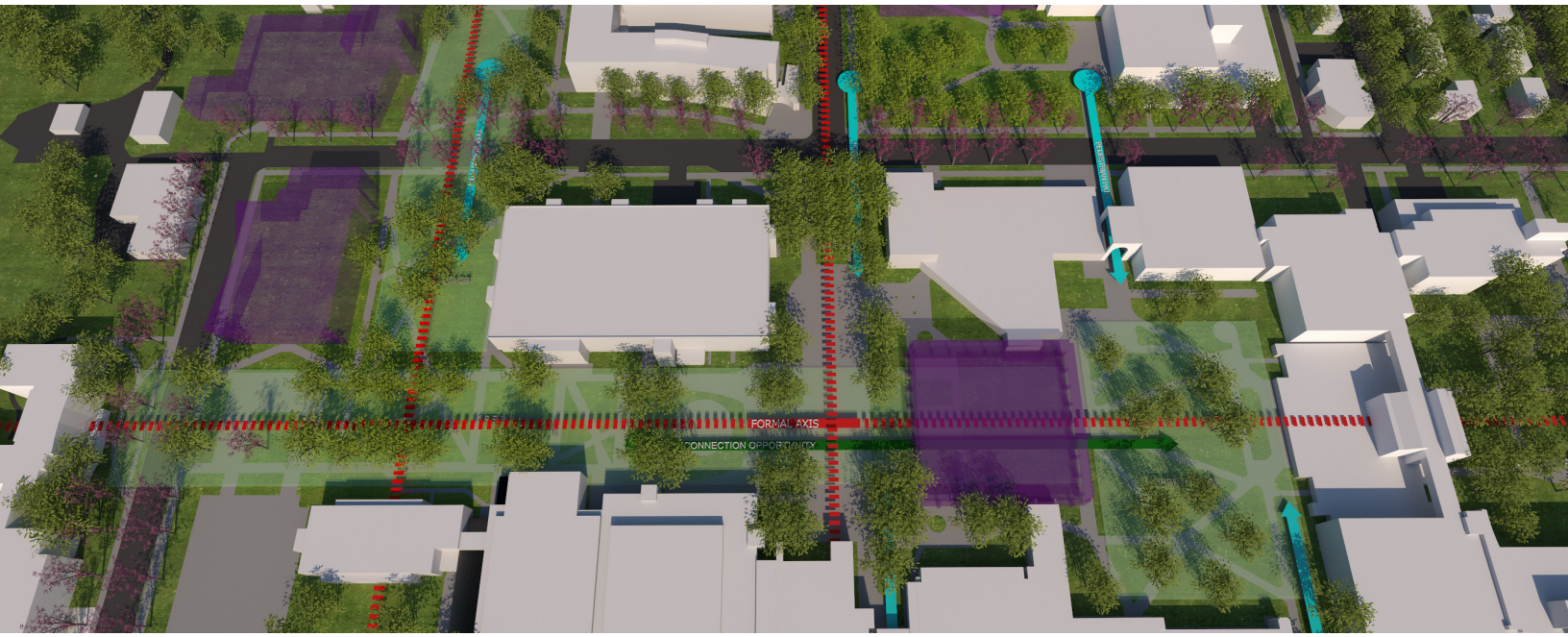
Minnesota State University Mankato



2024 Predesign
Armstrong Hall Solution

100% Submittal

Prepared by:
DLRGROUP
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Minneapolis, MN 55402
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2024 CAPITAL BUDGET REQUEST
Minnesota State University, Mankato - Armstrong Hall Solution
Qualitative Scoring Project Analysis - LARGE PROJECT

SECTION 1 - INTEGRATED PLANNING

1.1 Academic priorities: Targets institutional, regional, and state academic and facilities planning priorities.

Project is included in current Comprehensive Facility Plan and confirmed as a campus priority in our shared governance process of meet and confer and integrated planning process. (Ref 2.2)

1.2 Meets longterm space requirements for programs on a regional and multiregional basis (including multiple campuses of a single institution).

A classroom demand analysis was used to determine the right number of classrooms and their sizes while maximizing flexibility through designation of multi-purpose labs. The University recently implemented common bell and coordinated scheduling efforts to increase classroom utilization. Together these efforts demonstrate that while a reduction in the number of classrooms, this proposal will meet long- term space requirements for programs. (Ref 2.6, 2.7)

1.3 Supports the institution's Technology Plan.

Supports campus IT Solutions goal for all learning spaces to have an integrated technology infrastructure. The project will greatly improve the integration of technology into pedagogy. The placement of properly sized networking closets in strategic locations will improve the ability to support and maintain the technology systems and provide ubiquitous access to all. (Ref 8.1, 8.2)

1.4 Addresses specific community or campus cultural needs.

The project includes a transformation of traditional lecture style instructional space to flexible learning space. This includes informal learning space for student projects and collaborative work. Programs and departments will have more opportunity to collaborate and those that are community-facing, such as the College of Educations Dept of Counseling and Student Personnel, will be optimally relocated to a space at the periphery of campus. (Ref 2.1)

1.5 Includes space(s) to deliver programs that address continuing or emerging high demand fields.

This is a large project that houses two Colleges and 18 academic departments providing degrees in high demand fields such as Teaching (Elementary, Secondary, Middle and Substitute); Psychology and Corrections. The project includes updated and new lab spaces for these programs as well as many of the general education classes required for all degree programs on campus. The project has a campus wide impact. (Ref 2.3)

1.6 Promotes or increases retention and completion within the Minnesota State system.

High quality instructional space benefits student success and in-turn improves retention and completion. The existing Armstrong Hall Building has been widely known to be inferior instructional space and confirmed via student surveys and engagement events to be the area most in need of improvement. Renovations included in this project will allow for expanded blending of library and student learning services that will support student retention and completion. (Ref, 2.1)

1.7 Improves baccalaureate opportunities.

This project impacts a high percentage of general education courses and more than 15 baccalaureate programs. This means improvements to these learning spaces, will impact a majority of students. (Ref 3.3, 2.4)

SECTION 2 – ENROLLMENT, DEMOGRAPHICS, AND ACADEMIC PROGRAMING CONSIDERATIONS

2.1 (a) Only for projects impacting Student Services programs: Documents at least one of the following and uses the data to document how the Student Services related program has been successful and needs a facilities project to continue/grow that success:

Campus implementation of MavPass a peer-facilitated academic support system for students in historically difficult courses. MavPass sessions are confidential and free, and research shows that students who attend supplemental instruction typically earn up to one full letter grade higher in the course. MavPASS is part of a broader university strategy of designing intentionally collaborative and cross functional learning services to enhance student retention and completion, and works alongside our Center for Academic Success, TRIO Student Support Services, Undergraduate Research, Honors Program, University Fellowships, and Library Services. (Ref 2.1)

1. **The college/university's Student Services model has recently been rethought or reorganized, and the proposed changes have been implemented in practice.**

   Campus recently reorganized cross functional team and management structures into Library & Learning and is working to intentionally connect programs and centers available for tutoring, engagement, advising, and support focused on personnel who offer learning skills development. Some examples include the Center for Academic Success, MavPass, TRIO Student Support Services, Learning Communities, Honors, Undergraduate Research, Fellowships, and Library Services. (Ref 2.1)

2. **The Student Services departments impacted by this project have recently increased the number of staff who directly interact in person with students and cannot be housed within existing space**

32% of enrolled students utilized MavPASS services in AY2022. This program is supported by 106 MavPASS leaders; four graduate assistants; a faculty liaison and this year a coordinator was added. Space is at premium for staff and instructional sessions.

The Armstrong Hall Replacement project includes consideration of all student learning service centers and evaluation of which might benefit with physical and digital adjacencies. This exploration of services will be used to create a Student Learning Service Commons space where collaboration can provide enhanced service with improved efficiencies. (Ref 2.1)

3. **The college/university has demonstrated, taking into account student feedback, the student service modality that best meets the needs of their student population.** *Students were included in the interactive process utilized to develop this plan. (Ref Introduction)*

2.1 (b) Only for projects impacting specific academic programs: Project Documentation provides the following, at a minimum, and uses the data and narrative to demonstrate academic program strength and success, as well as facility needs, for those programs directly impacted by this project: *This project influences many academic programs across multiple colleges – references to demonstrated need can be found in 2.3*

1. **Five-year trend data for program enrollment and completion (growth data) -- percent change**

2. **Program level student success outcomes disaggregated by race/ethnicity, first generation, and Pell Grant eligibility, with a narrative to demonstrate what actions have been and will be taken to address (reasonable and feasible)**

3. **Workforce need: Data on the job market related to the programs, including the rate of past and future growth in job demands and a metric on the saturation level.**

2.2 Demonstrates need for in person campus facilities (rooms for private consultation/counseling, labs, access to specialized equipment or technology, etc.)

While pandemic response forced the advent of remote and hybrid (in synchronous in-person and remote) learning it was noted that some students responded to the shift better than others. Students were polled in 2020 and 2021 which revealed a strong preference for on-campus and in-person activities. Per the space program, this project includes a variety of spaces to meet the hands-on project work in today's instructional model and in-person meetings. These include right sized labs with specialized equipment and technology, flexible classroom spaces, Academic Advising & Counseling center, and student collaboration spaces. (Ref 1.3, 2.4)

2.3 Provides evidence of specialized program or student needs that support the need for renovation.

The measured success of the student support and services provided demonstrates the need to continue and expand availability of these important student success tools. (Ref 2.1)

2.4 Project responds to ongoing changes in student demographics (gender identity, race, age, etc.) and strives to eliminate opportunity gap.

Minnesota State University, Mankato has enjoyed the benefit of maintaining enrollment at a higher rate than many of our peer institutions of which can be attributed to our campus focus on equity and maintaining a welcoming environment. This is shown in our student demographics. Implementation of this project creates more informal learning and supplemental education spaces that have proven to help close the opportunity gap and will support our Equity 2030 goals in the areas of Student Academic Success and Student Engagement and Support. (Ref 2.3)

2.5 Project demonstrates potential to improve enrollment and eliminates opportunity gaps.

Creation of a Student Services Commons builds upon our commitment to eliminating the opportunity gap by collocation student success services to allow better collaboration and ability to find the right program that fits the best for each student and will support our Equity 2030 goals in the areas of Student Academic Success and Student Engagement and Support. (Ref 2.1)

SECTION 3 - FLEXIBILITY, ADAPTABILITY, AND ACCESSIBILITY

3.1 Includes features that yield active learning spaces and help the campus transition from traditi onal classroom learning to collaborative, group learning methods.

Project includes variety of types of teaching and learning spaces throughout the campus by selective renovation, e.g. 'suites' with collaboration-oriented conference rooms, small group instruction, casual interaction/connection space in addition to standardizing classrooms, and additional laboratories to provide more specialized space for simulation and hands-on practice. (Ref 2.3, 2.1, 8.1, 8.2)

3.2 Project includes flexible and adaptable features, including room types and furnishings, that allow for cost effective adaptability for future programs.

MSU Mankato has a standard classroom design to include technology, movable furniture, and utility infrastructure to provide flexibility for multiple room layouts. Additionally, a focus will be placed on HVAC design to allow a larger variety of functions and more adaptability for type of room use and potential reconfiguration. (Ref 2.3, 8.1)

3.3 Includes spaces or features that promote inclusion (gathering in groups, seeing others using the space as a way to feel safe and welcomed); includes spaces that can be used for large group gatherings (not just study space) to address a sense of belonging.

Per the space program this project provides "Collaboration Hubs" for large group work and a variety of sizes of Small Group spaces (15 different spaces in all). An open, learning (presentation) stair is proposed that would offer an informal space for all to access. Strategic use of artwork and moveable furnishings can provide a variety of atmospheres and customizable gathering spaces. (Ref 2.1, 2.2, 3.1, 3.4 Floor Plan concepts)

3.4 Establishes the space as a shared campus asset, not owned by any one department.

Minnesota State Mankato recognizes the value of space and has implemented important classroom scheduling principles to improve classroom utilization. The common bell schedule has already been implemented which creates a weekly classroom scheduling structure/pattern to avoid unusual meeting schedules to disrupt the useful hours for other classes before and after the hour/period.

In this project, the University is setting a target to increase classroom utilization campus wide from an average of 32 hours/week to 38 hours/week. While the current planning includes College/Department priority scheduling, it is understood that room reassignment may be a consideration if there is consistent poor utilization of a space/room. (Ref 2.7)

3.5 Project uses alternative approaches to providing traditional, enclosed offices for faculty or staff.

There are ongoing conversations by Minnesota State University, Mankato to define office needs, particularly when it comes to private offices. The project proposes a shift to flexible open office co-labs, shared offices, and hoteling workstations as appropriate. (Ref 1.3, 3.6)

3.6 Campus follows a written academic scheduling policy and uses it to maximize current space utilization and ease of class scheduling for students.

The campus adopted "Optimizing Learning Spaces & Student Success: Common Bell and Coordinated Scheduling" in May 2019. (Ref 2.7, Appendix)

3.7 Project plans go beyond "code minimum" of ADA accessibility to provide Universal Design features that accommodate a wider range of abilities.

In addition to ADA Accessibility Requirements, the Armstrong Hall Solution will employ Universal Design Strategies such as designing for equity, flexibility, and tolerance for error as outlined in the university's Comprehensive Facilities Plan. The MNSU ADA Advisory Committee includes membership across all campus bargaining units and includes student representation. This advisory committee will have opportunity to participate in the design process and project document review. (Ref 2.2)

3.8 Evidence that technology, flexible space use, and scheduling options have been fully maximized before proposing the need for new/renovated space.

Preparations for this proposal included the adoption of an academic scheduling policy; realignment of academic units; increased utilization of technology; and maximization of flexible use space. Based on these efforts the project results in a reduction of 44,000 GSF of building space and 15 less classrooms in the campus inventory. (Ref 1.4, 1.5, 2.7)

SECTION 4 - INFRASTRUCTURE, SUSTAINABILITY, AND ENERGY EFFICIENCY

4.1 Project documents analysis of space needs that could be satisfied through short or long-term methods, such as leasing off campus space, or sharing space with other colleges and universities within the system.

The project makes use of existing space on campus through a series of renovations, ultimately reducing the total square footage on campus. (Ref 1.5)

4.2 Project addresses "adjacent needs" in, or near to, the project area, such as HEAPR like work (roofs, HVAC, ADA accessibility improvements, etc.) or COPE issues, and demonstrates how the campus will use these improvements to reduce overall operating expenses.

Direct project work includes backlog items in the Library. The biggest project need that will be addressed is eliminating the backlog associated with Armstrong Hall. This will greatly reduce overall operating expenses, freeing up funds for HEAPR work in Morris Hall, Wiecking Center, and the Performance Center. (Ref 2.5. 3.6)

SECTION 5 - FINANCIAL IMPACT

5.1 Advances cooperation among campuses to reduce costs and enables the sharing of administrative operations, academic programs, and academic support.

This project brings two campus Colleges and numerous academic departments together in a deliberate and planned way to allow sharing of administrative operations and resources. Technology installations planned for both the formal and informal learning spaces provide connectivity between faculty and students both synchronous and asynchronous and opens the door for many opportunities between campuses to share instructional resources. (Ref 3.6)

5.2 Identifies and reduces total operating costs required (including new staff, anticipated utility costs, and any additional costs required as a result of the project).

Long term operating costs are projected to be reduced from $755,000 (current) to $580,000 (FY2031). As department realignments continue, it is expected that staffing costs within the impacted Colleges will also be reduced. (Ref 6.1)

5.3 Project accounts for special expenses relating to operations of new equipment or technology.

Project budget is estimated with the plan to meet B3 energy use requirements. The FF&E budget includes infrastructure to develop technology enhanced learning spaces. (Ref 5.3)

SECTION 6 - OVERALL IMPRESSIONS OF THE PROPOSED PROJECT

6.1 This project has been well thought out and well documented, fits within the Board's Capital Guidelines, and is worthy of inclusion on the Board's final Capital Budget Request list.

6.2 The documentation clearly identifies the problem to be solved by the project and lays out a clear path to find the solution.

6.3 The documentation clearly demonstrates why this particular project is an urgent priority for the college/university: facilities need, academic program need, student success need, workforce impact, etc.

6.4 Please provide additional comments, feedback, concerns, or praise about this project that could help the campus strengthen its project documentation.

MINNESOTA STATE

Minnesota State University - Mankato

Predesign Project Data Form

Provide this form at the beginning of Predesign Section 1.

Basic Information: 2024 State Appropriation Request	
Project Title:	*Armstrong Hall Replacement Project*
Street address(es) of the building(s) affected by project, including county name:	*Armstrong Hall - 521 Ellis Avenue, Mankato, Blue Earth County* *Clinical Sciences Building – 150 South Road, Mankato, Blue Earth County* *Memorial Library – 601 Maywood Ave, Mankato, Blue Earth County* *Morris Hall – 500 South Road, Mankato, Blue Earth County* *Wiecking Center – 415 Main Street, Mankato, Blue Earth County*

Project Scope			
New GSF:	*100,000*	Renewed GSF:	*5,000*
Renovated GSF:	*68,100*	Demolished GSF:	*145,000*

Project Timeline (all dates are approximate and subject to change)	
Proposed design start date:	*September 2024*
Proposed bid/procurement date:	*April 2025 – Morris Hall & Wiecking Reno; August 2025 – CSB & Memorial Library Reno; August 2026 – New Building; April 2028 - Demolition*
Proposed construction start date:	*May 2025 – Morris Hall & Wiecking Reno; September 2025 – CSB & Memorial Library Reno; September 2026 – New Building; May 2028 - Demolition*
Proposed occupancy date:	*September 2025 – Morris Hall & Wiecking; September 2026 – CSB & Memorial Library; June 2028 – New Building*

Facilities Data			
Current Replacement Value (CRV) of the building(s) affected by project:	*Armstrong Hall $63,073,419* *Memorial Library $74,557,201*	Backlog ($) removed by project:	*Armstrong Hall $30,579,167;* *Memorial Library $10,270,117*
Current FCI of building(s)/area(s) affected by project:	*Armstrong Hall 0.48;* *Memorial Library 0.14*	Anticipated FCI resulting from this project:	*0.0*
Anticipated campus-wide FCI resulting from this project:			
Number of classrooms and/or labs directly affected by this project:	*42 general classrooms in Armstrong Hall; 5 general classrooms location TBD; 20 classroom labs in Armstrong Hall*		

MINNESOTA STATE UNIVERSITY
MANKATO

October 31, 2022

Brian Yolitz
Minnesota State
Associate Vice Chancellor of Facilities
30 7th St. E., Suite 350
St. Paul, MN 55101

Re: Minnesota State University, Mankato
Armstrong Hall Predesign Report

Dear Brian,

We are pleased to present our Armstrong Hall Solution Predesign to replace Armstrong Hall with a smaller, more functional, building for the 2024 Capital Budget process.

DLR Group has prepared this predesign document in close collaboration with the campus community, key stakeholders, and the administration in accordance with Minnesota State predesign guidelines and design standards.

Our Comprehensive Facilities Plan strongly supports our request. The project advances our priority recommendation in building development needs to create innovative, student centered spaces on campus that support the academic needs of incoming generations. Armstrong Hall is our most heavily used building on campus, and it is also one of our oldest academic classroom buildings. It may have served the campus well in the past, but today its aging and outmoded infrastructure is not suitable for modern instruction. Additionally, replacement of Armstrong Hall removes a very large amount of deferred maintenance backlog identified in the Comprehensive Facilities Plan.

During the preparation of this predesign, Minnesota State University, Mankato has taken the impact of the pandemic and lessons learned into special consideration for planning the programing for the spaces included in this project. This project reduces 44,000 GSF of campus space and removes 15 classrooms from the campus inventory. We believe the completion of this project will position Minnesota State University, Mankato to have the most efficient and highly utilized instructional facilities in the Minnesota State system and exceed all targeted metrics currently requested by the System Office.

In acknowledgment to System-wide concerns about larger project costs and duration, this submission includes a two-biennium schedule that accelerates project completion and significantly reduces inflation cost.

OFFICE OF THE PRESIDENT
WIGLEY ADMINISTRATION CENTER 309 • MANKATO, MINNESOTA 56001
PHONE 507.389.1111 (v) • 800.627.3529 OR 711 (MRS/TTY) • FAX 507.389.6200

We look forward to working with your team to advance this request for the 2024 Capital Budget request to the legislature.

Sincerely,

Edward S. Inch
President

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DLRGROUP

DLR Group inc.
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520 Nicollet Mall, Suite 200
Minneapolis, MN 55402

November 8, 2022

Paul Corcoran
Assistant Vice President Facilities Management
Minnesota State University, Mankato
111 Wiecking Center
Mankato, MN 56001

Re: Project Name: Minnesota State University, Mankato – 2024 Armstrong Hall Predesign
DLR Group Project No.: 40-22149-00

Dear Mr. Corcoran:

DLR Group is pleased to submit to you this Predesign Report for the Armstrong Hall Solution at Minnesota State University, Mankato.

This report has been prepared in accordance with the Minnesota State Predesign Guidelines for Campus Facilities Projects in conjunction with Minnesota State University, Mankato faculty, staff and administration. This report provides the professional expertise and analysis required for the University to establish the project rationale and space requirements, and to determine the relative complexity and phasing of the project as a means to develop probable construction costs, capital budget requests, and anticipated project schedules.

Sincerely,
DLR Group

Nathan Miller, AIA
Principal
MN License No. 48122

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Introduction

Thank you for taking the time to review the information contained in this Predesign. The data and recommendations presented in this document are the result of 6+ years of collaboration between multiple stakeholders, the list below being the most recent. We understand that the amount of information presented within is substantial so we have taken the liberty of filling providing our opinion of the appropriate response to the scoring form by which the project predesign will be evaluated. These responses are attached.

Predesign Committee

DLR Group facilitated an interactive process engaging multiple constituents. Members of the administration, faculty, staff, and student body all participated at different levels during the workshops.

The primary project committee includes:

Minnesota State Mankato

Paul Corcoran	Assistant VP for Facilities Mgmt
Nate Huettl	Planning & Construction Director
David Hood	Provost & Senior VP for Academic Affairs
Rick Straka	VP for Finance and Administration
Robert Fleischman	Associate Provost
Lynn Akey	Assoc. VP for Institutional Research Strategy & Effectiveness
Matthew Loayza	Interim Dean of College of Social & Behavioral Sciences
Maria Bevacqua	Interim Dean of College of Social & Behavioral Sciences
Denise Thompson	Assistant to the Dean of Soc & Behavioral Sciences
Jean Haar	Dean of College of Education
Matt Cecil	Dean of College of Arts & Humanities
Maria Bevacqua	Acting Dean of College of Social & Behavioral Sciences
Daardi Mixon	Interim Dean of Library Services
Brenda Flannery	Dean of College of Business
Matthew Clay	Director for Technology Consulting
Wendy Schuh	Director of Student Health Services
Pat Nelson	Department Chair
Alexandra Panahon	Special Education Professor
Andrea Lassiter	Psychology Department Chair
Melissa Iverson	Student Relations Coordinator CoSBS
John David Paul	Faculty Representative

Design Team

Nathan Miller	Project Manager, DLR Group
Katherina Yurko	Programmer, DLR Group
Laura Smith	Designer, DLR Group
Matthew Streed	Designer, DLR Group
Mike Refsland	Sustainability Leader, DLR Group
Jonathan Murray	Estimator, Loeffler Construction

SECTION 1: Introduction

Section 1: Summary

1.1 Description of Project

Armstrong Hall has been the academic workhorse of Minnesota State University, Mankato since it was constructed in 1964. It currently houses 42 of the campus' 100 classrooms, as well as 20 of its 112 teaching laboratories. Nearly every student pursuing an undergraduate degree since 1964 has attended class in this building. Armstrong Hall has served the campus well over the years, but in its current state, constrains financial resources and 21st century curriculum delivery. The objective of this project is to replace the outdated and maintenance plagued Armstrong Hall in the most effective, efficient and innovative way possible.

After vetting numerous options over the past 6+ years and reaching out to a variety of stakeholders, it is the recommendation of Minnesota State Mankato and the Predesign team to replace Armstrong Hall (145,000 SF) by renovating approximately 75,000 SF of existing space on campus and building a new, smaller building (100,000 SF). The combination of existing space renewal and new building construction will work to increase campus-wide classroom utilization and facilitate program efficiencies. The net result will be a reduction in campus square footage of approximately 45,000 SF. The new building will be constructed on a different site within the campus academic district, allowing Armstrong Hall to be utilized during this multi-phase construction and renovation project. Ultimately, Armstrong Hall will be demolished, opening up the central mall across the east/west campus axis.

1.2 Project Cost and Schedule

General Obligation Bonds have been identified as the primary funding source for the new construction and renewal projects. Two Phases of Capital Budget Requests will be required for this project beginning in 2024. The envisioned multi-phase construction project includes:

2022 Phase 1 request for Design funds and all Renovation/ Renewal funds	$ 42.1 million
2024 Phase 2 request for New Building Construction funds & Demolition	$ 91.2 million

The project schedule is in alignment with capital requests and outlined as follows:

Nov 2022	PreDesign Complete
Sept 2024	Design Begins
May 2025	Renovation & Renewal project; Construction begins at Morris Hall
Sept 2026	Construction Start New Building - Move In Dec 2023
Oct 2028	Construction Start multi-phase Renovation Projects - Move In Dec 2027
June 2028	Decommission & Demolish Armstrong Hall

1.3 Academic and Operational Program Impacts

The primary goal of this project is to improve teaching and learning spaces across all academic disciplines. This project will provide the new spaces necessary for project-based learning, collaborative learning, student and faculty discussions, and will enhance MSU Mankato's ability to offer online education to MSU students and partner institutions.

This project will provide a logical migration of the departments currently housed in Armstrong Hall and optimize the academic relationships within the campus academic core.

The following programs have been identified and included in strategic discussions and space planning:

- College of Humanities & Social Sciences: English, World Languages & Cultures, Communication Studies, Philosophy, Law Enforcement, Psychology, Geography, Aging Studies, Gender & Women's Studies, Public Administration, History, Sociology & Corrections,
- College of Education: Elementary & Early Childhood Education, K-12 & Secondary Education, Counseling & Student Personnel, Aviation, Educational Leadership, Special Education, Center for School & University Partnerships, Center for Educator Support
- College Faculty/Staff Office Suites, Academic Advising & Counseling Center, Deans' Offices, Student Collaboration & Study Spaces
- College of Business classrooms
- General classrooms and labs shared across campus

The conditions within Armstrong Hall are no longer conducive to providing the quality of education that Minnesota State University, Mankato strives to provide. Many spaces, including classrooms and faculty spaces, are inadequately sized, inefficiently located and lack the flexibility needed to be used effectively in a high-flex or hybrid scenario. Laboratory environments lack adequate space and utility infrastructure for necessary equipment to support contemporary curriculum. Student spaces are all but nonexistent. Faculty offices ring around the exterior perimeter of the facility constraining collaboration, security, and student access.

The project program provides for modest increases in laboratories, with a few new laboratories that are not present today, and a variety of classroom spaces that are right sized for projected enrollment and in-person learning attendance. They will be designed to be flexible enough to support traditional lecture, active learning and hybrid learning. In addition, much needed gathering, collaboration, social learning spaces and spaces that facilitate online learning are included in the program, none of which are provided for in the existing Armstrong Hall. Faculty offices are programmed into larger collaboration suites of office space; Adjunct Faculty and GAs/TAs are programmed into flexible open-office co-labs at 1:3 and 1:5 stations per staff ratios - all of which will allow for better student access, sharing of office resources, and promoting faculty collaboration while minimizing the overall increase in building area devoted to offices. As the project matures, it is expected that office needs for faculty and staff will evolve to align with developing remote working habits. It is fair to assume that remote working habits will ultimately reduce the amount of physical office space on campus, but this has not yet been quantified as the "new normal" for staff and faculty office needs and expectations are still evolving.

1.4 Facility Issue Impacts

Deferred Maintenance / Renewal

Armstrong Hall represents just shy of 30% of Minnesota State University, Mankato's total deferred maintenance backlog. Armstrong Hall alone currently has a backlog in excess of $30.5m with another $617,000 scheduled by the time the building would be demolished. The current backlog equates to an FCI of 0.48. The building's exterior envelope and HVAC systems are the major concerns. The building cannot continue to operate without these systems in a functional state. There is risk of large scale failure if there is a delay in funding.

Memorial Library + Addition is in much better shape at an FCI of 0.14 and 0.08 respectively, but they still have an impactful level of deferred maintenance. The library renovations included as part of this project are primarily student services and student success programs. A major component is relocating these departments to improve visibility and accessibility which will help draw more students to the building. Putting modern systems in place is important to the success of the project.

Space Utilization Improvement

Armstrong Hall is the most heavily used instructional facility on campus. In terms of weekly student contact hours, Armstrong has more than double the next highest used facility (Trafton Science Center). Further, 15 of Armstrong's 42 classrooms fall below the Minnesota State minimum metrics for ASF per student station based on their types and occupancies. None of the classrooms in Armstrong Hall meet the Minnesota State minimum metrics for ASF per student for active learning classrooms at their current occupancy levels.. As part of the analysis surrounding instructional space utilization, specifically in Armstrong Hall, a Classroom Demand analysis was performed to determine an ideal count of classrooms needed by size. For the Armstrong Hall Solution, it was determined that nearly 10,000 ASF of classroom space could be saved by increasing utilization. This increase in utilization can be realized by moving from 32 weekly room hours to 38 and improving seat fill rates. This reduced the overall number of classrooms in the project program from 42 to 33. See Section 2 for additional information on Minnesota State Mankato's plan for improving classroom utilization, including optimizing the class schedule.

1.5 Alternatives Considered

In 2014 Minnesota State Mankato and the Predesign team explored an option to transform Armstrong Hall with an extensive Renewal and New Building Addition project. In the end, the three phase $119 million (in 2016 dollars) project cost was too great and the value of such scale of project was questioned.

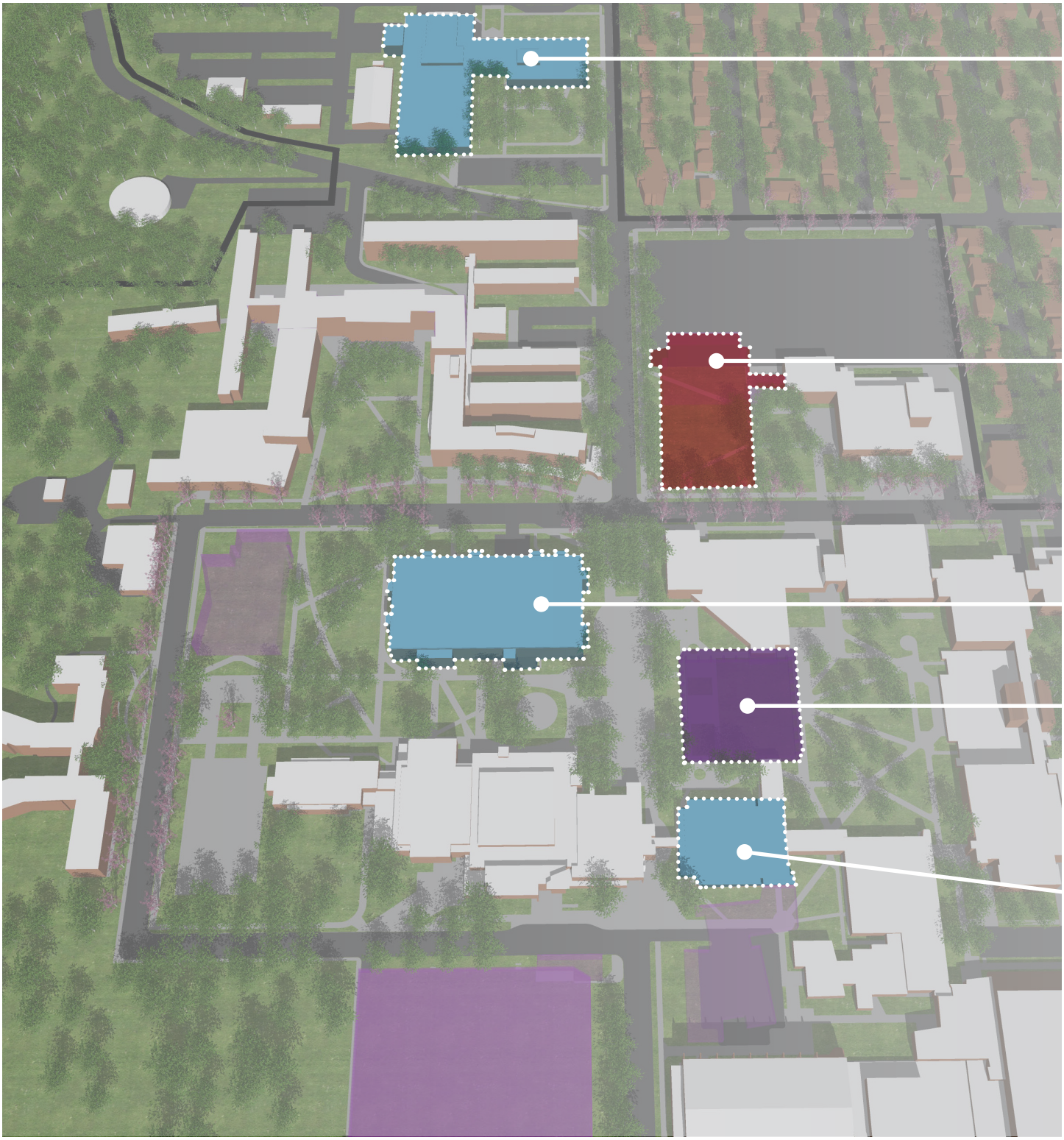
In 2016 Minnesota State Mankato and the Predesign team explored a renewal option to tackle all maintenance and ADA issues along with some modest finish upgrades (e.g. paint walls, replace carpet, and replace acoustic ceilings). The sheer scale of 145,000 SF presented significant sequencing issues. It was impossible to find enough available swing space on campus which resulted in the need to break down construction into four phases, adding significant cost to the project. We quickly discovered that yet again, project cost would be a major issue for the project but it was an alternative option that we knew we had to test and see if it was a viable option. In the end the price tag of $43.5 million (2016 dollars) was an astonishing amount to invest in a facility that, in the end would still not provide the types of 21st century educational environments that we see today and are now the standard on University campuses.

In 2018 (2020PD), a third predesign evaluated a comprehensive solution for Armstrong Hall which included a new building and several renovation projects of existing underutilized space. The new building has a compact, efficient footprint that de-emphasizes the private office and opts for a more open workspace layout, provides new student spaces currently lacking on campus and right sizes classrooms. Additionally, various programs will move into revitalized existing spaces on campus. These strategies, paired with better classroom utilization actually reduces the overall campus GSF. The current 2024 Predesign builds on the solution established in the 2020 Predesign.

1.6 Planning Process

Over the years, the Predesign team has engaged the Minnesota State Mankato President, Departmental Stakeholders, and the Predesign Steering Committee to identify and review a wide range of site options. Ten different campus locations were identified as potential candidates for the New Building location. Five sites were narrowed down to one site as the best candidate for the New Building location through meetings with campus leadership and the DLR Group team.

During each Predesign process, Steering Committee Workshops provided a constant and steady rhythm to the project that allowed the team to maintain focus. Specific Focus Groups were scheduled to engage with specific user groups regarding the project as specific findings and solutions developed (i.e. Faculty, Library staff, Facilities, etc.). At the same time, campus-wide conversations were taking place surrounding issues like scheduling and space utilization. Currently, there is an ongoing effort by the campus planning committee to discuss and understand post-Covid office and classroom needs.



Existing buildings

Future buildings identified in the 2018 Master Plan

Armstrong Hall, to be demolished

Proposed New Building

Buildings to be partially remodeled


Wiecking Center
Renovate 1,200 GSF
Proposed Building
Construct 100,000 GSF
Memorial Library
Renovate 52,600 GSF
Armstrong Hall
Demolish 145,000 GSF
Clinical Sciences
Interior Buildout 16,500 GSF
Morris Hall
Renovate 2,800 GSF
2024
2026
2028

SECTION 2: Basis for Need - Project Background

Section 2: Basis for Need - Project Background

2.1 Project Alignment with Campus Mission, Strategic and Academic Plans

Minnesota State University, Mankato is the largest University or College in the Minnesota State System, with a headcount enrollment that accounts for 28% of all students. They teach over 31% of all credits in the System, a 2% increase from two years ago. The Fall 2022 New Entering First-Year Class of 2,307 students is the 10th largest new class in the University's 154-year history. Additionally, the diversity of their student body has continued to increase, with domestic students of color representing 18% of overall enrollment, and International students representing 10% of overall enrollment.

The University's Mission states: "Minnesota State University, Mankato promotes learning through effective undergraduate and graduate teaching, scholarship, and research in service to the state, the region and the global community." Reflecting this overarching goal, this project aims to provide enhanced academic and social spaces for undergraduate & graduate students. In addition, research-based laboratory environments - some of which are for community-facing programs that offer services to the greater Mankato region – are integrated within the project and strategically positioned across new and renovated space in four campus academic facilities.

The University's Vision sets a high aspiration for its students, faculty and staff: "Minnesota State Mankato will be known as a university where people expect to go further than they thought possible by combining knowledge and the passion to achieve great things. Our foundation for this vision is our heritage of both dedicated teaching and the direct application of knowledge to improve a diverse community and world. We will achieve it by actively nurturing the passion within students, faculty and staff to push beyond possibility on the way to realizing dreams." To support this vision, the academic and social spaces in this project will impact three existing campus buildings (Memorial Library, Clinical Sciences, and Wiecking Center) in addition to a New Building. By pollinating the academic core with enhanced spaces, more opportunities for collaboration between diverse departments, disciplines and people can be achieved. Bringing together varied interests and passions in spaces that support knowledge-sharing will make Minnesota State Mankato's vision visible across campus.

The University's Strategic Plan, "University Strategic Directions, 2016 - 2021" has identified a set of directions for the University which are reflected in our approach and program for this project.

- Enhancing Student Success and Completion
- Elevating Faculty Distinction and Academic Achievement
- Expanding Regional and Global Impact
- Leading Equity and Inclusive Excellence
- Advancing a Culture of Evidence and Innovative Organizational Designs
- Leveraging the Power of Partnerships and Collaboration

Minnesota State University, Mankato has also identified twelve overarching areas of distinction in academic, research, and industry. In concert with Minnesota State Mankato leadership, many of these areas have been positioned to directly benefit from spaces included in the project. The key programs are highlighted in bold

- Agriculture, Food and Natural Resources
- Business, Management and Financial Services
- Creative and Performing Arts
- Data and Information Services
- Education and Human Services
- Engineering, Manufacturing and Technology
- Global Communication, Media and Information Technologies

- Health Care and Biomedical Sciences
- Integrative and Applied Disciplines
- Marketing, Sales and Professional Services
- Public Policy and Administration
- Transportation, Distribution and Logistics

Over the past two decades a wide range of studies have highlighted the challenges that students and faculty face within Armstrong Hall. A key driver of the project, in support of Minnesota State Mankato's Mission and Vision, is to elevate the student experience. There are many supporting aspects of the project that combine to positively impact student learning and socialization. Four of the University's largest academic colleges make up the primary users of Armstrong Hall. Almost every student that attends classes on the Mankato campus attends a course in Armstrong Hall during their academic path to degree completion.

By employing a strategy to renovate, repurpose and infill space across campus, the project ensures that programs and departments will be optimally located. For example, programs that engage the community and offer services and events that encourage public participation are proposed to occupy the lower level of the Clinical Sciences Building, located near the campus periphery, where there is convenient parking and easy way finding.

The proposed renovations of the Memorial Library will support a larger, future vision for the physical and digital university library as a hub for both library and student learning services, blending such services together through multidisciplinary and cross functional teams focused on student retention and completion. According to Murphy (2015), this new approach capitalizes on librarians' and learning specialists' focus "on skill development and learning strategies supporting student success, learning, and scholarly inquiry." While several general use classrooms relocated to the library from the current Armstrong Hall will be located in the library's lower level, other, specifically focused classrooms relocated to the library from the current Armstrong Hall will be located adjacent to library special collections in order to create a "Library as Lab" concept. Currently existing lower-level academic learning services that by the incoming classrooms will be relocated to the ground floor which has been envisioned as a learning commons featuring academic learning services that will strive to create an accessible, equitable environment where all students can succeed. While the overall vision for the Memorial Library is currently in development, these services will likely include library services, tutoring, supplemental instruction, general advising, accessibility services, TRIO student support services, MAVPass, honors, undergraduate research, university fellowships, and an IT help desk. This Armstrong Hall Solution project will complement and enhance this vision for the Memorial Library in part due to the remodeling that will occur within it, but also because of its proximity. The proposed location of the New Building near the Library will promote the utilization of physical library spaces for coordinated academic learning services, study and collaboration.

The proposed New Building floor plan and massing is strategically envisioned to be dramatically different than Armstrong Hall. Planning and design drivers include a reduced footprint, a more vertical building that optimizes natural daylight in academic and student occupied spaces, a clean building layout with intuitive way finding that provides clear cues for interior orientation, corridors with campus views, and clear sight lines to minimize navigating complexities.

2.2 Project Alignment with the Comprehensive Facilities Plan

The Master Plan identifies three Guiding Principles for the future development of campus. They are:

1. Embrace / Promote a welcoming and inclusive campus that highlights our unique identity
2. Create innovative, student-centered spaces on campus that supports student success of incoming generations
3. Provides flexible yet comprehensive vision to respond to future initiatives

Armstrong Hall (with its wide range of critical concerns regarding space quality, function and deferred maintenance) is recognized in the 2019 Comprehensive Facilities Plan (CFP) as the highest institutional planning priority seeking GO Bonding funds. The CFP identifies a range of solutions to be explored, including renovation, building addition, demolition, and new building replacement.

The CFP also identifies the critical need to create innovative, student-centered spaces on campus for all Colleges, at all levels. It highlights a series of renovations and campus improvements to be carried out over time to meet this goal. The 57,000 SF of existing space in Memorial Library, Wiecking Center and Morris Hall targeted for renovation/repurposing will address the criteria identified in the Master Plan. The proposed improvements and new amenities to support students and faculty include the following strategies and recommendations:

- Install flexible furniture, marker boards and technology improvements in classrooms that will facilitate hybrid and high-flex learning.
- Increase the variety of types of teaching and learning spaces throughout the campus by selective renovation, e.g. 'suites' with collaboration-oriented conference rooms, small group instruction, casual interaction/connection space in addition to standardizing classrooms, and additional laboratories to provide more specialized space for simulation and hands-on practice.
- Create shared spaces for research, collaboration, small group, conferencing, telepresence, storage.
- Create standardized office space for faculty and flexible/hotelling studio office space for graduate students, grad assistants and teaching assistants; quiet work/study space, collaboration/connections space
- Increased accessibility and inclusivity in the types of student-focused spaces, including Quiet study, spaces for participation in online courses, and reflection spaces to meet the needs of a diverse incoming student body
- Strategic use of artwork and moveable furnishings to provide atmospheres that can be adapted to meet the needs of students, whether used as private study space, small or large group gathering
- Employment of Universal Design features in new spaces to design for equity, flexibility and tolerance for error.

With the demolition of the existing Armstrong Hall, the pedestrian experience on campus is greatly improved. A new green space/ quadrangle creates a visual corridor that extends east-west across campus and provides a more visually and accessible connection. This also supports the first guiding principle of the Master Plan in strengthening campus wayfinding, access and mobility for visitors, students, faculty and staff, and prioritizing pedestrian-forward approaches.

2.3 Program Delivery and Demonstrated Need

Despite the pandemic, MSU Mankato has been very successful in maintaining their overall student enrollment, reflecting steady numbers since Fall 2018. There has been a slight decrease in students on-campus in Mankato as remote learning and technology improvements have increased the ease and flexibility in program delivery. This move to online or hybrid course delivery allows courses and services to be more accessible to a wider range of students. Course information that is accessible and available beyond traditional "class hours" provides more flexible scheduling for students who are juggling other life priorities or challenges, including jobs, families, dependents, and/or transportation. While this advantageous in many ways, there is still a strong desire from students to meet and collaborate in-person.

Fall Enrollment Comparisons (as of 10th census day)

Year	New First-Time, First-Year	Total on-campus (at least one course in Mankato)	Total Enrollment
Fall 2018	2,392	12,256 (88% of total)	13,894
Fall 2019	2,288	12,085 (87% of total)	13,896
Fall 2020	2,284	12,534 (89% of total)	14,071
Fall 2021	2,103	11,736 (84% of total)	13,926
Fall 2022	2,305	11,503 (83% of total)	13,941

Fall Full-Time Equivalent (FTE) Comparisons (as of 10th census day)

Year	New First-Time, First-Year	Total on-campus (in Mankato)	Total FTE
Fall 2018	2,387	10,029 (81% of total)	12,430
Fall 2019	2,279	9,752 (70% of total)	12,335
Fall 2020	2,256	5,943 (47% of total)	12,533
Fall 2021	2,077	7,503 (62% of total)	12,110
Fall 2022	2,288	7,818 (65% of total)	12,002

Minnesota State University, Mankato has taken the impact and lessons learned from the pandemic into special consideration for the spaces included in this project. In a typical pre-design, we would use the utilization records from the prior academic year as a baseline for determining space needs, incorporating enrollment growth and other goals. In this case, however, we've reviewed the utilization records for Fall 2021 and Spring 2022 and are not recommending these statistics be used as the foundation for the planning of the project. As part of pandemic response planning, MSU Mankato invested in instructional technology to create "HyFlex" and robust "Online" course delivery options that allowed for remote learning. As documented in the table below (data as of 8/3/2022) the University's enrollment pattern shifted significantly from "In Person" to "Online or HyFlex" during the Pandemic. Looking forward, MSU Mankato projects a course offering and enrollment pattern that follows the trend observed for Fall 2022 where in-person courses are up to 66%. This is a significant rebound from 44% in 2021 and 30% in 2020. The space program proposed in this predesign focuses on the utilization data gathered in Fall 2022 and supported by the strategic goals of the university to support student success and promote in-person learning and the full MSU Mankato campus experience.

Percent of Course Offerings by Term 8/3/2022

Delivery - Media Code	Fall 2022	Fall 2021	Fall 2020	Fall 2019
In Person	**66.3%**	**44.6%**	**30.5%**	**83.7%**
In Person	66.3%	44.6%	30.5%	83.7%
Online	**19.0%**	**22.0%**	**30.7%**	**11.0%**
03 - Mostly Online	0.3%	0.8%	0.7%	1.1%
12 - Completely Online-Asynchronous	14.6%	12.2%	9.9%	9.1%
13 - Completely Online - Synchronous	4.2%	2.8%	0.7%	0.7%
98 - Remote Teaching Limited In-Person	0.0%	0.1%	0.0%	0.0%
99 - Remote Teaching No In-Person	0.0%	6.0%	19.4%	0.0%
HyFlex	**5.5%**	**21.5%**	**21.8%**	**0.0%**
14 - HyFlex	5.5%	21.5%	21.8%	0.0%
Blended/Hybrid	**4.5%**	**7.6%**	**13.1%**	**4.5%**
09 - Blended/Hybrid	4.5%	7.6%	13.1%	4.5%
Arranged	**4.6%**	**4.3%**	**4.0%**	**0.0%**
11 - Arranged	4.6%	4.3%	4.0%	0.0%
Videoconferencing	**0.1%**	**0.0%**	**0.0%**	**0.8%**
04 - Videoconferencing Originating Site	0.0%	0.0%	0.0%	0.8%
08 - Videoconferencing Remote Site	0.1%	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Percent of Student Enrollments in Courses by Term

Delivery - Media Code	Fall 2022	Fall 2021	Fall 2020	Fall 2019
In Person	**53.5%**	**27.3%**	**11.5%**	**77.3%**
In Person	53.5%	27.3%	11.5%	77.3%
Online	**32.2%**	**34.3%**	**49.3%**	**16.9%**
03 - Mostly Online	0.3%	1.3%	0.9%	1.4%
12 - Completely Online-Asynchronous	27.1%	19.0%	16.4%	15.0%
13 - Completely Online - Synchronous	4.8%	3.2%	0.7%	0.6%
98 - Remote Teaching Limited In-Person	0.0%	0.1%	0.0%	0.0%
99 - Remote Teaching No In-Person	0.0%	10.8%	31.3%	0.0%
HyFlex	**7.9%**	**28.9%**	**25.9%**	**0.0%**
14 - HyFlex	7.9%	28.9%	25.9%	0.0%
Blended/Hybrid	**5.9%**	**8.3%**	**12.4%**	**5.3%**
09 - Blended/Hybrid	5.9%	8.3%	12.4%	5.3%
Arranged	**0.5%**	**1.1%**	**0.9%**	**0.0%**
11 - Arranged	0.5%	1.1%	0.9%	0.0%
Videoconferencing	**0.1%**	**0.0%**	**0.0%**	**0.4%**
04 - Videoconferencing Originating Site	0.0%	0.0%	0.0%	0.4%
08 - Videoconferencing Remote Site	0.0%	0.0%	0.0%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Whether in new, renovated or repurposed facilities, current national metrics and best practices advise increasing the ASF/seat projected for Classrooms, Class Laboratories, Open Laboratories, and Research Laboratories from current averages in Armstrong Hall.

New classrooms are programmed at an average of 21 ASF per student station, higher than the current Armstrong Hall average of 18 ASF, to allowing the University to shift a portion of their classrooms from traditional lecture classrooms with tablet arm chairs to active learning classrooms and classrooms with movable double occupancy tables and chairs. This will also allow additional room for proper social distancing should the need arise.

Following leading practices, class laboratory environments have been modestly increased for additional storage space, seat counts, function/flow. Labs with growth include:

- College of Education (CoE) Labs planned for Elementary & Early Childhood Education, K-12 & Secondary Education, Counseling & Student Personnel. These Laboratory spaces have been programmed for educator preparation experiences and practice, such as simulations, practice with educative manipulatives, practice with lesson plan delivery, and skills-based simulations

- College of Humanities & Social Sciences (CoHSS) Labs are planned for Corrections, Aging Studies, and Psychology to replace their current labs in Armstrong Hall with an increase in SF/seat for more efficient and flexible layouts, plus additional storage space. A Psychology Observation Room has been added to the program to provide oversight of simulated clinical psychology environments. This room will enable faculty to observe student practice, as well as students to learn from observing other student/patient simulated interactions. These types of observation environments have become a standard in Psychology education spaces.

A modest list of new environments is included in the program for the noted reasons below:

- CoE Elementary Ed Lab - An Education Simulation Lab does not currently reside within Armstrong Hall. It is critically important that the CoE has access to a real-world environment that simulates an actual classroom and enables students to prepare for changing room arrangements and teaching methods that shift through the course of the day and with changing subject matter. This type of environment is being including across the state and country in Education programs.

- CoHSS Observation & Therapy Rooms – There is no current area available in Armstrong Hall for these key types of learning spaces. The highest standard of instruction across the country includes these spaces to support curriculum delivery and prepare students for their career settings and experiences.

- Student Collaboration & Study Spaces – This type of space is currently driving facility renovations across the country to support student academic success and degree attainment. It is directly tied to the transition in higher education to active, applied, and team-based learning. There is very little space currently available in Armstrong Hall to meet this need. In the existing building students have nowhere to sit other than the floor before and after class as they wait to engage with faculty and work in project teams. The project program distributes these spaces throughout the proposed locations to promote these crucial activities.

DEED data for Blue Earth County reveals Teachers of all grade levels - Elementary, Secondary, Middle and Substitute - is one of the highest occupations in demand requiring a Bachelor's Degree or higher. Also in demand are counselors/ specialists in substance abuse, behavioral disorder and mental health. The College of Education and College of Humanities & Social Sciences (Psychology, Law Enforcement) will be primary beneficiaries of new learning spaces in the proposed project.

COUNTY PROFILE **Blue Earth Co.**

OCCUPATIONS IN DEMAND

Table 13. Southwest Occupations in Demand, 2022

Less than High School	High School or Equivalent	Some College or Assoc. Deg.	Bachelor's Degree or Higher
Home Health and Personal Care Aides $30,145/yr	Nursing Assistants $33,957/yr	Registered Nurses $76,734/yr	Elementary School Teachers, Except Special Education $53,146/yr
Retail Salespersons $28,932/yr	Licensed Practical and Licensed Vocational Nurses $48,351/yr	Clinical Laboratory Technologists and Technicians $55,177/yr	General and Operations Managers $79,034/yr
Cashiers $25,982/yr	Medical Assistants $41,596/yr	Police and Sheriff?s Patrol Officers $59,965/yr	Secondary School Teachers, Except Special and Career/Technical $57,121/yr
Fast Food and Counter Workers $24,598/yr	Automotive Service Technicians and Mechanics $37,127/yr	Magnetic Resonance Imaging Technologists $79,803/yr	Accountants and Auditors $64,075/yr
Heavy and Tractor-Trailer Truck Drivers $45,543/yr	Electricians $57,423/yr	Industrial Engineering Technologists and Technicians $51,741/yr	Substance abuse, behavioral disorder, and mental health $51,967/yr
First-Line Supervisors of Retail Sales Workers $43,858/yr	Heating, Air Conditioning, and Refrigeration Mechanics and Installers $49,409/yr	Surgical Technologists $57,436/yr	Substitute Teachers, Short-Term $35,428/yr
Waiters and Waitresses $25,523/yr	Machinists $48,003/yr	Radiologic Technologists and Technicians $65,570/yr	Project Management Specialists and Business Operations $60,798/yr
Stockers and Order Fillers $30,099/yr	Industrial Machinery Mechanics $52,667/yr	Veterinary Technologists and Technicians $37,547/yr	Pharmacists $134,918/yr
Customer Service Representatives $37,334/yr	Hairdressers, Hairstylists, and Cosmetologists $29,742/yr	Electrical and Electronic Engineering Technologists and $58,234/yr	Middle School Teachers, Except Special and Career/Technical $60,938/yr
Teaching Assistants, Except Postsecondary $29,982/yr	Emergency Medical Technicians and Paramedics $36,614/yr	Forest and Conservation Technicians $47,186/yr	Sales Representatives, Wholesale and Manufacturing, Technical and $54,030/yr

Source: DEED Occupations in Demand

Students who have graduated from these high MNDEED Demand departments in the College of Education and College of Humanities & Social Sciences can expect employment in their related fields, as employment percentages are historically very high, in the range of 95% to 100%.

Table 1: Rates of Related Employment by Department: Education and Counseling Programs in MNDEED Demand Areas

	2016-17		2017-18		2018-19		2019-20		2020-21		Grand Total	
Special Education Total	47		102		96		88		162		495	
Employed Related	**46**	**98%**	**100**	**98%**	**94**	**98%**	**87**	**99%**	**160**	**99%**	**487**	**98%**
Employed Unrelated Not Seeking Related	0		0		1		0		0		1	
Employed Unrelated Seeking Related	1		2		1		1		2		7	
	2016-17		2017-18		2018-19		2019-20		2020-21		Grand Total	
Ed. Studies: Elem & Early Childhood Total	105		108		160		148		136		657	
Employed Related	**100**	**95%**	**106**	**98%**	**151**	**94%**	**147**	**99%**	**133**	**98%**	**637**	**97%**
Employed Unrelated Not Seeking Related	2		1		0		1		1		5	
Employed Unrelated Seeking Related	3		1		9		0		2		15	
	2016-17		2017-18		2018-19		2019-20		2020-21		Grand Total	
Ed. Studies: K-12 & Secondary Pgrms Total	49		69		41		48		51		258	
Employed Related	**48**	**98%**	**68**	**99%**	**41**	**100%**	**47**	**98%**	**50**	**98%**	**254**	**98%**
Employed Unrelated Not Seeking Related	1		1		0		0		0		2	
Employed Unrelated Seeking Related	0		0		0		1		1		2	
	2016-17		2017-18		2018-19		2019-20		2020-21		Grand Total	
Counseling and Student Personnel Total	31		31		34		28		28		152	
Employed Related	**31**	**100%**	**31**		**34**	**100%**	**28**	**100%**	**28**	**100%**	**152**	**100%**
	2016-17		2017-18		2018-19		2019-20		2020-21		Grand Total	
Aviation Total	18		34		27		23		37		139	
Employed Related	**18**	**100%**	**32**	**94%**	**24**	**89%**	**23**	**100%**	**35**	**95%**	**132**	**95%**
Employed Unrelated Not Seeking Related	0		1		0		0		0		1	
Employed Unrelated Seeking Related	0		1		3		0		2		6	

2.4 Academic and Operational Program Impact

The distributed character of the project offers a terrific opportunity to "right-size" and optimize instructional space for current and evolving academic departments with new and improved existing facilities. It is important to maximize the number of programs affected by the project.

The essential programs affected positively include:

College of Humanities & Social Sciences

- English
- World Languages & Cultures
- Communication Studies
- Philosophy
- Law Enforcement
- Psychology
- Geography
- Aging Studies
- Gender & Women's Studies
- Public Administration
- History
- Sociology & Corrections
- College Office Suites
- Advising & Counseling Center
- Deans' Offices
- Student Collaboration & Study Spaces

College of Education

- Elementary & Early Childhood Education
- K-12 & Secondary Education
- Counseling & Student Personnel
- Aviation
- Educational Leadership
- Special Education,
- Center for Ed Partnerships
- Center for Educator Support

College of Business

- General Classrooms (shared)

Optimizing class schedules is another important outcome of the campus' recent initiative, “Optimizing Learning Spaces and Student Success: Common Bell and Coordinated Scheduling”, which put a framework in place that centralizes class times and aims to increase efficiencies in space utilization. The Predesign targets room utilization of 38 hours/week and 75% classroom seat fill.

2.5 Existing Facility Systems Summary

Armstrong Hall’s immediate infrastructure needs include: upgrade HVAC system, update interior finishes, address upcoming needs for roof replacement, increase plumbing fixture count to meet code and ADA requirements, and replace all domestic and waste water piping.

In 2008, HEAPR funding of $1.3M was dedicated to exterior shell work around/over windows for Morris, Armstrong, and Wigley Halls, plus one boiler burner replacement.

Armstrong Hall has a history of HVAC-related problems, such as a lack of air flow and temperature control. Below is the summary of the existing systems issues:

- A 2007 engineering study summarized the issue as systems unable to provide the proper air volume, including outside air. Complete renovation/replacement was recommended, at an estimated cost of $7 million for all levels.
- In 2012-13, a Predesign for the basement HVAC was carried out to address problems of significant air leakage, poor indoor air quality and comfort, and lack of controls. Renovation was recommended.
- Electrical feeders to individual floors are not adequate for loads, though service is adequate.
- Accessibility issues include primary entry stairs, restrooms, companion seating for wheelchair locations in the auditoriums, and lack of lever door hardware.
- With two rings of hallways, neither of which has views or daylight, orientation and way-finding are a challenge. The outer hallway serving the offices is very narrow.

The demolition of Armstrong Hall as part of this project will eliminate $30.5 million in backlog, including failing exterior cladding, non-compliant restrooms and a failing roof. In addition, renovations and renewal of 73,000 SF of existing space on campus in the Library, Clinical Sciences, Morris Hall and Wiecking Hall will reduce backlog by an additional $10m.

MINNESOTA STATE

ARMSTRONG HALL

Code Information

Occupancy group(s) (existing):	B: Education above 12th grade, A-3: Lecture Halls			
Occupancy group(s) (proposed):	B: Education above 12th grade, A-3: Lecture Halls			
Primary space types (office, classroom, etc.):	Classrooms, offices			
Type of construction (per current MN Building Code):	II-A			
Building Size (GSF):	Allowable Height:	5 stories	Actual Height:	3 stories + basement
	Allowable area / floor:	37,500	Actual area / floor:	~40,000sf
	Total building Area:	187,500	Space efficiency (%):	

Building Systems (describe type of system & current condition)

Roofing type(s):	Built-up
Structural system type(s):	Cast-in-place Concrete
Mechanical system type(s):	
Electrical system type(s):	
Fire protection type(s):	Automatic Sprinkler System
Exterior wall type(s):	Brick exterior with clay masonry back-up
Interior wall type(s):	Glazed block, steel stud with GWB
Conveying system(s):	Elevator
Technology system(s)	
Sustainability / alternative energy systems:	
Notes on existing FF&E:	

Metrics

Current backlog:	$30,579,167	Current 10-yr renewal:	
Current FCI:	0.48	Proposed FCI.:	0.0
Current CRV:	$63,073,419		

Memorial Library + Addition

Code Information

Occupancy group(s) (existing):	A-3: Libraries			
Occupancy group(s) (proposed):	A-3: Library			
Primary space types (office, classroom, etc.):	Library			
Type of construction (per current MN Building Code):	1-B			
Building Size (GSF):	Allowable Height:	11 stories	Actual Height:	3 stories + basement
	Allowable area / floor:	Unlimited	Actual area / floor:	~60,000sf
	Total building Area:	Unlimited	Space efficiency (%):	

Building Systems (describe type of system & current condition)

Roofing type(s):	Built-up
Structural system type(s):	Cast-in-place Concrete
Mechanical system type(s):	Constant Air Volume
Electrical system type(s):	
Fire protection type(s):	Partial Automatic Sprinkler System
Exterior wall type(s):	Brick exterior with concrete masonry back-up
Interior wall type(s):	CMU, steel stud with GWB
Conveying system(s):	Elevator
Technology system(s)	
Sustainability / alternative energy systems:	
Notes on existing FF&E:	

Metrics

Current backlog:	$10,270,117	Current 10-yr renewal:	
Current FCI::	0.14	Proposed FCI.:.	0.0
Current CRV:	$74,557,201		

2.6 Space Utilization Analysis

Current utilization of Armstrong Hall classrooms and laboratories is another key driver of the project. Armstrong Hall is the most heavily used instructional facility on campus. In terms of weekly student contact hours, Armstrong has more than double the next highest used facility (Trafton Science Center). However, 15 of Armstrong's 42 classrooms fall below the Minnesota State minimum metrics for ASF per student station based on their types and occupancies. Further, none of the classrooms in Armstrong Hall meet the Minnesota State minimum metrics for ASF per student for active learning classrooms at their current occupancy levels. More detailed utilization data can be found in that analysis, which is included in it's entirety in the appendix.

Fall 2022 Campuswide General Classroom Summary						
Classroom Capacity	No. of rooms	No. of Seats	Average Room Size	Average ASF per Station	Average Room Hours Per Week	Average Room Utilization
20 and Under	3	37	437	38.9	23	71
21 - 25	2	34	537	95.3	16	50
26 - 30	16	461	629	21.8	14	43
31 - 35	12	389	629	19.5	17	54
36 - 40	18	677	759	20.2	23	73
41 - 45	7	300	760	17.7	22	68
46 - 50	15	726	907	18.7	19	59
51 - 60	9	469	821	15.9	21	64
61 - 75	4	257	1,147	17.7	20	62
76 - 100	6	511	1,500	17.7	21	66
101 - 150	5	611	1,971	16.2	21	67
251 and Over	3	949	3,322	10.5	19	61
	100	5421	934	20.9	19	61

Campuswide General Classroom Data:

- Class Meetings: 14,128
- Class Hours: 31,033
- Average Utilization: 61%
- Max Capacity: 5,421

Armstrong Hall General Classroom Data:

- Class Meetings: 5,680
- Class Hours: 13,024
- Average Utilization: 61%
- Max Capacity: 1,822

Enrollment History and Projections						
	2019	2020	2021	2022	2023	2024
Total FYE:	13,896	14,071	13,926	13,941	14,275	14,589

Fall 2022 Armstrong Hall General Classroom Summary					
Classroom Name	Capacity	Size	ASF per Station	Hours Used Per Week	Room Utilization at 32 hours per week
AH 0004	76	1159	15.3	17	54
AH 0007	70	1693	24.2	20	63
AH 0013	48	956	19.9	19	58
AH 0015	40	868	21.7	28	88
AH 0039	50	790	15.8	24	74
AH 0040	48	1014	21.1	16	51
AH 0101	139	1784	12.8	24	75
AH 0102	110	1236	11.2	23	72
AH 0123	40	626	15.7	18	56
AH 0202	32	495	15.5	19	60
AH 0208	32	640	20.0	29	91
AH 0211	43	639	14.9	22	68
AH 0213	56	875	15.6	21	64
AH 0214	50	751	15.0	24	75
AH 0215	36	575	16.0	22	70
AH 0217	29	497	17.1	13	40
AH 0219	31	496	16.0	11	35
AH 0220	40	757	18.9	19	61
AH 0222	52	748	14.4	15	48
AH 0225	3	518	172.7	19	60
AH 0231	49	749	15.3	23	72
AH 0232	45	669	14.9	19	58
AH 0233	43	662	15.4	20	64
AH 0234	34	496	14.6	9	28
AH 0302	30	499	16.6	13	42
AH 0303	30	665	22.2	16	51
AH 0304	40	673	16.8	23	71
AH 0305	46	755	16.4	19	61
AH 0306	54	876	16.2	32	99
AH 0308	41	641	15.6	20	63
AH 0310	27	502	18.6	24	75
AH 0314	42	755	18.0	19	61
AH 0315	34	670	19.7	15	46
AH 0316	38	665	17.5	34	106
AH 0317	28	499	17.8	15	48
AH 0319	29	499	17.2	14	43
AH 0322	36	754	20.9	21	66
AH 0323	39	876	22.5	25	78
AH 0325	29	502	17.3	13	40
AH 0326	28	502	17.9	6	19
AH 0334	31	500	16.1	22	69
AH 0223B	24	431	18.0	7	21
	1822	**30957**	**20.9**	**814**	**61**

Online Learning, Classroom Demand and Rightsizing

While most campuses had some form of online education before, it has certainly improved in leaps and bounds since the pandemic and is now a standard component in most any student's schedule. Delivering quality online learning is not only about convenience for students, but is a way of reaching students who do not have the means, opportunity or ability to travel to campus. The technology rich classrooms and faculty resource areas that are proposed as part of this project will help the campus to continue to elevate the quality of their online offerings and make them accessible to a broad range of remote students at their homes and at partner institutions.

All of that said, Minnesota State University Mankato believes that experiencing their unique campus and being part of the campus community in-person contributes greatly to student success and has been a key reason for their continued success as an institution. A classroom demand analysis was performed in 2018 to better understand the true instructional space need at a campus wide level. Since that time, even through the pandemic, enrollment has remained steady and in line with projections throughout the pandemic. Students are now returning to campus at a rate that encourages leadership that in-person attendance will reach pre-pandemic levels before this project is completed. For this reason, we believe the classroom demand analysis continues to be a valid programming tool.

This analysis established benchmark targets for classroom weekly room hours, seat fill rate, and ASF per student station, then mapped out the existing coursework into classrooms within classroom capacity groups. The result was an ideal count of classrooms needed by size. For the Armstrong Hall Solution program, it was determined that nearly 10,000 ASF of classroom space could be saved by increasing these benchmark targets. This space savings was realized by moving from 32 to 38 weekly room hours, 65% to 75% seat fill rate, and 18 ASF per student station to 21. The Classroom Demand analysis findings provided the rationale and identified the means to reduce the overall number of classrooms on campus from 100 to 90, while maintaining the same number of weekly student contact hours (WSCH).

Calculating classroom demand is more than just looking at what size and type of classrooms are the most popular. It’s about understanding the WSCH need by actual enrollment per course, establishing a seat fill target and then designing an optimal mix of classrooms that align class size, classroom capacity, and classroom type to best serve the University’s current and future needs.

If we aligned Class sizes with Classroom sizes, what classrooms types and sizes would we really need? We look at Weekly Student Contact Hours and also Room Hours that are sorted by class size, then balance that data to find a suggested classroom mix.

1. The numbers below assume Armstrong Hall is offline.
2. We have considered projected FYE enrollment growth through 2025. We assume that enrollment growth will lead to added enrollment in existing courses, reducing the need for small classrooms and increasing the need for larger classroom
3. Analysis includes the gradual increase from 65% seat fill to 75% seat fill.

Classroom demand analysis based on WSCHs and enrollment size

	STARTING YEAR 2018:			MEDIUM TERM: 2025		
CLASSROOM OCCUPANCY	SUGGESTED TOTAL CLASSROOMS	SUGGESTED TOTAL SEATS	CURRENT WSCHS PER ENROLLMENT SIZE	PROJECTED WSCHS PER ENROLLMENT SIZE	SUGGESTED TOTAL CLASSROOMS	SUGGESTED TOTAL SEATS
0 - 20	**15**	**240**	5,222	3,656	**8**	**128**
21 - 25	**10**	**240**	6,899	7,313	**11**	**264**
26-30	**7**	**203**	6,231	6,985	**8**	**232**
31-35	**10**	**330**	9,129	10,316	**11**	**363**
36-40	**15**	**555**	15,502	17,672	**17**	**629**
41-45	**10**	**430**	12,503	14,316	**12**	**516**
46-50	**5**	**240**	6,539	7,520	**5**	**240**
51-60	**4**	**224**	5,724	6,525	**4**	**224**
61-75	**4**	**260**	6,849	7,671	**4**	**260**
76-100	**2**	**172**	4,965	5,411	**2**	**172**
101-150	**2**	**244**	9,222	9,960	**3**	**366**
151-250	**3**	**600**	11,445	12,303	**2**	**400**
251+	**1**	**329**	6,113	6,540	**1**	**329**
	88	**4,067**	106,342	116,188	**88**	**4,123**

* For consistency of data, WSCHs were calculated based on enrollment reporting from Fall 2016, the same data set used for the Campus Space Analysis published in December 2017. Fall 2017 enrollment reporting showed a slight decrease in general classroom use from our baseline numbers.
** Note that the number of suggested seats only raises slightly from the 2018 baseline. This is due to increasing the seat fill from 65% to 75%

The results of the classroom demand analysis illustrate that many classes are being held in classrooms that are larger than they need to be. However, rather than simply reduce the size of the classrooms, as this analysis would suggest, Minnesota State Mankato intends to continue to employ multiple strategies to increase class sizes, improve seat fill and, ultimately, the financial viability of courses with enrollment below their minimum threshold.

SEATS PER ROOM	CLASSROOMS SUGGESTED	SEATS SUGGESTED	ASF PER SEAT
20	**7**	**140**	26
24	**8**	**192**	25
28	**2**	**56**	24
34	**3**	**102**	22
38	**7**	**266**	22
42	**5**	**210**	20
48	**0**	**0**	20
56	**0**	**0**	20
65	**0**	**0**	20
86	**0**	**0**	20
150	**1**	**150**	20
200	**1**	**200**	20
350	**0**	**0**	10

Aligning Resources with Needs to Improve Utilization

The classroom demand analysis provided a solid foundation for working with the University to design a successful classroom solution. After collaborative sessions with Minnesota State Mankato, including Academic Affairs, the following conclusions were made:

- For the purposes of this Predesign, we are going to use an average of 21 ASF per seat. This will allow a blend of traditional and active learning classrooms.
- There are classes being held with under 20 students in classrooms that are larger than they need to be. Creating smaller classrooms that reduce classroom capacities would improve seat fill, but may limit future flexibility and threaten the financial viability of courses. Slightly larger classrooms are recommended to align with Minnesota State Mankato goals, with the understanding that additional strategies for improving seat fill will need to be employed to achieve the operational efficiency gains that are driving the 75% goal. Common strategies for improving seat fill:
    - Rightsize classrooms
    - Combine sections of courses offered at alternate times, giving students less options but increasing operational efficiency.
    - Actively campaign to increase enrollment of courses with higher growth potential.
    - Offer essential courses with lower growth potential in alternative learning environments, such as teaming rooms, conference spaces or online.
    - Use the excess seat fill capacity to accommodate enrollment growth.

Final Proposed Solution

We are proposing to replace the 42 classrooms in Armstrong Hall with 32 classrooms that are rightsized and distributed throughout both existing and new construction. There is reassurance that, despite the reduction of square footage, there is extra capacity inherent in the solution if unforseen circumstances lead to the need for additional capacity. The labs will be able to serve multiple departments and also function in a classroom capacity. They will be considered as multi-purpose labs that will have much greater flexibility than a typical lab that has fixed, specialized equipment.

Capacities	Existing Qty	Proposed Qty	Seats	SF/Seat	ASF
20	1	2	40	26	1040
24	1	2	48	25	1200
28	9	4	112	24	2688
34	6	4	136	22	2992
38	4	7	266	22	5852
42	8	4	168	20	3360
48	6	5	240	20	4800
56	6	1	56	20	1120
65	1	1	65	19	1235
80	1				
150	4	1	150	20	3000
200		1	200	20	4000
	47*	32	1481		31287

*Includes 5 classrooms not located in Armstrong Hall that would be repurposed as part of this project.

2.7 Classroom and Lab Scheduling

In the past several years, MSU Mankato has made great strides in addressing scheduling issues as it relates to space utilization on campus. In Fall 2018, the University launched an *Optimizing Learning Spaces and Student Success: Common Bell and Coordinated Scheduling* initiative. The initiative focused on ensuring that MSU Mankato students can register for the courses they need, when they need them, and in high-quality spaces. Following nine months of development and consultation, a common bell course framework was adopted by the University in May 2019. A second area of work launched in Fall 2019, with a focus on recommending actions for space management, room scheduling and course offerings in support of common bell and coordinated scheduling. The following recommendations for adoption is listed below:

Space Management Recommendations:

- Space classifications - alignment with FICM, identification of room features and capabilities
- Inventory of existing space - provide initial classification, features and capabilities and designation as open, priority or exclusive use
- Parameters of use - designations for open, priority or exclusive based on specialized supplies, equipment, software licenses, hazardous materials, or other considerations; open computer labs to avoid the 11-2 pm (Mon-Fri) time period
- Ongoing improvement of academic space

Room Scheduling Recommendations:

- Parameters for student enrollment and space assignment, space type to instructional pedagogy and room change/holding allowances
- Course-based student focused method for course room assignment

The Course Offering Workgroup was charged with advancing recommendations for the adoption of practices and tools to support efficient and effective determination of course offerings. Three recommendations are advanced by the Workgroup for consideration:

- Develop, deploy and provide professional development for online tools to assist Deans, Department Chairs, Program Coordinators and faculty in identifying opportunities to make course offerings more efficient.
- Review general education course offerings that are required across programs and identify opportunities to streamline/merge general education course offerings across programs.
- Pursue implementation of the Minnesota State Grad Planner tool

The Common Bell Course Framework on the Mankato Campus applies to undergraduate and graduate full or half-term courses that have daytime demand during a fall or spring term. An undergraduate and graduate course is considered to have daytime demand if the course:

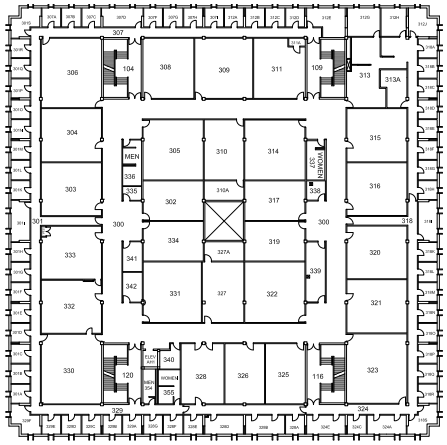
- meeting time begins between 8:00 a.m. and 5:00 p.m. on Monday, Wednesday and/or Friday.
- meeting time begins between 8:00 a.m. and 4:00 p.m. on Tuesday and/or Thursday.
- meets in a general purpose or telepresence classroom.
- meets in a face-to-face, telepresence, hybrid, or online synchronous format.

Additionally the Framework defines:

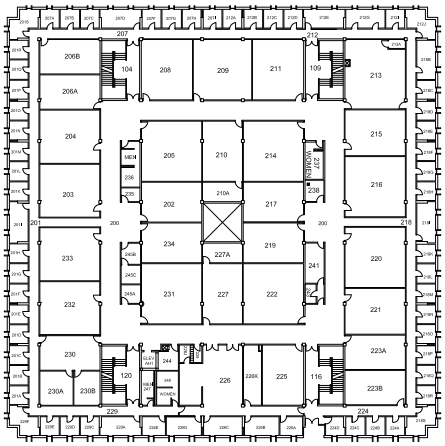
- Standard Scheduling Rules for Courses Carrying 1-5 Credits - # meeting times per week and time of class meeting (“A” through “F”) based on Course Model
- Distribution of Meeting Times, Patterns and Enrollments - Section offerings and Seat availability must be evenly distributed throughout the day and week.
- Additional Locations and Course Sites - are expected to follow the framework for courses offered in general purpose and telepresence classrooms
- Exemptions from the Framework - some programs offer courses in a unique course scheduling structure to meet the specific needs of the student population served

2.8 **Photos and Floor Plans**: Armstrong Hall

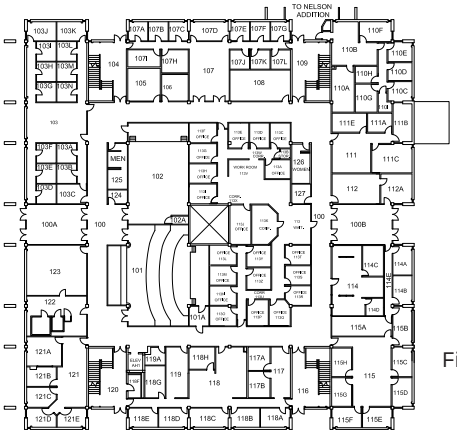
Exterior of Armstrong Hall



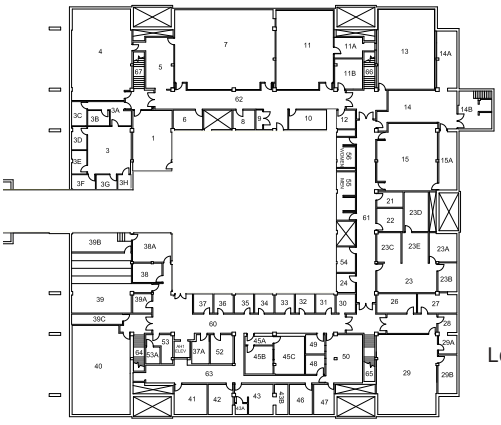
Third Level Plan



Second Level Plan



First Level Plan



Lower Level Plan

Exterior of Armstrong Hall at Central Entry

Exterior of Armstrong Hall at Overhang

Typical Corridor in Armstrong Hall

Typical Stair Landing in Armstrong Hall

Typical Office Corridor at Perimeter of Classrooms

Student Space / Forensic Lab in Armstrong Hall

Faculty Space in Armstrong Hall

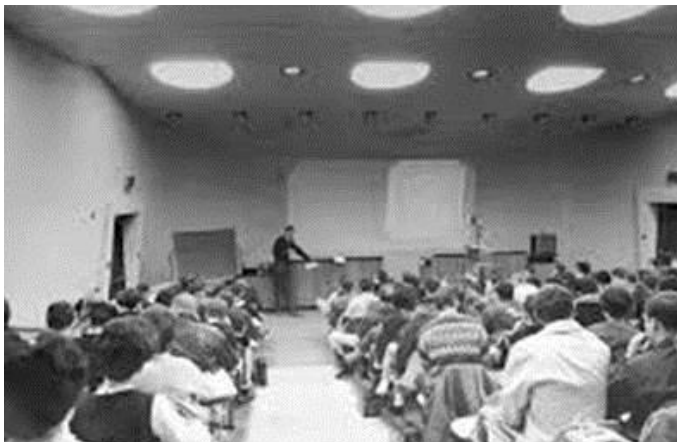
Spalling Limestone

Many of the classrooms in Armstrong Hall reflect the pedogogies and technologies that drove classroom design in the 1960s, the era during which Armstrong Hall was built.

Lecture style teaching:

- tablet arm chairs facing forward
- technology limited to an overhead projector, printed maps and chalkboards (markerboards)
- Minimize distractions, no windows.
- Students using books and notepads
- Direct lighting

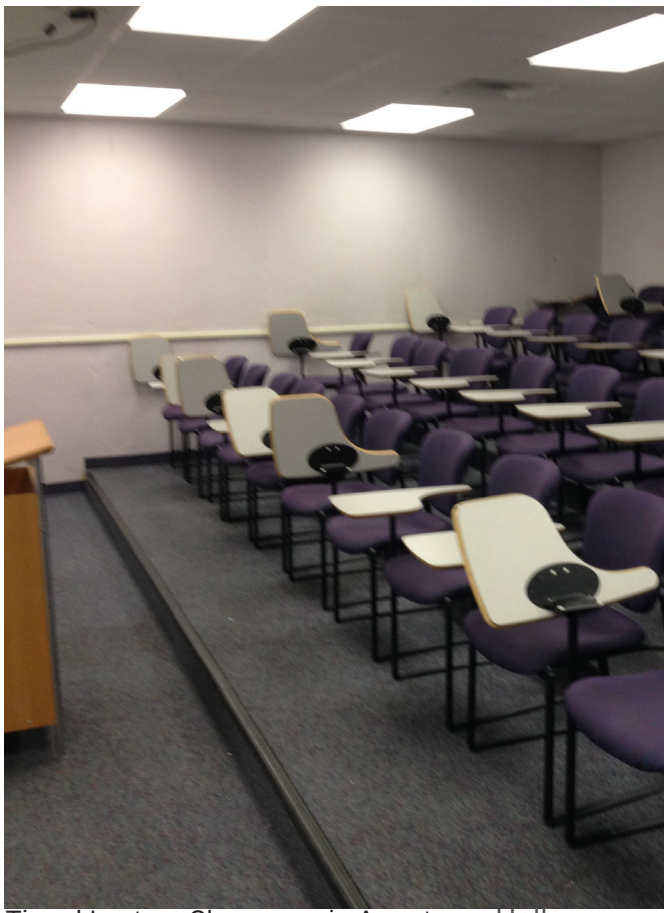
Typical 1960s classroom



Typical tiered 1960s lecture hall

Classroom in Armstrong Hall

Classroom in Armstrong Hall



Tiered Lecture Classroom in Armstrong Hall

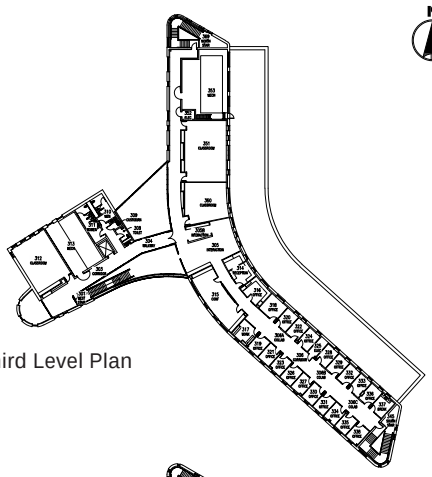
Contemporary Classroom Examples

Example Scale-Up Classroom with direct/indirect lighting and visual connection to student spaces.

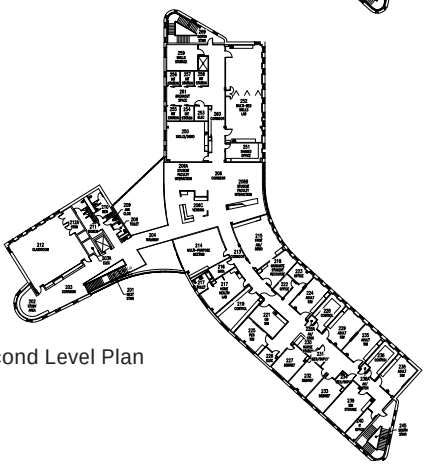
Example Seminar Classroom with flexible furniture and natural daylight.

Example Scale-Up Classroom with technology to support project based learning in Memorial Library.

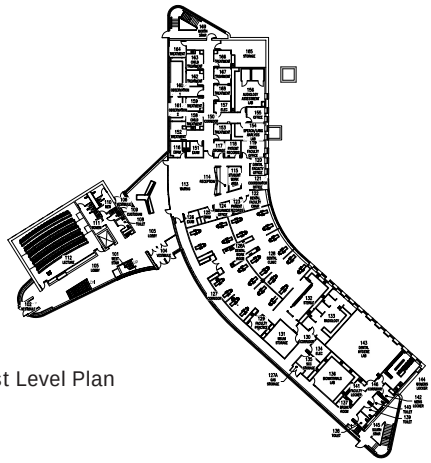
2.8 **Photos and Floor Plans:** Clinical Sciences



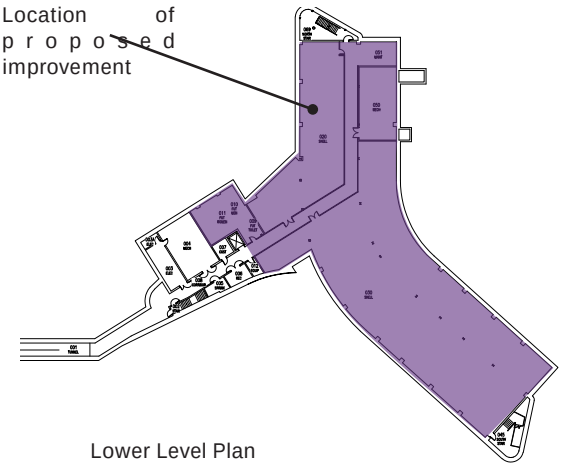
Third Level Plan



Second Level Plan

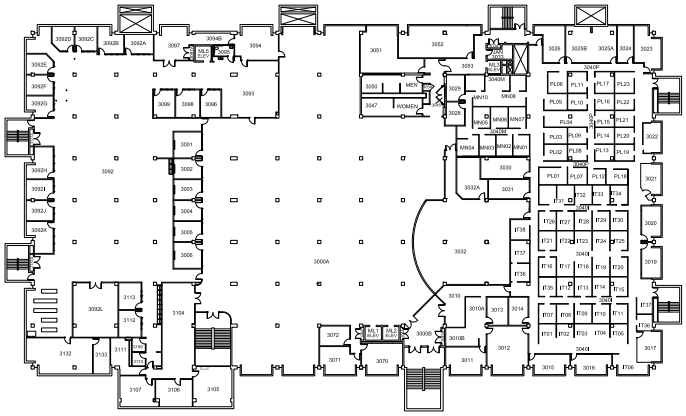


First Level Plan

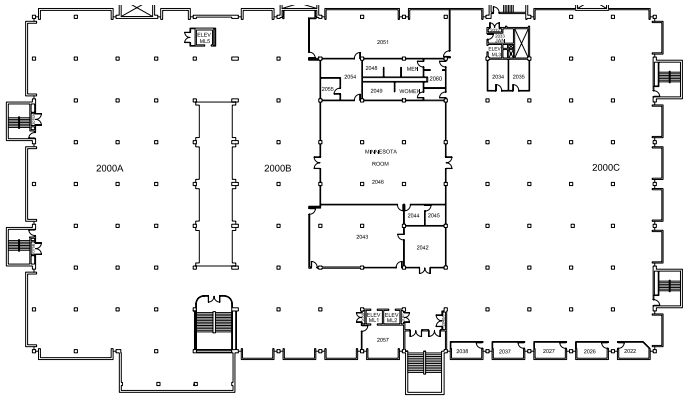


Lower Level Plan

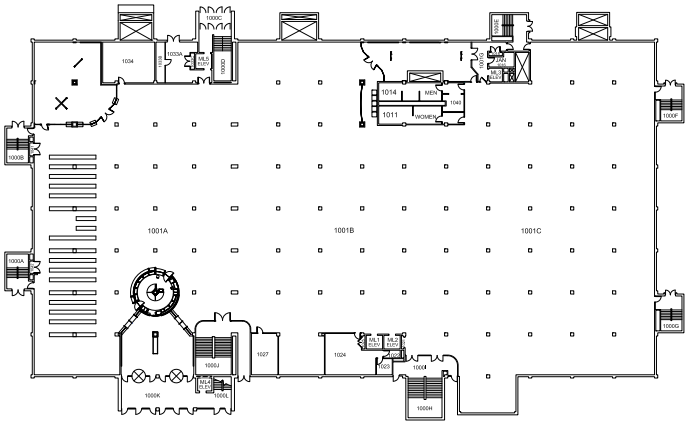
2.8 **Photos and Floor Plans:** Memorial Library



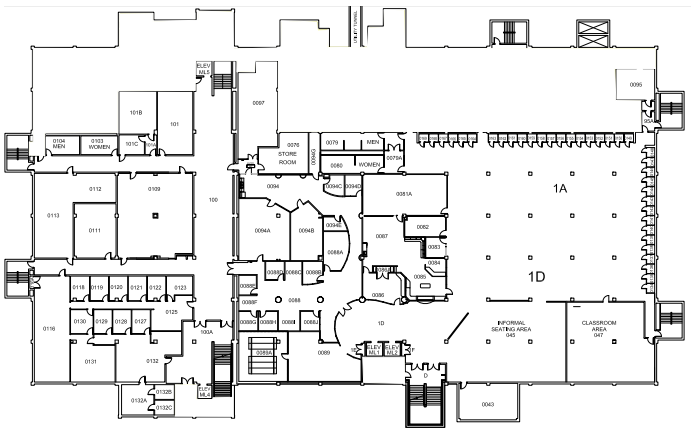
Third Level Plan



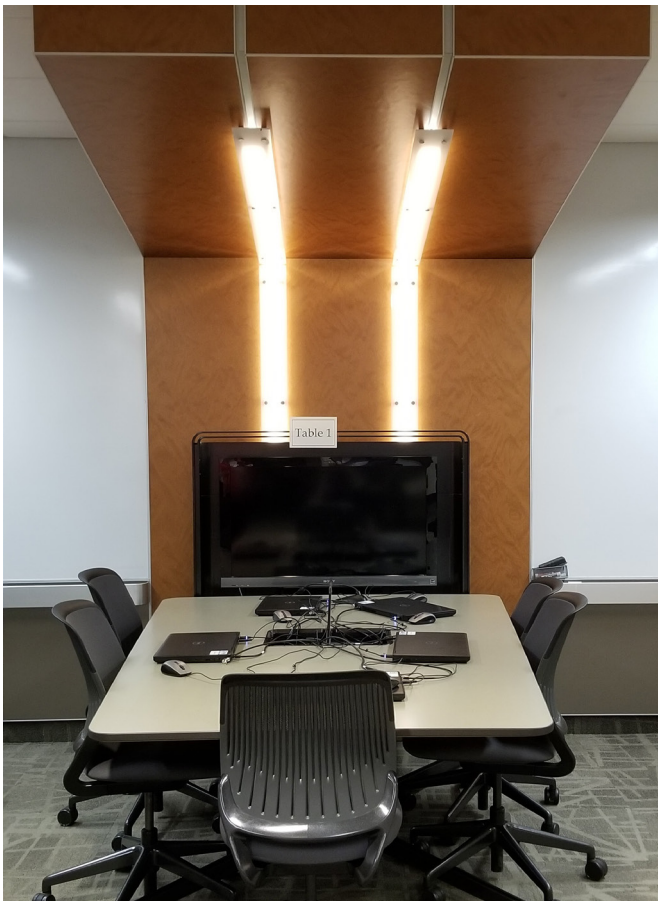
Second Level Plan



First Level Plan



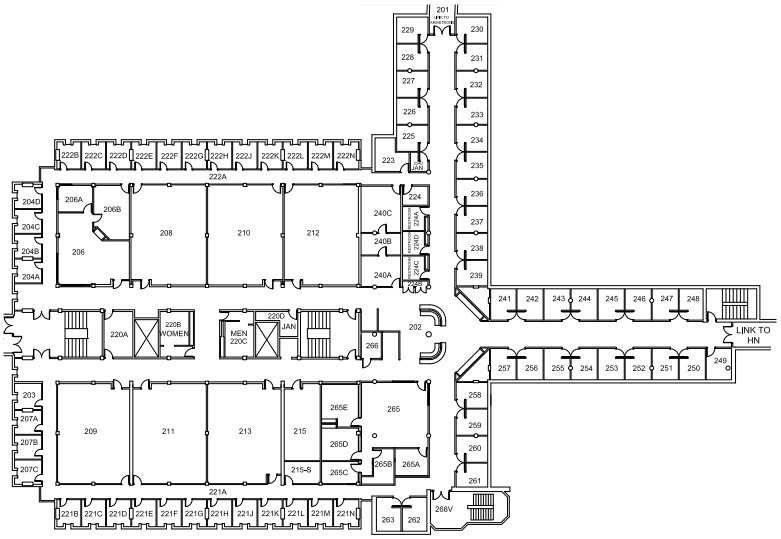
Lower Level Plan



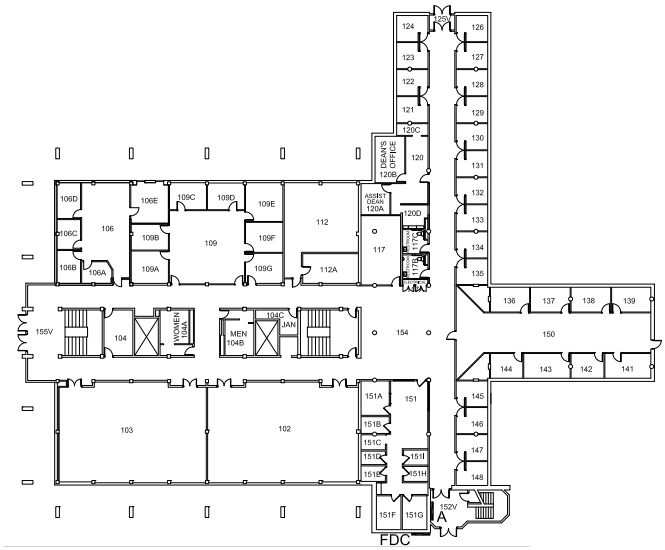
2.8 **Photos and Floor Plans:** Wiecking Center

First Level Plan

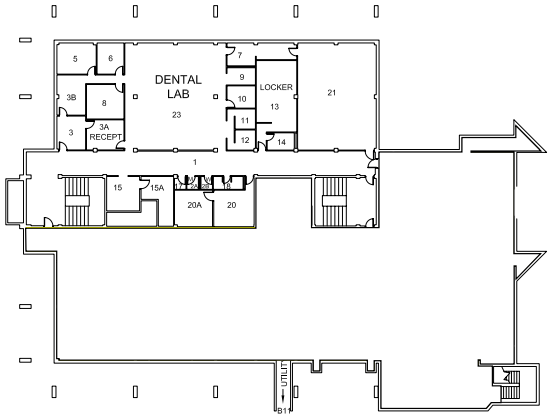
2.8 **Photos and Floor Plans:** Morris Hall



Second Level Plan



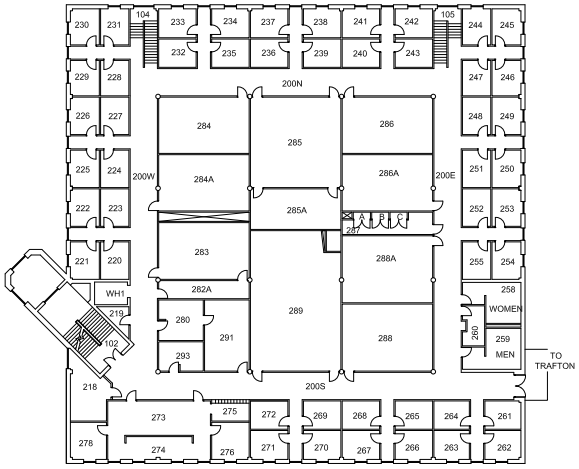
First Level Plan



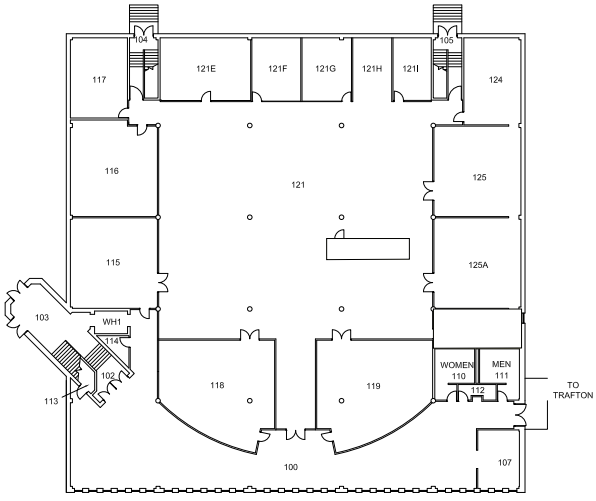
Lower Level Plan

2.8 **Photos and Floor Plans:** Wissink Center

Third Level Plan



Second Level Plan



First Level Plan

SECTION 3: Project Description

Section 3: Project Description

3.1 Design Intent

Armstrong Hall is an academic building located at the campus core that houses the College of Humanities & Social Sciences, and College of Education. The College of Business also regularly utilize classrooms in Armstrong Hall. The existing facility provides the majority of classrooms on campus, including two large scale auditoriums that seat 110 and 140 students.

Through previous studies, it has been established that Armstrong Hall has a significant backlog of building repair issues. Like many buildings of its construction era, its internal structure, floor plan depth, floor-to-floor heights, and utility infrastructure make it ill-suited for easy adaptation to modern pedagogical, student support, or faculty support needs. The significant funds required to retrofit these spaces, compared with the constrained quality of the results, does not warrant further investment in Armstrong Hall.

Based on EMS Campus Data:

- Class Meetings: 9,954
- Class Hours: 14,017
- Average Utilization: 55%
- Max Capacity: 2,157
- Area: 143,966 GSF
- Year Built: 1964
- Stories: 4
- FCI: .48
- Replacement Value: $63,073,419
- Building Repair Backlog: $30,579,167
- Current Uses: Classrooms, Administrative and Faculty Offices
  Equipment, Technology: Furniture needs upgrades; technology varies

The objective of this project is to replace Armstrong Hall with a smaller new building and renewing existing space in the Library, Clinical Sciences Building, Wiecking Center, and Morris Hall to increase campus-wide utilization and efficiencies. The new building will be constructed on a different site as an extension of the Academic District. Due to Armstrong Hall's significant size and high utilization, there is not enough swing space available on campus to allow it to be demolished prior to construction of the new replacement building. Rather, Armstrong Hall will be decommissioned over time as this multi-phase new construction and renewal project takes place. Ultimately Armstrong Hall will be demolished, opening up the central campus mall.

The design of the building will focus on achieving these goals:

- Rightsizing classrooms to maximize utilization and efficiency, while accommodating enrollment growth and supporting active learning, hybrid and high-flex learning.
- Flexible, efficient office space that supports collaboration between faculty and meaningful engagement with students.
- Adequate informal learning and social learning space to facility community building among students and encourage casual student/faculty interaction.
- Alignment with long term planning, such as the campus master plan and academic plan.

3.2 Purpose and Rationale

This project plays a significant role in contributing to the Strategic Framework for Minnesota State Colleges and Universities from both an economic growth and educational opportunity perspective. Project relevance and direct impacts are identified below:

MN State Colleges & Universities Strategic Framework	This project fullfills the Strategic Framework objectives in the following ways:
Ensure access to an extraordinary education for all Minnesotans	
Our faculty and staff will provide the best education available in Minnesota, preparing graduates to lead in every sector of Minnesota's economy.	By providing enhanced academic environments and technologies for faculty and staff to deliver the best education available in MN to a substantial number of students with diverse studies and career interests in Arts and Humanities, Education, and Social and Behavioral Sciences.
We will continue to be the place of opportunity, making education accessible to all Minnesotans who seek a college, technical or university education; those who want to update their skills; and those who need to prepare for new careers.	By providing quality academic environments that will be accessible to Minnesotan's who seek a university educational experience for both undergraduate and graduate studies as well as continuing education. The three colleges impacted by this project provide diverse career path options for students, for example: K12 and Special Education Teachers, Counselors, Language Interpretors, Public Speakers, Psychologists, Police Officers, Earth Scientists.
Be the partner of choice to meet Minnesota's workforce and community needs	
Our colleges and universities will be the partner of choice for businesses and communities across Minnesota to help them solve real-world problems and keep Minnesotans at the leading edge of their professions.	Minnesota State Mankato is the partner of choice for businesses and communities in the Southeast region and across the state of Minnesota. This project will provide active learning environments, laboratories and collaboration spaces for faculty and students to continue their great work and enrich their programs with further research partnerships, hands-on learning experiences, and interdisciplinary studies that explore and solve real-world problems.
Our faculty and staff will enable Minnesota to meet its need for a substantially better educated workforce by increasing the number of Minnesotans who complete certificates, diplomas and degrees.	By providing enhanced academic environments that expose and showcase a variety of educational studies to students so that they are aware of all the opportunities that exist for them to be valuable contributors to our communities. And providing collaborative study environments that support student's needs outside of the classroom so that they can succesfully accomplish their academic goals, degree completion and join the Minnesota workforce.
Deliver to students, employers, communities and taxpayers the highest value / most affordable option	
Our colleges and universities will deliver the highest value to students, employers, communities and taxpayers.	By providing quality active learning environments and interdisciplinary colllaboration spaces where students can refine their soft skills and learn how to work with others to solve problems to best prepare for their careers in the real world. These spaces will be healthy, flexible, multi-purpose, and highly utilized to deliver the highest value to students, employers, communities and taxpayers.
We will be the highest value / most affordable higher education option.	Our project has explored a variety of options over the past four years to ensure that the facility projects we are proposing are of the highest value, sustainable over time, and respectful of financial resources in Minnesota.

3.3 Space Program and Needs Inventory

The following Program and Space Needs Inventory has been created through workshop sessions with the Predesign Committee.

Units	Proposed				Total SF	
College of Humanities & Social Sciences					**31,269**	**SF**
English					**6,234**	
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	27	@	90	SF	2,430	SF
Open Office - 60sf: Administrative	1	@	60	SF	60	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	7	@	40	SF	280	SF
Reception	0.42	@	600	SF	252	SF
Conference (6)	1	@	150	SF	150	SF
Conference (12)	0.51	@	1,200	SF	612	SF
Collaboration/Circulation	0.51	@	3,840	SF	1,958	SF
Break	0.51	@	400	SF	204	SF
Storage	0.42	@	400	SF	168	SF
*Labs are listed below under Shared Shared Labs & Classrooms						
Communication Studies					**2,927**	
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	13	@	90	SF	1,170	SF
Open Office - 60: Administrative	1	@	60	SF	60	SF
Open Office - 40: TAs/GAs; 1 station / 5	4	@	40	SF	160	SF
Reception	0.22	@	600	SF	132	SF
Conference (12)	0.22	@	1,200	SF	264	SF
Collaboration/Circulation	0.22	@	3,840	SF	845	SF
Break	0.22	@	400	SF	88	SF
Storage	0.22	@	400	SF	88	SF
Philosophy					**1,727**	
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	7	@	90	SF	630	SF
Open Office - 60sf: Administrative	1	@	60	SF	60	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	2	@	40	SF	80	SF
Reception	0.13	@	600	SF	78	SF
Conference (12)	0.13	@	1,200	SF	156	SF
Collaboration/Circulation	0.13	@	3,840	SF	499	SF
Break	0.13	@	400	SF	52	SF
Storage	0.13	@	400	SF	52	SF
World Language & Cultures					**2,002**	
Office - 120sf: Department Chair	0	@	120	SF	0	SF
Office - 90sf: Faculty	9	@	90	SF	810	SF
Open Office - 60sf: Administrative	1	@	60	SF	60	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	2	@	40	SF	80	SF
Conference (6)	1	@	150	SF	150	SF
Reception	0.14	@	600	SF	84	SF
Conference (12)	0.14	@	1,200	SF	168	SF
Collaboration/Circulation	0.14	@	3,840	SF	538	SF
Break	0.14	@	400	SF	56	SF
Storage	0.14	@	400	SF	56	SF
*Labs are listed below under Shared Shared Labs & Classrooms						
Sociology & Corrections					**4,587**	
Law Enforcement Lab (AH014B, AH039C)	1	@	400	SF	400	SF
College Qualitative Lab (AH122)	1	@	400	SF	400	SF
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 120sf: Director	2	@	120	SF	240	SF
Office - 90sf: Faculty	17	@	90	SF	1,530	SF
Open Office - 60sf: Administrative	0	@	60	SF	0	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	1.6	@	40	SF	64	SF
Conference (6)	1	@	150	SF	150	SF
Reception	0.33	@	600	SF	198	SF
Collaboration/Circulation	0.33	@	2,800	SF	924	SF
Conference (12)	0.33	@	900	SF	297	SF
Break	0.33	@	400	SF	132	SF
Storage	0.33	@	400	SF	132	SF

College of Humanities & Social Sciences

Psychology					**6,992**	
Psychology Lab (WC353&353A)	1	@	1,400	SF	1,400	SF
Psychology Lab (AH029-AH029B)	1	@	1,200	SF	1,200	SF
Psych Observ Room	1	@	400	SF	400	SF
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	19	@	90	SF	1,710	SF
Open Office - 60sf: Administrative	0	@	60	SF	0	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	4.4	@	40	SF	176	SF
Conference (6)	1	@	150	SF	150	SF
Reception	0.36	@	600	SF	216	SF
Collaboration/Circulation	0.36	@	2,800	SF	1,008	SF
Conference (12)	0.36	@	900	SF	324	SF
Break	0.36	@	400	SF	144	SF
Storage	0.36	@	400	SF	144	SF
*Additional Labs listed below under Shared Category						
Geography					**4,053**	
Weather/Soils Lab - 18 seats	1	@	1,050	SF	1,050	SF
Cartography Wet Lab - 14 seats	1	@	450	SF	450	SF
GIS Lab	1	@	1,010	SF	1,010	SF
Office - 120sf: Department Chairs	1	@	120	SF	120	SF
Office - 90sf: Faculty	8	@	90	SF	720	SF
Open Office - 60sf: Administrative	0	@	60	SF	0	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	1	@	40	SF	40	SF
Reception	0.13	@	600	SF	78	SF
Collaboration/Circulation	0.13	@	2,800	SF	364	SF
Conference (12)	0.13	@	900	SF	117	SF
Break	0.13	@	400	SF	52	SF
Storage	0.13	@	400	SF	52	SF
History					**1,970**	
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	10	@	90	SF	900	SF
Open Office - 60sf: Administrative	0	@	60	SF	0	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	0.8	@	40	SF	32	SF
Reception	0.18	@	600	SF	108	SF
Collaboration/Circulation	0.18	@	2,800	SF	504	SF
Conference (12)	0.18	@	900	SF	162	SF
Break	0.18	@	400	SF	72	SF
Storage	0.18	@	400	SF	72	SF
Other CoH&SS					**777**	
Existing Seats (enclosed or open office space)						
Open Office - 40sf: Adjunct Sociology & Correct; 1 station / 3	2.33	@	40	SF	93	SF
Open Office - 40sf: Adjunct Psychology; 1 station / 3	0	@	40	SF	0	SF
Open Office - 40sf: Adjunct Geography; 1 station / 3	0	@	40	SF	0	SF
Open Office - 40sf: Adjunct History; 1 station / 3	0.67	@	40	SF	27	SF
Open Office - 40sf: Adjunct English; 1 station / 3	9.67	@	40	SF	387	SF
Open Office - 40sf: Adjunct Comm Studies; 1 station / 3	2.67	@	40	SF	107	SF
Open Office - 40sf: Adjunct Philosophy; 1 station / 3	2.67	@	40	SF	107	SF
Open Office - 40sf: Adjunct World Lang & Cultures; 1 station / 3	0.33	@	40	SF	13	SF
Reception		@		SF	0	SF
Collaboration/Circulation		@		SF	0	SF
Break		@		SF	0	SF
Storage	0.11	@	400	SF	44	SF

Units	Proposed				Total SF	
College of Education					**19,977**	**SF**
Teaching & Learning: K-12 & Secondary Pgrms					**2,930**	
K-12 Lab	1	@	750	SF	750	SF
Materials Storage	1	@	120	SF	120	SF
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	9	@	90	SF	810	SF
Open Office - 60sf: Administrative	2	@	60	SF	120	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	0.6	@	40	SF	24	SF
Reception	0.18	@	600	SF	108	SF
Conference (12)	0.18	@	1,200	SF	216	SF
Collaboration/Circulation	0.18	@	2,880	SF	518	SF
Break	0.18	@	400	SF	72	SF
Storage	0.18	@	400	SF	72	SF
Teaching & Learning: Elem & Literacy Ed					**5,870**	
Elementary Lab	1	@	1,120	SF	1,120	SF
Elementary Lab	1	@	800	SF	800	SF
Elementary Lab	1	@	800	SF	800	SF
Elementary Ed Simulation Classrooms	1	@	1,020	SF	1,020	SF
Materials Storage	1	@	200	SF	200	SF
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	9	@	90	SF	810	SF
Open Office - 60sf: Administrative	1	@	60	SF	60	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	0.2	@	40	SF	8	SF
Reception	0.17	@	600	SF	102	SF
Conference (12)	0.17	@	1,200	SF	204	SF
Collaboration/Circulation	0.17	@	2,880	SF	490	SF
Break	0.17	@	400	SF	68	SF
Storage	0.17	@	400	SF	68	SF
Teaching & Learning: Special Education Dpt					**2,401**	
Special Ed Lab	1	@	800	SF	800	SF
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	7	@	90	SF	630	SF
Open Office - 60sf: Administrative	1	@	60	SF	60	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	0.6	@	40	SF	24	SF
Reception	0.14	@	600	SF	84	SF
Conference (12)	0.14	@	1,200	SF	168	SF
Collaboration/Circulation	0.14	@	2,880	SF	403	SF
Break	0.14	@	400	SF	56	SF
Storage	0.14	@	400	SF	56	SF
Counseling and Student Personnel					**5,056**	
Teaching Lab - 12 seats	1	@	1,100	SF	1,100	SF
Teaching Lab - ? Seats	1	@	400	SF	400	SF
Media Production	1	@	400	SF	400	SF
Demonstration	1	@	400	SF	400	SF
Media Production	1	@	400	SF	400	SF
Office - 120sf: Department Chair	1	@	120	SF	120	SF
Office - 90sf: Faculty	9	@	90	SF	810	SF
Open Office - 60sf: Administrative	1	@	60	SF	60	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	3	@	40	SF	120	SF
Conference (6)	1	@	150	SF	150	SF
Reception	0.2	@	600	SF	120	SF
Conference (12)	0.2	@	1,200	SF	240	SF
Collaboration/Circulation	0.2	@	2,880	SF	576	SF
Break	0.2	@	400	SF	80	SF
Storage	0.2	@	400	SF	80	SF

College of Education

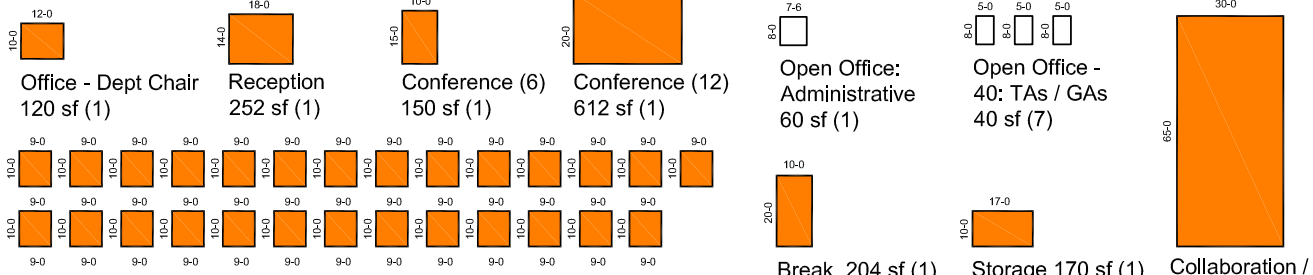
Aviation						**995**	
Office - 120sf: Department Chair	1	@	120	SF		120	SF
Office - 90sf: Faculty	3	@	90	SF		270	SF
Open Office - 60sf: Administrative	1	@	60	SF		60	SF
Open Office - 40sf: Adjunct; 1 station / 3	1.3	@	40	SF		52	SF
Reception	0.09	@	600	SF		54	SF
Conference (12)	0.09	@	1,200	SF		108	SF
Collaboration/Circulation	0.09	@	2,880	SF		259	SF
Break	0.09	@	400	SF		36	SF
Storage	0.09	@	400	SF		36	SF
Educational Leadership						**770**	
Office - 120sf: Department Chair	1	@	120	SF		120	SF
Office - 90sf: Faculty	2	@	90	SF		180	SF
Open Office - 60sf: Administrative	1	@	60	SF		60	SF
Open Office - 40sf: TAs/GAs; 1 station / 5	0.67	@	40	SF		27	SF
Reception	0.07	@	600	SF		42	SF
Conference (12)	0.07	@	1,200	SF		84	SF
Collaboration/Circulation	0.07	@	2,880	SF		202	SF
Break	0.07	@	400	SF		28	SF
Storage	0.07	@	400	SF		28	SF
Centers						**1,872**	
Office of Assessment & Research							
Office - 120: Center Director	1	@	120	SF		120	SF
Office - 90: Administrative	1	@	90	SF		90	SF
Office of Field & International Experience							
Office - 120: Center Director	1	@	120	SF		120	SF
Open Office - 60: Administrative	2	@	60	SF		120	SF
Center for Educator Support							
Office - 120: Center Director	1	@	120	SF		120	SF
Open Office - 60: Administrative / Adjunct	1	@	60	SF		60	SF
Center for Educator Partnerships & Student Support							
Office - 120: Center Director	1	@	120	SF		120	SF
Office - 90: Administrative	1	@	90	SF		90	SF
Open Office - 60: Administrative	1	@	60	SF		60	SF
Conference (6)	1	@	150	SF		150	SF
Reception	0.15	@	600	SF		90	SF
Conference (12)	0.15	@	1,200	SF		180	SF
Collaboration/Circulation	0.15	@	2,880	SF		432	SF
Break	0.15	@	400	SF		60	SF
Storage	0.15	@	400	SF		60	SF
Other CoE						**83**	
Existing Seats (enclosed or open office space)							
Open Office - 40sf: Adjunct; 1 station / 3 / Dept?	0.5	@	40	SF		20	SF
Open Office - 40sf: Adjunct T&L K12 & Second; 1 station / 3	0.3	@	40	SF		12	SF
Open Office - 40sf: Adjunct T&L Elem & Lit; 1 station / 3	0.3	@	40	SF		12	SF
Open Office - 40sf: Adjunct T&L Spec Ed; 1 station / 3	0.3	@	40	SF		12	SF
Open Office - 40sf: Adjunct Counsel & SP; 1 station / 3	0.67	@	40	SF		27	SF
Open Office - 40sf: Adjunct Ed Leadership; 1 station / 3	0	@	40	SF		0	SF
Reception		@		SF		0	SF
Conference (12)		@		SF		0	SF
Collaboration/Circulation		@		SF		0	SF
Break		@		SF		0	SF
Storage		@		SF		0	SF

Units	Proposed				Total SF	
Shared Multi-use Labs					**3,240**	**SF**
Multi-use Labs	**11**				**3,240**	**SF**
Mutli-use Lab	1	@	660	SF	660	SF
Mutli-use Lab	1	@	450	SF	450	SF
Mutli-use Lab	1	@	480	SF	480	SF
Mutli-use Lab	1	@	350	SF	350	SF
Mutli-use Lab	1	@	250	SF	250	SF
Mutli-use Lab	1	@	250	SF	250	SF
Mutli-use Lab	1	@	200	SF	200	SF
Mutli-use Lab	4	@	150	SF	600	SF
Shared General Classrooms					**31,287**	**SF**
Classrooms	**32**				**31,287**	**SF**
Classroom 20 seats	2	@	520	SF	1,040	SF
Classroom 24 seats	2	@	600	SF	1,200	SF
Classroom 28 seats	4	@	672	SF	2,688	SF
Classroom 34 seats	4	@	748	SF	2,992	SF
Classroom 38 seats	7	@	836	SF	5,852	SF
Classroom 42 seats	4	@	840	SF	3,360	SF
Classroom 48 seats	5	@	960	SF	4,800	SF
Classroom 56 seats	1	@	1,120	SF	1,120	SF
Classroom 65 seats	1	@	1,235	SF	1,235	SF
Classroom 150 seats	1	@	3,000	SF	3,000	SF
Classroom 200 seats	1	@	4,000	SF	4,000	SF
Library Renovated Spaces					**7,522**	**SF**
Space impacted by Renovations	**4**				**7,522**	**SF**
Classroom X seat (ML0XX Collaboration Lab)	1	@	1,900	SF	1,900	SF
Classroom X seat (ML047 Global Learning Lab)	1	@	1,755	SF	1,755	SF
Classroom 50 seat (ML109)	1	@	1,667	SF	1,667	SF
Other	1	@	2,200	SF	2,200	SF

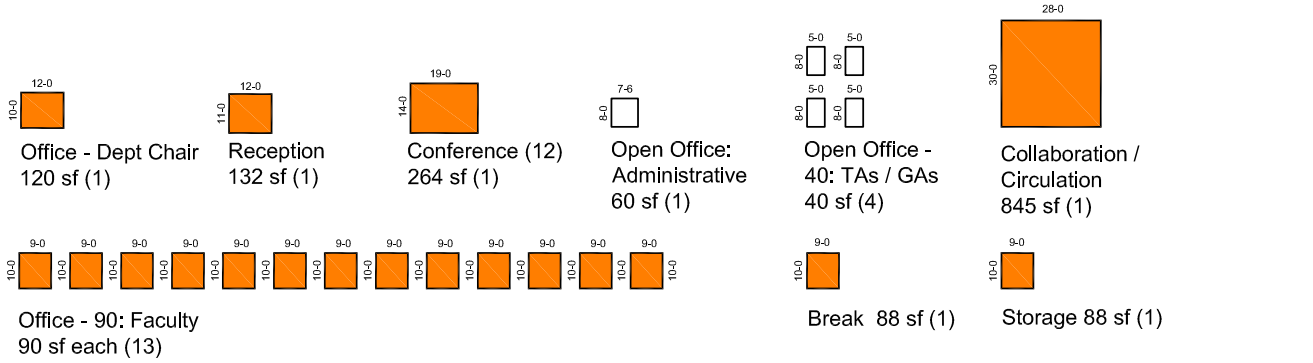
General						**19,650**	**SF**
Misc	**6**					**1,600**	**SF**
Storage	4	@	200	SF		800	SF
Recycling	2	@	400	SF		800	SF
Student	**29**					**14,150**	**SF**
Entry/Great Hall	1	@	4,000	SF		4,000	SF
Coffee Shop	1	@	500	SF		500	SF
Collaboration Hub	4	@	900	SF		3,600	SF
Social Learning	10	@	250	SF		2,500	SF
Just Ask' Faculty/Staff Desk	2	@	500	SF		1,000	SF
Adult Student w/ Children Study Suites	1	@	600	SF		600	SF
Small Group (6)	7	@	150	SF		1,050	SF
Small Group (12)	3	@	300	SF		900	SF
Joint Dean's Office	**19**					**2,240**	**SF**
CoAH Office - 140: Dean	1	@	140	SF		140	SF
CoAH Office - 120: Assistant Dean	1	@	120	SF		120	SF
CoAH Office - 90: Communications Director	1	@	90	SF		90	SF
CoAH Open Office - 60: Administrative	1	@	60	SF		60	SF
CoE Office - 140: Dean	1	@	140	SF		140	SF
CoE Office - 120: Assistant Dean	1	@	120	SF		120	SF
CoE Office - 90: Admin: Teacher Licensing	1	@	120	SF		120	SF
CoE Office - 60: Communications Coordinator	1	@	60	SF		60	SF
CoE Open Office - 60: Administrative	1	@	60	SF		60	SF
CoE Open Office - 40sf: TAs/GAs; 1 station / 5	1	@	40	SF		40	SF
CoSBS Office - 140: Dean	1	@	150	SF		150	SF
CoSBS Office - 120: Assistant Dean	1	@	120	SF		120	SF
CoSBS Office - 60: Communications Coordinator	1	@	60	SF		60	SF
CoSBS Open Office - 60: Administrative	1	@	60	SF		60	SF
Reception	1	@	300	SF		300	SF
Conference (12)	1	@	300	SF		300	SF
Storage	3	@	100	SF		300	SF
Joint Advising Center	**8**					**1,660**	**SF**
Advising / Coordinator Office (2 SBS, 2 A&H, 1 COE)	5	@	120	SF		600	SF
CoSBS Open Office - 60: Administrative	1	@	60	SF		60	SF
Study Room	1	@	800	SF		800	SF
Conference Room	1	@	200	SF		200	SF
ASF Total						**131,325**	**SF**
Net-to-Gross (circulation, walls, mech/service, etc)						78,795	SF
GSF Total	PROPOSED					**210,120**	**SF**

College of Humanities and Social Sciences

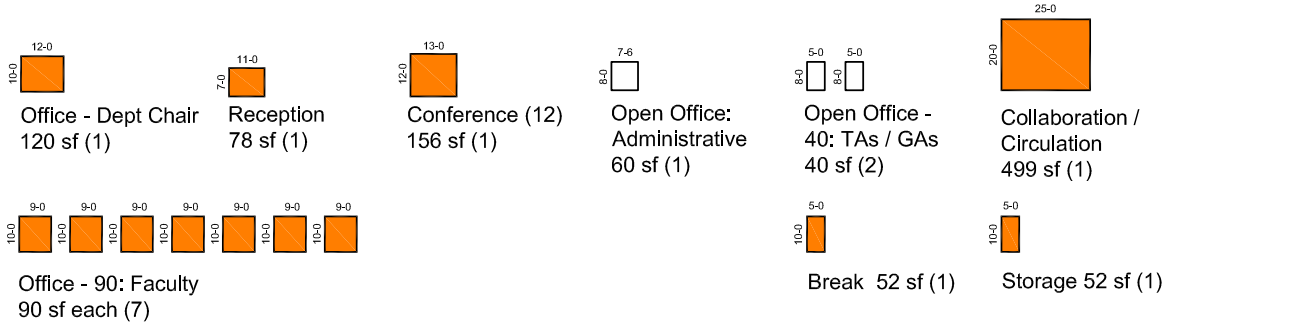
English



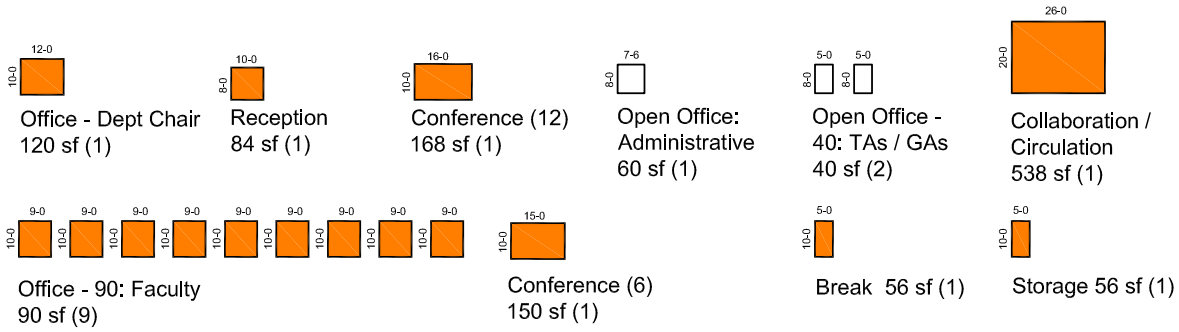
Communication Studies



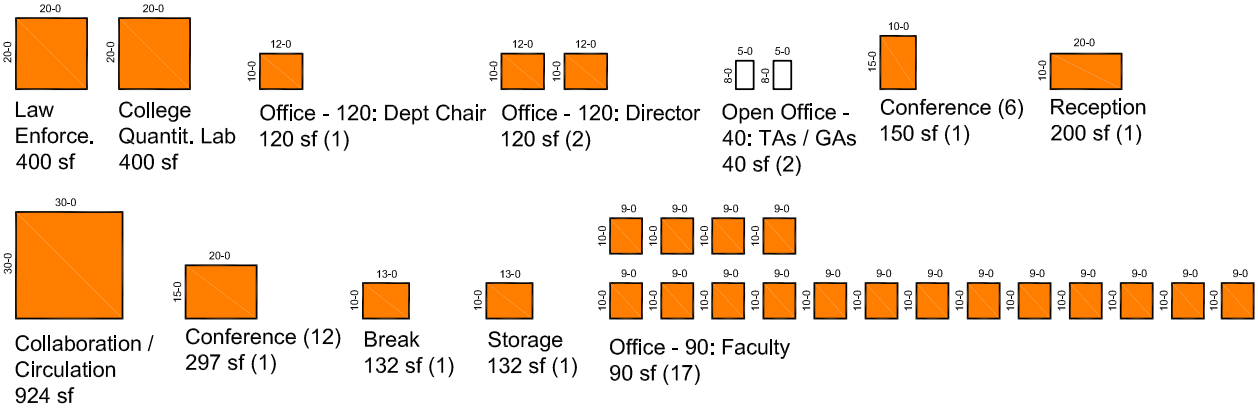
Philosophy



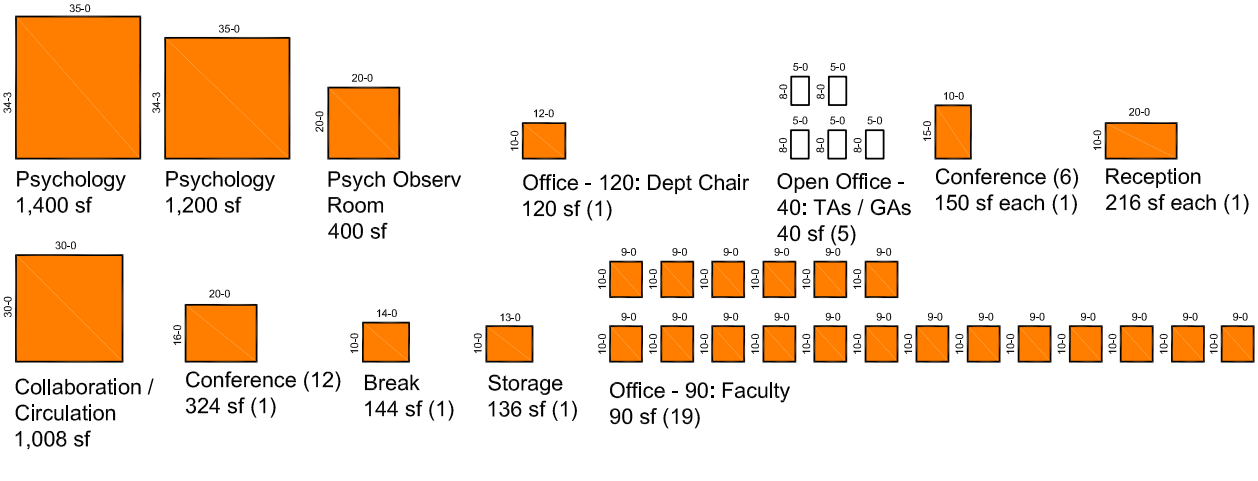
World Language & Cultures



Sociology & Corrections

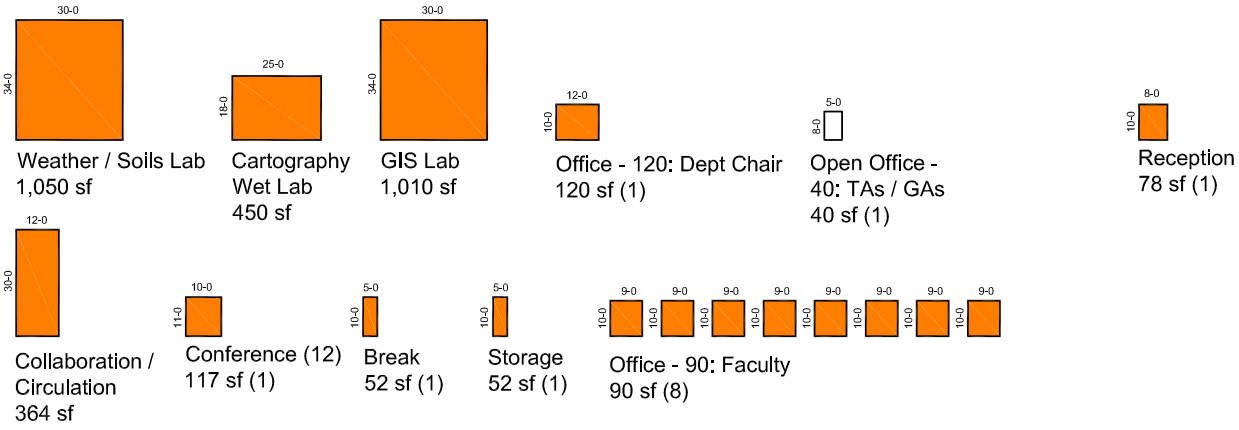


Psychology

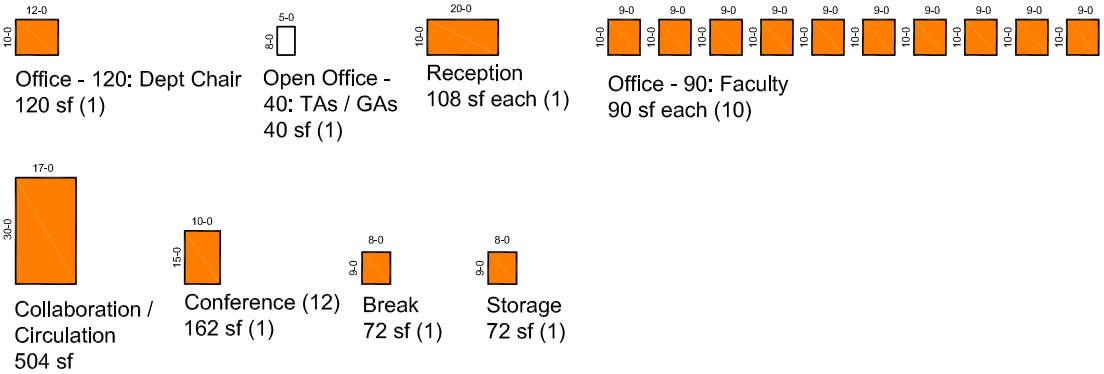


Feet 0 50 100

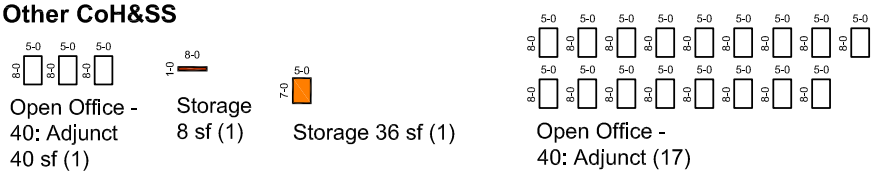
Geography



History

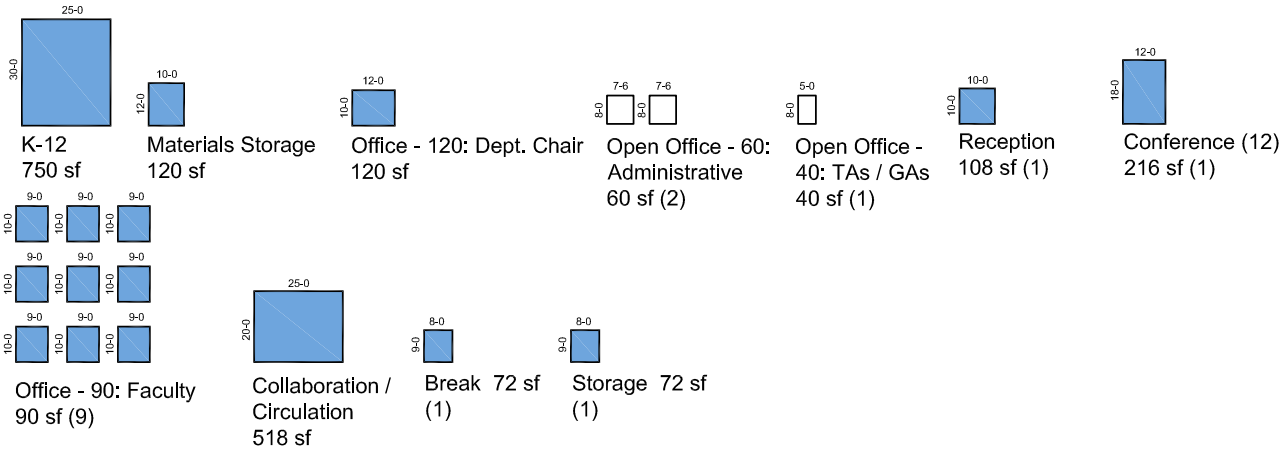


Other CoH&SS

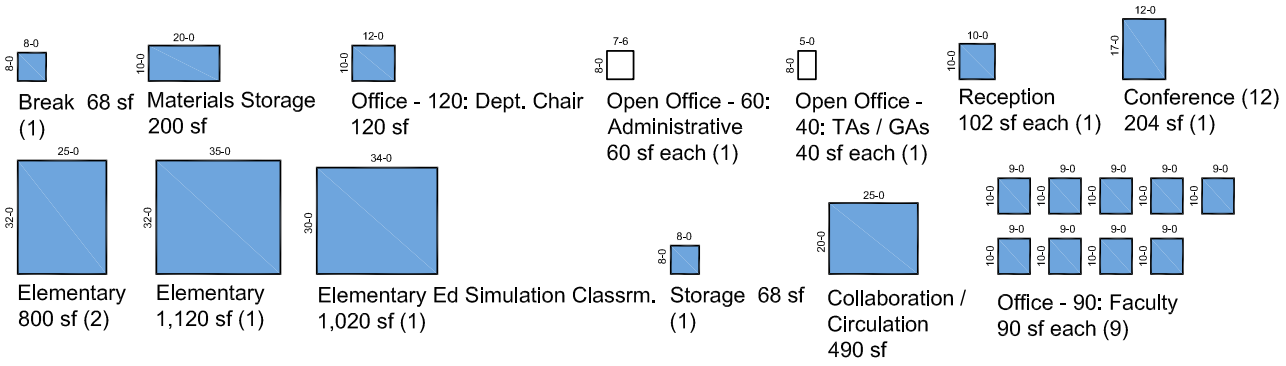


College of Education

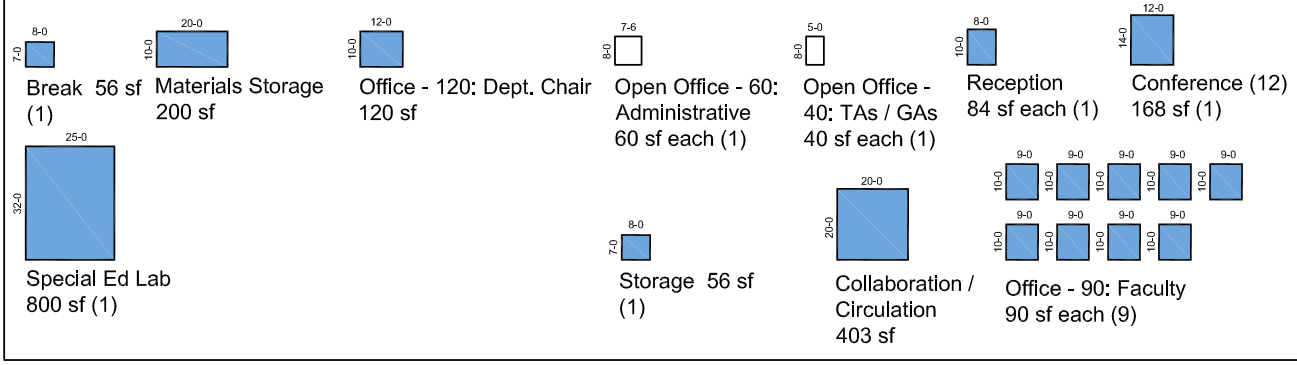
Teaching & Learning: K-12 & Secondary Programs



Teaching & Learning: Elementary & Literacy Ed

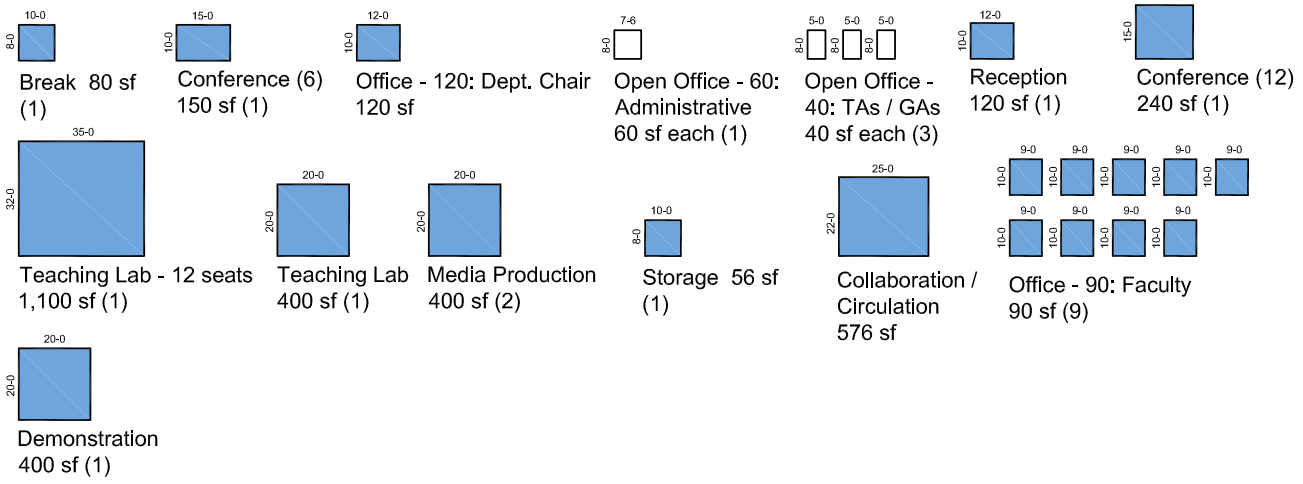


Teaching & Learning: Special Education Dpt

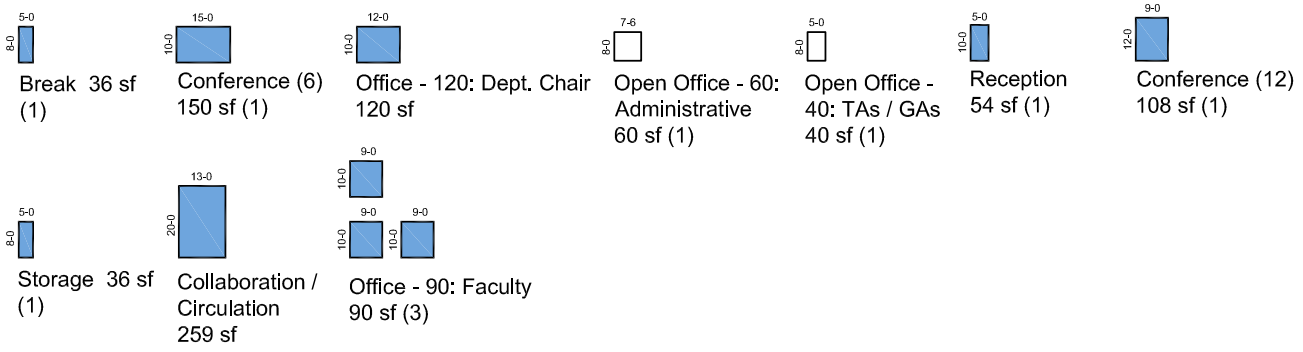


Feet 0 50 100

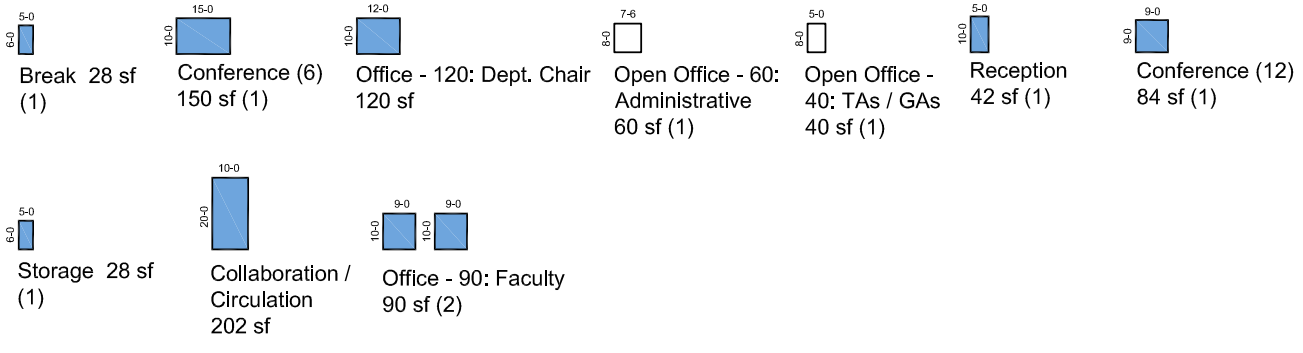
Counseling and Student Personnel



Aviation



Education Leadership



College of Education

Centers

Office of Assessment Research

Office - 120: Center Director
120 sf (1)

Office - 90: Administrative
90 sf (1)

Conference (6)
150 sf (1)

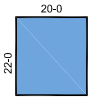
Reception
90 sf (1)

Office of Field & International Experience

Office - 120: Center Director
120 sf (1)

Open Office - 60:
Administrative
60 sf (2)

Conference (12)
180 sf (1)



Collaboration /
Circulation
432 sf

Center for Educator Support

Office - 120: Center Director
120 sf (1)

Open Office - 60:
Administrative
60 sf (1)

Break 60 sf
(1)

Storage 60 sf
(1)

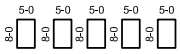
Center for Educator Partnership & Student Support

Office - 120: Center Director
120 sf (1)

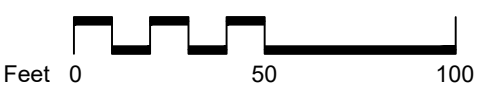
Office - 90: Administrative
90 sf (1)

Open Office - 60:
Administrative
60 sf (1)

Other CoE

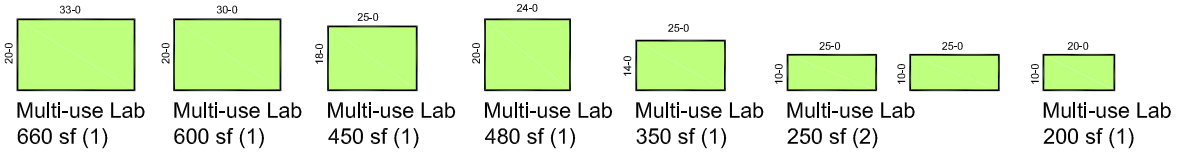


Open Office -
40: Adjunct
40 sf (5)



Shared Multi-use Labs

Multi-use Labs



Multi-use Lab
660 sf (1)

Multi-use Lab
600 sf (1)

Multi-use Lab
450 sf (1)

Multi-use Lab
480 sf (1)

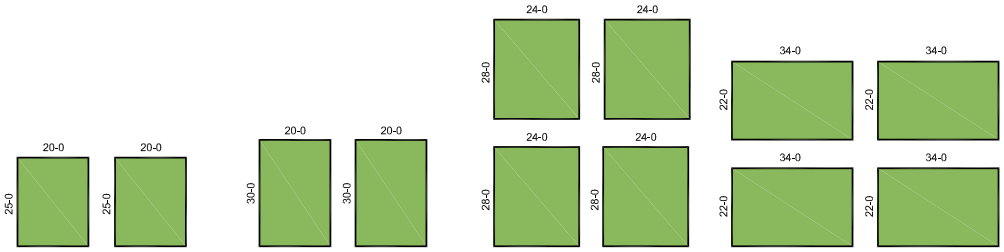
Multi-use Lab
350 sf (1)

Multi-use Lab
250 sf (2)

Multi-use Lab
200 sf (1)

Shared General Classrooms

Multi-use Labs

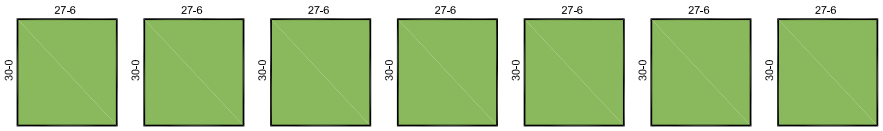


Classroom 20 seats
520 sf (2)

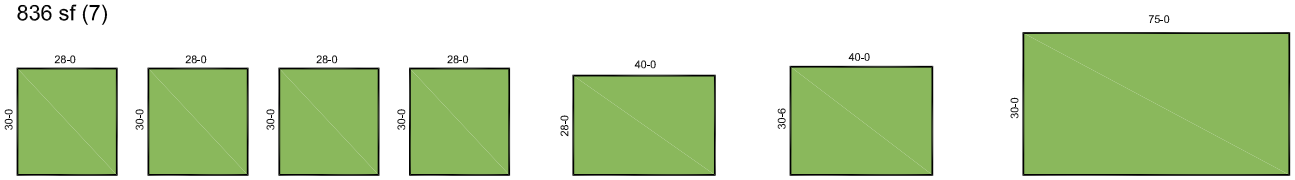
Classroom 24 seats
600 sf (2)

Classroom 28 seats
672 sf (4)

Classroom 34 seats
748 sf (4)



Classroom 38 seats
836 sf (7)

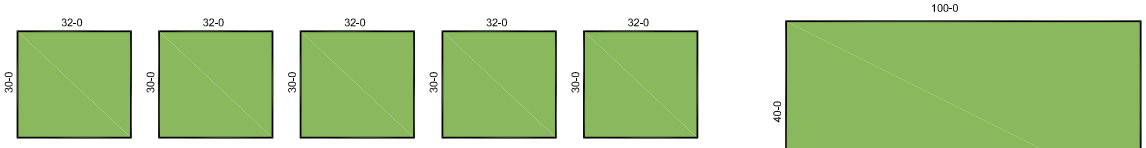


Classroom 42 seats
840 sf (4)

Classroom 56 seats
1,120 sf (1)

Classroom 65 seats
1,235 sf (1)

Classroom 150 seats
3,000 sf (1)

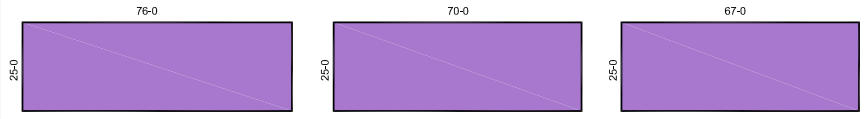


Classroom 48 seats
960 sf (5)

Classroom 200 seats
4,000 sf (1)

Library Renovated Spaces

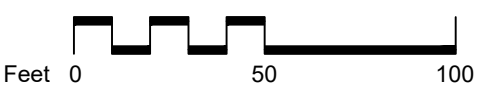
Multi-use Labs



Classroom
1,900 sf (1)

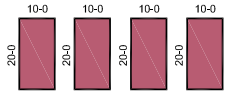
Classroom
1,755 sf (1)

Classroom
1,667 sf (1)

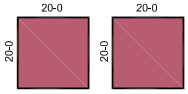


General

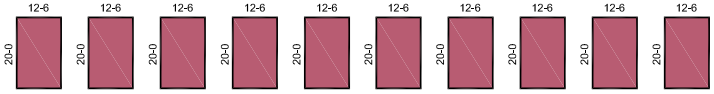
Misc



Storage
200 sf (4)

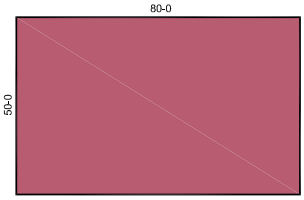


Recycling
400 sf (2)

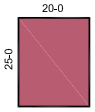


Social Learning
250 sf each (10)

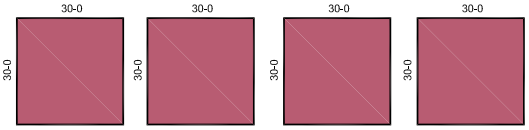
Student



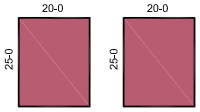
Entry / Great Hall 4,000 sf



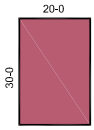
Coffee Shop
500 sf (1)



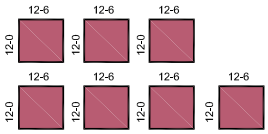
Collaboration Hub
900 sf (4)



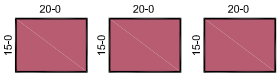
'Just Ask' Faculty /
Staff Desk
500 sf (2)



Adult Student
w/Children Study
Suites
600 sf (1)



Small Group (6)
150 sf (7)



Small Group (12)
300 sf (3)

Joint Dean's Office

CoAH
Office - 140:
Dean
(1)

CoAH
Office - 120:
Assist. Dean
(1)

CoAH
Office - 90:
Assist. Dean
(1)

CoAH
Open Office - 60:
Administrative
60 sf (1)

CoSBS
Office - 140:
Dean
(1)

CoSBS
Office - 120:
Assist. Dean
(1)

CoSBS
Office - 60:
Comm. Cord.
(1)

CoSBS
Open Office - 60:
Administrative
60 sf (1)

CoE
Office - 140:
Dean
(1)

CoE
Office - 120:
Assist. Dean
(1)

CoE
Office - 90:
Admin
(1)

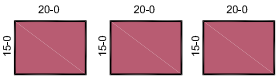
CoE
Office - 60:
Comm. Cord.
(1)

CoE
Open Office - 60:
Administrative
60 sf (1)

CoE
Open Office -
40: TAs / GAs
40 sf each (1)

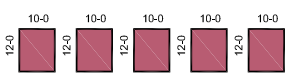
Reception
300 sf (1)

Conference (12)
300 sf (1)



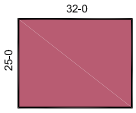
Storage
300 sf (3)

Joint Advising Center



Advising / Coordinator Office -
120: Assist. Dean
(5)

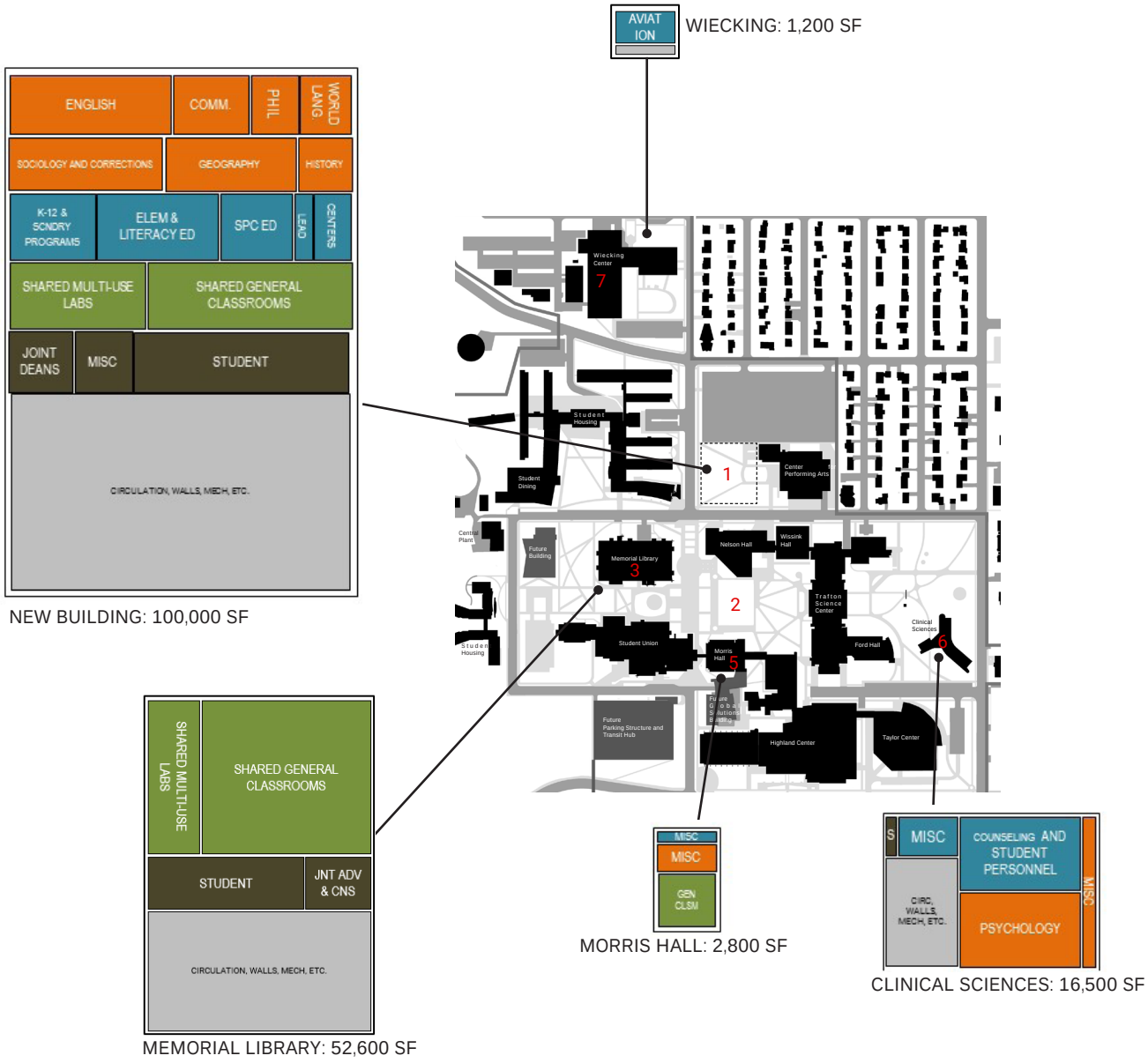
CoSBS Open Office - 60:
Administrative
60 sf (1)



Study
Room
800 sf (1)

Conference
Room
200 sf (1)

Proposed Department Locations

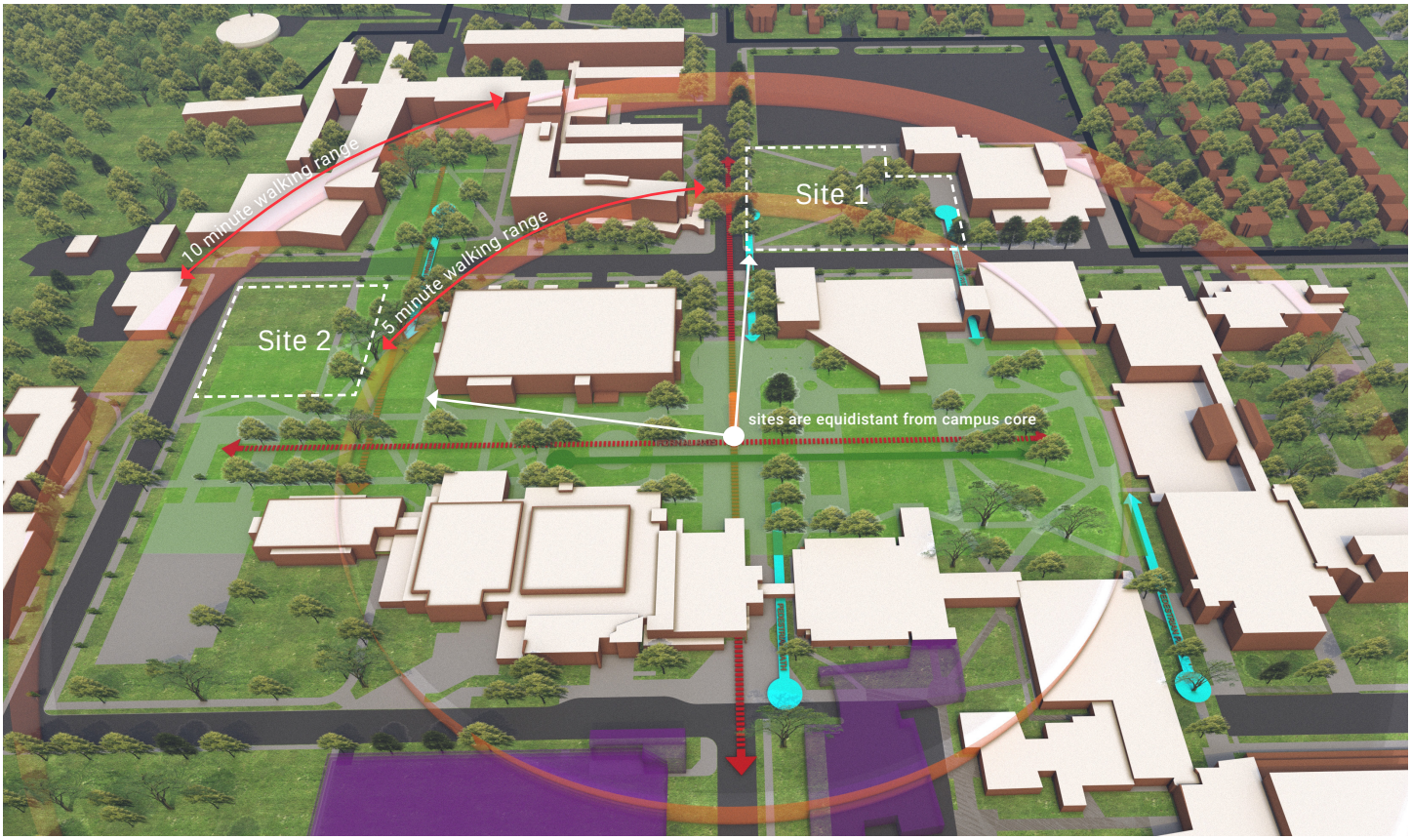


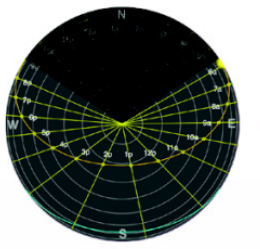
3.4 Graphics and Maps

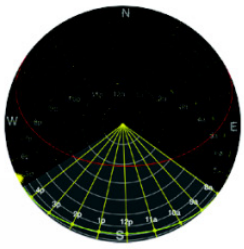
Site Location Options

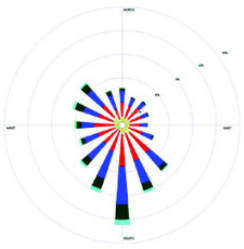
During the initial phase of the project, the Predesign team engaged the Minnesota State University, Mankato President, Departmental Stakeholders, and the Predesign Steering Committee to identify and review a wide range of site options. Ten different campus locations were identified as potential candidates for the location of the new building. A location within the campus academic core – in concert with the 2014 Campus Master Plan and other previous studies – was determined to be the most important driver for the project. Two sites were identified as the top candidates for the New Building location. Both of the sites were previously identified as new building sites in the 2014 Master Plan. Ultimately, the site on the North side of campus was chosen and incorporated into the 2018 Campus Master Plan.

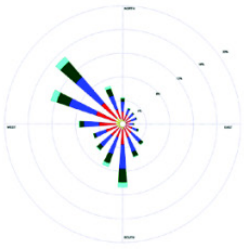
Site analysis showing walking distances, campus axis and green spaces.
(Armstrong Hall not shown)

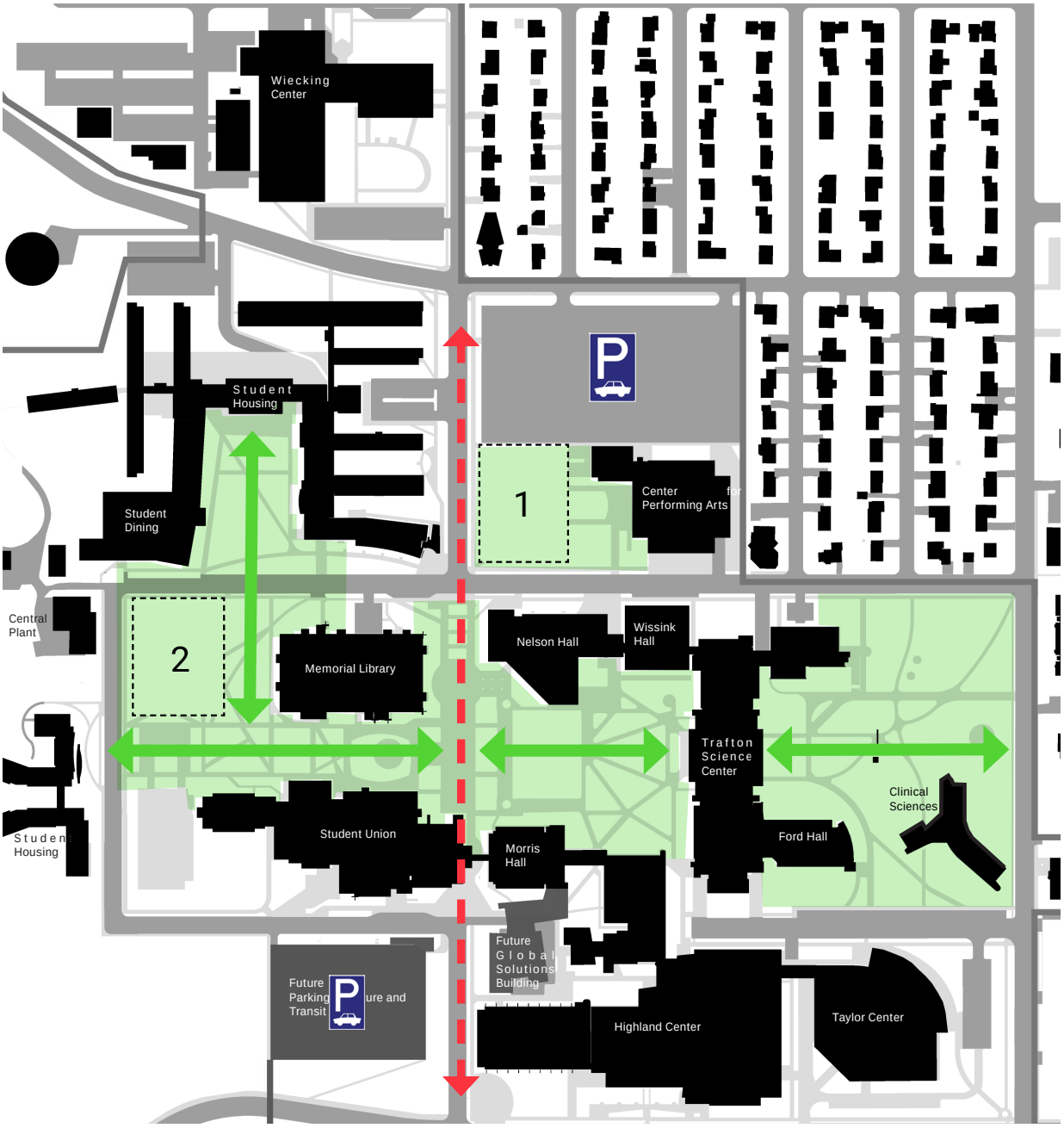



SUN PATH: JUNE 21ST


SUN PATH: DECEMBER 21ST

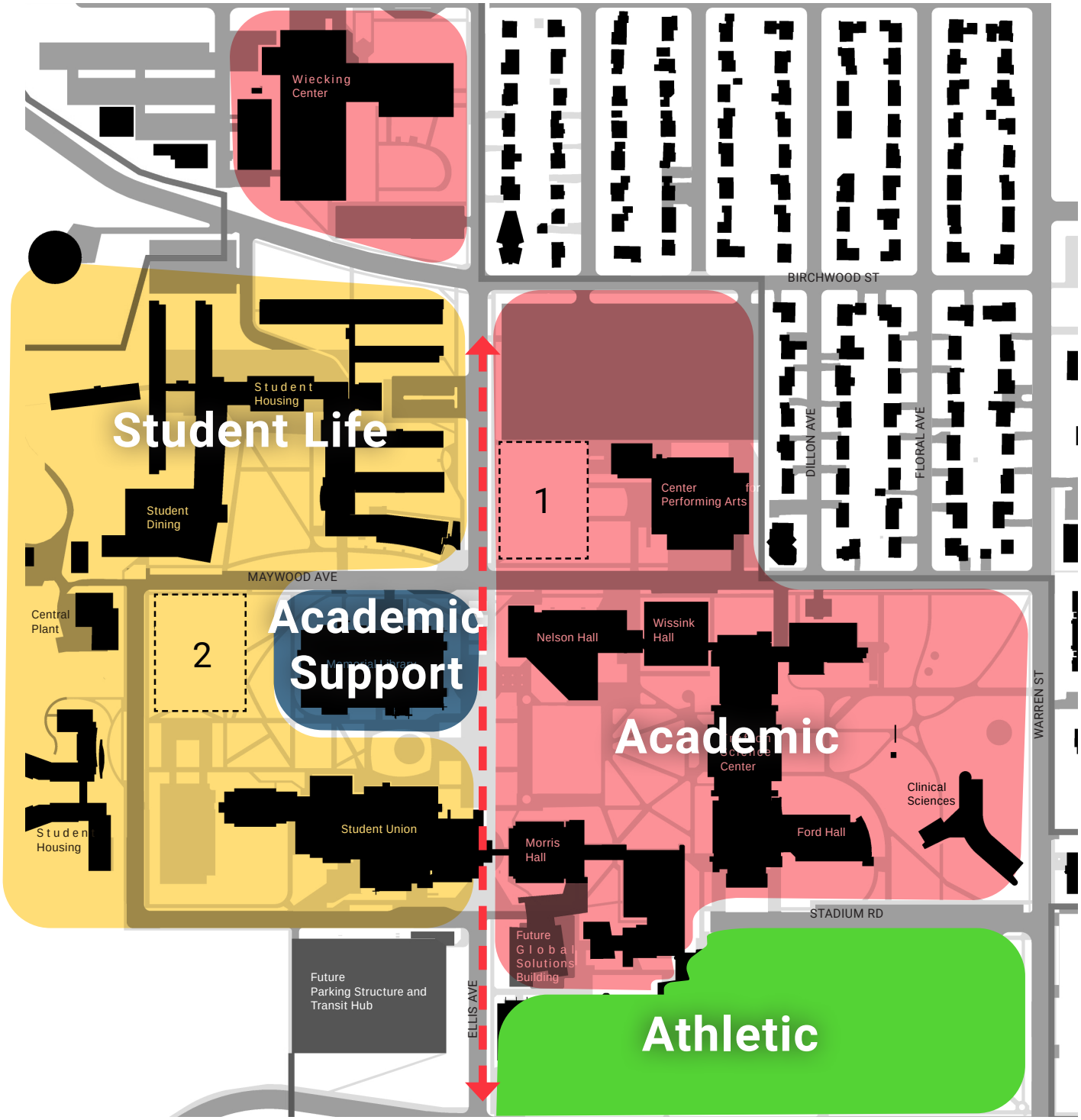

WND ROSE: JUNE 21ST


WND ROSE: DECEMBER 21ST



Connections

The demolition of Armstrong Hall will have a dramatic impact on the greenway connections on campus. The existing campus mall will extend East to Trafton Center and will nearly double in size.


Wiecking Center
BIRCHWOOD ST
Student Housing
Student Life
Student Dining
1
Center Performing Arts
DILLON AVE
FLORAL AVE
MAYWOOD AVE
Central Plant
2
Academic Support
Nelson Hall
Wissink Hall
Academic
Center
Clinical Sciences
WARREN ST
Student Housing
Student Union
Morris Hall
Ford Hall
STADIUM RD
Future Global Solutions Building
Future Parking Structure and Transit Hub
ELLIS AVE
Athletic

In considering the pros and cons of different sites for constructing this new academic building on campus, several factors need to be considered in regards to the bigger picture involving the Comprehensive Facilities Plan. Site number 1, located adjacent to the existing Center for Performing Arts, is the preferred site for a number of reasons tied to the future overall campus plan. The University has long discussed the possibility of developing a pedestrian campus. This plan would allow for limited vehicle usage within the campus core, i.e., buses and a university facility vehicles only. A new building on Site 1 would be strategically located on the future pedestrian campus road and within the Academic district. It would also serve to connect Wiecking Center to the rest of the Academic District.

The campus as it exists today has several identifiable zones including:

A.The Student Life District:
This area consists of all of the residential halls, Centennial Student Union, and the new University Dining Center. These structures are all currently and intentionally located in the Western quadrant of the campus representing a unified plan. When the high-rise residence hall buildings (Gage Towers) were demolished several years ago on Stadium road, the goal was to centralize all residential life buildings in the Western quadrant of campus. This decision was intended to better serve the residential students and minimize the traffic hazards in crossing the busy Stadium Road. In fact, the new adjacent University Dining Center serves all of the residential students today. Located within the Student Life District, Site Number 2 is a logical location for a future student residence, student life or student services building.

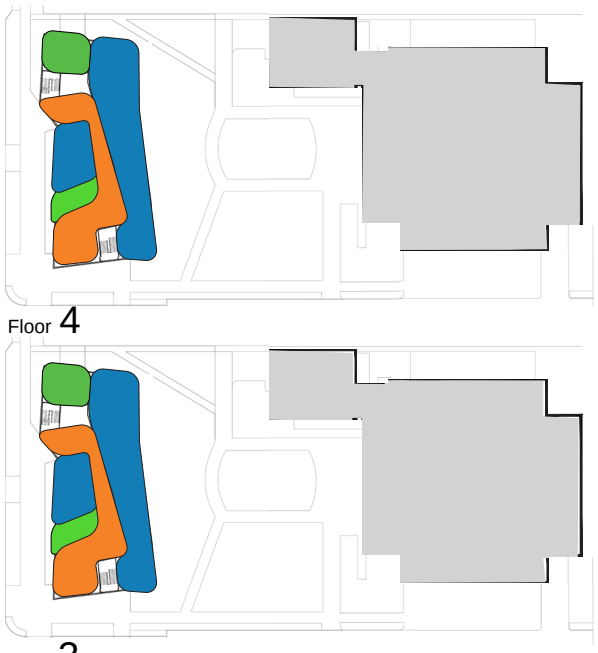
B: The Academic District:
This district resides on the North side of Stadium Road and East of the Student Life District. This district includes all of the buildings wherein the primary uses are instructional in nature. This includes Morris Hall, Nelson Hall, Wissink Hall, Ford Hall, Trafton Science Center, the Clinical Sciences Building, The Center for Performing Arts and Wiecking Center. Site number 1 is a logical location for a future academic building, one that can serve as a bridge that connects Wiecking Center back to the core of the Academic District.

C: Academic Support District:
This district is ideally located at the core of campus and serves as a bridge between the Academic District and the Student Life district. Memorial Library is the only building in this district and is identified as such due to it's blend of instructional, study, social and student services components.

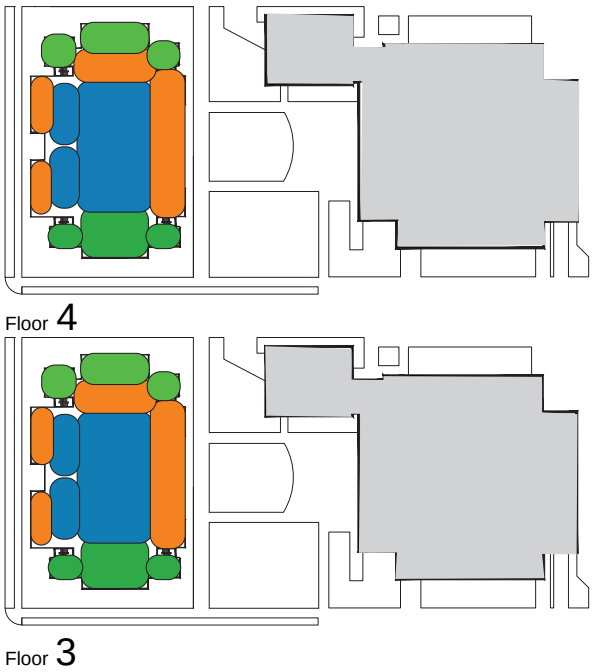
D. Athletic District:
The University has strategically located all of our outdoor athletic and intramural facilities on the South side of Stadium Road. The indoor athletic facilities are located on the North side of Stadium Road maintaining the integrity of the athletic district.

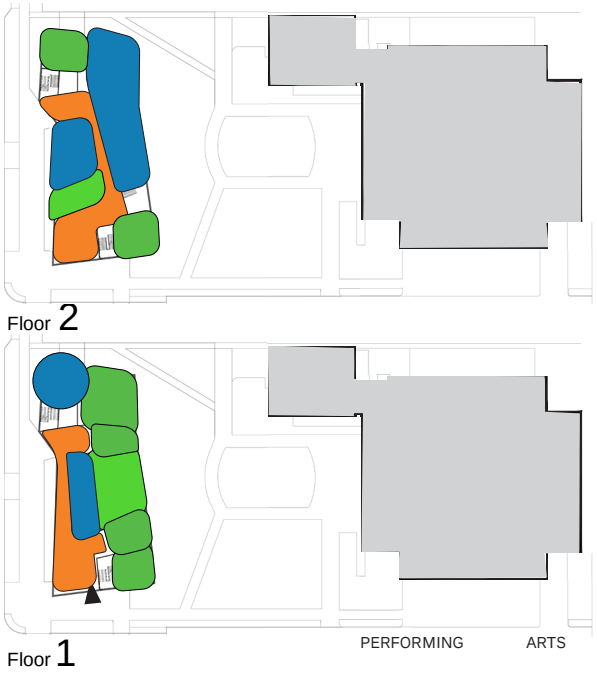
E. The Campus Mall:
After the demolition of Armstrong Hall, the primary Campus Mall that runs East to West will extend from Julia Sears Residential Hall to the Trafton Science Center. Site number 1 is adjacent to a secondary mall that runs North / South from the Wigley Administration Building to Val Imm Drive.

SITE 1 FIT PLAN A



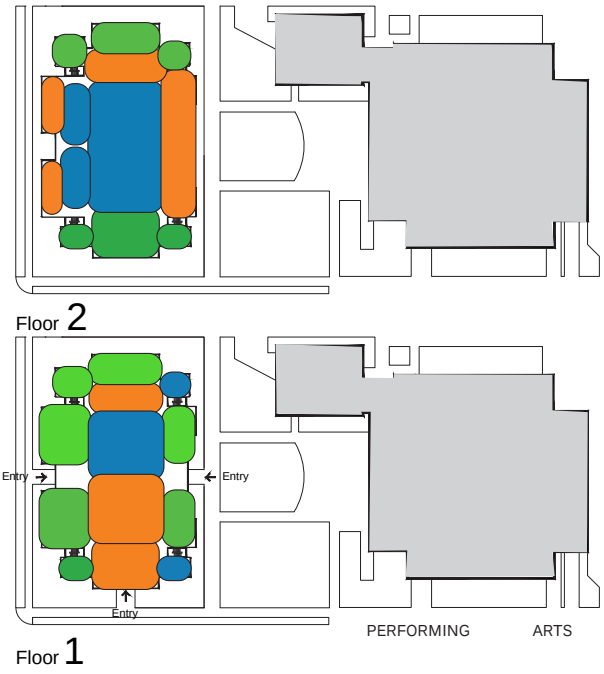
SITE 1 FIT PLAN B





CLASSROOMS
CIRCULATION
OFFICE / CONFERENCE

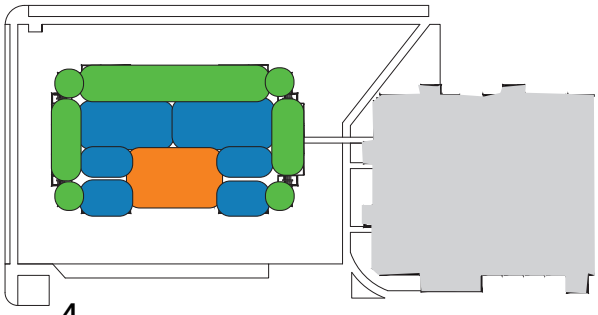
/



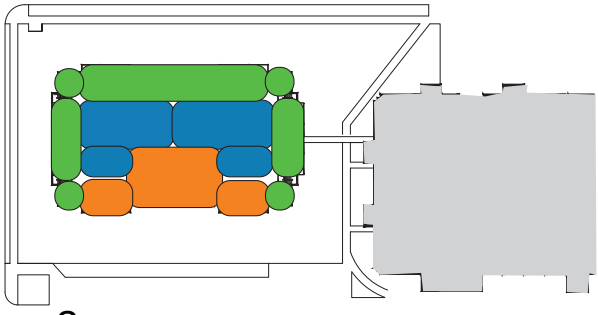
CLASSROOMS
CIRCULATION
OFFICE / CONFERENCE

/

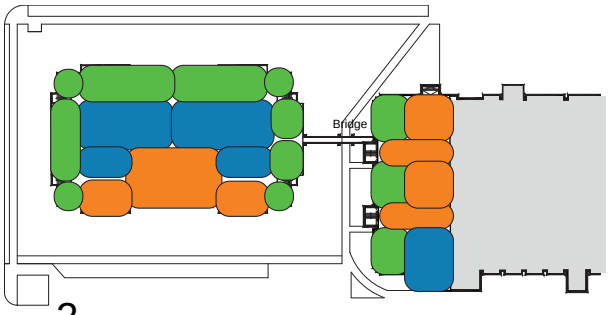
SITE 2 FIT PLAN A



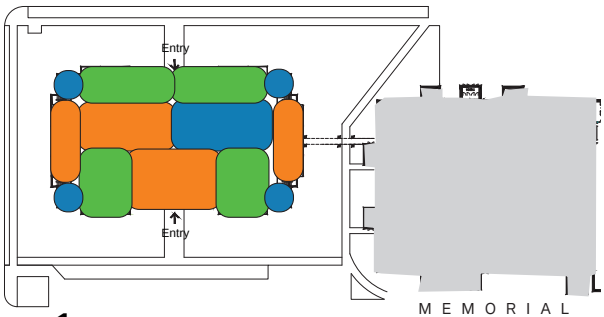
Floor 4



Floor 3



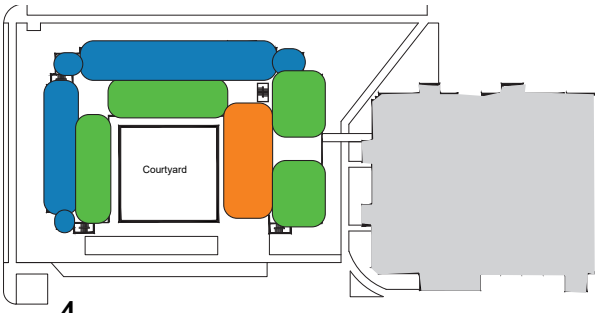
Floor 2



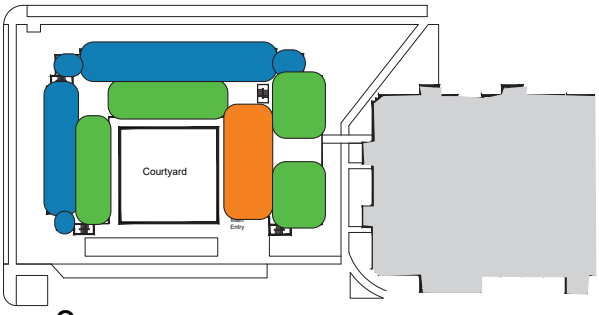
Floor 1

CLASSROOMS
CIRCULATION /
OFFICE / CONFERENCE

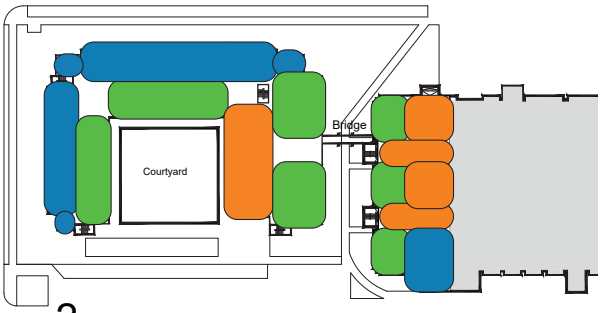
SITE 2 FIT PLAN B



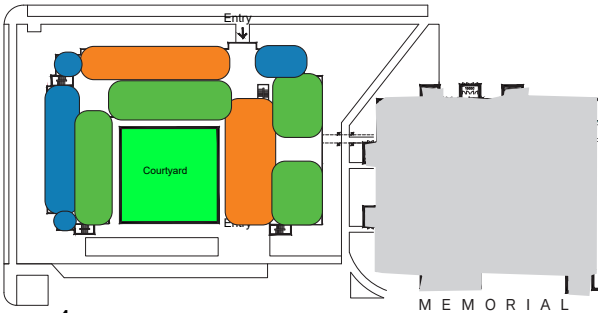
Floor 4



Floor 3

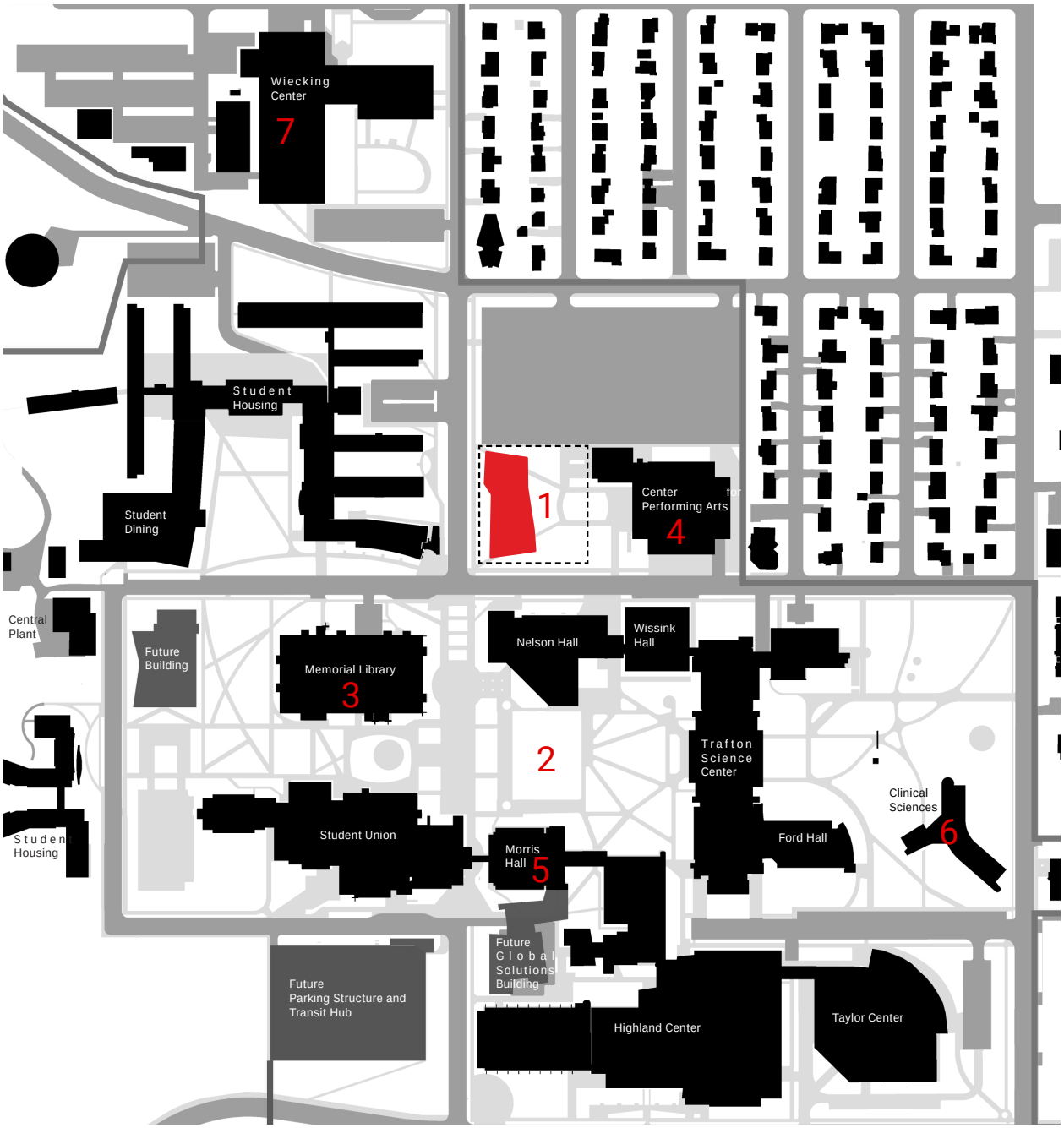


Floor 2



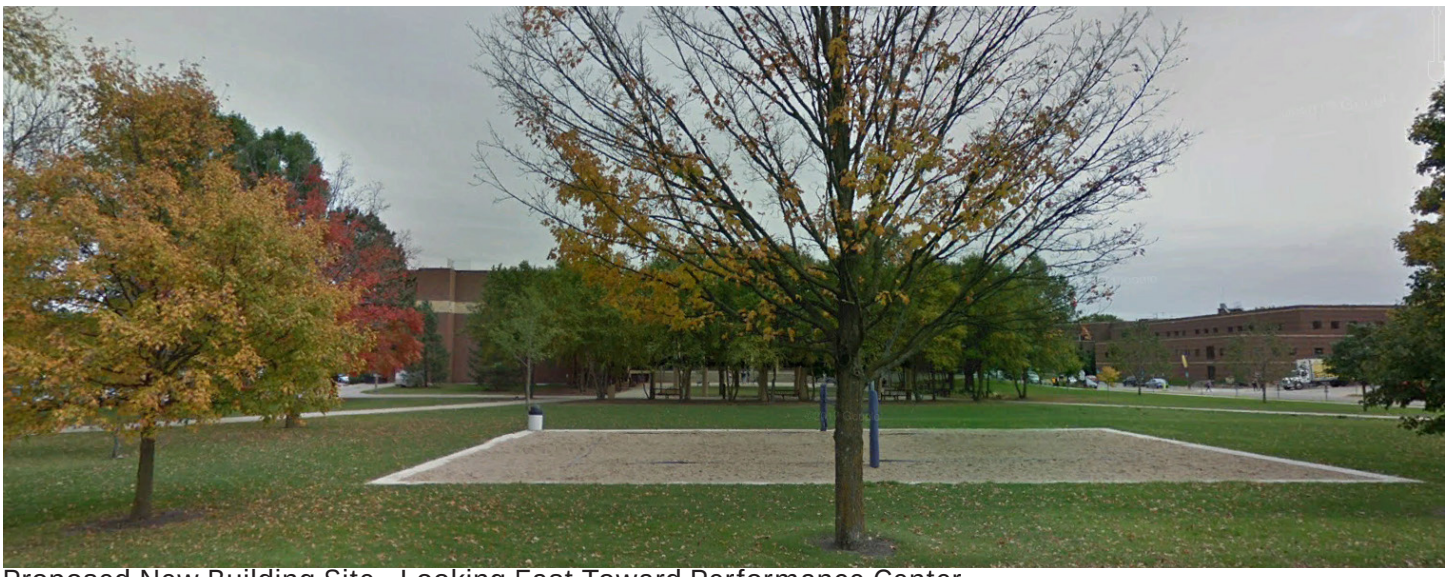
Floor 1

CLASSROOMS
CIRCULATION /
OFFICE / CONFERENCE



1. Proposed Building Site
2. Current Armstrong Hall Location (Shown Demolished)
3. Memorial Library
4. Center for Performing Arts
5. Morris Hall
6. Clinical Sciences
7. Wiecking Center

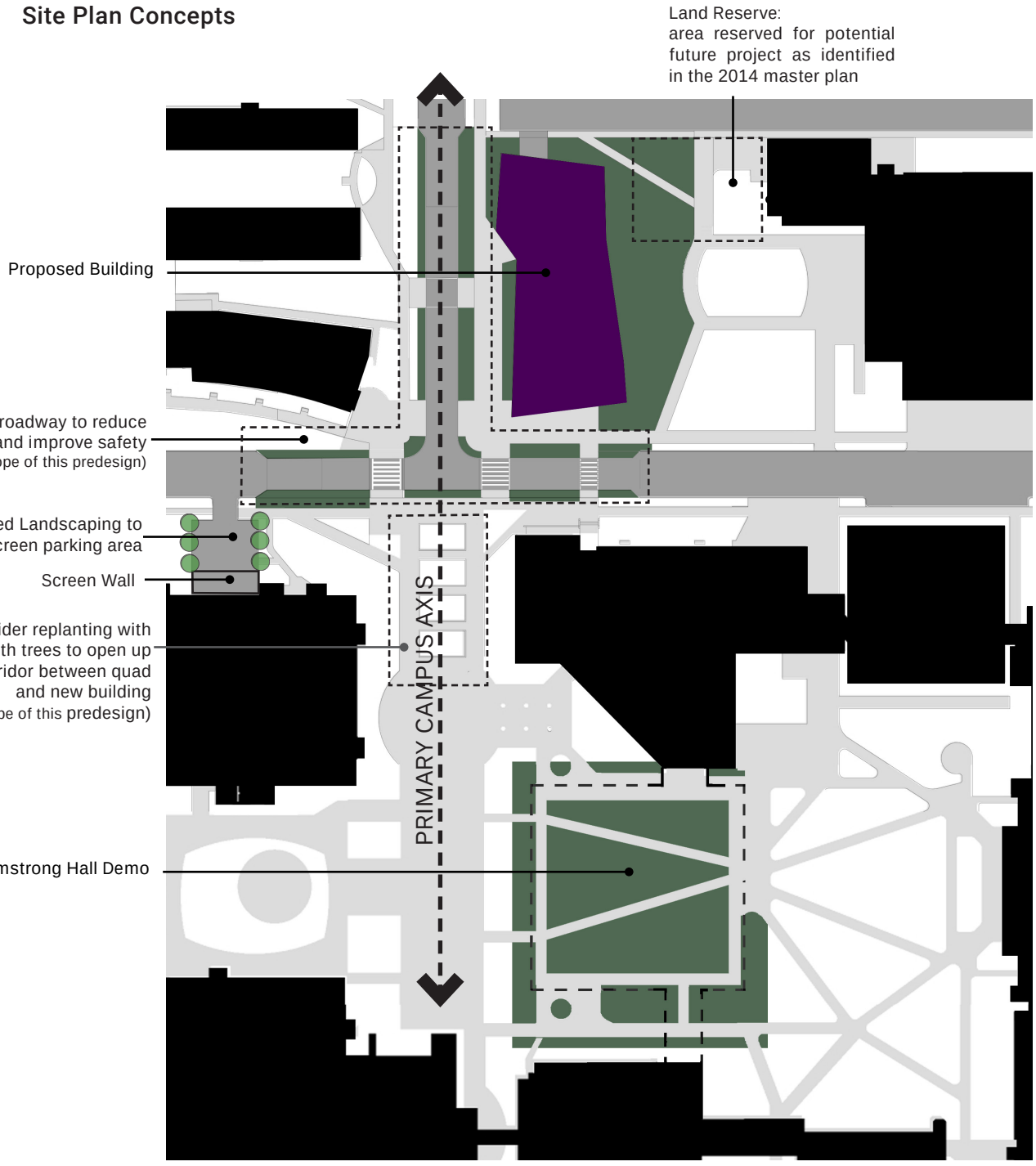
Proposed New Building Site - Looking Northeast toward Performance Center



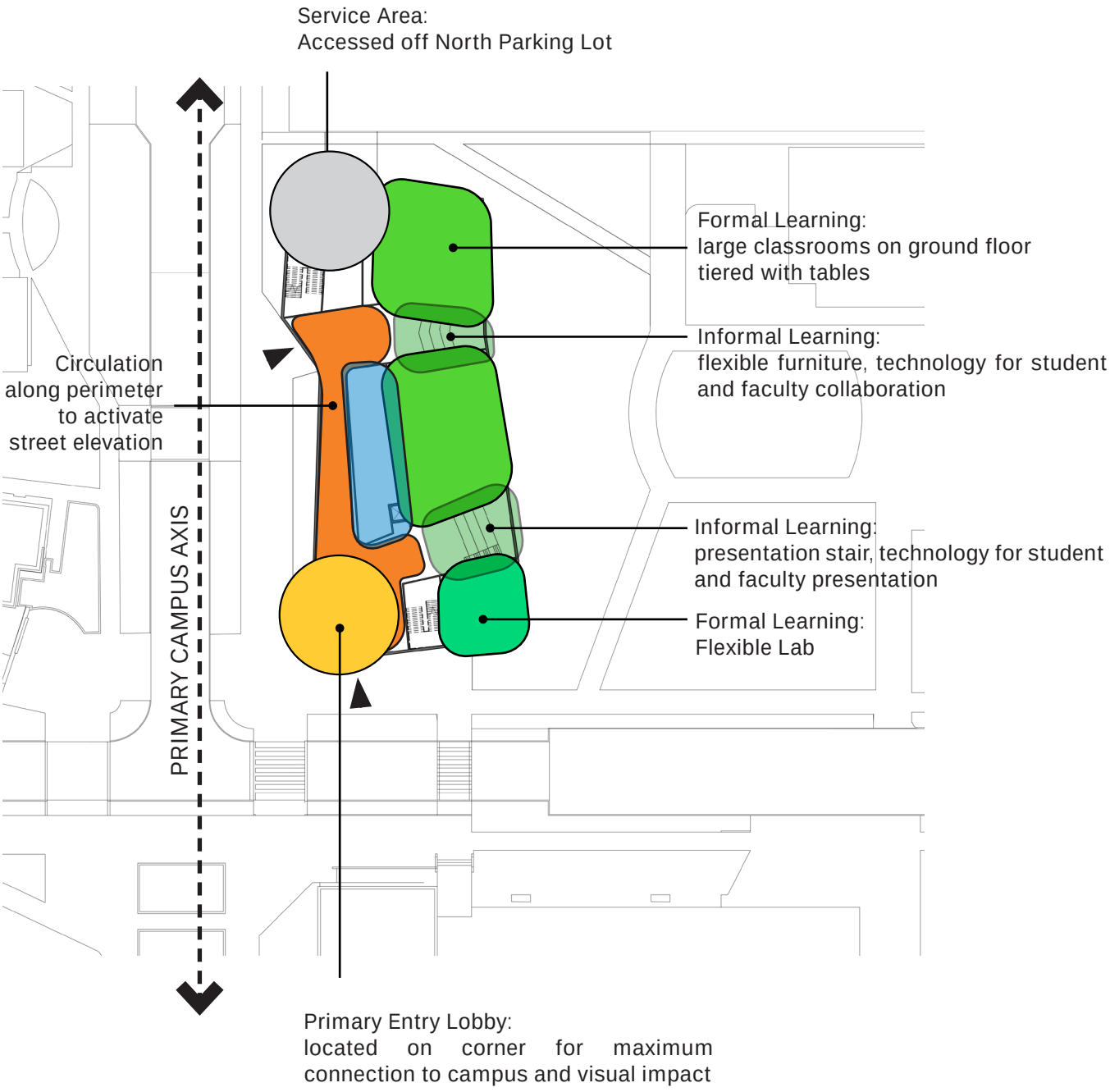
Proposed New Building Site - Looking East Toward Performance Center

While not a prerequisite for this pre-design, the design sketches on the following pages memorialize ideas derived from workshops with faculty and staff as well as internal charrettes that may prove to be valuable for discussion when the project moves forward into design.

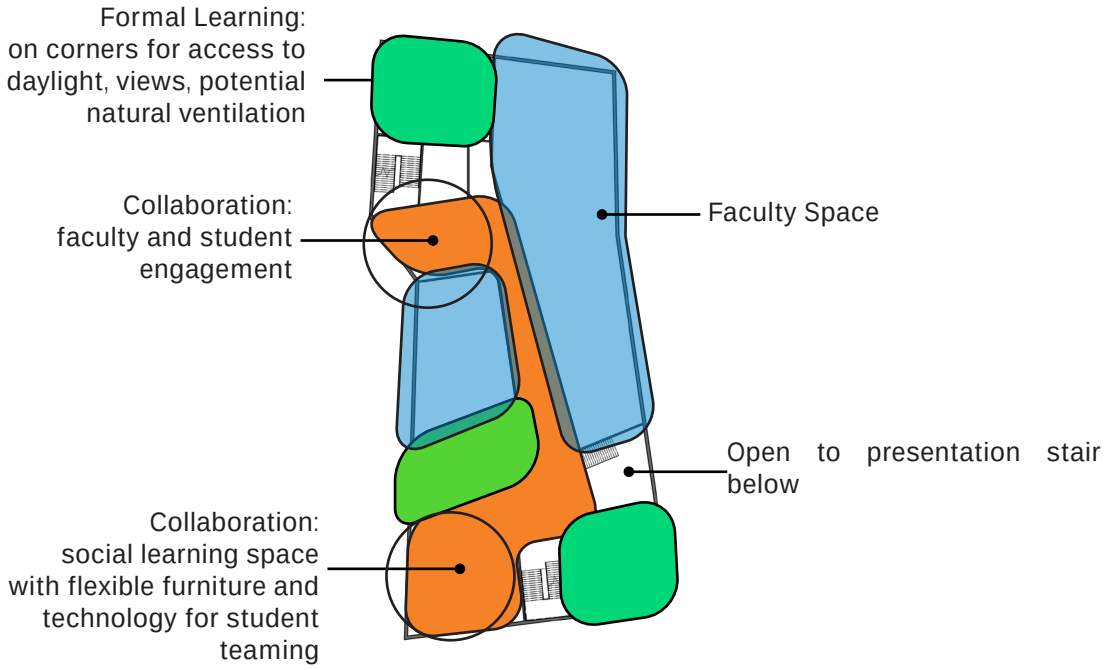
Site Plan Concepts



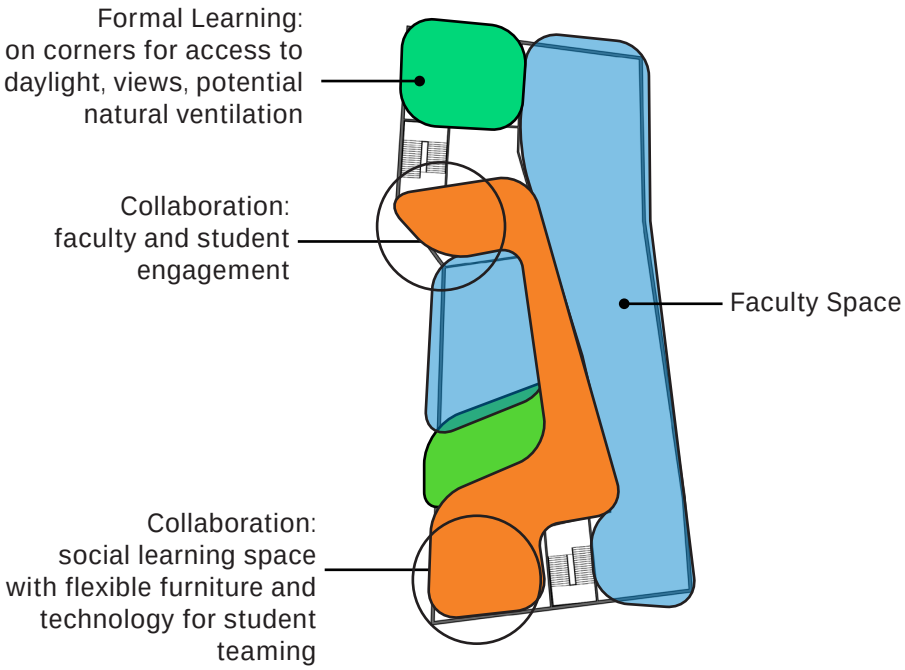
Ground Floor Plan Concepts



Second Floor Plan Concepts



Third and Fourth Floor Plan Concepts



MINNESOTA STATE

Predesign Building Summary Form | New Construction

PROPOSED BUILDING

Code Information

Occupancy group(s):	B: Education above 12th grade, A-3: Lecture Halls			
Primary space types (office, classroom, etc.):	Classrooms, offices			
Type of construction (per current MN Building Code):	II-B			
Building Size (GSF):	Allowable Height:	3 stories + increases	Actual Height:	4 stories
	Allowable area / floor:	23,000sf + increases	Actual area / floor:	25,000sf
	Total building Area:	69,000 + increases	Space efficiency (%):	

Building Systems

Roofing type(s):	Built-up
Structural system type(s):	TBD
Mechanical system type(s):	TBD
Electrical system type(s):	TBD
Fire protection type(s):	Automatic Sprinkler System
Exterior wall type(s):	Masonry Cavity Wall with Brick Veneer
Interior wall type(s):	Steel Stud with GWB
Conveying system(s):	Elevator
Life expectancy of building & systems:	50+ years
Technology systems:	TBD
Sustainability / energy:	TBD
Notes on proposed FF&E:	New FF&E

Construction Schedule

Construction start date:	September 2026	Occupancy date:	June 2028

3.5 Codes and Standards

The Minnesota Department of Labor and Industry defines the applicable codes for the project. Applicable codes will need to be reviewed as funding is available. The current applicable codes are as follows:

- Minnesota Building Code Administration
- Minnesota Provisions to the State Building Code
- Minnesota Building Code
- Minnesota Elevator and Related Devices Code
- Minnesota Conservation Code for Existing Buildings
- Minnesota Energy Code
- Minnesota Accessibility Code
- Minnesota Mechanical and Fuel Gas Code
- Minnesota Plumbing Code
- National Electrical Code

3.6 Impact on Campus Facilities

Space Utilization: Collocating and Standardizing Office Space

Currently within each department administration, faculty and staff offices are fragmented and spread across numerous buildings with some located in Armstrong Hall, Morris Hall or Wiecking Center. This often happens over time as office space is assigned to individuals wherever there is space available at the time the spaced is needed. In the early planning phase of projects like this, there is an opportunity to re-align office layouts and locations to better support the needs of students and create space efficiencies through adjacencies and synergies. This project prioritizes that opportunity and includes a collocation of all offices for every department that was located or partially located in Armstrong Hall. Knowing that change is inevitable in our world, we recommend a non-suite style office concept or a larger multi-department suite concept to provide a flexible solution that will allow for departments to flex – grown and reduce in size as needed – without isolating and fragmenting departments. In this way, departments are also able to share administrative resources, operations and personnel between the two campus Colleges.

In addition to the irregular location of offices in several buildings on campus, the size of offices fluctuated greatly ranging from 58 SF up to 180 SF and there is not any collaboration space provided in the existing buildings. Most of the offices on the smaller end, were originally not intended to be offices, but as departments grew over time, storage and custodial closets were repurposed as offices. Given the existing condition, to simply provide a one size fits all approach of say a 120 SF office for every faculty and staff member 24 hours a day would increase the replacement project SF greatly, significantly impact the project budget, not provide for any space for collaboration, and not be an efficient use of space or resources. The design team came up with office and furnishing options that explored guidelines for reducing office sizes/quantities and providing collaboration space. In the end a solution was reached that respects the project budget and provides quality space to support faculty, staff, and their engagement with students.

The solution details include:

- Deans will be provided an assigned enclosed office at 140 SF each
- Deans Assistants will be provided an assigned enclosed office at 120 SF each
  - Locations for all Deans and Dean's Assistants across the three Colleges will be collocated in a single location.
- Advising Staff will be provided an assigned enclosed office at 120 SF each.
  - Locations for all Advising Staff across the three Colleges will be collocated in a single location
- Faculty Department Chairs will be provided an assigned enclosed office at 120 SF each.
  - Department Chair positions are term based, as such these offices will turn over as the Chair position changes.
  - Locations will be collocated with departments
- Fulltime faculty and Directors will be provided an assigned enclosed office at 80 to 90 SF each
  - Locations will be collocated with departments
- Adjunct faculty will be provided a hoteling shared office or workstation that is approximately 40 SF (5'x8'). Desk spaces will be provided 1:3 – one desk space per every three adjunct faculty.

Utilities / Infrastructure - Mechanical Systems

Clinical Sciences

Mechanical scope in the Clinical Sciences Building will consist of modifying the shell fire protection system to suit the finished space; extending and modifying plumbing as required to suit the finished spaces; and extending and modifying the shell HVAC system for the finished spaces. When finishing the HVAC system, careful attention shall be paid to ensure proper ventilation, temperature asymmetry near exterior walls, and appropriate zoning.

Memorial Library

Mechanical scope in the Memorial Library will consist of extending the existing fire protection system throughout the entire building; modifying plumbing as required to suit the renovation; and extending and modifying the existing HVAC system for the renovation. When modifying the HVAC system, careful attention shall be paid to ensure proper ventilation, integration with long term maintenance plans for the main equipment, and minimizing disruption in operations to areas outside the scope of work. As part of the HVAC work, some of the air handling systems may be changed from constant volume to variable air volume with digital controls. Modifications to the fire protection system will require consideration of existing sprinkler supply flow and pressure, zoning, and protection of collections possibly requiring a pre-action system.

New Building

The primary HVAC system for the new building shall be a Dedicated Outside Air System (DOAS) coupled with chilled beams and other heating/sensible cooling terminal devices. The DOAS units will be variable air volume and feature chilled water coils, hot water coils, enthalpy energy recovery wheels, and a passive desiccant wheel running between the exhaust and supply air streams (known as a parallel configuration). The passive desiccant wheel can reduce peak cooling load by over 30% while also providing significant dehumidification and minimizing summer reheat. When feasible, floor mounted chilled beams with displacement air supply will be used – taking advantage of displacement ventilation's indoor air quality, comfort, and acoustic benefits. Other occupied areas will receive ceiling or bulkhead mounted chilled beam, as dictated by architectural design. Spaces where chilled beams

are not appropriate (computer labs, electrical rooms, vestibules) will be served by fan coil units, fan powered VAV boxes, or other traditional systems as appropriate. All classrooms, meeting rooms, and other gathering spaces will have demand controlled ventilation and independent zone control. A dry fluid cooler will be used in the winter to generate chilled water as needed. The chilled water system will be laid out to maximize the temperature differential between entering and leaving chilled water, and the heating water system will tie into campus steam via a heat exchanger. The entire building shall be controlled via a Building Automation System. The building will be fully sprinkled. Plumbing systems shall be per Minnesota State standards and state code. Domestic hot water shall be generated by a steam-hot water heat exchanger, tied into the campus steam plant.

Utilities / Infrastructure - Electrical Systems

Clinical Sciences

Power to mechanical equipment, general receptacles and owner equipment. Interior lighting will be LED for both general and specialty lighting. Occupancy sensors will be utilized for primary control of the lighting. Daylight sensors will be utilized where appropriate to further reduce energy consumption. Backbone and horizontal data cabling per campus standards connecting to existing infrastructure. Code and campus compliant fire alarm devices connecting to existing fire alarm system. AV, clock and security will be per Campus standards and integrated into existing system.

Memorial Library

Power distribution panel for entire facility to replace aging panels retaining the wiring. Power to mechanical equipment, general receptacles and owner equipment. Interior lighting will be LED for both general and specialty lighting. Occupancy sensors will be utilized for primary control of the lighting. Daylight sensors will be utilized where appropriate to further reduce energy consumption. Backbone and horizontal data cabling per campus standards connecting to existing infrastructure. Code compliant full digitally addressable fire alarm system for entire facility to replace aging system retaining the wiring infrastructure of the existing. AV, clock and security will be per Campus standards and integrated into existing system.

New Building

Electrical service will be served from the campus 15KV distribution system. Exterior pad mounted primary switch and transformer will feed an interior 1600 Amp, 277/480V/3P/4W switchboard. Electrical rooms will be located on each floor containing both 277/480V/3P/4W panels and 120/208V/3P/4W panels power to mechanical, general and owner equipment. Interior lighting throughout the facility will be LED for both general and specialty lighting. Occupancy sensors will be utilized in all areas for primary control of the lighting. Daylight sensors will be utilized where appropriate to further reduce energy consumption. Data closets will be located on each floor for the distribution of data infrastructure including backbone and horizontal data cabling. All exterior building and area lighting will be LED. Fire alarm system will be a code compliant fully digital addressable. AV, clock and security will be per Campus standards.

Utilities / Infrastructure - Structural Systems

Memorial Library

The original library was constructed in three main phases (drawings dated 1965, 1966 & 1990). The structural system is a cast-in-place concrete waffle slab and columns founded on shallow foundations with an allowable bearing capacity of 2,000 psf. All floors were designed for 150 pounds per square foot live load which would be typical of a library stack room loading in current Minnesota State Building Code. Given the robustness of the structure, proposed modifications of floor area to classrooms,

offices, corridors and similar is not expected to require structural modifications. Additionally items like folding partitions would likely be able to hang from the existing structure with minimal supplementary steel supports. Small openings for mechanical chases and similar penetrations should be relatively easy through the waffle slab if the size fits between existing two-way joists.

One of the possible alternatives for meeting renewable energy targets is adding solar photovoltaic panels to the Library roof. The existing waffle slab was designed for a minimum of 40 pounds per square foot snow load. It is likely that the existing concrete waffle slab structure could support the additional 5-10 pounds per square foot required by the solar PV panels without structural strengthening.

New Building

A four-story building with possible mechanical penthouse is proposed to be sited to the West of the Center for Performing Arts. The floor structural system could be either steel beams and columns with composite concrete slabs on metal deck, cast-in-place concrete slabs (flat slabs, pan joists or waffle slabs) and concrete columns, or precast concrete slabs (hollowcore) and steel columns/beams depending on market conditions and span requirements. The roof structural system could be either cast-in-place/precast concrete or steel bar joists/beams and metal roof deck. Foundations are likely to be conventional shallow spread footings with net allowable bearing capacity of 2,000-3,000 psf based on geotechnical reports for recent construction of the Clinical Sciences Building . The new building is expected to have a partial basement with cast-in-place concrete walls and foundations. All footings are recommended to be at minimum frost depth of 3'-6" below exterior grade. Actual foundation recommendation will be made by a qualified geotechnical engineer after a soil boring exploration has taken place.

Other features that may be part of the new building include a cast-in-place concrete tunnel or steel framed skyway across Maywood Avenue and large classrooms requiring long floor spans and deep structural girders.

Backlog Reduction

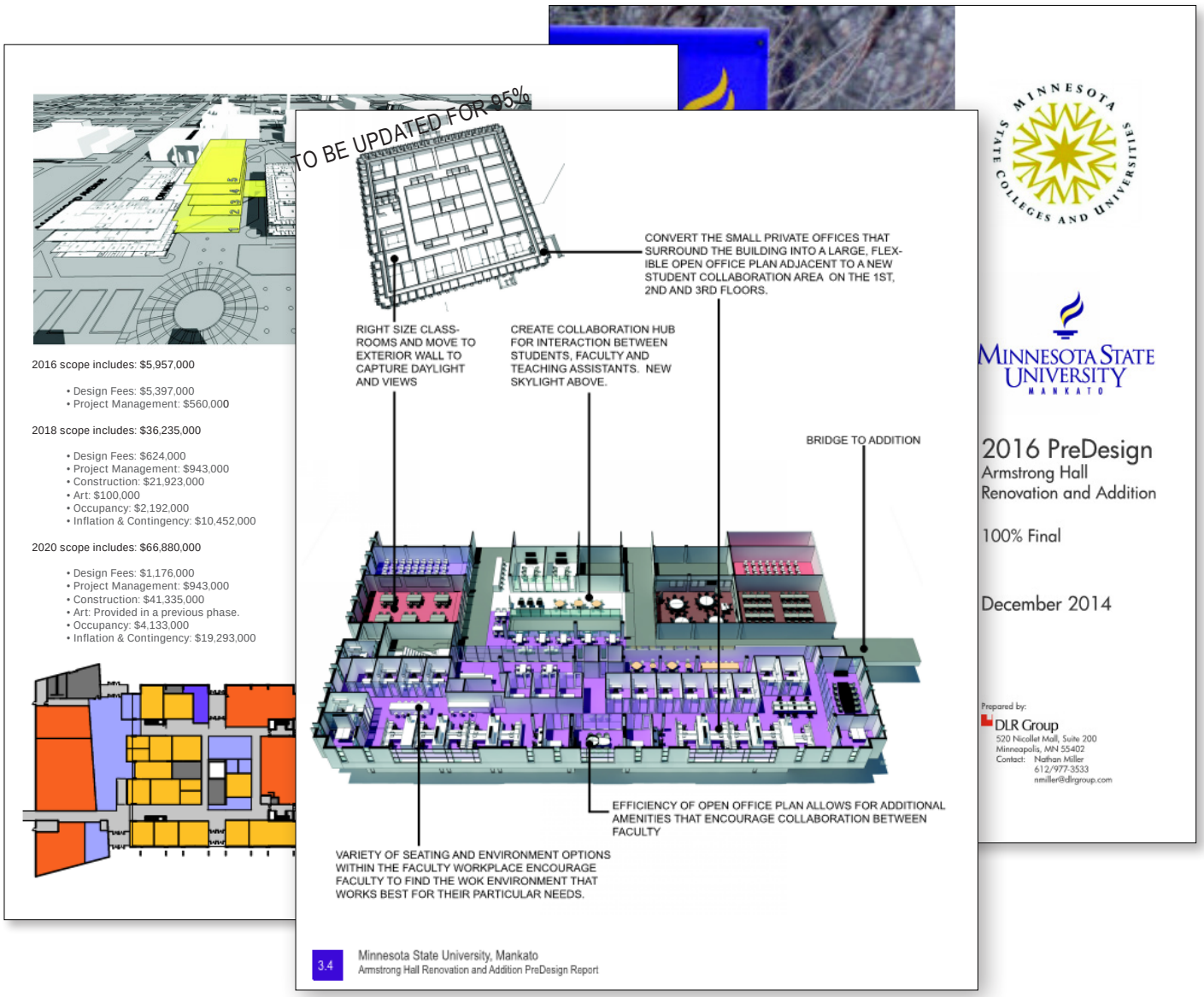
Armstrong Hall represents just shy of 30% of Minnesota State University, Mankato's total deferred maintenance backlog. Armstrong Hall alone currently has a backlog in excess of $30.5m with another $617,000 scheduled by the time the building would be demolished. The current backlog equates to an FCI of 0.48. Roofing and the HVAC systems are the major concerns. The building cannot continue to operate without these systems in a functional state. There is risk of large scale failure if there is a delay in funding.

Memorial Library + Addition is in much better shape at an FCI of 0.14 and 0.08 respectively, but they still have an impactful level of deferred maintenance. Proposed Library renovations include accessibility and visibility improvements to student service and success programs, attracting more students to the building. It will be imperative to the success of this project to have updated, efficient systems in place. Over $1.4m is included in the renovation funding to address the current backlog.

3.7 Alternatives Considered

In 2014 Minnesota State Mankato and the Predesign team explored an option to transform Armstrong Hall with an extensive Renewal and New Building Addition project. In the end, the three phase $119 million (in 2016 dollars) project cost was too great and the value of such scale of project was questioned.

In 2016 Minnesota State Mankato and the Predesign team explored a renewal option to tackle all maintenance and ADA issues along with some modest finish upgrades (e.g. paint walls, replace carpet, and replace acoustic ceilings). The sheer scale of 145,000 SF presented significant sequencing issues. It was impossible to find enough available swing space on campus which resulted in the need to break down construction into four phases , adding significant cost to the project. We quickly discovered that yet again, project cost would be a major issue for the project but it was an alternative option that we knew we had to test and see if it was a viable option. In the end the price tag of $43.5 million (2016 dollars) was an astonishing amount to invest in a facility that, in the end would still not provide the types of 21st century educational environments that we see today and are now the standard on University campuses.



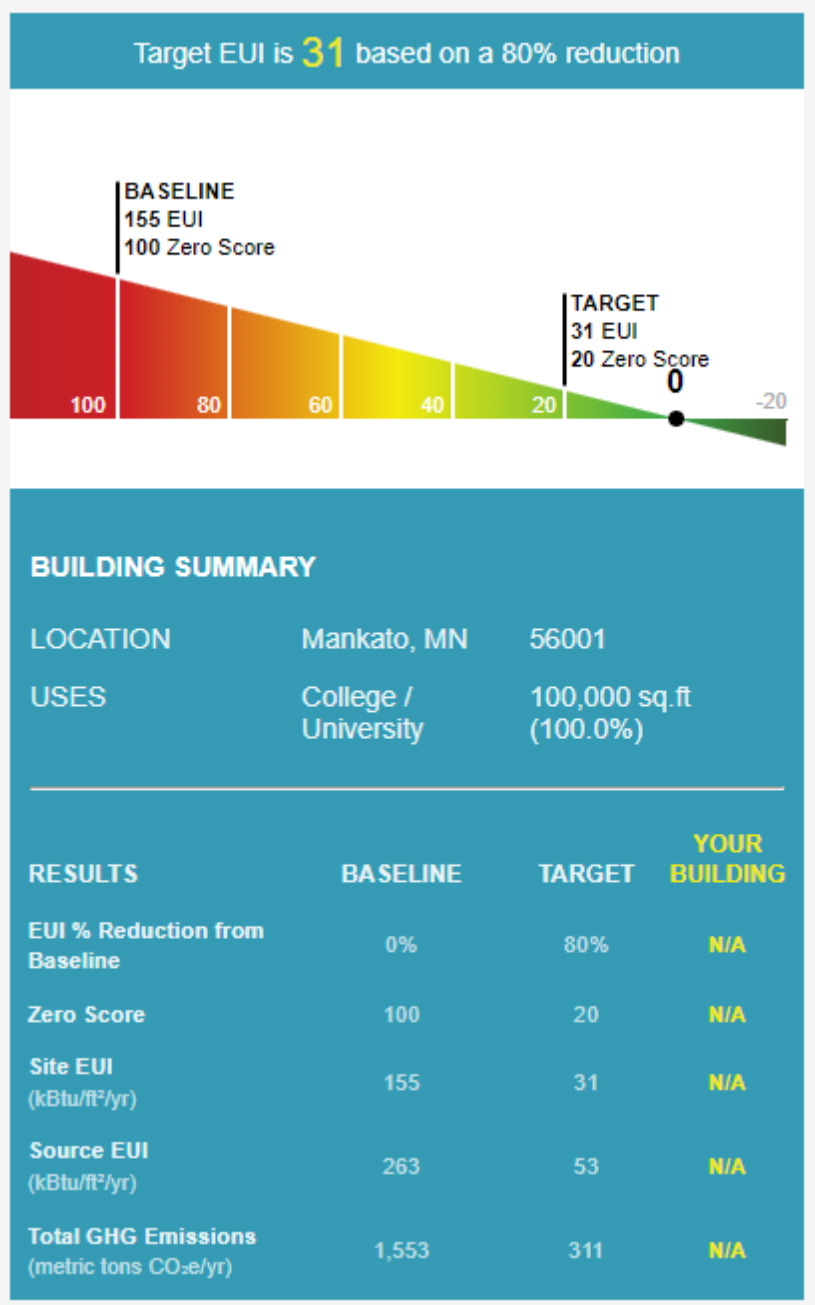
In 2018 (2020PD), a third predesign evaluated a comprehensive solution for Armstrong Hall which included a new building and several renovation projects of existing underutilized space. The new building has a compact, efficient footprint that de-emphasizes the private office and opts for a more open workspace layout, provides new student spaces currently lacking on campus and right sizes classrooms. Additionally, various programs will move into revitalized existing spaces on campus. These strategies, paired with better classroom utilization actually reduces the overall campus GSF. The current 2024 Predesign builds on the solution established in the 2020 Predesign.

SECTION 4: Sustainability and Energy

Section 4: Sustainability and Energy

The projects associated with the Armstrong Hall Solution will be in full compliance with applicable B3 criteria following the current version, v3.2r01, including SB2030 Energy Standard. B3 benchmarking will be part of the project quality assurance process to ensure holistic sustainable designs.

As the GESP modernizes existing building stock, Armstrong Hall will set the new benchmark for high performing new buildings on campus.

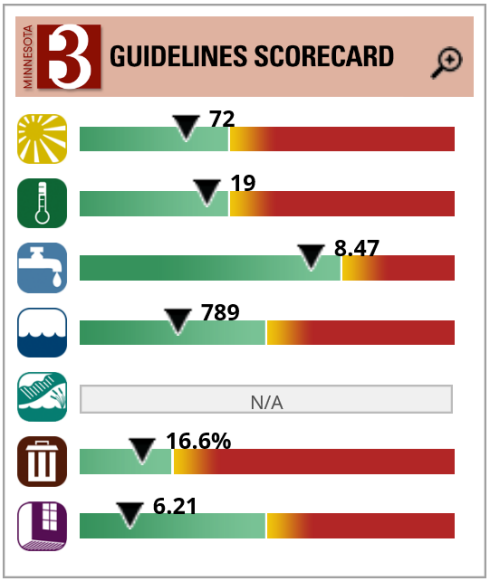


LED Lighting Upgrades	The end result provided a more open and brighter space. Improved night-time visibility and safety
Control Upgrades (Library VFDs & Economizer Programming)	Pump Speed Reduction = Energy Savings
Boiler #4 Control Upgrades	Removed unsupported, outdated controls with latest technology
Central Boiler Plant Improvements	Improved Feedwater and Deaerator Controls
Belimo Energy Valves	Precise Control of Chilled Water to "Free-Up" Chiller Capacity
Chiller #2 VFD	Precise and clean installation, Chiller Modulation for Improved Performance

4.1 Campus B3 Benchmarking Data

There are three buildings affected by this series of projects that have differing levels of data available.

Clinical Sciences is newer, having opened in 2017, so it was designed and constructed within modern guidelines, including B3, thus benchmarking data is available (below).

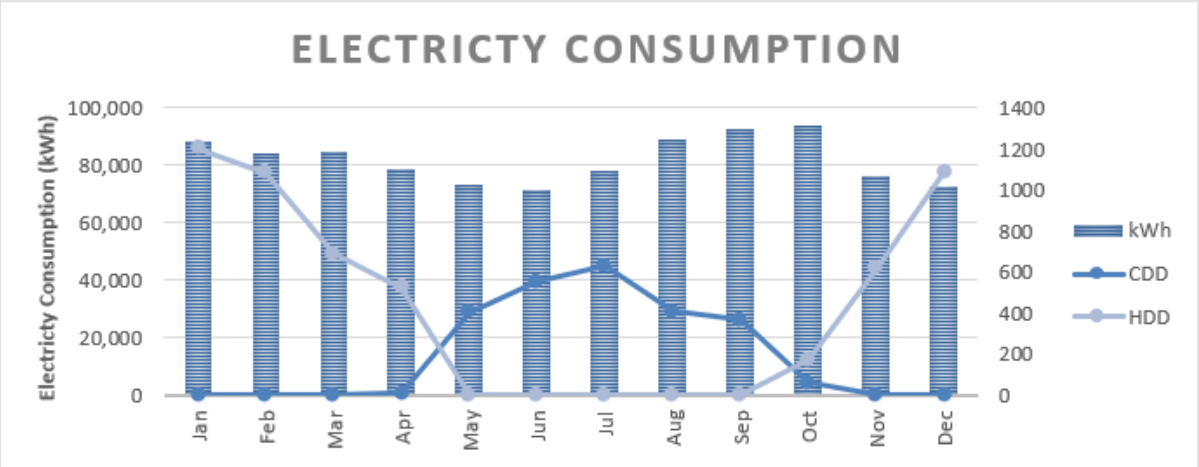


Armstrong Hall and the Memorial Library are not as recently constructed. Many of their utilities are on a campus wide metering system so benchmarking data is not available. The following data regarding electricity and steam usage is what we have available specific to these buildings.

Armstrong Hall currently has an EUI of 109 kBtu/SF as shown in the tables below, presenting the most recent 12 months.

Electricity consumption is relatively consistent across the last 12 months and trend lines do not seem to fluctuate because of external fluctuations in temperature.

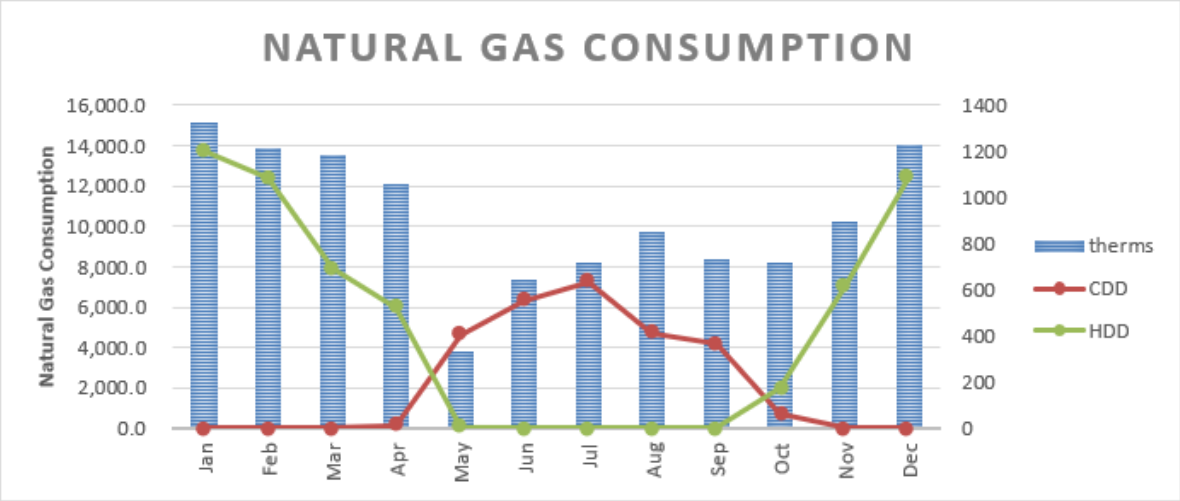
Month	Energy (KWh)	Monthly Cost	Energy Rate ($/kWh)
January	88,520	$8,320.88	$0.094
February	84,223	$7916.96	$0.094
March	84,547	$7947.42	$0.094
April	78,590	$7387.46	$0.094
May	73,287	$6888.98	$0.094
June	71,165	$6689.51	$0.094
July	78,073	$7338.86	$0.094
August	89,016	$8367.50	$0.094
September	92,837	$8726.68	$0.094
October	93,858	$8822.65	$0.094
November	76,554	$7196.07	$0.094
December	72,353	$6801.18	$0.094
Total	**983,023**	**$92,404.15**	**$0.094**
Total KWh/ft2	**6.78**	**$92,404.15**	
Total KBtu/ft2	**23.14**		



Minimal Natural Gas Consumption is expected in summer time where heating is not required. Trendlines indicate significant Natural Gas Consumption in winter with an average increase in gas consumption of 30% compared to 2017. Natural gas cost per therm has more than doubled since 2017 rates.

At the current utility rates this should equate to a revised annual energy cost of approximately $325,000 including energy consumption from the Clinical Sciences and Library buildings. The new building alone would be anticipated to consume approximately $90,000 worth of energy annually.

Month	therms	Monthly Cost	Energy Rate ($/therm)
January	15,105.0	$10876	0.72
February	13,857.8	$9978	0.72
March	13,498.7	$9719	0.72
April	12,083.4	$8700	0.72
May	3,774.5	$2717	0.72
June	7,355.1	$5296	0.72
July	8,235.3	$5929	0.72
August	9,753.1	$7022	0.72
September	8,400.4	$6048	0.72
October	8,201.5	$5904	0.72
November	10,239.4	$7372	0.72
December	14,040.8	$10108	0.72
Total	**124,545**	**$89,669**	**$0.72**
Total therms/ft2	**0.86**	**$0.4073**	
Total KBtu/ft2			



COMPARATIVE DATA REPORT

Armstrong Hall

COMPARATIVE DATA - ELECTRICITY

Negative variances are favorable

Month	kWh 2022	kWh 2021	kWh 2020	kWh 2019	kWh 2018	Variance 2021-2022	Variance 2020-2022
Jan	81,999	68,937	69,546	70,224	88,520	18.95%	17.91%
Feb	75,422	67,464	66,572	71,344	84,223	11.80%	13.29%
Mar	81,974	76,003	63,310	76,624	84,547	7.86%	29.48%
Apr	72,791	72,527	58,277	76,056	78,590	0.36%	24.91%
May	74,312	75,889	57,975	74,079	73,287	-2.08%	28.18%
Jun	72,484	72,555	58,760	63,512	71,165	-0.10%	23.36%
Jul	71,410	75,724	63,475	66,864	66,307	-5.70%	12.50%
Aug	72,993	80,893	66,966	74,122	71,200	-9.77%	9.00%
Sep		82,226	68,497	68,461	76,534		
Oct		85,902	70,986	72,875	74,032		
Nov		80,334	65,012	64,056	68,402		
Dec		78,383	69,901	64,719	67,161		
YTD	**603,385**	**916,837**	**779,277**	**842,936**	**903,968**	**0**	**2**

COMPARATIVE DATA - STEAM

Negative variances are favorable

Month	lbm 2022	lbm 2021	lbm 2020	lbm 2019	lbm 2018	Variance 2021-2022	Variance 2020-2022
Jan	1212681.00	1025089.00	1018592.00	1288734.00	1265076.00	18.3%	19.1%
Feb	1045998.00	1054994.00	920465.00	1183692.00	1160618.00	-0.9%	13.6%
Mar	933459.00	827418.00	843995.00	1113221.00	1130547.00	12.8%	10.6%
Apr	656320.00	625666.00	671481.00	760112.00	1012011.00	4.9%	-2.3%
May	403255.00	397008.00	332783.00	586182.00	316123.00	1.6%	21.2%
Jun	426579.00	482057.00	456400.00	602092.00	616003.00	-11.5%	-6.5%
Jul	396425.00	514377.00	435409.00	526039.00	574718.00	-22.9%	-9.0%
Aug	369519.00	517876.00	448903.00	470561.00	534952.00	-28.7%	-17.7%
Sep		630747.00	555777.00	527789.00	659736.00		
Oct		765860.00	766360.00	680227.00	828002.00		
Nov		908053.00	732123.00	835215.00	1077985.00		
Dec		1087231.00	993185.00	994268.00	1177778.00		
YTD	**5444235.00**	**5444485.00**	**5128028.00**	**6530633.00**	**6610048.00**	**0**	**0.0617**

1 of 1

Memorial Library — June 2018

COMPARATIVE DATA - ELECTRICITY

Negative variances are favorable

Month	kWh 2018	kWh 2017	kWh Variance	Cost per kWh 2018	Cost per kWh 2017	Cost Variance	Peak Demand kW 2018	Peak Demand kW 2017
Jan	170,145	221,452	-23.2 %	$0.0789	$0.0748	5.5 %	312	472
Feb	161,549	216,775	-25.5 %	$0.0812	$0.0667	21.7 %	308	460
Mar	177,389	182,266	-2.7 %	$0.0758	$0.0735	3.1 %	312	368
Apr	183,453	176,618	3.9 %	$0.0837	$0.0892	-6.2 %	336	340
May	164,413	157,662	4.3 %	$0.0758	$0.0758	0.0 %	328	336
Jun	147,867	143,418	3.1 %	$0.0812	$0.0874	-7.1 %	292	308
Jul		140,366			$0.0832		0	300
Aug		154,102			$0.0823		0	316
Sep		162,430			$0.0841		0	328
Oct		172,238			$0.0756		0	328
Nov		161,886			$0.0832		0	332
Dec		146,334			$0.0832		0	328
Y-T-D	**1,004,816**	**1,098,191**	**-8.5 %**					

COMPARATIVE DATA - STEAM

Negative variances are favorable

Month	lbs 2018	lbs 2017	lbs Variance	Cost per lbs 2018	Cost per lbs 2017	Cost Variance
Jan	1,931,560	1,363,371	41.7 %	$0.0065	$0.0050	30.0 %
Feb	1,704,068	926,379	83.9 %	$0.0041	$0.0056	-26.8 %
Mar	1,620,768	1,120,718	44.6 %	$0.0041	$0.0059	-30.5 %
Apr	1,374,450	731,291	87.9 %	$0.0041	$0.0050	-18.0 %
May	383,513	495,302	-22.6 %	$0.0041	$0.0041	0.0 %
Jun	744,036	553,362	34.5 %	$0.0041	$0.0037	10.8 %
Jul		540,117			$0.0049	
Aug		584,433			$0.0053	
Sep		541,367			$0.0053	
Oct		776,689			$0.0050	
Nov		1,182,110			$0.0110	
Dec		1,620,601			$0.0078	
Y-T-D	**7,758,395**	**5,190,423**	**49.5 %**			

4.2 Compliance Plan

A dedicated High Performance Design professional will be responsible for managing team B3 compliance documentation. This individual will conduct a B3 Kickoff Meeting, where all stakeholders will be in attendance. During this meeting the stakeholder team will be educated on the B3 process, documentation requirements per phase, in addition to individual discipline responsibilities. Throughout the design process B3 compliance will be a regular agenda item on team meetings, with additional meetings to be coordinated as necessary.
Challenges foreseen for compliance are linked to the redistribution of program into existing buildings; analysis will be conducted to determine if there is a need for the existing buildings to conduct building upgrades and/or modifications. The new building design will focus on optimized performance.

4.3 Energy Design Initiatives

Minnesota State Energy Code references IECC 2018 or ASHRAE 90.1-2016. In order to achieve reduction beyond code, the design team will use our net zero energy approach to building optimization. This approach focuses on reducing the amount of energy the building needs to operate by using energy conservation strategies in the Programming, Envelope, Lighting HVAC and Controls design phases.

In addition to the design initiatives listed in the table below, it would be recommended that a pathway for ongoing performance assessment be established to ensure design intent is realized after building hand over.

Programming	Optimize Orientation
	Locate all regularly occupied areas along perimeter to maximize daylight access
	Locate any high internal heat gain rooms on the north façade
	Explore passive solar heat gain opportunities
Envelope	Increase Roof R-Value
	Increase Wall R-Value
	Increase Slab R-Value
	Reduce Window U-Value
	Reduce Window SHGC
	Reduce Window VLT
	Reduce Thermal Bridging
	Design for Air Tightness
	Optimize Window to Wall Ratio
Lighting	Reduce Lighting Power Density
	Provide bi-level switching
	Design for Daylighting
HVAC	Explore decoupling outdoor air load from thermal load
	Explore Energy Recovery
	Design for appropriate load matching with turndown control
	Explore innovative systems with increased energy efficiency opportunities
Controls	Demand Control for Ventilation
	HVAC Night Setback
	HVAC Static Pressure Reset
	Daylighting
	Occupancy & Vacancy Sensors
	Consider installing a monitoring based commissioning system over the Building Automation System
Renewables	Consider Photovoltaics for supplemental electricity
	Consider Solar Hot Water Heating opportunities

A recent code addition is Animal Habitat Support. The project includes Bird Safe Glazing Strategies and assumes provisions for Endangered/ Threatened species within 2 miles of the project site. These include:

- Water source on site open year-round (aerator).
- Species habitat with natural or man-made structures (Bell Museum is great precedent)
- Pollinator habitat
- Dark Sky Compliant site and building lighting.

4.4 Low Cost Efficiency Measures

Sustainable concepts that will be considered include but are not limited to; envelope R-value optimization, data driven window to wall ratio selection, dedicated outdoor air systems, energy recovery, numerous heating and cooling delivery options, demand controlled ventilation, daylighting and receptacle load reduction. Existing buildings will be analyzed to determine whether there are opportunities to improve operation through controls strategies such as night setback and effective turndown or turnoff of equipment during unoccupied modes. In addition daylighting and occupancy/vacancy controls will be explored, with a focus on ensuring equipment is switched off when not needed.

4.5 Waste Management and Recycling

To minimize use of resources and negative environmental impacts through design decisions and careful reduction and management of waste generated during the construction process and building occupancy, a waste management plan will be established for this project. The plan will include:

1. A plan to adaptively reuse an existing structure or salvage and reuse materials from an existing structure being demolished or deconstructed onsite.
2. A plan to select materials with appropriate durability for service life. In many cases, state-funded buildings are intended to have a 50–100 year service life for the structure and envelope.
3. A plan to specify the use of prefabricated products, preassembled products, and/or modular building units to minimize construction waste onsite.
4. A plan that addresses both partial deconstruction (for renovations) and total deconstruction (for end-of-life removal) of the building to maximize the reuse and recycling of building components and materials. Indicate specific strategies to facilitate disassembly.
5. A construction waste management plan that includes the following:
    - Specification of materials to be diverted from disposal by efficient usage, recycling, reuse, manufacturer's reclamation, or salvage for future use, donation or sale.
    - Specification of the percentage of materials to be diverted ; calculate by weight or volume, but not both. Include separate average percentages for those materials collected by construction and demolition materials processing facilities that end up as alternative daily cover and incineration.
6. An operational waste plan that includes the following:
    - Description of waste streams and discuss how waste will be minimized and diverted from disposal (recycled, composted, reverse distribution).
    - Description of the collection plan including a collection plan for consumables and durables (this can be done at a campus or organization scale).

At least 75% of nonhazardous construction and demolition waste will be diverted from landfill. The percentage of materials diverted will be calculated by either weight or volume, but not both. Calculations will include:

1. All materials delivered to the site and intended for installation prior to the issuance of the certificate of occupancy, including related packaging
2. Construction materials and waste removal during demolition or razing.

Calculations will not include land-clearing debris (including trees, rocks, and vegetation), excavated soils, and fill and base materials such as topsoil, sand, and gravel. Waste used as alternative daily cover or in waste-to-energy incineration will not be counted as diverted material.

4.6 Renewable Energy

MN 16B.323: Cost/benefit analysis of solar energy system for new buildings

In order to determine the capacity needed to satisfy 2% of the future Armstrong Hall Program energy needs, the redistribution of the current 158,000 SF program into 3 buildings; new construction, use of Clinical Sciences and the Memorial Library. Assumptions were made for the predicted new construction EUI based on current energy code, energy data was available for the Clinical Sciences Building on the MNB3 Database, and utility bill data was provided by the client for the Memorial Library.

Program Location	Program Area (SF)	EUI (kBtu/SF)	Total Forecasted Energy (kBtu)
New Construction	100,000	31	3,100,000
Clinical Sciences	13,000	72	929,760
Library	45,000	50	2,250,000
	158,000	-	6,279,760

The analysis of the data indicates an estimated future annual energy expenditure of $110, 317 for the proposed program. This results in a B3 recommended 80kW solar photovoltaic system.

Utility Data	Cost	
Electricity ($/kWh)	$	0.094
Natural Cost ($/Therm	$	0.72
Blended Rate ($/kBtu)	$	0.015
Assumed Annual Energy Expenditure	$	94,196.40

**Costs based in current billed rates*

Annual Solar Generation Needed (kWh)		34,972
Solar Capacity Needed (kW)		34
Impementation Cost - $3000/kW	$	102,000
Simple Payback (Years)		2.5

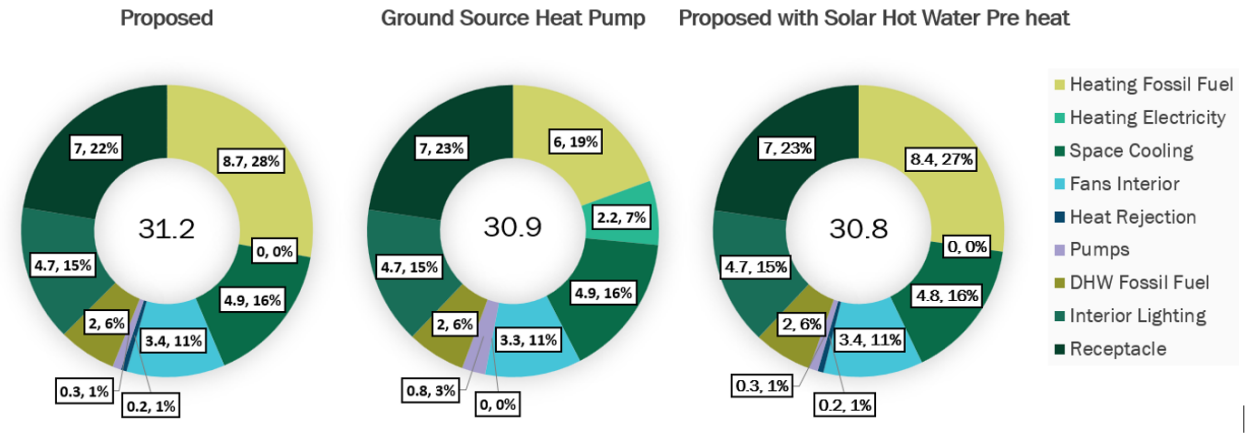
Assuming solar installation costs of approximately $3000/kW this size installation should payback within 2.5 years. Under B3 Guidelines a simple payback threshold of 12 years is deemed cost effective.

MN 16B.326: Cost/benefit analysis of geothermal and solar thermal heating & cooling systems

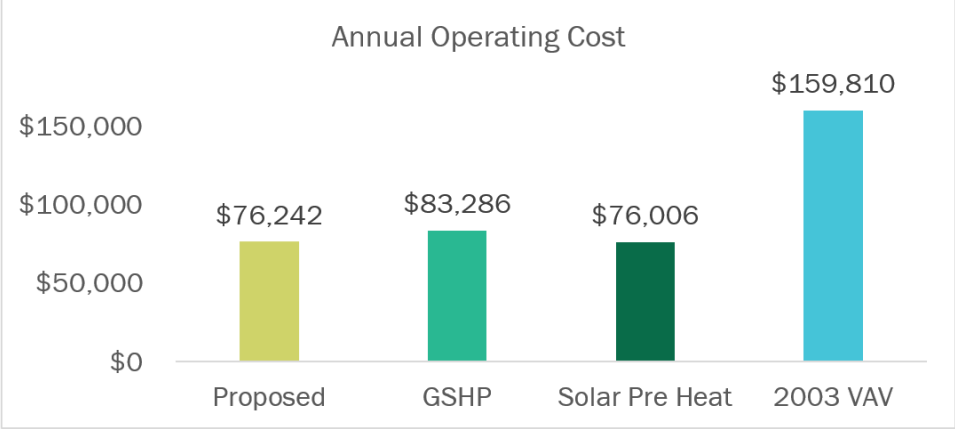
The table identifies three different system types which will be evaluated to determine feasibility for the site, operational energy costs, and first costs with payback analysis for each option. Detailed site information would be needed to verify the viability of a ground source heat pump system. In considering only the building type and climate, a GSHP system is viable. However, site constraints (soil conductivity, space available for drilling, etc.) may cause the first cost of the GSHP system to be too high. We propose evaluating the systems in the table below as a top priority at the beginning of design to ensure site feasibility is included in the cost analysis.

Code Minimum	SB 2030	Decarbonized
VAV AHU's	DOAS + Chilled Beams/FCU's	DOAS + heat pumps
Chilled Water	Chilled Water	GSHP for heating and cooling
Gas-fired boiler	Gas-Fired Boiler	Solar Thermal for OA pre-heat & DHW
Hot Water	Hot Water	

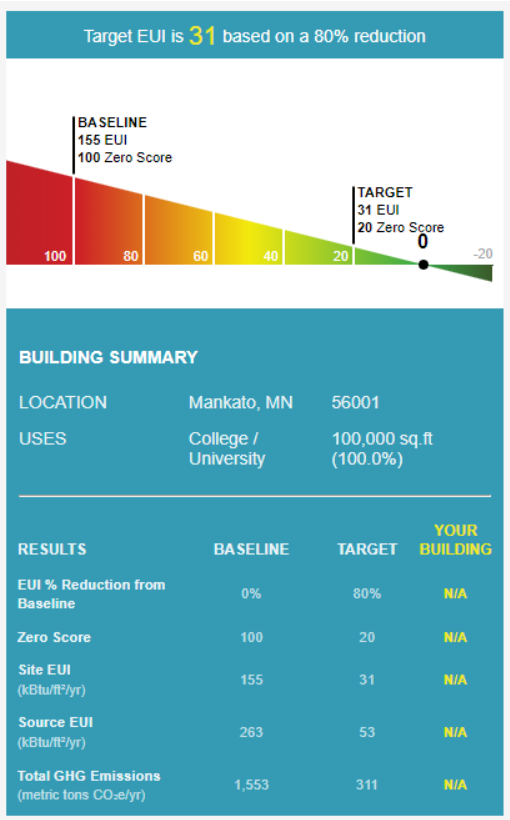
The primary system proposed is a designated outdoor air system (DOAS) with active chilled beams. This proposed system achieves an estimated energy use intensity (EUI) of 31.2 kBtu/ft2/year with heating accounting for most of the energy consumption. The addition of a 300 square foot solar array (accounting for 2% of the building energy) for solar hot water pre heat reduces the EUI by 0.4 kBtu/ft2/year. A ground source heat pump mechanical system results in an estimated EUI of 30.9 kBtu/ft2/year, a reduction of 0.3 kBtu/ft2/year from the proposed mechanical system.

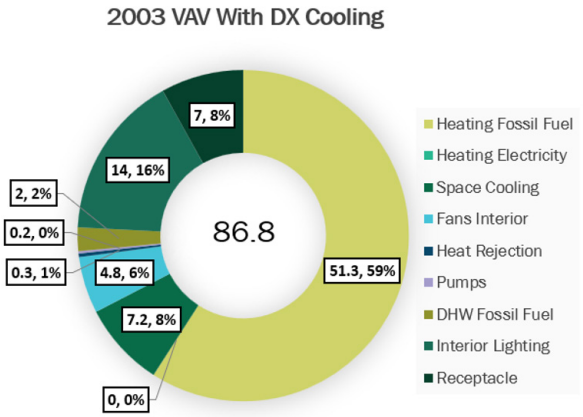


Adding solar hot water pre heat to the proposed mechanical system of a DOAS with chilled beams results in the lowest EUI of the three compared proposed model, but the initial cost may not be worth the limited improvement in annual EUI. Despite a ground source heat pump system having a lower EUI than the proposed DOAS with chilled beams, the estimate annual operating cost is higher by over 9%.

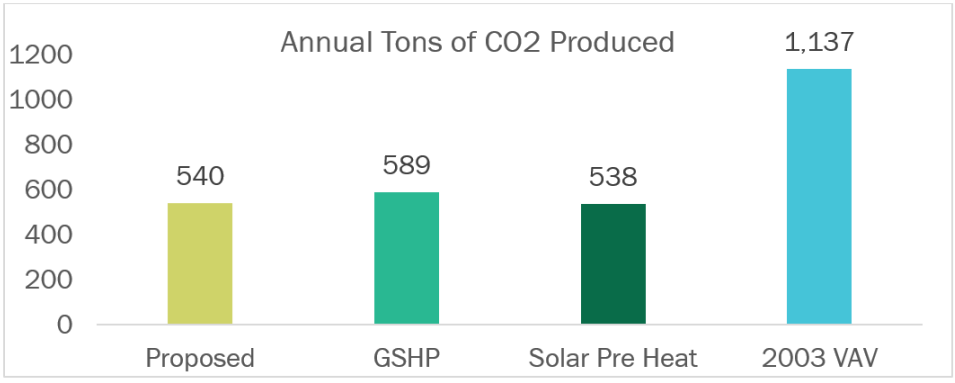


Compared to a 2003 baseline building with a variable air volume (VAV) system with direct-expansion (DX) cooling, the proposed DOAS with active chilled beams reduced energy use by 64%. Armstrong Hall, in contrast, was built in 1964 with significantly lower energy standards. Since its original construction in 1964, the building has had minimal repairs to parts of the roof and general maintenance. The most recent energy consumption information collected shows an EUI of 109 kBtu/ft2/year for Armstrong Hall, showing that even with some building improvements, the existing conditions still performs worse than a 2003 baseline building using a VAV system. Architecture 2030 estimates that a baseline building used for B3 benchmarking of a 100,000 square foot university building in Mankato, MN has an EUI of 155 kBtu/ft2/year. Compared to the Architecture 2030 baseline building, the proposed has an EUI reduction of 80%, meeting the B30 target.

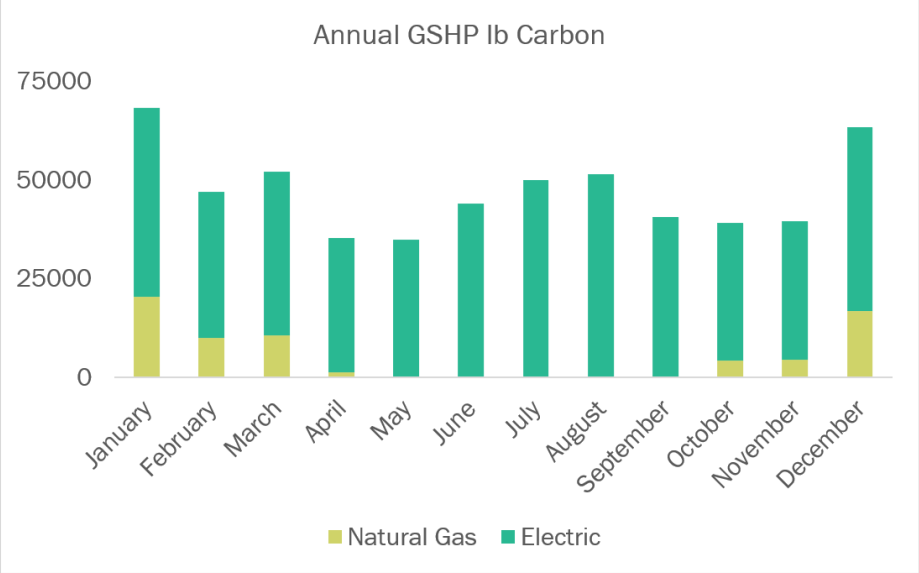




In addition to annual operating costs, the three alternative systems reduce carbon emissions by almost half, compared to the architecture 2030 baseline building. Every 100 tons of carbon saved is the equivalent of 20 average gasoline-powered passenger vehicle driven in one year. The benefit of using a ground source heat pump system over the DOAS is that a ground source heat pump system allows for greater potential of future decarbonization. Ground source heat pumps can be electrified, allowing the system to run on renewable sources rather than natural gas, which a boiler dependent system requires.



With Xcel Energy planning to retire all remaining coal plants by 2030 in efforts to transition to renewables, electrical energy use will have no associated carbon produced with its generation. The boiler in a ground source heat pump system can then be replaced with solar hot water preheat as the boiler demand is not as large, compared to the DOAS and VAV systems. If the goal is to make the entire building net zero in the future, it would be advantageous to incorporate a ground source heat pump system.



Net Zero Considerations

In order to make a building Net Zero ready, the typical energy use per square foot would be 20 kBtu/SF which would be require the new Armstrong Hall to be 50% better than energy code. This is within the realm of possibility and could be explored with the dedicated building simulation specialist on the team. The challenge for MSU Mankato specifically is that all buildings rely on a central plant; requiring a campus based approach to net zero.

This is a challenge and an opportunity; the challenge is that the central plant would need to eventually be replaced to achieve net zero, the opportunity is that MSU could take a campus solar approach which would increase the areas for solar beyond rooftop installations on the new Armstrong Hall. Instead solar PV could be incorporated throughout the campus where most feasible. The first step in the campus approach to net zero is to quantity the performance of each building in isolation, determine the energy optimization potential, which has somewhat been explored under the Guaranteed Energy Savings Program and then determine the additional optimization needed to get to a campus energy use intensity of 20 kBtu/SF 'Net Zero Ready' goal.

SECTION 5: Financial Information
Capital Expenditures

Section 5: Financial Information

5.1 Estimate of Capital Expenditure / Project Costs Summary

Funding for the Armstrong Hall Solution at Minnesota State University, Mankato is being requested over two bonding cycles.

2024
The request in 2024 totals approximately $42.1m (escalated). This request includes:

- Design fees. including state and non-state management, to advance the design for the entire project through construction documents.
- Design fees for construction administration of all the Renovation and Renewal projects (Clinical Sciences basement, Morris Hall, Library, and Wiecking Center).
- Construction funding for all the Renovation and Renewal projects (Clinical Sciences basement, Morris Hall, Library and Wiecking Center).

2026
The request in 2026 is for $91.2m (escalated) and includes the following scope items:

- Design fees for construction administration of the new building.
- Construction funding for the new building.
- Design fees for the demolition of Armstrong Hall and associated infrastructure and landscape repair.

Armstrong Hall currently serves as a major thoroughfare between the student housing located on the north side of campus and the academic and student services buildings on the south, especially in the winter months. Maintaining a weather protected connection between Nelson and Morris Halls is included in the demolition and landscape. This would come at an approximate price tag of $3.6m.

GSF costs broken down by new construction, renovation and renewal costs are included in the Capital Budget Workbook. In summary, there is approximately:

- 100,000sf of new construction at $435/sf
- 70,000sf of renovation/interior fit out at $285/sf
- 5,000sf of renewal at $75/sf

5.2 Procurement and Delivery

The recommended procurement and delivery method is Construction Manager as Constructor. The Construction Manager will carry a fee during the design phases but and argument can be made that this fee will save the project money in the long run through early involvement of the contractor to price and provide constructability reviews. In addition, the selection of the construction manager is a best value selection ensuring the involvement of a builder with experience in the project type.

5.3 Construction Budget Considerations

A 20% premium over standard cost estimating has been applied to new building construction costs to cover higher performance building components that meet B3 energy use requirements; these are most notably, based on recent B3 projects: Building envelope, Roof systems, HVAC system and Lighting control systems. Other miscellaneous B3 items like energy submeters, indoor air quality items (ie

MERV 8 filters during construction; MERV 13 filters for occupation), water efficient fixtures (1.1gpf water closets, .125gpf urinals, etc) carry a 5% premium and have also been incorporated into the base construction cost.

Furniture, fixtures, and Equipment (FF&E): The FF&E budget is set at 8% of the construction budget. This is to cover new furniture in the classrooms, labs and offices within this program. It also includes additional infrastructure to augment classroom technology with microphones, video cameras, and large screen monitors. Thirty percent of the Armstrong Hall solution's program is dedicated to Shared General Classrooms and Multi-Use Labs; this increases to 37% when Library Classrooms are included. In addition, college-specific labs may have future needs for virtual-learning. Conference room technology and wireless access points throughout to enable every office to connect when instructors have virtual meetings, are also included in this budgetary line item.
The major systems in the library are not intended to be impacted. They will remain in use thus are not included in this budget.

IT/technology: The technology budget is 1% of the construction budget. This is primarily phone and data cabling and equipment.

Security: Security has a separate line item in the budget of 1% of the construction budget.

Utilities: Required utilities exist in the street to either the west or south of the site and should be sufficient to handle the load of the new building. Storm sewer service will likely need to come from the Ellis Avenue side, sanitary sewer and water can likely come from either Ellis Ave or Maywood Avenue, chilled water will likely need to come from Maywood Ave.

Mechanical/Electrical: The mechanical & electrical systems for the new building are based on a B3 high performance design (see Narrative in Section 3).

Hazardous Materials: There are known hazardous materials in Armstrong Hall that will need to be abated prior to demolition. The hazardous materials report and estimate for this scope are included in the Appendix. Memorial Library also has known hazardous materials but at a much smaller scale. It is primarily limited to pipe fittings and flooring adhesives. The renovation of the Memorial Library is in the first phase of the project and carries $600,000 to cover the abatement of hazardous materials. Abatement and disposal of hazardous materials in Armstrong Hall is Included in the demolition cost.

5.4 Risk Mitigation

The project schedule has been modified to include a funding request of 2 phases over 2 biennium (4 years). Several key factors came into play when considering this shift from a 3 phase request over 3 bienniums (6 years) that will mitigate risk in various areas, including Project Schedule, Budget, Design, Regulatory and Procurement:

- Accelerates overall project completion (2 biennium instead of 3)
- Saves over $9 Million in project inflation costs
- Reduces Armstrong expenses in urgent repairs and poor energy efficiency
- Less risk of employee environmental complaints
- Less risk of scope creep between phases
- Improved cash flow reporting back to Department of Administration
- Less risk of significant code revisions between Design and Construction

SECTION 6: Financial Information
Ongoing Operating Expenditures

Section 6: Ongoing Operating Expenditures

6.1 Operating Costs

IMPACT ON CAMPUS OPERATING COSTS (in thousands; $137,500 = $138)	Current Cost	Projected Costs (Without Inflation)			
		FY 2024-25	FY 2026-27	FY 2028-29	FY2030-31
Compensation (Building Operation)	420	420	420	420	420
Other program-related expenses					
Building Operating Expenses					
Utilities (electric, gas, other)	211	211	200	60	60
Maintenance (routine)	107	250	250	0	100
Repairs (planned / estimated)	0	500	202	100	0
Waste removal (standard, hazardous)	6	6	6	6	0
Annual building servicing (elevators, fire, etc)	11	11	11	11	0
Lease Expenses					
Equipment	0	0	0	0	0
Off campus real estate lease expenses (or savings)	0	0	0	0	0
Expenditure Subtotal	**755**	**1,398**	**1,089**	**597**	**580**
Revenue Offsets; explain below	0	0	0	0	0
TOTAL	**755**	**1,398**	**1,089**	**597**	**580**
Change from Current FY 2022-2023		**643**	**-309**	**-492**	**-17**
Change in # of F.T.E. Personnel		0	0	0	0

Ongoing Building Repair, Replacement and Maintenance

The budget for ongoing building repair, replacement and maintenance will be impacted by this project. In the short term it will rise as the new building comes online while Armstrong is still operational. Once renovations are complete and Armstrong is taken offline the ongoing repair budget would drop significantly in the short term while the building is new and stay lower long term due to reduced SF and more efficient energy systems. The proposed numbers are available in the Capital Budget Workbook.

Staffing

At the conclusion of the Armstrong Hall Solution project campus square footage will have dropped by 45,000 sf, 100,000 sf of aging facilities will have been replaced with a brand new building with new equipment and energy conscious design and aging systems in the Memorial Library will have been replaced. This will all lead to a reduction in Operations and Maintenance costs.

6.2 Debt Capacity

The current debt service projected for Minnesota State Mankato in 2023 is $1,079,360. Maximum added Debt Service for this project is estimated to be $1.98 million in FY2029 with an average of $1.1 million per year over the life of the bonds. Some of this new debt will be offset by a reduction in operating costs with the demolition of Armstrong Hall.

Request Year	Request Amount	Avg added Debt Payment
2024	$42,163,000	$351,358
2026	$91,221,000	$760,175
Totals:	$133,384,000	$1,111,533

When looking at current debt service through the next several years there is a debt peak at FY2029 at $2,533,322 with a decline in the next five years to $1,945,745 in FY2034. The campus has the ability to strategically use some campus reserves to support the debt peak FY2028-2030.

Minnesota State University, Mankato is not subject to a financial recovery plan.

6.3 Expected Lifespans

DESCRIPTION	YEARS
MAKE UP AIR UNIT	20
ELECTRIC RADIATION	35
ELECTRIC INFRARED HEATER	40
CABINET UNIT HEATER	15
AIR COMPRESSOR	25
AIR COMPRESSOR - CONTROLS	25
SPLIT SYSTEM	15
AIR DRYER FOR AIR COMPRESSOR	25
EXAHUST FAN	20
ROOF TOP UNIT	15
RETURN FAN	20
SUPPLY FAN	20
HEAT RECOVERY AIR-TO-AIR EXCHANGER	15
GAS FIRED UNIT HEATER	15
BOILER	20
FAN COIL	20
SHUTOFF VAV BOX	20
SHUTOFF VAV BOX WITH ELEC REHEAT	20
FAN POWERED VAV BOX W/ELEC REHEAT	20

DESCRIPTION	YEARS
CHILLER - AIR COOLED	20
PUMP	15
SUMP PUMP	15
WATER HEATER	10
WATER SOFTENER	10
DUCT DISTRIBUTION	35
GAS DISTRIBUTION	30
DOMESTIC WATER	35
STORM DRAINAGE	30
SANITARY DRAINAGE	30
FIRE PROTECTION	40
TEMPERATURE CONTROLS	20
RE-COMMISSIONING	5
REBALANCE AIR SIDE	5

DESCRIPTION	YEARS
SERVICE ENTRANCE PANELS	25
BRANCH CIRCUIT PANELS	25
TRANSFORMERS	30
GENERATORS	25
MOTOR STARTERS / CONTROL CENTERS	20
FEEDERS	40
BRANCH CIRCUIT CONDUCTORS	40
INTERIOR LIGHT FIXTURES	20
LED EXIT SIGNS	20
INTERIOR EMERGENCY LIGHTING UNITS	10
INTERIOR LIGHTING CONTROLS	20
EXTERIOR BUILDING MTD LIGHT FIXTURES	20
EXTERIOR LIGHTING CONTROLS	20
FIRE ALARM SYSTEM	15
FIRE ALARM SYSTEM BATTERIES	8
TELEPHONE SYSTEM	20
DATA SYSTEM	20
CCTV SYSTEM	15
ACCESS CONTROL SYSTEM	15

SECTION 7: Schedule

Section 7: Schedule

7.1 Graphic Schedule

The schedule on the following pages responds to the funding cycle and aligns campus intensive tasks with semester breaks.

7.2 Phasing and proposed funding sequence

Two phases of capital budget requests will be required for this project, with the first request in 2024 and second request in 2026. The envisioned two-phase construction project includes:

2024 Phase 1 request for design funds and all renovation/renewal funds. $42.1 million
2026 Phase 2 request for new building construction funds and demolition. $91.2 million

The project schedule is in alignment with capital requests and outlined as follows:

Nov 2022 PreDesign Complete
Sept 2024 Design Begins
May 2025 Renovation and Renewal projects Construction begins at Morris Hall
Sept 2026 Construction start new building - Move in Dec 2023
Oct 2028 Construction start multi-phase renovation projects - Move In Dec 2027
June 2028 Decommission & Demolish Armstrong Hall

Schematic Design

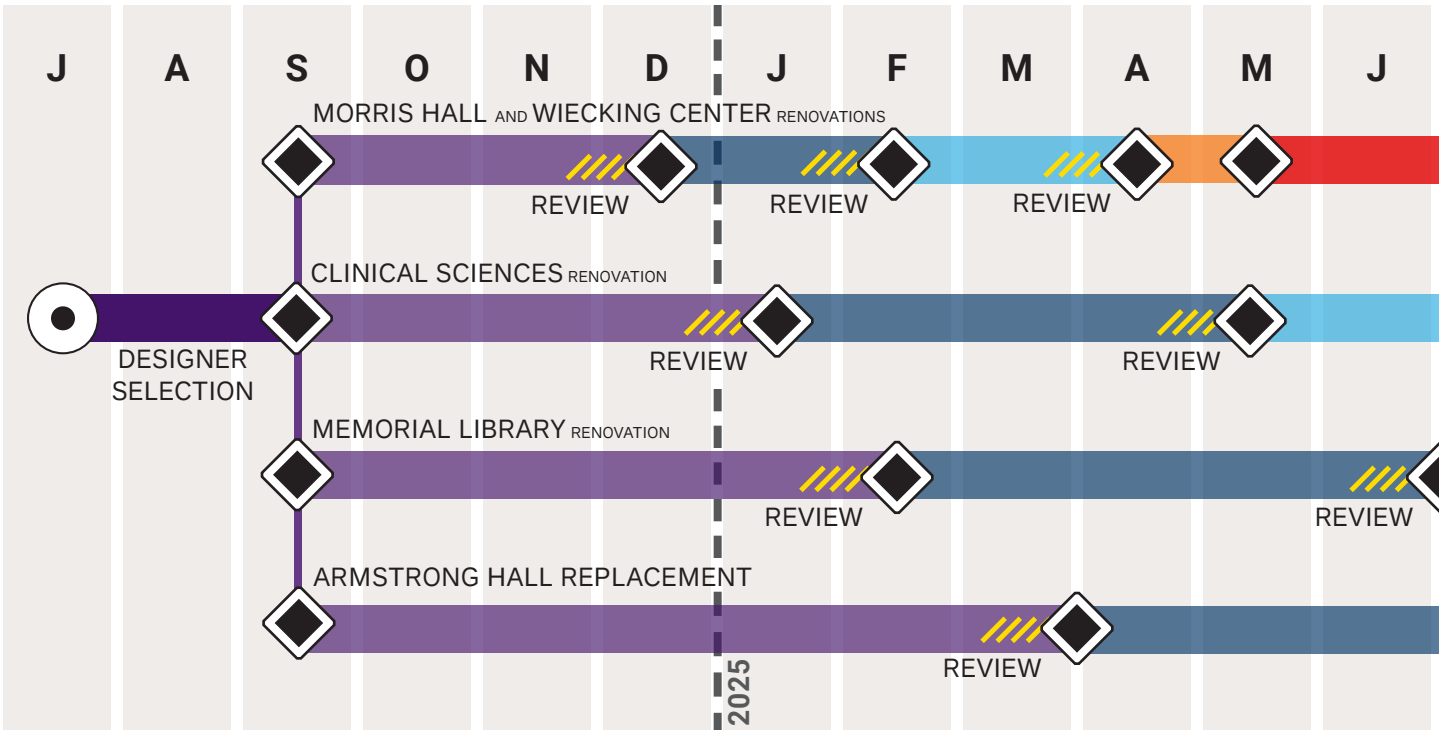
Identify project requirements goals, & opportunities.

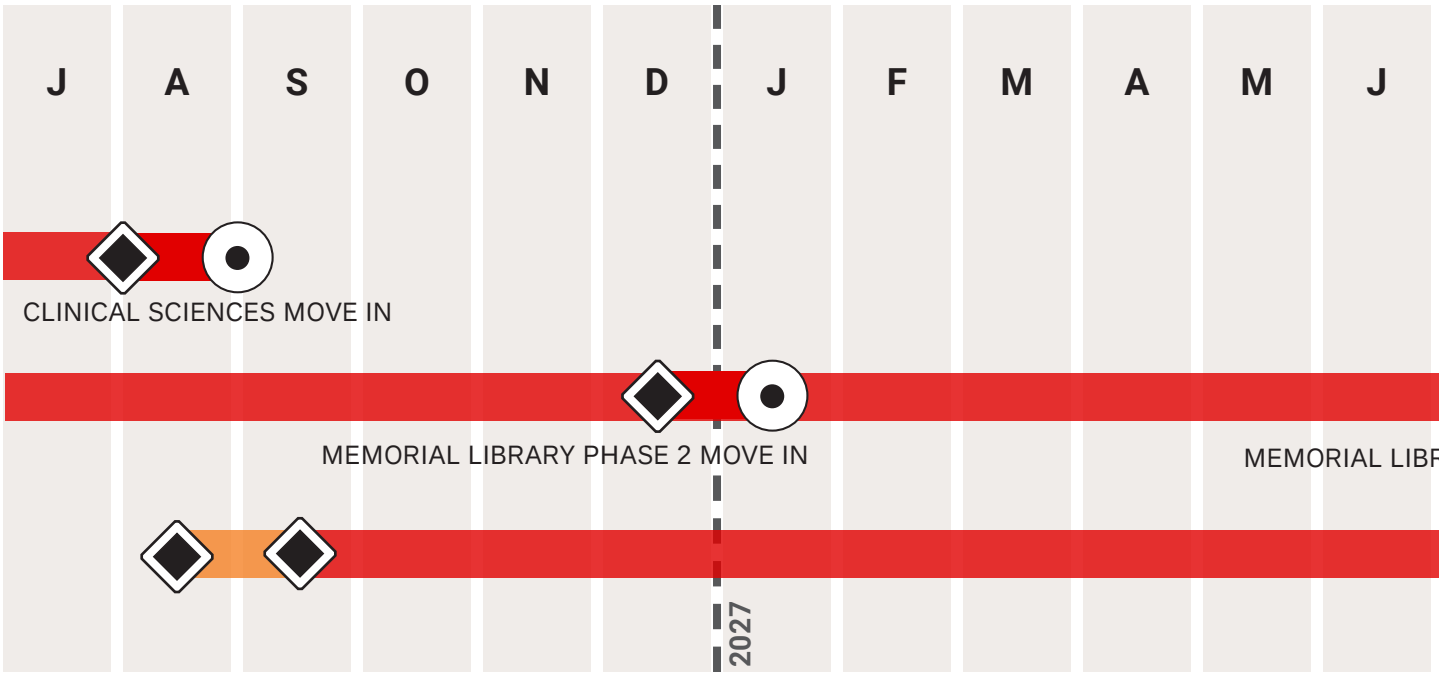
Design Development

Finalize design and engineering requirements,

Co D

Produce dra specifi





onstruction
Documents

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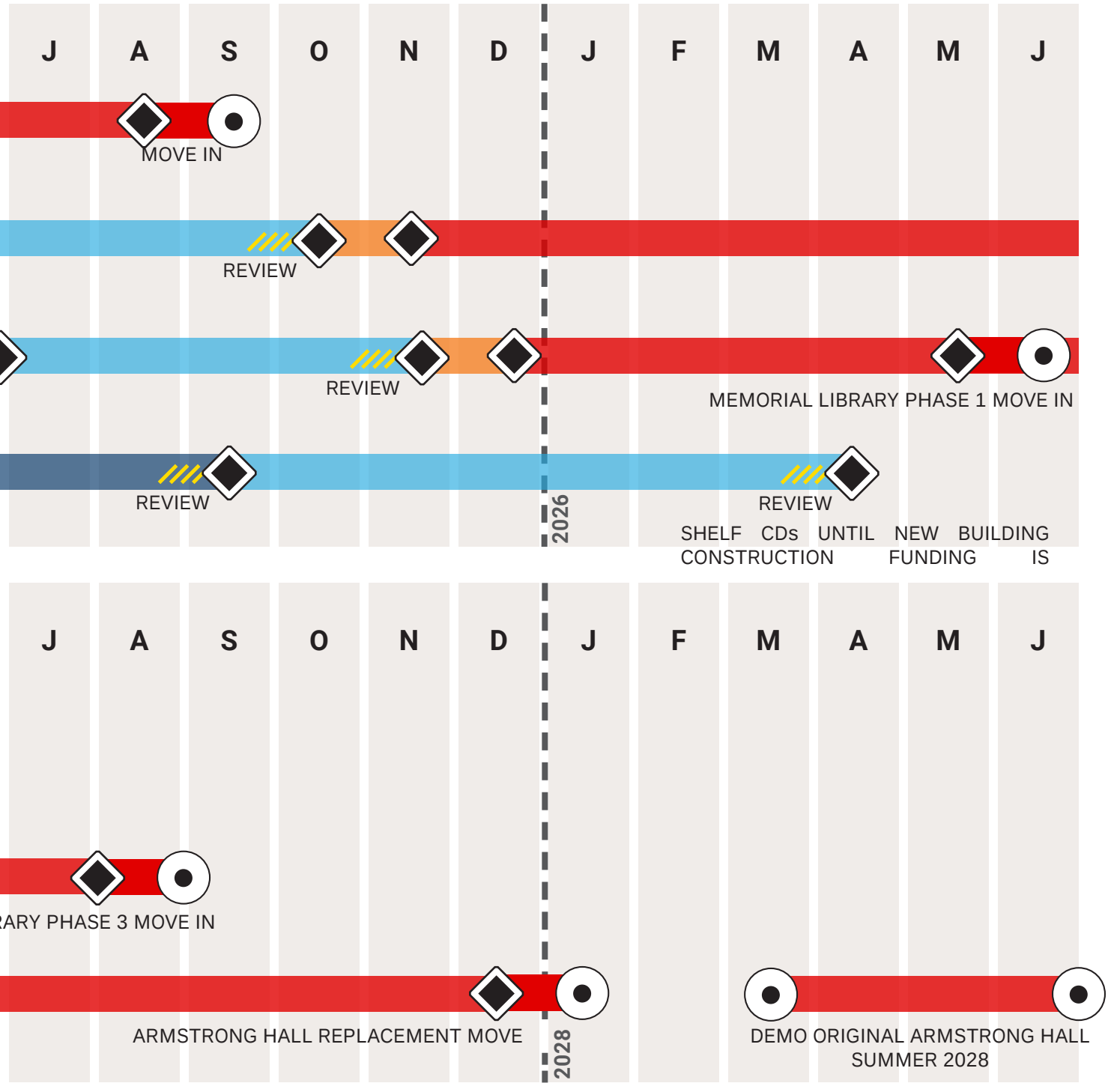
cations.

Bidding

CMAR bids to subcontractors and sets a GMP.

Construction

Demolish relevant existing conditions and construct



SECTION 8: Occupancy Plan

Section 8: Occupancy Plan

8.1 Infrastructure Needs and Improvements

The proposed project will allow the University to create much better learning environments designed and integrated with technology in mind, based on best practices in higher education. While every classroom in Armstrong Hall has a technology infrastructure to support teaching, the technology instruments are not integrated into the spaces as well as they could be. Much of the technology was installed well after the initial building was constructed and without the foresight of future technology use. As a result, power connections, accessibility and sightlines are less than ideal. Light systems are typically fixed without the ability to adjust for different settings. The new facility would support the IT Strategic Plan's first goal in "introducing new teaching models and furthering applied research their mission" with integrated technology infrastructure in each classroom. This includes:

- Five technology-enhanced collaborative labs
- One highly technical Counseling Lab with six counseling spaces, each of which have recording capacity
- Eight computer lab spaces
- All other learning spaces will have integrated AV technology systems
- Twenty computers for Open lab areas
- 8 printing stations
- Card access to Labs
- Technology for Conference rooms
- Digital signage

Student access to power and data is limited with the current conditions at Armstrong Hall. Many students bring personal technology tools to class and use them between classes requiring frequent access to power. Additionally, the placement of networking closets is not ideal. A well thought out design would improve wireless internet distribution and coverage. The networking closets are not big enough and could be expanded to hold networking and other technology support equipment for both teaching and learning. In order to further the IT Strategic Plan of providing "Superlative Access to Data", the new building would incorporate these from the very beginning of the design.

Proposed improvements will impact both initial and long-term operating costs in the following manner:

- The expansion of networking closets to include a rack for technology equipment used in teaching could dramatically reduce the cost of technology in the classroom.
- Integrating new building systems based on advanced controls, such as occupancy sensors and HVAC systems programmed to coincide with space use, could save on long-term utility costs.
- The storage requirements for paper documents would be reduced by the increased use of digital scans and electronic storage.
- Learning spaces that are easy to use with up-to-date equipment that is environmentally friendly.
- Students will have the access to power and the internet that they expect.
- Students will be served whether they are physically on campus or remote and allow flexibility to meet the needs of future students

8.2 Optimizing the Use of Technology

The past several years have seen many changes to the way institutions use technology. MSU Mankato has made enormous advancements to the technology in classrooms in a very short period. They have effectively transformed the campus into a flexible learning environment that can operate and adapt to both virtual and in-person scenarios, depending on the need. Looking forward, it will be important to maintain that sort of flexibility enabled by fully integrated technology solutions, like FlexSync, across campus. Initial and ongoing instructor training and support have aided in creating smooth transitions between remote delivery and in-person class meetings that allow for more productive time spent learning and working rather than figuring out how to work the technology instruments. Further, as technology has changed the traditional mode of operation, flexibility and personal preferences regarding in-person or remote learning and teaching will likely be an expectation of students, faculty, and staff going forward.

8.3 Funding Source

The project anticipates FF&E items to be capital expenses with the exception of faculty/staff office computer workstations. The campus would fund the purchase of these.

SECTION 9: Appendix

Adopted May 2019

Optimizing Learning Spaces & Student Success: Common Bell and Coordinated Scheduling

In Fall 2018 the University launched an "optimizing learning spaces and student success: common bell and coordinated scheduling" initiative. The initiative is focused on ensuring that our students can get the courses they need, when they need them, and in high-quality spaces.

To move the conversation surrounding the development of a common bell schedule, course offering practices, and room scheduling procedures forward, a work group of 31 appointed representatives jointly led by Rick Straka, Vice President for Finance and Administration and Lynn Akey, Vice President for Student Success, Analytics and Integrated Planning convened. The work group determined the first area of work was the development of a common bell course framework. After six months of effort, and proposal revision following the collection of campus feedback, the following Common Bell Course Framework Proposal is provided by the work group for campus consultation.

Common Bell Course Framework Proposal

Mankato Campus

The University's common bell course meeting framework applies to undergraduate and graduate full or half-term courses that have daytime demand during a fall or spring term. An undergraduate and graduate course is considered to have daytime demand if the course:

- meeting time begins between 8:00 a.m. and 5:00 p.m. on Monday, Wednesday and/or Friday.
- meeting time begins between 8:00 a.m. and 4:00 p.m. on Tuesday and/or Thursday.
- meets in a general purpose or telepresence classroom.
- meets in a face-to-face, telepresence, hybrid, or online synchronous format.

A course is not considered to have daytime demand if it meets any of the following criteria:

- The course does not have a consistent meeting pattern (days and/or times). For example, a course that meets once or twice (e.g., student away or study abroad).
- The course meeting time begins outside of the times of 8:00 a.m. and 5:00 p.m. on Monday, Wednesday, and/or Friday and 8:00 a.m. and 4:00 p.m. on Tuesday and/or Thursday.
- The course does not meet in a general purpose or telepresence classroom.
- The course is offered in an online asynchronous format.

Course Meeting Framework (see Full Campus Model).

Period	A Times M,T,W,TH,F	B Times T,TH	C Times MW,WF,MF	D Times T,TH	E Times	F Times M,T,W,TH,F
I	8:00-8:50	8:00-9:15	8:00-9:15	8:00-10:30	8:00-9:40	2:00
II	9:00-9:50	9:30-10:45	9:30-10:45	2:00-4:30	9:00-10:40	
III	10:00-10:50	11:00-12:15	2:00-3:15		2:00-3:40	
IV	11:00-11:50	12:30-1:45	3:30-4:45		3:00-4:40	
V	12:00-12:50	2:00-3:15	5:00-6:15		4:00-5:40	

VI	1:00-1:50	3:30-4:45				
VII	2:00-2:50					
VIII	3:00-3:50					
IX	4:00-4:50					
X	5:00-5:50					

The standard "A" class is 50 minutes. The first class of the day starts at 08:00 a.m. Classes meeting for two or more periods, must start according to this schedule.

The standard "B" class is 75 minutes. The first class of the day starts at 08:00 a.m. Such classes will be scheduled only on Tuesdays and Thursdays.

The standard "C" class is 75 minutes. The first class of the day starts at 08:00 a.m. Such classes will be scheduled only on Monday/Wednesday, Wednesday/Friday, or Monday/Friday.

The standard "D" class is 150 minutes. The first class of the day starts at 8:00 a.m. Such classes will only be scheduled on Tuesdays and Thursdays.

The standard "E" class is 100 minutes. The first class of the day starts at 8:00 a.m. Such classes will be scheduled only on Monday/Wednesday, Wednesday/Friday, Monday/Friday, or Tuesday/Thursday.

The standard "F" class is 200 minutes. The first class of the day starts at 2:00 p.m.

Standard Scheduling Rules for Courses Carrying 1-5 Credits. Note: The following rules do not apply to the length of labs, clinics, a specialized performing arts class or specialized class components, but such classes must begin at a time that is in accordance with the common course framework.

One Credit Courses (One contact hour per week for a full-term course (750 min./term))

- Meet once per week, begin at a standard "A" class meeting time, and meet for one class period.
- Meet twice per week, and follow the rules for two-credit classes; or
- Meet three times per week, and follow the rules for three-credit classes.

Two Credit Courses (Two contact hours per week for a full-term course (1500 min./term))

- Meet twice per week, begin at a standard "A" class meeting time, and meet for one class period; or
- Meet once per week, begin at a standard "A" class meeting time, and meet for two class periods outside of the 11:00 a.m. – 2:00 p.m. core scheduling block.

Three Credit Courses (Three contact hours per week for a full-term course (2250 min./term) see Three Credit Course Model)

- Meet three times per week on MWF, begin at a standard "A" class meeting time, and meet for one class period; or

- Meet twice per week, use the standard “B” class meeting times, and meet on Tuesdays and Thursdays only; or
- Meet twice per week, use the standard “C” class meeting times, and meet on Monday/Wednesday, Wednesday/Friday, Monday/Friday only; or
- Meet once per week, use the standard “D” class meeting times, and meet on Tuesday or Thursday.

Four Credit Courses (Four contact hours per week for a full-term course (3000 min./term) see Four Credit Course Model)

- Meet four times per week, begin at a standard “A” class meeting time; or
- Meet twice per week, use the standard “E” class meeting times, and meet on Monday/Wednesday, Wednesday/Friday, Monday/Friday or Tuesday/Thursday; or
- Meet once per week, begin at standard “F” class meeting time.
- For lecture/laboratory or lecture/discussion courses with three hours of lecture time, the lecture component follows the schedule for three credit courses and the laboratory/discussion component follows the schedule for one credit courses.

Five Credit Courses (Five contact hours per week for a full-term course (3750 min./term))

- Meet five times per week, begin at a standard "A" class meeting time, meet for one class period, and meet Monday, Tuesday, Wednesday, Thursday, Friday.
- For lecture/laboratory or lecture/discussion courses with three hours of lecture time, the lecture component follows the schedule for three credit courses. For lecture/laboratory or lecture/discussion courses with four hours of lecture time, the lecture component follows the schedule for four credit courses and the laboratory/discussion component follows the corresponding one or two credit schedule.

Distribution Requirements

1. **Distribution of Meeting Times.** Departments must be evenly distribute section offerings of a course throughout the day (no more than 30% between 8:00 a.m.-11:00 a.m., 30% between 11:00 a.m.-2:00 p.m., or 40% between 2:00 p.m.-6:00 p.m.). Non-compliant departments must change section meeting times to meet distribution requirements.
2. **Distribution of Meeting Patterns.** Departments must evenly distribute section offerings of a course throughout the week (Monday through Friday). Non-compliant departments must change section meeting times to meet distribution requirements.
3. **Distribution of Enrollments.** Departments must evenly distribute course seat availability across sections of a course throughout the day and throughout the week. Non-compliant departments must change section meeting times to meet distribution requirements.

Additional Locations and Course Sites

Additional locations (i.e., Edina, Normandale Partnership Center, Mesabi Range) and Course sites (e.g., Hubbard Building) are expected to follow the Common Bell Course Framework for courses offered in general purpose and telepresence classrooms.

Exemptions from Course Meeting Framework

Departments are expected to schedule classes so that students have reasonable access to courses inside and outside their department. It is recognized that some programs offer courses in a unique course scheduling structure to meet the specific needs of the student population served (e.g., Friday-Saturday Cohort programs). Exemptions to the Common Bell Course Framework will be considered and made on a course-by-course basis requiring the review and approval of the College Dean and Office of the Provost. Exemptions for courses can be made for up to three years prior to requiring renewal of exemption status.

Definitions

Credit Hour

- Minnesota State University, Mankato's definition of a credit hour is based on the federal definition (34CFR 600.2) of a credit hour.
  A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than: (1) One hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately 15 weeks for one semester hour of credit […], or the equivalent amount of work over a different amount of time; or (2) At least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward to the award of credit hours.
- One Hour of Classroom or Direct Faculty Instruction – a standard 50 minute instructional hour satisfies one hour of classroom time.

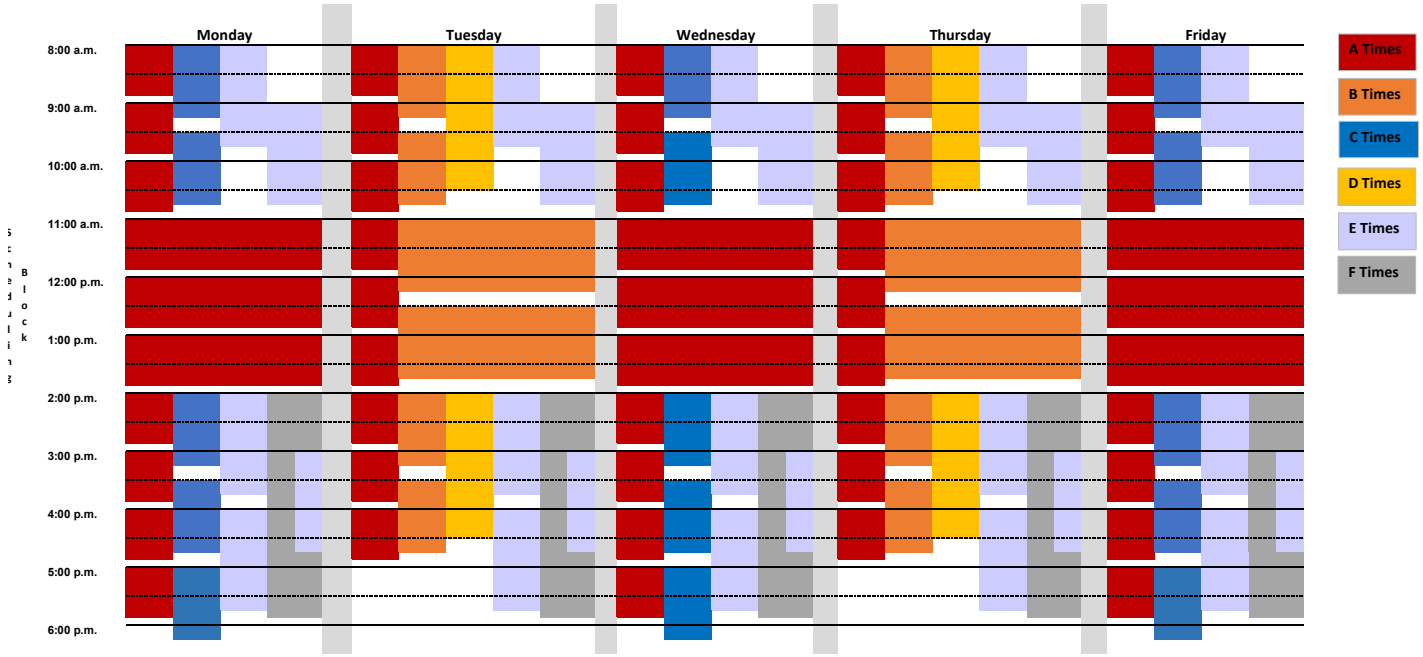
Types of Space

- General Purpose Classroom – a room that supports instructional/learning activity. The room configuration may vary widely to support various pedagogical methods and learning formats.
- Telepresence Classroom – a room designed to support instruction in multiple locations using telepresence technology.
- Specialized Use Classroom (i.e., labs, clinics, interview rooms) – a room with specialized equipment or scheduling requirements to meet specific course learning outcomes.
- Gymnasium - a room or space equipped for gymnastics, games, and other physical exercise.

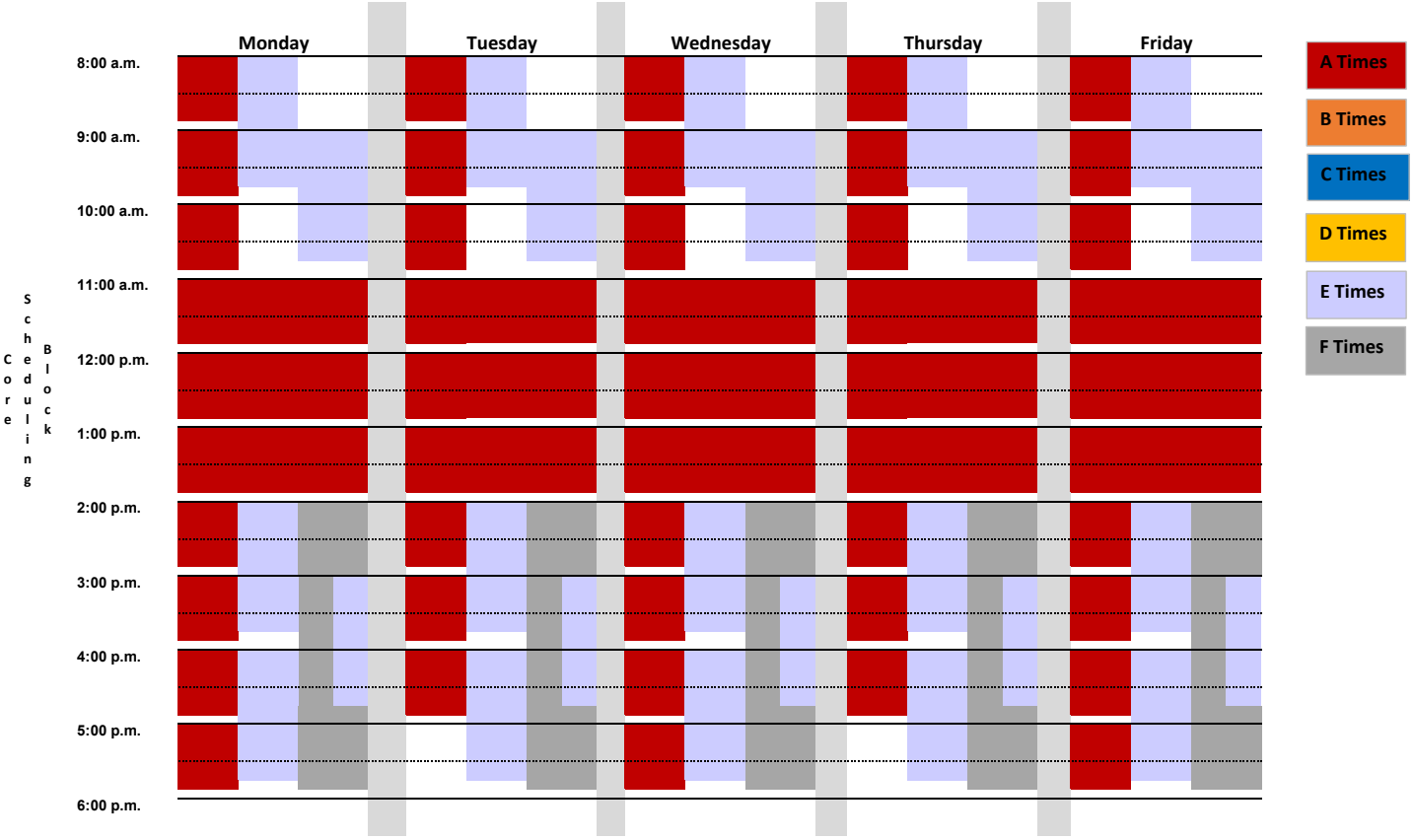
Types of Courses

- Lab - Course involving "hands-on" experience with specialized equipment, performing scientific testing/examination procedures and analysis.
- Clinic - Course involving applied learning with specialized equipment, performing scientific testing/examination procedures and analysis.
- Specialized Performing Arts Classes – courses that are participation based with minimal student outside of class work.
- Specialized Class Component – Component of a course involving unique and tailored activities to achieve curricular goals and student learning outcomes.

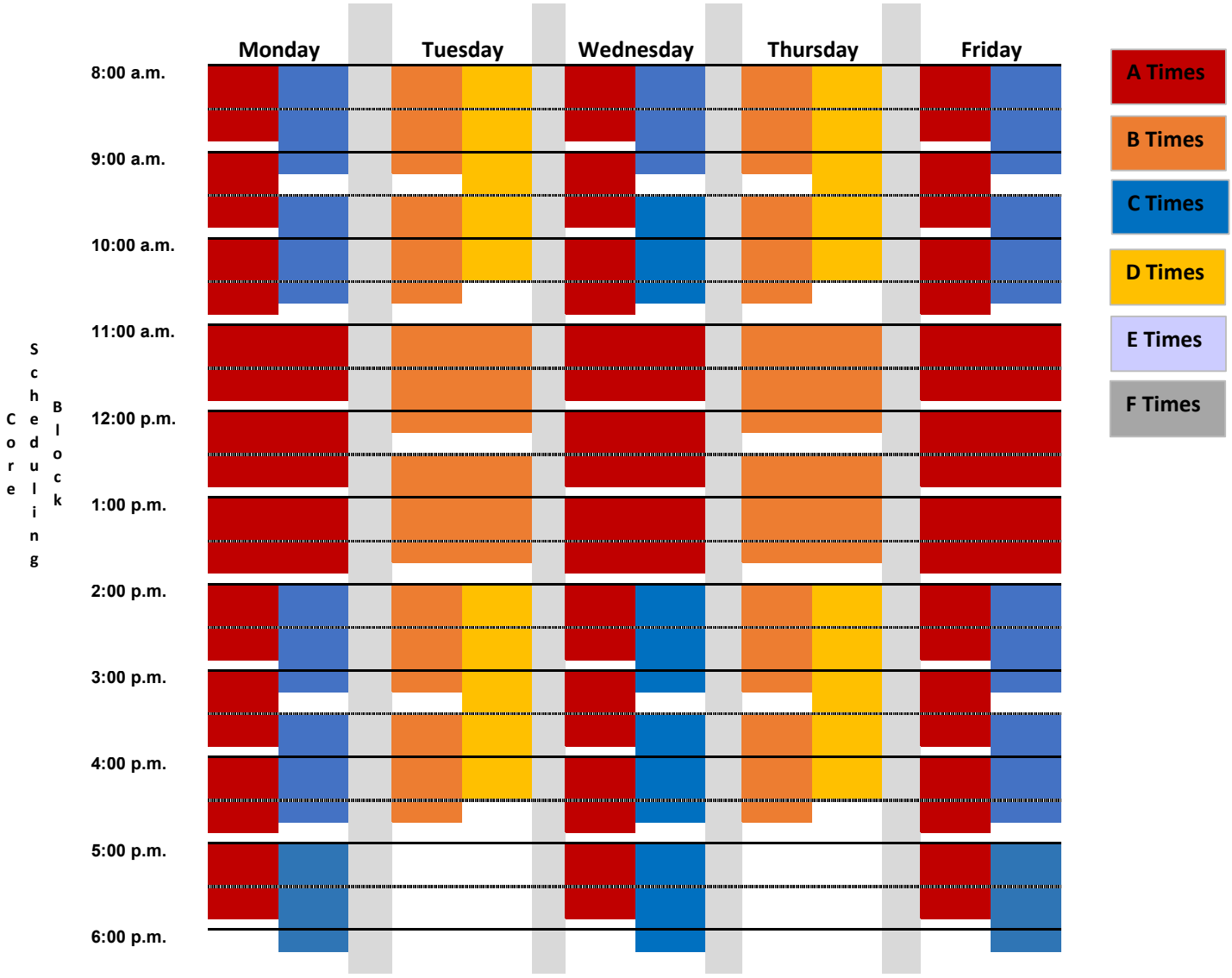
Full Campus Model



Four Credit Course Model



Three Credit Course Model



Room Type	Location	Data Count of Course	Sum of Weekly Hours*	Sum of Room Utilization %
Class Laboratory - 210	AH 0001	8	20.11	62.85
	AH 0011	10	26.76	83.64
	AH 0029	8	18.65	58.29
	AH 0121			0.00
	AH 0122	6	19.22	60.07
	AH 0203	13	39.64	123.88
	AH 0204	12	36.40	113.75
	AH 0205	10	23.11	72.23
	AH 0209	7	17.03	53.22
	AH 0216	7	18.09	56.52
	AH 0221	4	11.35	35.48
	AH 0223A	3	6.08	19.01
	AH 0309	11	25.68	80.26
	AH 0311	11	24.90	77.81
	AH 0320	9	22.44	70.12
	AH 0321	7	16.71	52.21
	AH 0327	12	38.93	121.65
	AH 0330	24	15.04	47.01
	AH 0331	12	35.65	111.42
	AH 0333	7	29.85	93.27
	CSB 128	12	24.48	76.49
	CSB 133	5	8.92	27.88
	CSB 136	2	5.31	16.58
	CSB 143	6	9.79	30.59
	CSB 215	5	9.73	30.41
	FH 0110	8	16.22	50.69
	FH 0125	5	14.11	44.10
	FH 0132	7	13.14	41.06
	FH 0212	6	10.71	33.45
	FH 0214	6	10.71	33.45
	FH 0236	2	6.49	20.28
	FH 0310	2	6.49	20.28
	FH 0313	6	16.54	51.70
	FH 0322	2	7.46	23.32
	HC 1232			0.00
	MH 0012	5	17.84	55.76
	MH 0112	9	25.47	79.58
	MH 0208	9	21.90	68.43
	MH 0212	9	25.95	81.10
	ML 0047	3	9.73	30.41
	ML 0081A			0.00
	ML 0101A	4	6.49	20.28
	ML 0101B			0.00
	NH 0001	3	16.54	51.70
	NH 0004	3	16.22	50.69
	NH 0106			0.00
	NH 0150	3	16.38	51.20
	NH 0201	5	27.25	85.16
	NH 0202	6	32.76	102.39

Class Laboratory - 210	NH 0203	6	25.14	78.57
	NH 0204	7	20.92	65.39
	PA 0102	2	4.06	12.67
	PA 0110	9	16.38	51.20
	PA 0113	8	18.82	58.80
	PA 0114			0.00
	PA 0126	6	15.57	48.66
	PA 0217			0.00
	TC 0169			0.00
	TE E120			0.00
	TE E211A	8	11.68	36.50
	TE E211B	1	2.43	7.60
	TE E216			0.00
	TE E218	4	6.81	21.29
	TE E308			0.00
	TE E315	6	11.90	37.20
	TN N162	5	13.79	43.09
	TN N164	5	11.35	35.48
	TN N166	1	1.78	5.58
	TN N182	9	16.06	50.18
	TN N184	7	15.90	49.67
	TN N186	3	6.81	21.29
	TN N287	1	1.95	6.08
	TN N337			0.00
	TN N338			0.00
	TN N361	2	1.62	5.07
	TN N362C	4	7.54	23.57
	TN N363	5	9.25	28.89
	TN N379			0.00
	TN N382			0.00
	TN N388	3	2.43	7.60
	TN N390	10	21.57	67.42
	TN N396			0.00
	TR C106	9	24.49	76.54
	TR C108	4	9.73	30.41
	TS S160	7	17.11	53.48
	TS S163	7	19.30	60.32
	TS S165			0.00
	TS S250	1	2.76	8.62
	TS S252	22	39.25	122.67
	TS S256	7	17.36	54.24
	TS S262	7	19.30	60.32
	TS S266	5	13.79	43.09
	TS S284			0.00
	TS S288	8	23.36	72.99
	TS S296	4	9.41	29.40
	TS S350	14	38.60	120.64
	TS S355	5	15.07	47.09
	TS S363	5	13.79	43.09
	TS S380	11	30.33	94.79
	TS S384	4	13.46	42.07
	WC 0301	7	15.57	48.66
	WC B115	1	2.43	7.60

Class Laboratory - 210	WC B137			0.00
	WC B138	3	8.03	25.09
	WH 0115	8	25.95	81.10
	WH 0118	8	24.33	76.03
	WH 0119	23	44.67	139.59
	WH 0125	18	33.66	105.18
	WH 0125A	14	29.36	91.75
	WH 0210			0.00
	WH 0283	11	29.44	92.00
	WH 0286	7	18.77	58.64
	(blank)			0.00
Class Laboratory - 210 Total		**646**	**1,605.38**	**5,016.82**
Classroom Facilities - 110	AH 0004	7	17.19	53.73
	AH 0007	17	20.28	63.36
	AH 0013	8	18.65	58.29
	AH 0015	11	28.14	87.94
	AH 0039	8	23.68	74.00
	AH 0040	7	16.18	50.55
	AH 0101	10	24.14	75.44
	AH 0102	8	23.03	71.98
	AH 0123	6	17.84	55.76
	AH 0202	9	19.04	59.51
	AH 0208	11	29.10	90.94
	AH 0211	13	21.84	68.24
	AH 0213	9	20.60	64.37
	AH 0214	16	24.12	75.38
	AH 0215	10	22.30	69.70
	AH 0217	5	12.65	39.54
	AH 0219	7	11.35	35.48
	AH 0220	8	19.46	60.83
	AH 0222	6	15.41	48.15
	AH 0223B	2	6.81	21.29
	AH 0225	8	19.06	59.56
	AH 0231	10	23.03	71.98
	AH 0232	7	18.65	58.29
	AH 0233	9	20.44	63.87
	AH 0234	5	8.92	27.88
	AH 0302	6	13.40	41.87
	AH 0303	5	16.22	50.69
	AH 0304	7	22.71	70.96
	AH 0305	7	19.46	60.83
	AH 0306	13	31.63	98.84
	AH 0308	8	20.28	63.36
	AH 0310	12	23.84	74.51
	AH 0314	9	19.46	60.83
	AH 0315	7	14.84	46.38
	AH 0316	11	34.06	106.45
	AH 0317	7	15.41	48.15
	AH 0319	6	13.81	43.17
	AH 0322	9	21.14	66.08
	AH 0323	11	25.06	78.31
	AH 0325	6	12.81	40.04
	AH 0326	3	6.00	18.75

Classroom Facilities - 110	AH 0334	11	21.98	68.68
	CSB 112	12	29.20	91.24
	CSB 212	16	32.03	100.11
	CSB 312	15	28.47	88.96
	CSB 350	12	15.19	47.47
	CSB 351	9	18.98	59.31
	FH 0216	11	14.08	43.99
	HC 1700A	11	21.49	67.16
	HC 1700B	10	19.06	59.56
	HC 2010	2	4.22	13.18
	MH 0013	8	28.55	89.21
	MH 0102	9	17.44	54.49
	MH 0103	5	12.17	38.02
	MH 0209	11	21.17	66.15
	MH 0210	9	16.06	50.18
	MH 0211	8	14.81	46.28
	MH 0213	10	20.45	63.90
	ML 0109	6	7.79	24.33
	NH 0003	7	18.49	57.78
	PA 0101	3	7.62	23.82
	PA 0104	4	12.17	38.02
	PA 0106	7	13.95	43.59
	PA 0250	7	17.03	53.22
	PH 0110	8	17.36	54.24
	PH 0112	10	19.06	59.56
	PH 0114	7	13.79	43.09
	PH 0116	14	15.41	48.15
	PS 0105	2	1.62	5.07
	PS 0126	9	8.11	25.34
	TC 0080	6	15.73	49.17
	TC 0082	5	6.24	19.51
	TE E224	9	20.11	62.85
	TE E225	14	30.49	95.29
	TN N362B	15	12.98	40.55
	TN N372	13	29.20	91.24
	TR C114	5	9.73	30.41
	TR C121	14	27.82	86.93
	TR C122	9	19.63	61.33
	TR C123	11	25.30	79.07
	TR C124	11	22.71	70.96
	TR C128	7	17.68	55.25
	TR C310	7	16.30	50.94
	TR C311	16	37.63	117.60
	TR C314	6	13.87	43.34
	TR C317	10	21.09	65.89
	TS S352	7	16.71	52.21
	WC 0351	9	29.20	91.24
	WC 0353	8	23.03	71.98
	WC 0357	9	29.20	91.24
	WC 220-AUD	6	13.30	41.56
	WC B123	7	12.07	37.70
	WC B124	4	7.30	22.81
	WH 0284	11	27.41	85.66

Classroom Facilities - 110	WH 0284A	9	22.55	70.46
	WH 0286A	11	34.55	107.97
	WH 0288	15	34.45	107.65
	WH 0288A	9	29.52	92.25
	WH 0289	11	21.54	67.31
	WH 0379	12	32.19	100.59
	(blank)			0.00
Classroom Facilities - 110 Total		**883**	**1,939.32**	**6,060.36**
(blank)	(blank)			0.00
(blank) Total				**0.00**
Grand Total		**1529**	**3,544.70**	**11,077.18**

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Colleges or Universities: Minnesota State University, Mankato
Campus: Minnesota State University, Mankato - Facilities

Facilities and Infrastructure: Armstrong Hall
Facilities and Infrastructure Number: E26071S0663

Facilities and Infrastructure are ordered by Facilities and Infrastructure Name Currency: USD

Statistics

FCI Cost:	30,579,167	**FCI:**	0.48
RI Cost:	33,620,319	**RI:**	0.53
Total Requirements Cost:	33,620,320		
Current Replacement Value:	63,073,419	**Date of most Recent Assessment:**	May 31, 2022

Type	Building		
Area	143,966 SF		
Use		**Construction Type**	
Floors	4	**Historical Category**	None

Address 1	521 ELLIS AVENUE	**City**	MANKATO
Address 2	-	**State/Province/Region**	-
Year Constructed	1964	**Zip/Postal Code**	56001
Year Renovated	-	**Architect**	-
Ownership	Owned	**Commission Date**	-
		Decommission Date	-

Insured Value:	33514940	**B3 Guidelines Apply**:	No
Basement:	No	**Elevator Penthouse**:	No
Model Type:	BASIC	**Mothball %**:	0
Off Campus (Owned):	No	**MinnState Latitude**:	N 44-08-49.3
MinnState Longitude:	W 093-59-55.9	**General Fund %**:	100
MinnState Appraisal Value (2019):	50380000	**MinnState Contents Value (2019)**:	0

Photo

No photo available.

Facilities and Infrastructure Description

Requirements

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
a.5. Roofing - Builit-up, Membrane, Cedar Renewal	Yes	B30 - Roofing	Lifecycle	3- Due within 5 Years of Inspection	Jan 1, 2029	1,764,282
b.1. Building Exteriors (Hard) Renewal	Yes	B20 - Exterior Enclosure	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	4,039,632
b.1. Building Exteriors (Hard) Renewal	Yes	B20 - Exterior Enclosure	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	1,570,968
c.1. Elevators Renewal	Yes	D10 - Conveying	Lifecycle	3- Due within	Jun 30, 2032	660,071

MINNESOTA STATE

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
				5 Years of Inspection		
d.1. HVAC - Equipment Renewal	Yes	D30 - HVAC	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	2,640,283
d.1. HVAC - Equipment Renewal	Yes	D30 - HVAC	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	792,085
d.1. HVAC - Equipment Renewal	Yes	D30 - HVAC	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	1,531,364
d.1. HVAC - Equipment Renewal	Yes	D30 - HVAC	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	316,834
d.2. HVAC - Controls Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	139,348
d.2. HVAC - Controls Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	557,393
e.1. HVAC - Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	5,864,948
e.1. HVAC - Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	1,570,968
e.1. HVAC - Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	1,256,774
e.1. HVAC - Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	523,656
f.1. Electrical Equipment Renewal	Yes	D50 - Electrical	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	851,491
f.1. Electrical Equipment Renewal	Yes	D50 - Electrical	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	883,028
f.1. Electrical Equipment Renewal	Yes	D50 - Electrical	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2025	536,124
g.1. Plumbing Fixtures Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	726,078
g.1. Plumbing Fixtures Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2024	80,675
g.2. Plumbing Rough-in Renewal	Yes	D2020 - Domestic	Lifecycle	1- Due within	Jun 30, 2018	1,173,459

MINNESOTA STATE

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
		Water Distribution		1 Year of Inspection		
j.1. Fire Detection Systems Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	2- Due within 2 Years of Inspection	Jun 30, 2020	733,412
k.1. Built-in Equipment Renewal	Yes	E - Equipment and Furnishings	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	557,393
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jan 1, 2022	72,595
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2019	1,234,108
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jan 1, 2022	967,928
Total						**31,044,897**

MINNESOTA STATE

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Colleges or Universities: Minnesota State University, Mankato
Campus: Minnesota State University, Mankato - Facilities

Facilities and Infrastructure: Memorial Library
Facilities and Infrastructure Number: E26071S0865

Facilities and Infrastructure are ordered by Facilities and Infrastructure Name Currency: USD

Statistics

FCI Cost:	10,270,117	**FCI:**	0.14
RI Cost:	23,226,333	**RI:**	0.31
Total Requirements Cost:	23,226,332		
Current Replacement Value:	74,557,201	**Date of most Recent Assessment:**	May 31, 2022

Type	Building		
Area	166,181 SF		
Use		**Construction Type**	
Floors	4	**Historical Category**	None
Address 1	601 MAYWOOD AVENUE	**City**	MANKATO
Address 2	-	**State/Province/Region**	-
Year Constructed	1967	**Zip/Postal Code**	56001
Year Renovated	-	**Architect**	-
Ownership	Owned	**Commission Date**	-
		Decommission Date	-

Insured Value:	0	**Addition**:	071S2090
B3 Guidelines Apply:	No	**Basement**:	No
Elevator Penthouse:	No	**Model Type**:	BASIC
Mothball %:	0	**Off Campus (Owned)**:	No
MinnState Latitude:	N 44-08-53.4	**MinnState Longitude**:	W 093-59-59.7
General Fund %:	100	**MinnState Appraisal Value (2019)**:	61672000
MinnState Contents Value (2019):	0		

Photo

No photo available.

Facilities and Infrastructure Description

Requirements

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
b.1. Building Exteriors (Hard) Renewal	Yes	B20 - Exterior Enclosure	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2027	1,625,439
c.1. Elevators Renewal	Yes	D10 - Conveying	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2032	259,054
d.1. HVAC - Equipment Renewal	Yes	D30 - HVAC	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	3,562,420

MINNESOTA STATE

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
d.2. HVAC - Controls Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	1,676,234
e.1. HVAC - Distribution Renewal	Yes	D3040 - Distribution Systems	Lifecycle	3- Due within 5 Years of Inspection	May 31, 2026	3,569,192
f.1. Electrical Equipment Renewal	Yes	D50 - Electrical	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	728,061
f.1. Electrical Equipment Renewal	Yes	D50 - Electrical	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2030	1,201,301
f.1. Electrical Equipment Renewal	Yes	D50 - Electrical	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2027	800,867
g.1. Plumbing Fixtures Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2027	931,241
g.2. Plumbing Rough-in Renewal	Yes	D2020 - Domestic Water Distribution	Lifecycle	3- Due within 5 Years of Inspection	May 31, 2026	2,031,798
i.1. Fire Protection Systems Renewal	Yes	D40 - Fire Protection	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	1,194,316
i.1. Fire Protection Systems Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2032	398,105
j.1. Fire Detection Systems Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	846,583
k.1. Built-in Equipment Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2027	1,608,507
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2026	223,457
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	May 26, 2032	83,796
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	2,039,047
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	223,457
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2030	223,457

MINNESOTA STATE

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
Total						**23,226,332**

MINNESOTA STATE

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Colleges or Universities: Minnesota State University, Mankato
Campus: Minnesota State University, Mankato - Facilities

Facilities and Infrastructure: Memorial Library Addition
Facilities and Infrastructure Number: E26071S2090

Facilities and Infrastructure are ordered by Facilities and Infrastructure Name Currency: USD

Statistics

FCI Cost:	2,727,100	**FCI:**	0.08
RI Cost:	8,709,770	**RI:**	0.25
Total Requirements Cost:	8,709,771		
Current Replacement Value:	35,129,677	**Date of most Recent Assessment:**	May 31, 2022

Type	Building		
Area	80,184 SF		
Use		**Construction Type**	
Floors	4	**Historical Category**	None

Address 1	601 MAYWOOD AVENUE	**City**	MANKATO
Address 2	-	**State/Province/Region**	-
Year Constructed	1992	**Zip/Postal Code**	56001
Year Renovated	-	**Architect**	-
Ownership	Owned	**Commission Date**	-
		Decommission Date	-

Insured Value:	0	**Addition**:	x
B3 Guidelines Apply:	No	**Basement**:	No
Elevator Penthouse:	No	**Model Type**:	BASIC
Mothball %:	0	**Off Campus (Owned)**:	No
MinnState Latitude:	N 44-08-51.0	**MinnState Longitude**:	W 094-00-02.4
General Fund %:	100	**MinnState Appraisal Value (2019)**:	27728000
MinnState Contents Value (2019):	0		

Photo

No photo available.

Facilities and Infrastructure Description

Requirements

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
b.1. Building Exteriors (Hard) Renewal	Yes	B20 - Exterior Enclosure	Lifecycle	3- Due within 5 Years of Inspection	May 26, 2027	980,363
c.1. Elevators Renewal	Yes	D10 - Conveying	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2022	367,636
d.1. HVAC - Equipment Renewal	Yes	D30 - HVAC	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2027	1,307,151
d.2. HVAC - Controls Renewal	Yes	D3060 - Controls and Instrumentation	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	776,121

MINNESOTA STATE

Facilities and Infrastructure Detail Report

By Facilities and Infrastructure Name

Requirement Name	Renewal	Prime System	Category	Priority	Action Date	Estimated Cost
f.1. Electrical Equipment Renewal	Yes	D50 - Electrical	Lifecycle	3- Due within 5 Years of Inspection	May 26, 2027	1,756,484
g.1. Plumbing Fixtures Renewal	Yes	D2010 - Plumbing Fixtures	Lifecycle	3- Due within 5 Years of Inspection	May 31, 2026	440,346
i.1. Fire Protection Systems Renewal	Yes	D40 - Fire Protection	Lifecycle	3- Due within 5 Years of Inspection	Jan 1, 2032	183,103
i.1. Fire Protection Systems Renewal	Yes	D40 - Fire Protection	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	366,206
j.1. Fire Detection Systems Renewal	Yes	D5037 - Fire Alarm Systems	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	408,485
k.1. Built-in Equipment Renewal	Yes	E - Equipment and Furnishings	Lifecycle	3- Due within 5 Years of Inspection	May 26, 2027	776,121
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2023	336,939
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2026	67,388
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	3- Due within 5 Years of Inspection	Jun 30, 2025	134,775
l.2. Interior Finishes Renewal	Yes	C30 - Interior Finishes	Lifecycle	1- Due within 1 Year of Inspection	Jun 30, 2018	808,653
Total						**8,709,771**

Department: Serving All Departments
Space Name: Traditional Classroom for 20

Area:	680 SF	**Occupant Load:**	20
Quantity:	5	**Description of Activity:**	Typical Classroom
Total Area:	3,400 SF	**Adjacencies:**	Classrooms

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT	
Table	8
Chairs	20
Desk	-
File Cabinet	-
Computer	1
Printer	-
Copier	-
Other	-

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	1
Speakers	yes
Other	-

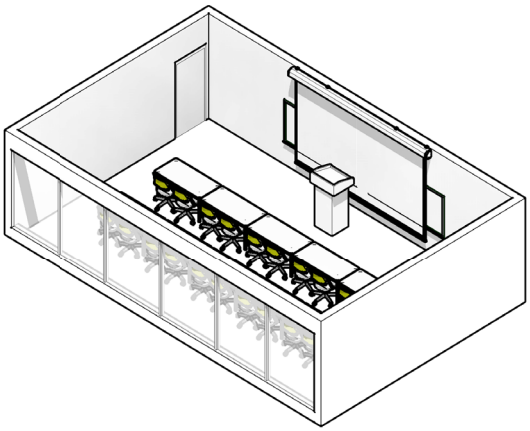
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

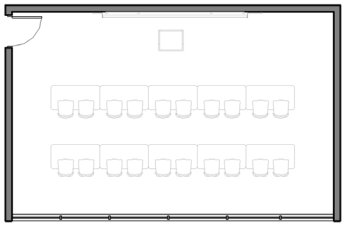
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	No
Other	-

MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS
Controls	BAS
Other	DCV

SPECIALTIES	
Casework	-
Teaching Station	1
Projection Screen	1
Marker Board	1
Chalkboard	-
Tackboard	-
Other	-

Typical Room Layout





Department: Serving All Departments
Space Name: Traditional Classroom for 24

Area:	685 SF	**Occupant Load:**	24
Quantity:	6	**Description of Activity:**	Typical Classroom
Total Area:	4,110 SF	**Adjacencies:**	Classrooms

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT	
Table	12
Chairs	24
Desk	-
File Cabinet	-
Computer	1
Printer	-
Copier	-
Other	-

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	1
Speakers	yes
Other	-

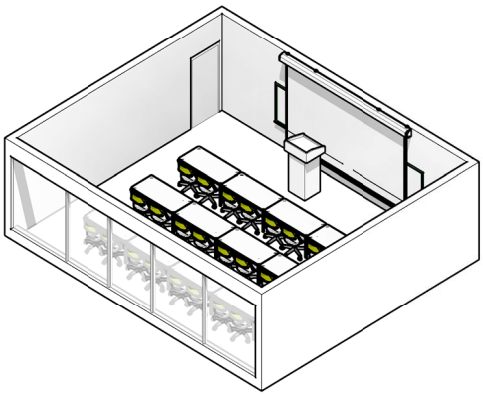
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

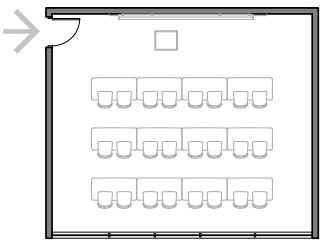
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	No
Other	-

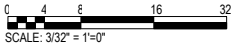
MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS
Controls	BAS
Other	DCV

SPECIALTIES	
Casework	-
Teaching Station	1
Projection Screen	1
Marker Board	1
Chalkboard	-
Tackboard	-
Other	-

Typical Room Layout







Department: Serving All Departments
Space Name: Traditional Classroom for 32

Area:	840 SF	**Occupant Load:**	32
Quantity:	10	**Description of Activity:**	Typical Classroom
Total Area:	8,400 SF	**Adjacencies:**	Classrooms

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT	
Table	16
Chairs	32
Desk	-
File Cabinet	-
Computer	1
Printer	-
Copier	-
Other	-

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	1
Speakers	yes
Other	-

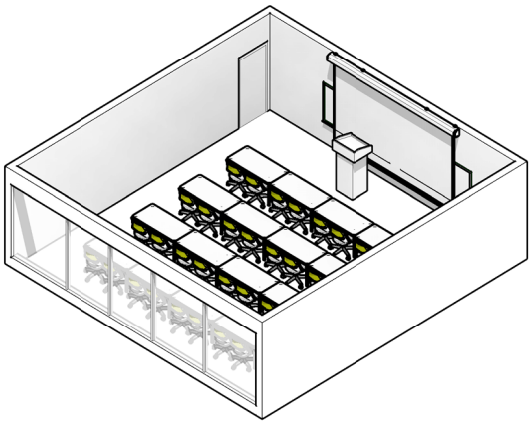
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

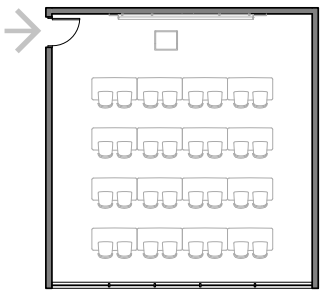
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	No
Other	-

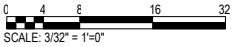
MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS
Controls	BAS
Other	DCV

SPECIALTIES	
Casework	-
Teaching Station	1
Projection Screen	1
Marker Board	1
Chalkboard	-
Tackboard	-
Other	-

Typical Room Layout







Department: Serving All Departments
Space Name: Active Learning Classroom for 56

Area:	1,400 SF	**Occupant Load:**	56
Quantity:	2	**Description of Activity:**	Active Learning Classroom
Total Area:	2,800 SF	**Adjacencies:**	Classrooms

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT	
Table	27
Chairs	60
Desk	-
File Cabinet	-
Computer	1
Printer	-
Copier	-
Other	-

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	1
Speakers	yes
Other	-

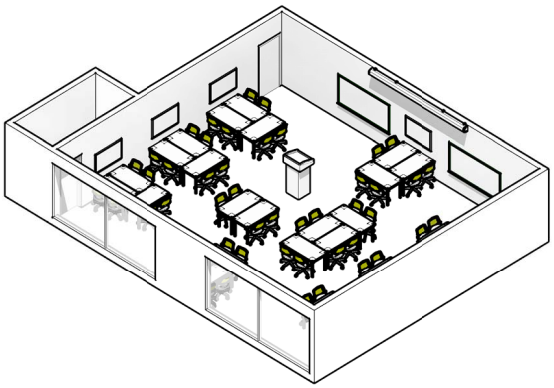
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

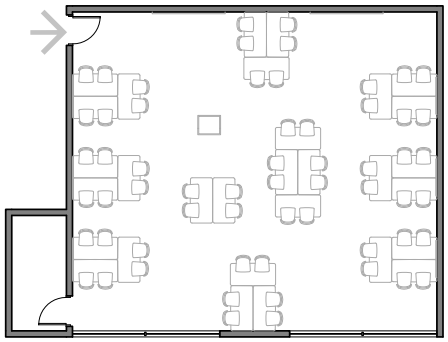
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	No
Other	-

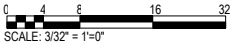
MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS
Controls	BAS
Other	DCV

SPECIALTIES	
Casework	-
Teaching Station	1
Projection Screen	1
Marker Board	2
Chalkboard	-
Tackboard	-
Monitor	8

Typical Room Layout







Department: Serving All Departments
Space Name: Lecture Hall

Area:	2,900 SF	**Occupant Load:**	140
Quantity:	1	**Description of Activity:**	lecture hall
Total Area:	2,900 SF	**Adjacencies:**	

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT		
Table	-	
Chairs	150	tablet arm
Desk	-	
File Cabinet	-	
Computer	1	
Printer	-	
Copier	-	
Other	-	

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	2
Speakers	yes
Other	-

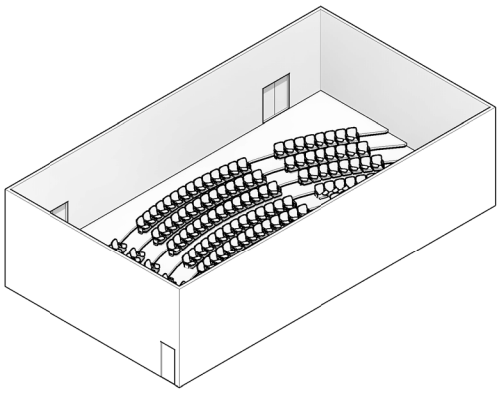
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

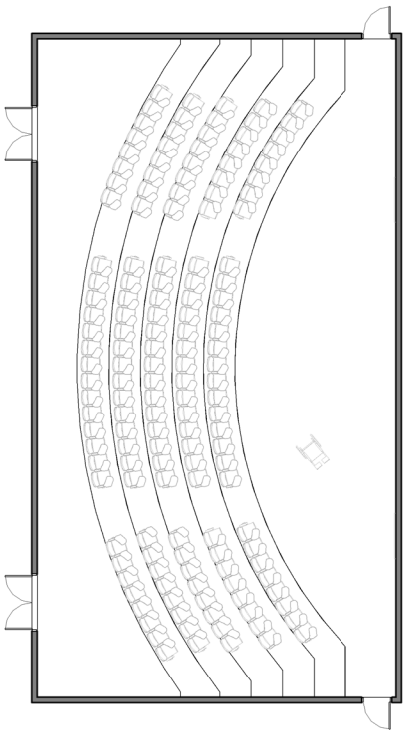
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	Yes
Other	-

MECHANICAL	
Temperature	70-75
Heating	Chilled Beam, Displacement
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS
Controls	BAS
Other	DCV

SPECIALTIES	
Casework	-
Teaching Station	1
Projection Screen	2
Marker Board	4
Chalkboard	-
Tackboard	-
Other	-

Typical Room Layout





Department: College of Education
Space Name: Elementary Education Simulation Lab

Area:	800 to 1,120 SF	**Occupant Load:**	24
Quantity:	4	**Description of Activity:**	Simulation Lab
Total Area:	3,740 SF	**Adjacencies:**	Restrooms, Storage

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT	
Table	24
Chairs	24
Desk	1
File Cabinet	-
Computer	1
Printer	1
Copier	1
Other	Play Equipment

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	1
Speakers	yes
Other	-

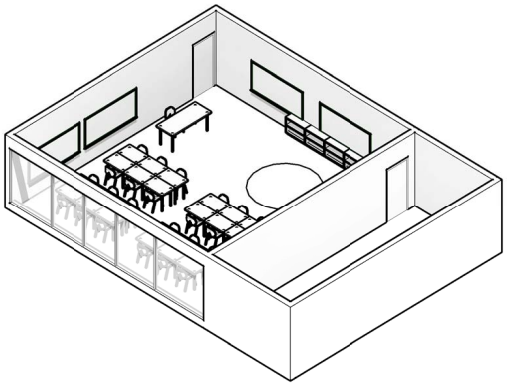
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

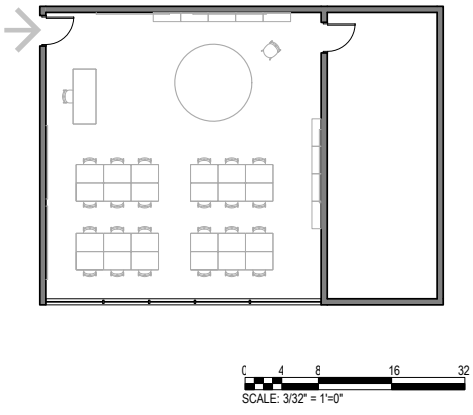
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	No
Other	-

MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS
Controls	BAS
Other	DCV

SPECIALTIES	
Casework	shelving
Teaching Station	-
Projection Screen	1
Marker Board	6
Chalkboard	-
Tackboard	-
Other	-

Typical Room Layout





Department: College of Social & Behavioral Sciences
Space Name: Therapy Lab

Area & Quantity:	4 @ 150 SF Therapy Room 1 @ 600 SF Observation Room	**Occupant Load:**	20
		Description of Activity:	Simulation Lab
Total Area:	1,000 SF	**Adjacencies:**	Classrooms

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT	
Table	6
Chairs	16
Desk	-
File Cabinet	yes
Computer	1
Printer	1
Copier	1
Other	-

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	1
Speakers	yes
Other	-

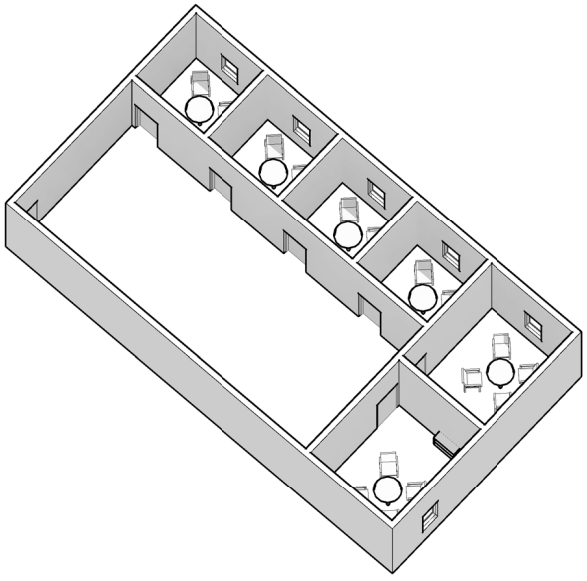
PLUMBING	
Sink	?
Kitchenette	?
WC	-
Shower	-

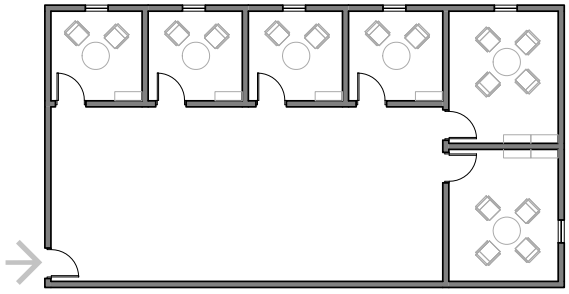
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	Yes
Zoned Lighting	No
Outlets	Yes
Security	No
Other	-

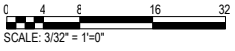
MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS
Controls	BAS
Other	

SPECIALTIES	
Casework	shelving
Teaching Station	-
Projection Screen	-
Marker Board	6
Chalkboard	-
Tackboard	6
Monitor	6?

Typical Room Layout







Department: General
Space Name: Advising & Counseling Center

Area:	2,030 SF	**Occupant Load:**	19
Quantity:	1 suite (8 offices; study, conf)	**Description of Activity:**	advising & counseling offices
Total Area:	2,030 SF	**Adjacencies:**	student services

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT		
Table	1	conf rm
Chairs	8	office chairs
Desk	8	
File Cabinet	8	
Computer	8	
Printer	1	
Copier	1	
Other		

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	1
Speakers	yes
Other	-

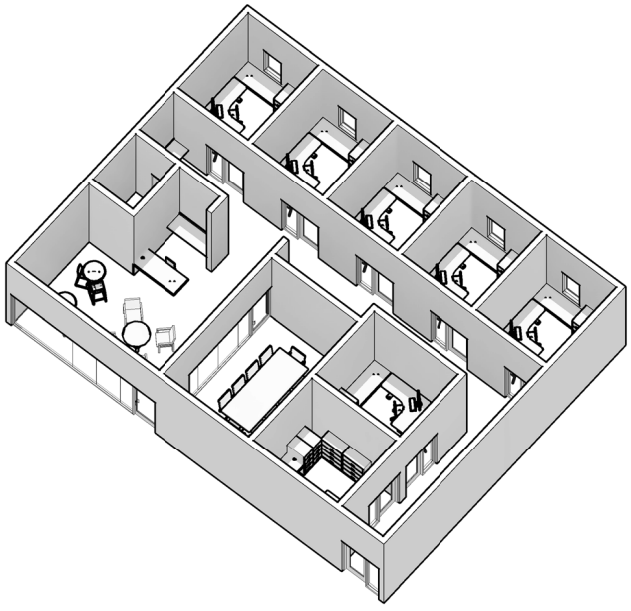
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

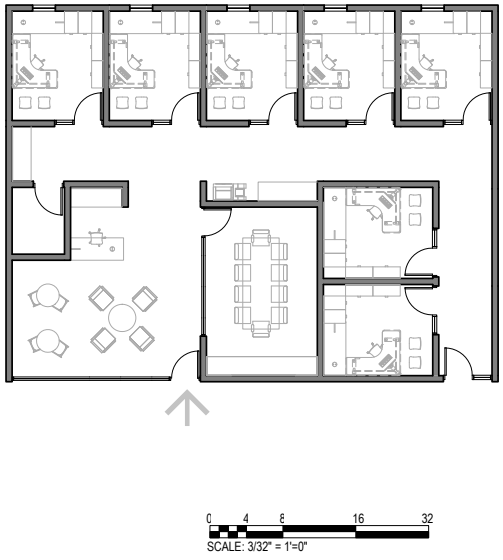
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	Yes
Other	-

MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS at copier
Controls	BAS
Other	DCV in conf

SPECIALTIES	
Casework	yes
Teaching Station	-
Projection Screen	-
Marker Board	-
Chalkboard	-
Tackboard	-
Other	Monitor (conf)

Typical Room Layout





Department: General
Space Name: Dean's Office Suite

Area:	1,690 SF	**Occupant Load:**	19
Quantity:	1 suite (6 offices + 1 conf)	**Description of Activity:**	Dean's offices, meeting
Total Area:	1,930 SF	**Adjacencies:**	student services, storage

ARCHITECTURAL	
Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT		
Table	1	conf rm
Chairs	8	office chairs
Desk	8	
File Cabinet	8	
Computer	8	
Printer	1	
Copier	1	
Other	-	

COMMUNICATIONS	
Voice	yes
Data	yes
Wireless	yes
Projector	-
Speakers	yes
Other	-

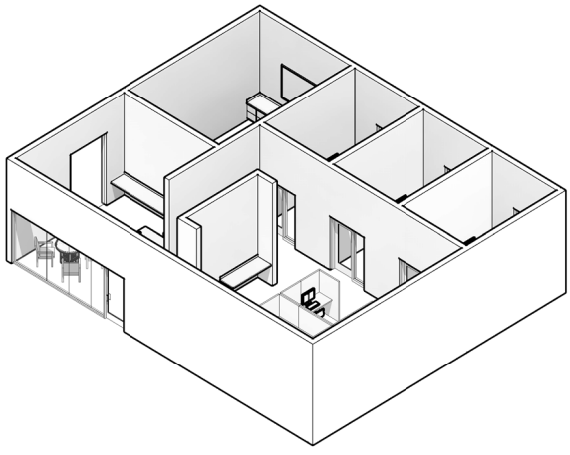
PLUMBING	
Sink	-
Kitchenette	-
WC	-
Shower	-

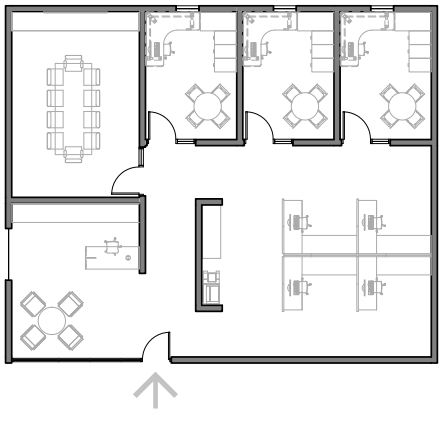
ELECTRICAL	
Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	Yes
Other	-

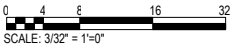
MECHANICAL	
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS at copier
Controls	BAS
Other	DAS in conf

SPECIALTIES	
Casework	yes
Teaching Station	-
Projection Screen	-
Marker Board	-
Chalkboard	-
Tackboard	-
Other	Monitor (conf)

Typical Room Layout







Department: General
Space Name: Faculty/ Admin Office Suite

Area:	4,380 SF	**Occupant Load:**	44
Quantity:	estimated to be approx 8	**Description of Activity:**	offices and meeting space
Total Area:	36,500 SF admin space	**Adjacencies:**	

ARCHITECTURAL

Access	Secure
Noise Control	Yes
Doors	HM
Walls	Gyp
Ceiling	ACP
Floors	CPT
Base	RB
Windows	
Other	

FURNITURE / EQUIPMENT

Table	1	conf rm
Chairs	31	office chairs
Desk	31	
File Cabinet	31	
Computer	31	
Printer	2	
Copier	2	
Other	-	

COMMUNICATIONS

Voice	yes
Data	yes
Wireless	yes
Projector	-
Speakers	yes
Other	-

PLUMBING

Sink	1
Kitchenette	yes
WC	-
Shower	-

ELECTRICAL

Lighting Type	LED
Lighting Options	Dimmable
Task Lighting	No
Zoned Lighting	Yes
Outlets	Yes
Security	Yes
Other	-

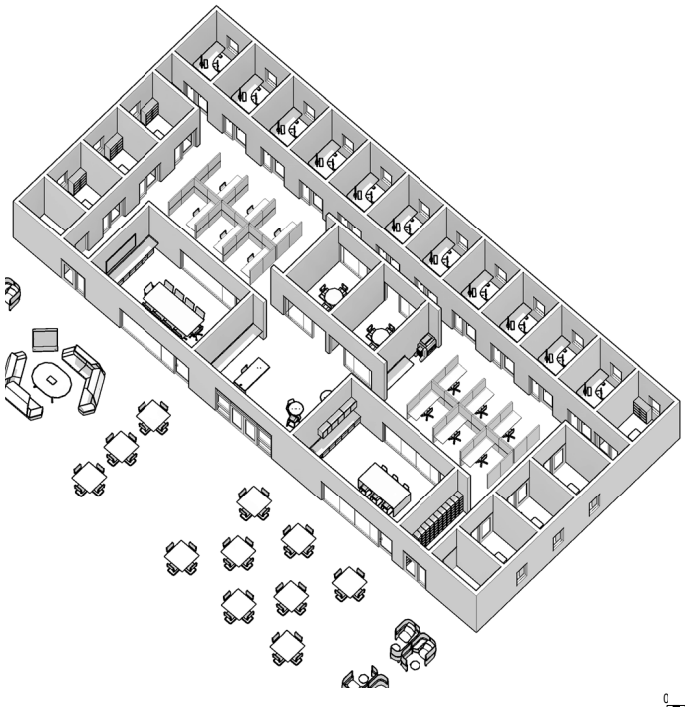
MECHANICAL

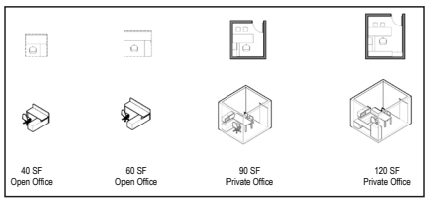
Temperature	70-75
Heating	Chilled Beam
Cooling	Chilled Beam
Humidity Control	DOAS
Exhaust	DOAS at copier
Controls	BAS
Other	DCV in conf

SPECIALTIES

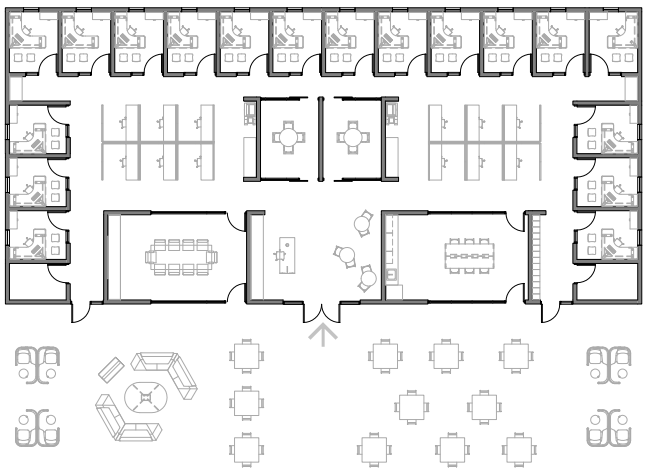
Casework	yes
Teaching Station	-
Projection Screen	-
Marker Board	-
Chalkboard	-
Tackboard	-
Other	Monitor (conf)

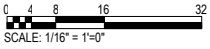
Typical Room Layout





18 private offices - 80 sf
12 hoteling stations
1 large conference room
2 small meeting rooms
2 printing stations
Entry Point





Agenda | Meeting Minutes

DLRGROUP

Project Name	MSU Mankato Armstrong Hall Predesign	**Prepared By**	Matthew Streed
Date	7/6/2022	**Project No.**	40-22149-00
Purpose	Predesign Kickoff		
Location	MSU Campus		

Distribution

☒ Paul Corcoran	☐ Chris Corley	☐ Name
☒ Lynn Akey	☒ Dr. Edward Inch	☐ Name
☒ Nate Huettl	☒ Matthew Streed	☐ Name
☒ David Hood	☒ Nate Miller	☐ Name

Predesign Kick-off:

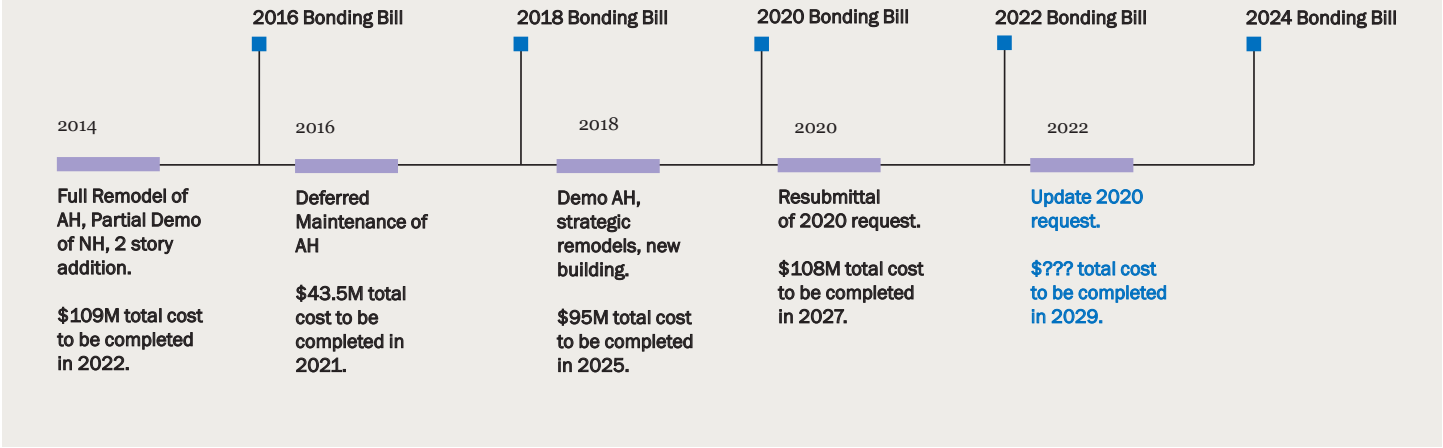
1. **What has changed?**
    a. Performing arts work is already complete
    b. Focus on repurposing and maximizing old space before building new
    c. Look for some 20 to 40 seat spaces, locate smaller spaces in the library so they can double as study rooms.
    d. Consider how hybrid has allowed them to reach students who have geographical limitations – such as students on the iron range.
    e. Some of the programs have merged and are now in one department, but the needs are believed to be the same.

2. **Ernollment:**
    a. Enrollment has dropped, but not nearly as much as other campuses. Enrollment goals for in-person students remain the same as before.
    b. Intent is to bring students back to campus as well as offer hybrid classes
    c. High Flex classrooms provide the flexibility to offer in-person and online but still requires physical space.
    d. Online students also require space for developing programs and student services when they do visit campus.

3. **Schedule:**
    a. Overall predesign meeting and deliverables shedule was discussed.

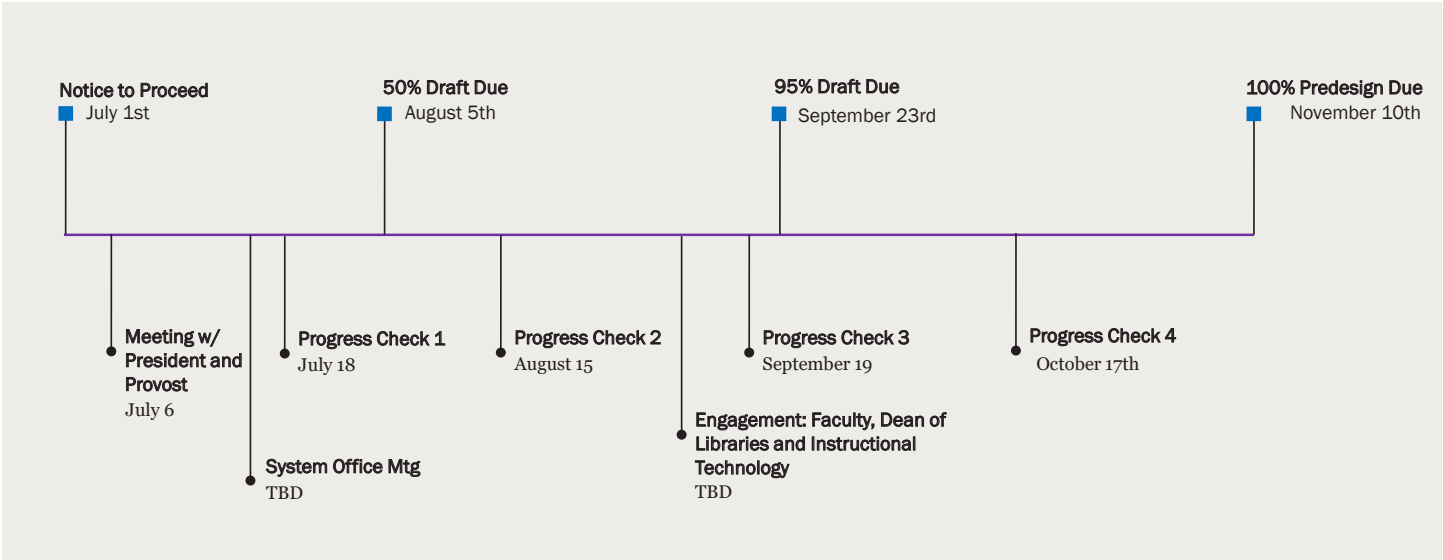
Overall Timeline

- PREDESIGN PROCESS
- BONDING BILL



2024 Predesign Timeline

- MEETINGS
- MILESTONES



Agenda | Meeting Minutes

DLRGROUP

Project Name	MSU Mankato Armstrong Hall Predesign	**Prepared By**	Laura Smith
Date	8/17/2022	**Project No.**	40-22149-00
Purpose	50% Draft Review w/ System Office		
Location	Zoom call		

Distribution

☒ Paul Corcoran	☒ Nathan Huettl	☒ Rick Straka
☒ President Dr. Inch	☒ Lynn Akey	☒ David Hood
☒ Brian Yolitz	☒ Michelle Gerner	☒ Justine Pliska
☒ Laura Smith	☐	☐

Introduction [PC]:

1. Post Covid responses:
    a. High tech classrooms planned – modification for HyFlex – synchronous instruction, interactive experience
    b. New office alternatives – continue talking with Meet & Confer planning committees – offer even more alternatives?
    c. Classroom reduction and increased utilization assumptions – will revisit w/ Shared Governance groups in near future

2. Utilization Numbers for Fall and Spring:
    a. Fall 2021 33.32% and Spring 2022 41.86%
    b. Fall 2022 doubling In Person offerings
    c. [BY] SO tracking 73% Fall 2022 vs MSU at 66% ; HyFlex classified as In Person
    d. Not as radical of a drop from Fall 2019 to Fall 2022 as some schools they've seen, doing the right thing to see how it may impact plans

3. Approach to delivering project – schedule – recommending 2 phases
    a. MSU request staged Schematic Design reviews – SO thinks doable schedule

4. Project Costs
    a. Inflation multiplier will change before 95% - Spring 2023 will adjust
    b. Inflation factors in worksheet now are 2021; 5-6% inflation per year

5. Adjunct faculty
    a. More concern w/ faculty probationary and 10 year – notion of faculty presence on campus and use space to support that effort. Could be collaborative group work space – pick up that conversation – how to utilize our space to focus on student success and how our space aligns to that vision. Discussion may be quite different this year vs 2 years ago. Some faculty prefer remote work; students want face to face interaction.

6. Program:
    a. More focus on Library renovation – what is going in there, better defined program: centralized student support
    b. Performing Arts – already completed - specialty instructional spaces, high tech

c. Wiecking Center – aviation – jet simulators – Paul need to confirm if there were other programmatic elements

7. Comprehensive Facilities Plan – update to align with new Strategic Plan (new leadership)

Questions/ Comments:

1. [MG] Project siting still north of Road? [RS] south front street, river front projects in downtown Mankato – more pedestrian friendly landscaping, bump outs – trucks to Dining Center

2. [JP] Blocking diagrams: Reconsider offices at building perimeter – also hoteling stations that are flexible for faculty, staff, students
3. Concern w/ SD/DD for all projects happening at same time including AH – PC reinforced need for programming phase to happen before SD

4. Draft comments
    a. Sept 23 – 95% due – will need B3 numbers and requirements updated
    b. MG feedback to Narrative and Workbook today
    c. Predesign – new requirement to show Scoring Criteria and where to locate it

Agenda | Meeting Minutes

DLRGROUP

Project Name	MSU Mankato Armstrong Hall Predesign	**Prepared By**	Matthew Streed
Date	8/22/2022	**Project No.**	40-22149-00
Purpose	Memorial Library Planning Discussion		
Location	Zoom Call		

Distribution

☒ Paul Corcoran	☒ Chris Corley	☐ Name
☒ Lynn Akey	☒ Matthew Streed	☐ Name
☒ Nate Huettl	☐ Name	☐ Name
☒ David Hood	☐ Name	☐ Name

Future of the Library, summary of task force meetings:

1. **Focus on Student Services on the Ground floor**
    a. Services will focus student success and equity
    b. Create a hub for student learning services
    c. Ask ourselves "How can we collaborate more effectively?"

2. **Tutoring and Academic Services:**
    a. Currently in the basement, move up to the ground floor.
    b. Wants to normalize student support on campus.
    c. Lots of flex space.
    d. Tutoring, general university advising.
    e. Accessibility services
    f. Honors programs
    g. Undergraduate research
    h. IT Help desk
    i. Community engagement
    j. Presence for study abroad, internships

Collections:

3. **Library as Lab:**
    a. Locate classrooms near special collections
    b. Locate History courses by maps
    c. Juvenile collection can go on upper floors

Decisions Made:

a. There are several classrooms identified to go into the library. Based on the library plans, academic spaces should be strategically located on the lower level and upper levels adjacent to collections so that the ground floor can be focused on services.