THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

College of Medicine & Interdisciplinary Building

Programming Document
October 31, 2024

IN ASSOCIATION WITH

NEWCOMB & BOYD | MEP
PICKERING FIRM, INC | CIVIL
NV5 | AV, IT SECURITY
SLS | CODE
PALACIO COLLABORATIVE | COST ESTIMATOR

TABLE OF CONTENTS

SECTION 01

EXECUTIVE SUMMARY

PARTICIPANTS

1.0 - EXECUTIVE SUMMARY

ACKNOWLEDGMENT

HOK would like to recognize the efforts of all who contributed to the contents herein.

PARTICIPANTS

UNIVERSITY OF TENNESSEE SYSTEM
Michelle Crowder
Hans Faulhaber
Robin Hipsky
Daniel Longserre Jr.
Benjamin Luttrell
Austin Oaks
Robbie Pope

UNIVERSITY OF TENNESSEE FACILITIES & PLANNING
Shuntae Brown
Edwin Jeffres
Andrea Kolen

UNIVERSITY OF TENNESSEE STEERING COMMITTEE
Wesley Byerly
Michelle Crowder
Kelly Davis
Hans Faulhaber
Brigitte Grant
Edwin Jeffres
Andrea Kolen
Raaj Kurapati
Wendy Likes
Benjamin Luttrell
Vikki Massey
Austin Oakes
G. Nicholas Verne
Robert Wake
Qiqi Zhou

SUBCOMMITTEE - ACADEMIC
Kelly Davis
Charles Snyder
Michael Whitt
Catherine Womack

SUBCOMMITTEE - INTERDISCIPLINARY
Liz Hall
Karen Johnson
Wendy Likes
Jacen Moore
Robbie Parker
Orpheus Triplett

SUBCOMMITTEE - CLINICAL
James Beaty
Ron Cowan
Paul Wesolowski
G. Nicholas Verne

SUBCOMMITTEE - RESEARCH
Wesley Byerly
Neal Chumbler
Ramesh Narayanan
Sarah Rhoads
Sue Theus
Robert Williams
Qiqi Zhou

SUBCOMMITTEE - AUXILIARY
Edwin Jeffres
Paul "PJ" Koltnow
Raaj Kurapati
George Ninan
Charles Snyder

UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER PARTICIPANTS
Ammar Ammar
Sharlet Alexander
Ann Bailey
Mary Billstrand
Nathan Boswell
Karah Brandt
Steve Butler
Neal Chumbler
Jaida Culp
Shelby Cooper
Ronald Cowan
Laika Day
Lynn Dobrunz
Breia Dooley
Rebecca Douglas
Liz Edmundson
Matthew Ennis
Boyd Gillespie
Ann Fields
Valerie Fleming
Chyna Harpe
Cohen Harris
Teresa Hartnett
Kelly Jeffrey
Muneeza Khan
Sara Kennon
Tara Lemoine
Brandi Lewis
Tamara McGhee
Juanita McPhee
Monica Meyerhoff
Melissa Norris
John Panzer
Mansour Parsi
Elaine Pater
Tejesh Patel
Jean Perdicaris
Patricia Phelan
Leslie Phelps-Detter
Bernard Provencher
Shandra Robertson
Cynthia Russell
John Schorge
David Schwartz
Bobbie Scott
David Shibata
Hae Won Shin
Ronald South
Stephanie Storgion
Zhongjie Sun
Donald Thomason
Porsha Toney
James Walker III
Juanita Wallace-Keys
Tony Wyrick
Jarrod Young

HOK – ARCHITECTURE
Barry Abrams
Alicia Asiedu
Eriz Ezell
Chirag Mistry
Chloe Newton
Emmaline Payne
Scott Rose
Ami Shah

NEWCOMB & BOYD - MECHANICAL, PLUMBING, ELECTRICAL, AND FIRE PROTECTION ENGINEERS
Walker Jones
Paul Maximuk

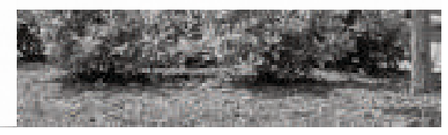
NV5 - AV, IT / TELECOM, SECURITY, ACOUSTICS
Greg Clark
Matt Letsinger
Jason Whitfield

PALACIO COLLABORATIVE - COST ESTIMATOR
Michael Palacio

PICKERING - CIVIL, SITE EVALUATION, SITE DEVELOPMENT
Harvey Matheny

SLS - CODE CONSULTING
John Caliri


THE UNIVERSITY OF TENNESSEE
HEALTH SCIENCE CENTER




THE UNIVERSITY OF
TENNESSEE
HEALTH SCIENCE CENTER

EXECUTIVE SUMMARY

1.0

The new College of Medicine Interdisciplinary Building (COMIB) at the University of Tennessee Health Science Center (UTHSC) in Memphis represents a transformative opportunity to advance the university's mission of fostering innovation, collaboration, and excellence in medical education.

Through a comprehensive programming process, HOK has engaged with university leadership, faculty, and key stakeholders in highly collaborative, interactive consensus-based workshops to re-frame a previous program to closely align with its goals and strategy for a facility that will not only accommodate the diverse needs of the College of Medicine but be learner-centric, help with attraction and recruitment of stellar learners, educators, administration and staff, but also enhance interdisciplinary collaboration across the other Colleges on campus. This program outlines a vision for a cutting-edge environment that will support the future growth of the university's goals, positioning UTHSC at the forefront of medical education.

PROJECT BACKGROUND

The University of Tennessee Health Science Center (UTHSC), based in Memphis, is a prominent institution focused on health education, research, clinical care, and public service. It is a major contributor to the healthcare industry in Tennessee and beyond. UTHSC was established in 1911 and is part of the University of Tennessee System. Its primary mission is to train health professionals to meet the health care needs of the state and the nation, with a strong emphasis on research, interprofessional education, and community engagement.

UTHSC has six colleges, each offering specialized programs in various health-related fields.

1. College of Medicine
2. College of Nursing
3. College of Pharmacy
4. College of Dentistry
5. College of Health Professions
6. College of Graduate Health Sciences

Together, these six colleges work to fulfill UTHSC's mission to improve the health of the public through education, research, clinical care, and community engagement. The institution is also actively involved in research that addresses both local and global health challenges.

The University of Tennessee - Health Science Center expects to see an increase enrollment across all disciplines. The current student population and faculty/staff has strained its physical facilities' footprint in terms of classroom space, co-curricular space, faculty/staff office space, as well as providing a need for interdisciplinary connections.

This program and program document was developed in collaboration with the UTHSC Stakeholders, the Steering Committee, Sub-Committees, UT System, and UT Facilities Teams and other campus participants through both in-person and virtual workshops, interactive fact-finding exercises, tours of existing facilities as well as in-person and online surveys.

Left: Graphical representation of COMIB facility from Madison Avenue.

Established in this Program Document are the guiding principles, design criteria, opportunities, and constraints for the design and construction for the new College of Medicine Interdisciplinary Building at the University of Tennessee Health Science Center (UTHSC). Along with a schedule of required spaces, the Program Statement outlines the requirements, functional imperatives, site and design aspirations, and preliminary estimate of construction cost. The programmatic elements consist of various modalities of instructional space, training areas that fosters interdisciplinary education, and provides space for current and future faculty and staff.

A key part of the programming exercise involved evaluating existing spaces at UTHSC to avoid duplication and ensure optimal resource utilization. HOK facilitated interactive, consensus-based workshops with UTHSC stakeholders to gather insights on current facilities and identify gaps in resources.

An important finding that emerged in evaluating the existing facilities was to avoid replicating spaces that are already well-established, particularly the advanced resources available at the CHIPS facility in Memphis. Additionally, with the newly renovated areas in the General Education Building and the imminent renovations to the gross anatomy lab at GEB, the focus is on complementing these existing resources rather than duplicating them, ensuring a more comprehensive educational experience for students.

The new COMIB facility will address deficiencies and accommodate the student and faculty population growth projections (to 2030 and beyond). While it is understood the College of Medicine, College of Health Professions, and College of Health Sciences need a home for faculty and students, UTHSC is hoping that this new interdisciplinary building fosters education and innovation across various professions.

PROCESS

This programming process included the following:

- **A Kick-Off Meeting** to review the project history, preliminary requirements, understand the vision and establish the priority goals. The Kick-Off Meeting was an interactive session in which human, technical and external factors influencing the design were discussed and defined. A 'Keep Lose Fix Create' matrix was created to establish the level of transformation desired by the stakeholders of the facility. Several design components and features were identified that are embedded in the program. A summary of the Goals/Vision session can be found in later in this document.

- **Data Gathering** of existing site conditions and design requirements.

- **Tours of existing facilities on Campus**, including the 910, 920, 930 Madison buildings, General Education Building, Lamar Alexander library etc.

- **Work Sessions with the Users** to review and confirm the functions, size and type of space required.

- **Development of a Cost Model** to align the Program (gross square feet) that can be constructed within the budget (Stated Cost Limitation).

These sessions emphasized the importance of collaboration and interdisciplinary learning. Participants shared their experiences, discussing the strengths and weaknesses of current spaces, which informed the program of the new facility. This thorough evaluation process aimed to create a comprehensive program that enhances educational offerings without redundancy.

Through numerous workshops and meetings, a comprehensive program that includes the College of Medicine and various professions was developed. The new building will be approximately 275,000 (GSF), with programmed net square feet including the following categories:

PROGRAM SUMMARY

Public & Amenity Spaces	16,935
Academic	38,300
Interdisciplinary	17,000
Workplace	55,738
Shared Workplace	20,852
Building Support	1,100
Total Net Square Feet (NSF)	**149,925**
Total Gross Square Feet (GSF)	275,000

COST ESTIMATE

Based on the program requirements, site development, and existing conditions, a total project budget of $350 million was developed. In addition, to the estimate of construction, the programming and planning team developed an estimate and budget for supplementary project costs. The cost established the maximum GSF allowance, guided the preliminary massing and architecture character, and established a constraint for programmatic elements. Based on programmatic elements, the total cost of construction is **$242,983,461.**

- **Cost of Construction - Building & Site:** $242,983,461.
- **MACC (Maximum Allowable Construction Cost):** $255,132,634.
- **Additional Project Cost:**
  - Furniture, Fixtures, and Equipment Cost: $17,355,390.
  - AV/IT/Network: $20,355,985.

GUIDING PRINCIPLES

The aspiration for the project is not solely providing a new building for the College of Medicine, but to create an inclusive facility to aid in connections to the various colleges. In addition, the new program should dually foster successful learning environments for students and generate a dynamic, yet efficient workplace to attract and retain stellar faculty and staff.

During the numerous workshops in conjunction with University of Tennessee Health Science Center committees the team identified their Guiding Principles for the project. The following is a summary of these priority goals:

GUIDING PRINCIPLES

- Forge an **identity** and **welcoming home** for the **College of Medicine**.
- A strong commitment to an **interdisciplinary** approach to support the University of Tennessee Heath Science Center's mission and vision.
- A place that fosters **collaboration** and enhances the vibrant **culture** between colleagues and learners.
- Establish a state-of-the-art facility that **attracts and recruits learners**, faculty/staff, and researchers.
- Design a building that meets today's needs while **seamlessly adapting to the needs of the future.**

Locations of (3) of site options.

SITE OPTIONS

In concurrence with developing the program of space requirements, HOK was asked to evaluate alternative sites for the project. Given three sites, we conducted a survey that established a weighted criteria to highlight the priorities. In addition, HOK worked with University of Tennessee Health Science Center (UTHSC) to analyze and evaluate each site's physical and functional characteristics – constraints and opportunities. Based on UTHSC's review and evaluation, the Site 3 located at Madison and Dudley was selected.

Left: Graphical representation of COMIB facility from green space of TriMetis building.

CONSTRUCTION AND DESIGN SCHEDULE

With Completion of this Program in October 2024, and funding approval in Spring of 2026, the new building is expected to start design in October 2026 and completed and occupied in the fourth quarter of 2030.

UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER - COLLEGE OF MEDICINE INTERDISCIPLINARY BUILDING

	TASK	2026			2027											2028											2029				2030				2031			
		OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
1	PROGRAM VERIFICATION																																						
2	SD																																						
3	DD																																						
4	CD																																						
5	EARLY RELEASE PACKAGE - SITE																																						
6	EARLY PERMITTING / CONTRACTING																																						
7	EARLY CONSTRUCTION START																																						
8	PERMITTING / CONTRACTING																																						
9	CONSTRUCTION																																						
10	OCCUPY																																						

START CONSTRUCTION

MID-POINT OF CONSTRUCTION

Right: Graphical representation of COMIB facility from Madison Avenue.

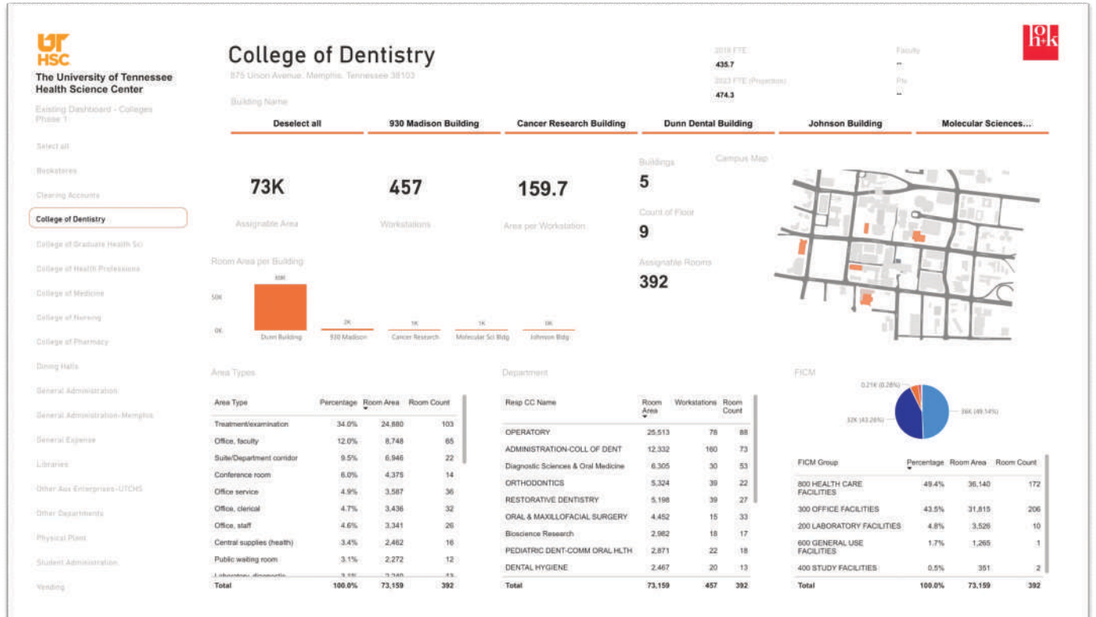
UTILIZATION STUDY

Alongside the program refresh for the University of Tennessee Health Science Center, the university is conducting a concurrent utilization study of the entire campus. Working with the HOK team, they aim to determine the best use of existing space, with an emphasis on the research and clinical needs, since it is currently not included the College of Medicine Interdisciplinary Building program.

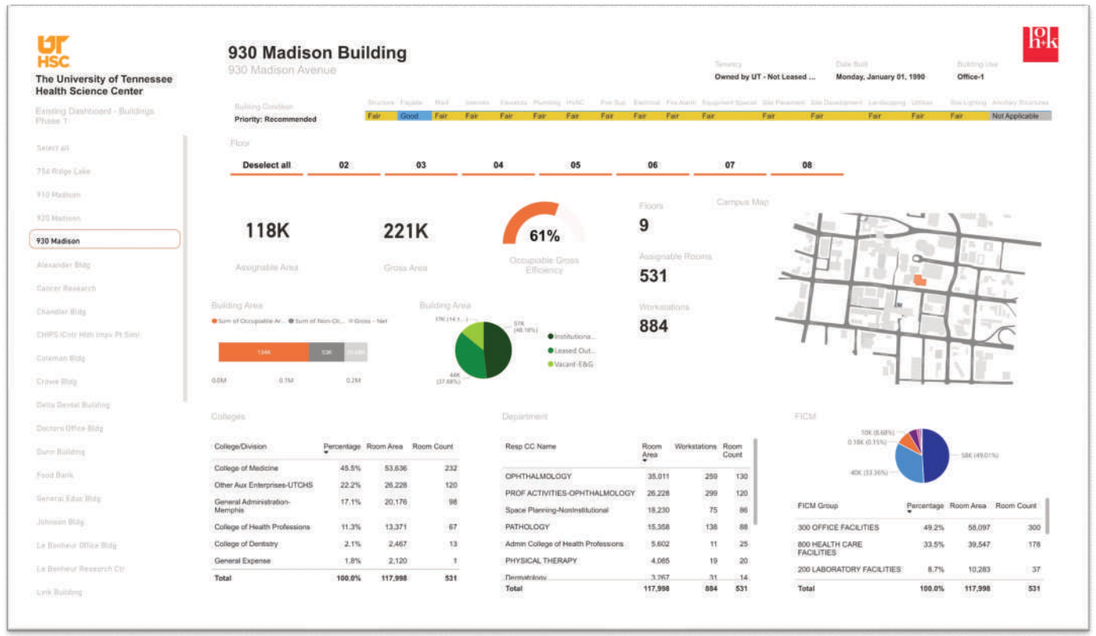
HOK is presently in the data-gathering phase, utilizing tours and existing documentation to understand the campus layout. Additionally, the team is developing various dashboards to effectively communicate their findings.

The resulting information will be compiled into a strategic plan, highlighting under and over-utilized space, and serving as a resource for future improvements on campus.

COLLEGE DASHBOARD



BUILDING DASHBOARD




THE UNIVERSITY OF
TENNESSEE
HEALTH SCIENCE CENTER

SECTION 02

PROJECT OVERVIEW + EXISTING CONDITIONS

2.0

PROJECT OVERVIEW

THE UNIVERSITY OF TENNESSEE - MEMPHIS

Established in 1911, the University of Tennessee's Memphis campus is committed to health science education and research. In short time, the emerging dentistry, medicine, and pharmacy programs were thriving. Eventually, new healthcare profession programs were added. These healthcare programs, in both undergraduate and graduate levels, evolved, flourished, until ultimately became colleges themselves – giving rise to the University of Tennessee Health Science Center.

As a fixture of the multi-campus, statewide University of Tennessee System, The University of Tennessee Health Science Center (UTHSC) cultivates future health care providers, as well as equips the next generation of leading healthcare researchers. UTHSC has been recognized both locally and nationally, for providing exceptional research, remarkable education, and distinguished service to students within the state of Tennessee. In 2010, U.S. News & World Report listed the College of Pharmacy 17th among American Pharmacy schools. Dating back to 1898, the College of Nursing is among the oldest nursing colleges in the state in Tennessee. Yet, as the largest medical school in the state of Tennessee, UTHSC's College of Medicine doesn't have a named building.

Student and faculty extrapolated growth is projected to increase by 26% within the next 5-15 years. Flexible classrooms, interprofessional training areas, faculty offices, and support spaces will back the growth and development of various programs. The program was created within the boundaries of 275,000 GSF to meet this demand. The new College of Medicine Interdisciplinary building is critical to support their education, ensure continued funding that benefits UTHSC, and attracting new learners/faculty.

Many student-focused programs and tenants will be relocated and housed within the new College of Medicine Interdisciplinary Building. The building will serve as an attractor faculty and learners but solidify the identity for the College of Medicine. The new building intends to provide a space that enhances the existing culture, as well as promote synergy among the different colleges. The goal of this program document is to outline the qualitative and quantitative requirements for the new building.

"Recruit the top students and faculty."

"Would love this to be a destination campus and healthcare center."

"… flexible, contemporary learning environment for medical students…"

"Improve the health outcomes for the people of Tennessee."

"… enhance the experience for students…"

2.1

PROCESS

PROGRAMMING

The programming process between HOK and the UTHSC stakeholders and Steering Committee, UT System, and Facilities Team was consensus-based, collaborative and concentrated around exploring the critical needs of its future inhabitants.

From an architectural perspective, programming is defining the desired basic needs for a building. It is the first step in a design process that seeks to gather enough information to define, interpret, and state the "problem". The solution to this "problem" informs the design and construction of a building.

The interactive programming process was centered on recognizing University of Tennessee Health Science Center's ideals and aspirations for the project. The programming approach brought together University Stakeholders with HOK's programming team to establish the hierarchy of needs, understand education values, establish milestone dates, evaluate budget constraints and opportunities, as well as consider new options for growth and innovation.

The themes confronted were as far ranging as understanding existing conditions to exploring new pedagogies and learning environments.

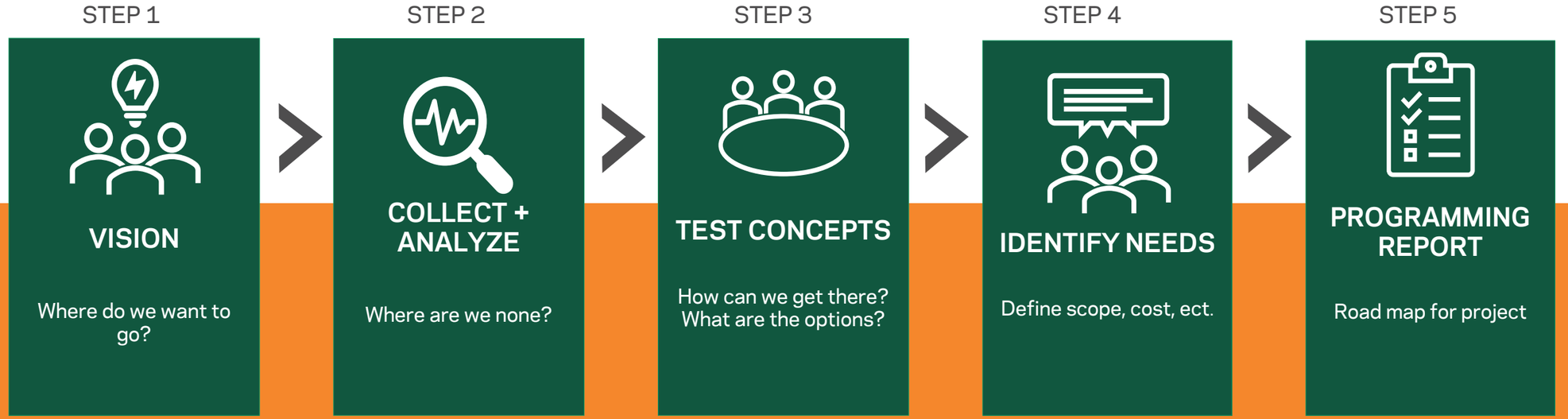
PROBLEM SEEKING METHODOLOGY

HOK's Problem Seeking Methodology of distinguishing the programmatic needs of the University of Tennessee Health Science Center, was a well-defined five step process devised to achieve the following:

- **Vision:** Establish goals. What does the University of Tennessee's Health Science Center want to achieve, and why?
- **Collect and Analyze Facts:** Where are we now? What are the existing conditions?
- **Test Concepts:** How does UT Health Science Center want to achieve its goals?
- **Identify Needs:** How much will it cost? How large is it? What is the quality/character of the space?
- **State the Problem/Program Report:** What are the significant conditions and the general directions the design should take?

This approach is not intended to incorporate any "design". Programming data contained in this document should be used as guidelines during concept or schematic design and beyond.

HOK'S PROBLEM SEEKING METHODOLOGY



STEP 1: VISIONING SESSION

The visioning workshop's focus is to establish what the University of Tennessee Health Science Center wants to achieve, and why.

STEP 2: COLLECT + ANALYZE

A key goal for the fact-finding and gathering workshops were data collection and evaluation.

STEP 3: TEST CONCEPTS

The principle goals of the concepts' workshops were to develop preliminary program recommendations and concepts.

STEP 4: IDENTIFY NEEDS

These workshops presented solutions and recommendations to all stakeholders. There were meetings to confirm the space requirements, s building systems criteria, and sustainability goals.

STEP 5: PROGRAMMING DOCUMENT

The final programming document delivers proposed results to identify what are the significant conditions and the general direction the design of the building should take.

The final report also specifies space requirements and other technical information that should be included in the design.

THE PROCESS

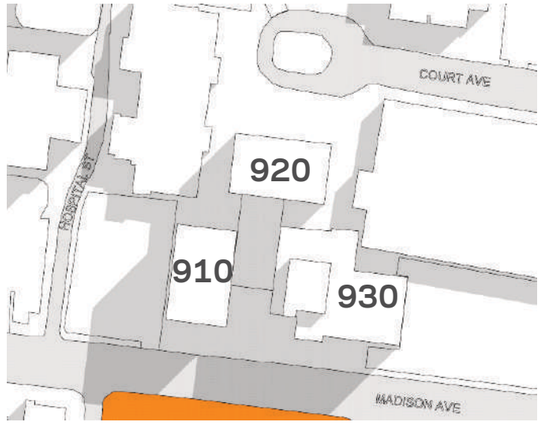
HOK led visioning and data collection sessions with the Steering Committee, key Stakeholders, and Users from UTHSC which contributed to a setting for the collective to share their concerns, goals and future vision for the project. These sessions centered on determining the objectives, as well as specific issues (function, aesthetics, maintainability, budget, schedule, etc.) must be realized and undertaken to satisfy each Stakeholder's personal definition of a successful project.

2.2

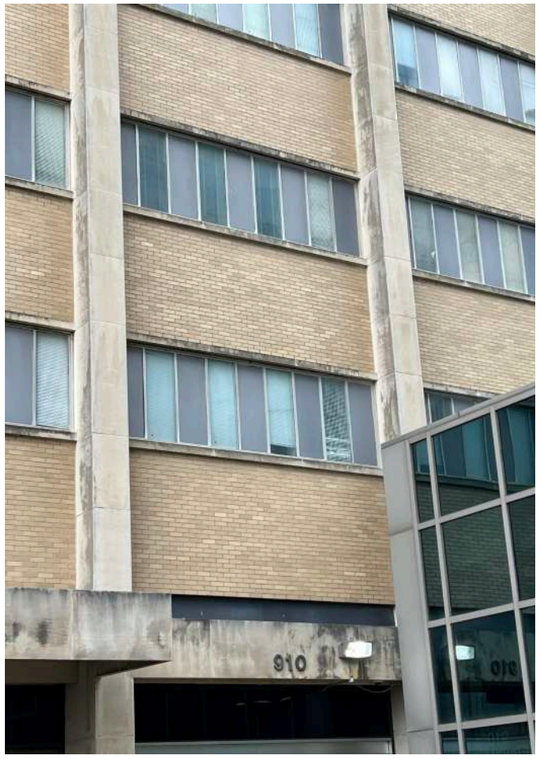
EXISTING CONDITIONS

910, 920, AND 930 MADISON

HOK conducted a series of visits to multiple buildings at the University of Tennessee Health Science Center (UTHSC) in Memphis to gain a thorough understanding of the existing spaces. This hands-on assessment allowed the programming team to observe the functionality, design, and spatial dynamics of the facilities currently in use. These visits were essential to create an informed and effective program for the new building for the College of Medicine Interdisciplinary building, ensuring that the program would meet the unique needs of UTHSC's various colleges, departments and programs and foster collaboration across disciplines.



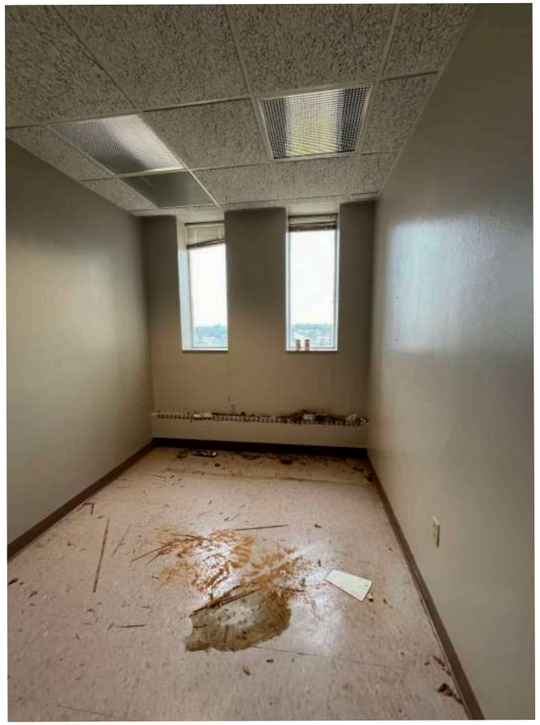
The current situation of the existing Madison complex buildings, especially the condition of the 910 and 920 Madison Avenue buildings at UTHSC reflects challenges in accommodating the growing needs of the School of Medicine and associated programs. These facilities are outdated and lack sufficient space for modern educational and clinical training requirements. They do not effectively support interdisciplinary collaboration, limiting the potential for innovative learning experiences. The absence of a centralized home for the School of Medicine, Graduate Health Sciences, and Health Professions further exacerbates these issues, highlighting the urgent need for a new interdisciplinary

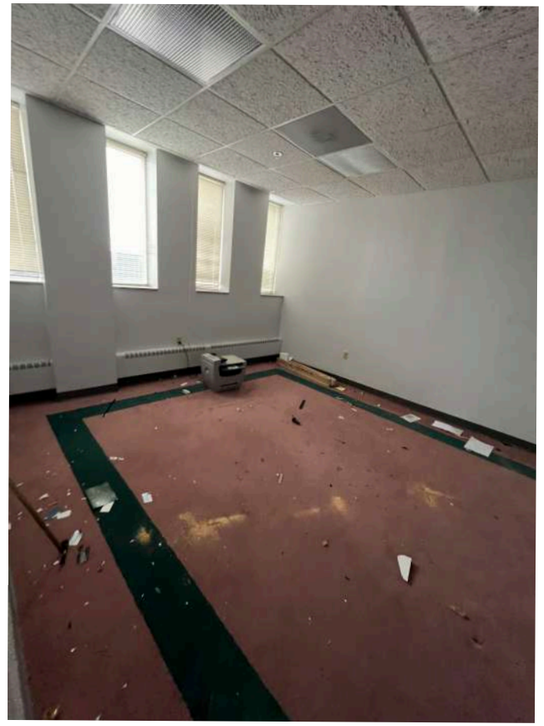


910 MADISON

920 MADISON

930 MADISON



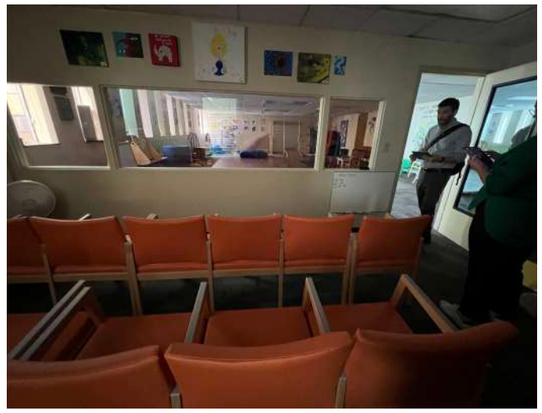


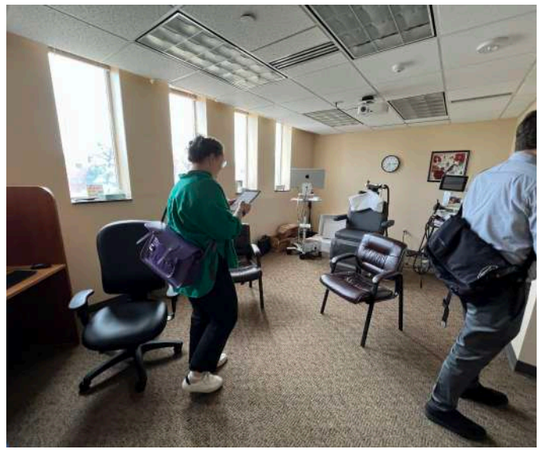
910 MADISON

Primary Space Types
- Offices
- Conference Rooms
- Clinical Suites
- Waiting Rooms
- Classrooms

The **910 Building** currently houses the majority of the College of Medicine's faculty offices, along with several small clinical suites. Many of the offices, originally designed as hotel rooms, are now inadequate for the needs of faculty and staff, necessitating their relocation. Additionally, as the 910 Building approaches the end of its useful life, its functions will either be integrated into the new interdisciplinary building or reassigned to more suitable locations elsewhere on campus to ensure the College's operational needs are met effectively.

910 MADISON





920 MADISON

Primary Space Types:
- Offices
- Conference Rooms
- Clinical Suites
- Waiting Rooms

Like **910, the 920 building** contains faculty offices, shared meeting rooms, and various small clinical suites. Also in relatively poor condition ,920 will soon be demolished. Another key observation is that the current building is not designed for its intended use. Hence, many program areas are inefficient and underutilized.

920 MADISON

930 MADISON

Primary Space Types
- Offices
- Conference Rooms
- Clinical Suites
- Waiting Rooms
- Auditorium

The 930 Building contains a variety of clinical office spaces, waiting areas, and large lecture halls. While it is not yet nearing the end of its life, it does require renovation and maintenance. In alignment with UTHSC's guidance, the plan is to retain the College of Medicine's clinical functions within this building. By consolidating clinical offices and suites here, a direct relationship can be established with the nearby new interdisciplinary building. The future growth and direction of the 930 Building will be further evaluated as part of the utilization study.

930 MADISON

THE PAGE IS INTENTIONALLY LEFT BLANK.

SECTION 03

VISIONING + GOALS

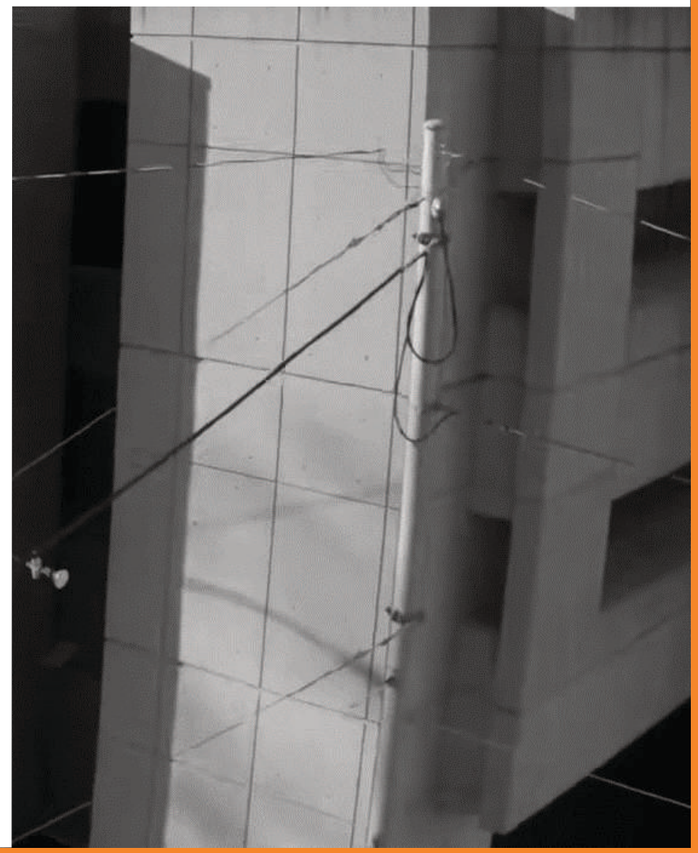
3.0

VISIONING

Visioning exercises were a critical component of HOK's programming process for the University of Tennessee Health Science Center's (UTHSC) new College of Medicine Interdisciplinary Building. These exercises occurred in collaborative workshops that brought together key stakeholders, including faculty, administrators, and staff, to explore goals, aspirations, and priorities for the new facility. By facilitating these discussions, HOK aimed to ensure that the program is aligned with the university's educational mission, promotes interdisciplinary collaboration, and accommodates future growth.

The visioning process helps create a shared understanding of the building's role in fostering innovation and excellence in medical education and resulted in establishing guiding principles for the project. The following pages are visual examples of the evolution, success indicators, and supporting vision insights that developed during the interactive exercises.


EVERYWHERE
YOU LOOK,



3.1

HEADLINE EXERCISE

This exercise requires users to imagine a news article or headline to depict bold accomplishments or transformative outcomes that define a successful project. Users were told to fill in the dashed boxes with headlines, and grey boxes with their thoughts of how the future building would impact the community. provide information that gives the HOK design team more perspective concerning the use of the building.

"…**enhance** education, patient care, research and outreach…."

"… teach the brightest students through **cutting-edge** technology."

"… fosters **translation research** among medical school facilities."

Daily Memphian
TRUTH IN PLACE.

A Testament to the Vision of Healthy Tennesseans - Thriving Communities - the State-of-the-Art - COM Interdisciplinary Building

Tennessee invests in promoting health education through the completion of its new UT Health Science Center College of Medicine - Interdisciplinary Health Science Building.

Supporting high quality education program, clinical experience, and cutting-edge research. The new UT Health Science Center - Com Interdisciplinary sets the standard for future investment in the living Tennesseans and economic development.

USER 1

Daily Memphian
TRUTH IN PLACE.

UT-COM Presents Interdisciplinary State-of-the-art Building

State-of-the-art COM building fosters translational research among medical school facilities.

New COM building fosters Interdisciplinary Professional Education

UT College of Medicine graduates assemble in new innovative teaching facility.

USER 2

Daily Memphian
TRUTH IN PLACE.

Breaking Barriers: A Building for the Future of Healthcare

A building for students crossing disciplines.

State-of-the-art learning space to develop future healthcare teams.

Pulling together - advancing collaborations advancing science.

UT Health Science Center Building towards Healthy Tennesseans, Thriving Communities.

Building to put students first.

USER 3

Daily Memphian
TRUTH IN PLACE.

UT Health Science Center Opens; COM & Interdisciplinary Bldg.

New space provides state of the academic and learning space for medical and other students. Serves as identity and home for the COM.

Positivity UTHSC for continued growth; Demonstrates firm partnership and leading MEM company;

Supports the expansion of ROH as the regions academic and medical center.

USER 4

3.2

KEEP / LOSE / FIX / CREATE

The “Keep / Lose / Fix / Create” exercise required users to reevaluate their current spaces to inform the design of the new College of Medicine Interdisciplinary Building. In this exercise, Stakeholders and users are asked to provide and provide feedback on what works well, what should be eliminated, what needs improvement, and what new elements should be introduced. Using the ranking system of “Keep”, “Lose”, “Fix”, and “Create”, characteristics, details, and comments are ranked and documented. Information compiled from this exercise greatly impacts and drives the programming.

“**World class** medical facility.”

“… **draws students** from all over the state, to Memphis.”

“Pulling together, advancing collaborations, advancing **science**.”

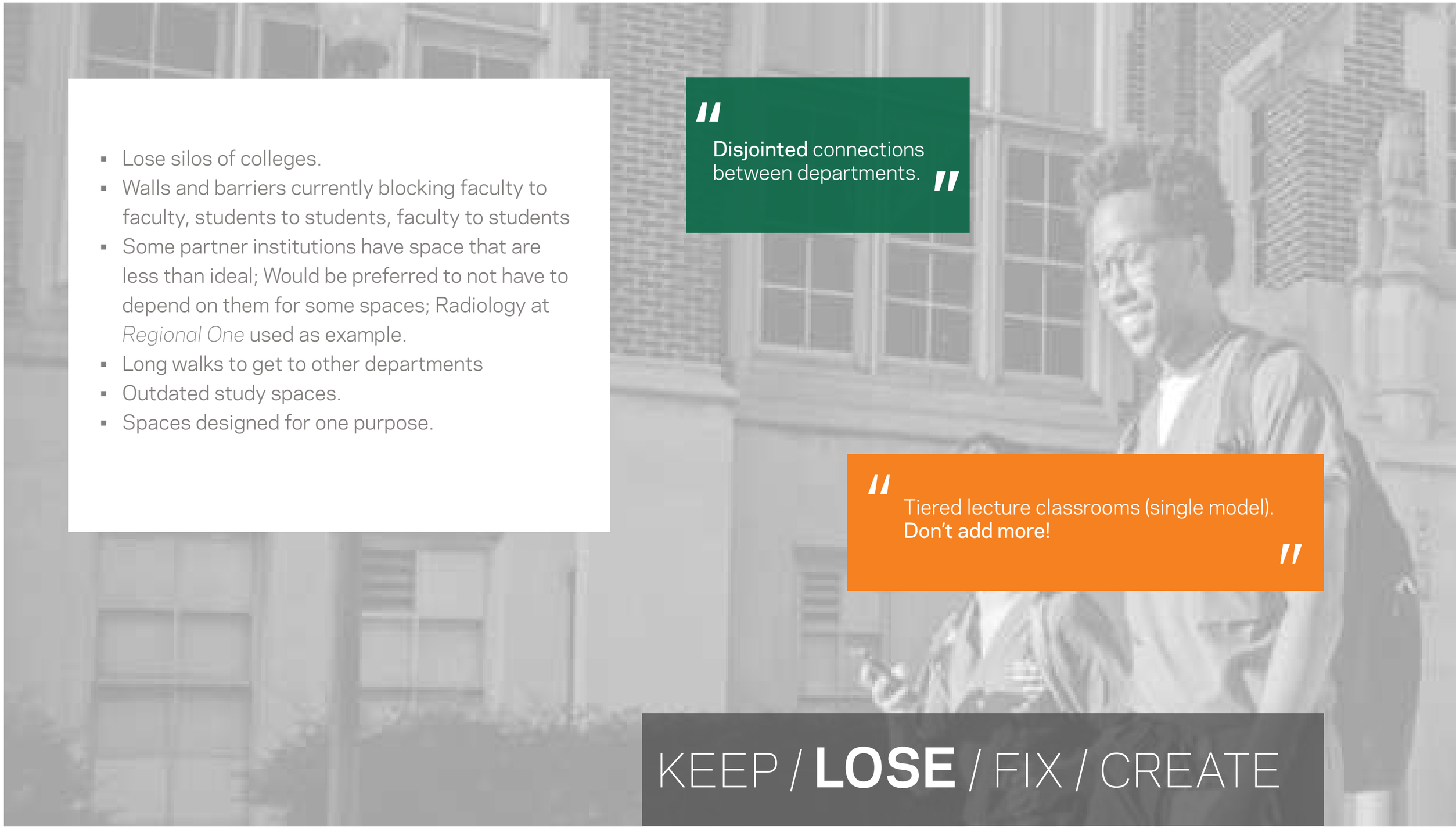
- All administrative staff co-located.
- Keep reputation that they are educating and training for the State of TN.
- TCRB research facilities are good.
- Students help each other vs. in competition.
- Keeping simulation in CHIPS; currently very effective to have simulation co-located in state-of-the-art facility.
- Current spaces are doing well for IPE simulation.

> "Keeping the student culture of **helping** each other at UTHSC."

> "Fantastic group of faculty, residents, fellows, and students. Keep the **mission oriented** and **mission** driven culture."

KEEP / LOSE / FIX / CREATE

- Lose silos of colleges.
- Walls and barriers currently blocking faculty to faculty, students to students, faculty to students
- Some partner institutions have space that are less than ideal; Would be preferred to not have to depend on them for some spaces; Radiology at *Regional One* used as example.
- Long walks to get to other departments
- Outdated study spaces.
- Spaces designed for one purpose.



"**Disjointed** connections between departments."

"Tiered lecture classrooms (single model). **Don't add more!**"

KEEP / **LOSE** / FIX / CREATE

- Biomedical engineering located too far away and needs better identity; becoming much more interdisciplinary.
- Need decent building for administration.
- Safe connections between facilities (i.e., tunnels or bridges).
- Address parking issues.
- The student study spaces - need space that is solely dedicated to the COM.
- Most teaching spaces max around 100; Need some larger spaces up to 200; Event space / conference space.

"**Improve recruiting**. Better recruiting of faculty through showing focus on and engagement with students."

"CHIPS is highly used and multidisciplinary; M1 and M2 students sometimes have **trouble scheduling**"

KEEP / LOSE / **FIX** / CREATE

- A space to be proud of displaying to prospective students, faculty, etc. Recruiting and general (donors, alumni)
- Dining facilities. Bicycle and shower facilities.
- Synergies between interdisciplinary research.
- Need a space where students can hangout and interact - lounge and respite area with coffee.
- Flexibility to support spectrum of teaching styles.
- Collaborative Space

"**Active learning**; students to cluster in groups, move furniture around, write on marker boards, synchronous with faculty during class."

"**Common area** for students; area for studying around other students."

KEEP / LOSE / FIX / **CREATE**

> "Clinical footprint sized that **multiple disciplines** could be in same space."

> "Medical students need a **home** and **identity**."

- 8-10 bed GCRC (Gen Clinical Research Center) suite (clinical trials).
- Create a space where M1 & M2 can have combined sessions and lectures.
- Areas dedicated for the four houses - named after famous alumni.
- Bioinformatics and epidemiology studies need computer visualization lab.
- Space for new programs: Cardiac Rehabilitation, Audiology, and Clinical Nutrition.
- Dry labs – computer study with community participants; Informatics; collaboration space where students could go and work with professors

KEEP / LOSE / FIX / **CREATE**

3.3

GUIDING PRINCIPLES

The Guiding Principles build the goals and vision that UTHSC leadership and HOK programming team established, resulting from a series of visioning exercises. Overall, the Guiding Principles shaped the foundation of all decision making, and were incorporated when programming each space, while governed by the ideas distilled from HOK, user, and stakeholder meetings.

Guiding principles play a crucial role, as they establish a clear foundation for future building and construction phases. These principles outline UTHSC's core values, goals, and priorities and should drive the design and development process, ensuring that all decisions align with the long-term vision for the project. These will help maintain focus throughout the design and construction stages, and serve as a framework to ensure that the facility meets both current needs and future growth, creating a cohesive plan from concept to completion. concept to completion.

"**Visibility** and **collaboration** for College of Medicine."

"**Flexible**, contemporary learning environment for medical students."

"... **destination** campus / healthcare center..."

Forge an **identity** and **welcoming home** for the **College of Medicine**.

A strong commitment to an **interdisciplinary** approach to support the **University of Tennessee Health Science Center** mission and vision.

A place that fosters **collaboration** and enhances the vibrant **culture** between colleagues and learners.

Establish a **state-of-the-art** facility that attracts and recruits learners, faculty/staff, and researchers.

Design a building that **meets today's needs** while **seamlessly adapting** to the needs of the future.

THE PAGE IS INTENTIONALLY LEFT BLANK.

SECTION 04

PROGRAMMING

4.0

PROGRAM OVERVIEW

The University of Tennessee Health Science Center intends to improve the field of healthcare, as well as the health of Tennesseans, by strengthening and amplifying advancement of medical education. By providing curated exemplary education and esteemed service to students and collaborators, within and outside the larger community, UTHSC has become a locally and nationally recognized powerhouse.

UTHSC's College of Medicine will be housed within the new building, located between Madison and Union Avenues. The goal of this program document is to establish the qualitative and quantitative requirements for the building so that the department could be housed proximally, collaborate effectively, and ensure successful student outcomes.

The 10-year FTE for the College of Medicine is expected to grow close to 3%. New flexible classrooms, faculty offices, formal and informal collaboration spaces, and support spaces will be created in the new building of the College of Medicine Interdisciplinary Building and provide over 275,000 gsf of space to help meet this demand. The space is critical to support their growth in undergraduate and graduate programs, ensuring continued funding that benefit the department and the University, and attracting new faculty to grow the department.

More than **3,100 students** in Memphis, Knoxville, Chattanooga, and Nashville.

More than **1,416 residents and fellows**.

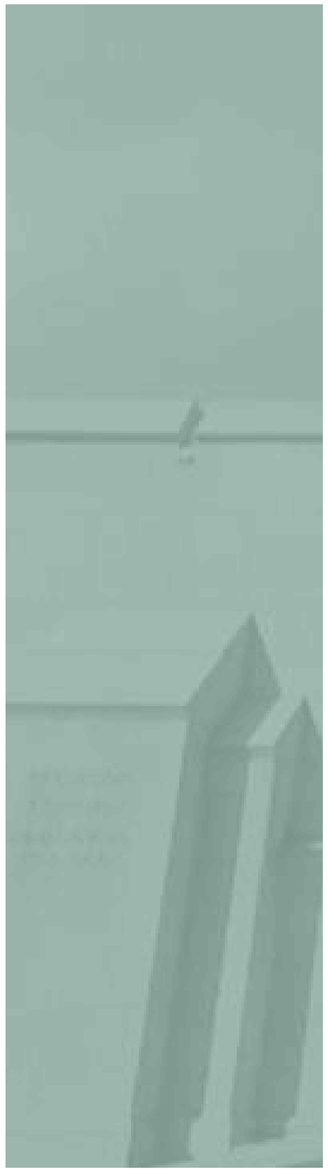
Over **$100 million** in grant and contract award in FY2023.

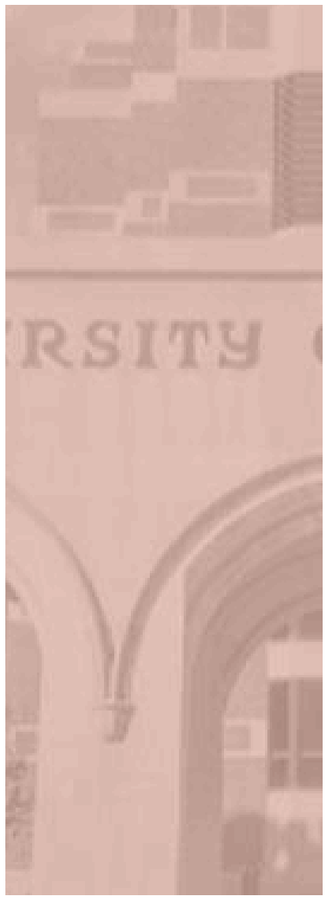
$56 million in Federal Research funds.

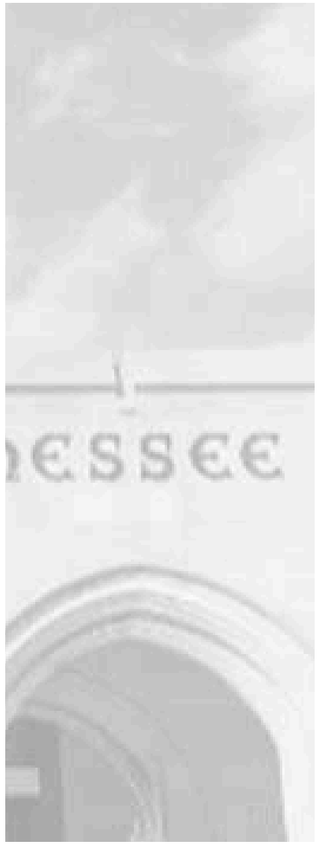
#18 in Most Graduated Practicing in Medically Underserved Areas*

Serve as **#24** in Primary Care*

-U.S. News & World Report





4.1

PROGRAM SUMMARY

The goals of the University of Tennessee Health Science Center were a centralizing component when generating the program for the new building. It reflects the curriculum, pedagogy, and academic goals of UTHSC, gleaned and compiled during the programming meetings.

Programmatic spatial needs are tracked by activity and space type in an effort to identify synergistic relationships across programs and departments. This program is composed and tracked in the following buckets:

- **Public & Amenity Spaces** - Comprising spaces that are common /shared by most occupants of the building. It includes interdisciplinary learner gathering and study spaces.
- **Academic** - Comprising scheduled classrooms, teaching spaces and support
- **Interdisciplinary Specialty Education** – Comprises spaces for interprofessional, interdisciplinary collaborations based in experiential learning as well as external partnerships.
- **Workplace** – Offices for the Deans, faculty, administration, staff etc.
- **Logistics, Building Support & Systems** - Spaces for building infrastructure, MEPFP systems etc.

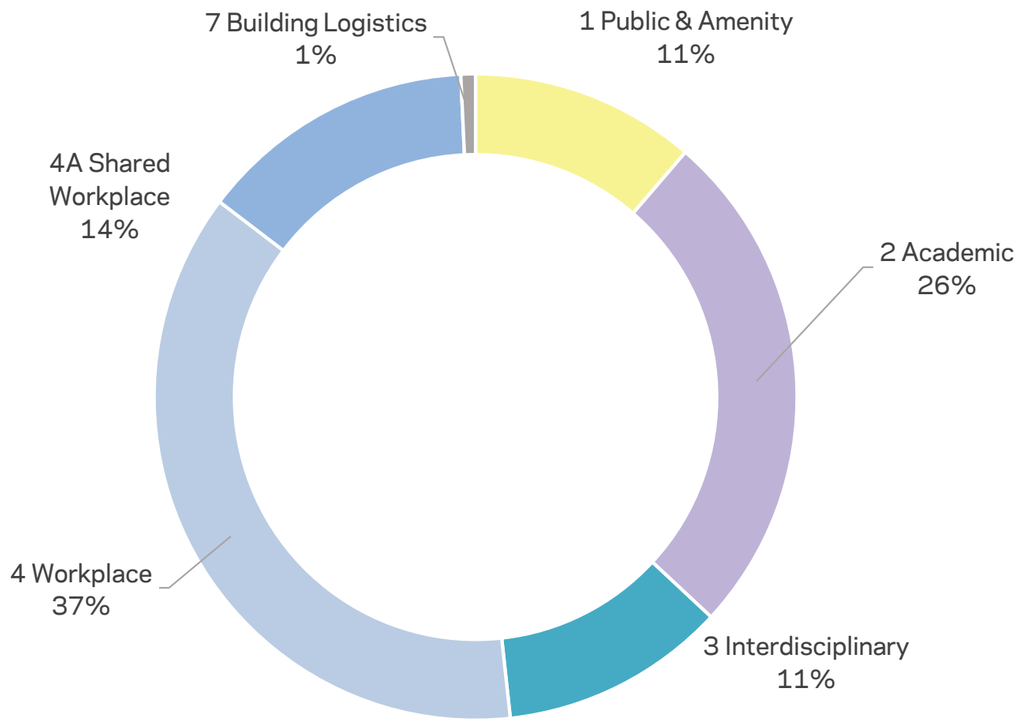
SUMMARY

On the adjacent page is the overall summary of each space type and associated net square footage. A 55% grossing percentage has been utilized for the purpose of this study to ensure collaboration and interaction spaces are celebrated, in keeping with guiding principles and program drivers.

Overall, the program aims to:

- Provide a state-of-the-art interdisciplinary building to house all learner-centric medical and health science programs.
- Create collaborative learning environments, and experiential, multi-purpose spaces that promote teamwork among students from various disciplines. Facilitate active learning, small-group based classrooms infused with technology
- Enhance student support services and amenities, fostering a vibrant academic community.
- Collaboration and meeting spaces, as well as office and workplaces, will effortlessly weave in features to facilitate communication, collaboration, while cultivating recruiting and retention.

PROGRAM SUMMARY



PROGRAM AREA ALLOCATION

Space Type	Proposed New Total NSF
1 Public & Amenity	16,935.00
2 Academic	38,300.00
3 Interdisciplinary	17,000.00
4 Workplace	55,738.00
4A Shared Workplace	20,852.00
7 Building Logistics	1,100.00
Grand Total	**149,925.00**

4.2

PROGRAM SCENARIO MAPPING

HOK developed multiple programmatic scenarios for the COMIB building, each reflecting different philosophical approaches to space allocation and program priorities. These scenarios varied in their emphasis on workplace, clinical, and interdisciplinary functions, offering distinct visions for how the building could support its users. Some scenarios prioritized workplace environments, optimizing office and collaboration spaces for productivity and flexibility. Others placed a heavier focus on clinical spaces, ensuring comprehensive support for patient care and medical functions. Interdisciplinary models integrated workspaces, and interprofessional functions, fostering collaboration across departments. Each scenario explored the correlation between these elements to support the evolving needs of the program.

- **Scenario 1:** Workplace Focused
- **Scenario 2:** Interdisciplinary Focused
- **Scenario 3:** Clinical Focused
- **Scenario 4:** Balanced Approach

PROGRAM SCENARIOS

This diversity of options facilitated open discussions among stakeholders, helping to align the building's design with the institution's broader vision.

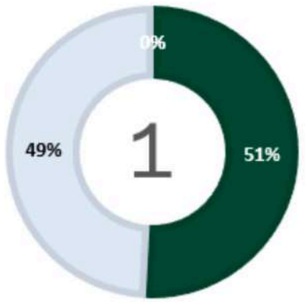
By providing these clear alternatives, UTHSC was empowered to evaluate the trade-offs between different strategies and choose an approach that best suited their goals. The flexibility of the scenarios gave them the freedom to refine and select a balanced solution that optimally integrated the diverse functions of the building. This collaborative and inclusive process ensured that all voices were considered, fostering broad buy-in across the institution.

UTHSC stakeholders unanimously chose the interdisciplinary approach, recognizing its potential to promote collaboration, break down silos, and create a more integrated environment. By blending workplace, interdisciplinary, and academic spaces, this approach balanced the needs of various users, including students, faculty, and staff across multiple colleges. Stakeholders saw this as a strategic opportunity to foster greater interaction between departments, enhancing educational outcomes.

The interdisciplinary model also aligned with UTHSC's goals of providing student-centric spaces, supporting faculty recruitment and retention, and creating a unified home for the College of Medicine. This approach allowed for flexible spaces that could evolve with the needs of students and faculty while encouraging cross-disciplinary connections. It was seen as the ideal way to cultivate a collaborative atmosphere, one that reflects the institution's commitment to innovation and academic excellence.

SCENARIO 1
Workplace
Focused

Includes:
Core (76,250nsf)
Workplace (73,750nsf)

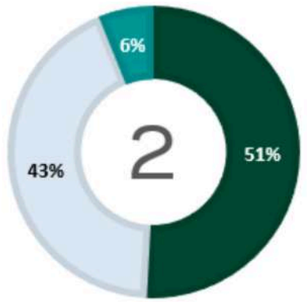


Workplace
focused

Spaces	Scenario 1 Area - NSF
Core	76250
Workplace	73,750
Interdisciplinary	0
Clinical Research	0

SCENARIO 2
Interdisciplinary
Focused

Includes:
Core (76,250nsf)
Workplace (64,600nsf)
Interdisciplinary (9,150nsf)

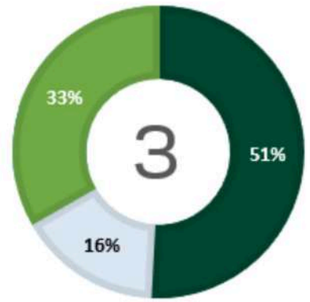


Interdisciplinary
focused

Spaces	Scenario 2 Area - NSF
Core	76250
Workplace	64,600
Interdisciplinary	9,150
Clinical Research	0

SCENARIO 3
Clinical Research
Focused

Includes:
Core (76,250nsf)
Workplace (23,750nsf)
Clinical Research (50,000nsf)

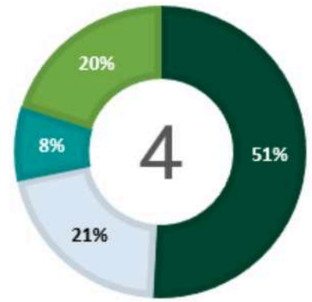


Clinical Research
focused

Spaces	Scenario 3 Area - NSF
Core	76,250
Workplace	23,750
Interdisciplinary	0
Clinical Research	50,000

SCENARIO 4
Balanced

Includes:
Core (76,250nsf)
Workplace (31,400nsf)
Interdisciplinary (3,200nsf)
Clinical Research (30,000nsf)



Balanced

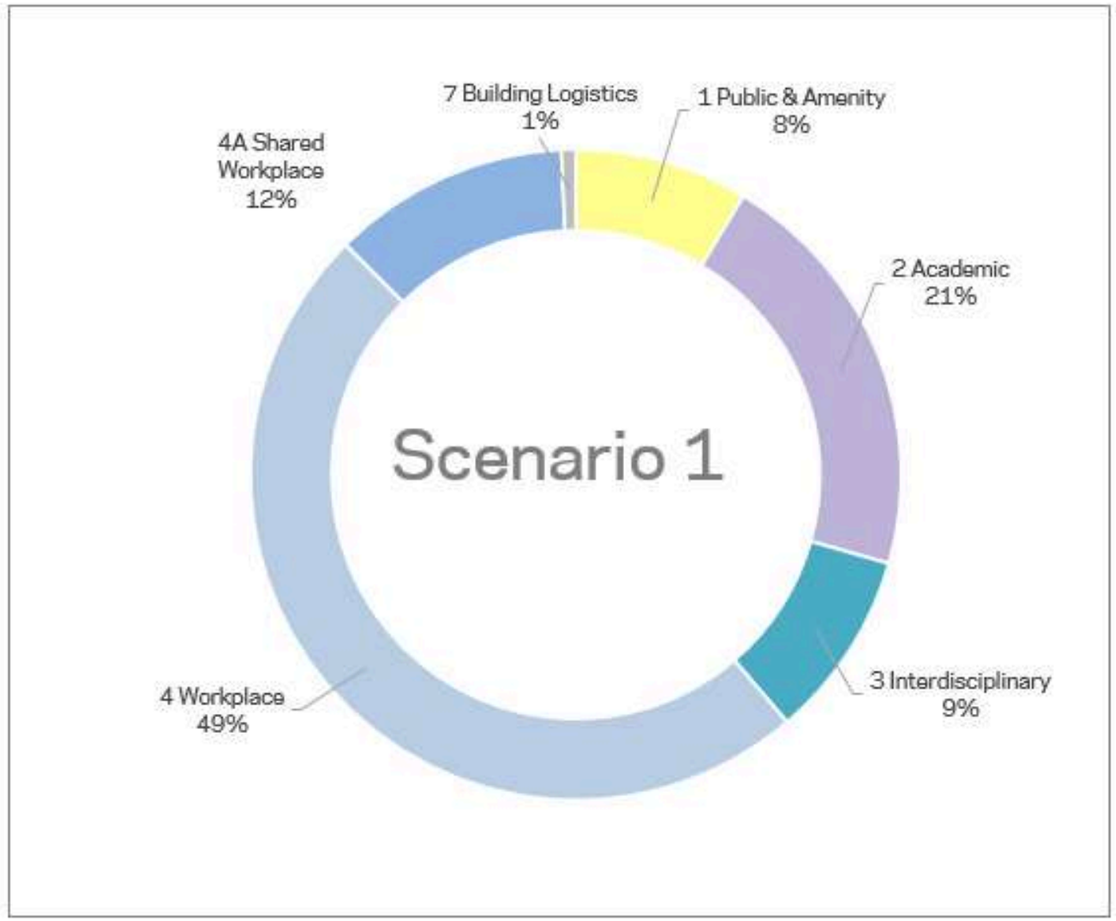
Spaces	Scenario 4 Area - NSF
Core	76,250
Workplace	31,400
Interdisciplinary	12,350
Clinical Research	30,000

PROGRAM OPTIMIZATION SUMMARY : **SCENARIO 1**

Scenario 1
Workplace Focused

- Workplace - Approx. 1,200 people (480 enclosed, 720 workspaces)

Space Type	Proposed Total NSF
1 Public & Amenity	13,465
2 Academic	32,460
3 Interdisciplinary	14,612
4 Workplace	76,146
4A Shared Workplace	18,422
7 Building Logistics	1,100
Grand Total	**156,205**

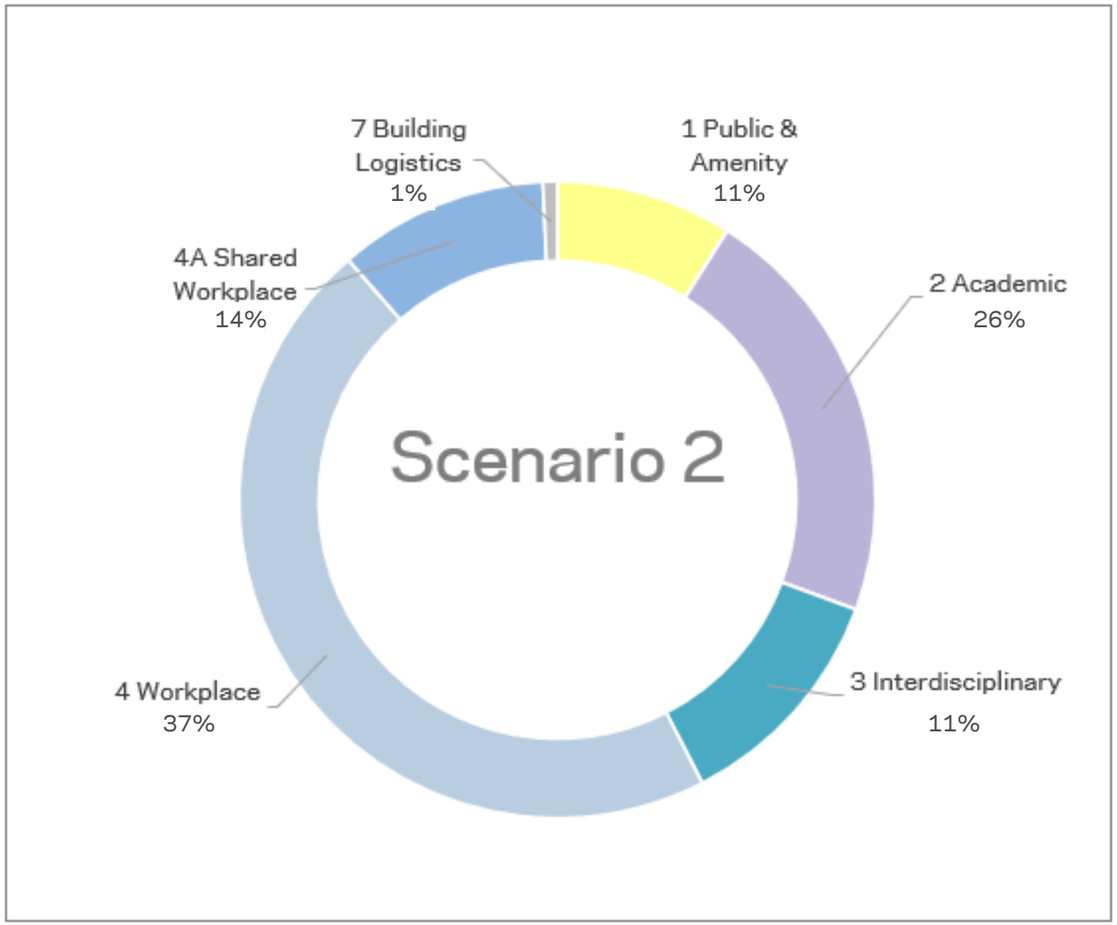


PROGRAM OPTIMIZATION SUMMARY : **SCENARIO 2**

Scenario 2
Interdisciplinary Focused

- Interdisciplinary – Health Incubator, Technology Innovation, Student Health Services
- Workplace - Approx. 600 people (100 enclosed, 580 workspaces)

Space Type	Proposed New Total NSF
1 Public & Amenity	16,935.00
2 Academic	38,300.00
3 Interdisciplinary	17,000.00
4 Workplace	55,738.00
4A Shared Workplace	20,852.00
7 Building Logistics	1,100.00
Grand Total	**149,925.00**

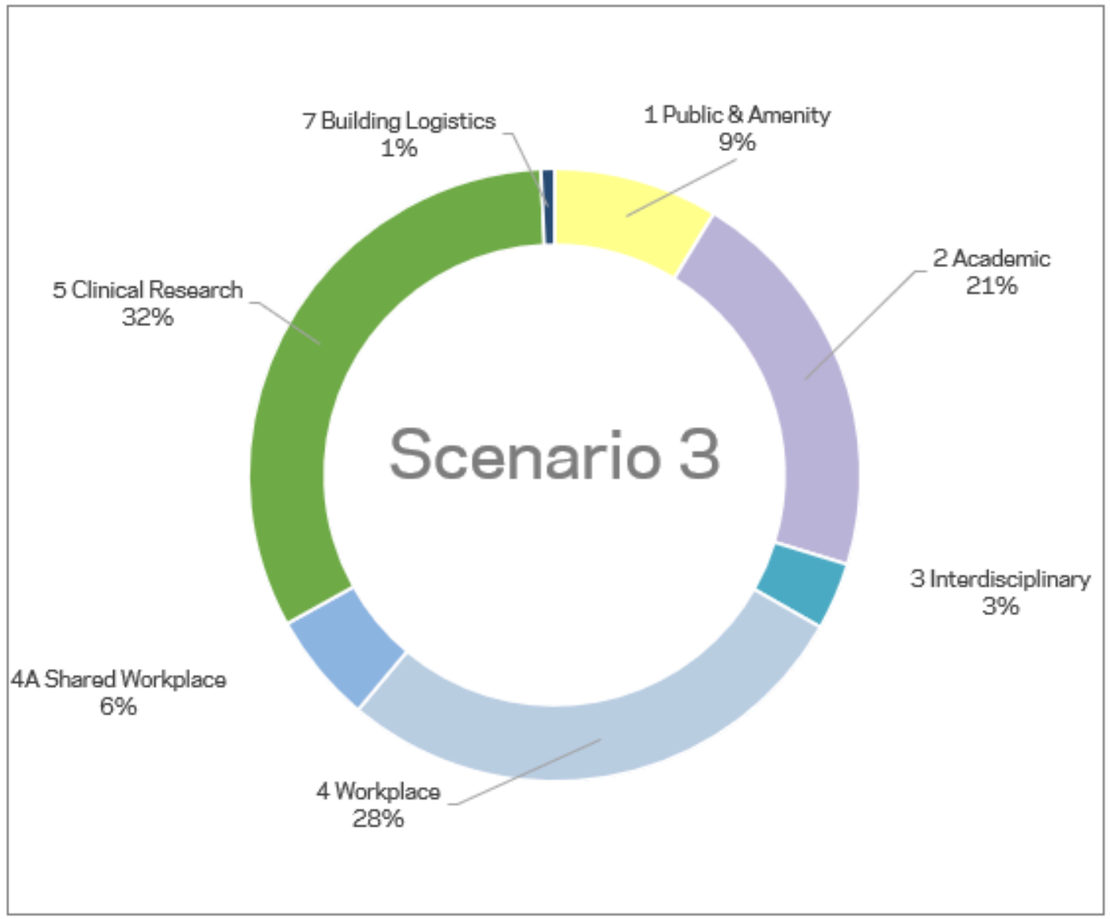


PROGRAM OPTIMIZATION SUMMARY : **SCENARIO 3**

Scenario 3
Clinical Research Focused

- Workplace - Approx. 525 people (100 enclosed, 425 workspaces)
- Clinical Research – 50,000

Space Type	Proposed New Total NSF
1 Public & Amenity	13,465
2 Academic	32,460
3 Interdisciplinary	5,500
4 Workplace	40,014
4A Shared Workplace	9,022
5 Clinical Research	50,000
7 Building Logistics	1,100
Grand Total	**154,561**

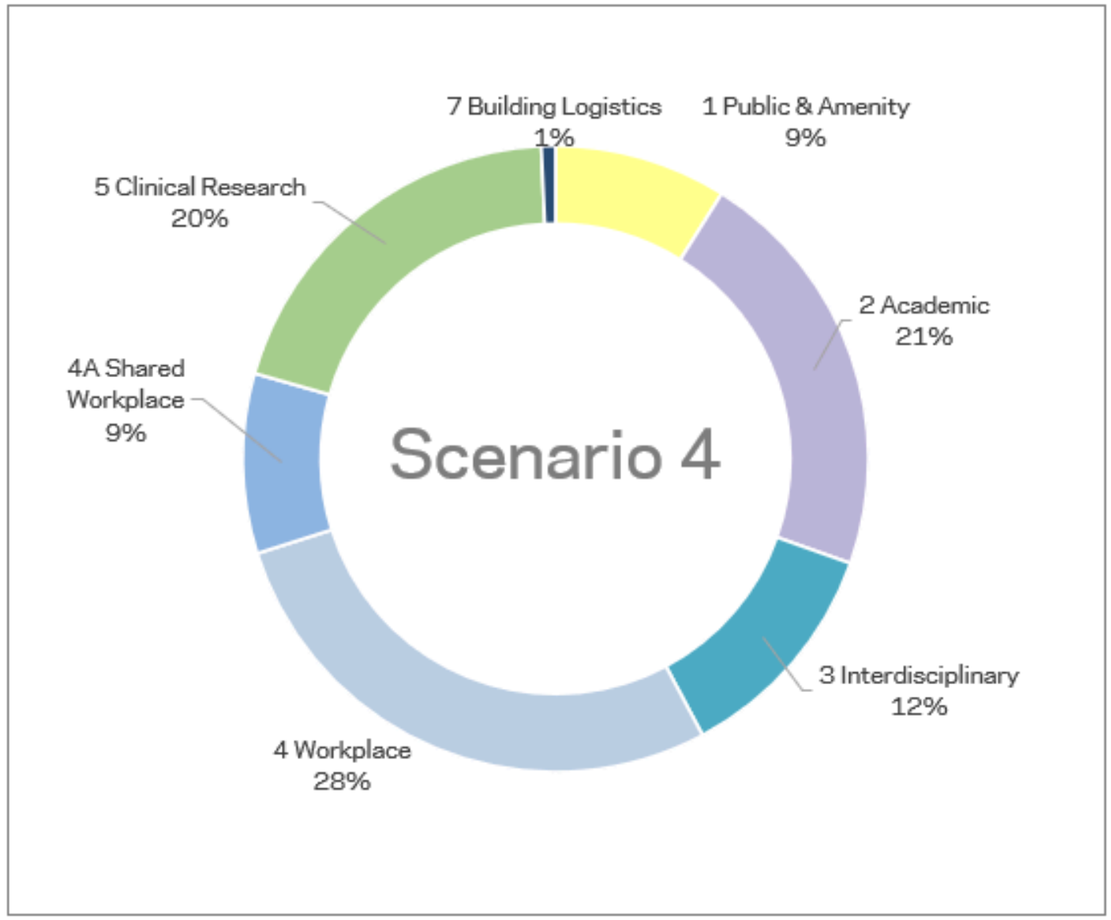


PROGRAM OPTIMIZATION SUMMARY : **SCENARIO 4**

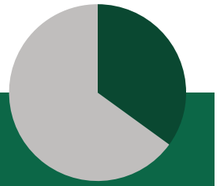
Scenario 4
Balanced

- Interdisciplinary – Health Incubator, Technology Innovation
- Workplace - Approx. 600 people (100 enclosed, 580 workspaces)
- Clinical Research

Space Type	Proposed Total NSF
1 Public & Amenity	13,465
2 Academic	32,460
3 Interdisciplinary	17,812
4 Workplace	42,128
4A Shared Workplace	14,022
5 Clinical Research	30,000
7 Building Logistics	1,100
Grand Total	**150,987**



SELECTED PROGRAM SCENARIO : **SCENARIO 2**



SCENARIO 1
Workplace Focused

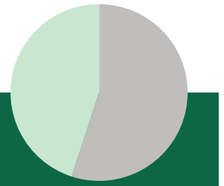
Includes:
Core (76,250nsf)
Workplace (73,750nsf)

SCENARIO 2
Interdisciplinary Focused

Includes:
Core (76,250nsf)
Workplace (64,600nsf)
Interdisciplinary (9,150nsf)

SCENARIO 3
Clinical Research Focused

Includes:
Core (76,250nsf)
Workplace (23,750nsf)
Clinical Research (50,000nsf)



SCENARIO 4
Balanced

Includes:
Core (76,250nsf)
Workplace (31,400nsf)
Interdisciplinary (3,200nsf)
Clinical Research (30,000nsf)

Optimal Program Range 150,000 - 160,000nsf

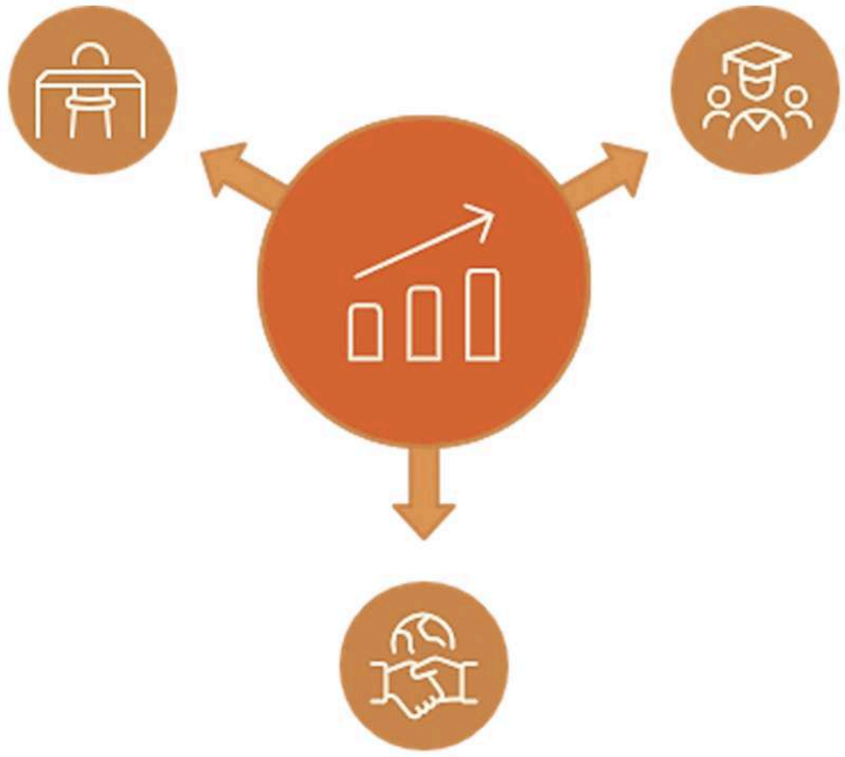
VISUALIZED PROGRAM SUMMARY : **SCENARIO 2**

Optimized workplace

Dynamic Environment, Future Calibration

Growth enabled

Increased Cohort Size



Increased partnerships

Facilitate More Internal and External Collaborations

4.3

PROGRAM DESCRIPTION

This narrative covers overall design intent for notable programmatic spaces that are within the scope of the new UTHSC building. By collaborating with key stakeholders across the UTHSC system, departmental leaders, faculty and other users, HOK has created a narrative that relates distinct parameters and specifications. HOK focused on creating a sustainable outlook for the extensive, forward-looking intentions of this program.

The new building is programmed to have an impact on the University of Tennessee campus. Bridging the gap between incongruent factions of the campus, the new building welcomes on campus collaboration. The building is intended to usher in continued growth of the College of Medicine and additionally enable future expansion of the College's interactions with the rest of UTHSC's major programs.

The program of the building reflects the curriculum, pedagogy, and academic goals of the College of Medicine and should be used as the keystone of design and the construction of the new building.

The program is comprised of and classified in the following groups:

- **Public + Amenity** : spaces that are **common** and **shared** by most users of the building.
- **Academic** : scheduled **classrooms** and **teaching** spaces of various spaces.
- **Interdisciplinary** : spaces that are used my **multiple disciplines** throughout the UTHSC.
- **Workplace** : faculty and staff **offices**, Post Doctoral offices, and Administrative offices
- **Shared Workplace** : open **communal** and **office** spaces utilized by faculty, staff, and students.
- **Building Logistics** : technical, systematic, and **logistical** spaces needed to assist and **maintain** the building **function**.

PUBLIC + AMENITY

- Public spaces
- Amenities
- Wellness
- Learner Study / Collaboration

ACADEMIC

- Multipurpose spaces
- Large Classroom
- Medium Classroom
- Small Group Rooms
- Support spaces

INTERDISCIPLINARY

- Digital Health + Innovation
- Specialty Simulation spaces

WORKPLACE

- Enclosed Offices
- Open Offices
- Shared Workspaces

PUBLIC + AMENITY

It has been researched, and results have shown that a compelling component of student learning happens outside of a formal/traditional classroom. Impromptu meetings between students, staff, and faculty, have shown to be a significant part of learning. For these, and many other reasons, amenities for students, faculty, and staff are a crucial component of the building.

All spaces should be branded and in keeping with the culture and integrity of the University of Tennessee Health Sciences Center.

LOBBY
Open to public spaces for visitors, faculty, staff, students, and other users. Includes reception and waiting area. Preferably set in a central location and includes coherent wayfinding.

STUDY FACILITIES / INFORMAL STUDENT COLLABORATION
An interdisciplinary social hub and gathering area for students. Various types of seating for group interactions, as well as individual nooks. Access to plentiful charging stations and USB ports.

HOUSES
UTHSC will divide the medical student body into smaller, supportive groups or "houses," each with its own faculty mentors and resources. The primary goals of these houses are to promote peer-to-peer learning, enhance student well-being, and build strong, long-lasting professional networks. Additionally, houses can serve as a foundation for wellness programs, career advising, and interprofessional learning, ultimately creating a more holistic approach to medical education. The space for each house will include comfortable space for casual conversation, along with some collaboration and casual study space. Houses will include food storage and equipment for some food preparation, so students from different stages of their medical education can interact, share experiences, and collaborate on academic and clinical projects.

FICM	Space Type	Space no.	Space Name	Occupants	New Qty	Program NSF	Total NSF	Notes
A.0 Public + Amenity								
Assembly								
W05	Public	A.1	Lobby		1	1,500	**1,500**	welcoming/inviting
630		A.2	Healthy Grab + Go		1	600	**600**	
W05		A.3	Prefunction		1	750	**750**	branding opportunities
680	Amenity	A.4	Media/ Recording Studio		1	250	**250**	
315		A.5	Lockers		125	3	**375**	Z lockers- double height
410	Wellness	A.6	Wellness rooms		5	80	**400**	quiet zones
410	Study/Collab/ Meeting	A.7	Study booths/rooms	2 to 4	12	80	**960**	quiet zones
410		A.8	Study Facilities/ Informal student collaboration		5	500	**2,500**	distributed
680		A.9	Green Room/ Interview/Conference Room	20	1	500	**500**	
670		A.10	Houses	60	6	900	**5,400**	Collab + lounge hub
630		A.11	Houses Shared Kitchenette		1	1,200	**1,200**	
650		A.12	Interdisciplinary Health Commons		1	2,500	**2,500**	Collaboration hub
Assembly							**16,935**	

PUBLIC + AMENITY SPACES
(13,465NSF)

Public Spaces ~2,550 nsf

- Building Lobby
- Pre-function
- Health Food Kiosk / Grab 'n' Go

Amenities ~1,125nsf

- Media / Recording Room
- Interview / Seminar Room
- Lockers

Wellness ~900nsf

- Wellness / Quiet Rooms
- Wellness Center

Learner Study / Collaboration ~8,890nsf

- Learner Commons
- COM Houses + Kitchenette
- Informal Collaboration
- Student Study Rooms 2 - 5p


Grab
& Go


Grab
& Go


150
1867 2017
MORGAN

ACADEMIC

The new classrooms and learning spaces will support the growth of the University of Tennessee Health Science Center. These are leading-edge classrooms and will provide opportunities for effective interactive, small group based active hybrid teaching and learning experiences. Access to daylight in all learning spaces is a key component of occupant wellbeing and is especially important to learning environments. This must be taken into consideration and incorporated during the design stages of the building.

LARGE FLEXIBLE / MULTIPURPOSE
There is a large multipurpose classroom seating 450 with tables and chairs. Envisioned as a space that can be divided into two halves of 225 people; this space is a forward-thinking, innovative, flat-floored classroom designed for current pedagogies with small groups and plenty of AV infrastructure around the room. This space will morph interchangeably between a traditional front facing lecture typology into small group setup as well as banquets and conventions, symposia, on-campus job fairs, industry events, student ceremonies, Open Houses, CEUs, and other events. Instructional technology will be critical for success as more and more students will need to be connected virtually. Acoustics will be a critical component and a high-quality, electrically operated, vertical operable wall to divide the space was deemed a high priority for UTHSC.

MEDIUM FLEXIBLE / MULTIPURPOSE
Medium multipurpose classrooms will have dividable/operable walls. Varied layouts will be designed to seat a range from 30 to 120 people. Spaces can be staged into multiple configurations, divided into two halves, or combined to create larger spaces. Movable, stack-able furniture, and adjustable height desks and chairs are best for these spaces. Ample writable surfaces to accommodate flux in student numbers.

SMALL GROUP ROOMS
Small group case-based learning is fast becoming a primary method of teaching. These spaces can be utilized for small group instruction as part of an organized curriculum and schedule and can later be used by students as group study spaces. Acoustical privacy and speech acuity are of prime importance in all classrooms and teaching spaces and a high degree of care must be undertaken to ensure this criterion is maintained.

FICM	Space Type	Space no.	Space Name	Occupants	New Qty	Program NSF	Total NSF	Notes
B.0 Classrooms								
Academic								
110	Classroom/ Meeting	B.1	Multipurpose 225/450p Meeting Space		2	6,750	**13,500**	student ceremonies + events
110		B.2	Classrooms 60/120p	60	8	1,800	**14,400**	
110		B.3	Classrooms 30/60	30	2	900	**1,800**	
110		B.4	Small Group Room 15p/30p	15	16	450	**7,200**	
Academic							**36900**	
Academic Service								
115	Classroom Support	B.10	Multipurpose support/storage		1	200	**200**	
115		B.11	Classroom storage		2	200	**400**	
115		B.12	IT Suite + Helpdesk		1	800	**800**	"Genius Bar" feel
Academic Service							**1400**	

ACADEMIC SPACES
(32,460NSF)

Multipurpose 225p / 450p ~13,500 nsf

- (2) 225p capacity spaces

Large 60p / 120p ~14,400nsf

- (8) 60p capacity spaces

Medium 30p / 60p ~1,800nsf

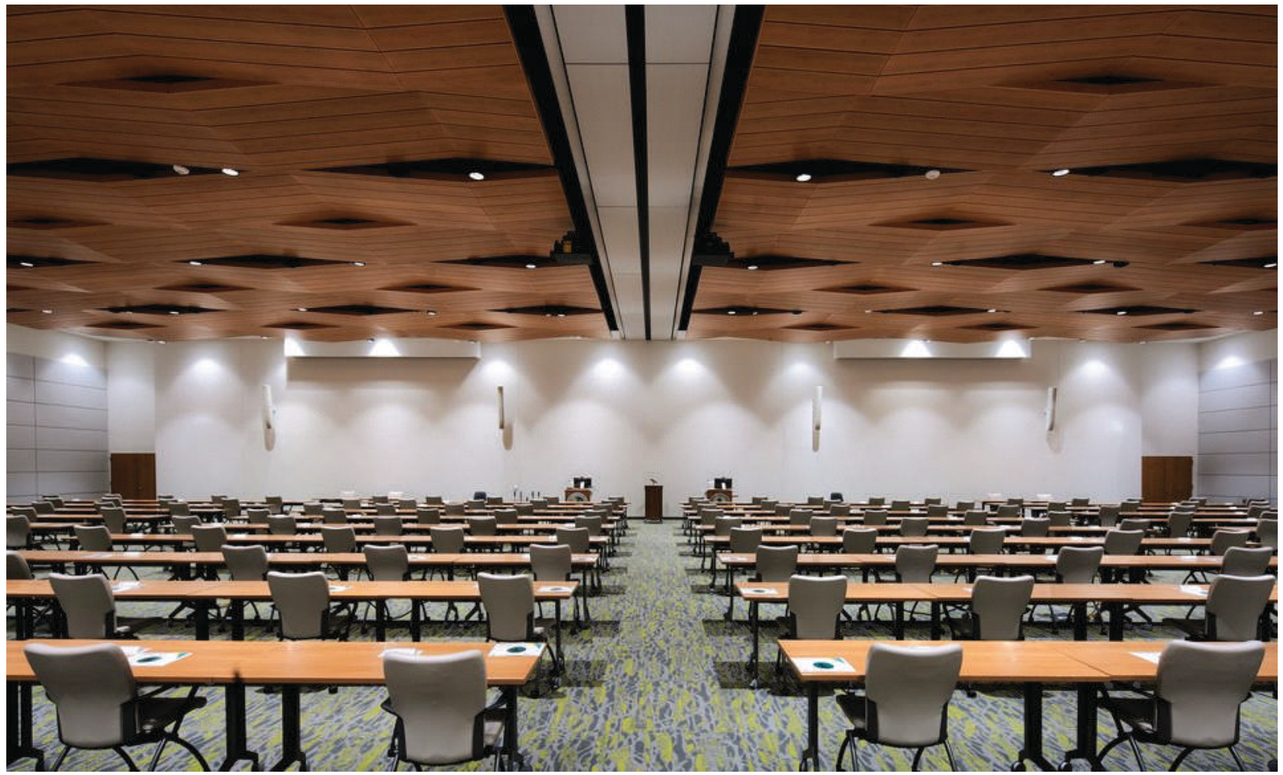
- (2) 30p capacity spaces

Small Group Rooms ~7,200nsf

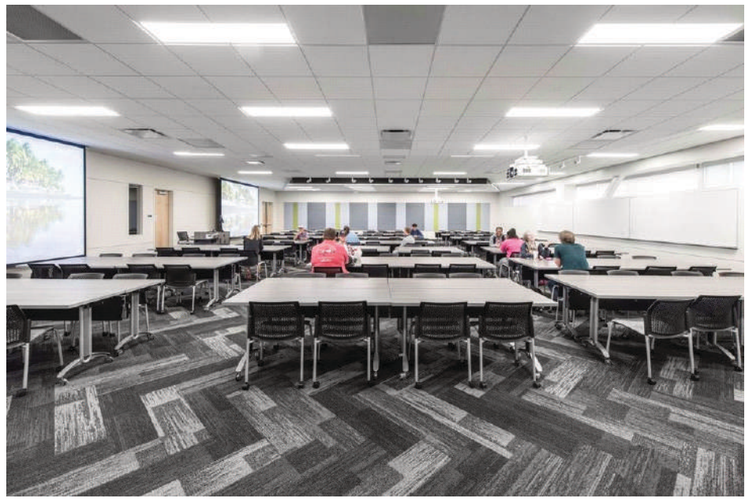
- (16) 15p capacity spaces

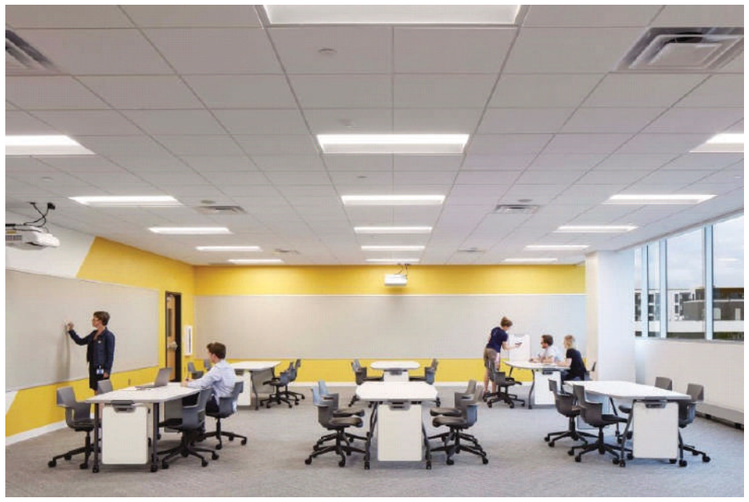
Support Spaces ~1,400nsf

- Storage and supplies
- IT Suite

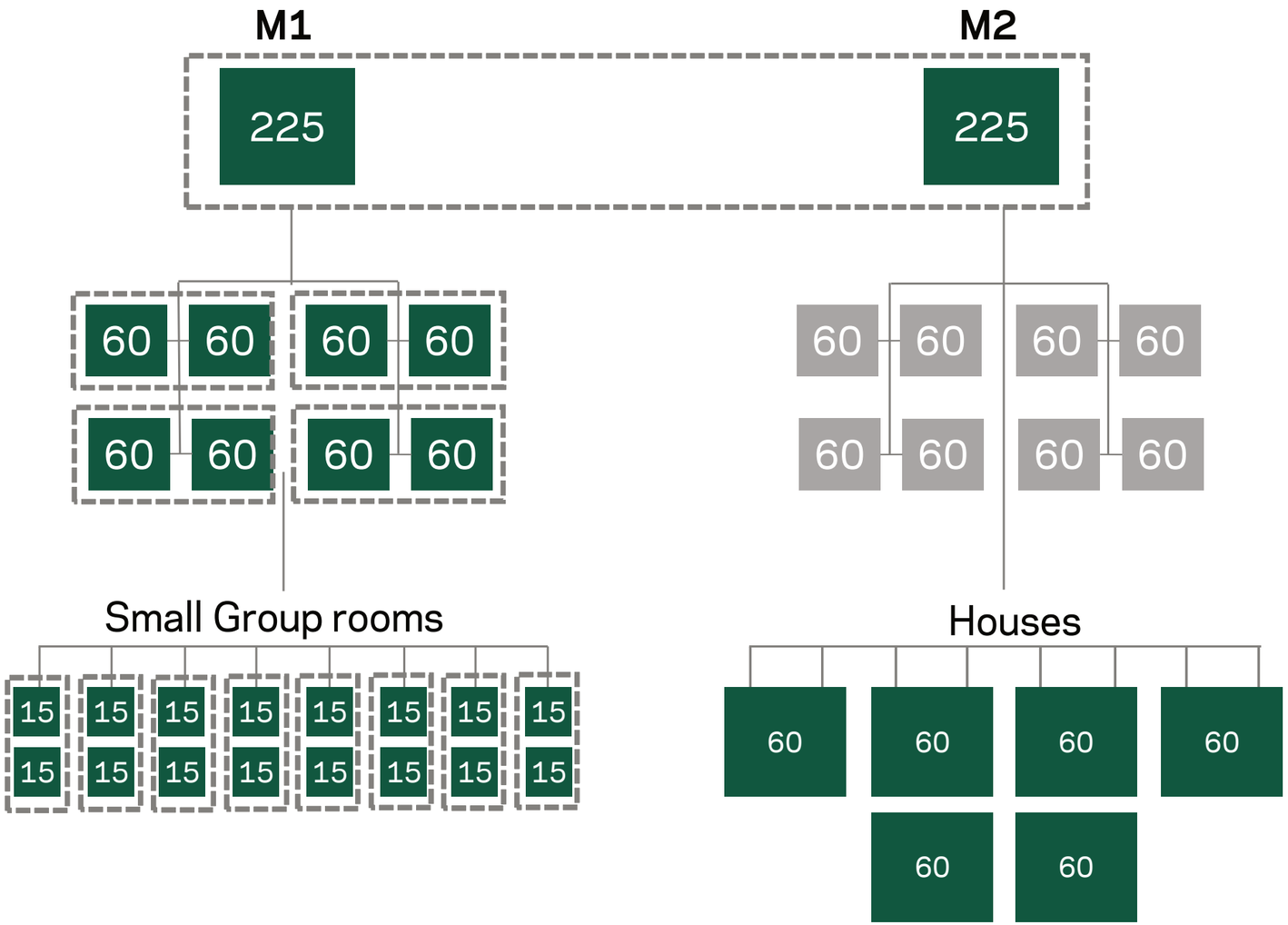



LACERS





COHORT BREAKDOWN



INTERDISCIPLINARY

The new interdisciplinary environments will fulfill UTHSC's aspiration for elimination of silos and collaboration spaces and state-of-the-art facilities. Enhanced with virtual interactive teaching equipment, career development tools, and simulations rooms when applicable, Interdisciplinary spaces a staple of the Graduate program.

HEALTH INCUBATOR

This is charted as a comprehensive ecosystem of places, programs, and people working together to foster innovation, collaboration, and interdisciplinary learning. It will bring together bright minds and allow them to take on challenges from multiple angles, shape discoveries into sound solutions, provide problem-solving, and educate tomorrow's creators to be proficient, capable, and multifaceted.

It will be a multipurpose space with a diversity of furniture, workstations, a conference room, informal seating, a pitch deck, and a collaboration space – where students can work through business plans and showcase ideas to potential investors.

COMPUTATIONAL / VISUALIZATION SUITE

With the advent and pervasiveness of artificial intelligence and machine learning, creative problem solving with data has increasingly become one of today's most desired skills. With the aid of computer technology, students can discover new ways to implement their knowledge of medical processes in various settings. The space will have ample writing surfaces, flexible furniture, and a variety of collaborative seating. It will be fitted with a floor to ceiling interactive screen, AV, technology and cameras, for Zoom and video.

HYPERFLEXIBLE IMMERSIVE SANDBOX SUITE

The building will have very few simulation spaces, but this simulation space will have movable walls that will allow the space to scale up or down and convert to various real-life simulations. Outfitted with house services, and some medical equipment. The immense flexibility of this space will make this an interdisciplinary space suited to recreate various medical settings including disaster response training, poverty training and other interprofessional education opportunities.

MOBILE HEALTH LAB

This will be an innovative suite of spaces through which students can experience community care, outreach and service. This space will serve as a home base for mobile health vehicles for dentistry, nursing and medicine (when not on the road) and be an exemplary interprofessional teaching space for learners across these programs. An adjacent learning/lecture space will give students a space to prepare, absorb, and digest material, before and after, a hands-on learning experience. Serving the wider community, which includes rural areas of Tennessee, the students will utilize these mobile health vehicles to deliver medical attention to residents of the state.

FICM	Space Type	Space no.	Space Name	Occupants	New Qty	Program NSF	Total NSF	Notes
C. Interdisciplinary								
Interdisciplinary								
210	Technology	C.1	Computational / Visualization Suite		1	1,000	**1,000**	Epidemiology, Bioinformatics space - SPSS, SASS software 3D Immersive Lab-
210		C.2	Technology Innovation Lab		1	1,000	**1,000**	Augmented Reality Lab
210	Makerspace	C.3	Health Makerspace - 3D Bioprinting Lab + support		1	2,000	**2,000**	
220	Incubator/ Industry Partnership Space	C.4	Health Incubator		1	6,000	**6,000**	Collaboration centered
210	Specialty Simulation	C.5	Disaster Response /Hyperflexible sandbox Immersive Studio +storage		1	4,000	**4,000**	Flexible simulation
210		C.6	Mobile Health Lab		1	3,000	**3,000**	
Interdisciplinary							**17,000**	

WORKPLACE

HOK worked with UTHSC to develop a strategic and flexible approach for integrating workplace functions into the COMIB facility, focusing first on relocating departments that serve the student population. Initial discussions prioritized which units from the College of Medicine, Graduate Health Sciences, and College of Health Professions would move into the new building. However, the decision to delay specific office allocations until a later design stage provided UTHSC with the greatest flexibility.

This approach allowed UTHSC to adapt to evolving needs, ensuring that departmental spaces could be allocated based on emerging priorities. It also enabled discussions around new workplace strategies, promoting more collaborative environments across disciplines. The program of spaces was developed with a focus on flexibility and futureproofing, grounded in evolutionary workplace design principles to support both current and long-term institutional goals.

ENCLOSED OFFICES
There are a few enclosed offices in the program with varying sizes. Larger offices will include a table and seating for guests, as well as exposure to daylight. Efficient storage solutions, along with vertical writing surfaces for quick meetings will be implemented. Neighborhoods of enclosed offices should be adjacent to shared meeting rooms, collaboration areas, and workplace amenities. Important spaces such as the Board room, conference room, kitchenette, work/copy/mail room, and storage will be adjacent to the Dean's offices.

Acoustical privacy is a vital criterion for the design and construction of these spaces. STC criteria outlined in the room data sheets and industry construction best practices such as extending walls to the deck and acoustical infill in walls should be considered to obtain the best possible outcomes for the project.

OPEN WORKSTATION AREAS
Open workstation areas will, be day-lit and ergonomic. Visitor perches will be an integral part of the workstation furniture. Furniture placement will encourage collaboration, interdepartmental conversation, and a lively work environment.

SHARED WORKPLACE
The shared workplace component encompasses program spaces that are necessary to support the main work areas. This includes an optimal count of meeting rooms of various sizes, hoteling areas, touchdown and huddle rooms to provide landing spots for visitors and allow for ad-hoc collaboration at various scales. A large, dedicated faculty break area and lounge is included in addition to informal collaboration spaces that should be peppered through the office areas.

FICM	Space Type	Space no.	Space Name	Occupants	New Qty	Program NSF	Total NSF	Notes
D. Workplace								
Office - Enclosed, shared and open								
310	Enclosed	D.1	Dean		3	225	**675**	
310		D.2	Assoc. Dean, Dept. Chair		17	150	**2,550**	
310		D.3	VC, AVC		3	150	**450**	
310	Enclosed or open - To be determined during design	D.4	Professor, Assoc, Asst, Instr		302	110	**33,220**	
310		D.5	Professional		114	80	**9,120**	
310		D.6	Administrative		21	80	**1,680**	
310		D.7	Coordinator		1	80	**80**	
310		D.8	Sec/Clerical-I		43	60	**2,580**	
310	Workstations	D.9	Technical-1		24	60	**1,440**	
310		D.10	Post-Doctoral Scholar		4	60	**240**	
310		D.11	Service		6	36	**216**	
310		D.12	GRA		3	36	**108**	
310		D.13	Technical-II		8	36	**288**	
310		D.14	Sec/Clerical-II		54	36	**1,944**	
310		D.15	Medical Interns/Residents		32	36	**1,147**	
Office							**55,738**	

WORKPLACE PROGRAM
(23,702NSF)

Enclosed Offices ~47,640 nsf

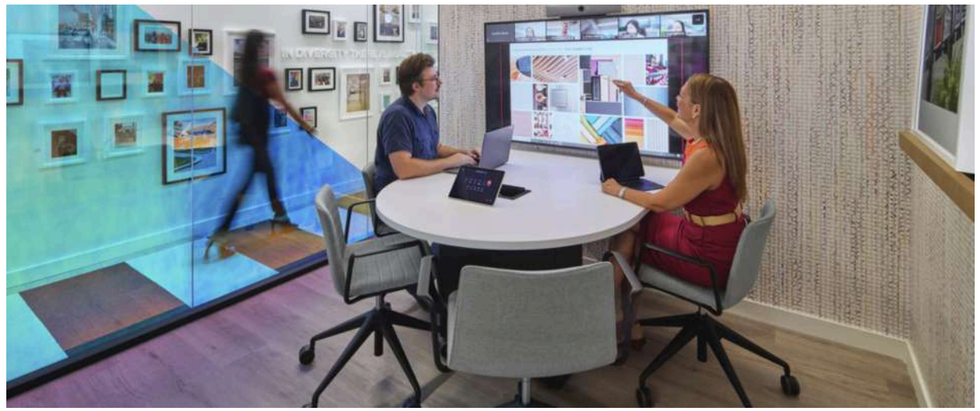
- 461 Offices

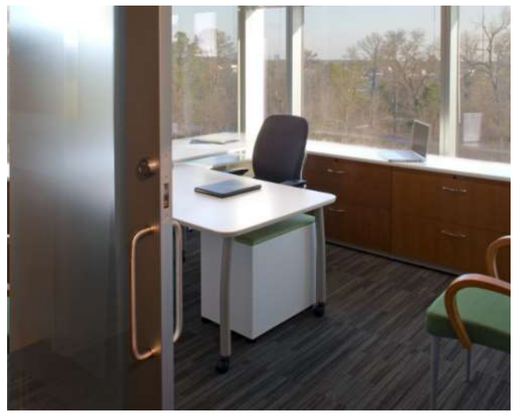
Open Workspaces ~7,963nsf

- 174 Workstations

Shared Workplace ~19,320nsf

- Reception / Waiting
- Meeting Rooms
- Break Areas
- Hotelling / Touchdown
- Informal Collaboration
- Storage and Support





FICM	Space Type	Space no.	Space Name	Occupants	New Qty	Program NSF	Total NSF	Notes
Workplace							**1,100**	
Shared Workplace								
W05		D.20	Reception /Waiting area		5	300	**1,500**	
350		D.21	Board Room	30	5	990	**4,950**	
630		D.22	Kitchenette		6	220	**1,320**	
680	Shared Workplace Amenities	D.23	Medium Meeting Rooms-15p	15	10	440	**4,400**	
360		D.24	Small Meeting Rooms		10	110		
310		D.25	Informal collaboration		10	330	**3,300**	
680		D.26	Faculty/ staff break area		5	550	**2,750**	
Shared Workplace							**18,220**	
Shared Workplace Service								
315		D.30	Workroom/ Storage		5	110	**550**	
315	Workplace Support	D.31	Hotelling / Touchdown Spaces		12	36	**432**	distributed
315		D.32	Wellness rooms		5	110	**550**	
Shared Workplace Service							**1,532**	

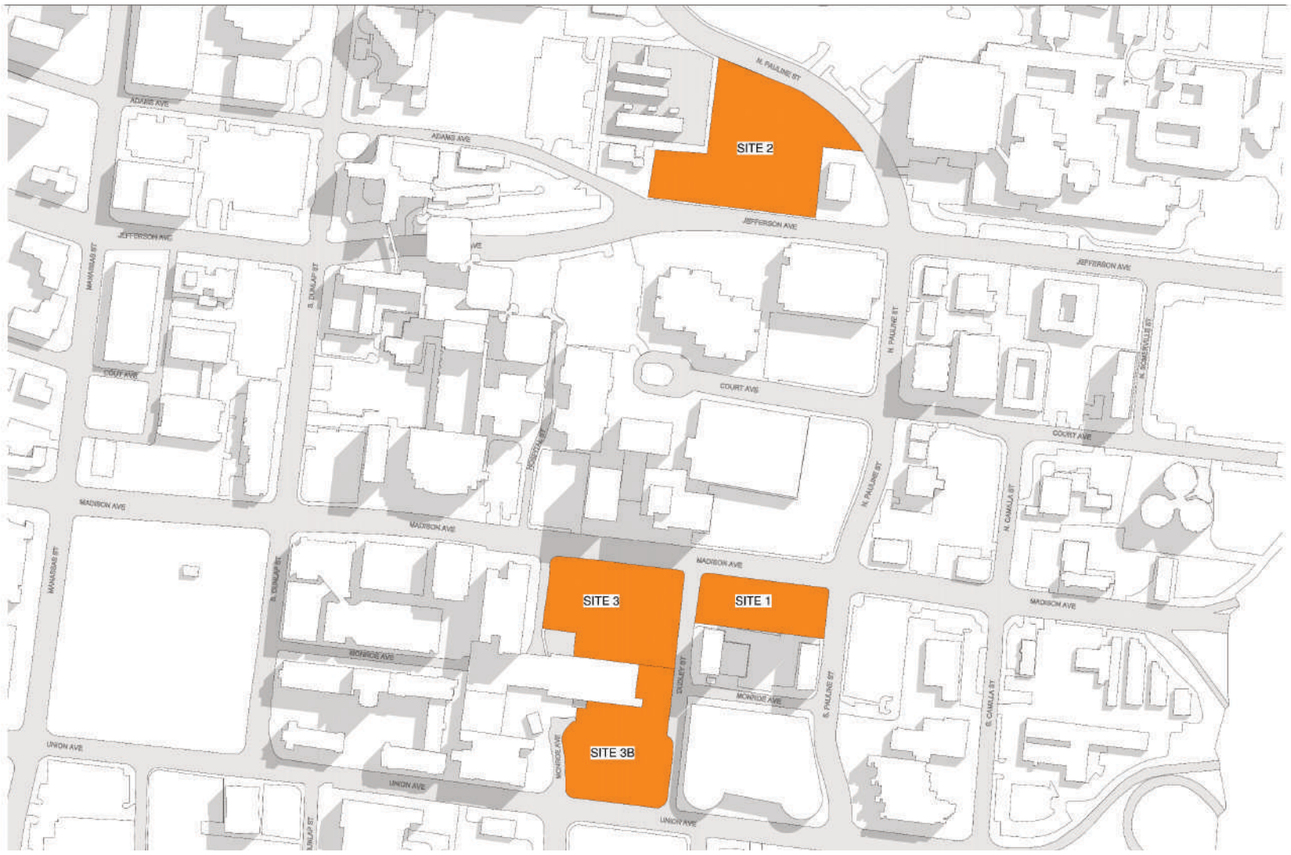
FICM	Space Type	Space no.	Space Name	Occupants	New Qty	Program NSF	Total NSF	Notes
E.0 Building Logistics								
Support Facilities								
W04		E.1	Loading Dock+ Handling		1	500	**500**	
730	Building Support	E.2	Building Storage/ dry goods		1	400	**400**	
W04		E.3	Building Management		1	200	**200**	
Support Facilities							**1,100**	
					total NSF:		**149,925**	

THE PAGE IS INTENTIONALLY LEFT BLANK.

SECTION 05

SITE ANALYSIS + MASSING

5.0



SITE SELECTION

Alongside the programming effort, the university requested they assist in selecting a site. The University provided 3 sites (one site with two different location options) to determine the best fit for College of Medicine Interdisciplinary Building. See site options above.

Site 1 - The original chosen location for the College of Medicine Interdisciplinary Building had great community presence but lacked in providing easy access to a service zone. The site also was very narrow in size which limited its massing opportunities.

Site 2 - The site furthest from the main campus provided great connections to the clinical partners, however since the program lacked clinical area, the site did not merit value for this phase.

Lastly, **Site 3** – The site is bisected by the TriMetis building to create a northern and southern site option, provided the most value. It provided connection, exposure to visitors, and excellent service and pedestrian movement scores.

"Risk Assessment: Include a thorough risk assessment in your criteria—natural disaster proneness, political stability of the region, etc., must be factored into decision-making."

*"it will be great if the medical school location can nearby **the hospital partners** since med student, residents, fellows will work in the hospitals for training at the most of their times beside of the classes. "*

"Accessibility: Consider how accessible the location is for employees, customers, or any other key stakeholders – this includes public transportation option and infrastructure quality."

"Proximity to other buildings/facilities other than the 910/20/30 complex and minimizing the need for crossing major roads, e.g. Madison should be priority

"Future Growth: A site should not only meet current needs but also have room for expansion to accommodate future growth without excessive additional investment."

*"I see this particular facility as the **hub of medical education** at the UTHSC campus thus it should be relatively easy to access and be sited in such a way **to project the "state of the art" facility that it should be to the general public.** I do not believe proximity to clinical partners should be the driving determination of where the building is ultimately sited."*

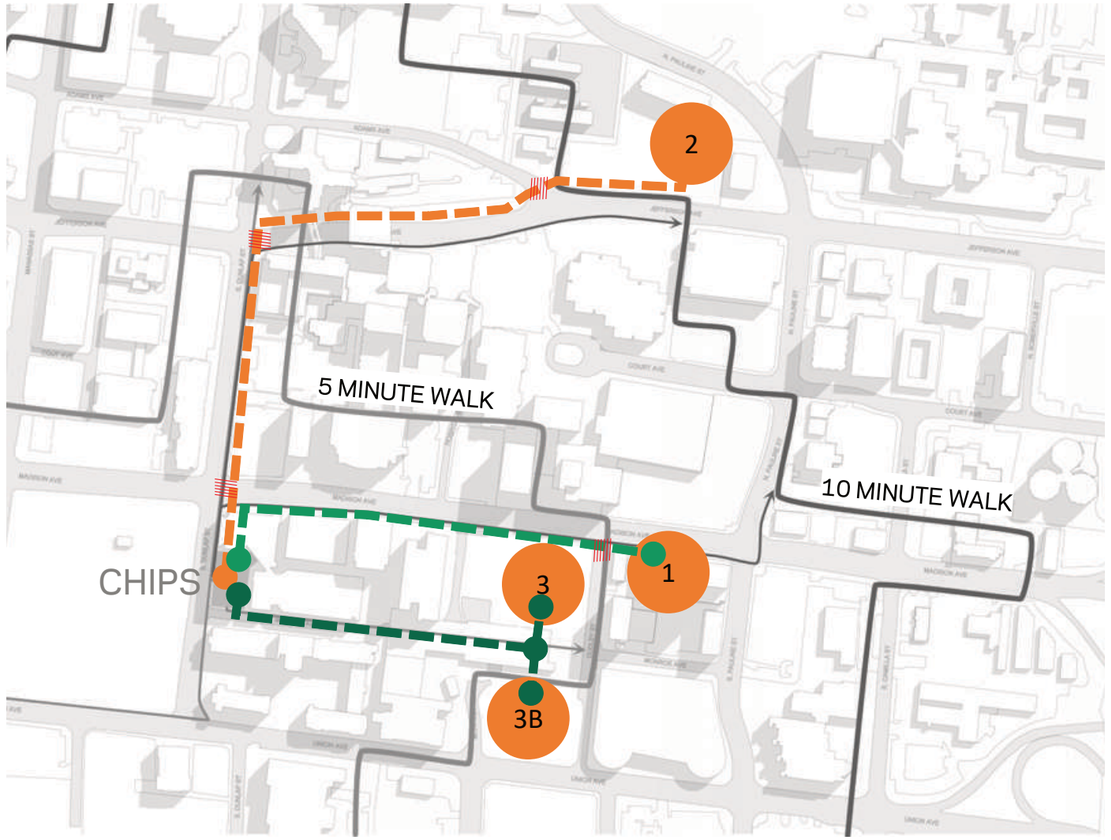
SITE SELECTION

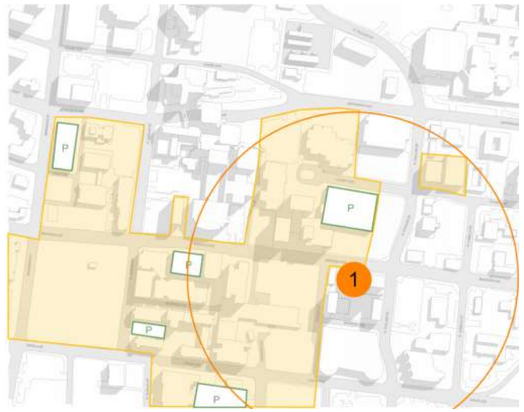
COMMUNITY PRESENCE

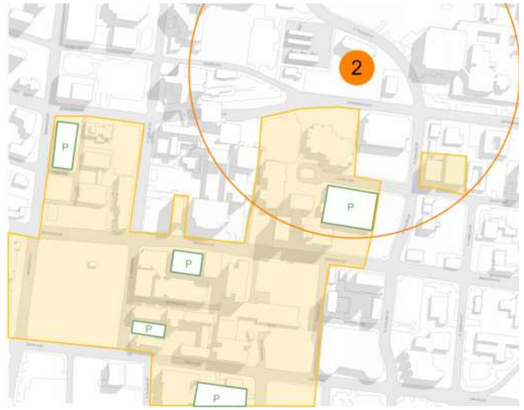
Community presence was one of the highest-ranking factors for site selection from the survey results. This new building has a chance reinforce and create additional recognition and identity for the University of Tennessee Health Science Center, campus. To develop on objective evaluation of visibility to the community, data from TDOT Annual Average Daily Traffic Maps were used to assess traffic patterns. From this data we can see that a heavy flow of traffic is using Union Ave to connect with the interstate to the east. That traffic reduces by half near Union Ave and S Lauderdale St, suggesting that about 14,000 vehicles are heading to a destination near the campus and medical district, and about 13,000 vehicles are continuing west toward downtown. Madison Ave receives about 15,000 vehicles but should be noted that this data is from 2009. Traffic along N. Pauline St. drops significantly to 6,000 vehicles, suggesting that this area is in the shadow of the interstate and most travelers bypass this area. From this data we can see that Site 3 would receive the highest visibility from community traveling through the area. Site 1 has less traffic, but still visible to traffic along Madison and Pauline. Site 2's geometry creates multiple edges for view potential, but unfortunately with recorded traffic volume the site would receive the least amount of visibility to community.

PEDESTRIAN MOVEMENT

Pedestrian movement was also highly ranked from the survey as an important factor for determining the site. To assess the strengths of each site, the team measure the walking distances along actual walking paths and factored in the impact of barriers along these paths. The Center for Healthcare Improvement and Patient Simulation (CHIPS) was used as common building that College of Medicine students would frequent. In this category, site 3 benefits from being within the core campus block surrounded by Union Ave, S Dunlap St, Madison Ave, and Dudley St. From site 3 students and faculty can reach most core campus buildings by walking along the edge of Madison or through central campus pedestrian paths without crossing roadways. The path to site 1 only crosses Dudley St which is a very low traffic, but the distance puts it just above the 5-minute walk measurement.



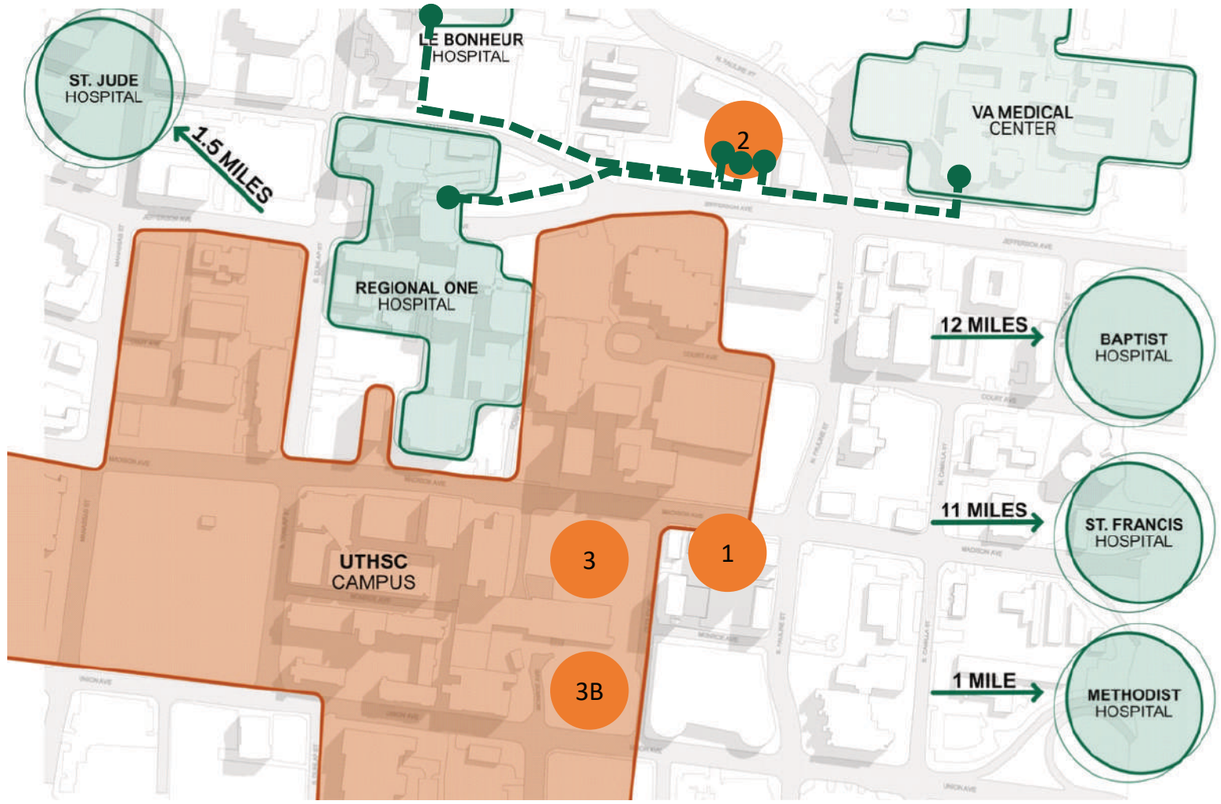




Site 2 is the furthest from CHIPS with a walk duration over a 10-minute walk. This path requires crossing a roadway 3 times, and the most direct path takes students off-campus thru the medical district which could become a safety concern.

PARKING

Connection to existing parking on campus was also deemed a high priority from the site selection survey. Leveraging existing campus parking allows funds that would need to be spent on new parking to go towards the much-needed program within the building. Sites 1 and 3 are within proximity to multiple parking options, while site 2 is more remote and could necessitate addition parking built for the location.

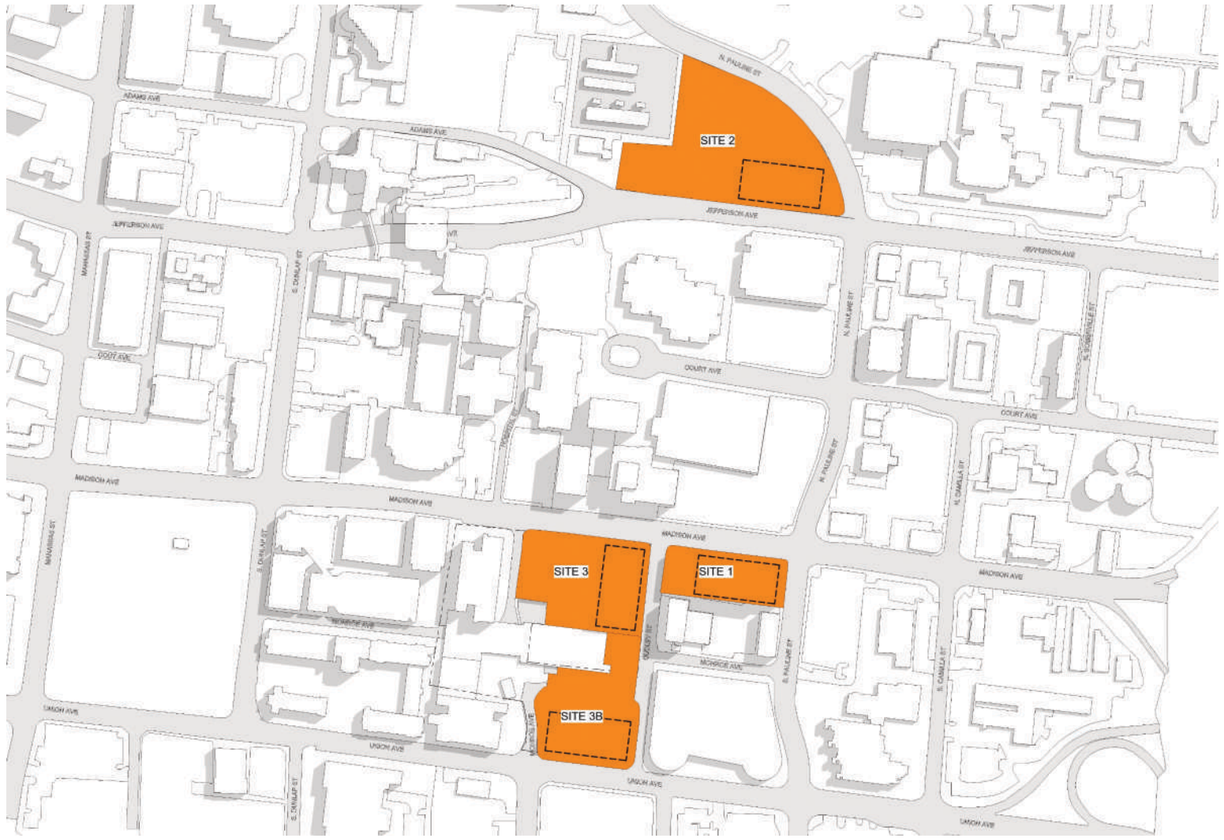


CLINICAL PARTNERS

The Health Science Center has several nearby clinical partners to prepare/train their learners for the workforce. With almost direct connections to the VA hospital, Le Bonheur, and Regional One, Site 2 became a strong contender. As students are migrating across campus to clinical training classes, it is important to consider the safety and proximity from the College of Medicine Interdisciplinary Building. Yet, since the new building will not having clinical research nor simulation, this category did not merit much weight in the decision making for the location of the building. Moreover, while the university strives to maintain these relationships, so keeping them as neighbors is key.

CROSS-DISCIPLINE ADJACENCIES

The new College of Medicine will be an interdisciplinary building. In the above diagram, the primary buildings of companion colleges are highlighted that learners will originate. Although Sites 1 and 2 are a fair distance for most pedestrians, the centrally located Site 3 is more intertwined in the web of buildings.

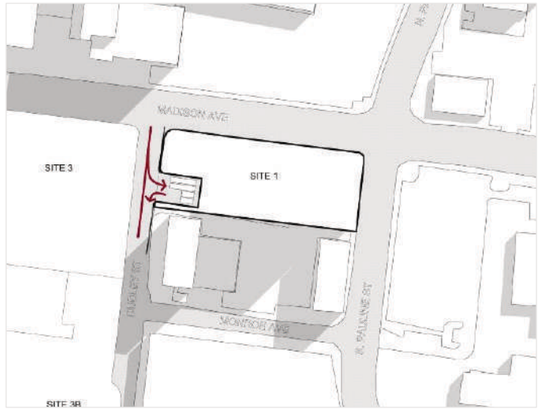


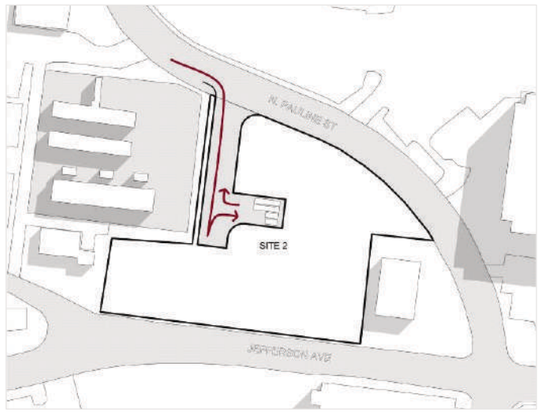
GROWTH POTENTIAL

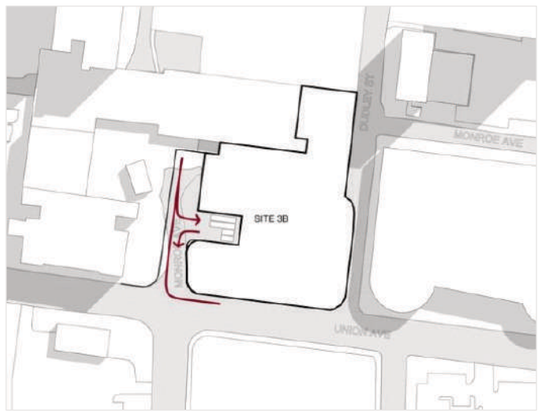
Already realizing that a second phase will be critical to accommodate all the needs of College of Medicine's needs the potential to expand in a respectable and smart way became a major criterion. Hence, Sites 1 and 3 became power players. With an adjacent empty or soon to be vacant lots, a connection to a Phase II building will be achievable.

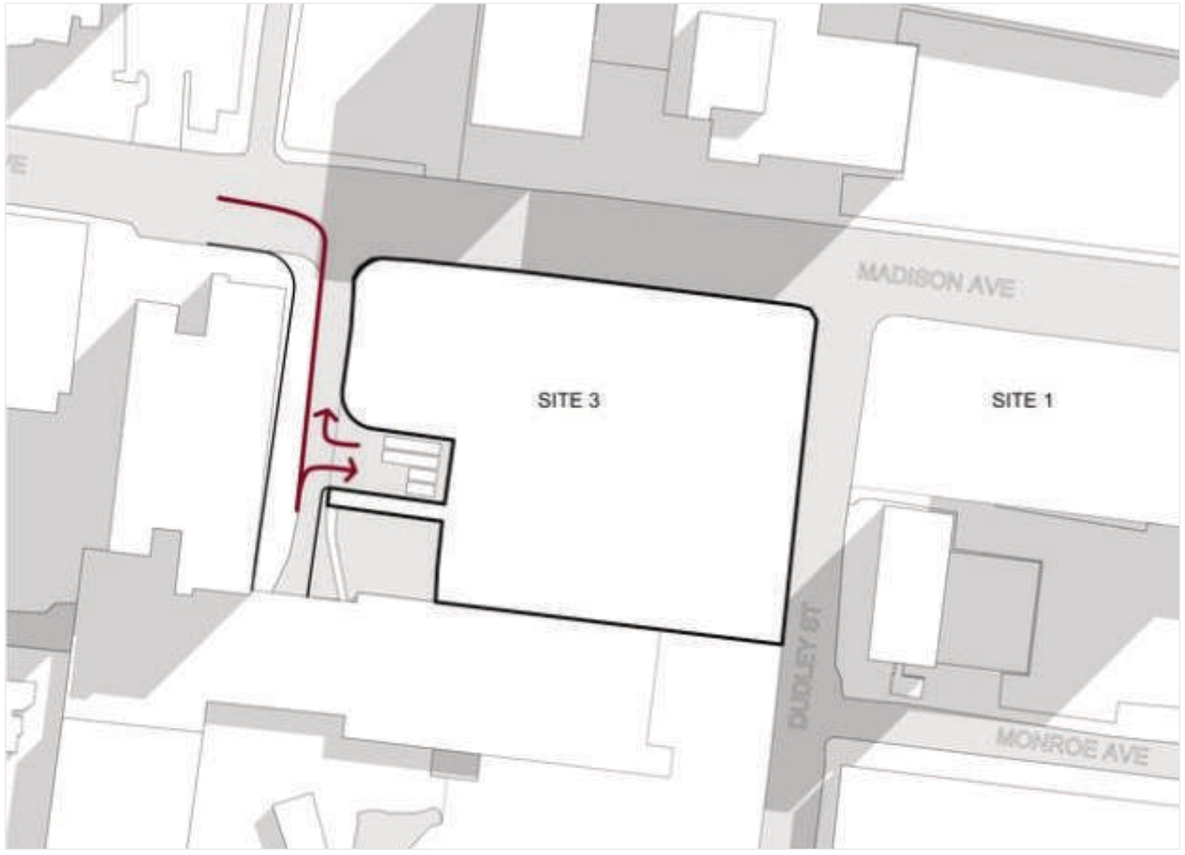
COLLEGE OF MEDICINE ADJACENCIES

While on campus, learners navigate to various buildings for clinical training, lectures, and/or amenities such as the student center. The Center for Healthcare Improvement and Patient Simulation (CHIPS), General Education Building (GEB), Student Alumni Center (SAC), and building 930 are outlined above as they are locations of current essential spaces for students. The new location must be easily accessible to CoM students and faculty.









SETBACKS

The city of Memphis' requires (3) different setbacks located on the site. Although, the University of Tennessee may not have to adhere to *all* local building requirements such as maximum height, it was important to consider the various zoning standards. Setbacks such as the 7' minimum front yard and the building and alley separation of 5' all affect the building's massing.

SERVICE

An adequate zone for service and utilities is required for the success of a new .

A moderate service zone with 2 bays for 55' trucks, and two bays for trash and recycling collection was tested to determine the viability of each site. All sites have the potential to provide a service yard, but site 1 was significantly more constrained that the others. Only 1 narrow edge is viable for service on this site, and by placing the service access here it would compete with the building's ability to create a strong connection back to campus. Site 2 has many options to provide service access, and site 3 has the building to expand an existing service drive without creating new barriers to pedestrian movement on campus.

SITE SELECTION

The Steering Committee was asked to complete a survey to prioritize evaluation criteria for the site of the new building. They ranked the following statements as *Strongly Agree, Agree, Neutral, Disagree,* or *Strongly Disagree.*

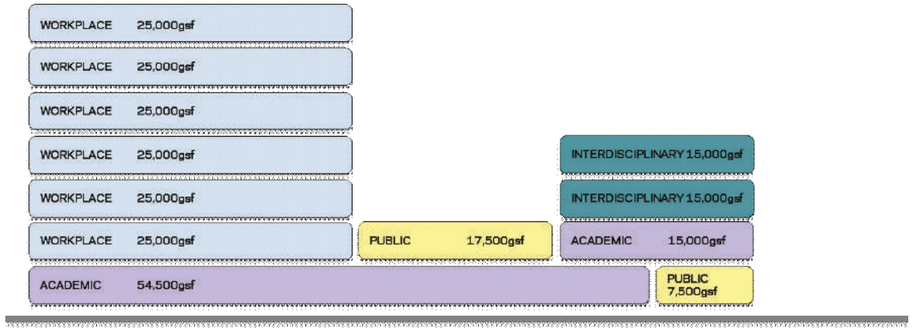
- **Community Presence:** The location should provide increased visibility of UTHSC to the community.
- **College of Medicine Adjacencies:** The location should be close to, and provide easy access to GEB and CHIPS.
- **Interdisciplinary Adjacencies:** The location should be easily accessible from other Colleges (Nursing, Health Professions, Graduate Health Sciences, Pharmacy, Dentistry)
- **Pedestrian Movement:** Priority should be given to sites with strong pedestrian connections to other parts of campus.Safety: If operational and technological strategies are considered even, the location should give preference to a site that inherently feels safer to students and faculty.
- **Parking:** The site location should be close to existing campus parking.Service: The location should provide adequate loading docks and service access that is efficient and convenient.
- **Existing Conditions:** Site location should be selected to avoid any negative or costly existing conditions that can be discovered during the assessment. (eg. underground utilities, soil conditions, easements)
- **Growth Potential:** Site selection should give preference to location that allows for future growth. (directly adjacent space for future building)
- **Clinical Partners:** Proximity to clinical partners like Regional One, Le Bonheur, VA, and Methodist is a priority for site selection.
- **Housing:** Proximity to student housing should be a priority for site selection.
- **Green Space:** Should the site be able to provide outdoor amenity space / green space?

Criteria	Weighted Modifier	Site 1	Site 2	Site 3	Site 3B
Safety	5	20	15	25	20
Community Presence	5	25	15	20	25
Parking	5	15	10	20	20
Pedestrian Movement	5	20	5	25	25
Growth Potential	4	4	20	16	12
College of Medicine Adjacencies	4	12	4	20	20
Interdisciplinary Adjacencies	4	12	4	16	20
Existing Conditions	4	16	12	20	12
Clinical Partners	3	9	15	9	9
Service	3	3	15	15	15
Total		136	115	186	178

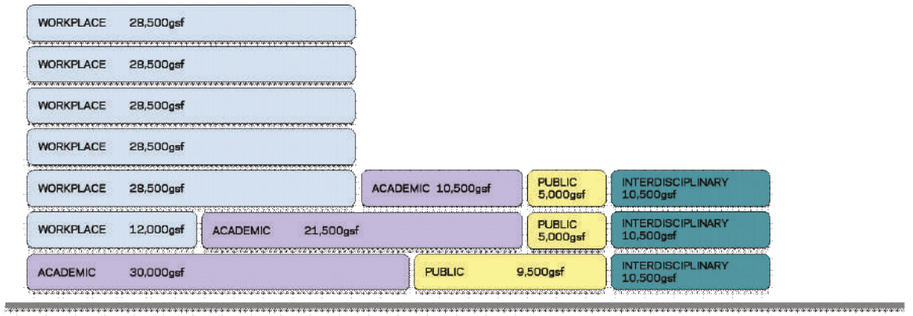
The results from the survey stratified into tiers of priorities. Consistently ranked as highest priority included Safety, Community Presence, Parking, and Pedestrian Movement. These are included in the chart above with a weighted modifier of 5 applied to the site's score in these categories. Close behind in the next tier of importance were Growth Potential, College of Medicine Adjacencies, Interdisciplinary Adjacencies, and Existing Condition. A weighted factor of 4 was applied to these criteria. Clinical Partners, Green Space, and Service grouped themselves in the next tier with a weight of 3.

After these points were tallied both options at Site 3 became the clear leader. Sites 1 and 2 have clear strengths, but further discussion with Steering Committee decided that those sites could better serve other campus needs. Between the two options within Site 3, the north option adjacent to Madison Ave was preferred due to adjacencies, and safer feeling sidewalk for pedestrians.

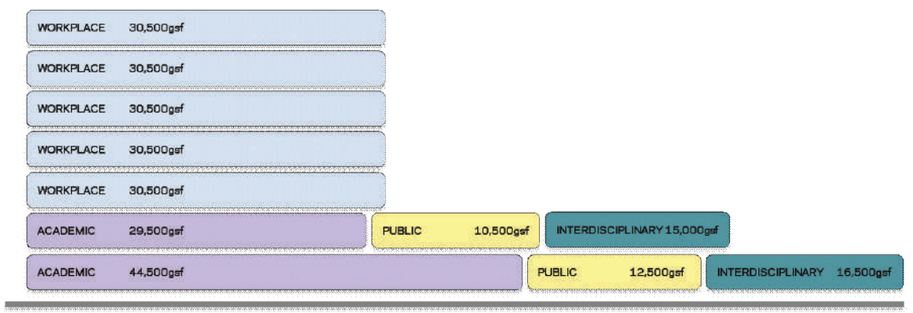
5.1



1



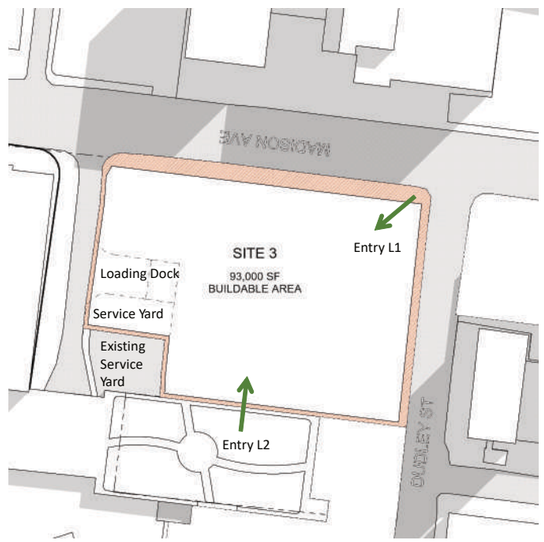
2



3

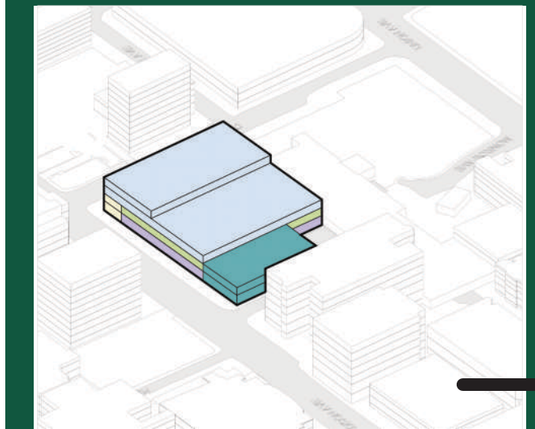
BLOCK AND STACK DIAGRAMS

Multiple options were explored as the program was developed and applied to the site. This exploration grows outward from needs of the program, and concurrently pushes inward based on the site constraints.
From the site perspective, we start with city zoning ordinances that define building setbacks and building heights, existing site conditions and utilities, and ideal adjacencies for entries and building support. On this site an existing service road ramps down on the western edge, creating an ideal spot to locate new service yards, shipping and receiving. The corner of Madison and Dudley create a prominent corner and frontage to engage people entering the building.
As a counterpoint the block and stack diagrams explore the vertical relationships of program. Acknowledging that all programs cannot be on level 1, these diagrams explore adjacencies through the building. The 1st option explores an idea for a Interdisciplinary tower. The 2nd option explores bringing student focused program further up into the building with stronger connections to faculty.



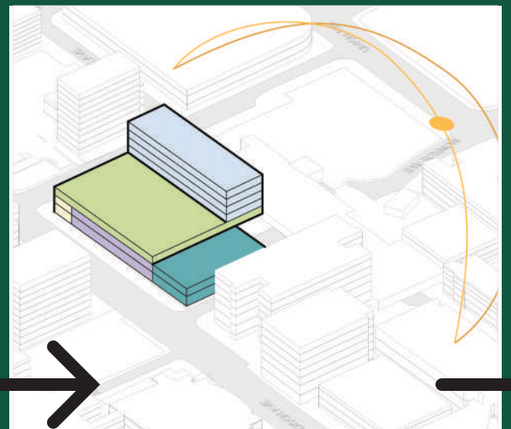
MASSING DIAGRAMS

PROGRAM



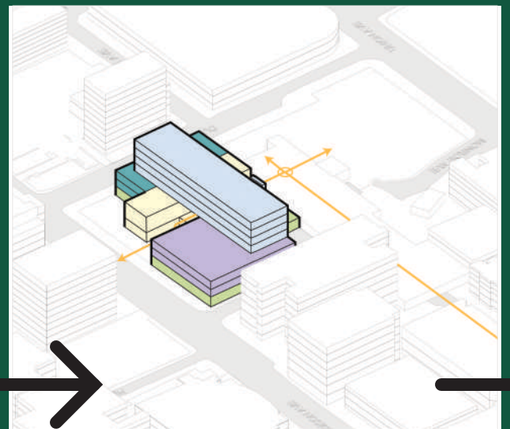
The massing is developed by sculpting and shaping the program. The function of each space type is critical to the success of the building and must be factored into the exterior form.

SOLAR ORIENTATION



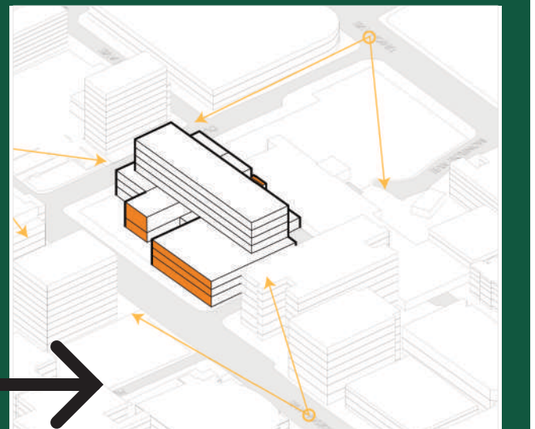
The workplace component is shifted and formed to maximize natural light available to the interior. We can then orient this bar shape to support an optimized facade capable of shading solar heat gain and mitigating glare.

PEDESTRIAN CONNECTION



The podium of academic, interdisciplinary and student spaces can be formed to encourage movement into and thru the building. The new building can connect disjointed parts of campus to make the area more pedestrian and inviting.

VISIBILITY



As the forms are shaped on the lower levels, opportunities for visual identity and community presence can be achieved. Highly visible portions of the building can receive branding and signage that acknowledge and

5.2

ARCHITECTURAL CHARACTER

The University of Tennessee Health Science Center campus contains a diverse architectural history that spans over a century, mirroring the growth and evolution of both the institution and medical education. UTHSC was established in 1911, and its architectural landscape has expanded alongside its academic and research missions. The campus features a mix of early 20th-century classical revival architecture, mid-century modernism, and contemporary styles, offering a visual timeline of its development.

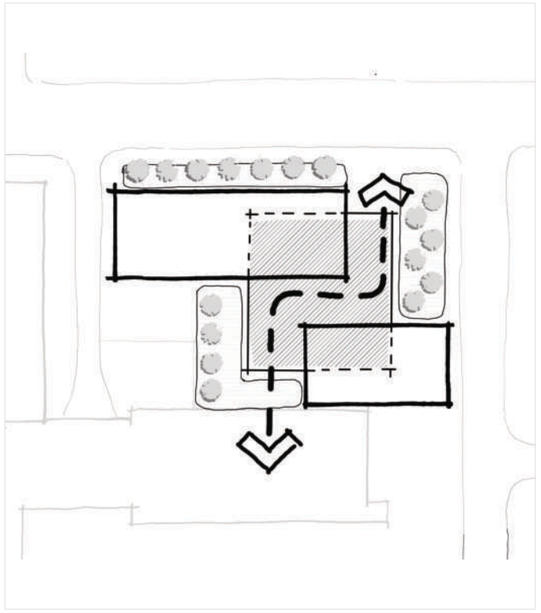
Many of UTHSC's original buildings, like the Crowe Research Building built in 1919, embody the Neoclassical and Collegiate Gothic styles that were popular at the time. These structures feature brick facades, symmetrical layouts, grand entrances, and classical details such as columns, pediments, and cornices. The use of brick and stonework in these older buildings were intended to convey the prestige and permanence of medical education.

As the university grew in the post-war era, new facilities were added to accommodate expanding programs. Buildings from this period reflect the streamlined, functional aesthetic of mid-century modernism. This style is characterized by minimal ornamentation, flat or gently sloping roofs, and the use of concrete and steel. The simplicity of design aimed to emphasize function over form, in keeping with the institution's focus on scientific advancement and medical research.

Recent decades have seen the addition of more contemporary buildings that blend functionality with modern aesthetics. Newer facilities like the Cancer Research Building and the Translational Science Research Building incorporate glass facades and metal panel along with brick to relate to the existing campus.

The architectural style of the UTHSC campus represents a blend of historic and modern elements, reflecting both its long-standing heritage and forward-thinking role towards the future of medical education.

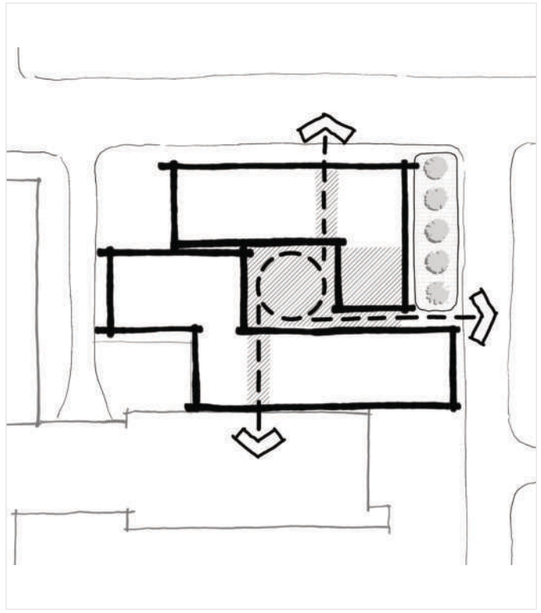
PARTI CONCEPTS



STITCH

*"Love the view of the **interior stair** and **approach-ability**"*

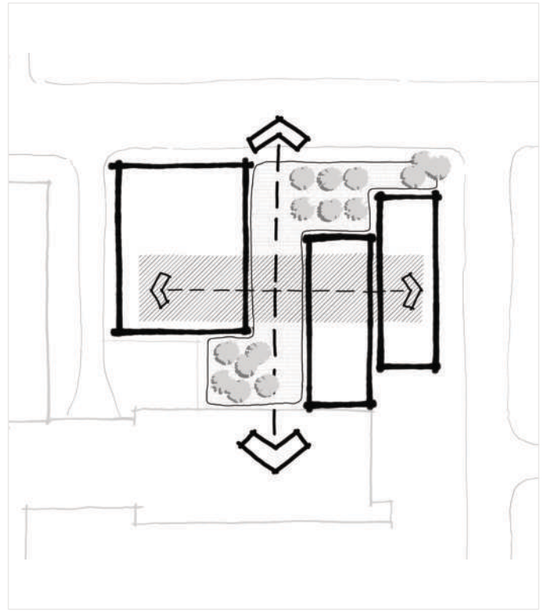
*"Front placement of **workplace area overwhelms** the look of the building"*



COURTYARD

*"Like the workplace **tower being on south** side of building"*

*"Seems to **turn its back** on the rest of campus and could **create silos**"*



PAVILIONS

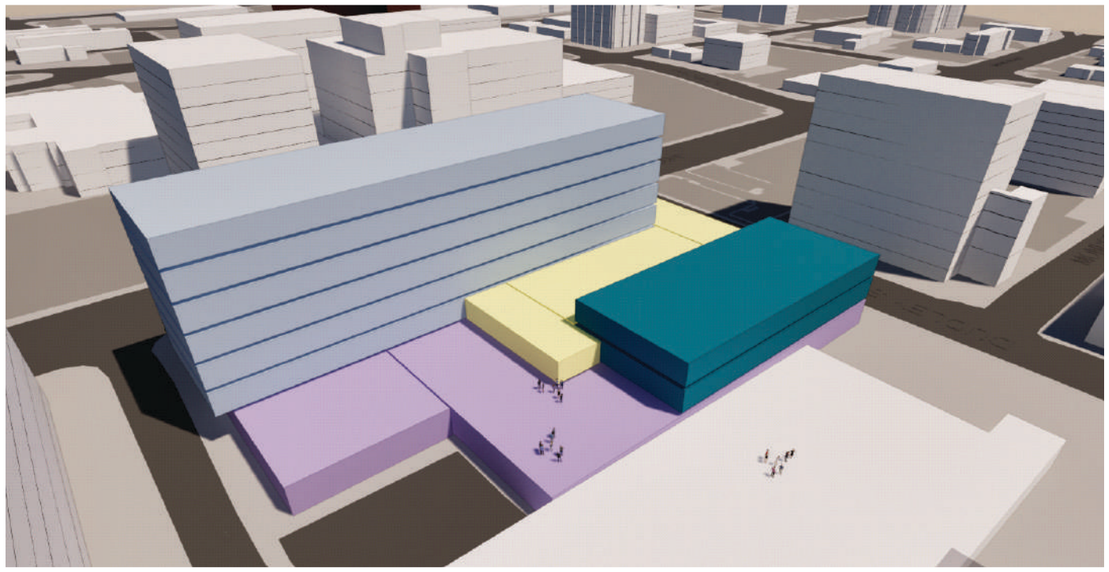
*"Appreciate the ground level plaza and ability to **traverse site in open way**"*

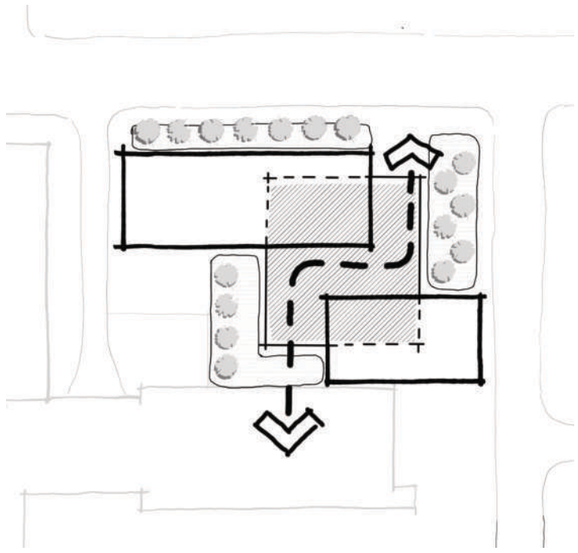
*"Like how these are more **distinct buildings** and the opportunities this provides"*

STITCH

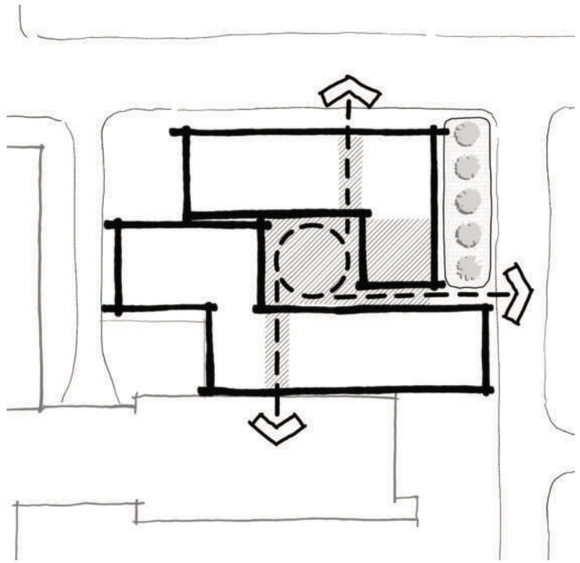
The building form creates a more urban edge along Madison while still creating a tree lined green space. Around the back the form expands the existing service yard with additional building support for the new facility. The façade pulls elements from around campus like red brick, glass, and metal panel into a composition that relates to the campus while being fresh and contemporary. The arcade along Madison creates protected transparency and covered pedestrian circulation. The vertical expression moving up the building provides visual load tracing which feels natural to the human eye. The public and amenity space weave through the forms with transparency, signifying a new combined entry for the College of Medicine Interdisciplinary Building, and a place to see movement and activity within the building.

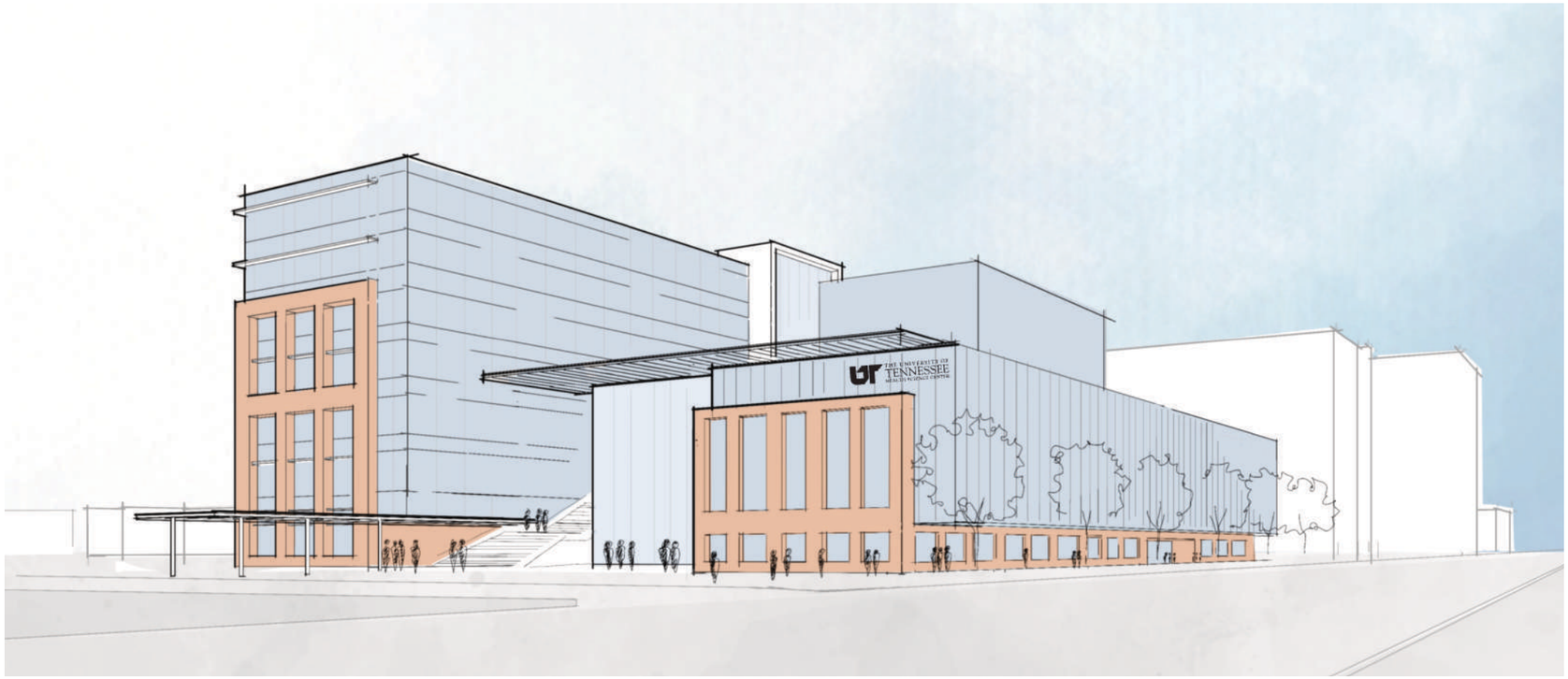
The Stitch concept ties the program together with the central public and amenity space, which is shown in the parti as a hatch. This central space also connects an entry point on the corner of Madison and Dudley with an additional entry on level 2 from the roof of TriMetis. The massing extends the roof plaza and create a student and faculty entrance that connects back to the central campus. At the corner of Madison and Dudley the form pulls back from the corner offering a new front door to the College of Medicine and UTHSC.





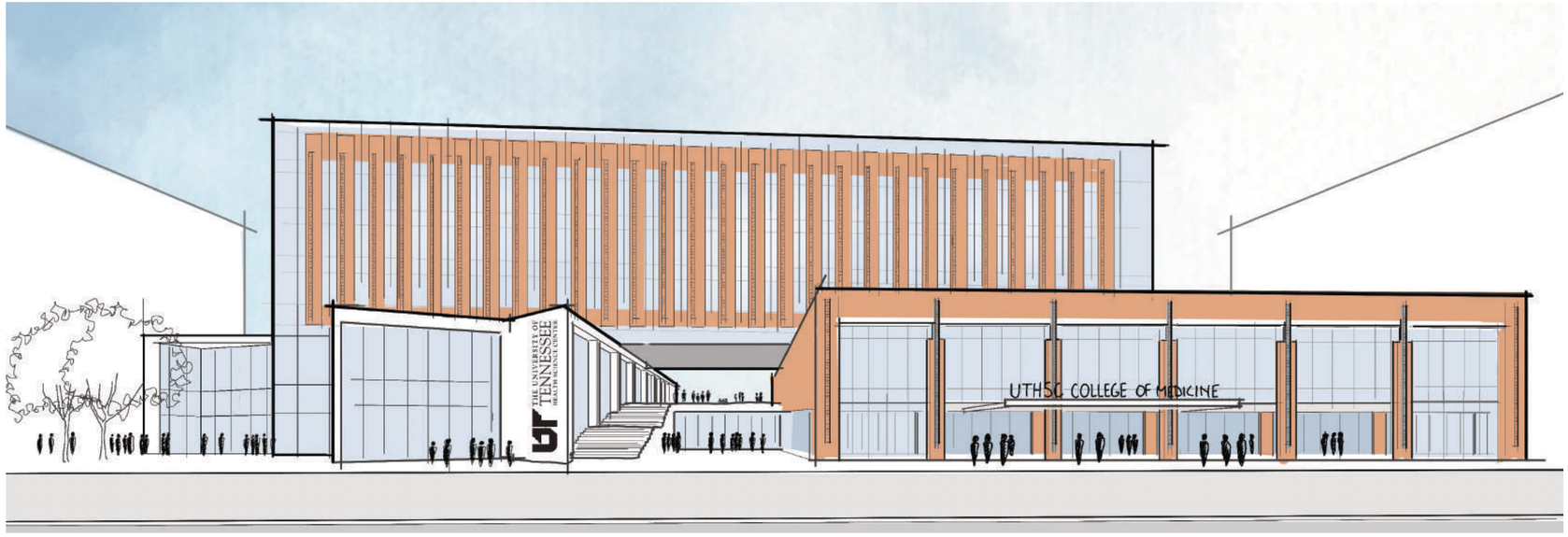
COURTYARD

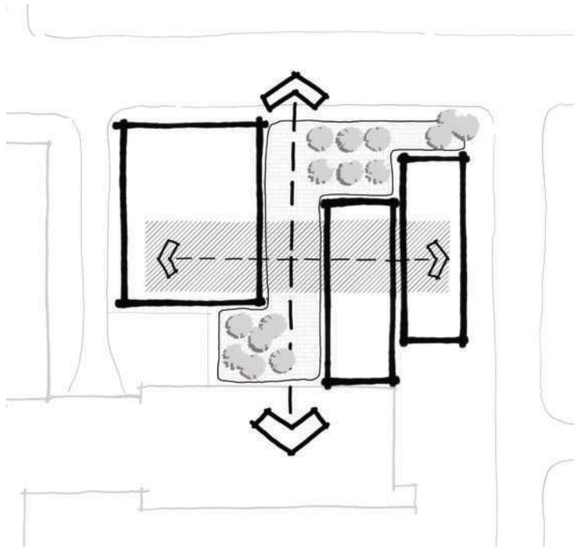


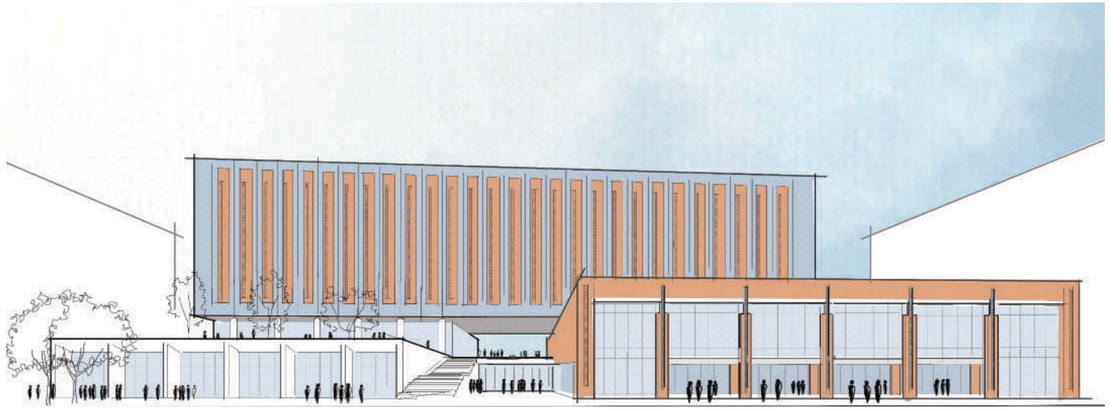


The Courtyard concept creates a central focal point that can pull together the various disciplines housed in the building. The student entry in this massing recedes into the mass without expanding the TriMetis roof plaza. The protected central hub could be an open courtyard or enclosed atrium. The academic and interdisciplinary programs become a combined mass fronting Madison, while the College of Medicine tower wraps behind. Brick and glazing interlock to form a contemporary expression that is rooted in the history of the campus. A trellis ties the mass together while shading a transparent entry and public space, while an open-air stair allows movement up and through the courtyard to campus.

PAVILIONS







The Pavilions massing creates a new level 2 entry with an expanded and inviting roof plaza. The workplace tower is central in this option to not feel imposing on the roof terrace or along Madison Avenue. As the pavilions push and pull they create nodes of green space at the corner and along Madison. The massing creates distinct branding and naming opportunities for the various program housed within. The open-air pass through of the forms creates a new north south axis on the campus with the chance to strengthen the connection to 910, 920, 930, Coleman Building, and the future phase 2 building at the edge of Union.

ARCHITECTURAL CONCEPTS

The design for the new College of Medicine Interdisciplinary Building balances tradition and innovation, embodying the future of medical education while reflecting the rich history of its academic context. The structure is not only a physical space but also a symbol of the intersection between knowledge, collaboration, and progress – especially crucial in a medical education facility where interdisciplinary learning and education are at the forefront.

The two lower floors of the building are dedicated to students and interdisciplinary activities, offering spaces designed to foster collaboration and active learning. The floors are open, transparent, and flexible, responding to the evolving needs of medical education. The use of curtainwall systems on lower floors allows light into the building, creating bright, engaging spaces that encourage interaction and the exchange of ideas.

Gathering areas and adaptable classroom spaces emphasize the importance of connectivity, while the openness promotes a sense of inclusivity.

An open staircase extends from the interior to the exterior, creates a visual and physical connection between the corner of the site and the central part of campus via a pedestrian route over the existing green roof amenity above TriMetis. The connection acts as an architectural artery, connecting to the existing east-west axis through campus and establishing a new north-south axis that will connect the 900 buildings, Coleman, and a future phase II building at Union.

The sculpting of the lower floor's massing creates a unified base, while also expressing unique identities of the diverse interdisciplinary programs within. The distinct massings create opportunities for additional branding and signage, increasing visibility towards the community.

On the upper floors, the building transitions from the student environment to a quieter more focused workplace for faculty and staff. The massing of the workplace is composed of vertical openings creating a contextual reference to the existing campus buildings. The brick reflects the rich character of the campus, while the glass edges suggest a contemporary forward-thinking aesthetic, both expressing the character of people within. The shading systems within the aluminum curtainwall provide both practical and aesthetic benefits. They mitigate solar gain and glare concerns, ensuring that the building performs well environmentally.

A service zone currently exists on the west side of the site with drive extending to a lower level of the Pharmacy Building and TriMetis. New shipping and receiving, trash collection, and utilities can be located off the existing drive without creating new barriers often associated with these back of house services. The existing systems should be assessed at the outset of design to determine their viability. If they are at or near the end of anticipated life, it may be viable to replace with a combined and more efficient system associated with the new


THE UNIVERSITY OF
TENNESSEE
HEALTH SCIENCE CENTER


HERBERT ST
N PAULINE ST
COURT AVE
N CAMILLA ST
MADISON
S CAMILLA ST
DUDLEY ST
S. PAULINE ST
EAST ST
UNION AVE
BEALE COVE


THE UNIVERSITY OF
TENNESSEE
HEALTH SCIENCE CENTER

THE PAGE IS INTENTIONALLY LEFT BLANK.

SECTION 06

ROOM DATA SHEETS

6.0 - ROOM DATA SHEETS

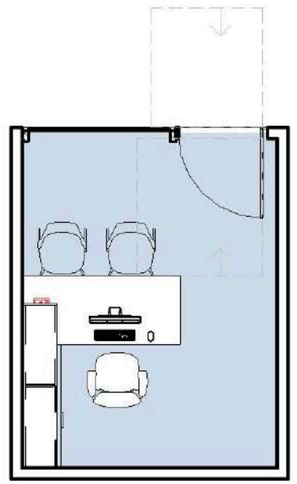
6.0

ROOM DATA SHEETS

In order to identify and detail all requirements, HOK developed prototype layouts of salient spaces to graphically and qualitatively represent design features (concepts) of spaces to test programming assumptions.

There are two main components of the room data sheets that follow:

1. Plans and three-dimensional views
2. Space requirement sheets



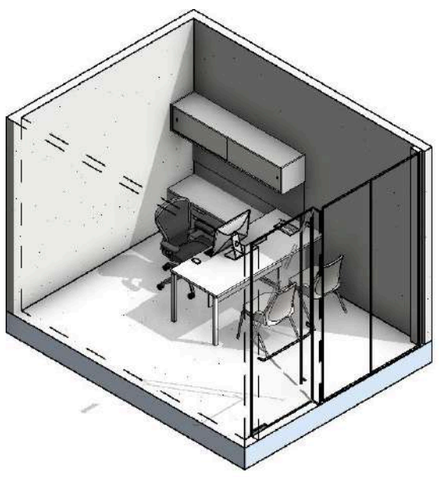
PLANS AND THREE-DIMENSIONAL VIEWS

Plans and three-dimensional views of salient spaces are being used to communicate and validate the quantitative data in the building program and convey functional needs discussed during programming user group work sessions.

These concepts may evolve and morph in synthesis of the project design in further design stages. Therefore, it is important to understand room layouts at this stage as baseline standards of acceptance and not necessarily finished or set in stone solutions. Rooms may change shape but the functional basis must be maintained.

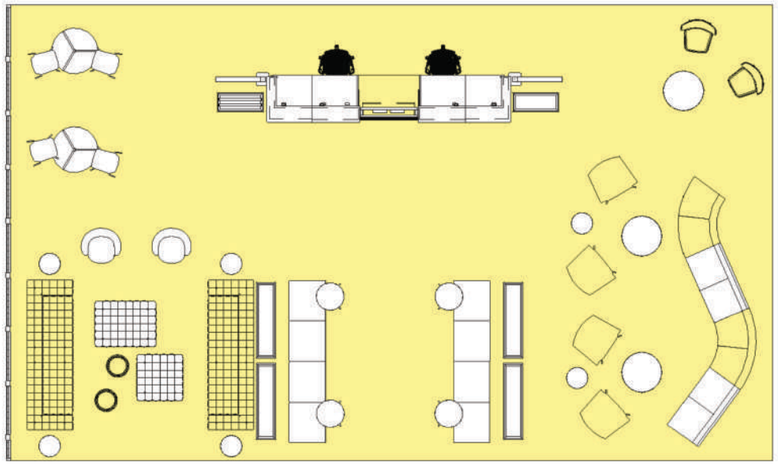
SPACE REQUIREMENT SHEETS

The purpose of the Space Requirement Sheet is to document and establish room requirements for the new facility on a room by room basis. This includes service and infrastructure requirements mechanical, electrical, plumbing, lighting, security criteria, architectural finishes, casework, millwork, as well as major equipment as relevant to the space type being depicted.




THE UNIVERSITY of
TENNESSEE
HEALTH SCIENCE CENTER

LOBBY
PUBLIC + AMENITY



SPACE REQUIREMENTS

Space Name: LOBBY
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 1,500

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	

DESCRIPTION

Open, main entrance space for the building. Seating for users and space for information / welcoming desk.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	x
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	Main entrance
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl tree tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	
Raised Floor	
Other	Terrazzo
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

PREFUNCTION
PUBLIC + AMENITY

SPACE REQUIREMENTS

Space Name: PREFUNCTION
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 750

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Open space for gathering and networking before and after events.

ROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	x
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

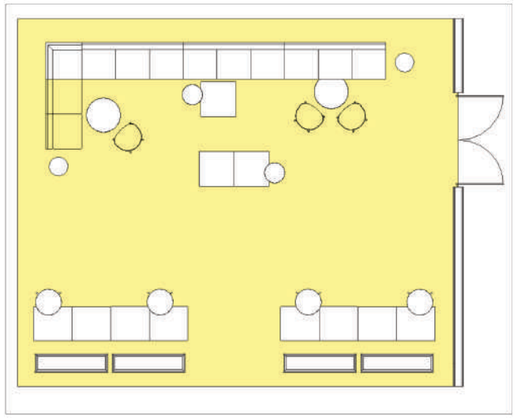
ARCHITECTURAL

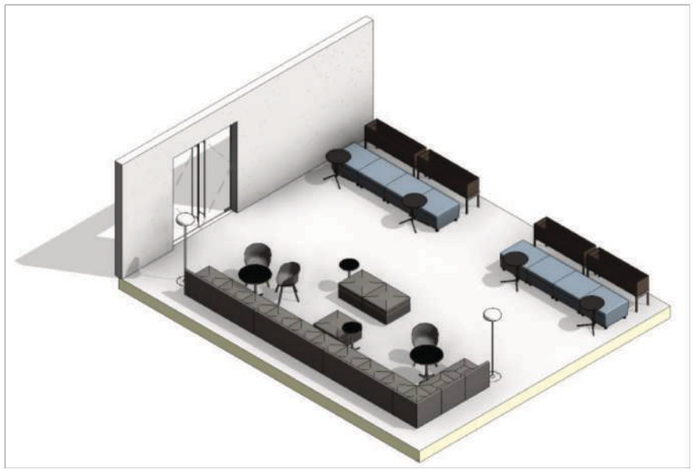
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	

REMARKS:





HEALTH GRAB + GO
PUBLIC + AMENITY

SPACE REQUIREMENTS

Space Name: HEALTH GAB + GO
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 600

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Quick, "on the go" food and snack pick up for students, faculty, and staff. No long term food and drink storage for individual users.

ROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	
Conference Table	
Markerboard	
Moveable	
Wall mounted	

PLUMBING

Sinks	
Standard	x
ADA	
Scullery	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
480V, 100A, 3 Phase	
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	

EQUIPMENT

Refrigerator	
Microwave	x
Coffee Machine	x
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboards	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	x
Concrete	
Resinous/ Epoxy	
Carpet	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	10'-0"
Doors	
Size	
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	

REMARKS:

MEDIA - RECORDING STUDIO
PUBLIC + AMENITY

SPACE REQUIREMENTS

Space Name: MEDIA / RECORDING STUDIO
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 250

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION

Space for studio level recording and some level of broadcasting. Interactive tech space for users. Quiet space for recording.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	x
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

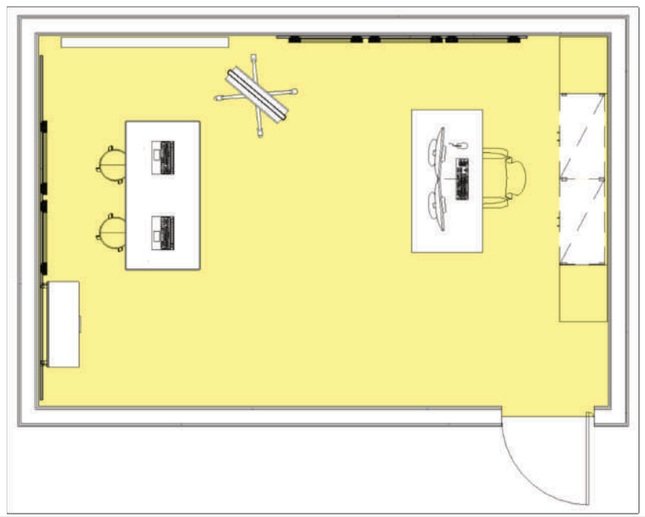
PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	15 - 20
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	60

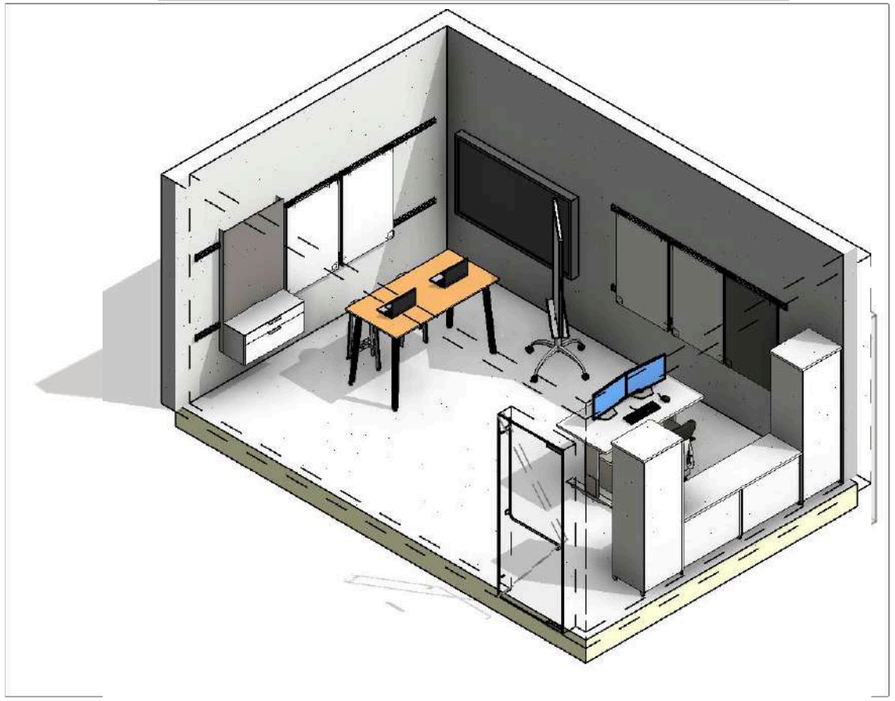
AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	x

SECURITY	
Locks	
Card Access	x

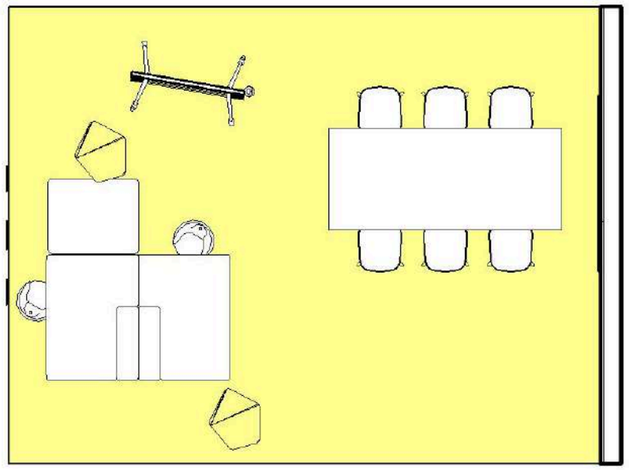
REMARKS:





STUDY FACILITY / INFORMAL STUDENT COLLAB

PUBLIC + AMENITY



SPACE REQUIREMENTS

Space Name: STUDY FACILITIES / INFORMAL STUDENT COLLABORATION

Space ID

Department / Space Type: PUBLIC + AMENITY

Programmed NSF: 500

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	

DESCRIPTION

Semi-quiet student space for study and informal collaboration.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV	
Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

SPACE REQUIREMENTS

Space Name: STUDY BOOTHS / ROOMS
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 80

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY

No. Of Occupants	1 - 2

DESCRIPTION

Quiet study space for single, or couples study groups.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	x
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

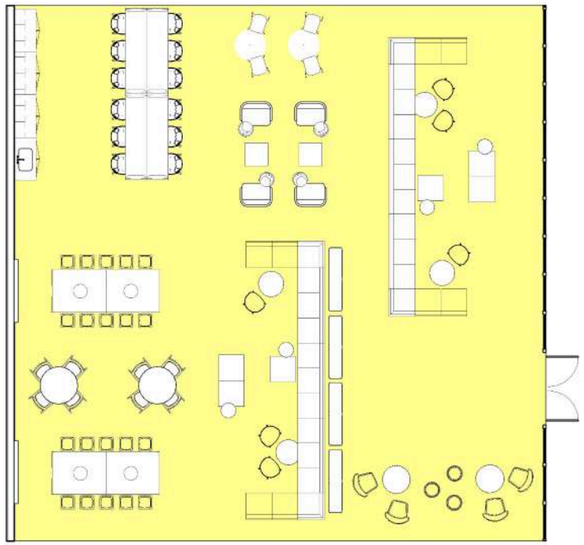
SECURITY

Locks	
Card Access	x

REMARKS:

INTERDISCIPLINARY HEALTH COMMONS

PUBLIC + AMENITY



SPACE REQUIREMENTS

Space Name: INTERDISCIPLINARY HEALTH COMMONS

Space ID

Department / Space Type: PUBLIC + AMENITY

Programmed NSF: 2,500

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION

Space for students to meet up, collaborate, and socialize.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

PLUMBING	
Sinks	
Standard	x
ADA	
Scullery	

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	x
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	x
Card Access	

REMARKS:

WELLNESS ROOM
PUBLIC + AMENITY

SPACE REQUIREMENTS

Space Name: WELLNESS ROOM
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 80

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY

No. Of Occupants	1

DESCRIPTION

Quiet space for single reflective time.
Single use.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	x
Semi Private	
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	x
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	X

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	25 - 30
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	55

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

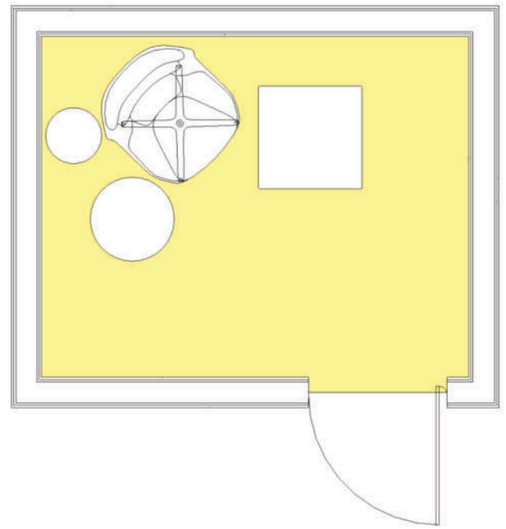
ARCHITECTURAL

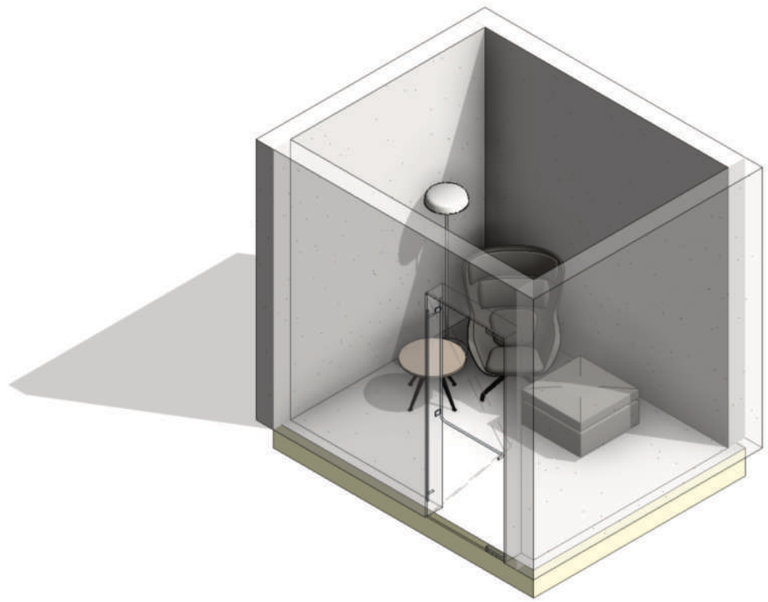
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

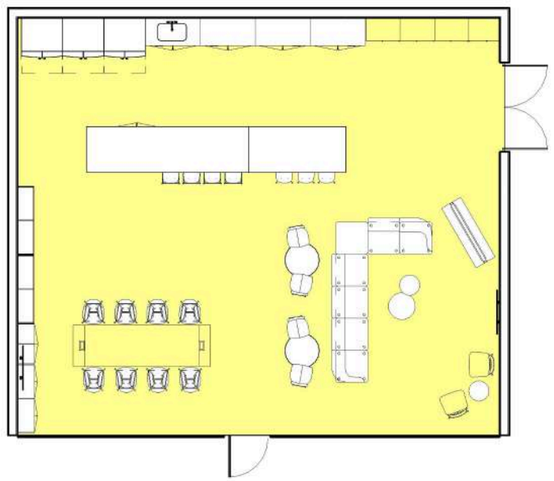
Locks	
Card Access	x

REMARKS:





HOUSES
PUBLIC + AMENITY



SPACE REQUIREMENTS

Space Name: HOUSES
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 900

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	40

DESCRIPTION
Space for student cohorts to meet up and socialize. Recreational space for cohorts

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

PLUMBING	
Sinks	
Standard	x
ADA	
Scullery	

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	x
Microwave	x
Coffee Machine	x
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	Small grp/Huddle rm
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45

AV	
Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	x
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:
Adjacent to Small Group and Huddle Rooms.

HOUSES SHARED KITCHENETTE
PUBLIC + AMENITY

SPACE REQUIREMENTS

Space Name: HOUSE SHARED KITCHENETTE
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 1200

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Shared kitchen where students can store food and drinks within the Shared Houses. Limited food prep.

ROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	
Conference Table	
Markerboard	
Moveable	
Wall mounted	

PLUMBING

Sinks	
Standard	x
ADA	
Scullery	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	x
Microwave	x
Coffee Machine	x
Dishwasher	x
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	x
Concrete	
Resinous/ Epoxy	
Carpet	
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

LOCKERS
PUBLIC + AMENITY

SPACE REQUIREMENTS

Space Name: LOCKERS
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 3

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION

Space for students to (short term) store personal belongings. Quick retrieval and drop off between classes.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	
Conference Table	
Markerboard	
Moveable	
Wall mounted	
Other	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
480V, 100A, 3 Phase	
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Markerboards	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	
GWB, Epoxy Paint	x
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	x
Concrete	
Resinous/ Epoxy	
Carpet	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	8'-0"
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	x
Card Access	

REMARKS:

GREEN RM / INTERVIEW / CONFERENCE RM
PUBLIC + AMENITY

SPACE REQUIREMENTS

Space Name: GREEN ROOM / INTERVIEW / CONFERENCE ROOM
Space ID
Department / Space Type: PUBLIC + AMENITY
Programmed NSF: 500

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	
CLASSROOM OCCUPANY	
No. Of Occupants	
DESCRIPTION	
Space for interviews of prospective recruits. Confernence space for meetings of depart-ment heads, faculty, etc.	
ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	
CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	x
Markerboard	
Moveable	
Wall mounted	x

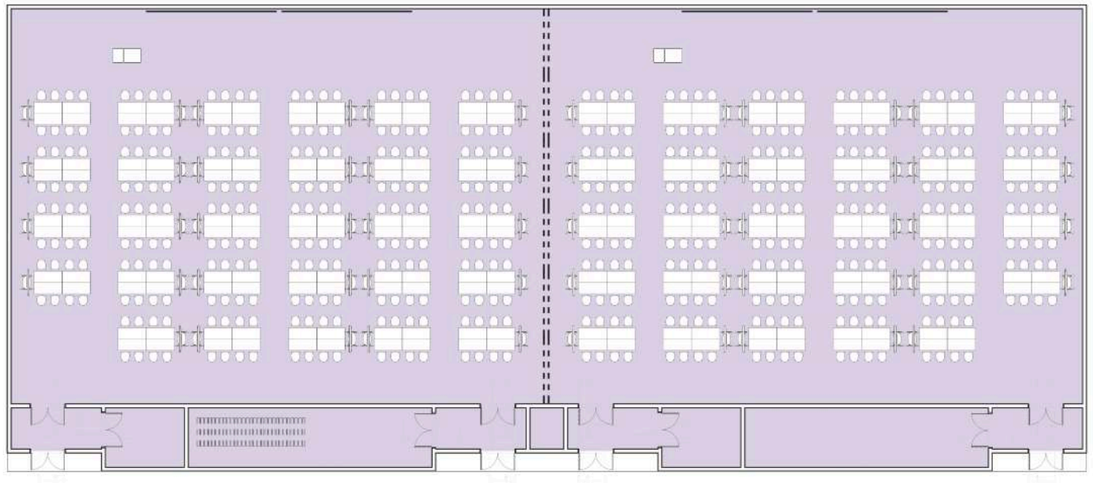
ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	
LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x
EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	x
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x
ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	
PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	20 - 25
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	50

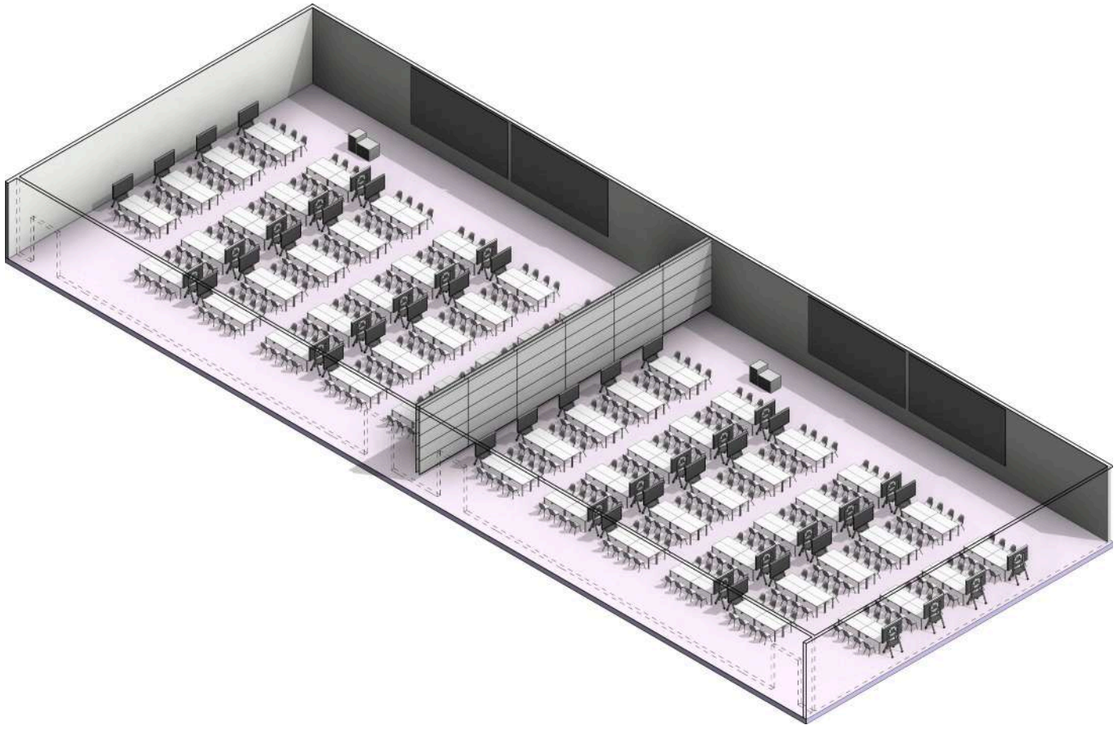
AV	
Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	
ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	
SECURITY	
Locks	x
Card Access	

REMARKS:

MULTIPURPOSE MEETING SPACE: 225 / 450

ACADEMIC





SPACE REQUIREMENTS

Space Name: MULTIPURPOSE MEETING SPACE: 225/450

Space ID

Department / Space Type: ACADEMIC

Programmed NSF: 6,750

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	225 / 450

DESCRIPTION

Large enclosed flexible work and learning space. Movable furniture and a modular wall meant for dividng or combining adjacent space.

ROOM TYPE	
Flat Floor	x
Raised floor	x
Floor boxes - power	
Floor boxes - power + data	x
Sloped	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55

AV	
Distance Learning	x
Video Conferencing	x
Video Wall	x
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	x
Smartboard	

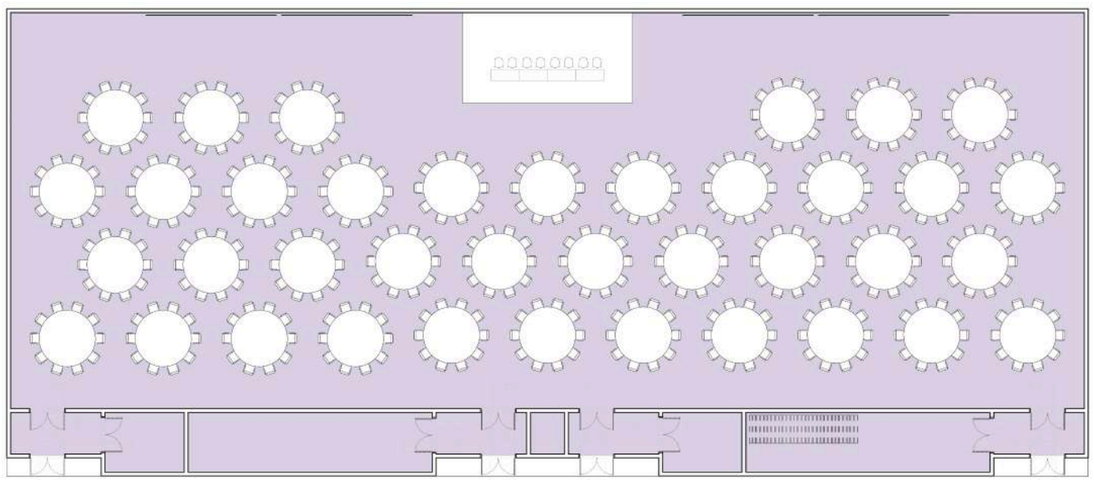
ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	x
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	
Type	
Vision Panel	
Special Hardware or Seals	

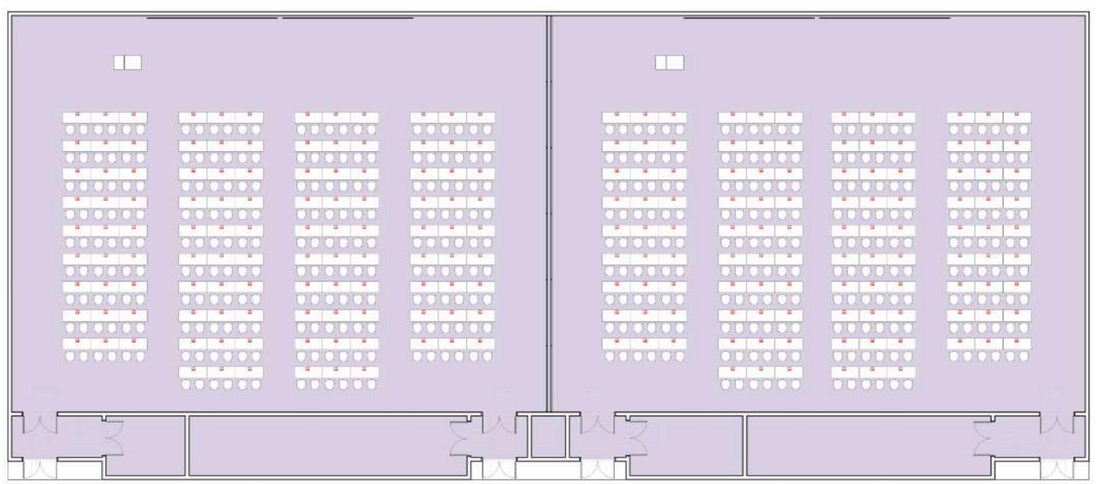
SECURITY	
Locks	
Card Access	x

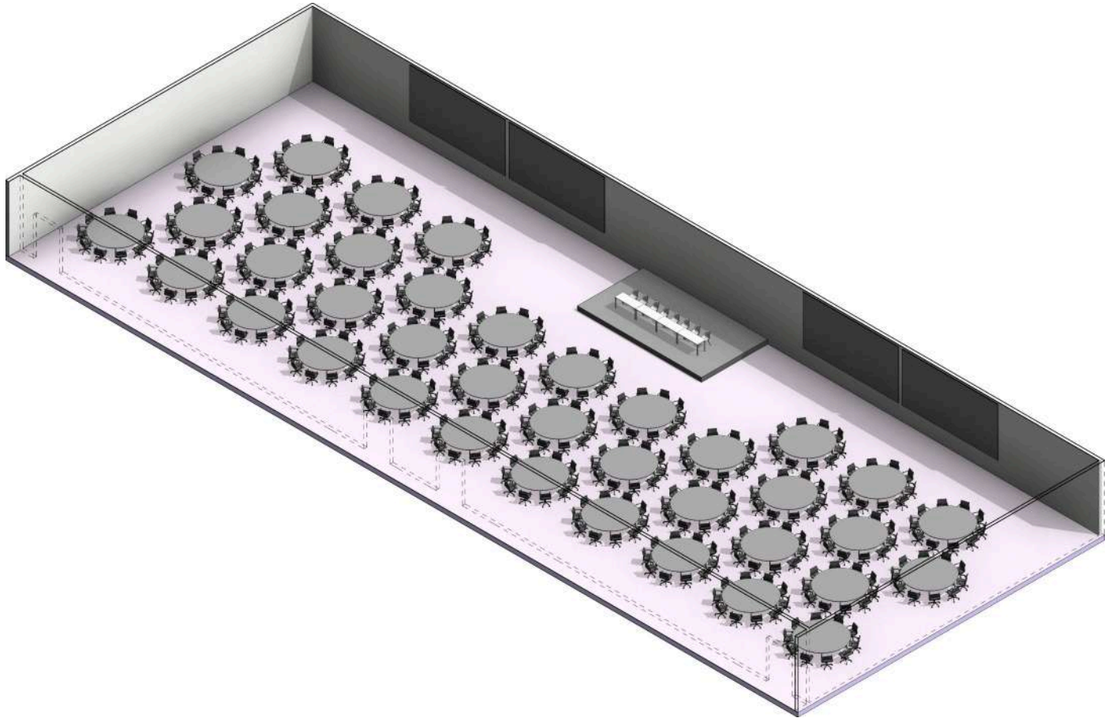
REMARKS:

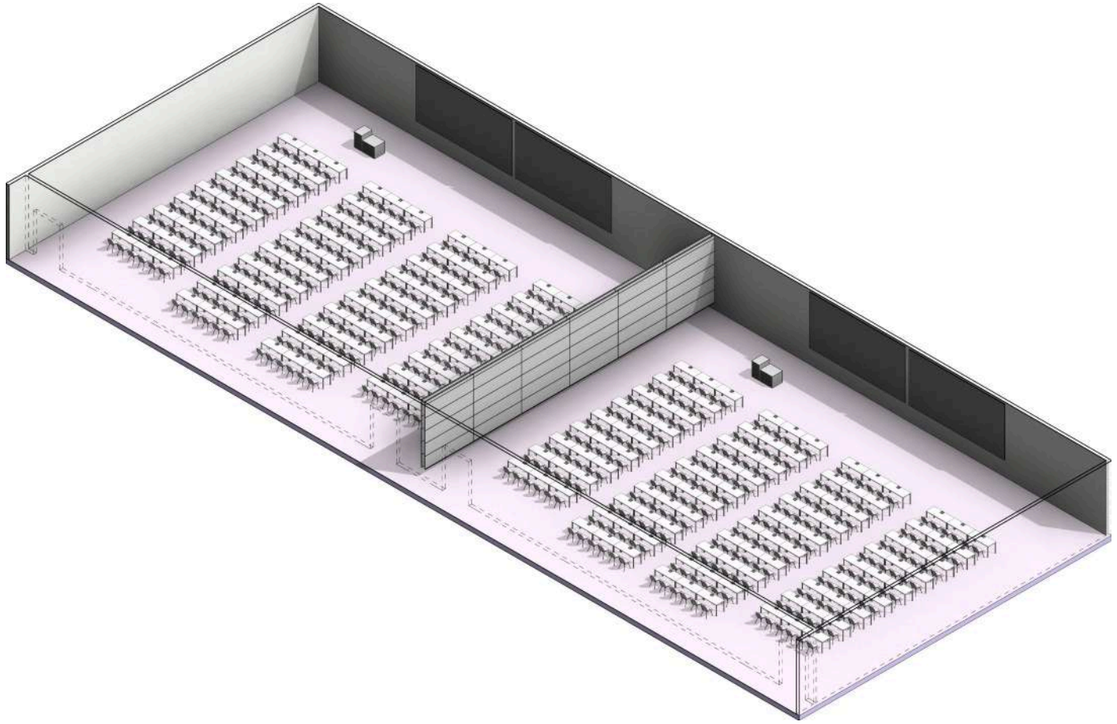
MULTIPURPOSE MEETING SPACE: 225 / 450

ALTERNATE FURNITURE CONFIGURATIONS

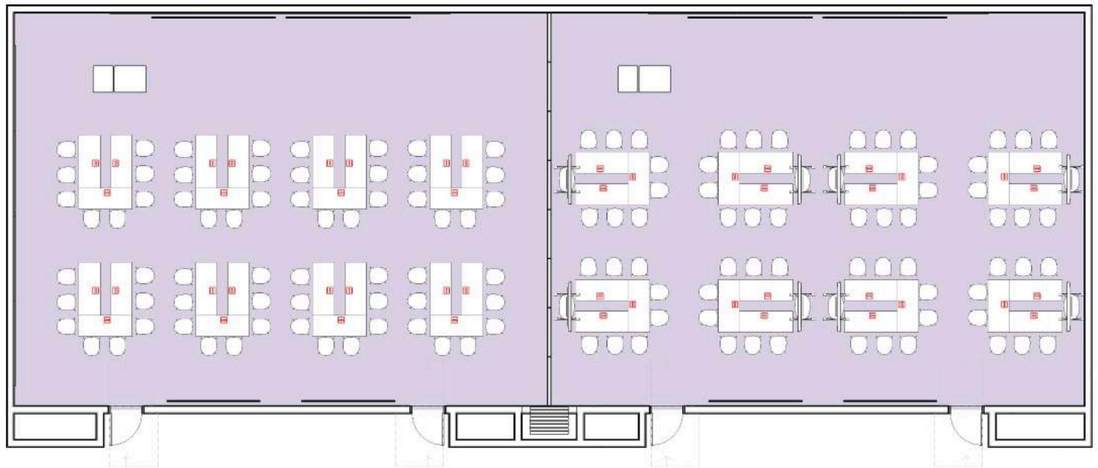


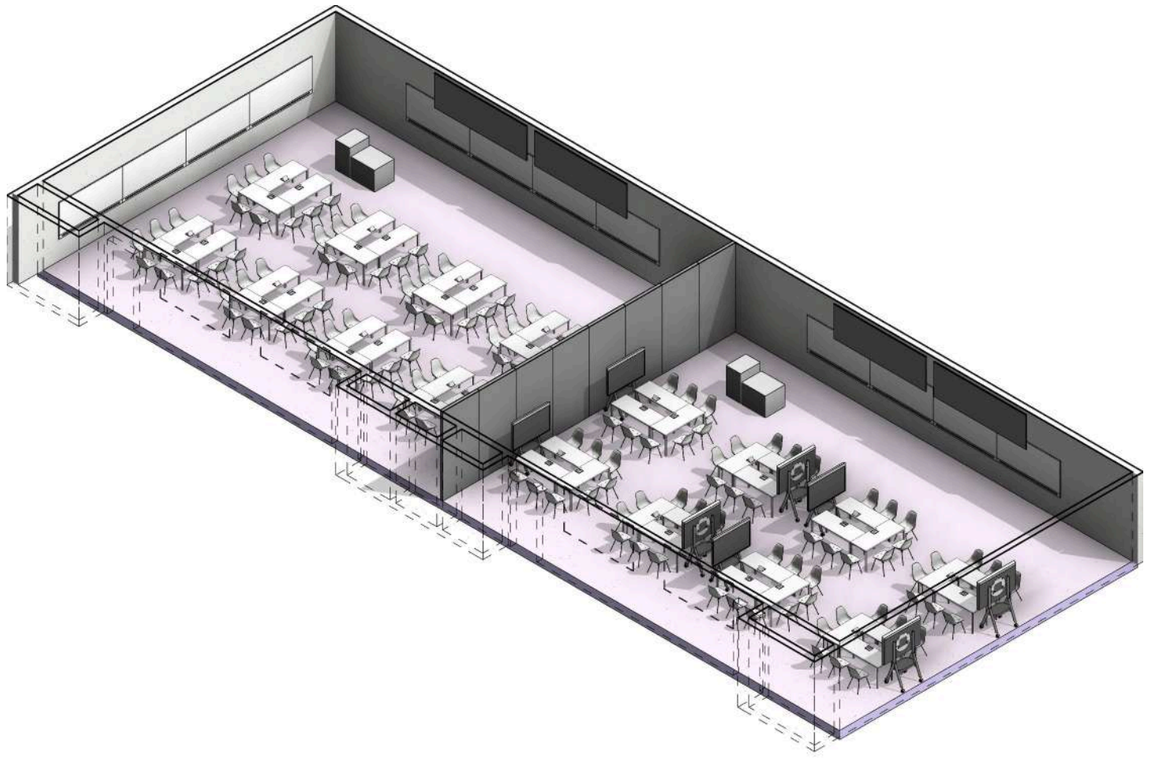






CLASSROOM: 60 / 120





SPACE REQUIREMENTS

Space Name: CLASSROOM (60/120)

Space ID

Department / Space Type: ACADEMIC

Programmed NSF: 1,800

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	60 / 120

DESCRIPTION

Enclosed teaching space. Adaptable, flexible furniture for efficient collaboration. Modular wall for dividing and comjoining adjacent classrooms.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	x
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	x
Rearrangeable	x
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55

AV	
Distance Learning	x
Video Conferencing	x
Video Wall	x
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	x
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	x
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	Wood
Vision Panel	x
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

Flexible, movable, modular 'plug & play' casework with 'house' services.

CLASSROOM: 30 / 60
ACADEMIC

SPACE REQUIREMENTS

Space Name: CLASSROOM: 30/60
Space ID
Department / Space Type: ACADEMIC
Programmed NSF: 900 / 1,800

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	30 / 60

DESCRIPTION

Enclosed teaching space. Adaptable, flexible furniture for efficient collaboration. Modular wall for dividing and comjoining adjacent classrooms.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	x
Sloped	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	x
Digital screen at table	
Rearrangeable	x
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55
	h

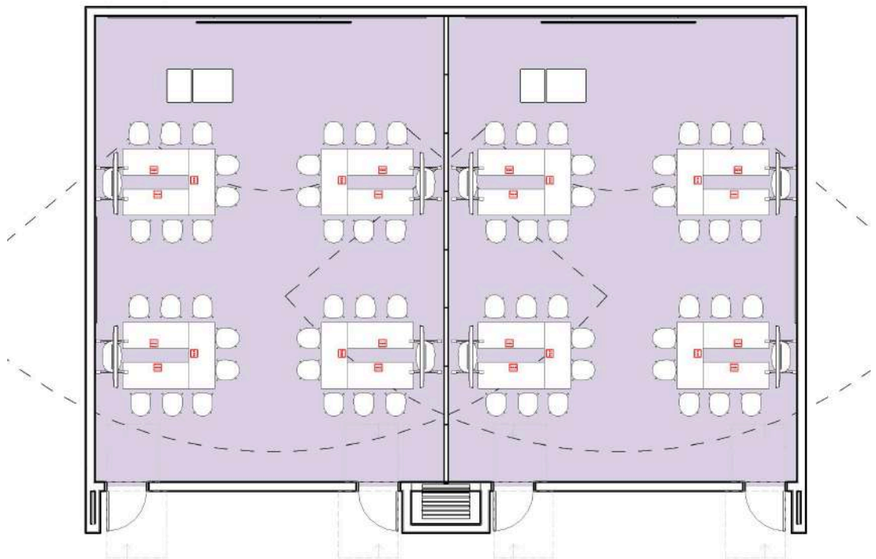
AV	
Distance Learning	x
Video Conferencing	x
Video Wall	x
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	x
Smartboard	

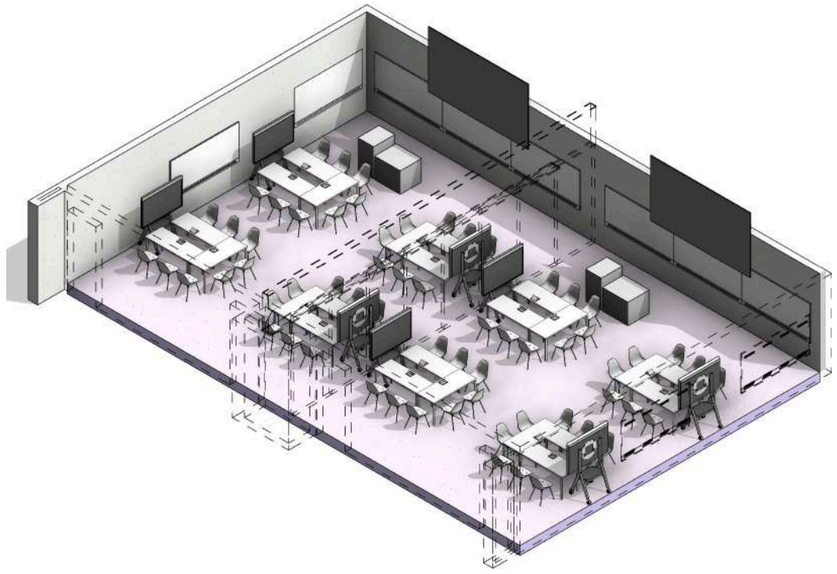
ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	x
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	Wood
Vision Panel	x
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

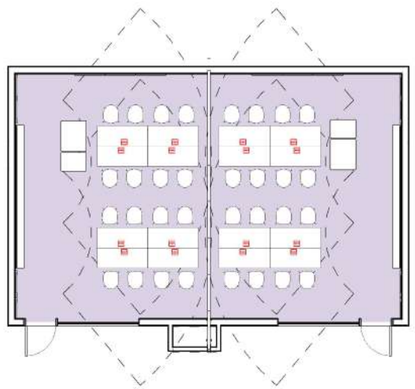
REMARKS:

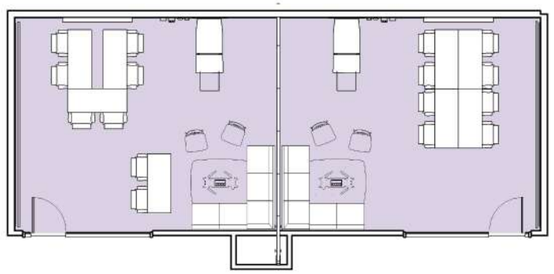
Flexible, movable, modular 'plug & play' casework with 'house' services.

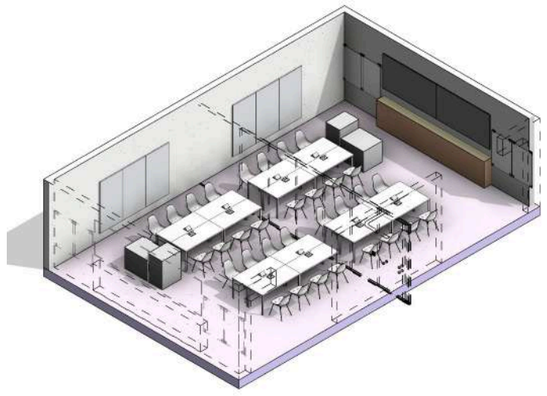


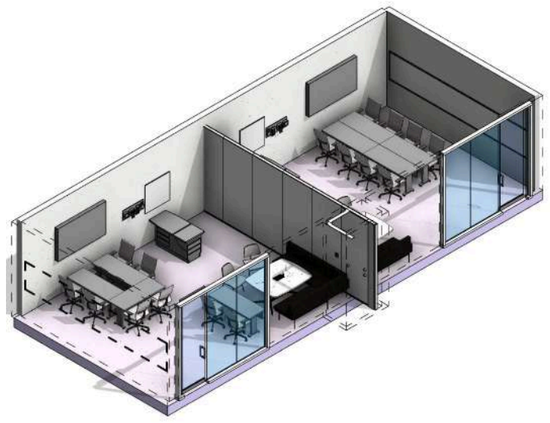


SMALL CLASSROOM: 15 / 30
ACADEMIC









SPACE REQUIREMENTS

Space Name: SMALL CLASSROOM (15/30)
Space ID
Department / Space Type: ACADEMIC
Programmed NSF: 450

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	15 / 30

DESCRIPTION

Enclosed teaching space. Adaptable, flexible furniture for efficient collaboration. Modular wall for dividing and comjoining adjacent classrooms.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	x
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	x
Rearrangeable	x
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55

AV	
Distance Learning	x
Video Conferencing	x
Video Wall	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	x
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	x
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	Wood
Vision Panel	x
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

Flexible, movable, modular 'plug & play' casework with 'house' services.

CLASSROOM STORAGE
ACADEMIC

SPACE REQUIREMENTS

Space Name: CLASSROOM STORAGE
Space ID
Department / Space Type: ACADEMIC
Programmed NSF: 200

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Enclosed space for teaching materials and other classroom related equipment.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
File Cabinets	x
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall Mounted	x
Tackboard	
Moveable	
Wall Mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	40-45

EQUIPMENT CRITERIA

Vibration Sensitivity/Criteria	
Light Sensitive	
Heat or Vibration Producing	x
Noise Producing	x
Other	

AV

Distance Learning	
Video Conferencing	
Video Wall	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Operable Wall	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

MULTIPURPOSE SUPPORT STORAGE
ACADEMIC

SPACE REQUIREMENTS

Space Name: MULTIPURPOSE SUPPORT / STORAGE
Space ID
Department / Space Type: ACADEMIC
Programmed NSF: 200

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION

Enclosed storage space for excess teaching materials, equipments, and other interdisciplinary equipment.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
File Cabinets	x
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall Mounted	x
Tackboard	
Moveable	
Wall Mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	40-45

EQUIPMENT CRITERIA	
Vibration Sensitivity/Criteria	
Light Sensitive	
Heat or Vibration Producing	x
Noise Producing	x
Other	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Operable Wall	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

SPACE REQUIREMENTS

Space Name: IT SUITE
Space ID
Department / Space Type: ACADEMIC
Programmed NSF: 800

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	4

DESCRIPTION

Semi-enclosed workplace for IT employees. Some short term storage for IT and tech equipment.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	X

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45-50

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL

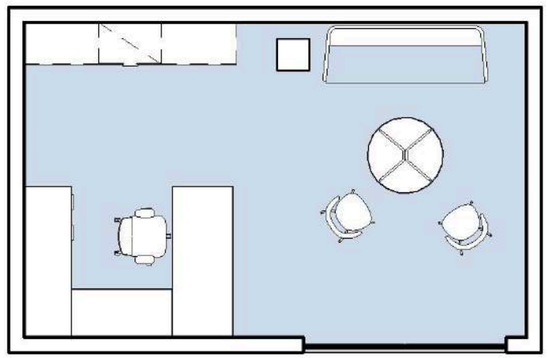
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

DEAN
WORKPLACE



SPACE REQUIREMENTS

Space Name: DEAN
Space ID
Department / Space Type: WORPLACE
Programmed NSF: 225

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	1

DESCRIPTION
Enclosed offices space for the Dean.
Guest / collaborative seating, and vertical
writing surfaces

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	x
Semi Private	
Open	
Guest Seating	x
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	x
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	Board Room
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

ASSC. DEAN / DEPT CHR / VICE CHR / ASSC VICE CHR
WORKPLACE

SPACE REQUIREMENTS

Space Name:	ASSOC. DEAN, DEPT. CHAIR, VICE CHAIR, ASSOC. VICE CHAIR
Space ID	
Department / Space Type:	WORKPLACE
Programmed NSF:	150

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	1

DESCRIPTION
Enclosed office. Vertical writing surfaces
for note taking

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	x
Semi Private	
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	x
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

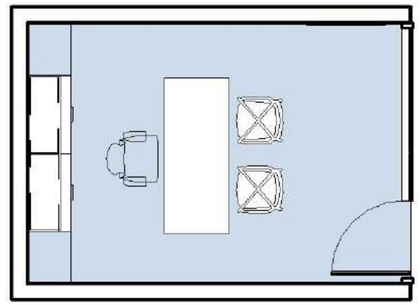
PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

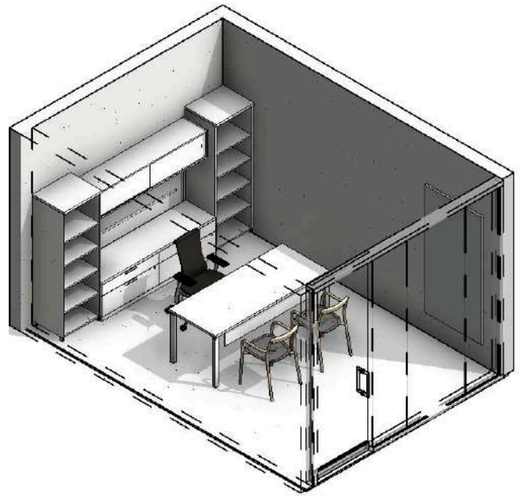
AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

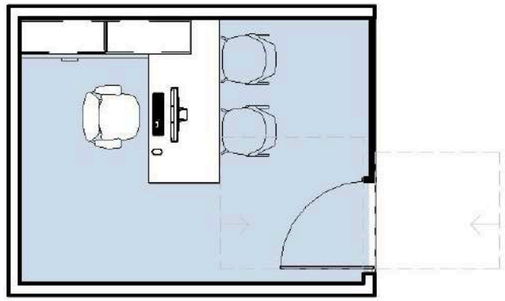
SECURITY	
Locks	
Card Access	x

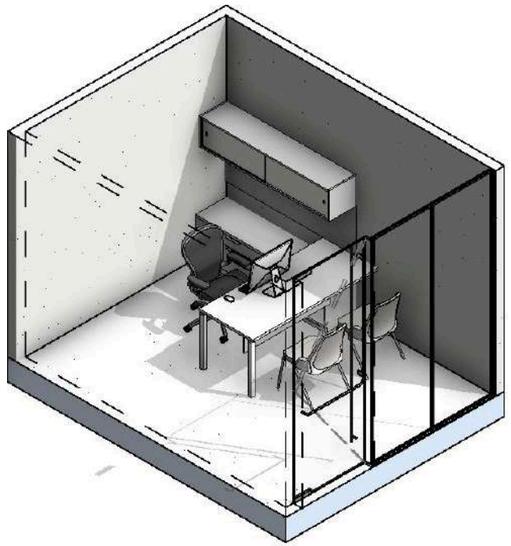
REMARKS:





PROFESSOR / ASSOC, ASST INSTRUCTOR
WORKPLACE





SPACE REQUIREMENTS

Space Name:	PROFESSOR, ASSOC., ASST, INSTR
Space ID	
Department / Space Type:	WORKPLACE
Programmed NSF:	110

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	1

DESCRIPTION
Enclosed office. Vertical writing surfaces for note taking

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	x
Semi Private	
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	x
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

BOARD ROOM
WORKPLACE

SPACE REQUIREMENTS

Space Name: BOARD ROOM
Space ID
Department / Space Type: SHARED
Programmed NSF: 900

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION
Hours of Operation
- 8 hours/day
- 14 hours/day: x
- 24 hours/day

CLASSROOM OCCUPANCY
No. Of Occupants

DESCRIPTION
Enclosed shared space for meetings and important group sessions. Outfitted with virtual communication and interactive technology.

CLASSROOM TYPE
- Flat Floor: x
- Raised floor
- Floor boxes - power
- Floor boxes - power + data

CASEWORK/MILLWORK/ FURNITURE
Space Type
- Private: x
- Semi Private
- Open

Guest Seating
Table w/ seating for 2-3
Wall Cabinets or Shelves
Sofa/ Lounge chair
Flexible Furniture: x
- Moveable tables
- Stackable chairs
- Task chairs w/arms: x

Collaborative Furniture
- Digital screen at table
- Rearrangeable

Bookcases
Conference Table: x
Markerboard
- Moveable
- Wall mounted: x

PLUMBING
Sinks
- Standard
- ADA
- Scullery

ELECTRICAL
Electrical Raceway
110V, 20A, 1 Phase: x
208V, 30A, 1 Phase
208V, 30A, 3 Phase
USB Outlets: x
Emergency/ Standby Power
UPS (OFOI)
Other

LIGHTING
Lighting Level
- 80-100 fc at bench/desk (labs)
- 30-60 fc at bench/desk (offices): x

Task Lighting
Darkenable or Dimmable: x
Special Lighting: x
Natural Daylight Preferred or not: x

EQUIPMENT
Refrigerator
Microwave
Coffee Machine
Dishwasher
Printer/ Scanner
Plotter
Copier
Computers: x
Other: x

ADJACENCY CRITERIA
Primary Adjacency
Secondary Adjacency

PERFORMANCE REQUIREMENTS
NC Acoustical Criteria: 35-40
Acoustical Panels: x
Privacy Criteria
Testing Criteria
STC Rating: 55

AV
Distance Learning
Video Conferencing: x
Projection Surface
Flat screen Monitors: x
Power at Table: x
Data at Table: x
Lectern or Other
Smartboard

ARCHITECTURAL
Walls/Partitions
- GWB, Paint: x
- GWB, Epoxy Paint
- CMU, Paint
- Operable Wall
- Other

Wall Protection
- Corner Guards
- Crash Rails

Flooring
- VCT/ Vinyl free tile
- Sheet Vinyl
- Concrete
- Resinous/ Epoxy
- Carpet: x
- Raised Floor
- Other

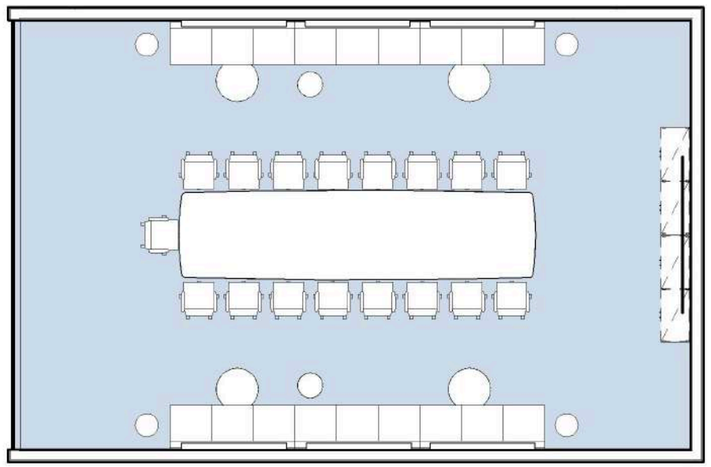
Base
- 4" Rubber: x
- Integral w/floor

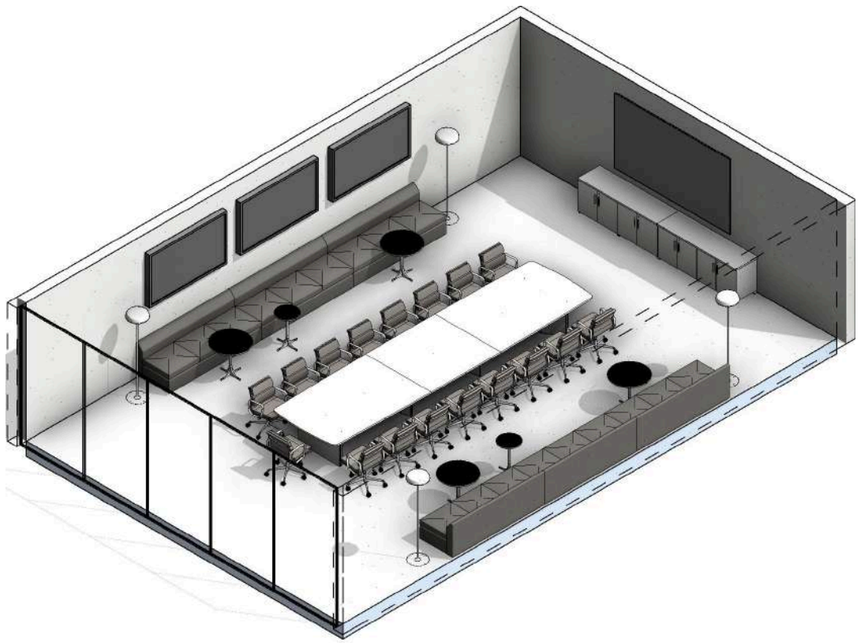
Ceiling
- Open
- Acoustic Tile: x
- Gyp. Board
- Height

Doors
- Size: 36"
- Type
- Vision Panel
- Special Hardware or Seals: x

SECURITY
- Locks
- Card Access: x

REMARKS:





MEDICAL INTERNS / RESIDENTS / SERVICE / GRA
WORKPLACE

SPACE REQUIREMENTS

Space Name: MEDICAL INTERNS / RESIDENTS, SERVICE, GRA
Space ID
Department / Space Type: WORKPLACE
Programmed NSF: 36

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	

DESCRIPTION
Small open workstation arrangements with vertical writing surfaces

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	x
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	

REMARKS:

MEETING ROOM: 15 PERSON
WORKPLACE

SPACE REQUIREMENTS

Space Name: MEETING ROOM: 15 PERSON
Space ID
Department / Space Type: SHARED
Programmed NSF: 375

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	15

DESCRIPTION

Enclosed space used for small meetings.
Moveable furniture for efficient configurations depending on group size.

ROOM TYPE

Flat Floor	
Raised floor	
Floor boxes - power	
Floor boxes - power + data	x

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	50

AV

Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

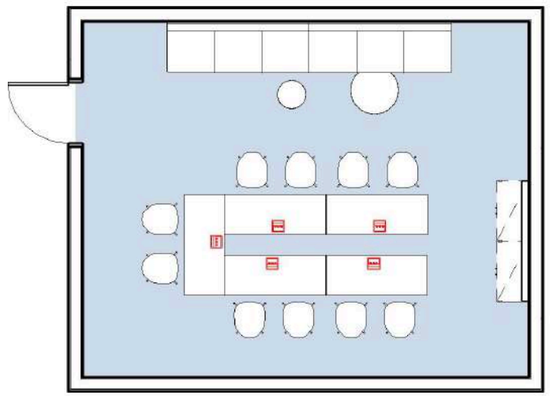
ARCHITECTURAL

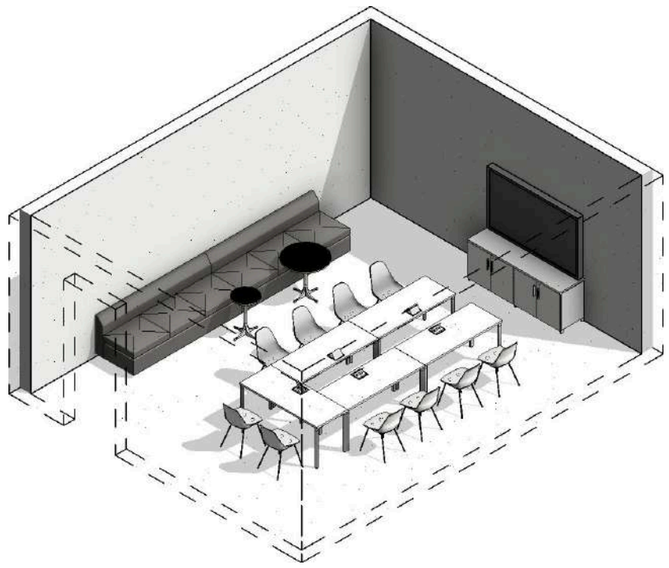
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	x
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

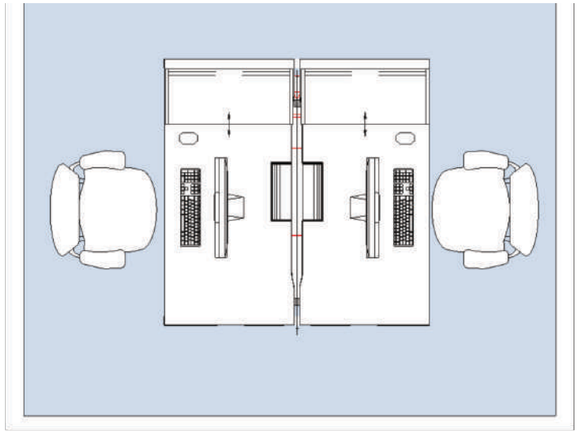
Locks	
Card Access	x

REMARKS:





ADMINISTRATIVE / PROFESSIONAL / COORDINATOR
WORKPLACE



SPACE REQUIREMENTS

Space Name: ADMINISTRATIVE, PROFESSIONAL, COORDINATOR
Space ID
Department / Space Type: WORKPLACE
Programmed NSF: 80

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	1

DESCRIPTION
Open workstation. Modular desk systems, collaborative configurations.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	x
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	

REMARKS:

POST DOC / SCHLR SEC/CLR / TECHNICAL
WORKPLACE

SPACE REQUIREMENTS

Space Name: POST-DOCTORIAL SCHOLAR, SEC / CLERICAL, TECHNICAL
Space ID
Department / Space Type: WORKPLACE
Programmed NSF: 60

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	1

DESCRIPTION

Open workstation. Modular desk systems
Vertical writing surfaces for note taking and collaboration.

ROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	x
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

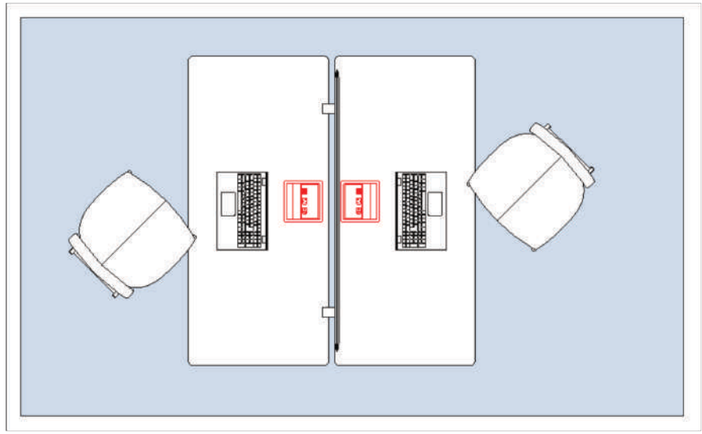
ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	
Type	
Vision Panel	
Special Hardware or Seals	

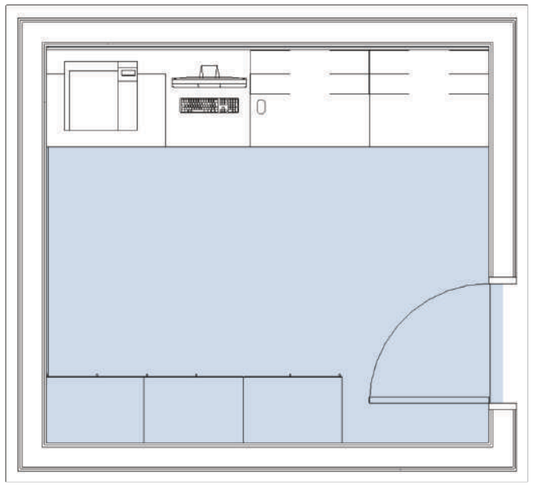
SECURITY

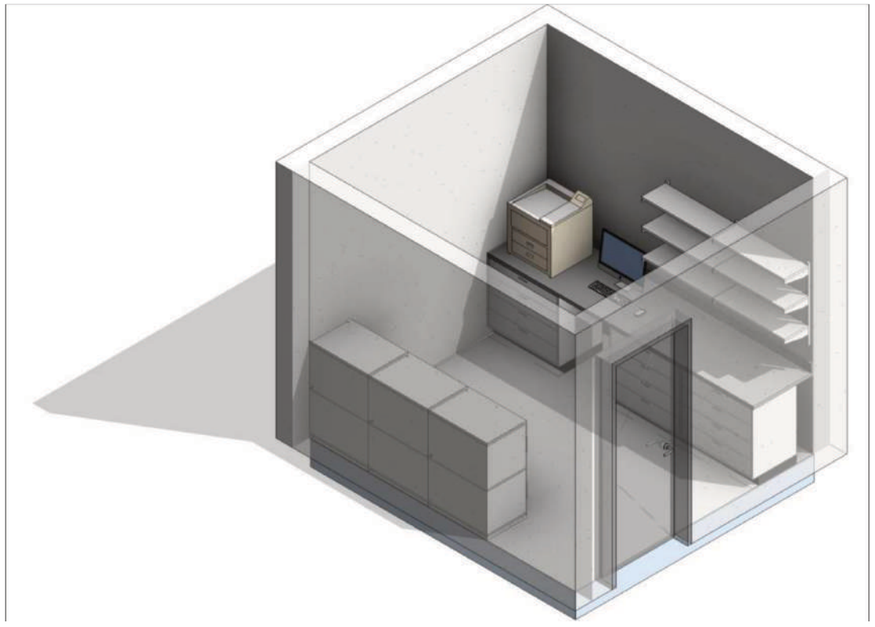
Locks	
Card Access	

REMARKS:



COPY / MAIL AREA
SHARED





SPACE REQUIREMENTS

Space Name: COPY / MAIL AREA
Space ID
Department / Space Type: SHARED
Programmed NSF: 110

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	

DESCRIPTION

Enclosed space for retrieval and disperal of mail and other packages. Space for faculty and staff to create and process paperwork.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
File Cabinets	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall Mounted	x
Tackboard	
Moveable	
Wall Mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	x
Plotter	x
Copier	x
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	40-45

EQUIPMENT CRITERIA	
Vibration Sensitivity/Criteria	
Light Sensitive	
Heat or Vibration Producing	x
Noise Producing	x
Other	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Operable Wall	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

SPACE REQUIREMENTS

Space Name: FACULTY / STAFF BREAK AREA

Space ID

Department / Space Type: SHARED

Programmed NSF: 300

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	10

DESCRIPTION

Enclosed break space for faculty and staff only. Space for food and drink storage and some food prep. A space for some socializing.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	
Sloped	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	
Conference Table	
Markerboard	
Moveable	
Wall mounted	

PLUMBING	
Sinks	
Standard	
ADA	x
Scullery	

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	x
Microwave	x
Coffee Machine	x
Dishwasher	x
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

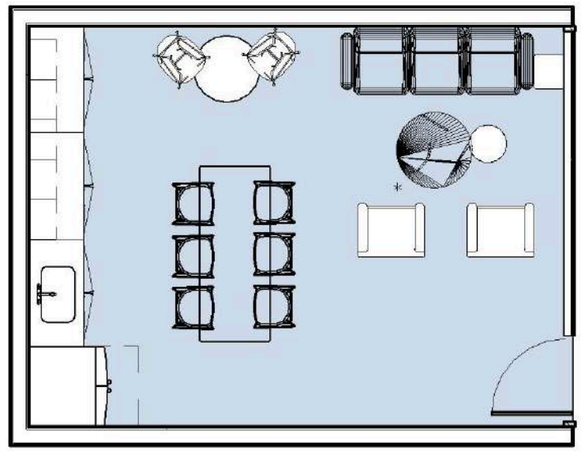
AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

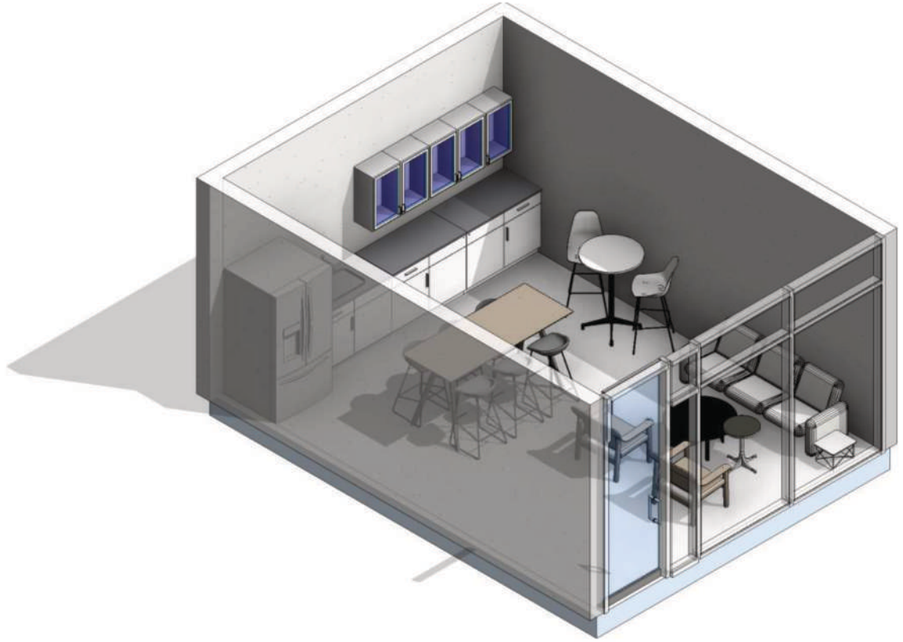
ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	x
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

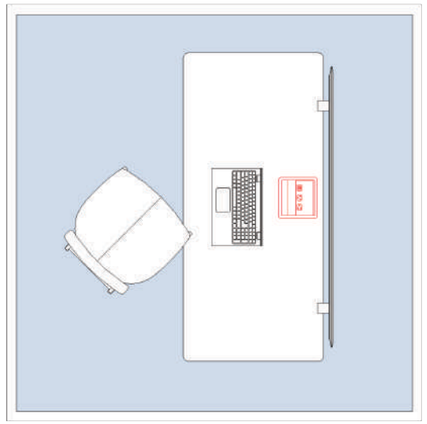
REMARKS:

FACULTY / STAFF BREAK AREA
SHARED





HOTELLING / TOUCHDOWN
SHARED



SPACE REQUIREMENTS

Space Name: HOTELLING / TOUCHDOWN
Space ID
Department / Space Type: SHARED
Programmed NSF: 36

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	
CLASSROOM OCCUPANCY	
No. Of Occupants	1
DESCRIPTION	
Unassigned open workstation. Especially for visiting faculty and staff.	
ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	
CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	x
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	
LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x
EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x
ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	
PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	
ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	
Type	
Vision Panel	
Special Hardware or Seals	
SECURITY	
Locks	
Card Access	

REMARKS:

INFORMAL COLLABORATION
SHARED

SPACE REQUIREMENTS

Space Name: INFORMAL COLLABORATION
Space ID
Department / Space Type: SHARED
Programmed NSF: 300

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Semi-quiet student space for study and informal collaboration.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV

Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

RECEPTION / WAITING
SHARED

SPACE REQUIREMENTS

Space Name: RECEPTION / WAITING
Space ID
Department / Space Type: SHARED
Programmed NSF: 200

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	12

DESCRIPTION

Open space for people waiting to be received by faculty, staff, and other users. Space for short term seating.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	
Sloped	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	x
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	
Gyp. Board	x
Height	
Doors	
Size	
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	

REMARKS:

STORAGE
SHARED

SPACE REQUIREMENTS

Space Name: STORAGE
Space ID
Department / Space Type: SHARED
Programmed NSF: 80

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	
24 hours/day	x

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Enclosed storage space with free standing and free standing storage.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	x
Semi Private	
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
File Cabinets	x
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall Mounted	
Tackboard	
Moveable	
Wall Mounted	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	40-45

EQUIPMENT CRITERIA

Vibration Sensitivity/Criteria	
Light Sensitive	
Heat or Vibration Producing	
Noise Producing	
Other	

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Operable Wall	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

WORKROOM / STORAGE
SHARED

SPACE REQUIREMENTS

Space Name: WORKROOM / STORAGE
Space ID
Department / Space Type: SHARED
Programmed NSF: 110

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANY	
No. Of Occupants	

DESCRIPTION
Enclosed dual storage and work room.
Includes storage solutions and equipment for paperwork production and processing.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
File Cabinets	x
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall Mounted	x
Tackboard	
Moveable	
Wall Mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	x
Plotter	
Copier	x
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	40-45

EQUIPMENT CRITERIA	
Vibration Sensitivity/Criteria	
Light Sensitive	
Heat or Vibration Producing	x
Noise Producing	x
Other	

AV	
Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Operable Wall	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

HEALTH INCUBATOR
INTERDISCIPLINARY

SPACE REQUIREMENTS

Space Name: HEALTH INCUBATOR
Space ID
Department / Space Type: INTERDISCIPLINARY
Programmed NSF: 6,000

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION
Open, convertible, flexible space. Contains a "Shark Tank"/Pitch space for interdisciplinary meetings, conference space, flexible seating, and open workstations.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

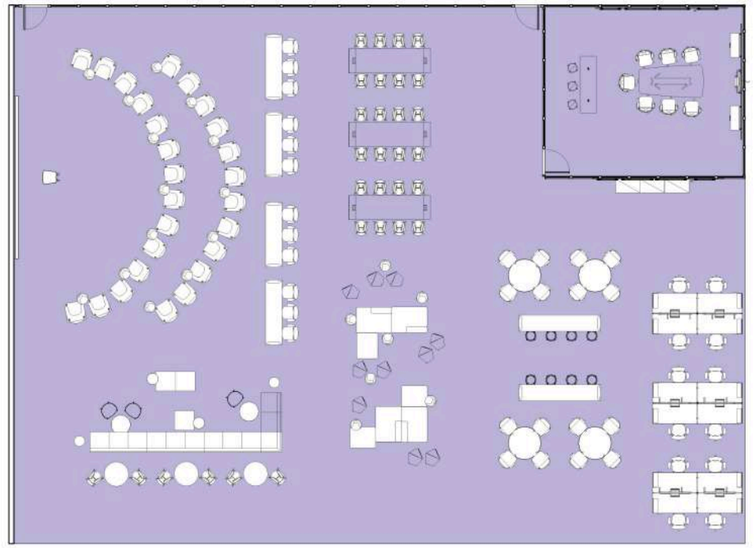
PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55

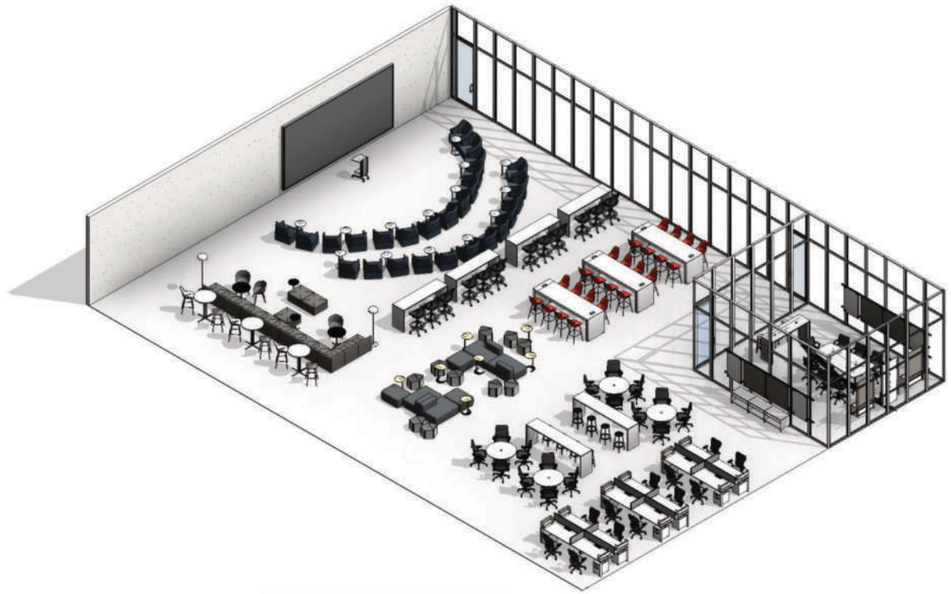
AV	
Distance Learning	
Video Conferencing	x
Projection Surface	x
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:





HEALTH MAKERSPACE - 3D BIOPRINTING
INTERDISCIPLINARY

SPACE REQUIREMENTS

Space Name: HEALTH MAKERSPACE - 3D BIOPRINTING LAB
Space ID
Department / Space Type: INTERDISCIPLINARY
Programmed NSF: 2,000

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION
Interdisciplinary space for collaboration.
Space for 3D Bioprinting

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	x
Table w/ seating for 2-3	x
Wall Cabinets or Shelves	
Sofa/ Lounge chair	x
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	x
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	
Wall mounted	X

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	50

AV	
Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

DIS. RESPONSE / HYPERFLEX / IMMERSIVE STUDIO
INTERDISCIPLINARY

SPACE REQUIREMENTS

Space Name: DISASTER RESPONSE / HYPERFLEXIBLE SANDBOX / IMMERSIVE STUDIO
Space ID
Department / Space Type: INTERDISCIPLINARY
Programmed NSF: 4,000

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Space with multiple kenetic dividing walls.
Equipped to simulate multiple diaster situations.

ROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	x
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55

AV

Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

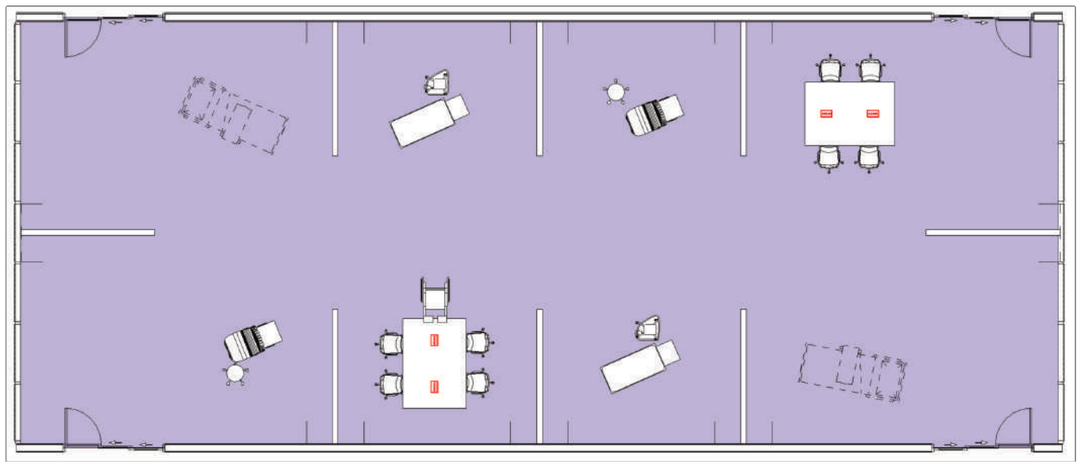
ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	x
Resinous/ Epoxy	
Carpet	
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	x
Acoustic Tile	
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

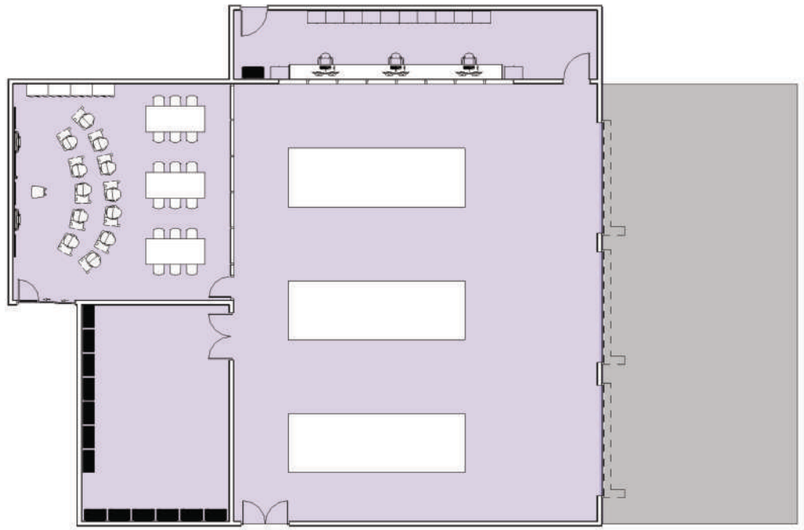
SECURITY

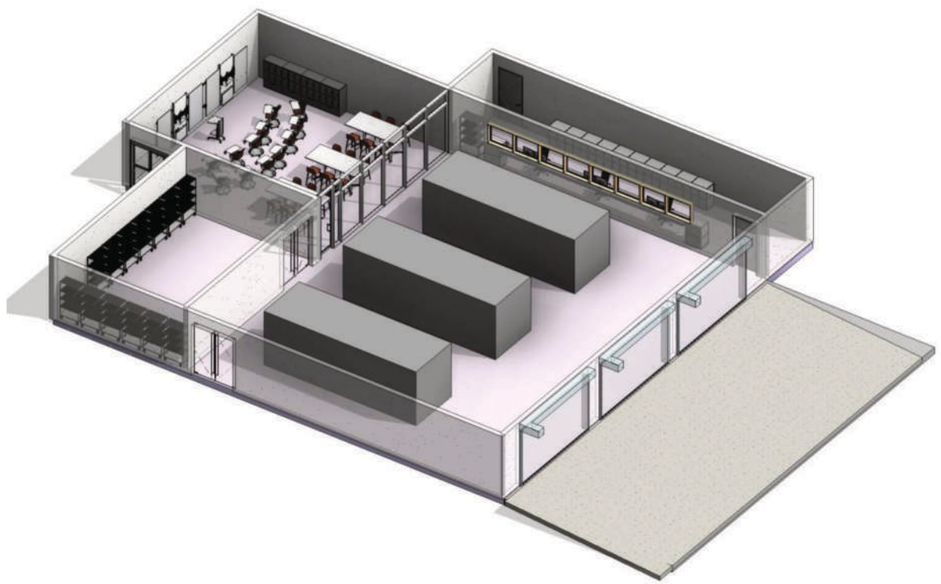
Locks	x
Card Access	

REMARKS:



MOBILE HEALTH LAB
INTERDISCIPLINARY





SPACE REQUIREMENTS

Space Name: MOBILE HEALTH LAB
Space ID
Department / Space Type: INTERDISCIPLINARY
Programmed NSF: 3,000

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION

Housing for mobile medical vehicles.
Teaching, obervations, and storage spaces attached.

ROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	x
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	Parking/Loading
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	20 - 25
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55

AV	
Distance Learning	
Video Conferencing	
Projection Surface	x
Flat screen Monitors	x
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	x
Resinous/ Epoxy	
Carpet	
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	x
Acoustic Tile	
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	x
Other	coiling door

SECURITY	
Locks	
Card Access	x

REMARKS:

An innovative suite of spaces where students can experience community care, out reach, and service.
Will serve as a home base for dentistry, nursing, and medicine mobile health vehicles.
Interprofessional teaching space for learners across programs. Adjacent learning/lecture space to prepare, absorb, and digest material, before and after, a hands-on learning experience.
Recording and camera capture capabilities are required. One way glass at the control room

SPACE REQUIREMENTS

Space Name: COMPUTATIONAL / VISUALIZATION SUITE

Space ID

Department / Space Type: INTERDISCIPLINARY

Programmed NSF: 1,000

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

DESCRIPTION

Enclosed teaching and interactive space.
Collarborative, flexible furniture with data.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	x
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	25 - 30
Acoustical Panels	x
Privacy Criteria	
Testing Criteria	
STC Rating	55

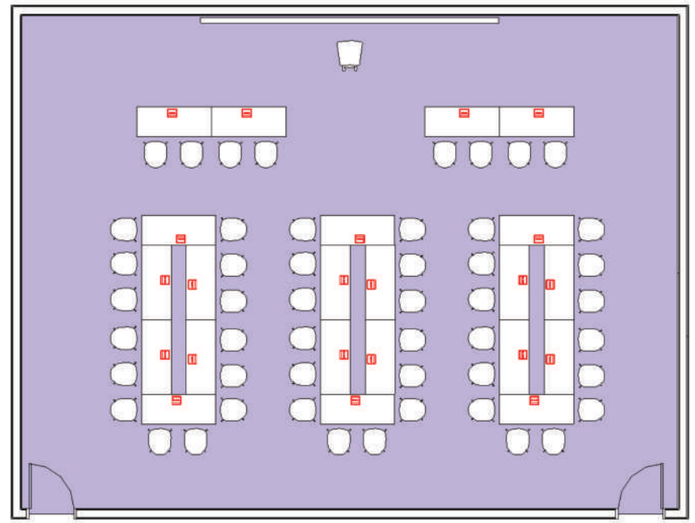
AV	
Distance Learning	x
Video Conferencing	x
Video Wall	x
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

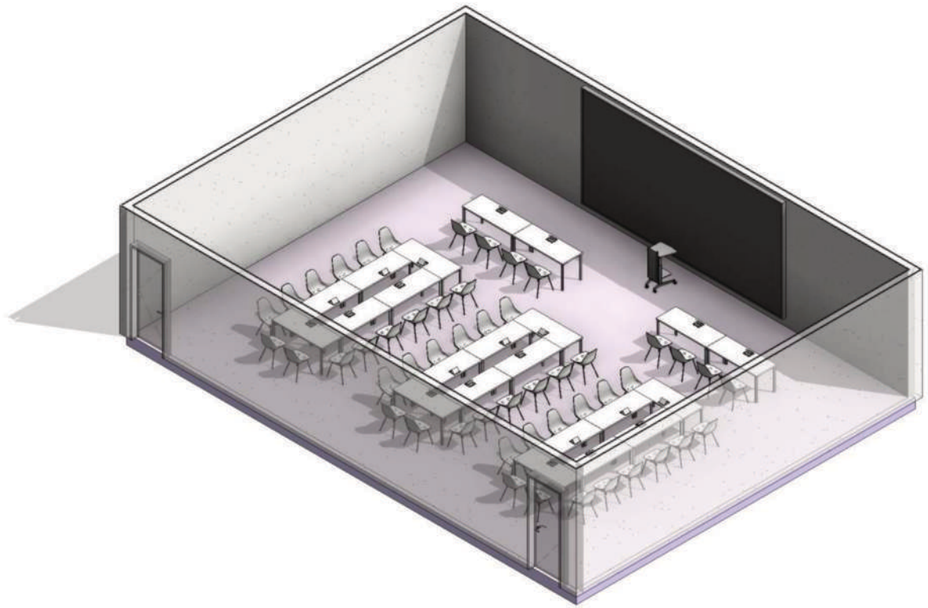
ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	x
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

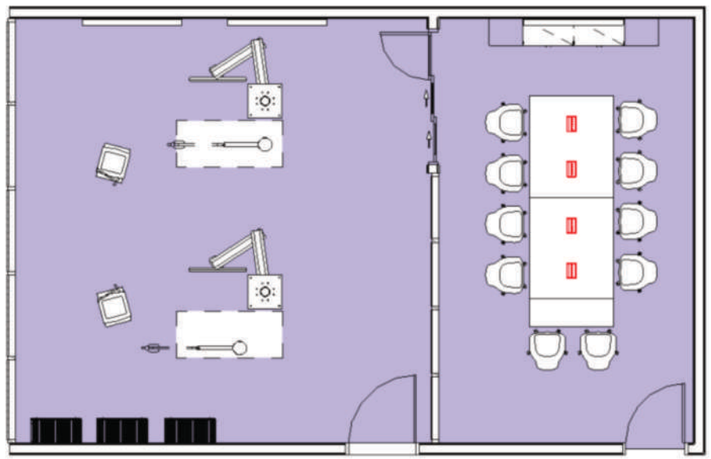
REMARKS:

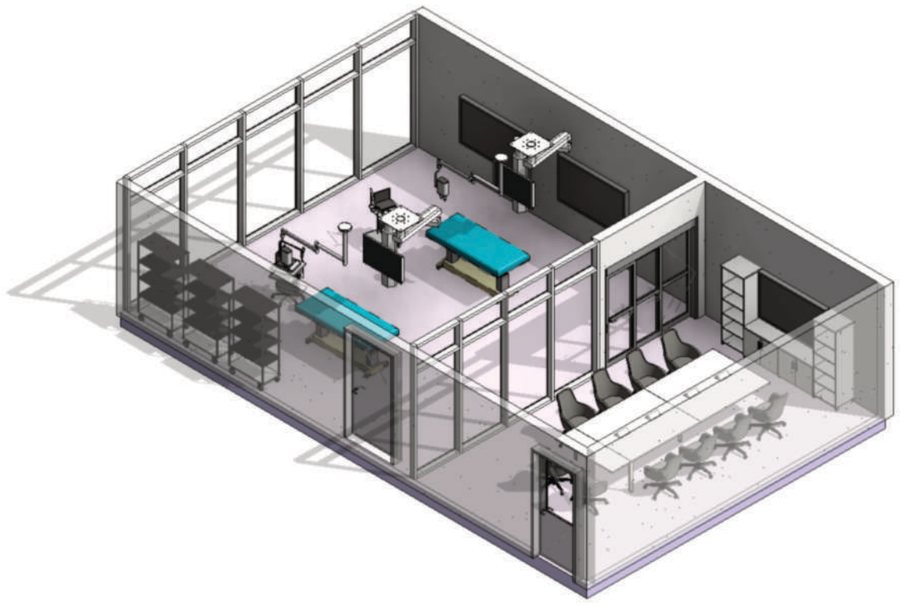
COMPUTATIONAL / VISUALIZATION SUITE
INTERDISCIPLINARY





TECHNOLOGY INNOVATION LAB
INTERDISCIPLINARY





SPACE REQUIREMENTS

Space Name: TECHNOLOGY INNOVATION LAB

Space ID

Department / Space Type: INTERDISCIPLINARY

Programmed NSF: 1,000

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION	
Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY	
No. Of Occupants	

Space to research and demostrate latest medical technology in partnership with internal or external stkeholders.

CLASSROOM TYPE	
Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE	
Space Type	
Private	
Semi Private	
Open	x
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Conference Table	
Markerboard	
Moveable	x
Wall mounted	x

ELECTRICAL	
Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING	
Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	x
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT	
Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	x
Other	x

ADJACENCY CRITERIA	
Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS	
NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	50

AV	
Distance Learning	
Video Conferencing	x
Projection Surface	
Flat screen Monitors	x
Power at Table	x
Data at Table	x
Lectern or Other	
Smartboard	

ARCHITECTURAL	
Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	
Resinous/ Epoxy	
Carpet	
Raised Floor	
Other	Rubber
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	48"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY	
Locks	
Card Access	x

REMARKS:

KITCHENETTE
SHARED

SPACE REQUIREMENTS

Space Name: KITCHENETTE
Space ID
Department / Space Type: SHARED
Programmed NSF: 200

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Enclosed kitchen and dining space for faculty and staff. Food and drink storage and some food prep.

ROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	
Sloped	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	
Semi Private	x
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	x
Stackable chairs	x
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	
Conference Table	
Markerboard	
Moveable	
Wall mounted	

PLUMBING

Sinks	
Standard	
ADA	x
Scullery	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
USB Outlets	x
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	x
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	x
Microwave	x
Coffee Machine	x
Dishwasher	x
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	35-40
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Smartboard	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	x
GWB, Epoxy Paint	
CMU, Paint	
Operable Wall	
Other	wall tile
Wall Protection	
Corner Guards	
Crash Rails	
Flooring	
VCT/ Vinyl free tile	
Resilient sheet / Vinyl free	x
Concrete	
Resinous/ Epoxy	
Carpet	
Raised Floor	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

BUILDING STORAGE / DRY GOODS
BUILDING LOGISTICS

SPACE REQUIREMENTS

Space Name: BUILDING MANAGEMENT
Space ID
Department / Space Type: BUILDING LOGISTICS
Programmed NSF: 200

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	1

DESCRIPTION

Enclosed workplace for building management employee. Some storage space.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	x
Semi Private	
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	x
Conference Table	
Markerboard	
Moveable	
Wall mounted	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
480V, 100A, 3 Phase	
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	30
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Markerboards	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	
GWB, Epoxy Paint	x
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	x
Concrete	
Resinous/ Epoxy	
Carpet	
Other	
Base	
4" Rubber	
Integral w/floor	x
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

LOADING DOCK + HANDLING
BUILDING LOGISTICS

SPACE REQUIREMENTS

Space Name: LOADING DOCK + HANDLING
Space ID
Department / Space Type: BUILDING LOGISTICS
Programmed NSF: 500

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	

DESCRIPTION

Indoor / outdoor space for receiving and off-loading packages, equipment, etc.

ROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	service
Semi Private	
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	
Conference Table	
Markerboard	
Moveable	
Wall mounted	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
480V, 100A, 3 Phase	
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	

ADJACENCY CRITERIA

Primary Adjacency	Receiving Off.
Secondary Adjacency	Stock/Storage

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Markerboards	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	
GWB, Epoxy Paint	
Other	CMU
Wall Protection	
Corner Guards	
Crash Rails	x
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	
Concrete	x
Resinous/ Epoxy	
Carpet	
Other	
Base	
4" Rubber	x
Integral w/floor	
Ceiling	
Open	x
Acoustic Tile	
Gyp. Board	
Height	
Doors	
Size	Overhead
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

BUILDING MANAGEMENT
BUILDING LOGISTICS

SPACE REQUIREMENTS

Space Name: BUILDING MANAGEMENT
Space ID
Department / Space Type: BUILDING LOGISTICS
Programmed NSF: 200

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER.

UTILIZATION

Hours of Operation	
8 hours/day	
14 hours/day	x
24 hours/day	

CLASSROOM OCCUPANCY

No. Of Occupants	1

DESCRIPTION

Enclosed workplace for building management employee. Some storage space.

CLASSROOM TYPE

Flat Floor	x
Raised floor	
Floor boxes - power	
Floor boxes - power + data	

CASEWORK/MILLWORK/ FURNITURE

Space Type	
Private	x
Semi Private	
Open	
Guest Seating	
Table w/ seating for 2-3	
Wall Cabinets or Shelves	x
Sofa/ Lounge chair	
Flexible Furniture	
Moveable tables	
Stackable chairs	
Task chairs w/arms	
Collaborative Furniture	
Digital screen at table	
Rearrangeable	
Bookcases	
Metro Shelves	x
Conference Table	
Markerboard	
Moveable	
Wall mounted	

ELECTRICAL

Electrical Raceway	
110V, 20A, 1 Phase	x
208V, 30A, 1 Phase	
208V, 30A, 3 Phase	
480V, 100A, 3 Phase	
Emergency/ Standby Power	
UPS (OFOI)	
Other	

LIGHTING

Lighting Level	
80-100 fc at bench/desk (labs)	
30-60 fc at bench/desk (offices)	30
Task Lighting	
Darkenable or Dimmable	
Special Lighting	
Natural Daylight Preferred or not	x

EQUIPMENT

Refrigerator	
Microwave	
Coffee Machine	
Dishwasher	
Printer/ Scanner	
Plotter	
Copier	
Computers	
Other	

ADJACENCY CRITERIA

Primary Adjacency	
Secondary Adjacency	

PERFORMANCE REQUIREMENTS

NC Acoustical Criteria	30 - 35
Acoustical Panels	
Privacy Criteria	
Testing Criteria	
STC Rating	45 - 50

AV

Distance Learning	
Video Conferencing	
Projection Surface	
Flat screen Monitors	
Power at Table	
Data at Table	
Lectern or Other	
Markerboards	

ARCHITECTURAL

Walls/Partitions	
GWB, Paint	
GWB, Epoxy Paint	x
Other	
Wall Protection	
Corner Guards	x
Crash Rails	
Other	
Flooring	
VCT/ Vinyl free tile	
Sheet Vinyl	x
Concrete	
Resinous/ Epoxy	
Carpet	
Other	
Base	
4" Rubber	
Integral w/floor	x
Ceiling	
Open	
Acoustic Tile	x
Gyp. Board	
Height	
Doors	
Size	36"
Type	
Vision Panel	
Special Hardware or Seals	

SECURITY

Locks	
Card Access	x

REMARKS:

KITCHENETTE
SHARED

THE PAGE IS INTENTIONALLY LEFT BLANK.

SECTION 07

BUILDING SYSTEMS NARRATIVE

7.0 -LIFE SAFETY CODE

7.1 - CIVIL

7.2 - ARCHITECTURAL

7.3 - HEATING, VENTILATION, + AIR CONDITIONING

7.4 - PLUMBING

7.5 - ELECTRICAL

7.6 - FIRE ALARM

7.7 - FIRE SUPPRESSION

7.8 - AV, IT, + ELECTRONIC SECURITY SYSTEMS

7.9 - ACOUSTICS

7.10 - SMART BUILDING

7.0

LIFE SAFETY CODE

FIRE PROTECTION AND LIFE SAFETY CODE REPORT

Project Name
Memphis, Tennessee 38163

Prepared For:

HOK
133 Pactée St, NE, Suite 4800
Atlanta, Georgia 30303

Report – September 24, 2024

SLS # **2.1003**

SLS Consulting, LLC.
Atlanta |Boston| Miami | New York

© 2024 SLS Consulting, LLC. All Rights Reserved

TABLE OF CONTENTS

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

I. INTRODUCTION

SLS Consulting, LLC. (SLS) has prepared this Fire Protection/Life Safety Narrative report for the Project Name project located in Memphis, Tennessee. The Fire Protection/Life Safety Narrative report is intended to address the following major requirements as they relate to the proposed project:

- Construction Type.
- Means of Egress (e.g., occupant loading, number of exits, egress capacity, etc.).
- High Rise Requirements.
- Fire Protection Systems (e.g., sprinkler protection, fire alarm, firefighter communication, etc.).
- Means of Egress Lighting and Markings.
- Emergency Power Requirements.

It is noted that this report is not intended to be "all inclusive" of fire protection/life safety requirements, but rather is intended to address major code compliance requirements. This *Fire Protection/Life Safety Narrative* report has been prepared based on the Consultant Coordination presentation dated 09/11/2024 and discussions with the project team regarding fire protection/life safety systems. This Narrative is intended to serve as a design validation tool and will be updated as the project design progresses to final design.

This report is primarily intended to address all life safety and building code related issues, however, requirements of each code listed in Section B relevant to life safety will also be evaluated. Mechanical, Plumbing, Electrical, and Fire Protection system designs are assumed to be in accordance with relevant installation standards. It is not the intent of this report to outline installation requirements, but rather to identify what systems are required as part of the referenced project.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

A. Project Description

The proposed Project Name project will be a mixed used project. The building will serve as a classroom space, informal learning spaces, lounges, offices, building support spaces, technology suite, makerspace, and interdisciplinary space. These uses translate to primary occupancies of Group A-3, Assembly, Group B, Business, and Group S-2, Storage.

The building will be protected throughout by automatic sprinklers designed in accordance with NFPA 13, Standard for the Installation of Sprinklers, and a fire alarm system designed in accordance with NFPA 72, National Fire Alarm and Signaling Code.

Figure 1: Conceptual Rendering

B. Applicable Codes

The major applicable codes for the project include, but are not limited to, the following:

Building Code

- IBC: International Building Code, 2012 Edition as adopted by TN State Fire Marshal (with amendments)

Fire Prevention/Life Safety Code

- IFC: International Fire Code, 2012 Edition as adopted by TN State Fire Marshal.
- 2021 Memphis Fire Code – Access Provisions only.

Life Safety Code:

- NFPA 101: Life Safety Code, 2012 Edition as adopted for state facilities by the TN State Fire Marshal

Electrical Code

- NFPA 70: National Electrical Code® (NEC) 2017 of the State of Tennessee.

Mechanical Code

- IMC: Mechanical Code 2012 of the State of Tennessee.

Plumbing Code

- IPC: Plumbing Code 2012 of the State of Tennessee.

Major NFPA Standards

- NFPA 10: Standard for Portable Fire Extinguishers, 2018 Edition.
- NFPA 13: Standard for the Installation of Sprinkler Systems, 2016 Edition
- NFPA 14: Standard for the Installation of Standpipe and Hose Systems, 2016 Edition.
- NFPA 20: Standard for Installation of Stationary Fire Pumps for Fire Protection, 2016 Edition.
- NFPA 72: National Fire Alarm and Signaling Code®, 2016 Edition.

The project is a state facility located within the Memphis, Tennessee jurisdiction. As such, the project will need to comply with State Fire Marshal adopted codes.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

FIRE PROTECTION AND LIFE SAFETY CONCEPTS

A. Occupancy Classifications

The Project Name Project is designed as a *mixed-use* facility. As such, there will be several different *occupancies and uses* within the building, as summarized by the table below.

Table 1: Occupancy Classifications

Occupancy Group Classifications (IBC)	Occupancy Group Classifications (NFPA 101)	Specific Use
Use Group A-3, *Assembly* occupancies (IBC §303.4)	*Assembly* (Chapter 12)	Lounges, Lobbies, Meeting Rooms > 750 ft²
Use Group B, *Business* occupancies (IBC §304.1)	*Business* (Chapter 38)	Offices, Meeting Rooms ≤ 750 ft²
Use Group S-2, *Low Hazard Storage* occupancies (IBC §311.3)	*Storage* (Chapter 42)	Parking, General Storage and M/E/P Support Spaces

B. Building Classification Approach & Mixed-Use Approach

As stated above, the Project Name project will consist of multiple occupancies. Mixed-use occupancies are required to meet the criteria of IBC §508 and NFPA 101 §6.1.14. Any of the following approaches may be used for multiple occupancies. A combination of the below approaches is also a common approach within and between floors.

i. Non-Separated Mixed-Use

Occupancies are required to be individually classified in accordance with

IBC §302.1 and NFPA 101 §6.1. The most restrictive requirements of IBC and NFPA 101 §6.1 shall apply to the nonseparated area based on the occupancies present. The building height, area, and number of stories of the building or portion thereof, classified as nonseparated mixed-use shall also be based on the most restrictive criteria of the occupancies present.

No rated separations are required between nonseparated mixed-use occupancies except as where required by other sections of the code.

ii. Accessory (IBC) & Incidental (LSC) Occupancies

In accordance with IBC §508.2 and NFPA 101 §6.1.14.1, an accessory/incidental occupancy is an occupancy, or occupancies, that are ancillary to the main use/occupancy of the building, and that are individually classified in accordance with IBC §302.1 and NFPA 101 §6.1.

The height, area, and number of stories of the building containing accessory occupancies are determined in accordance with the limitations of the main occupancy of the building.

The aggregate area of accessory spaces shall not exceed ten percent (10%) of each floor area and shall not exceed the non-sprinklered area limitation for each individual accessory occupancy.

Accessory/Incidental occupancies are not required to be separated by fire-resistance rated construction from the main building occupancy, unless required otherwise by the code.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

C. Construction Type

The project documents indicate that the project will most likely be 7 stories in height and have a maximum floorplate of approximately 90,000 square feet.

i. Height and Area

The following height and area limitations shown are for the construction types that may be selected for this project based on the provided height and area estimation.

a. Non-Separated Mixed Use

If the building is designed as non-separated mixed use, the most restrictive occupancy type shall govern height and area limitations. The following table outlines the height and area requirements based on construction type selected for this building and the presence of a sprinkler system throughout:

Table 2: Height and Area Compliance – Non-Separated

	Group A, B, S-2	
	Type IA	**Type IB**
Stories	UL	11
Height (ft)	UL	160
Area per Floor	UL	UL

ii. Fire-Resistance Rating Based on Building Elements (IBC Table 601)

Due to the proposed occupancies classifications and number of stories in the Project Name project, the following construction types may be used. The fire resistance rating requirements shown below are obtained from Table 601 of IBC.

Table 3: Fire-Resistance Ratings of Building Elements (Hours)

Building Element	Type IA	Type IB
Primary Structural Frame	3[1,2]	2[1,2]
Bearing Walls		
Exterior[4,5]	3	2
Interior	3[1]	2[1]
Nonbearing Walls and Partitions		
Exterior	(Table 602)	(Table 602)
Interior[3]	0	0
Floor Construction and Secondary Members	2	2
Roof Construction and Secondary Members	1 ½ [2]	1[2, 3]

[1]Except in Group F-1, H, M and S-1 occupancies, fire protection of primary structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.

[2]In all occupancies, heavy timber complying with Section 2304.11 shall be allowed where a 1-hour or less fire-resistance rating is required.

[3]Not less than the fire-resistance rating required by other sections of the IBC.

[4]Not less than required by Table 602 of the IBC based on the fire separation distances (FSDs).

[5]Not less than the rating as referenced in IBC §704.10

iii. High-Rise Building Construction Type Reduction

SLS Analysis: The following is applicable to the project only if it is classified as a high-rise building.

IBC Section 403.2.1.1 allows Type IA construction if building height is under 420 ft. to be reduced to Type IB Construction except the required fire resistance rating of columns supporting floors cannot be reduced.

IBC Section 403.2.1.1 allows Type IB construction to be reduced to Type IIA for all occupancies other than Groups F-1, H-2, H-3, H-4, H-5, M, and S-1.

The construction reduction above is allowed for buildings that have sprinkler control valves equipped with supervisory initiating devices and waterflow initiating devices for each floor.

The fire resistance rating requirements shown below are obtained from Table 601 of IBC.

Table 4: Fire-Resistance Rating Requirements for Reduced Construction (Hours)

Building Element	Type IA	Type IA Reduced	Type IB	Type IB Reduced
Primary Structural Frame Columns	3[1,2]	2[1,2] 3[1,2]	2[1,2]	1[2, 3]
Bearing Walls Exterior[5.6] Interior	 3 3[1]	 2 2[1]	 2 2[1]	 1 1
Nonbearing Walls and Partitions Exterior Interior[4]	 (Table 602) 0	 (Table 602) 0	 (Table 602) 0	 (Table 602) 0
Floor Construction and Secondary Members	2	2	2	1
Roof Construction and Secondary Members	1[1]/2[2]	1[2,3]	1[2, 3]	1[2, 3]

[1]Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.
[2]Except in Group F-1, H, M and S-1 occupancies, fire protection of primary structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
[3]In all occupancies, heavy timber complying with Section 2304.11 shall be allowed where a 1-hour or less fire-resistance rating is required.
[4]Not less than the fire-resistance rating required by other sections of the IBC.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

[5]Not less than required by Table 602 of the IBC based on the fire separation distances (FSDs).
[6]Not less than the rating as referenced in IBC Section 704.10

iv. Exterior Wall Ratings and Allowable Openings (IBC Table 602 & Table 705.8)

The fire separation distance (FSD) is the distance measured from the building face to the closest interior lot line; centerline of a street, an alley or public way; or to an imaginary line between two buildings on the lot. The distance shall be measured at right angles from the face of the wall. If several buildings are located on the same lot, then an imaginary line shall be provided between the buildings to establish the fire separation distance.

Table , below, illustrates the exterior wall ratings and allowable openings based on the FSD and potential construction classifications.

Table 4 Exterior Wall[1,2] Ratings and Allowable Openings

Fire Separation Distance = X (feet)	Allowable Opening Area	Fire-Resistance Rating (Group A, B, S-2)
0 < X < 3	Not Permitted	1
3 ≤ X < 5	15%	1
5 ≤ X < 10	25%	1
10 ≤ X < 15	45%	1
15 ≤ X < 20	75%	1
X≥20	No Limit	0

[1]Where Table 705.8 permits nonbearing exterior walls with unlimited area of unprotected openings, the required fire-resistance rating for the exterior walls is 0 hours.

[2]Nonbearing.

D. Special Occupancies

Special occupancies are governed by the individual occupancy chapters and Chapter 11 of the LSC and Chapter 4 of the IBC. Special occupancies, and their requirements, are applicable to Project Name as follows.

i. High-Rise Building

SLS Analysis: The following is applicable to the project only if it is classified as a high-rise building.

If the building is provided with a floor level 75 ft. or more above the lowest level of fire department vehicle access, it is considered a high-rise building. High-Rise Building Requirements are governed by IBC Section 403. Note that the lowest level of fire department vehicle access is defined as the actual grade elevation the fire department vehicle sits on.

a. Secondary Water Supply

An automatic secondary on-site water supply having a capacity not less than the hydraulically calculated sprinkler demand, including the hose stream requirement, is required to be provided for high-rise buildings assigned to a seismic design category C, D, E or F. The secondary water supply must have a duration of not less than 30 minutes or as determined by the occupancy hazard classification in accordance with NFPA 13, whichever is greater. (IBC, 403.3.3).

b. Required Systems

Each of the following systems are specifically required for high-rise buildings. Detail on each systems requirements are outlined later in this report.

- Smoke Detection;
- Emergency Voice/Alarm Communication Fire Alarm System;
- Class I Standpipe Systems;
- Emergency Responder Radio Coverage;
- Fire Command Center;
- Smoke Removal;
- Standby and Emergency Power.

c. Integrated Fire Protection Systems Testing

Per LSC Section 11.8.9 integrated systems testing of fire protection systems is required in all high-rise buildings. Integrated systems testing requires a final commissioning and integration report to be provided to the AHJ as a requirement of Certificate of Occupancy.

d. Stair Remoteness

In the high-rise buildings, the exit stairs within the project must be designed to be physically separated from one another by 30-feet or one-fourth of the maximum diagonal of the area served (whichever is less) in accordance with GBC Section 403.5.1. The distance is measured in a straight line between the nearest points of the stair enclosures.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

e. Stairway Re-Entry and Communication System

In a high-rise building, if the doors are locked from the stair side, then there must be a two-way communication system provided in the stairway on at least every 5th floor. The system must be connected to an approved constantly attended station. In addition, the doors must be capable of being unlocked simultaneously, but remain latched, upon signal from FCC per GBC Section 403.5.3.

Note that this is in addition to stairway re-entry requirements for all buildings identified in the means of egress portion of this report.

f. Smokeproof Enclosures

All stairs serving levels 75 ft. or more above the lowest level of fire department vehicle access shall be designed as smoke proof enclosures in accordance with Section 909.20 of the IBC and NFPA 92. More detail on smoke control requirements is provided in the smoke control section of this report.

g. Luminous Egress Markings

As a *high-rise* building, IBC Section 403.5.5 states that approved luminous egress path markings delineating the exit path must be provided in Group A, B, E, I, M and R-1 occupancies in accordance with IBC Section 1025. Markings within the exit enclosures are required to be provided on steps, landings, handrails, perimeter demarcation lines, and discharge doors from the exit enclosure. Materials should comply with either UL 1994 *or* ASTM E2072.

h. Fire Service Access Elevators (FSAE)

The highest occupied floor served by the extended elevator shafts in the Project Name building is located more than 120-feet above the lowest level of fire department vehicle access. Therefore, two fire service access elevators in accordance with IBC Section 403.6.1 shall be provided.

ii. Hazardous Material Storage and Handling

If the proposed project will provide a hazardous materials inventory statement detailing chemical classifications and quantities proposed when materials are expected to be present. Quantities are not expected to exceed the Maximum Allowable Quantities (MAQ) outlined in the IBC, IFC, or NFPA 30. Placards consistent with NFPA 704 requirements shall be provided in all locations materials are present.

Note that the locations housing the storage and handling of flammable and combustible liquids is considered an area containing high hazard contents per LSC Section 6.2. As such, regardless of quantity stored, these areas will require 1-hour fire barrier separation, automatic sprinkler protection, and compliance with LSC section 7.11 for means of egress.

iii. Laboratory Buildings

If the proposed project will contain laboratories using chemicals, per NFPA 101 §8.7, compliance with NFPA 45 is required for specific requirements related to laboratory chemical use.

Note that the locations housing the storage and handling of flammable and combustible liquids are considered areas containing high hazard contents per NFPA

101 §6.2. As such, regardless of quantity stored, these areas will require 1-hour fire barrier separation, automatic sprinkler protection, and compliance with NFPA 101 §7.11 for means of egress.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

E. Fire Separation Requirements

The following table indicates the spaces within the Project Name project where fire resistance rated separations should be provided. This includes incidental accessory occupancies.

Table 5: Required Fire-Resistance Rated Spaces

Spaces	Required Rating[1]	Reference
Information technology equipment - Critical	1-hour *fire barrier*	NFPA 75 §5.1.3
Fire Alarm equipment	2-hour fire barrier	NFPA 72 Chapter 12
Electrical rooms with dry-type transformers > 112.5 kva	1-hour *fire barrier*	NFPA 70 §450.21
Transformer Vaults (oil-insulated)	3-hour *fire barrier*	NFPA 70 §450.42
Mechanical Shafts (*connecting 4 stories or more*)	2-hour fire/smoke *barrier*	IBC §713, NFPA 101 §8.6.5
Stair Shafts (*connecting 4 stories or more*)[3]	2-hour fire/smoke *barriers*	IBC §713.4, NFPA 101 §7.1.3.2.1
Elevator Lobby	1-hour *fire partition or 0-hour smoke partition*	IBC §3006.3
Fire Command Center *(high-rise only)*	1-hour sfire barrier	GBC §911
Trash Collection Rooms	1-hour *fire barrier or sprinklers*	IBC T-509
Emergency Switchgear Room	2-hour *fire barrier*	NFPA 110 §7.2.1.1
Fire Pump Room	2-hour *fire barrier*	IBC §913.2, NFPA 20 §4.12.1
Elevator Machine Rooms and Shafts (*connecting 4 stories or more*)[3]	2-hour *fire barrier/smoke barrier*	IBC §713

Note 1: Fire Barriers are rated walls that are continuous from floor slab to slab above. Fire partitions are rated walls that are continuous from floor to underside of the rated floor/ceiling assembly.

Note 2: Per NFPA 110, §7.11.4 Generators outside or on roof need lightning protection designed and installed in accordance with NFPA 780, Standard for the Installation of Lightning Protection Systems.

Note 3: In accordance with IBC 713.4, the shaft enclosure rating must not be less than the floor rating for the construction type.

(*) Code requires 1-hour, however 2-hours recommended by SLS to meet survivability requirements for cabling/equipment associated with FA or BDA systems.

i. Opening Protection

Doors and fire shutters within fire resistance rated assemblies are required to have fire-resistance ratings and meet the required testing standards as specified in the table below. All doors and fire shutters required to be fire-resistance-rated must be designed, installed, and labeled in accordance with NFPA 80.

Table 6: Minimum Door Rating Requirements

Wall Type	Wall Rating	Minimum Fire Door Rating	Reference
New enclosures for shafts and interior exit stairways ≥ 4 stories Fire barriers having a required rating greater than 1 hour	2-hour	90 min.	IBC Table 716.5 & NFPA 101, Table 8.3.4.2
New enclosures for shafts and interior exit stairways < 4 stories	1-hour	60 min.	IBC Table 716.5 & NFPA 101, Table 8.3.4.2
Other fire barriers	1-hour	45 min.	IBC Table 716.5 & NFPA 101, Table 8.3.4.2

ii. Fire Separation Marking

Each new fire wall, fire barrier, fire partition, smoke barrier, smoke partition, or any other new wall required to have protected openings shall be permanently identified with signs or stenciling above any decorative ceiling and in concealed spaces with the wording, "FIRE AND/OR SMOKE BARRIER – PROTECT ALL OPENINGS". Such signs or stenciling shall be in 3-inch-high letters, 3/8-inch stroke in a contrasting color and be located within 15 feet of the end of each wall and at intervals not exceeding 30 feet measured horizontally along the wall or partition. This requirement is mandated by NFPA 101 §8.2.2.5 and IBC §703.7.

iii. Fire Barriers

Fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab, or deck above and be securely attached. Shafts, interior exit stairways, and ramps that do not extend to the underside of the roof sheathing, deck or slab of the building shall be permitted to be enclosed at the top with construction of the same fire-resistance rating as the topmost floor penetrated by the shaft, but not less than the fire-resistance rating required for the shaft enclosure.

In accordance with IBC §707.5.1, the supporting construction for a fire barrier shall be rated at least as much as the fire barrier it is supporting.

In accordance with IBC §707.6, openings in a fire barrier shall be protected in accordance with IBC §716 and NFPA 101 Section 8.3. Openings shall be limited to a maximum aggregate width of 25% of the length of the wall, and the maximum area of any single opening shall not exceed 156 sq.ft.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

- Single opening limit of 156 sq.ft. does not apply, where adjoining floors are protected by an automatic sprinkler system.
- Single opening limit of 156 sq.ft. does not apply, where the opening protective is a fire door serving exit stairs, exit ramps, exit access stairs, or exit access ramps.
- Single opening limit of 156 sq.ft. does not apply, where the opening protective has been tested in accordance with ASTM E 119 or UL 263. The fire resistance rating of the opening must be equal to or more than the fire resistance rating of the wall.
- The 25% limit of the fire barrier does not apply, where the opening protective is a fire door serving exit stairs, exit ramps, exit access stairs, or exit access ramps.
- The 25% limit of the fire barrier does not apply, where the opening protective has been tested in accordance with ASTM E 119 or UL 263.

iv. Smoke Barriers

Smoke barrier construction is required to form an effective membrane continuous from the top of the foundation of floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces, such as above suspended ceiling. The supporting construction is required to be protected to afford the required fire-resistance-rating of the wall supported. Smoke barriers shall be constructed in accordance with IBC §709 and NFPA 101 §8.5.

v. Penetrations

The following sections of this report are applicable to penetrations through fire barriers, fire partitions, and horizontal assemblies.

a. Through Penetrations

Penetrations shall be installed as tested in an approved fire-resistance-rated assembly, or in an approved penetration firestop system tested in accordance with ASTME 814 or UL 1479. Where the penetrating items are steel, ferrous, or copper pipes, tubes or conduits, the annular space between the penetrating item and the fire-resistance-rated wall is permitted to be protected via the following two scenarios:

- Holes with a maximum 6 in. diameter and 144 in² area are permitted to be protected with grout or mortar.
- The material used to protect the opening must pass ASTM E 119 or UL 263 test conditions.

b. Membrane Penetrations in Fire-Resistance-Rated Walls

Membrane penetrations must comply with IBC §714.4.2 where walls or partitions are required to have a fire-resistance rating, recessed fixtures shall be installed such that the required fire resistance will not be reduced.

c. Horizontal Assemblies

Penetrations of a fire-resistance-rated floor, ceiling assembly, or ceiling membrane must comply with IBC §714.4.1.1 through 714.4.1.3.

Though penetrations must be installed as tested in the approved fire-resistance-rated assembly, or they must be protected by an approved through-penetration firestop system installed and tested in accordance with ASTM E814 or UL 1479 with an F rating/T rating of not less than 1 hour but not less than the required rating of the floor penetrated.

Membrane penetrations must comply with IBC §714.4.1.1.1 or 714.4.1.1.2.

Penetrations of non-fire-resistance-rated floor or floor/ceiling assemblies or the ceiling membrane of a non-fire-resistance-rated roof/ceiling assembly shall meet the requirements of IBC §713 or shall comply with IBC §714.4.2.1 or 7.14.4.2.2.

- Noncombustible penetrating items, connecting not more than five stories are permitted, provided that the annular space is filled to resist the free passage of flame and the products of combustion with an approved noncombustible material or with a fill, void or cavity material that is tested and classified for use in through-penetration firestop systems.
- Penetrating items that connect not more than two stories are permitted, provided that the annular space is filled with an approved material to resist the free passage of flame and the products of combustion.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

F. Vertical Opening Code Compliance Approach

Vertical openings within the Project Name project must be protected by fire-resistance rated construction in accordance with IBC §712 or NFPA 101 Section 8.6 classified accordingly.

i. Shafts

Shaft enclosures in the project must be designed in compliance with §713 of the IBC. The shaft enclosures shall have a fire resistance rating of not less than 2 hours and not less than the floor assembly penetrated but need not exceed 2 hours. The construction shall be as fire barriers in accordance with §707 of the IBC.

SLS Analysis: Stair and mechanical shafts where connecting four or more stories are required and provided with 2-hour enclosure in accordance with IBC and NFPA 101.

G. Fire Protection and Life Safety Systems Overview

i. Fire Command Center

SLS Analysis: The following is applicable to the project only if it is classified as a high-rise building.

The building will have a fire command center as required for high-rise buildings. The fire command center must be located near the entry point and must be at least 200 sq. ft. in size with a minimum dimension of 10 ft. (IBC, 911.1.3). The fire command center must be constructed of at least 1-hour fire barrier enclosure (IBC, 911.1.2). The location and accessibility of the fire command center shall be approved by the fire chief (IBC, 911.1.1).

It is noted that the lighting and HVAC system in the fire command center must be tied into emergency power. The following items must be provided in the fire command center:

- The emergency/voice alarm communications system.
- The fire department communication systems; two-way telephone communication service panels and controls.
- Fire detection and alarm system annunciator.
- Annunciator unit visually indicating the location of the elevators and whether they are operational.
- Status indicators and controls for air distribution systems.
- The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
- Controls for unlocking *stairway* doors simultaneously.
- Sprinkler valve and water flow detector display panels.
- Emergency and standby power status indicators.

- A telephone for fire department use with controlled access to the public telephone system.
- Fire pump status indicators.
- Schematic building plans indicating the typical floor plan and detailing the building core, fire protection systems, fire-fighting equipment and fire department access and the location of *fire walls, fire barriers, fire partitions, smoke barriers* and smoke partitions.
- Worktable.
- Generator supervision devices, manual start and transfer features.
- Public address system, where specifically required by other sections of this code.
- Elevator fire recall switch in accordance with ASME A17.1.
- Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

ii. Sprinkler Systems

Based on the proposed occupancies of the project, per NFPA 101 Section 12.3.5.2 and IBC §903.2.1, sprinkler protection designed in accordance with NFPA 13 is required to be installed throughout the building. This building will connect the protection system to the city water supply.

a. Sprinkler Supervision and Alarms

The following water supply control valves are required to be electrically supervised by a listed fire alarm control unit per IBC §903.4:

- Automatic sprinkler systems
- Pumps
- Tanks
- Water levels and temperatures
- Critical air pressures
- Water-flow switches on all sprinkler systems
- Exception: Jockey pump control valves sealed and locked in the open position, control valves to commercial kitchen hoods, valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position

One exterior approved audible alarm located on the exterior of the building shall be connected to each sprinkler system. They should activate upon flow through the sprinkler system equivalent to the smallest orifice sprinkler head installed in the system being discharged (IBC §903.4.2).

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

b. Monitoring

Alarm supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station, or, where approved by the fire code official, shall sound an audible signal at a constantly attended location (IBC §903.4.1).

c. Site Water Supply Systems

The site water supply for fire protection systems shall be provided in accordance with the requirements of Chapter 23 of NFPA 13.

Fire hydrants must be installed within 100 feet of the fire department connections in accordance with NFPA 14. Backflow preventer must be designed and installed as required by the local water department jurisdiction.

d. Standpipe Systems

Per IBC §905.3.1, Class I automatic standpipes shall be provided within the Project Name project as the building is required to be fully sprinklered. The installation of standpipes shall be designed and installed in accordance with NFPA 14, *Standard for the Installation of Standpipe and Hose Systems.*

Standpipe hose connections are to be provided in the following locations in accordance with IBC §905.4:

- In every required stairway on each floor level above and below grade. Hose connections shall be located at an intermediate landing between stories unless otherwise approved by the fire code official.
- On each side of the wall adjacent to the exit opening of a horizontal exit, except where floor areas adjacent to a horizontal exit are reachable from an interior exit stairway hose connection by a nozzle attached to 100 feet of hose as measured along the path of travel.
- In every exit passageway at the entrance from the passageway to other areas of the building.
- In the highest landing of a stairway with access to the roof or on the roof
- Where the most remote portion of a story is more than 150 feet from a hose connection, the fire code official is authorized to require additional hose connections be provided in approved locations. The distances from a hose connection shall be measured along the path of travel.

Buildings with more than one standpipe shall have interconnected standpipes in accordance with NFPA 14 and IBC §905.4.2.

iii. Fire Pump

This building will have a fire pump to supply the sprinkler and standpipe systems. The installation of the fire pump shall be designed and installed in accordance with NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*.

The fire pump room must be accessed directly from the exterior. The fire pump rooms that are not directly accessible from the outside shall be accessible through an

enclosed passageway from an enclosed stairway or exterior exit. The enclosed passageway shall have a fire-resistance rating not less than the fire-resistance rating of the fire pump room (2-hours) (NFPA 20 §4.12.2.1).

SLS Analysis: Design team to discuss with the MEP designer to determine if a fire pump will be required for the project.

iv. Fire Department Connections

Where buildings are equipped with a standpipe system installed in accordance with IFC §905, a fire hydrant is required within 100 ft. of the fire department connections (IFC §507.5.1.1). This distance is permitted to exceed 100 ft. where approved by the fire code official. The fire department connections must be visible, accessible, and clearly marked for fire department use.

v. Special Suppression Systems

If the project includes the design of a commercial kitchen, the only special fire suppression systems within the building will be for commercial kitchen hood suppression systems. This system must be designed and installed in accordance with NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*.

vi. Fire Extinguishers

Fire extinguishers must be provided throughout the building as required by IBC §906. The fire extinguishers must be installed in accordance with NFPA 10, *Standard for Portable Fire Extinguishers.* The table below provides a brief overview of the installation requirements.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

Table 5: Fire Extinguishers

Hazard Area	Minimum Size and Type	Maximum Travel Distance to Extinguisher [ft]	Maximum Floor Area per Unit of A [ft²]	Maximum Floor Area per Extinguisher [ft²]
Low Hazard (Assembly areas, Office spaces)	2A:10B:C Increase rating based on limits	75	3,000	11,250
Moderate Hazard (Storage)	2A:20B:C Increase rating based on limits	75	1,500	11,250
Commercial Kitchen	Class K	30 ft. to cooking appliance	N/A	N/A

H. Fire Alarm & Detection

i. Fire Alarm Systems

In accordance with IBC §907.2.1 and NFPA 101 §12.3.4, as a building containing an assembly occupancy, a fire alarm system shall be provided. The fire alarm system must be designed and installed in accordance with NFPA 72. Audible and visual appliances must be installed in accordance with IBC. Selective evacuation signal is permitted where general evacuation is impractical due to building configuration per IBC §907.5.2.2.

The fire alarm system must be designed to interface or monitor other life safety systems in the building such as automatic sprinkler system, fire pump, generator, etc.

a. Audible and Visual Notification

Audible and visual appliances are required to be installed in accordance with IBC and NFPA 72.

SLS Analysis: Further review and discussion would be required with the Fire Protection Design Engineer to provide a code-compliant system that would target appropriate areas for annunciation.

ii. Remote Annunciator Panel

As per usual practice with the Fire Department, a remote fire alarm annunciator panel and remote generator annunciator panel should be provided at the lobby reception desk. NFPA 72 requires that the remote annunciator be located such that emergency responding personnel can easily access the annunciator. Typically, this is within 10 feet of the building entrance or at the front desk.

iii. Fire Alarm Monitoring

The fire alarm system of the Project Name shall be monitored by a central station.

iv. Emergency Responder Radio System:

The building shall be provided with emergency responder radio coverage as required by IBC §915.1 in accordance with Section 510 of the IFC. Where approved by the building official and the fire code official, a wired communication system in accordance with IFC 907.2.13.2 shall be permitted to be installed or maintained instead of an approved radio coverage system.

The building is considered to have acceptable emergency responder communications enhancement system coverage when signal strength measurements in 95% of all areas on each floor of the building meet the signal strength requirements in IFC §510.4.1.1 through §510.4.1.2.

Emergency responder radio coverage systems shall be provided with an approved secondary source of power. The secondary power supply is required to be capable of operating the emergency responder radio coverage system for a period of at least 24 hours. When primary power is lost, the power supply to the emergency responder radio coverage system is required to automatically transfer to the secondary power supply (IFC 510.4.2.3).

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

SLS Analysis: Recommend discussion with the State and Memphis Fire Departments to determine emergency responder radio coverage is required.

I. Smoke Control Systems Overview

The building will require a smoke control system in accordance with IBC Section 909. The design of the smoke control system for Project Name can incorporate active and passive protection. The building components that will require smoke control system protection are listed below. All smoke control equipment (e.g., fans, VFDs, etc.) is required to be enclosed in a dedicated 2-hour fire rated enclosure. The smoke control system interfaces with the fire alarm system for activation (i.e., automatic or manual) and for supervision (e.g., monitoring of the disconnect switches for voltage and current loss).

SLS Analysis: The following is applicable to the project only if it is classified as a high-rise building or if an atrium is included in the design.

i. Smoke Control Rational Analysis

Any project requiring smoke control systems require a smoke control rational analysis report per IBC Section 909.4. The report shall detail the design requirements of the smoke control systems and their design to ensure the following are taken into account at a minimum:

- Stack Effect;
- Temperature Effects of Fire;
- Wind Effect;
- HVAC System Shutdown or Operation with the Smoke Control Systems;
- Climate Impacts;
- Duration of System Operation;
- Interaction of Smoke Control System Components.

ii. Stairs

Stairs serving floors more than 75-feet above the lowest level of fire department vehicle access will be designed as *smoke-proof enclosures* in accordance with IBC Section 909.20.5 and Section 1023. The stairways in the high-rise building must be pressurized to comply with the requirements in IBC. See the project's smoke control rational analysis for more information.

iii. Elevators

The elevator hoist-ways and associated elevator machine rooms must be protected in accordance with the requirements of IBC Section 713, Section 3006.2 and 3006.3. The elevator hoist-ways must be protected by lobby enclosure or by pressurization when the elevator shaft connects more than three (3) floors. See the project's smoke control rational analysis for more information.

iv. Smoke Removal System

A smoke removal system is required for high-rise buildings as indicated in IBC Section 403.4.7. Natural or mechanical ventilation must be provided for this project to facilitate smoke removal in post-fire salvage and overhaul operations in accordance with Section 403.4.7. Natural ventilation involves manually operable windows or panels distributed around the perimeter of each floor based on the criteria in IBC Section 403.4.7(1). If natural means is not feasible, then mechanical ventilation must be provided to achieve one exhaust air change every 15 minutes for the area involved. Return and exhaust air shall be moved directly to the outside without recirculation to other portions of the building.

v. Smoke Control Special Inspections

All smoke control systems require a third-party special inspection to provide commissioning of the smoke control systems. The inspections shall be performed by a qualified individual and shall be completed in accordance with IBC Section 909.18 and 1705.18.

Note: Special Inspections shall be contracted by the owner directly and must be provided by a third-party to the engineer of record (EOR).

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

J. Emergency and Standby Power Systems

The emergency power systems shall be designed in accordance with the following (IBC §2702):

- NFPA 70, National Electrical Code (NEC).
- NFPA 110, Standard for Emergency and Standby Power Systems.
- NFPA 111, Standard on Stored Electrical Energy Emergency and Standby Power Systems.

Standby systems in low-rise buildings are required as follows:

- Elevators used as accessible means of egress (IBC 1009/1008 as reference by the ADA and ANSI ICC A117).

Emergency power is required to the following systems in low-rise buildings. Note that emergency power will be provided by battery backup to those noted:

- Electric fire pumps (NFPA 20)[1].
- Exit Signs – Battery Backup.
- Means of Egress Lighting – Battery Backup.
- Automatic detection systems – Battery Backup.
- Fire Alarm and Communication systems – Battery Backup.

[1]Fire pumps that are electrically driven require emergency power per NFPA 20. NFPA 20 allows the secondary power source to be removed if directly connected to a "reliable power source". A reliable power source is defined as follows:

(1) The source power plant has not experienced any shutdowns longer than 10 continuous hours in the year prior to plan submittal. NFPA 25 requires special undertakings (i.e., fire watches) when a water-based fire protection system is taken out of service for longer than 10 hours. If the normal source power plant has been intentionally shut down for longer than 10 hours in the past, it is reasonable to require a backup source of power.
(2) Power outages have not routinely been experienced in the area of the protected facility caused by failures in generation or transmission. This standard is not intended to require that the normal source of power be infallible to deem the power reliable. NFPA 20 does not intend to require a backup source of power for every installation using an electric motor–driven fire pump.
(3) The normal source of power is not supplied by overhead conductors outside the protected facility. Fire departments responding to an incident at the protected facility will not operate aerial apparatus near live overhead power lines, without exception. A backup source of power is required in case this scenario occurs and the normal source of power must be shut off. Additionally, many utility providers will remove power to the protected facility by physically cutting the overhead conductors. If the normal source of power is provided by overhead

conductors, which will not be identified, the utility provider could mistakenly cut the overhead conductor supplying the fire pump.

(4) Only the disconnect switches and overcurrent protection devices permitted by 9.2.3 [of NFPA 20] are installed in the normal source of power. Power disconnection and activated overcurrent protection should occur only in the fire pump controller. The provisions of 9.2.2 [of NFPA 20] for the disconnect switch and overcurrent protection essentially require disconnection and overcurrent protection to occur in the fire pump controller. If unanticipated disconnect switches or overcurrent protection devices are installed in the normal source of power that do not meet the requirements of 9.2.2 [of NFPA 20], the normal source of power must be considered not reliable and a backup source of power is necessary.

Elevator machine room ventilation and/or air conditioning should be connected to the building's standby power source. Where more than one (1) elevator is provided, all elevators should be provided with standby power and return to the designated level. After this point, one (1) elevator should remain operable from the standby power source (IBC §3003.1.3).

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

K. General Means of Egress Requirements

i. Maximum Allowable Travel Distances

As a building protected throughout by automatic sprinklers, the following maximum allowable travel distances are applicable to the Project Name project as required by IBC T-1014.3, §1018.4, T-1016.2.

Table 8: Travel Distance Requirements

Occupancy Group Classifications (IBC)	Occupancy Classification (NFPA 101)	Distances
Use Group A, *Assembly* occupancies	*Assembly*	**Max Travel Distance:** 250 feet **Max Dead End Distance**: 20 feet **Max Common Path Distance**: 20/75 feet[1]
Use Group B, *Business* occupancies	*Business*	**Max Travel Distance**: 300 feet **Max Dead End Distance:** 50 feet **Max Common Path Distance:** 100 feet
Use Group S-2, *Low Hazard Storage* occupancies	*Storage*	**Max Travel Distance:** 400 feet **Max Dead End Distance:** 50 feet **Max Common Path Distance:** 100 feet

[1]Assembly use spaces with an occupant load of 50 or more, shall have its common path of travel distance limited to 30-feet. If the occupant load is less than 50, then the common path of travel distance shall be limited to 75-feet.

ii. Number of Required Exits Per Floor

Each floor of the building is provided with the following minimum number of exits as required by IBC §1015.1.1 and NFPA 101 §7.4.

Table 9: Number of Exits Requirements

Floor Occupant Load	Number of Exits Required
0-500 occupants	2 Exits
501-1,000 occupants	3 Exits
>1,000 occupants	4 Exits

iii. Electrical Room Exit

Electrical rooms with equipment rated 1200 Amps or more, and 6 feet wide that contain overcurrent devices, switching devices or control devices shall have two (2) exit access doors (one at each end of the working space). The doors must swing in the direction of egress and must be equipped with panic hardware or fire exit hardware.

Electrical rooms with equipment rated 800 Amps or more that contain overcurrent devices, switching devices or control devices, and the exit door is less than 25 feet from the working space, the door shall swing in the direction of egress and must be

equipped with panic hardware or fire exit hardware (IBC §1008.1.10, and NFPA 70, Article 110.26.(C)(3)).

Electrical rooms with equipment used in circuits over 600 volts with switchgear and control panels exceeding 6 feet in width shall have two (2) exit access doors (one at each end of the working space). The doors must swing in the direction of egress and must be equipped with panic hardware or fire exit hardware (NFPA 70, Article 110.33(A)).

iv. Boiler Rooms or Furnace Rooms

Two (2) exits are required in boiler rooms where the area is over 500 sq.ft. and any fuel-fired equipment exceeds 400,000 Btu. The two exit doors must be remotely separated by a distance equal to one-half the diagonal dimension of the room (IBC §1015.3).

v. Mechanical Equipment Rooms

Mechanical equipment rooms including boiler rooms, furnace rooms, and similar spaces shall be arranged to limit common path of travel to a distance not exceeding 100 feet for building protected by sprinkler system. Stories used for mechanical equipment rooms (including the roof) shall be permitted to have a single means of egress where the travel distance to an exit on that story does not exceed the common path of travel. If the room has only open equipment area and no rooms, then the travel distance is not regulated.

vi. Exit Access Remoteness Requirements

Where two (2) exit doors or exit access doors are required to be provided, the exits must be designed in order to be remote from one another in accordance with IBC §1015.2.1 Exception 2 and NFPA 101 Section 7.5.1.3.3. The exits must be separated by more than one-third of the maximum diagonal distance of the floor, space, or area served.

vii. Exit Discharge Configurations

All the exits must discharge to the outside in accordance with IBC §1027.1. The exit discharge must comply with remoteness requirements of one-third of the maximum diagonal distance of the building. However, the Codes allow for a maximum of 50% of the number and 50% of the capacity of exits to discharge through the interior of the building provided that the following criteria are met:

- *Exterior Exit Visibility:* The exit enclosure discharges to a free and unobstructed path of travel to an exterior exit door and such exit is readily visible and identifiable from the point of termination of the exit enclosure in accordance with IBC §1027.1 *Exception 1.1* and NFPA 101 Section 7.7.2.
- *Floor Separation:* The entire area of the level of exit discharge is separated from areas below by construction having a two (2) hour fire resistance rating (IBC §1027.1 *Exception 1.2* and NFPA 101 Section 7.7.2).
- *Sprinkler Protection:* The egress path is protected throughout by automatic sprinklers (IBC §1027.1 *Exception 1.3* and NFPA 101 Section 7.7.2).

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

viii. Exit Passageway

Exit passage walls are required to have walls, floors and ceilings of not less than that required for the connecting interior exit stairway. Exit passageways are required to be constructed as fire barriers (IBC, 1023.3). Exit passageway opening protectives are required to be in accordance with Section 716. Penetrations into and openings through an exit passageway are prohibited except for required exit doors, equipment and ductwork necessary for independent pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and electrical raceways serving the exit passageways (IBC, 1023.6).

ix. Door Hardware Requirements

Panic hardware (or fire exit hardware for fire doors) must be installed in all doors serving rooms or spaces with an occupant load of 50 persons or more in a Group A occupancy per IBC Section 1008.1.10 NFPA 101 Section 12.2.2.2.3 will require panic hardware on Group A occupancies with a load of 100 or more. As both codes are applicable, the more stringent applies.

x. Occupant Load Factors

The following occupant load factors have been used to calculate the occupant load of the spaces within the Project Name project as required by NFPA 101 T-7.3.1.2 and IBC T-1004.1.2.

Table 10: Occupant Load Factors

Use of Space	Occupant Load Factors [ft²/occupant]
Assembly – Standing Space	5 net
Assembly – Concentrated (chairs only-not fixed)	7 net
Assembly – Unconcentrated Tables & Chairs	15 net
Classroom Area	20 net
Shops and Other Vocational Room Areas	50 net
Exercise Rooms	15 net (w/o equipment) 50 net (w/ equipment)
Offices/Business	100 gross
Outpatient Treatment Areas	100 gross
Kitchens Commercial	100 gross (NFPA 101) 200 gross (IBC)
Storage and Mechanical Spaces	300 gross (IBC) 500 gross (NFPA 101)

xi. Spaces with One Means of Egress Requirements

Spaces with one (1) means of egress within the Project Name project shall comply with the following means of egress requirements as required by IBC T-1015.1.

Table 11: One Means of Egress

Occupancy	Maximum Occupant Load	Maximum Exit Access/Common Path of Travel Distance (feet)
Assembly	49	75 feet
Business	49	100 feet
Storage and Mechanical	29	100 feet

xii. Egress Capacity Factors

The egress capacity for the means of egress must be designed using the capacity factors indicated in the table below. In addition, the minimum width of the means of egress components must also be considered in the design (NFPA 101 §7.3.3 and IBC §1005.3).

Table 12: Egress Capacity

Egress Component	Egress Capacity Factor [inches/occupant]	
	NFPA 101	IBC
Stairways < 44 inches	0.3	0.3
Stairways > 44 inches	Refer to Note 1	0.3
Level Components	0.2	0.2

[1]For stairways in the referenced occupancies that are wider than 44 in., the capacity is permitted to be increased using the following equation:

$$C = 146.7 + \frac{Wn-44}{0.218}$$

xiii. Stair Width Requirements

Stairs are required to have a minimum width of 44 inches, but not less than the width determined using the egress capacity factors outlined above (IBC §1009.4).

xiv. Corridor Width

The minimum clear width is 44 inches and must be increased to accommodate the occupant load (IBC Table 1018.2).

xv. One Exit Unavailable Analysis

The means of egress must be designed with adequate width and capacity such that the loss of one exit leaves the other exits available to handle at least 50% of the occupant load. Analysis and calculation must be shown on plans (IBC §1005.5 and NFPA 101 §7.3.1.1.2).

In addition, the main entrance/exit shall have a width to accommodate ½ of the total occupant load (IBC §1028.2 and NFPA 101 §12.2.3.6).

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

xvi. Exit Signage

Exit signs are required at all exit doors and directional signs are required within the means of egress where the path of egress is not apparent. Exit sign placement shall be such that no point in the exit access corridor is more than 100 feet from the nearest exit sign (IBC §1011.1).

xvii. Means of Egress Lighting

Normal lighting must be designed to provide a minimum of 1 ft-candle measured at the floor within exit access routes, exits, and the exit discharge routes. In the stairs, the minimum illumination shall be at least 10 ft-candle measured at the walking surface. The elevator code requires adequate lighting of 10 ft-candle at the landing sill of elevators measured with doors open/closed (IBC §1006, NFPA 101 §7.8 and 7.9, ASME A17.1 §2.11.10.2).

Additionally, lighting is required to be arranged such that the failure of a single lighting unit does not reduce illumination levels to less than 0.2 ft-candle as required by IBC §1006.2.

Emergency lighting is required for this occupancy per IBC Section 1006.3.1. The emergency lighting must provide an average of 1 ft-candle measured at the floor throughout the means of egress with a minimum of 0.1 ft-candle at any point. The illumination of 10 ft-candle for the elevator threshold is still required under emergency lighting conditions.

As per standard practice, it is recommended that the project team ensure that battery back-up lighting is provided in the following locations: emergency generator room, fire command centers, fire pump room, and the emergency responder radio coverage room (if provided).

Emergency lighting must be provided in mechanical rooms and electrical rooms as required in NFPA 70, Articles 110.26(D) and 700.16.

L. Major Life Safety Accessibility Requirements Overview

Accessibility requirements are indicated in IBC §1007 and Chapter 11. The Project Name Project must comply with all the applicable accessibility requirements mandated for each occupancy. The complete review of accessibility code compliance is outside the scope of this Narrative Report. The items listed below are not all inclusive of the requirements in IBC. However, the list below provides a quick reference of some basic requirements related to fire and life safety that may be missed during the design.

i. Accessible Means of Egress

Two accessible means of egress must be provided whenever two exits are required from the space, floor, or building. If one means of egress is permitted by the Code, then only one accessible means of egress needs to be provided. Travel distance and common path of travel limits must be followed equal to the required means of egress. Each accessible means of egress shall be continuous from each accessible occupied space to a public way or area of refuge.

a) Exit stair must comply with clear width of landings and stair of 48 inches measured between handrails.

   NOTE to a): The clear width above is not required in buildings protected by an automatic sprinkler system.

b) Elevators must comply with firefighters' emergency operations, power supply shall be protected against interruption, and must be located in a smokeproof enclosure.

   NOTE to b): The smokeproof enclosure is not required in buildings protected by an automatic sprinkler system.

SLS Analysis: This project is required to be protected by an automatic sprinkler system, therefore these requirements are not applicable.

ii. Elevators

In buildings where a required accessible floor is four or more stories above the level of exit discharge (5-story building), then at least one required accessible means of egress shall be an elevator. The elevator must comply with the emergency operation and signaling requirements of ASME A17.1 Section 2.27. Standby power shall be provided (IBC §3003.1).

iii. Area of Refuge

An area of refuge as part of the accessible means of egress in a building protected by an automatic sprinkler system may consist of each story with or without two accessible rooms in accordance with IBC Section 1007. The story can serve for Area of Refuge for both exits. The two accessible rooms must be separated from each other by smoke partitions. In an open floor plan, an enclosed elevator lobby with smoke partitions can serve as the two accessible rooms.

SLS Analysis: If the building is provided with a sprinkler system throughout, the entire floorplate is considered an area of refuge.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

iv. Area of Refuge: Communication

Each story as mentioned above must comply with the following requirements for a two-way communication in accordance with IBC 1007:

- Two-way communication systems shall provide communication between each required location and the fire command center, or a central control point location approved by the fire department.
- Directions for the use of the two-way communication system; instructions for summoning assistance; and written identification of the location shall be posted adjacent to the two-way communication system.
- The two-way communication system shall include both audible and visible signals.

SLS Analysis: Two-way communication at elevators will be required.

v. Exit Door Signage

Tactile signage shall be provided to meet all the following criteria: a) tactile signs shall be located at each exit door requiring an exit sign; b) tactile sign shall read EXIT; and c) tactile signs shall comply with 2010 ADA standards.

M. Interior Finish Requirements

Interior finishes within the Project Name project are designed to comply with the requirements of the IBC. The major interior finish requirements for the project are summarized in the table below (IBC T-803.9 and NFPA 101 T-A10.2.2). The sprinkler system reduction allowed by code has been applied.

Table 7: Interior Finish Requirements

Occupancy Classifications	Floor Finish Requirement	Interior Wall and Ceiling Finish Requirements (IBC)
Assembly (A)	Exits: **Class II** Corridors: **Class II** Spaces not separated from corridor: **Class II**	Exit Enclosure: **Class B** Corridors & Exit access stairs: **Class B** Rooms & Enclosed Spaces: **Class C** Lobbies: **Class C** **Note 1**
Business (B)	Exits: **Class I or II**	Exit Enclosure: **Class B** Corridors & Exit access stairs: **Class C** Rooms & Enclosed Spaces: **Class C** Other Spaces: **Class C** **Note 1**
Storage (S)	Exit: **Class II**	Exit Enclosure: **Class C** Corridors & Exit access stairs: **Class C** Rooms & Enclosed Spaces: **Class C** Other Spaces: **Class C**

Note 1: IBC has more stringent requirements.
Note 2: NFPA 101 has more stringent requirements.

Additional interior finish requirements:

- All combustible materials used as interior wall, ceiling, and floor finishes must have proper documentation indicating that the finishes comply with the requirements above.
- It is recommended that the design for unique or custom interior finishes (e.g., wood finishes, textile wall coverings, foam finishes, material applied to fire doors, etc.) within the project be identified early in the design/construction process. Interior finishes consisting of unique materials or assembly of different materials will have to be tested by a nationally recognized laboratory.
- Interior wall and ceiling trim and incidental finishes must be identified by the project team and must be included for assessment. Interior floor trim material used as wall base or decorative border would also be included and tested as a wall finish or floor finish.

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

- Interior wall and ceiling finishes are normally tested as a single layer on noncombustible substrate. If the material is installed in any other manner, then the assembly of all materials must be tested in accordance with the standards above.
- Wood interior finish (e.g., millwork, wood lockers, etc.) must be tested as an assembly of all the components exactly how it will be installed including the adhesives, lacquers, glazing, etc.
- Depending on the occupancy classification, the furnishings in common areas, such as upholstered furniture, must also be evaluated before the furniture is installed in the facility.
- The fire department may require a Third (3rd) Party Evaluation of the interior finishes to ascertain compliance with above rating.

N. Fire Department Access

i. Site Access/Set-Up Sites:

IFC Appendix D for the minimum fire department site access requirements as follows:

- Fire department access road shall extend to within 150-ft of all portions of the exterior walls of the first story of the building. This dimension is permitted to increase if the building is equipped with a sprinkler, the fire apparatus access roads cannot be installed due to topography and an approved alternative means of fire protection is provided. (IFC, §503.1.1).
- Fire department access road dead ends more than 150-ft shall be provided with approved provisions for fire apparatus to turn around (IFC, §503.2.5).
- Fire department access roads shall have an unobstructed width of 20 feet and a vertical clearance of 13 ft 6 inches. The AHJ shall have the authority to require or permit modifications to the required access widths where they are inadequate for fire or rescue operations or where necessary to meet the public safety objectives of the jurisdiction (IFC, §503.2.1 & §503.2.2).
- Fire department access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities (IFC, §503.2.3).
- Aerial Access in accordance with IFC Appendix D105 shall be provided. Aerial access roads shall be 26 ft. in width and be located approximately 15 to 30 ft. from the face of the building served.

ii. Elevator – Emergency Medical Services

Any building that is four or more stories above, or four or more stories below, grade plane, must contain at least one passenger elevator that is operational for building occupants and fire department access to all floors. The elevator car shall be able to accommodate an ambulance stretcher (24 inches x 84 inches) with 5 inches radius corners. The elevator car must be identified by the international symbol for emergency medical services (star of life). The symbol must be at least 3 inches high and located inside on both sides of the hoist-way door frame (IBC §3002.4).

UT HEALTH SCIENCE CENTER
FIRE PROTECTION/LIFE SAFETY NARRATIVE
September 24, 2024 | SLS # 2.1003

II. SUMMARY AND CONCLUSION

This report provides an outline of building and fire code related requirements for this project and information associated with the general approach to fire protection, life safety and building code compliance. As a living document, this report will be revised, modified, and amended as the project progresses. To ensure accuracy of this report, close coordination, review, and concurrence from design team members is required.

In case of conflict, it should be noted that the requirements of the applicable codes take precedent over this report.

Prepared by:

Madelyn Uryase
Consultant
Email : madelyn.uryase@socotec.us
Mobile: (617) 464-6906

Reviewed by:

John Caliri Jr, P.E.
Associate Principal/Fire Protection Engineer
Email: john.caliri@socotec.us
Mobile: (774) 451-7053

7.1

CIVIL

CIVIL SITE COMPARISONS

SITE 1

LOCATION: Southwest corner of Madison Avenue and South Pauline Street

DEVELOPMENT AREA / DIMENSIONS: 3 Separate Parcels comprising 1.1 acres (+/-) / 350' x 140'

ZONING: Base Zoning – CMU-3 (Commercial Mixed Use)
Overlay Zoning – (MD) Medical District Overlay

CURRENT USE: Vacant, multi-story hotel / parking garage
2 Vacant, 1-story commercial buildings

TRANSPORTATION AND SITE ACCESS:
The site has frontage and direct access to three roadways as follows:
- Madison Avenue
- South Pauline Street
- South Dudley Street
- Rear (south) alley access

UTILITIES:
Sanitary Sewer: Available along Madison Ave, S. Pauline St. and S. Dudley St.

Water: Available along Madison Ave and S. Dudley St., Unknown along S. Pauline

Gas: Available along Madison Ave and S. Dudley St., Unknown along S. Pauline

Electricity: Underground electric system along Madison Ave and S. Dudley St., Overhead electric system along S. Pauline

POTENTIAL SITE CONSTRAINTS:
- Unknown environmental concerns related to vacant buildings, previous uses, etc.
- High cost of demolition
- Proximity to 2 signalized intersections, may limit road access locations
- Small site; limited parking opportunities

SITE 2

LOCATION: Northwest corner of Jefferson Avenue and North Pauline Street

DEVELOPMENT AREA / DIMENSIONS: 3 Separate Parcels comprising 3.9 acres (+/-) / Irregular Shape

ZONING: Base Zoning – CMP-1 (Campus Master Plan)
Overlay Zoning – (MD) Medical District Overlay

CURRENT USE: Vacant, multi-story medical facility
Surface parking lot

TRANSPORTATION AND SITE ACCESS:
The site has frontage and direct access to two roadways as follows:
- Jefferson Avenue
- North Pauline Street

UTILITIES:
Sanitary Sewer: Available along Jefferson Ave, N. Pauline St., and along west property line

Water: Available along Jefferson Ave and N. Pauline St.

Gas: Unknown availability along Jefferson Ave and N. Pauline St.

Electricity: Unknown availability along Jefferson Ave, Overhead electric system along N. Pauline

POTENTIAL SITE CONSTRAINTS:
- Unknown environmental concerns related to vacant buildings, previous uses, etc.
- High cost of demolition
- Irregular shaped property
- Adjacent to electric substation to the west
- Distance from UTHSC campus

SITE 3

LOCATION: Southwest corner of Madison Avenue and South Dudley Street

DEVELOPMENT AREA / DIMENSIONS: 2 Acres (+/-) / 370' x 270'

EXISTING PARCEL SIZE: 5.5 Acres

ZONING:

Base Zoning – CMP-1 (Campus Master Plan)
The CMP-1 District is intended to accommodate new development where the land-use pattern is predominately urban in character. New development should be urban in character with an emphasis on compact, vertical, pedestrian-oriented, mixed use development that fit seamlessly into the built environment. Landscaping requirements are reduced and buildings are pulled up much closer to the street.

Overlay Zoning – The UT System is exempt from local zoning overlays, but the project is located in the (MD) Medical District Overlay. The purpose of the Medical Overlay District is to support the investment efforts of the various institutional uses located within the district by providing restrictions on those uses deemed incompatible with the future land uses anticipated in the area. The area is also intended to have a more urban, pedestrian-friendly, walkable character in the future, and therefore replacement standards that support this vision are included in the overlay district. Finally, mapped limitations on height will help reduce the impact of large-scale uses on the surrounding neighborhoods.

SITE PLAN REVIEW / PROCEDURE:
As described in Section 8.2 – Medial Overlay District of the Memphis and Shelby County Unified Development Code (UDC)

- Following a pre-application conference, site plan applications are submitted to the City of Memphis, Land Use Development Services

(LUDS) for review by the Zoning Administrator.
• The Zoning Administrator is authorized to approve site plans within the Medical Overlay District in accordance with the Special District Administrative Site Plan review procedure.
• The Zoning Administrator is authorized to approve administrative deviations to the building envelope standards, where owing to special conditions, strict enforcement of certain standards would be physically impractical.
• The Land Use Control Board (LUCB) is authorized to approve special exceptions related to building height and parking.
• The City of Memphis, Engineering Division will review site civil construction plans related to public improvements (i.e. sanitary sewer, stormwater management, and roadway improvements/modifications).
• Utility service requests for electricity, gas, and water are submitted to Memphis Light Gas and Water (MLGW)

BUILDING REGULATIONS:
Per UDC Section 8.2.5.C

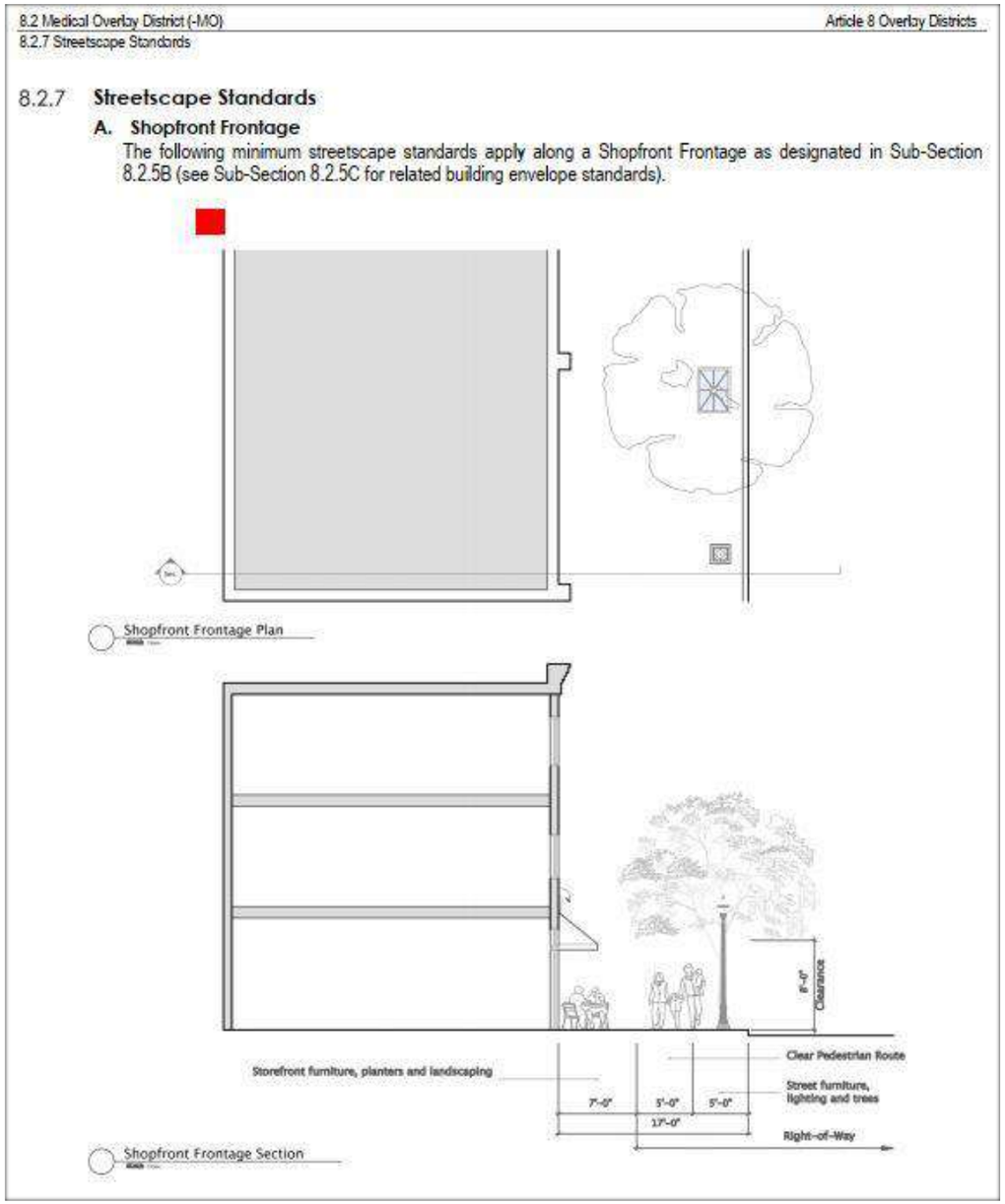
• Building and Parking Placement

Front Yard Setback: 7′ (Min.) / 15′ (Max.)
- Rear/Rear Yard Setback: 0′
- Alley Setback: 5′
- Build Separation: 5′ (betweendetached buildings on separate
- Parking Setback (Street): No closer than principal building to the primary street
- Parking Setback (Alley): 0′

• Building Elements
- Transparency (min%)
- Ground Floor: 60 (Primary street) / 30 (Side street)
- Upper Floors: 20 (Primary and side streets)
- Building Entrance
  - ▶Facing Primary Street
  - ▶Blank Wall Area: 30 linear feet (Max.)
- Building Height
  - ▶Block Face (0-30′ of lot depth): 80′
  - ▶Block Interior (30′+ of lot depth): 125′

Floor Height
  - ▶Ground Floor: 14′ (Min.) / 20′ (Max.)
  - ▶Upper Floors: 9′ (Min.) / 12′ (Max.)

• Streetscape Standards see adjacent diagram:



TRANSPORTATION AND SITE ACCESS:
The site had frontage and direct access to two roadways as follows:

- Madison Avenue
  - Minor Arterial; 88′ Right-of-Way
  - Property line is located 7.5′ from the face-of-curb
  - 2 east bound lanes, 3 west bound lanes, 1 center left turn lane
  - 2 trolly lines share the roadway with passenger vehicles
  - 2 trolly stops flank the site; 400′ to the west and 200′ to the east
  - Roadway traffic count – 15,428 (2009)
- South Dudley Street
  - Local Roadway; 62′ Right-of-Way
  - Property line is located 6.5′ (+/-) from the face-of-curb
  - 1 north bound lane, 1 south bound lane
- Pedestrian crosswalks
  - Traffic signal crosswalk located at the Madison Ave / S. Dudley St intersection
  - Mid-block crossing located approximately 125′ west of the site; equipped with Rectangular Rapid Flashing Beacons (RRFB)
  - 3-Way Stop and crosswalk located at the S. Dudley St / Monroe Ave intersection approximately 50′ south of the site

Access and curb cut standards are regulated by the City of Memphis, Engineering Division.

TOPOGRAPHY AND DRAINAGE:
General Site Conditions:
The site is crowned near the middle and is well drained to both street frontages along the north and east sides with a portion draining to the south. There is approximately 10 vertical feet of fall across the site, generally from northwest to southeast. The site is sodded and landscaped with small trees. A paved walking path traverses the site from northwest to southeast with two bench seating areas located along the path.

Drainage and Stormwater Detention:
The site is located with the Gayoso Bayou drainage basin and the Sophia sub-basin. Although there are no known flooding issues in the area, the Gayoso Bayou is identified as a "sensitive basin" by the City of Memphis, Division of Engineering. Stormwater detention is required in sensitive basins unless a detention waiver is granted by the City. Detention waivers may be granted for sites which were previously developed and are being re-developed without increasing the amount of impervious surface.

Based on a site survey conducted by Allen & Hoshall in 2021, there are no drainage easements located on the site, however there are two small drain inlets near the south-central portion of the site. A 7′ x 15′ box culvert is routed under S. Dudley Street along the west right-of-way. It is assumed that most of the site drainage into this box culvert.

UTILITIES:
Sanitary Sewer:
Sanitary sewer is provided by the City of Memphis and is available to the site along both Madison Avenue and S. Dudley Street as follows:

- Madison Ave – 21″ concrete sanitary sewer, with possible service line stub to project site near center of roadway frontage (to be verified)
- S. Dudley St. – 24″ concrete sanitary sewer

Water:
Public water is provided by Memphis Light Gas & Water and is available to the site along both Madison Avenue and S. Dudley Street as follows:

- Madison Ave – 10″ water main along the south side then crosses to the north side of roadway
- S. Dudley St. – 10″ water main along the east side of roadway

Gas:
Gas is provided by Memphis Light Gas & Water and is available to the site along both Madison Avenue and S. Dudley Street as follows:

- Madison Ave – 8" intermediate pressure gas main along the south side of roadway
- S. Dudley St. – 8″ intermediate pressure gas main along the west side of roadway

Electricity:
Electric utility is provided by Memphis Light Gas & Water and is available to the site along both Madison Avenue and S. Dudley Street as follows:

- System of underground cable routed from manhole to manhole that would likely be used to provide power to the site.

System is located along the north side of Madison Ave and the east side of S. Dudley St

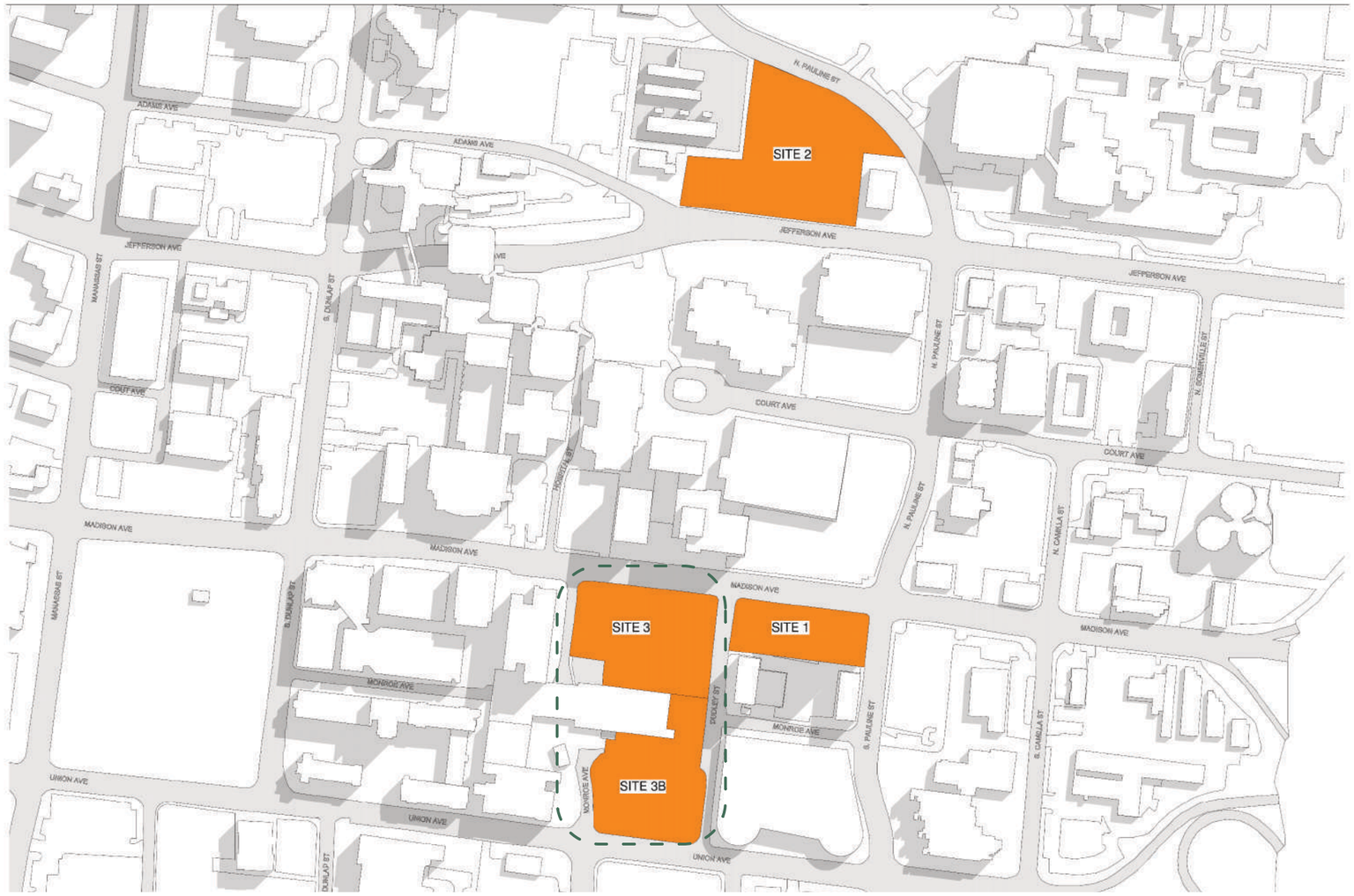
POTENTIAL SITE CONSTRAINTS:
A Recognized Environmental Condition (REC) was noted in the following two reports:
• Phase II Investigation, 2016, Prepared by: EnSafe, Inc.
• Phase I Environmental Site Assessment (ESA), 2020, Prepared by: Fisher Arnold, Inc. (FA)

The FA report indicates the location of six (6) RECs on the 5.5 acre parcel, however only REC No. 1 is located on the proposed development site. As noted on the Site Location Map in Attachment A, REC No. 1 was the location of two (2) former Underground Storage Tanks (USTs) on the north central portion of the site. As stated in the ESA Executive Summary in Attachment A, the former USTs contained heating oil and were removed in 2005 as part of property re-development activities. The Phase I ESA referenced above states the following:

Under the direction of the Tennessee Division of Solid Waste Management (TDSWM), both former UST basins were evaluated and TDSWM found "that adequate investigation had been performed to conclude that the soils and/or groundwater impacted by the petroleum wastes did not contain hazardous constituents at levels that posed a significant threat to human health or the environment". No land use restrictions were warranted and a "Notice That Petroleum Wastes Are Present" (Notice) was filed with the Shelby County Register of Deeds. Review of previous site assessment activities documents that soil and groundwater contamination remains on-site in the north-central portion of the Subject property above current applicable Residential Based Screening Levels..

The ESA also states: This Notice was "provided to inform prospective purchasers or users of thepresence of the petroleum wastes, and that TDSWM should be contacted prior to any removal of impacted soils or groundwater to ensure proper management and disposal of the removed materials."

Additional environmental investigation is warranted to determine what further



ATTACHMENT A
PHASE 1 ESA
PREPARED BY:
FISHER ARNOLD, INC.
SEPTEMBER 15, 2020

EXECUTIVE SUMMARY

Fisher Arnold, Inc. (FA), was retained by the Tennessee Department of General Services, to perform a Phase I Environmental Site Assessment (ESA) on the 5.5-acre loading dock property located at 885 Madison Avenue and the 0.88-acre TriMetis medical research building located at 45 S. Dudley Street, in Memphis, Shelby County, Tennessee ("Property").

The purpose of the Phase I Environmental Site Assessment (ESA) was to identify areas of environmental concern, determine Recognized Environmental Conditions (RECs), and to conduct all appropriate inquiries, (AAI) to obtain certain protections from liability under the federal Superfund Law (CERCLA) as performed in general accordance with (1) the United States Environmental Protection Agency (USEPA) Standards and Practices for All Appropriate Inquiries (AAI), 40 Code of Federal Regulations (CFR) Part 312, and (2) guidelines established by the American Society for Testing and Materials (ASTM) in the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment (ESA) Process / Designation E 1527-13 (ASTM Standard Practice E 1527-13). The scope of work and conditions of the agreement have been described within Section 1.2 of the report.

FA obtained and reviewed a variety of updated site-specific information and performed a visual inspection of the subject property and a walk-through of the residence. This current report includes a description of the work performed and addresses pertinent data and observations relating to the environmental condition of the subject property and any recognizable environmental concerns.

Based on site reconnaissance, interviews and review of available records, FA identified six Recognized Environmental Conditions (RECs) associated with the Subject property.

1) The Subject property is a closed Leaking Underground Storage Tank (LUST) site and a closed State Remediation Program (SRP) site. The site formerly operated two 15,000-gallon heating oil USTs which were installed in 1994 and removed in 2005. Additionally, a 15,000-gallon heating oil UST and a 12,000-gallon heating oil UST, which were installed in 1959 and closed in place in 1989, were also removed from the property in 2005, as part of property re-development activities. The two 15,000-gallon USTs that were installed in 1994 are associated with an historic address for the Subject property; however, they were previously located on the west adjoining property (881 Madison Avenue). The 15,000-gallon and 12,000-gallon USTs that were installed in 1959 were previously located in the north-central portion of the Subject property. Under direction of the Tennessee Division of Solid Waste Management (TDSWM), both former UST basins were evaluated and the TDSWM found "that adequate investigation had been performed to conclude that the soils and/or groundwater impacted by the petroleum wastes did not contain hazardous constituents at levels that posed a significant threat to human health or the environment." No land use restrictions were warranted and a "*Notice That Petroleum Wastes Are Present*" (Notice) was filed with the Shelby County Register of Deeds. This Notice was "provided to inform prospective purchasers or users of the presence of the petroleum wastes, and that the TDSWM should be contacted prior to any removal of impacted soils or groundwater to ensure proper management and disposal of the removed materials." A September 1, 2016 Phase II Investigation report prepared by Ensafe on behalf of the State of Tennessee concluded that soil contamination remains on-site in the north-central portion of the Subject property in the immediate vicinity of the former UST. Further soil delineation and groundwater sampling related to this condition are indicated and represent an ongoing REC for this condition.

2) Shallow groundwater is currently being collected for water reclamation and irrigation located on the property. A September 1, 2016 Phase II Investigation report prepared by Ensafe on behalf of the State of Tennessee concluded that sump water and shallow groundwater in the immediate vicinity of the water reclamation system has been impacted by PCE. The report recommends further study around the PCE detections and the use of the shallow groundwater for irrigation purposes. These data and recommendations represent an ongoing REC for the property.

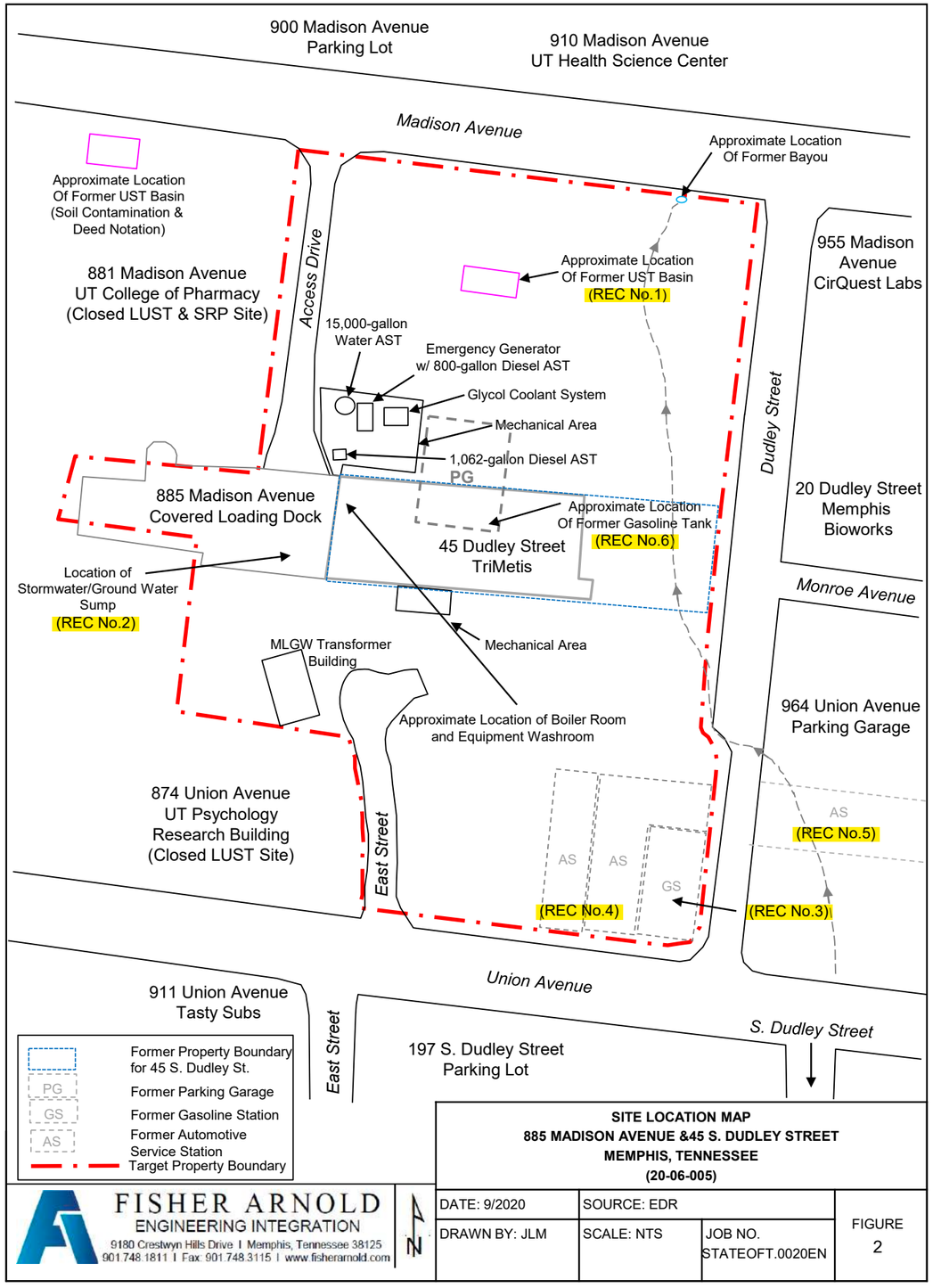
3) The Subject property was formerly occupied by a gasoline dispensing station from at least 1932 until 1952 located in the southeastern portion of the property. FA was unable to determine whether the former USTs were removed from the property. The potential exists for orphan USTs to be present on the property and/or for a release to have occurred from the system. A September 1, 2016 Phase II Investigation report prepared by Ensafe on behalf of the State of Tennessee indicated that elevated petroleum odors were observed in this area of the site. Although groundwater results in this area did not indicate groundwater impacts, this observation and the potential for orphan USTs represent a REC for the property.

4) The Subject property was formerly occupied by several automotive service garages from at least 1926 until 1953 located in the southeastern portion of the property. A September 1, 2016 Phase II Investigation report prepared by Ensafe on behalf of the State of Tennessee indicated that elevated petroleum odors were observed in this area of the site. Although groundwater results in this area did not indicate groundwater impacts, this observation represents a REC for the property.

5) The immediately adjacent property to the east at 964 Union Avenue was formerly occupied by several automotive service garages from at least 1949 until 1964. A September 1, 2016 Phase II Investigation report prepared by Ensafe on behalf of the State of Tennessee indicated that elevated levels of carbon tetrachloride, choroform, and TCE were observed in groundwater on this property. Due to the potential for this condition to have impacted the subject property, this represents a REC for the property.

6) A September 1, 2016 Phase II Investigation report prepared by Ensafe on behalf of the State of Tennessee indicated that certain volatile organic compounds were detected in indoor air samples at concentrations greater than USEPA residential and/or industrial Regional Screening Levels (RSLs). This study recommended further study in order to rule out the potential for a subsurface source of the observed contaminants. This finding represents a REC for the property.

Further environmental information is recommended to be collected for the Subject property in order to determine if the identified RECs have impaired the property.



7.2

ARCHITECTURAL

ARCHITECTURE AND INTERIORS

The project consists of a 275,000 GSF new construction at the corner of Madison Avenue and Dudley St. The new facility will include academic classrooms, workplace for faculty and staff, specialty areas for interdisciplinary education, and amenity space to support students and faculty within the building. The building design will comply with 2023 Design Guidelines and Preference from University of Tennessee Facilities Services, or more recent document if update available.

The building envelope will be designed to fit with the eclectic style of the campus, while celebrating the forward-thinking and innovative medical education. The exterior enclosure will consist of exterior rainscreen systems, curtain wall systems, low slope roofing system, vegetated roofing systems, and aluminum trellis and shading systems.

The primary rainscreen system will consist of modular brick to match campus brick color ("Campus Blend" manufactured by General Shale Brick, Inc as basis of design). Typical pattern will be a running bond with Flemish bond every sixth course. To fit with elevated brick detailing elsewhere on campus some accent areas have unique patterns of offset or turned brick to create texture and depth. The brick veneer to be supported by thermally broken shelf angles and thermally broken brick ties.

A secondary rainscreen system will consist of natural quarried stone veneer. The basis of design is Limestone supplied by Indiana Limestone Fabricators with a smooth Eureka Buff finish. An alternate to stone could be explored with a glass-fiber reinforced concrete system. Panel finishes to have natural variety, or if manufactured product provide at least 3 textures within color tone randomly distributed to create a natural expression.

Additional rainscreen trim to be cast stone or aluminum plate. Cast stone basis of design is Rockcast as manufactured by Reading Rock, Inc. in UTR 19 color. The rainscreen cladding backup will consist of thermally broken z-girts, semi-rigid mineral wool insulation to comply with IECC minimum u-values, fluid applied air barrier, glass-mat exterior sheathing, and cold formed metal studs.

Glazed aluminum curtainwalls consist of conventionally glazed exterior cladding system. Provide 2 ½" sitelines and depth per span and applied loads. Mullion profiles to contain a continuous thermally broken assembly to meet or exceed IECC u-values. Exterior glazing to curtainwall system with high performance fluoropolymer factory clear anodized finish.

Exterior glazing will consist of 1" insulated glass units. The basis of design is PPG Solarban 60 with PPG Solargray tint. IGUs to include warm edge spacers to meet or exceed IECC u-values. Spandrel conditions to consist of typical glazing with metal shadow box.

The primary roof system to be a SBS modified bitumen roof membrane for low slope roofs from a preferred manufacturers (Siplast/Firestone/John Manville/Soprema). Provide ½" per foot slope with a 3-ply system and cold-applied adhesive, and a granular cap sheet in light reflecting energy efficient color. The roof perimeter will have a minimum 42" tall parapet. Liquid applied flashings preferred.

Green roofs to be intensive systems with 6" – 24" growing media to support plantings design for terrace. Tree wells to be provided for additional depth at specific locations. Hot fluid applied water proofing, root barrier, and drainage system to be provided as warranted system, basis of design Hydrotech Intensive Garden Roof Assembly.

Design will comply with energy conservation and sustainability requirements per Tennessee Sustainability and Energy Guidelines, and Tennessee High Performance Building Requirements. Refer to preliminary HPBr checklist included in appendix.

The lobby and entry spaces will serve as Student Commons which will consist of collaboration areas, study rooms, and gathering places. Students and faculty will spend long period of time in the building, and these commons will provide areas for study between classes, and grab a bite to eat. Refrigerators and microwaves will be provided nearby where students can store and prepare food that they bring. Vending machines and grab-n-go food options may be provided for additional options.

Furniture in Commons and public space is flexible with power at all locations. Entry points will include recessed aluminum walk-off mats. Primary entrances will have pedestal mounted operators and one set of motorized doors at each entrance.

Open collaboration areas will include gypsum ceilings with recessed linear LED lighting on dimmers. Flooring will be mid to high-grade carpet tile. Furniture in these locations will not be fixed but require power. Study rooms will be fully enclosed spaces with glass sidelights and wood veneer doors. Ceiling will consist of Tegular Armstrong Ultima or equal acoustical panel ceilings with batt insulation above. Each room will have recessed linear LED lighting on dimmers. The flooring will consist of mid to high-grade carpet tile. Include wall hung glass markerboards.

Primary building circulation will include resilient flooring. The ceiling will be primarily acoustic ceiling panels with painted gypsum at feature areas. 20% of the walls will include a custom graphic wallcovering for branding and wayfinding.

Interior glass partitions to be butt jointed and restrained at top and bottom. The glass shall be fully tempered and a minimum 3/4" thick or complying with GANA recommendations.

For spaces that are divisible with an operable partition, provide an electrically operated vertical operable partition with STC 60 rating. The basis of design is a Skyfold Zenith Premium 60. Finishes will include acoustic fabric and markerboard surface material.

Wood doors to be 1-3/4" thick. Exterior hollow metal doors shall be 14-gauge steel; others may be 16-gauge. Heavy doors, fire doors, and doors wider than 3'-0" must be installed using four heavy duty ball bearing butts. Steel door frames for openings wider than 3'-0", and all steel frames for exterior doors shall be constructed of 14-gauge material. Interior frames for doors narrower than 3'-0" may be constructed of 16-gauge material. All frames are to be fully welded and shall have double rabbeted profiles with equal sized rabbets. All doors to be 8'-0" tall unless noted otherwise.

Passenger elevators will be 3500 pound capacity / 350 fpm machine room-less. At least one service elevator with 5000 pound capacity will be provided with access to all levels with mechanical or building system equipment. All elevator designs and installations to comply with all applicable codes and regulations.

Academic and didactic environments will be designed for active learning, with movable, stackable furniture, ample power, writable surfaces, and have technology integrated to ensure that students are engaged in the process of learning through activities and/or discussion in class, as opposed to passively listening to an expert.

Wall construction in classroom shall extend to structure and have batt insulation to minimize sound transmission to maximize acoustic fidelity. Finishes to be zero VOC latex paint in "eggshell" finish. Wall mounted acoustical treatments will be used to maintain acoustical fidelity in al didactic environments.

Floor finishes to be high grade carpet tiles. Ceiling heights will vary and should be Armstrong Ultima or equivalent with a gypsum board bulkhead at exterior glazing or other design appropriate locations.

All windows on exterior of building to have soffit-mounted manual roller shades, automatic roller shades should be in any double height or hard-to-reach locations. Provide dual solar darkening and blackout shades at all classrooms located on an exterior wall.

7.3

HEATING, VENTING, AND AIR CONDITIONING

I. HEATING, VENTILATING, AND AIR CONDITIONING

A. CODES AND STANDARDS:

1. HVAC systems will comply with the following minimum requirements:

- International Building Code-2012
- International Mechanical Code-2012
- ASHRAE Standard 62.1-2010
- State of Tennessee High Performance Building Requirements
- University of Tennessee – Division of Facilities Planning – Designer's Manual (Appendix 3 – Designer's Manual)

B. DESIGN CONDITIONS:

1. Offices, conference areas, and classrooms: 75°F DB, 50% RH summer; 72°F DB winter
2. Outside: 95°F DB, 78°F WB summer; 0°F DB winter.

C. CENTRAL PLANTS FOR HEATING AND COOLING:

1. Based on an anticipated building size of 300,000 gross square feet, the estimated building cooling load is approximately 1,000 tons (300 square feet per ton). The estimated building heating load is 5,500 MBh.

2. Two options are being considered for central heating and cooling plants to serve the new facility:

a) Option 1: provide a new central plant within the facility footprint.

b) Option 2: provide a new central plant at a remote location separate from the building.

3. Heating plant: the heating plant will consist of 3 boilers, primary and secondary hot water pumps, piping, and accessories. Each boiler will be 3,000 MBh, with space provided for an additional four 3,000 MBh boilers. Each of the three boilers serving the building will be sized for 50% of the building load, providing N+1 redundancy so that the building load will still be fully served upon failure of one boiler.

a) Boilers will be low pressure condensing type, rated for a minimum 125 psig hot water working pressure and featuring fully modulating burner controls for low turndown capability.

b) Hot water piping 2.5" and larger will be schedule 40 black steel, and 2" and smaller will be type L hard drawn copper. or schedule 40 black steel. Piping will be insulated with preformed fiberglass pipe insulation with white all service jacket with self-sealing lap.

4. Cooling plant: the cooling plant will consist of 3 chillers, condenser water and chilled water pumps, piping, cooling towers, and accessories. Each chiller will be 500 tons, with space provided for an additional four 500-ton chillers. Each of the three chillers serving the building will be sized for 50% of the building load, providing N+1 redundancy so that the building load will still be fully served upon failure of one chiller.

a) The chillers will be water-cooled centrifugal type with variable frequency drives to maximize efficiency at part-load conditions.

b) Condenser water and chilled water pumps will be base-mounted double or end suction type, with premium efficiency motors and variable frequency drives. Chilled water system flow will be controlled based on system differential pressure and regulated within the chiller's allowable limits.

c) Cooling towers will be induced-draft type and will be located on the roof. The towers will be sized for 3 gpm/ton at 78°F wb ambient conditions. Tower fans will be furnished with variable frequency drives. Tower capacities will match chiller capacities, including space available for future towers.

d) Chilled and condenser water piping 2.5" and larger will be schedule 40 black steel, and 2" and smaller will be type L hard drawn copper. Chilled water piping will be insulated with preformed cellular glass pipe insulation. Condenser water piping will be insulated with preformed fiberglass pipe insulation.

e) Waterside economizer: a plate heat exchanger and waterside economizer controls will be provided to allow free cooling during cold outdoor temperatures.

f) Air Handling Units: draw-through, factory-fabricated, medium pressure type including the following features:

1. 2" thick, solid, galvanized steel, double-wall casings with rigid foam insulation between the walls. Perforated inner walls will be allowed at fan sections for improved acoustic performance.
2. Pleated 4" deep MERV 13 filters.
3. Hot water type preheat coils with 30°ΔT. An inline circulating pump will be provided to maintain full design flow at each preheat coil.
4. Chilled water type cooling coils with maximum face velocity of 450 FPM, maximum 8 rows of depth, and 12°ΔT (to match the existing cooling plant design.)
5. Premium efficiency fan motors with variable frequency drives.
6. Fan arrays with direct-drive plenum fans with airfoil blades and gravity backdraft dampers.
7. Acceptable manufacturers will be Carrier, JCI-York, and Trane.

D. ENERGY RECOVERY UNITS:

Air-to-air energy recovery using total enthalpy wheels or plate heat exchangers will be employed to precondition outside air. Energy recovery unit construction will match the air handling unit parameters listed above.

E. AIR DISTRIBUTION:

Ductwork will conform to SMACNA recommendations. New supply ductwork will be galvanized steel insulated with 2" thick fiberglass blanket insulation. New general exhaust ductwork will be uninsulated galvanized steel. Supply air distribution devices will be architectural plate face type. Exhaust air will be drawn from ceiling-mounted eggcrate grilles.

F. TERMINAL UNITS:

1. Variable-volume reheat terminal units will provide heating/cooling supply air to offices, classrooms, and other non-laboratory areas. Heat will be provided by heating water coils..

STAIRWELL PRESSURIZATION

1. Stairwells will be pressurized with outside air to maintain 0.15" wg minimum differential pressure across any closed stairway door. Fans will be the variable pitch vaneaxial type with multiple ducted discharge points in each stairwell.

H. AUTOMATIC TEMPERATURE CONTROLS:

The existing building control system (BCS) will be extended to incorporate the new systems, including terminal units, air valves, and other related systems. New BCS components will integrated into the existing building control system and will be fully compatible with and connected to the existing Energy Management System serving the campus. Acceptable manufacturers will be JCI and Siemens.

1. BCS controllers will be field programmable, microprocessor-based type incorporating direct digital control and energy management functions. Each BCS controller will perform its assigned control and energy management functions as a stand-alone unit and will comply with FCC Part 15, Subpart B 2008. Each BCS controller will be expandable by adding additional input/output modules that operate through the processor of the BCS.

2. Heating water control valves will be 2-way, equal percentage flow characteristic, globe or ball type with electric actuators.

3. Control dampers will be low-leakage, opposed-blade type with airfoil blades, blade seals, side seals, and electric actuators.

4. Space temperature sensors will be electronic type with setpoint adjustment, visual temperature scale, and communication port. Duct and pipe temperature sensors will be electronic type with accuracy of +/-0.5°F. Space and duct humidity sensors will have an accuracy of +/-2% RH. Air and water differential pressure sensors/transmitter will be provided with 3-valve manifold assembly to allow field test measurements to be taken without interrupting the BCS system reading. Current sensing relays will be provided for HVAC equipment status. Pressure switches will be provided for filter status.

5. Software graphics with pictorial representations of equipment and devices being controlled will be provided.

I. TESTING:

Adjusting and Balancing: systems will be tested, adjusted, and balanced to achieve proper operation, design flow, temperature and pressure differentials, and pressure drop through piping, ductwork, equipment, and components. A Subcontractor, certified by AABC or NEBB and independent of the Contractor, will be required to perform testing, adjusting, and balancing work. Preliminary test and balance work should be performed on the systems which will be modified under the scope of the renovation, and these systems will need to be rebalanced after renovation work is completed.

J. COMMISSIONING:

The project will require commissioning of HVAC equipment and controls as required by the State of Tennessee High Performance Building Requirements.

K. PRICING ALTERNATES:

a. Include pricing to extend chilled water and steam piping from the existing heating and cooling plants at the GEB parking garage. Approximately 1500' of trenching would be required, and the trench would include 10" chilled water supply and return piping, 4" steam piping, and 3" steam condensate piping. Piping will be underground preinsulated type (Thermacor or similar.)

7.4

PLUMBING

PLUMBING

A. CODES AND STANDARDS:

1. Plumbing systems will comply with the following minimum requirements:
a) International Plumbing Code – 2012.
b) State of Tennessee High Performance Building Requirements.
c) University of Tennessee – Division of Facilities Planning – Designer's Manual
d) University of Tennessee – Mechanical Criteria

B. PLUMBING FIXTURES:

1. Water closets will be elongated vitreous china, wall-hung, sensor-activated, flush valve type, 1.6 gallons per flush with white open front seats.

2. Urinals will be vitreous china, wall-hung, sensor-activated, flush valve type, 0.125 gallons per flush.

3. Lavatories will be vitreous china, under-mount type, with sensor-activated centerset faucet, 0.5 gpm flow control, and grid strainer.

4. Water fountains will be electric, modular type with in-wall chiller, extended round receptors, and bottle filler option.

5. Floor-mounted service sinks will be terrazzo with grid strainer, rim guard, and faucet with hose thread outlet, vacuum breaker, and wall brace. Wall-hung service sinks will be enameled cast iron with floor-mounted trap standard and faucet with hose thread outlet and vacuum breaker.

6. Break room sinks will be stainless steel, self-rimming type, with swing spout faucet, and 1.5 gpm flow control.

C. DRAINAGE SYSTEMS:

1. Sanitary drain, waste, and vent systems will extend from underground mains to all fixtures and equipment requiring service. Drainage and vent stacks will extend vertically through the roof. The system will be provided with traps, vents, and cleanouts as required by code. Trap primers will be provided for drains susceptible to loss of water seal by evaporation.

2. Elevator pits will be provided with sump pumps with the discharge piped to the sanitary system.

3. Rainwater primary and secondary drainage systems will extend from the roof drains to underground mains. Cleanouts will be provided as required by code. Drain bodies and horizontal rainwater primary and secondary piping above grade and within heated spaces will be insulated to prevent condensation. Rainwater secondary drainage piping will be routed independent of other drainage systems and discharge above grade at an observable location.

4. Sanitary and rainwater drainage and vent piping above grade will be hubless cast iron pipe and fittings with heavy duty compression type couplings. Drainage and vent piping below grade will be service weight cast iron pipe and fittings with elastomeric compression joints.

D. DOMESTIC WATER SYSTEMS:

1. The water supply will be provided from municipal sources with service separate from fire protection service. Dual backflow prevention devices and pressure reducing valves will be provided.

2. The building will be served with a horizontal distribution system to each fixture group and to vertical risers.

3. A central water pressure booster pump package will be provided to serve the upper floors of the building.

4. Domestic water heaters will be gas-fired vertical storage type with ASME tanks, automatic controls and safeties and factory-installed insulation and jacket. A hot water circulating pump will be provided to limit temperature loss throughout the system to 10°F maximum. A master mixing valve will be provided.

5. Domestic water piping within the building will be type L hard drawn copper with wrought copper fittings and lead-free soldered joints. Press-fit joints will be allowed at the Owner's discretion.

E. LABORATORY COMPRESSED AIR SYSTEMS:

1. The laboratory compressed air system will be prewired and prepiped skid mounted units, located in the penthouse. Compressors will be reciprocating type with nonlubricated compressor units. Compressed air systems will include compressed air receivers, air-cooled after-coolers, refrigerated air dryers and pre- and post-filters to provide clean air.

2. Piping for laboratory gas systems and cylinder gases will be type L hard copper tubing.

ELECTRICAL SYSTEMS

A. GENERAL:

1. Electrical systems will comply with the following minimum requirements:

- International Building Code-2012
- NFPA 70-2017, National Electrical Code
- International Energy Conservation Code-2012
- State of Tennessee High Performance Building Requirements
- University of Tennessee – Division of Facilities Planning – Designer's Manual
- University of Tennessee – Office of Information Technology Communications Group – Satellite Equipment Room and Structured Cabling Requirements - 2017
- University of Tennessee – Facility Services – Electrical Specifications

B. CENTRAL PLANT OPTIONS:

1. Option #1: The central plant will be served from the building's electrical distribution system. For this option, it is anticipated that two (2) pad-mount transformers and two (2) low-voltage switchboards will be required.

2. Option #2: The central plant will be located remote from the building. A separate pad-mount transformer and low-voltage switchboard will be provided to serve the central plant. The building will have its own pad-mount transformer and low-voltage switchboard.

C. PRIMARY DISTRIBUTION SYSTEM:

1. The primary service will be provided by the local utility company (Memphis Light, Gas, & Water). The contractor will coordinate the service requirements with the utility company and will provide the transformer pad, secondary ductbank, and secondary feeders. The utility company will provide the primary service conductors and service transformers.

D. SECONDARY DISTRIBUTION SYSTEMS:

1. Normal power for the building will originate from two (2) pad-mount service transformers located outside the building. The local utility company will furnish and install the primary service conductors and service transformers. Service to the building will be 480/277 V, 3-phase, 4-wire, wye connected, grounded neutral.

2. In general, loads will be served as follows:

Load
- LED lighting
- Motors 0.5 hp and larger
- Receptacles and motors

Service
- 277 V
- 480 V, 3-phase.
- 120 V, single-phase 0.33 hp and smaller through the use ofstep-down transformers

3. Service equipment will consist of two (2) low-voltage switchboards. Service switchboards will be front accessible with individually mounted main and group mounted feeder devices. Switchboard bussing will be copper, and will be braced for the available fault current. The main circuit breaker will be insulated case, stationary type and the feeder circuit breakers will be molded case type with electronic trip units. Ground fault protection will be provided for 480 V services and feeders 1000 A and larger. The service switchboard will be provided with an electronic power monitor.

4.Underground concrete-encased ductbank will be used for secondary feeder installation.

5.Building lighting, receptacle, and mechanical equipment loads will be served by separate feeders. Feeder risers will be cable in conduit to supply power to distribution and branch circuit panelboards. Branch circuit panelboards will be provided on each floor to serve the lighting and receptacles on the same floor. Laboratory areas will be provided with dedicated panelboards. Protective devices in panelboards will be bolt-on type circuit breakers. Buswork will be copper. Lighting and receptacle panelboards will have a minimum 25% spare/space capacity. From each flush-mounted panelboard, a minimum of six spare empty conduits will be provided.

6. Wiring will be insulated conductors installed in raceways. Conductors will be copper with type THWN/THHN or XHHW insulation. Conductors for power wiring will be a minimum of #12 AWG and a maximum of 500 kcmil. Separate neutral conductors will be provided for each branch circuit. Conductors will be color-coded the entire length to identify phases, neutral, and ground.

7. Raceways will be minimum 0.75" for power and 1" for communications systems. In general, electrical metallic tubing will be provided for interior wiring installations. Rigid metal conduit will be provided for exposed raceways serving fire pumps and fire pump control equipment and other applications. Flexible metal conduits will be provided for connections to recessed luminaires, motors, dry-type transformers, and electrical equipment subject to movement or vibration. Liquidtight flexible metal conduits will be provided for connection to equipment exposed to rain or spray. Cable trays will be provided to form a system that interconnect all telecommunication rooms and extends throughout corridors and work areas. With the exception of raceways serving floor boxes, conduits shall not be installed in concrete floor slabs.

8. Electrical systems, circuit and equipment will be grounded and bonded. A green colored grounding conductor will be installed in raceways with the phase conductors. The maximum resistance of electrical systems to ground will be 3 ohms. A green colored grounding conductor will be installed in raceways with phase conductors.

9. A lightning protection system will be provided and will be the concealed type installed with UL lighting protection inspection certificates.

10. Provisions will be made to accommodate a campus master clock system. Power for equpment and empty raceways to future roof mounted antennae will be provided to serve campus Primex wireless clock system.

E. LIGHTING:

1. Generally, interior lighting will be LED type. Illumination levels for work surfaces will be provided in accordance with IESNA recommended illumination levels.

2. In general, the following luminaire types will be provided:

- Enclosed offices: recessed 2′ x 4′ direct/indirect LED systems.
- Open offices: recessed 2′ x 4′ direct/indirect LED systems.
- Lobbies and corridors: recessed LED downlights and recessed 2′ x 2′ direct/indirect LED systems.
- Restrooms: downlights and linear cove LED systems.
- Classrooms: recessed linear slot and recessed wallwasher LED systems.
- Laboratories: recessed linear slot LED systems.
- Laboratory support spaces: recessed, 1′ x 4′ direct/indirect LED systems.
- Mechanical and electrical rooms: industrial type LED luminaires.
- Means of egress: LED edge-lit exit signs.
- Exterior area lighting: UT campus standard luminaires.
- Exterior building lighting: wall-mounted luminaires at secondary exits and architectural luminaires at main entries.

3. Interior spaces will be provided controls for automatic lighting shut-off in accordance with International Energy Conservation Code-2021. Automatic lighting shut-off controls will consist primarily of ceiling-mounted occupancy and vacancy sensors with local dimmer switch. Mechanical and electrical rooms will be provided with toggle switches. Lighting near glazed exterior walls will be provided with daylight responsive dimming controls. Interior office spaces and laboratory spaces will be provided with dimming controls.

F. EMERGENCY POWER SYSTEM:

1. Assuming the building will be a high-rise, the emergency power supply system will include an engine-generator set, automatic transfer switches, remote annunciator, and accessories to automatically supply power during a utility power failure. Engine-generator set will be provided with a diesel-fueled engine. Generator will be 480Y/277 V, 3-phase, 4-wire synchronous type with permanent magnet pilot exciter. The engine-generator set will be located at the building exterior in a weatherproof, acoustically-treated enclosure with a sub-base fuel tank sized to provide 48 hours of runtime at full rated load. Acceptable engine-generator manufacturers will be Caterpillar and Kohler. Automatic transfer switches will be open transition type, 4-pole switched neutral. A temporary generator connection cabinet will be provided near the loading dock as required per NFPA 70, Article 700.

- Egress lighting and exit lights
- Fire detection and alarm systems
- Fire protection systems
- Lighting and receptacles in the fire command center
- Elevators as required per the IBC
- Lighting, receptacles, and HVAC systems for elevator machine rooms
- Smoke control systems
- BCS system
- Lighting and receptacles in electrical rooms
- Lighting and receptacles in communication equipment rooms
- Cooling systems for communication equipment rooms
- Select receptacles in the laboratory areas
- Miscellaneous building loads as required by UTHSC

G. FIRE PUMP

1. The fire pump will be served from two sources, a dedicated service connection from the new pad-mount service transformer and from the emergency power system. Supply conductors will be kept independent of all other wiring and will be routed outside the building. Supply conductors will connect to a listed fire pump combination controller and transfer switch.

H. COMMUNICATIONS SYSTEMS

1. A complete communications system (equipment, equipment racks, cabling, conduits, pathways, equipment rooms, work area outlets, etc.) will be furnished and installed per UT Telecommunications Design and Installation Standards.

G. SECURITY SYSTEMS:

1. Electronic security systems will include an integrated system of intrusion detection, access control and alarm monitoring, and video surveillance. Classrooms will be provided with UTK locking requirements. Video surveillance will be provided at building main entrances and exits. Final connectivity and programming will be by UT Facility Services.

H. ELECTRICAL SYSTEMS COMMISSIONING

1. The project will require commissioning of lighting control systems as required by the State of Tennessee High Performance Building Requirements.

7.6

FIRE ALARM

FIRE ALARM SYSTEM

A. GENERAL:

1. Fire alarm system will comply with the following minimum requirements:

- International Building Code-2012
- NFPA 70-2017, National Electrical Code
- NFPA 72-2016, National Fire Alarm Code
- NFPA 101-2012, Life Safety Code
- University of Tennessee – Division of Facilities Planning – Designer's Manual

B. DESIGN CRITERIA:

1. A new fire alarm system will be installed to serve the new building. The system will be a supervised, local protective signaling system employing multiplex communication and individually addressable initiating devices. Acceptable manufacturers will be EST or Simplex.

2. Cardax interface equipment will collect data from the fire alarm system and connect to the central alarm reporting station at the University of Tennessee Health Science Center Police Department. In lieu of a fireman's telephone system, a distributed antenna system will be provided to ensure signal strength for public safety portable radios.

C. CONTROL EQUIPMENT:

1. Assuming the building will be a high-rise, fire alarm equipment requiring user interface will be located in a ground floor Fire Command Center. The fire Command Center will contain equipment and features as required by Section 403 of the International Building Code – 2012.

2. Control equipment will be modular in construction, UL listed, and housed in a surface-mounted steel cabinet. Operating voltage will be 24 V DC. Standby power will be furnished by a 4-hour self-contained emergency battery power supply.

3. The main fire alarm control panel will include solid state construction, plug-in modules and dead front construction. Signaling line circuits and initiating device circuits will be arranged so that the number of connected devices does not exceed 80% of circuit capacity. The fire alarm annunciator will be an LCD display with minimum 80 character capacity.

4. Speaker circuits will be selectable for 1-way transmission of voice instructions. The circuit selector panel will be mounted adjacent to or integral with the CPU and will include individual zone selector switches, an all-call switch, and a microphone with press-to-call button and coil cord.

D. ALARM INITIATING DEVICES:

1. Alarm initiating devices will include addressable manual pull stations, monitor modules, duct detectors, heat detectors, and smoke detectors. Auxiliary functions will be performed by control modules located within 36" of the controls for the equipment to be operated.

E. NOTIFICATION DEVICES:

1. Alarm signaling devices will consist of alarm speakers and strobe lights.

7.7

FIRE SUPPRESSION

FIRE SUPPRESSION

A. GENERAL:

1. Fire suppression systems will comply with the following minimum requirements:

- International Building Code-2012
- International Fire Prevention Code-2012
- NFPA 13-2010, Installation of Sprinkler Systems
- NFPA 20-2012, Installation of Centrifugal Fire Pumps
- University of Tennessee – Division of Facilities Planning – Designer's Manual

B. DESIGN CRITERIA:

1. The building will be protected throughout by a combined system of Class I wet standpipes and automatic sprinklers.

2. Sprinkler piping will be sized by hydraulic calculations. Mechanical rooms and storage areas will be classified Ordinary Hazard, Group 1. Other areas will be classified Light Hazard. Hydraulic design criteria will be in accordance with NFPA 13-2010.

a) Light Hazard areas will be designed to provide a minimum density of 0.10 gpm/ft^2.

b) Ordinary Hazard, Group 1 areas will be designed to provide a minimum density of 0.15 gpm/ft^2. Maximum area per sprinkler will be 130 ft^2.

c) Minimum design area will be the most hydraulically demanding 1500 ft^2 for wet systems.

d) A simultaneous inside hose demand of 100 gpm will be included for light hazard areas and 250 gpm will be included for ordinary hazard areas.

e) Sprinkler connections on each floor will include a monitored control valve, a flow switch, and a test/drain connection. A drain riser with discharge at the building exterior will also be provided to serve each sprinkler system.

C. SYSTEMS:

1. Assuming the building will be a high-rise, water supply will be fed from two separate connsuections to the city mains. The fire water services will be located in a dedicated Fire Pump Room on the ground floor of the building. The fire water services will be provided with indoor, UL-listed, ASSE-approved, reduced-pressure type backflow prevention devices. A fire pump will be provided in the same room to serve the building. Two fire department connections and a fire pump test header will also be provided at the building. Fire pump controllers will be UL listed for use with electric motor-driven fire pumps and will include the motor starter, power transfer switch, and wye-delta closed transition starting.

2. Assuming the building will be seismic design category C, an on-site secondary fire water supply tank will be provided as required by Section 903.3.5.2 of the International Building Code-2012.

3. Wet standpipes will be located within heated stairwells. Additional standpipes, if required, will be provided so that all portions of all floors are within reach of a 200' hose. Hose thread pattern will match the local fire department pattern.

4. Sprinklers heads will be commercial, quick response, UL listed type. Sprinklers in areas having ceilings will be semi-recessed pendent design with a white finish and white ceiling cup. Concealed type sprinklers with white cover plates will be used in areas with gypsum board ceilings.

5. Aboveground piping will be black steel with threaded, grooved, or welded fittings. Piping 2" and smaller will be schedule 40 and pipe 2.5" and larger will be schedule 10. No plain-end fittings, strap-on branch outlets, or couplings employing set screws will be used. Pump suction piping and piping subject to alternate wetting and drying will be galvanized. Underground piping will be cement-lined ductile iron with mechanical joints. Underground piping will be anchored with concrete thrust blocks and tie rods.

6. The fire suppression system will be monitored by the building fire alarm system. Monitor points will include trouble and alarm conditions for pump status, waterflow switches, valve monitor switches, and fire department access key (Knox) boxes.

7.8

AUDIOVISUAL, IT, AND SECURITY SYSTEMS

AUDIOVISUAL

PUBLIC & AMENITY SPACES

BUILDING LOBBY

Various video displays are planned within the lobby space to help to communicate several informational aspects such as college branding, scheduled events, facility wayfinding, program history, donor recognition, energy dashboard, overflow simulcast from other spaces within the building, UTHSC research and academic programs, and more. This is presently envisioned as a single large-scale, interactive video display supported by other smaller display elements and form factors that begin to form a story-telling feature for the new facility.

PRE-FUNCTION

Positioned outside the multi-purpose meeting rooms, this space will be a gathering and networking area before and after events. The space could also be used to host less formal events, ceremonies, or expos.

The space is envisioned to include a presentation system with video projector and motorized projection screen coupled with an audio system for program audio and speech reinforcement.

The space will also include flat panel displays for digital signage content, including welcome messaging, schedule of events, and university branding.

HEALTH COMMONS

The Commons will be a centralized open space with soft seating for students to meet, socialize and casually collaborate.

It may include a few open "booth" arrangements where students can sit and connect their mobile device to a shared flat panel display for content sharing or collaborative work.

MEDIA/ RECORDING STUDIO

This space will be a resource for faculty to create digital instructional content for curriculum. Instructors can use the space to self-record audio and/or video for in-clSass and/or online usage. A green screen is planned to support post-production of recorded content.

The space could also be used for self-recording/ producing podcast content or by students to practice or record formal presentations.

Users will be able to record audio and video synchronized with presentation/ media content.

Control of the system will be by the user(s); no separate control room is planned. A simplified control interface for recording functions is planned inside the studio space.

INTERVIEW ROOM

This will be a space to interview prospective students, either in-person or remotely. It will also support departmental or faculty meetings for up to 8-10 participants.

System Capabilities & Features:

- Flat panel display for presenting digital content and/or web conference sessions
- Loudspeaker elements for program and conferencing audio
- Video camera and microphone element for web conference sessions
- Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
- Touch panel control interface

INFORMAL STUDENT COLLABORATION

Planned as huddle and study spaces for groups of up to 6-8 students, these enclosed spaces will include a wall-mounted interactive flat panel display with integrated camera and microphone for collaboration, digital whiteboarding, and web conferencing.

Multiple students can share content wirelessly from their mobile device to the display simultaneously for active collaboration sessions with both in-room and remote participants.

STUDENT STUDY BOOTHS

Intended for 2-4 person study, these rooms will have a flat panel display for viewing content from a mobile device (laptop, tablet, smartphone, etc.).

ACADEMIC SPACES

MULTI-PURPOSE MEETING SPACE

Two 225-seat flat floor rooms with flexible furniture will be situated adjacent to each other and separated by an operable partition so they can combine into a single large event space with a capacity of up to 450 seats when desired. These rooms are planned to be used for a variety of use cases including large class sections, special events, receptions, etc.

System Capabilities & Features:

- Presentation:
  - Dual video displays at the front of each 225-seat room.
  - Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
  - Confidence monitors for presenter reference
  - Wireless microphone system for speech reinforcement
  - Overhead sound system for program audio and speech reinforcement
- Web Conferencing/ Event Capture
  - PTZ video cameras for web conferencing or event capture/ streaming
  - Wireless microphone system for presenter and audience speech capture
- Assistive Listening System
- System Control:
  - Touch panel control interface
  - When the rooms are combined, the AV system also combines and functions as a single, unified system.

LARGE (60/120) CLASSROOMS

Eight 60-seat, flat floor classroom spaces with flexible furniture are planned to support traditional instruction and active learning modalities. At least some rooms will combine to adjacent classrooms to form a 120-seat space.

Movable furniture is planned to accommodate multiple room arrangements. A front-of-room video display is planned for instructor content. Smaller displays are planned at the room's perimeter to support 8-person student teams working in active learning or team collaboration mode.

System Capabilities & Features:

- Presentation:
  - Large-format video display for instructor content. Fixed, direct-view LED display positioned above the writing surface is preferred over video projection.
  - When rooms are combined, displays are planned to show the same image but will be capable of showing independent images. Sightlines will need to be evaluated for the latter scenario.
  - Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
  - Annotation tablet at instructor lectern for digital content mark-up
  - Confidence monitor for presenter reference
  - Wireless microphone system for speech reinforcement
  - Overhead sound system for program audio and speech reinforcement
- Team-based Active Learning
  - Flat panel displays (wall-mounted or mobile cart-based) provided for each 7 or 8-person group
  - Students share content from their mobile device to their team display wirelessly
  - Up to four student content windows can be viewed on each display
  - Group display content can be pushed to the instructor display or other team displays via the control system.
  - Microphone at each team table for in-room voice amplification during full-class discussions or interactions.
- Web Conferencing/ Lecture Capture
  - PTZ video cameras for whole-room web conferencing and lecture capture
  - Dedicated in-room displays for viewing remote participants during web conference sessions
  - Wireless microphone system for presenter speech capture
  - Local microphones for team audio capture
  - Lecture capture system that synchronizes instructor audio, video, and content (with annotation)
- Assistive Listening System
- System Control:
  - Touch panel control interface
  - When the rooms are combined, the AV system also combines and functions as a single, unified system.

MEDIUM (30/60) CLASSROOMS

Eight 30-seat, flat floor classroom spaces with flexible furniture are planned to support traditional instruction and active learning modalities. At least some rooms will combine to adjacent classrooms to form a 60-seat space.

Movable furniture is planned to accommodate multiple room arrangements. A front-of-room video display is planned for instructor content. Smaller displays are planned at the room's perimeter to support 8-person student teams working in active learning or team collaboration mode.

System Capabilities & Features:

- Presentation:
  - Large-format video display for instructor content. Fixed, direct-view LED display positioned above the writing surface is preferred over video projection.
  - When rooms are combined, displays are planned to show the same image but will be capable of showing independent images. Sightlines will need to be evaluated for the latter scenario.
  - Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
  - Annotation tablet at instructor lectern for digital content mark-up
  - Confidence monitor for presenter reference
  - Wireless microphone system for speech reinforcement
  - Overhead sound system for program audio and speech reinforcement

- Team-based Active Learning
  - Flat panel displays (wall-mounted or mobile cart-based) provided for each 7 or 8-person group
  - Students share content from their mobile device to their team display wirelessly
  - Up to four student content windows can be viewed on each display
  - Group display content can be pushed to the instructor display or other team displays via the control system.
  - Microphone at each team table for in-room voice amplification during full-class discussions or interactions.

- Web Conferencing/ Lecture Capture
  - PTZ video cameras for whole-room web conferencing and lecture capture
  - Dedicated in-room displays for viewing remote participants during web conference sessions
  - Wireless microphone system for presenter speech capture
  - Local microphones for team audio capture
  - Lecture capture system that synchronizes instructor audio, video, and content (with annotation)
- Assistive Listening System
- System Control:
  - Touch panel control interface
  - When the rooms are combined, the AV system also combines and functions as a single, unified system.

SEMINAR/ SMALL (15/30) CLASSROOMS

Several 15-seat, flat floor spaces with flexible furniture are planned to support traditional instruction and active learning modalities. At least some rooms will combine to adjacent classrooms to form a 30-seat space.

Movable furniture is planned to accommodate multiple room arrangements. A front-of-room video display is planned for instructor content. Smaller displays are planned at the room's perimeter to support 8-person student teams working in active learning or team collaboration mode.

System Capabilities & Features:

- Presentation:
  - Large-format video display for instructor content. Direct-view LED or ultra-large format flat panel display is preferred over video projection.
  - Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
  - Annotation tablet at instructor lectern for digital content mark-up
  - Wireless microphone system for speech reinforcement
  - Overhead sound system for program audio and speech reinforcement
- Team-based Active Learning
  - Flat panel displays (wall-mounted or mobile cart-based) provided for each 7 or 8-person group
  - Students share content from their mobile device to their team display wirelessly
  - Up to four student content windows can be viewed on each team display
  - Group display content can be pushed to the instructor display or other team displays via the control system.
- Web Conferencing/ Lecture Capture
  - PTZ video cameras for whole-room web conferencing and lecture capture
  - Dedicated in-room displays for viewing remote participants during web conference sessions
  - Wireless microphone system for presenter speech capture
  - Local microphones for team audio capture
  - Lecture capture system that synchronizes instructor audio, video, and content (with annotation)
  - • Assistive Listening System
- System Control:
  - Touch panel control interface
  - When the rooms are combined, the AV system also combines and functions as a single, unified system.

HOUSES

The Houses are planned as informal lounge and study spaces for medical student cohorts.

System Capabilities & Features:

- Share Content/ Collaborate:
  - Wall-mounted flat panel display to share digital content from mobile device via wired or wireless connection. Consider all-in-one interactive display unit with on-board PC and integrated camera and microphone.
  - Multiple students (in-room or remote) can connect to the display simultaneously during a collaboration session. Up to four content windows can be viewed at once.
- Web Conferencing
  - Integrated camera and microphone at the flat panel display for web conference session.

INTERDISCIPLINARY SPACES

COMPUTATIONAL/ VISUALIZATION SUITE

The Visualization suite is planned to include a large, high-resolution, wide aspect ratio, immersive video wall that will support varying usage scenarios including detailed exploration of large data sets, group instruction/ presentation, donor or partner demonstrations, interactive experimentations, and AR/VR applications.

Video cameras and microphone array elements are planned to support video conference applications.

A multi-channel surround sound system is planned to deliver program audio for immersive video wall content. The sound systems could also be used when needed for speech reinforcement for presentations or seminars.

HEALTH MAKERSPACE

The maker space will house a mix of fabrication equipment and tools in support of 3D bioprinting and other modeling/ prototyping activities.

A flat panel video display is planned within the space to view related media such as 3D computer modeling software or instructional video.

HEALTH INCUBATOR

The Incubator will be an open space with flexible seating and workstations for interdisciplinary meetings and collaboration. It will include a "Pitch" space where users can present ideas to colleagues or potential partners.

System Capabilities & Features:

- Large-format flat-panel display for presenting digital content
- A separate flat panel video display with camera and microphone (potentially on mobile cart) may be provided for smaller group meetings, web conference, or collaboration
- Loudspeaker elements for program audio
- Video camera and microphone elements for session capture/ streaming
- Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
- Touch panel control interface

TECHNOLOGY INNOVATION LAB

The Innovation Lab will comprise of a dry lab environment for research and development engagements plus an adjoining conference space for meetings and remote conferencing.

System Capabilities & Features:

- Large format flat panel display in the meeting space for presenting digital content and/or video conference sessions
- Distributed flat panel displays in the lab space for viewing reference or instructional content
- Distributed loudspeakers in the conference space for program and conferencing audio
- Video camera and microphone(s) in the conference space for web conference sessions
- Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to conference room display and sound system.
- Touch panel control interface at conference table

HYPER-FLEXIBLE SANDBOX/ IMMERSIVE STUDIO

This open "sandbox" space will include an open grid ceiling and movable partition systems to create a highly reconfigurable space that can simulate various disaster and response situations.

Infrastructure will be planned at floor, wall, and ceiling locations to accommodate audio and video capture of simulated events.

Multiple video displays on mobile carts are planned for instructional purposes, reference

content, or debrief activities. Some or all will have integrated video camera and microphone elements for web conferencing or collaboration with remote participants.

MOBILE HEALTH LAB

This lab space will comprise of multiple rooms including a large high-bay "garage" area equipped with various emergency vehicles for simulating medical emergency situations, a dedicated simulation control and observation space, and a separate classroom environment for instruction and debrief.

System Capabilities & Features:

• Large-format video display and presentation system in classroom space for instruction and debrief
• Video cameras and microphone elements throughout simulation space for video and audio capture of simulation activities.
Control room with multiple operator stations, PCs with simulation capture software, audio communication to the simulation room, video monitors to view sim capture channels, and control of all audiovisual and simulation systems.
• Distributed loudspeakers in classroom, simulation room, and control room.

WORKPLACE

BOARD ROOMS

The Boardrooms will be a meeting space for administration and important department sessions. It will accommodate presentations and video conference sessions.

System Capabilities & Features:

• Dual ultra-large format flat panel display for presenting digital content and/or video conference sessions
• Distributed loudspeakers for program and conferencing audio
• Video camera and microphone element(s) for full-room video conference sessions
• Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
• Touch panel control interface

MEETING CONFERENCE ROOMS

These spaces will accommodate meetings and conference sessions for up to 15 attendees, with multimedia presentations and web conference capabilities.

System Capabilities & Features:

• Large format flat panel display for presenting digital content and/or video conference sessions
• Distributed loudspeakers for program and conferencing audio
• Video camera and microphone for full-room video conference sessions
• Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
• Touch panel control interface

SMALL CONFERENCE ROOMS

These spaces will accommodate meetings and conference sessions for up to 8 attendees, with multimedia presentations and web conference capabilities.

System Capabilities & Features:

- Flat panel display for presenting digital content and/or video conference sessions
- Distributed loudspeakers for program and conferencing audio
- Video camera and microphone for full-room video conference sessions
- Wired and wireless connection of mobile device (laptop, tablet, smartphone, etc.) to room display(s) and sound system.
- Touch panel control interface

INFORMATION TECHNOLOGY SYSTEMS

A complete Information Technology system and infrastructure will be furnished as the backbone for all digital communication in the building, compliant with UTHSC Cable Infrastructure Standards dated August 1, 2024, and consisting of the following elements:

OUTSIDE PLANT (OSP)

The IT/ Telecommunication technologies in the building will connect to outside services (such as the campus network, internet service providers, etc.) via the OSP. The OSP consists of an existing network of duct banks, pathways, and cables and shall connect external services at dual service entry points within the lower level of the facility with the following provisions:

- Dual 96-strand Single mode fiber connectivity from opposite sides of the building.
- Minimum of four 4" conduits at each entry

TELECOMMUNICATION ROOMS

Dedicated Equipment Rooms (ER) and Telecommunication Rooms (TR) shall be provided to house equipment racks, network switches, optical fiber terminations, copper cabling patch panels, and other related equipment. TRs will provide for manageable and sustainable distribution of low voltage communications signals within the building and will be designed to be flexible and scalable.

CONSISTENT WITH UTHSC STANDARDS:

- At least one ER/TR shall be provided on each floor. More than one may be necessary depending on floorplate size.
- Locate ER/TRs so that the total length of the horizontal cabling does not exceed 250 feet.
- All ER/ TRs shall be stacked vertically throughout the entirety of the building.
- Locate the ER/TRs so that access is directly from an open, unassignable space, such as a corridor.
- Each main Equipment Room (ER/ MDF) shall be minimum 16'x20' with no dropped ceiling and space for at least four two-post racks and two ladder racks.
- Each Telecommunications Room (TR/ IDF) shall be minimum 12'x16' with no dropped ceiling and space for at least three two-post racks and two ladder racks.
- The ER/TR shall not be shared for other purposes including, but not limited to, custodial, access pathways, electrical, mechanical, storage, etc.

STRUCTURED CABLING

A structured cabling system will be furnished to connect all network-enabled devices to the building's networking infrastructure.

VERTICAL CABLE/PATHWAYS

The multiple TRs in the building shall connect back to a main telecommunication room (MDF) via fiber and copper cabling. Fiber strand counts, copper pairs and terminations shall comply with current UTHSC Cable Infrastructure standards.

HORIZONTAL CABLE/PATHWAYS

Per UTSCH IT Cable Infrastructure standards, Commscope Systimax Category 6a cable will be utilized for all horizontal cabling.
Outlet configuration shall be furnished per UTSCH IT Cable Infrastructure standards, with no less than two data drops at each outlet.

WIRELESS NETWORK

A building-wide wireless network will be furnished to augment and supplant the traditional wired network. Access points will be located to provide building-wide wireless coverage. The wireless infrastructure design will be based on the latest IEEE-802.11 standard (802.11ac Wave-2) and can adapt to and support recent standards such as 802.11ax Wi-Fi 6 and future standards such as 802.11be Extremely High Throughput (EHT).

Power over Ethernet (PoE) technology will be used to simplify installation and increase system flexibility by centrally locating all power requirements for wireless access points. This methodology greatly increases the availability of network bandwidth by adding the capability of connecting to the network via multiple frequencies and channels. The goal of the wireless system design is to allow for wireless coverage for the entire facility, including adjacent exterior areas, utilizing high density and dynamic load balancing wireless network standards.

DISTRIBUTED ANTENNA SYSTEM (DAS)

Publix Safety DAS

NFPA 72: National Fire Alarm and Signaling Code requires first responder radio coverage within the building. Critical areas, as defined by the NFPA and the authority having jurisdiction (AHJ) require coverage of 99% of the floor area. General areas of the building must have coverage over 90% of the floor area. Where radio coverage is insufficient to meet these criteria, a Public Safety DAS is required. Depending on building construction and final site conditions, the installation of a Public Safety DAS may be mandated.

CELLULAR DAS

DAS systems are commonly deployed to support cellular services within a building that may otherwise not have sufficient coverage. These Cellular DAS systems operate as a seamless part of a cellular network. Though not mandated by code, a Cellular DAS may be desired based on program requirements. Its inclusion is TBD.

ELECTRONIC SECURITY SYSTEMS

A complete Electronic Security System and infrastructure will be furnished in coordination with UTHSC campus Police Department and consisting minimally of the following elements:

ACCESS CONTROL SYSTEMS

An Access Control system will provide card access at the following locations:

- Certain entry and exit points of the building
- Classrooms/Lecture Halls
- Electrical/Mechanical Rooms
- Any other area or space deemed a priority by the UTHSC campus police or users.

The system will be configured so that that time-of-day features may be utilized. Some doors may be unlocked by the system during regular business hours or for special events while others will always require a card for access. Doors may go into an alarm state when opened immediately, such as in an emergency exit, or when a perimeter door is held open for an extended period.

VIDEO SURVEILLANCE SYSTEM

A system of fully integrated security cameras will monitor the public-use areas of the building. The camera type is standardized on IP-based units. Cameras will be used to monitor the following areas:

- Public spaces
- Hallways
- Corridors
- Stairwells
- Elevator entrances/exteriors.

No cameras are planned in classrooms or personal office space.

These cameras will use motion sensing software to activate recording only when certain conditions are met such as human movement. Coordination of final recording equipment requirements such as servers, associated software, camera licenses, etc shall be coordinated with UTHSC campus Police Department.

EMERGENCY PHONES

The use of “Blue Light” emergency telephones is planned inside and outside the facility. The configuration is such that the instrument is wall mounted at indoor locations and pedestal mounted at select outdoor locations, with pedestal units possibly containing an integrated camera. The units typically have one red button which automatically calls the campus or local security services.

Elevator telephones can be programmed to automatically call these same locations for help

INTRUSION DETECTION

Devices such as glass break detectors, duress alarms (a.k.a.,panic buttons), tamper switches, and motion sensors may be employed in certain situations. These devices notify the security of an intrusion into a space, based on criteria established by the overall system logic. This system may be stand alone or integrated into the Access Control System.

7.9

ACOUSTICS

ACOUSTICS

ACOUSTICAL STANDARDS

The recommendations presented in this report are consistent with the criteria and design standards listed below.

- 2023 ASHRAE Applications Handbook: Chapter 49 “Noise and Vibration Control”
- ANSI-ASA S12.60-2010 Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools

SOUND ISOLATION

A primary goal is to provide appropriate separation between noise-generating and noise-sensitive spaces. Careful layout of the building can create necessary distance between loud and quiet areas. Buffer spaces like storage rooms and vestibules can also be effective at reducing sound transmission.

Noise Sensitive	Noise Generating	Buffer/Neutral
Classrooms	Lounge	Corridors
Media / Recording	Mechanical Rooms	Commons
Wellness/Quiet	Elec Rooms	Vestibules
Digital Health	IDF/MDF	Storage

DOORS

High quality adjustable perimeter gasketing and drop seals should be anticipated for all doors into noise-sensitive or noise-generating spaces. Example products include Zero International Models 770, 870, and 369.

INTERIOR GLAZING

Storefront style glazing and side-lites typically exhibits poor sound isolation. It is recommended that these systems are avoided altogether where speech privacy or sound isolation are required. That being said, these systems can be acoustically enhanced to maximize their sound isolation capabilities.

INTERIOR PARTITIONS

Various interior partitions will be needed to generate an appropriate level of sound isolation throughout the building. All partitions should run full-height to the deck, with their perimeters sealed airtight with a non-hardening sound caulk.

The assemblies described below will achieve the STC values noted in the room data sheets. These construction types assume a 20-gauge stud, 16” on center. If 25-gauge studs or 20-gauge EQ (19 mil) are used, a layer of drywall can be removed from the noted constructions.

- STC 45: Three layers (2+1) of 5/8” drywall, 3 5/8” stud, full height with batt insulation
- STC 50: Two layers (1+1) of 5/8” drywall, resilient clip (Kinetics Noise ‘Isomax’ or similar), 3 5/8” stud, full height with batt insulation
- STC 55: Four layers (2+2) of 5/8” drywall, two 3 5/8” studs, staggered, full height with batt insulation
- STC 60: Four layers (2+2) of 5/8” drywall, two 3 5/8” studs with an independent airspace in between, full height with batt insulation

FLOOR/CEILING CONSTRUCTION

Typical commercial floor / ceiling constructions, consisting of an acoustical tile ceiling suspended below a concrete slab, should be sufficient for the majority of the building. Carpet should be used wherever practical to prevent transmission of footfall noise through the concrete slab. Hard surface floors should not be used above occupied spaces with exposed ceilings. If this condition cannot be avoided, the hard surface flooring will require a resilient backing or a resilient underlayment.

ACOUSTIC FINISHES

CEILING FINISHES

Sound-absorptive ceiling treatment is recommended for all occupied spaces to control reverberant noise buildup and promote speech intelligibility. Standard acoustic ceiling tile with 0.70 NRC (Noise Reduction Coefficient) or greater is appropriate for most spaces. Higher NRC ratings of 0.90 or greater are recommended for specialty spaces such as classrooms, conference rooms, and the media/record.

Other ceiling options include suspended acoustical clouds or baffles. All ceilings should ideally have 70-100% coverage with appropriate products, such as Armstrong Soundscapes Shapes and Blades, Arktura SoftGrid.

WALL FINISHES

Absorptive wall finishes are recommended for noise-sensitive spaces such as conference rooms, classrooms, and the media/recording. A wide variety of absorptive wall products is available, including fabric-wrapped panels, stretch-fabric wall systems, thick felt panels, and absorptive curtains. These products will be coordinated with the design team to ensure they support the intended aesthetic of each space.

BUILDING SYSTEM NOISE CONTROL

Noise from building mechanical, electrical, and plumbing systems can be highly distracting and detrimental to educational and collaboration spaces. Design measures should be incorporated to provide appropriate noise levels in all occupied areas of the building.

Building system noise and vibration control treatments presented in this report are primarily based on Chapter 49 'Sound and Vibration Control' from the 2023 ASHRAE Applications Handbook. Wherever possible, the mechanical system design should comply with this standard.

BACKGROUND NOISE LEVELS

Background noise levels in each space should be optimized for their proposed use. Low background noise levels are desirable in spaces where speech intelligibility is critical (e.g. meeting rooms.) In open and shared areas where quiet concentration is desired, background noise levels should be loud enough to mask small noises from other users, without being so loud as to be distracting.

The following background noise targets are provided for each space. This table uses the NC (Noise Criteria) rating system, a single-number value representing the sound level in the room. We would typically recommend that the lower design targets listed below should be used when selecting terminal units, terminals, and other system components based on manufacturer catalog ratings. The higher values below specify the intended performance of the total system installed and operating under actual field conditions, which is typically much louder than the levels quoted by the equipment manufacturer.

Space Type	Equipment Selection NC Rating	Max Field NC Rating
Classrooms	25	30
Media / Recording	15	20
Wellness/Quiet	20	25
Digital Health	20	25
Private Office	25	30
Shared/Open Office	30	35
Lounge	35	40
Corridors	40	45

NOISE GENERATING EQUIPMENT

Providing appropriate internal noise levels requires careful attention to all mechanical systems. Equipment such as Air Handlers, Terminal Units, and Diffusers should be selected to achieve the lower NC ratings in the preceding table. These ratings are also presented in the room datasheets that follow.

DUCT LAYOUTS

The simplest and most cost-effective way to reduce background noise levels is to locate noisy equipment outside of noise-sensitive rooms. Terminal units and duct mains should not be located above any room noted as NC 30 or below. These items should be placed in adjacent corridors, with individual fit-out branches to serve each noise sensitive room.

Penetrations through acoustical walls can significantly reduce their performance. As such, layouts should be routed to minimize the number of penetrations through demising walls.

SOUND ATTENUATORS

We anticipate integral sound attenuators will be required for all air handler discharges and intakes.

Specialty duct sound attenuators will be required for all spaces listed as NC-30 or below, specifically the classrooms and Media/ Recording. Example manufacturers include Vibro-Acoustics, Kinetics, and Price.

VIBRATION CONTROL

Rotating equipment can generate problematic levels of vibration. All equipment should be mounted on vibration-isolating bases and hangers selected according to the ASHRAE Applications Handbook. This is expected to include spring isolators, inertia bases, and neoprene pads.

DESIGN COORDINATION

NV5 will work together with the project's mechanical engineer to analyze the system noise levels and provide recommendations for optimization. This will require a detailed set of HVAC drawings, as well as octave band sound power data for all noise-generating equipment. Ideally, the mechanical engineer should provide this info as soon as possible so that noise control measures can be incorporated from the beginning of the design process.

7.10

SMART BUILDING

SMART BUILDING

Smart building design leverages data from base building system integrations such as DDC controls, metering, access controls and video surveillance. The platform will also leverage data from new technologies such as IAQ and OU sensors. The Smart building platform utilizes the integrated data from these systems to optimize building operations, verify building performance metrics meet the energy model predictions, monitor building assets performance identifying potential failure points or deviations from anticipated operations. The platform also acts as the graphical user interface for monitoring all connected building systems while providing a centralized building performance dashboard visualizing building performance in real time.

SMART BUILDING OPTIONS

A.) SMART BUILDING SOFTWARE PLATFORM - ROM BUDGET - $1.25/SQ. FT.

- Benefit to owner - Software that will enable the owner to connect all building systems like BAS, energy reporting, lighting control, work order management.
- Technology provides – Fault detection and diagnostics.
- Predictive analytics
- Centralized alarm monitoring and routing.
- Provide continuous commissioning data to the facility operations team.
- Energy and building performance KPI's and analytics.
- Sustainability compliance KPIs for scope 1 and 2 GHG emissions and carbon reporting.

B.) OCCUPANCY UTILIZATION SENSORS – ROM BUDGET - $2.50/SQ. FT. FOR THE WHOLE BUILDING, $1.25/SQ. FT. FOR PARTIAL BUILDING (60) %

- Provides actual people count in areas where sensors are deployed.
- Provides enriched analytics identifying how long people are in a space, what areas are not fully utilized and heat mapping of areas with more traffic
- Enables building optimization based on actual occupancy. The technology can be integrated into other building systems to optimize the occupants experience and optimize building systems operations.

C.) INDOOR AIR QUALITY (IAQ) – ROM BUDGET - $.85/SQ.FT. BASED ON A DEPLOYMENT OF GREATER THAN 50,000 SQ. FT. INTERIOR SPACE

- Sensors also measure temperature, humidity, VOCs, and particulate.
- Data can be used to report compliance with building certifications like LEED, Fitwell, Reset.
- Can be integrated to show building KPIs into the smart building platform.
-
- All the ROM budgets have incorporated day 1 installation costs for materials, labor, sensor, and software required to implement each specific technology. Day 2 ongoing costs typically run between 5-10 % of the initial deployment costs for ongoing support and licensing fees.

THE PAGE IS INTENTIONALLY LEFT BLANK.

SECTION 08

COST MODEL

8.0

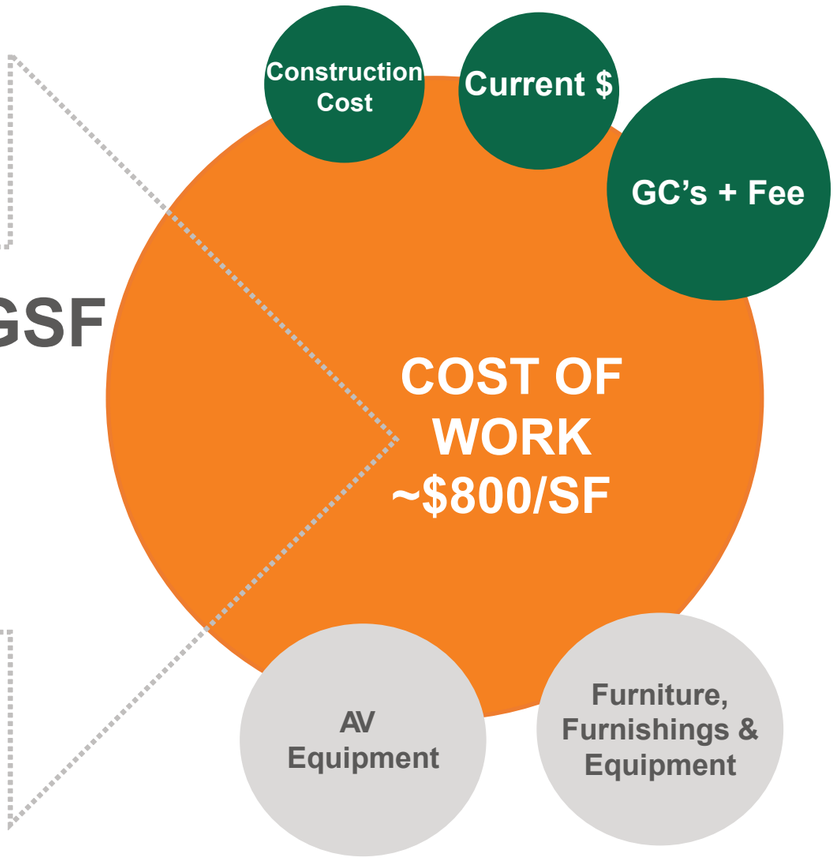
TOTAL PROJECT COST

The Total Project Cost that was used over the duration of the Programming phase was $350 million. The cost estimate includes both hard and soft costs. The budget, provided by the client, allowed us to reach a maximum building gross square footage of 275,000 to 300,000 square feet.

Building size ~275-300K GSF

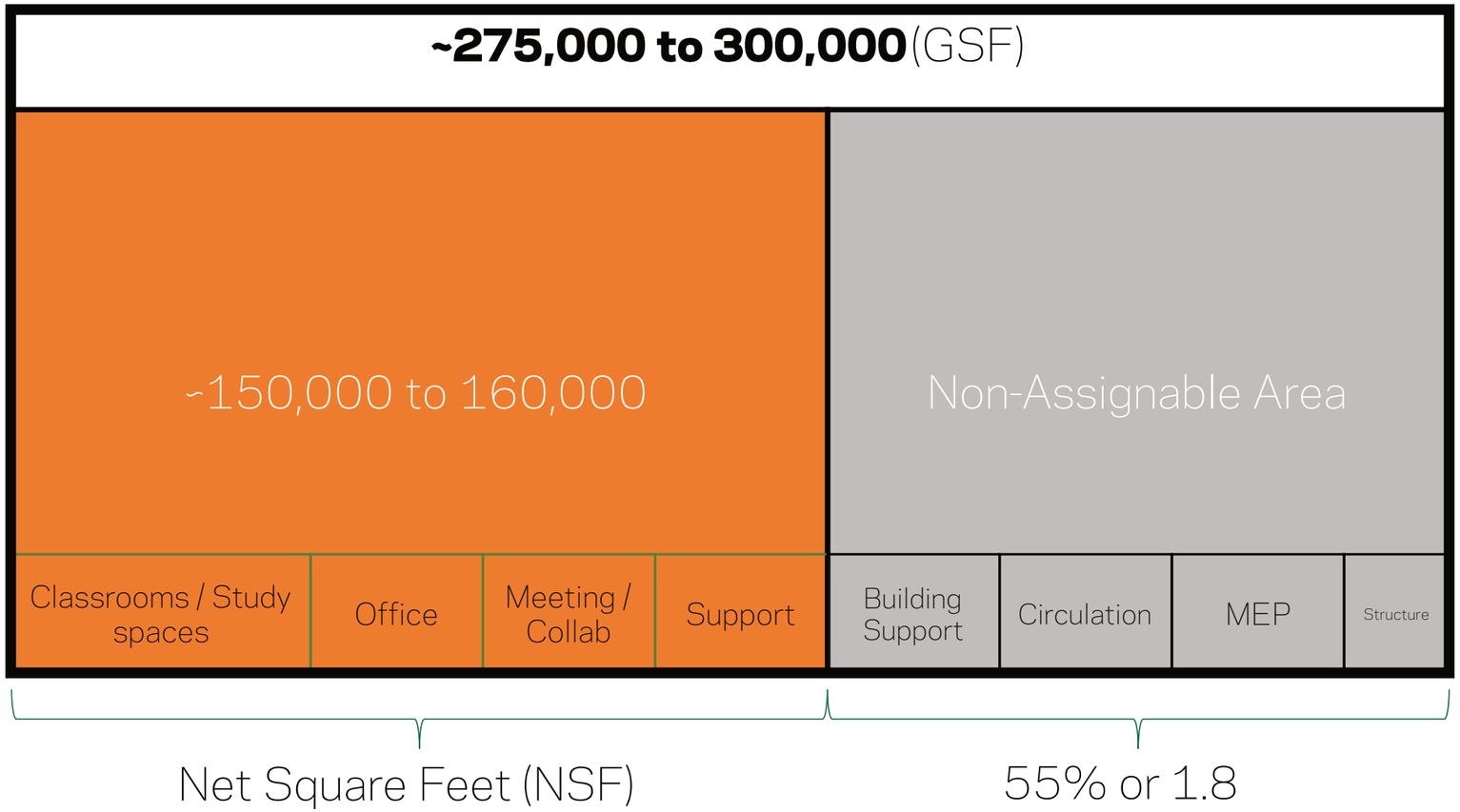
MACC ~$245

Total project cost $350M



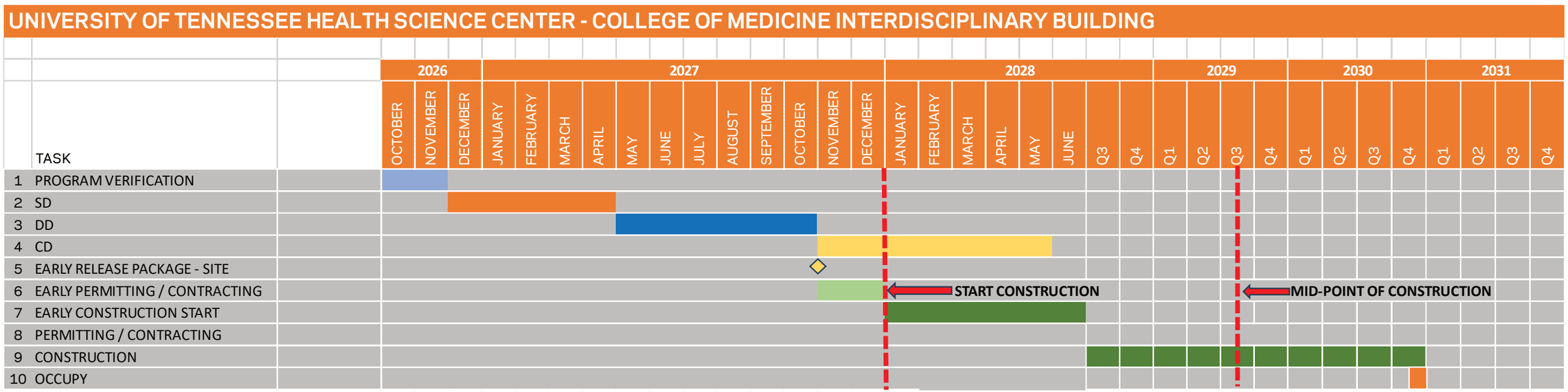
ASSIGNABLE AREA

Having the Total Project Cost allowed us to target the maximum gross and assignable square feet based on the estimated Cost of Construction. The budget allowed us to reach a maximum building gross square footage of 275,000 to 300,000 square feet.



DESIGN SCHEDULE

The below Design & Construction schedule details the time frame upon Programming Document approval to Substantial Completion. With the inclusion on early packages, the building is expected to be occupied by Q4 of year 2030.



ANNUAL ESCALATION

The table below shows an annual project escalation rate of 6% per year. The time duration is from present to the year 2034.

	Name:	UTHSC College of Medicine Interdisciplinary Building							
	Location:	Memphis, TN				Date:	2024-09-03		
	Area:	275,000	GSF		Midpoint of Construction:		2029-09-01		
UTHSC COMIB PROGRAM REFRESH									
ESCALATION IMPACT ON COST OF CONSTRUCTION									
ESCALATION IMPACT - COST ADD / YEAR	**YEAR**	**GSF**	**NSF**	**COST OF CONSTRUCTION**	**COST OF CONSTRUCTION ADD/YR**	**CURRENT $/SF**	**ESCALATION RATE**	**YEARS**	**$/SF**
TARGET START	**Q3 2024**	**275,000**	**159,431**	**$186,934,000**		$679.76	6%	-	$680
	Q3 2025	**275,000**	**159,431**	**$198,088,582**	**$11,154,582**	$679.76	6%	1	$720
	Q3 2026	**275,000**	**159,431**	**$209,304,622**	**$11,216,040**	$679.76	6%	2	$761
	Q3 2027	**275,000**	**159,431**	**$220,520,662**	**$11,216,040**	$679.76	6%	3	$802
	Q3 2028	**275,000**	**159,431**	**$231,767,431**	**$11,246,769**	$679.76	6%	4	$843
	Q3 2029	**275,000**	**159,431**	**$242,983,471**	**$11,216,040**	$679.76	6%	5	$884
	Q3 2030	**275,000**	**159,431**	**$254,199,511**	**$11,216,040**	$679.76	6%	6	$924
	Q3 2031	**275,000**	**159,431**	**$265,415,551**	**$11,216,040**	$679.76	6%	7	$965
	Q3 2032	**275,000**	**159,431**	**$276,662,320**	**$11,246,769**	$679.76	6%	8	$1,006
	Q3 2033	**275,000**	**159,431**	**$287,878,360**	**$11,216,040**	$679.76	6%	9	$1,047
	Q3 2034	**275,000**	**159,431**	**$299,094,400**	**$11,216,040**	$679.76	6%	10	$1,088

8.1

COST MODEL

The following cost model was provided by Palacio Collaborative. It is a preliminary pricing summary that encompasses project constraints and opportunities. The Cost Model accounts for the amount and type of space required including site related development to establish the Estimated Cost of Building and Site Construction.

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

EXECUTIVE SUMMARY

Prepared For: HOK

Project Name: UTHSC College of Medicine Interdisciplinary Building

Location: Memphis, TN

Estimate Date: 9/3/2024

Area: 275,000 GSF

Midpoint of Construction: 9/1/2029

Project # 24097

Palacio Lead Contact: Michael D. Palacio, CPE

Scope: New 7-story health education building to include variety sized classrooms, mobile health lab, disaster response space, computational lab, offices, etc. as well as associated sitework.

CONSTRUCTION COST SNAPSHOT				
PROJECT TYPE	AREA	UNIT	COST/SF	TOTAL
New Build	275,000	SF	844.68	$232,287,681
Sitework	275,000	SF	38.89	$10,695,780
TOTAL ESTIMATED CONSTRUCTION COST	**275,000**	**SF**	**$883.58**	**$242,983,461**

ESTIMATE ASSUMPTIONS
Anticipated Midpoint Construction: 3rd Quarter 2029 (Add 1.5% per quarter for escalation beyond this point)
CM-at-risk delivery method
CM to receive bids from at least three (3) qualified subcontractors per trade
Most of the bidders will be from the local market (within 1 hour driving distance)
Assumes normal working hours

ESTIMATE EXCLUSIONS
Furniture & loose equipment (fixed millwork: vanity tops, base/wall cabinets, etc are included in this estimate)
Audio/visual equipment & installation (rough-in infrastructure is included in this estimate)
Educational equipment (overhead grid and panel system at disaster response is included in this estimate)
Security cameras (complete card reader system is included in this estimate)
Rock or unsuitable soils excavation
Owner's contingency
Testing & impact fees

PALACIO GENESYS

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN Date: 9/3/2024
Area: 275,000 GSF Midpoint of Construction: 9/1/2029

ESTIMATE SUMMARY				60.0 MONTHS
COMPONENT	AREA	UNIT	COST	TOTAL
Building Cost (Shell)				
A. Substructure (Foundations)	275,000	SF	30.89	$8,493,704
B. Structural Systems	275,000	SF	52.20	$14,354,058
Exterior Wall	275,000	SF	32.13	$8,835,949
Exterior Doors & Windows	275,000	SF	39.44	$10,847,301
Roofing	275,000	SF	23.38	$6,430,617
C. Partitions	275,000	SF	31.09	$8,549,925
Interior Doors & Glazing	275,000	SF	26.84	$7,381,950
Millwork	275,000	SF	3.33	$915,240
Accessories	275,000	SF	7.79	$2,141,563
Stairs & Railings	275,000	SF	2.75	$757,300
Wall Finishes	275,000	SF	9.77	$2,687,176
Floor Finishes	275,000	SF	8.01	$2,202,770
Ceiling Finishes	275,000	SF	12.01	$3,303,628
D. Conveying Systems	275,000	SF	4.25	$1,170,000
Plumbing	275,000	SF	14.38	$3,953,830
HVAC	275,000	SF	88.55	$24,350,113
Fire Protection	275,000	SF	8.14	$2,237,500
Electrical Distribution	275,000	SF	30.89	$8,495,053
Lighting	275,000	SF	22.59	$6,213,100
Special Systems	275,000	SF	22.48	$6,181,712
E. Fixed Equipment	275,000	SF	10.40	$2,860,496
Total Building Cost	*275,000*	*SF*	*481.32*	*$132,362,984*
"Gut" Interior	*0*	*SF*	*0.00*	*$0*
Total Sitework	*275,000*	*SF*	*22.16*	*$6,094,707*
Total Hazardous Abatement Allowance	*0*	*SF*	*0.00*	*$0*
SUBTOTAL				**$138,457,691**
GC/CM General Conditions & Requirements			8.5%	$11,768,904
Non-Negotiated General Requirements & Preconstruction			1.5%	$2,253,399
GC/CM Fee			3.5%	$5,336,800
Design/Estimating Contingency			15%	$23,672,519
CM-at-risk Contingency			3%	$5,444,679
SUBTOTAL (CURRENT DOLLARS)				**$186,933,992**
				$679.76
Escalation to Midpoint of Construction - Add 1.5% per quarter beyond this point				
9/3/24 to 9/1/29 30.0%				$56,049,469
TOTAL ESTIMATED CONSTRUCTION COST				**$242,983,461**
Cost per SF				**$883.58**

PALACIO GENESYS

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN Date: 9/3/2024
Area: 275,000 GSF Midpoint of Construction: 9/1/2029

UTHSC COMIB PROGRAM REFRESH

ESCALATION IMPACT ON COST OF CONSTRUCTION

ESCALATION IMPACT - COST ADD / YEAR	YEAR	GSF	NSF	COST OF CONSTRUCTION	COST OF CONSTRUCTION ADD/YR	CURRENT $/SF	ESCALATION RATE	YEARS	$/SF
TARGET START	Q3 2024	275,000	159,431	$186,933,992		$679.76	6%	-	$680
	Q3 2025	275,000	159,431	$198,088,574	$11,154,582	$679.76	6%	1	$720
	Q3 2026	275,000	159,431	$209,304,613	$11,216,040	$679.76	6%	2	$761
	Q3 2027	275,000	159,431	$220,520,653	$11,216,040	$679.76	6%	3	$802
	Q3 2028	275,000	159,431	$231,767,421	$11,246,768	$679.76	6%	4	$843
	Q3 2029	275,000	159,431	$242,983,461	$11,216,040	$679.76	6%	5	$884
	Q3 2030	275,000	159,431	$254,199,500	$11,216,040	$679.76	6%	6	$924
	Q3 2031	275,000	159,431	$265,415,540	$11,216,040	$679.76	6%	7	$965
	Q3 2032	275,000	159,431	$276,662,308	$11,246,768	$679.76	6%	8	$1,006
	Q3 2033	275,000	159,431	$287,878,348	$11,216,040	$679.76	6%	9	$1,047
	Q3 2034	275,000	159,431	$299,094,387	$11,216,040	$679.76	6%	10	$1,088

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

PROGRAM/AREA CALCULATION				H=High Partition/Door Density, M=Medium, L=Low
Restroom/Janitor	H	6,720	NSF	
Conference/Meeting Room/Houses	H	9,650	NSF	
Board Room	H	900	NSF	
Storage/File Rooms	H	1,660	NSF	
Work/Copy/Mail Room	H	660	NSF	
Break Room/Kitchenettes/Grab-N-Go	H	2,900	NSF	
Media/Recording Studio	H	250	NSF	
Study Room/Facilities	H	3,460	NSF	
Office	H	61,479	NSF	
Dean & Associate Dean Offices	H	3,090	NSF	
Office, IT Suite & Helpdesk	H	800	NSF	
Open Office	M	4,256	NSF	Sec/Clerical, Medical Interns, Hoteling, Shared WS
Mobile Health Lab	M	3,000	NSF	
Lab, Chemistry	M	0	NSF	
Lab, Biology	M	0	NSF	
Lab, A&P	M	0	NSF	
Lab, Other	M	0	NSF	
Vivarium	M	0	NSF	
Lab Prep, Dry	M	0	NSF	
Lab Prep, Wet	M	0	NSF	
Classroom	M	23,400	NSF	
Health Incubator/Makespace	M	8,000	NSF	
Computational/Tech Innovation Lab	M	2,000	NSF	
Tiered Classroom/Educational Auditorium	L	0	NSF	
Auditorium (Performance)	L	0	NSF	
Multipurpose/Large Classrooms	L	13,500	NSF	
Training Room	L	0	NSF	
Student Lounge/Collaboration/Commons	L	2,500	NSF	
Lobby/Reception/Prefunction	L	2,250	NSF	
Secondary Lobby/Reception/Waiting	L	600	NSF	
Kitchen	L	0	NSF	
Servery Area	L	0	NSF	
Dining/Seating Area	L	0	NSF	
Retail Area (Book Store)	L	0	NSF	
Inventory/Receiving (Book Store)	L	0	NSF	
Library, Stacks/Reference	L	0	NSF	
Library, Circulation/Reading	L	0	NSF	
Gymnasium	L	0	NSF	
Locker Room	L	375	NSF	
Maintenance/Loading Dock/Handling	L	500	NSF	
Disaster Response/Hyperflexible Studio	L	4,000	NSF	
Other	L	0	NSF	
Total Building Net Area		155,950	NSF	
Circulation/Support Area				
Grossing Factor (by %):	76%	119,050	NSF	
Mechanical Penthouse		0	GSF	
Shell Space		0	GSF	
TOTAL BUILDING GROSS AREA		**275,000**	**GSF**	

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

BUILDING SPECIFICS								
Gross Building Area		**275,000**	**GSF**					
Project Type		**New-Build**						
Basement Area		0	SF	50%	Daylight	Basement Type		
Basement Perimeter		0	LF	% Ratio				
Penthouse Area		0	SF	Penthouse Ext Wall Ht:		20	FT	
Penthouse Perimeter		0	LF					
Roof Area		71,250	HSF	Average Roof Overhang		0	FT	
# of Floors (Attic/P'house/B'ment not included)		7	EACH					
Average Floor Level Perimeter		1,180	LF	3.0%	Perimeter to	2.0%	2.4%	2.7%
				% Ratio	Area Ratio	Square	Rectangle	Bar/L-Shape
						1:1	3:1	5:1
Average Floor to Floor Height		17.0	FT					
Sustainable Design Level		LEED Silver						
Delivery Method		CM-at-Risk						

DESCRIPTION		QTY	UNIT	PRICE	TOTAL		
A. SUBSTRUCTURE							
Slab on Grade		71,250	SF	10.00	712,497		
Elevator Pit		5	EACH	15,000.00	75,000		
Foundation System							
Spread Footings		71,250	SF	7.66	545,611		
Deep Foundations Premium	100%	71,250	SF	100.50	7,160,596	Pile & Cap	Deep Foundation Type
Basement Construction							
Foundation Wall w/Drain Mat & WP		0	SF	0.00	0		
Excavation (Dirt)		0	CY	0.00	0		
				TOTAL SUBSTRUCTURE	**$8,493,704**		

B. SHELL						
STRUCTURAL SYSTEM						
Podium Floor Structure	Steel	0	SF	54.63	0	
Floor Structure	Steel	203,750	SF	54.63	11,129,859	
Attic/Penthouse Floor Structure	Steel	0	SF	54.63	0	
Roof Structure	Stl/Joist	71,250	SF	41.84	2,981,355	
Fireproofing at Steel Stucture	Y					
Pre-Engineered Bldg (% of Total Roof Area)	0%	0	SF	0.00	0	
Sloped Interior Balcony Structure		0	SF	0.00	0	Assumes Cantilevered Structure
Exterior Balcony or Other Structure		0	SF	0.00	0	
Reinforce Existing Str (Repurpose)	No Work	0	SF	0.00	0	
Green Roof Structure Premium		19,000	SF	12.78	242,844	
				TOTAL STRUCTURAL SYSTEM	**$14,354,058**	

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

EXTERIOR WALL								
Wall Assembly, Metal Stud	100%	87,810	SF	32.50	2,853,815	**100%**	8" metal stud @ 50%	
Wall Assembly, CMU	0%	0	SF	33.25	0	Total		
Upgraded Brick Veneer, Patterned	80%	70,248	SF	45.00	3,161,149			
Precast Concrete Wall Panel	0%	0	SF	0.00	0			
Synthetic Stone Veneer	0%	0	SF	0.00	0			
Stone Veneer	0%	0	SF	0.00	0			
Stucco	0%	0	SF	0.00	0	**100%**		
Fiber Cement Panel (Equitone or Similar)	20%	17,562	SF	95.00	1,668,384	Total		
Cementitious Wall Panel (Nichiha)	0%	0	SF	0.00	0			
Cement Board Wall Siding (Hardie or Similar)	0%	0	SF	0.00	0			
Metal Panel, Utilitarian	0%	0	SF	0.00	0			
Metal Panel	0%	0	SF	0.00	0			
Composite Metal Panel	0%	0	SF	0.00	0			
Penthouse Wall Cladding	0%	0	SF	0.00	0			
Soffit & Fascia w/Framing		0	SF	0.00	0			
Demo Along Addition/Existing Bldg (Addition Bldg Type Only)				0.00	0	0	0	
Exist. Wall Cladding (Repurpose)	No Work	0	SF	0.00	0			
Ext Cladding Demo at Exist Bldg		0	SF	0.00	0			
Arch Detailing Allowance	15%	1	LS	1,152,600.00	1,152,600	Low: 5%	Med: 10%	High: 15%
				TOTAL EXTERIOR WALL	**$8,835,949**			

EXTERIOR DOORS & WINDOWS								
Curtainwall	45%	71,844	SF	135.00	9,698,981	Total Glazing by % of Exterior Wall		
Upgraded Curtainwall	0%	0	SF	0.00	0	Low	Medium	High
Storefront/Aluminum Windows	0%	0	SF	0.00	0	20% to 35%	35% to 45%	+45%
Upgraded/Historic Windows	0%	0	SF	0.00	0			
Remove Exterior Glazing and/or Wall		0	SF	0.00	0			
Sunscreens, Horizontal	40%	28,738	SF	35.00	1,005,820	% of Glazing Protected by Sunscreens		
Sunscreens, Vertical	0%	0	SF	0.00	0			
Exterior Doors		15	EACH	5,500.00	82,500			
Overhead Doors (10'x10')		3	EACH	20,000.00	60,000	Mobile health lab		
				TOTAL EXTERIOR DOORS & WINDOWS	**$10,847,301**			

ROOFING								
Flat Membrane Roof w/Tapered Insulation	100%	71,250	SF	27.50	1,959,367			
Metal Roof w/Rigid Laminated Insulation	0%	0	SF	24.75	0	Roof Pitch:	3	:12
Asphalt Shingles w/Rigid Laminated Insulation	0%	0	SF	13.25	0	Roof Pitch:	6	:12
Gutters (Prefin Metal)		0	LF	0.00	0			
Downspouts		0	LF	0.00	0			
Green Roof Premium (Shallow)		0	SF	0.00	0			
Green Roof/Roof Terrace Premium		19,000	SF	55.00	1,045,000			
Guard Railing at Green Roof/Roof Terrace		250	LF	350.00	87,500			
Skylights		1,250	SF	135.00	168,750			
Roof Monitors		0	SF	0	0	Monitor Ht:	5	FT
Mechanical Roof Screen Wall, 10' Tall		200	LF	850.00	170,000	Assumed at lower roofs		
Entry Canopy/Trellis		24,000	SF	125.00	3,000,000			
Roof Demolition (Repurpose Only)		0	SF	0.00	0			
				TOTAL ROOFING	**$6,430,617**			
				TOTAL SHELL	**$40,467,925**			

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

C. INTERIORS

INTERIOR PARTITIONS							
Partitions (6" to 8", typical)						SF of Partition to Room NSF Ratio	
Room Type (High Density)		269,082	SF			**2.94**	SF of Part'n per Plan SF
Room Type (Medium Density)		81,457	SF			**2.00**	
Room Type (Low Density)		31,690	SF			**1.34**	
Grossing Area		135,164	SF			**1.14**	
Drywall Partitions w/Sound Batts	55%	284,566	SF	15.00	4,268,495	**100%**	
Rated Drywall Partitions w/Sound Batts	35%	181,088	SF	16.50	2,987,947	Total	
CMU/Shaftwall Partitions	10%	51,739	SF	25.00	1,293,483		
				TOTAL INTERIOR PARTITIONS	**$8,549,925**		

INTERIOR DOORS & GLAZING								
INTERIOR DOORS						Door per Room NSF Ratio		
Room Type (High Density)	SC Wood	833	EACH	3,000.00	2,499,000	110	SF of Part'n per Plan SF	
Room Type (Medium Density)	Full Glass	102	EACH	4,750.00	484,500	400		
Room Type (Low Density)	SC Wood	32	EACH	3,000.00	96,000	750		
Grossing Area	SC Wood	120	EACH	3,100.00	372,000	1000		
Special Door Allowance		1	LS	50,000.00	50,000			
INTERIOR GLAZING (Butt-Joint, Typ)	10%	51,739	SF	75.00	3,880,450	Low: 2%	Med: 5%	High: +8%
				TOTAL INTERIOR DOORS & GLAZING	**$7,381,950**			

MILLWORK					
Breakrooms		1	LS	76,125.00	76,125
Work/Copy/Mail Rooms		1	LS	46,200.00	46,200
Restrooms		1	LS	67,200.00	67,200
Other Millwork		1	LS	606,314.58	606,315
Miscellaneous Millwork Allowance		1	LS	119,400.00	119,400
				TOTAL MILLWORK	**$915,240**

ACCESSORIES						
Visual Display Boards & Projection Screens		1	LS	297,458.33	297,458	
Lockers		1	LS	18,500.00	18,500	
Interior Signage (Door ID & Code Required)		1	LS	108,800.00	108,800	
Exterior Signage Allowance		1	LS	350,000.00	350,000	
Folding Partitions, Vertical (Skyfold)		1,275	SF	275.00	350,625	Multipurpose/Classroom (1 each)
Folding Partitions, Vertical (Skyfold)		1,440	SF	275.00	396,000	Classrooms 60/120 (4 each)
Folding Partitions, Horizontal		300	SF	100.00	30,000	Classrooms 30/60 (1 each)
Folding Partitions, Horizontal		1,440	SF	100.00	144,000	Classrooms 15/30 (8 each)
Raised Access Floor		3,000	SF	55.00	165,000	Mobile Health Lab
Toilet Compartment, Urinal Scrn & Accessories		1	LS	179,200.00	179,200	
Miscellaneous Accessories		1	LS	101,979.17	101,979	
				TOTAL ACCESSORIES	**$2,141,563**	

STAIRS & RAILINGS					
Exit Stairs (At Basement & Penthouse)		0	FLT	0.00	0
Upgraded Exit Stairs		16	FLT	26,300.00	420,800
Replace Exit Stairs (Repurpose)	Y	1	LS	0.00	0
Monumental Stairs (Interior/Exterior)		1	FLT	291,500.00	291,500
Upgraded Railing at Overlook		100	LF	450.00	45,000
				TOTAL STAIRS & RAILINGS	**$757,300**

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

WALL FINISHES					
Interior Paint		275,000	PSF	4.00	1,100,000
Epoxy Paint		0	SF	0.00	0
Wall Tile		1	LS	341,625.00	341,625
Acoustic Wall Panel		1	LS	767,550.00	767,550
Wood/Metal Wall Panel		1	LS	127,500.00	127,500
Special/Upgraded Wall Finish Allowance	15%	1	LS	350,501.25	350,501
				TOTAL WALL FINISHES	**$2,687,176**
FLOOR FINISHES					
Carpet Tile or VCT w/Rubber Base		197,555	SF	5.50	1,086,553
LVT or Stained Concrete w/Rubber Base		59,600	SF	7.50	447,000
Floor Tile w/Base		7,095	SF	20.00	141,900
Upgraded Floor Tile w/Base		3,100	SF	25.00	77,500
Wood/Athletic Floor w/Wood Base		900	SF	25.00	22,500
Terrazzo Floor w/Base		2,250	SF	35.00	78,750
Epoxy Floor w/Integral Base		4,000	SF	15.00	60,000
Sealed Concrete Floor w/Base		500	SF	2.50	1,250
Special/Upgraded Floor Finish Allowance	15%	1	LS	287,317.88	287,318
				TOTAL FLOOR FINISHES	**$2,202,770**
CEILING FINISHES					
ACT Ceiling, 2x2		228,540	SF	8.50	1,942,590
Upgraded ACT Ceiling		32,590	SF	20.00	651,800
Suspended Drywall Ceiling w/Finish		6,720	SF	14.00	94,080
Drywall Ceiling Attached to Structure w/Finish		0	SF	0.00	0
Suspended Drywall Ceiling w/Epoxy Paint		0	SF	0.00	0
Upgraded Metal/Wood Ceiling		3,150	SF	55.00	173,250
Paint Structure		4,000	SF	2.75	11,000
Special/Upgraded Ceiling Finish Allowance	15%	1	LS	430,908.00	430,908
				TOTAL CEILING FINISHES	**$3,303,628**
				TOTAL INTERIORS	**$27,939,552**

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

D. SERVICES								
CONVEYING SYSTEMS								
Passenger Elevator		26	STOP	45,000.00	1,170,000			
Freight Elevator	N	0	STOP	0.00	0			
Hospital/Oversized Elevator		0	STOP	0.00	0			
Wheelchair Lift		0	EACH	0.00	0			
				TOTAL CONVEYING SYSTEMS	**$1,170,000**			
PLUMBING								
Restroom/Convenience Fixts (Includes Booster Pump)		324	FIXT	9,000.00	2,916,000	850	GSF per Fixture	
Wet Lab/Lab Prep Plumbing		0	SF	0.00	0			
Lab Plumbing, Other		0	SF	0.00	0			
Vivarium Plumbing		0	SF	0.00	0			
Kitchen & Servery Plumbing		0	SF	0.00	0			
Roof Drain System		71,250	SF	10.22	728,083			
Sustainable Design Premium	LEED Silver	1	LS	309,747.06	309,747			
				TOTAL PLUMBING	**$3,953,830**			
HVAC								
General Area	VAV	272,000	SF	70.00	19,040,000	DX	VRF/RTU	VAV
Lab, Chemistry		0	SF	0.00	0	DX Split or	Variable	Variable Air
Lab, Biology		0	SF	0.00	0	WSHP	Refrigerant	Vol. (Chiller,
Lab Prep, Wet		0	SF	0.00	0		Flow or RTU	Boiler, VAV)
Lab, Other		0	SF	0.00	0	**$36**	**$48**	**$70**
Mobile Health Lab		3,000	SF	75.00	225,000			
Vivarium		0	SF	0.00	0			
Auditorium (Performance)		0	SF	0.00	0			
Kitchen		0	SF	0.00	0			
Attic/Mechanical Penthouse		0	SF	0.00	0			
Shell Space (Heat & Ventilation Only)		0	SF	0.00	0			
Atrium Exhaust System Allowance		0	LS	0.00	0			
HVAC Redundancy Allowance (N+1)		1	LS	1,500,000.00	1,500,000			
Smart Building Software Platform		275,000	SF	1.25	343,750			
Occupancy Utilization Sensors (Entire Building)		275,000	SF	2.50	687,500			
Occupancy Utilization Sensors (60% of Building)		165,000	SF	2.50	412,500			
Indoor Air Quality (IAQ)		275,000	SF	0.85	233,750			
Sustainable Design Premium	LEED Silver	1	LS	1,907,612.50	1,907,613			
				TOTAL HVAC	**$24,350,113**			
FIRE PROTECTION								
Wet System	New	275,000	SF	7.50	2,062,500			
Dry Pipe System		0	SF	0.00	0	Attic & canopies wider than 10'		
Fire Pump	Y	1	EACH	175,000.00	175,000			
Clean Agent Fire Protection System		0	LS	0.00	0	0 SF	$5.00/CF No less than $32,500/rm	
				TOTAL FIRE PROTECTION	**$2,237,500**			
ELECTRICAL DISTRIBUTION								
General Area		261,494	SF	28.00	7,321,832			
Mobile Health Lab & Disaster Response		7,000	SF	40.00	280,000			
Lobby/Prefunction & Open Office/Shared Workspace		6,506	SF	35.00	227,710			
Auditorium (Performance)		0	SF	0.00	0			
Kitchen		0	SF	0.00	0			
Attic/Mechanical Penthouse		0	SF	0.00	0			
Shell Space		0	SF	0.00	0			
Sustainable Design Premium	LEED Silver	1	LS	665,511.07	665,511			
				TOTAL ELECTRICAL DISTRIBUTION	**$8,495,053**			

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

LIGHTING					
General Area		220,350	SF	16.00	3,525,600
Classroom & Lab		36,400	SF	17.50	637,000
Auditorium & Tiered Classroom		0	SF	0.00	0
Multipurpose/Large Classrooms		13,500	SF	20.00	270,000
Student Lounge/Collaboration/Commons		2,500	SF	22.00	55,000
Lobby		2,250	SF	25.00	56,250
Dining & Servery		0	SF	0.00	0
Attic/Mechanical Penthouse		0	SF	0.00	0
Shell Space		0	SF	0.00	0
Exterior Building Lighting	Y	275,000	SF	1.00	275,000
Architectural Light Allowance	High	1	LS	2.00	550,000
Daylighting System	Y	165,000	SF	2.85	470,250
Sustainable Design Premium	LEED Silver	275,000	SF	1.36	374,000
				TOTAL LIGHTING	**$6,213,100**

SPECIAL SYSTEMS					
Telephone/Data	Wired	2,390	EACH	635.00	1,517,650
Audio/Visual Equipment, Rough-In		275,000	SF	2.00	550,000
Audio/Visual Equip, Rough-In (Performance Auditorium)		0	SF	0.00	0
Audio/Visual Equipment Allowance	NIC	0	SF	0.00	0
Security System, Rough-In		275,000	SF	0.50	137,500
Card Reader Access	Complete	205	EACH	4,000.00	820,000
Security Camera System Allowance	Complete	120	EACH	4,500.00	540,000
Fire Alarm System		275,000	SF	5.00	1,375,000
Emergency Phones/Intercom System		1	LS	125,000.00	125,000
Nurse Call System		0	SF	0.00	0
Emergency Responder System	Y	1	LS	365,000.00	365,000
Distributed Antenna Sys (DAS)	Y	275,000	SF	2.00	550,000
Lightning Protection (Roof Area)	Y	71,250	SF	1.25	89,062
Emergency Generator w/ATS, Natural Gas		150	KW	750.00	112,500
UPS System		0	LS	0.00	0
				TOTAL SPECIAL SYSTEMS	**$6,181,712**
				TOTAL SERVICES	**$52,601,308**

E. FIXED EQUIPMENT						
Lab Casework Allow (Base, Wall, Reagent)		0	SF	0.00	0	
Lab Casework Allow (Base Cabinets & Shelf)		0	SF	0.00	0	
Prep Lab Casework Allow. (Base & Wall Cabinets)		0	SF	0.00	0	
Fume Hoods		0	EACH	0.00	0	
Biosafety Cabinets		2	EACH	12,500.00	25,000	3-D printing lab
Snorkels		0	EACH	0.00	0	
Autoclaves		0	EACH	0.00	0	
Vivarium Equipment Allowance		0	LS	0.00	0	
Miscellaneous Fixed Lab Equipment Allowance		1	LS	2,500.00	2,500	
Loading Dock Equipment		1	LS	10,000.00	10,000	
Food Service Equipment		0	SF	0.00	0	
Breakroom/Kitchen Appliance Allowance		1	LS	67,666.67	67,667	
Window Covering, Electric Roller Shades		71,844	SF	30.00	2,155,329	
Window Covering, Manual Roller Shades		0	SF	0.00	0	
Overhead Grid & Panel System Allowance		4,000	SF	150.00	600,000	Disaster response
Fixed Seminar Tables at Tiered Classrooms		0	SEAT	0.00	0	
Fixed Auditorium Seats		0	SEAT	0.00	0	
				TOTAL EQUIPMENT	**$2,860,496**	

PALACIO

GENESYS CONCEPTUAL COST MODELING TOOL

Name: UTHSC College of Medicine Interdisciplinary Building
Location: Memphis, TN
Date: 9/3/2024
GSF: 275,000
Construction Date: 9/1/2029
Cost per SF: $883.58
Construction Cost: $242,983,461

G. SITEWORK	
Site Address or General Location:	**Memphis, TN**

SITEWORK SPECIFICS					
Total Impacted Area		175,000	SF		
Building Footprint		71,250	SF		
TOTAL DEVELOPED SITE WORK		**103,750**	SF		

SITE PREPARATION							
Building Demolition, NIC			0	SF	0.00	0	
Site Remediation Allowance			1	LS	500,000.00	500,000	
Site Demolition			0	SF	0.00	0	
Site Layout			4.0	ACRE	5,000.00	20,100	
Site Mobilization			4.0	ACRE	10,000.00	40,200	
Site Clearing			4.0	ACRE	7,500.00	30,150	
Erosion Control, Temporary Roads, Const Entrance, Etc			4.0	ACRE	8,000.00	32,160	
Earthwork	Feet Deep	3	22,400	CY	15.00	336,000	
Bad Soils	Feet Deep	1	3,100	CY	35.00	108,500	
Rock Excav	Feet Deep	0	0	CY	55.00	0	Rippable
					TOTAL SITE PREPARATION	**$1,067,110**	

SITE HARDSCAPES & LANDSCAPES						
Parking Spaces		0	SPACE	0.00	0	
Driveway to Parking		0	LF	0.00	0	
Loop Road		0	LF	0.00	0	
Sidewalk % of Site	25%	25,938	SF	8.50	220,469	
Concrete Paving	0%	0	SF	0.00	0	
Upgraded Paving at Entry Plazas	50%	51,875	SF	20.00	1,037,503	
Pavers	0%	0	SF	0.00	0	
Fire Lane (Grasscrete)	0%	0	SF	0.00	0	
Paving, Other	0%	0	SF	0.00	0	
Covered Walkway (10' Wide)		0	LF	0.00	0	
Retaining Wall Allowance	Veneered	0	SF	150.00	0	
Mechanical Screen Wall		200	LF	360.00	72,000	
Dumpster Pad, Screen Wall & Gates		1	LS	40,000.00	40,000	
Fencing & Gates		0	LF	0.00	0	
Landscaping Allowance		1	LS	250,000.00	250,000	
Irrigation Allowance		1	LS	75,000.00	75,000	
Site Furnishings Allowance		1	LS	10,000.00	10,000	
Site Signage		1	LS	15,000.00	15,000	
				Total Hardscape & Landscape	**$1,719,972**	

SITE & UTILITIES						
Storm Drainage (Paved Area + Slab on Grade)		149,062	SF	2.00	298,125	
Underground Storm Water Detention	Y	37,300	CF	15.00	559,500	Assumes 1 CF/4 SF of Impervious
Site Lighting at Parking & Driveway Allowance		0	EACH	0.00	0	
Site Lighting at Walkways Allowance		20	EACH	7,500.00	150,000	
Site Utilities Allowance		200	LF	2,750.00	550,000	Domestic & Fire Water, San Sewer
Steam & Chilled Water Site Piping Allowance		1	LS	1,750,000.00	1,750,000	
Special Site Consideration		0	SF	0.00	0	
Special Site Consideration		0	SF	0.00	0	
				TOTAL SITE & UTILITIES	**$3,307,625**	
				TOTAL SITE DEVELOPMENT	**$6,094,707**	

8.2

FIXTURE, FURNITURE, AND EQUIPMENT COST SUMMARY

The following subsequent pages present a preliminary breakdown of fixture, furniture, and equipment costs.

UNIVERSITY OF TENNESSEE COLLEGE OF MEDICINE INTERDISCIPLINARY BUILDING

FURNITURE, FIXTURE, AND EQUIPMENT COSTS SUMMARY

								Total (2024)*	$10,807,464.57
								Additional Public & Amenity Area Furniture Allowance (20%)*	$12,968,957.48
Space No.	Space Name	Quantity of Spaces	Furniture Type	Quantity	Basis of Design Manufacturer	Basis of Design Model	Unit Price	Total Price	Sub-Total
A. Public + Amenity									
A.1	Lobby	1							$100,712.26
			Reception Desk	1	MillerKnoll	Dividends System w/ lam front and power - seat 2ppl	$8,000.00	$8,000.00	
			Reception Chair	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
			Lounge Seating (Sofa)	2	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$11,500.00	
			Backless Lounge Seating	8	Bernhardt	Harmony 2 seat bench GR6 Fab	$1,925.00	$15,400.00	
			Serpentine Sofa	1	Bernhardt	Neighborhood Modular Lounge GR6 Fab	$13,950.00	$13,950.00	
			Armless Lounge Chairs	6	Bernhardt	Claire Armless Lounge GR6 Fab	$2,550.00	$15,300.00	
			Armless Chairs	6	Arcadia	Theme Wood Base Fully Uph Armless Chair	$780.00	$4,680.00	
			Round Tables	3	OFS	Intermix Lam 36"D Tapered Base	$1,895.00	$5,685.00	
			Small Round Tables	6	Bernhardt	Quiet 22"D 23.7"h Round top /Round Base	$950.00	$5,700.00	
			Coffee Tables	2	Bernhardt	Clue 30"D 15.5"H Veneer Cylinder table	$2,550.00	$5,100.00	
			Large Ottomans	2	Bernhardt	Colours Large Ottoman #3 GR6 Fab	$1,925.00	$3,850.00	
			Small Ottomans	2	Bernhardt	Colours Small Ottoman #13 GR6 Fab	$875.00	$1,750.00	
			Planters	6	MillerKnoll	Antenna Bridge Planter 42"w laminate	$985.00	$5,910.00	
			Trash Receptacle	2	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4"	$1,043.63	$2,087.26	
								$100,712.26	
A.3	Prefunction	1							$66,952.63
			Lounge Seating	6	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$34,500.00	
			Backless Lounge Seating	8	Bernhardt	Harmony 2 seat bench GR6 Fab	$1,925.00	$15,400.00	
			Round Tables	2	OFS	Intermix Lam 36"D Tapered Base	$1,895.00	$3,790.00	
			Small Round Tables	4	Bernhardt	Quiet 22"D 23.7"h Round top /Round Base	$950.00	$3,800.00	
			C-Tables	2	MillerKnoll	Riley Pull up Table - Walnut	$927.00	$1,854.00	
			Ottomans	3	Bernhardt	Colours Small Ottoman #13 GR6 Fab	$875.00	$2,625.00	
			Planters	4	MillerKnoll	Antenna Bridge Planter 42"w laminate	$985.00	$3,940.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4"	$1,043.63	$1,043.63	
								$66,952.63	
A.4	Media/Recording Studio	1							$17,233.63
			Tables	2	MillerKnoll	OE1 Communal Table 30x72 with surface power	$1,800.00	$3,600.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
			Stools	2	MillerKnoll	Regeneration Stool w/Arms GR B	$800.00	$1,600.00	
			Storage Units	3	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$3,240.00	
			Wall-mounted Markerboard	5	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$5,750.00	
			Acoustic Screen	1	MillerKnoll	OE1 Curved Screen GR4 Hush Fabric 48"w x 75"h	$1,100.00	$1,100.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4"	$1,043.63	$1,043.63	
								$17,233.63	
A.6	Wellness Room	5							$34,013.15
			Lounge Seating	1	MillerKnoll	Striad HighBack Lounge GR5 TBD	$3,100.00	$3,100.00	
			Side Table	1	MillerKnoll	Muuto Relate Side Table	$475.00	$475.00	
			Ottoman	1	MillerKnoll	Striad Ottoman GR5 TBD	$1,070.00	$1,070.00	
			Floor Lamp	1	MillerKnoll	Muuto Pull Floor Lamp - Oak	$605.00	$605.00	
			Mini Fridge	1	GE® Compact Refrigerator	Undercounter refrigerator, 24x24	$509.00	$509.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4"	$1,043.63	$1,043.63	
								$6,802.63	
A.8	Study Facilities/Informal Student Collaboration	5							$209,388.15
			Tables	4	MillerKnoll	OE1 Nook 45"h w/power seated height	$1,685.00	$6,740.00	
			Bar Height Tables	2	MillerKnoll	OE1 42"x 72" x42"H Communal Table w/Power	$2,185.00	$4,370.00	
			Chairs with casters	8	MillerKnoll	Ollo Light Task Armless 5 Star Base	$560.00	$4,480.00	
			Bar Height Chairs	4	Encore	Hoom Wire Base Bar Stool GR4 Fabric	$785.00	$3,140.00	
			Lounge Seating	1	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$5,750.00	
			Backless Lounge Seating	2	Bernhardt	Harmony 2 seat bench GR6 Fab	$1,925.00	$3,850.00	
			C-Tables	2	MillerKnoll	Riley Pull up Table - Walnut	$927.00	$1,854.00	
			Wall-mounted Markerboard	6	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$6,900.00	
			Free standing Markerboard	1	MillerKnoll	Scribe Mobile Board (2) tray (1) Cup 48x54x72"h	$1,125.00	$1,125.00	
			Poufs @ Lounge Seating	3	Bernhardt	Colours Small Ottoman #13 GR6 Fab	$875.00	$2,625.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4"	$1,043.63	$1,043.63	
								$41,877.63	
A.9	Green Room / Interview / Conference Room	1							$39,123.63
			Conference Tables	1	Nucraft	FLOW Veneer table with Power 54"x 144" Island base	$12,000.00	$12,000.00	
			Chairs	12	OFS	PUR Highback Conference Chair GR7	$1,250.00	$15,000.00	
			Storage Unit	6	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$6,480.00	
			Wall-mounted Markerboard	4	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$4,600.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$39,123.63	
A.10	Houses	6							$646,812.00
			Lounge Seating	6	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$34,500.00	

Space No.	Space Name	Quantity of Spaces	Furniture Type	Quantity	Basis of Design Manufacturer	Basis of Design Model	Unit Price	Total Price	Sub-Total
			Backless Lounge Seating	2	Bernhardt	Harmony 2 seat bench GR6 Fab	$1,925.00	$3,850.00	
			Armless Lounge Chairs	2	Bernhardt	Claire Armless Lounge GR6 Fab	$2,550.00	$5,100.00	
			Armless Chairs	2	Arcadia	Theme Wood Base Fully Uph Armless Chair	$780.00	$1,560.00	
			Dining Tables	1	Bernhardt	Blueprint Block Stepped HT Table 36"d 96"w - 72" w	$9,400.00	$9,400.00	
			Dining Chairs	8	Encore	Hoom Wire Base Chair GR4 Fabric	$695.00	$5,560.00	
			Counter Height Dining Stools	7	Encore	Hoom Wire Base Counter Stool GR4 Fabric	$785.00	$5,495.00	
			Bar Height Tables	2	MillerKnoll	OE1 42"x 72" x42"H Communal Table w/Power	$2,185.00	$4,370.00	
			Bar Height Chairs	4	Encore	Hoom Wire Base Bar Stool GR4 Fabric	$785.00	$3,140.00	
			Coffee Tables	3	Bernhardt	Bassa Occ. Tables (Varous Sizes)	$1,325.00	$3,975.00	
			Ottomans	1	Bernhardt	Colours Large Ottoman #3 GR6 Fab	$1,925.00	$1,925.00	
			Poufs @ Lounge Seating	2	Bernhardt	Colours Small Ottoman #13 GR6 Fab	$875.00	$1,750.00	
			Storage Units	7	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$7,560.00	
			Lockable Lockers/Storage	16	MillerKnoll	Anchor 50"h x 12 Locker with coat Hook and top (Ganged)	$625.00	$10,000.00	
			Wall-mounted Tackboard	2	MillerKnoll	48 x 60 Tack board (4) pieces GR30	$1,000.00	$2,000.00	
			Microwave	2	Panasonic	2100 Watt* Commercial Microwave Oven_13"w x 12"d x 6 7/8"h_NE-21523_MRW	$1,250.00	$2,500.00	
			Refrigerator	2	GE	18.2 Cu. Ft. Top-Freezer Refrigerator_GIE18ISHSS_REF1	$1,100.00	$2,200.00	
			Coffee Machine	1	Bunn	Coffee Brewer_BrewWise_Dual TF DBC Black_22" X 36" X 20" 265.6 servings/hour_8 ounce servings_Digital brewer control w/ inulated thermofresh server_34600.0005_BREW	$1,825.00	$1,825.00	
			Recycling Bin	3	Trashcans Warehouse	Large Recycling Bin (17 gallon) - XL Rectangular, White Gloss Finish with Co-mingle Lid and "Trash" Decal	$364.00	$1,092.00	
								$107,802.00	
A.11	Houses Shared Kitchenette	1							$107,802.00
			Lounge Seating	6	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$34,500.00	
			Backless Lounge Seating	2	Bernhardt	Harmony 2 seat bench GR6 Fab	$1,925.00	$3,850.00	
			Armless Lounge Chairs	2	Bernhardt	Claire Armless Lounge GR6 Fab	$2,550.00	$5,100.00	
			Armless Chairs	2	Arcadia	Theme Wood Base Fully Uph Armless Chair	$780.00	$1,560.00	
			Dining Tables	1	Bernhardt	Blueprint Block Stepped HT Table 36"d 96"w - 72" w	$9,400.00	$9,400.00	
			Dining Chairs	8	Encore	Hoom Wire Base Chair GR4 Fabric	$695.00	$5,560.00	
			Counter Height Dining Stools	7	Encore	Hoom Wire Base Counter Stool GR4 Fabric	$785.00	$5,495.00	
			Bar Height Tables	2	MillerKnoll	OE1 42"x 72" x42"H Communal Table w/Power	$2,185.00	$4,370.00	
			Bar Height Chairs	4	Encore	Hoom Wire Base Bar Stool GR4 Fabric	$785.00	$3,140.00	
			Coffee Tables	3	Bernhardt	Bassa Occ. Tables (Varous Sizes)	$1,325.00	$3,975.00	
			Ottomans	1	Bernhardt	Colours Large Ottoman #3 GR6 Fab	$1,925.00	$1,925.00	
			Poufs @ Lounge Seating	2	Bernhardt	Colours Small Ottoman #13 GR6 Fab	$875.00	$1,750.00	
			Storage Units	7	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$7,560.00	
			Lockable Lockers/Storage	16	MillerKnoll	Anchor 50"h x 12 Locker with coat Hook and top (Ganged)	$625.00	$10,000.00	
			Wall-mounted Tackboard	2	MillerKnoll	48 x 60 Tack board (4) pieces GR30	$1,000.00	$2,000.00	
			Microwave	2	Panasonic	2100 Watt* Commercial Microwave Oven_13"w x 12"d x 6 7/8"h_NE-21523_MRW	$1,250.00	$2,500.00	
			Refrigerator	2	GE	18.2 Cu. Ft. Top-Freezer Refrigerator_GIE18ISHSS_REF1	$1,100.00	$2,200.00	
			Coffee Machine	1	Bunn	Coffee Brewer_BrewWise_Dual TF DBC Black_22" X 36" X 20" 265.6 servings/hour_8 ounce servings_Digital brewer control w/ inulated thermofresh server_34600.0005_BREW	$1,825.00	$1,825.00	
			Recycling Bin	3	Trashcans Warehouse	Large Recycling Bin (17 gallon) - XL Rectangular, White Gloss Finish with Co-mingle Lid and "Trash" Decal	$364.00	$1,092.00	
								$107,802.00	
B. Classrooms									
B.1	Multipurpose 225/450p Meeting Space	2							$356,794.52
			Tables	104	KI	Pirouette Nesting Tables 24x72 No Power	$900.00	$93,600.00	
			Chairs	230	KI	Limelight High Density Stack Chair w/seat pad GR P2	$315.00	$72,450.00	
			Lectern	1	KI	All Terain Binder TWR/Pncl Shelf/File 44" x 22" x 20" Lam	$1,060.00	$1,060.00	
			Wall-mounted Markerboard	8	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$9,200.00	
			Trash Receptacle	2	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$2,087.26	
								$178,397.26	
B.2	Classrooms 60/120p	8							$391,018.08
			Tables	24	KI	Pirouette Nesting Tables 24x72 No Power	$900.00	$21,600.00	
			Chairs	62	KI	Limelight High Density Stack Chair w/seat pad GR P2	$315.00	$19,530.00	
			Lectern	1	KI	All Terain Binder TWR/Pncl Shelf/File 44" x 22" x 20" Lam	$1,060.00	$1,060.00	
			Wall-mounted Markerboard	4	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$4,600.00	
			Trash Receptacle	2	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$2,087.26	
								$48,877.26	
B.3	Classrooms 30/60p	2							$71,447.26

Space No.	Space Name	Quantity of Spaces	Furniture Type	Quantity	Basis of Design Manufacturer	Basis of Design Model	Unit Price	Total Price	Sub-Total
			Tables	18	KI	Pirouette Nesting Tables 24x72 No Power	$900.00	$16,200.00	
			Chairs	48	KI	Limelight High Density Stack Chair w/seat pad GR P2	$315.00	$15,120.00	
			Lectern	1	KI	All Terain Binder TWR/Pncl Shelf/File 44" x 22" x 20" Lam	$1,060.00	$1,060.00	
			Wall-mounted Markerboard	2	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$2,300.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$35,723.63	
B.4	Small Group Room 15/30p	16							$219,098.08
			Tables	6	KI	Pirouette Nesting Tables 24x72 No Power	$900.00	$5,400.00	
			Chairs	16	KI	Limelight High Density Stack Chair w/seat pad GR P2	$315.00	$5,040.00	
			Lectern	1	KI	All Terain Binder TWR/Pncl Shelf/File 44" x 22" x 20" Lam	$1,060.00	$1,060.00	
			Wall-mounted Markerboard	1	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$1,150.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$13,693.63	
B.12	IT Suite Helpdesk	1							$19,633.63
			Tables	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
			Storage Units	2	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$2,160.00	
			Wall-mounted Shelving Units	4	MillerKnoll	Dividends Wall Mount Overhead Open Shelf 72" metal	$675.00	$2,700.00	
			Free standing Shelving Units	4	MillerKnoll	Calibre Bookcase 5H 36"w Metal	$820.00	$3,280.00	
			Wall-mounted Markerboards	1	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$1,150.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$19,633.63	
C. Interdisciplinary									
C.1	Computational / Visualization Suite	1							$58,843.61
			Tables	22	KI	Pirouette Fixed Trainig Table 24x72 ganging w/power	$1,220.00	$26,840.00	
			Chairs	50	KI	Doni Two Tone task Chair - Uph Seat Armless GR P2	$495.00	$24,750.00	
			Lectern	1	KI	All Terain Binder TWR/Pncl Shelf/File 44" x 22" x 20" Lam	$1,060.00	$1,060.00	
			Wall-mounted Markerboard	4	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$4,600.00	
			Movable Computer Cart	2	Staples	Luxor 3 shelf metal A/V cart (Blue)	$274.99	$549.98	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$58,843.61	
C.2	Technology Innovation Lab	1							$30,902.46
			Conference Tables	1	Nucraft	FLOW table 42 x120 with Power/Data TBD	$12,000.00	$12,000.00	
			Chairs	10	MillerKnoll	Ollo Mesh back light task w/arms - GR C Fabric	$595.00	$5,950.00	
			Storage Units	4	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$4,320.00	
			Free standing Shelving Units	3	MillerKnoll	Calibre Bookcase 5H 36"w Metal	$820.00	$2,460.00	
			Ceiling-mounted Exam Lights	2	Burton	Examination Light: LED, 45,000 lux @ 18 in/90,000 lux @ 18 in, Ceiling, 4100K, 16 W Watt, NXC	$902.61	$1,805.22	
			Ceiling-mounted Boom	2	Centrum Force	Telescoping Ceiling Boom	$865.00	$1,730.00	
			Movable Computer Cart	2	Staples	Luxor 3 shelf metal A/V cart (Blue)	$274.99	$549.98	
			Trash Receptacle	2	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$2,087.26	
								$30,902.46	
C.3	Health Makerspace + 3D BioPrinting Lab	1							$95,168.24
			Lab Grade Stainless Steel Tables	5	KI	Stout, Rectangular 27-40" Adjustable Height Table, 30x72", Post-Leg, 1-1/2" Stainless Steel Worksurface	$5,000.00	$25,000.00	
			Chairs	5	KI	Doni Two Tone task Chair - Uph Seat Armless GR P2	$495.00	$2,475.00	
			Laboratory Cart	2	MillerKnoll	@42H Procedure Cart with Limited Security	$2,215.00	$4,430.00	
			Misc. Desktop Equipment	1	Beckman Coulter	Microfuge	$2,640.00	$2,640.00	
			Biosafety Cabinet	1	Thermo Scientific	Thermo Scientific 1300 series Class II type A2 Biological safety cabinet packages	$15,389.00	$15,389.00	
			Wall-mounted Markerboard	4	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$4,600.00	
			Movable Computer Cart	2	Staples	Luxor 3 shelf metal A/V cart (Blue)	$274.99	$549.98	
			3D Printer - Large	1	FormLabs	Form 4L	$9,999.00	$9,999.00	
			3D Printer - Small	2	FormLabs	Form 4BL	$13,999.00	$27,998.00	
			Trash Receptacle	2	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$2,087.26	
								$95,168.24	
C.4	Health Incubator	1							$287,527.26
			Tables	3	MillerKnoll	Headway Seated height table w/power 36x96	$2,810.00	$8,430.00	
			Chairs	24	MillerKnoll	Ollo Light Task Armless 5 Star Base	$560.00	$13,440.00	
			Club Chairs with Casters	26	Arcadia	Domo Mobile Lounge Dual Uph GR 4 Fabric	$1,625.00	$42,250.00	
			Conference Table	1	MillerKnoll	Headway Tapered 48x96 Laminate - NoPower	$2,030.00	$2,030.00	
			Chairs @ Conference Table	7	MillerKnoll	Always Chair 5 star w/lift mech - GR 4 Fabric	$1,296.00	$9,072.00	
			Lounge Seating	6	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$34,500.00	
			Backless Lounge Seating	7	Bernhardt	Harmony 2 seat bench GR6 Fab	$1,925.00	$13,475.00	

Space No.	Space Name	Quantity of Spaces	Furniture Type	Quantity	Basis of Design Manufacturer	Basis of Design Model	Unit Price	Total Price	Sub-Total
			Poufs @ Lounge Seating	10	Bernhardt	Colours Small Ottoman #13 GR6 Fab	$875.00	$8,750.00	
			C-Tables	25	MillerKnoll	Muuto Relate Pull Up table	$475.00	$11,875.00	
			Armless Lounge Chairs	3	Bernhardt	Claire Armless Lounge GR6 Fab	$2,550.00	$7,650.00	
			Small Round Tables	2	Bernhardt	Quiet 22"D 23.7"h Round top /Round Base	$950.00	$1,900.00	
			Bar Height Round Tables	3	Bernhardt	Quiet 30"D Standing Height	$1,951.00	$5,853.00	
			Bar Height Chairs	6	Encore	Hoom Wire Base Bar Stool GR4 Fabric	$785.00	$4,710.00	
			Standing Height Tables	6	MillerKnoll	Headway Standing HT 24x84 w/ power	$2,365.00	$14,190.00	
			Chairs @ Standing Height Tables	12	MillerKnoll	Regen Task Stool High Perf Arms Gr C fabric	$825.00	$9,900.00	
			Stools @ Standing Height Tables	8	Bernhardt	Blocco Backless Barstool	$650.00	$5,200.00	
			Round Tables	4	Bernhardt	Quiet 36"D Seated height Tables	$1,955.00	$7,820.00	
			Chairs @ Round Tables	16	Arcadia	Theme Wood Base Fully Uph Armless Chair	$780.00	$12,480.00	
			Workstations	12	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$45,000.00	
			Chairs with Casters @ Workstations	12	MillerKnoll	Ollo Mesh back light task w/arms - GR C Fabric	$595.00	$7,140.00	
			Wall-mounted Markerboard	4	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$4,600.00	
			Coffee Tables	2	Bernhardt	Clue 30"D 15.5"H Veneer Cylinder table	$2,550.00	$5,100.00	
			Ottomans	3	Bernhardt	Colours Large Ottoman #3 GR6 Fab	$1,925.00	$5,775.00	
			Lectern	1	KI	All Terain Binder TWR/Pncl Shelf/File 44" x 22" x 20" Lam	$1,060.00	$1,060.00	
			Storage Unit	3	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$3,240.00	
			Trash Receptacle	2	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$2,087.26	
								$287,527.26	
C.5	Disaster Relief/Hyperflexible Sandbox	1							$131,759.26
			Tables with Data	2	MillerKnoll	OE1 42"x 72" Communal Table w/Power	$2,185.00	$4,370.00	
			Chairs with Casters	8	MillerKnoll	Ollo Mesh back light task w/arms - GR C Fabric	$595.00	$4,760.00	
			Stretchers with Headwall	10	Vantage	Vantage Bed with Integrated Headwall	$11,015.95	$110,159.50	
			Wall-mounted Markerboards	8	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$9,200.00	
			IV Pole	10	AliMed	AliMed® Chrome-Plated Steel IV Pole	$118.25	$1,182.50	
			Trash Receptacle	2	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$2,087.26	
								$131,759.26	
C.6	Mobile Health Lab	1							$79,025.89
			Tables	3	MillerKnoll	OE1 42"x 72" Work Table w/Power Seated height	$1,300.00	$3,900.00	
			Chairs	18	KI	Doni Two Tone Guest Chair GR P2 Fabric	$465.00	$8,370.00	
			Castered Seating with Attached Desk	12	KI	Learn2 Doni No Arm Uph Seat with Surface and acces. Rack GR P2	$770.00	$9,240.00	
			Lectern	1	KI	All Terain Binder TWR/Pncl Shelf/File 44" x 22" x 20" Lam	$1,060.00	$1,060.00	
			Lockable Lockers	36	MillerKnoll	Anchor 50"h x 12 Locker with coat Hook and top (Ganged)	$625.00	$22,500.00	
			Chairs with Casters	3	MillerKnoll	Ollo Mesh back light task w/arms - GR C Fabric	$595.00	$1,785.00	
			Lockable Storage	12	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$12,960.00	
			Free standing Shelving Unit	14	MillerKnoll	Calibre Bookcase 5H 36"w Metal	$820.00	$11,480.00	
			Wall-mounted Markerboards	4	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$4,600.00	
			Trash Receptacle	3	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$3,130.89	
								$79,025.89	
D. Workplace									
D.1	Dean	3							$87,405.00
			Tables	1	REFF	REFF U - Shape Veneer Desk with Adj. Ht	$9,200.00	$9,200.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
			Guest Chairs	2	Bernhardt	Chantal W/Wood Base GR 6 TBD	$1,400.00	$2,800.00	
			Small Round Table	1	MillerKnoll	REFF Sliding Table 42D V1 Veneer	$1,675.00	$1,675.00	
			Armless Chairs	2	Bernhardt	Chloe Wood Base GR6 TBD	$1,180.00	$2,360.00	
			Storage Unit	4	MillerKnoll	REFF Storage Cabinet/Wardrobe to match desk Veneer	$1,650.00	$6,600.00	
			Wall-mounted Storage Unit	2	MillerKnoll	REFF Double Overhead w/TB V1 Veneer w/ lock	$2,076.00	$4,152.00	
			Wall-mounted Markerboard	1	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$1,150.00	
			Trash Receptacle	1	Trashcans Warehouse	Rectangular Trash Receptacle (10 gallon) - Spectrum, Cube Slim, Gray with Full Lid Opening and White Waste Label	$298.00	$298.00	
								$29,135.00	
D.2	Assoc. Dean, Dept. Chair	17							$353,566.00
			Tables	1	MillerKnoll	REFF Adj "U" Config Desk V1 Veneer	$8,750.00	$8,750.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
			Guest Chairs	2	Bernhardt	Chantal w/Chrome Base - GR 6 Fabric TBD	$1,180.00	$2,360.00	
			Storage Unit	4	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,160.00	$4,640.00	
			Wall-mounted Storage Unit	2	MillerKnoll	REFF Overhead w/ tackBD GR 40 w/Lock V1 Veneer	$1,350.00	$2,700.00	
			Wall-mounted Markerboard	1	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$1,150.00	
			Trash Receptacle	1	Trashcans Warehouse	Rectangular Trash Receptacle (10 gallon) - Spectrum, Cube Slim, Gray with Full Lid Opening and White Waste Label	$298.00	$298.00	
								$20,798.00	
D.4	Professor, Assoc, Asst, Instr	302							$3,387,836.00

Space No.	Space Name	Quantity of Spaces	Furniture Type	Quantity	Basis of Design Manufacturer	Basis of Design Model	Unit Price	Total Price	Sub-Total
			Tables	1	MillerKnoll	REFF Adj "U" Config Desk laminate	$7,700.00	$7,700.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
			Storage Unit	2	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,160.00	$2,320.00	
			Trash Receptacle	1	Trashcans Warehouse	Rectangular Trash Receptacle (10 gallon) - Spectrum, Cube Slim, Gray with Full Lid Opening and White Waste Label	$298.00	$298.00	
								$11,218.00	
D.5	Professional	114							$1,060,200.00
			Workstation	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.6	Administrative	21							$195,300.00
			Workstation	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.7	Coordinator	1							$9,300.00
			Workstation	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.8	Sec/Clerical-I	43							$399,900.00
			Tables	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.9	Technical-I	24							$223,200.00
			Tables	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.10	Post-Doctoral Scholar	4							$37,200.00
			Tables	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.11	Service	6							$27,900.00
			Tables	1	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$3,750.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
								$4,650.00	
D.12	GRA	3							$13,950.00
			Tables	1	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$3,750.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
								$4,650.00	
D.13	Technical-II	8							$74,400.00
			Tables	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.14	Medical Interns/Residents	32							$297,600.00
			Tables	2	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$7,500.00	
			Chairs	2	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$1,800.00	
								$9,300.00	
D.15	Sec/Clerical-II	54							$251,100.00
			Tables	1	MillerKnoll	K Bench Adj Ht with Desk Acc/Pwr 30x66	$3,750.00	$3,750.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
								$4,650.00	
D. Shared Workplace									
D.20	Reception/Waiting Area	5							$76,348.15
			Reception Desk	1	MillerKnoll	REFF 72" W Recept Desk Dbl Ped - Laminate	$4,000.00	$4,000.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
			Guest Seating	2	MillerKnoll	Naughtone Percy Lounge Chair GR 5 Fab	$2,260.00	$4,520.00	
			Bench Seating	1	MillerKnoll	Naughtone Hue 2 seat GR 5 Fabric	$3,456.00	$3,456.00	
			Coffee Tables	1	MillerKnoll	Naughtone Trace Circle table	$1,350.00	$1,350.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$15,269.63	
D.21	Board Room	5							$375,718.15
			Conference Tables	1	Nucraft	FLOW table 42 x120 with Power/Data TBD	$22,500.00	$22,500.00	
			Chairs	12	OFS	PUR Highback Conference Chair GR7	$1,250.00	$15,000.00	
			Overflow Seating	6	Davis Modo	TBD	$4,000.00	$24,000.00	
			Storage Unit	2	Knoll Reff Veneer	72"W Credenza	$4,000.00	$8,000.00	
			Wall-mounted Markerboard	4	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$4,600.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$75,143.63	
D.22	Kitchenette	6							$88,368.00

Space No.	Space Name	Quantity of Spaces	Furniture Type	Quantity	Basis of Design Manufacturer	Basis of Design Model	Unit Price	Total Price	Sub-Total
			Dining Tables	1	MillerKnoll	Rockwell tall Table Laminate 36x72 standing height	$2,395.00	$2,395.00	
			Chairs	8	Encore	Hoom Wire Base Bar Stool GR4 Fabric	$785.00	$6,280.00	
			Round Table	2	MillerKnoll	Dividends 30"D Standing height metal base	$575.00	$1,150.00	
			Microwave	1	Panasonic	2100 Watt" Commercial Microwave Oven_13"w x 12"d x 6 7/8"h_NE-21523_MRW	$1,250.00	$1,250.00	
			Refrigerator	1	GE	18.2 Cu. Ft. Top-Freezer Refrigerator_GIE18ISHSS_REF1	$1,100.00	$1,100.00	
			Coffee Machine	1	Bunn	Coffee Brewer_BrewWise_Dual TF DBC Black_22" X 36" X 20" 265.6 servings/hour_8 ounce servings_Digital brewer control w/ inulated thermofresh server_34600.0005_BREW	$1,825.00	$1,825.00	
			Recycling Bin	2	Trashcans Warehouse	Large Recycling Bin (17 gallon) - XL Rectangular, White Gloss Finish with Co-mingle Lid and "Trash" Decal	$364.00	$728.00	
								$14,728.00	
D.23	Medium Meeting Room - 15p	10							**$192,436.30**
			Tables	6	MillerKnoll	Pixel Flip Top Tables 24x72	$1,255.00	$7,530.00	
			Chairs	16	MillerKnoll	Ollo Mesh back light task w/arms - GR C Fabric	$595.00	$9,520.00	
			Wall-mounted Markerboards	1	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$1,150.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$19,243.63	
D.24	Small Meeting Room	10							**$28,236.30**
			Tables	1	MillerKnoll	Dividends 48"D Laminate Table no Power	$630.00	$630.00	
			Chairs		MillerKnoll	Ollo Light Task Armless 5 Star Base	$560.00	$0.00	
			Wall-mounted Markerboards	1	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$1,150.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$2,823.63	
D.25	Informal Collaboration	10							**$438,776.30**
			Tables	4	MillerKnoll	OE1 42"x 72" x42"H Communal Table w/Power	$2,185.00	$8,740.00	
			Bar Height Tables	2	MillerKnoll	OE1 42"x 72" x42"H Communal Table w/Power	$2,185.00	$4,370.00	
			Chairs with casters	8	MillerKnoll	Ollo Light Task Armless 5 Star Base	$560.00	$4,480.00	
			Bar Height Chairs	4	Encore	Hoom Wire Base Bar Stool GR4 Fabric	$785.00	$3,140.00	
			Lounge Seating	1	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$5,750.00	
			BacklessLounge Seating	2	Bernhardt	Harmony 2 seat bench GR6 Fab	$1,925.00	$3,850.00	
			C-Tables	2	MillerKnoll	Riley Pull up Table - Walnut	$927.00	$1,854.00	
			Wall-mounted Markerboard	6	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$6,900.00	
			Free standing Markerboard	1	MillerKnoll	Scribe Board (2) tray (1) Cup 48x54x72"h	$1,125.00	$1,125.00	
			Poufs @ Lounge Seating	3	Bernhardt	Colours Small Ottoman #13 GR6 Fab	$875.00	$2,625.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$43,877.63	
D.26	Faculty/Staff Break Area	5							**$155,490.00**
			Dining Tables	1	MillerKnoll	Rockwell tall Table Laminate 36x72 standing height	$2,395.00	$2,395.00	
			Chairs	8	Encore	Hoom Wire Base Bar Stool GR4 Fabric	$785.00	$6,280.00	
			Round Table	1	MillerKnoll	Dividends 30"D Standing height metal base	$575.00	$575.00	
			Sofa	1	Bernhardt	Harmony Luxe 3 Seat GR6 Fab	$5,750.00	$5,750.00	
			Armed lounge Chair	2	Bernhardt	Ravel Walnut Frame Arm chair GR 6 Fabric	$2,985.00	$5,970.00	
			Coffee Tables	2	Bernhardt	Bassa Occ. Tables (Varous Sizes)	$1,325.00	$2,650.00	
			Side Tables	1	Bernhardt	Bassa Occ. Tables (Varous Sizes)	$1,325.00	$1,325.00	
			Microwave	2	Panasonic	2100 Watt" Commercial Microwave Oven_13"w x 12"d x 6 7/8"h_NE-21523_MRW	$1,250.00	$2,500.00	
			Refrigerator	1	GE	18.2 Cu. Ft. Top-Freezer Refrigerator_GIE18ISHSS_REF1	$1,100.00	$1,100.00	
			Coffee Machine	1	Bunn	Coffee Brewer_BrewWise_Dual TF DBC Black_22" X 36" X 20" 265.6 servings/hour_8 ounce servings_Digital brewer control w/ inulated thermofresh server_34600.0005_BREW	$1,825.00	$1,825.00	
			Recycling Bin	2	Trashcans Warehouse	Large Recycling Bin (17 gallon) - XL Rectangular, White Gloss Finish with Co-mingle Lid and "Trash" Decal	$364.00	$728.00	
								$31,098.00	
D.31	Hotelling/Touchdown Spaces	12							**$33,000.00**
			Tables	1	MillerKnoll	K Stand Adj Ht table w/ Screen and desk top power	$1,850.00	$1,850.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
								$2,750.00	
D.32	Wellness Room	5							**$28,795.00**
			Lounge Seating	1	MillerKnoll	Striad HighBack Lounge GR5 TBD	$3,100.00	$3,100.00	
			Side Table	1	MillerKnoll	Muuto Relate Side Table	$475.00	$475.00	
			Ottoman	1	MillerKnoll	Striad Ottoman GR5 TBD	$1,070.00	$1,070.00	
			Floor Lamp	1	MillerKnoll	Muuto Pull Floor Lamp - Oak	$605.00	$605.00	
			Mini Fridge	1	GE® Compact Refrigerator	Undercounter Refrigerator, 24x24	$509.00	$509.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$5,759.00	

Space No.	Space Name	Quantity of Spaces	Furniture Type	Quantity	Basis of Design Manufacturer	Basis of Design Model	Unit Price	Total Price	Sub-Total
E. Building Logistics									
E.3	Building Management	1							**$8,183.63**
			Tables	1	MillerKnoll	K Stand Adj Ht table w/ Screen and desk top power	$1,850.00	$1,850.00	
			Chairs	1	MillerKnoll	Generation Chair Grade B Fabric Fully Adj.	$900.00	$900.00	
			Storage Units	3	MillerKnoll	Calibre 4DR 36"w Metal Lateral w/ Lock	$1,080.00	$3,240.00	
			Wall-mounted Markerboards	1	Calyx	36x60 Magnetic Glass w/Access.	$1,150.00	$1,150.00	
			Trash Receptacle	1	Bobrick	Trash Receptacle, 8 1/4" diameter opening, 33-gal capacity, 18 1/4" diameter, 32"high	$1,043.63	$1,043.63	
								$8,183.63	
								Total (2024)*	**$10,807,464.57**
								Additional Public & Amenity Area Furniture Allowance (20%)*	**$12,968,957.48**
								Escalation Impact Cost at 6% Per Year	
								2025	**$13,747,094.93**
								2026	**$14,571,920.63**
								2027	**$15,446,235.87**
								2028	**$16,373,010.02**
								2029	**$17,355,390.62**

The above cost estimations are presented as a preliminary cost model. These estimates are provided as a rough order of magnitude cost and should be used for high-level budget estimating.

8.3

AV/IT/SECURITY COST SUMMARY

The following subsequent pages present a preliminary breakdown of Network, AV, IT, and Security costs. Please note, that security costs are included in the cost of construction.

NETWORK COSTS

Below are the estimated network costs:

- 1-MDF Buildout with overhead cable ladder racking (5)-racks and (2)-8-inch vertical organizers/)- (4)-12-inch vertical organizers
- 10-IDF's Buildout with overhead cable ladder racking (4)-Racks and (2)- 6-inch vertical organizer's- (3)-8-inch vertical organizers
- Install MDF and IDF grounding System

= $288,000.00

- Install (12)-24-SM risers to MDF with all LIU-s and fiber terminations

= $104,000.00

- Install (2)- 96-SM IN/OUTDOOR going out to (2)-Building BDF's with all LIU-s and fiber terminations. No boring in this price

= $205,000.00

- Install (1,550)- Dual CAT6A Station drops and WAP's with all CAT6A Patch Panels and CAT6A patch cords
- Install j-hook system

= $2,603,000.00

Based on the numbers I have received; I am estimating a roughly $2.5 million budget for electronics.

This is based on an estimate of:

- Qty. 140 Cisco 9300X-48HXN-E Switches with line cards, stacking cables, and dual power supplies.
- Qty. 250 Cisco Meraki CW9162I-MR Wireless access points
- Qty. 14 Cisco Meraki Indoor Temperature/Humidity sensors
- Qty. 14 Cisco Meraki Indoor Water Leak Sensors with cables
- Qty. 2 Cisco Catalyst 9300X-24Y-A Core Switches with 40/100G uplink cards, dual power supplies, stacking cables.
- Estimated Qty. 14 APC 5000VA UPS's (model to be determined later)
- NetAlly Cable Tester - for maintenance of cable plant
- Fiber Optic OTDR - for maintenance of cable plant.

Models are subject to change with availability as newer generations of hardware are released. Actual quantities can be more solidified once we are in design phase and have a better idea of construction requirements.

ESTIMATED TOTAL NETWORK COST:

= $5,700,000.00

NETWORK COST SUMMARY	
ESCALATION ASSUMING 6% PER YEAR	
YEAR	COST PER YEAR
2024	$5,700,000.00
2025	$6,042,000.00
2026	$6,404,520.00
2027	$6,788,791.20
2028	$7,196,118.67
2029	$7,627,885.79

University of Tennessee Health Science Center
College of Medicine

Pre-Design/ Program
Audiovisual Systems Opionon of Probable Cost

Spaces	Space Qty	Unit Cost Allowance	Extended Cost
Room Specific Audiovisual Systems			
Public & Amenity Space			
Building Lobby	1	$ 375,000	$ 375,000
Pre-Function	1	$ 110,000	$ 110,000
Health Commons	1	$ 50,000	$ 50,000
Media/ Recording Studio	1	$ 80,000	$ 80,000
Interview Room	1	$ 32,000	$ 32,000
Informal/ Open Student Collaboration	1	$ 33,500	$ 33,500
Student Study	12	$ 7,500	$ 90,000
Academic Space			
Multi-Purpose Meeting Space	2	$ 450,000	$ 900,000
Large Classroom - Active Learning	8	$ 220,000	$ 1,760,000
Medium Classroom - Active Learning	8	$ 180,000	$ 1,440,000
Seminar/ Small Classroom	16	$ 80,000	$ 1,280,000
Dept House	6	$ 25,000	$ 150,000
Interdisciplinary Space			
Computational/ Visualization Lab	1	$ 450,000	$ 450,000
Health Makerspace	1	$ 40,000	$ 40,000
Health Incubator	1	$ 85,000	$ 85,000
Technology Innovation Lab	1	$ 70,000	$ 70,000
Hyper-Flex Sandbox/ Immersive Studio	1	$ 175,000	$ 175,000
Mobile Health Lab	1	$ 175,000	$ 175,000
Workplace			
Boardroom	5	$ 75,000	$ 375,000
Small Conference Room	10	$ 25,000	$ 250,000
Medium Conference Room	10	$ 35,000	$ 350,000

Totals:

Subtotal:	**$ 8,270,500**
State & Local Taxes at 0%	$ -
Contingency at 15%	$ 1,240,600
Total Audiovusal Systems OPC:	**$ 9,511,100**
Escalation at 6% per year:	
2025	$ 10,081,800
2026	$ 10,686,700
2027	$ 11,327,900
2028	$ 12,007,600
2029	$ 12,728,100

Notes:

1.) All estimates above represent complete systems, including equipment, installation materials, installation labor and general user training.
2.) The cost allowance figures are representative of similar system types and scale currently envisioned for this facility. Actual cost is likley to vary once design details become more specific and refined.
3.) Typical infrastructure items such as back boxes, conduit, cable pathways, AC power and so on are typically provided by the General Contractor or Electrical Contractor and are not included.
4.) Related items not included are: Structured cabling systems, voice/data electronics, access control, surveillance systems, specialty lighting fixtures and dimmer controls, traditional white boards, computers and Smart Building Systems.

University of Tennessee Health Science Center
College of Medicine

Pre-Design/ Program
Electronic Security Systems Opinion of Probable Cost

Space Description	Qty	Technology Systems OPC Unit	Technology Systems OPC Extended
Building Security Systems			
Access Control System	1	$ 675,000	$ 675,000
Video Surveillance System	1	$ 540,000	$ 540,000
Intrusion Detection System	1	$ 40,000	$ 40,000
Emergency Phones / Security Intercoms	1	$ 125,000	$ 125,000

Totals:

Subtotal:	$ 1,380,000
State & Local Taxes at 0%	**$ -**
Contingency at 15%	$ 207,000
Total Electronic Security Systems OPC:	**$ 1,587,000**
Escalation at 6% per year:	
2025	$ 1,682,200
2026	$ 1,783,100
2027	$ 1,890,100
2028	$ 2,003,500
2029	$ 2,123,700

Notes:

1.) All estimates above represent complete systems, including equipment, installation materials, installation labor and general user training.
2.) The cost allowance figures are representative of similar system types and scale currently envisioned for this facility. Actual cost is likley to vary once design details become more specific and refined.
3.) Related items not included are: Outside Plant, structured cabling systems, voice/data electronics, access control, surveillance systems, specialty lighting fixtures and dimmer controls, traditional white boards, computers and Smart Building Systems.
4.) Highlighted Rows above may be accounted for in General Construction cost estimate.

Included in the Cost of Construction.

THE PAGE IS INTENTIONALLY LEFT BLANK.

APPENDIX

A. CONCEPTBOARD (KEEP LOSE FIX CREATE)

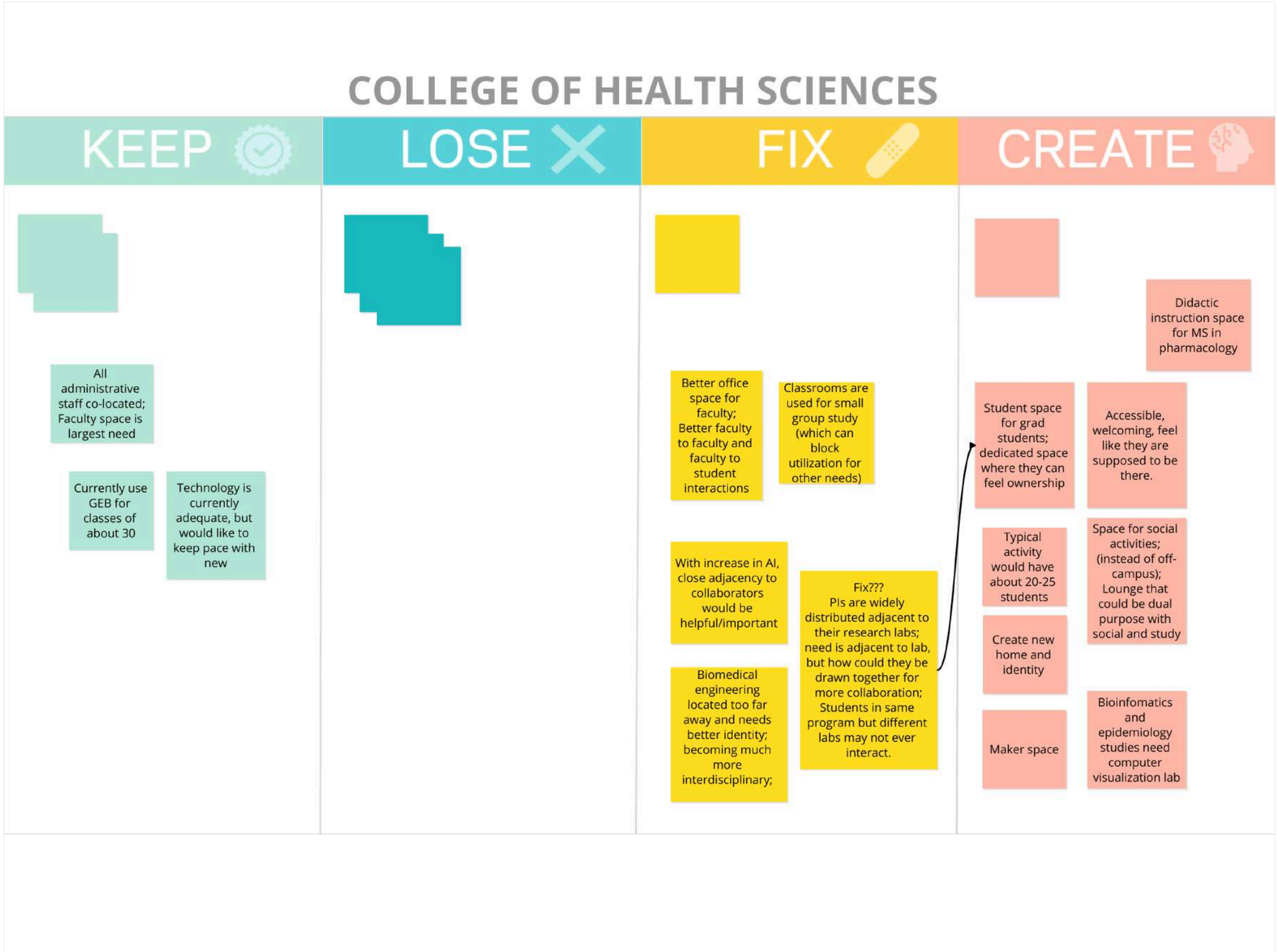
B. SURVEY RESULTS

C. HIGH PERFORMANCE BUILDING REQUIREMENT

A.

CONCEPT BOARD

The fololwing diagrams are part of an exercise called "Keep, Lose, Fix, Create." The exercise allows the users to voice what's working and what isn't working.



COLLEGE OF HEALTH PROFESSIONS

KEEP

GEB has newly renovated PT/OT spaces

Didactic spaces in GEB are currently adequate, but new programs could increase need

Adjacencies
Current collaborative programs:
Center for health systems improvement;
preventative medicine;

LOSE

Walls and barriers currently blocking faculty to faculty, students to students, faculty to students

FIX

Improve adjacencies of motion lab; has had issues in basement space; make it more interdisciplinary;
Space for exam that is more private than open area;
If available would prefer to move into new building

Small group learning spaces, that could also be used for research or collaboration; currently going to GEB for makeshift space

Parking or drop off to support

Wet labs and dedicated research space; currently requesting from others

CREATE

Bachelors of Health Sciences; partnership with community colleges to help with pipelines with other programs

Identity and presence on campus

New program - Cardiac rehabilitation (40 students/yr)

New program - Clinical nutrition (20ish class)

New program - Audiology program in Memphis (expand Knoxville)

Collaborative space

Space for lectures and events (multi purpose)

Dry labs - computer study with community participants; informatics; collaboration space where students could go and work with professors

Clinical footprint sized that multiple disciplines could be in same space

Accessible and welcoming space, from parking thru entry to internal spaces

ACADEMIC PLANNING

KEEP

Keep reputation that they are educating and training for the State of TN

State of the art education (technology)

Classroom in teaching and learning building 920 is booked frequently; Has soft furniture that supports small group and movable tables

LOSE

Lose silos

tiered lecture classrooms (single mode) Don't add more

FIX

CHIPs technology is not as futureproof / adaptable to sustain into future

Technology needs connection other campuses

Some buildings on campus feel prestigious, but also aged and dated.
Find ways to help recruit (students and faculty) with the campus and architecture

overall space utilization

M2 attendance not as strong, possibly due to M1 being present for labs; active learning modalities could help

improve recruiting: better recruiting of faculty through showing focus on students; engaging with students;

CREATE

Wider variety of learning spaces
Evidence based approach pedagogy
More group study and adaptable education spaces

Active learning; students to cluster in groups, move furniture around, write on marker boards; synchronous with faculty during class

Flexibility to support spectrum of teaching styles

IPE comes from opportunity of students being in the same place at the same time, not necessarily due to technology or design of classroom

space for spontaneous interprofessional education
Currently doing well for big events, but want more chances for IPE encounters

COLLEGE OF MEDICINE

KEEP

Fantastic group of faculty, residents, fellows, and students; Keep the mission oriented and mission driven culture

LOSE

Disjointed connections between departments (as much as feasible)

Some partner institutions have space that are less than ideal; Would be preferred to not have to depend on them for some spaces; Radiology at Regional One used as example

FIX

CHIPs is highly used and multidisciplinary; M1 and M2 students sometimes have trouble scheduling time there.

Team based learning is currently in 920 building; will need to be replaced

CREATE

Common area for students; area for studying around other students

Space for departments to connect

A space to be proud of displaying to prospective students, faculty, etc. Recruiting and general (donors, alumni)

8-10 bed GCRC (Gen Clinical Research Center) suite (clinical trials)

TEACHING AND LEARNING SPACES

KEEP

The collegiate culture. - for students and faculty.

Students help each other vs competition.

LOSE

Outdated study spaces

Dispersed nature of faculty offices. - need a true office space with a departmental structure.

FIX

The student study spaces - need space that is solely dedicated to the COM.

Technology and Zoom capabilities.

All of the rooms are not accesssible.

Address parking issues.

Not enough waterclosets for the building - especially for females. - more unisex restrooms

Need for additional testing space.

Not enough outlets in the library - deters students from studying there

CREATE

Testing space for students with accommodations. -students with additional needs during exams.

Space that accommodates for 25% growth in each program.

Need more classrooms and auditorium spaces.

Implement a more social learning community.

Create a variety of types of student study spaces at all hours

Need a space where students can hangout and interact - lounge and respite area with coffee

Areas dedicated for the four houses - named after famous alumni.

The new building should include space for the PA program.

Need space to accommodate match day. **350-400 people** friends and family

Need a few more sim. spaces like in CHIPS.

Create a space where M1 & M2 can have combined sessions and lectures.

White coat ceremony - 180 students > 4-5 people with them.

Need multipurpose/ flex space.

COLLEGE OF MEDICINE - SIMULATION SPACES

KEEP

Flat classrooms and flexible group work spaces

Keeping simulation in CHIPS; currently very effective to have simulation co-located in state of the art facility

Current spaces are doing well for IPE simulation

Simulation on neutral turf to support multiple colleges

LOSE

Enclosed ref. and eq rooms. Spaces designed for one purpose.

Carpet (need easier to maintain surfaces, EVS,)

FIX

Most teaching spaces max around 100; Need some larger spaces up to 200; Event space / conference space

Skills labs are closest to capacity and could use expansion; Would renovate to include within CHIPS ideally to keep simulation collocated and neutral turf

CREATE

Additional flat classroom and group work space

Virtual anatomy (larger than current space and flexible) (not currently doing virtual anatomy)
Need alternates to full immersion for learners who struggle with VR env

Wellness rooms (prayer, pumping and ref., space for cultural diversity)

Expand capacity to support non-student learners (eg. conferences with ability to utilize simulation space)

Event space (200-250pp) (other facilities successfully utilize atrium space)

Innovation space with partner institutions

Virtual / telemedicine simulation

IPE - more flat classroom could support growth (current CHIPS can accommodate about 100)

COLLEGE OF MEDICINE - BASIC SCIENCES

KEEP

- TCRB research facilities are pretty good

LOSE

- Silos of colleges
- Long walks to get to other departments

FIX

- **Need decent building for administration**
- MRC is not used; Occupies a 1/3 of TCRB; Only use sequencer
- Nash needs to be completed for programs to move into and allow priority in COM for other needs
- Safe connections between facilities (eg. tunnels or bridges)
- Crossing Madison can be scary

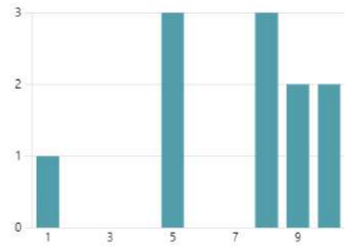
CREATE

- Create recruitment opportunities with new building for leadership and faculty positions
- Dining facilities
- Bicycle and shower facilities
- Vivarium space to support research; holding, procedure, and surgery; Mostly rodents and some zebrafish
- Medical students need a home
- Ambulatory clinic
- Synergies between interdisciplinary research
- Build within budget now, but allow for future expansion

CLINICAL TRANSLATIONAL RESEARCH - DAY 1

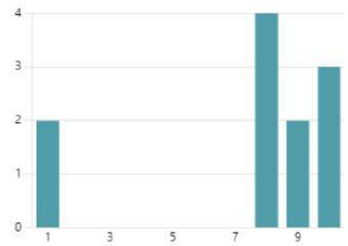
1. **Clinical Research** (0 point)

7.09
Average Rating



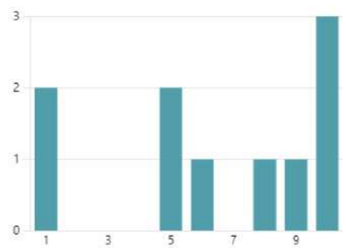
2. **Translational Research** (0 point)

7.45
Average Rating



3. **Core Platforms** (0 point)

6.50
Average Rating



4. Other Categories of Research we did not include? (0 point)

0
Responses

Latest Responses

DAY 1

B.

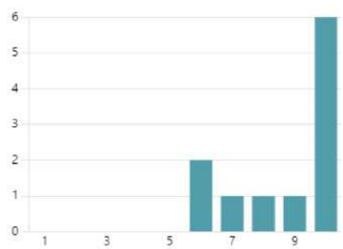
SURVEY RESULTS

During the programming process we conducted a series of surveys from users to gain quantitative and qualitative insight on the goals and aspirations for the new College of Medicine Interdisciplinary Building. Surveys were kept anonymous in most circumstances.

DIGITAL HEALTH INNOVATION - DAY 1

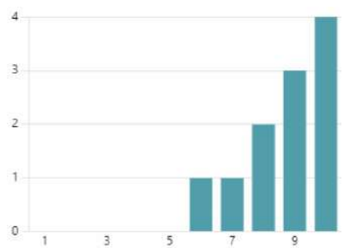
1. **Digital Health Informatics**

8.73
Average Rating



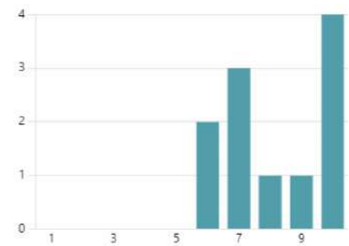
2. **Immersive Technologies**

8.73
Average Rating



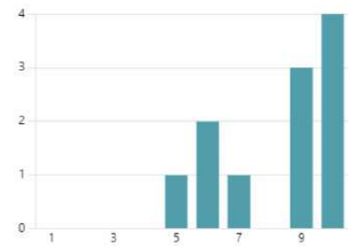
3. **Digital Therapeutics**

8.18
Average Rating



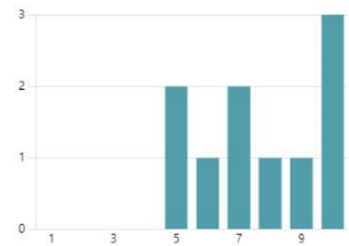
4. **Wearables/Sensors**

8.27
Average Rating



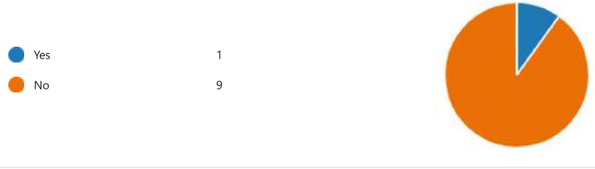
5. **Health Makerspaces**

7.70
Average Rating

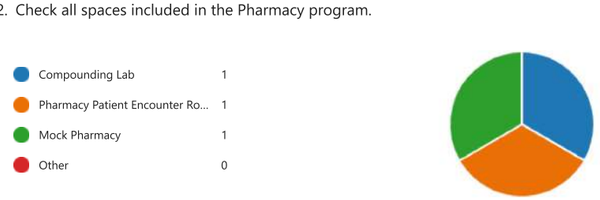


HEALTH PROFESSIONS - DAY 1

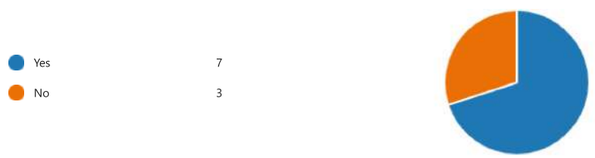
1. **Pharmacy**



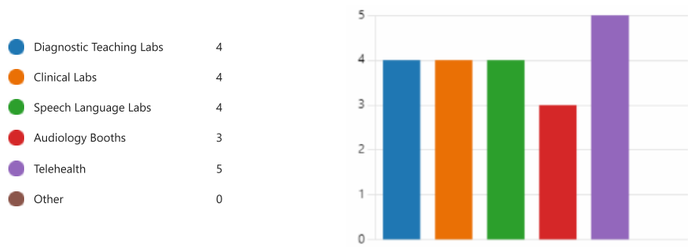
2. Check all spaces included in the Pharmacy program.



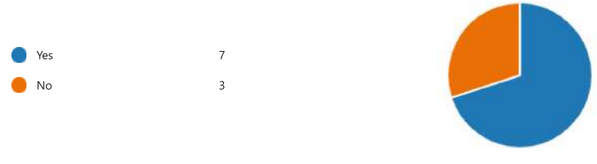
3. **Health Professions**



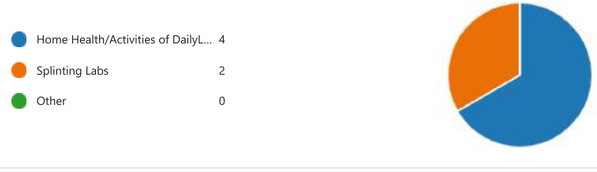
4. Check all spaces included in the Health Profession program.



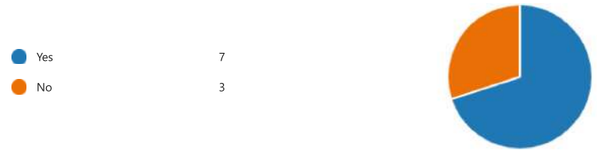
5. **Occupational Therapy**



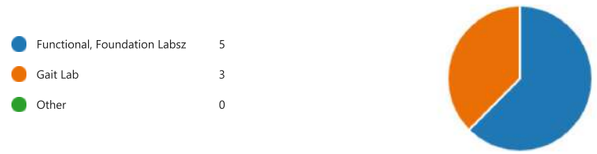
6. Check all spaces included in the Health Profession program.



7. **Physical Therapy**



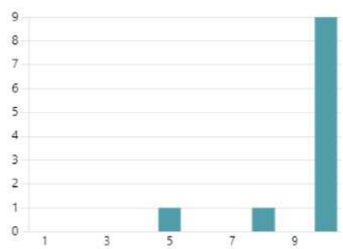
8. Check all spaces included in the Physical Therapy program.



MEDICAL EDUCATION - DAY 1

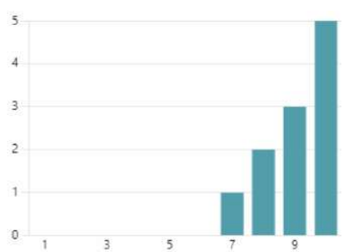
1. **Active Learning Spaces - Large Format**

9.36
Average Rating



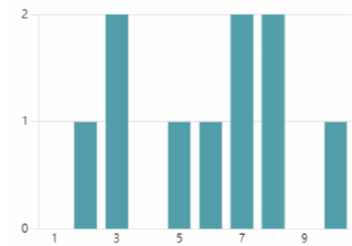
2. **Small Group Rooms**

9.09
Average Rating



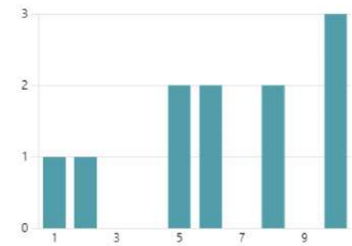
3. **Hi-Fidelity Simulation Spaces**

5.90
Average Rating



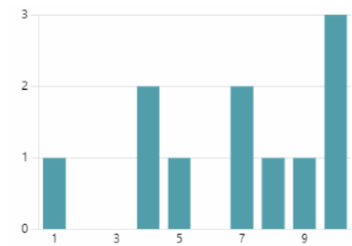
4. **Standardized Patient Exam Rooms**

6.45
Average Rating



5. **Surgical Skills/Robotics**

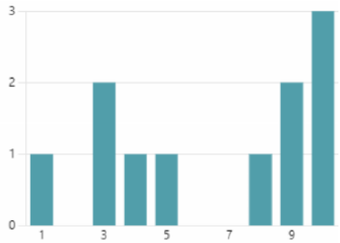
6.82
Average Rating



NURSING - DAY 1

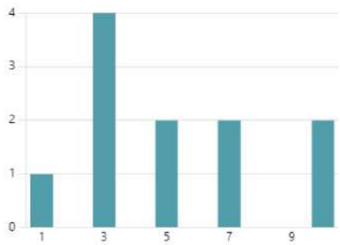
1. **Clinical Skills/Task Training**

6.55
Average Rating



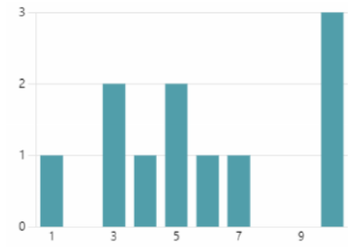
2. **Simulation Spaces**

5.18
Average Rating



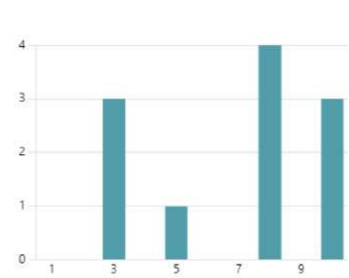
3. **Standardized Patient Exam Rooms**

5.82
Average Rating



4. **Debrief Rooms**

6.91
Average Rating



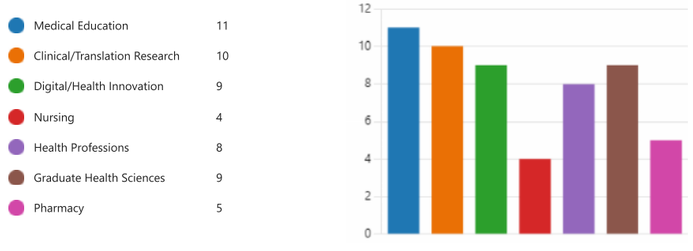
5. Any other spaces that we hope to see in the program?

0
Responses

Latest Responses

OCCUPANT DISCOVERY - DAY 1

1. In the future, which programs do you anticipate in the building? Select all programs that apply. (0 point)



2. Are there any programs we are missing, if so, please add below. (0 point)

5
Responses

Latest Responses

"Dentistry Disaster lab, study, library space Really like the idea of some innovati..."

"Some clinical spaces "

"Na"

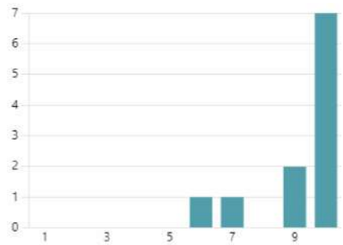
2 respondents (**40**%) answered **Dentistry** for this question.

DAY 2

CLINICAL HEALTH RESEARCH - DAY 2

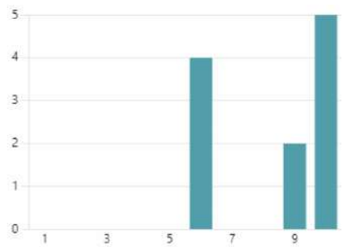
1. **Clinical Research** (0 point)

9.18
Average Rating



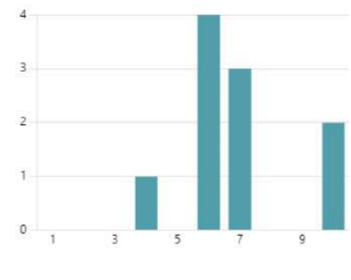
2. **Translational Research** (0 point)

8.36
Average Rating



3. **Core Platforms** (0 point)

6.90
Average Rating



4. Other Categories of Research we did not include? (0 point)

4
Responses

Latest Responses

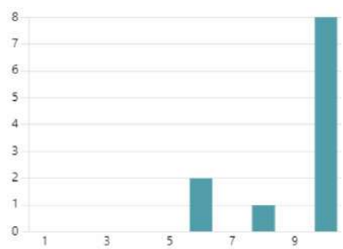
"Non wet lab research. Community based research. "

"Informatics"

DIGITAL HEALTH INNOVATION - DAY 2

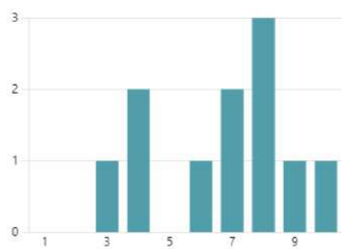
1. **Digital Health Informatics**

9.09
Average Rating



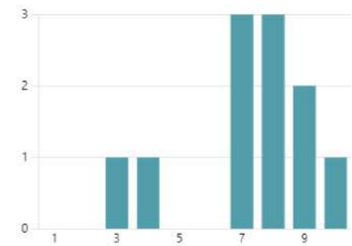
2. **Immersive Technologies**

6.73
Average Rating



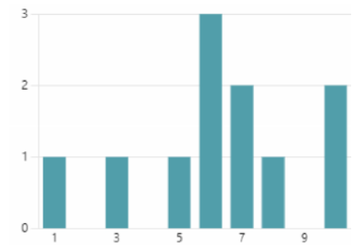
3. **Digital Therapeutics**

7.27
Average Rating



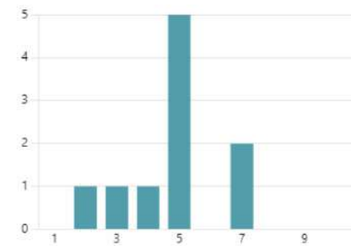
4. **Wearables/Sensors**

6.27
Average Rating



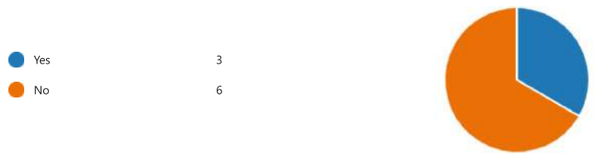
5. **Health Makerspaces**

4.80
Average Rating

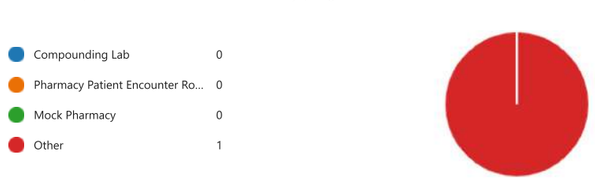


HEALTH PROFESSIONS - DAY 2

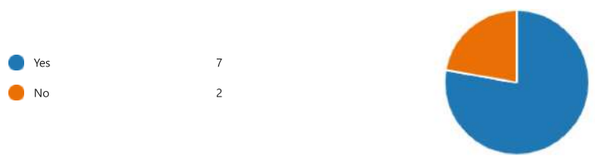
1. **Pharmacy**



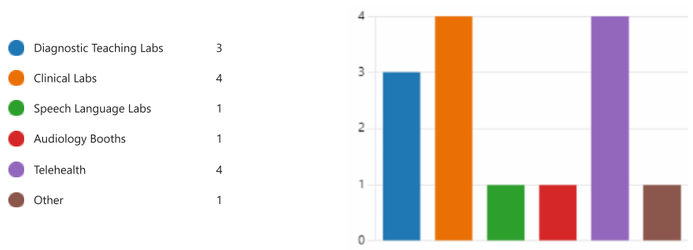
2. Check all spaces included in the Pharmacy program.



3. **Health Professions**

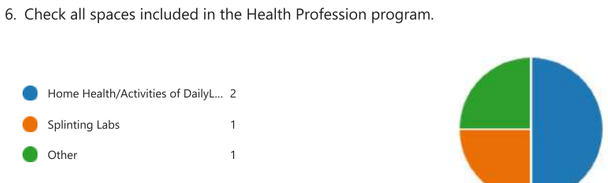


4. Check all spaces included in the Health Profession program.



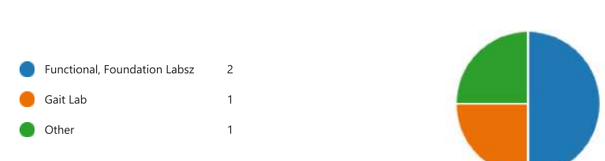
5. **Occupational Therapy**

6. Check all spaces included in the Health Profession program.



7. **Physical Therapy**

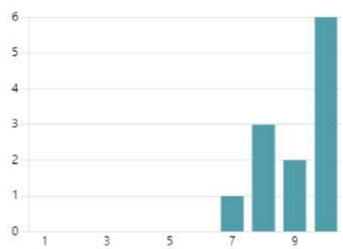
8. Check all spaces included in the Physical Therapy program.



MEDICAL EDUCATION - DAY 2

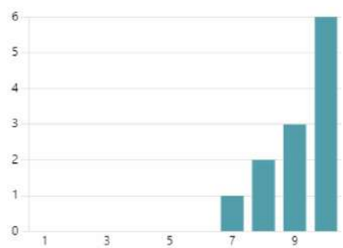
1. **Active Learning Spaces - Large Format**

9.08
Average Rating



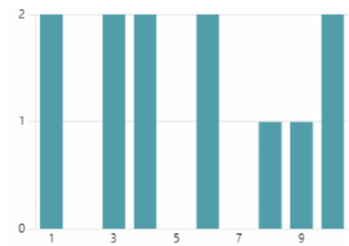
2. **Small Group Rooms**

9.17
Average Rating



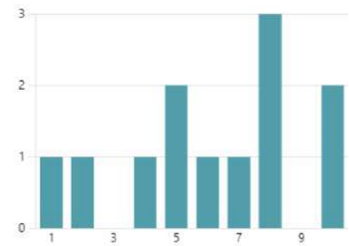
3. **Hi-Fidelity Simulation Spaces**

5.42
Average Rating



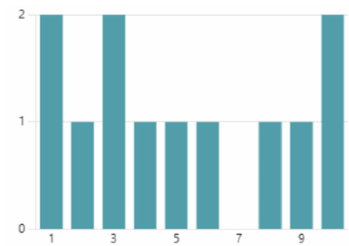
4. **Standardized Patient Exam Rooms**

6.17
Average Rating



5. **Surgical Skills/Robotics**

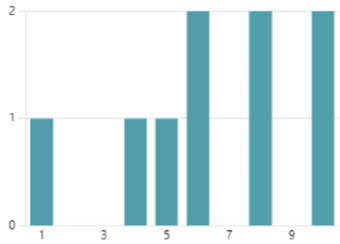
5.17
Average Rating



NURSING - DAY 2

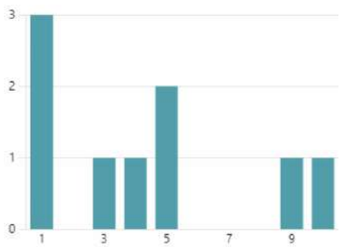
1. **Clinical Skills/Task Training**

6.44
Average Rating



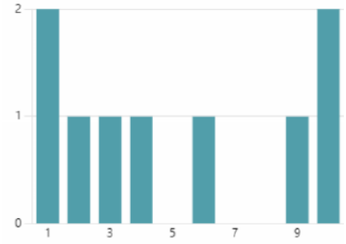
2. **Simulation Spaces**

4.33
Average Rating



3. **Standardized Patient Exam Rooms**

5.11
Average Rating



4. **Debrief Rooms**

6.22
Average Rating

5. Any other spaces that we hope to see in the program?

1
Responses

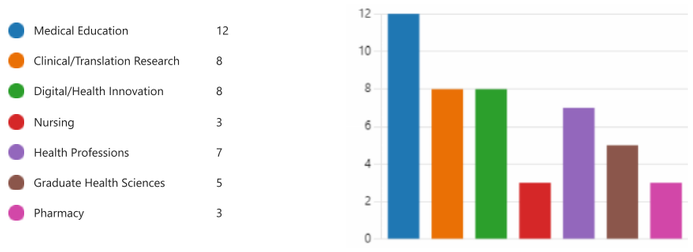
Latest Responses
"Adequate space for Medicine/nursing student interprofessional education activ..."

1 respondents (**100**%) answered **Medicine/nursing** for this question.

Medicine/nursing
education activities **Adequate space**

OCCUPANT DISCOVERY - DAY 2

1. In the future, which programs do you anticipate in the building? Select all programs that apply. (0 point)



2. Are there any programs we are missing, if so, please add below. (0 point)

6
Responses

Latest Responses
"Dentistry"

2 respondents (**33**%) answered **Dentistry** for this question.

SUCCESS IDENTIFIERS - DAY 2

Success Identifiers

12
Responses

01:34
Average time to complete

Active
Status

1. Identify three words to define transformative success for the new facility.

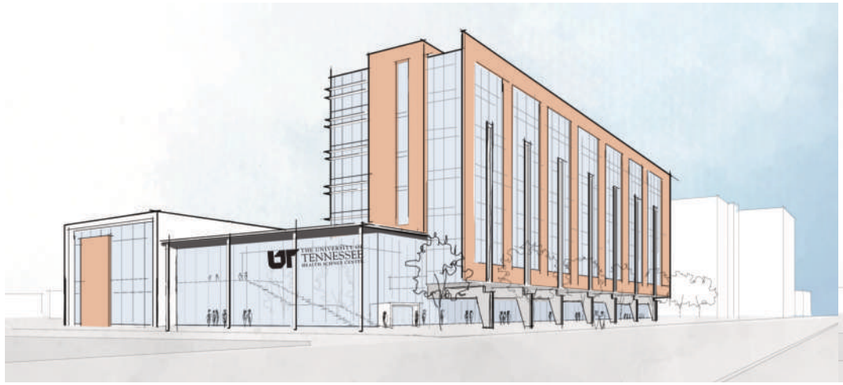
12
Responses

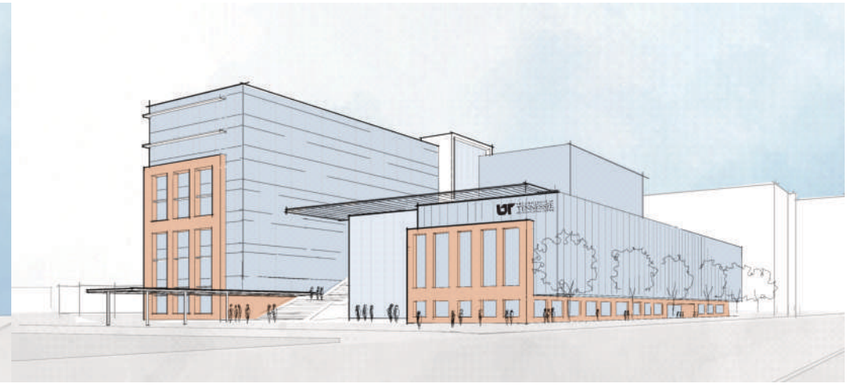
Latest Responses
"Collaboration, represent-pillars, monumental"
"Definitive, Inviting, timeless"
"Student, faculty friendly"

Update

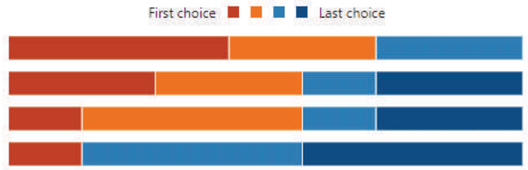
3 respondents (**27**%) answered **Functional** for this question.

MASSING SELECTION SURVEY



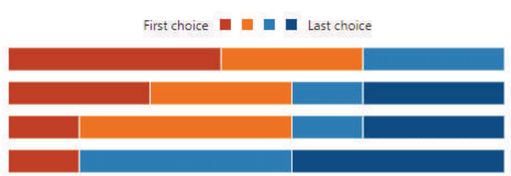


Rank	Options
1	Pavilions - Health Commons
2	Pavilions - Terrace
3	Courtyard
4	Stitch



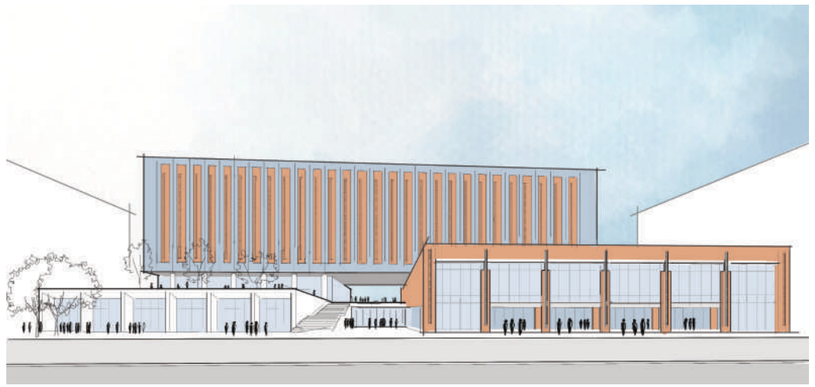
ID ↑	Name	1st	2nd	3rd	4th
1	anonymous	Pavilions - Terrace	Courtyard	Pavilions - Health Commons	Stitch
2	anonymous	Stitch	Pavilions - Terrace	Pavilions - Health Commons	Courtyard
3	anonymous	Courtyard	Pavilions - Health Commons	Stitch	Pavilions - Terrace
4	anonymous	Pavilions - Terrace	Pavilions - Health Commons	Stitch	Courtyard
5	anonymous	Pavilions - Health Commons	Pavilions - Terrace	Courtyard	Stitch
6	anonymous	Pavilions - Health Commons	Courtyard	Stitch	Pavilions - Terrace
7	anonymous	Pavilions - Health Commons	Courtyard	Pavilions - Terrace	Stitch

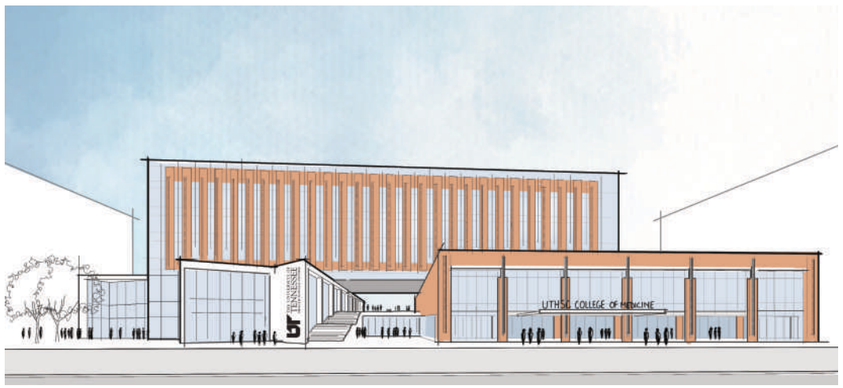
Rank	Options
1	Pavilions - Health Commons
2	Pavilions - Terrace
3	Courtyard
4	Stitch

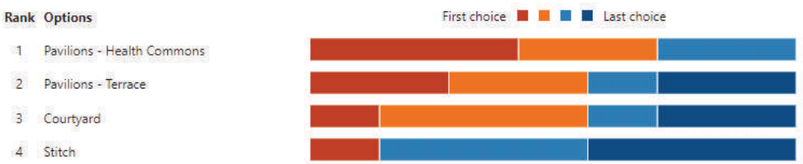


ID ↑	Name	1st	2nd	3rd	4th
1	anonymous	Pavilions - Terrace	Courtyard	Pavilions - Health Commons	Stitch
2	anonymous	Stitch	Pavilions - Terrace	Pavilions - Health Commons	Courtyard
3	anonymous	Courtyard	Pavilions - Health Commons	Stitch	Pavilions - Terrace
4	anonymous	Pavilions - Terrace	Pavilions - Health Commons	Stitch	Courtyard
5	anonymous	Pavilions - Health Commons	Pavilions - Terrace	Courtyard	Stitch
6	anonymous	Pavilions - Health Commons	Courtyard	Stitch	Pavilions - Terrace
7	anonymous	Pavilions - Health Commons	Courtyard	Pavilions - Terrace	Stitch

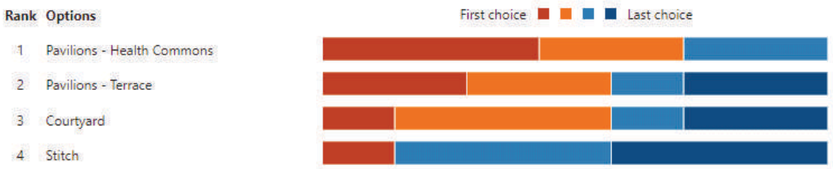
MASSING SELECTION SURVEY







ID ↑	Name	1st	2nd	3rd	4th
1	anonymous	Pavilions - Terrace	Courtyard	Pavilions - Health Commons	Stitch
2	anonymous	Stitch	Pavilions - Terrace	Pavilions - Health Commons	Courtyard
3	anonymous	Courtyard	Pavilions - Health Commons	Stitch	Pavilions - Terrace
4	anonymous	Pavilions - Terrace	Pavilions - Health Commons	Stitch	Courtyard
5	anonymous	Pavilions - Health Commons	Pavilions - Terrace	Courtyard	Stitch
6	anonymous	Pavilions - Health Commons	Courtyard	Stitch	Pavilions - Terrace
7	anonymous	Pavilions - Health Commons	Courtyard	Pavilions - Terrace	Stitch



ID ↑	Name	1st	2nd	3rd	4th
1	anonymous	Pavilions - Terrace	Courtyard	Pavilions - Health Commons	Stitch
2	anonymous	Stitch	Pavilions - Terrace	Pavilions - Health Commons	Courtyard
3	anonymous	Courtyard	Pavilions - Health Commons	Stitch	Pavilions - Terrace
4	anonymous	Pavilions - Terrace	Pavilions - Health Commons	Stitch	Courtyard
5	anonymous	Pavilions - Health Commons	Pavilions - Terrace	Courtyard	Stitch
6	anonymous	Pavilions - Health Commons	Courtyard	Stitch	Pavilions - Terrace
7	anonymous	Pavilions - Health Commons	Courtyard	Pavilions - Terrace	Stitch

ARCHITECTURE CONCEPT SURVEY

Survey Prompt:

View from across Madison Ave. The lower two floors are student focused and come to the foreground. A 2-story central spine filled with student commons and amenity spaces creates a new axis on campus that can extend and connect with the 900s buildings and Coleman buildings to the north, and the future Phase II building to the south. Academic classroom spaces and interdisciplinary spaces are located off of this glass clad circulation space. The push and pull of building form creates multiple masses that could be uniquely branded with signage to recognize and identify the myriad of program within the building. The workplace tower massing is articulated to reflect the rich character of the campus, while becoming lighter at the edges with a glass expression that feels forward thinking and contemporary. Please share any thoughts or comments you have on this image.

View from across Madison Ave

Steering Committee Responses:

"The glass wall and staircase provide a modern feel and as someone mentioned in our last meeting, bring energy to the building. The tower being on the backside of the building makes it more approachable from Madison while providing opportunities for branding that can be seen from far away. "

"I really like the look and two stories on the front and the tower set back off the street, and especially the different "wings" of sorts with the stairs and walkway in the middle. I also like having some greenery at the corner, and the drive thru on the other end would be needed for events, etc. "

"Massing-wise, and lime-stone base-wise, I like the forms. I'm assuming the red portions are brick? The brick appears to be floating in a plane of glass and not grounded."

"I believe this is an excellent response to the program including siting for a campus "front door" and a branded facility that responds to the campus needs in terms of location and appearance."

"I love the architectural design. I appreciate how the building captures architectural design from other buildings throughout the campus with a modern appeal.

"The design and integration of the building from across Madison Ave seem thoughtfully considered. Here are some observations and comments: 1. Student-Focused Lower Floors - The emphasis on the lower two floors being student-focused is a great approach. By bringing these spaces to the foreground, it makes them more accessible and inviting for students, encouraging interaction and engagement. 2. Central Spine - A 2-story central spine filled with student commons and amenity spaces sounds like a brilliant idea. This axis not only creates a vibrant, active zone within the building but also integrates seamlessly with the campus by connecting to existing buildings such as the 900s buildings and Coleman buildings to the north, as well as future developments like Phase II to the south. 3. Glass Clad Circulation Space - Using glass for circulation spaces offers several benefits: Transparency: It promotes openness, making the interior feel connected with the exterior environment. Natural Light: It allows natural light to penetrate deeper into the building, creating a more pleasant and energy-efficient space. Visibility: It visually connects different areas of academic classroom spaces and interdisciplinary spaces, fostering collaboration among students and faculty. 4. Building Form Dynamics - The push and pull in building form creating multiple masses is an intriguing architectural feature. By allowing unique branding with signage for different programs within the building, it can enhance navigation and recognition while maintaining an organized structure. 5. Workplace Tower Massing - The integration of rich campus character into workplace tower massing is commendable: Character Reflection: This maintains a cohesive aesthetic that respects and complements existing architecture. Contemporary Edge: The use of lighter, glass expressions at the edges adds a modern touch, symbolizing progressiveness while blending with traditional elements.

Survey Prompt:

View from across Madison Ave, elevated to level 2 to help visualize site elements and urban edge. From this perspective we can see how the form pulls back from the corner of Madison Ave and Dudley to create a welcoming green space. This outdoor space flows up and through the building to connect to the roof of TriMetis and create a strong pedestrian connection to the heart of the campus. To the right of image a small vehicular drop-off is provided adjacent to the entrance at the student commons and adjacent to the large classrooms. Please share any thoughts or comments you have on this image.

Steering Committee Responses:

"Welcoming and visually appealing. "

"Really good branding and naming opportunities in different areas, facing different directions. Unique look to buildings, while maintaining similarity to other campus buildings. Really like having the green space and trees. "

"I believe the integration of the TriMetis facility into the design of the COMIB is a natural. I agree with the drop off and welcoming green space which also responds to the TriMetis facility integration."

"Great drop-off location. The design makes the building appear inviting from many angles. "

"The elevated view from across Madison Ave at level 2 offers a fantastic perspective on the site's elements and urban edge. Here are some detailed thoughts and comments:

1. Pullback from Madison Ave and Dudley Corner

Welcoming Green Space: The decision to pull back the form from the corner to create a welcoming green space is excellent. It provides an inviting entrance and a buffer between the building and the busy streets.

Urban Integration: This green space integrates well with the urban fabric, enhancing the pedestrian experience and offering a calm, natural area amidst an urban setting.

2. Outdoor Space Flow

Connection Through Building: The design allows this outdoor space to flow up through the building, creating seamless indoor-outdoor transitions. This enhances accessibility and encourages movement throughout different levels of the structure.

Roof Connection to TriMetis: Connecting this flow to the roof of TriMetis strengthens pedestrian connectivity, ensuring that students and staff can easily navigate through various parts of campus while enjoying open-air environments.

3. Pedestrian Connectivity

Strong Campus Connection: By fostering strong pedestrian connections to the heart of campus, this design encourages walking, social interactions, and enhances overall campus cohesion.

Elevation Advantage: The elevated perspective helps visualize how these pathways might be used by pedestrians, adding layers of usability for different times of day or weather conditions.

4. Vehicular Drop-Off Area

Strategic Placement: The small vehicular drop-off area adjacent to student commons and large classrooms is very strategically placed. It ensures easy access for those who need it without disrupting pedestrian flow.

Convenience: This adds convenience for students, faculty, or visitors who may need quick access to these key areas.

ARCHITECTURE CONCEPT SURVEY

Survey Prompt:

View from the roof of TriMetis looking toward a pedestrian entry at level 2 of the new building. The workplace tower has shifted centrally between Madison and TriMetis allowing student focused spaces to be forefront on both sides of the building. The transparent masses that extend out at this level contain commons, small, and medium sized classrooms. By connecting to the existing green roof above TriMetis, the building enhances the central core of the campus creating a sense of place and connectivity. The tower extending vertically on this facade creates a visual marker and opportunity for additional signage visible from Union Ave. Please share any thoughts or comments you have on this image.

Steering Committee Responses:

"Brilliant use of the TriMetis roof space, great way to connect building to the main portion of campus. The glass elements and trellis add interest and modernism. Again, very approachable and visually appealing. "

"I think this is a great, unique space and opportunity to join with the existing green space and walkway, and hopefully encourage pedestrian traffic in the middle of campus. And, more good signage and branding opportunities, and opportunities to highlight the life and visibility of people in the building on the lower floors here too. "

"The only issue I would like to see is an eastern elevation showing how this building can be integrated with the facility ultimately planned for the Union site."

"I'm excited about the connectivity to the campus. This is a very pleasant area to walkthrough."

"Excellent view from Union. Additional signage for branding and naming on this facade is helpful. This space creates an outdoor gathering venue for campus wide engagement activities."

"The view from the roof of TriMetis looking towards the pedestrian entry at level 2 of the new building offers a comprehensive glimpse into how this structure integrates with and enhances the campus. Here are some detailed observations and comments:

1. Central Positioning of Workplace Tower

Strategic Shift: The central placement of the workplace tower between Madison and TriMetis is a strategic decision, allowing student-focused spaces to be prominently featured on both sides. Balanced Access: This positioning ensures that key areas such as commons, classrooms, and other student-centric spaces are easily accessible from multiple directions.

2. Transparent Masses - Visibility and Openness: The transparent masses extending out at this level contain commons as well as small and medium-sized classrooms, promoting visibility and openness. This transparency can foster a sense of inclusivity and collaboration among students.

Light Penetration: These glass-clad sections will likely allow natural light to flood interior spaces, creating a more inviting atmosphere while reducing energy consumption.

3. Connection to Existing Green Roof

Enhanced Connectivity: By connecting to the existing green roof above TriMetis, this design enhances connectivity within the central core of the campus. This physical link promotes movement between buildings and encourages use of outdoor spaces. Sense of Place: The green roof integration helps create a cohesive environment, giving students and faculty a strong sense of place within the campus.

4. Visual Marker with Vertical Tower Extension

Signage Opportunity: The vertical extension of the tower on this facade creates an excellent visual marker for additional signage visible from Union Ave. This can help in wayfinding while simultaneously branding the building's identity.

Modern Aesthetics: Extending vertically adds to the building's contemporary appeal, symbolizing growth and forward-thinking design principles."

Survey Prompt:

View from roof of TriMetis. This view moves closer to the entry points at level 2, where students and faculty can walk along the central axis of campus and connect to GEB, CHIPS, Library, and other core buildings of campus. A few skylights are shown to allow some natural light to access the large level 1 floor plate containing larger classrooms. Some sunshades and trellis are provided on this facade to allow transparent and inviting student spaces. Please share any thoughts or comments you have on this image.

Steering Committee Responses:

"The trellis and glass really work well together!"

"Similar comments to previous photo. I like the glass wall or something similar for the room on the right and larger space on bottom left to show movement and life in building. "

"Same as [previous], facades need something to anchor them."

"I am concerned about the addition of the skylight but otherwise like the fact that this facility will anchor what will be the primary connection of the GEB, Pharmacy, CHIPs, Library and other core buildings of the campus."

"I am concerned about the addition of the skylight but otherwise like the fact that this facility will anchor what will be the primary connection of the GEB, Pharmacy, CHIPs, Library and other core buildings of the campus."

"With this being the central axis of campus and connect to GEB, CHIPS, Library, and other core buildings of campus, people can get to where they need to be in a matter of minutes. This area also allows for being able to host events outside on the green space."

"The closer view from the roof of TriMetis focusing on the entry points at level 2 provides a detailed look at how students and faculty can navigate and interact with this new building. Here are some thoughts and comments:

1. Central Campus Axis

Connectivity: The ability for students and faculty to walk along the central axis of campus and connect seamlessly to GEB, CHIPS, Library, and other core buildings is highly beneficial. This ensures ease of movement and promotes a cohesive campus experience.

Integration: This design effectively integrates the new building into the existing campus layout, enhancing overall functionality.

2. Skylights for Natural Light

Natural Illumination: The inclusion of skylights is a smart move to allow natural light to penetrate into the large level 1 floor plate, particularly benefiting larger classrooms. This can create a more pleasant learning environment while also reducing reliance on artificial lighting.

Energy Efficiency: Leveraging natural light helps in energy conservation, aligning with sustainable building practices.

3. Sunshades and Trellis

Climate Control: The sunshades and trellis provided on this facade not only add aesthetic value but also help in controlling the amount of sunlight entering the building. This can keep interior spaces cooler during hot days, improving comfort for occupants.

Inviting Spaces: These elements make student spaces more inviting by providing shaded areas where students can relax or study comfortably."

"In thinking about utilization of this outdoor space, is the nearby access for vehicles? IE delivery vehicles to bring in tents, chairs, etc; as well as food trucks."

ARCHITECTURE CONCEPT SURVEY

Survey Prompt:

View of building at a campus level. This is a new view from a bird's eye perspective to help show the new buildings relationship to the broader campus and adjacent clinical partners. Please share any thoughts or comments you have on this image.

Steering Committee Responses:

It fits in as if were meant to be there. Almost like a tie-in that connects the campus together from all points."

"Fills a vacant space in a key area, while keeping some green space and encouraging walkability of campus - and adding great new branding and naming opportunities. Also great future opportunities for more connection and growth with old Holiday Inn space which will be come open and open space on Union Ave. side of building."

"I think the massing is fine and the courtyard spaces are nice. "

"I think the massing is fine and the courtyard spaces are nice. "

"The bird's eye perspective of the building offers an excellent vantage point to understand its relationship to the broader campus and adjacent clinical partners. Here are some detailed observations and comments:

1. Integration with Broader Campus

Strategic Positioning: The new building appears well-positioned within the broader campus layout, ensuring easy access to core academic buildings like GEB, CHIPS, and the Library.

Campus Flow: This view highlights how pathways and green spaces flow seamlessly between the new building and existing structures, promoting a cohesive campus environment.

2. Relationship with Clinical Partners

Proximity Benefits: Being close to clinical partners can enhance collaboration opportunities for students and faculty involved in healthcare-related programs.

Shared Resources: This proximity allows for potential shared resources and facilities, which could enrich educational experiences through practical exposure.

3. Architectural Harmony

Visual Cohesion: The new building's design seems to harmonize well with existing architectural styles on campus while introducing modern elements that add contemporary appeal.

Green Spaces: The incorporation of green spaces around the building enhances visual aesthetics and provides areas for relaxation and outdoor activities.

4. Accessibility and Navigation

Entry Points: From this perspective, it's clear that multiple entry points are strategically placed to facilitate easy access from various parts of the campus.

Pedestrian-Friendly Design: Pathways appear pedestrian-friendly, encouraging walking and making navigation intuitive for students, faculty, and visitors.

5. Future Expansion Considerations

Scalability: The layout shows potential for future expansions or additions without disrupting existing structures or pathways.

Adaptive Spaces: Open areas around the building may be adapted for future needs as the campus grows."

High Performance Building Requirements - July 2021

CHECKLIST / TRACKING FORM

Phase	Points Summary
Applicable	88
Minimum	44
Programming	52
SD	0
DD	0
CD	0
Closeout	0

SBC Number:	540/000-01-2019
Project Name:	UTHSC College of Medicine & Interdisciplinary Building
Date:	
Project Type:	New_Construction
Project Phase:	Programming
Category from Applicability Tree:	
Compliance Check:	Project Complies with the HPBr

Helpful Hints:

1) Refrain from copying and pasting data in Column C, "Applicable to Building/Site Scope?" as this can cause errors in some rows.
2) If any cell highlights red below, then you have a point allocated to a credit that is "not applicable." This is an error. Simply delete the contents of the cell to reset.

3) In column C, if you have copied or pasted in this column and a cell highlights all red, delete the contents of that cell to correct the error.
4) If no points are available in the dropdown, this means you have listed that credit as "not applicable" and points cannot be attempted.

		Project Team Representatives	Initials
O	-	Owner	
C	-	Contractor	
ME	-	Mechanical Engineer	
EE	-	Electrical Engineer	
CE	-	Civil Engineer	
A	-	Architect	
CxA	-	Commissioning Agent	
LA	-	Landscape Architect	
Other	-	Other	

					Programming			SD			DD			CD			Closeout				
				Checklist Total	52	31	22	0	0	105	0	0	105	0	0	105	0	0	105		
22 Points			Land Management	LM Total:	16	2	4	0	0	22	0	0	22	0	0	22	0	0	22		Primary Credit Responsibility
Possible Points	Credit ID	Applicable to Building/Site Scope?	Description	Level:	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Comment: Describe implementation approach for each pursued credit. New comments should be appended to old comments at each project phase. If credits are neither pursued nor applicable, provide justification.	Role	Initials
1	LM1.1	No	Site Selection - Reuse Existing Buildings	Priority 2			1			1			1			1			1		O	0
1	LM1.2	Yes	**Site Selection -** Show preference for building on developed sites: Preserve farmland/habitat, wetlands, floodplains, public parkland	**Priority 1**	1		0			1			1			1			1		O	**0**
1	LM1.3	Yes	**Site Selection -** Brownfield Redevelopment - Remediate and Restore contaminated sites when possible	**Priority 2**			1			1			1			1			1		O	**0**
1	LM1.4	Yes	**Site Selection -** Urban Development - Locate building within existing infrastructure	**Priority 1**	1		0			1			1			1			1		O	**0**
1	LM2.1	Yes	**Site Disturbance -** Sediment and Erosion control during construction	**Required**	1		0			1			1			1			1		C	**0**
1	LM2.2	Yes	**Site Disturbance -** Limit site disturbance during construction to minimum development footprint	**Priority 1**	1		0			1			1			1			1		CE	**0**
1	LM3.1	Yes	**Transportation -** Plan for access to public transportation	**Priority 2**	1		0			1			1			1			1		O	**0**
1	LM3.2	Yes	**Transportation -** Provide bicycle storage for 5% of building occupants and shower/changing facilities for 0.5% of FTE occupants	**Priority 2**	1		0			1			1			1			1		CE	**0**
1	LM3.3	Yes	**Transportation -** Plan site to include preferred parking for carpooling for 5% of all spaces provided	**Priority 2**			1			1			1			1			1		CE	**0**
1	LM3.4	Yes	**Transportation -** Plan site to include preferred parking for low-emitting/fuel efficient vehicles for 5% of all spaces provided	**Priority 2**			1			1			1			1			1		CE	**0**
1	LM4.1	Yes	**Landscape Design -** Maximize vegetated open space	**Priority 2**	1		0			1			1			1			1		Other	**0**
1	LM4.2	Yes	**Landscape Design -** Native and drought tolerant planting	**Required**	1		0			1			1			1			1		Other	**0**
1	LM5.1	Yes	**Heat Island Reduction -** Non roof surface reflectivity and shading	**Priority 1**	1		0			1			1			1			1		CE	**0**
1	LM5.2	Yes	**Heat Island Reduction -** Reflective roof materials	**Priority 2**	1		0			1			1			1			1		A	**0**
1	LM6.1	Yes	**Stormwater Design -** Post development discharge rate and volume not to exceed Pre-development rate	**Priority 1**	1		0			1			1			1			1		CE	**0**
2	LM6.2	No	Stormwater Design - Reduce discharge rate and volume 25% on previously developed sites.	Priority 2		2	0			2			2			2			2		CE	0
1	LM6.3	Yes	**Stormwater Design -** Design to remove 80% Total Suspended solids from the average annual rainfall event. Verify local requirements.	**Priority 1**	1		0			1			1			1			1		CE	**0**
1	LM6.4	Yes	**Stormwater Design -** Design per TDEC BMP References	**Required**	1		0			1			1			1			1		CE	**0**
1	LM7.1	Yes	**Exterior Site Lighting -** Design exterior lighting power to be 10% less than is allowed by ASHRAE 90.1-2010, Section 9.4.3	**Priority 2**	1		0			1			1			1			1		EE	**0**
1	LM7.2	Yes	**Exterior Site Lighting -** Locate fixtures to minimize illuminance above the horizontal plane	**Priority 1**	1		0			1			1			1			1		EE	**0**
1	LM7.3	Yes	**Exterior Site Lighting -** Locate exterior fixtures to minimize light trespass at property lines. Document foot-candle levels at site boundary	**Priority 1**	1		0			1			1			1			1		EE	**0**
7 Points			Water Effciency	WE Total:	4	1	2	0	0	7	0	0	7	0	0	7	0	0	7		Primary Credit Responsibility
Possible Points	Credit ID	Applicable to Building/Site Scope?	Description	Level:	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Comment: Describe implementation approach for each pursued credit. New comments should be appended to old comments at each project phase. If credits are neither pursued nor applicable, provide justification.	Role	Initials
1	WE1.1	Yes	**Water Efficient Landscaping**, Utilize efficient irrigation technologies and planting measures	**Required**	1		0			1			1			1			1		ME	**0**
1	WE1.2	Yes	**Water Efficient Landscaping**, Non potable sources or no irrigation	**Priority 1**	1		0			1			1			1			1		A	**0**
1	WE2.1	Yes	**Wastewater Treatment & Conveyance:** On site treatment	**Priority 2**			1			1			1			1			1		ME	**0**
1	WE2.2	Yes	**Wastewater Treatment & Conveyance:** Utilize non potable water	**Priority 2**			1			1			1			1			1		ME	**0**
2	WE3.1	Yes	**Water Use Reduction -** Fixture flow and flush rates	**Required**	2		0			2			2			2			2		ME	**0**
1	WE3.2	Yes	**Water Use Reduction** - Utilize auto-flow / auto-flush valves	**Priority 2**		1	0			1			1			1			1		ME	**0**
37 Points			Energy Efficiency	EE Total:	11	10	16	0	0	37	0	0	37	0	0	37	0	0	37		Primary Credit Responsibility
Possible Points	Credit ID	Applicable to Building/Site Scope?	Description	Level:	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Comment: Describe implementation approach for each pursued credit. New comments should be appended to old comments at each project phase. If credits are neither pursued nor applicable, provide justification.	Role	Initials
1	EE1.1	Yes	**Commissioning -** Basic commissioning process	**Required**	1		0			1			1			1			1		CxA	**0**
3	EE1.2	Yes	**Commissioning -** Advanced commissioning process	**Priority 1**		3	0			3			3			3			3	Will UTC carry this contract?	CxA	**0**

C.

HIGH PERFORMANCE BUILDING REQUIREMENTS

The High Performance Building Requirement are Tennessee's baseline sustainability goals and achievements. A minimum score of 44 is required to meet the standard. However, during the programming phase the building is optimistic to achieve 52 total points across categories.

High Performance Building Requirements - July 2021
CHECKLIST / TRACKING FORM

Phase	Points Summary
Applicable	88
Minimum	44
Programming	52
SD	0
DD	0
CD	0
Closeout	0

SBC Number:	540/000-01-2019
Project Name:	UTHSC College of Medicine & Interdisciplinary Building
Date:	
Project Type:	New_Construction
Project Phase:	Programming
Category from Applicability Tree:	
Compliance Check:	Project Complies with the HPBr

Helpful Hints:

1) Refrain from copying and pasting data in Column C, "Applicable to Building/Site Scope?" as this can cause errors in some rows.
2) If any cell highlights red below, then you have a point allocated to a credit that is "not applicable." This is an error. Simply delete the contents of the cell to reset.

3) In column C, if you have copied or pasted in this column and a cell highlights all red, delete the contents of that cell to correct the error.
4) If no points are available in the dropdown, this means you have listed that credit as "not applicable" and points cannot be attempted.

		Project Team Representatives	Initials
O	-	Owner	
C	-	Contractor	
ME	-	Mechanical Engineer	
EE	-	Electrical Engineer	
CE	-	Civil Engineer	
A	-	Architect	
CxA	-	Commissioning Agent	
LA	-	Landscape Architect	
Other	-	Other	

						Programming			SD			DD			CD			Closeout					
				Checklist Total		52	31	22	0	0	105	0	0	105	0	0	105	0	0	105			
1	EE2.1	Yes	**Energy Efficient Purchasing Policy -** Energy Star qualified appliances & equipment	**Required**		1		0			1			1			1			1		O	0
1	EE3.1	Yes	**Energy Efficiency -** Schematic Design energy modeling	**Required**		1		0			1			1			1			1		Other	0
1	EE3.2	Yes	**Energy Efficiency -** Life Cycle Cost Analysis	**Priority 1**			1	0			1			1			1			1		Other	0
1	EE3.3	Yes	**Minimum Energy Performance -** all projects to demonstrate compliance with ASHRAE 90.1-2010, according to project scope	**Required**		1		0			1			1			1			1		Other	0
8	EE3.4	Yes	**Improved Energy Performance -** energy model is used during design, and final design demonstrates energy cost savings that exceed those required by the Minimum Energy Performance credit (EE3.3)	**Priority 1**		4	2	2			8			8			8			8		Other	0
5	EE4.1	No	Energy Efficiency in Existing Buildings - Lighting Power Reduction	Priority 1				5			5			5			5			5		EE	0
2	EE4.2	No	Energy Efficiency in Existing Buildings - Daylight Harvesting Controls	Priority 1				2			2			2			2			2		EE	0
2	EE4.3	No	Energy Efficiency in Existing Buildings - Vacancy sensor-controlled lighting	Priority 1				2			2			2			2			2		EE	0
2	EE4.4	No	Energy Efficiency in Existing Buildings - High efficiency HVAC Equipment	Priority 1				2			2			2			2			2		ME	0
1	EE5.1	Yes	**Energy Metering, Monitoring and Reporting:** Building-Level Metering	**Priority 1**		1		0			1			1			1			1		ME	0
3	EE5.2	Yes	**Energy Metering, Monitoring and Reporting:** System level energy metering with measurement and verification - New Construction	**Priority 1**			3	0			3			3			3			3		Other	0
3	EE5.3	No	Energy Metering, Monitoring and Reporting: System level energy metering with measurement and verification - Existing Buildings	Priority 1				3			3			3			3			3		Other	0
1	EE6.1	Yes	**Long-Term Energy Reporting -** Maintain energy and water consumption data in Energy Star Portfolio Manager	**Priority 1**		1		0			1			1			1			1	Need input from UTC	O	0
1	EE7.1	Yes	**Renewable Energy -** Investigate life-cycle cost effectiveness of on-site renewable energy	**Priority 1**		1		0			1			1			1			1	Confirm if just a study	Other	0
1	EE7.2	Yes	**Renewable Energy -** Provide Renewable Energy Credits (RECs) equal to 10% of annual site electricity through TVA or RECs equal to 35% from another source	**Priority 2**			1	0			1			1			1			1		O	0
15 Points			**Materials and Resources**	**MR Total:**		5	10	0	0	0	15	0	0	15	0	0	15	0	0	15			**Primary Credit Responsibility**
Possible Points	**Credit ID**	**Applicable to Building/Site Scope?**	**Description**	**Level:**		Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	**Comment:** Describe implementation approach for each pursued credit. New comments should be appended to old comments at each project phase. If credits are neither pursued nor applicable, provide justification.	**Role**	Initials
1	MR1.1	Yes	**Recycling Collection and Storage**	**Required**		1		0			1			1			1			1		O	0
3	MR2.1	Yes	**Construction Waste Management** (50%, 75%, 95%)	**Priority 1**		1	2	0			3			3			3			3		C	0
1	MR3.1	Yes	**Sustainable Materials:** Recycled content 10%	**Required**		1		0			1			1			1			1		A	0
1	MR3.2	Yes	**Sustainable Materials:** Recycled content 20%	**Priority 2**			1	0			1			1			1			1		A	0
3	MR3.3	Yes	**Sustainable Materials:** Tennessee Produced Materials (non-wood) - Harvested AND manufactured in state - 10% of total cost. Harvested OR manufactured in TN, 50% of product cost contributes to credit	**Priority 1**			3	0			3			3			3			3		A	0
3	MR3.4	Yes	**Sustainable Materials:** Tennessee Produced Wood Products -Wood materials harvested AND manufactured in state - 50% of wood products. When harvested OR manufactured in state, 50% of material cost contributes to credit.	**Priority 1**			3	0			3			3			3			3		A	0
1	MR3.5	Yes	**Sustainable Materials:** Regional materials - 20%	**Priority 2**		1		0			1			1			1			1		A	0
1	MR3.6	Yes	**Sustainable Materials:** Material reuse	**Priority 2**			1	0			1			1			1			1		A	0
1	MR3.7	Yes	**Sustainable Materials:** Rapidly renewables	**Priority 2**		1		0			1			1			1			1		A	0
19 Points			**Indoor Environmental Quality**	**EQ Total:**		15	4	0	0	0	19	0	0	19	0	0	19	0	0	19			**Primary Credit Responsibility**
Possible Points	**Credit ID**	**Applicable to Building/Site Scope?**	**Description**	**Level:**		Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	**Comment:** Describe implementation approach for each pursued credit. New comments should be appended to old comments at each project phase. If credits are neither pursued nor applicable, provide justification.	**Role**	Initials
1	EQ1.1	Yes	**Tobacco Smoke Control**	**Required**		1		0			1			1			1			1		O	0
1	EQ2.1	Yes	**Minimum Ventilation:** Design to meet ASHRAE 62.1-2007 or 2012 IMC	**Required**		1		0			1			1			1			1		ME	0
1	EQ3.1	Yes	**Outdoor Air Delivery Monitoring:** Provide a direct outdoor airflow measurement device	**Priority 2**		1		0			1			1			1			1		ME	0
1	EQ4.1	Yes	**CO2 Monitoring:** Provide CO2 monitors in all high occupancy areas	**Priority 2**		1		0			1			1			1			1		ME	0
1	EQ5.1	Yes	**Air Quality Management:** During construction	**Priority 1**		1		0			1			1			1			1		C	0
1	EQ5.2	Yes	**Air Quality Management:** Before occupancy	**Priority 2**			1	0			1			1			1			1		C	0
1	EQ6.1	Yes	**Material VOC Limits:** Adhesives and sealants	**Required**		1		0			1			1			1			1		A	0
1	EQ6.2	Yes	**Material VOC Limits:** Paints	**Required**		1		0			1			1			1			1		A	0
1	EQ6.3	Yes	**Material VOC Limits:** Coatings and anti-corrosive paints	**Required**		1		0			1			1			1			1		A	0
1	EQ6.4	Yes	**Material VOC Limits:** Flooring systems	**Required**		1		0			1			1			1			1		A	0
1	EQ6.5	Yes	**Material VOC Limits:** Composite wood and agrifiber	**Required**		1		0			1			1			1			1		A	0
1	EQ7.1	Yes	**Pollutant Control:** Entryway systems	**Priority 1**		1		0			1			1			1			1		A	0

High Performance Building Requirements - July 2021

CHECKLIST / TRACKING FORM

Phase	Points Summary
Applicable	88
Minimum	44
Programming	52
SD	0
DD	0
CD	0
Closeout	0

SBC Number:	540/000-01-2019
Project Name:	UTHSC College of Medicine & Interdisciplinary Building
Date:	
Project Type:	New_Construction
Project Phase:	Programming
Category from Applicability Tree:	
Compliance Check:	Project Complies with the HPBr

Helpful Hints:

1) Refrain from copying and pasting data in Column C, "Applicable to Building/Site Scope?" as this can cause errors in some rows.
2) If any cell highlights red below, then you have a point allocated to a credit that is "not applicable." This is an error. Simply delete the contents of the cell to reset.

3) In column C, if you have copied or pasted in this column and a cell highlights all red, delete the contents of that cell to correct the error.
4) If no points are available in the dropdown, this means you have listed that credit as "not applicable" and points cannot be attempted.

		Project Team Representatives	Initials
O	-	Owner	
C	-	Contractor	
ME	-	Mechanical Engineer	
EE	-	Electrical Engineer	
CE	-	Civil Engineer	
A	-	Architect	
CxA	-	Commissioning Agent	
LA	-	Landscape Architect	
Other	-	Other	

					Programming			SD			DD			CD			Closeout					
				Checklist Total	52	31	22	0	0	105	0	0	105	0	0	105	0	0	105			
1	EQ7.2	Yes	**Pollutant Control:** Hazardous material storage	Required	1		0			1			1			1			1		A	0
1	EQ7.3	Yes	**Pollutant Control:** Filtration media	Priority 1	1		0			1			1			1			1		ME	0
1	EQ8.1	Yes	**Thermal Comfort:** Design to meet ASHRAE Standard 55-2004	Required	1		0			1			1			1			1		ME	0
1	EQ9.1	Yes	**Individual Occupant System Controls:** Lighting controls	Priority 1		1	0			1			1			1			1		EE	0
1	EQ9.2	Yes	**Individual Occupant System Controls:** Thermal comfort	Priority 2		1	0			1			1			1			1		ME	0
1	EQ10.1	Yes	**Daylight to Occupied spaces**	Priority 1		1	0			1			1			1			1		A	0
1	EQ11.1	Yes	**Views from Occupied spaces**	Priority 1	1		0			1			1			1			1		A	0
5 Points			**Innovation in Design and Construction**	ID Total:	1	4	0	0	0	5	0	0	5	0	0	5	0	0	5			Primary Credit Responsibility
Possible Points	**Credit ID**	**Applicable to Building/Site Scope?**	**Description**	**Level:**	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	Yes	Maybe	No	**Comment:** Describe implementation approach for each pursued credit. New comments should be appended to old comments at each project phase. If credits are neither pursued nor applicable, provide justification.	**Role**	Initials
1	ID1.1	Yes	**Innovation in Design:** Provide Specific Title	Priority 1		1	0			1			1			1			1		Other	0
1	ID1.2	Yes	**Innovation in Design:** Provide Specific Title	Priority 2		1	0			1			1			1			1		Other	0
1	ID1.3	Yes	**Innovation in Design:** Provide Specific Title	Priority 2		1	0			1			1			1			1		Other	0
1	ID1.4	Yes	**Innovation in Design:** Provide Specific Title	Priority 2		1	0			1			1			1			1		Other	0
1	ID2.1	Yes	**Environmentally Accredited Design Team**	Priority 1	1		0			1			1			1			1		Other	0
				Checklist Total:	52	31	22	0	0	105	0	0	105	0	0	105	0	0	105			

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

College of Medicine & Interdisciplinary Building
Programming Document, October 31, 2024