / 2016.02.26

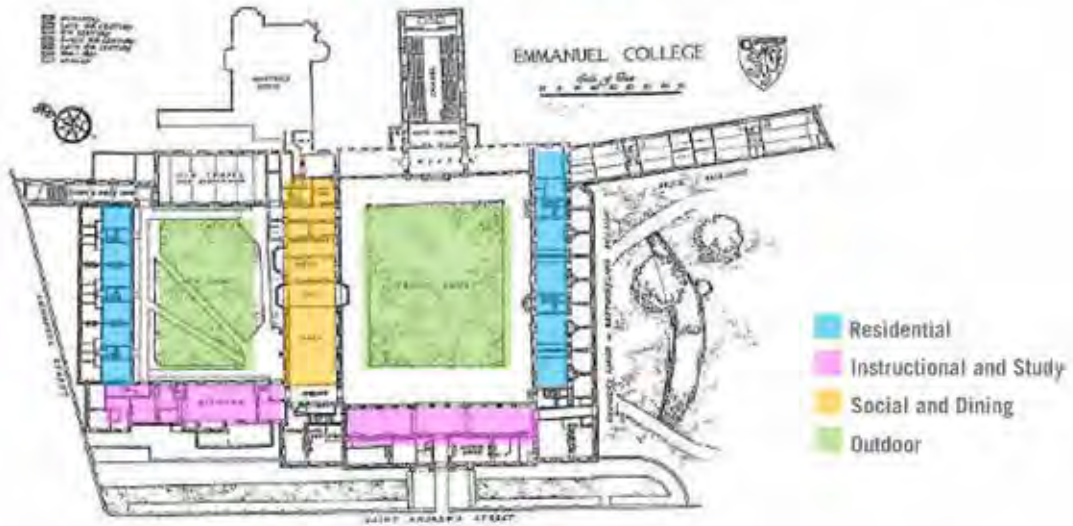
BENCHMARKING



COMMUNITIES

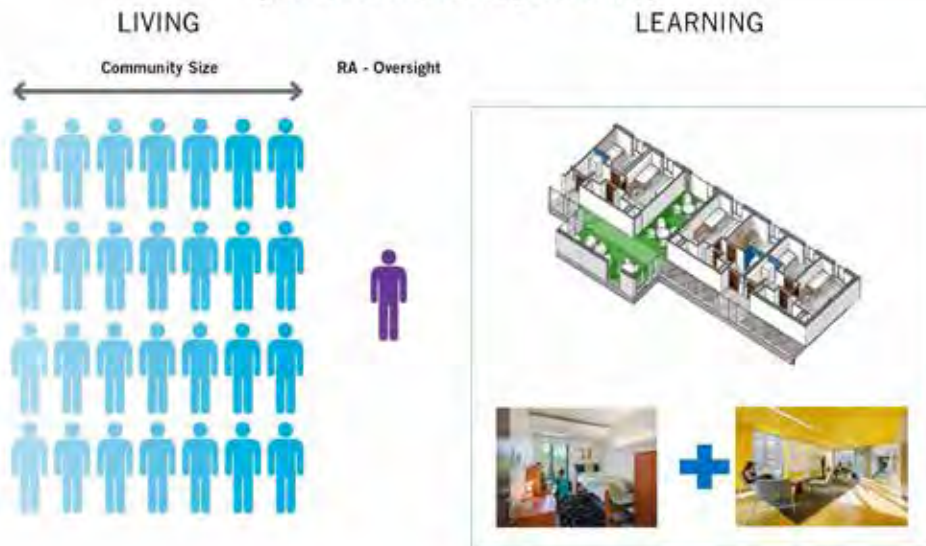


COMMUNITIES

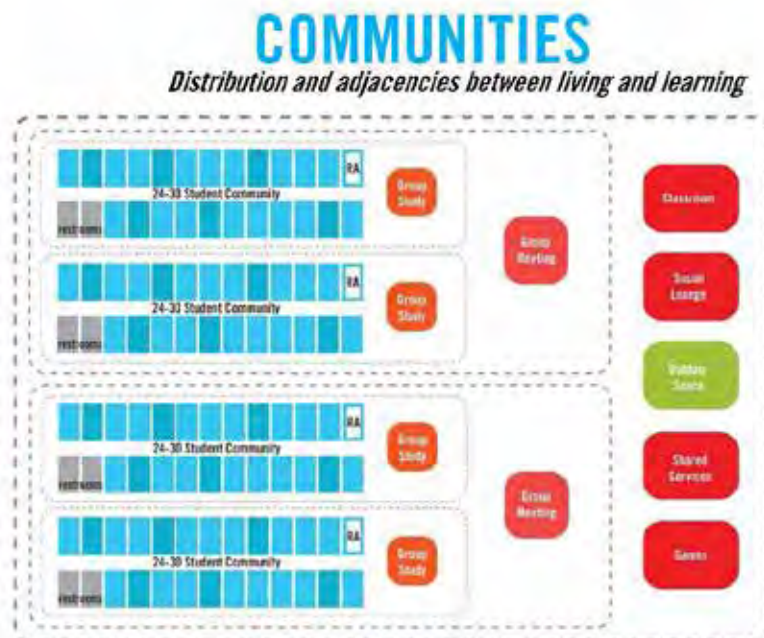


COMMUNITIES

Spatial ratio between living and learning



WORKSHOP #01 / 2016.02.26



WORKSHOP #01 / 2016.02.26



NEXT STEPS

1. DEVELOP PROGRAM SCENARIOS
2. DEVELOP PLANNING OPTIONS
3. ASSESS SITE DEVELOPMENT STRATEGIES
4. SCHEDULE NEXT MEETING: WS2 17 March?

01
EXECUTIVE SUMMARY

02
SITE CONTEXT AND
CONCEPT

03
PHYSICAL
ORGANIZATION

04
PROGRAM
DEVELOPMENT

05
NARRATIVES

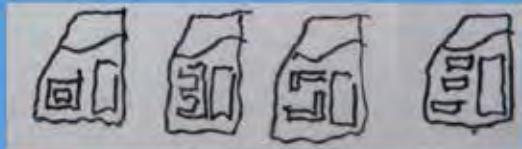
06
APPENDIX

SECTION 06e

WORKSHOP #02

WORKSHOP #02 / 2016.03.23

University of Alabama
South Campus Residential Development Programming
WORKSHOP 2
23 March 2016



PERKINS+WILL

AGENDA

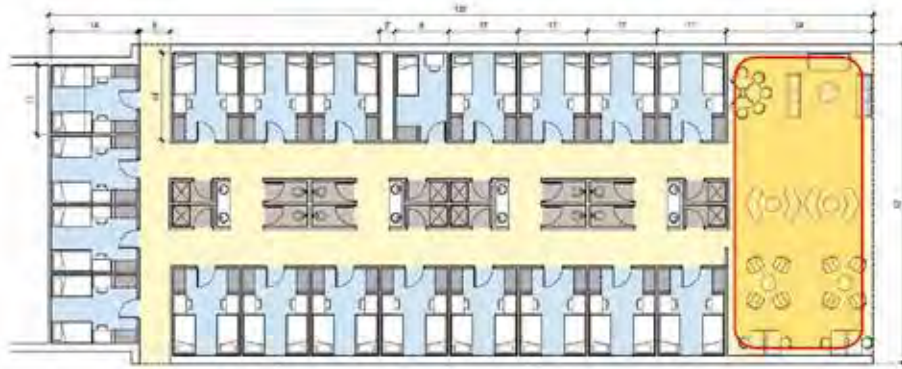
1. DESIRED OUTCOMES
2. CONFIRMED DECISIONS
3. NEIGHBORHOOD CONCEPTS
4. UNIT TYPOLOGY
5. SITE CONCEPT STUDIES
6. NEXT STEPS

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WORKSHOP #02 / 2016.03.23

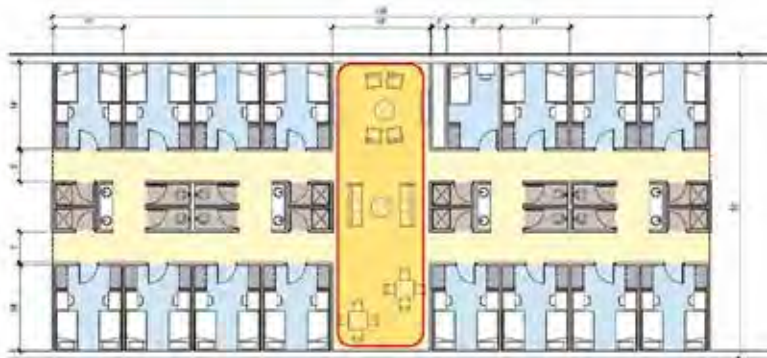
NEIGHBORHOODS

OPTION-02A
38 BEDS
185 NSF/BED



NEIGHBORHOODS

OPTION-01
32 BEDS
168 NSF/BED



NEIGHBORHOODS

OPTION-02B
38 BEDS
210 NSF/BED



NEIGHBORHOODS

OPTION-03
34 BEDS
242 NSF/BED



WORKSHOP #02 / 2016.03.23

Unit Typology

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UNIT TYPES

Site Concept Studies



PERKINS+WILL

SITE CONCEPTS SUMMARY

OPTION 1, 2B, 2C

	Community Director Apartment	Area Director Apartment	Single (10k)	Double
Top of Station				
Level 13				
Level 12				
Level 11				
Level 10	1		4	130
Level 09			4	130
Level 08	1		4	130
Level 07			4	130
Level 06	1		4	130
Level 05			4	130
Level 04	1		4	130
Level 03			4	130
Level 02			4	130
Level 01			4	130
COMMONS				



OPTION 1B, 2, 3B

	Community Director Apartment	Area Director Apartment	Single (10k)	Double
Top of Station				
Level 13				
Level 12				
Level 11				
Level 10				
Level 09	1		4	130
Level 08			4	130
Level 07			4	130
Level 06			4	130
Level 05	1		4	130
Level 04			4	130
Level 03	1		4	130
Level 02			4	130
Level 01			4	130
COMMONS				



OPTION 3

	Community Director Apartment	Area Director Apartment	Single (10k)	Double
Top of Station				
Level 13				
Level 12				
Level 11				
Level 10				
Level 09				
Level 08				
Level 07			4	130
Level 06	1		4	130
Level 05			4	130
Level 04	1		4	130
Level 03			4	130
Level 02			4	130
Level 01			4	130
COMMONS				



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OPTION1_2B_2C				
	Community Director Assignment	Area Director Assignment	League (Rd)	League
Top of Mountain				
Team13				
Team12				
Team11				
Team10				170
Team09				170
Team08				170
Team07				170
Team06				170
Team05				170
Team04				170
Team03				170
Team02				170
ECONOMY				
Team01				



OPTION-01B: 4 BARS

OPTION 1B. 2. 3B				
	Community Overlook Apartment	Five Overlook Apartment	Singer (BA)	Onond
	Year of Station			
Year 1				
Year 2				
Year 3				
Year 4				
Year 5	1		0	20
Year 6	1		0	30
Year 7	1		0	30
Year 8			0	20
Year 9	1		0	20
Year 10	0		0	20
Year 11	0		0	20
Year 12			0	20
Year 13		1	0	20
Year 14			0	20
Year 15			0	20
Year 16			0	20
Year 17			0	20
Year 18			0	20
Year 19			0	20
Year 20			0	20
Year 21			0	20
Year 22			0	20
Year 23			0	20
Year 24			0	20
Year 25			0	20
Year 26			0	20
Year 27			0	20
Year 28			0	20
Year 29			0	20
Year 30			0	20
Year 31			0	20
Year 32			0	20
Year 33			0	20
Year 34			0	20
Year 35			0	20
Year 36			0	20
Year 37			0	20
Year 38			0	20
Year 39			0	20
Year 40			0	20
Year 41			0	20
Year 42			0	20
Year 43			0	20
Year 44			0	20
Year 45			0	20
Year 46			0	20
Year 47			0	20
Year 48			0	20
Year 49			0	20
Year 50			0	20
Year 51			0	20
Year 52			0	20
Year 53			0	20
Year 54			0	20
Year 55			0	20
Year 56			0	20
Year 57			0	20
Year 58			0	20
Year 59			0	20
Year 60			0	20
Year 61			0	20
Year 62			0	20
Year 63			0	20
Year 64			0	20
Year 65			0	20
Year 66			0	20
Year 67			0	20
Year 68			0	20
Year 69			0	20
Year 70			0	20
Year 71			0	20
Year 72			0	20
Year 73			0	20
Year 74			0	20
Year 75			0	20
Year 76			0	20
Year 77			0	20
Year 78			0	20
Year 79			0	20
Year 80			0	20
Year 81			0	20
Year 82			0	20
Year 83			0	20
Year 84			0	20
Year 85			0	20
Year 86			0	20
Year 87			0	20
Year 88			0	20
Year 89			0	20
Year 90			0	20
Year 91			0	20
Year 92			0	20
Year 93			0	20
Year 94			0	20
Year 95			0	20



154 UA SOUTH CAMPUS RESIDENTIAL DEVELOPMENT STUDY PRE-SCHEMATIC REPORT



OPTION-03: ELBOWS

TOTAL NEIGHBORHOODS: 48
LEVELS ABOVE LEVEL01: 8
BEDS/NEIGHBORHOOD: 34
TOTAL BEDS: 1530 @ 5 LEVELS (1632 @ 6)
COMMON AREA: 61,311SF

OPTION3				
	Community Director Apartment	Area Director Apartment	Single (RAC)	Double
Top of Station				
Level 13				
Level 12				
Level 11				
Level 10				
Level 09				
Level 08				
Level 07				
Level 06				
Level 05				
Level 04				
Level 03				
Level 02				
Level 01	COMMONS			



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OPTION-02B: COURTYARD NORTH

TOTAL NEIGHBORHOODS: 45
LEVELS ABOVE LEVEL01: 5
BEDS/NEIGHBORHOOD: 34
TOTAL BEDS: 1360 @ 8 LEVELS (1530 @ 9)
COMMON AREA: 53,900SF

OPTION1, 2B, 2C				
	Community Director Apartment	Area Director Apartment	Single (RAC)	Double
Top of Station				
Level 13				
Level 12				
Level 11				
Level 10				
Level 09				
Level 08				
Level 07				
Level 06				
Level 05				
Level 04				
Level 03				
Level 02				
Level 01	COMMONS			



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WORKSHOP #02 / 2016.03.23



OPTION-02C: COURTYARD WEST

TOTAL NEIGHBORHOODS: 45
 LEVELS ABOVE LEVEL01: 5
 BEDS/NEIGHBORHOOD: 34
 TOTAL BEDS: 1360 @ 8 LEVELS (1530 @ 9)
 COMMON AREA: 57,050sf

OPTION1, 2B, 2C

	Community Director Apartment	Area Director Apartment	Single (BA)	Double
Level 13				
Level 12				
Level 11				
Level 10				1,700
Level 09				1,700
Level 08				1,700
Level 07				1,700
Level 06				1,700
Level 05				1,700
Level 04				1,700
Level 03				1,700
Level 02				1,700
Level 01				1,700
Level 00				COMMONS

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OPTION-03B: ELBOWS

TOTAL NEIGHBORHOODS: 48
 LEVELS ABOVE LEVEL01: 8
 BEDS/NEIGHBORHOOD: 34
 TOTAL BEDS: 1530 @ 5 LEVELS (1632 @ 6)
 COMMON AREA: 71,052sf

OPTION1B, 2, 3B

	Community Director Apartment	Area Director Apartment	Single (BA)	Double
Level 13				
Level 12				
Level 11				
Level 10				
Level 09				2,000
Level 08				2,000
Level 07				2,000
Level 06				2,000
Level 05				2,000
Level 04				2,000
Level 03				2,000
Level 02				2,000
Level 01				2,000
Level 00				COMMONS

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STUDENT FORUM

1. What is the most important thing to break down the scale of a large building?
2. What is the most popular residence hall on campus?
3. Why? What makes it successful?
4. How would you define some of the key factors for success of a Neighborhood community of about 35 students?
5. Would you prefer smaller bedrooms that have bigger common spaces, or bigger bedrooms with smaller common spaces?
6. Would you want complete flexibility or some fixed spaces in the common space in a neighborhood?
7. What is the single most in-demand common space?

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Next Steps

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SECTION 06f

WORKSHOP #03

WORKSHOP #03 / 2016.04.13

University of Alabama
South Campus Residential Development Programming
WORKSHOP 3
13 April 2016

PERKINS+WILL

WS3 AGENDA

1. DECISION MATRIX
2. SITE PLAN AND BUILDING MASSING REVIEW
3. NEIGHBORHOOD, UNIT TYPE AND PROGRAM REVIEW
4. Lunch Discussion regarding Report Format
5. HRC STAFF INPUT

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OUTCOMES

From WS2:

1. Agree on Strategy for Recommendations and Report
2. Agree on Site Strategy
3. Agree on Neighborhood Concept and Size(s)
4. Agree on Phasing Strategy

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Site & Building Massing

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WORKSHOP #03 / 2016.04.13

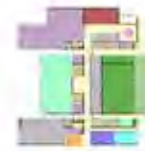
Shifted I Concept (Service South)



Shifted I Concept (Service South)



Folded-In Concept (Service South)



Folded-In Concept (Service South)



WORKSHOP #03 / 2016.04.13

Folded-Out Concept (Service South)



Folded-Out Concept (Service South)



H Concept (Service South)



H Concept (Service South)



WORKSHOP #03 / 2016.04.13

H Concept (Separate Regional Fitness)



H Concept (Separate Regional Fitness)





An aerial view of a building complex. The central building has a prominent green roof. To its right is a large, multi-story building with a grid-like facade. The surrounding area includes a road and other smaller structures.

Height Matrix – 31x39

31 beds in Neighborhood A, 39 beds in Neighborhood B

	Faculty-in residence Apartment	Area Director Apartment	Community Director Apartment	Single (RA)	Single (medical)	Double	
							Top of Stadium
level13				4	1		120
level12				4	1		120
level11				4	1		120
level10				4	1		120
level09				4	1		120
level08				4	1		120
level07				4	1		158
level06				5	1		158
level05				5	1		158
level04				5	1		158
level03				5	1		158
level02			4	4	1		128
level01	1	1					COMMONS
TOTALS				52	12	1638	1702



Height Matrix – 31x31

31 beds in Neighborhood A, 31 beds in Neighborhood B

	Faculty-in residence Apartment	Area Director Apartment	Community Director Apartment	Single (RA)	Single (medical)	Double	
							Top of Stadium
level13				4	1		120
level12				4	1		120
level11				4	1		120
level10				4	1		120
level09				4	1		120
level08				4	1		120
level07				4	1		150
level06				5	1		150
level05				5	1		150
level04				5	1		150
level03				5	1		150
level02			4	4	1		120
level01	1	1					COMMONS
TOTALS				52	12	1590	1654



WORKSHOP #03 / 2016.04.13

Height Matrix – 35x31

35 beds in Neighborhood A, 31 beds in Neighborhood B

	Faculty-in residence Apartment	Area Director Apartment	Community Director Apartment	Single (RA)	Single (medical)	Double
	Top of Stadium					
level13				4	1	136
level12				4	1	136
level11				4	1	136
level10				4	1	136
level09				4	1	136
level08				4	1	136
level07				4	1	166
level06				5	1	166
level05				5	1	166
level04				5	1	166
level03				5	1	166
level02			4	4	1	132
level01	-1	1	COMMONS			
TOTALS				48	11	1642 1701



Level 01 - Options



I Concept

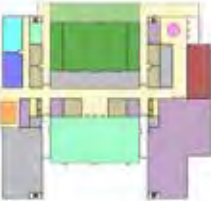


H Concept

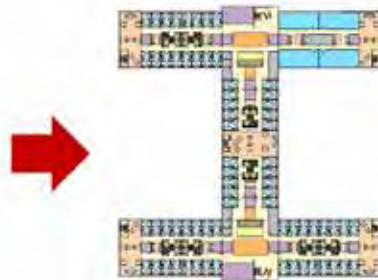


H Concept (w/o Fitness)

Level 01 - Commons



Orientations

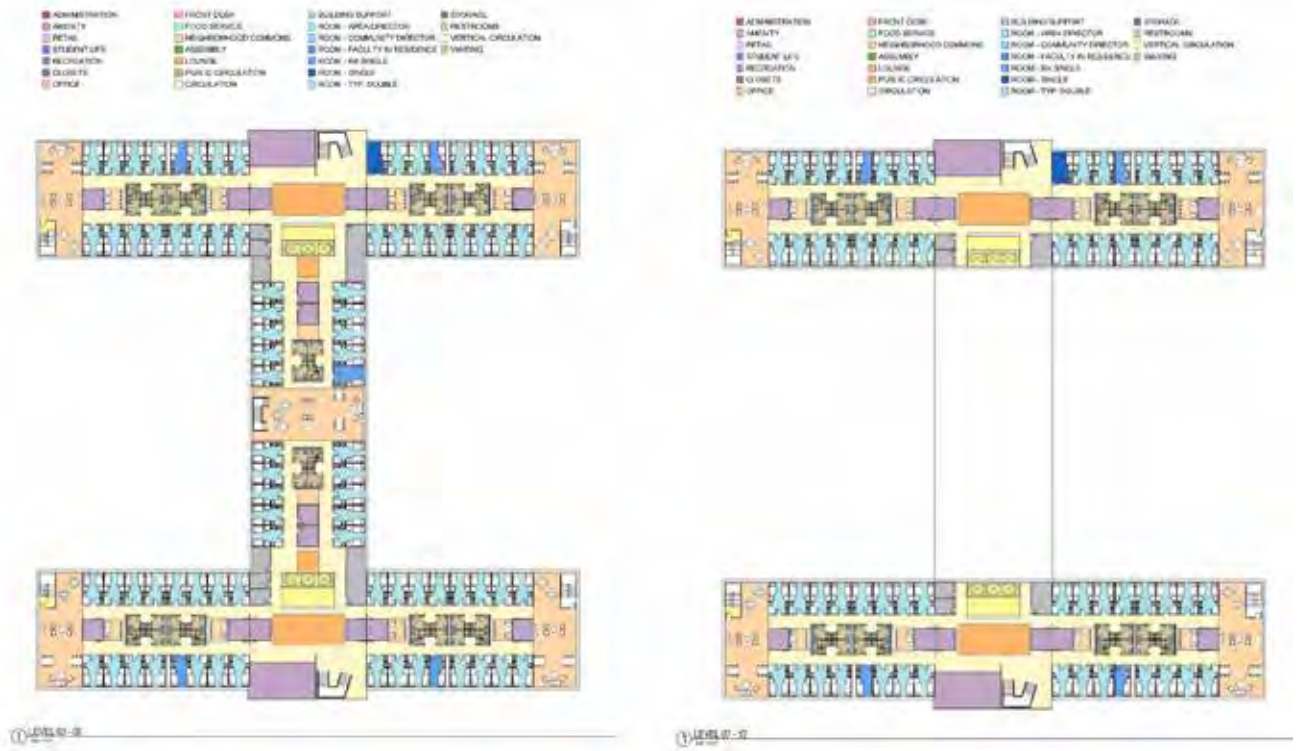


WORKSHOP #03 / 2016.04.13

Neighborhood Review

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Neighborhood A



WORKSHOP #03 / 2016.04.13

Neighborhood A



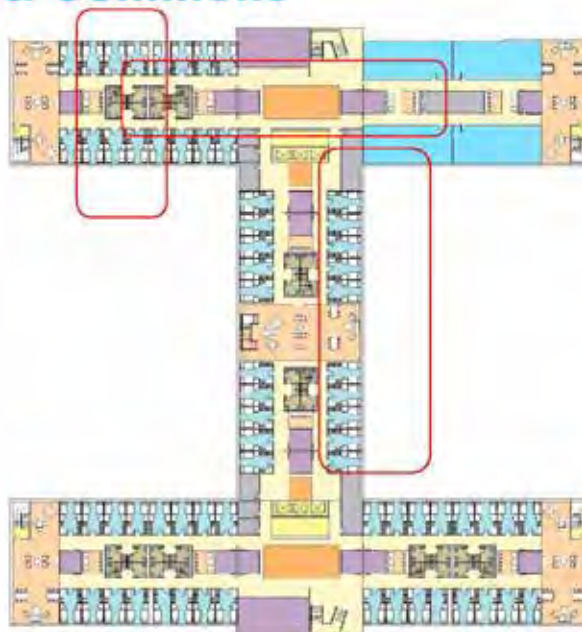
Neighborhood B



Community Director Neighborhood

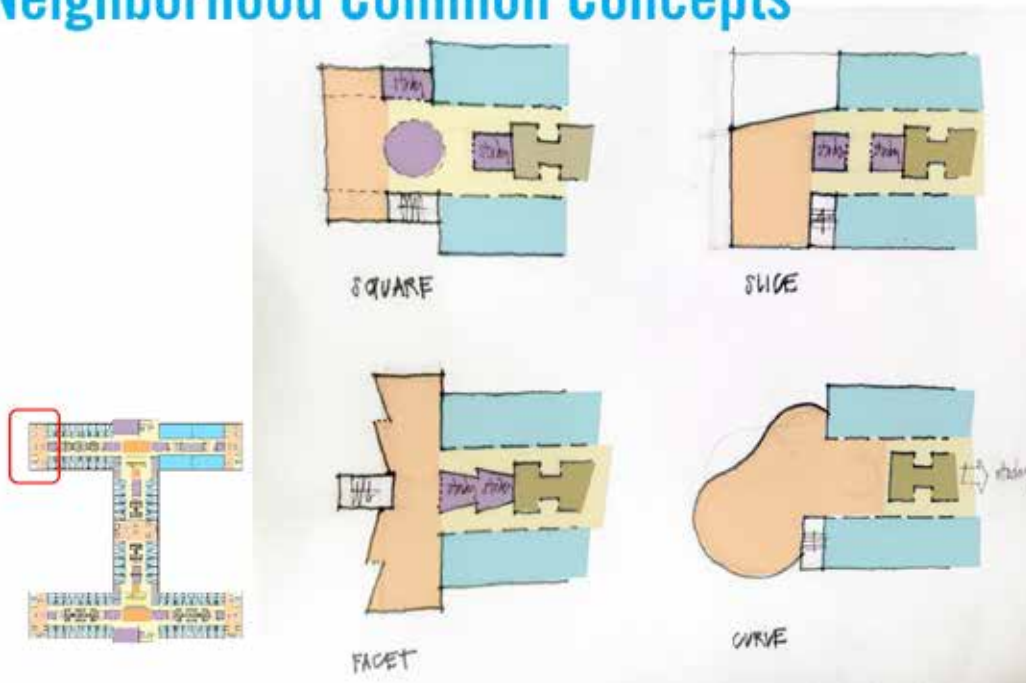


Corridor Interest & Commons

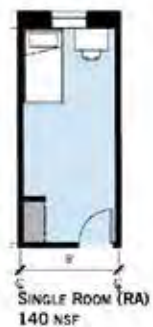


WORKSHOP #03 / 2016.04.13

Neighborhood Common Concepts



Typical Unit Types



UNIT TYPES

01
EXECUTIVE SUMMARY

02
SITE CONTEXT AND
CONCEPT

03
PHYSICAL
ORGANIZATION

04
PROGRAM
DEVELOPMENT

05
NARRATIVES

06
APPENDIX

SECTION 06g

WORKSHOP SD #01

WORKSHOP SD #01 / 2016.06.28

University of Alabama South Campus Residential Development Programming PRE-SD WORKSHOP 1 28 June 2016

PERKINS+WILL

SCHEDULE

PROPOSED TIMELINE /

Weeks	1	2	3	4	5	6	7	8	9	10	11	12
*	*				*			*			*	*
Selection	Workshop 1				Workshop 2			Workshop 3			Presentation of Final Draft	Final Report Deliverable
	Project Kickoff with the full team				Review of three (3) planning concepts			Review of recommended concept				
	Project Goals and Vision				Program review and refinement			Discussion of refinement				
	Reconnaissance and Site Tour				Discussion of phasing and implementation			Consensus on program				
	Preliminary Programming with Residential Life Leadership				Decision and consensus on single strategy for further development			Consensus on phasing and implementation				
	Collection of Existing Conditions Documentation				Meeting with students			Discuss final documentation				

DAVID - NEED UPDATED SLIDE?

L L

PRE-SD SCHEDULE

- WS1 (28 June): Review feedback and direction
- WS2 (26/27/28 July): Review project and content development
- WS3 (15 August): Finalize report
- Pre-SD report deadline (26 August)

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PRE-SD TEAM

- | | |
|-------------------------------|-----------------------------------|
| • Perkins+Will | Architecture / Interior Design |
| • Structural Design Group | Structural Engineering |
| • Whitaker & Rawson | Mechanical / Plumbing Engineering |
| • Jackson Renfro & Associates | Electrical Engineering |
| • McGiffert & Associates | Civil Engineering |

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WORKSHOP SD #01 / 2016.06.28

WS4 AGENDA

1. Schedule
2. Site Plan and Level 01 Development 1 hour (1:00 pm)
 - a. Connection to parking deck
 - b. Vertical relationships
 - c. Service access
 - d. Location and scope of new program elements
 - e. Recreation component- indoor vs outdoor
 - f. First floor common spaces
2. Neighborhood Plans 1 hour (2:00 pm)
 - a. Bedrooms
 - b. Washrooms
 - c. Common Spaces
 - d. Model Rooms (typical double, typical 2BR suite)
 - e. Relationship to other adjacent floors
3. Wellness Center 30 min (2:30 pm)
 - a. Free standing vs embedded
4. Room Criteria Process and Overview 30 min (3:00 pm)
5. Summary and Next Steps

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WS4 AGENDA

1. Schedule
2. Site Plan and Level 01 Development 1.5 hours (12:30 pm)
3. Neighborhood Plans 1 hour (2:00 pm)
4. Wellness Center 30 min (2:30 pm)
5. Room Criteria Process and Overview 30 min (3:00 pm)
6. Summary and Next Steps

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Site Plan / Level 1 Development

- a. Connection to parking deck
- b. Vertical relationships
- c. Service access
- d. Location and scope of new program elements
- e. Recreation component- indoor vs outdoor
- f. First floor common spaces

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WORKSHOP SD #01 / 2016.06.28

Phasing



Final Site Plan



Final Site Plan



Height Matrix and bed counts

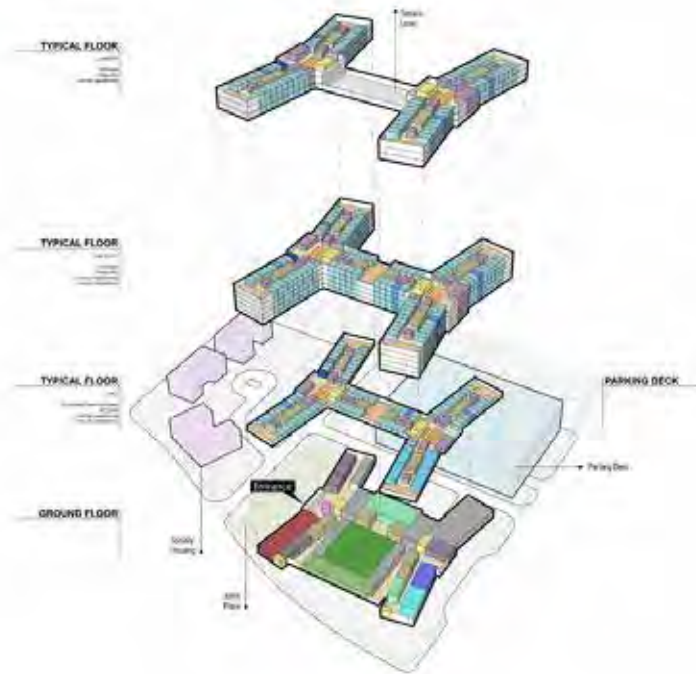
35 beds per end bar, 39 beds per cross bar

	Facility in Mid-rise Apartment	Area Director Apartment	Community Director Apartment	Number of cross-bar neighborhoods	Number of end bar neighborhoods	Single Units (RA)	Double beds	Number of beds per floor	Cumulative Number of Units	Area per floor
Top of Mid-rise										
Level 10					4	4	138	140	1459	43,500.0
Level 09	2 STAIRS				4	4	138	140	1319	43,500.0
Level 08					4	0	138	140	1179	43,500.0
Level 07	3 STAIRS			1	4	0	138	179	1039	52,500.0
Level 06				1	4	0	174	179	860	52,500.0
Level 05	3 STAIRS			1	4	0	174	179	681	52,500.0
Level 04				1	4	0	174	179	502	52,500.0
Level 03	3 STAIRS			1	4	0	174	179	323	52,500.0
Level 02			4 APARTMENTS	1	3	4	140	144		52,500.0
Level 01	1 APARTMENT	1 APARTMENT	COMMONS							74,000.0
TOTALS				6	35	41	1418	1459		519,500.0

Common
Residential

WORKSHOP SD #01 / 2016.06.28

Exploded Axon



Plans



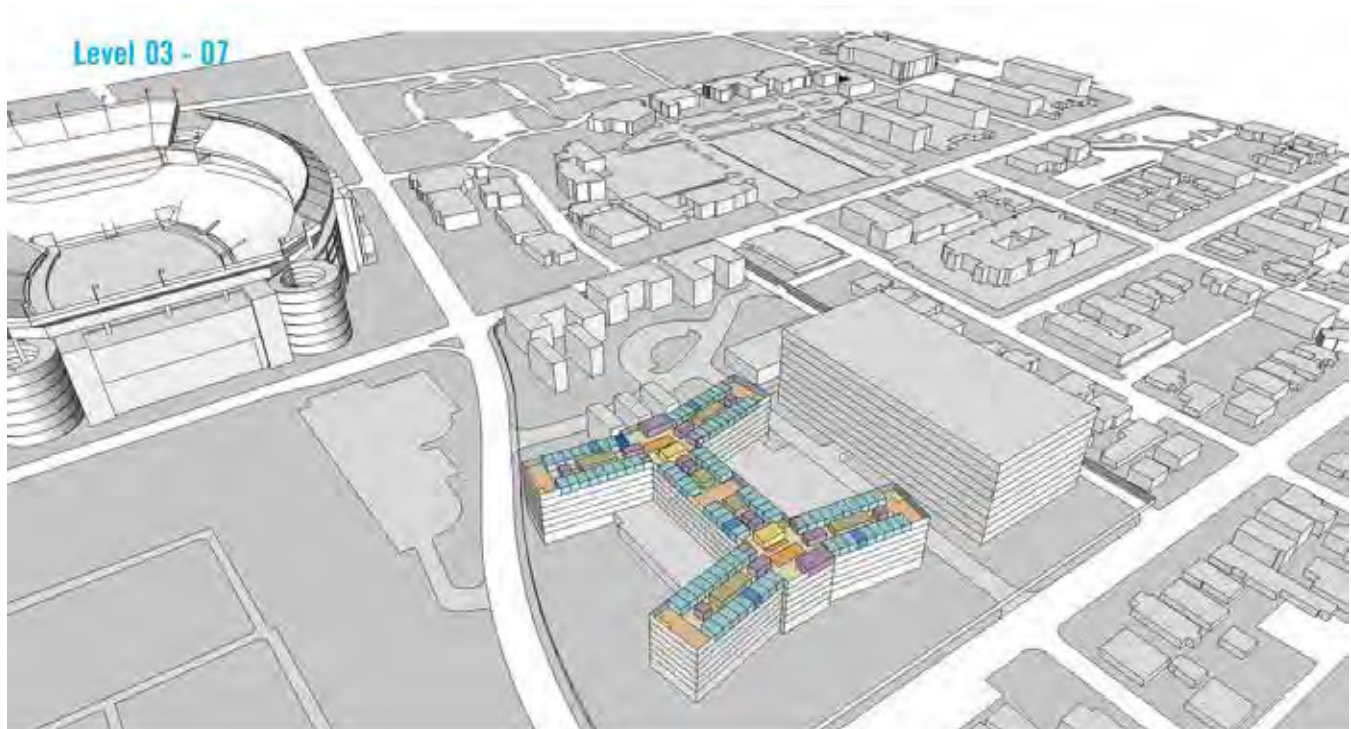
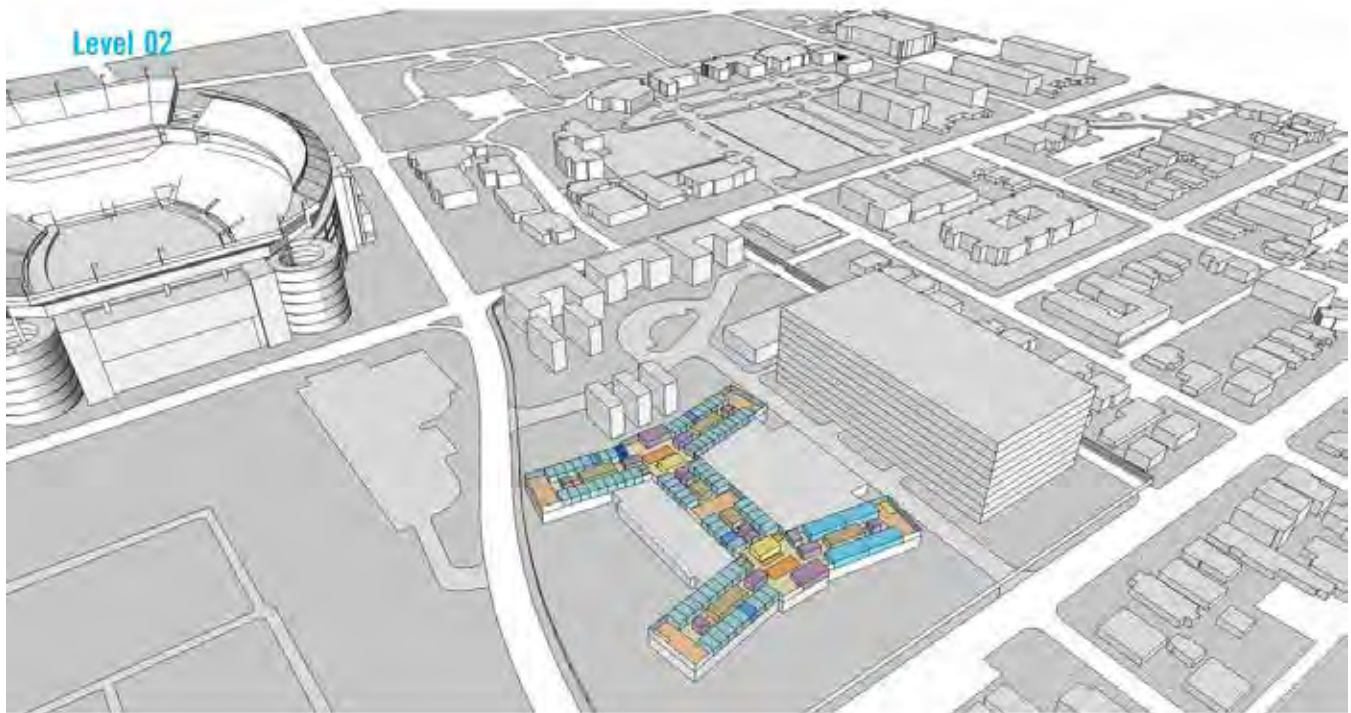
Plans

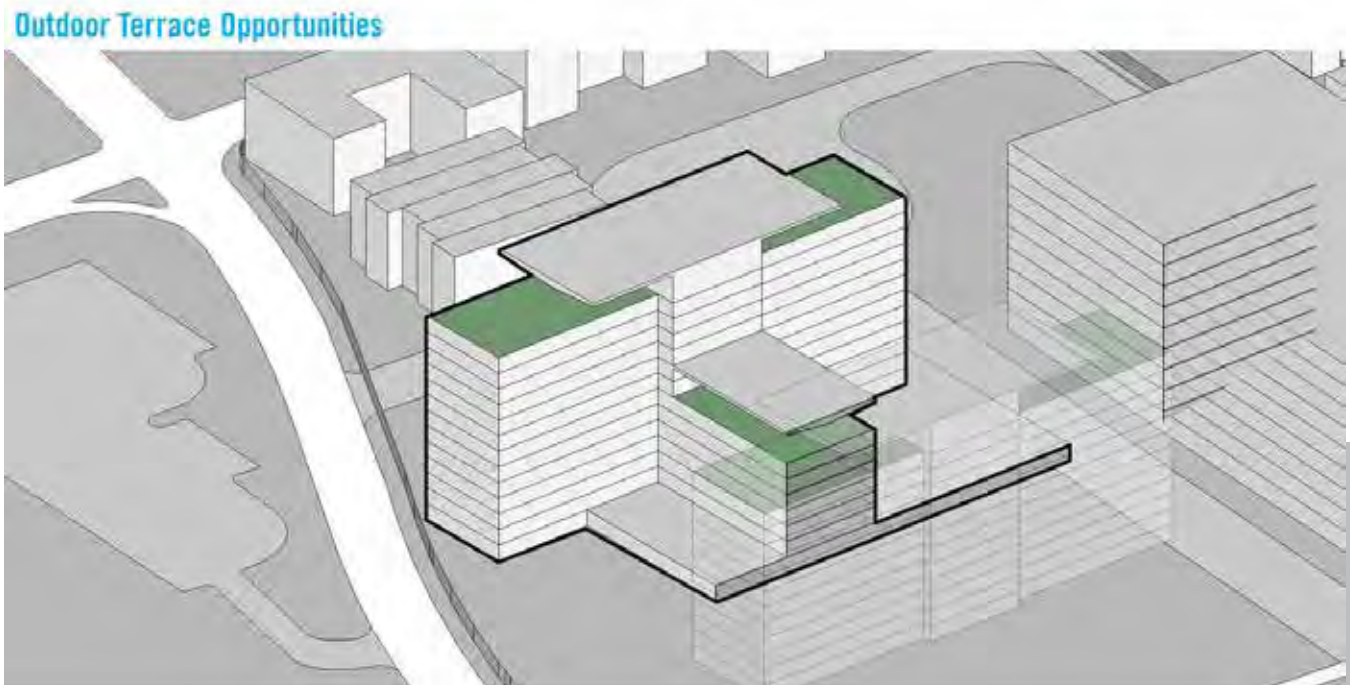


Level 01



WORKSHOP SD #01 / 2016.06.28





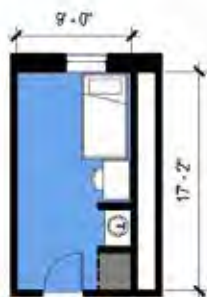
WORKSHOP SD #01 / 2016.06.28

Neighborhood Plans

- a. Bedrooms
- b. Washrooms
- c. Common Spaces
- d. Model Rooms (typical double, typical 2BR suite)
- e. Relationship to other adjacent floors

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Typical Unit Types



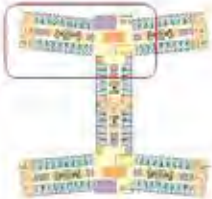
SINGLE ROOM (RA)
140 NSF



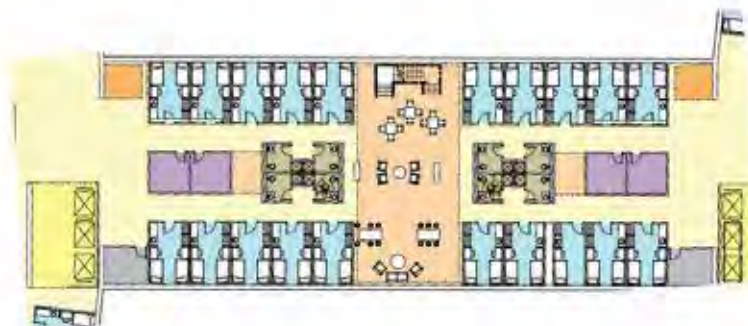
DOUBLE ROOM W/SINK
180 NSF



Neighborhood A



Neighborhood B



WORKSHOP SD #01 / 2016.06.28

Community Director Neighborhood



Wellness Center

WORKSHOP SD #01 / 2016.06.28

TUMKEN HOUSE Perkins + Will Project No. 032691.00 Date: _____ Revision: 01/16		Room Data Sheet	
Program No.	Room Name	Quantity	Target Area
DESCRIPTION			
ARCHITECTURAL			
Occupancy:			
Exterior Window			
Requirements:			
Cooling Ht:			
Door(s):			
Door Frame:			
Hardware:			
Interior Glazing:			
Window Shades:			
Partitions Type:			
Fire Rating:			
Floor Finish:			
Base:			
Wall Finish:			
Ceiling Finish:			
Ceiling:			
Masonry:			
Acoustics:			
Other:			
FURNITURE, FIXTURES AND EQUIPMENT			
General:			
Mobile:			
Electrical/Data Req:			
Other:			
MECHANICAL			
HVAC:			
Air Changes/Hour:			
Supply Air:			
Exhaust:			
PLUMBING			
Specify Plumbing:			
GPM Target:			
Fixt. Drains:			
Fixtures:			
Other:			
FIRE & SMOKE PROTECTION			
General:			
Sprinkler Type:			
ELECTRICAL			
Power:			

TUMKEN HOUSE Perkins + Will Project No. 032691.00 Date: _____ Revision: 01/16		Room Data Sheet	
Partitions:			
Special Chutes:			
USB Outlets:			
Floor Outlets Boxes:			
Emergency Power:			
UPS Power:			
Other:			
LIGHTING			
Elimination Level:			
Specialty Fixture:			
Type:			
Color Temperature:			
Switching:			
Multi-Level:			
Dimmer:			
Lighting Control System:			
Daylight Harvesting:			
Occupancy Sensor:			
Energy Consumption Target:			
COMMUNICATIONS			
General:			
Voice:			
Data:			
AV:			
CATV:			
WiFi:			
Special:			
SECURITY			
General:			
Card Reader:			
Special:			
Camera:			
NOTES / COMMENTS			
1.			
2.			
3.			
4.			
5.			

Next Steps

- WS1 (28 June): Review feedback and direction
- WS2 (26/27/28 July): Review project and content development
- WS3 (15 August): Finalize report
- Pre-SD report deadline (26 August)

Confirmed Decisions and Desired Outcomes

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OUTCOMES

From WS2:

1. Agree on Strategy for Recommendations and Report
2. Agree on Site Strategy
3. Agree on Neighborhood Concept and Size(s)
4. Agree on Phasing Strategy

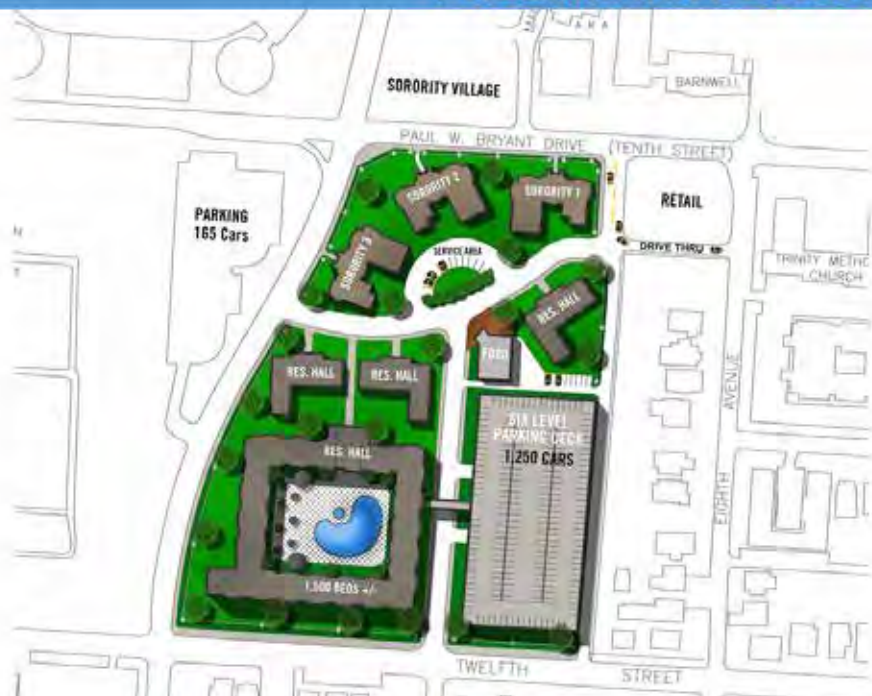
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WORKSHOP SD #01 / 2016.06.28

Site & Building Massing

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PRELIMINARY STUDY



I Concept



I Concept (Service South)

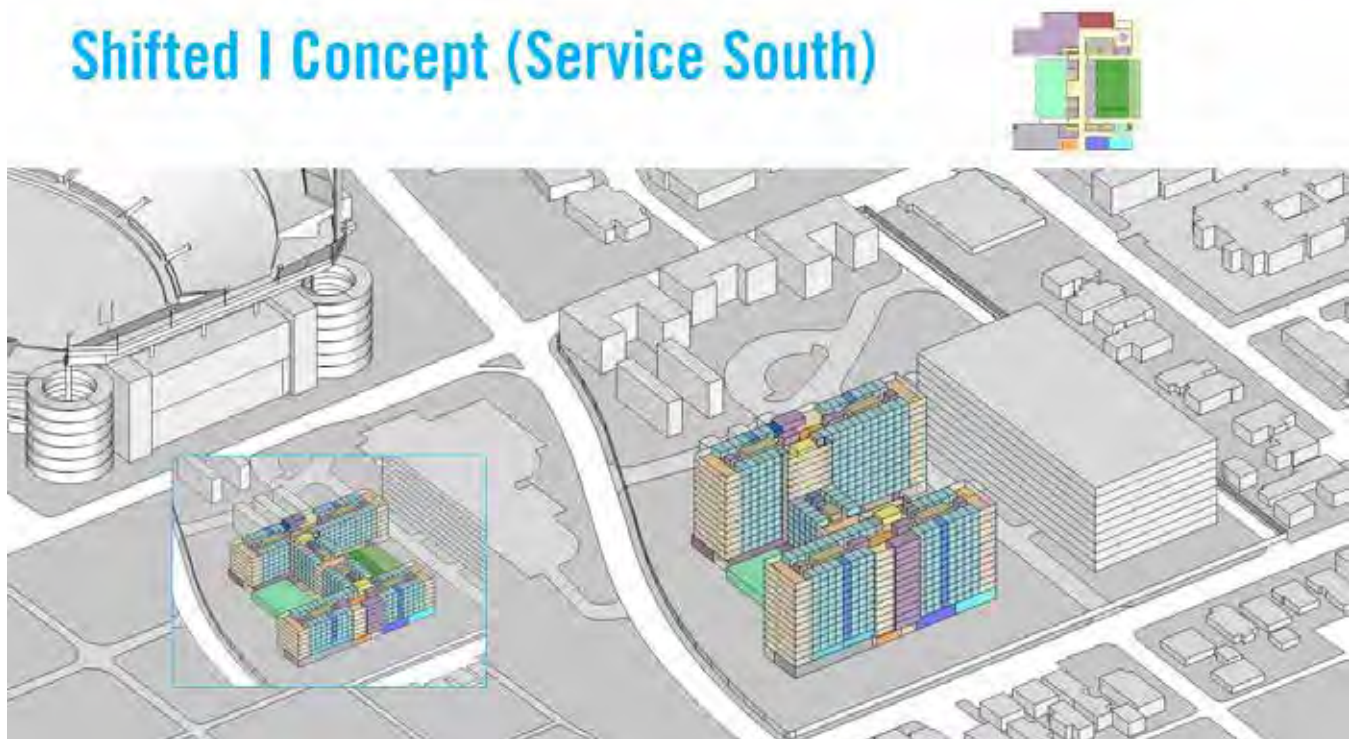


WORKSHOP SD #01 / 2016.06.28

I Concept (Service West)



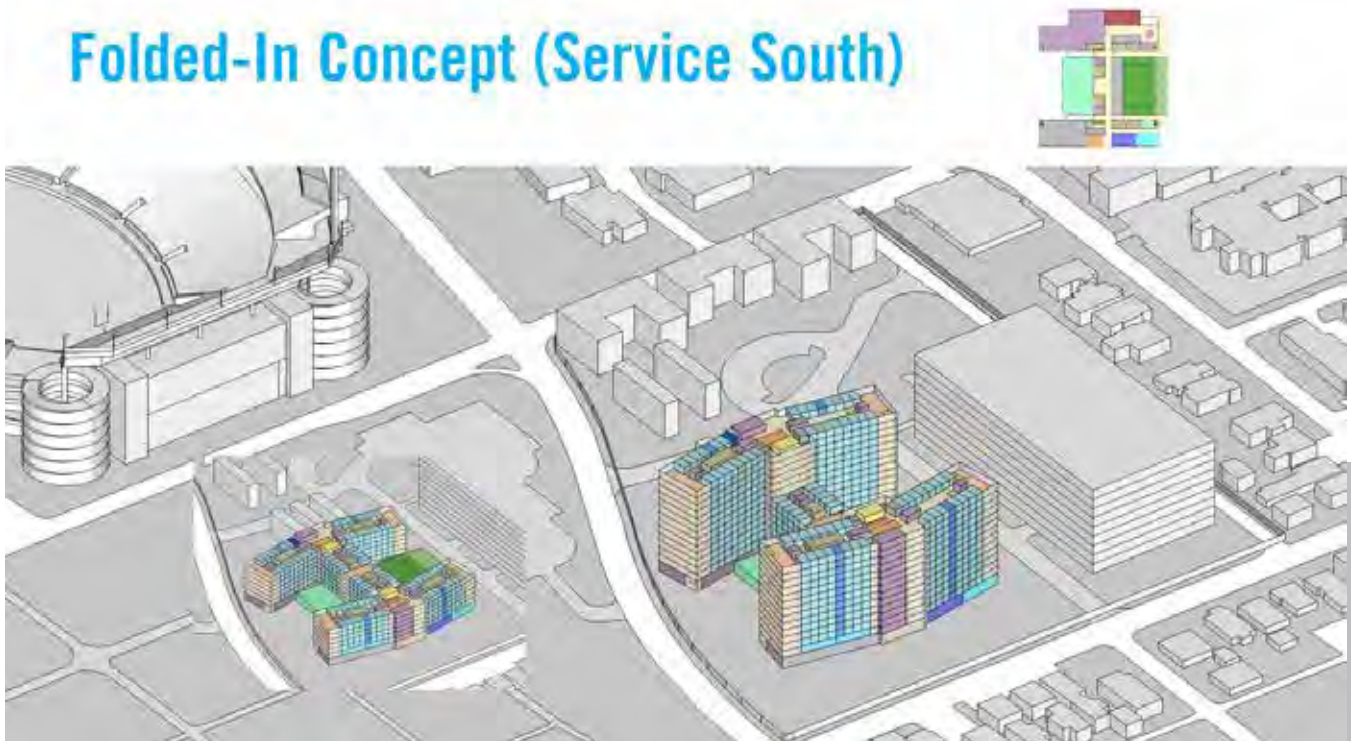
Shifted I Concept (Service South)



Shifted I Concept (Service South)



Folded-In Concept (Service South)

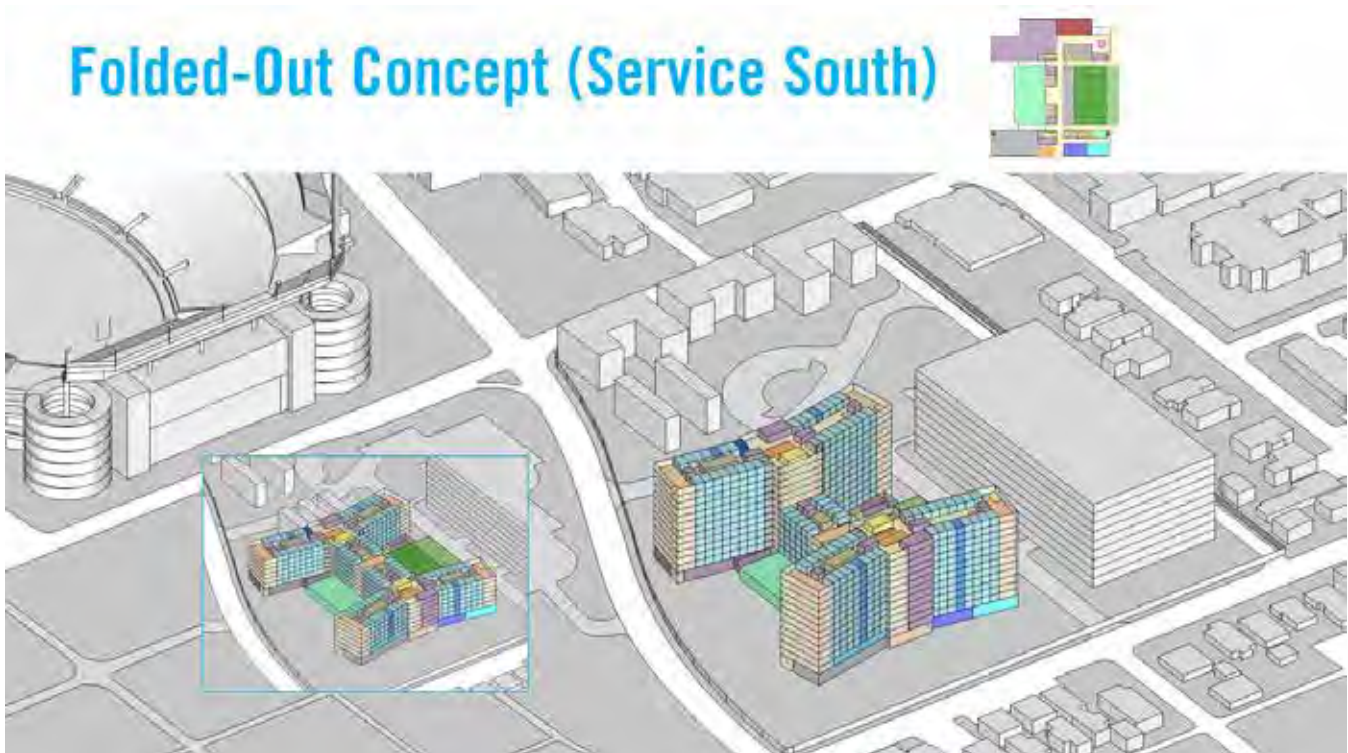


WORKSHOP SD #01 / 2016.06.28

Folded-In Concept (Service South)



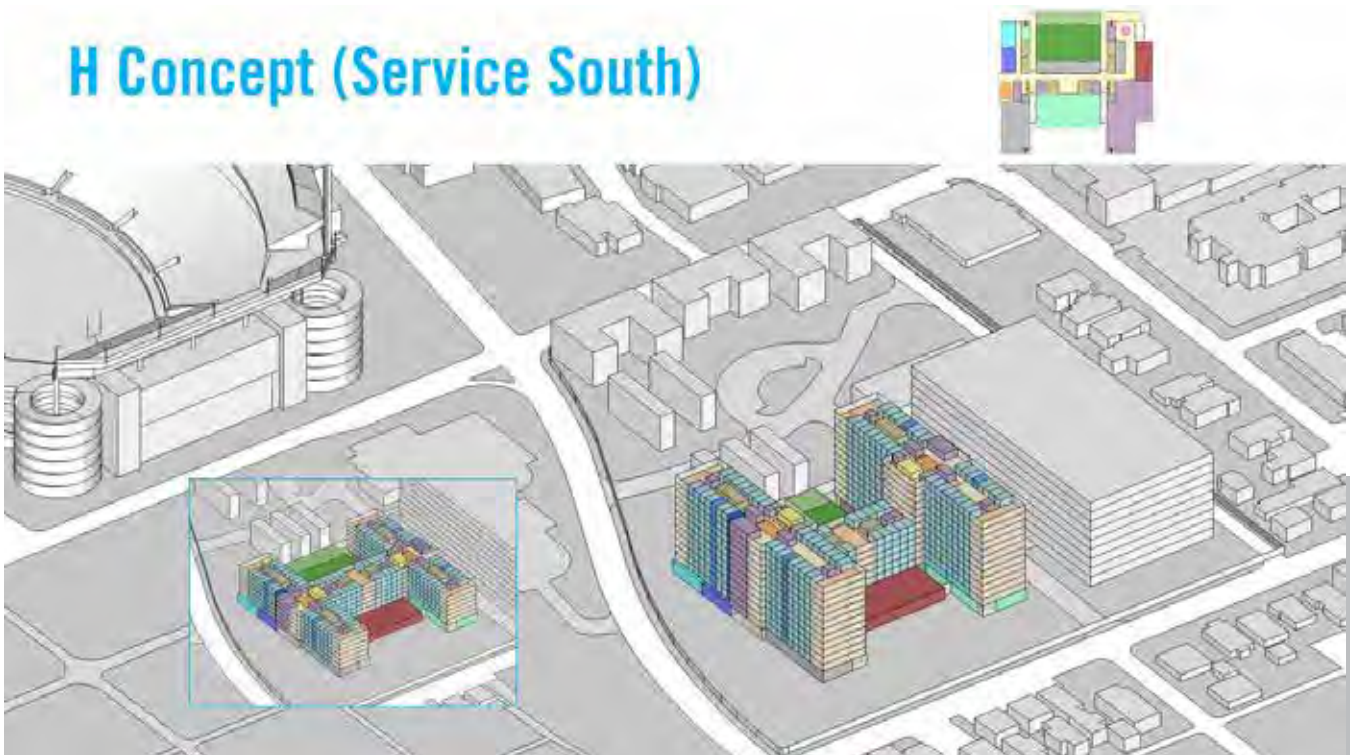
Folded-Out Concept (Service South)



Folded-Out Concept (Service South)



H Concept (Service South)



WORKSHOP SD #01 / 2016.06.28

H Concept (Service South)



H Concept (Separate Regional Fitness)



H Concept (Separate Regional Fitness)



Height Matrix – 31x39

31 beds in Neighborhood A, 39 beds in Neighborhood B

	Faculty-in-residence Apartment	Area Director Apartment	Community Director Apartment	Single (RA)	Single (medical)	Double
				Top of Stadium		
level13				4	1	120
level12				4	1	120
level11				4	1	120
level10				4	1	120
level09				4	1	120
level08				4	1	120
level07				4	1	158
level06				5	1	158
level05				5	1	158
level04				5	1	158
level03				5	1	158
level02			4	4	1	128
level01	1	1		COMMONS		
TOTALS				52	12	1638 1702



WORKSHOP SD #01 / 2016.06.28

Height Matrix – 31x31

31 beds in Neighborhood A, 31 beds in Neighborhood B

	Faculty-in-residence Apartment	Area Director Apartment	Community Director Apartment	Single (RA)	Single (medical)	Double
	Top of Stadium					
level13				4	1	120
level12				4	1	120
level11				4	1	120
level10				4	1	120
level09				4	1	120
level08				4	1	120
level07				4	1	150
level06				5	1	150
level05				5	1	150
level04				5	1	150
level03				5	1	150
level02			4	4	1	120
level01	1	1	COMMONS			
TOTALS				52	12	1590 1654



Height Matrix – 35x31

35 beds in Neighborhood A, 31 beds in Neighborhood B

	Faculty-in-residence Apartment	Area Director Apartment	Community Director Apartment	Single (RA)	Single (medical)	Double
	Top of Stadium					
level13				4	1	136
level12				4	1	136
level11				4	1	136
level10				4	1	136
level09				4	1	136
level08				4	1	136
level07				4	1	166
level06				5	1	166
level05				5	1	166
level04				5	1	166
level03				5	1	166
level02			4	4	1	132
level01	1	1	COMMONS			
TOTALS				48	11	1642 1701



Level 01 - Options



1 Concept



H Concept



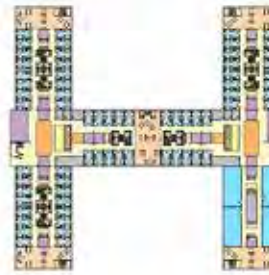
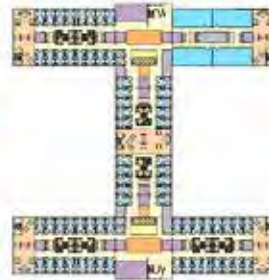
H Concept (w/o Fitness)

Level 01 - Commons



WORKSHOP SD #01 / 2016.06.28

Orientations



Neighborhood Review

H Concept (Service South)

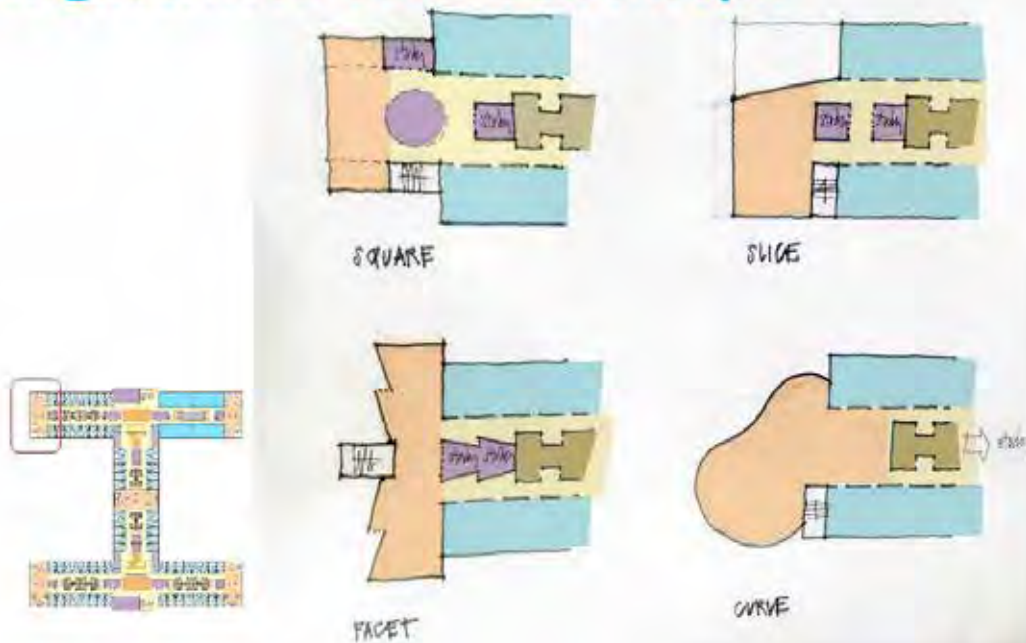


WORKSHOP SD #01 / 2016.06.28

Neighborhood A



Neighborhood Common Concepts



Program

PERKINS+WILL

SECTION 06h

WORKSHOP SD #02

WORKSHOP SD #02 / 2016.07.20

University of Alabama South Campus Residential Development PRE-SD WORKSHOP 2 20 July 2016

PERKINS+WILL

SCHEDULE

PROPOSED TIMELINE /

Weeks	1	2	3	4	5	6	7	8	9	10	11	12
*	*				*			*			*	*
Selection	Workshop 1				Workshop 2			Workshop 3			Presentation of Final Draft	Final Report Deliverable
	Project Kickoff with the full team				Review of three (3) planning concepts			Review of recommended concept				
	Project Goals and Vision				Program review and refinement			Discussion of refinement				
	Reconnaissance and Site Tour				Discussion of phasing and implementation			Consensus on program				
	Preliminary Programming with Residential Life Leadership				Decision and consensus on single strategy for further development			Consensus on phasing and implementation				
	Collection of Existing Conditions Documentation				Meeting with students			Discuss final documentation				

DAVID - NEED UPDATED SLIDE?

LL

PRE-SD SCHEDULE

- WS1 (28 June): Review feedback and direction
- WS2 (26/27/28 July): Review project and content development
- WS3 (15 August): Finalize report
- Pre-SD report deadline (26 August)

PERKINS+WILL

PRE-SD TEAM

- | | |
|-------------------------------|-----------------------------------|
| • Perkins+Will | Architecture / Interior Design |
| • Structural Design Group | Structural Engineering |
| • Whitaker & Rawson | Mechanical / Plumbing Engineering |
| • Jackson Renfro & Associates | Electrical Engineering |
| • McGiffert & Associates | Civil Engineering |

PERKINS+WILL

WORKSHOP SD #02 / 2016.07.20

SD-WS2 AGENDA

1. Engineers (9:00am – 11:45pm)
 - MEP
 - Civil
 - Structural
2. Student Forum Meeting (12:00pm – 1:30pm)
3. Steering Committee (2:00 pm – 4:00pm)

PERKINS+WILL

Site Plan / Level 1 Development

- a. Connection to parking deck
- b. Vertical relationships
- c. Service access
- d. Location and scope of new program elements
- e. Recreation component- indoor vs outdoor
- f. First floor common spaces

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WORKSHOP SD #02 / 2016.07.20

Final Site Plan



Site Plan
(Lvl 01)



Site Plan
(Lvl02)



Height Matrix and Bed Counts

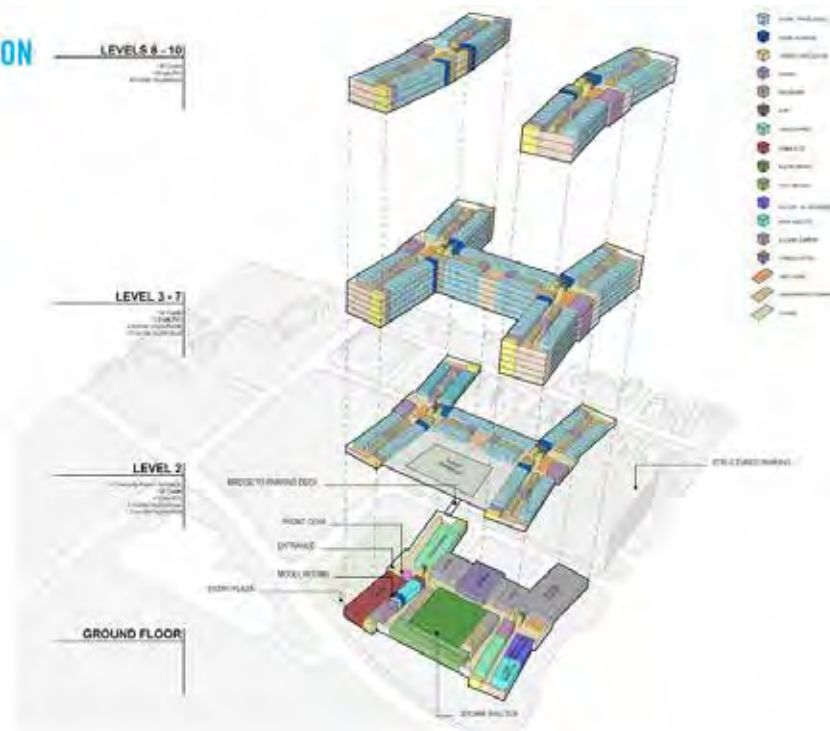
		Faculty & Residence Apartment	Area Director Apartment	Community Director Apartment	Number of adjacent neighborhoods	Number of adjacent neighborhoods	Single beds (RA)	Double beds	Number of beds per floor	Cumulative Number of Beds	Area per floor	Washer & Dryer per floor	W/D Ratio
336	Level 10					4	4	144	144	1589	42,225.0	34	9
328	Level 09					4	4	144	144	1441	42,225.0		
320	Level 08					4	4	144	144	1293	42,225.0	34	10
296	Level 07				1	4	5	192	192	1145	53,702.0		
288	Level 06				2	4	5	192	192	948	53,702.0	34	12
276	Level 05				3	4	5	192	192	751	53,702.0		
268	Level 04				3	4	5	192	192	664	53,702.0	34	12
256	Level 03				3	4	5	192	192	357	53,702.0		
248	Level 02			2 APARTMENTS	1	3	4	144	144		53,702.0	17	5
224	Level 01	1 APARTMENT	1 APARTMENT	COMMONS							75,298.0		
					TOTALS	6	35	41	1548	1589	524,185.0		

Commons

Residential

WORKSHOP SD #02 / 2016.07.20

BUILDING ORGANIZATION



LEVEL 01



LEVEL 02



- WALKWAY
- CLIMATE
- NEIGHBORHOOD CONSIDERATIONS
- CLIMATE
- CIRCULATION
- BUILDING SUPPORT
- ROOM - COMMUNITY ENTRANCE
- ROOM - RA SINGLE
- ROOM - SINGLE
- ROOM - TYP. DOUBLE
- STORAGE
- MULTIROOMS
- VERTICAL CIRCULATION



LEVEL 03-07



- WALKWAY
- CLIMATE
- NEIGHBORHOOD CONSIDERATIONS
- CLIMATE
- CIRCULATION
- BUILDING SUPPORT
- ROOM - COMMUNITY ENTRANCE
- ROOM - RA SINGLE
- ROOM - SINGLE
- ROOM - TYP. DOUBLE
- STORAGE
- MULTIROOMS
- VERTICAL CIRCULATION

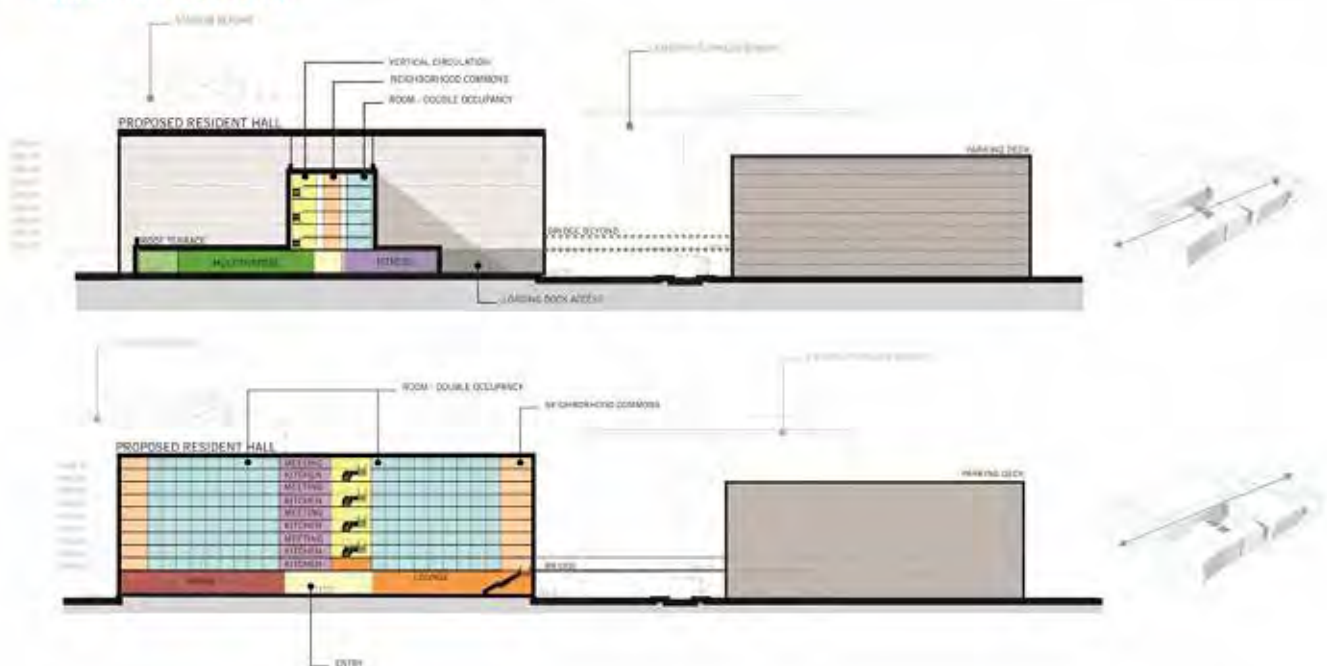


WORKSHOP SD #02 / 2016.07.20

LEVEL 08-10



BUILDING SECTIONS

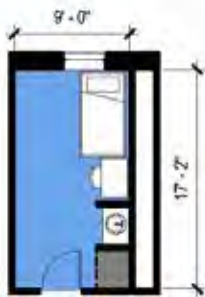


Neighborhood Plans

- a. Bedrooms
- b. Washrooms
- c. Common Spaces
- d. Model Rooms (typical double, typical 2BR suite)
- e. Relationship to other adjacent floors

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Typical Unit Types



SINGLE ROOM (RA)
140 NSF



DOUBLE ROOM W/SINK
180 NSF



WORKSHOP SD #02 / 2016.07.20

Unit Types & Size Study

DOUBLE ROOM W/SINK

SINGLE ROOM WITH VANITY (RA)

SINGLE ROOM W/O VANITY (RA)

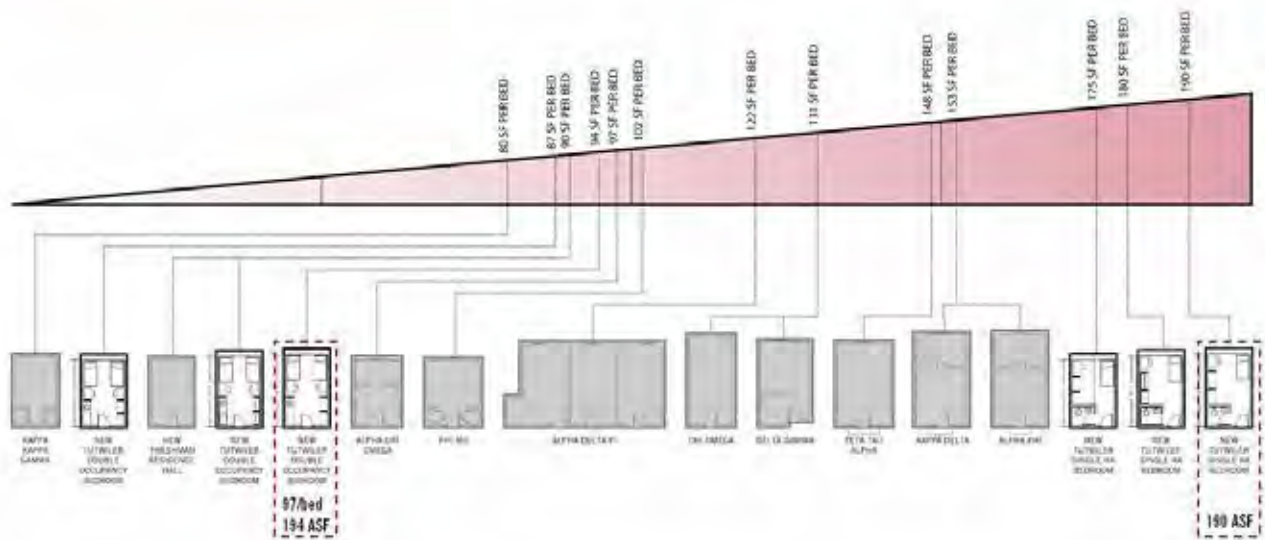
17'-2" DEEP
174 ASF

18'-2" DEEP
188 ASF

18'-8" DEEP
194 ASF



Sorority Bedroom Size Comparison



Neighborhood Options

36 Beds + 1RA

8,000 ASF

216 ASF/Bed

18'-8" Depth



WORKSHOP SD #02 / 2016.07.20

Neighborhood Options

36 Beds + 1 RA

8,000 ASF

216 ASF/Bed

18'-8" Depth



Neighborhood Options

36 Beds + 1 RA

8,000 ASF

216 ASF/Bed

18'-8" Depth



Neighborhood Options

36 Beds + 1 RA

7,725 ASF

209 ASF/Bed

18'-2" Depth



Neighborhood Options

36 Beds + 1 RA

7,770 ASF

210 ASF/Bed

18'-2" Depth



WORKSHOP SD #02 / 2016.07.20

Neighborhood Options

36 Beds + 1 RA

8,000 ASF

216 ASF/Bed

18'-2" Depth



Neighborhood Options

36 Beds + 1 RA

8,000 ASF

216 ASF/Bed

18'-2" Depth



Neighborhood Options

36 Beds + 1 RA

7,725 ASF

209 ASF/Bed

17'-2" Depth



Neighborhood Options

36 Beds + 1 RA (Previous)

8,000 ASF

216 ASF/Bed

17'-2" Depth



WORKSHOP SD #02 / 2016.07.20

Neighborhood Options (Current)

36 Beds + 1 RA

8,000 ASF

216 ASF/Bed

18'-8" Depth



Next Steps

- WS1 (28 June): Review feedback and direction
- WS2 (26/27/28 July): Review project and content development
- WS3 (15 August): Finalize report
- Pre-SD report deadline (26 August)

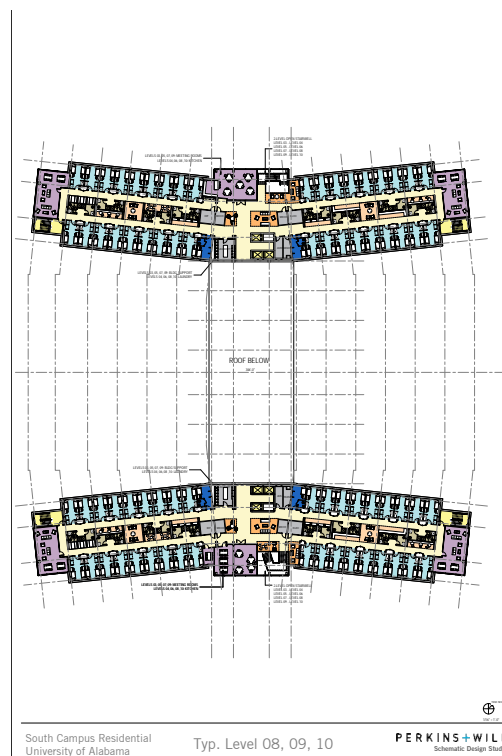
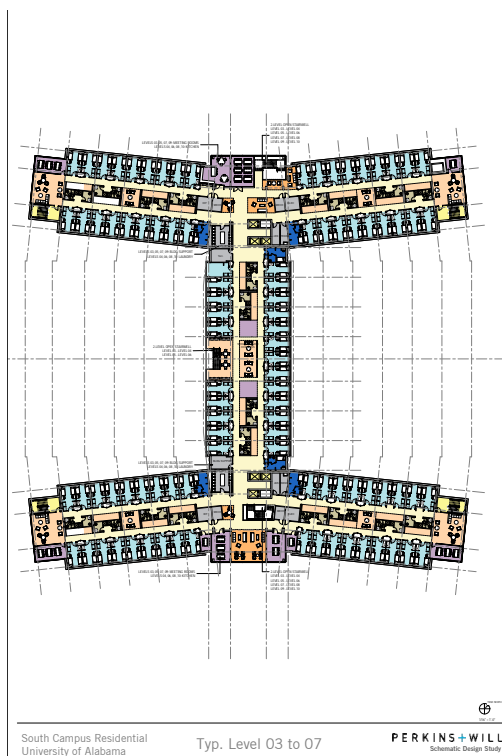
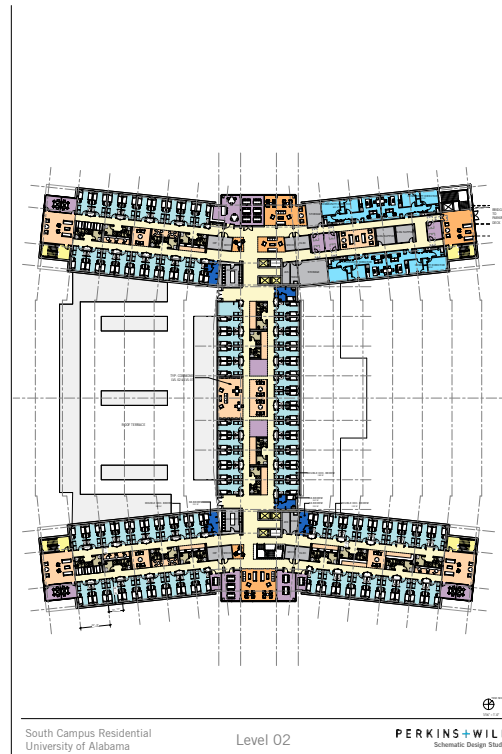
Confirmed Decisions and Desired Outcomes

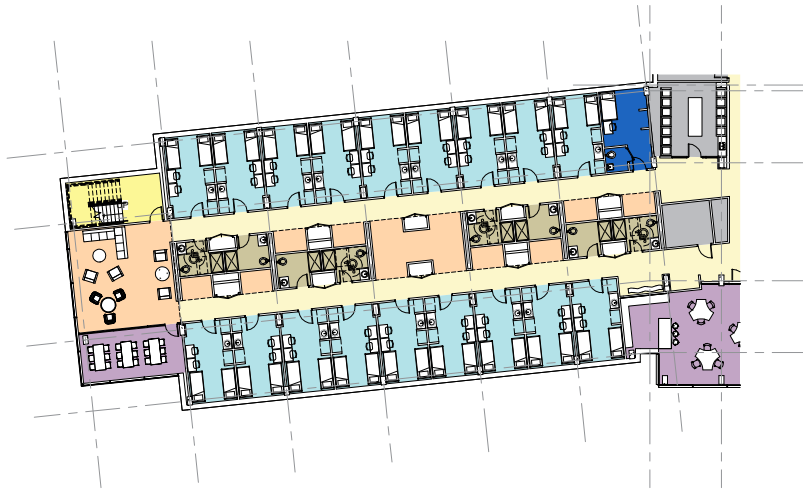
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SECTION 06i

WORKSHOP SD #03

WORKSHOP SD #03 / 2016.08.18



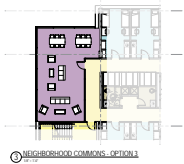


1 Level 03 - Neighborhood Plan
1/16" = 1'-0"

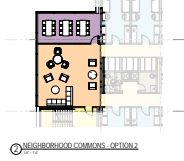
South Campus Residential Community
University of Alabama

Neighborhood Plan

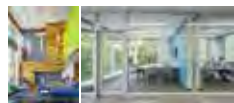
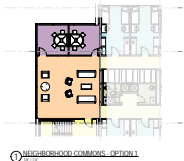
PERKINS+WILL
Schematic Design Study



NEIGHBORHOOD COMMONS - OPTION 1



NEIGHBORHOOD COMMONS - OPTION 2

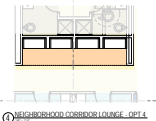


NEIGHBORHOOD COMMONS - OPTION 3

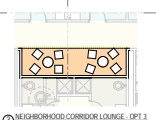
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University of Alabama

NEIGHBORHOODS
END COMMONS

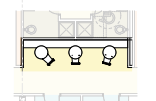
PERKINS+WILL
Schematic Design Study



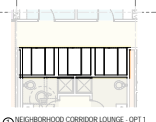
NEIGHBORHOOD CORRIDOR LOUNGE - OPT 1



NEIGHBORHOOD CORRIDOR LOUNGE - OPT 2



NEIGHBORHOOD CORRIDOR LOUNGE - OPT 3



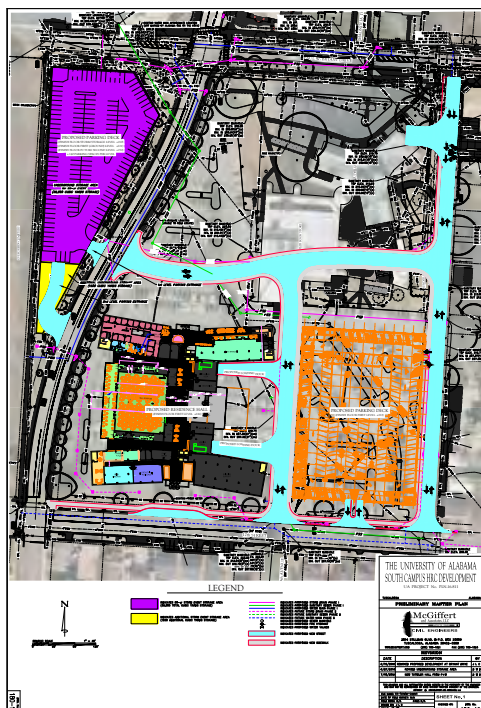
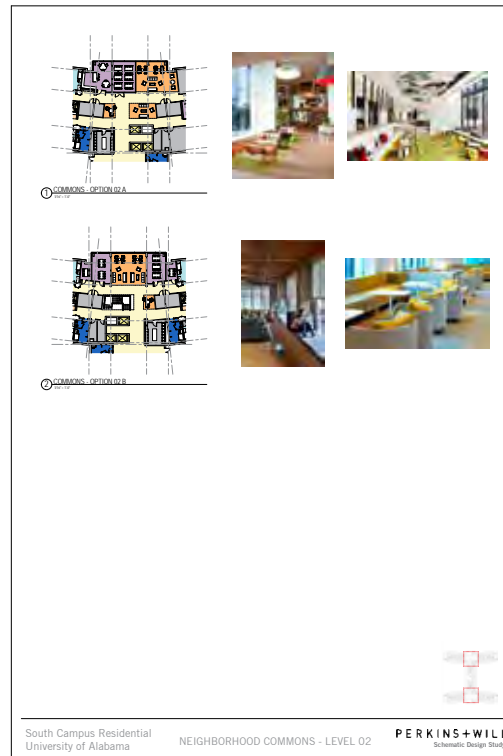
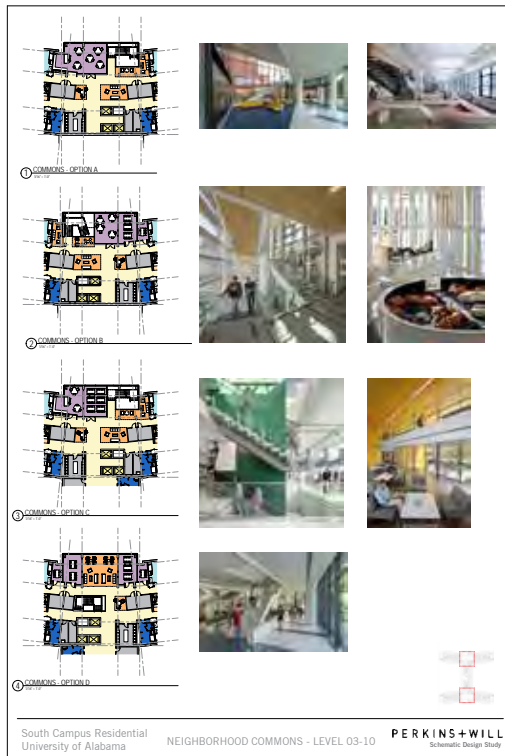
NEIGHBORHOOD CORRIDOR LOUNGE - OPT 4

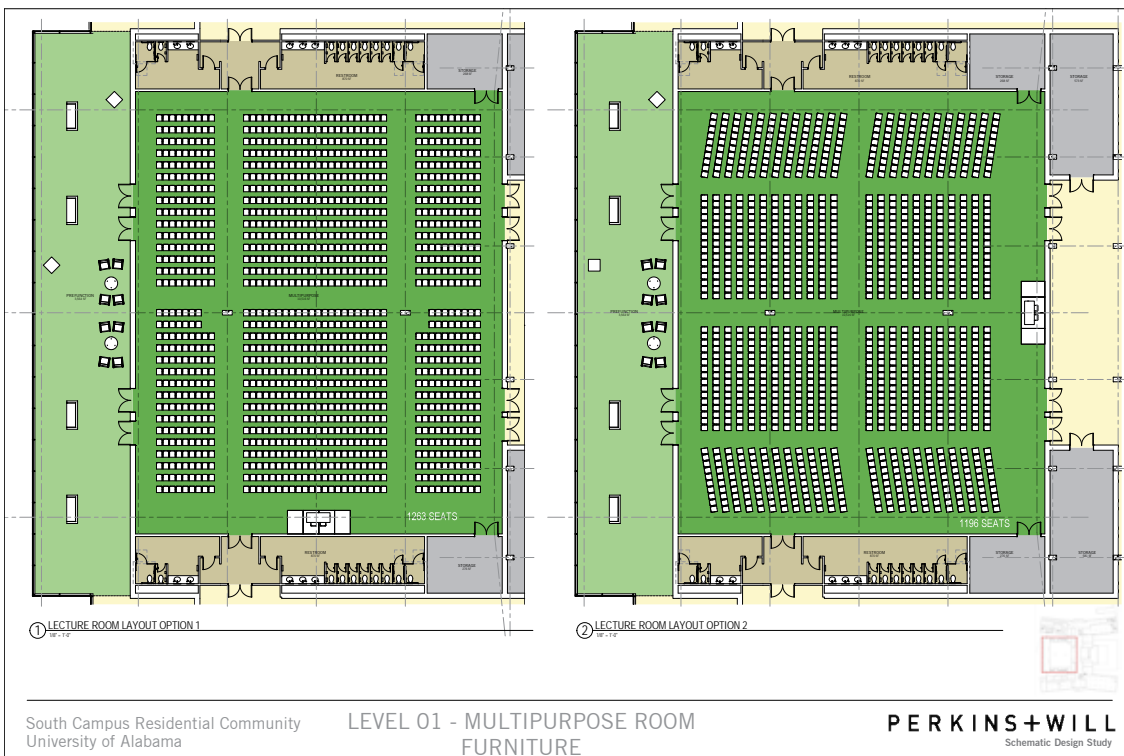
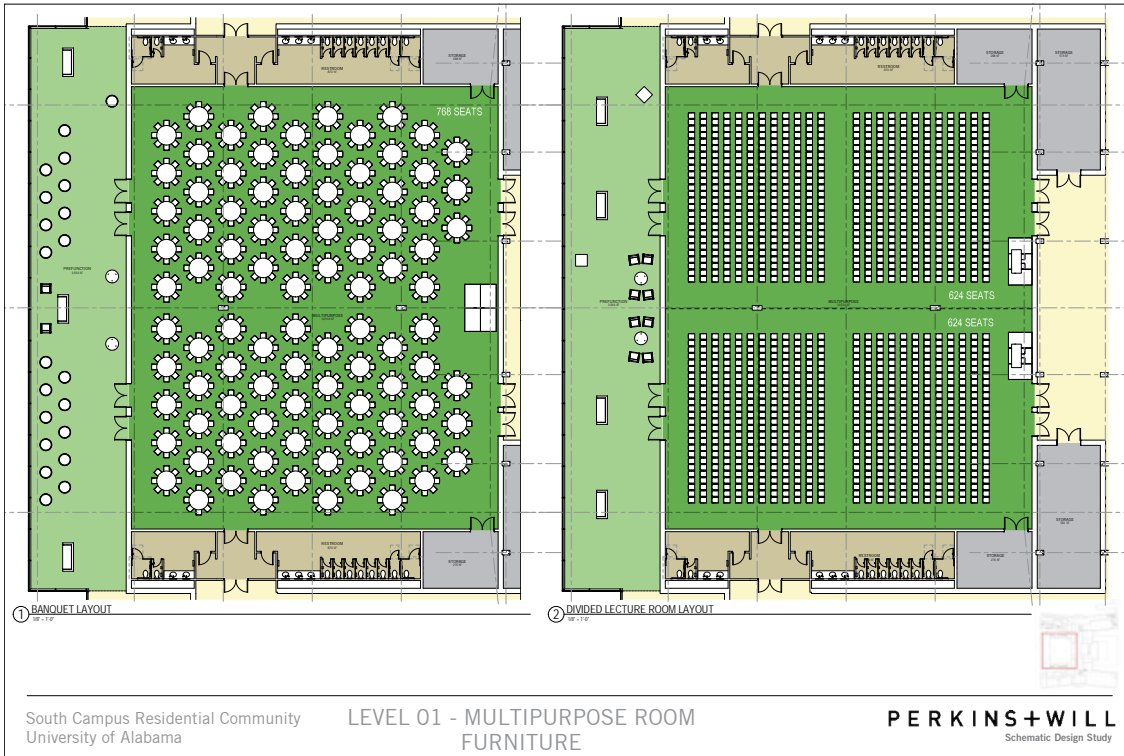
South Campus Residential
University of Alabama

NEIGHBORHOOD
CORRIDOR COMMONS

PERKINS+WILL
Schematic Design Study

WORKSHOP SD #03 / 2016.08.18





WORKSHOP SD #03 / 2016.08.18



South Campus Residential Community
University of Alabama

SECTION PERSPECTIVES

PERKINS+WILL
Programming Study

1315 Peachtree Street NE,
Atlanta, GA 30309

PERKINS+WILL

perkinswill.com