EXHIBIT C
PROGRAM

REQUEST FOR QUALIFICATIONS

PART A: PRE-CONSTRUCTION SERVICES (Design-Assist) and
PART B: CONSTRUCTION SERVICES (Construction Management at Risk)

New STEM Complex
Southern University
Baton Rouge, Louisiana
Project No. 19-616-20-02, F.19002357

January 26, 2023

SOUTHERN UNIVERSITY

AND AGRICULTURAL & MECHANICAL COLLEGE

New STEM Complex

Programming Submittal, March 29th 2022

MANNING Architecture Interiors Planning

Coleman Partners Architects

Perkins&Will

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←University of Kansas ISB, Biology Teaching Lab

ACKNOWLEDGEMENTS

Southern University Baton Rouge Executive Committee

- Dr. Patrick Carriere, Dean, College of Sciences and Engineering
- Mr. Archie Tiner, CSE Liason for Renovation, Remodeling and New Construction
- Mr. Maurice Pitts, Executive Director of Facility Services

State of LA Office of Facility Planning & Control

- Mr. Bobby Boudreaux, Assistant Director
- Mr. James Pugh, Project Manager

Design Team

MANNING Architecture Interiors Planning

Coleman Partners ARCHITECTS LLC

Perkins&Will

ACKNOWLEDGEMENTS

Project Identification: New STEM Complex

Project Location: Southern University | Baton Rouge, LA

Schedule Number: 19-616-20-02

WBS Number: F.19002357

AFC: $37,850,000

Design Schedule: (See Below)

PHASE SUBMITTAL	ORIGINAL DATE DUE	DAYS EXT.	REVISED DUE DATE	REVIEW DAYS
Program Completion	11/15/2021	134	3/29/22	20
Schematic Design	12/26/2021	134	5/9/22	40
Design Development	4/4/2022	134	8/16/22	0
Construction Documents				
Bid Documents				

EXECUTIVE SUMMARY

The design team – guided by leaders of the Office of Facility Planning and Control – collaborated with the Southern University Science, Math and Engineering Dean's office, facilities leaders, and faculty representatives to create a building program that embodies the vision for this new state-of-the art teaching, learning and research facility. As the framework for moving forward, this document will serve as a road map for the design of the new STEM building. The contents of this building program include a detailed spreadsheet of the building spaces – by uses type (pie charts) and by department (Excel spreadsheet), a graphic depiction of the building program, a statement of probable cost, a series of design considerations – including laboratory design concepts, a series of site-analysis graphics, and images of a preliminary investigation of blocking and stacking of the spaces on the site.

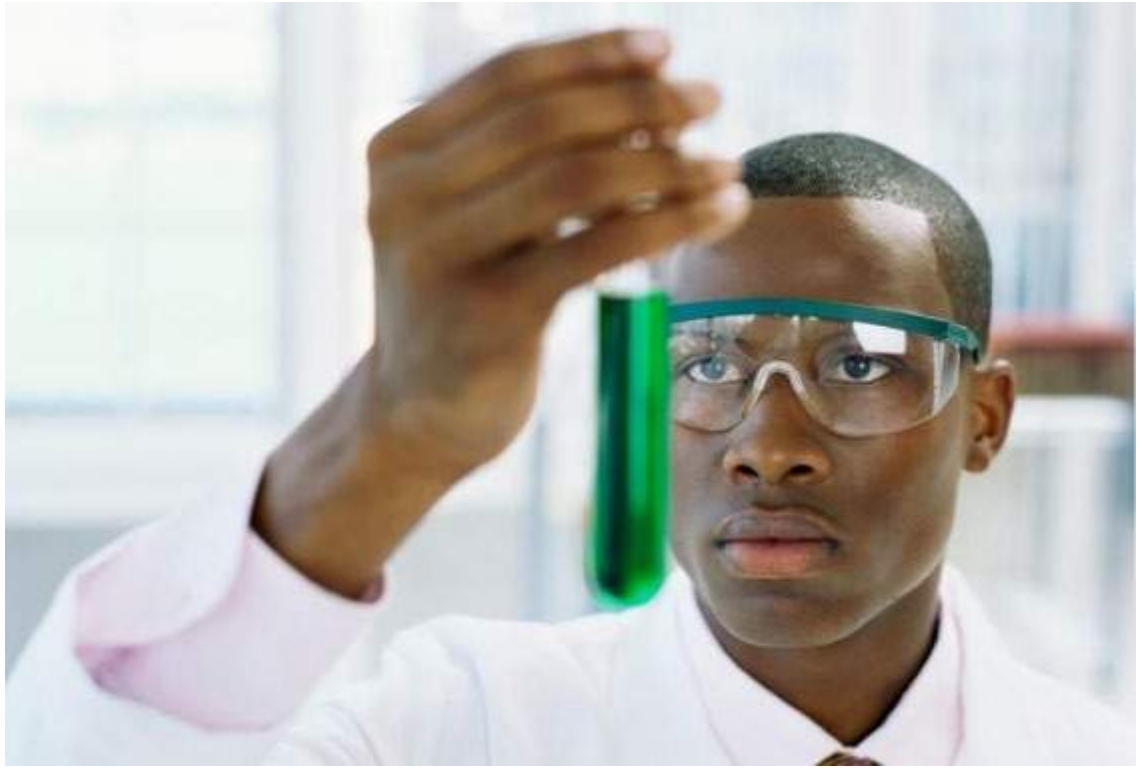
The building program is informed from our team's experience: (1) We investigated similar buildings at peer institutions for similar program components, mix of uses, and net-square-feet to gross-square-feet efficiency ratio; and (2) our team has designed other Science, Teaching, Laboratory buildings on other university campuses, and we brought this knowledge to bear on the program of this facility.

This program is focused on creating a student-centric environment: Throughout programming, we've provided for a connected, dynamic and immersive place for students and faculty. As a 21st-century STEM educational and research venue is desired, it's important to encourage informal collaboration in the corridors and common spaces of the building – a 65% net-square-feet to gross-square-feet efficiency ratio will allow for this.

A primary source for deciding the number and type of teaching spaces, as well as space utilization, was our analysis of the recent (Fall 2021/Spring 2022) enrollment of students in the various classes to be taught within the new facility. Additionally, the design team met individually with the chairs of the various departments to tour their existing facilities, assess needs, and receive their wish lists for the new building. The process was iterative – initial program assumptions were refined and adapted throughout the process, as the design team responded to feedback from the university stakeholders.

Several hallmarks of successful STEM facility design were kept in mind during the preparation of, and are reflected in, the building program. A few of note include: (1) Traditional classroom sizes are mixed with scale-up classrooms, to accommodate flexibility in teaching modalities within the same space. (2) Laboratories are conceived in planning modules that will allow a high degree of utilization throughout the day, as well as be flexible so that labs adapt easily to different types of teaching and research.

EXECUTIVE SUMMARY



(3) Classroom and lab configurations are envisioned that will allow for integration with tech and audio/visual systems for digital-age teaching, learning and understanding.
As a way of keeping entire groups of teaching laboratories prepped for various subjects of study, and to allow quick transitions between lab classes, common service corridors are provided for the teaching labs – a "back-of-house" support space outside the back door of each lab.

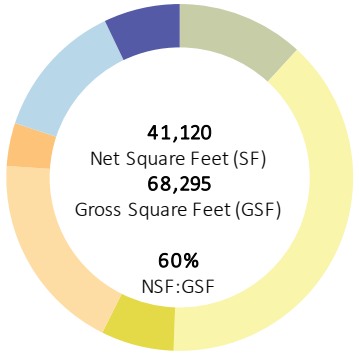
An analysis of the building site has revealed several advantages: (1) The site is central to the Science, Math and Engineering zone on Southern University's campus, and pedestrian connections to all of its surrounding facilities will be possible; (2) its position on a prominent street corner makes the site highly visible and easily accessible by students and faculty (both on-foot and from nearby parking areas) on many sides; (3) the site will allow for lots of natural light, including a broad expanse on the north side, allowing for good indirect daylighting on that side; (4) a row of mature trees grace its north side, and the site will be shaded on the west when the sun is hot and low in the sky, with the potential of glare; (5) it can accommodate a building of 3 stories (assuming James Hall will be demolished, as planned) that will encourage the use of open stairs instead of elevators – an essential part of a connected, student-centric environment.

A challenge for the project is its limited budget of just under $38 million. This translates into a maximum building area that cannot be exceeded, and as a result some of the spaces initially considered for inclusion in the program had to be left out. Additionally, the construction industry is in the midst of fluctuating costs for building supplies and products. We've seen prices rise of the last several months, and the trend appears to be continuing. At the publication of this document, we believe the market will allow at cost-per-square-foot of about $475 for this type of facility – higher than the $350 range initially assumed. As such, we've included a Base Bid program that meets the available funds for construction at today's costs (the $475 range). A second program, the Bid Alternate 1 program, is listed that adds back the program spaces that were included as part of the $350/sf program, but were excluded in the $475/sf program). Finally, we understand there may be a possibility of Southern University being granted additional funding as the design process unfolds, either from the State Legislature and/or from other sources. Therefore, there's a third program included herein – the Bid Alternate 2 program – which adds more wish-list spaces to the building if additional funds become available.

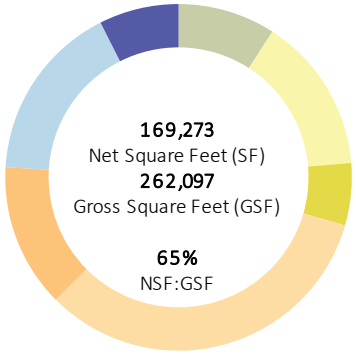
The spaces included in the Base Bid Program have been reviewed and selected by Southern University, and this document reflects that,

PROGRAM

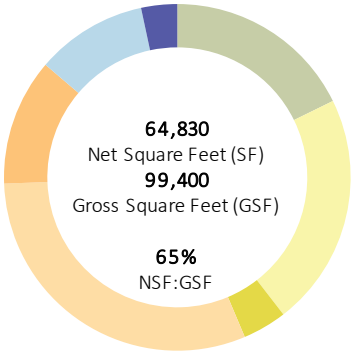
INFORM from experience



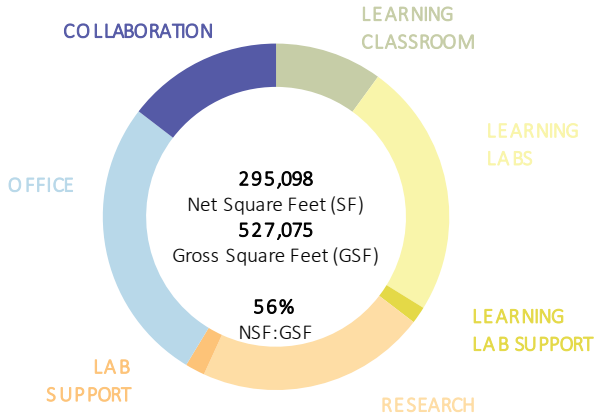
Abilene Christian University
Halbert Walling Research Center



Kansas University
Integrated Science Building



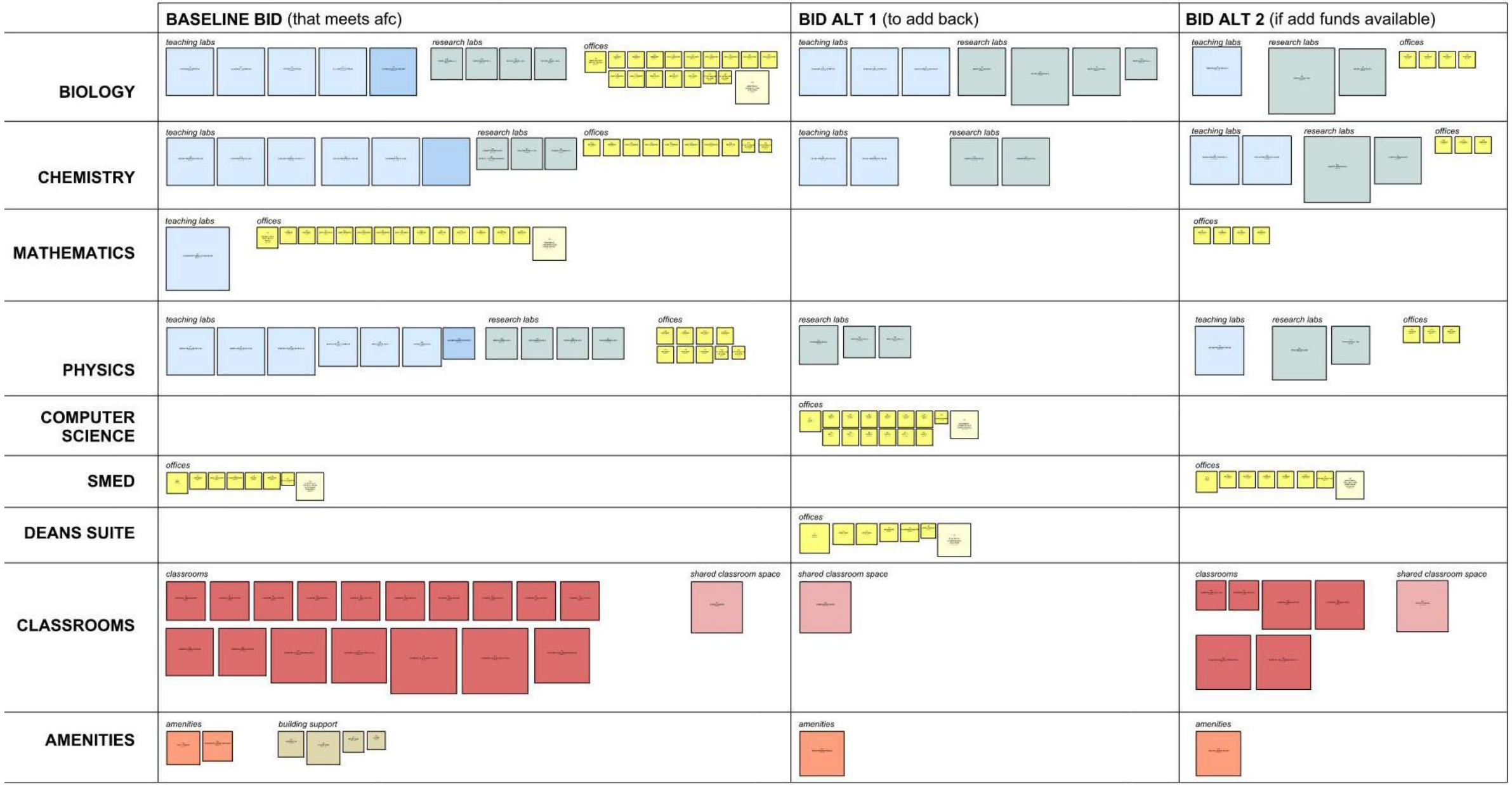
Indiana University
Multidisciplinary Research and Classroom Building



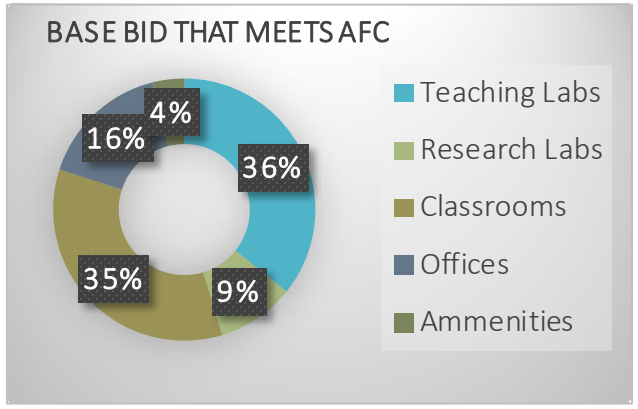
Louisiana State University
Patrick F. Taylor Hall

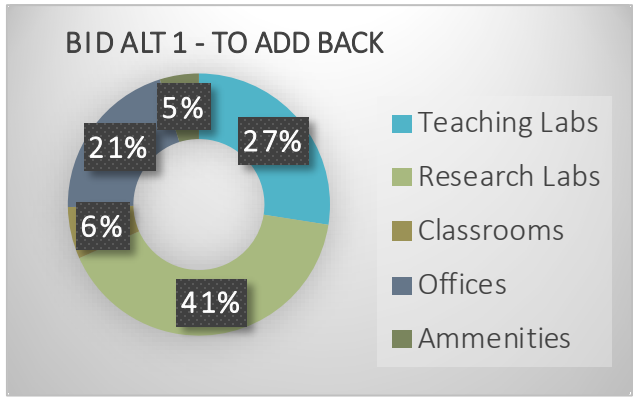
PROGRAM SUMMARY

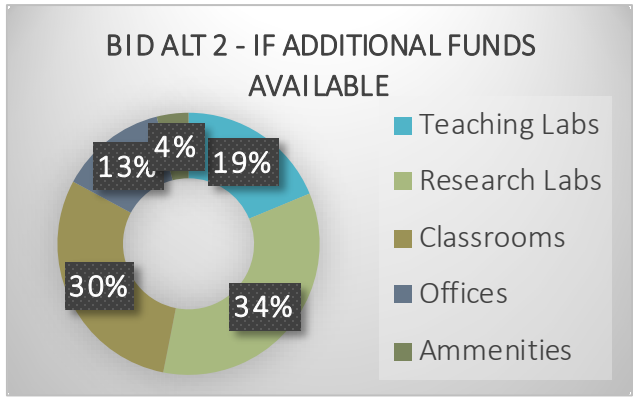
PROGRAM SUMMARY - GRAPHIC REPRESENTATION



SPACE PROGRAM SUMMARY







Southern University STEM Building

AREA/FUNCTION		BASE BID THAT MEETS AFC TOTAL NSF	ADDITIONAL PROGRAM BID ALT 1 - TO ADD BACK TOTAL NSF	ADDITIONAL PROGRAM FUNDS AVAILABLE TOTAL NSF
Teaching Labs				
Biology Department		5,128	3,078	1,080
Chemistry Department		6,154	2,052	2,160
Mathematics Department		1,820	0	0
Physics Department		5,579	0	1,080
	NSF	18,681	5,130	4,320
Research Labs				
Biology Department		1,820	3,983	2,970
Chemistry Department		1,365	2,048	2,970
Physics Department		1,820	1,592	1,980
	NSF	5,005	7,623	7,920
Classrooms				
Classrooms - Traditional		8,868	0	2,960
Classrooms - Scale-up		8,015	0	2,700
Lecture Hall		0	0	0
Student Success Center		0	1,195	0
Student Commons		1,195	0	1,200
	NSF	18,078	1,195	6,860
Offices				
Biology Department		2,600	0	500
Chemistry Department		1,150	0	375
Mathematics Department		2,400	0	500
Physics Department		1,025	0	375
Computer Science Offices		0	2,125	0
Science/Math Edu. SMED		1,250	0	1,300
Dean's Suite		0	1,700	0
	NSF	8,425	3,825	3,050
Building Amenities				
Graduate Student Bullpen		0	900	900
Faculty Lounge		500	0	0
Food Service		400	0	0
Loading Dock		300	0	0
Storage		500	0	0
Server Room		200	0	0
IT Room		150	0	0
	NSF	2,050	900	900
STEM Building Total NSF		52,239	18,673	23,050
Net to Gross Factor		*65%*	*65%*	*65%*
Building Total DGSF		80,368	28,728	35,462

SPACE PROGRAM

Southern University - New STEM Complex - FINAL PROGRAM - 3/28/22

LA project 19-616-20-02

			BASE BID THAT MEETS AFC			NOTES FOR BASE BID	BID ALT 1- TO ADD BACK			BID ALT 2- IF ADDITIONAL FUNDS AVAILABLE		
			Area (NSF)	Quantity	Total Area (NSF)		Area (NSF)	Quantity	Total Area (NSF)	Area (NSF)	Quantity	Total Area (NSF)
Department of Biological Sciences and Chemistry												
Biology Department												
Teaching labs	1.1	General Biology Teaching Lab	1,026	0	0		1,026	3	3,078	0	0	0
	1.2	Microbiology Teaching Lab	1,026	0	0		1,026	0	0	1,080	1	1,080
	1.3	Biochemistry Teaching Lab	1,026	0	0	In Chemistry program	1,026	0	0	0	0	0
	1.4	Physiology Teaching Lab	1,026	1	1,026		1,026	0	0	0	0	0
	1.5	Cell Biology Teaching Lab	1,026	2	2,052		1,026	0	0	0	0	0
	1.6	Anatomy Teaching Lab	1,026	1	1,026		1,026	0	0	0	0	0
	1.7	Teaching labs Support	1,024	1	1,024	Shared teaching lab support	1,024	0	0	0	0	0
		Total Biology Teaching labs			5,128				3,078			1,080
Research Labs	1.8	Biology Research Lab- 1	1,980	0	0		1,980	0	0	1,980	1	1,980
	1.9	Biology Research lab- 2	1,024	0	0		1,024	2	2,048	990	1	990
	1.10	Biology research lab- 3	455	4	1,820	REMOVE SOME BIO RESEARCH LABS FROM BASE BID	455	1	455	0	0	0
	1.11	Biology research lab- 4	1,480	0	0		1,480	1	1,480	0	0	0
		Total Biology Research Labs			1,820				3,983			2,970
Offices	1.12	Program leader office for chem and bio	200	1	200		200	0	0	0	0	0
	1.13	Professor	125	3	375		125	0	0	125	4	500
	1.14	Assoc. Professor	125	4	500		125	0	0	0	0	0
	1.15	Assist. Professor	125	4	500		125	0	0	0	0	0
	1.16	Instructor	125	3	375	2 per office	125	0	0	0	0	0
	1.17	Technicians/ Lab Mngr.	75	2	150		75	0	0	0	0	0
	1.18	Departmental Conference Room- bio & chem	500	1	500		500	0	0	0	0	0
		Total Biology Offices			2600				0			500
TOTAL BIOLOGY				**NSF**	**9,548**			**NSF**	**7,061**		**NSF**	**4,550**
Chemistry Department												
Teaching labs	2.1	General Chemistry Teaching Lab	1,026	0	0		1,026	2	2,052	1,080	1	1080
	2.2	Organic Chemistry Teaching Lab	1,026	2	2,052		1,026	0	0	1,080	1	1,080
	2.3	Biochemistry Teaching Lab	1,026	2	2,052		1,026	0	0	0	0	0
	2.4	Inorganic Chemistry Teaching Lab	1,026	1	1,026		1,026	0	0	0	0	0
	2.5	Teaching labs Support	1,024	1	1,024	Shared teaching lab support	1,024	0	0	0	0	0
		Total Chemistry Teaching labs			6,154				2,052			2,160
Research Labs	2.6	Chemistry Research Lab-1	1,980	0	0		1,980	0	0	1,980	1	1,980
	2.7	Chemistry Research Lab- 2	1,024	0	0		1,024	2	2,048	990	1	990
	2.8	Chemistry Research Lab-3	455	3	1,365	REMOVE SOME CHEM RESEARCH LABS FROM BASE BID	455	0	0	0	0	0
		Total Chemistry Research Labs			1365				2048			2970
Offices	2.9	Program leader office (listed under biology)	200	0	0		200	0	0	0	0	0
	2.10	Professor	125	2	250		125	0	0	125	3	375
	2.11	Assoc. Professor	125	2	250		125	0	0	0	0	0
	2.12	Assist. Professor	125	3	375		125	0	0	0	0	0
	2.13	Instructor	125	1	125	2 per office	125	0	0	0	0	0
	2.14	Technicians/ Lab Mngr.	75	2	150		75	0	0	0	0	0
	2.15	Departmental Conference Room (listed under biology)	350	0	0		350	0	0	0	0	0
		Total Chemistry Offices			1150				0			375
TOTAL CHEMISTRY				**NSF**	**8,669**			**NSF**	**4,100**		**NSF**	**5,505**

SPACE PROGRAM

Southern University - New STEM Complex - FINAL PROGRAM - 3/28/22

LA project 19-616-20-02

			BASE BID THAT MEETS AFC			NOTES FOR BASE BID	BID ALT 1- TO ADD BACK			BID ALT 2- IF ADDITIONAL FUNDS AVAILABLE		
			Area (NSF)	Quantity	Total Area (NSF)		Area (NSF)	Quantity	Total Area (NSF)	Area (NSF)	Quantity	Total Area (NSF)
Department of Mathematics and Physics												
Mathematics Department												
Instructional Spaces	3.1	Mathematics Tutoring & Computer lab	1,820	1	1,820		1,820	0	0	0	1	0
		Total Math Instructional space			1,820				0			0
Offices	3.2	Program leader office for Math and Physics	200	1	200		200	0	0	0	0	0
	3.3	Professor	125	2	250		125	0	0	125	4	500
	3.4	Assoc. Professor	125	1	125		125	0	0	0	0	0
	3.5	Assist. Professor	125	4	500	REMOVE MATH DEPT FROM BASE BID	125	0	0	0	0	0
	3.6	Instructor	125	6	750		125	0	0	0	0	0
	3.7	Admin Assist.	75	1	75		75	0	0	0	0	0
	3.8	Departmental Conference Room for math and phy	500	1	500		500	0	0	0	0	0
		Total Math Offices			2,400				0			500
T		T		NSF	4,220			NSF	0		NSF	500
Physics Department												
Teaching labs	4.1	General Physics Teaching Lab	1,026	2	2,052		1,026	0	0	1,080	1	1,080
	4.2	Experimental Physics Teaching Lab	1,026	1	1,026		1,026	0	0	0	0	0
	4.3	Quantum Physics Teaching Lab	682	1	682		682	0	0	0	0	0
	4.4	Physics Computer Lab	682	2	1,364	Space for 25 students Programming	682	0	0	0	0	0
	4.5	Teaching labs Support	455	1	455	Shared teaching lab support	455	0	0	0	0	0
		Total Physics Teaching labs			5,579				0			1,080
Research Spaces	4.6	Physics Research Lab-1	1,320	0	0		1,320	0	0	1,320	1	1,320
	4.7	Physics Research Lab-2	682	0	0		682	1	682	660	1	660
	4.8	Physics Research Lab-3	455	4	1,820	REMOVE SOME PHYSICS RESEARCH LABS FROM BASE BID	455	2	910	0	0	0
		Total Physics Research labs			1820				1592			1980
Offices	4.9	Program leader office	200	0	0		200	0	0	0	0	0
	4.10	Professor	125	7	875		125	0	0	125	3	375
	4.11	Assoc. Professor	125	0	0		125	0	0	0	0	0
	4.12	Assist. Professor	125	0	0		125	0	0	0	0	0
	4.13	Instructor	125	0	0		125	0	0	0	0	0
	4.14	Technicians/ Lab Mngr.	75	2	150		75	0	0	0	0	0
	4.15	Departmental Conference Room	350	0	0		350	0	0	0	0	0
		Total Physics Offices			1025				0			375
TOTAL PHYSICS				NSF	8,424			NSF	1,592		NSF	3,435

SPACE PROGRAM

Southern University - New STEM Complex - FINAL PROGRAM - 3/28/22

LA project 19-616-20-02

			BASE BID THAT MEETS AFC			NOTES FOR BASE BID	BID ALT 1- TO ADD BACK			BID ALT 2- IF ADDITIONAL FUNDS AVAILABLE		
			Area (NSF)	Quantity	Total Area (NSF)		Area (NSF)	Quantity	Total Area (NSF)	Area (NSF)	Quantity	Total Area (NSF)
Department of Computer Science												
Computer Science Offices												
Offices	5.1	Chair	200	0	0	REMOVE COMPUTER SCIENCE OFFICES FROM BASE BID	200	1	200	0	0	0
	5.2	Faculty	125	0	0		125	12	1500	0	0	0
	5.3	Admin Assist.	75	0	0		75	1	75	0	0	0
	5.4	Departmental Conference Room	350	0	0		350	1	350	0	0	0
TOTAL COMPUTER SCIENCE OFFICES				**NSF**	**0**			**NSF**	**2,125**		**NSF**	**0**
Science/Math Edu. SMED												
Offices	6.1	Chair	200	1	200		200	0	0	200	1	200
	6.2	Professor	125	1	125		125	0	0	125	5	625
	6.3	Assoc. Professor	125	1	125		125	0	0	0	0	0
	6.4	Assist. Professor	125	1	125		125	0	0	0	0	0
	6.5	Faculty	125	1	125		125	0	0	0	0	0
	6.6	Instructor	125	1	125	2 per office	125	0	0	0	0	0
	6.7	Research Assistant	75	1	75		75	0	0	125	1	125
	6.8	Departmental Conference Room	350	1	350		350	0	0	350	1	350
TOTAL SMED OFFICES				**NSF**	**1250**			**NSF**	**0**		**NSF**	**1300**
DEAN's suite												
Offices	7.1	Dean	400	0	0	REMOVE DEAN'S SUITE	400	1	400	400	0	0
	7.2	Assoc dean	200	0	0		200	2	400	200	0	0
	7.3	Bus manager	150	0	0		150	1	150	150	0	0
	7.4	Advancement director	150	0	0		150	1	150	150	0	0
	7.5	Admin assistant	100	0	0		100	1	100	100	0	0
	7.6	Departmental Conference Room	500	0	0		500	1	500	500	0	0
TOTAL DEAN'S SUITE OFFICES				**NSF**	**0**			**NSF**	**1,700**		**NSF**	**0**
Shared Use Spaces												
Classrooms												
Classrooms	8.1	Classroom - Small (30 students)	682	10	6,820	30 person	682	0	0	400	2	800
	8.2	Classroom- Medium (45 Students)	1,024	2	2,048	45 person	1,024	0	0	1,080	2	2,160
	8.3	Classroom Scale-up Medium (50 students)	1,365	3	4,095	50 person	1,365	0	0	1,350	2	2,700
	8.4	Classroom Scale-up large / Lecture Hall (70 students)	1,960	2	3,920	70 students- make spaces divisible so both can be combined into 1 space	1,960	0	0	0	0	0
	8.5	Lecture Hall (200 students)	3,000	0	0	200 Person - 15 sq.ft.. ea.	3,000	0	0	3,000	0	0
	8.6	Student Success Center	1,195	0	0	REMOVE STUDENT SUCCESS CENTER	1,195	1	1,195	0	0	0
	8.7	Student Commons	1,195	1	1,195		1,195	0	0	1,200	1	1,200
TOTAL CLASSROOMS				**NSF**	**18,078**			**NSF**	**1,195**		**NSF**	**6,860**

SPACE PROGRAM

Southern University - New STEM Complex - FINAL PROGRAM - 3/28/22 LA project 19-616-20-02			BASE BID THAT MEETS AFC			NOTES FOR BASE BID	BID ALT 1- TO ADD BACK			BID ALT 2- IF ADDITIONAL FUNDS AVAILABLE		
			Area (NSF)	Quantity	Total Area (NSF)		Area (NSF)	Quantity	Total Area (NSF)	Area (NSF)	Quantity	Total Area (NSF)
Amenities												
Amenities	9.1	Graduate Student Bullpen	900	0	0	REMOVE GRAD BULLPEN	900	1	900	900	1	900
	9.2	Faculty Lounge	500	1	500		500	0	0	500	0	0
	9.3	Food Service - Coffee & Grab in Go	400	1	400		400	0	0	400	0	0
	9.4	Loading Dock	300	1	300		300	0	0	300	0	0
	9.5	Storage Room	500	1	500		500	0	0	500	0	0
	9.6	Server rm	200	1	200		200	0	0	200	0	0
	9.7	IT room	150	1	150		150	0	0	150	0	0
TOTAL AMENITIES				**NSF**	**2,050**			**NSF**	**900**		**NSF**	**900**
Total Net Area					**52,239**				**18,673**			**23,050**
Gross Factor (Circulation/Structure/MEP)				**65%**	**28,129**			**65%**	**10,055**		**65%**	**12,412**
Total Gross Area					**80,368**				**28,728**			**35,462**
			Cost per sq. ft		**$471**							
ADDITIVE GROSS AREA TOTAL- BASE BID THAT MEETS AFC					**80,368**							
ADDITIVE GROSS AREA TOTAL- BASE BID PLUS ALT 1									**109,095**			
ADDITIVE GROSS AREA TOTAL- BASE BID PLUS ALT 1 PLUS ALT 2												**144,557**

Target GSF	107,500	
Budget Available for Construction	$37,850,000	
Target Cost per square foot	$352	*(This number is too low based on current market costs)*

28,728

STATEMENT OF PROBABLE COST - SUMMARY

The following Statement of Probable Cost is based upon our professional opinion which has been gleaned from multiple projects, similar in size and scope, that have been bid or have received design phase cost estimates from CMAR's at various stages of design.

We are witnessing unprecedented volatility in the construction industry due to skyrocketing cost escalation. The COVID 19 pandemic has severely impacted supply chains, reduced raw and finished material production capacity and made pre-pandemic labor shortages even worse. In addition to that, we are now dealing with rising inflation which will continue to cause cost increases even as the pandemic becomes more manageable as it hopefully enters endemic stages.

As a result of this volatility, we cannot guarantee that pricing at this early in the design process is accurate. It is imperative that a CMAR be brought on board as soon as possible, but definitely prior to beginning the Design Development phase in order to confirm that the estimate is on target and aligned to the project scope. Otherwise, we may proceed with designing a building that either cannot be built within the budget, or, equally as concerning, leaves program on the table due to being well below budget.

			PER CENT	AMOUNT
DIVISION	1	General Requirements	9.0%	$3,406,500
DIVISION	2	Existing Conditions	2.0%	$757,000
DIVISION	3	Concrete	7.0%	$2,649,500
DIVISION	4	Masonry	2.0%	$757,000
DIVISION	5	Metals	11.0%	$4,163,500
DIVISION	6	Woods and Plastics	2.0%	$757,000
DIVISION	7	Thermal & Moisture Protection	5.0%	$1,892,500
DIVISION	8	Openings	10.0%	$3,785,000
DIVISION	9	Finishes	10.0%	$3,785,000
DIVISION	10	Specialties	1.0%	$378,500
DIVISION	11	Equipment	1.0%	$378,500
DIVISION	12	Furnishings	0.5%	$189,250
DIVISION	13	Special Construction	0.0%	$0
DIVISION	14	Conveying Equipment	1.0%	$378,500
DIVISION	21	Fire Suppression	1.5%	$567,750
DIVISION	22	Plumbing	17.0%	$6,434,500
DIVISION	23	Heating, Ventilating & Air Conditioning	*incl. abv.	$0
DIVISION	26	Electrical	15.0%	$5,677,500
DIVISION	27	Communications	*incl. abv.	$0
DIVISION	31	Earthwork	3.0%	$1,135,500
DIVISION	32	Exterior Improvements	1.0%	$378,500
DIVISION	__	_____	1.0%	$378,500
DIVISION	__	_____		

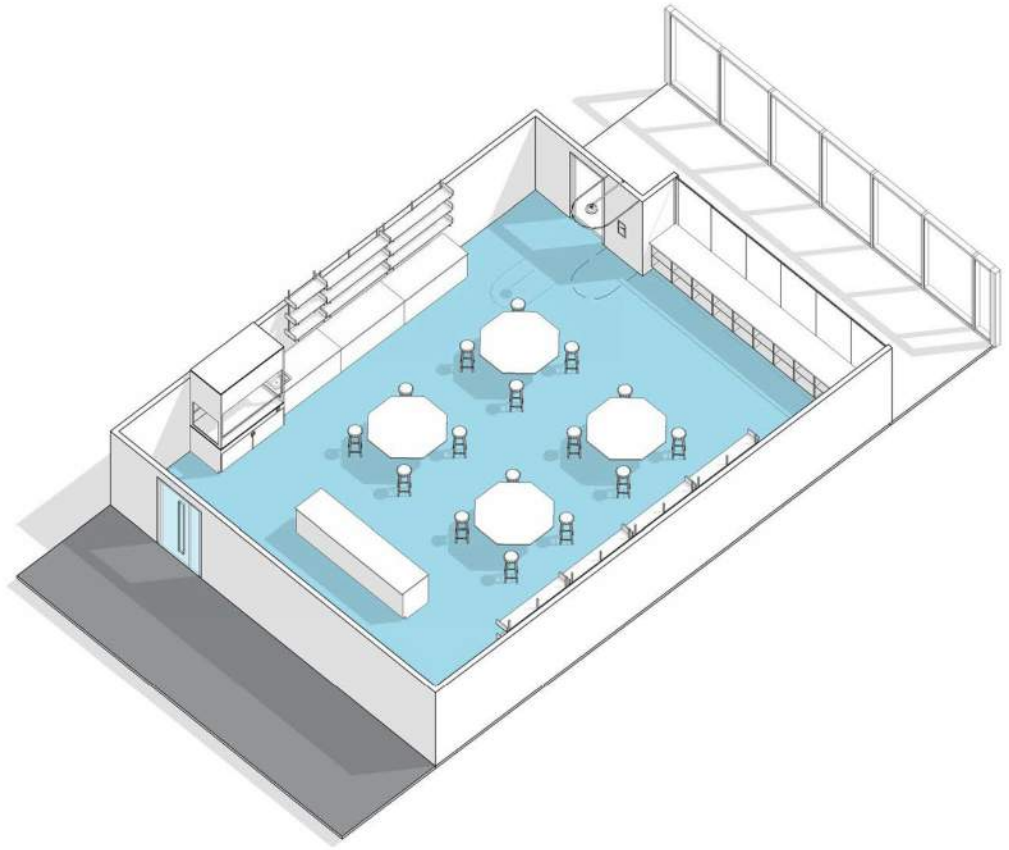
TOTAL CONSTRUCTION COST OF BASE BID	100%	$37,850,000
ALTERNATES:		
NUMBER 1	Additional Program - 28,728 SF	$13,529,698
NUMBER 2	Additional Program - 35,462 SF	$16,701,133
NUMBER 3		
TOTAL CONSTRUCTION COST (BASE BID AND ALTERNATES)		$68,080,831
ESTIMATED COST OF TESTING LABORATORY SERVICES		

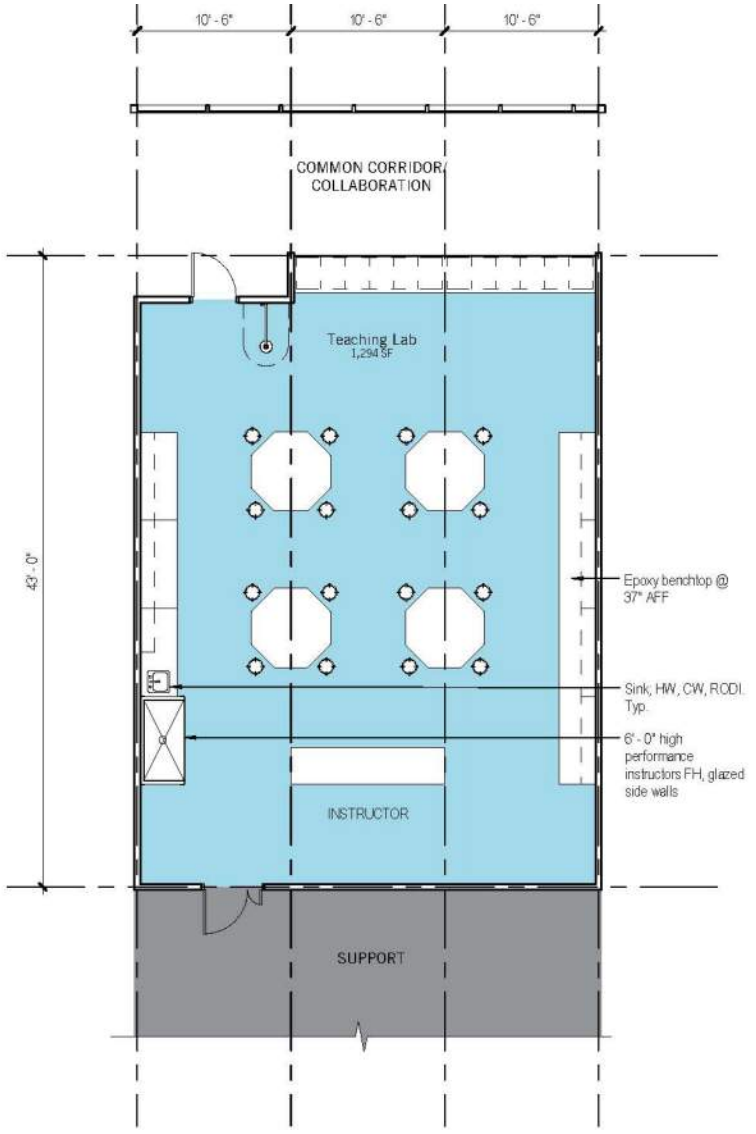
CD Phase only. Attach scope of services.

The foregoing includes the most common divisions of the CSI 49 Division Format. Others may be added as required.

DESIGN CONSIDERATIONS

LAB FLEXIBILITY – program, utilization + growth

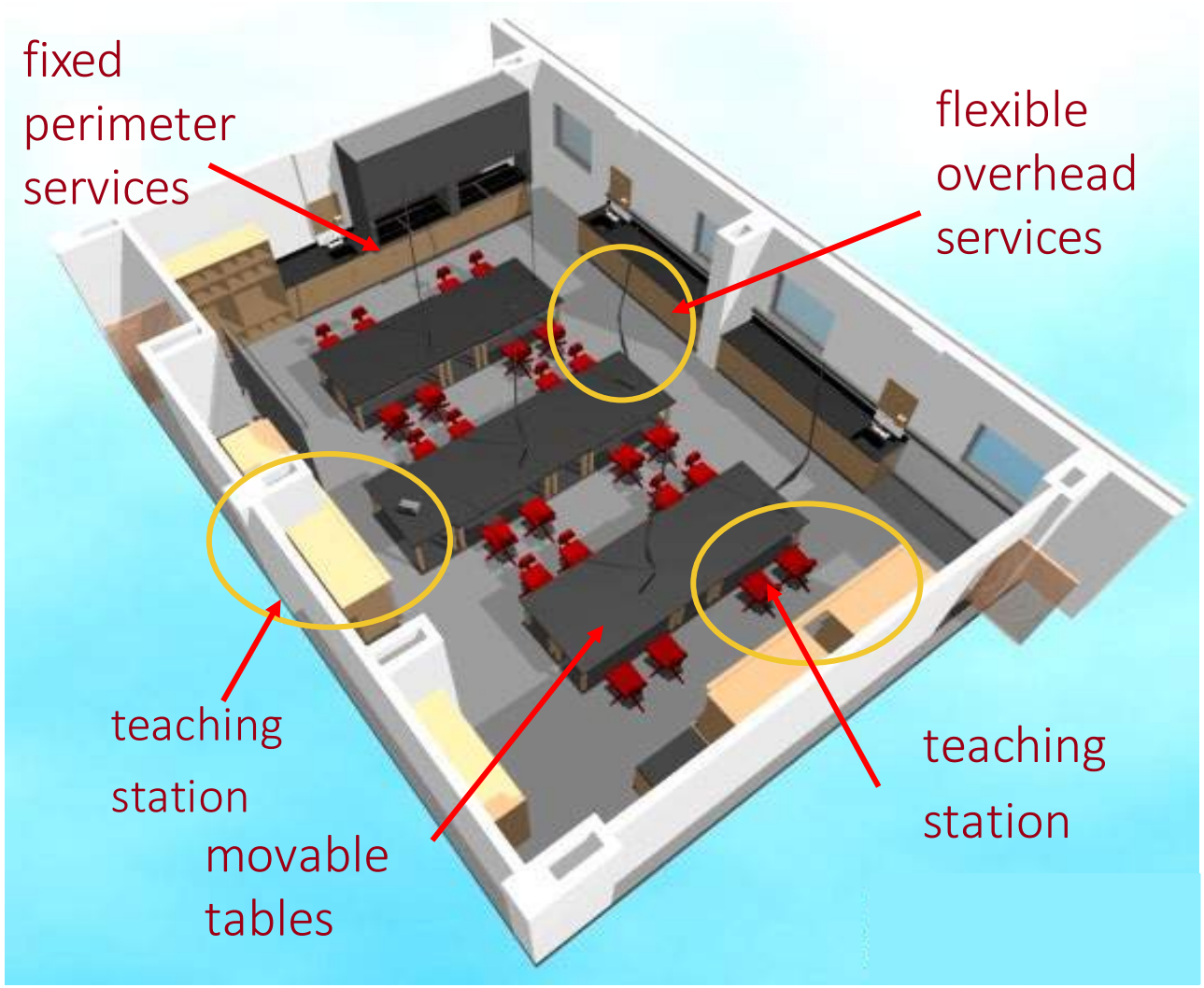




University of Kansas, Integrated Science Building

DESIGN CONSIDERATIONS

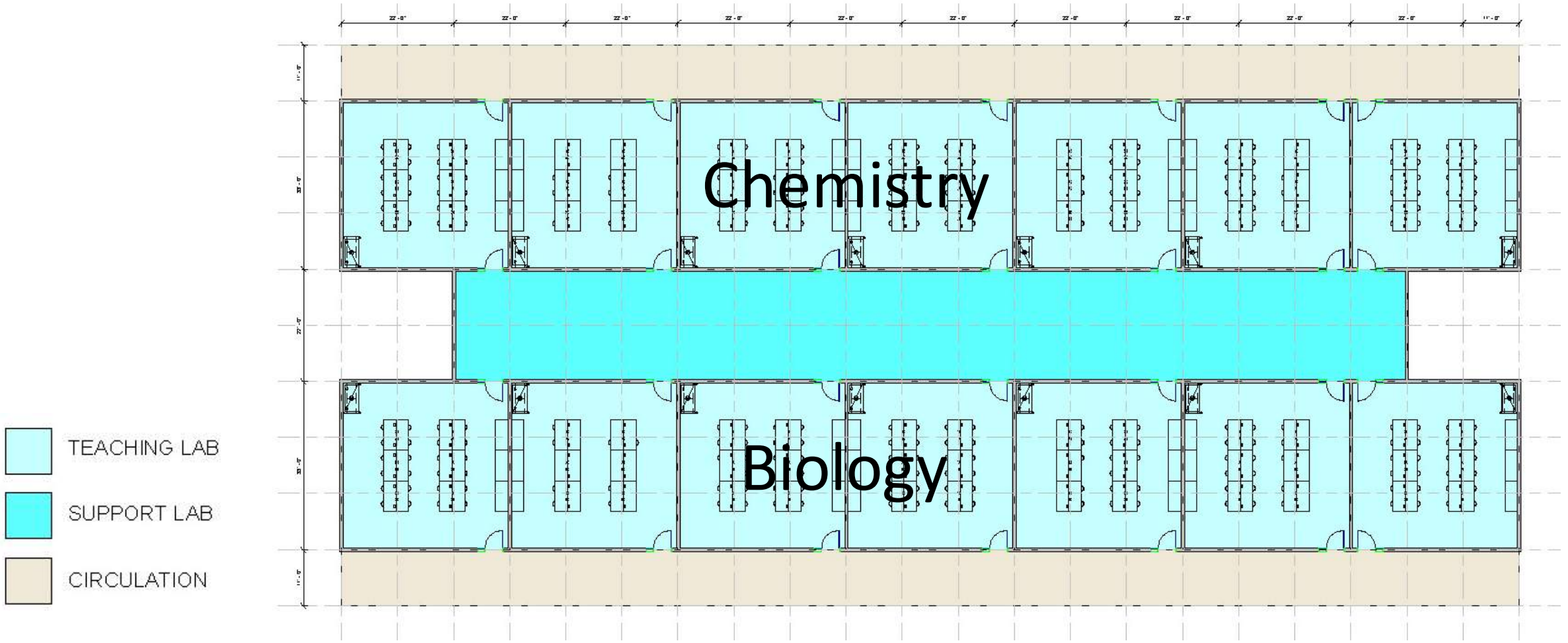
TEACHING LAB FLEXIBILITY – Common Program Elements



- Multiple “teaching zones”
- Space for equipment, carts, mobile experiments
- Microscopes
- Specimen display and storage
- Deep sinks
- Mix of Simulations and hands on

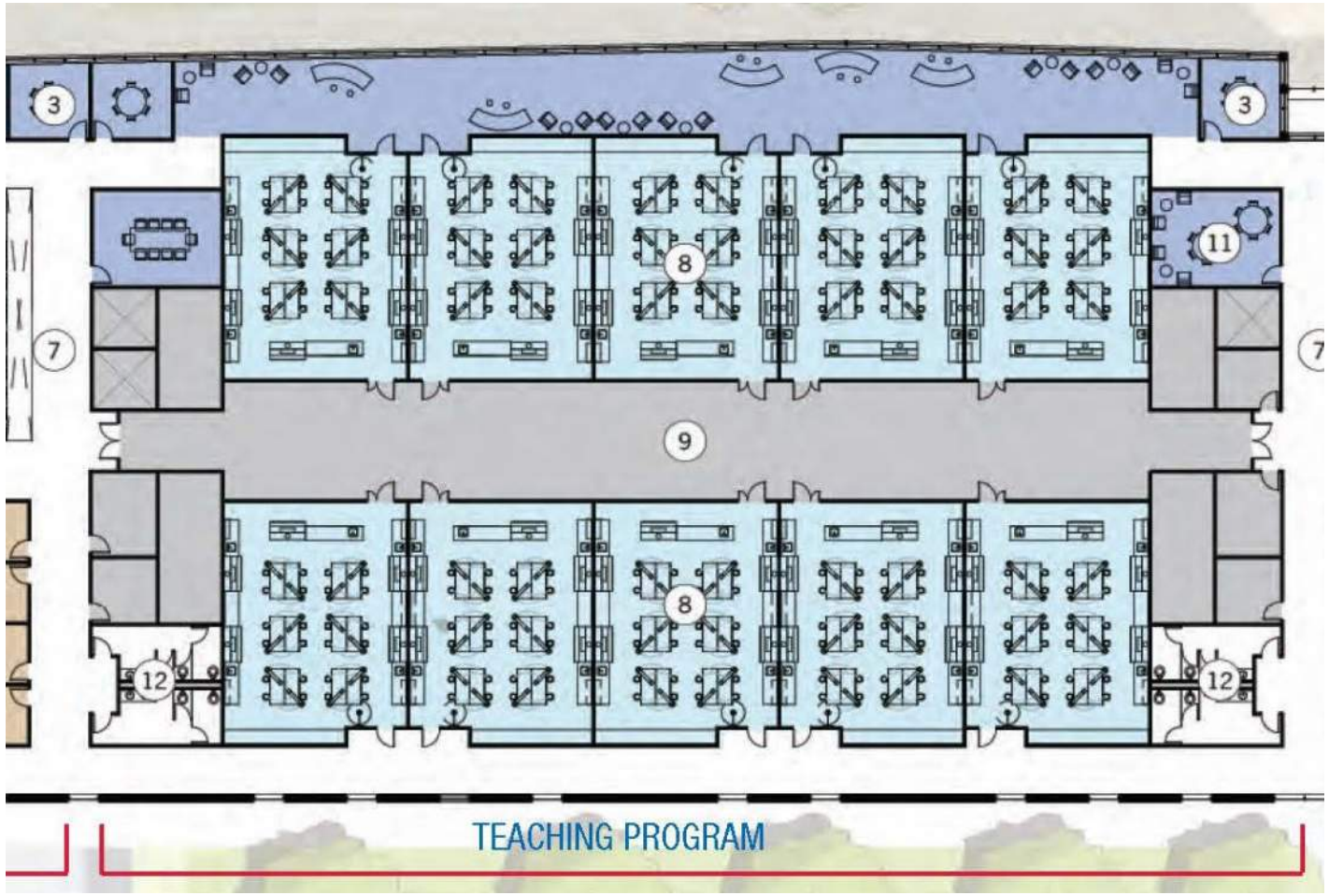
DESIGN CONSIDERATIONS

TEACHING LAB FLEXIBILITY – Shared Lab Support Core Design

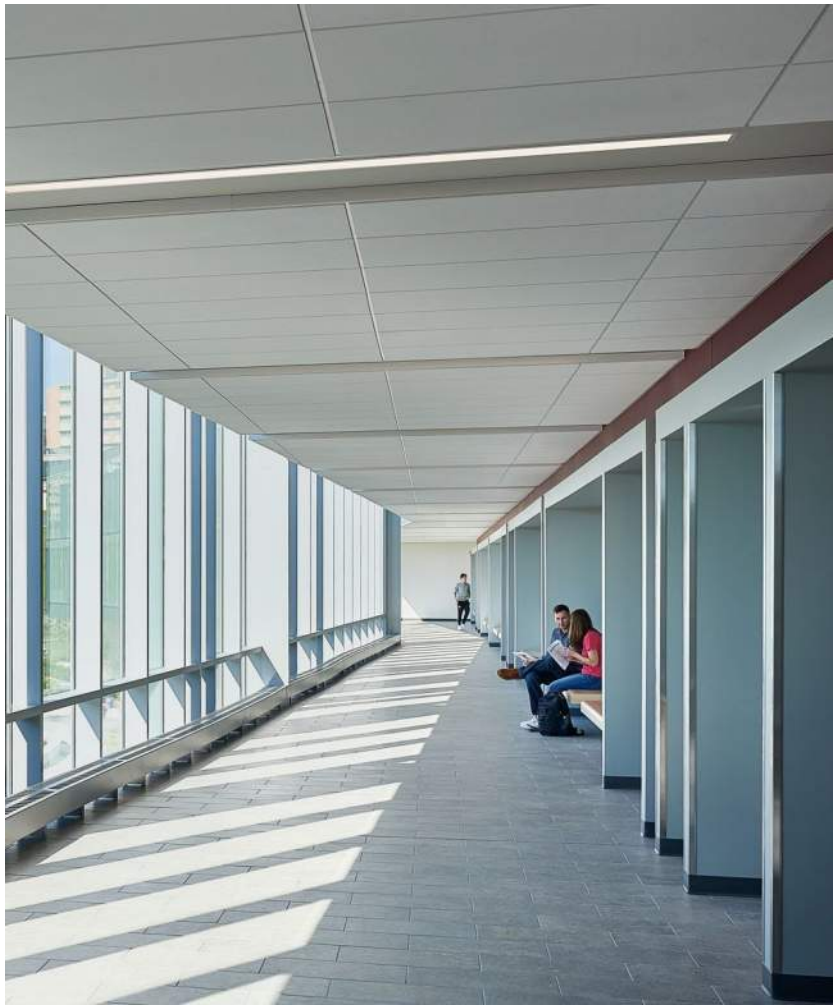


DESIGN CONSIDERATIONS

TEACHING LAB FLEXIBILITY – Service Corridor Concept



DESIGN CONSIDERATIONS
TEACHING LAB FLEXIBILITY



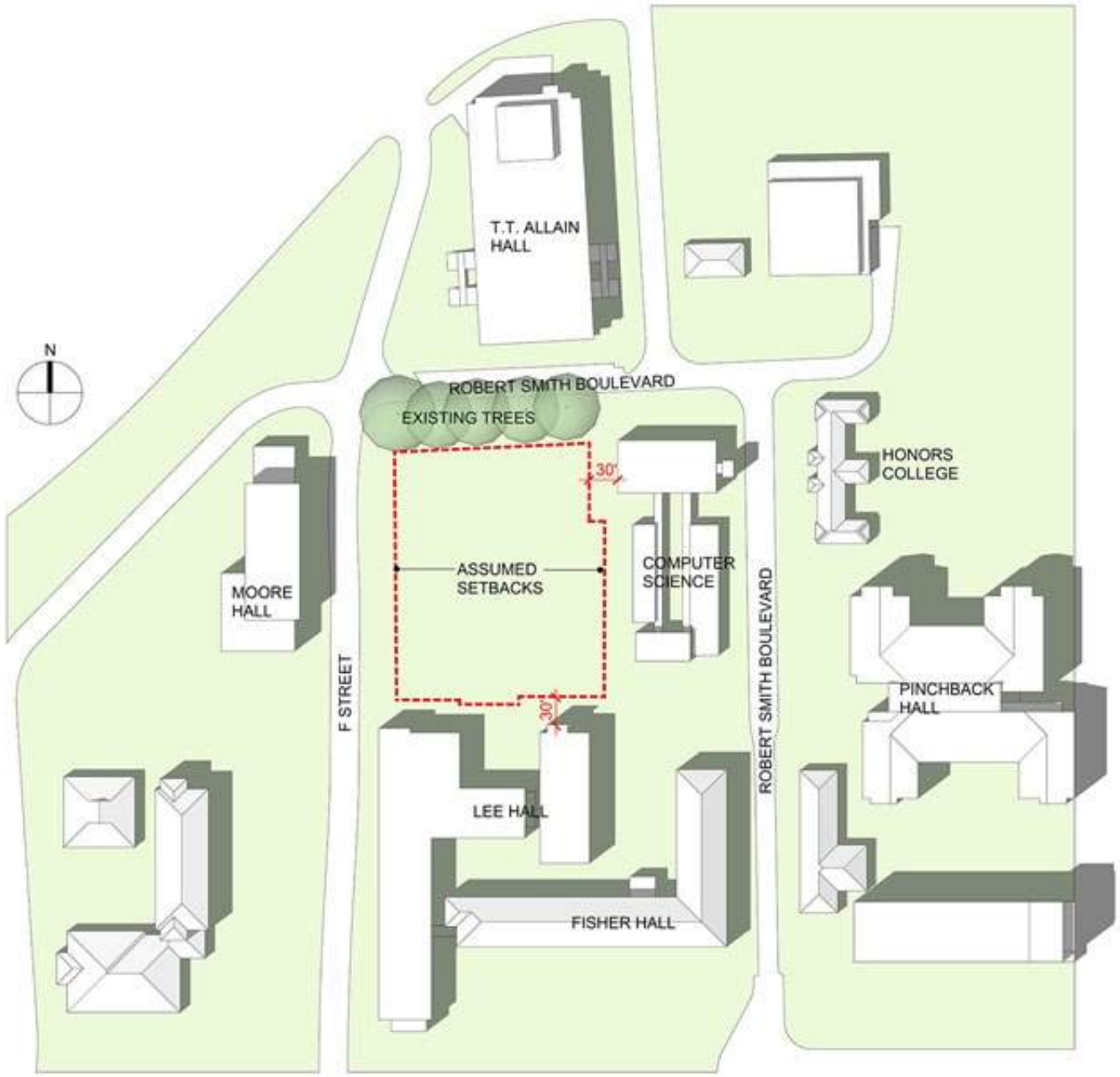
DESIGN CONSIDERATIONS

TEACHING LAB FLEXIBILITY

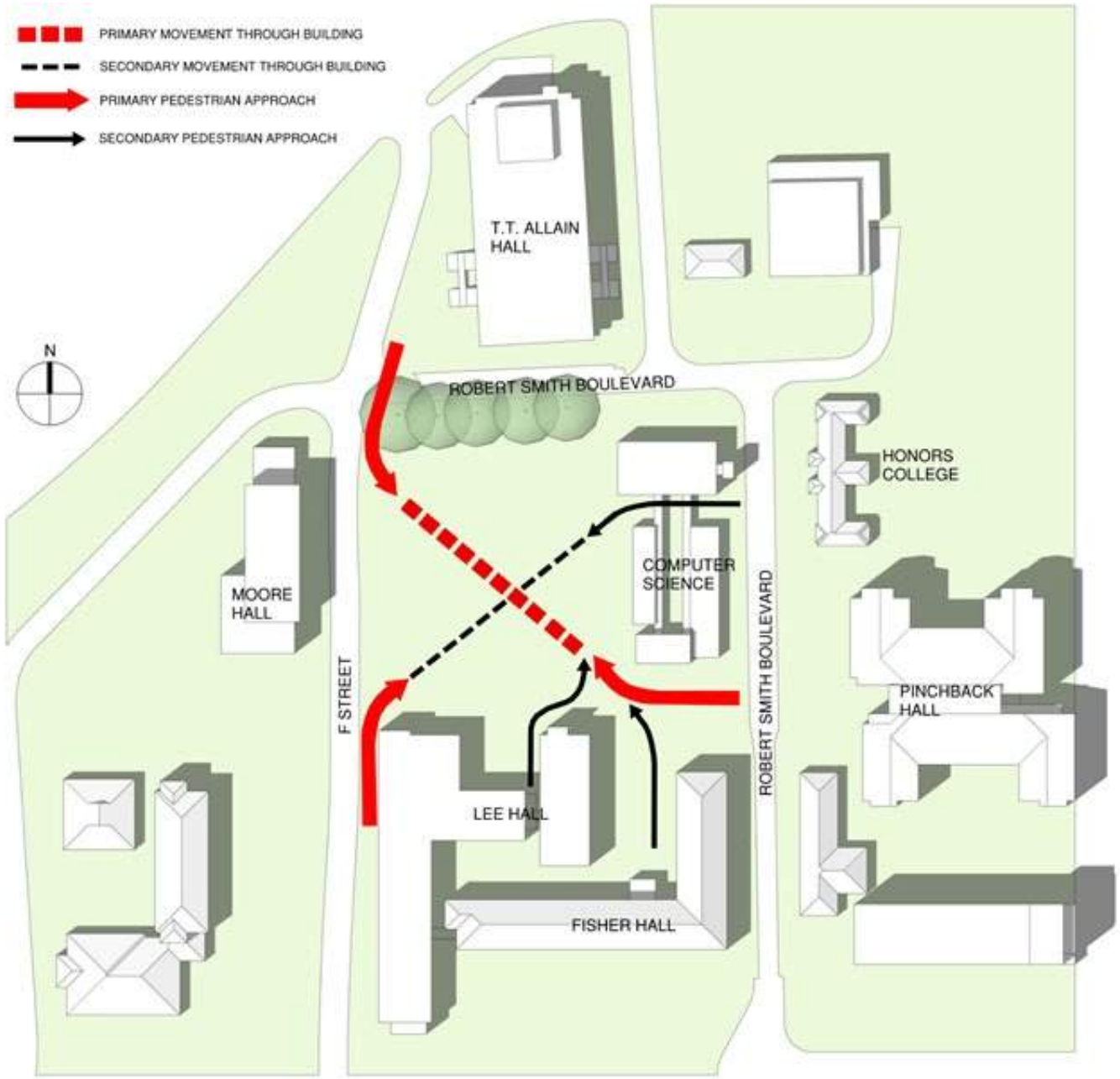
SITE ANALYSIS

SITE OPPORTUNITIES

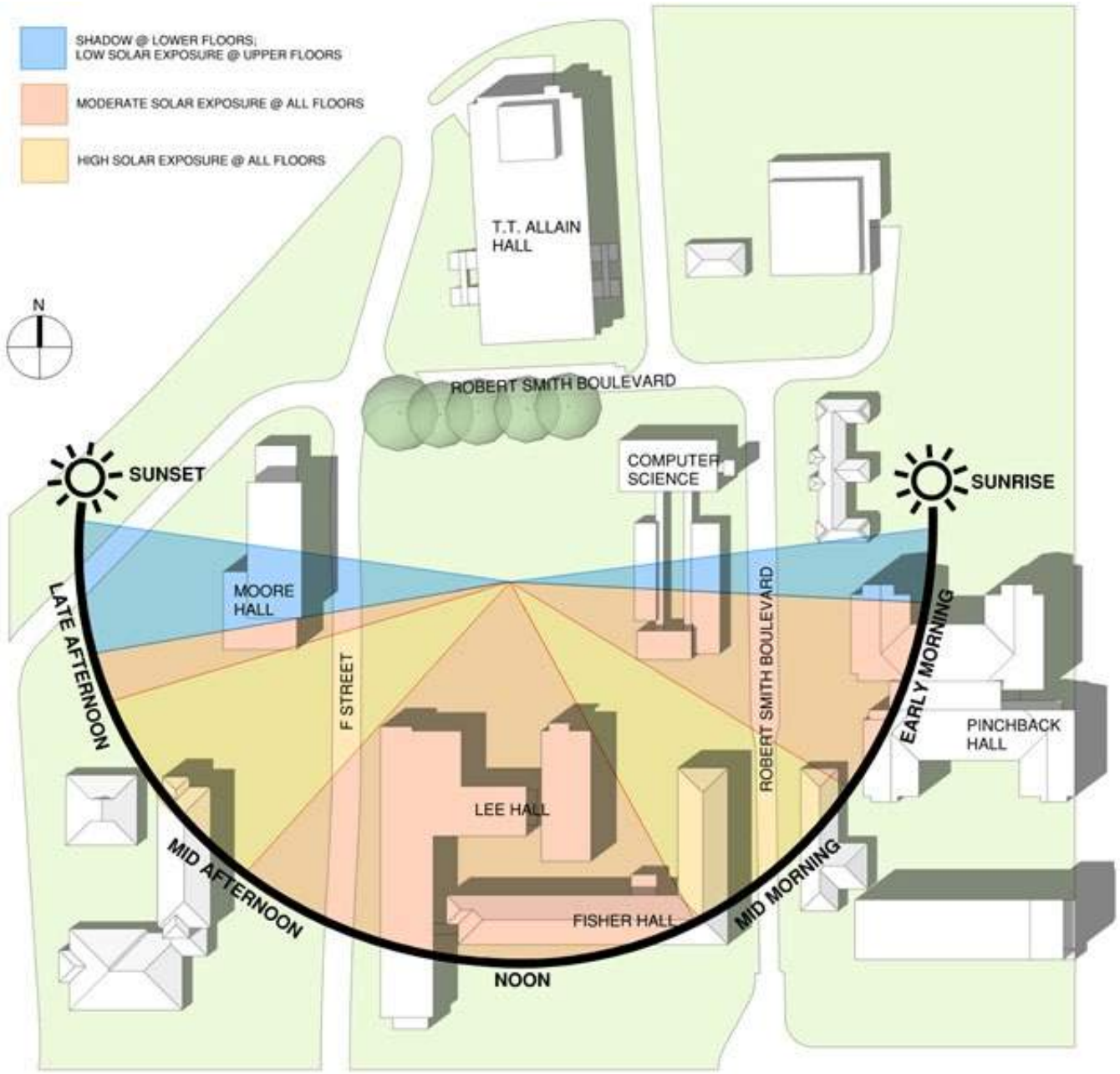
SITE OPPORTUNITIES
SETBACKS



SITE OPPORTUNITIES
ACCESS

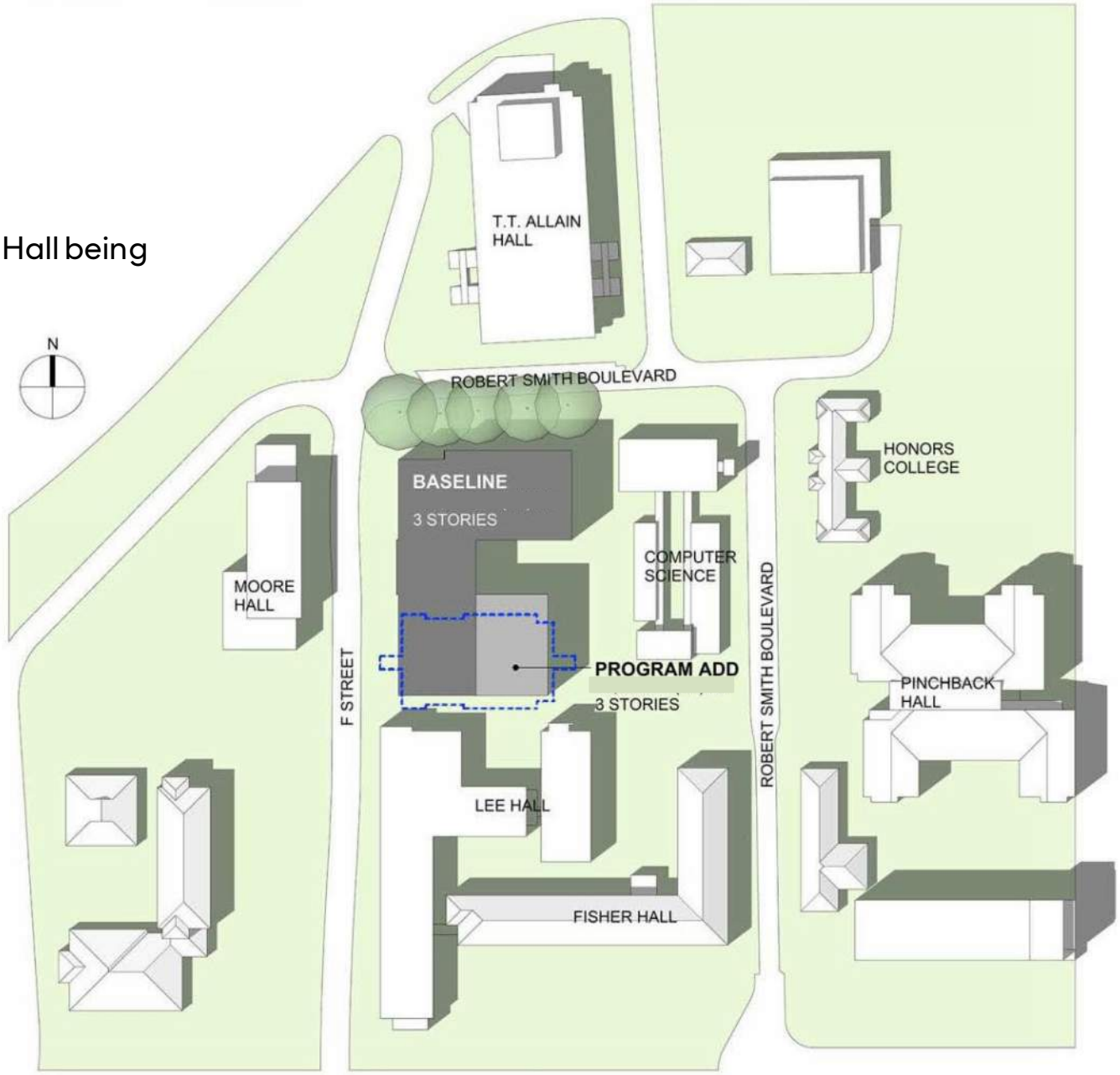


SITE OPPORTUNITIES
SOLAR EXPOSURE

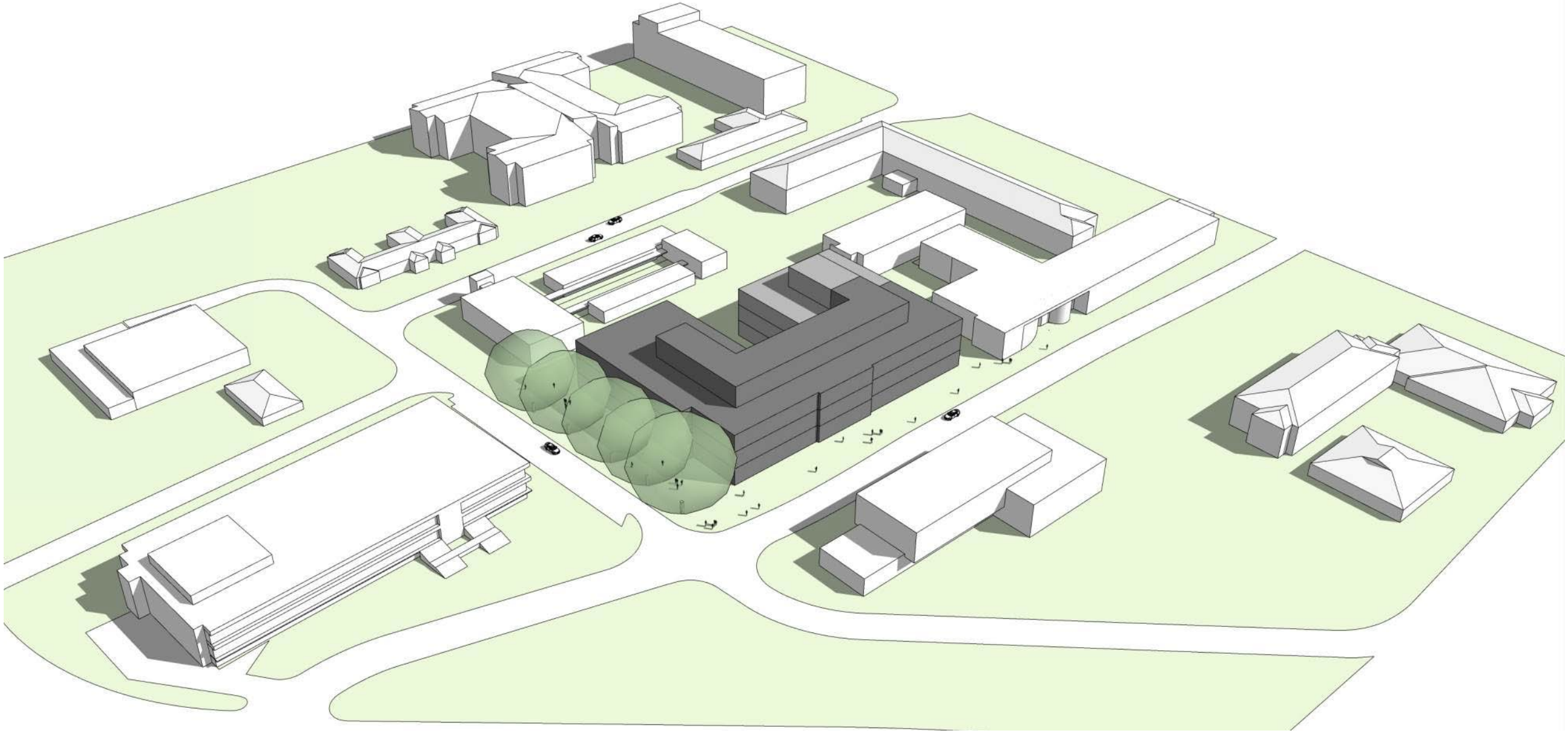


SITE OPPORTUNITIES
MASSING

* These massing studies show James Hall being demolished



BLOCKING & STACKING OPPORTUNITIES



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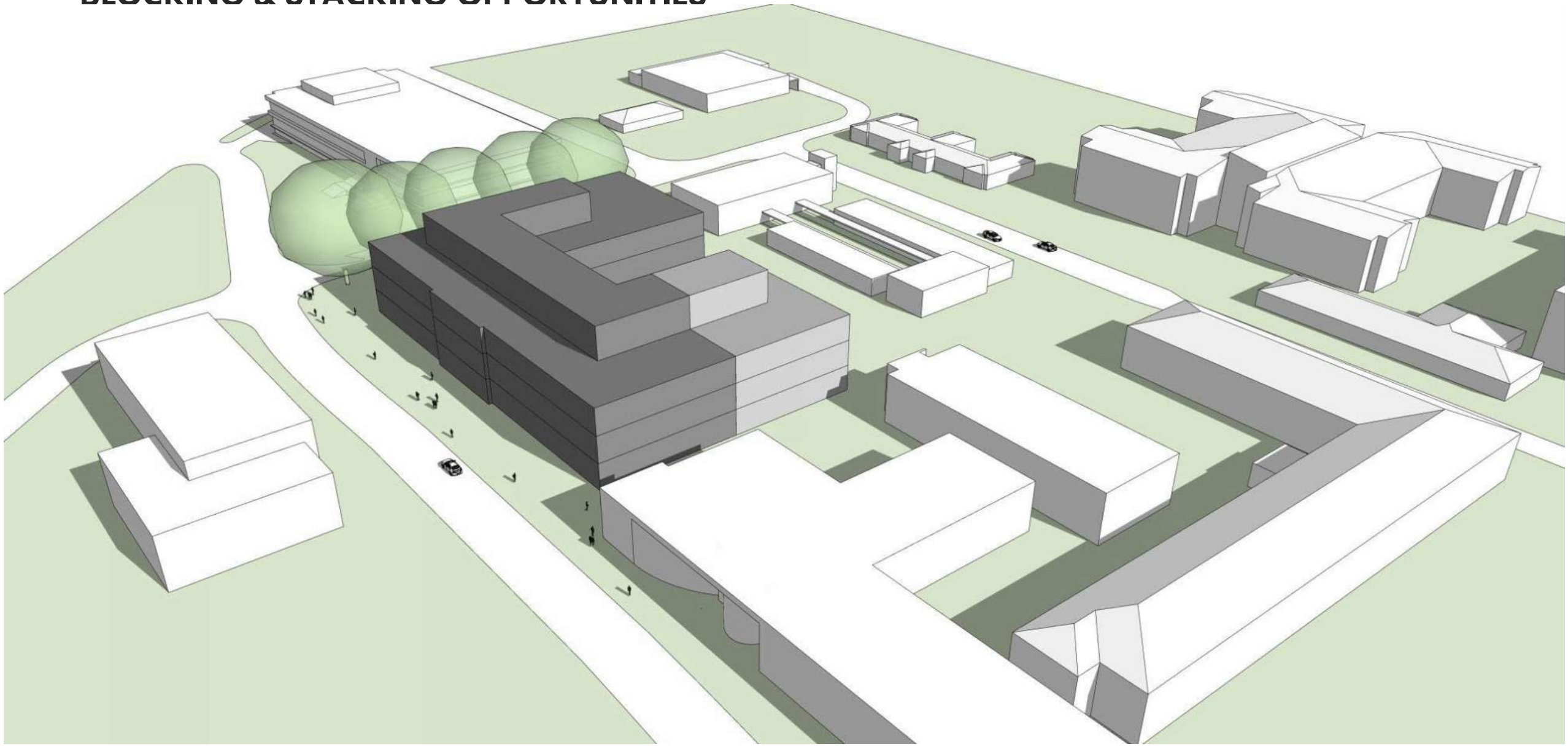
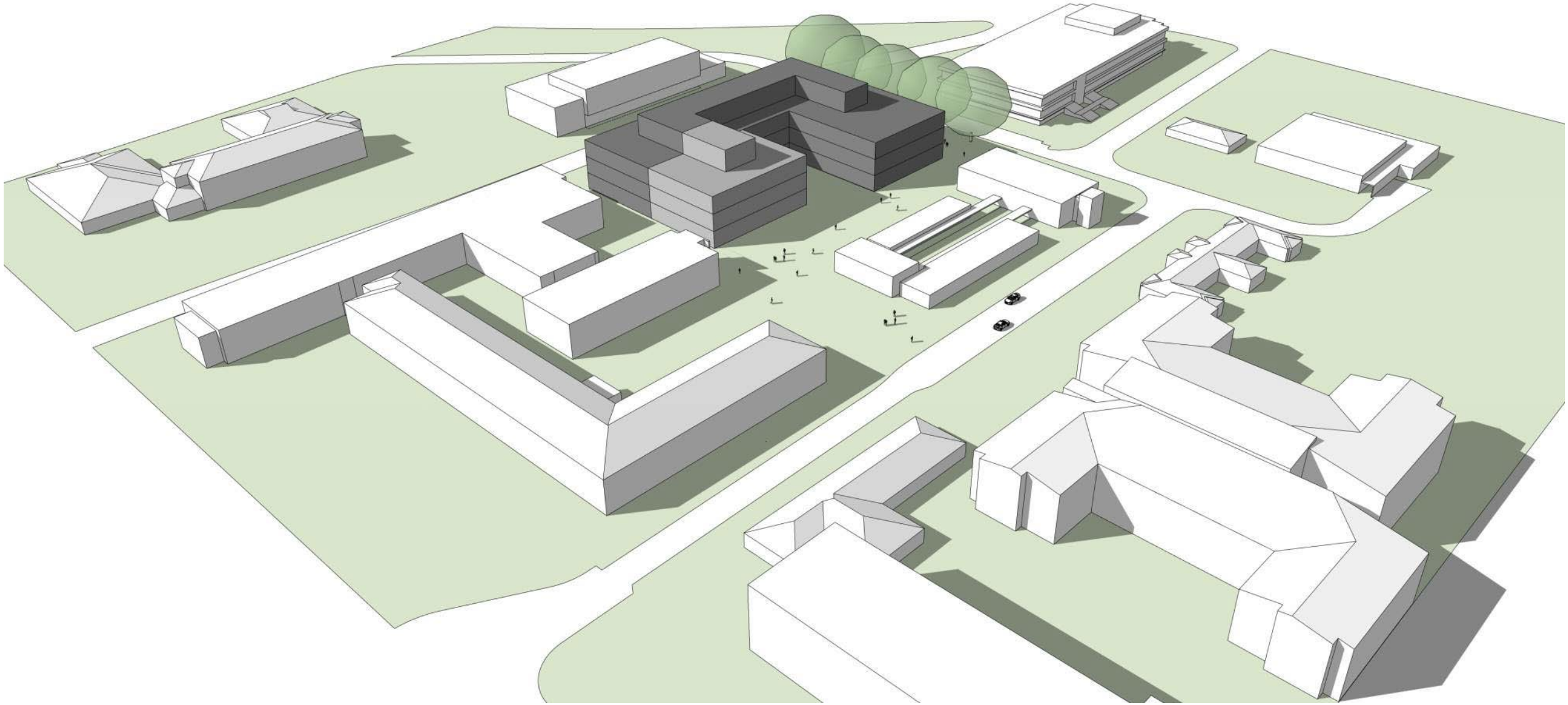


BLOCKING & STACKING OPPORTUNITIES



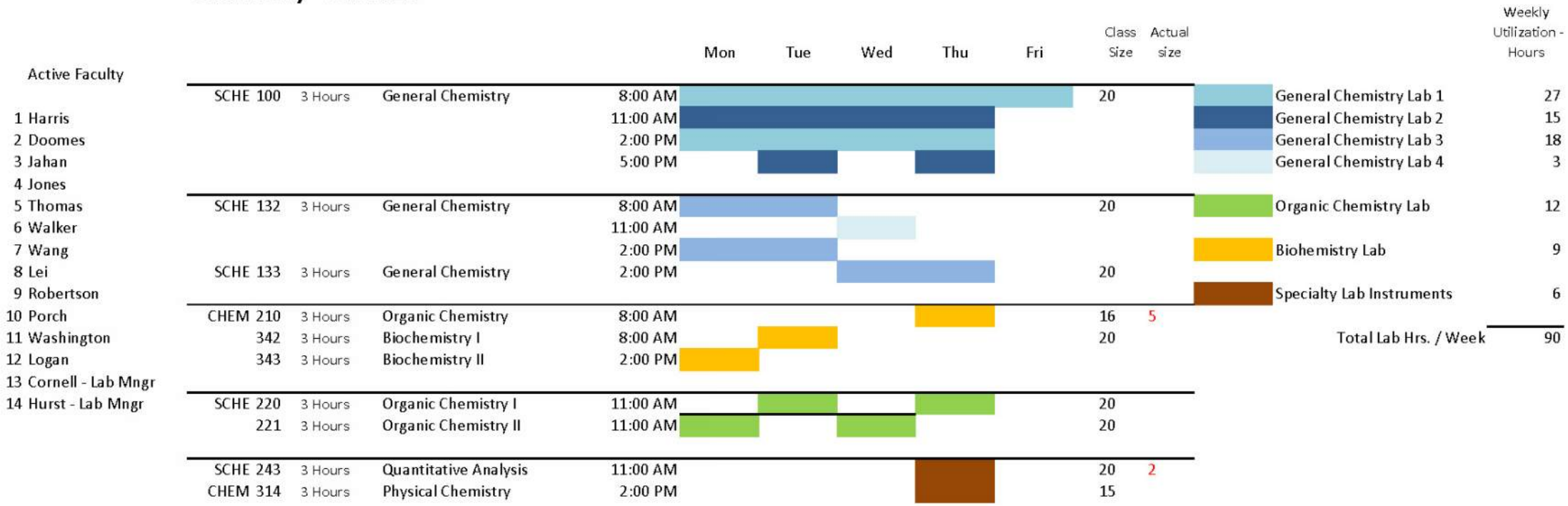
SOUTHERN UNIVERSITY
AND AGRICULTURAL & MECHANICAL COLLEGE

APPENDIX

Programming Submittal, March 7th 2022

ANALYSIS OF FALL 2021 ENROLLMENT - UTILIZATION

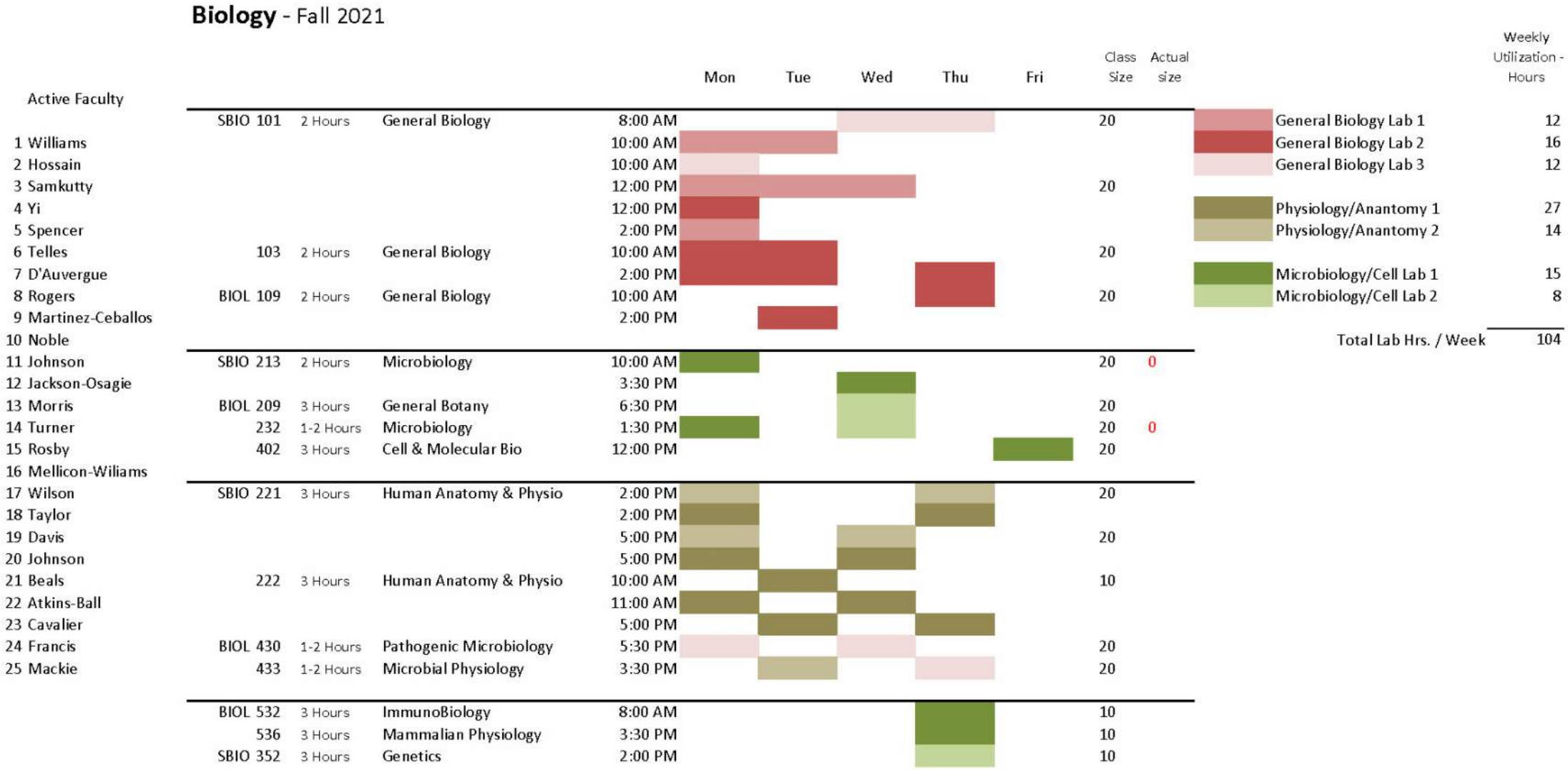
Chemistry - Fall 2021



Active Faculty					Mon	Tue	Wed	Thu	Fri	Class Size	Actual size
	SCHE 100	3 Hours	General Chemistry	8:00 AM						20	
1 Harris				11:00 AM							
2 Doomes				2:00 PM							
3 Jahan				5:00 PM							
4 Jones											
5 Thomas	SCHE 132	3 Hours	General Chemistry	8:00 AM						20	
6 Walker				11:00 AM							
7 Wang				2:00 PM							
8 Lei	SCHE 133	3 Hours	General Chemistry	2:00 PM						20	
9 Robertson											
10 Porch	CHEM 210	3 Hours	Organic Chemistry	8:00 AM						16	5
11 Washington	342	3 Hours	Biochemistry I	8:00 AM						20	
12 Logan	343	3 Hours	Biochemistry II	2:00 PM							
13 Cornell - Lab Mngr											
14 Hurst - Lab Mngr	SCHE 220	3 Hours	Organic Chemistry I	11:00 AM						20	
	221	3 Hours	Organic Chemistry II	11:00 AM						20	
	SCHE 243	3 Hours	Quantitative Analysis	11:00 AM						20	2
	CHEM 314	3 Hours	Physical Chemistry	2:00 PM						15	

	Weekly Utilization - Hours
General Chemistry Lab 1	27
General Chemistry Lab 2	15
General Chemistry Lab 3	18
General Chemistry Lab 4	3
Organic Chemistry Lab	12
Biohemistry Lab	9
Specialty Lab Instruments	6
Total Lab Hrs. / Week	90

ANALYSIS OF FALL 2021 ENROLLMENT - UTILIZATION



Biology - Fall 2021

Active Faculty					Mon	Tue	Wed	Thu	Fri	Class Size	Actual size
1 Williams	SBIO 101	2 Hours	General Biology	8:00 AM						20	
2 Hossain				10:00 AM							
3 Samkutty				10:00 AM							
4 Yi				12:00 PM						20	
5 Spencer				12:00 PM							
6 Telles				2:00 PM							
7 D'Auvergue	103	2 Hours	General Biology	10:00 AM						20	
8 Rogers				2:00 PM							
9 Martinez-Ceballos	BIOL 109	2 Hours	General Biology	10:00 AM						20	
10 Noble				2:00 PM							
11 Johnson	SBIO 213	2 Hours	Microbiology	10:00 AM						20	0
12 Jackson-Osagie				3:30 PM							
13 Morris	BIOL 209	3 Hours	General Botany	6:30 PM						20	
14 Turner	232	1-2 Hours	Microbiology	1:30 PM						20	0
15 Rosby	402	3 Hours	Cell & Molecular Bio	12:00 PM						20	
16 Mellicon-Wiliams											
17 Wilson	SBIO 221	3 Hours	Human Anatomy & Physio	2:00 PM						20	
18 Taylor				2:00 PM							
19 Davis				5:00 PM						20	
20 Johnson				5:00 PM							
21 Beals	222	3 Hours	Human Anatomy & Physio	10:00 AM						10	
22 Atkins-Ball				11:00 AM							
23 Cavalier				5:00 PM							
24 Francis	BIOL 430	1-2 Hours	Pathogenic Microbiology	5:30 PM						20	
25 Mackie	433	1-2 Hours	Microbial Physiology	3:30 PM						20	
	BIOL 532	3 Hours	ImmunoBiology	8:00 AM						10	
	536	3 Hours	Mammalian Physiology	3:30 PM						10	
	SBIO 352	3 Hours	Genetics	2:00 PM						10	

	Weekly Utilization - Hours
General Biology Lab 1	12
General Biology Lab 2	16
General Biology Lab 3	12
Physiology/Anantomy 1	27
Physiology/Anantomy 2	14
Microbiology/Cell Lab 1	15
Microbiology/Cell Lab 2	8
Total Lab Hrs. / Week	104

ANALYSIS OF FALL 2021 ENROLLMENT - UTILIZATION

Physics - Fall 2021

Active Faculty					Mon	Tue	Wed	Thu	Fri	Class Size	Actual size
	SPHY 102	2 Hours	Physical Science	8:00 AM						25	
1 Henry				10:00 AM							
2 Malozovsky				1:00 PM							
3 Lam				3:00 PM							
4 Reese				3:30 PM						40	
5 Zhao	SPHY 103	1 Hour	Physical Science	10:00 AM						25	5
6 Robins											
7 Rambabu	SPHY 211	2 Hours	Elements Physics	1:30 PM						40	
8 Stewart				3:50 PM							
9 Shin	212	2 Hours	Elements Physics	3:30 PM						40	7
10 Miranda											
11 Gao	SPHY 213	2 Hours	General Physics	8:00 AM						25	
12 Stacy				10:00 AM							
				1:00 PM							
				3:00 PM							
	214	2 Hours	General Physics	8:00 AM						24	6
				10:00 AM							
				3:00 PM							

	Weekly Utilization - Hours
General Physics Lab 1	10
General Physics Lab 2	10
General Physics Lab 3	8
Physics Equipment lab	4
Total Lab Hrs. / Week	32

ANALYSIS OF SPRING 2022 ENROLLMENT - UTILIZATION

Chemistry - Spring 2022

Active Faculty					Mon	Tue	Wed	Thu	Fri	Class Size	Actual size		Weekly Utilization - Hours
	SCHE 100	3 Hours	General Chemistry	8:00 AM						20		General Chemistry Lab 1	18
1 Harris				11:00 AM								General Chemistry Lab 2	9
2 Doomes				2:00 PM								General Chemistry Lab 3	18
3 Jahan				5:00 PM								General Chemistry Lab 4	12
4 Jones													
5 Thomas	SCHE 132	3 Hours	General Chemistry	8:00 AM						20		Organic Chemistry Lab	9
6 Walker				11:00 AM									
7 Wang				2:00 PM								Biohemistry Lab	9
8 Lei													
9 Robertson	SCHE 133	3 Hours	General Chemistry	2:00 PM						15		Specialty Lab Instruments	8
10 Porch													
11 Washington	CHEM 212	3 Hours	Biochemistry	11:00 AM									
12 Cornell - Lab Mngr	342	3 Hours	Biochemistry I	9:00 AM									
13 Hurst - Lab Mngr	343	3 Hours	Biochemistry II	2:00 PM									
	SCHE 220	3 Hours	Organic Chemistry I	2:00 PM						30			
	221	3 Hours	Organic Chemistry II	8:00 AM						20			
				2:00 PM									
	SCHE 243	3 Hours	Quantitative Analysis	9:00 AM						15	4		
	CHEM 315	3 Hours	Physical Chemistry	2:00 PM						15	3		
	CHEM 450	2 Hours	Instrumental Analysis	6:30 PM						8	3		

ANALYSIS OF SPRING 2022 ENROLLMENT - UTILIZATION

Biology - Spring 2022

Active Faculty					Mon	Tue	Wed	Thu	Fri	Class Size	Actual size
	SBIO 101	2 Hours	General Biology	8:00 AM						20	
1 Williams				10:00 AM							
2 Cullins				6:30 PM							
3 Hossain	102	2 Hours	General Biology	8:00 AM						20	
4 Samkutty				10:00 AM							
5 Yi				2:00 PM							
6 Spencer	103	2 Hours	General Biology	9:30 AM						20	
7 Telles	BIOL 109	3 Hours	General Biology	12:00 PM						20	
8 Dubytska				3:30 PM							
9 D'Auvergue											
10 Rogers	SBIO 213	2 Hours	Microbiology	10:00 AM						20	
11 Martinez-Ceballos				12:00 PM							
12 Noble	BIOL 232	1-2 Hours	Microbiology	1:30 PM						20	
13 Johnson	402	3 Hours	Cell & Molecular Bio	10:00 AM						20	5
14 Anthony											
15 Layres	SBIO 221	3 Hours	Human Anatomy & Physio	10:00 AM						25	
16 Jackson-Osagie				5:00 PM							
17 Morris	222	3 Hours	Human Anatomy & Physio	6:30 PM						20	
18 Atkins-Ball	223	1.5 Hours	Comparative Anatomy	3:30 PM						10	8
19 Turner	BIOL 442	3 Hours	Animal Physiology	2:30 PM						20	
20 Rosby	540	3 Hours	Reproductive Physiology	3:30 PM						20	3
21 Mellicon-Wiliams											
22 Wilson	BIOL 450	3 Hours	Microbial Genetics	5:30 PM						20	8
23 Taylor											
24 Davis	SBIO 233	1.5 Hours	Comparative Anatomy	3:30 PM						10	8
25 Johnson	361	3 Hours	Vertibrate Histology	2:00 PM						20	
26 Beals	450	3 Hours	Vertibrate Embryology	2:00 PM						20	
27 Ogunkoya											

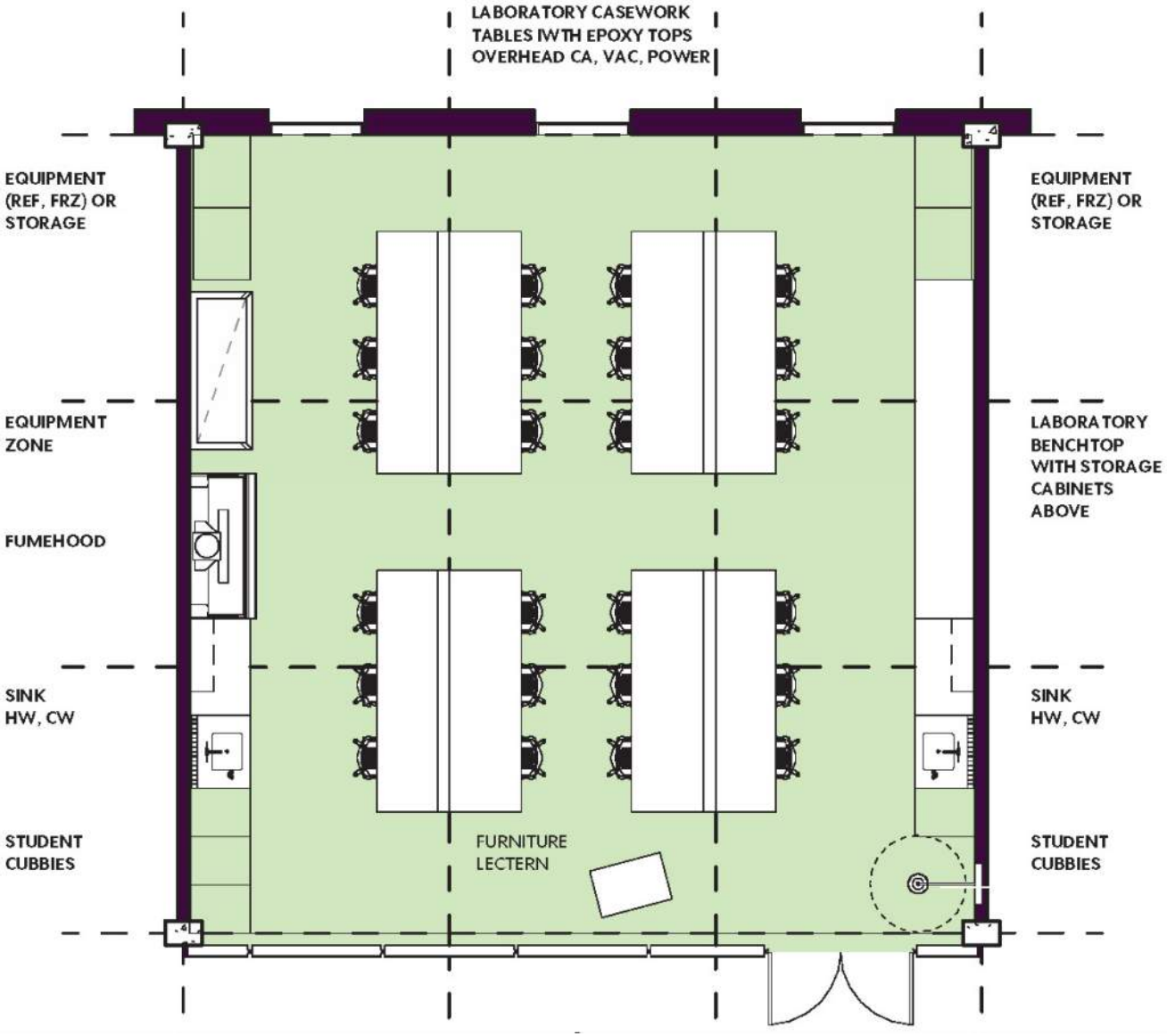
	Weekly Utilization - Hours
General Biology Lab 1	12
General Biology Lab 2	10
General Biology Lab 3	6
Physiology/Anantomy 1	12
Physiology/Anantomy 2	12
Microbiology/Cell Lab 1	10
Microbiology/Cell Lab 2	8

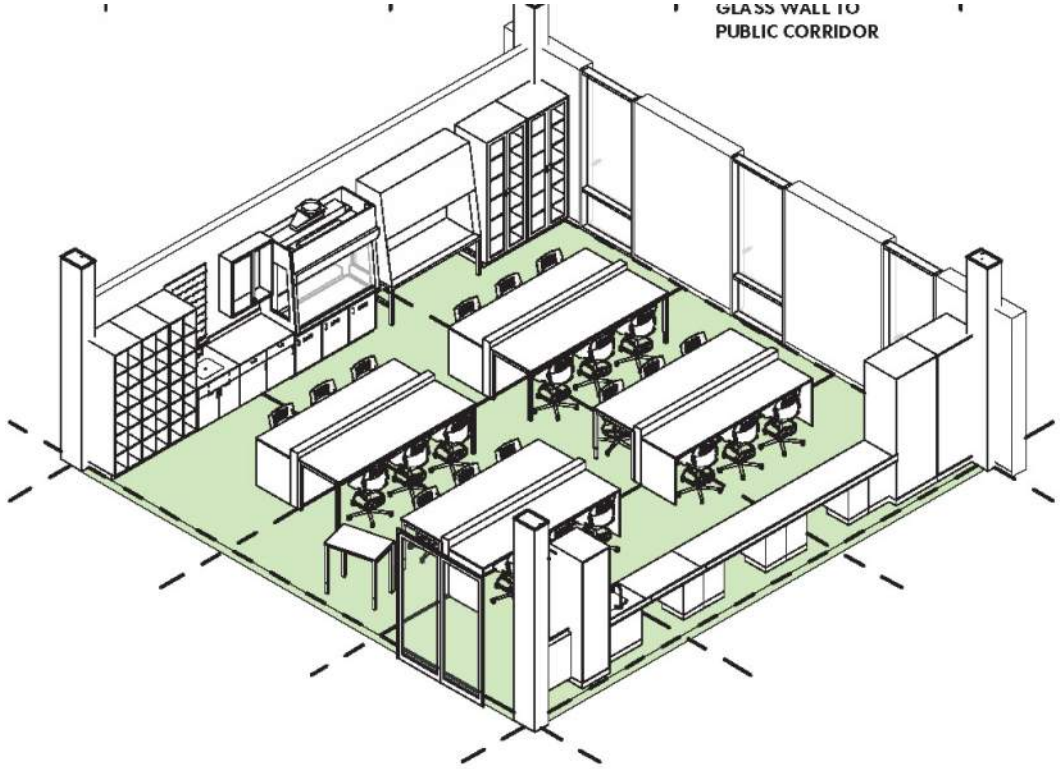
ANALYSIS OF SPRING 2022 ENROLLMENT - UTILIZATION

Physics - Spring 2022

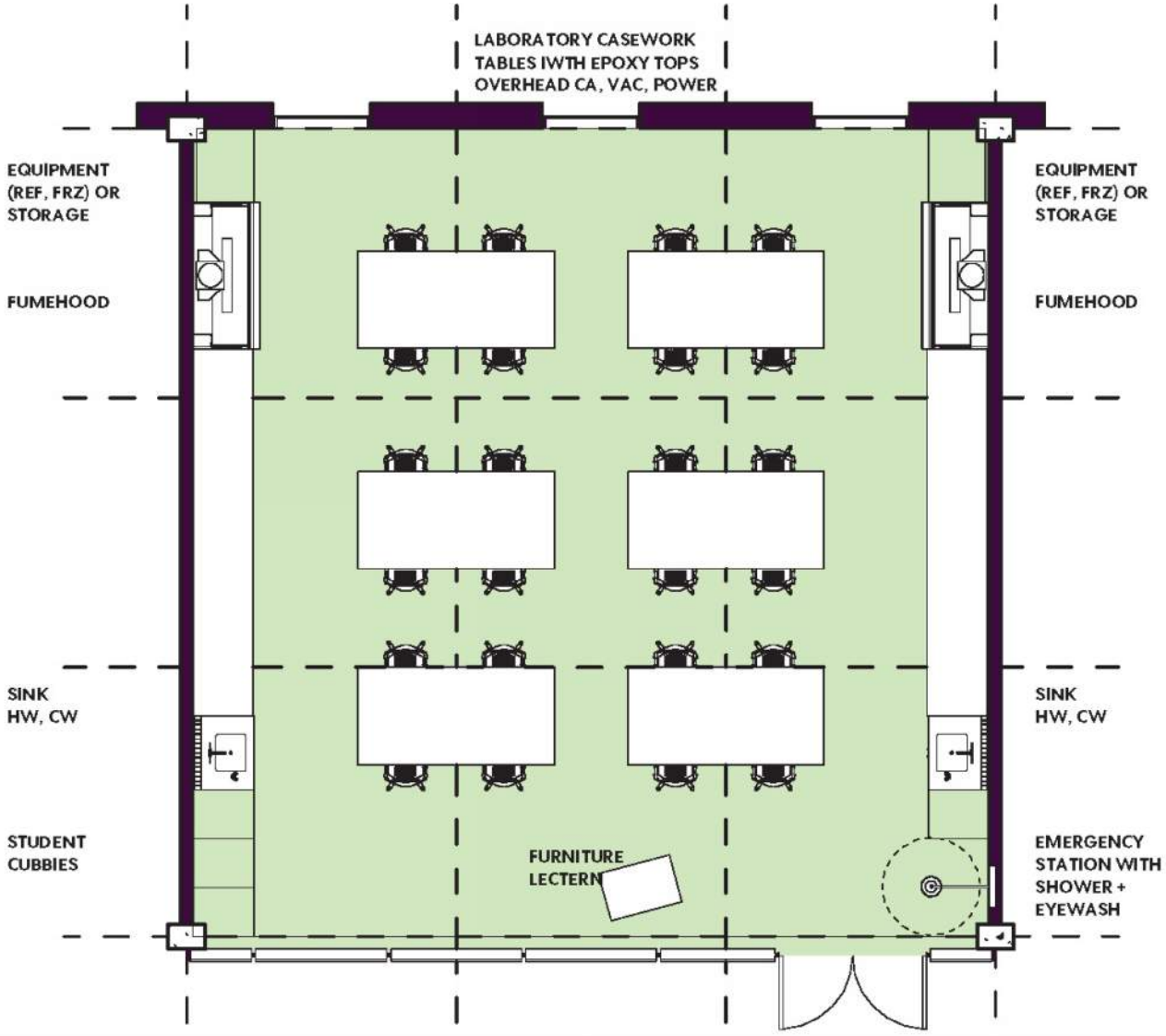
Active Faculty					Mon	Tue	Wed	Thu	Fri	Class Size	Actual size		Weekly Utilization - Hours
	SPHY 102	2 Hours	Physical Science	8:00 AM						20		General Physics Lab 1	10.5
1 Henry				10:00 AM								General Physics Lab 2	5.5
2 Malozovsky												General Physics Lab 3	3.5
3 Lam	SPHY 211	1.5 Hours	Elements Physics	1:00 PM						25			
4 Fazely				1:00 PM								Physics Equipment lab	0
5 Reese				4:00 PM									
6 Zhao													
7 Bayayoko	SPHY 213	2 Hours	General Physics	1:00 PM						25			
8 Robins				3:00 PM									
9 Rambabu				3:00 PM									

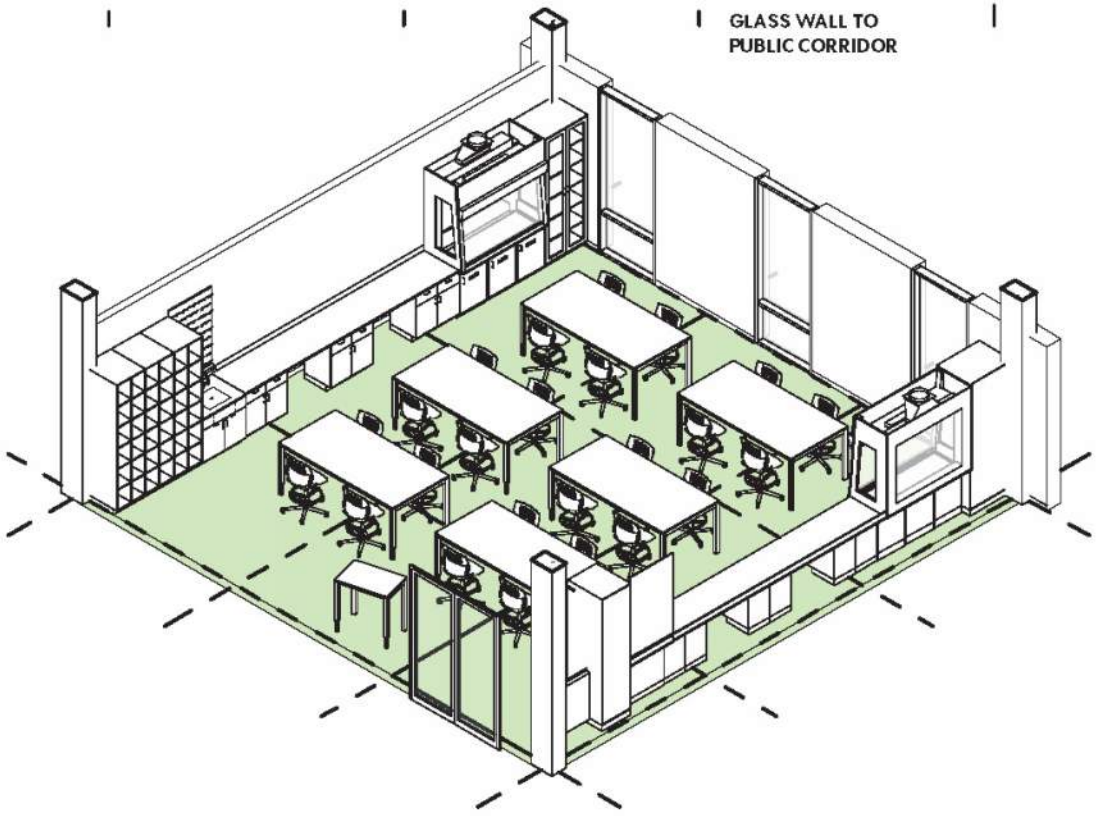
EXAMPLE PLANS – MICROBIOLOGY – 24 SEATS



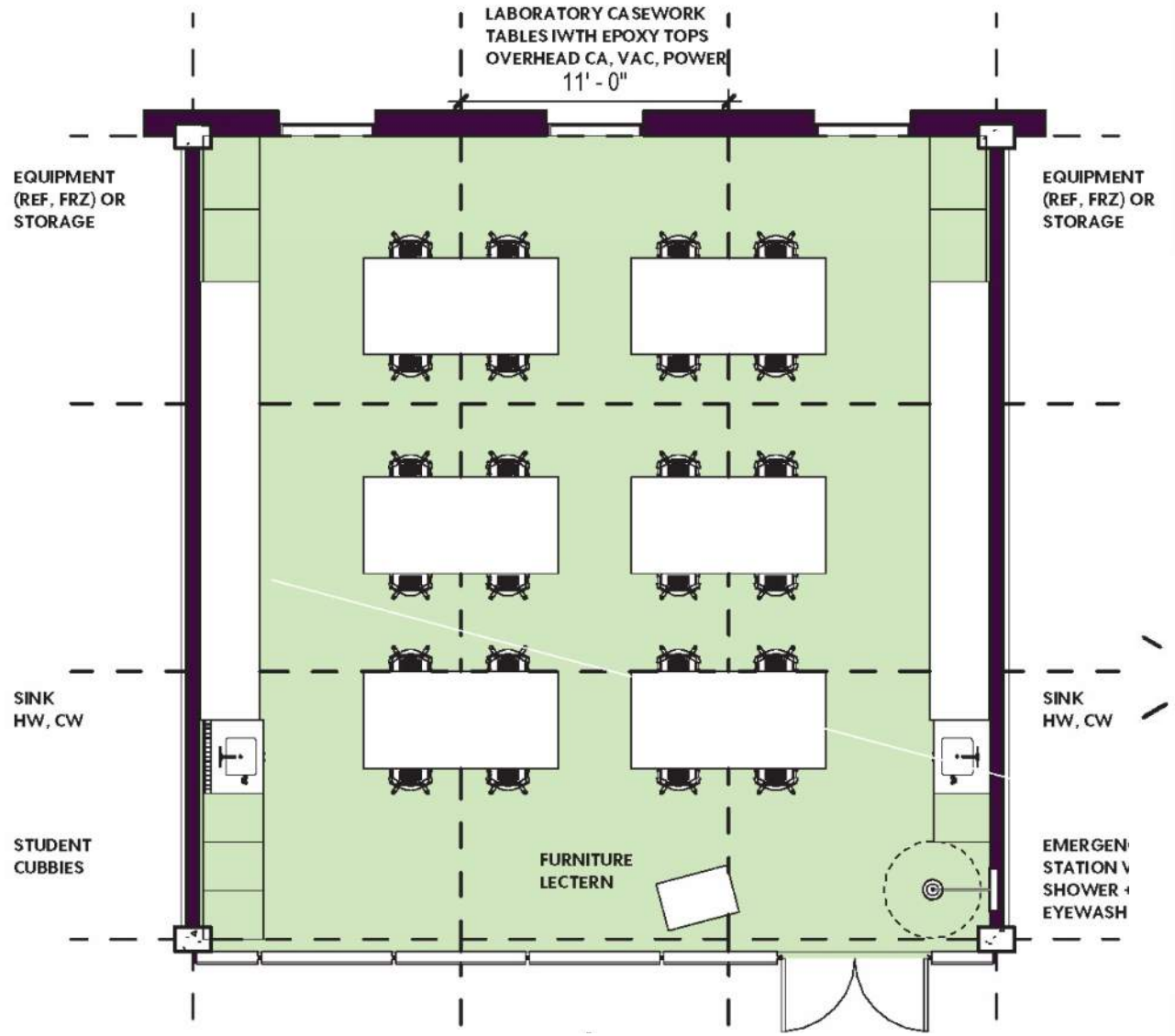


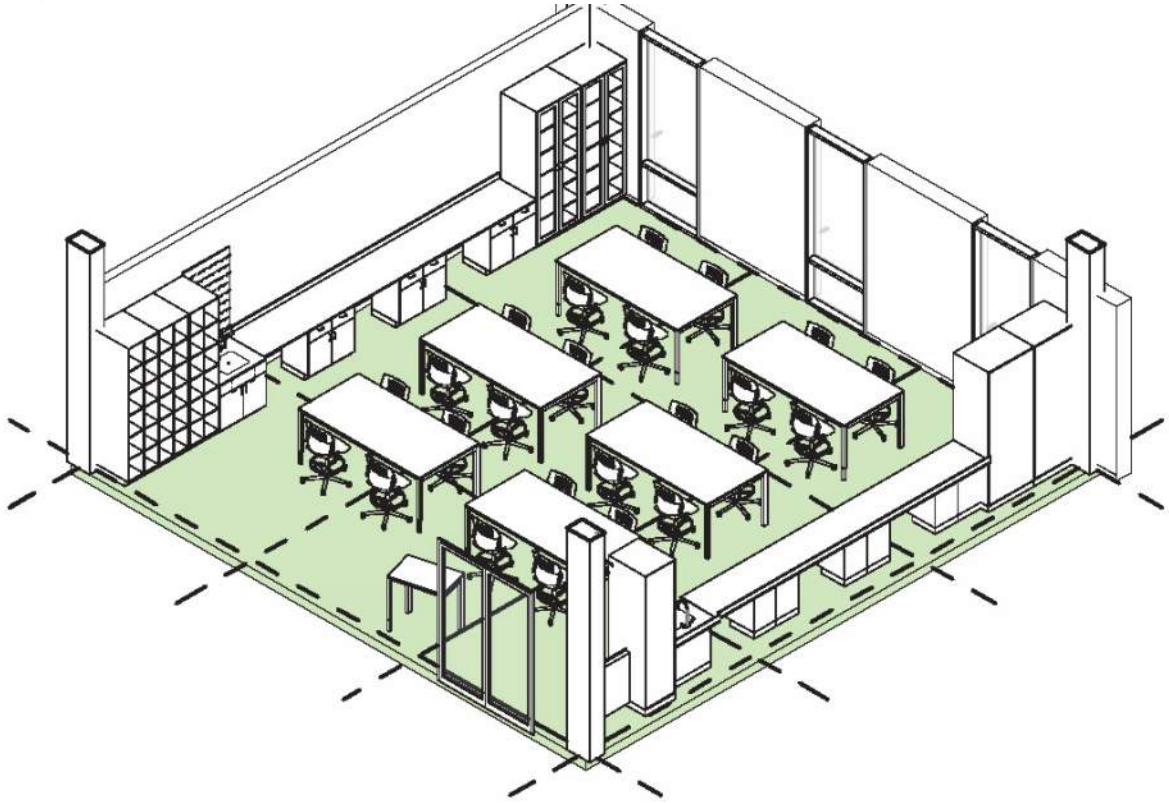
EXAMPLE PLANS – BIOCHEMISTRY – 24 SEATS



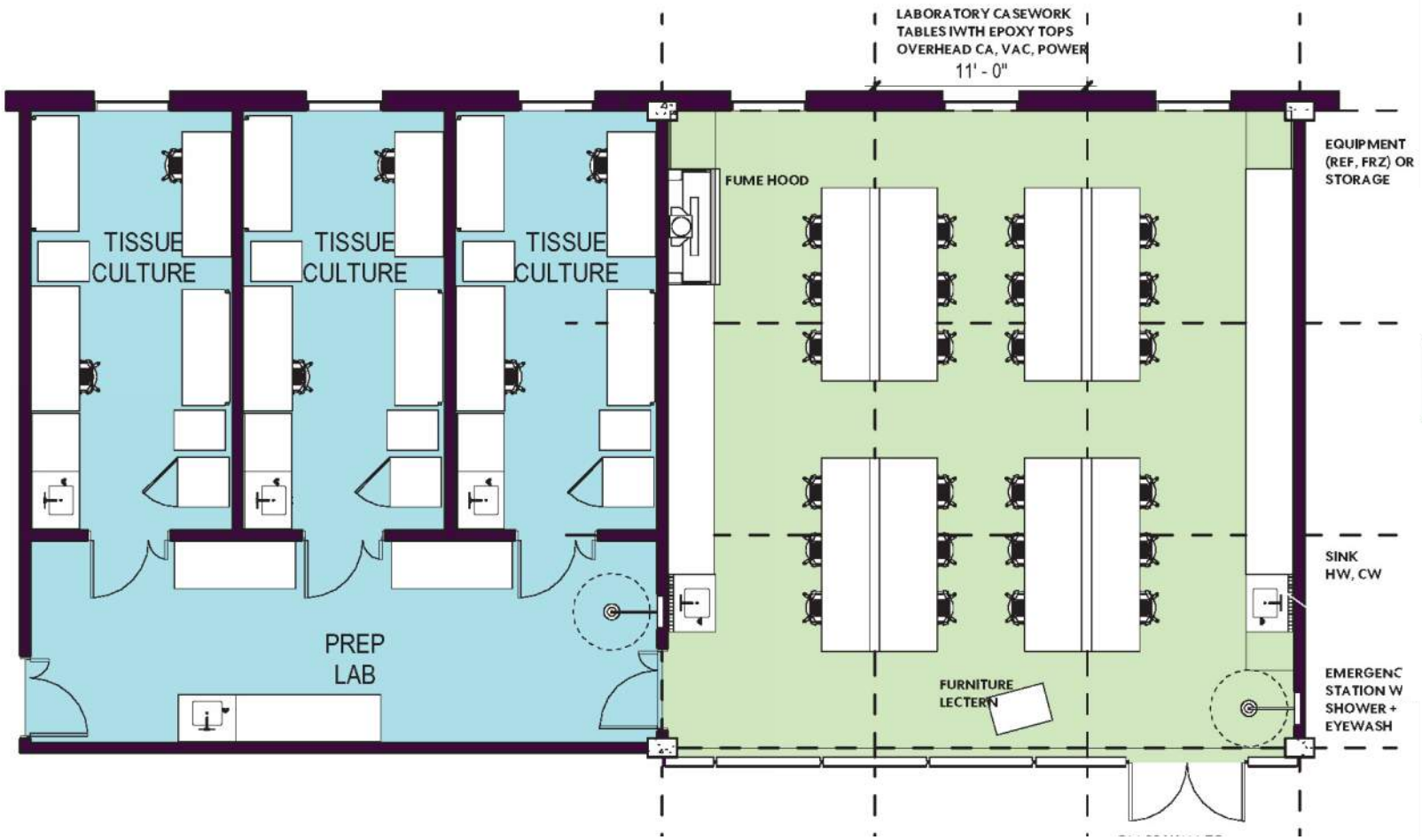


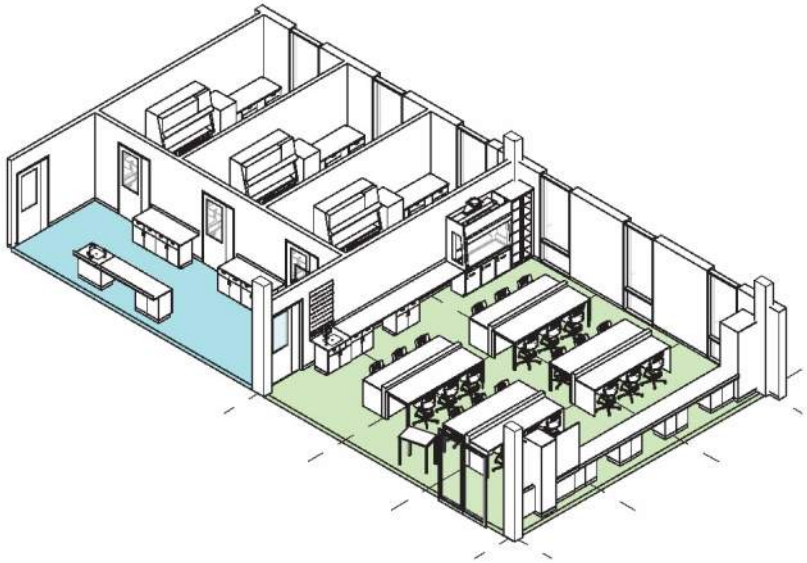
EXAMPLE PLANS – PHYSIOLOGY – 24 SEATS



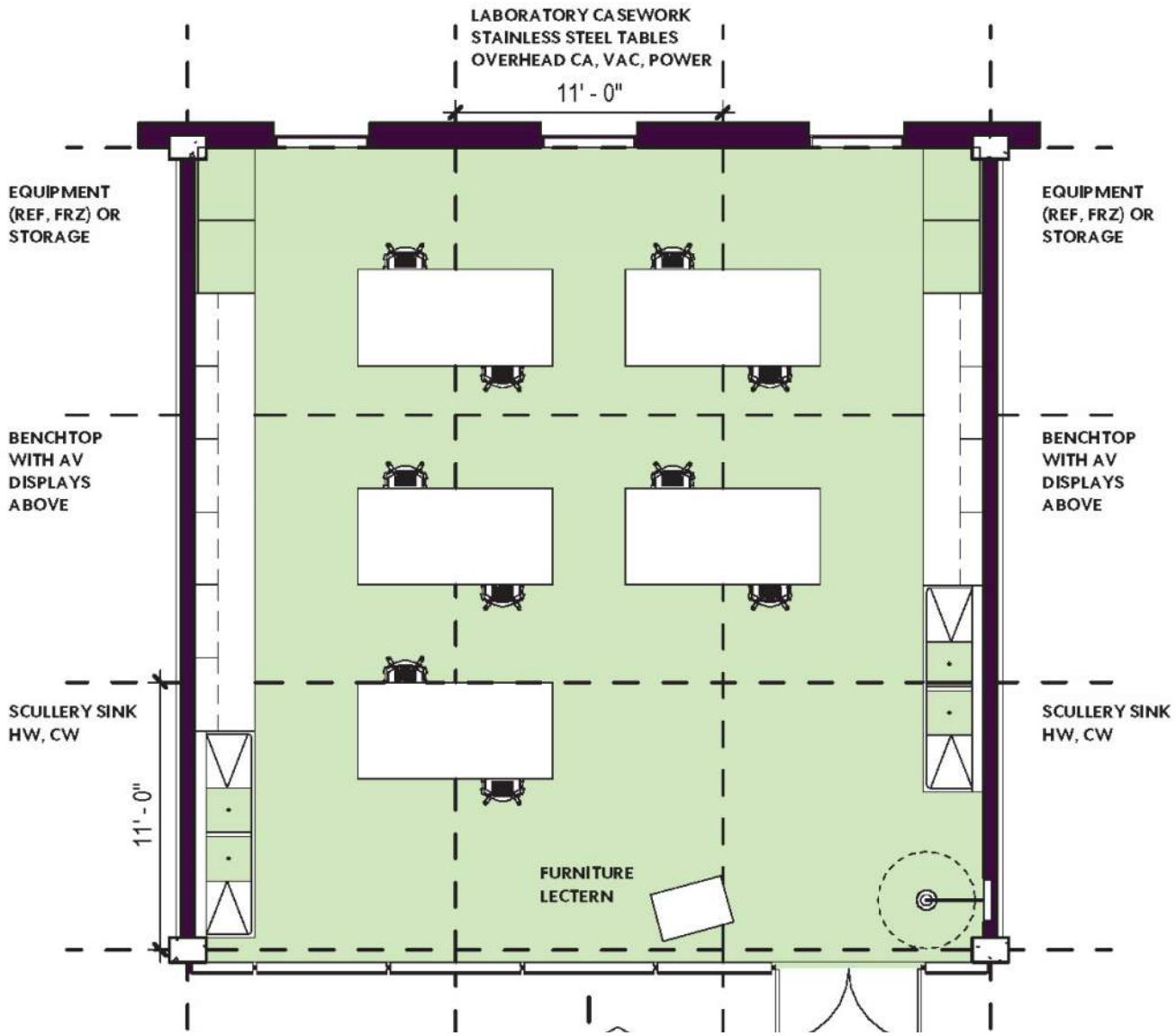


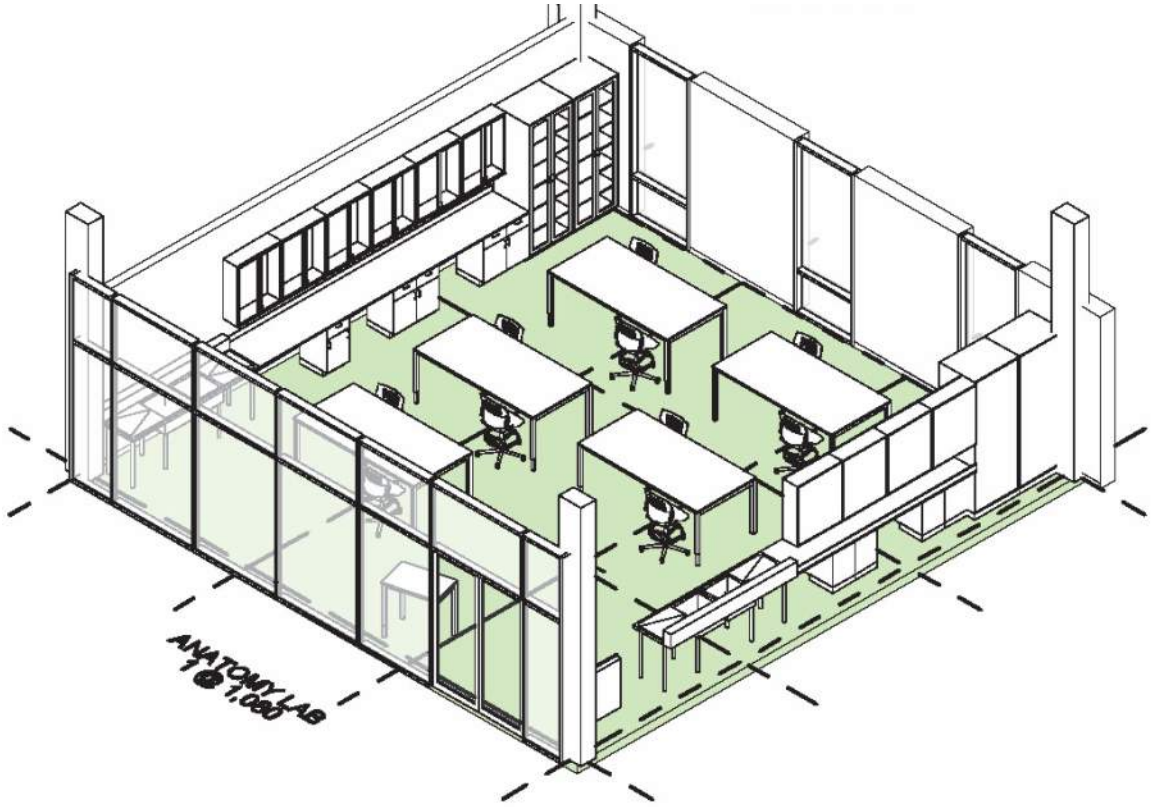
EXAMPLE PLANS – CELL BIOLOGY – 24 SEATS



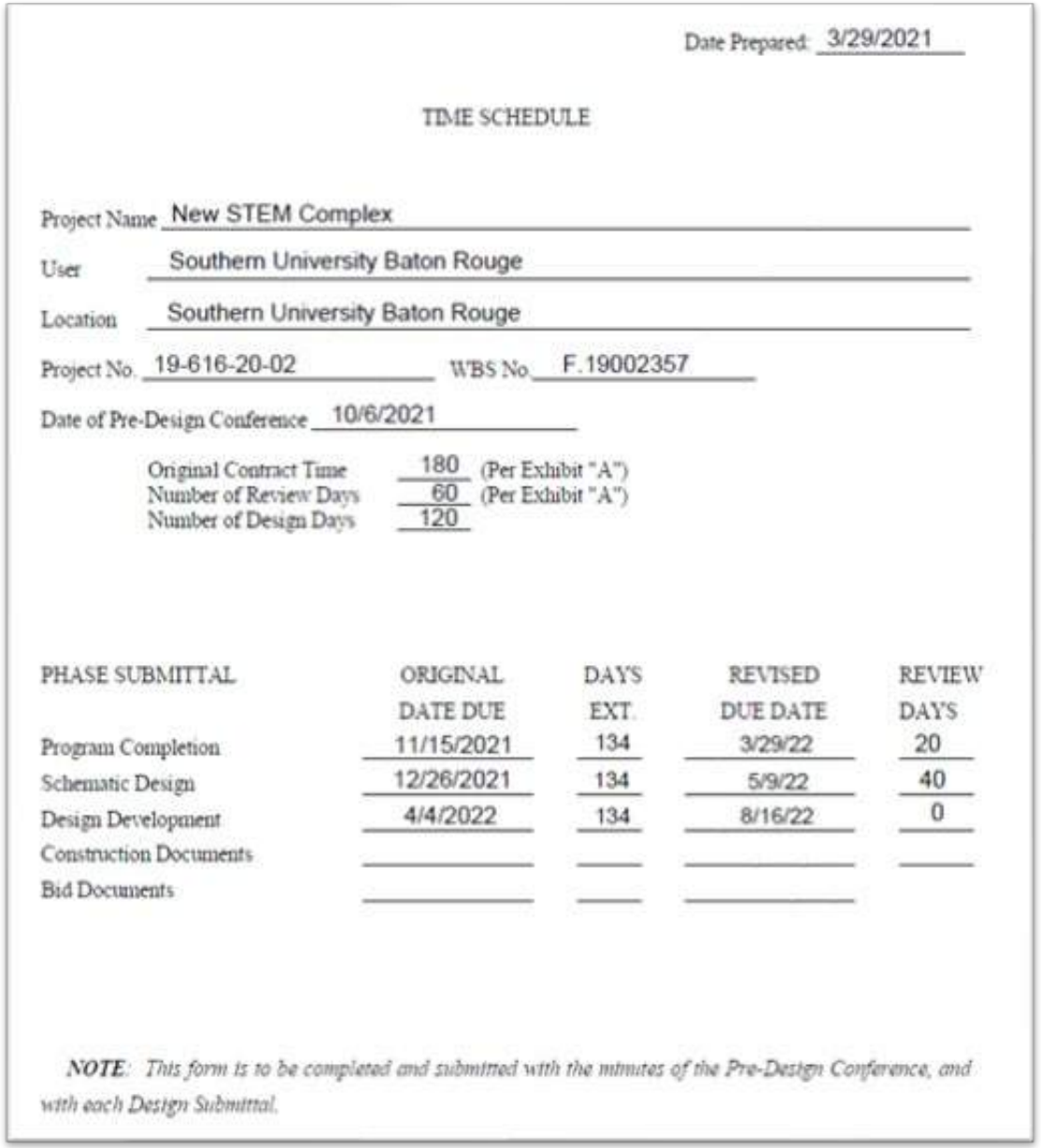


EXAMPLE PLANS – ANATOMY – 10 SEATS





TIME SCHEDULE



Date Prepared: 3/29/2021

TIME SCHEDULE

Project Name: New STEM Complex

User: Southern University Baton Rouge

Location: Southern University Baton Rouge

Project No.: 19-616-20-02 WBS No.: F.19002357

Date of Pre-Design Conference: 10/6/2021

Original Contract Time	180	(Per Exhibit "A")
Number of Review Days	60	(Per Exhibit "A")
Number of Design Days	120	

PHASE SUBMITTAL	ORIGINAL DATE DUE	DAYS EXT.	REVISED DUE DATE	REVIEW DAYS
Program Completion	11/15/2021	134	3/29/22	20
Schematic Design	12/26/2021	134	5/9/22	40
Design Development	4/4/2022	134	8/16/22	0
Construction Documents				
Bid Documents				

NOTE: This form is to be completed and submitted with the minutes of the Pre-Design Conference, and with each Design Submittal.

STATEMENT OF PROBABLE COST

Facility Planning & Control

STATEMENT OF PROBABLE COST

DATE: 3/29/22

PROJECT: New STEM Complex

PROJECT NO: 19-616-20-02 WBS NO: F.19002357

LOCATION: Southern University | Baton Rouge, LA

DESIGN PROFESSIONAL: Manning, APC | Coleman Partners, LLC, AJV

TOTAL NEW AREA BEING CONSTRUCTED: 80,368 sq. ft.

TOTAL EXISTING AREA BEING RENOVATED: N/A sq. ft.

PROJECT PHASE: Programming A F C: $37,850,000

			PER CENT	AMOUNT
DIVISION	1	General Requirements	9.0%	$3,406,500
DIVISION	2	Existing Conditions	2.0%	$757,000
DIVISION	3	Concrete	7.0%	$2,649,500
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DIVISION	14	Conveying Equipment	1.0%	$378,500
DIVISION	21	Fire Suppression	1.5%	$567,750
DIVISION	22	Plumbing	17.0%	$6,434,500
DIVISION	23	Heating, Ventilating & Air Conditioning	*incl. abv.	$0
DIVISION	26	Electrical	15.0%	$5,677,500
DIVISION	27	Communications	*incl. abv.	$0
DIVISION	31	Earthwork	3.0%	$1,135,500
DIVISION	32	Exterior Improvements	1.0%	$378,500
DIVISION	—		1.0%	$378,500
DIVISION	—			
TOTAL CONSTRUCTION COST OF BASE BID			100%	$37,850,000

ALTERNATES:

NUMBER 1	Additional Program - 28,728 SF	$13,529,698
NUMBER 2	Additional Program - 35,462 SF	$16,701,133
NUMBER 3		

TOTAL CONSTRUCTION COST (BASE BID AND ALTERNATES) $68,080,831

ESTIMATED COST OF TESTING LABORATORY SERVICES
CD Phase only. Attach scope of services.

The foregoing includes the most common divisions of the CSI 49 Division Format. Others may be added as required.