Montana Tech Master Plan

Montana Technological University

2025 Comprehensive Facilities Master Plan

FINAL

SEPTEMBER 24, 2025

THINK|ONE ARCHITECTS

AndersonMasonDale

Acknowledgments

The Master Plan is a comprehensive planning tool that came about through the hard work and input from a wide array of individuals. The team would like to thank all those involved in establishing the master plan vision for Montana Tech.

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Executive Summary

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Aerial view of historic core of campus
(Anderson Mason Dale Architects)

1.1 Introduction

The Montana Technological University (Montana Tech) Comprehensive Facilities Master Plan (Master Plan) represents the culmination of a six-month planning process to develop a comprehensive vision for future physical growth of the institution. The Master Plan is a direct result of hard work and dedication from numerous administrators, faculty, staff, students, community members, and professionals with a focused goal of developing a realistic, fact-based, actionable plan to guide the future development of the University.

The last master planning effort was conducted in 2010 and was designed to support Vision 2025, which was prepared and published the year prior in 2009. Many of the stated planning projects have been realized, such as the opening of the Natural Resources Building (NRB), the Student Success/Living Learning Center (SSC/LLC), the renovation of the former Petroleum Engineering Building into the current Health Sciences Building (HSB) and upgraded the football field in Alumni Coliseum. Other initiatives remain active in the advancement of this current master plan, such as the renovation of Main Hall, which is currently in design, and the west campus research expansion.

This 2025 Master Plan is structured to provide the vision for the campus physical environment for the next ten years; and as with past planning efforts, is essential for proper long-range development of the campus. The plan establishes driving principles, specific goals, and priorities that serve as the framework for future physical development. The plan also provides long-range planning for architecture, land use, space use, landscape, transportation, parking, and utilities.

Montana Tech campus aerial view (Montana Tech)

1.2 Purpose

The purpose of this Master Plan is to provide a planning document that can serve multiple functions:

- Identifies specific deficiencies and needs – both in terms of facilities and program – by building, by department, and at a campus-wide level
- Provides a list of Capital Construction Funding projects for programmatic changes and facilities improvements at the University over the next 10 years
- Identifies projects and facilities needs over the near term for further investigation
- Provides conceptual program plans and cost models for specific academic and campus improvements
- Presents an overall campus framework that identifies areas for future growth, defines a clear network of pedestrian and vehicular circulation to strengthen wayfinding, protects and enhances open space and provides the necessary right-of-way for utilities infrastructure and facility needs on the Main Campus

This plan outlines the facilities that Montana Technological University (Montana Tech) will need to remain an institution of opportunity and innovation and live up to its designation as Montana's only Special Focus science and engineering university. The framework of land uses, building forms, and open spaces described in this plan are intended to be flexible and adaptable. This Comprehensive Master Plan will not only guide the planning and design of campus facilities, but will also influence academic programming, existing and future space scheduling, and appropriate building and open space uses.

This plan should serve as a guide, not as a set of binding prescriptive actions, and the specific should be modified as additional requirements and needs arise. However, such revisions should follow and support the Plan's guiding principles. This Comprehensive Master Plan is a living document that should be periodically re-examined and updated as the campus continues to evolve.

The document is organized as follows:

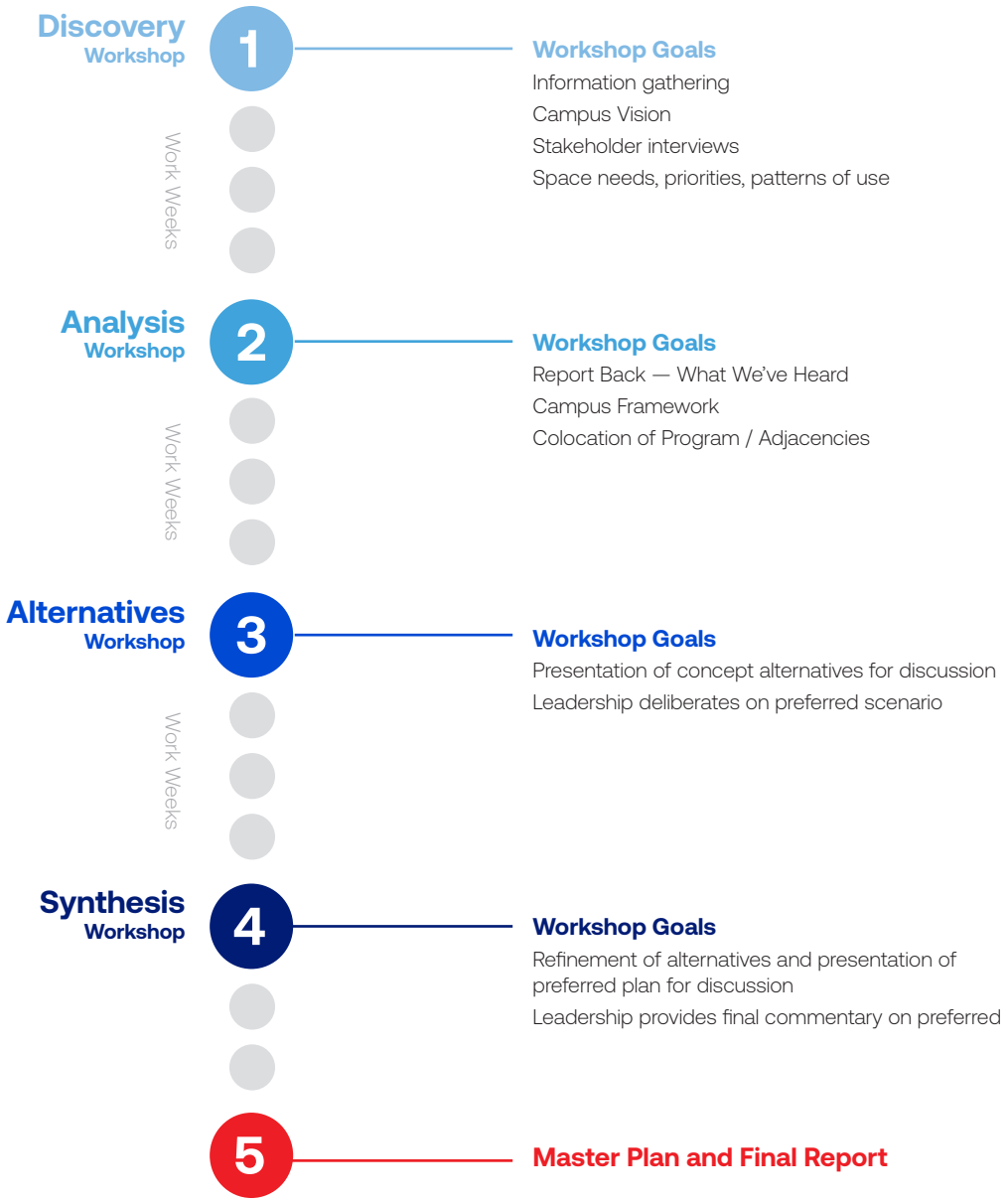
- **Section 1 – Executive Summary** describes the objectives, methodology and summary overview of the master plan
- **Section 2 – Program and Institution** provides current and historical context to the evolution of the university and captures the spirit of place
- **Section 3 – Existing Conditions** documents both the data gathering and analysis of both utilization and facilities conditions that informed the current recommendations
- **Section 4 – Master Plan** includes illustrative site and development plans that provide the framework for future campus growth
- **Section 5 – Appendix** contains meeting minutes from stakeholder and community meetings, detailed utilization data, and additional cost information

1.3 Process

The planning process was broken out into four sequential phases – Discovery, Analysis, Alternatives, and Synthesis, with intermediate work weeks and breakout sessions between the primary phases. This rigorous process identified pressing campus and urban issues, analyzed facility assets, and conducted campus-wide qualitative and quantitative analyses.

- **Discovery**: an information gathering phase, focuses on the development of the campus vision and driving principles, and includes a broad range of stakeholder interviews along with early space assessments and utilization analyses
- **Analysis**: a reflective phase that communicates back to the university what we've heard and what the data analyses reveal, while beginning to suggest planning challenges and opportunities that the master plan should address
- **Alternatives**: lays out a series of concept alternatives for the full range of master planning categories for consideration of university leadership and the community at large
- **Synthesis**: presents a refinement of alternatives and allows for final commentary to be collected and integrated in the final preferred plan

The master planning process was consensus-based throughout all phases of development. This effort included interviews with university leaders, staff, and student representatives. In workshop format, stakeholders voiced concerns and proposed opportunities through open forum, brainstorming, and presentation-led discussion. Participants confirmed analysis assumptions and critiqued master plan alternatives during presentations and breakout discussions. The primary workshops were all held on-campus, with interim planning calls taking place over video conference.



1.3.1 Community Engagement

In the first two phases of the planning process, the master planning team met with a number of stakeholder groups identified in collaboration with the Executive Committee.

These groups included:

- Student Government and Student Life
- Campus Facilities and IT
- Athletics
- Research
- Faculty and Staff Senate
- Marketing and Enrollment
- College of Letters, Sciences, and Professional Studies (CLSPS)
- Lance College of Mines and Engineering (LCME)
- Highlands College

Subsequent to the first two phases, the planning team continued to meet with Campus Facilities, CLSPS and LCME for the duration of the master planning effort.

The master planning team also engaged the Butte-Silver Bow community, student body, faculty, staff, and alumni on several occasions over the course of the master planning effort. The first Community Open House was held in early November during the Alternatives phase. This was followed by a second Community Open House in late February during the Synthesis phase. The on-campus meetings, held in the Copper Lounge in the Student Union Building, were advertised on the Montana Tech website and social media channels, in the local newspaper, and on the local radio station. Both evening events consisted of a brief overview presentation of the master planning effort to date followed by a breakout session with presentation boards set up around the space to encourage small group and one-on-one discussions. Comments and feedback were recorded on the boards and via a QR code that allowed community members to share feedback both during and after the presentation. The open comment period was held for two weeks following each event. Local television outlets covered the events.

Community Open House on February 19 2025 (Anderson Mason Dale Architects)

1.4 Master Plan Foundations

The comprehensive Master Plan describes a physical form that will support Montana Tech in their mission to meet their designation as Montana's only Special Focus science and engineering university and provide a transformative student experience that builds upon a tradition of hands-on learning and undergraduate research.

Driving Principles and Goals provide a foundation for campus physical development. Each sets a fundamental philosophy towards the design and implementation of the campus's programmatic needs. Driving Principles are the overlying strategies that give direction to the Goals, which indicate the methods that the university will achieve its principles.

1.4.1 Driving Principles

Be deliberate in the pursuit of **future enrollment** by focusing and amplifying message of **exceptional STEM and Health education**

Celebrate **hands-on learning** and continue to **grow research opportunities** across undergraduate and graduate levels

Align with Strategic Vision in creating a **Healthy and Vibrant Campus Environment**

Pursue physical infrastructure to support **accessibility**

Create **hybrid, multi-use facilities** that encourage collaboration, cross-pollination, and **interdisciplinary scholarship** across colleges and departments

Identify and nimbly respond to **industry partnerships** and funding opportunities

1.4.2 Specific Goals

Enrollment
On-campus student population of 2,500 by 2034, representing 3% annual growth

As of Fall 2024, there were 1,927 enrolled on-campus students across Main Campus and Highlands College

Parking
Expand available parking on Main Campus by an additional 400+ parking stalls

The Main Campus currently provides 998 parking spaces, with 840 permitted spaces for students, faculty and staff

Housing & Dining
Provide an additional 300+ on-campus beds for Montana Tech students and expand dining services to meet new growth

Current on-campus housing provides 460 beds

The off-campus University Apartments apartments offers 60 apartment units

Student Services
Co-location of all business office operations

Consolidation of student services to the Student Union Building

Officing
Develop hub officing strategy for a percentage of graduate students and/or faculty members

Academic
Main & Engineering Hall renovations - *in design*

Highlands College Line Indoor Training Facility - *funded*

Reed House renovation

Library Learning Commons modernization

Student Union Building (SUB) renovation for more student-focused programming

New Academic Event Hall with a 500+ capacity event space and active learning classrooms

Research
Develop west campus for research innovation and expanded field research activities

Partner with industry to develop new central campus Research Institute for academic research

Athletics
Health, Physical Education and Recreation (HPER) Complex renovation Phase 1

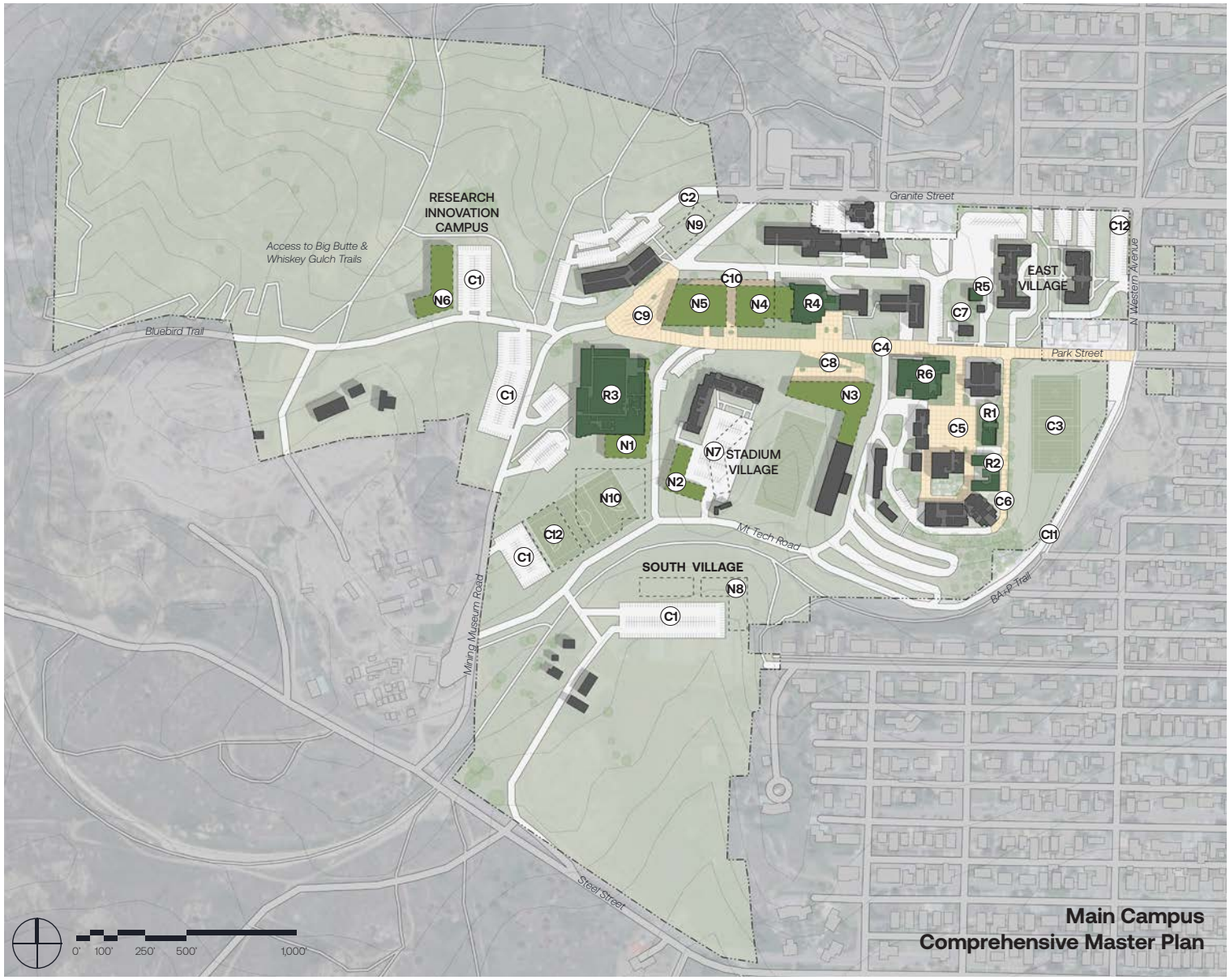
HPER addition Phase 2

Stadium expansion

Campus
Central Courtyard redevelopment
Re-imagine Park Street as a pedestrian-friendly promenade with connected outdoor programming

New southern campus vehicular roadway following the BA+P trail

1.5 Master Plan Summary



Renovation Projects

R1 Engineering Hall
R2 Main Hall
R3 HPER Modernization Phase I
R4 Library Learning Commons
R5 Reed House
R6 Student Union Building

New Buildings

N1 HPER Athletics Addition Phase II
N2 Stadium Village Housing Phase I
N3 Stadium Expansion
N4 Academic Event Center
N5 Research Institute
N6 Research Center
N7 Stadium Village Housing Phase II
N8 Future Housing
N9 Future Academic Research
N10 Future Building Site

Campus Improvements

C1 New Surface Parking Lot
C2 New Parking Access
C3 Outdoor Intramural Field
C4 Park Street Promenade
C5 Courtyard Redevelopment
C6 Montrose Ave. Redevelopment
C7 Campus Green
C8 Stadium Event Terrace
C9 Research Gateway Steps
C10 Below Grade Podium Parking
C11 South Campus Access Road
C12 Surface Parking Expansion

Existing Facilities
Future Renovation
Proposed Facilities

1.5 Master Plan Summary

New Buildings

H1 Indoor Line Training Facility

Existing Facilities

E1 Highlands College Building
E2 Outdoor Line Training Yard

Existing Facilities
Future Renovation
Proposed Facilities

1.5.1 Master Plan Priorities

The following summary identifies the priority ranking of the proposed comprehensive master plan physical campus projects, broken out into realistic time horizons for planning and implementation. Within each category, projects are labeled and color-coded to align with renovation (R), new construction (N), or campus (C) work.

Immediate Priorities (1-3 Yrs)

R1, R2 - Main and Engineering Hall Renovations
R5 - Reed House Renovation
R3 - HPER Facility Upgrades Phase I
H1 – Highlands College Indoor Line Training Facility
N2 - Stadium Village Phase I **Planning**
C5 - Courtyard Redevelopment
C1 – West Surface Parking Development
C2, C10, C11 - Traffic and Campus Access Improvements **Planning**

Mid-Term Priorities (5-10 Yrs)

N5 – Research Institute **Implementation**
N4 - Academic Event Center **Planning**
N6 – Research Innovation Campus Phase II Building **Planning**
N3 - Stadium Expansion **Planning**
N7 – Stadium Village Phase II **Planning**
C4 – Phase 2 Park Street Improvements

Near-Term Priorities (3-5 Yrs)

R4 - Library Learning Commons Modernization
R6 - Student Union Renovations
N1 - HPER Athletics Addition Phase II
N6 - Research Innovation Campus Phase I Building
N2 – Stadium Village Phase I **Implementation**
N5 - Research Institute **Planning**
C4 – Phase I Park Street Improvements

Long-Term Priorities (10+ Yrs)

N4 - Academic Event Center **Implementation**
N6 - Research Innovation Campus Phase II Building **Implementation**
N3 - Stadium Expansion **Implementation**
N7 – Stadium Village Phase II **Implementation**
C4 – Phase III Park Street Improvements

1.5.2 Project Drivers

The following pages provide a breakout of the four time horizons and identify the primary project drivers relative to programmatic need, facilities maintenance, enrollment and relationship to the driving principles of this master plan.

Immediate Priorities (1-3 Yrs)

Project Drivers

	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
R1, R2 - Main and Engineering Hall Renovations	x	x	-	1, 2, 3, 4, 5
R5 - Reed House Renovation	x	-	-	3, 4
R3 - HPER Facility Upgrades Phase I	x	-	-	3, 4
H1 – Highlands College Indoor Line Training Facility	x	-	-	2
N2 - Stadium Village Phase I **Planning**	-	-	x	3, 5
C5 - Courtyard Redevelopment	x	x	-	3, 5
C1 – West Surface Parking Development	-	-	x	5
C2, C10, C11 - Traffic and Campus Access Improvements **Planning**	-	x	-	3, 5

Legend

1 Exceptional STEM and health education
2 Hands-on learning and research
3 Healthy and vibrant campus environment
4 Hybrid, collaborative, interdisciplinary multi-use facilities
5 Supports accessibility
6 Fosters industry partnership

1.5 Master Plan Summary

Near-Term Priorities (3-5 Yrs)

Project Drivers

	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
R4 - Library Learning Commons Modernization	x	x	-	1, 4, 5
R6 - Student Union Renovations	x	x	-	3, 4, 5
N1 - HPER Athletics Addition Phase II	x	-	-	3, 4
N6 - Research Innovation Campus Phase I Building	x	-	-	2, 3, 4
N2 – Stadium Village Phase I **Implementation**	-	-	x	3, 5
N5 - Research Institute **Planning**	x	-	-	1, 2, 4, 5, 6
C4 – Phase I Park Street Improvements	-	x	-	3, 5

Legend

1 Exceptional STEM and health education
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4 Hybrid, collaborative, interdisciplinary multi-use facilities
5 Supports accessibility
6 Fosters industry partnership

Mid-Term Priorities (5-10 Yrs)

Project Drivers

	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
N5 – Research Institute **Implementation**	x	-	-	1, 2, 4, 5, 6
N4 - Academic Event Center **Planning**	x	x	-	1, 4
N6 – Research Innovation Campus Phase II Building **Planning**	x	-	-	1, 2, 4, 6
N3 - Stadium Expansion **Planning**	x	-	-	3, 4
N7 – Stadium Village Phase II **Planning**	-	-	x	3
C4 – Phase II Park Street Improvements	x	-	-	3, 5

Legend

1 Exceptional STEM and health education
2 Hands-on learning and research
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4 Hybrid, collaborative, interdisciplinary multi-use facilities
5 Supports accessibility
6 Fosters industry partnership

Long-Term Priorities (10+ Yrs)

Project Drivers

	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
N4 - Academic Event Center **Implementation**	x	_	-	1, 2, 3, 4, 5
N6 - Research Innovation Campus Phase II Building **Implementation**	x	_	-	1, 2, 3, 4, 6
N3 - Stadium Expansion **Implementation**	x	_	-	3, 4
N7 – Stadium Village Phase II **Implementation**	-	_	x	3
C4 – Phase III Park Street Improvements	x	_	-	3, 5

Legend

1 Exceptional STEM and health education
2 Hands-on learning and research
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4 Hybrid, collaborative, interdisciplinary multi-use facilities
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6 Fosters industry partnership


PHYSICS
GEOLOGY.
MINERALOGY.
METALLURGY.
CHEMISTRY

Program & Institution

2

Main Hall facade (Anderson Mason Dale Architects)

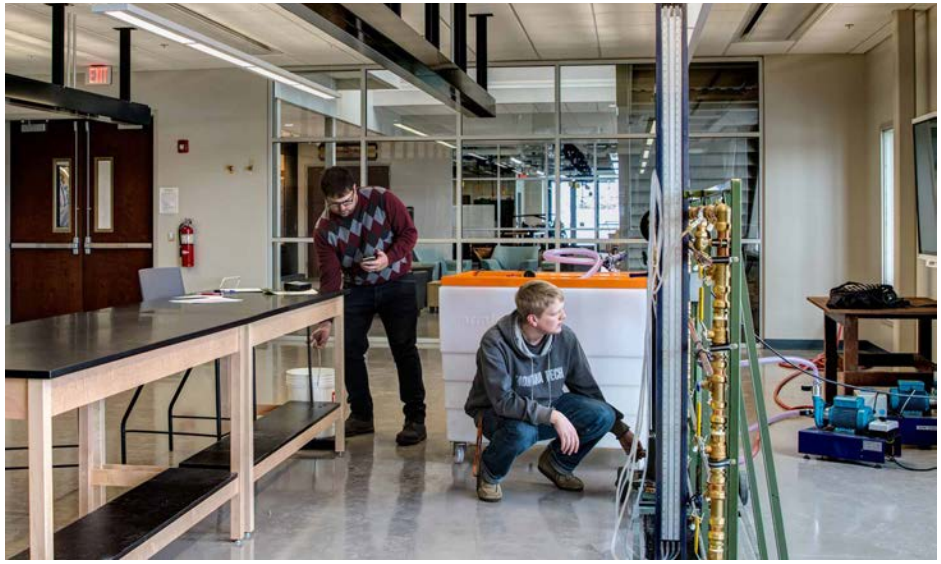
2.1 Institutional Overview

Montana Technological University (Montana Tech) is a place of purpose, home to forward-thinking, teaching, research, and innovation. The university embraces its living laboratory and emphasizes the value of experiential learning and community building.

Prior to 1951, the college offered bachelor of science degrees in only five areas. Today, Montana Tech offers degree programs at the doctorate, master's, bachelor's, associate, and certificate levels. The student body exhibits a national and global snapshot with 44 states and 16 foreign countries represented. Montana Tech provides graduates with the knowledge and skills necessary for successful lives and careers, conducts basic and applied research, offers workforce development programs designed to meet local and state industries' needs, and provides related services to the citizens of Montana and beyond.

The "M" on Big Butte is shown with campus in the foreground (Montana Tech)

2.1 Institutional Overview



Students participate in research at the Natural Resources Research Center (Cushing Terrell)

Students participate in the Metallurgical and Materials Engineering Summer Program (Montana Tech)

Montana Tech is a leader in science, technology, engineering, and mathematics (STEM) education. The University is one of a handful of institutions in the United States that maintains a wide variety of mineral and energy engineering degree programs. All of Montana Tech's engineering programs are accredited by the Accreditation Board for Engineering and Technology (ABET). Moreover, many of Montana Tech's engineering programs are not only unique to the region but are also one of only a few in the country. For example, Montana Tech is one of only 14 universities in the United States offering a bachelor's degree in mining engineering and one of 20 in the nation offering an undergraduate degree in petroleum engineering. The metallurgical and materials engineering program is one of four programs in the nation that emphasizes mineral processing and extractive metallurgy in its curriculum and research activities. Montana Tech also offers the more traditional engineering programs including civil, electrical, environmental, geological, and mechanical engineering.

Additionally, Montana Tech offers non-engineering degree and certificate programs unique within the Montana University System (MUS). These include a doctorate in earth science and engineering, master's degrees in ecological restoration, industrial hygiene, and project engineering and management; bachelor's degrees in business and information technology, construction management, cybersecurity and network administration, interdisciplinary arts and sciences, and occupational safety and health; and certificates in pre-apprentice line. A number of Montana Tech's non-engineering programs have specialized accreditation/certification from entities such as the American Chemical Society (ACS) and The Commission on Collegiate Nursing Education (CCNE).

The campus is also home to the Montana Bureau of Mines and Geology (MBMG). The MBMG, established as a state agency in 1919, continues to fulfill its mandate to collect and publish information on Montana's geology to promote orderly and responsible development of the energy, groundwater, and mineral resources of the state. MBMG's research faculty closely collaborates on a number of research programs and in the mentoring of graduate students.

Nursing students participate in hands-on labs in the Lesar Family Nursing Simulation Center (Montana Tech)

Montana Bureau of Mines and Geology curates the Mineral Museum on campus (TripAdvisor)

2.1 Institutional Overview

Montana Tech's atmosphere encourages faculty-student interaction, and undergraduate and graduate students are frequently involved with faculty and staff in research programs. Montana Tech's commitment to research has resulted in significant growth in its funded research over the last several years. The institution's funding base has diversified to include local, state, and national support from the private sector and government.

Montana Tech's world-renowned reputation is based on the successes of its graduates working around the world. While the campus continues to receive recognition for its heritage programs, growth in areas such as business, nursing and health sciences, and safety/industrial hygiene have significantly broadened the diversity of degree offerings. In turn, this diversity attracts students who have varied career interests and objectives. The changes at Montana Tech over the past years have served to amplify the University's role and mission as Montana's only Special Focus University.

Montana Tech commencement ceremony (Montana Tech)

Research

Montana Tech researchers are tackling grand challenges that are at the interface of disciplines. Research focus areas vary widely, from successful environmental remediation techniques meant to clean up some of the world's most contaminated Superfund sites, to novel processes that will extract and process rare earth minerals needed to lead the world's clean energy future. In FY 2024, research awards totaled more than $22.6 million (NSF HERD), output from 144 researchers, 146 undergraduates, and 213 graduates, with external research expenditures representing 22% of campus expenditures.

10 percent of undergraduates receive funding for research experiences
95% of thesis-based graduate students are funded (master's and doctoral)
12 active patents and 2 licenses as of the end of FY 24
Provisional Patents: 6 with 13 student inventors

State-of-the-art nanotechnology lab (Montana Tech)

Students fly drones in the Underground Mine Education Center (Brian Powers)

2.1 Institutional Overview

Natural Resource Research Center (NRRC) (Cushing Terrell)

The Oredigger football team calls Bob Green Field in Alumni Coliseum home (Montana Tech)

Campus

Montana Tech is located in the mining town of Butte, Montana (population 35,700), 80 minutes west of Bozeman and 70 minutes southwest of Helena. The 108-acre campus is a blend of historic buildings and modern facilities including 2 buildings built in the past 10 years. The newest buildings, the Natural Resource Research Center (NRRC) opened in April 2017, and the Living Learning Center (LLC), Montana Tech's newest residence hall and home to the Student Success Center (SSC) opened in the fall of 2019.

Athletics

Montana Tech, a member of the National Association of Intercollegiate Athletics (NAIA) and the Frontier Conference, competes in a variety of sports, including basketball, cross country, football, golf, track and field, and volleyball.

2.2 Mission, Vision, Values, and Goals

Mission

As Montana's Special Focus Institution, Montana Technological University provides a transformative student experience by developing leaders and advancing science, engineering, and technology, with the purpose of benefiting humanity while meeting the changing needs of society.

Vision

To be the institution of opportunity and innovation.

Values

- Commitment to students
- Diversity, equity, and inclusion
- Collaboration and determination
- Experiential learning
- Innovation and creativity
- Community
- Excellence

Goals

Student Success

Montana Tech aims to center students through distinct and robust academic programs, open learning environments, and accessible services. The University focuses on accessibility, engagement, and employability for its students.

Programs Of Distinction

The school is committed to excellence in all programs and strives to provide learning, research, and service experience to its community. Montana Tech supports experiential learning, mentoring, and community and industry engagement.

A Healthy And Vibrant Campus Ecosystem

Montana Tech has an investment in effective infrastructure with opportunities for social, intellectual, and professional growth. The school works to provide exceptional service and foster an inclusive and sustainable campus ecosystem.

Gateway to campus at sunset (Montana Tech)

2.3 History

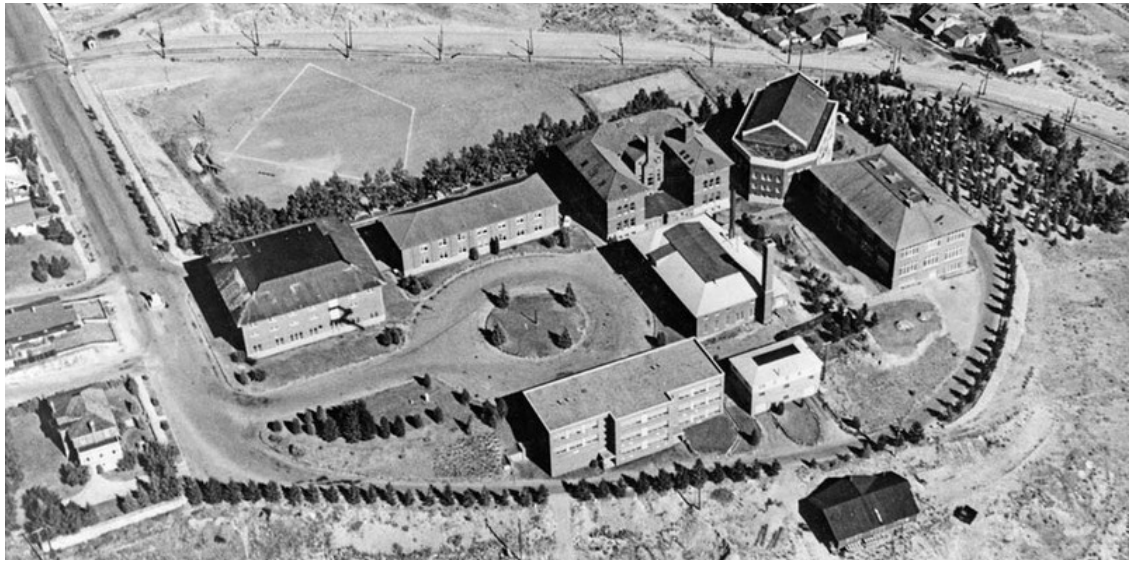
Historic Overview

Montana Tech traces its roots to the Enabling Act of 1889 that granted statehood to the people of Montana. In that act, the United States Congress set aside 100,000 acres to establish and maintain a school of mines. The Montana State School of Mines was established by the legislature in 1893, and on September 11, 1900, the Montana State School of Mines opened its doors.

In 1965, Montana's legislature enacted name changes for the state's colleges and universities, and the School of Mines became the Montana College of Mineral Science and Technology. In 1994, the Montana Board of Regents (BOR) restructured the Montana University System into two affiliations (Montana State University and University of Montana). Montana Tech became affiliated with the University of Montana, officially named Montana Tech of the University of Montana. The restructuring also assigned to Montana Tech what had been the Butte Vocational-Technical Center now known as Highlands College.

In March 2017, the Montana BOR approved a fourth institutional classification for higher education units in the state—Special Focus Four-Year Universities, in which Montana Tech became the first and only member. This new classification was added to the three previous classifications: Two-Year Colleges, Four-Year Regional Universities, and Research Doctoral Universities. This classification reflects the unique characteristics of Montana Tech and the opportunities a Special Focus designation can provide the University. The following year the BOR approved a request to rename the institution Montana Technological University.

Montrose Avenue looking north 1924 (Butte-Silver Bow Public Archives)



Aerial view of Montana School of Mines circa. 1956 (Montana Historical Society Research Center Photograph Archives)

Football game taking place on Leonard field circa 1930 (Butte-Silver Bow Public Archives)

Historic Landmark Designation

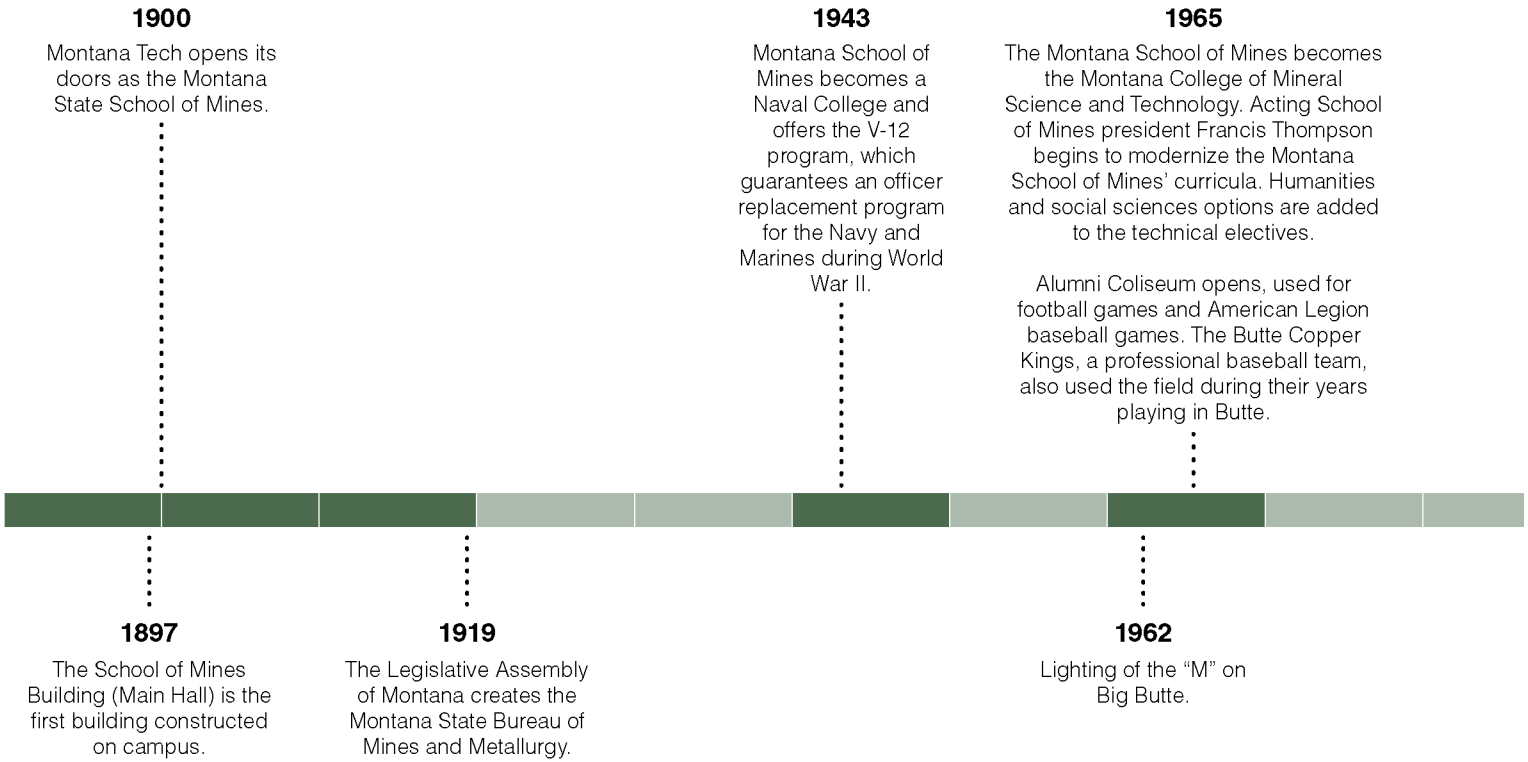
Butte is a treasure trove of American history, home to the sprawling Butte-Anaconda National Historic Landmark District. This 9,774-acre district, one of the nation's largest, boasts nearly 6,000 historically significant resources. Notably, Montana Tech's Main Campus resides within this landmark, showcasing five meticulously preserved historic structures: Main Hall (1897), the Mill Building (1908), Engineering Hall (1910/1923 addition), the Science and Engineering Building (formerly the Gym, 1925), and the Chemistry and Biology Building (formerly Metallurgy Building, 1927).

Leonard Field

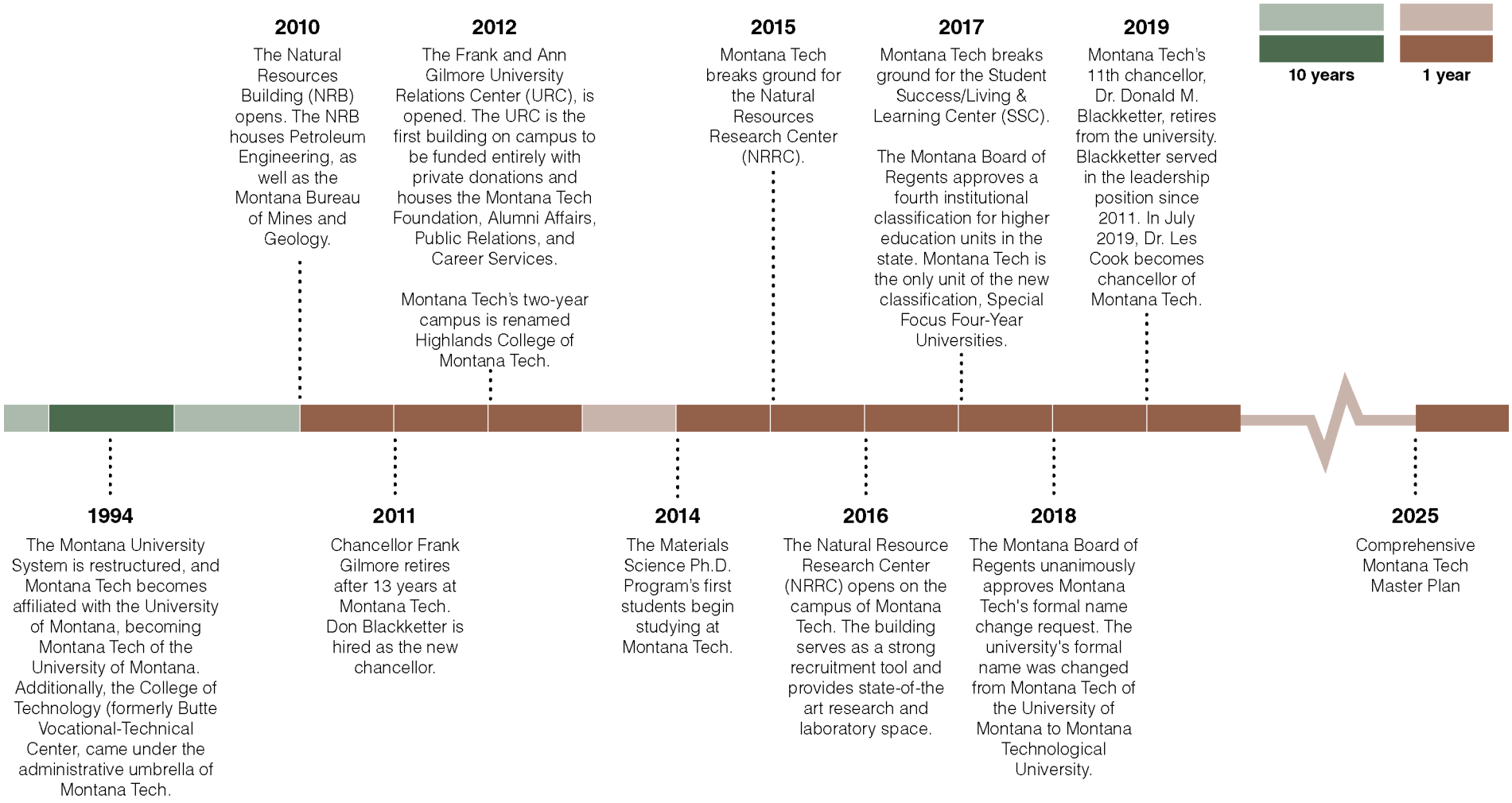
Leonard Field, a testament to community resilience, was painstakingly crafted in 1931 by unemployed miners, through the Silver Bow Country Emergency Relief Association. In 1933, it was dedicated to Nathan Leonard, the university's first president. Beyond its football legacy, Leonard Field served as a vibrant community hub, hosting baseball games, track meets, tennis matches, and even transforming into a winter skating rink. While its rock retaining walls aren't officially landmarked, they stand as cherished symbols of Butte's history and a unique part of the campus's character. A tunnel, once connecting the field to the Gymnasium, added a dramatic touch to game days, as the football team emerged onto the field.

Leonard Field during construction circa 1930 (Butte-Silver Bow Public Archives)

Historic Timeline



2.3 History


10 years
1 year
1994
The Montana University System is restructured, and Montana Tech becomes affiliated with the University of Montana, becoming Montana Tech of the University of Montana. Additionally, the College of Technology (formerly Butte Vocational-Technical Center, came under the administrative umbrella of Montana Tech.
2010
The Natural Resources Building (NRB) opens. The NRB houses Petroleum Engineering, as well as the Montana Bureau of Mines and Geology.
2011
Chancellor Frank Gilmore retires after 13 years at Montana Tech. Don Blackketter is hired as the new chancellor.
2012
The Frank and Ann Gilmore University Relations Center (URC), is opened. The URC is the first building on campus to be funded entirely with private donations and houses the Montana Tech Foundation, Alumni Affairs, Public Relations, and Career Services.
Montana Tech's two-year campus is renamed Highlands College of Montana Tech.
2014
The Materials Science Ph.D. Program's first students begin studying at Montana Tech.
2015
Montana Tech breaks ground for the Natural Resources Research Center (NRRC).
2016
The Natural Resource Research Center (NRRC) opens on the campus of Montana Tech. The building serves as a strong recruitment tool and provides state-of-the art research and laboratory space.
2017
Montana Tech breaks ground for the Student Success/Living & Learning Center (SSC).
The Montana Board of Regents approves a fourth institutional classification for higher education units in the state. Montana Tech is the only unit of the new classification, Special Focus Four-Year Universities.
2018
The Montana Board of Regents unanimously approves Montana Tech's formal name change request. The university's formal name was changed from Montana Tech of the University of Montana to Montana Technological University.
2019
Montana Tech's 11th chancellor, Dr. Donald M. Blackketter, retires from the university. Blackketter served in the leadership position since 2011. In July 2019, Dr. Les Cook becomes chancellor of Montana Tech.
2025
Comprehensive Montana Tech Master Plan

2.4 Campus Location & Context

Montana Tech thrives in the heart of the Rockies, nestled along the Continental Divide perfectly positioned between Yellowstone and Glacier National Parks. This isn't just a location; it's a launchpad for adventure. With world-class recreation nearby in every direction regardless of season or interest, getting off-campus means something special here.

Steeped in history, Montana Tech is rooted in Butte, a legendary mining town known as the "richest hill on Earth." Campus, home to the Mineral Museum and steps from the World Museum of Mining, blends historic charm with modern innovation. Recent additions like the Natural Resource Research Center and the Student Success/Living Learning Center reflect Montana Tech's commitment to cutting-edge education.

Butte, a vibrant community of 35,700, offers a unique blend of historic architecture, local museums, and a thriving small-business scene. Just a short drive from Bozeman and Helena, Montana Tech provides exceptional educational experience in a truly unforgettable setting.

2.5 Overview of Programs

Overview

Montana Tech offers 15 certificates, 10 associate degrees, 24 bachelor's degree programs, 14 master's programs, and 2 doctoral programs. The school fosters innovative research for both graduate and undergraduate students and has a unique selection of programs in both technological and non-STEM areas. The university has an over 90% career outcomes rate for over a decade (Montana Tech Outcomes Survey). As of Fall 2024, the most popular majors included Nursing, Business & IT, Mechanical Engineering, and Civil Engineering. The College of Letters, Sciences, and Professional Studies is home to Sherry Lesar School of Nursing, the #1 RN Program in Montana (RegisteredNursing.org, 2024) and pre-professional health options.

In 2010, Montana Tech acquired ownership of a parcel of land immediately west of the campus. The parcel included an old silver mine called the Orphan Boy Mine. At the same time, a significant industry gift allowed Montana Tech to initiate the development of an Underground Mine Education Center (UMEC) on the campus. The UMEC is a unique hands-on, interdisciplinary educational environment for students. The center complements courses in mining engineering, geological engineering, environmental engineering, metallurgical and materials engineering and occupational safety and health. It also serves as a research facility utilized by students and faculty, and other organizations doing research in underground mining methods, rock mechanics, ventilation, fragmentation, and health and safety.

Montana Tech has evolved into a dynamic institution composed of four schools and colleges: Lance College of Mines and Engineering, College of Letters, Sciences, and Professional Studies; Highlands College; and the Graduate School.

Lance College of Mines and Engineering

Montana Tech's Lance College of Mines and Engineering has a century-long history of educating graduates to solve some of the world's most challenging and complex problems. Programs within include:

- Civil Engineering
- Computer Science
- Construction Management
- Cybersecurity and Network Administration
- Electrical Engineering
- Environmental Engineering
- Geological Engineering
- Mechanical Engineering
- Metallurgical & Materials Engineering
- Mining Engineering
- Petroleum Engineering
- Safety, Health, and Industrial Hygiene
- Software Engineering

College of Letters, Sciences, and Professional Studies

The College of Letters, Sciences and Professional studies (CLSPS) houses a diverse number of programs that includes:

- Biological Sciences
- Business & Information Technology
- Chemistry
- Data Science
- Exercise and Health Science
- Interdisciplinary Arts and Sciences
- Mathematical Sciences
- Nursing

Pre-Professional

Pre-Health: Pathways and advising are available for students interested in pursuing health professionals such as dentistry, medicine, pharmacy, physical therapy, physician assistant, and more.

2.5 Overview of Programs

Graduate School

CLSPS:
- Ecological Restoration

LCME:
- Electrical Engineering
- Engineering
- Environmental Engineering
- General Engineering
- Geological Engineering
- Industrial Hygiene Professional Track
- Industrial Hygiene
- Materials Science Engineering
- Metallurgical/Mining Process Engineering
- Mining Engineering
- Petroleum Engineering
- Project Engineering & Management

Hybrid:
- Earth Sciences & Engineering
- Geoscience
- Interdisciplinary Studies
- Materials Science

Highlands College

From certificates and associate degrees to community education and customized training, Highlands offers the following:
- Associate of Science
- Automotive Technology
- Civil Engineering Technology
- Computer Networks and Cybersecurity
- Construction Technology - Carpentry
- Pre-Apprentice Line Program
- Precision Machining Technology
- Radiologic Technology
- Web Development and Administration
- Welding Technology

Non-Degree

- Dual Enrollment
- Non-degree

2.6 Current Policies Affecting Facilities

Housing

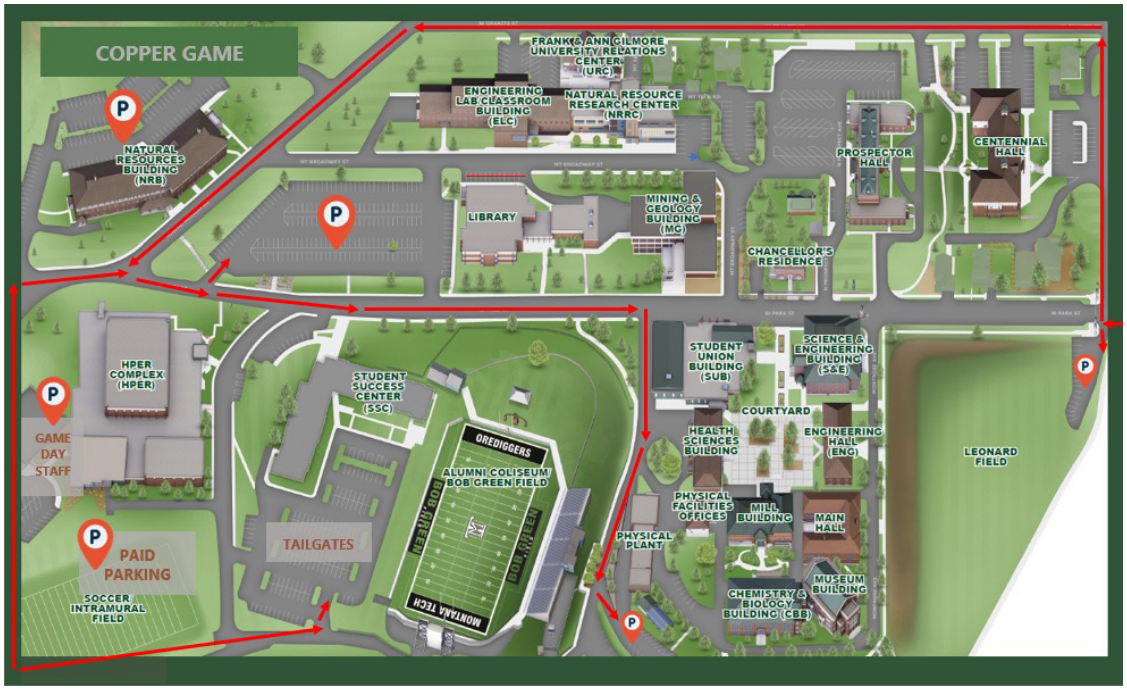
Residence hall living is an integral part of the Montana Tech first year experience. Research shows that students who live on campus for their first year are retained into their secondary year at a significantly higher rate than students who commute to campus during their first year.

The current campus policy, in accordance with Montana Tech residence hall requirements and Policy 502.1 of the Montana Board of Regents of Higher Education, requires all traditional, first-year students to live on-campus during their first year at Montana Tech. Highlands College students are exempt from this policy. Exceptions to the live-in requirement may be requested by students who are married or are living with immediate family within a reasonable commuting distance from campus. Students requesting exemption from this policy must complete and submit an exemption form to the Montana Tech Office of Residence Life.

Externally, the current state of the Butte housing market, which has seen remarkable growth since the pandemic, is applying significant pressure to increase on-campus housing options for undergrads and graduate students alike. With median listing prices surging by 92% compared with five years ago, and rental rates in the last year rising by $200 a month, off-campus housing options have become scarcer and more unaffordable. This trend is paired with the inability to keep up with demand through new construction, which has contributed to rising prices.

A strategic goal of this master plan is to build upon the existing on-campus inventory housing all first-year and expand the number of beds to further house a majority of second-year students or other undergraduates interested in living on-campus. This master plan recommends the construction of an additional residence hall with a minimum of 300 beds to meet this goal. See section 3.3.1 of this report for a deeper dive on this planning initiative.

The newest on-campus housing, the Living Learning Center (LLC) opened in 2019 (Oz Architects)



Parking map for 2024 season opening football game, Orediggers v. Georgetown College Tigers (Montana Tech)

Parking

Parking permits are required to park on campus. All campus paved and un-paved lots are paid permit parking. Students, faculty, and staff may request one campus permit and are allowed to have one vehicle on campus at any given time.

Students that live on campus are permitted to park on campus, provided they purchase a permit and park in designated lots.

Limited non-metered visitor parking are made available in dispersed lots around campus.

While Montana Tech does not offer street parking, adjacent residential streets do accommodate street parking, which are permitted through Butte-Silver Bow.

For campus events, such as football games, career fairs, or community events, existing permit lots are opened up for public use, often for free use, which displaces student, staff and faculty permit holders. In the case of football games, the existing soccer intramural field south of the HPER Complex is also opened for paid single game tailgate parking, while season ticket tailgate spots use the existing Student Success Center lot.

Given current high demand for parking permits by students, staff, and faculty, and external pressures of hosting campus events, providing additional on-campus parking is an immediate priority. Additionally, as surface parking lots are replaced by new buildings or open space, parking spaces will need to be replaced with new surface parking lots or future parking structures. See section 3.3.2 of this report for a more detailed analysis of on-campus parking.

2.7 Student Enrollment

The master plan accommodates a projected moderate increase in student enrollment over the course of the next 10 years, based on a reasonable expectation of 3% annual growth. While there are a multitude of factors at play in predicting future enrollment, the state of Montana has seen an average of 1% population growth per year over the past decade and the University is seeing growing student interest both from in-state and out-of-state applicants.

Overview

In Fall 2024, 2,429 students from 45 states, 1 territory and 17 countries were enrolled in over 60 undergraduate and graduate degree programs. 79 percent were Montana residents.

2024-2025 Enrollment

- 2,224 undergraduate students; 628 freshmen
- 205 graduate students (master's and doctoral)
- 39.7 percent of students were female, 12 percent were minority, 2 percent were international

Average Class Size

- 19 students
- Montana Tech has a student/faculty ratio of 13:1

Retention and Graduation Rates

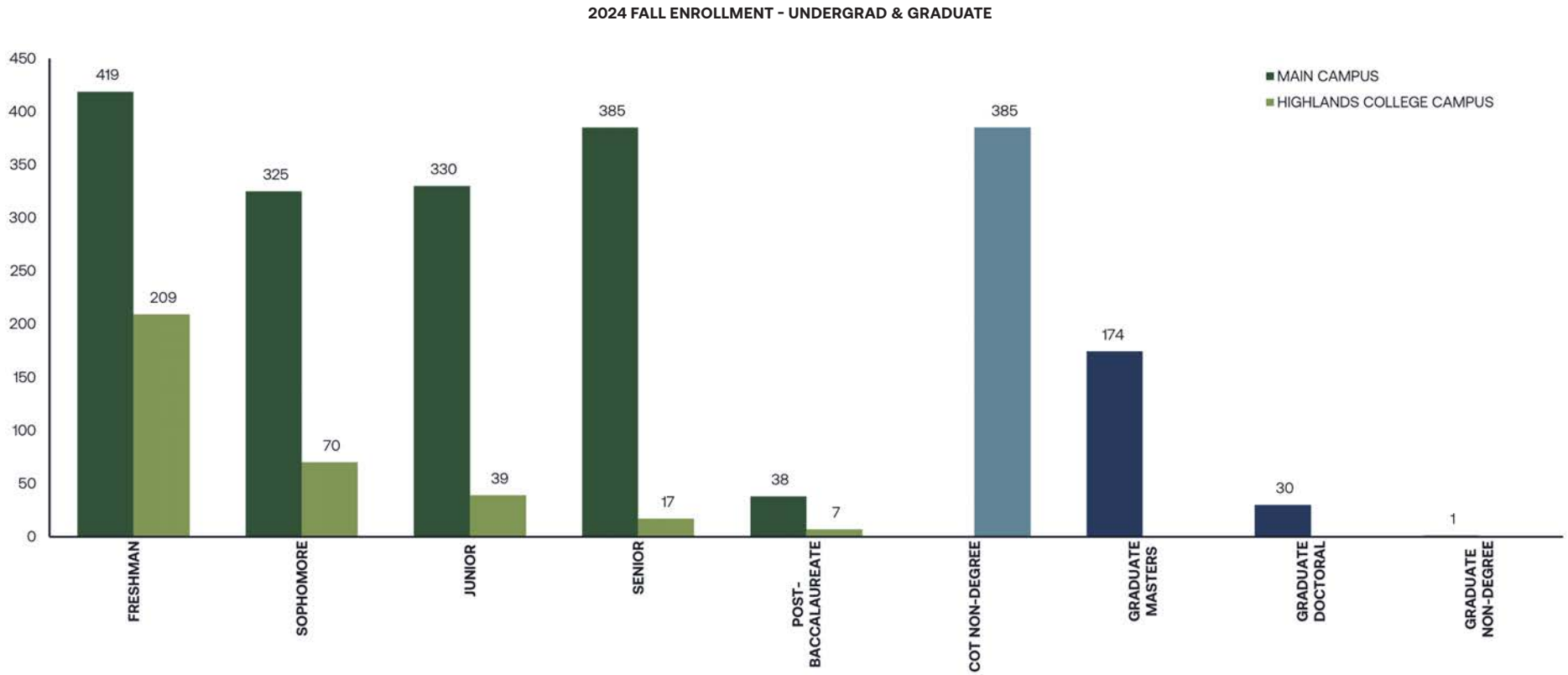
- 77 percent of first-year students return for sophomore year (Fall 2023 entering class)
- 57 percent 6-year graduation rate
- 534 degrees and certificates awarded in 2023-2024

Students participating in a club fair on campus (Montana Tech)

2.7 Student Enrollment

2024-2025 Total Enrollment

2,429 total students were enrolled at Montana Technological University in Fall 2024, across both the Main Campus and Highlands College Campus. Fall 2024 enrollment was the largest enrollment since pre-pandemic. Students came from 45 states and 1 territory, 79% were Montana residents. Students came from 17 countries; 2% were international.



2.7 Student Enrollment

Enrollment Distribution by Organizational Unit

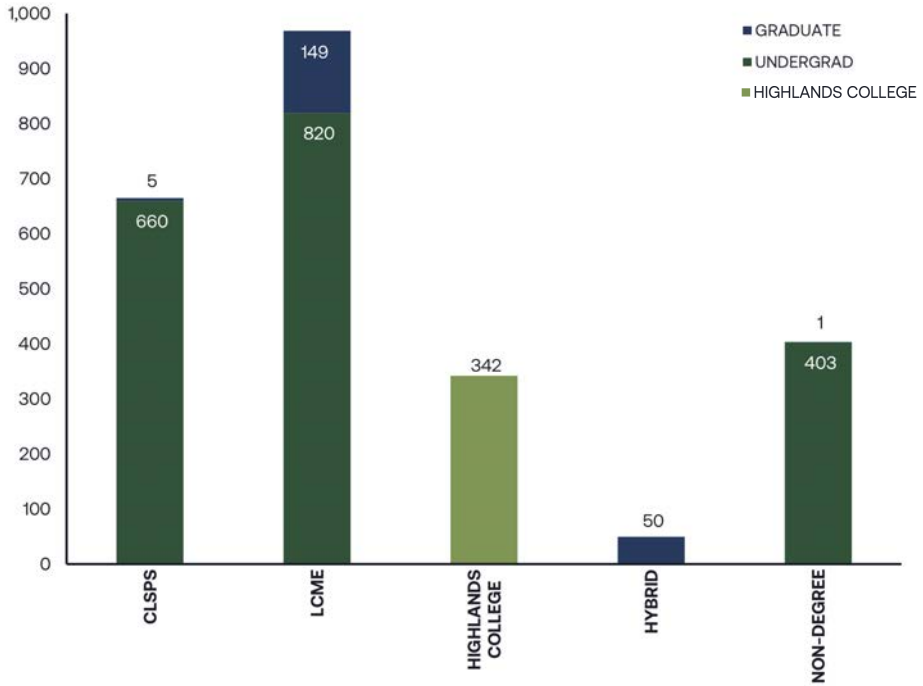
Montana Technological University is academically organized into colleges.

- College of Letters, Sciences, and Professional Studies
- Lance College of Mines and Engineering
- Highlands College (HC)

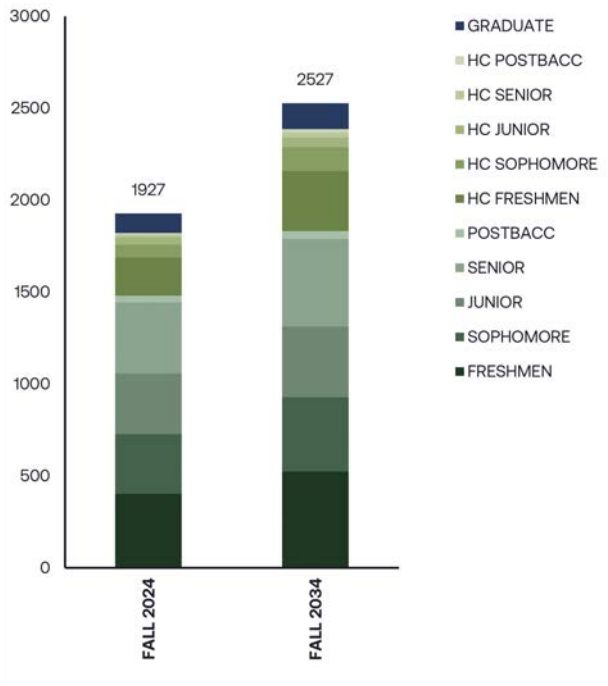
2024-2034 On-Campus Enrollment

This master plan has taken the position of focusing on on-campus enrollment as distance learning and on-line course offerings have historically had negligible impact to on-campus facilities and infrastructure. Two remote groups were specifically excluded from the 10-year projections, including dual enrollment high school students taking college-level courses through their local high school course offerings and distance only graduate programs.

2024 FALL ENROLLMENT BY COLLEGE



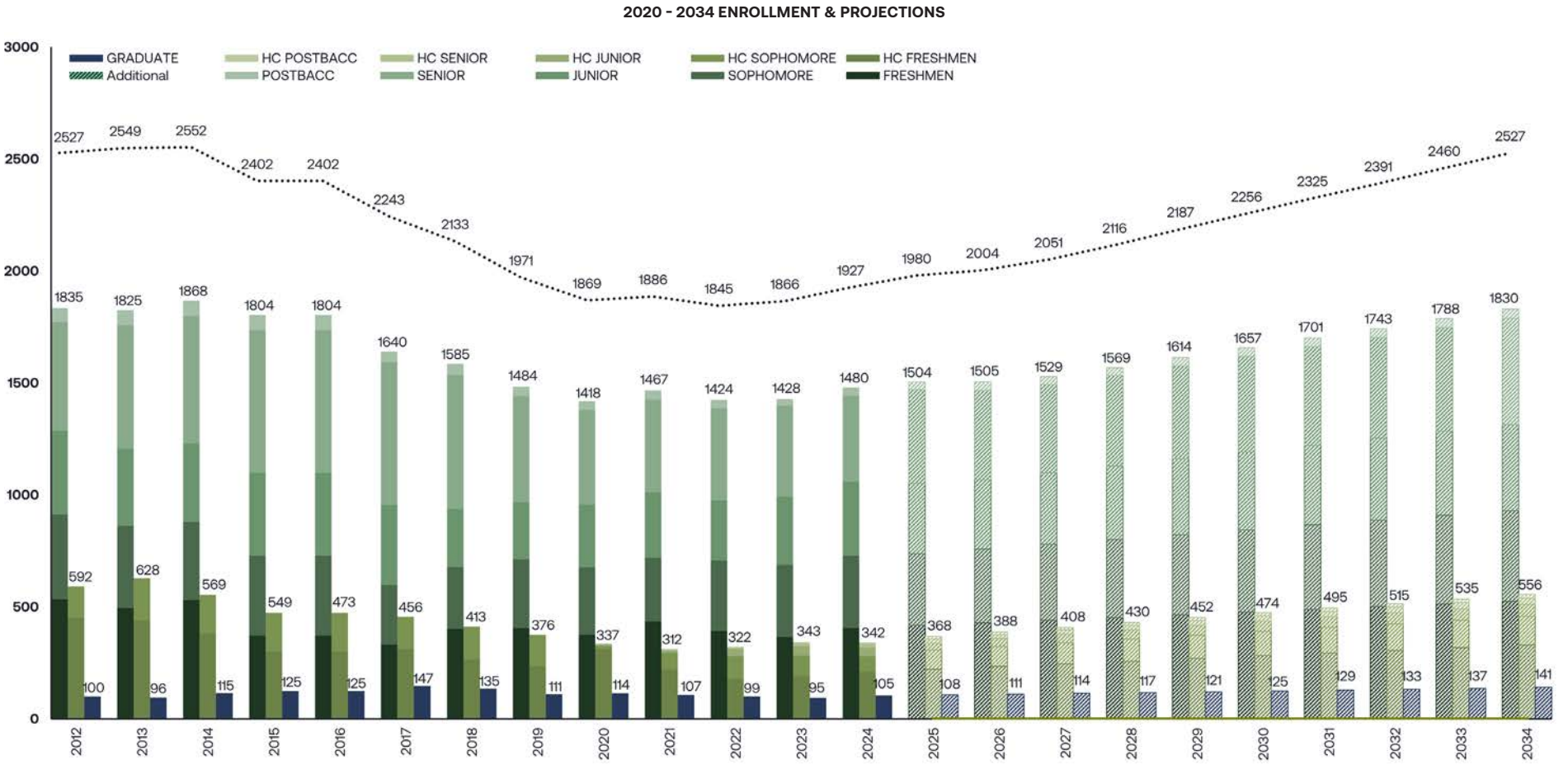
10-YEAR ENROLLMENT PROJECTION



2012-2034 On-Campus Enrollment History & Projections

The master plan assumes that on-campus student enrollment will grow by an average 3% year over year for an overall growth of 32 percent over the next decade. The median historical growth of each undergraduate category was taken from the Fall 2012 through Fall 2024 enrollment data to project enrollment numbers out to 2034.

Consideration for distance programs, which include off-campus concurrent enrollment high school students and online-only graduate students were specifically excluded from the projections as the intent of the master plan is to capture and address physical impacts to the campus facilities and infrastructure.

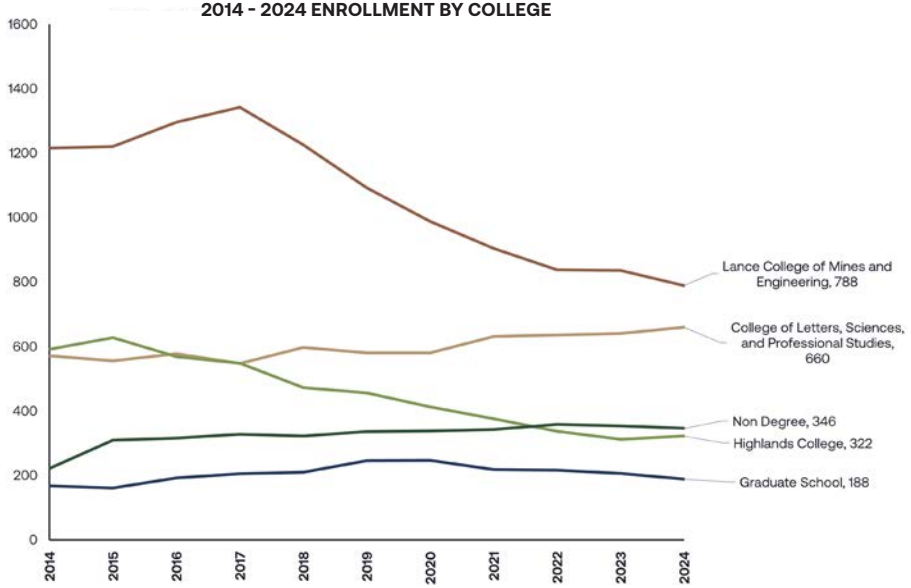


2.7 Student Enrollment

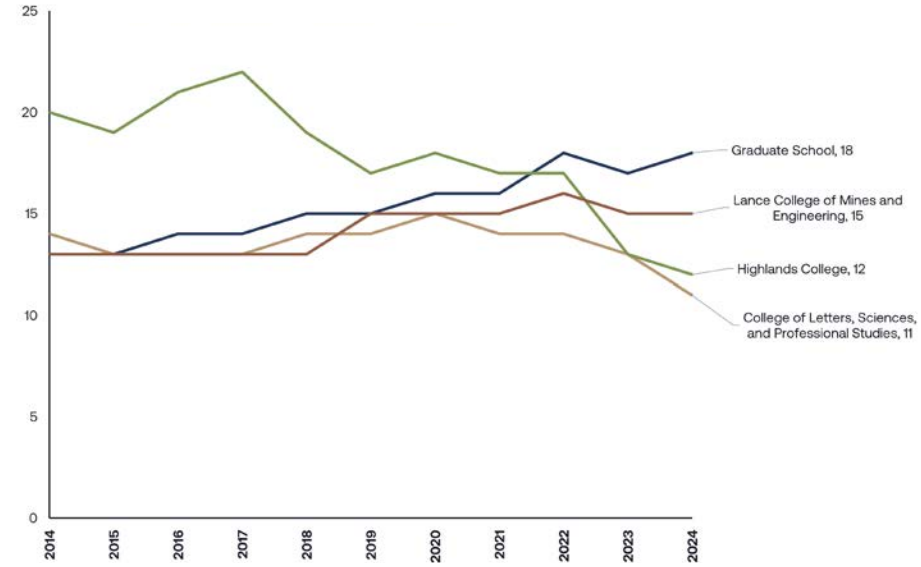
Enrollment by College

In Fall 2024, Lance College of Mines and Engineering enrolled 820 students, the College of Letters, Sciences, and Professional Studies 660 students, and Highlands College 342 students. Each college enrollment was diversified among 11 or more programs. The adjacent chart represents enrollment data by college over the last ten years. The chart below shows the number of majors per college or degree type over the last decade.

2014 - 2024 ENROLLMENT BY COLLEGE



2014 - 2024 NUMBER OF MAJORS BY COLLEGE



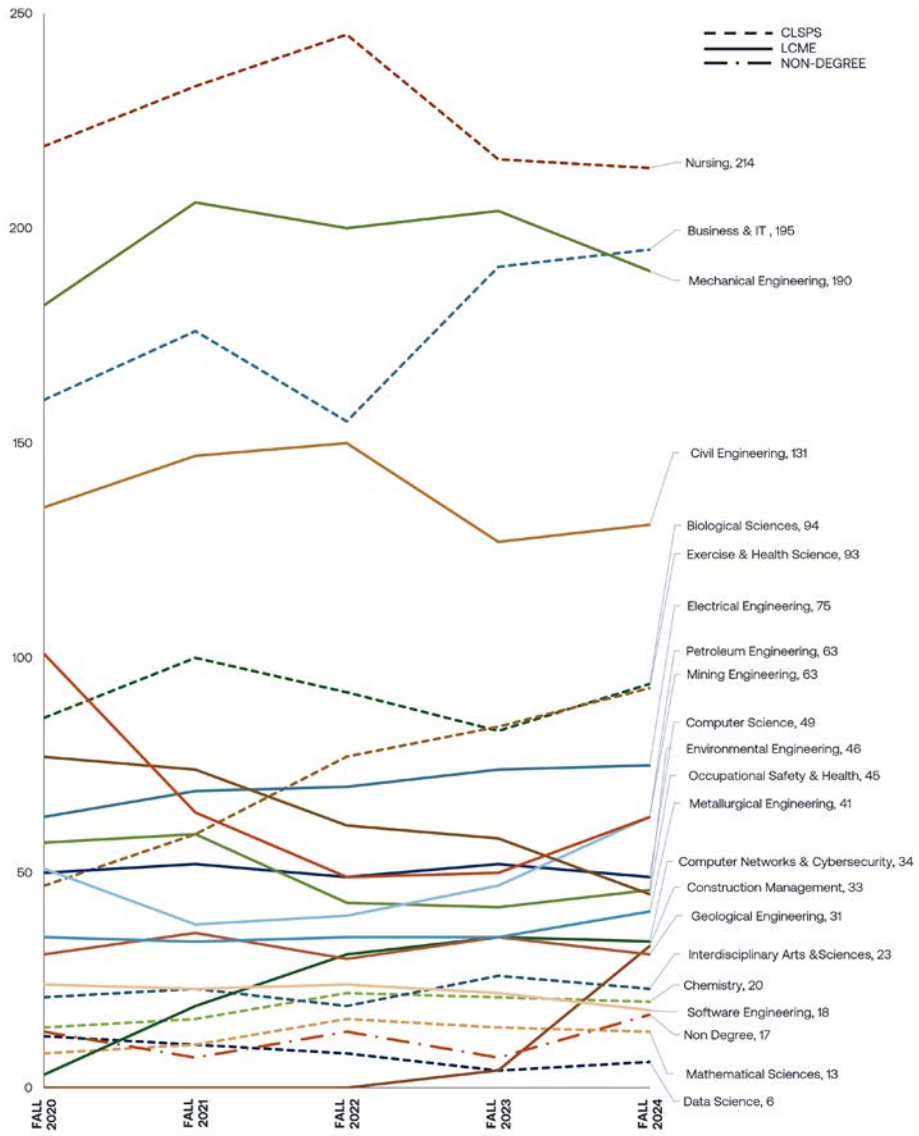
Enrollment by Undergraduate Major

Montana Technological University has 8 active undergraduate majors in the College of Letters, Sciences, and Professional Studies, 13 active undergraduate majors in the Lance College of Mines and Engineering. Enrollment data from the last five years is represented in the adjacent chart to provide perspective on recent enrollment trends.

2024 Top 5 Majors by Enrollment (enrollment in parentheses):

- Nursing (214)
- Business and Information Technology (195)
- Mechanical Engineering (190)
- Civil Engineering (131)
- Biological Sciences (94)

2020 - 2024 UNDERGRADUATE ENROLLMENT BY MAJOR



2.7 Student Enrollment

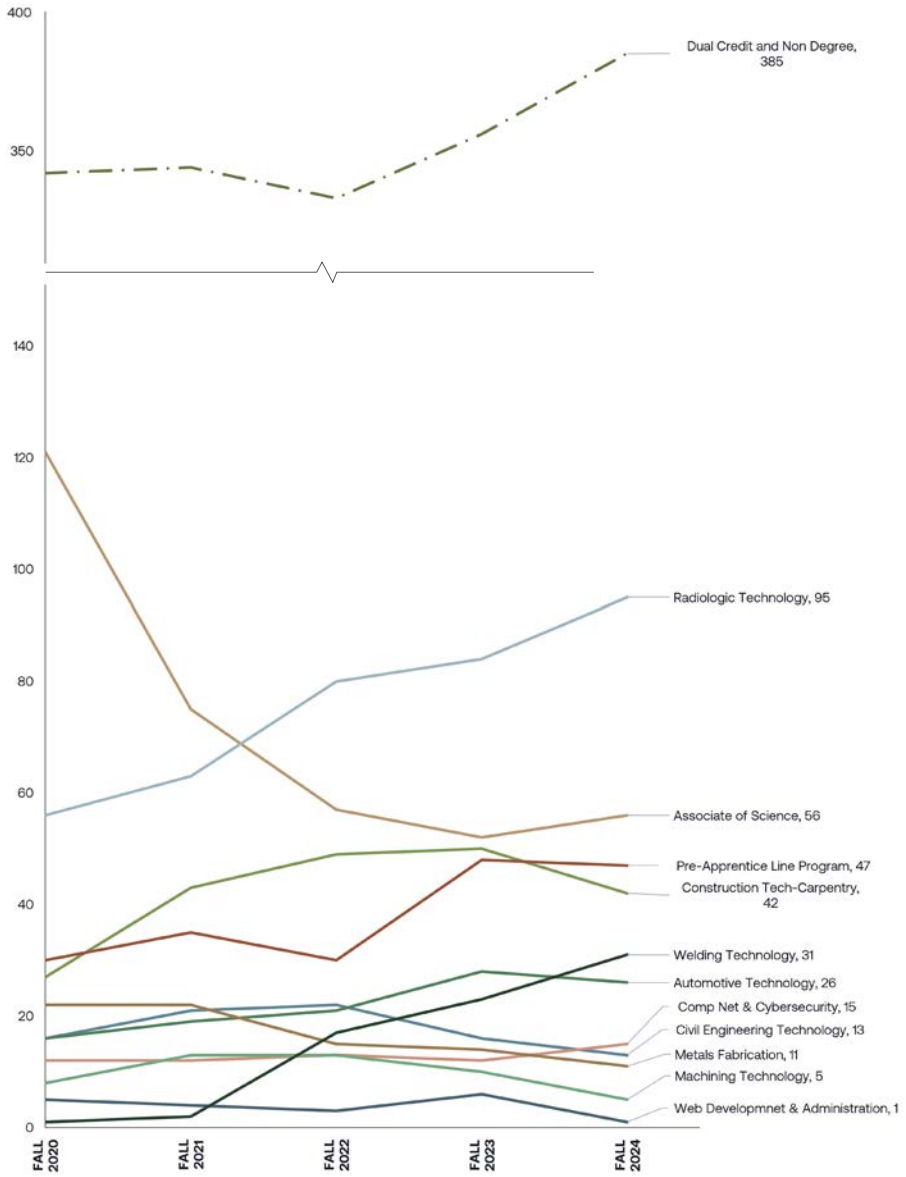
Enrollment by Program

Montana Technological University has 12 active programs at Highlands College. Enrollment data from the last five years is represented in the adjacent chart to provide perspective on recent enrollment trends.

2024 Top 5 Programs by Enrollment (enrollment in parentheses):

- Dual Credit / Non-Degree (385)
- Radiologic Technology (95)
- Associate of Science (56)
- Pre-Apprentice Line Program (47)
- Construction Tech-Carpentry (42)

2020 - 2024 HIGHLANDS COLLEGE ENROLLMENT BY PROGRAM

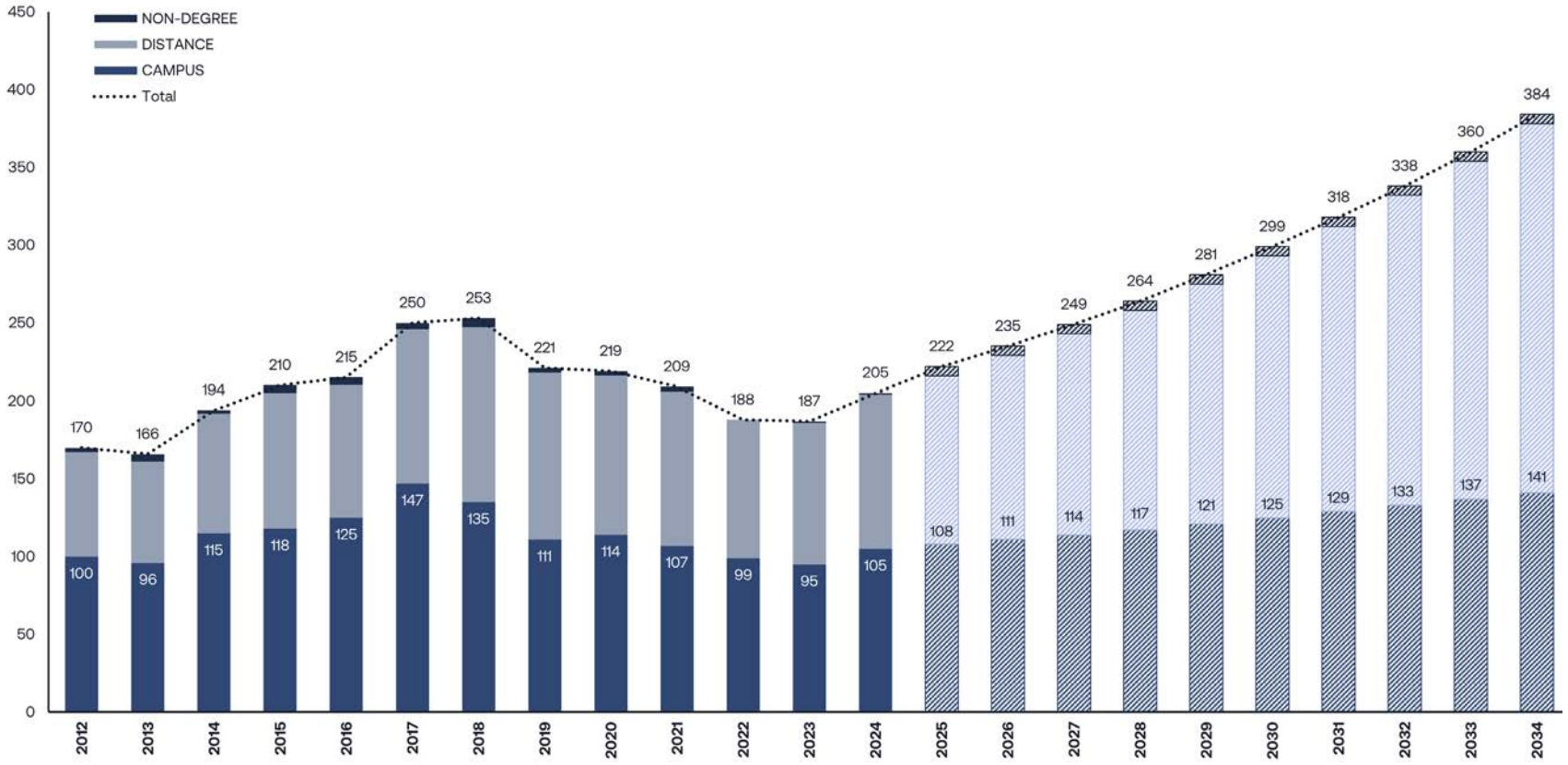


2012-2034 Graduate Enrollment

Historical data for graduate enrollment indicates a peak in 2018, with near to full recovery of graduate enrollment in 2024 from pre-pandemic levels. 10-year projections are based on current and anticipated grant awards and other funding, and direct inquiry with the Lance College of Mines and Engineering department heads.

The distance programs are anticipated to grow 9% annually, largely based on a 2024 Request to Plan. The on-campus graduate programs are anticipated to grow 3% annually, with the goal of returning to 2018 peak enrollment. In total, the graduate program is anticipated to grow 6% annually over the next 10 years.

2012 - 2034 GRADUATE ENROLLMENT & PROJECTIONS



2.7 Student Enrollment

Enrollment by Graduate Program

205 students were enrolled in graduate programs in Fall 2024, across 14 programs.

2024 Top 5 Graduate Programs (enrollment in parentheses):

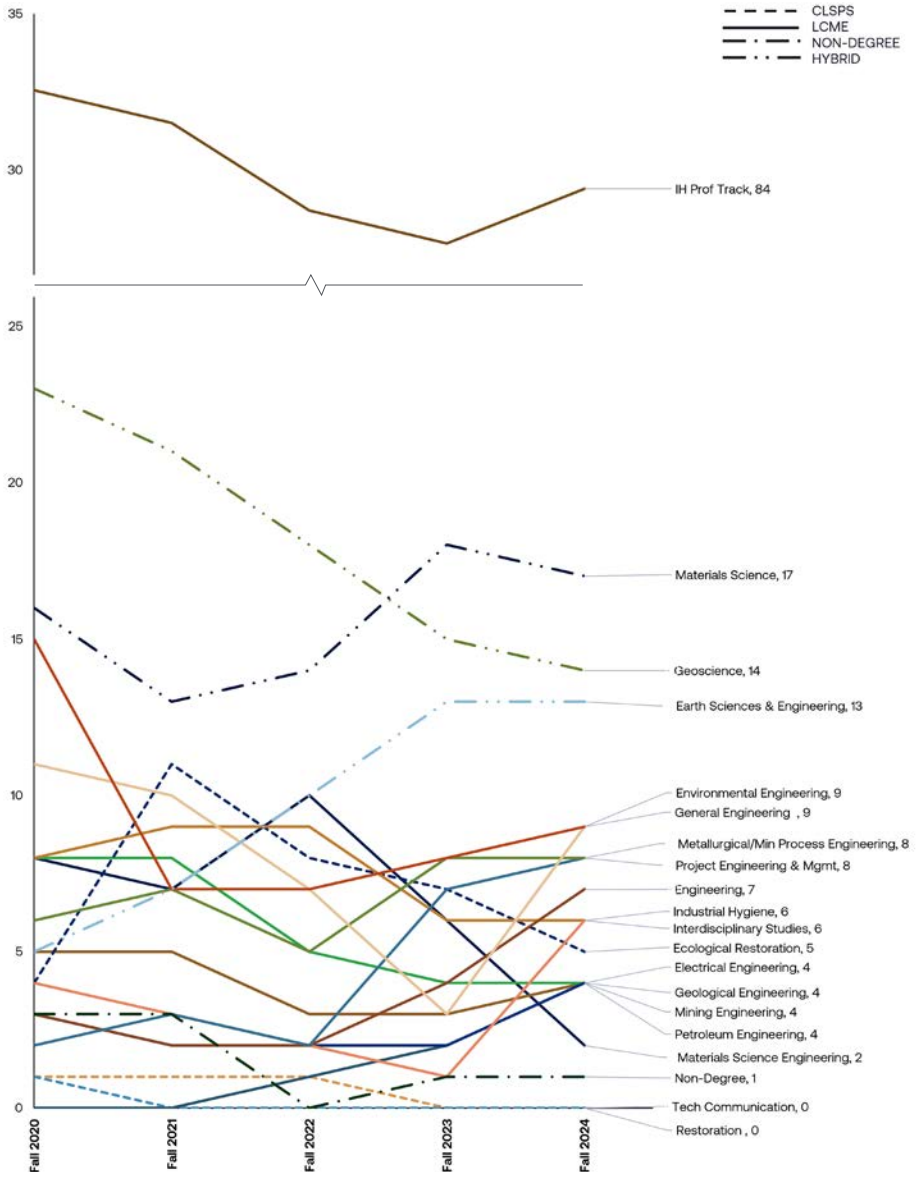
- Industrial Hygiene Professional Track (84)
- Materials Science (17)
- Geoscience (14)
- Earth Sciences and Engineering (13)
- General Engineering (9) tied
- Environmental Engineering (9) tied

Five of the graduate programs are distance programs and comprised roughly half of the graduate population. These programs include:

- Industrial Hygiene Professional Track (84)
- Project Engineering and Management (8)
- Engineering (7)
- Industrial Hygiene (6)
- Non-Degree (1)

A vast majority of the programs are housed within the Lance College of Mines and Engineering (LCME), with 3 programs identifying as hybrid and supported by both LCME and the College of Letters, Sciences and Professional Studies.

2020-2024 GRADUATE ENROLLMENT BY MAJOR

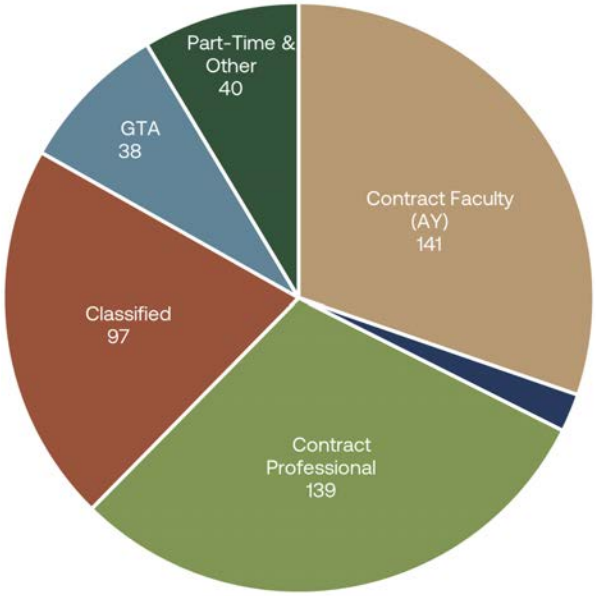


2.8 Faculty & Staff

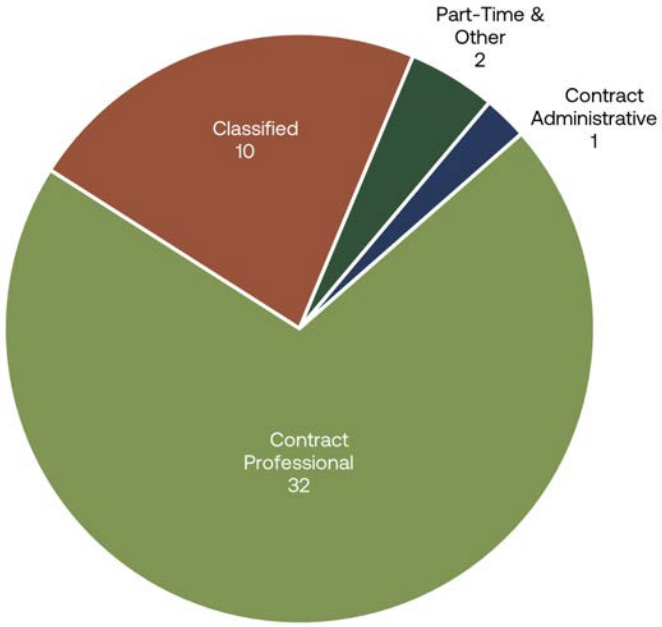
Montana Tech, in conjunction with the Montana Bureau of Mines and Geology, has 507 faculty and staff, including tenured faculty, research faculty, teaching faculty, and industry professionals providing students with a diverse range of expertise and perspectives. Staff provide student support services as well as administrative and program support in a student-centered environment.

For Fiscal Year 2024 (FY24), Montana Tech and the Montana Bureau of Mines and Geology collectively employed 510 FTE (141 Faculty, 331 Staff, and 38 Graduate Teaching & Research Assistants). Over the next decade, the master plan accommodates an expansion of the Montana Tech faculty and staff aligned with the projected on-campus student enrollment of 3% per year.

MONTANA TECH FACULTY & STAFF 2024



BUREAU OF MINES & GEOLOGY FACULTY & STAFF 2024



Existing Conditions

3

Historic Main Hall facade (Butte-Silver Bow archives, C. Owen Smithers Photograph Collection)

3.1 Boundaries & Land Use

3.1.1 Ownership

Parcels Owned by Montana Tech

The Montana Tech campus consists of parcels within the Town of Butte and surrounding region of Butte-Silver Bow County. Campus lands include approximately 175 acres split among three sites (acreage and property listings per Montana State Library Cadastral website):

- Main Campus (approx. 130 acres): The academic, research and administrative center of campus, over 60 different parcels make up the Main Campus property, listed under ownership of Montana Tech of the University of Montana or Montana College of Mineral Science and Technology.
- Highlands College Campus (41.03 acres): The home of Highlands College, located along Basin Creek Road just south of the Highway 2 intersection
- University Greens (6.86 acres): Off-campus apartment-style housing, located at the intersections of Missoula and Henry Avenue.

Parcels Within Montana Tech Boundary Not Owned by Tech

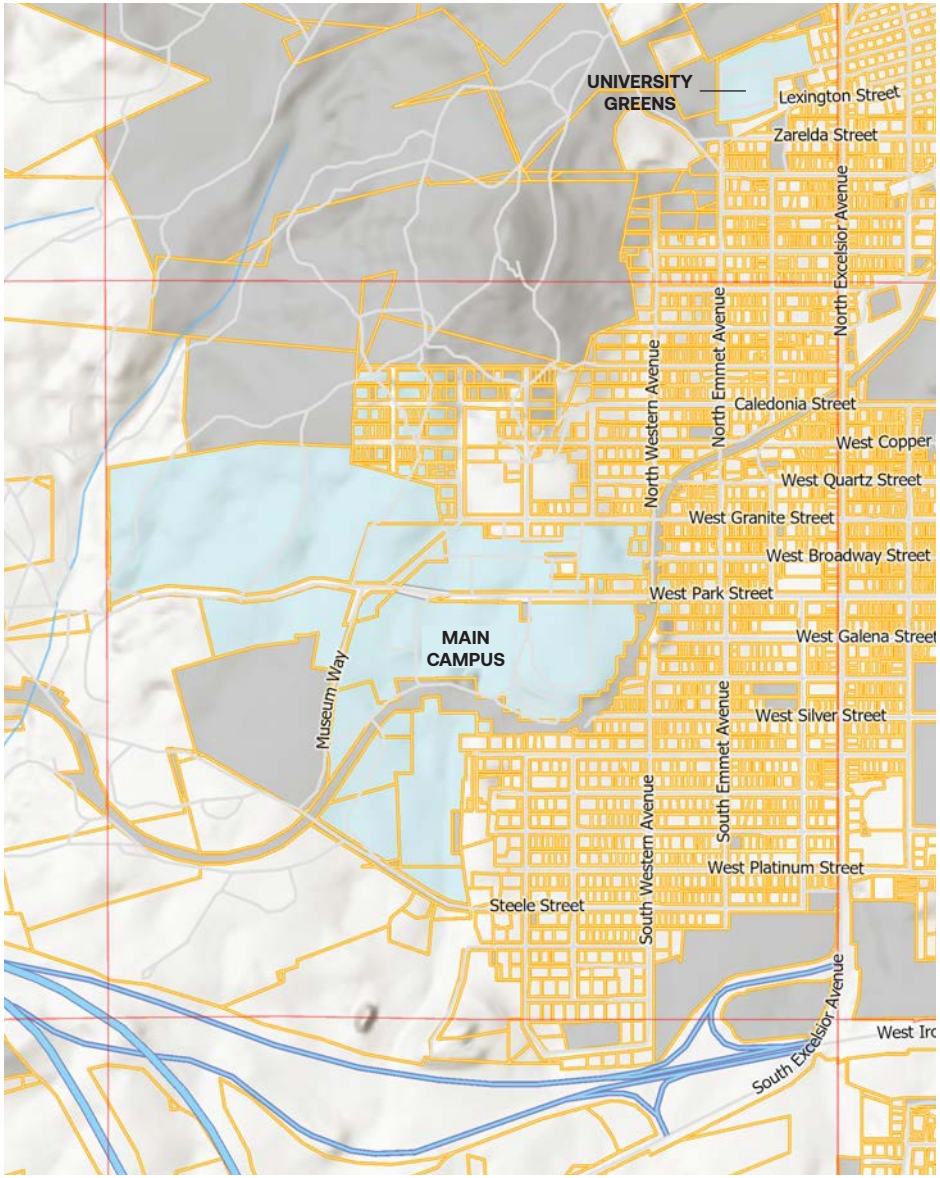
The Main Campus parcel is largely contiguous, but there are several exceptions where privately owned parcels are owned within the Main Campus boundaries:

- University Relations Center (URC): Property owned and operated by the Montana Tech Foundation (0.54 acres)
- 1330 W Granite Street, adjacent to the URC, owned by Big Ravine LLC (0.21 acres)
- 1330 W Granite Street, owned by Patricia Higinbotham (0.31 acres)
- 1205 and 1231 W Park Street, south of Centennial Hall, owned by James Miller (0.64 acres)
- 1235 W Park Street, south of Centennial Hall, owned by Montana Southern Baptist Fellowship (0.092 acres)

State of Montana:
Montana Tech Owned

Local Government:
Butte-Silver Bow Owned

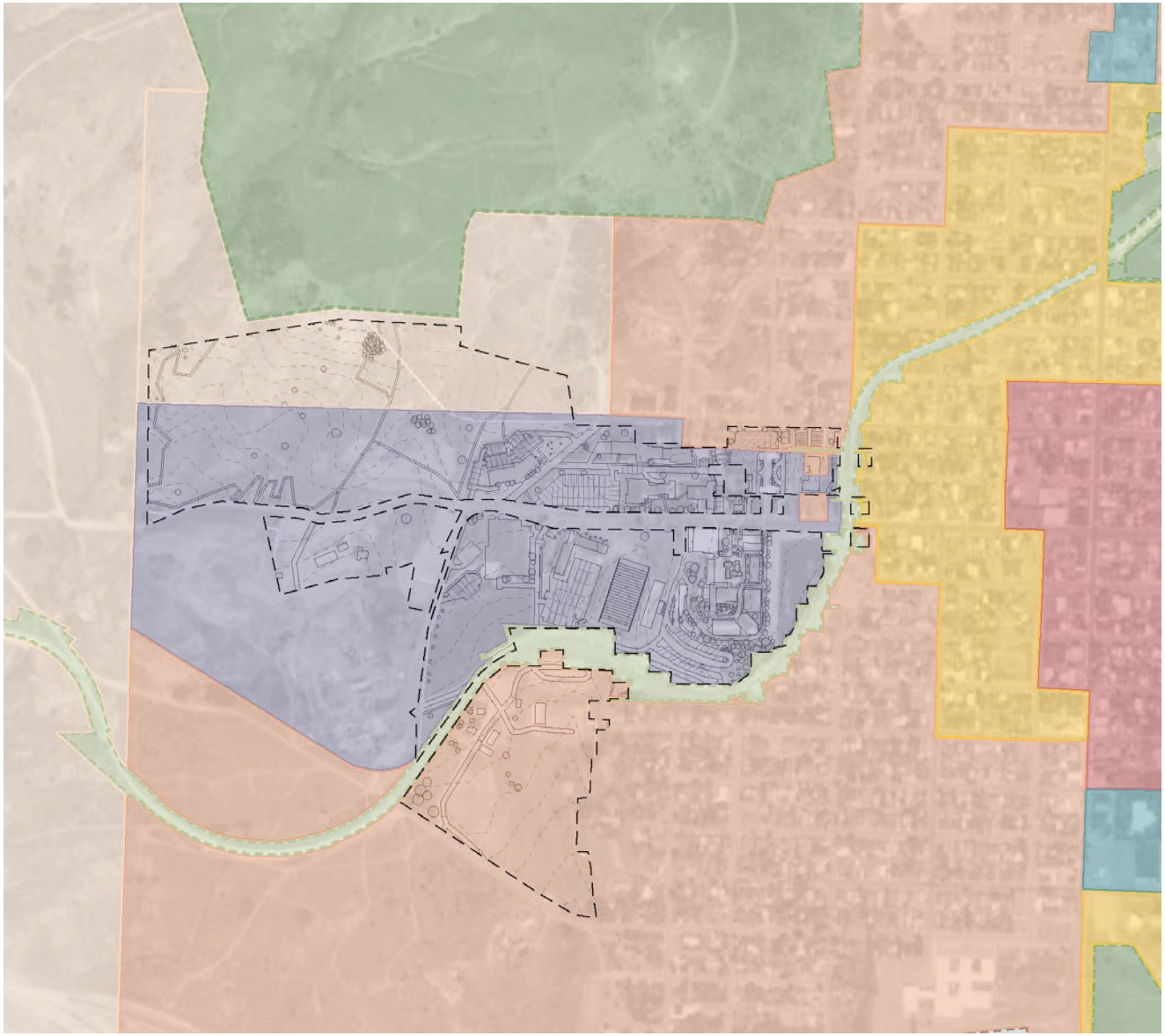
Private Owner Parcel



Cadastral Map of Main Campus and surrounding area (Montana Cadastral website)

3.1.2 Zoning

The majority of areas surrounding Montana Tech's campus are residential, either R1 One-Family or R2 Two-Family Residential. Residential zoning is most dense in and around the central business district of Butte, and gradually expands out from R3 Multi-family at the center of downtown Butte out to R1S One-Family Suburban Residential to the north and west of Main Campus. Open space to the north of Main Campus, including the Big Butte Open Space Park is zoned as Conservation Open Space, while the trail network running along the southern border of campus are designated as Developed Open Space.



Butte-Silver Bow Interactive Landuse, Zoning and Utilities Map, Zoning and Urban District Boundaries

3.1.3 Land Uses

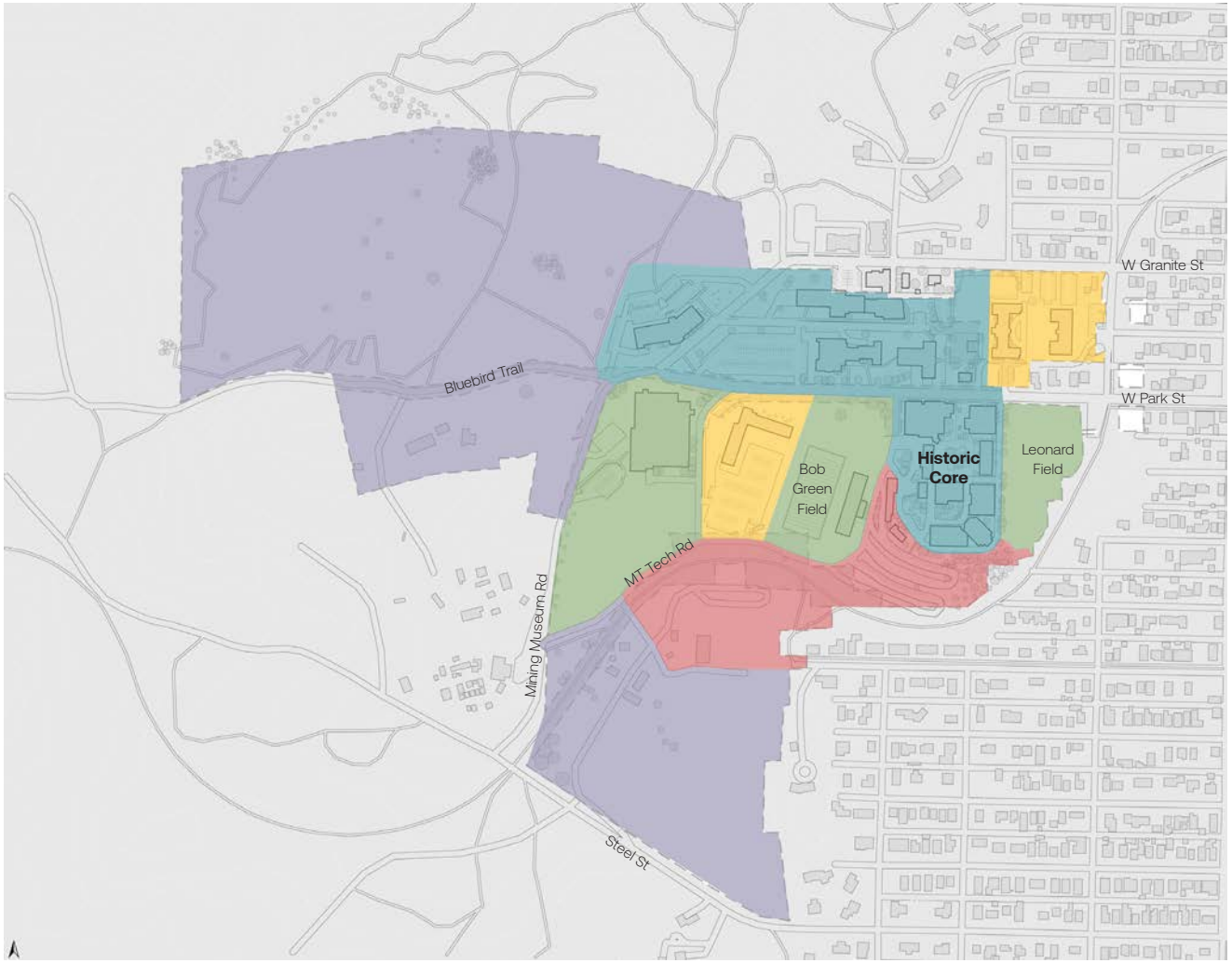
Land Uses Adjacent to Main Campus

Main Campus is bordered by downtown Butte to the east, open space to the north and immediate south, and undeveloped land to the far west. The surrounding areas are used for commercial, residential, recreational, and mining research and remediation activities. Steep topography in the immediate surroundings and within the campus boundaries are a natural barrier to rapid development.

- North of Main Campus is Big Butte, a steep hill with Montana Tech's letter "M" on the side. Leading up to Big Butte are residential neighborhoods and several hiking trails. Hiking trails lead off campus from the northwest into Big Butte Open Space Park and Whiskey Gulch trail system.
- To the east of campus is the City of Butte, with primarily residential and historic storefronts on the main thoroughfare of Park Street that leads from town into Main Campus.
- The southern edge of Main Campus is bound by the BA+P Hill Trail, which stands for Butte Anaconda and Pacific Railway. This historic paved trail starts in the community of Rocker, located southwest of Main Campus on the south side of Interstate Highway 15, and finishes on the hills above Butte at the Granite Mountain Spectacular Mine Memorial. The upper half of the trail (north of the Mining Museum) is paved, while the lower half of the trail is gravel. Further south of the trail are single-family residential neighborhoods.
- The western edges of campus are varied. The World Museum of Mining sits at the most southern and western edge of campus and is located on an actual mine yard - the Orphan Girl Mine. As one travels further north and west, while the land is zoned for R1 Suburban Residential, it is all owned by ARCO Environmental Remediation, LLC (AERL) and is part of the EPA superfund site Operable Unit 13 - West Side Soils.

Aerial of downtown Butte in the foreground, Montana Tech off to the left and Big Butte (Butte MT)

Entry to the World Mining Museum (www.MontanaPictures.net)



Legend

- Academic/Research
- Residential/Student Life
- Athletics/Recreation
- Facilities
- Expansion/Growth

Main Campus Land Uses

Although Main Campus has many uses, it is broken into major areas based on similar function.

The academic/research zone is centrally located along the northern edge of campus, while the historic core stretches south and encompasses a sweeping bluff overlooking downtown Butte.

Housing zones are divided into two quadrants, with the older housing developments located in the northeast quadrant of campus, while the newest on-campus housing is located toward the western built edge of campus adjacent to Bob Green Field.

Recreation zones are evenly distributed across campus, with an informal multi-purpose recreation field on the eastern edge of campus, Bob Green Field and Alumni Coliseum centrally located in the heart of Main Campus, and the HPER Complex and outdoor soccer field holding the western edge.

Campus facilities is located on the southwest edge of the historic core, backed by a terraced hill that drops steeply to the south that accommodates three tiers of surfaced campus parking.

The most southern and western extents of campus are largely undeveloped and remain opportunities for future campus expansion to accommodate the growing needs of Montana Tech.

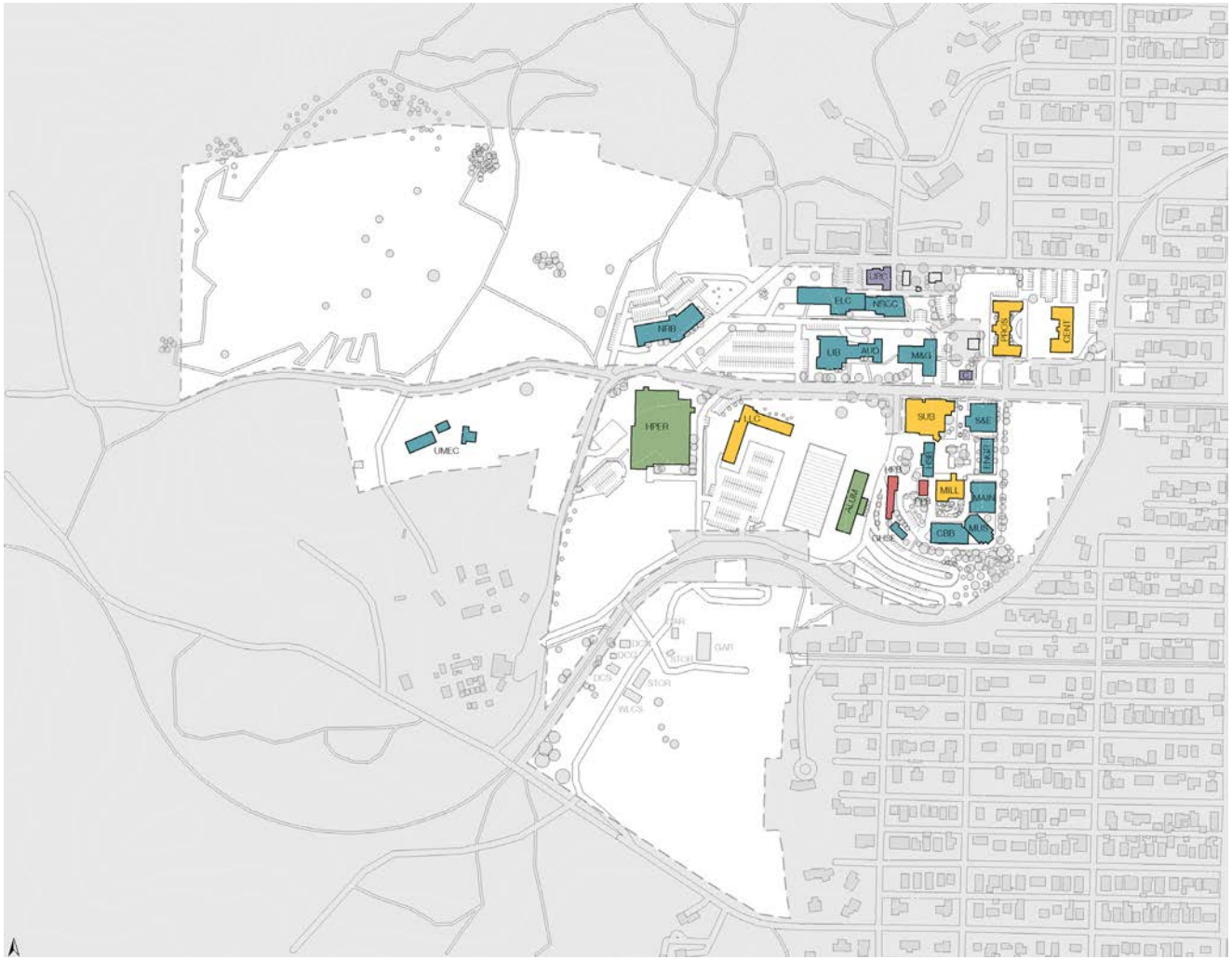
3.2 Building Use

Most campus buildings are multi-purpose, containing research, academic, and often administrative uses. The majority of buildings are academic or research-focused, with a mix of departments in each building. Academic buildings are primarily located in the historic core of campus and along the northern edge of W Park Street.

Student services and administrative functions are distributed across campus but largely focused along W Park Street and spread between the third floor of the Living Learning Center (LLC) and the Student Union Building (SUB). The Associated Students of Montana Tech (ASMT) student government is housed in the Mill Building, along with the Veteran's Lounge, while the Health Sciences Building (HSB) houses TRIO.

Administrative offices are distributed across campus, housed in the third floor of Mining and Geology (MG), the University Relations Center (URC), and the Living Learning Center (LLC).

Campus Facilities and the Physical Plant are on the southwest side of the historic core, overlooking Bob Green Field and the west side of campus.



Legend

- Academic/Research
- Residential/Student Life
- Athletics/Recreation
- Administrative
- Facilities

Building Use by Floor

The following pages offer graphic representation of the building's programmatic uses by floor across Main Campus and provide insight into the mixed-use nature of the facilities.

- Restroom
- Amenity/Resource
- Lab
- Circulation
- Office
- Gathering (conference, study, lounge)
- Classroom
- Computer Lab
- Storage/Utility (MEP/IT/storage)
- Housing

3.2 Building Use

3.3 Space Utilization & Needs

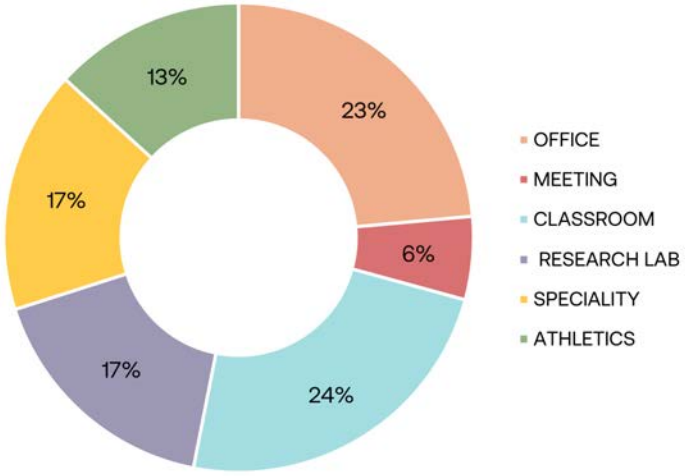
Current and future space needs were evaluated based on utilization and enrollment data analysis, as well as projected enrollment and predicted future needs. Both projected space needs and current conditions and utilization of existing spaces were used to complete this analysis.

The space utilization and needs analysis is organized by type of space, which was then translated into separate areas for development within the Master Plan. The five space types analyzed are:

- Housing and Dining
- Classrooms
- Research Spaces
- Officing
- Parking

Current space use distribution on the Main Campus is represented in the following chart. Specialty spaces include the on-campus Mineral Museum, library, student support services, student study and lounge spaces, dining facilities and the campus bookstore.

SPACE USE BY CATEGORY



3.4 Housing and Dining

3.4.1 Housing

On-campus housing at Montana Tech is served by three primary dormitory-style residence halls:

- Prospector Hall (PROS): The first and original residence hall at Montana Tech. Home to just under 200 first-year students, this historic building is also home to the Office of Residence Life.
- Centennial Hall (CENT): Built in 1998, Centennial serves approximately 100 first-year students and consists mostly of traditional double occupancy rooms as well as suite style rooms.
- Living Learning Center (LLC): Montana Tech's newest residence hall, opened in 2019. Home to both upper class and first-year students, the LLC provides a variety of room options and facilities. Student housing here is located on the first and second floors, while the third (top) floor houses the Student Success Center (SSC) and Charlie's Bistro, one of the on-campus dining options.

Together, the on-campus residence halls provide 460 beds, with approximately 20 beds assigned to Resident Assistant's (RA's) each year.

Montana Tech also owns an off-campus apartment housing complex, University Greens, located approximately one mile north of Main Campus. It consists of three complexes, 60 units in total, with 2- and 3- bedroom apartment units. Apartments are available to Montana Tech students and are assigned according to a priority list as they become available.

Living Learning Center (Oz Architects)

Centennial Hall (Montana Tech)

Prospector Hall (Montana Tech)

Based on the projected enrollment numbers and current lack of affordable housing options in the Butte area, Montana Tech is looking to gradually increase capacity and provide an additional 300+ on-campus beds for their undergraduates over the next ten years.

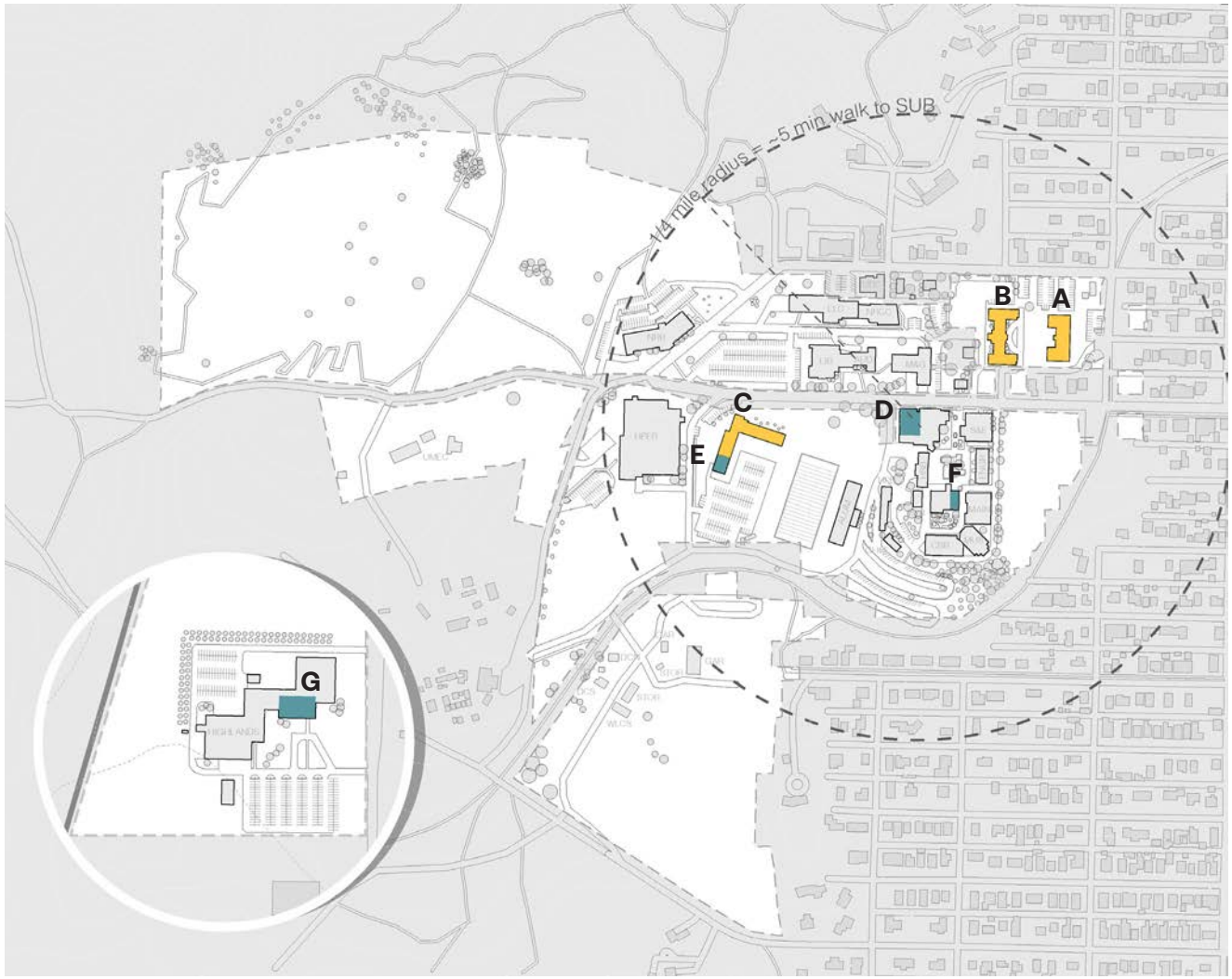
In today's terms, the current on-campus housing facilities barely meet the capacity needs of the incoming freshman class. With transfer students and sophomores that were looking for on-campus housing for Fall 2024, the demand was greater than the available beds and the University proactively converted a number of non-dormitory spaces within the existing residence halls to house all students that applied for on-campus housing.

Looking ten years out, should the enrollment projections track, the University would no longer be able to provide housing to all first time students.

	Fall 2024	Fall 2034	Population Change 2024 -2034	% Change 2024-2034	Annual % Change
UNDERGRADUATE					
First Year North Campus	405	525			2%
First Year Subtotal	**405**	**525**	**120**	30%	2%
Sophomores North Campus	324	405			2%
Sophomore Subtotal	**324**	**405**	**81**	25%	2%
TOTAL North Campus Students	**729**	**930**	**201**	28%	2%

ON-CAMPUS HOUSING	Fall 2024	Fall 2034
Centennial Hall		
Singles	43	43
Doubles	130	130
Suite Singles	0	0
Suite Doubles	24	24
Centennial Subtotal	**197**	**197**
Prospector Hall		
Singles	3	3
Doubles	62	62
Suite Singles	32	32
Prospector Subtotal	**97**	**97**
Living Learning Center		
Singles	90	90
Doubles	64	64
Suite Singles	12	12
LLC Subtotal	**166**	**166**
TOTAL Beds	**460**	**460**
RA Beds	20	20
AVAILABLE Beds	**440**	**440**
BEDS SURPLUS/DEFICIT (First Year Only)	35	(85)
BEDS SURPLUS/DEFICIT (First Year + Sophomore)	(269)	(490)

3.4 Housing and Dining



On-Campus Housing
460 beds

A Centennial Hall 197 beds
B Prospector Hall 97 beds
C Living Learning Center 168 beds

Off-Campus Housing
60 units

University Greens (not shown)

Dining Locations
239 seats

D Marcus Dining 196 seats
E Charlies Bistro 35 seats
F Mill Coffee 8 seats

G Highlands 88 seats

3.4.2 Dining

Montana Tech offers a variety of dining service options to their students. The main dining facility, which is buffet style / all you can eat, is Marcus Daly Dining Hall, located on the second floor of the Student Union Building. Other retail dining options on the Main Campus include Charlie's Bistro, on the third floor of the LLC, and the Coffee Mill, located on the first floor of the Mill Building. On Highlands College Campus, students have access to the Highlands dining facility.

Hours and services vary across the options:

Marcus Daly Dining Hall: Seven days a week
Monday - Friday
Breakfast: 7:30am - 9:30am
Lunch: 11:00am - 1:30pm
Dinner: 5:00pm - 7:30pm

Saturday - Sunday
Brunch: 10:00am - 1:30pm
Dinner: 5:00pm- 7:30pm

Charlie's Bistro: Monday – Friday
7:00am – 5:00pm

Coffee Mill: Monday – Friday
7:00am – 5:00pm

Highlands: Monday – Friday
6:30am – 2:00pm

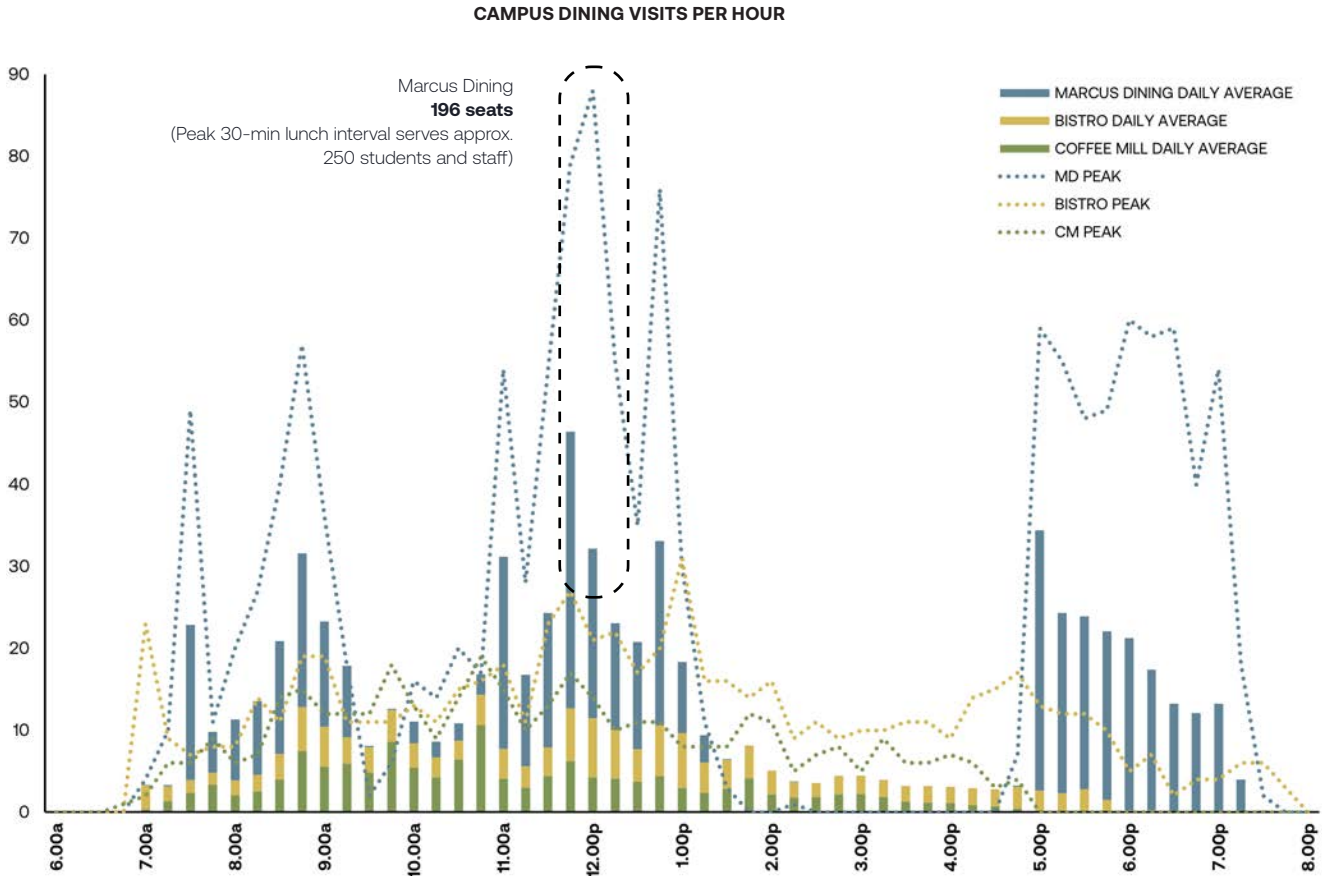
Utilization data for the dining facilities was gathered using card swipes and cash/card transactions from the Fall 2023 semester and analyzed to better understand the current service levels relative to seating capacity.

Montana Tech administration serving a special late-night breakfast in the dining hall (Montana Tech)

Students eating late-night breakfast at Marcus Daly Dining Hall (Montana Tech)

Main Campus Dining

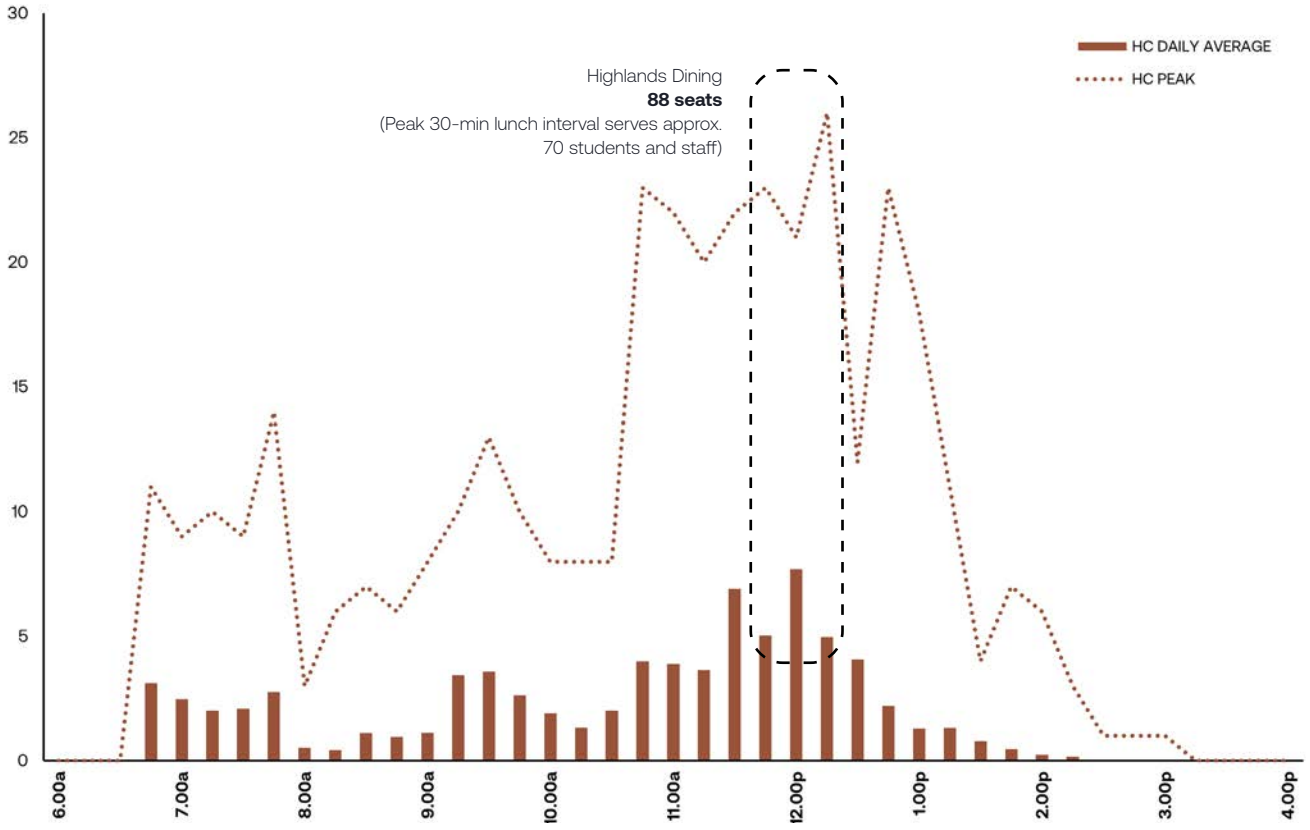
On Main Campus, typical peaks were confirmed over the breakfast, lunch and dinner hours, with the lunchtime noon hour recorded as the busiest time. Marcus Dining Hall is the busiest venue, serving approximately 250 students and staff between the peak intervals of 11:45am and 12:15pm. The challenge at this location is seating capacity, as Marcus Dining is arranged with just under 200 seats, finding a place to sit over the lunch hour can be difficult. Assuming student enrollment continues to rise, the University should consider expanding the seating capacity at Marcus Dining or expanding the dining services and offerings at other locations on Main Campus to accommodate the future demand. That said, Marcus Dining is the main dining facility and is most centrally located to classrooms and labs students and staff are moving between over the lunch hour, and likely will continue to be the preferred dining venue into the future.



Highlands College Campus Dining

On Highlands College Campus, the Highlands dining facility sees similar peak traffic around the lunch hour. Here the rush of approximately 70 students and staff between 11:45am and 12:15pm is comfortably accommodated with nearly 90 seats available. The University should monitor Highlands College enrollment in tandem with future expansion of programs or course offerings at this site to expand seating capacity as the need arises.

HIGHLANDS COLLEGE DINING VISITS PER HOUR

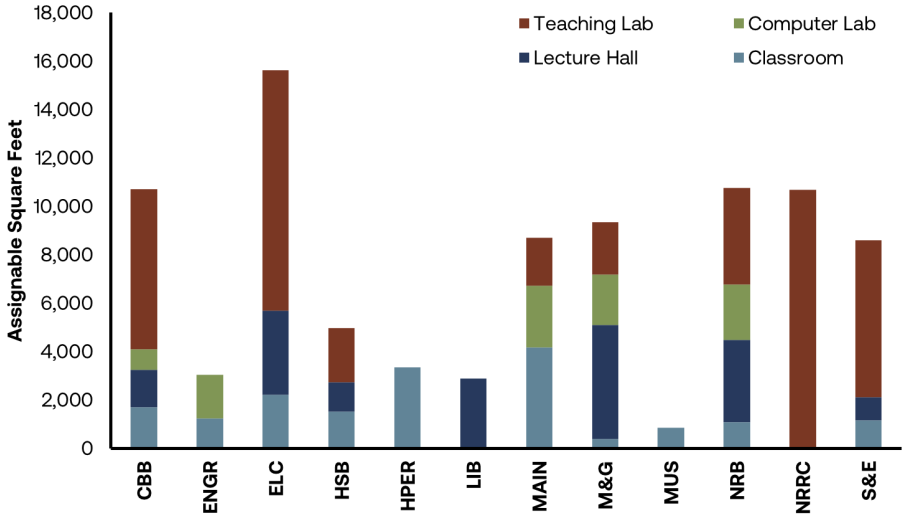


3.5 Classrooms

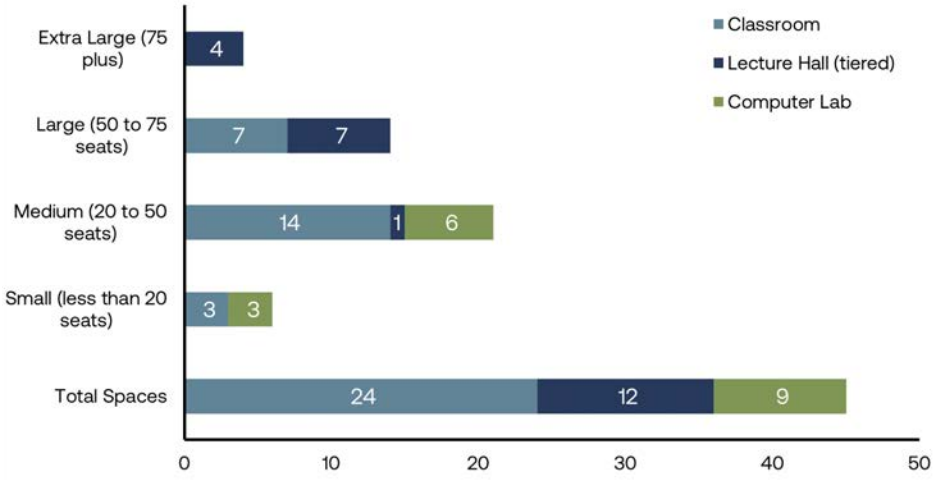
Classrooms, computer labs and teaching lab spaces controlled by the registrar on the Main Campus make up approximately 24% of the total assignable square footage on campus and are distributed across 12 buildings.

There are 45 total classroom spaces on Main Campus, excluding teaching labs. These rooms range in size from small, capacity of 20 or less, to extra-large, capacity of 100 or more. A majority of classrooms seat between 20-50 students.

REGISTRAR CONTROLLED SPACE BY BUILDING

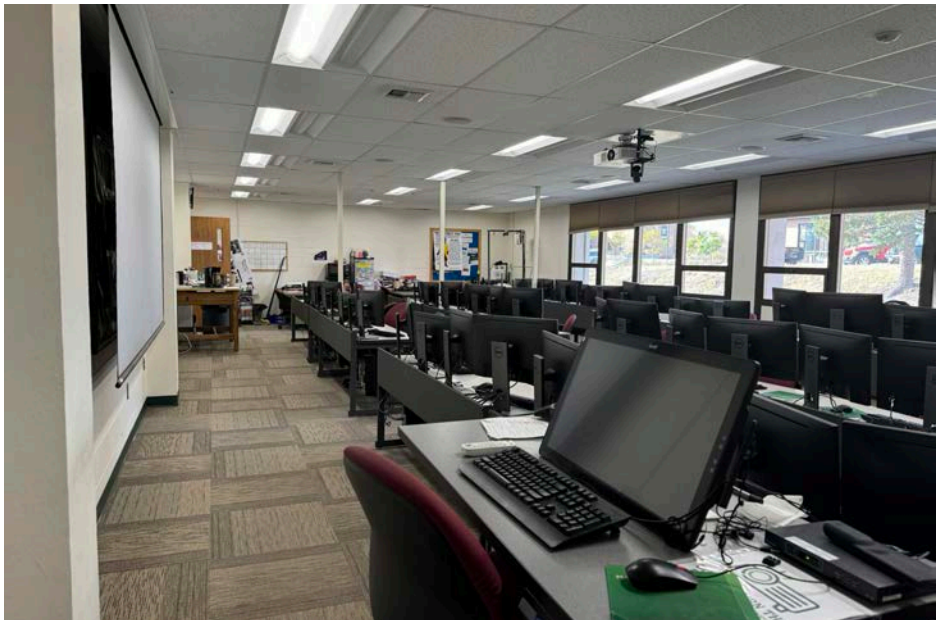


TEACHING SPACES BY SIZE



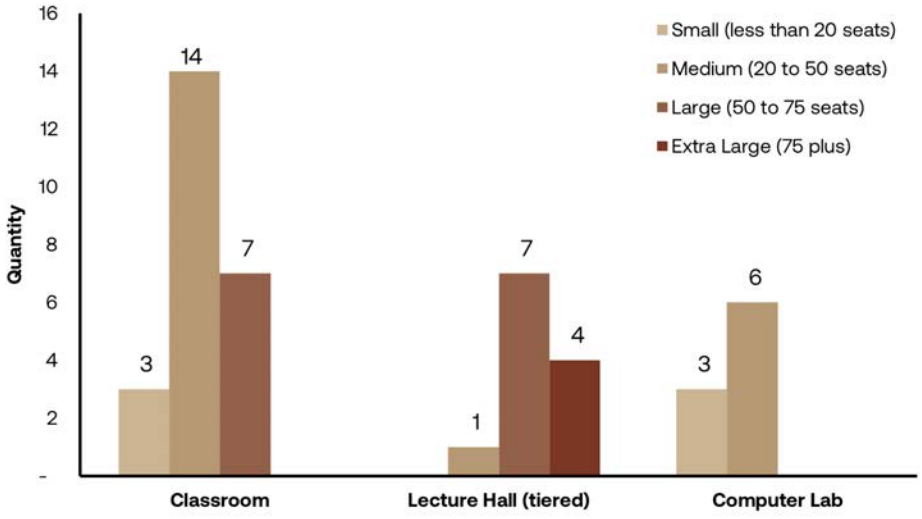
3.5 Classrooms

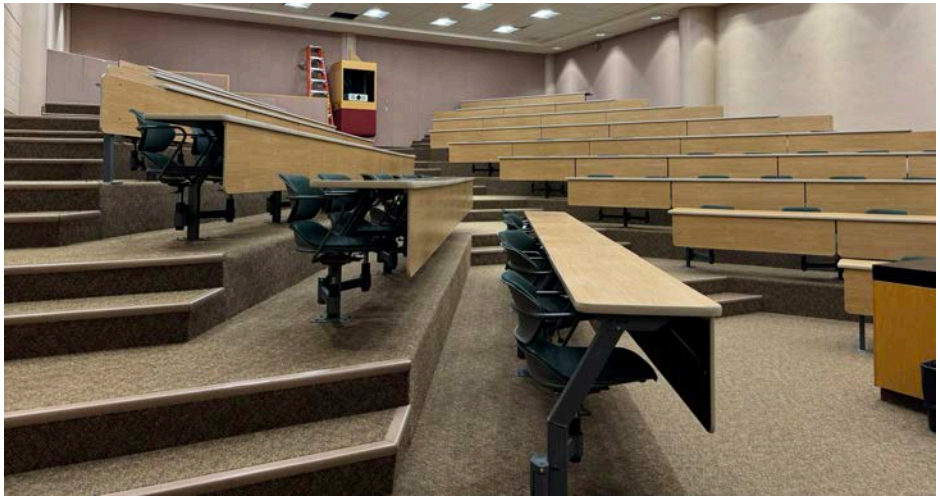
While a majority of the classroom spaces are flat floor, the higher occupancy classrooms on campus are all tiered classroom or auditorium-style seating with built-in furnishings. In recent years, these spaces have been more challenging to schedule and teach in from an instructional perspective as they do not afford the flexibility to accommodate alternative modes of student engagement desired by modern teaching pedagogies. There are currently no flat floor classrooms on the Main Campus that are sized to accommodate more than 70 students.



Computer class lab in the Mining & Geology Building (Anderson Mason Dale Architects)

TEACHING SPACES BY CLASS TYPE





Tiered lecture classroom in the ELC building (Anderson Mason Dale Architects)

Classroom Utilization

The design team, with the assistance of the registrar's office, conducted an analysis of academic use of campus facilities to help identify under- or over-utilized space, as well as gain an understanding of what types of facilities might be needed in the future. Both Main and Highlands College Campus classroom spaces under the scheduling purview of the registrar were analyzed to gain an understanding of how specific rooms and buildings are used, and to identify overall trends in class size and room occupancy.

Raw enrollment data was provided by the University for the Fall 2023 semester. The raw data was then used to calculate the following metrics which are based on room use throughout the week, Monday through Friday, 8am-4pm (40 hours).

- Room Utilization – Percentage based on hours reported for academic use divided by 40 hours per week.
- Weekly Room Hours (WRH) – Total hours per week of all academic use (for example, if you had five classes that met five hours per week, then the WRH equals 25 hours).
- Weekly Student Contact Hours (WSCH) – Equals the total number of students using a room multiplied by the Weekly Room Hours; for example, if you had five classes that met five hours per week then WRH is 25 hours and if all of those classes had 10 students each then WSCH is 250 (25 x 10 = 250).
- Student Station Occupancy (SSO) – Percentage based on Weekly Student Contact Hours (WSCH) divided by the room capacity.
- Average Section Size – The total number of students divided by the total number of sections.

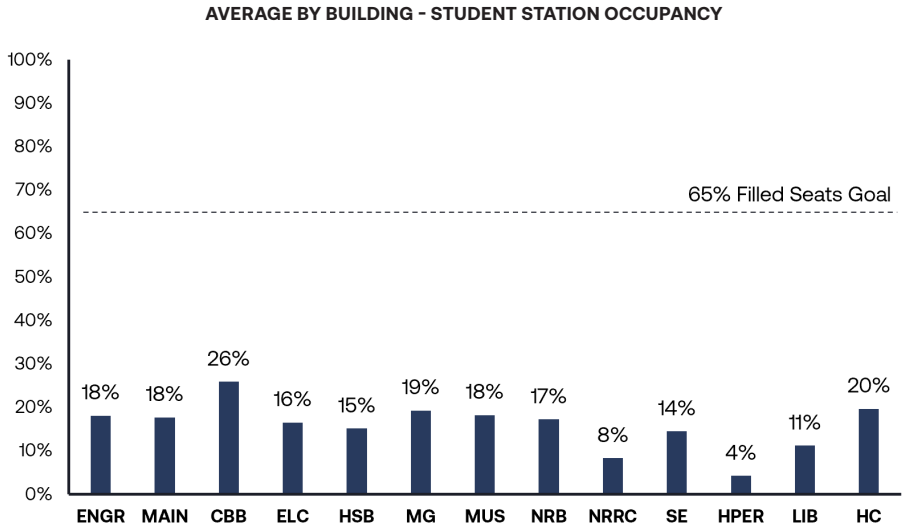
The Montana University System (MUS) Office of the Commissioner of Higher Education (OCHE) does not have guideline recommendations for classroom utilization rates, so the design team looked to the space standards and target utilization rates that Montana State University Office of Space Planning and Management has published.

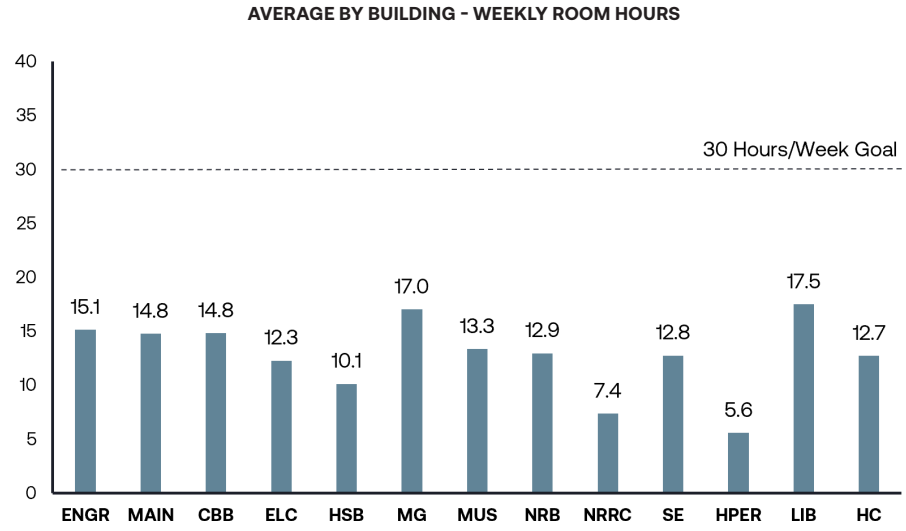
MSU has identified the following utilization targets for classrooms and instructional labs:

Space Type	Room Use	Utilization Rate (Hrs)	Utilization Rate (%)
Classroom	1-24 Seats	30	75
	25-50 Seats	32	80
	51-100 Seats	32	80
	>100 Seats	34	85
Classroom / Labs Seats	All Classrooms & Instructional Labs	-	85
Lab	Research Lab	TBD	TBD
	Instructional Lab	34	85

3.5 Classrooms

For Montana Tech, the overall weekly room hours and student station occupancy across both campuses are lower, and in some cases significantly lower than the MSU target utilization rates. Highlands College Campus is represented as HC (Highlands College) in the charts to the left. (See Appendix for full representation of the utilization data charts across both campuses).



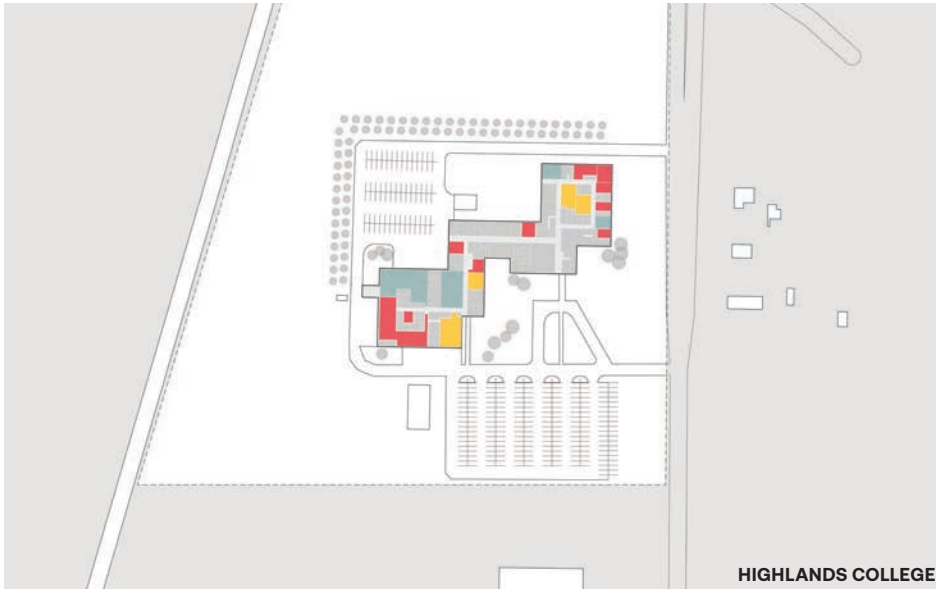


Graphic Classroom Utilization

In the Highlands College Campus floor plan below and Main Campus plan graphics on the following page, classroom utilization is represented graphically relative to the weekly room hours. As can be visually understood, a vast majority of classrooms on both campuses are utilized less than 15 hours per week.

Classrooms > 15 WRH
Under 15 WRH
Under 10 WRH

3.5 Classrooms



Classrooms > 15 WRH
Under 15 WRH
Under 10 WRH

Daily Campus Activity

Daily attendance, based on class scheduling from Fall 2023, was also evaluated to gain an understanding of peak academic activity, when both students and faculty were on campus.

Main Campus has the greatest concentration of students in class between the hours of 9am-1pm, with lighter class activity from 8am-9am and 1pm-5pm. Tuesdays and Thursdays are more heavily scheduled than Monday and Wednesday, with Friday's having the lightest scheduling.

Highlands College Campus has a relatively steady schedule going from 10am-5pm, with peak activity occurring between 5pm-6pm on Monday's and Wednesdays. The campus is quiet on Monday and Wednesday mornings and all-day Friday.

MAIN CAMPUS DAILY ATTENDANCE

TIME		MON	TUE	WED	THU	FRI	AVERAGE
7:00 AM	7:59 AM	9	31	9	98	0	29
8:00 AM	8:59 AM	419	515	421	482	246	417
9:00 AM	9:59 AM	686	888	674	895	545	738
10:00 AM	10:59 AM	682	778	612	829	590	698
11:00 AM	11:59 AM	584	785	572	875	426	648
12:00 PM	12:59 PM	769	997	693	970	424	771
1:00 PM	1:59 PM	540	616	492	629	358	527
2:00 PM	2:59 PM	497	616	517	482	330	488
3:00 PM	3:59 PM	331	598	391	580	131	406
4:00 PM	4:59 PM	180	420	318	407	28	271
5:00 PM	5:59 PM	150	100	119	37	0	81
6:00 PM	6:59 PM	150	109	105	54	0	84
7:00 PM	7:59 PM	0	57	69	17	0	29
8:00 PM	8:59 PM	0	25	14	1	0	8
9:00 PM	9:59 PM	0	0	14	0	0	3
	TOTAL	4997	6535	5020	6356	3078	
	AVERAGE	**333**	**436**	**335**	**424**	**205**	

HIGHLANDS COLLEGE DAILY ATTENDANCE

TIME		MON	TUE	WED	THU	FRI	AVERAGE
7:00 AM	7:59 AM	0	24	0	24	0	10
8:00 AM	8:59 AM	0	68	0	68	0	27
9:00 AM	9:59 AM	0	49	0	44	0	19
10:00 AM	10:59 AM	66	63	66	59	0	51
11:00 AM	11:59 AM	44	75	44	52	0	43
12:00 PM	12:59 PM	69	95	69	76	0	62
1:00 PM	1:59 PM	68	79	83	56	0	57
2:00 PM	2:59 PM	54	77	69	46	0	49
3:00 PM	3:59 PM	67	59	67	52	0	49
4:00 PM	4:59 PM	74	60	91	21	0	49
5:00 PM	5:59 PM	116	56	133	21	0	65
6:00 PM	6:59 PM	63	21	80	21	0	37
7:00 PM	7:59 PM	21	21	38	21	0	20
8:00 PM	8:59 PM	0	0	0	0	0	0
9:00 PM	9:59 PM	0	0	0	0	0	0
	TOTAL	642	747	740	561	0	
	AVERAGE	**43**	**50**	**49**	**37**	**0**	

3.6 Research Space

The master planning team conducted an analysis to understand the current state of research at Montana Tech and the space needed to meet research growth goals. The master planning team reviewed national data, spoke with research leadership, and utilized National Science Foundation (NSF) data for both the institution as well as identified peers.

In an effort to capture a meaningful group of peers to benchmark against, the master planning team collected peer data from the list the Montana University System generated from FY2022 IPEDS data. These institutions, similar to Montana Tech would meet the following criteria:

Peer Criteria

Sector: Public, 4-year
Location: preferably in the western states
Special Criteria: special focus engineering/ STEM/technology institutions
Institution Size: <7,000 students

Integrated Post-Secondary Education Data System (IPEDS) Peers

- Colorado School of Mines
- Michigan Technological University
- Missouri University of Science and Technology
- New Mexico Institute of Mining and Technology
- Oregon Institute of Technology
- South Dakota School of Mines and Technology

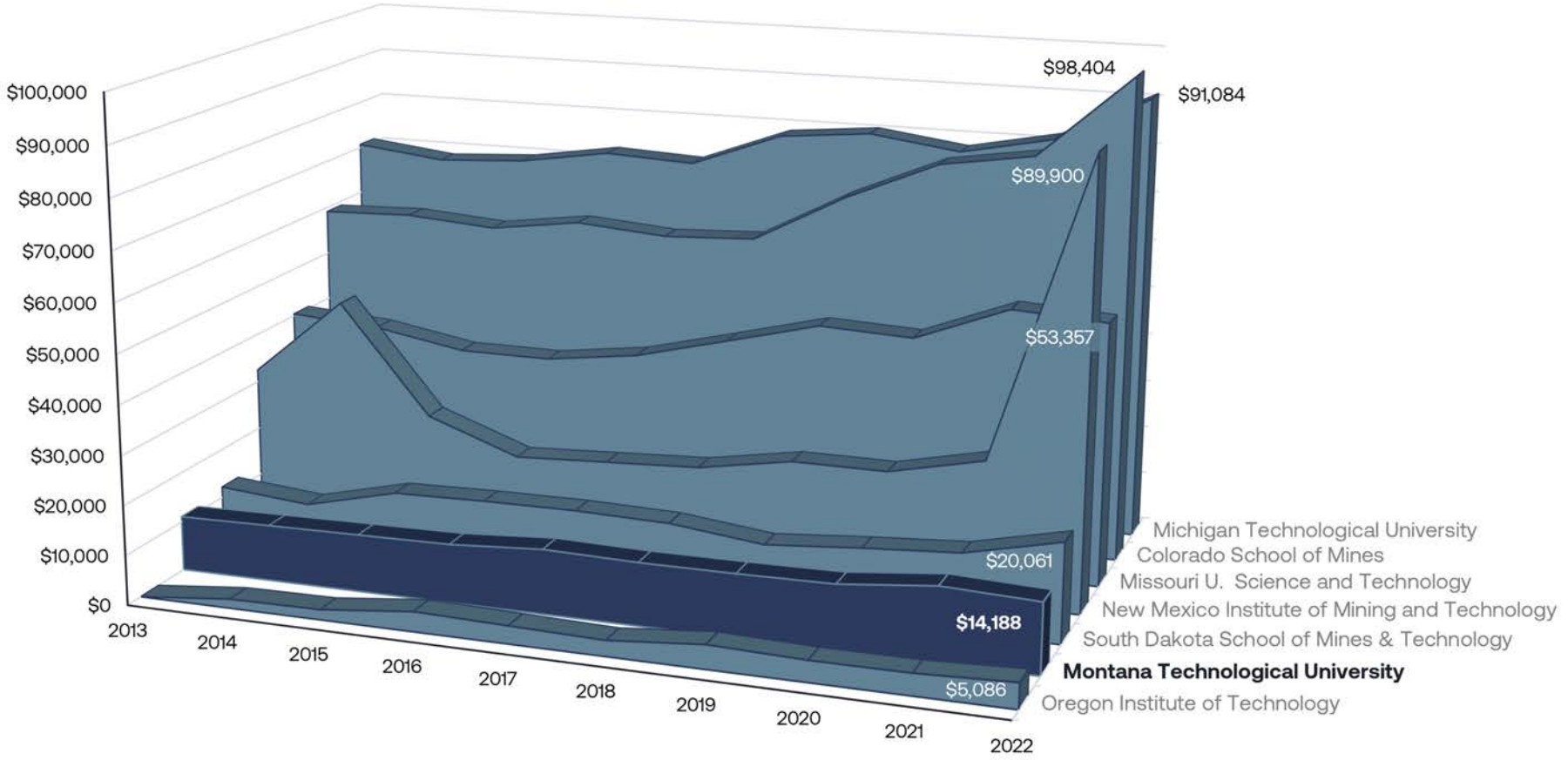
MT Tech	FY22 IPEDS Data					
Institution Name (7 total)	State	Current Unrestricted Revenue per Student	Tuition Revenue per Student	State Approps per Student	% State Share	Student to Faculty Ratio
Colorado School of Mines	CO	22,840	22,348	492	2%	17.0
Michigan Technological University	MI	23,492	15,434	8,058	34%	13.0
Missouri University of Science and Technology	MO	19,306	10,437	8,869	46%	18.0
New Mexico Institute of Mining and Technology	NM	32,380	5,873	26,507	82%	9.0
Oregon Institute of Technology	OR	21,627	8,946	12,681	59%	15.0
South Dakota School of Mines and Technology	SD	19,469	9,444	10,025	51%	12.0
Average		23,186	12,080	11,105	46%	14.0
Average (minus CO)		23,255	10,027	13,228	54%	13.4
Median (minus CO)		21,627	9,444	10,025	51%	13.0

FY22

Montana Technological University	MT	13,989	6,048	7,941	57%	13.0
	% of median	65%	64%	79%	110%	100%

*current unrestricted funds include tuition and state appropriations for MUS institutions; some designated funds not considered auxiliary may be included in peer institution data (per IPEDS definition)
**state approps per student includess ALL students, not just residents

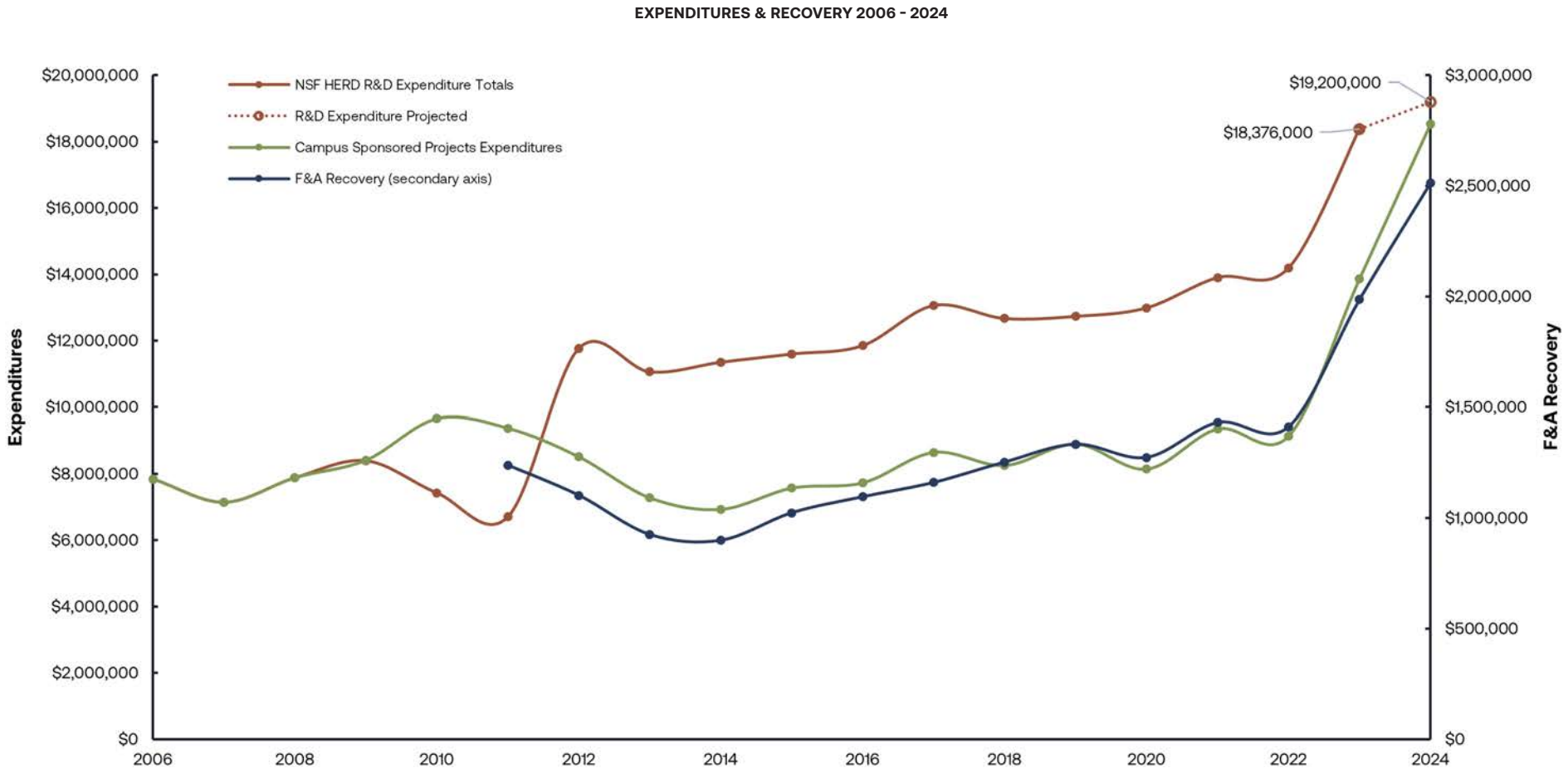
3.6 Research Space



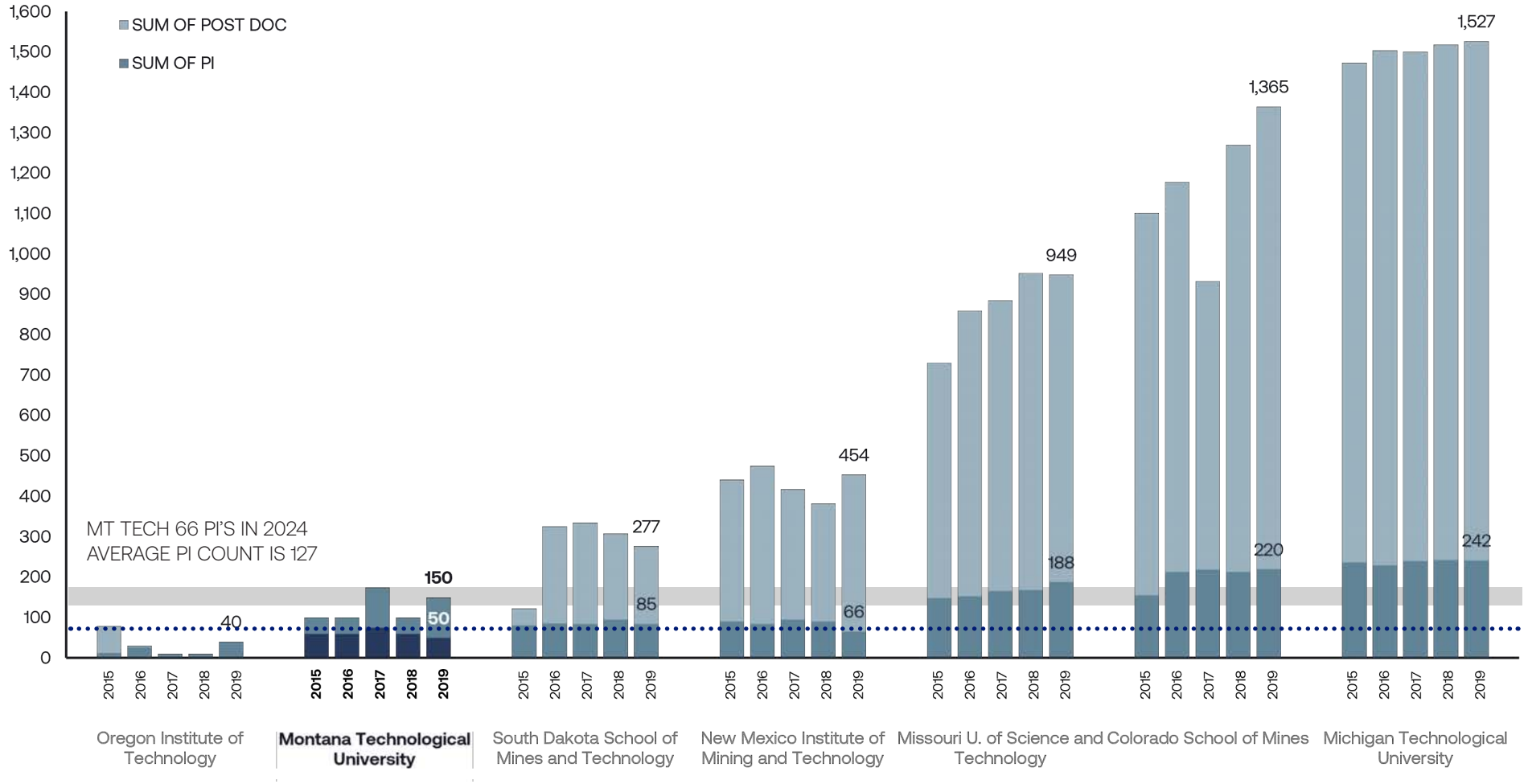
Montana Tech Expenditures by Institution - IPEDS Peers, 2013-2022
Per National Science Foundation, Dollars In Thousands

Montana Tech Historical Data on Research Expenditures

The below graph charts the NSF HERD R&D total expenditures for Montana Tech from 2006 to present. Post-COVID, Montana Tech has seen a significant increase in expenditures from 2022 to 2023 and is projecting further growth into 2024.



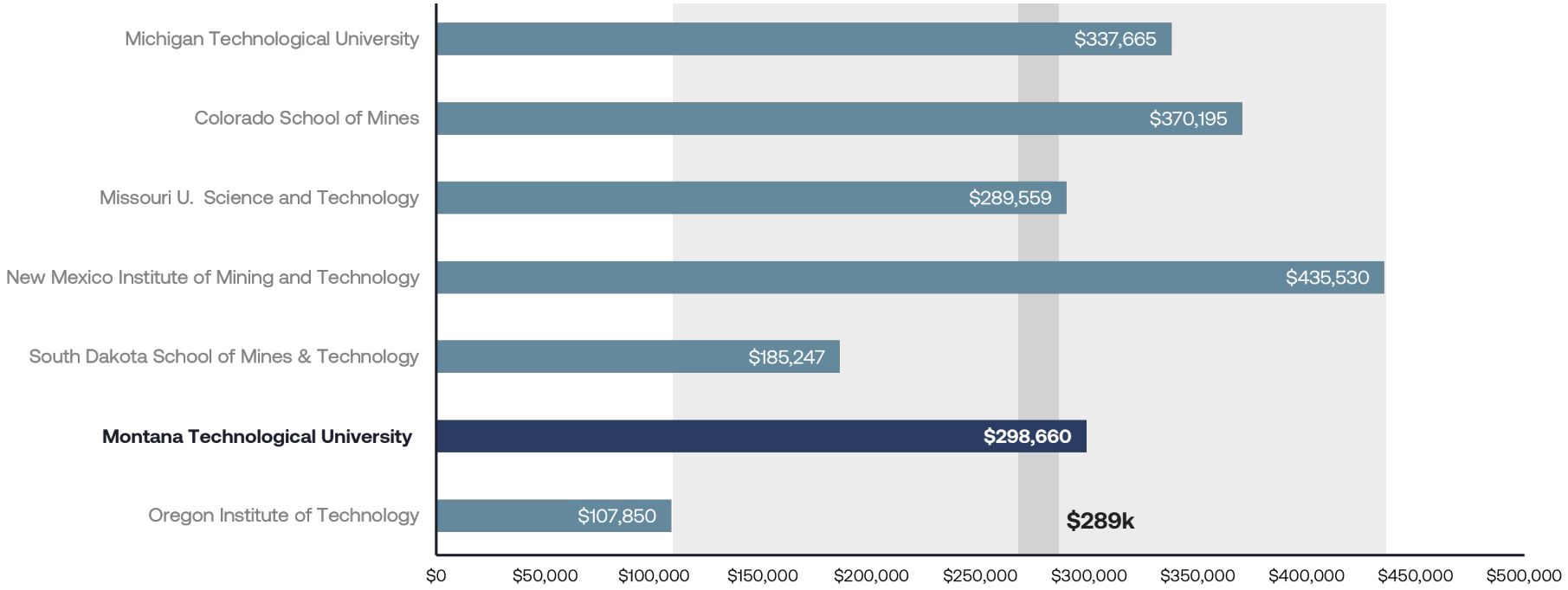
Principal Investigator Benchmarking



Distribution of PIs by Institution - IPEDS Peers, 2015-2019
Per National Science Foundation

Research Expenditures per PI Benchmarking

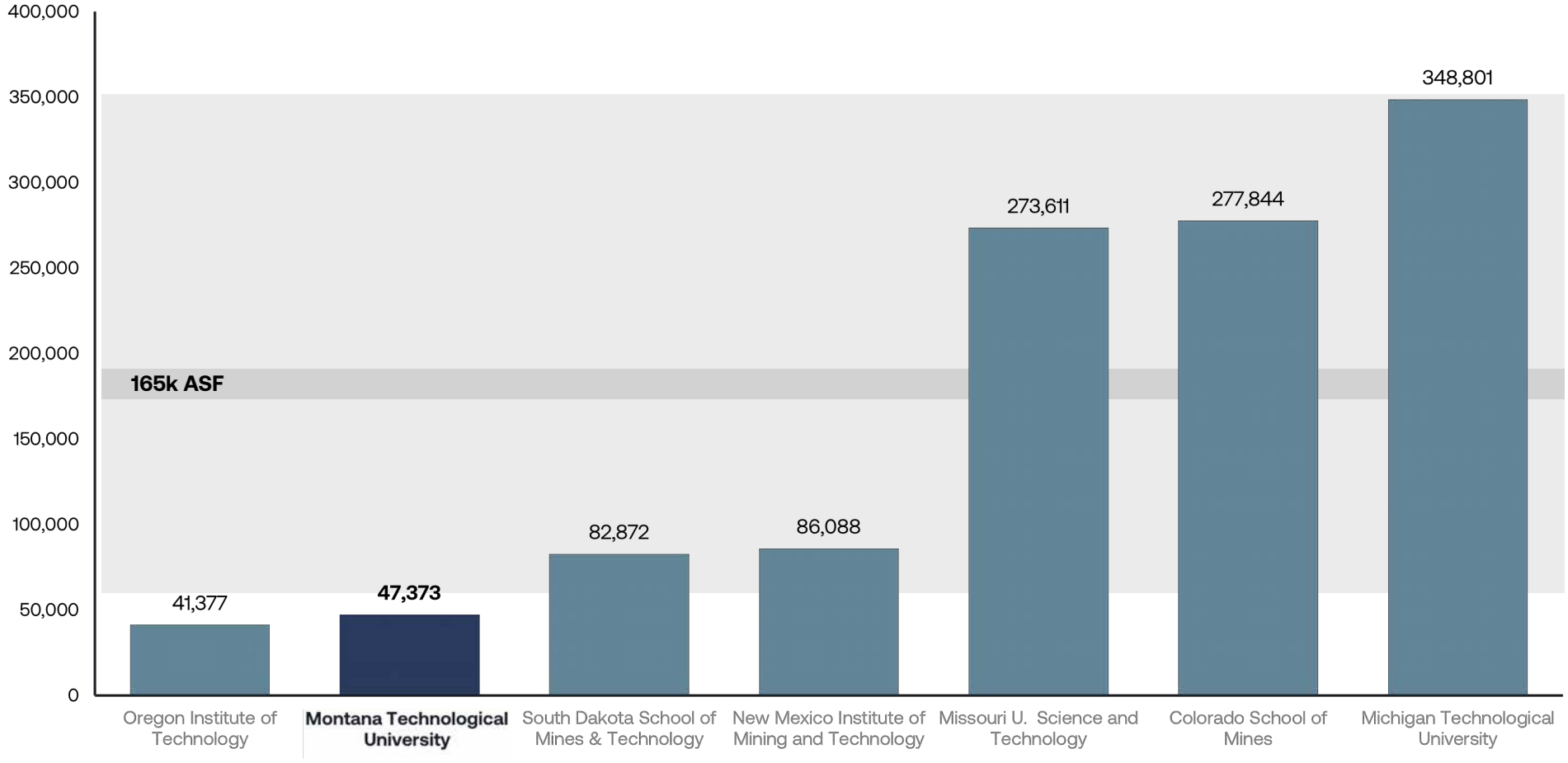
The R&D Expenditures data from 2021 was combined with PI counts from 2019 (latest available NSF data) to look at average research expenditures per PI across each institution. In 2024, Montana Tech had 66 PI's and $19.2M in expenditures for a total of $290k per PI.



Research Expenditures per PI - IPEDS Peers

Per National Science Foundation

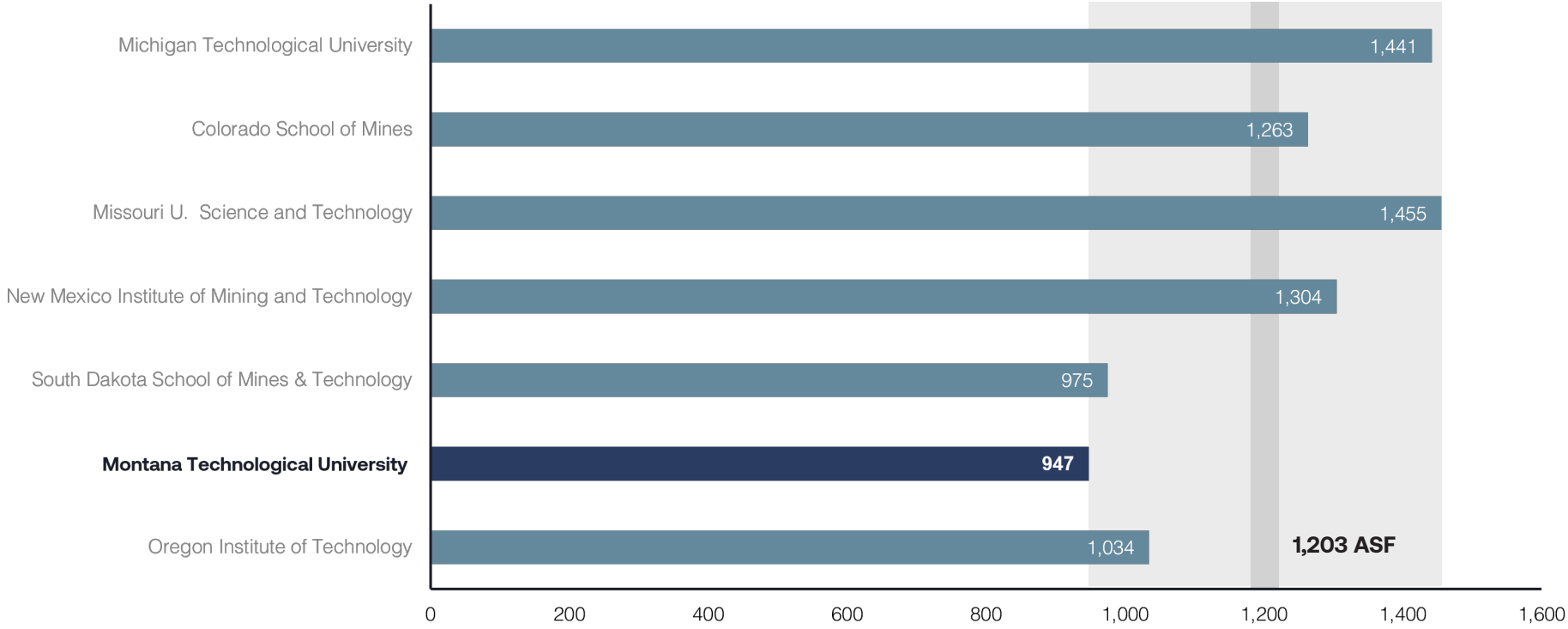
Research Square Footage Benchmarking



Research Square Footage by Institution - IPEDS Peers, 2021
Per National Science Foundation, Assignable Square Feet (ASF)

Research Square Footage per PI Benchmarking

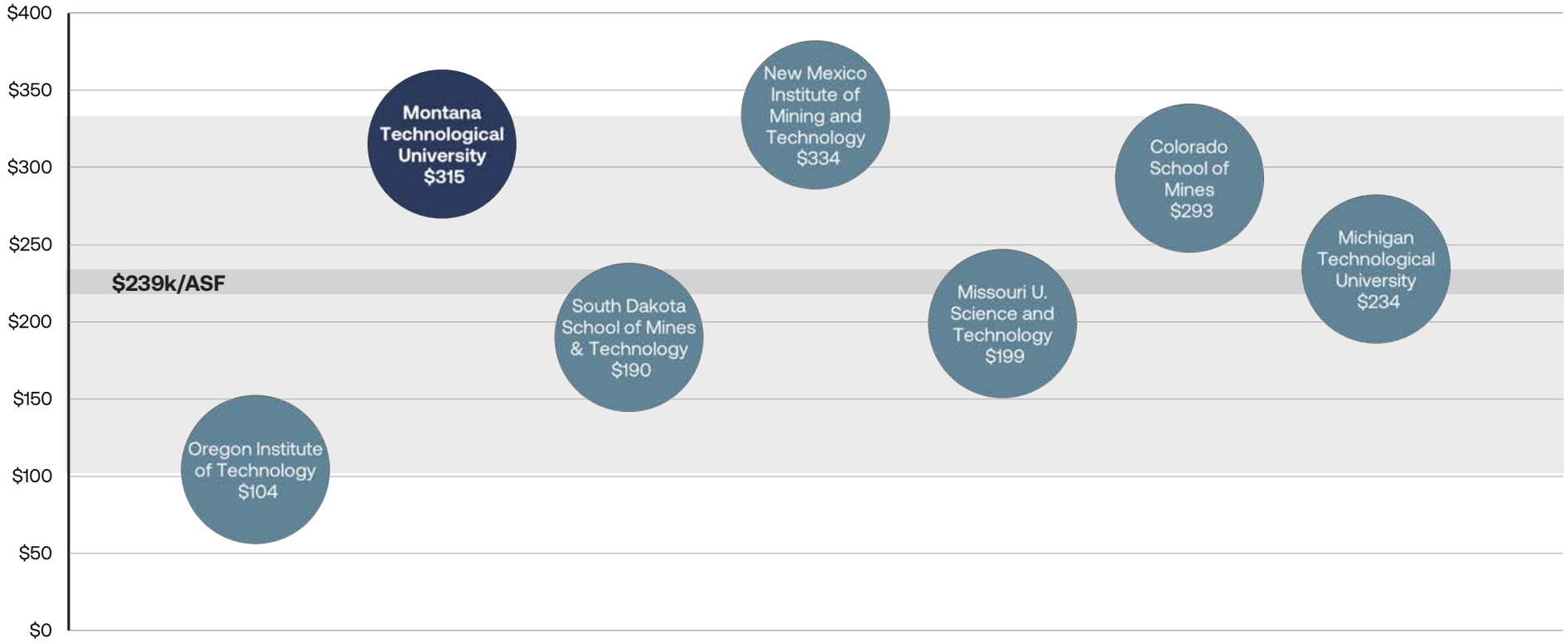
The square footage data from 2021 was combined with PI counts from 2019 (latest available NSF data) to look at average square footage per PI across each institution. In 2024, Montana Tech had 66 PI's, and the SF per PI went down to 718 square feet per PI. The current delta in square footage from the average of 1,203 ASF is 32,000 square feet (66 PI's x 1,203 ave. ASF = 79,398 ASF - 47,373 ASF current Tech research space = 32,025 ASF)



Research Square Footage per PI - IPEDS Peers, 2021
Per National Science Foundation

Research Expenditures per Square Footage Benchmarking

The set of square footage data was combined with research expenditure data to look at average research expenditures per square foot across each institution.



Research Expenditures per Square Foot - IPEDS Peers, 2021

Per National Science Foundation

Research Demands Projections

With a current primary investigator count of 66 in 2024, and operating with 47,373 ASF of research space, the square foot of research space per PI is far below average benchmarks. Montana Tech should aim for a minimum of 1,000 assignable square feet of research space per PI, with a possible aspirational target of meeting the current peer average of 1,200 ASF per PI.

With these current figures, Montana Tech should plan to add a minimum of 18.5k square feet of research space to meet the 1,000 ASF per PI target, or upwards of 32k square feet of research space to meet the 1,200 ASF per PI average. This is assuming the number of PIs conducting research at Montana Tech remains stable. Should the number of PI's increase, the need for additional research space will correspondingly rise.

Seeing the trend lines from Montana Tech's NSF HERD R&D total expenditures, it is plausible that externally funded research expenditures will continue to grow, which would follow that more PI's would be needed to carry out the work.

Moving forward, Montana Tech should internally discuss a realistic target for externally funded research expenditures, which will inherently drive the PI count and ultimately the needed assignable square footage of research space on campus.

A student research and design team studying wastewater treatment plans (Montana Tech)

Outdoor field research with the Department of Geological Engineering (Montana Tech)

3.7 Officing

Currently, offices are distributed across campus with minimally defined organization for office grouping across departments or colleges. In many cases, departmental faculty offices are distributed across several buildings. As departments increase their faculty or staff positions, available office space is often simply taken over.

Space Standards

Montana Tech does not have office space standards or guidelines in place and given some of the unique historical buildings and resultant unique plan configurations, there are many offices across campus that far exceed the office space standards one would typically see on other higher ed campuses. Several buildings have offices that average 200 square feet or greater, where a typical staff or faculty office would be expected to range between 80-140 square feet.

OFFICING SUMMARY

BLDG CODE	STAFF/ FACULTY OFFICES	STUDENT OFFICES	TOTAL OFFICES	Office ASF	Average Office ASF	OPEN OFFICES	Open Office ASF
MAIN	20	3	23	5,097	222	2	530
ENGR	18	-	18	2,996	166	1	323
CBB	21	1	22	3,803	173	-	-
ELC	31	2	33	6,794	206	2	216
HSB	16	-	16	3,947	247	-	-
M&G	35	2	37	6,973	188	5	3,083
MUS	25	1	26	5,882	226	3	1,354
NRB *	56	1	57	9,683	170	10	4,682
NRRC	4	2	6	790	132	-	-
S&E	28	3	31	4,268	138	1	150
HPER	16	-	16	2,051	128	2	227
LIB	5	-	5	750	150	-	-
LLC	16	-	16	2,114	132	5	4,037
MILL	-	-	-	-		2	2,523
SUB	17	-	17	2,751	162	3	647
URC	20	-	20	2,739	137	2	381
PPB	7	-	7	1,060	151	1	222
TOTAL	**335**	**15**	**350**	**61,697**	**176**	**39**	**18,376**

The Montana University System (MUS) Office of the Commissioner of Higher Education (OCHE) does not have guideline recommendations for office space standards, so the design team looked to the space standards that Montana State University Office of Space Planning and Management has published.

MSU has identified the following office space standards:

Space Occupant Classification	Recommended		
	Space Type	Space Attributes	NASF per person
Executive (Provost, Dean, VP, Director)	Private Office	Conference table/chairs or private meeting space	120 - 200
Academic Full-Time (Dept. Head, Tenure Track, Non-Tenure Track = 1.0 FTE)	Private/Shared Office	Private meeting space or shared office depending upon need and availability of space	80 - 140
Academic Part-Time (Non-Tenure Track < 1.0 FTE, Emeritus)	Private/Shared Office Cubicle/Open Workstations	Collaborative and introvert spaces	48 - 100
Staff Senior/Professional	Private/Shared Office Cubicle/Open Workstations	Collaborative and introvert spaces	80 - 140
Staff Classified/Fixed-Term	Shared Office Cubicle/Open Workstations	Collaborative and introvert spaces	48 - 120
Non - Employee Appointments	Cubicle/Open Workstations	Collaborative and introvert spaces	36 - 60

3.7 Officing

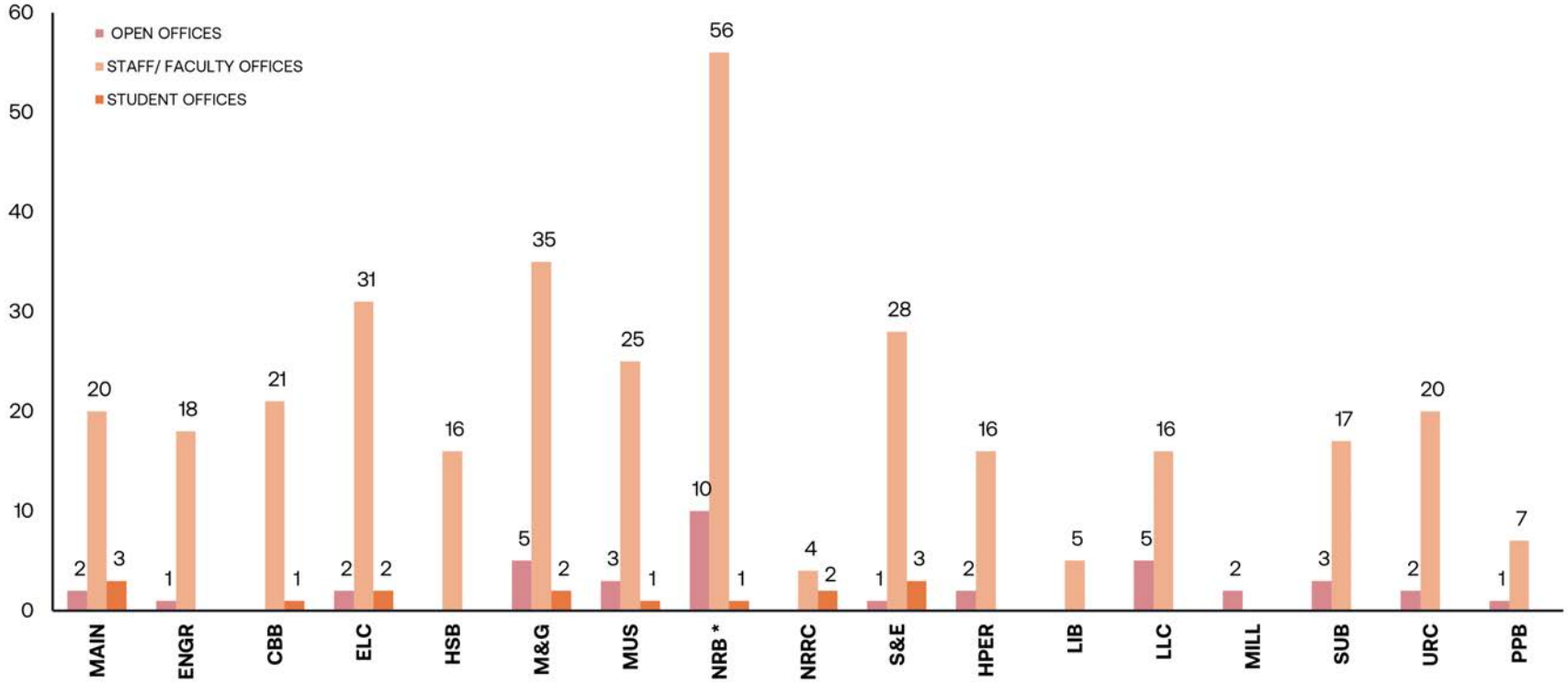
With the latest office survey that was conducted in the spring of 2025, there were 350 total offices on campus. 45 of those offices are assigned to the Montana Bureau of Mines and Geology (MBMG), located in the Natural Resources Building (NRB), while the remaining 305 offices serve Montana Tech. There were 27 total vacant offices at the time of the survey, including Main and Engineering Halls, which will soon be undergoing renovation in 2026. Office counts may be affected by the new programming anticipated in both those buildings.

While current office vacancies suggest the University has room to expand and re-organize office assignments to better collocate departments, future office space use and policy considerations should evaluate:

- Workstation assignments for students versus private office
- Assignment of shared offices for emeritus faculty versus private offices

An un-assigned office hoteling hub, with a variety of workspaces to choose from, and based on a reservation system, could be particularly space efficient and ultimately suitable for graduate students and adjunct level faculty. Implementation of such an approach would further free up private offices across campus to prioritize faculty.

OFFICES & OPEN OFFICES ACROSS CAMPUS



3.7 Officing

The following graphics represents the Main Campus by floor level and identifies occupied versus vacant offices.

3.8 Parking

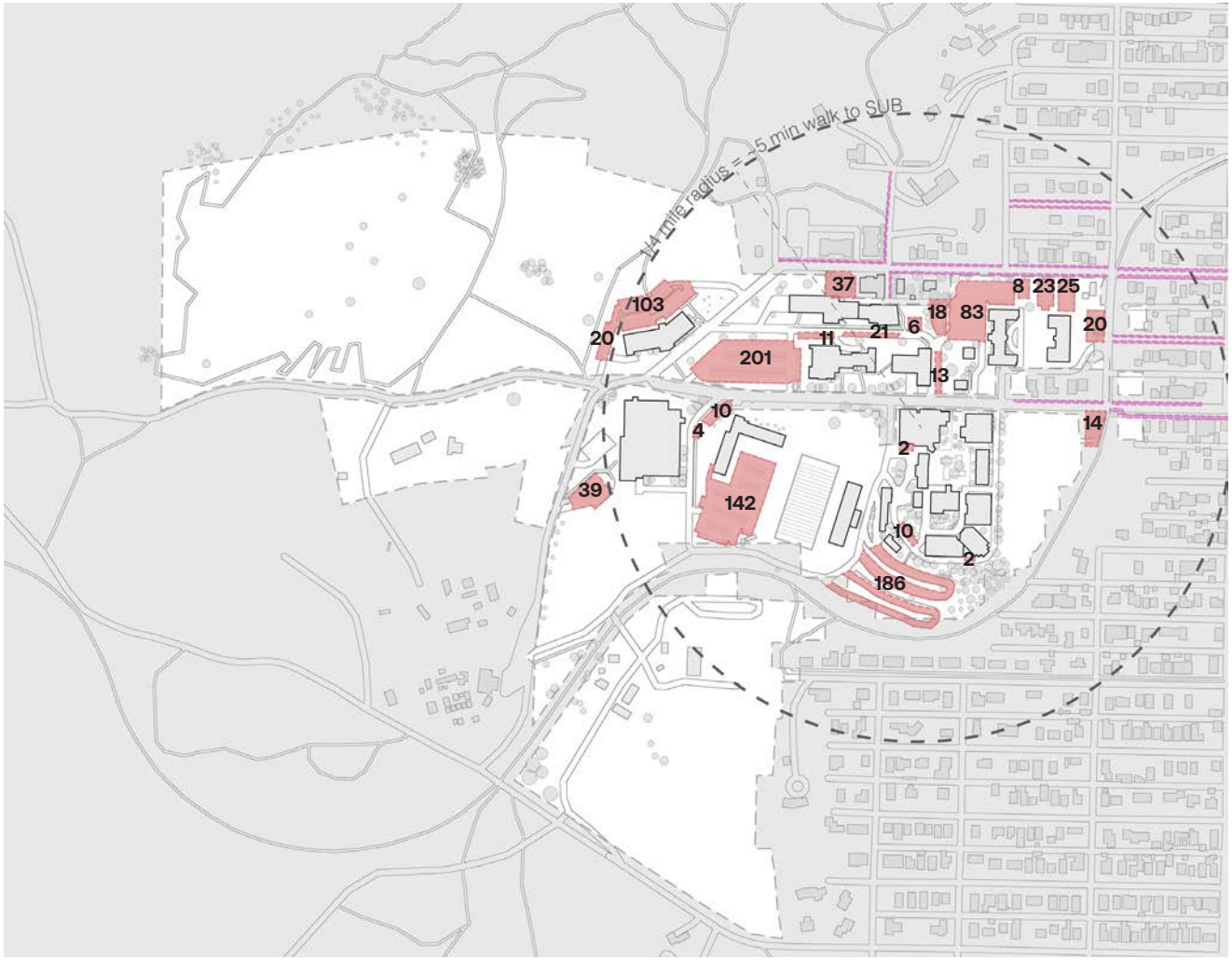
Managing and expanding on-campus parking is both a present and future concern for the University, with many students, staff and faculty commuting to campus by car or students living on-campus and looking to bring and park a personal vehicle on campus.

Main Campus has 23 surface parking areas distributed across campus serving the academic core, housing districts and athletics facilities. Currently there are 998 total parking spaces on campus, with 840 permitted spaces, which equates to approximately one permitted space for every three employees or students.

TOTAL PARKING	**998**
"A", "B", and "D" Permit Spaces	840
Handicap	52
Visitor	52
Reserved	42
Motorcycle	12

Permit spaces are assigned by category as follows:

- "A" permit: for Faculty and Staff, parking allowed in "A" and "B" lots
- "B" permit: for Students, parking allowed in "B" lots only
- "D" permit: for Residence Hall Students, parking allowed in "D" lots only on the Main Campus or in "B" parking at Highlands College Campus
- "MC" permit: for Motorcycles, parking allowed in motorcycle parking spaces only



Legend

On-Campus Surface Lots

Residential Street Parking (permitted thru Butte-Silver Bow)

County Requirements

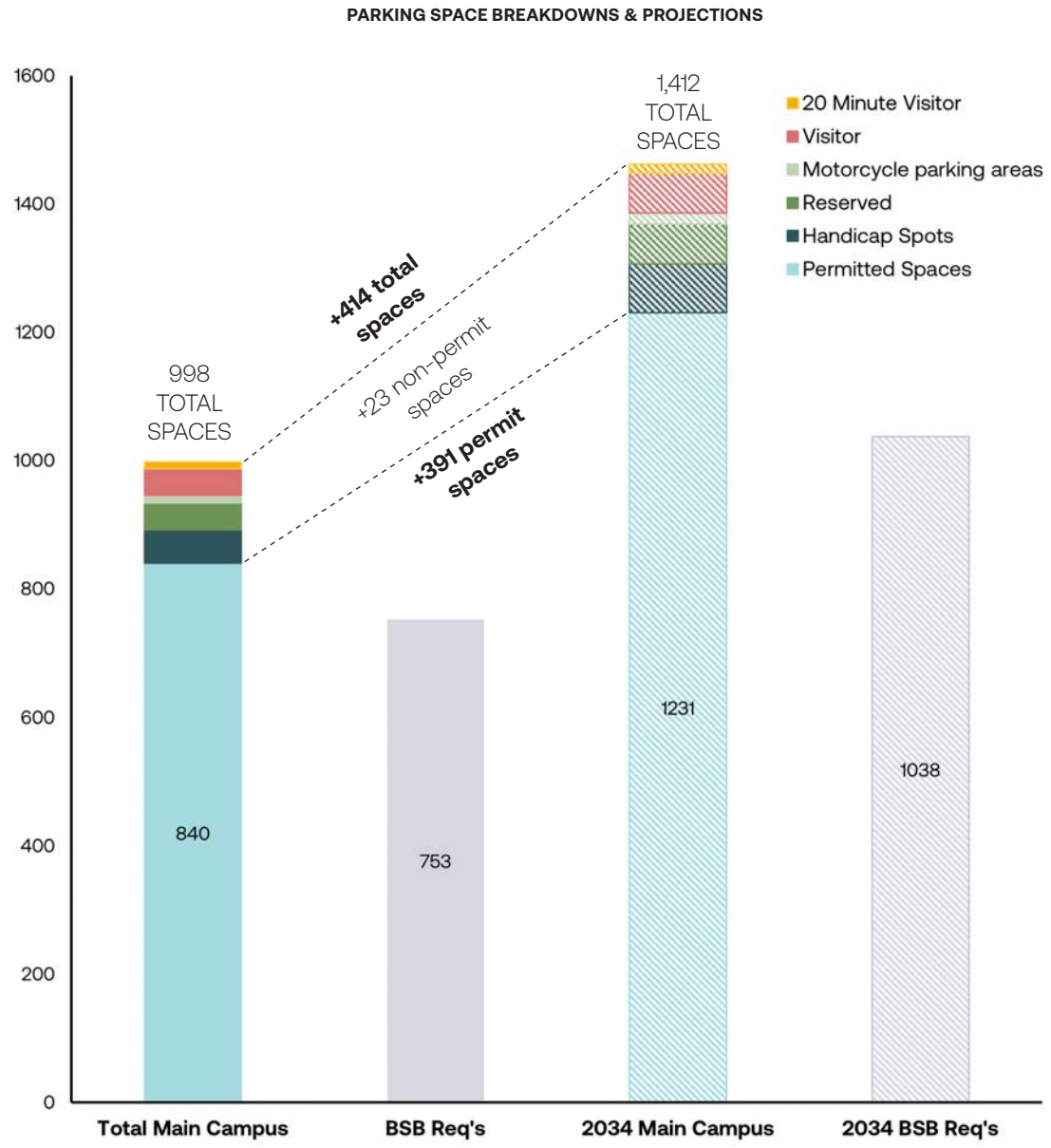
Current campus parking facilities exceed the Butte-Silver Bow Municipal Code requirements, which for higher education calls for a minimum of one parking space per employee and one parking space per five students (section 17.40.900 - Off-street parking - Table of minimum standards).

Projections for Future Parking

Using parking decal sale data from the past five years (2020-2024), the number of decals sold across the combined employee and student population average 77% of the total on-campus student, staff and faculty population. The University does not track sales separately across populations.

Projections for future permitted parking have assumed a minimum of one parking space per two employees/students, at an 80% purchase rate. (For example, a population of 3,000 individuals x 0.5 spaces per individual = 1,500 spaces x 80% decal purchases = 1,200 spaces)

Projections for future non-permit spaces have been calculated based on the percentage increase in the number of permit spaces. For Montana Tech, the quantity of permit spaces over the next 10 years, tracking with projected enrollment and employee counts, should increase by 42%.

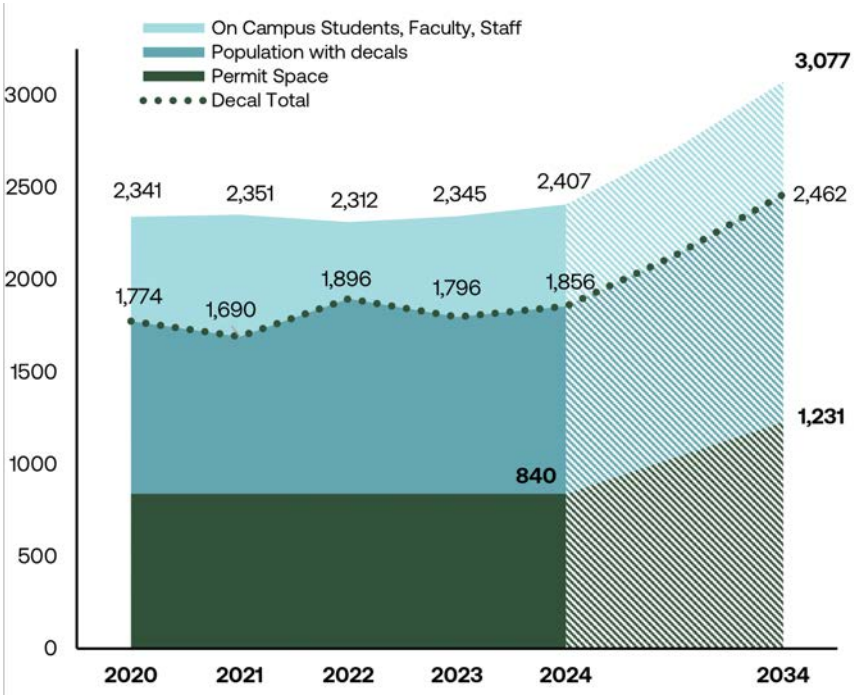


Decal Sales

Parking decals in Fall 2024 were sold at just over 2 decals per space (2.14), which has made finding a parking space on campus challenging during peak hours of the day. Projected enrollment suggests a further strain on existing parking.

Future permitted parking projections are modeled using a decal sale ratio of 2:1 (a maximum of two decals sold per permitted space available). The below historical data and 10 year projection captures both the 80% purchase rate of decals and the 2:1 sales maximum to arrive at the recommended 1,231 future permitted spaces.

PROJECTED PERMITTED PARKING & DECAL SALES



Existing Parking

The majority of the Main Campus parking lots are located on the periphery of campus, aside from the more central surface lot adjacent to the library. Other major parking areas are situated proximate to both residential precincts, and directly southwest of the historic core in a terraced switchback referred to as the Tiers.

The Tiers are configured as one-way parking which are entered from the uphill approach and follow a snaking pattern down the hillside. This parking lot is narrow, particularly the first tier of parking, due to the tight one-way drive aisle with parallel parking on the downhill side and opposing angled parking facing into the hill. A further challenge of this lot includes the steep concrete stair access that runs between the tiers and up to Main Campus at the top of the bluff.

The majority of the other campus parking lots are traditional two-way traffic and generally meet standard design practices.

3.9 Campus Infrastructure

3.9.1 Mechanical Systems

Heating Systems

The heating system for the central core of campus, as well, the buildings along the north side of Park Street are served by a central steam plant. The buildings served by the steam plant are:

- Mining and Geology
- Prospector Hall
- Science and Engineering
- Engineering Hall
- Main Hall
- Museum Building
- Chemistry Building
- Mill Building
- Health Sciences Building
- Student Union Building
- Physical Plant
- Heating Plant

The steam plant includes 2) 350 High Pressure natural gas fired boilers installed in 1968. A third low pressure boiler was installed in 2023. Steam is distributed to the buildings listed above either through utility tunnels or direct burial. At the time of this report, ongoing projects have either replaced portions of the distribution system or have projects scheduled to be replaced. Steam pressures range from 30 psi in the winter to 15 psi in the summer. At each building, a steam pressure reducing station is employed to reduce steam pressure to a usable space heating medium.

It is our understanding that a steam plant controls upgrade is planned for the future.

The plant appears to have adequate capacity for the buildings currently served. Recent, current, and near future projects are intended to upgrade the central plant and distribution to allow operation for many years to come.

New buildings constructed on campus in the future would best be served by high efficiency units designed specifically for the individual buildings. Potential systems could include heat pumps, high efficiency boilers, etc.

Cooling Systems

Campus cooling systems are isolated to individual buildings that have cooling. Many buildings on campus do not currently have mechanical cooling. As new projects are developed, both renovations or new builds, either individual cooling systems or systems to support adjacent buildings should be investigated.

The approach of an overall chilled water plant is not viable given the limited space available in the tunnel for additional piping, the general topography of the campus, and a space available for a plant. An alternative to a campus wide chilled water systems would be to potentially share a chiller between adjacent buildings.

Geothermal systems, while very efficient, do not seem to be viable for campus with today's technology. The viability of geothermal is concerning given the extensive mining shafts and potentially highly corrosive ground water located under and around Montana Tech's campus.

3.9.2 Electrical Systems

The campus is fed and metered by Northwestern Energy at a single location (just east of Ophir and a block south of Granite. Multiple switchgear stations are located throughout the campus. The switchgear stations are located on the north side of the Chemistry Building, north side of Mining and Geology Building, north side of ELC, and directly east of ELC (approximately one block). From the switchgear stations, medium voltage transmission lines are routed to transformers located at specific buildings at which point power is then fed into building service at the appropriate voltage and phase.

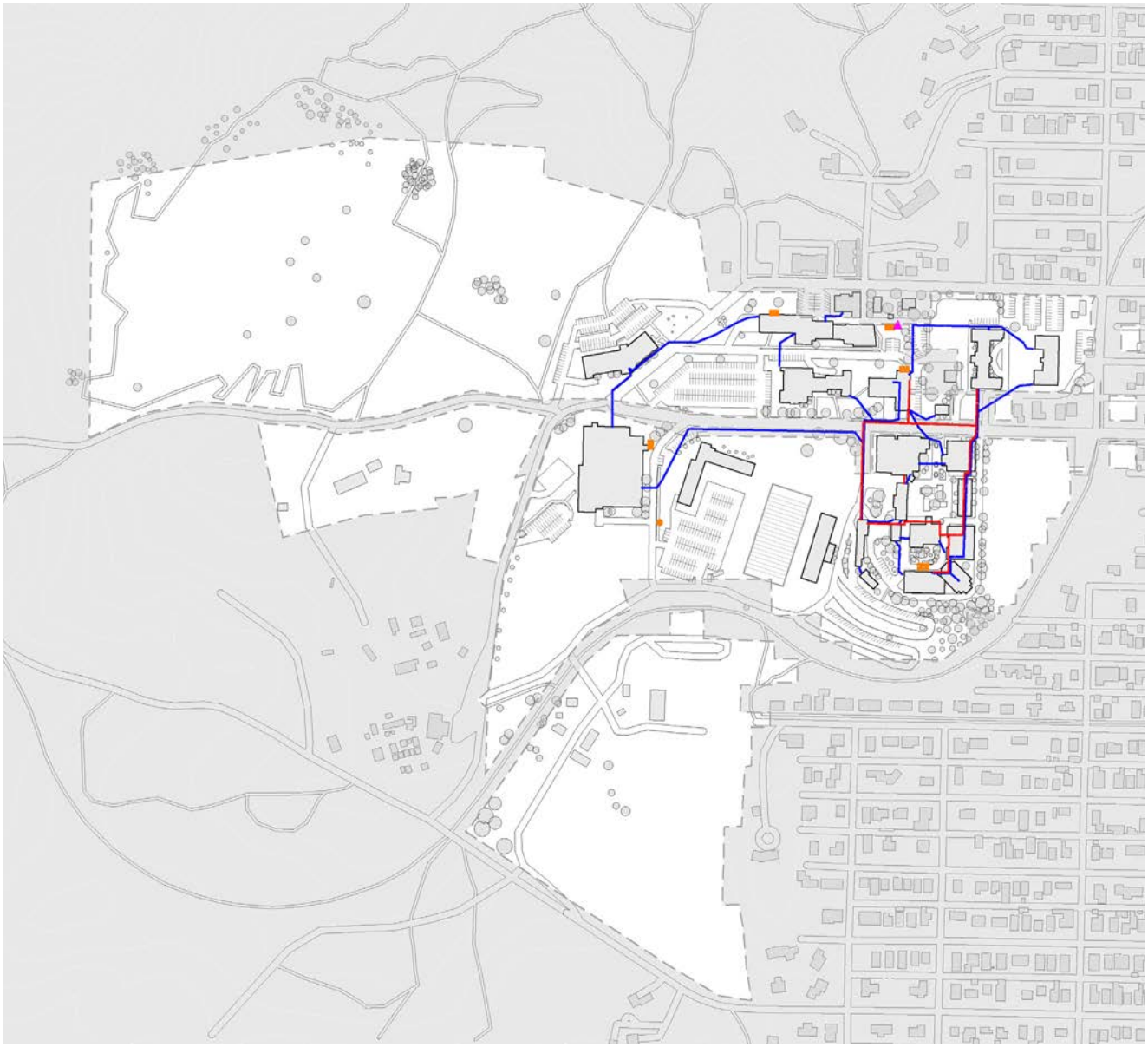
As future facilities are developed on campus, further review of the electrical system will be required to ensure adequate power is available for the building functions. Campus owned medium voltage power does not appear to be available south of Main Campus or south of the sports facilities.

3.9.3 Technology Systems

The campus IT system is fed from the Mining and Geology Building that was upgraded in 2015. Fiber optic cabling is then routed throughout campus in either the existing tunnels or through buried conduits.

As new buildings are developed, further investigation into data connection will be needed.

Site Mechanical, Electrical, and Technology



Steam/Condensate
Fiber Distribution
Electrical Switchgear
Medium Voltage Feeder
Connection to Northwestern Energy Power

3.9.4 Potable Water

Existing Water Conditions

The City-County of Butte Silver Bow provides the campus with potable water. Public water mains are looped throughout campus and are located within the public streets to provide domestic and fire service connections to each building. Private service lines are located within the campus on Montana Tech property. Fire hydrants are located throughout campus to provide exterior fire protection.

Per the Butte-Silver Bow Water Master Plan from January 2022, Montana Tech is on the southwest portion of the West Side pressure zone. Due to the changes in elevation within the West Side pressure zone, the pressures range from 25-226 psi. Since Montana Tech is in the lower elevations of the pressure zone, they experience higher pressures. Most of the campus has available pressure within 80-120psi. The areas south of Park Street and west of the football field are within 120-150psi. Despite the high pressures, Montana Tech has low available fire flows available at fire hydrants due to smaller diameter pipe. Five (5) of the approximately 21 fire hydrants on campus can't deliver more than 1,000 gpm at 20 psi residual pressure. Four (4) of the five (5) hydrants can't deliver more than 589 gpm at 20 psi residual pressure. IFC 2021 requires a minimum fire flow rate of 1,500 gpm at 20 psi residual pressure for commercial buildings but the authority having jurisdiction can approve lower flow rates.

Water Main Recommendations

As building expansion moves west on campus, additional fire hydrants and water main extensions will be needed to serve new structures and provide fire protection. Water main extensions should be a minimum of 8-inches in diameter. The water main in West Park Street should be extended west and the water mains in Museum Way should be extended north and south to eliminate or minimize dead ends thereby improving water capacity and quality. Existing main capacities will need to be evaluated on a case-by-case basis to ensure adequate capacity is provided for each project. If existing fire hydrant capacities are limited due to small pipe sizes, the piping should be replaced and/or additional hydrants with appropriately sized pipe, 6-inches or larger, connected to a water main. Due to high pressures on the south end of campus, anticipate the use of pressure reducing valves at proposed buildings.

3.9.5 Sanitary Sewer

Existing Sanitary Sewer

The City-County of Butte Silver Bow sanitary sewer collection system collects and conveys wastewater generated by the campus. The existing sanitary sewer mains that serve the Montana Tech campus are located within the public roadways throughout campus. The majority of the existing buildings connect to an existing 8-inch main that flows to the east down Park Street with a newer trunk main that flows from the western side of campus towards the existing 8-inch main in Diamond Street.

Sanitary Sewer Recommendations

Visual inspection of existing sewer mains should be performed by the City-County of Butte Silver Bow and sewer services by Montana Tech using video camera inspection. The visual inspection data can help assess which sanitary sewer lines need to be replaced or serviced before potential backups.

As the campus expands to the west, sanitary sewer mains will need to be extended within Park Street. There is a ridge west of the intersection with Park Street and Museum Way and the grade starts to descend to the west. Therefore, a lift station will be necessary the further west of Museum Way the campus expands. Building south of Bob Green Field may require a lift station to tie-in to the existing sewer main near West Diamond Street. Capacity calculations via flow monitoring should be conducted to determine the available capacity for system growth as each building project is proposed. All future sanitary sewer main expansion would be best served if installed within the public right of way or public utility easement to remain consistent with the existing system maintenance access.

3.9.6 Stormwater Management

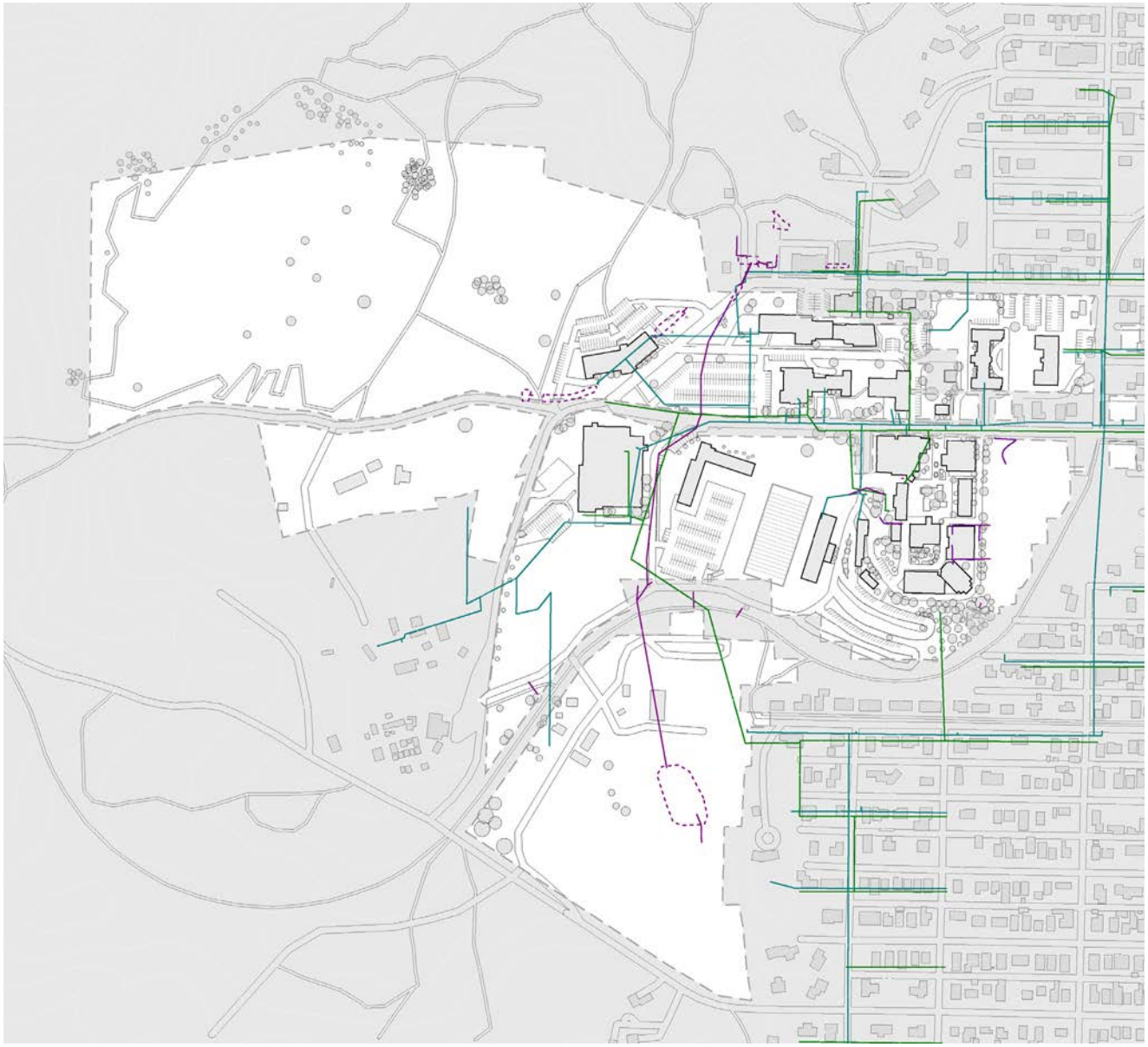
Existing Stormwater Management

Unlike the water and sanitary sewer systems, the stormwater network is primarily owned and maintained by Montana Tech. Given the topography of the Montana Tech campus, most of the stormwater is conveyed on the surface or underground via pipe to a detention pond on the south end of campus, southwest of West Diamond Street. Some of the buildings on campus have visible surface ponds such as the Natural Resources Building. There are surface ponds on the northwest end of West Granite Street at the apartment complex. This pond has an overflow structure which discharges onto Montana Tech property where it is conveyed in a grass swale to an inlet north of Broadway Street. Based on site investigation, it is believed that stormwater is continued to be collected and conveyed from Broadway Street south through the parking lot west of the library, and then south and west of the Student Success Center until it discharges into the detention pond. Drainage from the southeast portion of campus including the west sides of Engineering Hall, Bob Green Field, Student Success Center, HPER Complex, and intramural field also flow to the detention pond. The eastern half of the southeast portion of campus drains to inlets within Montrose Ave and appear to discharge through the earthen retaining wall to Leonard Field. There may be additional underground storm capacity in the Student Success Center and Bob Green field which should be confirmed as future projects are proposed in the area.

Stormwater Management Recommendations

As new projects are proposed, the stormwater management strategy will need to be designed to meet the requirements of Butte Silver Bow's stormwater management standards. We recommend continuing to make use of the existing detention pond but utilizing upstream detention/retention techniques to improve downstream water quality and limit the impacts on the existing detention pond. An independent review of the drainage report of the surface ponds on the northwest end of West Granite Street at the apartment complex may open area for development north and west of the Engineering Lab building. If the pond on the southwest end of the apartment complex is sized for minimal downstream impacts, there may be options for reconfiguring the existing riprap and drainage swale.

Site Water Utilities and Management

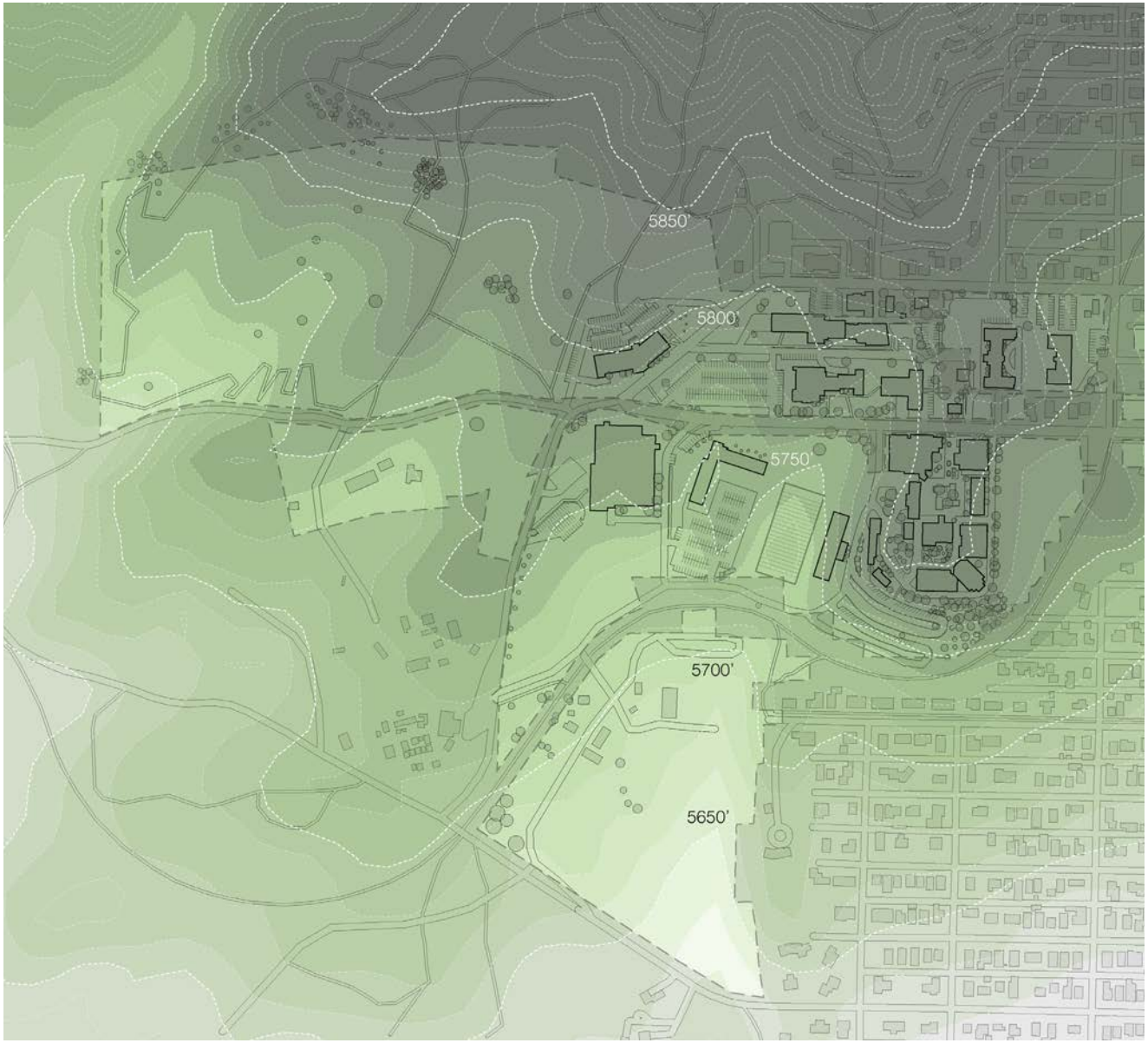


Water Main
Sewer line
Stormwater

3.10 Campus Site Analysis

3.10.1 Topography

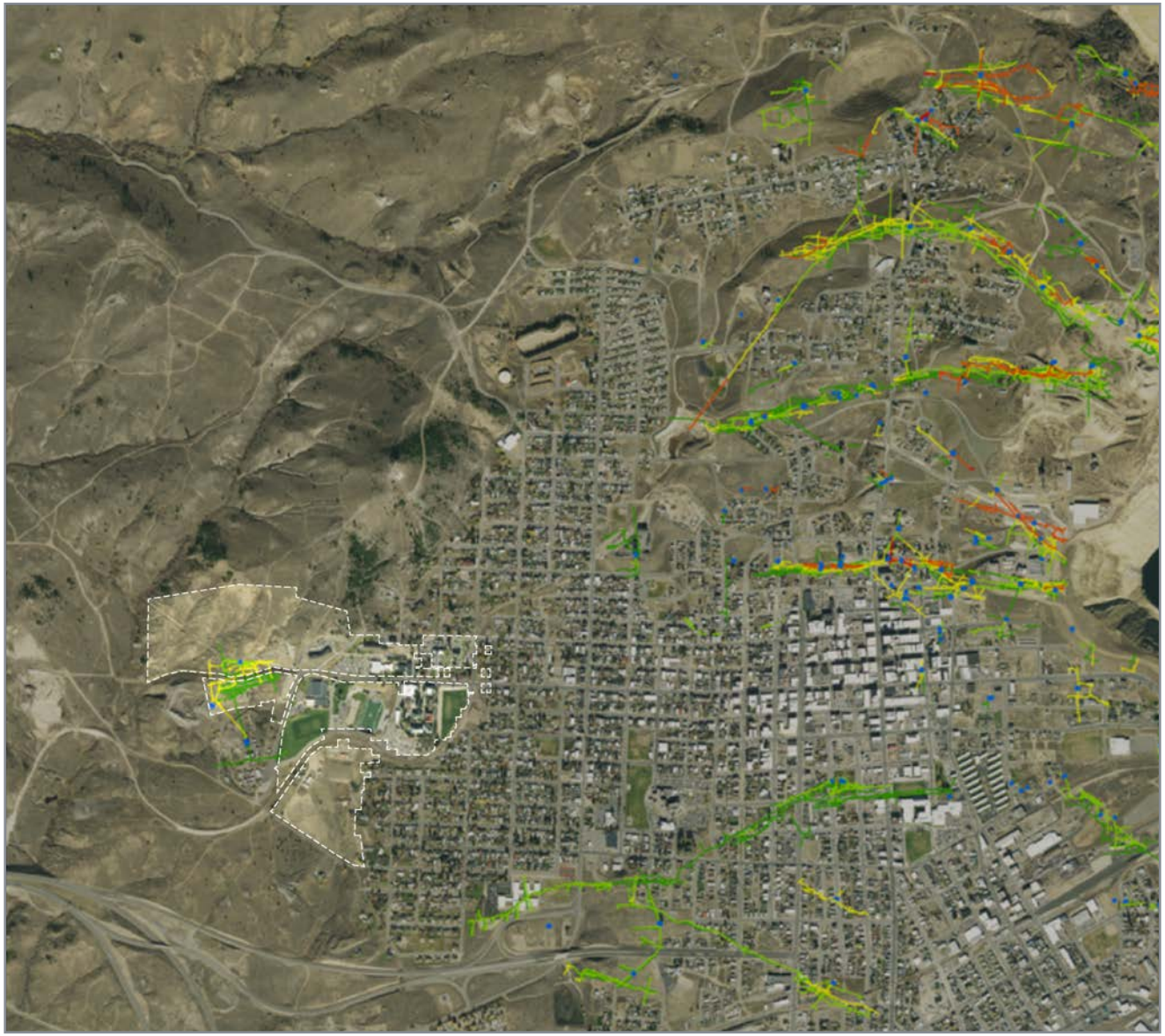
The Montana Tech Main Campus is located on the northwest side of Butte, southeast of the Big Butte Open Space. The campus topography rises steeply from east to west along West Park Street from North Western Avenue until you pass the maintenance access near the Science & Engineering building where it then transitions downhill to the west passed the Student Success Center. The campus also generally slopes north to south. Due to the grades on campus, frequent use of reinforced retaining walls and sloped earth are prevalent. The overall campus was constructed on the edge of the Butte Hill hillside with elevations ranging from 5,650 to 5,850 feet.



3.10.2 Underground Workings & Subsidence

Butte is known for underground mining operations, and Montana Tech has historic mine tunnels throughout the campus. Most of the historic mine haulways/tunnels are located on the northeast end of campus with a single primary haulway beneath the HPER Complex building and traveling northeast towards the Mining and Geology building. Most of the haulways are 500 or more feet below the ground surface but they should be considered where buildings are proposed.

An underground tunnel system exists on campus to provide utilities services and access between buildings. The tunnel system primarily serves as a route for the existing geothermal steam distribution line that runs beneath the historic structures adjacent to Montrose Avenue.

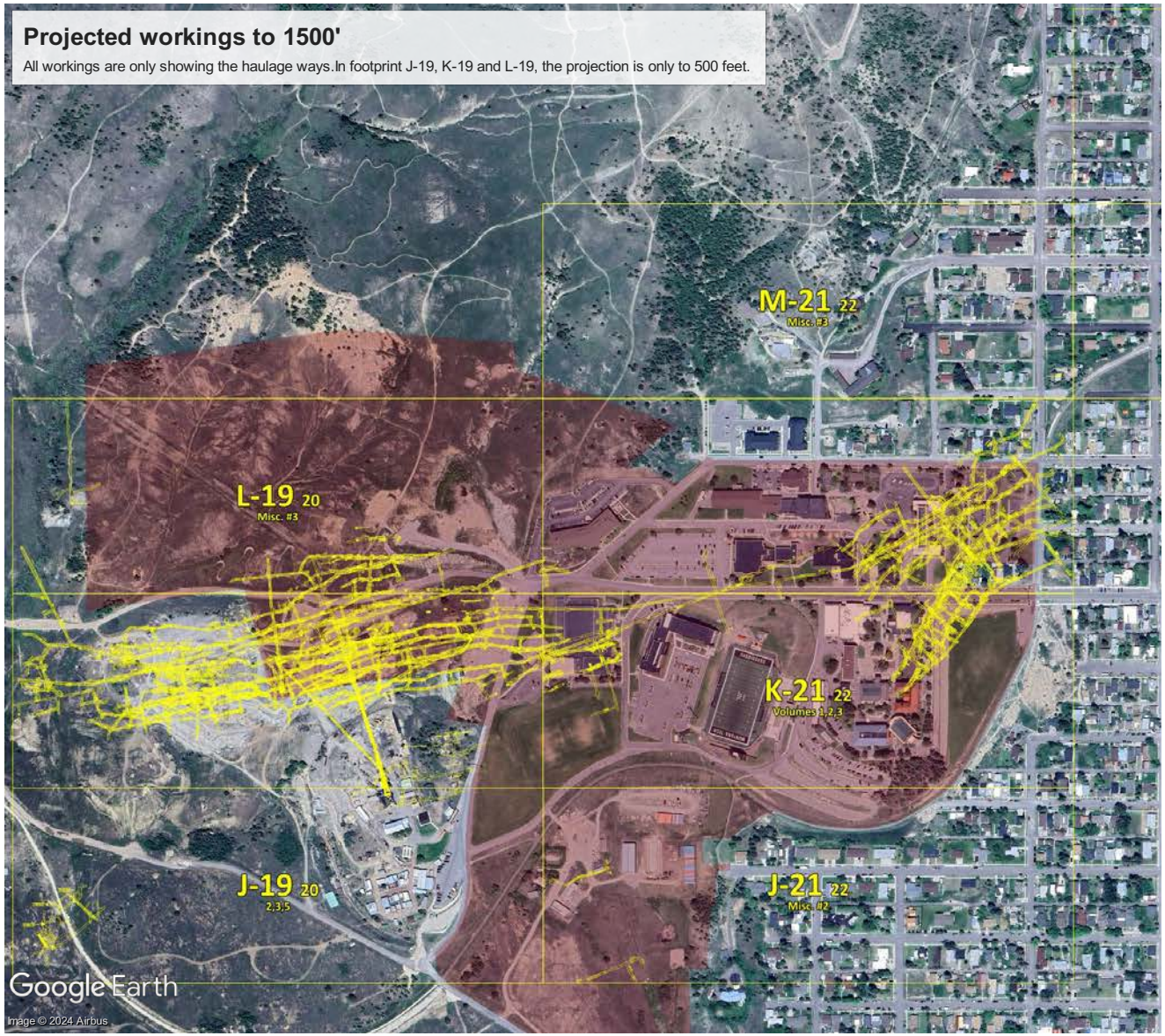


Mine shafts throughout Butte greater than 500 feet deep (Montana Bureau of Mining & Geology)

Tech Campus Detailed Map

The adjacent map of the Montana Tech campus (red shade) indicates the mine workings (haulage ways only) in yellow. It is a composite of workings down to the 1500-foot level.

Also note that there are stopes and other workings not shown either due to the scale (too many to show) or they were not recorded. The shallowest workings are about 200-300 feet deep.



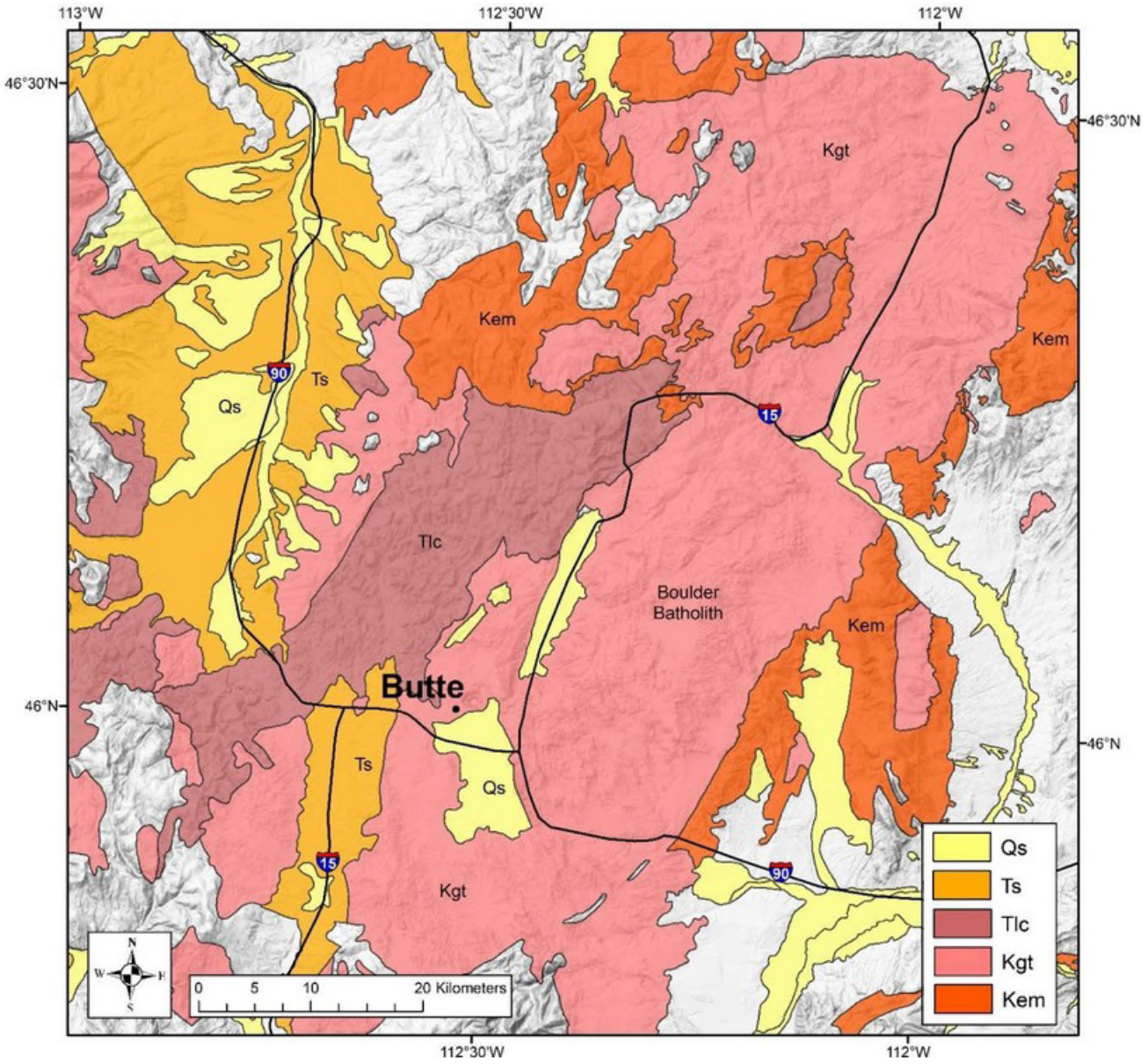
Montana Tech-specific mine shafts and underground workings (Montana Tech)

3.10.3 Soils

Montana Tech is located on the periphery of the granite Boulder batholith geologic formation which runs roughly between Butte and Helena and between the Deer Lodge Valley and Broadwater Valley. Butte Granite makes up the bulk of the batholith (about 70%), with additional named intrusions along the periphery.

The onsite soils generally contain gravelly and sandy soil types with surface slopes that drain towards the southwest and southeast. Per FEMA FIRM Panel 30093C0170E, Montana Tech is in Zone X which is considered an area of minimal flood hazard.

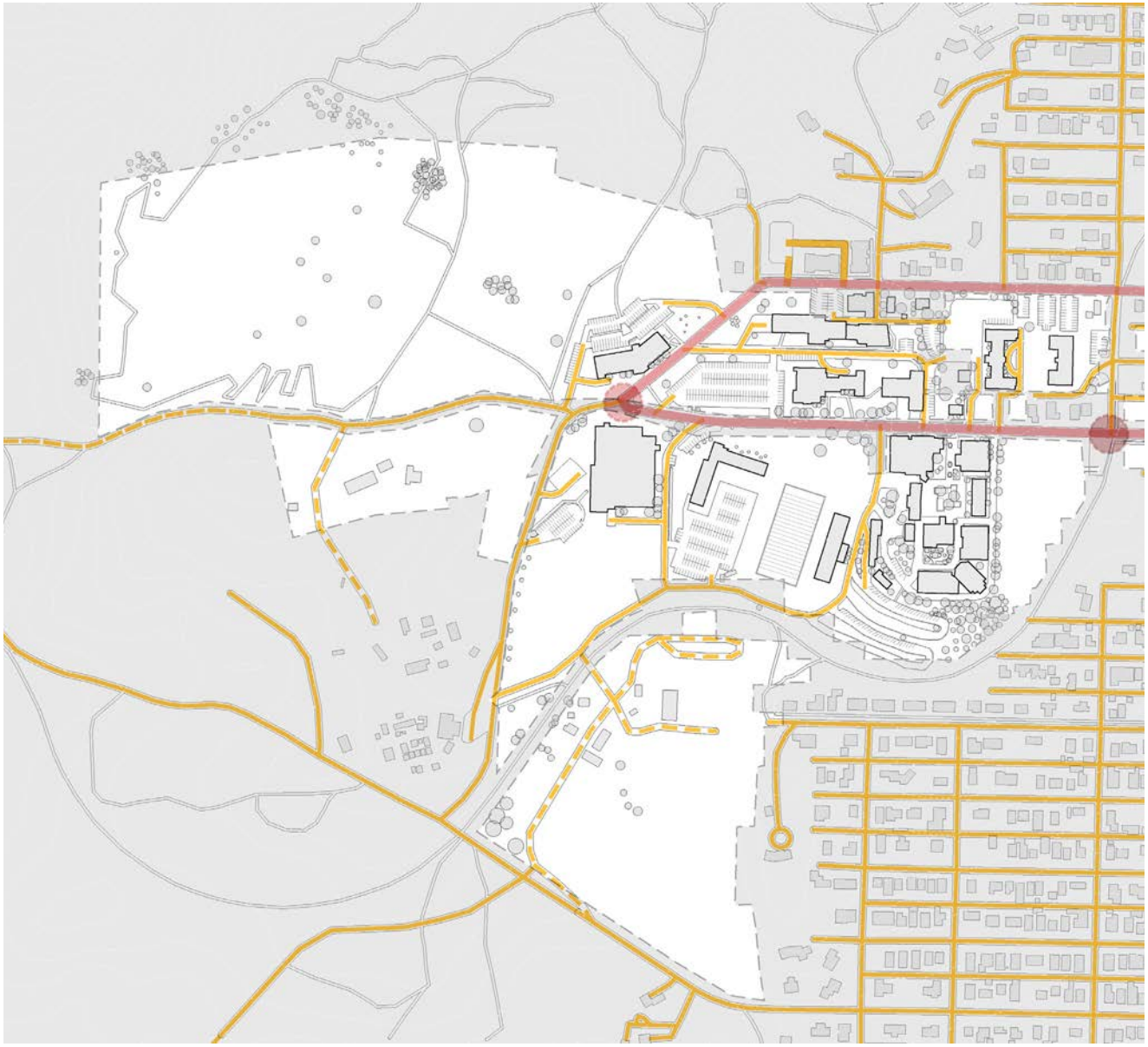
For any future site development, a focused geotechnical investigation should be conducted as soil conditions vary widely across campus and evidence of historic surface and below grade mining activities are found throughout the area.



Qs: Quaternary Sediment
Ts: Tertiary Basin-fill Sediments
Tlc: Tertiary Lowland Creek Volcanics
Kgt: Boulder Batholith
Kem: Cretaceous Elkhorn Mountain Volcanics

3.10.4 Roads & Gateways

The primary access corridor is West Park Street with additional access via West Granite Street to the north and Mining Museum Road on the west perimeter. West Park Street is a two-way collector with on-street parking, sidewalk, landscaped boulevard and a designated westbound bike lane. West Granite Street is a two-lane local road with sidewalks, landscaped boulevards and on-street parking while Mining Museum Road is a two-lane paved road with no pedestrian facilities and no on-street parking.



3.10.5 Paths & Trails

At the southern boundary of the Montana Tech Campus, the BA&P Hill Trail is a paved multi-use trail that provides recreational access extending from Rocker, Montana, to the intersection of Clear Grit Street and Wyoming Avenue. Additional recreation area is in the northwest corner of campus providing access to the Big Butte Open Space Recreation Area trailheads.

In 2024, Montana Tech obtained a tree planting grant, which three student clubs participated in the plantings. The University has put in for funds for 2025 as well. In addition, the University is starting internal conversations to develop a tree campus plan, with the goal of becoming a designated tree university and receive a higher level of funding on an annual basis for tree management.

The University is also exploring funding opportunities for trail system upgrades; to place educational and trail signage along the trail system west of Tech, as well as to upgrade some of the trails and further expand them.

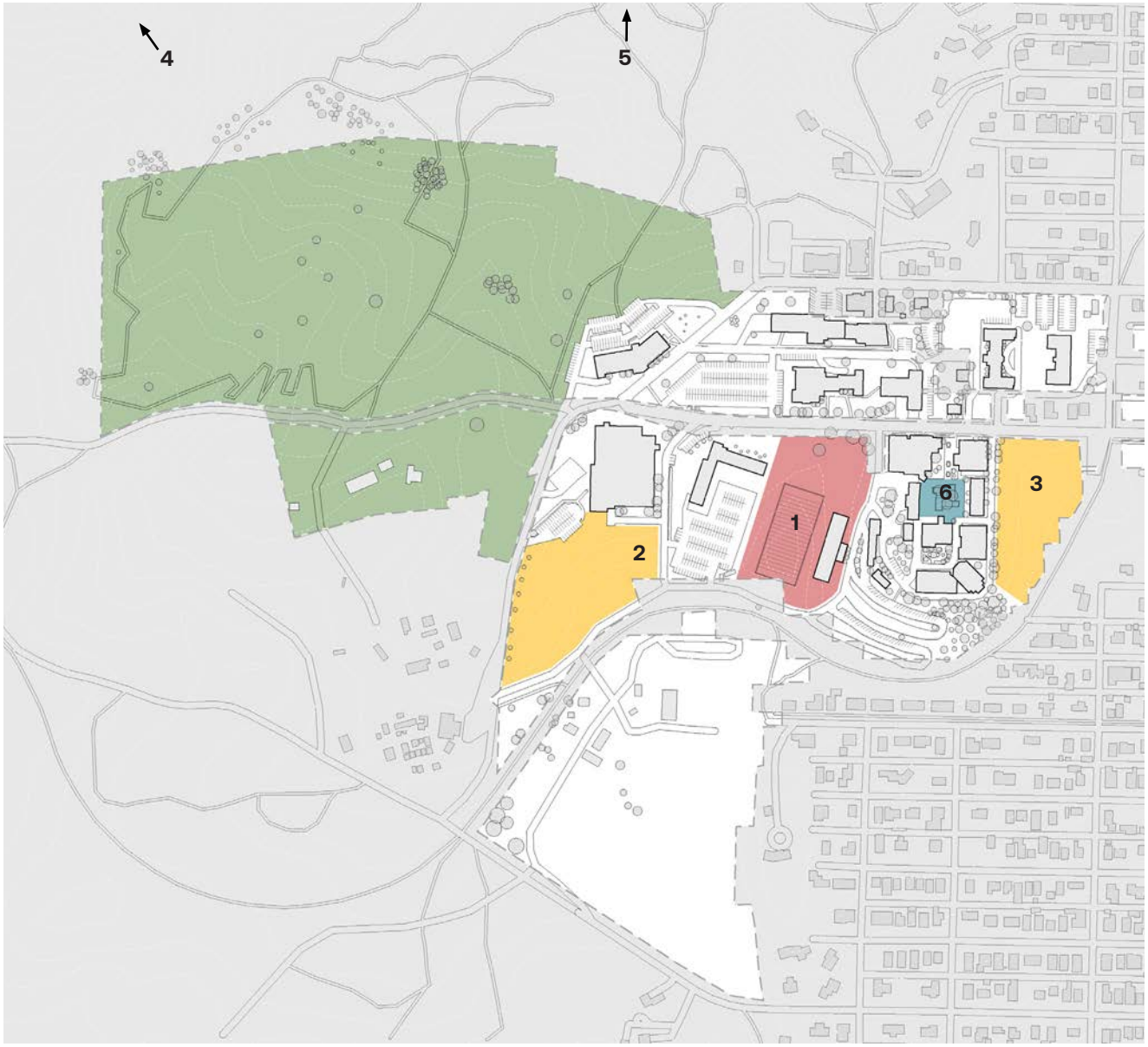
Pedestrian Paths
Trails

3.10.6 Open Space & Views

Open Space

There are three existing athletic and recreational fields on campus; the practice field east of Mining Museum Road and south of the Health, Physical Education and Recreation (HPER) Complex, Bob Green Field in the Alumni Coliseum finished with astro-turf, and Leonard Field located to the southwest of the West Park Street and BA&P Trail intersection.

Main Campus contains one courtyard located in the outdoor common space shared by the historic structures south of West Park Street. However, the walkway on the east edge of campus could be considered a pedestrian courtyard as regular vehicle traffic is not usually permitted through the corridor. Montrose Avenue's location allows it to be the primary pedestrian access to the historic buildings while also providing expansive views of Butte and the Continental Divide.



Athletic Fields	
Recreation/Active	
Campus Open Space	
Courtyards	
Bob Green/Alumni Field	1
Soccer/Intramural Field	2
Leonard Field	3
Big Butte Recreation Area	4
Pintlar Wilderness Area	5
Campus Courtyard	6

Views

Views of Bob Green Football Field & Western Mountains **1**

Views of Butte **2**

Views of I-15 corridor **3**

3.10.7 Developable Areas

45 acres	**1**
4 acres	**2**
3 acres	**3**
1.7 acres	**4**
0.4 acres	**5**
2 acres	**6**
3.7 acres	**7**
1.8 acres	**8**
5 acres	**9**
3 acres	**10**
24 acres	**11**
1 acre	**12**

Master Plan

4

Central campus and Leonard Field aerial
(Montana Tech)

4.1 Master Plan Foundations

The comprehensive Master Plan describes a physical form that will support Montana Tech in their mission to meet their designation as Montana's only Special Focus science and engineering university and provide a transformative student experience that builds upon a tradition of hands-on learning and undergraduate research.

Driving Principles and Goals provide a foundation for campus physical development. Each sets a fundamental philosophy towards the design and implementation of the campus's programmatic needs. Driving Principles are the overlying strategies that give direction to the Goals, which indicate the methods that the university will achieve its principles.

4.1.1 Driving Principles

Be deliberate in the pursuit of **future enrollment** by focusing and amplifying message of **exceptional STEM and Health education**

Celebrate **hands-on learning** and continue to **grow research opportunities** across undergraduate and graduate levels

Align with Strategic Vision in creating a **Healthy and Vibrant Campus Environment**

Pursue physical infrastructure to support **accessibility**

Create **hybrid, multi-use facilities** that encourage collaboration, cross-pollination, and **interdisciplinary scholarship** across colleges and departments

Identify and nimbly respond to **industry partnerships** and funding opportunities

4.1.2 Specific Goals

Enrollment
On-campus student population of 2,500 by 2034, representing 3% annual growth

As of Fall 2024, there were 1,927 enrolled on-campus students across Main Campus and Highlands College

Parking
Expand available parking on Main Campus by an additional 400+ parking stalls

The Main Campus currently provides 998 parking spaces, with 840 permitted spaces for students, faculty and staff

Housing & Dining
Provide an additional 300+ on-campus beds for Montana Tech students and expand dining services to meet new growth

Current on-campus housing provides 460 beds

The off-campus University Apartments apartments offers 60 apartment units

Student Services
Co-location of all business office operations

Consolidation of student services to the Student Union Building

Officing
Develop hub officing strategy for a percentage of graduate students and/or faculty members

Academic
Main & Engineering Hall renovations - *in design*

Highlands College Line Indoor Training Facility - *funded*

Reed House renovation

Library Learning Commons modernization

Student Union Building (SUB) renovation for more student-focused programming

New Academic Event Hall with a 500+ capacity event space and active learning classrooms

Research
Develop west campus for research innovation and expanded field research activities

Partner with industry to develop new central campus Research Institute for academic research

Athletics
Health, Physical Education and Recreation (HPER) Complex renovation Phase 1

HPER addition Phase 2

Stadium expansion

Campus
Central Courtyard redevelopment
Re-imagine Park Street as a pedestrian-friendly promenade with connected outdoor programming

New southern campus vehicular roadway following the BA+P trail

4.1.3 Master Plan Priorities

The following summary identifies the priority ranking of the proposed comprehensive master plan physical campus projects, broken out into realistic time horizons for planning and implementation. Within each category, projects are labeled and color-coded to align with renovation (R), new construction (N), or campus (C) work.

Immediate Priorities (1-3 Yrs)

R1, R2 - Main and Engineering Hall Renovations
R5 - Reed House Renovation
R3 - HPER Facility Upgrades Phase I
H1 – Highlands College Indoor Line Training Facility
N2 - Stadium Village Phase I **Planning**
C5 - Courtyard Redevelopment
C1 – West Surface Parking Development
C2, C10, C11 - Traffic and Campus Access Improvements **Planning**

Mid-Term Priorities (5-10 Yrs)

N5 – Research Institute **Implementation**
N4 - Academic Event Center **Planning**
N6 – Research Innovation Campus Phase II Building **Planning**
N3 - Stadium Expansion **Planning**
N7 – Stadium Village Phase II **Planning**
C4 – Phase II Park Street Improvements

Near-Term Priorities (3-5 Yrs)

R4 - Library Learning Commons Modernization
R6 - Student Union Renovations
N1 - HPER Athletics Addition Phase II
N6 - Research Innovation Campus Phase I Building
N2 – Stadium Village Phase I **Implementation**
N5 - Research Institute **Planning**
C4 – Phase I Park Street Improvements

Long-Term Priorities (10+ Yrs)

N4 - Academic Event Center **Implementation**
N6 - Research Innovation Campus Phase II Building **Implementation**
N3 - Stadium Expansion **Implementation**
N7 – Stadium Village Phase II **Implementation**
C4 – Phase III Park Street Improvements

4.2 Proposed Master Plan

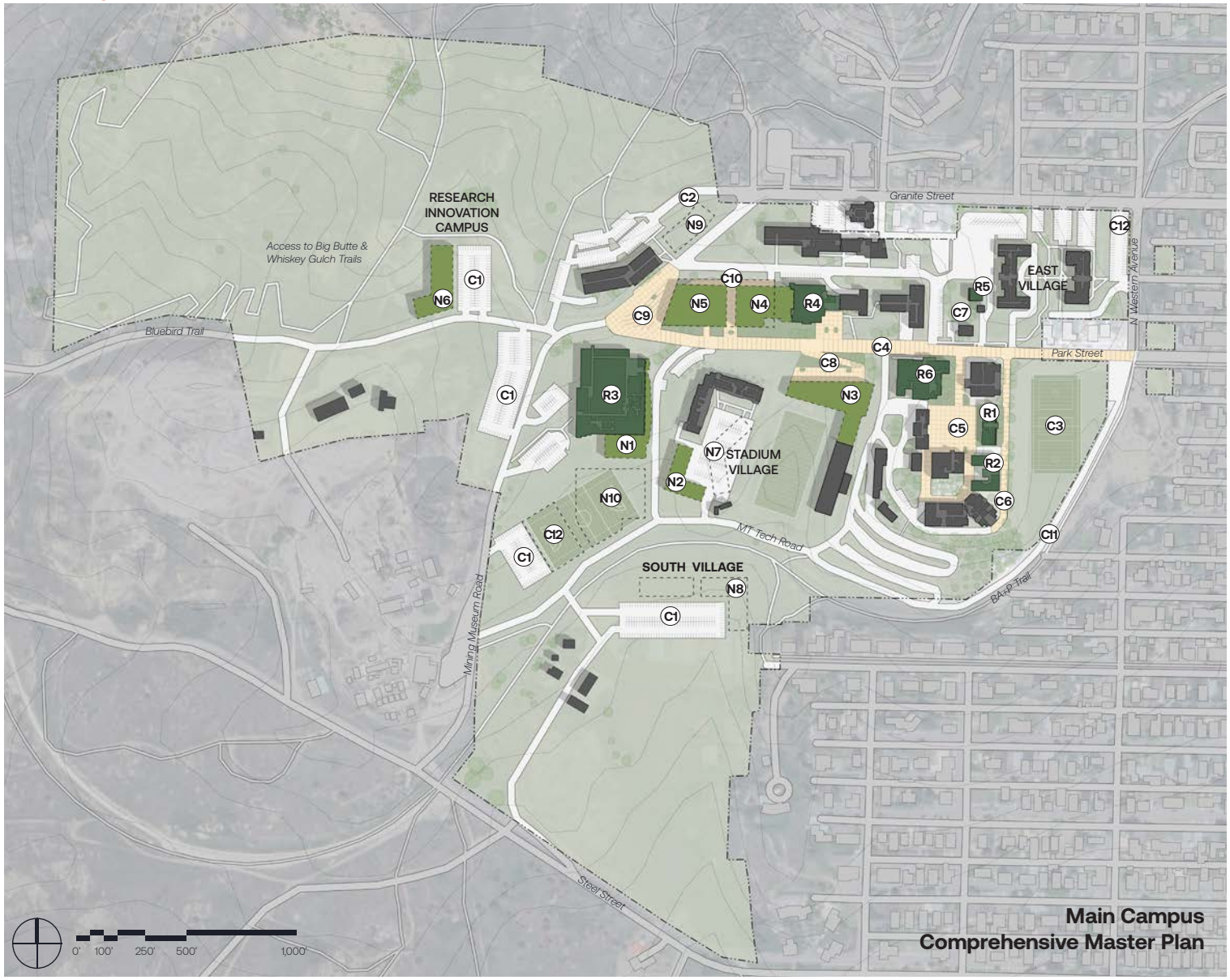
At its essence, the Master Plan is a collection of powerful ideas to facilitate decision-making for the next ten years.

These ideas serve to establish a framework for coordinating physical change. This framework reinforces simple patterns and foundational elements to maintain Montana Tech's unique spatial characteristics, while at the same time identifying opportunities for responsible growth.

Philosophically, the Master Plan is an opportunity-based tool, not a rigid list of mandated implementation projects. The Master Plan needs to remain flexible in the midst of changing enrollment, curricular, fiscal, and external challenges.

Montana Tech campus with mountains and the city of Butte in the background (Montana Tech)

4.2.1 Comprehensive Master Plan



Renovation Projects

R1 Engineering Hall
R2 Main Hall
R3 HPER Modernization Phase I
R4 Library Learning Commons
R5 Reed House
R6 Student Union Building

New Buildings

N1 HPER Athletics Addition Phase II
N2 Stadium Village Housing Phase I
N3 Stadium Expansion
N4 Academic Event Center
N5 Research Institute
N6 Research Center
N7 Stadium Village Housing Phase II
N8 Future South Village Housing
N9 Future Academic Research
N10 Future Building Site

Campus Improvements

C1 New Surface Parking Lot
C2 New Parking Access
C3 Outdoor Intramural Field
C4 Park Street Promenade
C5 Courtyard Redevelopment
C6 Montrose Ave. Redevelopment
C7 Campus Green
C8 Stadium Event Terrace
C9 Research Gateway Steps
C10 Below Grade Podium Parking
C11 South Campus Access Road
C12 Surface Parking Expansion

Existing Facilities
Future Renovation
Proposed Facilities

4.2.2 Highlands College Micro-Master Plan

New Buildings

H1 Indoor Line Training Facility

Existing Facilities

E1 Highlands College Building
E2 Outdoor Line Training Yard

Existing Facilities
Future Renovation
Proposed Facilities

4.3 Proposed Land Use

Land Use Zones

The existing campus has a clear delineation of land uses. The Facilities Master Plan seeks to largely maintain and strengthen the existing land use patterns and relationships between land uses. The Facilities Master Plan seeks the following improvements:

Research

A new research innovation campus, now bordered by the Natural Resources Building (NRB) intends to expand to the west into existing undeveloped open space, while minding existing access routes to outdoor recreation trails.

Residential

Currently, on-campus residential uses are concentrated in two locations: Centennial and Prospector Halls located in the northwest quadrant of campus, labeled in the master plan as East Village, and the Living Learning Commons just east of Alumni Field, labeled in the master plan as Stadium Village. The master plan expands housing at Stadium Village, while suggesting a future third housing complex, South Village, south of MT Tech Road.

Surface Parking

Vehicle parking is distributed around campus, largely on the edges. The master plan recommends further expansion of surface lots around the perimeter to meet the future parking demands of the campus. If funds became available, consolidation to a future parking structure is suggested, potentially replacing The Tiers surface lots as a preferred location.

Campus

The campus is currently split into north and south precincts by Park Street, which serves as the main road though campus. The master plan reimagines Park Street as a pedestrian-friendly promenade where vehicles are accommodated, but pedestrian uses are prioritized. This redevelopment is contingent on a new south access road being opened up following the BA+P Trail, which would loop south of campus and tie into MT Tech Road.

The relationships between land use zones on the Main Campus largely function well – academic, administrative, research, residential, student life, and recreational buildings are all within easy walking distance, promoting interdisciplinary interaction.

4.3 Proposed Land Use

Legend

- Academic/Research
- Residential/Student Life
- Athletics/Recreation
- Administrative
- Facilities
- Parking
- Program to be determined

4.4 Proposed Projects

The following summary outlines the projects by use type and correspond to the specific goals outlined in the Master Plan.

Subsequent pages are dedicated to individual projects, outlining the Need, the Project, and the Site criteria, organized in sections by priority (Immediate, the Near-Term, Mid-Term, and Long Term).

Parking

C1	New Surface Parking Lots
C10	Below Grade Podium Parking
C12	Surface Parking Expansion

4.4 Proposed Projects

Housing & Dining

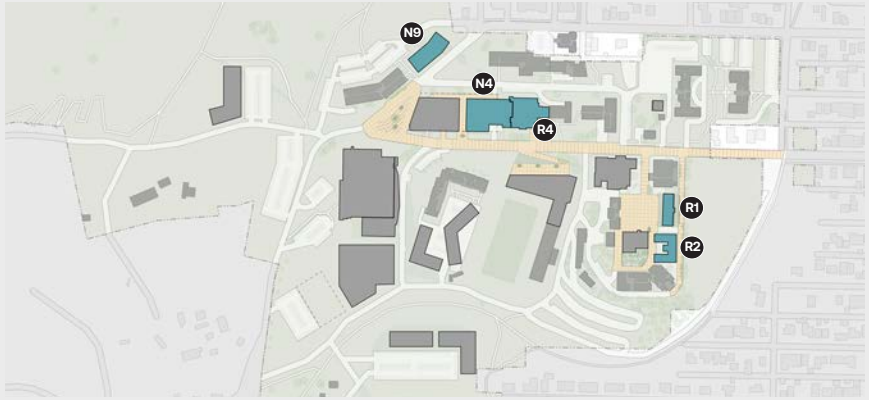
N2	Stadium Village Housing Phase I
N7	Stadium Village Housing Phase II
N8	South Village Phase I and II

Student Services

R5	Reed House Renovation
R6	Student Union Building Renovation

4.4 Proposed Projects

Academic



R1	Engineering Hall Renovation
R2	Main Hall Renovation
R4	Library Learning Commons Modernization
N4	Academic Event Center
N9	Future Academic Research
HCN1	Indoor Line Training Facility (not shown)

Research

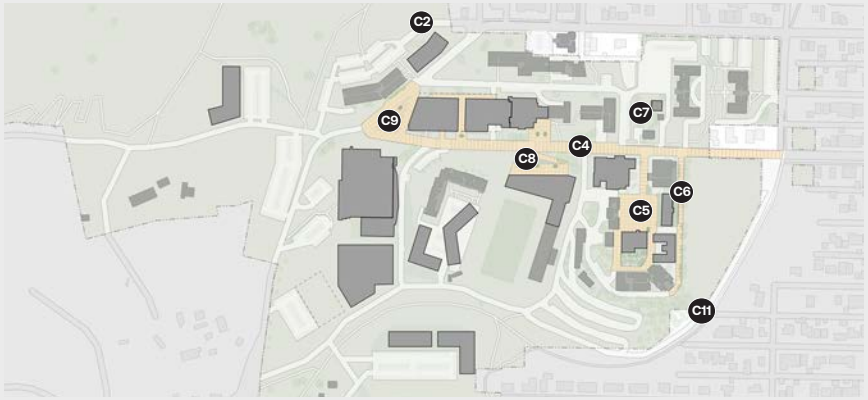
N5	Research Institute
N6	Research Innovation Center

4.4 Proposed Projects

Athletics

R3	HPER Modernization Phase I
N1	HPER Athletics Addition Phase II
N3	Stadium Expansion
C3	Outdoor Intramural Field Replacement

Campus



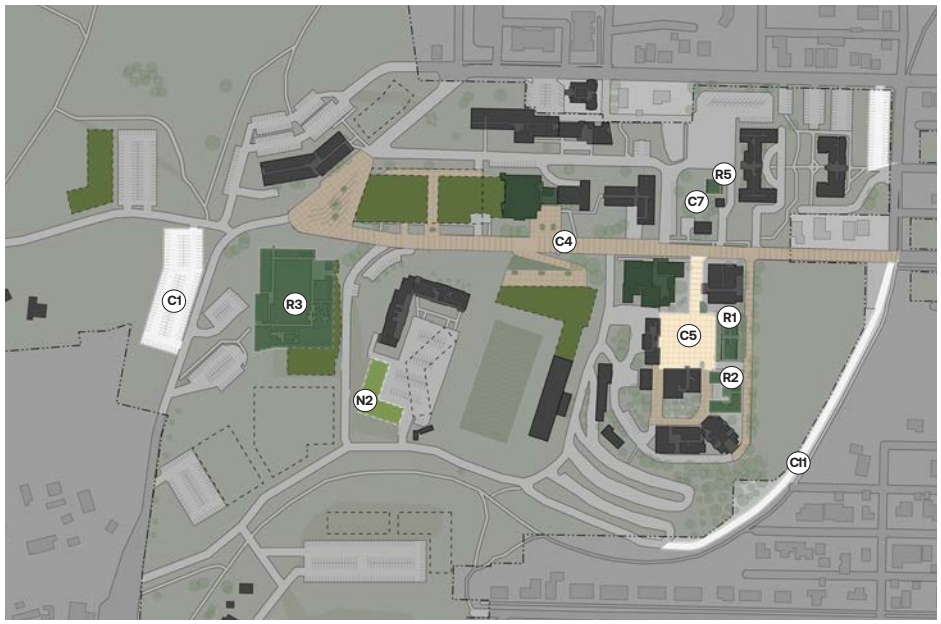
C2	New Parking Access
C4	Park Street Promenade
C5	Courtyard Redevelopment
C6	Montrose Pedestrian Way
C7	Campus Green
C8	Stadium Event Terrace
C9	Research Gateway Steps
C11	South Campus Access Road

4.4.1 Immediate Priorities

Projects and Drivers	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
R1, R2 - Main and Engineering Halls Renovations	x	x	-	1, 2, 3, 4, 5
R3 - HPER Facility Upgrades Phase I	x	-	-	3, 4
R5 - Reed House Renovation	x	-	-	3, 4
H1 – Highlands College Indoor Line Training Facility	x	-	-	2
N2 - *Stadium Village Phase I **Planning**	-	-	x	3, 5
C1 – West Surface Parking Development	x	x	-	3, 5
C4 - Park Street Improvements Phase I	-	x	-	3, 5
C5 - Courtyard Redevelopment	-	-	-	5
C7 - Campus Green (incl. with R5)	x	x	-	3
C11 - South Campus Access Road **Planning**	x	x	-	3, 5

Driving Principles

1 Exceptional STEM and health education
2 Hands-on learning and research
3 Healthy and vibrant campus environment
4 Hybrid, collaborative, interdisciplinary multi-use facilities
5 Supports accessibility
6 Fosters industry partnership



Renovation Projects
R1 Engineering Hall
R2 Main Hall
R3 HPER Modernization Phase I
R5 Reed House

New Buildings
N2 Stadium Village Housing Phase I *

Campus Improvements
C1 New Surface Parking Lot
C5 Courtyard Redevelopment
C11 South Campus Access Road *

*Planning Phase

Existing Facilities
Future Renovation
Proposed Facilities

I-R1 and I-R2: Main and Engineering Halls Renovations

The Need

Main and Engineering Halls are historic structures that have not undergone substantial renovations since their original construction. Main Hall lacks ADA accessibility and contains outdated and insufficient mechanical and electrical systems. Its floor plan does not support the needs of modern teaching and learning. Similarly, Engineering Hall is also not ADA accessible and features building systems that are beyond their expected useful life and no longer meet current codes. Both facilities require significant upgrades to align with contemporary standards for accessibility, safety, and educational functionality.

The Project

The planned renovations will thoughtfully preserve and reinforce the historic character of both Main and Engineering Halls, while transforming their interiors into modern, flexible learning environments. The updated spaces will provide ample room for student study, collaboration, and engagement. In addition, the renovations will include dedicated areas for faculty offices and research activities. Critical building infrastructure will be comprehensively upgraded, including HVAC, plumbing, and electrical systems. Life safety and code compliance issues—such as fire protection and ADA accessibility—will also be fully addressed, ensuring the buildings meet contemporary standards for safety, comfort, and functionality.

The Site

The buildings are situated between the Science and Engineering Building to the north and the Mineral Museum to the south. Engineering Hall occupies a prominent position on the central courtyard to the west, while both buildings front Montrose Avenue to the east, offering striking views overlooking the city of Butte. Any addition between the two structures should be thoughtfully designed to promote and facilitate pedestrian movement through the space, while preserving and honoring the existing view corridor.

Main Hall (left) with part of Engineering Hall (right), Anderson Mason Dale

Rendering of future renovations to Main and Engineering Halls, Anderson Mason Dale

I-R5: Reed House Renovation

The Need

The University is currently exploring the relocation of its Marketing and Communications departments from their current off-campus location in the University Relations Building to a more central, on-campus setting. The Reed House has emerged as a preferred option due to its proximity to both the Chancellor's Residence and the administrative offices housed in the adjacent Mining and Geology Building to the west.

The Project

The Reed House is a 1913 two-story bungalow with an unfinished basement and accessory detached garage that sits as a vacant residence in the heart of campus. The property was purchased by Montana Tech in 2016 in "as is" condition, after which exterior building and site improvements have been more recently made. The interior remains derelict, lacking domestic water services, featuring worn and dated interiors, and is not ADA accessible. A full interior renovation is required to transform the space into functional offices, meeting rooms, a break area, and accessible restroom facilities.

The Site

The property sites directly north of and on a contiguous lot with the Chancellor's Residence. Directly east lies Prospector Residence Hall, with the Mining and Geology administrative and classroom building to the west. Additional consideration for redevelopment of west lawn into functional campus green for student use is desired. The main floor access should be studied to provide an accessible route to the first floor at a minimum. A residential elevator may be considered if footprint and budget allow.

Reed House front entrance, Anderson Mason Dale

West lawn and South facade of Reed House, Anderson Mason Dale

I-R3: HPER Facility Modernization Phase I

The Need

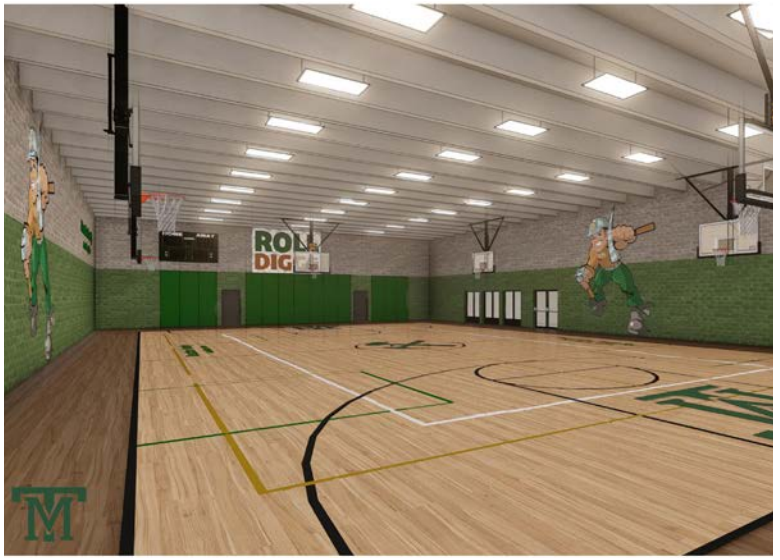
The HPER Renovation Plan is a strategic initiative designed to enhance student and student-athlete experiences, address critical space deficiencies, support campus growth, and expand revenue-generating opportunities through increased event-hosting capabilities. The project will be executed in two phases to meet immediate facility needs while positioning Montana Tech for long-term success in recreation, wellness, athletics, and campus engagement.

The Project

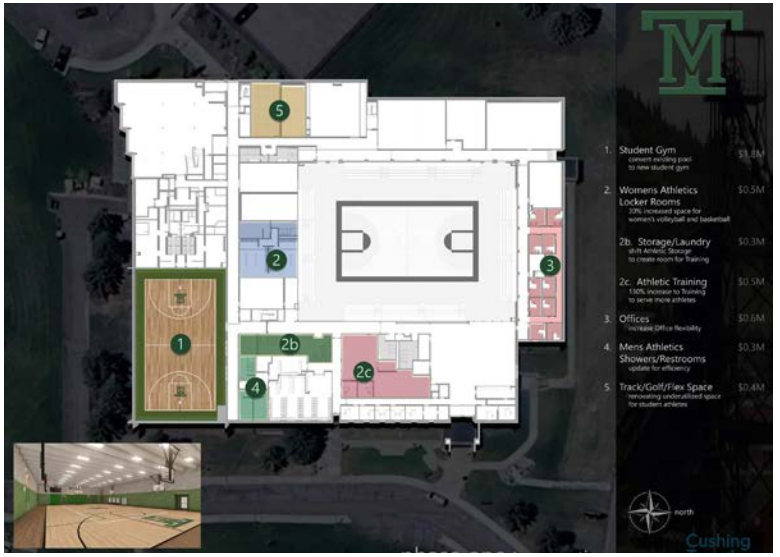
Phase I focuses on optimizing existing spaces to better serve students by converting the underutilized pool into a multi-purpose auxiliary gym, constructing dedicated women's varsity locker rooms to address gender equity concerns, expanding the athletic training room, improving storage solutions, and increasing office capacity to support coaching and administrative needs.

The Site

N/A. Redevelopment.



HPER Auxiliary Gym rendering, Cushing Terrell



Phase 1 Plan, Cushing Terrell

I-H1: Indoor Line Training Facility

The Need

The Pre-Apprentice Line Program at Highlands College is in critical need of a dedicated indoor line training facility to complement the existing outdoor line yard. Currently offered as a one-semester certificate program, the course prepares students for groundman and apprentice roles in the electrical line trade, providing foundational skills in the installation, construction, maintenance, and repair of electrical power line systems.

While the outdoor yard offers valuable hands-on experience, it is limited by weather conditions and seasonal constraints. A new climate-controlled, purpose-built indoor training facility will enable year-round instruction, significantly increasing training capacity, safety, and educational quality.

The Project

The approximately 26,000 gross square foot facility will include an indoor yard featuring adjustable pole structures, climbing stations, rigging equipment, and simulated energized environments—allowing students to train in realistic, real-world conditions within a safe, climate-controlled setting. The design also includes approximately 5,000 gross square feet for storage bays, equipment housing, and essential building support infrastructure.

This strategic investment in specialized infrastructure will ensure students are better prepared to meet industry standards and workforce expectations, while significantly enhancing instructional quality, safety, and program reach. It will further elevate Highlands College's reputation as a regional leader in technical training and directly supports Montana Tech's mission to produce career-ready graduates for Montana and beyond in high-demand skilled trade fields.

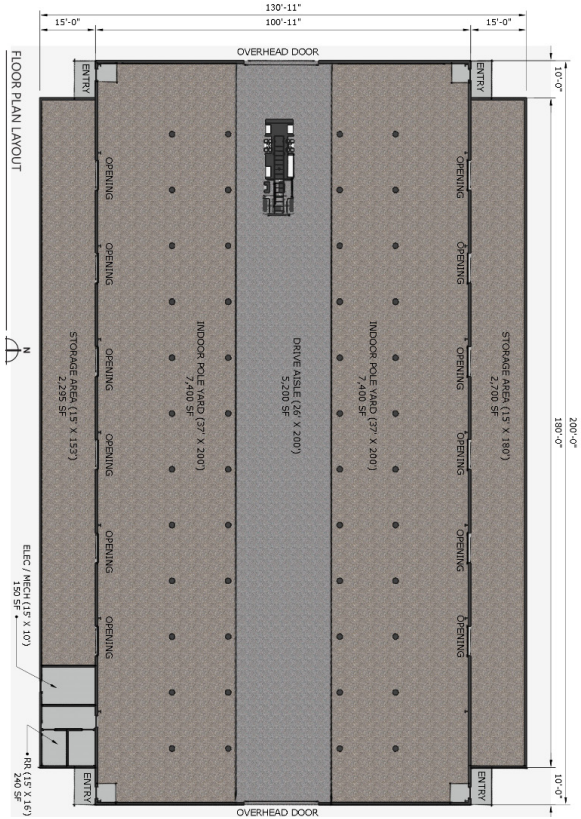
The Site

The proposed indoor line training facility will be located directly north of the existing Highlands College facility, in close proximity to the current line training classroom situated at the northwest corner of the building. This location provides an ideal operational layout, with the existing outdoor line yard positioned adjacent to the new indoor structure, allowing for efficient and convenient movement between classroom instruction, outdoor practice, and indoor training activities.

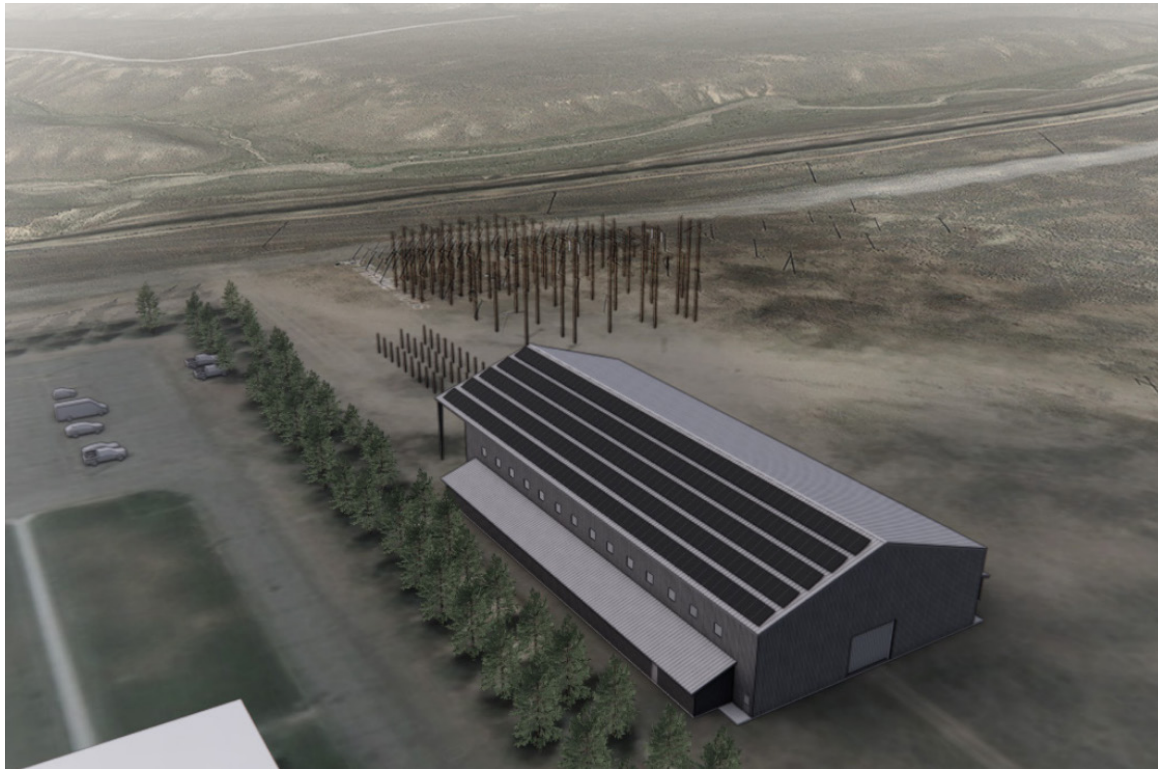
The site selection reinforces the cohesive integration of program elements, minimizing travel time for students and instructors while enabling seamless transitions between learning environments. The adjacency of classroom, indoor, and outdoor training areas will support flexible instruction models, enhance safety and supervision, and strengthen the overall learning experience.

Proposed indoor line training facility, interior render, Cushing Turrell

4.4 Proposed Projects - Immediate Priorities



Indoor Line Facility Plan, Cushing Terrell



Line Facility exterior rendering, Cushing Terrell

I-N2: Stadium Village Housing Phase I (*Planning*)

The Need

This Facilities Master Plan indicates a need to construct approximately 300 additional undergraduate beds on campus to accommodate a growing student enrollment, expand on-campus housing opportunities to second-year and upperclassmen students, and begin to address the growing demand for affordable student housing. This development should be implemented in phases, with the Stadium Village site identified as the starting point for initial construction.

The Project

Phase I focuses on the construction of a new 126-bed, three-story residence hall located at the southwest corner of MT Tech Road, near its intersection with the northern spur. Designed with a preference for single-occupancy rooms, this new facility will nearly double the residential capacity of the precinct, which currently includes student housing on Levels 1 and 2 of the Living Learning Center/Student Success Center. Dining services will continue to be provided at the existing Marcus Daly Dining Hall in the Student Union Building, with additional capacity offered through an expanded dining facility on Level 3 of the Living Learning Center/ Student Success Center.

The Site

The site design for the new residence hall should thoughtfully accommodate non-residential pedestrian circulation, particularly for those traveling east to west to access Alumni Field for events and activities. Site circulation may include the incorporation of a new pedestrian bridge connecting Level 3 of the Living Learning Center/Student Success Center, facilitating direct access to existing dining services. The site should balance open space for residential use with campus-wide accessibility, supporting both community interaction and student recreation. As the housing expansion will displace existing surface parking, replacement spaces in the Stadium Lot should be identified and constructed prior to the start of construction to maintain adequate campus parking capacity.

Living Learning Center, Anderson Mason Dale

Precedent student housing project, Anderson Mason Dale

I-C5: Courtyard Redevelopment

The Need

The existing courtyard is a dated and under-utilized space in the heart of the historic campus core. The use is further limited by the current layout which incorporates a non-ADA accessible raised center podium, with several old-growth spruce trees which dominate the field. The trees, while providing limited shade in the summer months, also shed nuisance needles and tree sap, which create maintenance issues and inconvenience everyday users. The trees are further showing signs of stress, which may necessitate their removal in the near future.

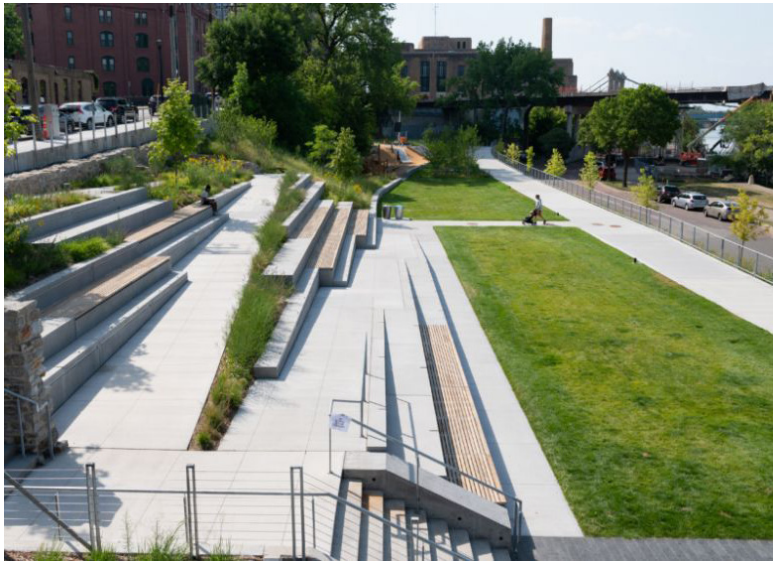
The Project

As part of the Main and Engineering Hall renovation project, Montana Tech should undertake a comprehensive redesign of the plaza's hardscape and landscape elements. The goal is to create a fully accessible, flexible, and year-round outdoor gathering space that can accommodate a variety of programs and activities, including food trucks, outdoor concerts, and departmental graduation and commencement ceremonies.

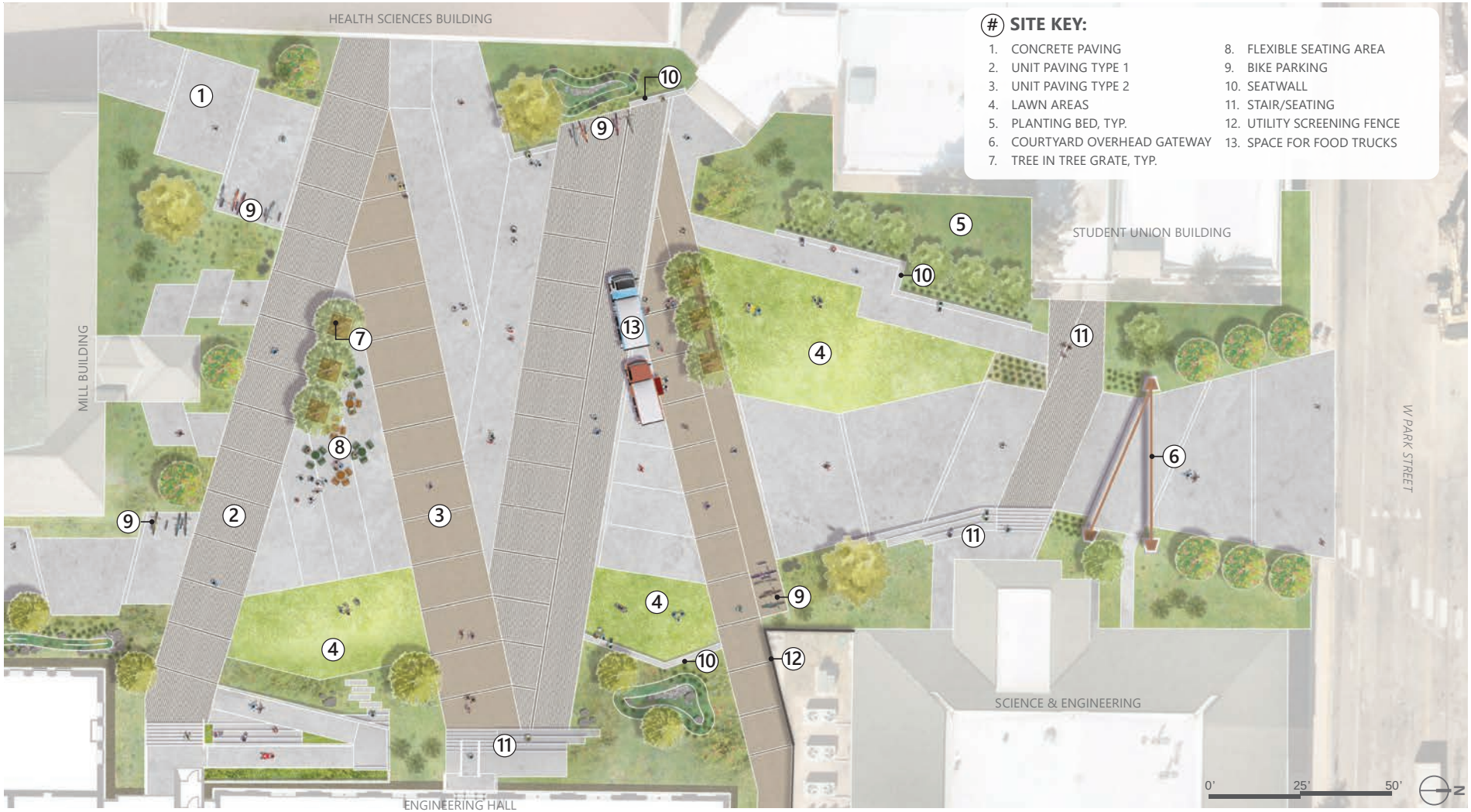
The Site

The redesign of the central courtyard should thoughtfully respond to the adjacent buildings that frame the space, emphasizing and reinforcing their primary entrances. The design should encompass not only the central courtyard but also the pedestrian spur leading to Park Street, establishing a cohesive design vocabulary and material palette. This approach will create a unified aesthetic that can be replicated in future renovations of existing public spaces and the creation of new outdoor "rooms" across campus.

Aerial of central courtyard, Anderson Mason Dale



Minneapolis Water Works Park, Damon Farber Landscape Architects



Courtyard schematic design plan, SCJ Studio

I-C1: West Surface Parking Development

The Need

The Facilities Master Plan identifies the need to develop an additional 415 parking spaces on campus to support growing student enrollment, an expanding faculty and staff, and increased demand for special event parking. This includes parking needs related to athletic programs, commencement ceremonies, conferences, and other community events. The parking expansion should be implemented in phases, beginning with the west campus site to address immediate capacity pressures and improve accessibility for high-traffic areas.

The Project

This Phase I project will redevelop an existing gravel parking area, that is currently signed as a permitted lot but not counted in the current on-campus parking capacity. The lot is utilized as overflow from the nearby Library or Natural Resources Building lots. The construction includes a paved lot with appropriate striping, lighting, signage and drainage to accommodate approximately 158 new parking spaces.

The Site

Sidewalks and crosswalks along Mining Museum Road and Bluebird Trail should be added and sized appropriately to facilitate safe pedestrian movement between the new parking lot and the Natural Resources Building to the north and HPER Complex to the east.

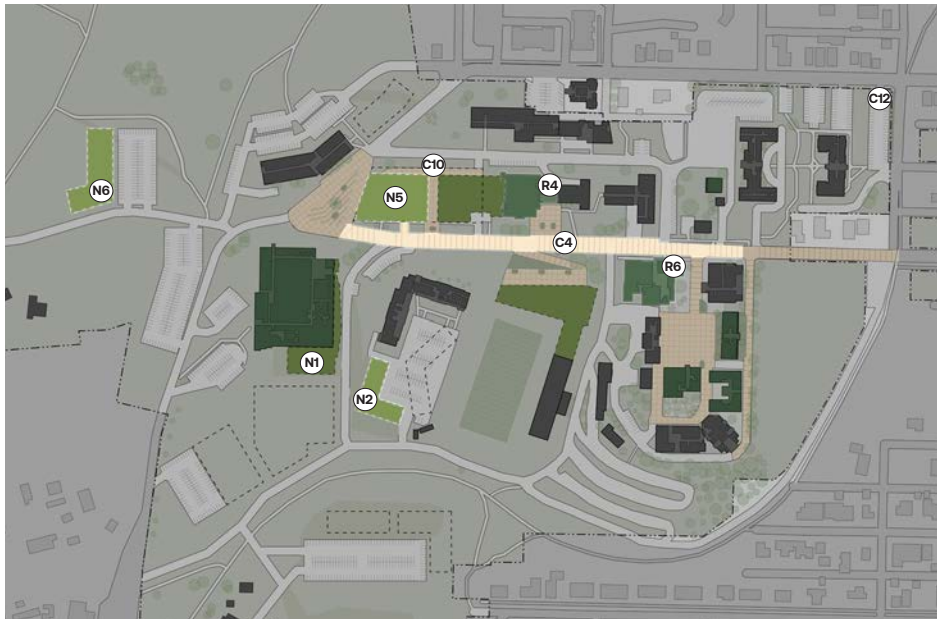
Existing gravel surface lot, Google Street View

4.4.2 Near-Term Priorities

Project Drivers	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
R4 - Library Learning Commons Modernization	x	x	-	1, 4, 5
R6 - Student Union Renovations	x	x	-	3, 4, 5
N1 - HPER Athletics Addition Phase II	x	-	-	3, 4
N2 - Stadium Village Phase I **Implementation**	x	-	x	2, 3, 4
N5 - Research Institute **Planning**	x	-	-	3, 5
N6 – Research Innovation Campus Building	x	-	-	1, 2, 4, 5, 6
C4- Park Street Improvements Phase II	-	x	-	3, 5
C10 - Below Grade Podium Parking (incl with N5) **Planning**	x	-	x	5
C12 - East Village Surface Parking Expansion	x	x	x	3, 5

Driving Principles

1 Exceptional STEM and health education
2 Hands-on learning and research
3 Healthy and vibrant campus environment
4 Hybrid, collaborative, interdisciplinary multi-use facilities
5 Supports accessibility
6 Fosters industry partnership



Renovation Projects
R4 Library Learning Commons
R6 Student Union Building

New Buildings
N1 HPER Athletics Addition Phase II
N2 Stadium Village Housing Phase I
N5 Research Institute *
N6 Research Innovation Campus Building

Campus Improvements
C4 Park Street Promenade - Phase II
C10 Below Grade Podium Parking *
C12 East Village Surface Parking Expansion

*Planning Phase

Existing Facilities
Future Renovation
Proposed Facilities

II-R4: Library Learning Commons Modernization

The Need

The Montana Tech Library is an outdated facility whose design, layout, and amenities no longer fully meet the evolving needs and expectations of today's library users. The facility requires modernization to foster a dynamic, collaborative learning environment that integrates advanced technology and encourages creativity, innovation, and engagement.

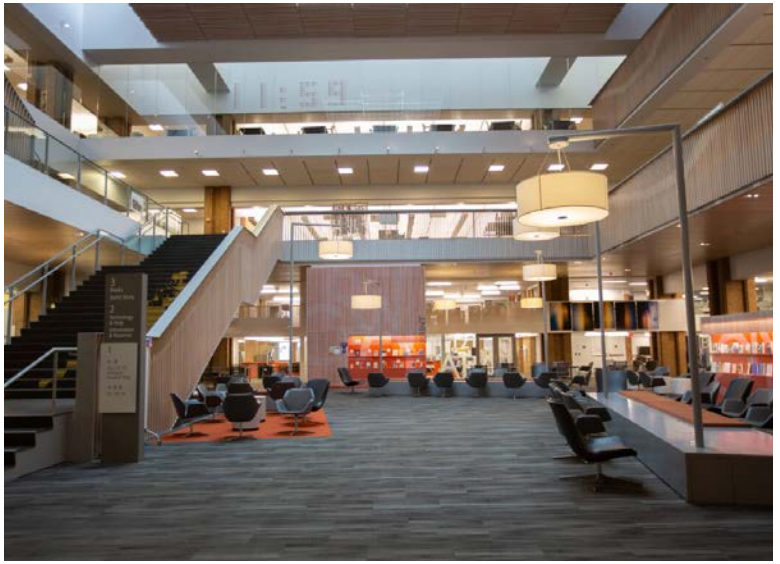
The Project

The Library, built in 1976, is a two-story concrete-frame building clad in red brick veneer with glass storefronts and metal panel infill. It has not undergone any major renovations since its construction. To optimize the use of valuable floor space, consideration should be given to relocating rarely circulated materials to an accessible on- or off-campus facility. The renovation should include flexible and inviting spaces for student study and collaboration, open gathering areas for small talks and library events, dedicated classrooms for library instruction, and specialized spaces such as a maker space for 3D printing, a studio for podcasting and video presentations, a VR/AR drone room, and an artificial intelligence center. Additionally, the project should incorporate a coffee shop and comprehensive accessibility improvements throughout the entire building.

The Site

The existing building occupies a prominent site along Park Street. A new arrival and entry court should be designed to seamlessly connect with the Park Street promenade, creating an inviting gathering space for students.

Library main entrance, Anderson Mason Dale



University of Washington Odegaard Library renovation, University of Washington

II-R6: Student Union Renovations

The Need

The Student Union Building (SUB) should serve as the vibrant heart of student life beyond the academic experience but is currently in need of modernization. Existing programming is not fully aligned with student needs, and many functions have been squeezed into spaces that inadequately support their intended use.

The Project

The project scope includes right-sizing the campus bookstore, creating a re-imagined student game room, expanding the health and wellness center, and adding new student study spaces. It also encompasses new offices for student government, a comfortable lounge area, and modernized conference facilities. While the project could be executed in phases, funding will likely require a combination of fundraising efforts and student fees.

The Site

N/A. Redevelopment.

SUB renovation plans, NAC

Renovation rendering, NAC

II-N1: HPER Athletics Addition Phase II

The Need

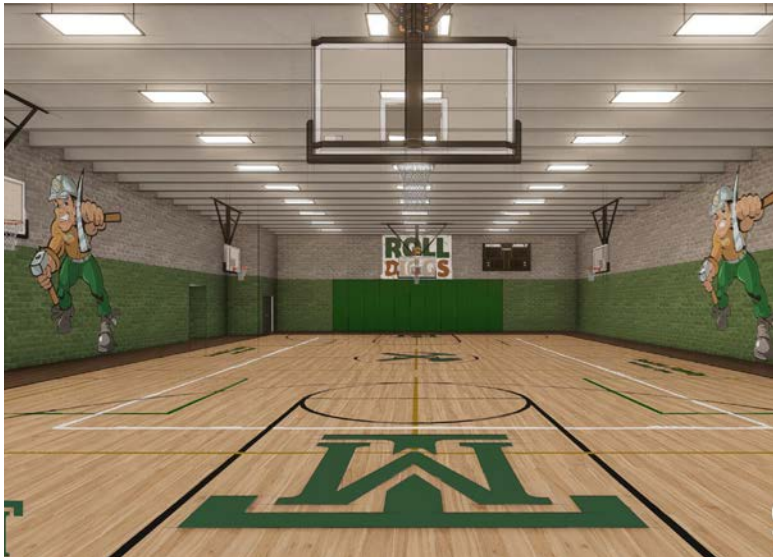
The HPER Renovation Plan is a strategic initiative designed to enhance student and student-athlete experiences, address critical space deficiencies, support campus growth, and expand revenue-generating opportunities through increased event-hosting capabilities. The project will be executed in two phases to meet immediate facility needs while positioning Montana Tech for long-term success in recreation, wellness, athletics, and campus engagement.

The Project

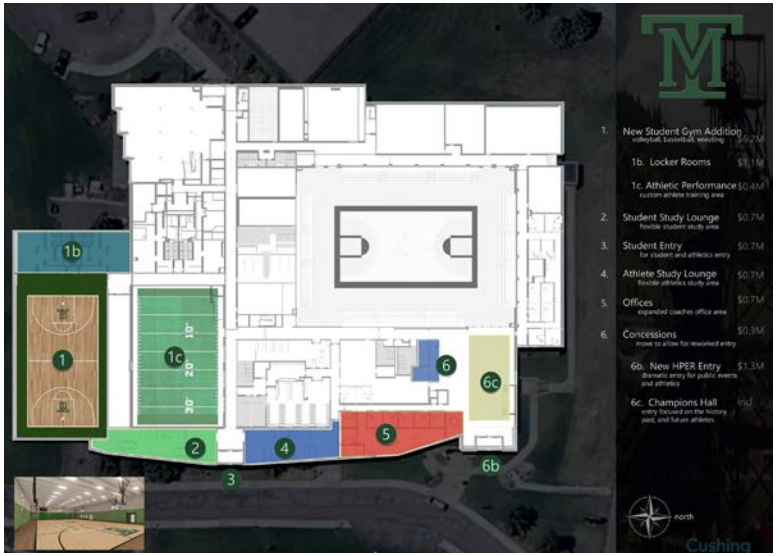
Phase II is a transformational expansion that introduces new student and athletic spaces, including a student gym addition, an athletic performance center, and dedicated study lounges to support both academic and wellness initiatives. This phase also includes a new east-side building entry to improve accessibility and security, an office expansion to accommodate campus growth, and a lobby renovation featuring an updated concession area and Champions Hall to celebrate Montana Tech's athletic legacy.

The Site

The new entry should be designed to accommodate vehicular drop off. Existing service access at the southwest corner of the building should be screened.



HPER Auxiliary Gym rendering, Cushing Terrell



Phase 2 Plan, Cushing Terrell

II-N5: Research Institute (*Planning*)

The Need

Montana Tech currently faces a significant shortage of dedicated research space, with a documented deficit of approximately 32,000 square feet compared to the average research space available at peer institutions. This shortfall limits the University's ability to fully support its growing community of primary investigators, secure competitive research funding, and expand its research enterprise. The Master Plan aspires to close this gap, achieving parity in research square footage per primary investigator, and positioning Montana Tech to compete at the national level.

The proposed new academic research facility will not only address the quantitative shortfall but also reimagine the qualitative experience of research on campus. A core goal is to bring "science on display"—celebrating and showcasing the University's extraordinary research and cutting-edge technologies, much of which is currently hidden in windowless basements or tucked away behind closed doors.

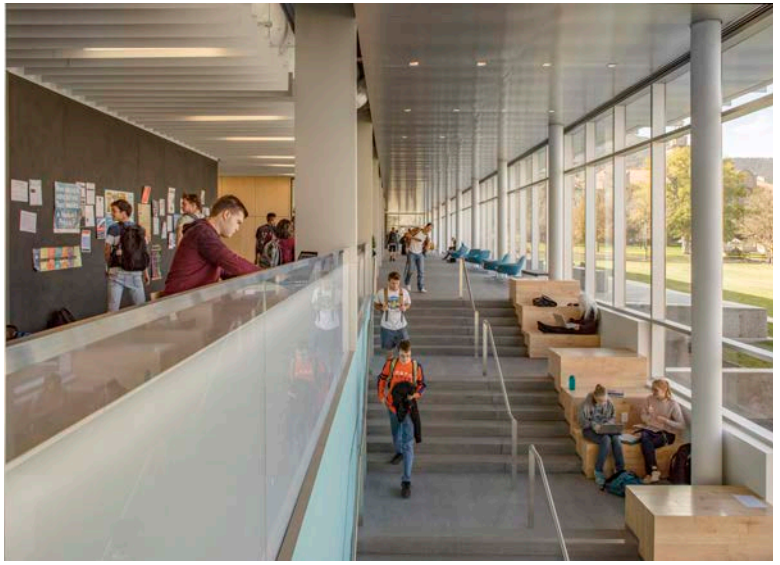
The Project

The Master Plan proposes the development of a new academic research institute - a dynamic environment where Montana Tech students can transform imagination into reality. This future-focused building will serve as a hands-on learning hub, fostering the development of critical skills through project-based design, faculty mentorship, and industry collaboration. Designed to empower the next generation of engineers, scientists, and innovators, the facility will act as a living laboratory where students are encouraged to explore, experiment, and invent.

Through glass-walled labs, collaborative workspaces, and open public galleries, the new facility will place innovation at the heart of the student and visitor experience, reinforcing Montana Tech's identity as a leader in applied research, discovery, and industry partnership.

In collaboration with industry partners, the building will host interdisciplinary research initiatives, capstone projects, and real-world problem-solving opportunities that connect classroom

Colorado School of Mines Marquez Hall, Anderson Mason Dale



Colorado School of Mines CoorsTek, Anderson Mason Dale

learning with practical application. This flexible, high-tech environment will instill the confidence, creativity, and expertise students need to lead in their fields and shape the future of innovation.

The Site

The proposed site for the new facility is anticipated to be shared with the new academic event center. The existing site is reasonably level and currently serves as the largest-capacity surface parking lot on campus. To mitigate the loss of surface parking and maintain or expand overall capacity, replacement parking is envisioned in the form of podium (structured) parking integrated into the new facility design. This approach supports a more efficient land use strategy while preserving essential parking availability for students, faculty, staff, and event attendees.

University of Wyoming, Enzi STEM Education Facility, Anderson Mason Dale

II-N6: Research Innovation Campus Phase I

The Need

As part of the long-range vision for campus growth, the Facilities Master Plan identifies the westward expansion of campus as a strategic opportunity to develop a new research complex that will serve as a regional hub for technology innovation, deployment, and field-scale testing. This expansion is intended to support Montana Tech's research mission by creating purpose-built facilities that bridge academic inquiry with real-world application.

The Project

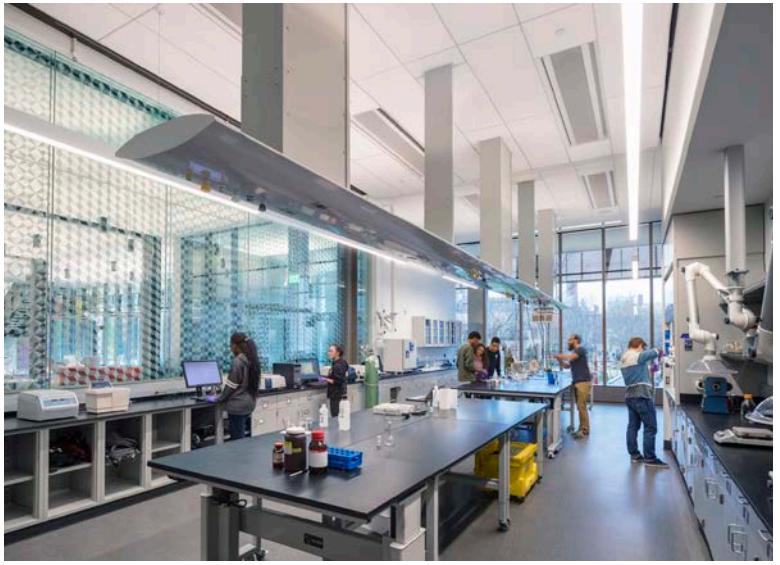
The new research facilities will be designed to complement and enhance the capabilities of the Montana Tech Underground Mine Education Center (UMEC). The UMEC provides a one-of-a-kind, hands-on learning and research environment focused on underground mining methods, rock mechanics, ventilation, fragmentation, and occupational health and safety. By collocating new surface-level research infrastructure nearby, Montana Tech can fully leverage its interdisciplinary strengths in geoscience, engineering, and environmental systems, while enabling translational research that extends from laboratory to field application.

This new precinct will provide flexible lab, shop, experimental space, and outdoor demonstration and field research sites that could support a range of activities, including prototype development, testing, robotics, and data collection at scale, particularly in areas aligned with Montana Tech's institutional strengths and industry partnerships. The facility will advance not only academic discovery but also workforce training, commercial testing, and collaboration with industry, reinforcing Montana Tech's role as a center for applied innovation in Montana and beyond.

The Site

The proposed site encompasses designated open space lands characterized by rolling hills and the remnants of abandoned mine sites. While these lands present certain geotechnical and environmental challenges, they also offer a unique opportunity to reclaim and repurpose post-industrial landscapes for cutting-edge research and innovation.

Colorado School of Mines, Labriola Innovation Hub, OZ Architecture



Brown University, Engineering Research Center, Kieran Timberlake

II-C4: Park Street Improvements Phase I

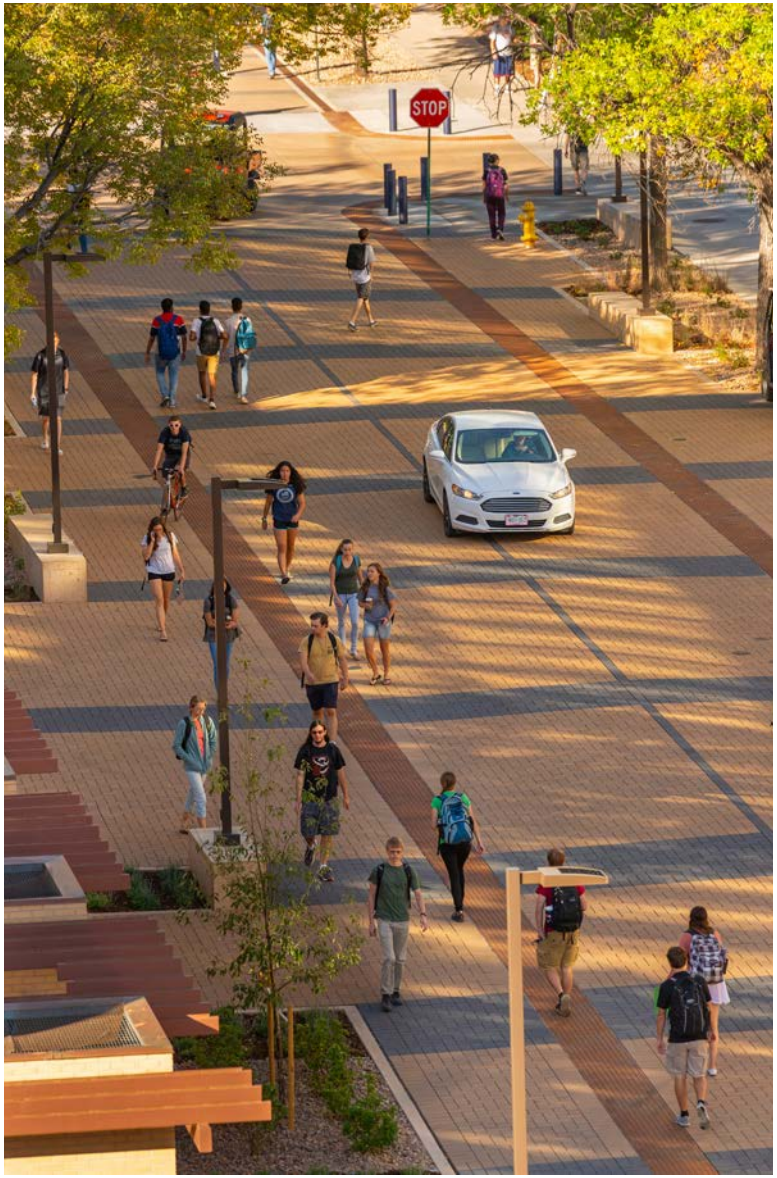
The Need

Montana Tech's campus is bisected by W Park Street, the primary east-west arterial that accommodates both vehicular and pedestrian traffic. This thoroughfare not only separates key academic, residential, and student life facilities but also presents challenges to pedestrian safety and the overall sense of campus cohesion. In its current configuration, the street includes not less than seven pedestrian crossings within a 1/3 mile stretch—from N Western Avenue to Mining Museum Road. While this high frequency of crossings reflects a significant level of pedestrian demand, the current infrastructure does not adequately support the safety, comfort, or prominence of foot traffic as a primary mode of circulation.

The Project

In support of the university's long-term goals for safety, sustainability, and student experience, the Master Plan recommends a transformational redesign of W Park Street as a shared "green" street. This reimagined corridor will prioritize pedestrian mobility and connectivity while maintaining limited, low-speed vehicular access. The hardscape design should feature integral colored and scored concrete panels, with curbless transitions between vehicular and pedestrian areas to enhance accessibility and safety. Traffic calming measures—such as variations in color and texture, strategic plantings, and benches—should be incorporated to create a more pedestrian-friendly environment.

The overall design should take cues from the Courtyard Redevelopment project, see project II-C.5, to align with overall design vocabulary and material palette to create a unified campus aesthetic. The transformation of W Park Street is envisioned as a phased project, with sections redeveloped over time in coordination with adjacent building projects and available funding. Each phase will extend and reinforce a unified design language of high-quality hardscape materials, landscape features, and pedestrian-first design principles.

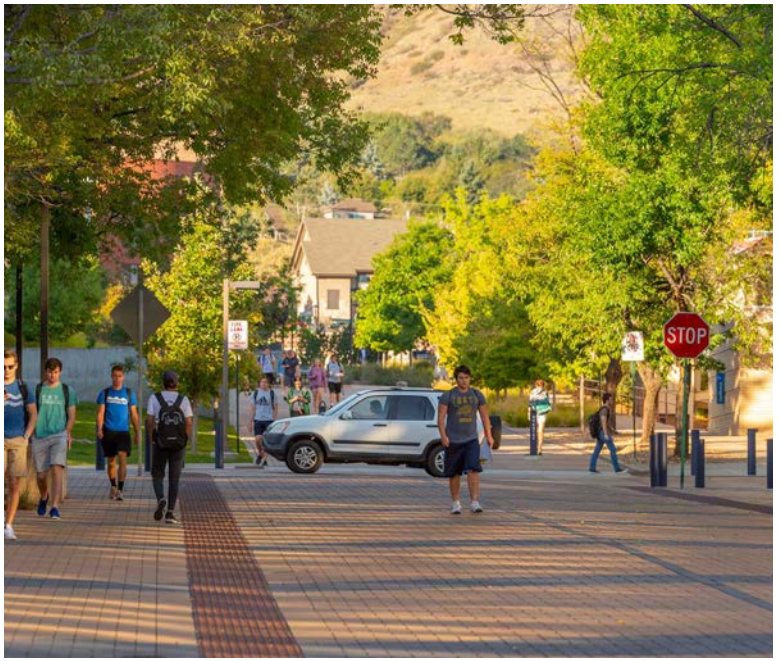


Colorado School of Mines, Anderson Mason Dale

The Site

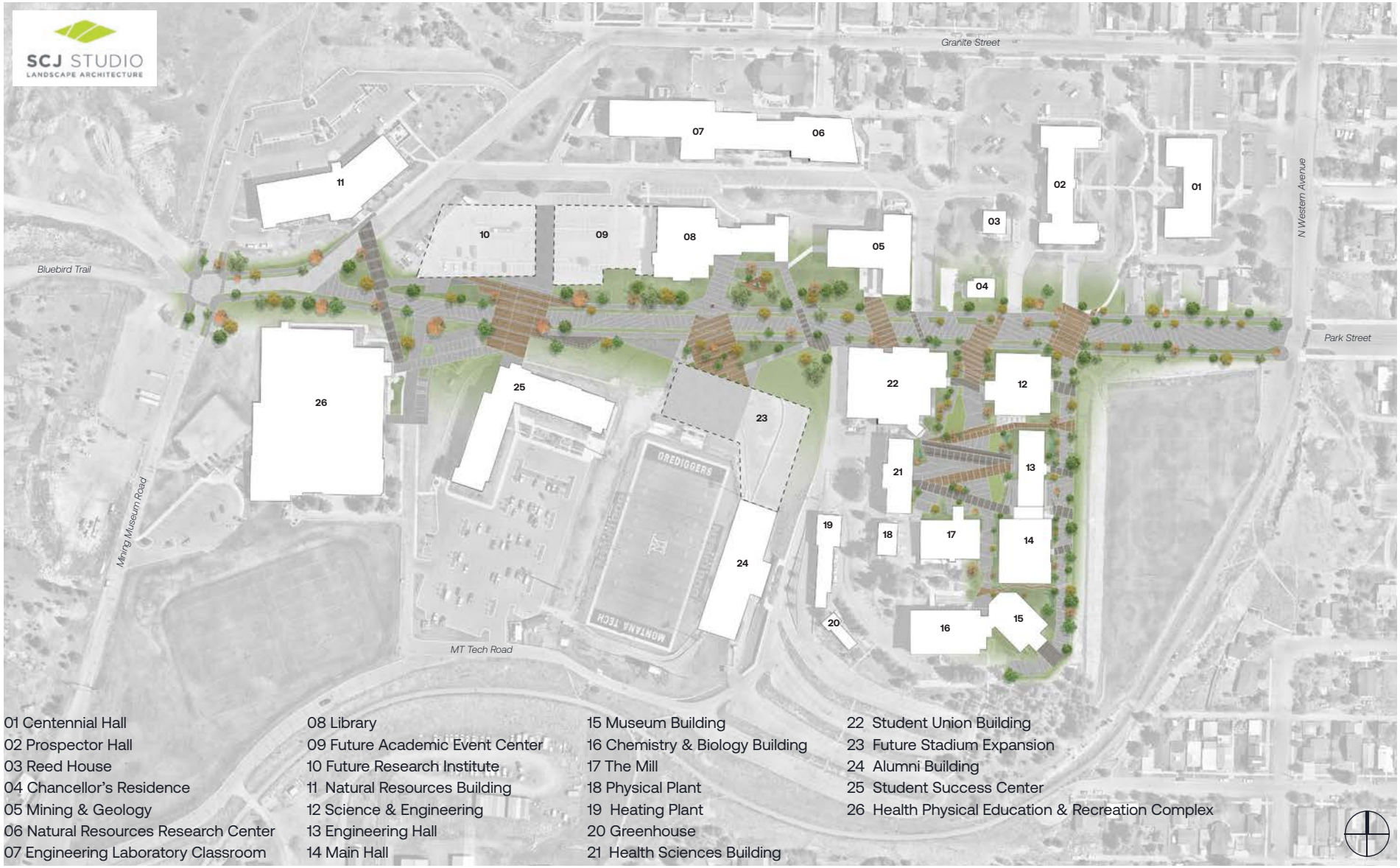
The new streetscape design should take into account the significant grade changes across the length of the street section. Individual phased improvement projects should expand the public realm to create moments of gathering and respite and engage existing and future building entries. The completed project should serve as both a functional circulation route and a symbolic centerpiece of the Montana Tech campus.

Existing Park street pedestrian crossings, Google Street View



Colorado School of Mines, Anderson Mason Dale

4.4 Proposed Projects - Near-Term Priorities



01 Centennial Hall
02 Prospector Hall
03 Reed House
04 Chancellor's Residence
05 Mining & Geology
06 Natural Resources Research Center
07 Engineering Laboratory Classroom
08 Library
09 Future Academic Event Center
10 Future Research Institute
11 Natural Resources Building
12 Science & Engineering
13 Engineering Hall
14 Main Hall
15 Museum Building
16 Chemistry & Biology Building
17 The Mill
18 Physical Plant
19 Heating Plant
20 Greenhouse
21 Health Sciences Building
22 Student Union Building
23 Future Stadium Expansion
24 Alumni Building
25 Student Success Center
26 Health Physical Education & Recreation Complex

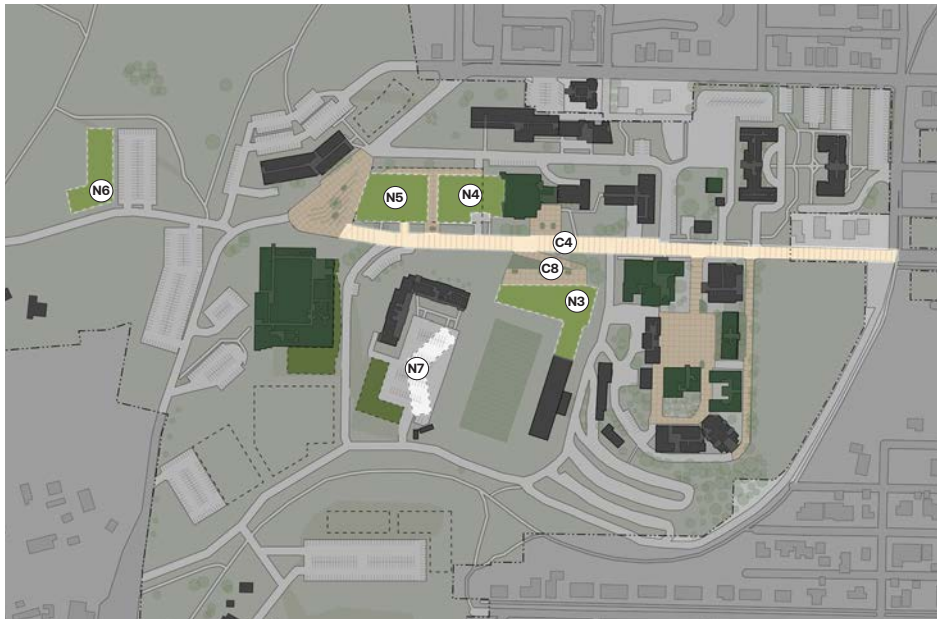
Campus landscape plan design, SCJ Studio and Anderson Mason Dale

4.4.3 Mid-Term Priorities

Project Drivers	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
N3 – Stadium Expansion **Planning**	x	-	-	1, 2, 4, 5, 6
N4 - Academic Event Center **Planning**	x	-	-	1, 4
N5 - Research Institute **Implementation**	x	-	-	1, 2, 4, 6
N7 - Stadium Village Housing Phase II **Planning**	-	-	x	3
C4 - Park Street Improvements Phase III	x	x	-	3, 5
C8 - Stadium Event Terrace (incl with N3) **Planning**	-	-	-	3, 5

Driving Principles

1 Exceptional STEM and health education
2 Hands-on learning and research
3 Healthy and vibrant campus environment
4 Hybrid, collaborative, interdisciplinary multi-use facilities
5 Supports accessibility
6 Fosters industry partnership



Renovation Projects

New Buildings
N3 Stadium Expansion*
N4 Academic Event Center*
N5 Research Institute
N6 Research Innovation Campus Building *
N7 Stadium Village Housing Phase II *

Campus Improvements
C4 Park Street Promenade Phase III
C8 Stadium Event Terrace *

*Planning Phase

Existing Facilities
Future Renovation
Proposed Facilities

III-N4: Academic Event Center (*Planning*)

The Need

Montana Tech currently lacks a dedicated large-capacity venue to host professional events, conferences, banquets, and receptions. In the absence of such a facility, major campus events are often held in the HPER gymnasium, a space primarily intended for athletics. This dual use creates ongoing scheduling conflicts and limits the availability of the gym for both athletic programming and broader university engagement efforts. Furthermore, the HPER space lacks the acoustics, infrastructure, and flexibility needed for professional, revenue-generating events.

From an academic perspective, the University is also constrained by a shortage of modern, large-capacity instructional spaces. The existing tiered lecture halls are outdated, inflexible, and ill-suited to contemporary teaching methods, which increasingly emphasize active learning, group interaction, and technology integration. These limitations directly impact instructional delivery, student engagement, and Montana Tech's ability to host academic symposia, guest lectures, and cross-disciplinary seminars at scale.

The Project

To address these critical space deficiencies, the Facilities Master Plan recommends the development of a multi-functional, large-capacity event and instructional facility designed to serve both academic and external community needs. The primary event space should accommodate 500+ attendees for major functions such as conferences, academic convocations, banquets, and regional summits, establishing Montana Tech as a hub for professional engagement in southwest Montana. Instructionally, the facility should include state-of-the-art active learning classrooms capable of supporting 50-100+ students in flexible, technology-enabled environments. These spaces should be designed to support evolving pedagogical models, including group work, hybrid learning, and interactive instruction. The facility should also provide dedicated support spaces including breakout rooms, staging areas, catering support, and integrated AV systems.

This facility will serve as a revenue-generating asset through partnerships with external groups, community organizations,

Washington State University Spark Academic Innovation Center, ZGF

CU Anschutz Health Sciences Building, Anderson Mason Dale

and professional associations, while also meeting the University's growing internal demand for high-capacity, multi-purpose space. This new venue will not only strengthen Montana Tech's academic delivery and event programming capacity but also elevate its regional presence and reputation as a center for innovation, education, and professional development.

A conceptual level plan diagram of this project is included on the following page, and proposes to connect to the library and learning commons modernization project to the east.

The Site

The proposed site for the new facility is reasonably level and currently serves as the largest-capacity surface parking lot on campus, making it a strategic and logistically feasible location for new development. Its central proximity to core academic, residential, and student life facilities enhances its potential to serve as a vibrant, high-use destination for both campus and community functions. To mitigate the loss of surface parking and maintain or expand overall capacity, replacement parking is envisioned in the form of podium (structured) parking integrated into the new facility design. This approach supports a more efficient land use strategy while preserving essential parking availability for students, faculty, staff, and event attendees.

CU Anschutz Health Sciences Building, Anderson Mason Dale

CSM CoorsTek Center for Applied Science and Engineering, Anderson Mason Dale

Level 2 - Academic Event Center and Learning Commons

Level 1 - Academic Event Center and Learning Commons

Conceptual Academic Event Center and Learning Commons Plans

A Classroom
B Restroom
C Classroom in the Round
D Print Archives
E Tutoring
F Writing Center
G Career Services
H Learning Hub
I Learning Steps
J Lobby
K Learning Commons
L Study Room
M Cafe
N Catering
O Storage
P Support
Q Conference
R Event Center
S Stacks

Classroom
Event/Large Classroom
Amenity/Resource
Gathering
Storage/Support
Circulation

III-N3: Stadium Expansion (Planning)

The Need

The Alumni Coliseum Renovation Plan is a strategic initiative aimed at modernizing Montana Tech's premier outdoor athletic venue to enhance the fan experience, improve game day operations, and generate new revenue opportunities. The project will be executed in two phases to address critical infrastructure needs while positioning the facility for long-term success as a hub for competition, hospitality, and athletic growth.

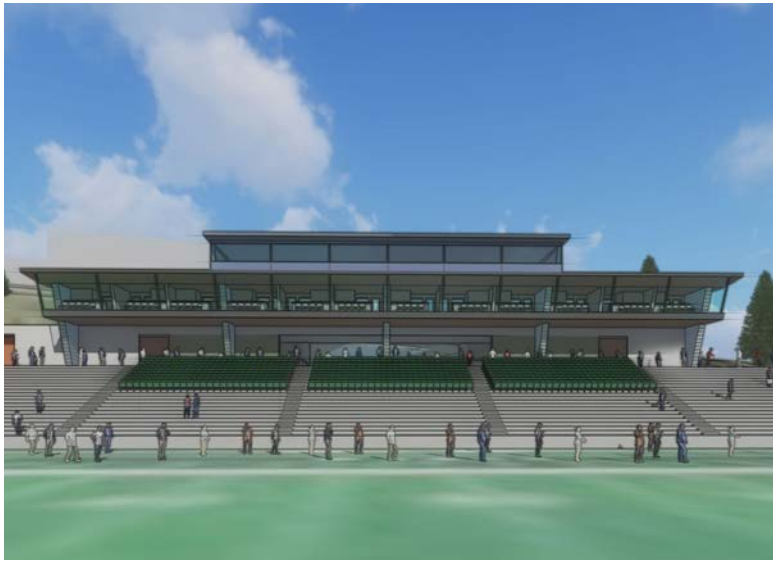
The Project

Phase I focuses on renovating stadium seating and constructing a new concourse building that will significantly improve the game day experience for fans, coaches, and operations personnel. This phase includes enhanced concessions and restroom facilities designed to accommodate larger crowds, a dedicated operations suite for game day staff, enclosed spaces for coaches, media, and broadcasting, and private hospitality suites to optimize revenue generation. These improvements will elevate the overall functionality of Alumni Coliseum while creating a more engaging and modern atmosphere for fans and participants alike.

Phase II will introduce a state-of-the-art Football Operations Building, relocating football operations from the HPER Complex to a dedicated facility within Alumni Coliseum. This new building will include a football locker room, coaching offices, a weight room, and an expanded athletic training space. By providing a modernized, sport-specific environment, this phase will enhance the student-athlete experience, strengthen recruiting efforts, and create opportunities to add additional sports at Montana Tech by repurposing the space football vacates in the HPER Complex.

The Site

The new concourse building is on a prominent site along Park Street, overlooking Alumni Field. The existing site presents a significant grade challenge between field level and Park Street. The site design should connect this facility back to the Park Street promenade with a welcoming pedestrian arrival court that could offer seating and shade and serve as a gathering place for game day activities.



Render of renovated existing football seating, Cushing Terrell

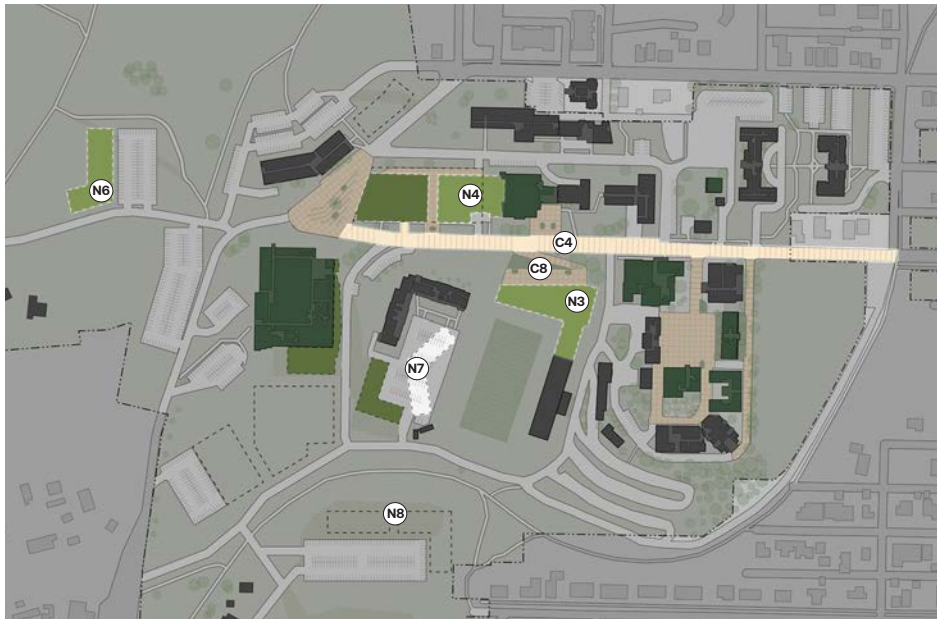
Stadium expansion rendering, Cushing Terrell

4.4.4 Long-Term Priorities

Project Drivers	Programmatic Need	Facilities Maintenance	Enrollment	Driving Principles
N3 – Stadium Expansion **Implementation**	-	_	x	3
N4 - Academic Event Center **Implementation**	x	_	-	1, 2, 3, 4, 5
N7 - Stadium Village Phase II **Implementation**	x	_	-	3, 4
N8 - South Village Housing **Planning**	x	_	-	3, 4
C4 - Park Street Improvements Phase IV	x	_	-	3, 5
C8 - Stadium Event Terrace (incl. with N3) **Implementation**	-	_	-	3, 5

Driving Principles

1 Exceptional STEM and health education
2 Hands-on learning and research
3 Healthy and vibrant campus environment
4 Hybrid, collaborative, interdisciplinary multi-use facilities
5 Supports accessibility
6 Fosters industry partnership



Renovation Projects

New Buildings
N3 Stadium Expansion
N4 Academic Event Center
N6 Research Innovation Campus Building
N7 Stadium Village Housing Phase II
N8 South Village Housing *

Campus Improvements
C4 Park Street Promenade

*Planning Phase

Existing Facilities
Future Renovation
Proposed Facilities

4.5 Phasing & Sequencing

Project Priorities

The long-term value of the Montana Tech Facilities Master Plan lies in its ability to establish clear capital priorities and optimize the use of limited and valuable institutional resources. The plan serves as a strategic framework to guide future investments, ensuring that decisions are aligned with the University's mission, academic vision, enrollment goals, and fiscal realities.

Through the master planning process, the planning team identified more than 30 potential projects, encompassing a range of efforts—from building renovations and new construction to improvements in parking, infrastructure, and open space environments. The scope and complexity of these projects vary significantly, from relatively straightforward surface parking lots to transformative facilities such as cutting-edge research and innovation laboratories.

To support implementation, projects have been phased based on strategic guidance from Montana Tech leadership, carefully considering institutional priorities, anticipated enrollment growth, and the evolving financial landscape. The phasing approach ensures that investments are timely, efficient, and scalable.

Student housing projects, in particular, are envisioned to proceed in multiple phases, with the goal of quickly increasing capacity to support growing student demand for affordable, on-campus living options. Importantly, the number of available beds is never reduced in any phase, ensuring a stable and predictable revenue stream while supporting a vibrant campus community.

This Facilities Master Plan is a living document, designed to adapt as Montana Tech's needs evolve—positioning the institution for long-term success and reinforcing its role as a national leader in STEM and applied science education.

Project Phasing

The Phasing Plan provides a clear and actionable framework for implementing the recommendations outlined in the Facilities Master Plan. Designed to align with Montana Tech's strategic priorities, the plan identifies a four-phase structure that allows the University to take decisive steps toward campus transformation while retaining flexibility to respond to changing conditions, emerging opportunities, enrollment growth, and available funding.

The phasing diagrams included in this chapter visually represent the anticipated sequence of development, illustrating how projects can be layered over time to reinforce institutional goals and optimize capital investments. Each phase has been carefully considered to ensure forward momentum while avoiding unnecessary disruption to campus operations.

In collaboration with Montana Tech leadership, the planning team structured the phasing strategy to:

- Maximize impact by prioritizing high-need projects that offer the greatest return on investment.
- Minimize disruption to academic programs, student services, and campus life.
- Limit temporary relocations by reducing the number of times programs or user groups would need to move.
- Sequence enabling projects (e.g., parking, utility upgrades) to support major new construction and renovations.
- Create early wins that build momentum and confidence among stakeholders and potential funding partners.

This phased approach supports strategic decision-making, facilitates efficient allocation of resources, and provides a roadmap for long-term campus development that is both visionary and achievable.

4.6 Project Cost Estimates

As part of the Facilities Master Plan process, the planning team developed order-of-magnitude project costs appropriate for the master planning level of detail. These preliminary estimates are intended to serve as a foundational tool for strategic decision-making, long-range capital planning, and the early stages of project budgeting.

While not intended for final design or construction bidding, these cost estimates provide valuable insight into the relative scale and complexity of proposed projects. They help inform prioritization, sequencing, and funding strategies, offering Montana Tech the ability to plan confidently for short-, medium-, and long-term investments. By coupling visionary campus development with practical financial forecasting, the Facilities Master Plan ensures that the University's investments are both aspirational and grounded in fiscal responsibility.

The specific costs for each project are listed on the next pages, categorized by priority.

Cost Assumptions

The master planning team process utilized the following assumptions.

- Total Project Cost; the sum of Future Construction Cost and Contingency.
- Future Construction Costs, prepared at an order-of-magnitude and per-square-foot level.
  - Building costs: foundation, substructure, superstructure, exterior enclosure, roofing, interior construction, stairs, interior finishes, conveying systems, plumbing, HVAC, fire protection, electrical, equipment, furnishings, site to 5-feet outside the building perimeter, and demolition
  - Site costs: demolition/site preparation, earthwork, hardscape, lawn, pedestrian lighting, site amenities, landscaping and utilities. Hazardous abatement or environmental studies are not included.
  - Soft costs: including fundraising/financing, design and programming, and permits. The master planning team assumed Soft Costs to be 30 percent of Construction Costs (building + site)
  - Escalation: assumes 4 percent/year
- Contingency; 5 percent of future construction costs for new construction, 10 percent for renovation. The high contingency is appropriate because the projects are not fully defined at the master plan-level.
- All costs reflect values as of 2025. Any future projects should consider escalation costs.

Assumptions of GSF for building projects on the following pages are estimates. Actual building program should be evaluated at the start of each project to understand current program needs.

4.6 Project Cost Estimates

Project	Gross SF	Work Type	Project Priority				Total Project Cost
			Immediate	Near-Term	Mid-Term	Long-Term	
R1 - Engineering Hall Renovation	14,000	Renovation	✓				**$8,000,000**
R2 - Main Hall Renovation	38,000	Renovation	✓				**$30,000,000**
R3 - HPER Modernization Phase I	24,000	Renovation	✓				**$4,400,000**
R5 - Reed House Renovation	2,500	Renovation	✓				**$1,332,000**
H1 - Indoor Line Training Facility	26,000	New Building	✓				**$7,774,000**
C1 - New West Surface Parking Lot: 160 spaces	N/A	Campus	✓				**$1,335,000**
C4 - Park Street Promenade - Phase I	20,136	Campus	✓				**$1,178,000**
C5 - Courtyard Redevelopment	28,000	Campus	✓				**$1,092,000**
C7 - Campus Green (incl. with R5)	8,800	Campus	✓				**$275,000**
Total Immediate Projects (1-3 years)							**$55.4M**

4.6 Project Cost Estimates

Project	Gross SF	Work Type	Project Priority				Total Project Cost
			Immediate	Near-Term	Mid-Term	Long-Term	
R4 - Library Learning Commons Modernization	39,000	Renovation		✓			**$20,783,000**
R6 - Student Union Building Renovation	21,000	Renovation		✓			**$11,373,000**
N1 - HPER Athletics Addition Phase II	33,600	New + Reno		✓			**$15,730,000**
N2 - Stadium Village Housing - Phase I: 126 beds	45,000	New Building		✓			**$24,570,000**
N6 - Research Innovation Campus Building	46,000	New Building		✓			**$71,760,000**
C4 - Park Street Promenade - Phase II	20,136	Campus		✓			**$1,178,000**
C6 - Montrose Ave. Redevelopment	17,000	Campus		✓			**$663,000**
C12 - East Village Parking Expansion:30 spaces	N/A	Campus		✓			**$254,000**
Total Near-Term Projects (3-5 years)							**$153.4M**

Project	Gross SF	Work Type	Project Priority				Total Project Cost
			Immediate	Near-Term	Mid-Term	Long-Term	
N5 - Research Institute	32,000	New Building			✓		**$49,920,000**
C4 - Park Street Promenade - Phase III	20,136	Campus			✓		**$1,178,000**
C10 - Below Grade Podium Parking: 200 spaces	N/A	Campus			✓		**$14,040,000**
C11 - South Campus Access Road	N/A	Campus			✓		**TBD**
Total Mid-Term Projects (5-10 years)							**$65.1M**

4.6 Project Cost Estimates

Project	Gross SF	Work Type	Project Priority				Total Project Cost
			Immediate	Near-Term	Mid-Term	Long-Term	
N3 - Stadium Expansion	35,600	New Building				✓	**$36,714,000**
N4 - Academic Event Center	56,000	New Building				✓	**$56,016,000**
N7 - Stadium Village Housing Phase II: 168 beds	60,000	New Building				✓	**$32,760,000**
C4 - Park Street Promenade - Phase IV	20,136	Campus				✓	**$1,178,000**
C8 - Stadium Event Terrace (incl. with N3)	N/A	Campus				✓	**TBD**
Total Long-Term Projects (10+ years)							**$167.6M**

4.7 Criteria for Plan Updates

The Facilities Master Plan is designed to serve as a living document—a strategic framework that can be updated or amended as needed to remain responsive to Montana Tech's evolving needs and external conditions. While the plan presents a cohesive long-term vision, it recognizes the importance of adaptability in the face of change.

Several scenarios may necessitate a formal amendment to the Master Plan, including but not limited to:

- Significant economic shifts impacting enrollment trends or institutional priorities
- The adoption of new academic programs, research initiatives, or strategic goals
- Changes in campus boundaries due to property acquisition or divestment
- Adjustments to project financing, phasing, or funding availability

In the event of such changes, amendments may be proposed to ensure that the plan continues to reflect the best interests of the University and its stakeholders. All amendments will be subject to review and approval by the Montana Tech leadership team, after which the revised version will become the official Facilities Master Plan.

This approach ensures that the plan remains relevant, actionable, and aligned with Montana Tech's mission, vision, and capacity—supporting decision-making well into the future.


MONTANA

Addendum

Highlands College

5

Highlands College Campus main entrance
(Montana Tech)

5.1 Addendum Introduction

Introduced in the 2025 legislative session, Montana House Bill 5 (HB 5) was prepared with a focus on long-range building appropriations for funding major repairs and capital development projects across state facilities. First presented in late 2024, the bill passed the House in March 2025, the Senate in April 2025, and was signed into law by the Governor on June 19, 2025.

Key funding recipients include:

- Montana Department of Corrections (DOC)
- Montana State Hospital (DPHHS)
- Montana University System (MUS)
- Montana Department of Administration (DOA) - Capital Complex

Approximately $156 million has been allocated to the Montana Department of Corrections, with implementation scheduled through mid-2027. The primary focus of this funding is the expansion of inmate housing capacity and modernization of Montana State Prison site infrastructure.

To address overcrowding at the Montana Women's Prison in Billings, the DOC is actively evaluating options for new construction or renovation. Potential locations under consideration include the Highlands College campus in Butte, Yellowstone County, Anaconda-Deer Lodge County, and Boulder, Montana.

The Highlands College proposal would transfer the existing site and facilities to the Department of Corrections while providing funding to Montana Technological University to relocate the Highlands College programs to Main Campus.

The purpose of this addendum is two-fold. First, it consolidates all existing Highlands College campus data into a single location for ease of reference for future planning. Second, it provides a preliminary program and evaluation of a series of site alternatives to support potential future design and construction decisions.

Outdoor Pre-Apprentice Line Yard at Highlands College, Montana Tech

Precision Machining Shop at Highlands College, Montana Tech

5.2 Campus Overview

Highlands College, part of Montana Technological University in Butte, Montana, offers career-focused technical education designed to prepare students for immediate employment or transfer to four-year programs. Highlands College provides a range of programs leading to one-year certificates and two-year associate degrees. These programs are tailored to meet the workforce needs of Montana and beyond, emphasizing hands-on training and industry-relevant skills.

Located at 1300 West Park Street, the campus is situated approximately 7 miles south and east of Montana Tech's Main Campus, a roughly 15 minute drive. Access to the campus is provided via Basin Creek Road, and the site is bordered to the west by a historic rail line.

The campus is comprised of a single-story main facility and three modest outbuildings; a 2-story allied trades building that is currently vacant along with a single-story maintenance garage to the south, and a single-story storage shed to the north. Additionally, a three-acre outdoor line yard is located north of the main facility to support field training for the College's Pre-Apprentice Line program.

Degree Offerings

From certificates and associate degrees to community education and customized training, Highlands offers the following:

Associate of Science
Automotive Technology
Civil Engineering Technology
Computer Networks and Cybersecurity
Construction Technology - Carpentry
Pre-Apprentice Line Program
Precision Machining Technology
Radiologic Technology
Web Development and Administration
Welding Technology

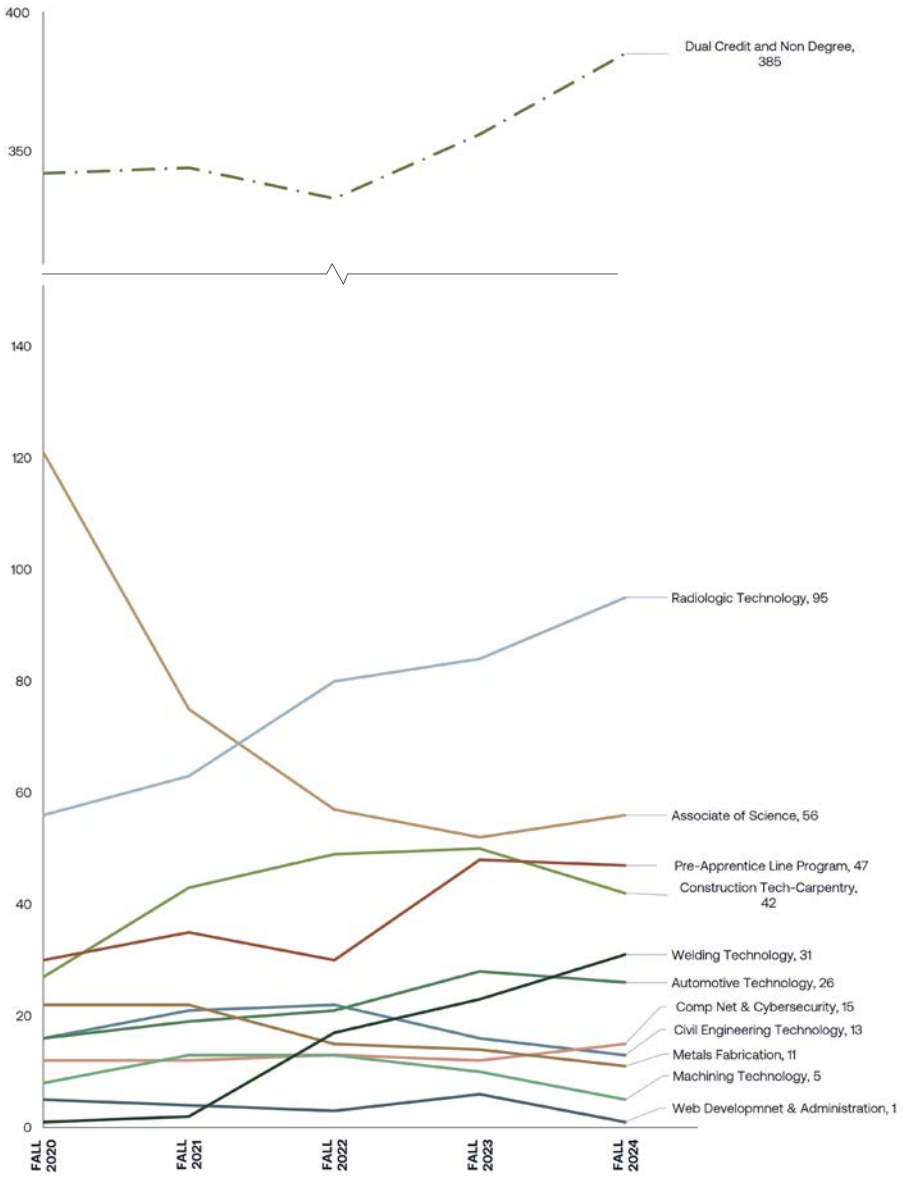
Enrollment by Program

Montana Technological University has 12 active programs at Highlands College. Enrollment data from the last five years is represented in the adjacent chart to provide perspective on recent enrollment trends.

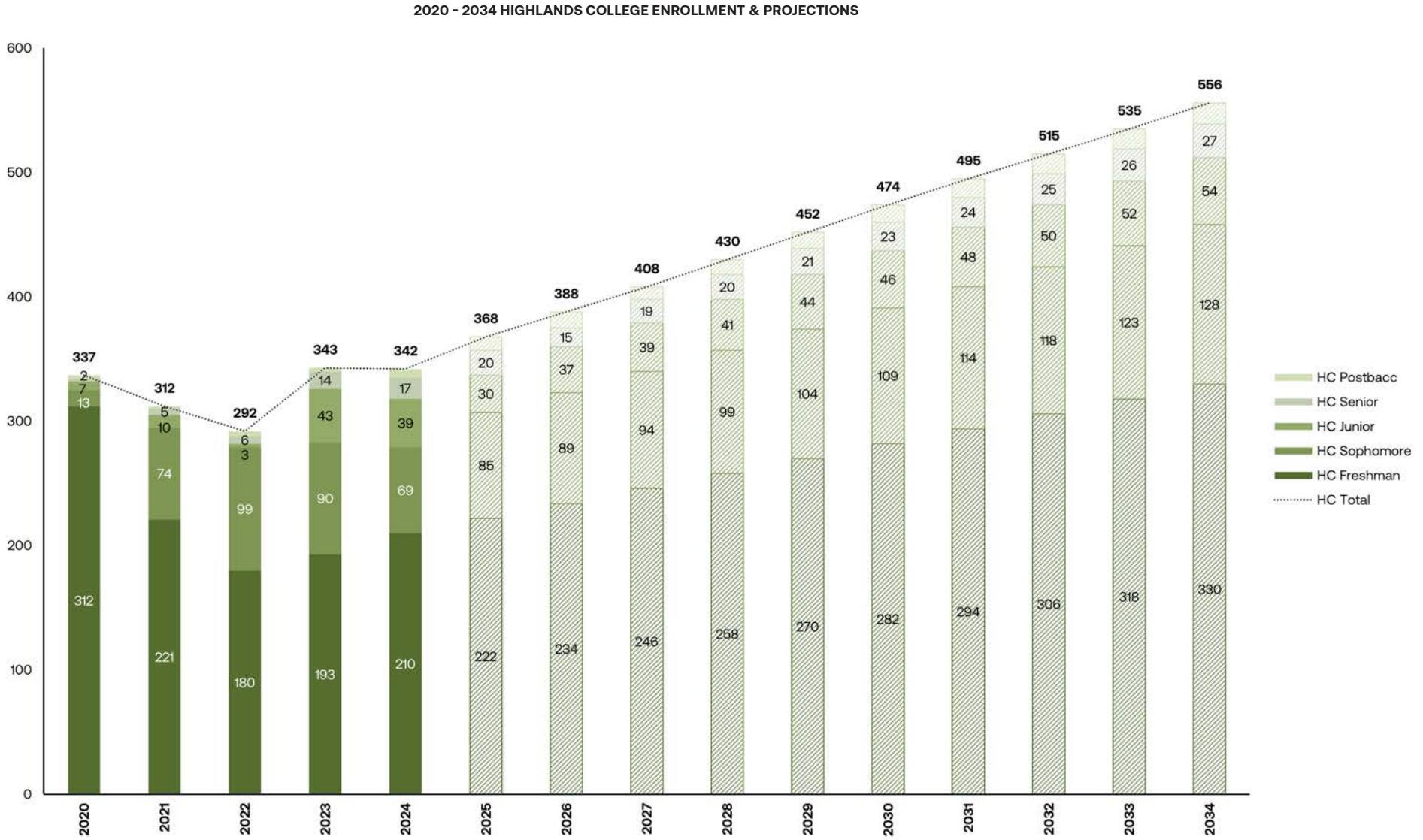
2024 Top 5 Programs by Enrollment (enrollment in parentheses):

- Dual Credit / Non-Degree (385)
- Radiologic Technology (95)
- Associate of Science (56)
- Pre-Apprentice Line Program (47)
- Construction Tech-Carpentry (42)

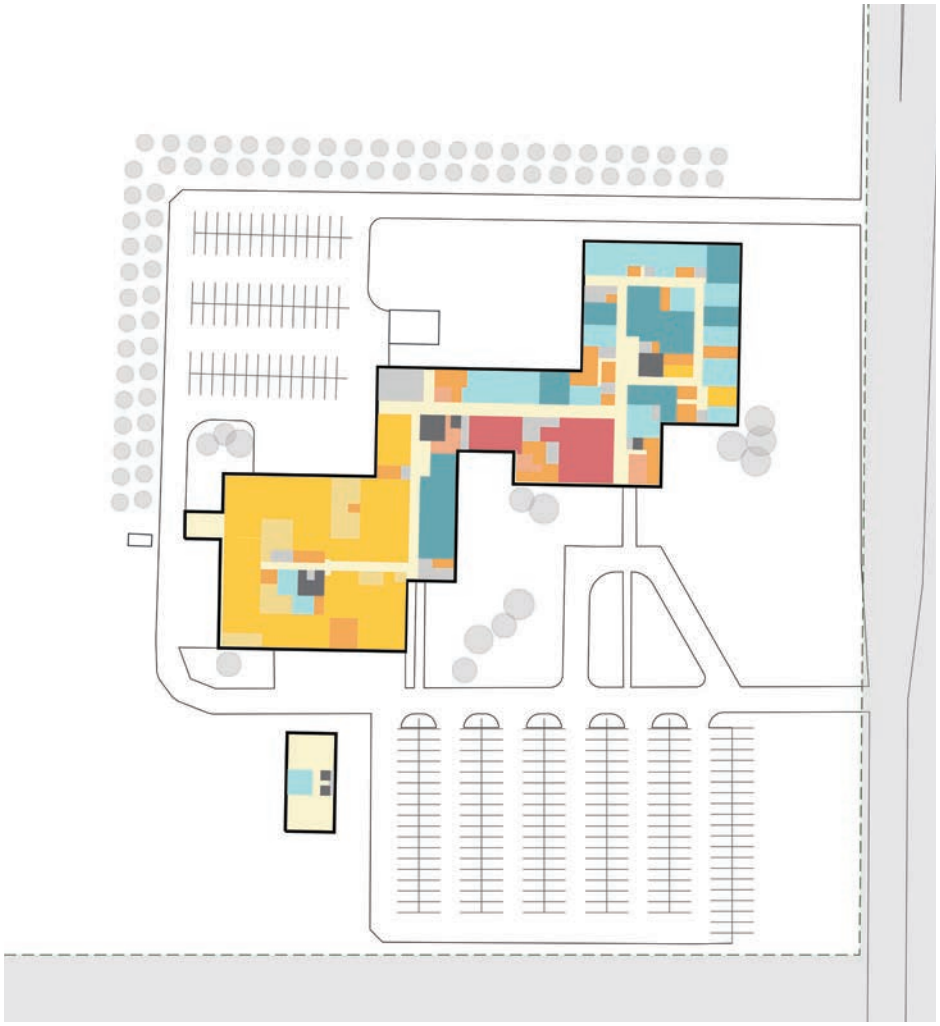
2020 - 2024 HIGHLANDS COLLEGE ENROLLMENT BY PROGRAM



5.2 Campus Overview

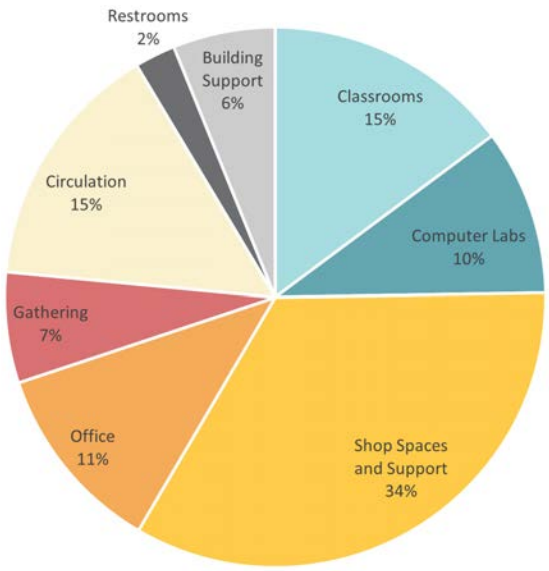


Existing Program



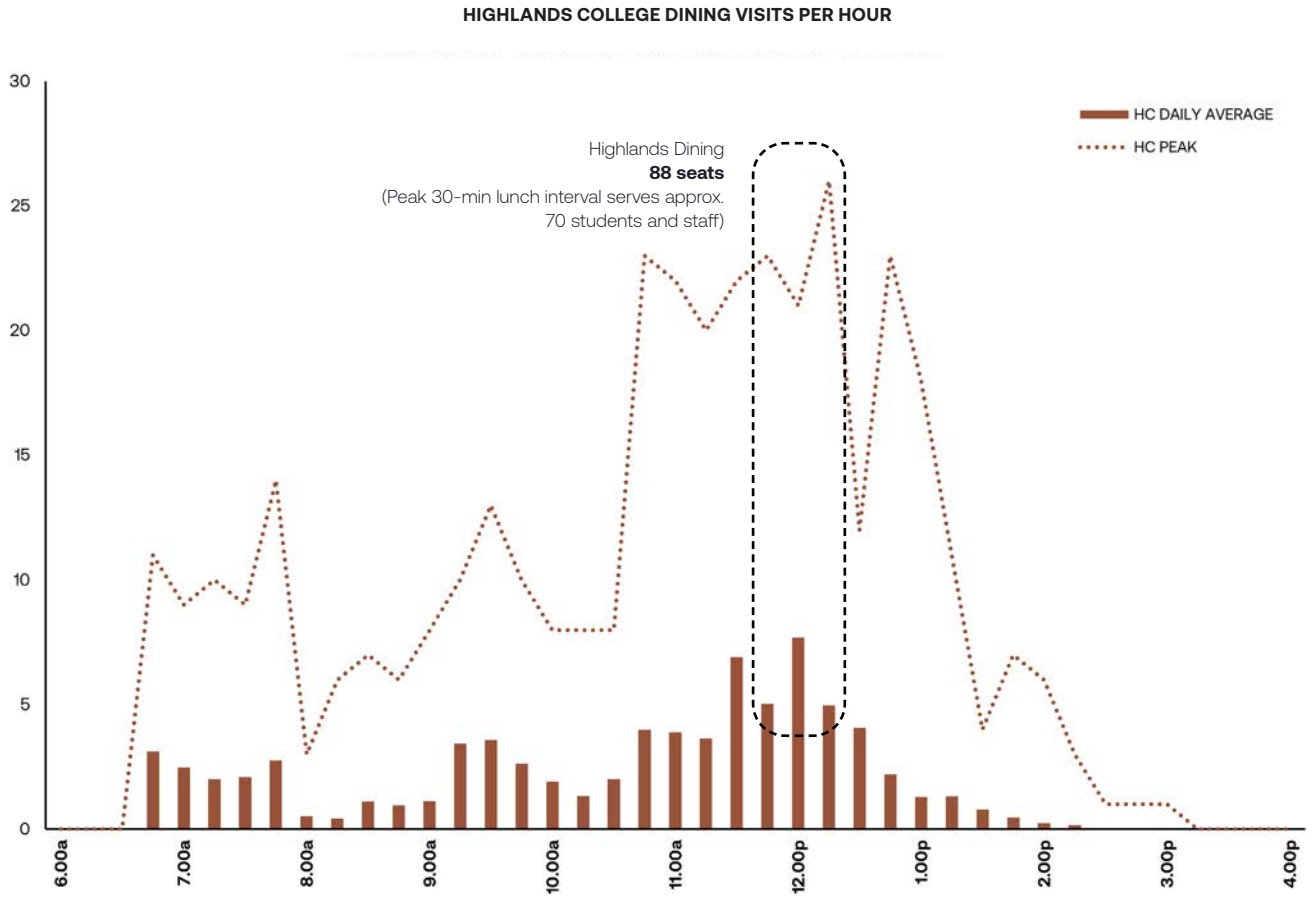
- Classrooms
- Computer Labs
- Shop Spaces and Labs
- Shop and Lab Support
- Office
- Open Office
- Gathering
- Circulation
- Restrooms
- Building Support

HIGHLANDS COLLEGE APPROXIMATE PROGRAM DISTRIBUTION



Highlands College Campus Dining

On Highlands College Campus, the Highlands dining facility sees peak traffic around the lunch hour. Here the rush of approximately 70 students and staff between 11:45am and 12:15pm is comfortably accommodated with nearly 90 seats available. The University should monitor Highlands College enrollment in tandem with future expansion of programs or course offerings at this site to expand seating capacity as the need arises. Should the programs be relocated to Main Campus, a facility of similar capacity should be planned or the demand incorporated into other existing Main Campus dining locations.



Classroom Utilization

Highlands College Campus classroom spaces under registrar control were analyzed to gain an understanding of how specific rooms are used, and to identify overall trends in class size and room occupancy.

Raw enrollment data was provided by the University for the Fall 2023 semester. The raw data was then used to calculate the following metrics which are based on room use throughout the week, Monday through Friday, 8am-4pm (40 hours).

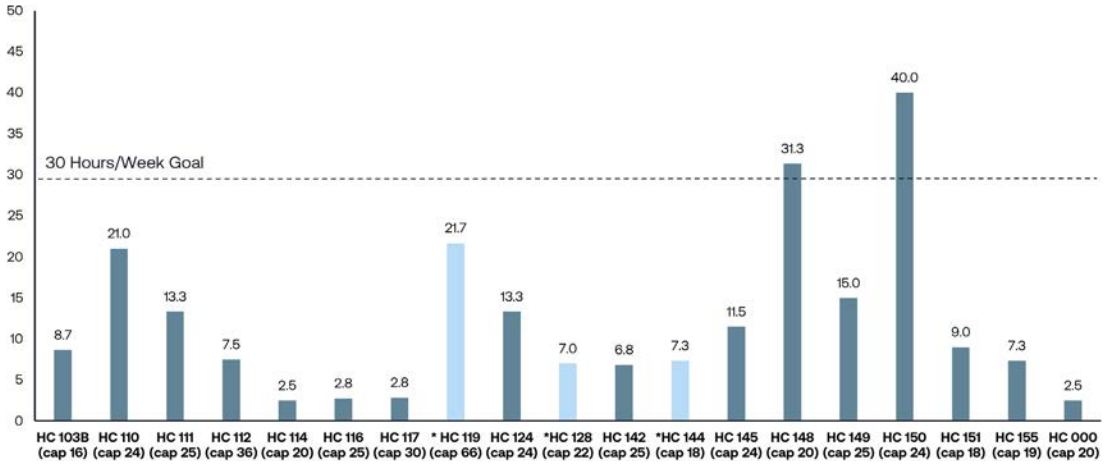
- Weekly Room Hours (WRH) – Total hours per week of all academic use (for example, if you had five classes that met five hours per week, then the WRH equals 25 hours).
- Student Station Occupancy (SSO) – Percentage based on Weekly Student Contact Hours (WSCH) divided by the room capacity.

Utilization targets for classrooms and instructional labs are as follows:

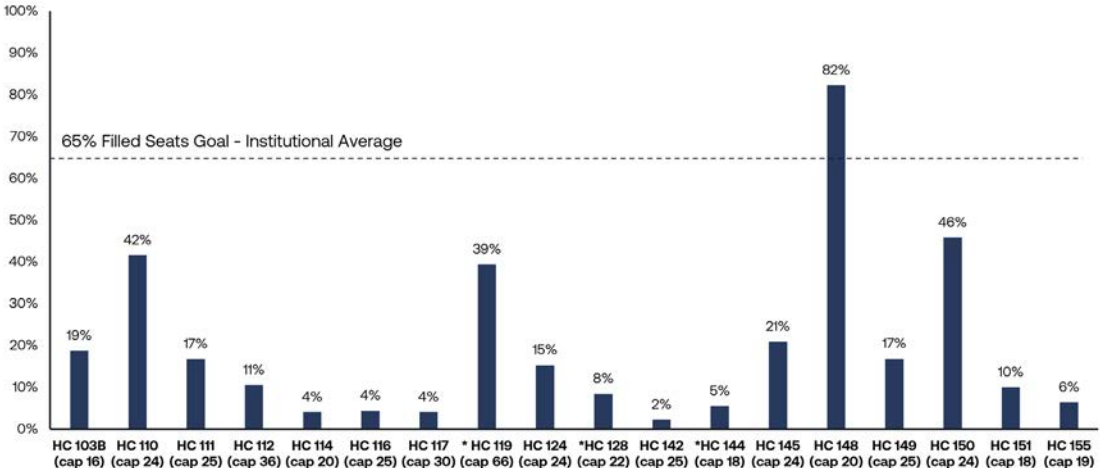
Space Type	Room Use	Utilization Rate (Hrs)	Utilization Rate (%)
Classroom	1-24 Seats	30	75
	25-50 Seats	32	80
	51-100 Seats	32	80
	>100 Seats	34	85
Classroom / Labs Seats	All Classrooms & Instructional Labs	-	85
Lab	Research Lab	TBD	TBD
	Instructional Lab	34	85

For Highlands College, the overall weekly room hours and student station occupancy are lower, and in some cases significantly lower than Montana State University target utilization rates.

UTILIZATION BY CLASSROOM - WEEKLY ROOM HOURS



%UTILIZATION BY CLASSROOM - STUDENT STATION OCCUPANCY



5.2 Campus Overview

In the adjacent Highlands College Campus plan graphic, classroom utilization is shown relative to weekly room hours. The visualization indicates that a majority of the 19 classrooms scheduled through the registrar are used for fewer than 10 hours per week

Daily Campus Activity

The Highlands College Campus is active from 10am-5pm, with peak activity occurring between 5pm-6pm on Monday's and Wednesdays. The campus is quiet on Monday and Wednesday mornings and all-day Friday.

HIGHLANDS COLLEGE DAILY ATTENDANCE

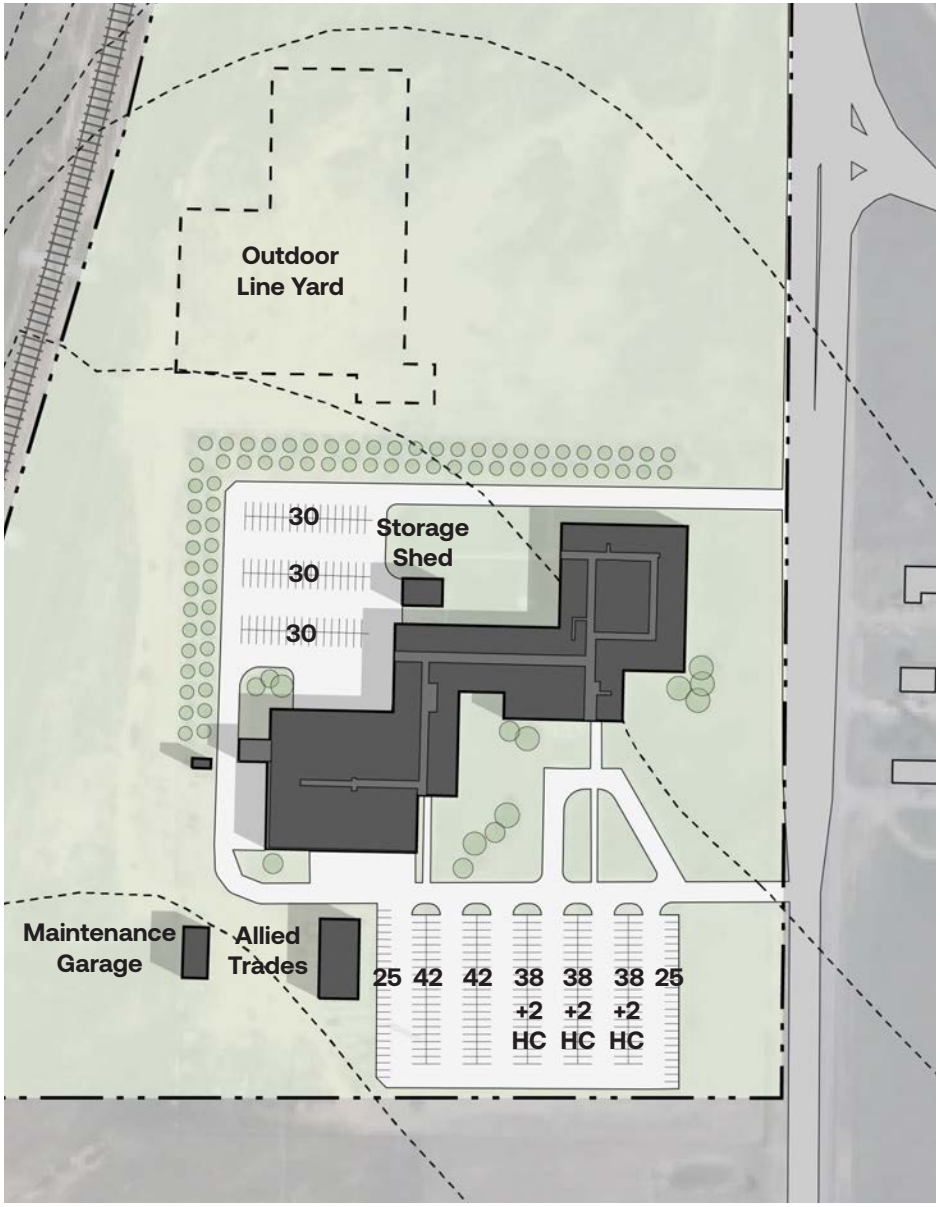
TIME		MON	TUE	WED	THU	FRI	AVERAGE
7:00 AM	7:59 AM	0	24	0	24	0	10
8:00 AM	8:59 AM	0	68	0	68	0	27
9:00 AM	9:59 AM	0	49	0	44	0	19
10:00 AM	10:59 AM	66	63	66	59	0	51
11:00 AM	11:59 AM	44	75	44	52	0	43
12:00 PM	12:59 PM	69	95	69	76	0	62
1:00 PM	1:59 PM	68	79	83	56	0	57
2:00 PM	2:59 PM	54	77	69	46	0	49
3:00 PM	3:59 PM	67	59	67	52	0	49
4:00 PM	4:59 PM	74	60	91	21	0	49
5:00 PM	5:59 PM	116	56	133	21	0	65
6:00 PM	6:59 PM	63	21	80	21	0	37
7:00 PM	7:59 PM	21	21	38	21	0	20
8:00 PM	8:59 PM	0	0	0	0	0	0
9:00 PM	9:59 PM	0	0	0	0	0	0
	TOTAL	642	747	740	561	0	
	AVERAGE	**43**	**50**	**49**	**37**	**0**	

Parking

All students, faculty, and staff commute to Highlands College which creates a high demand for parking. Many students and faculty commute between the main campus and Highlands. The available parking is in excess of the current demand and the extents of existing parking would not need to be replicated if the Highlands College programs were relocated to Main Campus.

Adherence to the Butte-Silver Bow Municipal Code requirements for higher education, which stipulates one parking space per employee and one parking space per five students, would be a reasonable planning metric.

Total Spaces (including handicap)	**344**
Standard spaces North lot	90
Standard spaces South lot	248
Handicap spaces South lot	6



5.3 Program and Plan Alternatives

Program

The proposed Career Technical Center is envisioned as a new facility to support a broad range of hands-on, high-demand career and technical education programs. The plan incorporates two major building components:

1. Main Career Technical Center (Approx. 40,000 GSF)

Program Areas:

- Shared classrooms and flexible instructional spaces
- Welding labs
- Construction management and technology labs
- Radiologic technology labs
- Certified Nursing Assistant (CNA) program facilities
- Civil engineering technology labs
- Computer networks and information technology labs
- Machine tooling labs
- Support functions and common spaces (student collaboration, offices, storage, circulation)

This facility is intended to consolidate multiple programs under one roof to promote efficiency, cross-disciplinary collaboration, and shared use of resources.

2. Indoor Line Training Facility (Approx. 28,000 GSF)

Program Areas:

- Large-scale indoor line training space simulating utility field conditions
- Dedicated classrooms for instructional integration
- Faculty and staff offices
- Program support areas

This separate building is designed to support the pre-apprentice line program, ensuring year-round training capacity regardless of weather conditions. This indoor facility would be paired with an outdoor line yard covering approximately 3-acres.

Planning Studies

Three preliminary massing and site-planning studies were developed for the Main Career Technical Center to evaluate plan efficiencies, site fit, and functional adjacencies:

Option A – Single-Story (40,000 GSF footprint)

- Advantages: Simplified circulation, clear sightlines, ease of equipment movement, direct outdoor access for all labs.
- Considerations: Larger site footprint required, potentially higher site development cost, reduced flexibility for future expansion.

Option B – Two-Story (Approx. 20,000 GSF per floor)

- Advantages: More compact footprint, improved opportunities for program adjacencies (labs vs. classrooms), potential cost savings in utilities.
- Considerations: Need for vertical circulation (elevators, stairs), separating classrooms above shop areas will demand enhanced floor/ceiling assemblies to manage noise and vibration.

Option C – Hybrid Massing: 1-Story Shops + 3-Story Academic

In this concept, the facility is organized into two adjacent but separate buildings:

1-Story Technical Wing (Shop / Heavy Program Areas)

- Houses welding, machine tooling, civil engineering technology labs, and other shop-intensive programs.
- Single-level configuration provides direct outdoor access, large clear-span spaces, and safe movement of materials and equipment.
- High-bay volumes accommodate ventilation, overhead systems, and specialized instructional layouts.

3-Story Academic Wing (Classrooms, Offices, and Light Labs)

- Contains shared classrooms, computer networks labs, radiologic technology, CNA instructional areas, faculty offices, and student support spaces.
- Vertical organization allows separation of general education and program-specific spaces, with opportunities for clustering classrooms by discipline.
- Compact footprint conserves site area and enhances campus density while establishing a strong architectural presence.

Main Career Technical Center Program

Shared Classrooms	NSF	QTY	TNSF	Multi	NASF
Classroom	800	4	3,200	1.0	3,200
Innovation Lab	1,200	1	1,200	1.0	1,200
Computer / CAD Lab	1,200	1	1,200	1.0	1,200
Subtotal			**5,600**		**5,600**

Welding	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	2	240	1.3	312
Welding Lab	3,840	1	3,840	1.0	3,840
Tool Crib	240	1	240	1.0	240
Welding Lab Storage	240	1	240	1.0	240
Virtual Welding Lab	240	1	240	1.0	240
Subtotal			**4,800**		**4,872**

Construction Management + Tech	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	1	120	1.3	156
Clean Shop - Lasers and 3D printers	240	1	240	1.0	240
Project Storage - In Progress	240	1	240	1.0	240
Material Storage	240	1	240	1.0	240
Construction Shop	1,080	1	1	1.0	1
Woodworking Shop	3,840	1	3,840	1.0	3,840
Woodworking Spray Booth	300	1	300	1.0	300
Woodworking Shop Tool Storage	300	1	300	1.0	300
Subtotal			**5,281**		**5,317**

Radiologic Technology	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	2	240	1.3	312
X-Ray Lab	300	2	600	1.3	780
X-Ray Control Booth	80	2	160	1.3	208
X-Ray Briefing Room	160	1	160	1.3	208
Radiography Storage	200	1	200	1.3	260
Subtotal			**1,360**		**1,768**

C N A	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	1	120	1.3	156
CNA Skills Lab	600	1	600	1.0	600
Briefing Room	320	1	320	1.0	320
Clean Supply	150	1	150	1.3	195
Dirty Supply	150	1	150	1.3	195
Subtotal			**1,340**		**1,466**

Civil Engineering Technology	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	1	120	1.0	120
Subtotal			**120**		**120**

Computer Networks + Web	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	1	120	1.0	120
Electronics Lab	1,600	1	1,600	1.0	1,600
Tech Lab	1,600	1	1,600	1.0	1,600
Storage	300	1	300	1.0	300
Subtotal			**3,620**		**3,620**

Machine Tooling (Advanced MFR)	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	2	240	1.0	240
Precision Machining / Inspection Room	300	1	300	1.0	300
Tool Crib	200	1	200	1.0	200
Machine Shop	2,700	1	2,700	1.0	2,700
Storage	150	1	150	1.0	150
Subtotal			**3,590**		**3,590**

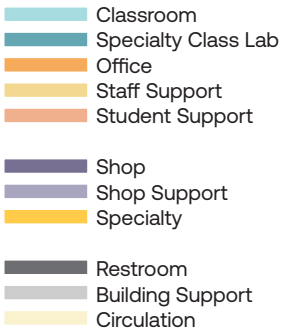
Support & Common Spaces	NSF	QTY	TNSF	Multi	NASF
Student Lounge / Lunch Room	300	1	300	1.0	300
Student Study	300	1	300	1.0	300
Staff Lounge	120	1	120	1.3	156
Study Rooms	160	4	640	1.3	832
Conference Room	360	2	720	1.0	720
Lockers	14	60	840	1.0	840
Work / Copy / Print	120	1	120	1.0	120
Receiving	750	1	750	1.3	975
Subtotal			**3,790**		**4,243**

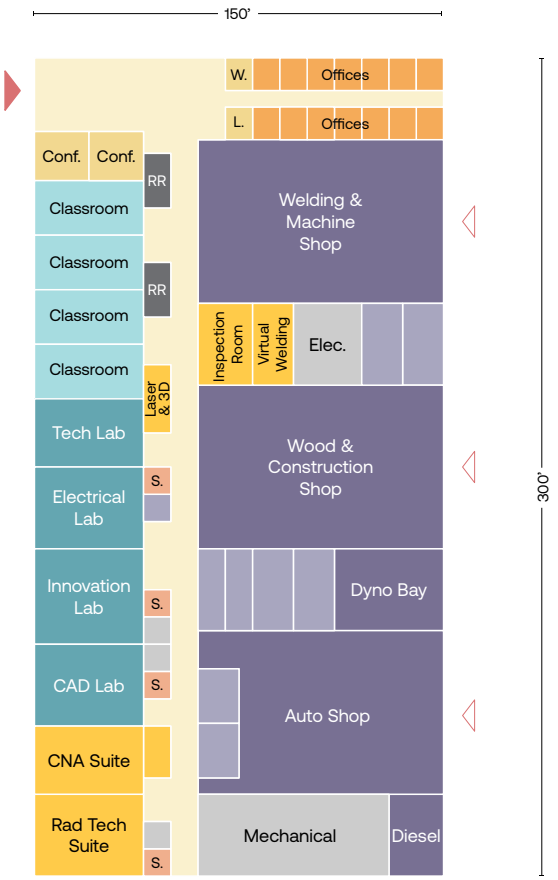
Total Assignable Area		**115**	**29,501**		**30,596**
Total Gross Area					**40,795**

Line Training Facility Program

Pre-Apprentice Line Program	NSF	QTY	TNSF	Multi	NASF
Faculty Office	120	2	240	1.0	240
Classroom	1200	1	1,200	1.0	1,200
Outdoor Line Training		6	ac		
Indoor Line Training	26,200	1	26,200	1.0	26,200
Storage	300	1	300	1.0	300
Subtotal			**27,940**		**27,940**

Option A: 1-story

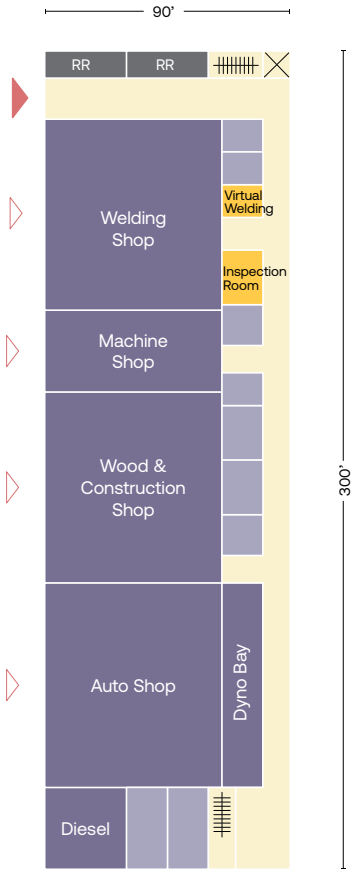




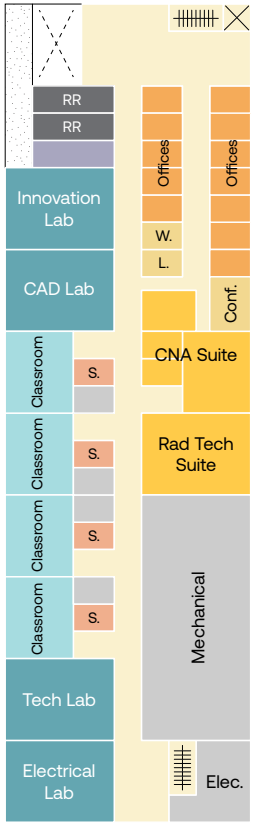
Level 1

1" = 40'

Option B: 2-story



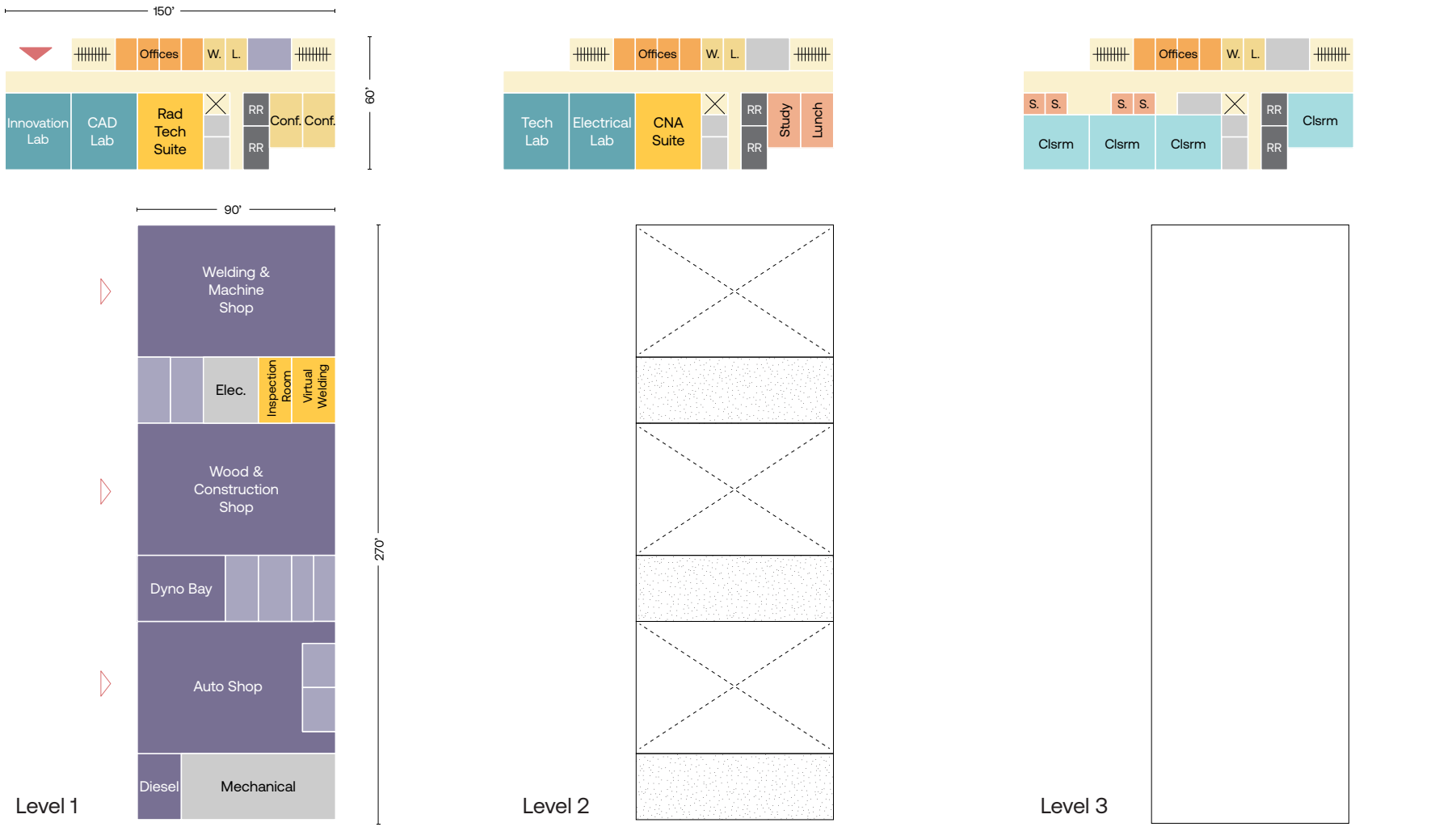
Level 1



Level 2

1" = 40'

Option C: 3-story



5.4 Site Alternatives

As part of the preliminary program planning, three site alternatives were evaluated for the new Career Technical Center and the associated Indoor Line Training Facility. Each alternative considers program functionality, campus integration, parking and circulation, and opportunities for long-term growth.

Alternative 1 – Co-Located with Indoor Line Training Facility

- Places the 40,000 GSF main Career Technical Center directly adjacent to the 28,000 GSF Indoor Line Training Facility at the south end of campus
- Creates a dedicated “technical training precinct” on campus with shared parking and infrastructure
- Promotes synergies between the two facilities, but locates the main academic program farther from the core campus circulation

Alternative 2 – Main Facility Near Campus Core

- Positions the main Career Technical Center closer to existing campus circulation routes and adjacent academic buildings
- Improves accessibility for students taking courses across multiple programs and enhances visibility of technical education within the campus identity
- The Indoor Line Training Facility remains in the vicinity of it’s planned location, requiring separate parking and circulation solutions

Alternative 3 – Intramural Field Redevelopment

- Locates the main Career Technical Center on the existing intramural field
- Provides a large, flexible footprint for development while maintaining proximity to other academic facilities
- Would displace recreation/athletics functions, requiring mitigation or relocation of intramural activities
- The Indoor Line Training Facility remains in it’s planned location, requiring separate parking and circulation solutions

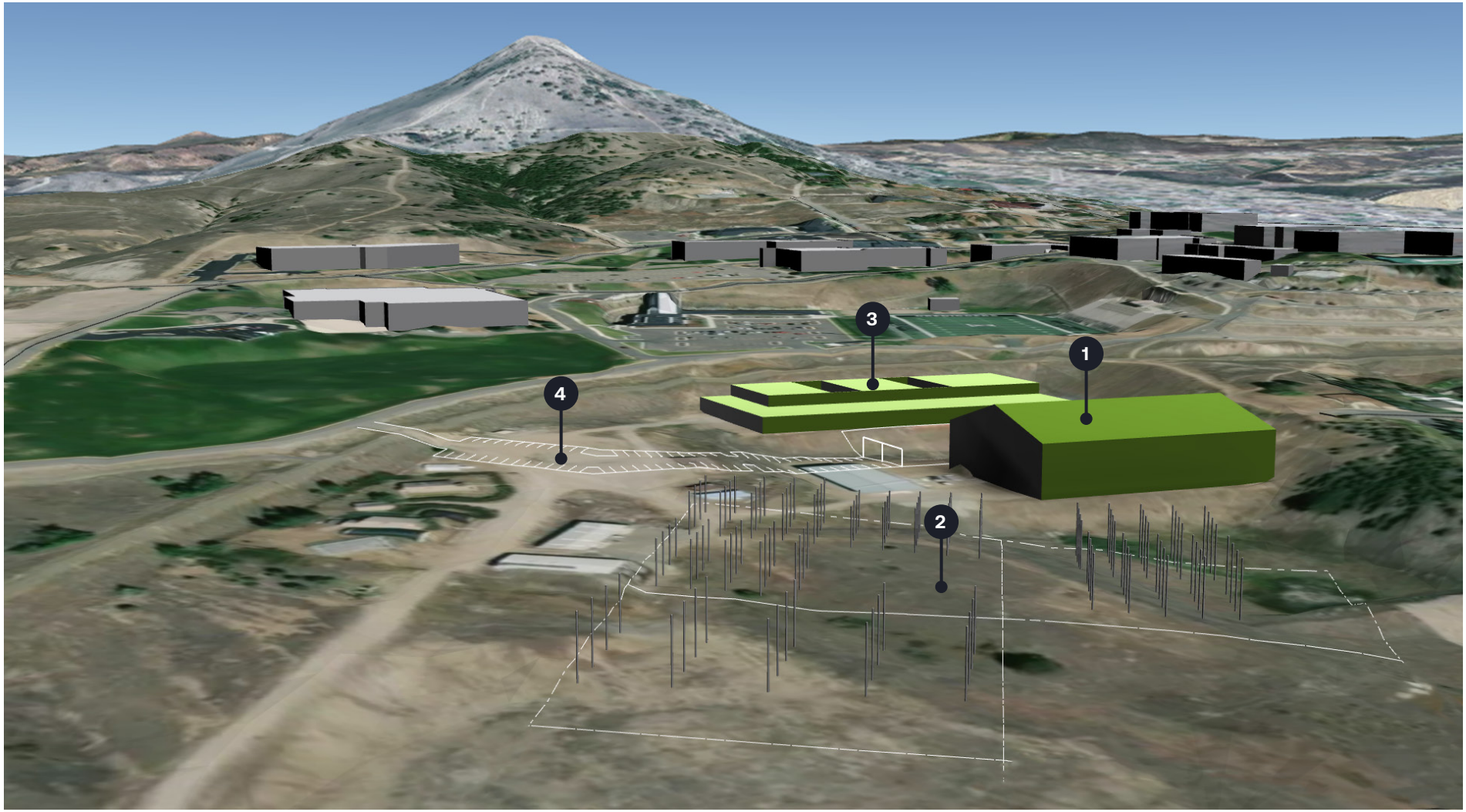
Option I: South Village

Pros

- Sufficient buildable area for facilities and site needs
- Room to grow programs
- Access from north and south
- Water and Sewer Mains are in the vicinity of the site
- Access roads from Museum Way and MT Tech Road

Cons

- Major drainage pathway from north campus
- Lacks direct access to existing site infrastructure
- Prevents development of South Village housing
- May need to import fill or add a lift station to connect to the gravity sewer main
- May need to loop the water main from W Diamond Street to MT Tech Road to service the building
- Main storm drain for drainage from the upper campus runs through the site and would need to be rerouted
- Surface drainage would need to be routed around the site
- One-way traffic on the east side of MT Tech Road



1 Indoor line facility
2 Outdoor line yard
3 Shop & Classroom building
4 Highlands Parking

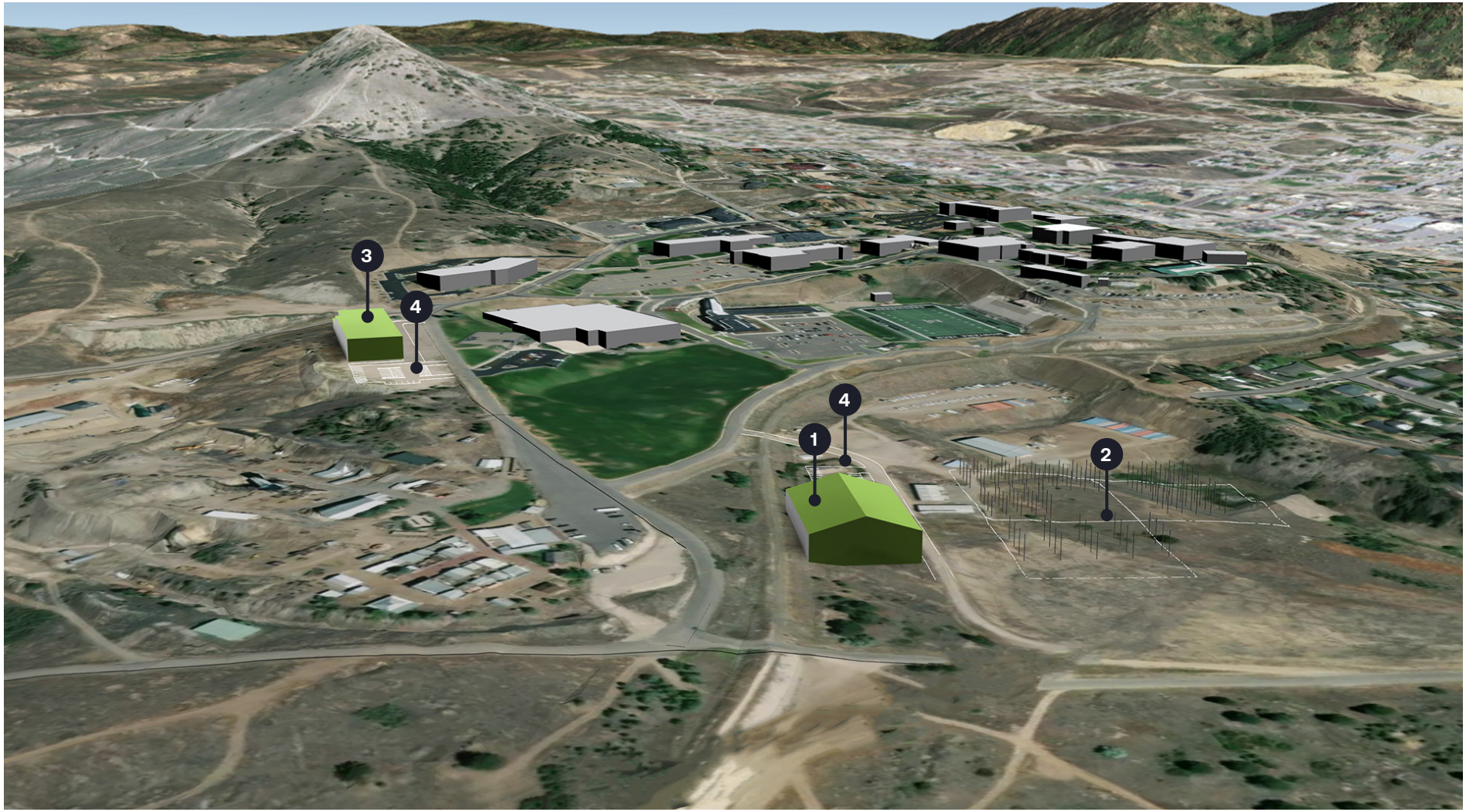
Option II: West Campus South

Pros

- Access roads from Museum Way, Park Street, and Mining Museum Road
- Allows future Research Innovation Campus to remain
- Allows existing Bureau site infrastructure to remain in place in the south faciliities dirt lot

Cons

- Limited by Tech property boundaries
- May conflict with extents of underground workings
- Steep downhill terrain from the edge of the existing gravel lot
- Limited room for parking and/or line yard
- Water and Sewer would need to be extended from Park Street
- May need to add a lift station to connect to the gravity sewer main
- May need to loop the water main from Park Street to Museum Way to service the building
- Will likely require street/ multimodal improvements to Bluebird Train and Museum Way
- Removes additional parking spaces unless building above



1 Indoor line facility
2 Outdoor line yard
3 Shop & Classroom building
4 Highlands parking

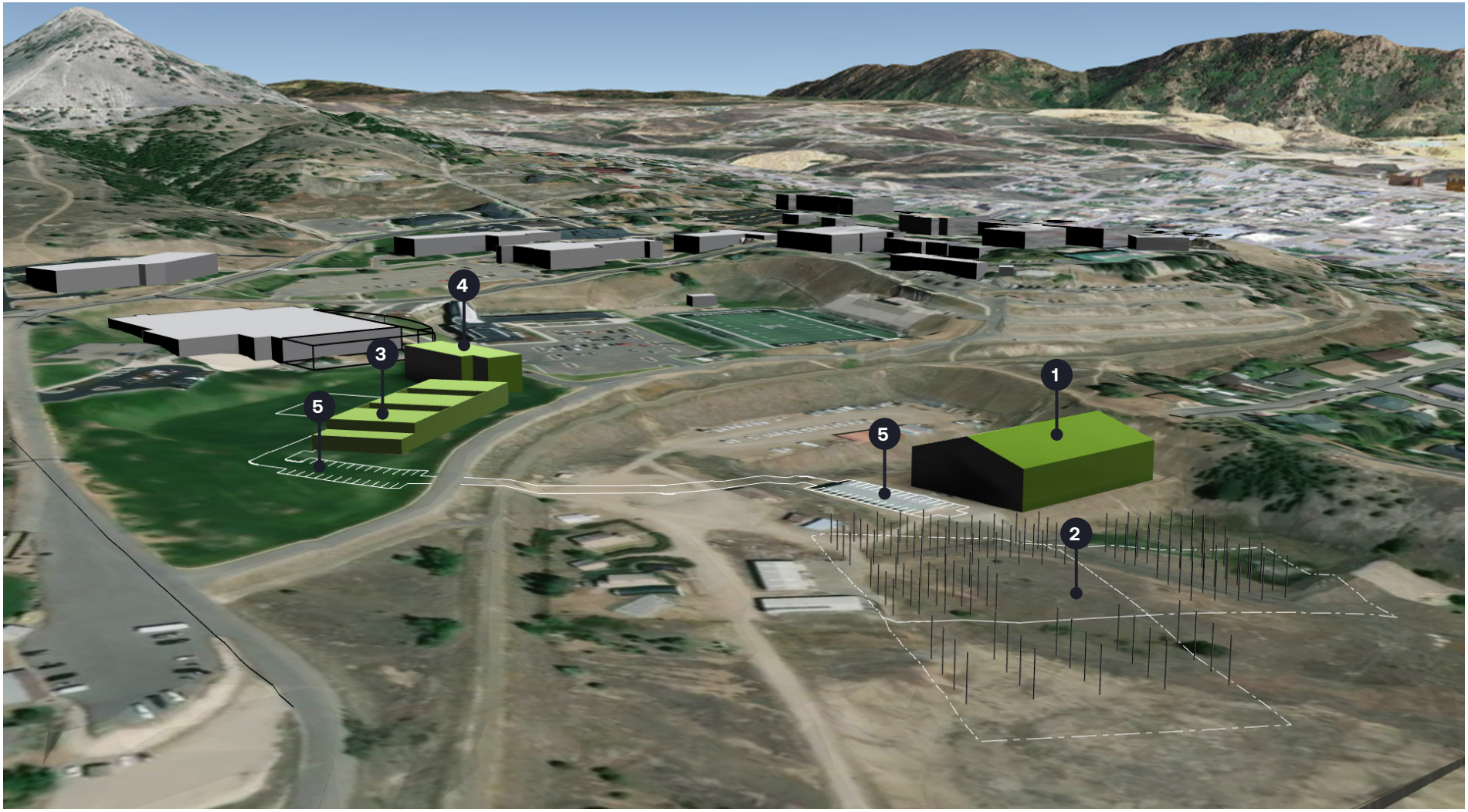
Option III: Intramural Field

Pros

- Central to campus
- Access roads from Museum Way and MT Tech Road
- Relatively flat topography
- Water and Sewer Mains are in the vicinity of the site
- Available space
- Close to existing parking and other buildings

Cons

- Limited space for parking and/or line yard
- Removes available open field space



1 Indoor line facility
2 Outdoor line yard
3 Shop building
4 Classroom building
5 Highlands parking

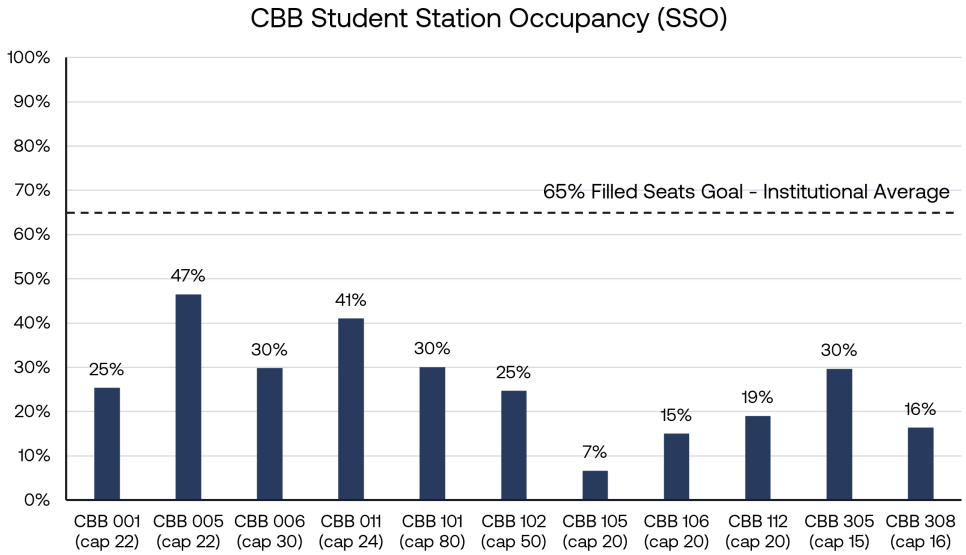

Smithers
Butte

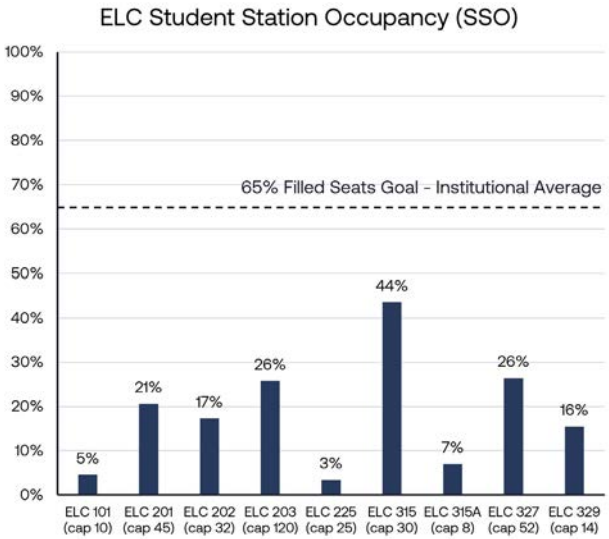
Appendix

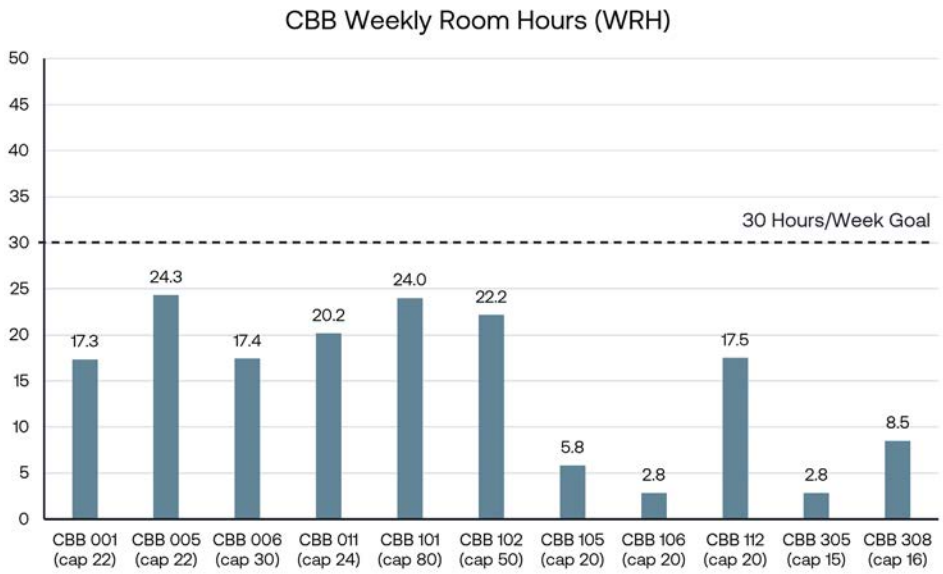
6

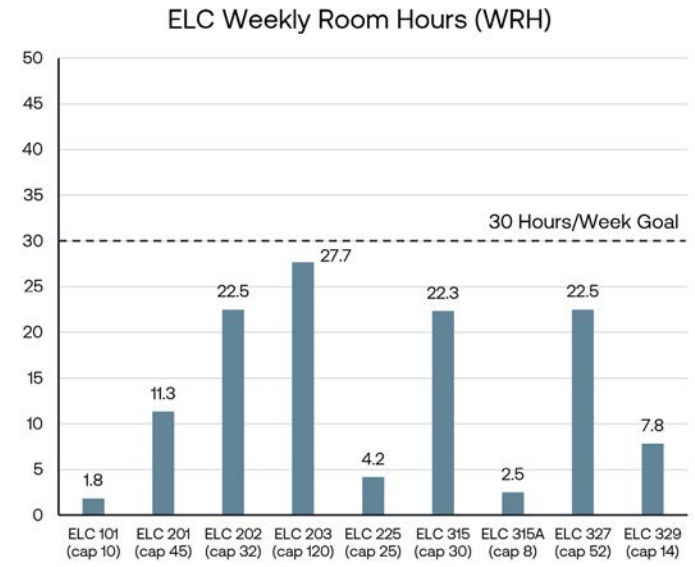
Historic football game at Leonard Field
(Butte-Silver Bow archives, C. Owen
Smithers Photograph Collection)

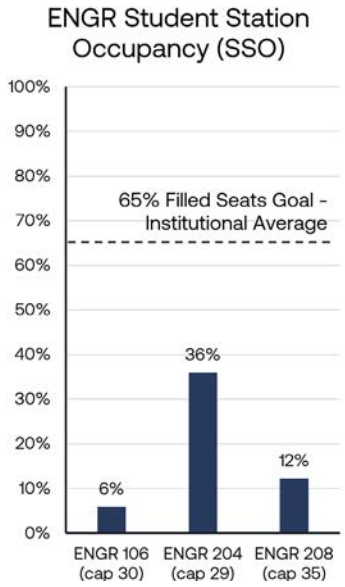
6.1 Utilization Data

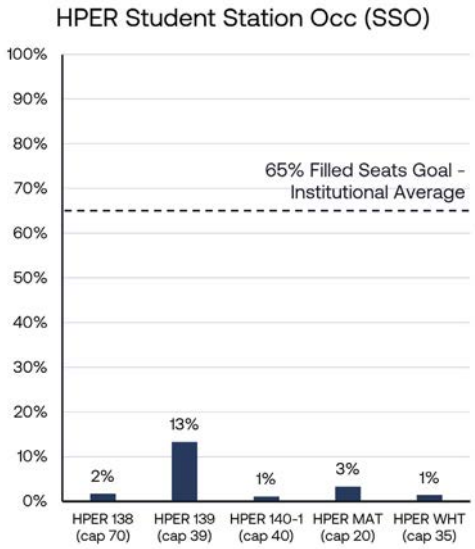


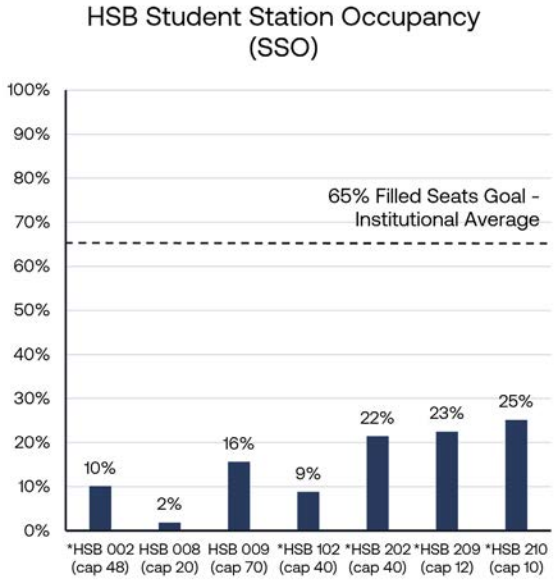


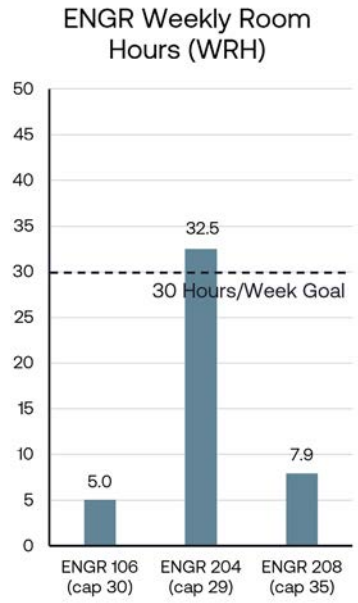


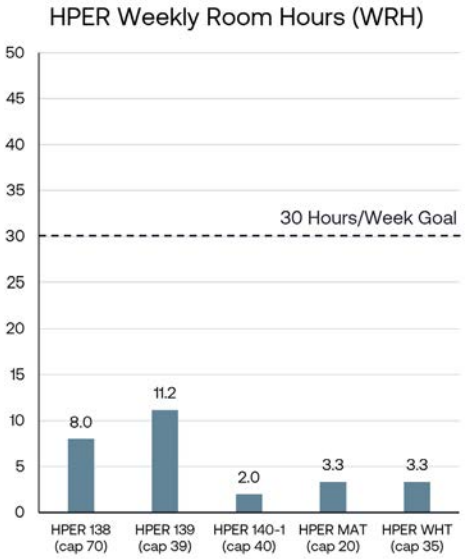


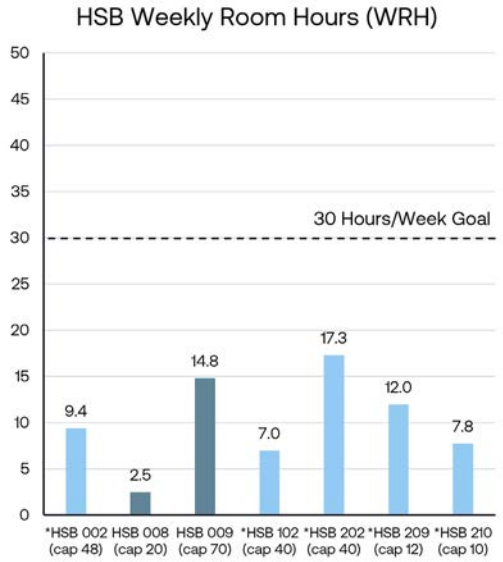

ENGR Student Station Occupancy (SSO)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
6%
36%
12%
ENGR 106 (cap 30)
ENGR 204 (cap 29)
ENGR 208 (cap 35)

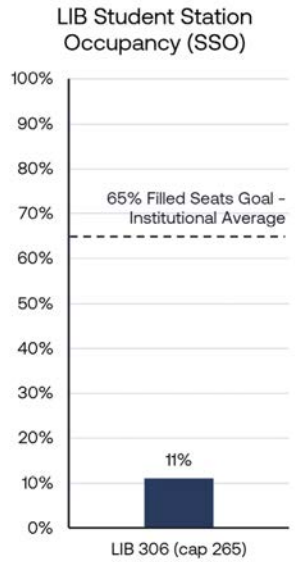

HPER Student Station Occ (SSO)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
2%
13%
1%
3%
1%
HPER 138 (cap 70)
HPER 139 (cap 39)
HPER 140-1 (cap 40)
HPER MAT (cap 20)
HPER WHT (cap 35)

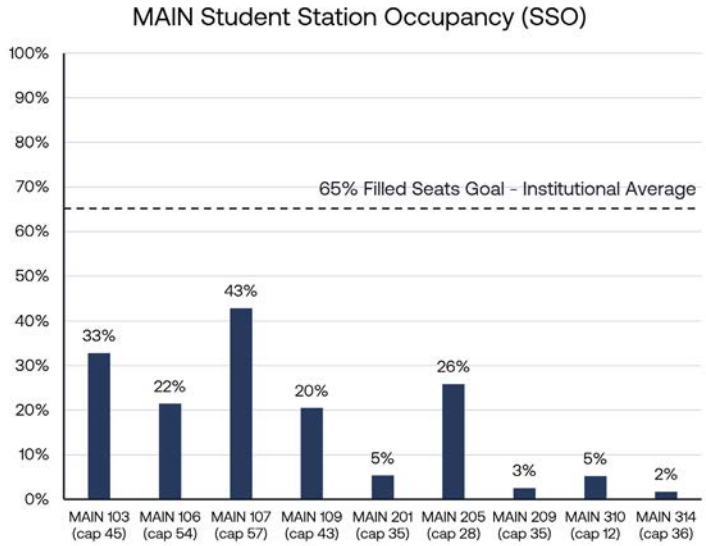

HSB Student Station Occupancy (SSO)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
10%
2%
16%
9%
22%
23%
25%
*HSB 002 (cap 48)
HSB 008 (cap 20)
HSB 009 (cap 70)
*HSB 102 (cap 40)
*HSB 202 (cap 40)
*HSB 209 (cap 12)
*HSB 210 (cap 10)

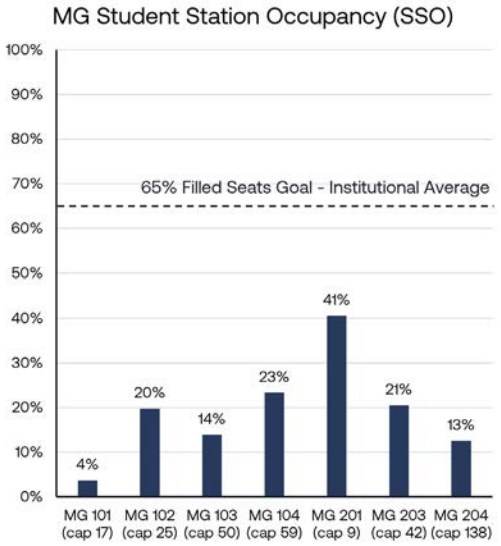

ENGR Weekly Room Hours (WRH)
50
45
40
35
30
25
20
15
10
5
0
30 Hours/Week Goal
5.0
32.5
7.9
ENGR 106 (cap 30)
ENGR 204 (cap 29)
ENGR 208 (cap 35)

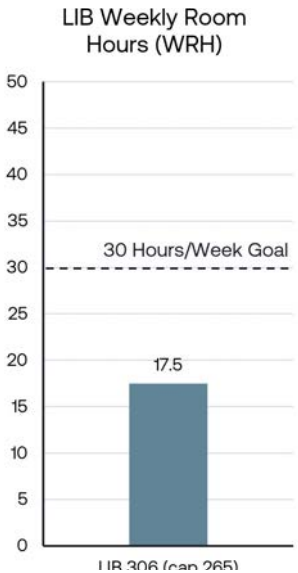

HPER Weekly Room Hours (WRH)
50
45
40
35
30
25
20
15
10
5
0
30 Hours/Week Goal
8.0
11.2
2.0
3.3
3.3
HPER 138 (cap 70)
HPER 139 (cap 39)
HPER 140-1 (cap 40)
HPER MAT (cap 20)
HPER WHT (cap 35)

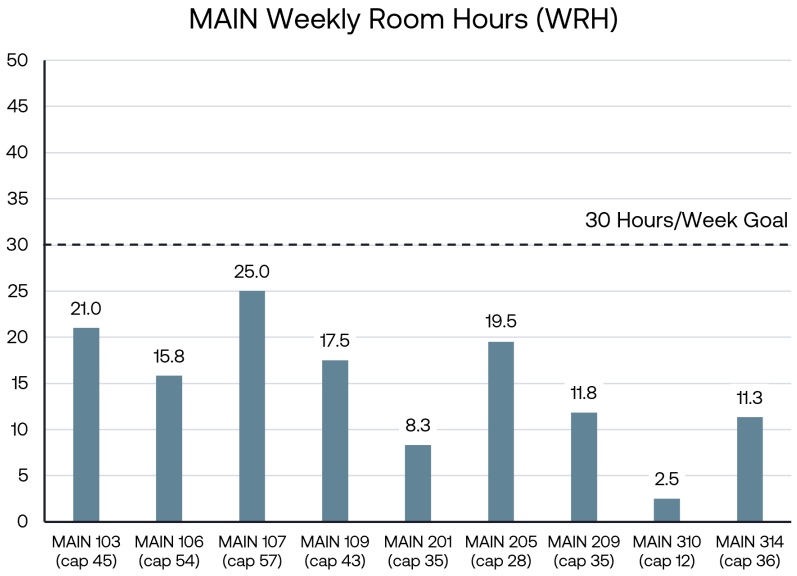

HSB Weekly Room Hours (WRH)
50
45
40
35
30
25
20
15
10
5
0
30 Hours/Week Goal
9.4
2.5
14.8
7.0
17.3
12.0
7.8
*HSB 002 (cap 48)
HSB 008 (cap 20)
HSB 009 (cap 70)
*HSB 102 (cap 40)
*HSB 202 (cap 40)
*HSB 209 (cap 12)
*HSB 210 (cap 10)


LIB Student Station Occupancy (SSO)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
11%
LIB 306 (cap 265)


MAIN Student Station Occupancy (SSO)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
33%
22%
43%
20%
5%
26%
3%
5%
2%
MAIN 103 (cap 45)
MAIN 106 (cap 54)
MAIN 107 (cap 57)
MAIN 109 (cap 43)
MAIN 201 (cap 35)
MAIN 205 (cap 28)
MAIN 209 (cap 35)
MAIN 310 (cap 12)
MAIN 314 (cap 36)


MG Student Station Occupancy (SSO)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
4%
20%
14%
23%
41%
21%
13%
MG 101 (cap 17)
MG 102 (cap 25)
MG 103 (cap 50)
MG 104 (cap 59)
MG 201 (cap 9)
MG 203 (cap 42)
MG 204 (cap 138)


LIB Weekly Room Hours (WRH)
50
45
40
35
30
25
20
15
10
5
0
30 Hours/Week Goal
17.5


MAIN Weekly Room Hours (WRH)
50
45
40
35
30
25
20
15
10
5
0
30 Hours/Week Goal
21.0
15.8
25.0
17.5
8.3
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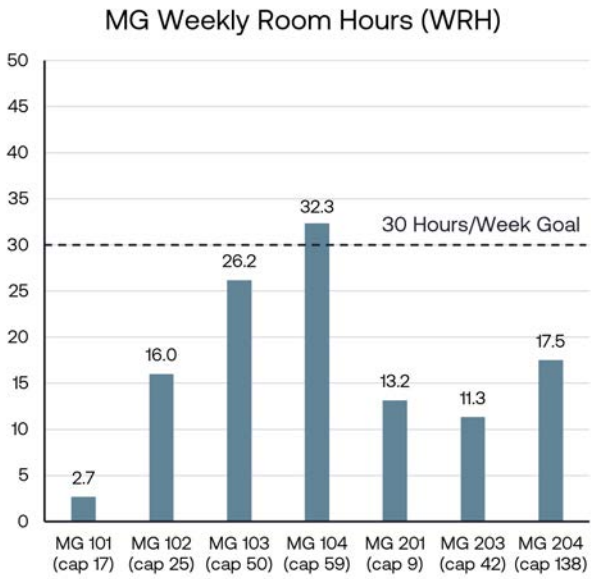
11.3
MAIN 103 (cap 45)
MAIN 106 (cap 54)
MAIN 107 (cap 57)
MAIN 109 (cap 43)
MAIN 201 (cap 35)
MAIN 205 (cap 28)
MAIN 209 (cap 35)
MAIN 310 (cap 12)
MAIN 314 (cap 36)


MG Weekly Room Hours (WRH)
50
45
40
35
30
25
20
15
10
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0
30 Hours/Week Goal
2.7
16.0
26.2
32.3
13.2
11.3
17.5
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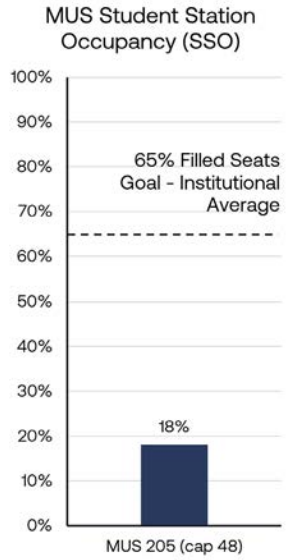
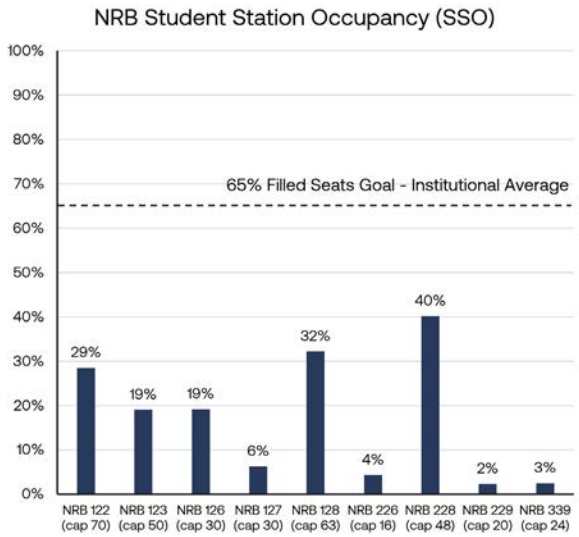
MG 102 (cap 25)
MG 103 (cap 50)
MG 104 (cap 59)
MG 201 (cap 9)
MG 203 (cap 42)
MG 204 (cap 138)


MUS Student Station Occupancy (SSO)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
18%
MUS 205 (cap 48)


NRB Student Station Occupancy (SSO)
100%
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70%
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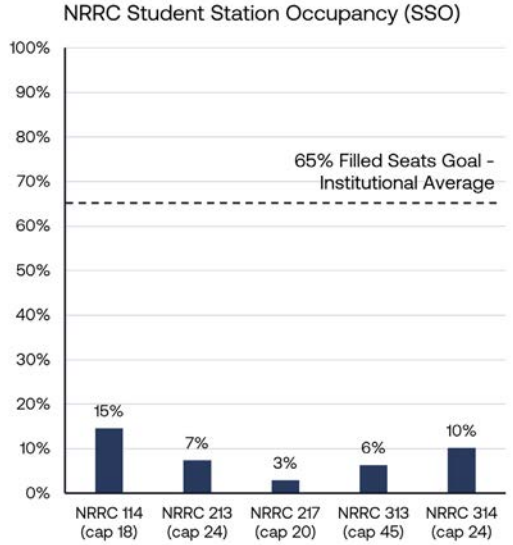
30%
20%
10%
0%
65% Filled Seats Goal - Institutional Average
29%
19%
19%
6%
32%
4%
40%
2%
3%
NRB 122 (cap 70)
NRB 123 (cap 50)
NRB 126 (cap 30)
NRB 127 (cap 30)
NRB 128 (cap 63)
NRB 226 (cap 16)
NRB 228 (cap 48)
NRB 229 (cap 20)
NRB 339 (cap 24)


NRRC Student Station Occupancy (SSO)
100%
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65% Filled Seats Goal - Institutional Average
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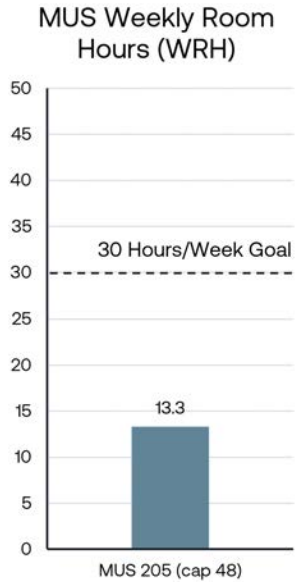
6%
10%
NRRC 114 (cap 18)
NRRC 213 (cap 24)
NRRC 217 (cap 20)
NRRC 313 (cap 45)
NRRC 314 (cap 24)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30 Hours/Week Goal
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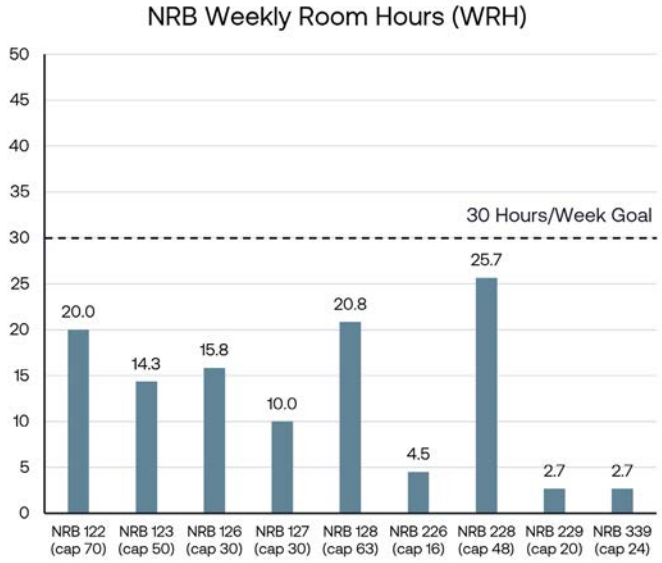
MUS 205 (cap 48)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NRB 122 (cap 70)
NRB 123 (cap 50)
NRB 126 (cap 30)
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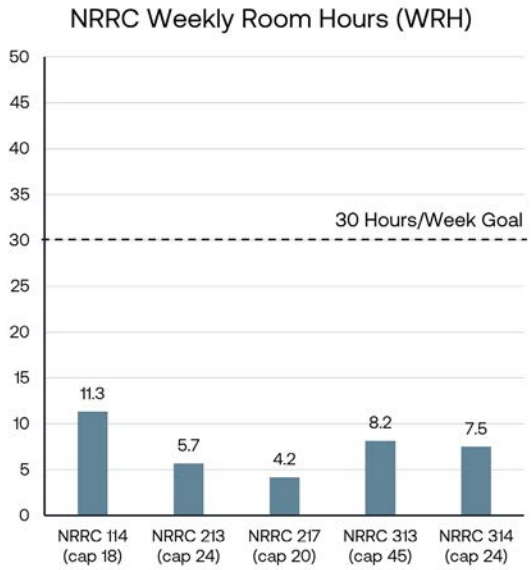
NRB 226 (cap 16)
NRB 228 (cap 48)
NRB 229 (cap 20)
NRB 339 (cap 24)


NRRC Weekly Room Hours (WRH)
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30 Hours/Week Goal
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5.7
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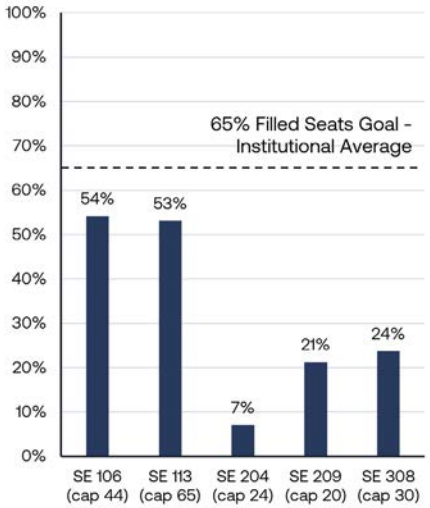
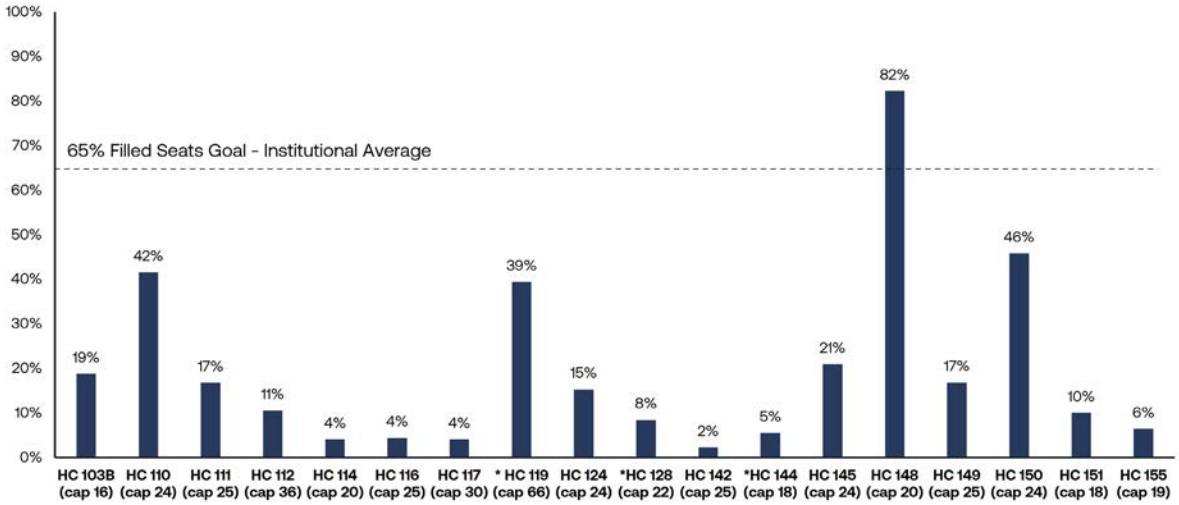
8.2
7.5
NRRC 114 (cap 18)
NRRC 213 (cap 24)
NRRC 217 (cap 20)
NRRC 313 (cap 45)
NRRC 314 (cap 24)

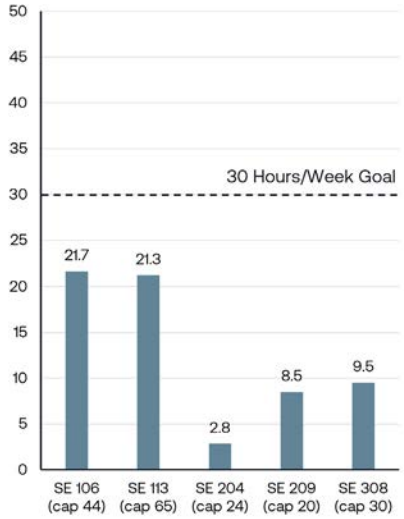
SE Student Station Occ (SSO)



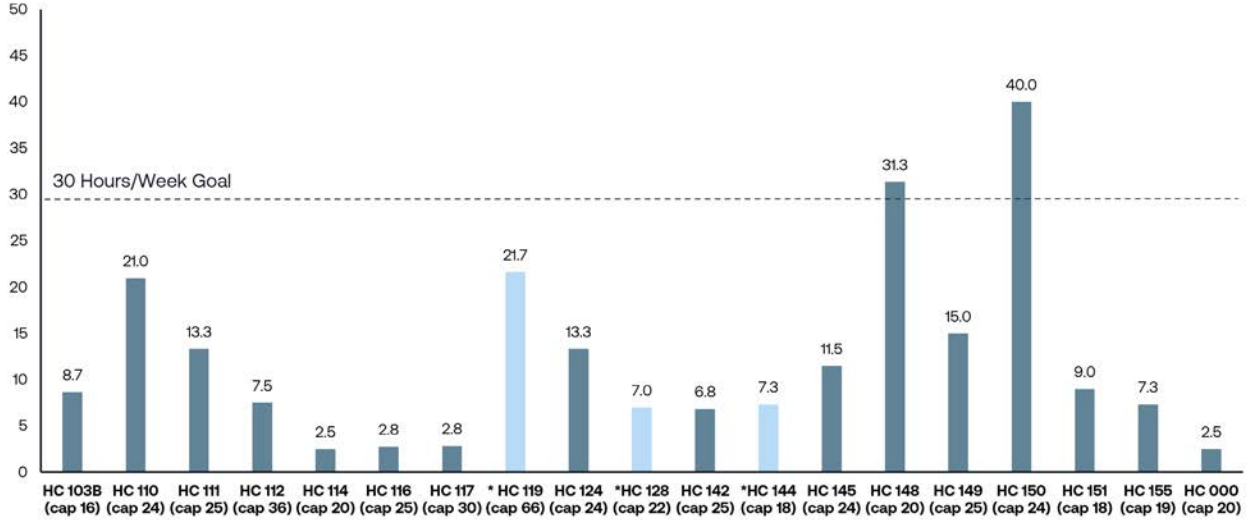
HC CLASSROOM STUDENT STATION OCCUPANCY



SE Weekly Room Hours (WRH)



HC CLASSROOM WEEKLY ROOM HOURS



6.2 Meeting Minutes

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MEETING MINUTES # Athletics

Date: 09/05/24 (2:30 -3:30)
Project #: 24-033
Project: Montana Tech - Master Plan

Subject: Athletics
Date/Location: 09/05/24 Montana Tech Campus - Mill Building

Present: Brian Solomon - Montana Tech (VB)
Kyle Samson - Montana Tech (FB)
Matt Stepan - Montana Tech (AD)
Adam Hiatt - Montana Tech (Men's BB)
Jeff Graham - Montana Tech (Women's BB)
Jon Wirth - ThinkOne
Kyle Brunner - AMD

Author: Kyle Brunner
Distribution: MTT Steering Committee, file

Meeting Notes

- **Strategic Plan**
  - Currently working on a strategic plan in advance of the capitol campaign.
    - Matt to send ThinkOne and AMD strategic plan and renderings of new football facility plans
  - Athletics rely heavily on principle donors as they are an auxiliary program and can't receive funds from the state

- **HPER**
  - Facilities aren't the worst in the Conference but also aren't the best
    - They want to strive to be better than "on par" with their peers.
  - The pool does not get used enough to justify the cost of maintaining it.
    - Athletics and Students would like to see the pool filled in and become another gym
  - Balancing between athletics and student functions at HPER is a challenge.
    - Facilities are only available to general student population approx. 1/3 of the time
    - Very limited open gym time
    - The HPER holds a lot of non-athletic events (career fair, robotics, etc.) which pushes athletics out of their space for weeks at a time
      - They must use local high school gyms for practice, which is inconvenient for the teams and detrimental to recruiting
  - There is not enough office space for Athletics in HPER
    - They want to hire new staff, but they have nowhere to house them

  - The training room is too small to handle 287 student athletes
    - Most student athletes get treatment in the hallway instead of the training room
  - Athletics only have one large meeting room, which they can't use regularly as it's used as a scheduled classroom space
    - Can the term Auxiliary be removed from HPER if it has classroom space housed in it?
  - Ideally a secondary gym would be beneficial to athletics, academics, and students.

This represents Anderson Mason Dale's understanding of the major points of discussion of the conference. If you have any additions or corrections, please notify this office promptly.

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MEETING NOTES # Facilities

Date:	09/05/24 (10:00 -11:30)
Project #:	24-033
Project:	Montana Tech - Master Plan
Subject:	Facilities & IT
Date/Location:	09/05/24 Montana Tech Campus - Mill Building
Present:	Layne Sessions - Montana Tech Eric Luther - Montana Tech (IT) Zachary Kelley - Montana Tech (IT) Yvonie Laughery - Montana Tech (IT) Jennifer Simon - Montana Tech (IT) Alan Christensen - Montana Tech (IT) Brian Vieke - Montana Tech (Physical Facilities) Roger St. Aubin - Montana Tech (Physical Facilities) Sean Milligan - Montana Tech (Physical Facilities) Josh Kounesky - Montana Tech (Physical Facilities) Alicia Johnson - Montana Tech (Physical Facilities Erick Castle - Montana Tech (Campus Security) Jon Wirth - ThinkOne David Pfeifer - AMD Kyle Brunner - AMD
Author:	Kyle Brunner
Distribution:	

Meeting Notes

Challenges

- Electrical upgrades are needed after underground explosion and extremely wet year last year
  - Currently the HPER is back feeding the power to the football stadium
  - Must plan for redundancy and plan for future additions and projects
    - The electrical capacity is currently close to maxed out
- The Campus has made some environmental quality upgrades recently, including full LED upgrade to whole campus
  - More energy efficiency upgrades are needed
  - Layne does not believe there are any sustainability mandates at the State or University level
- Deferred maintenance is a budget and cost issue
- All Buildings need HVAC upgrades

  - Some buildings are not currently compatible for adding A/C and are fit out with window units
- Facilities make requests to the state every 2 years for repairs and capital improvements
  - They typically have a low approval rate so it's hard for the campus to make long-term plans for upgrades or repairs to facilities
- Improvements to overall building efficiencies and comfort for students, faculty, and staff is a must
  - Layne to provide list of ideal campus improvements
- Accessibility concerns - Campus not fully ADA compliant
    - Parking lots
    - Engineering and Main aren't accessible and don't have elevators, will be addressed in the renovations

Information Technology

- Network closets are not in ideal or safe spaces
  - Some reside in closets of offices or classrooms and can't be accessed while those spaces are being used
  - The Engineering Hall network closet is in one big room with elec, mech, steam, and storage
    - Where does future mech and elec going in ENG, no additional basement space
  - Elec and IT closets are slowly becoming storage closets which makes them difficult to access
  - Buildings need to plan for redundant feeds for ease of upgrades in the future
- Room numbering needs to be considered or redone
  - Affects network labeling
- Improve Wi-Fi access campus-wide
  - Wi-Fi signal strength differs from building to building

Utilities

- SCC doesn't have A/C
  - There isn't enough electrical capacity; students have to turn off everything in their room to run the microwave
- Fire panels are currently shared between Engineering and Science & Engineering, will have to be changed when Engineering is renovated
  - Sewage pipes are currently clay pipe and are well past their useful life, replacement is inevitable.
- Account for EV charging in the future for commuters
  - Possibly campus facilities fleet could become all EV

Computer Support

- The buildings without ADA accessibility make it hard to carry heavy equipment to upper floors
- Projector screens and smart boards need to be separated
  - You can't use both at the same time, which is frustrating for users
- Inconvenient locations for power and data
  - Hard to access and people trip over wires and cables on floors connected to computers and equipment
- Flexibility of space is crucial
- Computer labs are not used very much
  - Jennifer to provide computer lab usage data to ThinkOne and AMD
  - Students use whichever computer lab is closest to where they live or park
  - Adding new computer labs in a space not close to parking will go unused

- If computer labs are to move location(s) or additional ones added, HVAC needs to be considered to make sure computers can function

Park Street

- Can the Campus become more walkable and pedestrian friendly
- Campus is currently separated by Park Street creating a north and south precinct
    - ***Can Park Street become more pedestrian centric rather than car centric to connect the two precincts?***

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MEETING MINUTES # Leadership

Date:	09/05/24 (8:00 - 9:30)
Project #:	24-033
Project:	Montana Tech - Master Plan
Subject:	Campus Vision: Leadership
Date/Location:	09/05/24 Montana Tech Campus - Mill Building
Present:	Layne Sessions - Montana Tech Ron Muffick - Montana Tech Les Cook - Montana Tech Tim Elgren - Montana Tech Michele Hardy - Montana Tech Joe Cooper - Montana Tech Jack Skinner - Montana Tech Paul Blumenthal - State of Montana Bill Hanson - ThinkOne Jon Wirth - ThinkOne David Pfeifer - AMD Cynthia Ottenbrite - AMD Kyle Brunner - AMD
Author:	Kyle Brunner
Distribution:	

Meeting Notes

Academic Teaching Committee

- Drop from the Workshop 01 agenda, do not have a working group assembled to discuss
- Michele to act as conduit between faculty and leadership group to find who is interested and who should represent different academic programs.
- Currently MT Tech is using a 50-year-old model for classroom set up and furniture (desk bolted to the ground, forward facing, etc.), we need to do something different and new, despite the money issues. Modular, power, technology in seating options.
    - Paul – table and chairs are bolted to the ground for money and budget reasons, long range programming money, rather than procured process
- Function to inform structure rather than the opposite. Flexibility of spaces is very important. Ownership of spaces is an issue within and between departments.

Athletics

- Need to learn what the Athletics Department vision is and how that fits in with the academic master plan. If they've already done the work we can just fold it in.
  - There are talks of an Indoor practice facility for athletics
  - They just joined the North Star Conference – studying the addition of a baseball program in the future

Main and Engineering

- Should get faculty within each building to have some say in this process
- Studying Highlands College for swing space during construction of Main and Engineering is fine, but permanently moving spaces to HC would be problematic

Highlands College

- A previous study conducted by consultant hired by MTT to find out how to make Highlands Campus more vibrant, and the consultant said to pick the campus up and bring to main campus.
  - Fundamentally too cost prohibitive
  - Have looked into options for selling HC to build new on north campus but the appraisal of the property was significantly lower than would be needed for design and construction of a new facility
- MT Tech is currently splitting resources between the two campuses.
- Logistically not possible to teach at HC and get back to North campus on time, or vice versa. Students and faculty show up late when they have to travel between the two.
- Computer Science department is split between the campuses, which is problematic

"Wow" Factor

- The location/geography
- Student Success Center + the football field
- Health Sciences
- Experiential learning is unique to MT Tech and is key to the "wow" factor
  - NRRC highlighting the labs
  - People don't know about the lab spaces MTT has; they have state of the art equipment hidden away in the basements of buildings that students don't see on tours
  - Need to remember that we educate first. That is the priority.
  - Undergrads get advanced experience at MT Tech compared to other schools where one would need to be a grad student to get the same experience
    - Students get to do something special right away as freshmen
- Nano Lab is fabulous
- Nursing Simulation Lab
- SAP Lab (Business Department) – cloud-based, enterprise application software lab
  - 1 of 13 in the nation
- MTT offers a different teaching method. Rather than teaching information MT Tech teaches inquiry (the how, the why)
  - Students get direct access to instructors which is rare

Opportunities

- Modernization
  - Introduce a comprehensive program for campus modernization to address needed upgrades across the portfolio over a realistic time horizon

- Future Growth
  - Environmental remediation area provides opportunity for future growth once they get approval (open space to the west of campus)
    - "Research Park!"
- Promote and capitalize on industry partnerships
  - Switzer Engineering is heavily involved and wants to build facilities on campus, but want a clear vision and direction
- Would like to see greater flexibility in space use and less ownership
- Leverage technology to improve overall space utilization across campus

Big Picture Ideas (wants and needs)

- Co-locating offices with labs or teaching spaces.
  - Engineering Hall doesn't have engineering in it for example.
  - Would promote more 1-on-1 interactions between office and lab.
    - PB reference to the Salk Institute as an ideal workflow for faculty with "Thinking" spaces adjacent to "producing" spaces
  - Currently departments are spread out between multiple buildings
- Students need more outlets on campus to build their communication skills
  - More gathering and collaborative spaces to get students out of their dorm rooms
- Space Utilization
  - They have data for utilization, specifically on lab space usage
    - Jack to get utilization metrics to ThinkOne & AMD
- Classrooms
  - General preference for smaller classrooms to maintain small student to faculty ratio, which is a strength of MT Tech, but also need larger, more flexible classrooms spaces for intro classes
  - MT Tech needs to move into the future of teaching and teaching spaces.
- Blackbox Theater
  - Interested in exploring teaching opportunities in ultimately flexible space
  - Transforms to accommodate multiple capacities and teaching styles
  - Michelle believes there would be interest from faculty in "black box" space
  - The "black box" space is a great intersection of academic and auxiliary spaces
  - Could the auditorium become a black box?
- Large mixed-use, revenue generating space
  - Ballroom space for orientation, career fair, etc
- Separate academic from auxiliary
  - HPER is all auxiliary even though it has classrooms

The Hub

- Presentation of academic office solution that utilizes reservation system to secure various work spaces based on the faculty need
- Leadership indicated that they need to explore and study these visionary ideas and continue talks along these lines to help bring MT Tech into the future
- We need more hoteling spaces for grad students similar to the Hub
  - How does MT Tech coexist with the new and old (Google/Twitter campuses)?

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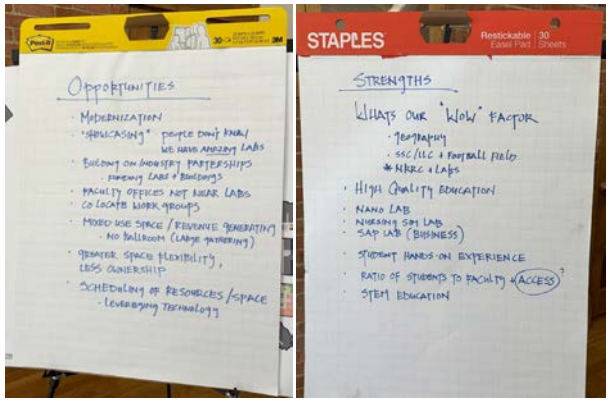
Handwritten Notes



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MEETING NOTES # Marketing and Enrollment

Date:	09/05/24 (10:00am-11.30am)
Project #:	24-033
Project:	Montana Tech - Master Plan
Subject:	Marketing and Enrollment
Date/Location:	09/05/24 Montana Tech Campus - SUB
Present:	Ron Muffick - MTT, VC of Admin and Finance Angela Hoffman-Cooper - MTT, Admissions Megan Strickland - MTT, Admissions/Marketings Lisa Hibnes - MTT, PR Marketing Heather Skocilich - MTT, Registrar Leslie Dickerson - MTT, EO Admissions and Enrollment Amanda Badovinar - MTT, EO Marketing and Communications Bill Hanson - ThinkOne Cynthia Ottenbrite - AMD
Author:	Cynthia Ottenbrite
Distribution:	

Meeting Notes:

Enrollment Goals

- Peak enrollment was 3,000 students in 2015, with a significant percentage contribution of international students
- Recent enrolment data for Fall 2023 was 2,031 (including 330 dual/concurrent HS student enrollment)
- Census data for Fall 2024 still being finalized
- Current aspiration goal was discussed as potentially 2,500 students (including dual/concurrent enrollment), or possibly 2,500 students excluding dual enrollment
- Considering campus did handle 3,000 students previously, would expect to have greater flexibility now with classroom utilization and accommodating possible interim condition when Main and Engineering undergo renovations and/or Campus could possibly aspire to get back to 3,000 students

Applicants and Application Process

- Approx 80% of enrolled students are from Montana
- Possible enrollment cliff may occur after 2026, when the number of graduating HS students in Montana is expected to peak
- 3% of all HS seniors choose to attend MTT
- Pell eligible students make up approx 25-30% of the student enrollment

- Have seen increased application/acceptance to the LCME with the new Lance Scholar's Program.
    - Offered to +/- 50 students, and provides guaranteed $4k/yr
- Campus has an 80% application rate from prospective students who choose to visit. And of those students, 50% are ultimately accepted
    - If students choose to visit, MTT covers the cost of a hotel for 1 nite
- 2025 application process will move to a state-wide Common Application, with the direct application to MTT becoming obsolete
    - May drive greater competition across the MT system, unclear what the impact may be to MTT future enrollment

Marketing/Recruitment/Retention

- ROI is a cornerstone of MTT Marketing and Enrollment
    - Affordability
    - 90% graduation rate
- Feel like MTT is on-target with size, cost, experience and outcomes; but is in need of a face-lift to remain or be more competitive with other peer institutions
- Students are looking for a more "bougie" University experience, attracted to new/modern facilities and expecting AMENITIES
- Butte location can be both a positive and negative
- Historic aspects of the community generally are not a draw for 17 year olds
- Marketing focus on MT Tech as the "authentic Montana experience" and a "Gem in the Community"

Physical Campus Opportunities

- Would like to have a large/flex meeting space; i.e. ballroom
- Look at making improvements to the overall landscaping
    - More curation of native landscape
    - Balance with more strategic green space
    - Look at better utility of Montrose Ave
- Expand opportunities for more indoor and outdoor gathering space
- Would like to see better use/activation of the library

Registrar

- In agreement with the classroom utilization data that the design team prepared
- Preference for teaching on certain days and times leads to inefficiencies in room scheduling, looking to standardize start/stop times in the future
    - May warrant further internal discussions with faculty to identify what the perceived pinch points are for scheduling
- Roll-over of previous semester/year scheduling data for future planning may limit innovation; easy to get caught in a repetition loop without critical evaluation
- Lack of class scheduling software is a limiting factor

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MEETING NOTES # Research

Date:	09/05/24 (2:00pm-3.30pm)
Project #:	24-033
Project:	Montana Tech - Master Plan
Subject:	Research
Date/Location:	09/05/24 Montana Tech Campus - SUB
Present:	Ron Muffick - MTT, VC of Admin and Finance Paul Blumenthal - State A/E Jack Skinner - MTT, LCME Angela Lueking - MTT, VC for Research, Dean of Graduate School Rick LaDouceur - MTT, Mechanical Engineering David Pfeifer - AMD Bill Hanson - ThinkOne Cynthia Ottenbrite - AMD
Author:	Cynthia Ottenbrite
Distribution:	

Meeting Notes:

Spatial Challenges

- Operational challenges with research initiatives being managed by Research Centers and space allocation managed by Departments
    - Research activity not considered in allocation of space – improve communication on space needs and discourse on goals
- Lack of office space and problems with hoarding and mobile squatting

External Funding

- Research expenditures have more than doubled in the past 2 years, from $8M in 2022 to $18M in 2024, and are on trajectory to continue this growth
- Funding source primarily federal dollars, Department of Defense
- No increase is space allocation

Programming of Core Campus

- Discussed a model where academic focus is centralized at the campus core and auxiliary (research focus) is distributed to the periphery?

Opportunities

- Would like to see more showcase lab spaces
- "Buried", low visibility or antiquated space
- Could be an amazing recruitment tool, missed opportunity

- Need to further amplify the “Technological” at Montana Technological University
    - Celebrate and further emphasize MTT’s technology and innovation work

Research Benchmarking Goals

- Identify # of primary investigators and post-docs at MTT, including historical data if available
- Identify research square footage at MTT
    - Angela to share out spreadsheet of square footage tracking

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MEETING NOTES # Student Govt & Life

Date:	09/05/24 (4:00 -5:00)
Project #:	24-033
Project:	Montana Tech - Master Plan
Subject:	Student Govt & Life
Date/Location:	09/05/24 Montana Tech Campus - SUB
Present:	Layne Sessions - Montana Tech Joe Cooper - Montana Tech Aaron Frale - Montana Tech Andy Larson - Montana Tech Layton Bahnmiller - Montana Tech Sarah Northwolfe - Montana Tech Quinn - Montana Tech Paul Blumenthal - State of Montana Bill Hanson - ThinkOne Jon Wirth - ThinkOne David Pfeifer - AMD Cynthia Ottenbrite - AMD Kyle Brunner - AMD
Author:	Kyle Brunner
Distribution:	

Meeting Notes

HOUSING AND DINING

What are the current housing options on campus, undergrad and grad?

- 461 on-campus beds
    - Have created overflow space for Fall 2024 to reach 470 beds
    - Have had to turn away residents who wanted to come back to the residence halls this year
    - State mandate to house incoming freshmen only
- 60 offsite apartments (the greens)
    - Originally utilized for housing faculty staff, grad students, priority has now shifted to undergrads
        - Line students taking classes at Highlands College are housed here (1 semester intensive program)
- Upper-class live off campus (apartments or renting houses)
    - Prices around campus and across Butte are going up and is limiting enrollment

- Housing stock mostly made up of old mining houses, very few apartment complexes
- Faculty and staff are being pushed out as well due to cost
- Fewer rental options down by Highlands College
- More students are applying for RA positions as it's guaranteed housing in the dorms
- Media events have made Montana more popular and causing housing prices to increase drastically

- Students want their own room
  - The shared apartment style dorms aren't what students want, which reflects Jacks comment in the leadership workshop that students like to stay in their rooms.

How do current housing offerings align with need/demand?

- They Don't…

What are the campus dining options and how are they accessed/distributed?

- Marcus Dining is the primary dining option on campus, located at the SUB, and has a lot of great options, Charlies and Highlands are secondary
- Highlands
  - Only two people operate the dining at Highlands, if they are both out or sick, the dining operation is closed
  - Only open for breakfast and lunch
- Charlies
  - Only open during the day, but is convenient/located near classes
  - It's hard to know what they have on the menu, and difficult to know if you can eat there if you have allergies
- The Campus has a large dining footprint for small amount of students it serves
- Dining has nothing but improved over the last 5 years.

STUDENT SERVICES

Where are student services located on campus and what is the current state; access, resources, and user experience?

- Locations
  - SSC
    - 50% of services are in the SSC
    - Campus tours and Welcome Center
  - URC (Foundation building)
    - Houses Career Services and Marketing
  - SUP
    - Digger Card, Counseling, Health Services
  - HSB
    - Houses TRIO. Frustrated that they are so far away from other student services and presents a wayfinding challenge
  - MG
    - Admissions in MG
- Geographic issues make a lot of inefficiencies.
  - Students didn't know about TRIO!
  - Need maps to just locate all the various student services
    - Campus signage is lacking
      - Greater consistency and on brand signage is needed
  - Co-locate as many places as possible

What is the current state of the student Health center; access, resources, experience

- 3 small exam rooms
  - Not a lot of privacy in exam rooms.
  - Students don't know about it
  - Limited hours
  - Highland students don't have access or limited access
- Mental health services
  - In the basement, and frankly depressing

What is the current state of the Fitness center; access, resources, experience

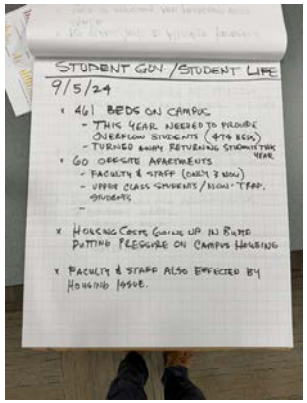
- Maintenance, condition, and cleanliness is lacking and can be improved
- Weird hours due to athletic department demands
- Workout room is a beautiful space with great views
- Students don't know when they are allowed to use the rec center outside of Athletics
  - Schedule isn't clear to student body
- Get rid of the pool and provide a Multi-purpose flex space!!!
  - Noted: a very small dedicated group of students do use the pool

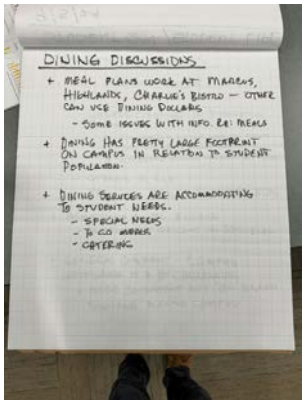
STUDENT LIFE

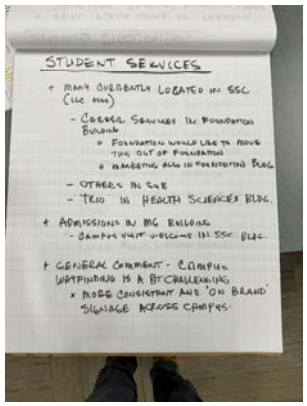
Focal Points

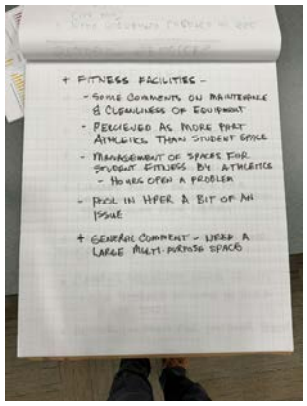
- Mill is under-utilized, but generally a gathering place on campus for studying and socializing
- The library used to be more active.
  - The coffee shop was removed and lost some of it draw
- 2nd floor of Prospector (Coolest dorm)
  - Revamped recreation hall is a great place for students to hang out and play games like pool or ping pong
- SSC
  - Pulls people away from SUB and Library
- Campus life/vibrance immediately drops off after 5pm, feels like a ghost town
- Informal study spaces are sufficient around campus
- Clubs
  - Old clubs have spaces to meet, but new clubs don't know where to gather and congregate
  - The professional clubs get established spaces because they are tied to a professor and department, and having space to meet is straightforward
  - Outdoor recreation rentals
    - Very popular but doesn't have its own space
    - Would like a game cleaning room
      - Gun storage and rental is in a dorm which is not ideal

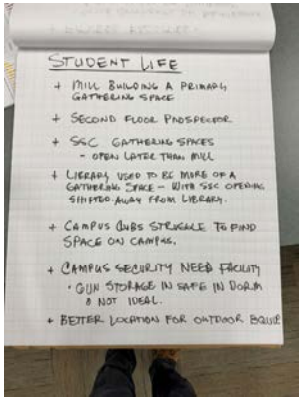
Handwritten Notes











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MEETING MINUTES # CLSPS

Date: 09/06/24 (10:00 -11:30)
Project #: 24-033
Project: Montana Tech - Master Plan

Subject: CLSPS
Date/Location: 09/06/24 Montana Tech Campus - SUB

Present: Layne Sessions - Montana Tech
Janet Coe - Montana Tech (Nursing)
Hilary Risser - Montana Tech (Math)
Tim Kober - Montana Tech (Business)
Mike Masters - Montana Tech (Arts & Sciene)
Amy Kuenzi - Montana Tech (Bio, Exercise, Health Science)
Dawn Atkinson - Montana Tech (Writing)
Paul Blumenthal - State of Montana
Bill Hanson - ThinkOne
Jon Wirth - ThinkOne
David Pfeifer - AMD
Cynthia Ottenbrite - AMD
Kyle Brunner - AMD

Author: Kyle Brunner
Distribution:

Meeting Notes

Identify how the College is currently operating and discuss your vision for how you want to work in the future:

Nursing
- Locations: HSB, and simulation center at SE
- Growth: Expanding from 30 to 40 students
- Details
  - Run a few classes out of Main and at HPER
  - Faculty office space is a need. When HSB was remodeled, they outgrew their 4 offices. They have currently taken over a conference space to provide workstations for new faculty/staff
  - Depending on where people move, HSB can be expanded or renovated.
  - Nursing program works with the local hospital for their clinical hours, not teaching activities at the hospital

Math
- Locations: Faculty offices are at MUS, 1st and 2nd floor
  - Currently have 10 faculty and are growing
- Details
  - They teach all over campus
  - Most of their classes are 50 to 60 students
  - Teach about half of the undergrads
  - Oversee the Computer Science Department
  - Officing
    - Out of office space even though they are hiring now
    - Growth area is needed, and flexibility is needed
    - Perception that University builds for current needs rather than factoring for growth
    - Existing offices do not have acoustical privacy
  - Classroom Configuration
    - Variety of teaching styles
    - They need flexible classrooms that allow a variety of different configurations
    - AI is power intensive, must plan for that in the future
  - Classroom Fit out
    - Smart boards are useless to math department, not big enough to write out math problems, no one asked them if they wanted them
    - Would like floor to ceiling white boards
  - Math is foundational to all the other programs
  - They have to turn students down from getting into a math class because there isn't a big enough classroom available
    - Seems like everyone is fighting for the large classrooms

Business
- Locations: Faculty are primarily housed in the ELC, but also have lab space in Engineering Hall, and also teach in the NRC
  - Lab space is far away from offices
- Enrollment/Growth: 200 students and growing
- Details
  - Classes are taught in NRC
    - They prefer a computer lab style learning
  - They have some overlap with the Data Science program

Art & Science, Anthropology
- Locations: Housed in Main Hall, also use labs in ENGR
  - Faculty on first floor
  - Use the classrooms on the corners
- Details
  - Needs lab space and storage space

Biology and Exercise and Health Science
- Locations: HSB and HPER
- Growth/Enrollment: 90 students
- Details
  - Offer an Ecology and MCDB track

- Large anatomy and biology cohort
- Some of their space in HPER was taken up by Athletics and e-sports
- Lack of lab space and out of research space
- A dedicated teaching lab is needed
  - Wet lab, like the ones in the basement of Main Hall.
  - They have a small space in Main Hall, but it isn't very useful

Chemistry

- Locations: CBB
- Details
  - Need more space for grad student offices

Writing Program

- Locations: Housed in Engineering Hall, and mostly teach in Engineering Hall
  - Accessibility is a huge issue.
- Details
  - No major, but serve every student at MT Tech, with exception of the Lineman program
  - Challenge: driving back and forth between both campuses
    - Highlands is more accessible but it's hard to get back and forth because faculty is split between campuses.
    - They rely on adjunct faculty
    - 5 teachers
  - Would like a multi-purpose classroom space with movable furniture and collaboration setups
  - They don't have a conference room, or breakroom space
    - Currently must book a classroom to have group meetings.
    - Shared workspaces do not work for their department for privacy reasons
  - HC116 Computer lab doesn't work well for their needs
  - Need storage space specific for writing
    - Current storage is in the office of one of the faculty, and not readily accessible by others

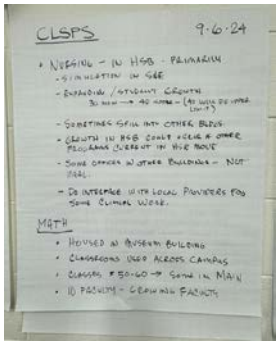
Challenges

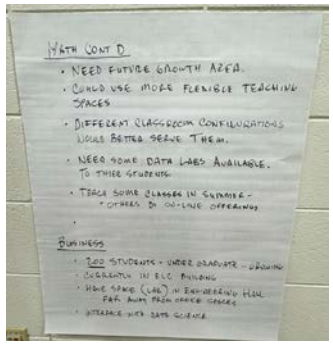
- Classrooms
  - The furniture and classroom layouts are crucial
  - CBB 102 functions well
  - PSYCH 101 has an enrollment of 150 or 160 student, no classroom can house that many students with exception of the auditorium
  - Math doesn't get over 60 people
  - Faculty load/staffing affects class size
  - BLACKBOX THEATER IDEA
  - There are more lecture hall style classrooms than we discussed or are shown in our current data
    - ThinkOne and AMD to follow up with Layne to get specific room numbers
- A Daycare center would be helpful to staff
- Housing is an issue for new faculty
  - Housing prices have doubled
  - No short-term housing options

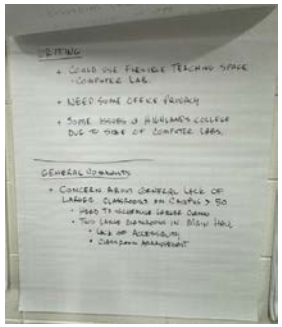
Describe your Future State: Describe your vision for how you would like to work in the future and what you see as potential changes in the key departmental focuses or beyond the department

- Would like to plan for AI/VR Simulation labs in the future for nursing
- The why is important to the students
  - The application of knowledge, not the transfer of knowledge
- Classrooms that are less hardwired, more configurable
  - Plug and play model for classrooms
  - Technology is ever changing so no point in putting permanent fixtures in classrooms
  - Faculty wants to be involved with furniture options
- Library and learning center combined together rather than separate
- Library should be re-programmed
  - "Hub/Hive" for faculty officing
  - Maker space and creator space
- Recruiting
  - MODERNIZATION!

Handwritten Notes







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THINK ONE ARCHITECTS

MEETING NOTES # 3

Date:	11/13/2024 (12:00pm-2:45pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Leadership
Date/Location:	11/13/2024 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Jack Skinner – MTech, LCME Interim Dean
Paul Blumenthal - MTech
Layne Sessions – MTech, Director of Facilities
Ron Muffick – MTech, VC of Admin and Finance
Ron Sherman – MTech, facilities
Tim Elgren – MTech, Provost
Joe Cooper – MTech, Vice Provost Student Success
Michelle Hardy – MTech, CLSPS
Les Cook – MTech, Chancellor
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Schedule
- Main and Engineering bidding for construction starting in January 2026, assume ground-breaking in Spring of 2026
- Currently writing justification for GCCM - will be RFQ and RFP process
  - Could be 90-day turnaround

Driving Principles
- "Interprofessional" has a different meaning for healthcare
  - Replace with "interdisciplinary"
- "Pursue physical infrastructure to support DEI goals" - what are the goals
  - Replace DEI goals with "accessibility and inclusivity"

Specific Goals

- Need infrastructure master plan for utilities to support other proposed programs
  - Now that we know rough ideas for future building sites, can get civil engineer for more in depth analysis
- Housing and Dining growth/expansion can be generalized
  - Don't specify freshmen and sophomores, assume a % of sophomores and upperclassmen. Maybe the bed increase is more around +300 beds as opposed to the suggested +490 for 2034 projection
  - Grad students and upper classmen looking for more housing options as well
- Reword parking to clarify ADDITIONAL spaces to avoid confusion
- Formatting: Enrollment feels prioritized right now
  - Enrollment growing causes parking and housing/dining changes, this list order makes sense

Priorities

- Pole barn for the COT Lineman program is getting private funding currently, not state funded
- Move Pool infill up, can be done quickly and soon
- Campus Quad should be relabeled Campus Courtyard
- Training bubble and intramural relocation is unknown timing as of now
- Enrollment currently limited by parking and housing/dining
- Bump up housing/dining or others for optics to show priority on timing and get support of students who won't be here in 5+ years
- Need to grow parking and other capacities before other programs can be supported
- Need 1-3 and 3-5 year breakouts to further breakdown short term priorities
- Clarification if timeframe is Planning vs Breaking Ground on each program (add bullet for when planning will start vs actually implemented)

Precincts

- Research Precinct Mapping
  - Research is currently embedded within academic precinct, and strategic vision to is to keep current research embedded
  - West research space intended for field work, i.e. drone, biotech, mining - not moving existing but expansion in other fields
  - Revise precinct map to indicate West Campus as area of future growth, amend Academic precinct to include Research, revise South Campus as an area of future growth as well
- West Campus Development
  - The idea that flexible spaces can be combined not applicable to West Campus, do not think that side of campus should be shared space (grad, faculty, undergrad research occupy space, not doubling as teaching space)
  - University does not want to own the land beyond the current MTech property boundary, lease only
  - Future parking lot area and north area are important growth areas for university
- Research Program
  - Growth of grad program and integration into campus means we need to support undergrad involvement
  - Research is expansive growth area for university, can lean into it

  - EEIFC plan is valuable for this visioning
- Research Stakeholder Meetings
  - Missing demographic from research meetings - researchers vs people from research office
  - Research funds are with people who are not included in meetings - view is skewed
  - ARL research group is not west of campus
  - Desire to arrange follow up call with more comprehensive research stakeholders
- Energy Environment and Innovation Field Campus (EEIFC)
  - West campus is perceived as a wasteland, Robin has plan to clean it up which is why it's prioritized
  - CERA run by Robin will implement expansion, will build on what MTech owns not leases
    - Commissioner says won't own or lease until remediated (2028)
    - Research can be on environmental remediation, doesn't work if can't operate there until remediated
    - Commitment to build is there, but will take more time (complications with EPA, contaminated soil, state)
- Research Institute
  - TE likes the Colorado School of Mines precedent of Research Institute, not just expanded field station
  - Big picture: how much to plan for general research building
    - Currently not in writing, just speculation
  - Funding wants big idea, advancing national reputation
    - Research institute will fill this desire
    - Parking is not as exciting, although needed to accommodate growth
    - What is frontier for research – need consensus on highest priority
    - Don't want Master Plan to prevent funding by implying other priorities
  - Can put new Research Institute in heart of campus to show priority and potential for the University
  - Research Institute as game changer that propels MTech forwards - this needs to be reflected in Master Plan if true
  - Research Institute can have larger role to play in the development of the Master Plan and need to continue conversation
  - Add Research Institute to the priorities matrix/buckets
- General
  - Question: where can we build that won't require remediation
- Master Plan (MP)
  - Used for identifying priorities, a tool for the Leadership team to set the priorities and sync with the Foundation
  - MP utilizes a looser writing style for prescribing physical plans that doesn't restrict the University
    - Colorado School of Mines example, two buildings constructed in the heart of campus were NOT in their Master Plan
    - MP adapts and responds to opportunities and strategic vision
    - MP can inform how opportunities are manifested
    - Realization of MP priorities is dependent on how funding comes about
  - MP is a portrait of what MTech could look like in the future, then use that to prioritize and take action

- All other programs are planned and working well so far, research is nebulous and feels like the heart of the matter - need to be able to accommodate when opportunities arise

MASTER PLAN PROGRAM PLANS

Research
- Potential future spaces
- A and B are owned and we can build on it, need utilities (A first then fill out with B)
- A is good space

Housing
- Grad student population, increasing demand for family housing
  - If single students were excluded from current University-owned off-campus apartments, would improve utilization and meet greater need for family housing
  - Consider renovating the off-campus apartment housing as part of Master Plan
- Priority for new residence hall construction is single rooms and single-use shower/restroom facilities
  - Students will pay more for a single
- Option B is liked, creating a new neighborhood
  - Can more readily accommodate new surface parking
  - May have soil cap which would constrain development options, design team to investigate further
    - Entire area around former rail line presumed capped with 2-3 feet of soil, unclear how much can be disturbed
    - Site is drainage for entire area to the north
  - Good for the University to realize/develop this site as part of campus and expand overall footprint
- Option C is a concern for neighborhood and density

Facilities
- Include parking structures in plans to show consideration
- Surface lots are more realistic to what's feasible
- Elevation changes across campus and from existing parking (Tiers) in inclement/winter weather is an issue for certain MTech populations
- Need accessible, safe parking especially if removing Library lot
- Parking west of NRB is still close
- Alternative option to evaluate would be a campus shuttle/bus system
- Option A is near an existing mine, may be limited in footprint (either for parking or future building) to ensure not in conflict with underground excavations

Athletics
- Option C (athletics training facility) can still be an option even if the future facility in not built over structured parking
- Options B and C must be developed in sequence for the intramural field program to remain on-line
- HPER pool infill likely to include upgrades to entire building
- Proposal for academic extension to athletic building

Academic/Research
- Proposals F and E are potential for academic and/or Research Institute

Public Spaces
- Unless parking access changes, students will still drive through Park St as the main thorough fare thru campus
- Parking on the periphery is priority
- Park St is a city bus route
- Neighborhood won't like if parking traffic is rerouted to those roads
- Granite St is very dangerous given steep grade
- Park Street pedestrian improvements as traffic calming tool rather than closing road entirely
  - Concerns that students won't change driving habits
  - Concern about snowplows damaging paving surface
- Bypass from highway to come into campus from South would help prevent traffic in neighborhoods
- Further discussion with Butte-Silver Bow required to better understand ownership of Park Street, requirements for long-term access, and potential for future Hwy 15/115 exit/bypass

Student Services Colocation Planning
- Need to ensure program areas for meeting rooms are still accommodated
- RIPPLE
  - Has limited interaction with students
  - Can be somewhere separate (Reed House?)
- TRIO
  - Doesn't have huge student flow
  - Move to SSC or Learning Commons
  - Pair with Tutoring
- Advising & Tutoring
  - Keep together but they are separate programs
- Marketing
  - Is relatively independent, can likely go anywhere
- Career Center
  - Possibility of Career Center in Reed with Marketing/Communications
- SSC/LLC Colocations
  - Collocating is high priority, question is where and which services
  - Political issues with Marketing and Payroll in SSC
  - Consider flipping the Business Office with Admissions?
    - Put Business Office with HR and Payroll in MG
    - Business Office and Financial Aid want to be together
  - HR & Payroll and Admissions should be together
  - Admissions and Marketing should be together
  - Financial Aid, Registrar, Business Office
    - All work with students
- Reed House
  - Reed House future
    - Move to 1-3 year priority
  - Condition
    - Exterior renovations in 2020, interior is not livable
    - Gutted kitchen on first floor, 1 bathroom upstairs, unfinished basement
    - Not accessible aside from first floor
  - Program Strategies

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THINK ONE ARCHITECTS

- Marketing, Career Center, RIPPLE, Alumni house, swing space during renovations
- Move Chancellor to Reed House and Chancellor's House becomes something else?

- Chancellor's House
  - Challenging location, heart of campus, fishbowl
    - Students appreciate it but location offers little/no privacy for the Chancellor in-residence
  - Programming Alternatives
    - Could be great event center
    - Temporary housing for postdoc/visiting scholars
    - Offices for marketing
  - 5 beds – too large for most prospective/future Chancellor
  - U of MT is selling their Chancellor's house – can see how they are addressing
  - Stipend for housing costs if Chancellor doesn't live on-campus
  - Requirement for chancellor to live there
    - Why is that requirement in place and would that change the feel of MTech and the campus

Library

- Could relocate low/no circulation materials into climate-controlled storage and open up floor area for swing space
- Storage must be kept a certain distance for accreditation – could be negotiated
- The Mill might be more suited for new office hub rather than taking stack spaces
- Budgeting is difficult for temporary relocation because otherwise falls in full renovation budget

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MEETING NOTES # 3

Date:	11/13/2024 (3:00pm-3:45pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Research
Date/Location:	11/13/2024 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES

Jack Skinner – MTech, LCME Interim Dean
Robyn Bullock– MTech, CERA Director
Rick Laducer – MTech, Mechanical Engineering Department head
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Enrollment Projections

- Current projection feels too steep
- Unrealistic to get to 400 or 500 grad students in the next 10 years
  - Don't have space for that many students
  - Current projections based on DoD grants
  - Can't hire more faculty without more undergrad, need faculty for more grad students
  - Distance/Online program is only on campus in summer for a few weeks, not a driver of campus research resources
- As a goal/metric, 20% of undergrad population should become grad students
  - Almost all grad students will be in LCME (787 undergrads in F24)
- Easier to make projections by going department by department
- Realistic vs optimistic projection, for purpose of Master Plan look at how much space is actually needed
- Desire for more researchers to have input in growth assumptions
- Questions for faculty engaged in research on campus
  - What is their projection of grad students for their program
  - How much space to plan for

Funding
- $12 out of 14 million funding is ARL, $7mil of this is in a contract that is ending within the next year
- Concerns about future funding and effects on ability to support grad student research and lab space
- Strategic planning already has funding and projections for target enrollment for distance programs only

West Campus Expansion
- Within CERA umbrella but can be any research facilities
- Desire to support this expansion

Faculty or Grad Officing Hub
- Depends on individual student if office needs to be close to lab
- Currently have students with split location and works fine
- Already have 3-4 clustered in office
- Hub idea is well liked especially for grad students
- Mill or MG both offer a central location
- Faculty are already used to teaching and office in separate locations
- Cubicles are not collaborative
- Can put grad student advising nearby too for easy access
- CLSPS does not have a lot of grad students, most research is field work off campus

Research Needs
- Lots of research is also done at undergrad level
- Better to have a plan that includes room and growth without relying on a new Research Institute which would be dependent on donors
- Research Hub: Place for Interdisciplinary Innovation
    - Open research space, could include hub but would prefer designated lab space as well

Action Items
- Find projections department by department
    - Use projections to predict officing needs (with and without hub model)
    - Use projections to predict research lab needs
- Add plan for Research Institute to the Master Plan
    - Opportunity for campus to get behind big idea
    - Doesn't have to be based on hard space utilization numbers
    - Set up for if a donor opportunity comes along

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THINK ONE ARCHITECTS

MEETING NOTES # 1

Date:	11/13/2024 (4:00pm-5:00pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Foundation
Date/Location:	11/13/2024 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Ron Muffick – MTech, VC of Admin and Finance
Jaime Heppler – MTech, Foundation CEO
Bob Shepherd – MTech, Foundation Chair (via Zoom)
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Housing
- Students used to live off campus, but current economy means more students are living on campus for multiple years
    - Cultural shift for the school as a whole
    - Helps promote a collegiate atmosphere
- Foundation owns second phase of the 1421 W Granite Street Apartments
    - Need more information on investing in that development because currently losing money on existing Green Apartments

Enrollment
- Critical to specify on-campus students for projections
- Need strategy to smooth out boom and bust cycle of boutique engineering degree programs
- Retain programs that make the school distinct
- Provide space for programs other than engineering to supplement growth
    - Business, Nursing, etc.
    - Need to highlight necessity of newer programs for survival of traditional STEM programs

Main and Engineering Renovations
- A chance for wow factor showcase

Student Services Colocation
- Move tutoring to areas under SUB
- Questions about utilizing the library more fully
- Appealing to donor base for additional funding on project

Foundation Relationship
- Wants to embed Master Plan in overall strategy
- Strong partnership needed and desired
- Chair and executive committee would like follow-up conversation(s)
- Currently building a $100 million campaign, in silent phase
    - 4-5 year campaign
    - Priority goal is to take care of home base
        - Student scholarship
        - Endowing department heads and smaller program positions
    - Use Master Plan as way to find priorities, Foundation will enhance and advance this vision
        - Big ideas, more prominent innovation, research, entrepreneurship
- Separate conversation for athletics because mostly private donors
- Three types of funding (state, auxiliary, private) need to coordinate to deliver Master Plan vision
- Need to communicate vision of school with some detail and show clear direction of school
- Boom and bust is less of a concern, have more room for error than before
- Clarity is appreciated to better communicate with potential donors
- Data-driven and defendable plan is an asset to both Master Plan and campaign
- Master Plan shows map of aspirational University
    - Foundation can leverage this for donation

Next Steps
- Engage the Foundation executive team virtually, show more in detail
- Set up meeting with MKPD firm who is partnering with Foundation campaign
- Coordinate and hone visions for MTech as a whole
    - Premier Tech University in MT
    - Research Institute

This represents Anderson Mason Dale's understanding of the major points of discussion of the conference. If you have any additions or corrections, please notify this office promptly.

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THINK|ONE ARCHITECTS

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Choose an item. # 1

Date: 11/13/2024 (5:30pm-7:30pm)

Project #: 24-033

Project: Montana Technological University - Master Plan

Subject: Community Open House

Date/Location: 11/13/2024 Montana Tech Campus

Present: see below

Author: N/A

Distribution: file, attendees

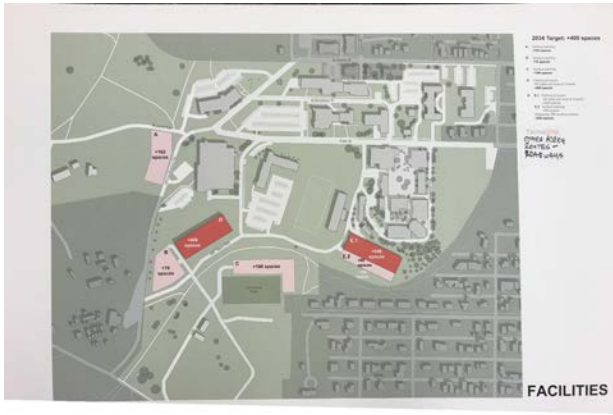
Online Survey Feedback

- Parking seemed like the main issue you were attempting to address. How about encouraging students who live within walking/biking distance to stop driving? We see students 5 blocks from campus fire up their big diesel trucks, let them idle for 20 minutes, and then drive to park on campus. It's ridiculous. With less parking to deal with, you'll have more room for campus improvements like street trees, landscaping, and gathering spaces. Another item that wasn't mentioned was the surrounding open space. There are so many recreational opportunities right next to campus that need to be connected to campus. Your plan should address those connections and create walkways/pathways to those nodes. More designed gathering spaces for student events, a food truck area, plazas that face southwest and west to take advantage of warm sunny days (which do occur even in winter). Wayfinding, accessibility.
- I would suggest that Leonard field be considered for something. The wall was built by the CCC program after the depression of 1928. Time to move on!

Click or tap here to enter text.

- There is a lot owned by MT Tech immediately below the Arch & walking trail on the South side of Park St . It was not on the Master plan boards and could be developed for parking.
- "Good morning. Great presentation last evening. We discussed the possibility of creating an avenue south from the Mining museum to West Iron street/City Center exit. There appears to be enough space to make this a possibility. Obviously there would need to be cooperation with MDT, BSB, and ARCO as they are the major land owner in the corridor. Would like to discuss options if needed. Thank you!
- Having a road through the middle of campus is horrible. That needs to be community space like every other campus in America.
- If you're still trying to figure out how to make the buildings you're going to renovate accessible, please check out the ADA resource on it (if you haven't already): https://www.ada.gov/law-and-regs/design-standards/. Additionally, I'd recommend reaching out to local organizations, such as Ability Montana and the Butte-Silver Bow ADA Advisory Committee, for additional input on making historic buildings accessible to the disabled.
- Thanks for the presentation, I would like to suggest keeping recreation assets in mind through this process. Tech has the Big Butte and the city trail near the arch which are incredible assets to student recruitment. Finding ways to amplify those, create more accessibility, and/or additional outdoor rec opportunities that close to campus can serve to differentiate this school from almost every other!
- Housing and parking are a priority to the students here on campus and for those who live off campus. Students love the Mill building as a study space and having ASMT there is incredibly valuable. If you are going to take the Mill space away or change it too heavily make sure that the new student space has students in mind wherever it is going to be. I do like the campus green (C) on the public space map.

Click or tap here to enter text.



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THINK|ONE

MEETING NOTES # 3

Date:	11/14/2024 (8:00am-8:45am)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	CLSPS
Date/Location:	11/14/2024 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Michelle Hardy – MTech, CLSPS
Hillary Risser – MTech, Math department head
Janet Coe - MTech, Nursing
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

MASTER PLAN SCENARIOS

Public Spaces
- Pedestrian street is liked, concerns about neighbors

Parking
- Parking structure on current tiered parking will be safer, currently very dangerous especially in inclement weather
  - Tiers are also accessibility concern

Academic
- Any swing space would need to consider network drops
- The Mill does not have good WiFi, would need network drops added to successfully serve as office swing space

Enrollment
- Correction: Applied Sciences (Business) major has 197 students – confirm department(s) under this heading include “Business & IT” (167) and “Business” (28)? Does not add up to 197.

STUDENT SERVICES COLOCATION

Writing Center
- Refer to how MSU’s writing center operates – primary location is on the first floor of the library

Tutoring
- Currently students are shuttled to ACE for tutoring
- Potential for mandatory tutoring if students need help
- Currently students don’t access these services, could be more convenient
- Some tutoring happens in ACE already so consolidating it would be beneficial
- Quiet study spaces and tutoring can collocate in library

Student Services
- HR and Payroll don’t need to be next to student services
- SSC colocalization of Financial Aid, Registrar, and Business Office is successful
  - Enrollment should join this
- HR spends most time with Deans and Provost
- Interactions
  - Staff: HR, Payroll, Admin (Deans, Provost, Chancellor)
  - Students: Financial Aid, Registrar, Business Office, Enrollment, Admissions (with Marketing?)
  - Alumni: Foundation, Marketing (with Admissions?)

Reed House
- TRIO and RIPPLE could relocate here because of limited student traffic
- Don’t want perception that RIPPLE is being pushed aside because it is a new center
- Special interest centers (ex. Women’s center, Native American) would be great programs to backfill the Reed House, which MTech does not currently have
- Home for ASMT and other student clubs a great idea
  - Home-like feel, welcoming, less institutional
- Unnecessary as a new alumni space

RIPPLE
- Relatively autonomous, just needs office space
- They have an outreach component, need access/space for loading materials
- Loosely affiliated with CLSPS faculty

TRIO
- TRIO should be somewhere students can find it
- Collocating with ACE and general mentorship

SAP Lab
- Associated with the Business department
- Doesn’t need to be that large, only moved in because space was underutilized
- Space was formerly tutoring and didn’t change structure when the SAP program took over the space

- Should be convenient for collaborating
- Helpful if close to Business but doesn’t need to be in the same building
- Math and Data Science would like to collaborate too

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MEETING NOTES # 3

Date:	11/14/2024 (9:00am-9:45am)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	LCME
Date/Location:	11/14/2024 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Chris Roos – MTech, Mining Engineering
Rick LaDouceur– MTech, Mechanical Engineering Department Head
Glenn Shaw – MTech, Geological Engineering Department Head
Dave Gilkey – MTech, Safety, Health and Industrial Hygiene
Jerry Downey – Metallurgical & Materials Engineering Department Head
Bryce Hill – MTech, Electrical Engineering Department Head
Jack Skinner – MTech, Interim Dean of LCME
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Connection Diagram
- Most departments have a lot of crossover
- Width of lines matters more than number of connections
- Mining and Mechanical have overlap
- Currently don't have synergies in Main building
- Would like to see what future connections could be

Main and Engineering
- Electrical wasn't supposed to be in Main permanently

Parking
- The Tiers is liked as parking
- Shuttle might be better investment than structured parking
- Build West with more walkable spaces, argument to make it easier for people to be incentivized to walk when campus is very hilly
- Concern with removing new storage facilities in the south area
- South campus was considered for practice fields in the past

Housing
- Interest in further developing Green Apartments for more housing

Public Spaces
- Question of if there's data from when Park was closed and how traffic was
  - Inconvenient but not an issue overall
- If tiers are parking, can put road in along former railroad bed to reduce traffic
- Keep trail in place and have southern access loop
- Will need to configure traffic flow for corner near LLC parking
- Most intersections are too tight currently, this would need to be alleviated
- Add a line to 1-5 year plan/buckets to improve traffic or access
  - Infrastructure

Enrollment
- Grad projections are feeling accurate
- Funding is huge concern and limits growth
- Space is constraining enrollment of grad students, especially department specific vs general lab space
- Changes in FASFA is a concern for immediate future undergrad enrollment

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MEETING NOTES # 3

Date: 11/14/2024 (10:00am-10:45am)
Project #: 24-033
Project: Montana Technological University - Master Plan

Subject: Highlands College
Date/Location: 11/14/2024 Montana Tech Campus

Present: see below

Author: Mia Torrence
Distribution: file, attendees

ATTENDEES
Linda Granger – Highlands College, Associate of Science Advisor
Bernie Phelps – Highlands College, Dual Enrollment & Grant Funding Director
Kinsley Bennett – Highlands College, Community Education & Industry Pathways Director
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

- Lineman Facility
  - Expand to more transmission work
  - Project should be realized within the next 5 years if grant goes through
- Enrollment
  - Will be adding Smart Fabrication program within the next few years
  - Will be putting Metals Fabrication in moratorium
- Enrollment Projections
  - Need to validate projections
    - Design team to follow up with actual numbers and share out with Karen for review
  - Dual enrollment is good, want to get other programs up to that level
  - Round out current programs and boost visibility of offerings

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THINK ONE ARCHITECTS

MEETING NOTES # 3

Date: 11/14/2024 (11:00am-1:00pm)
Project #: 24-033
Project: Montana Technological University - Master Plan

Subject: Leadership Wrap Up
Date/Location: 11/14/2024 Montana Tech Campus

Present: see below

Author: Mia Torrence
Distribution: file, attendees

ATTENDEES
Dan Stevenson - MUS Director of Facilities Planning
Jack Skinner – MTech, LCME Interim Dean
Layne Sessions – MTech, Director of Facilities
Ron Muffick – MTech, VC of Admin and Finance
Ron Sherman – MTech, Facilities
Tim Elgren – MTech, Provost
Michelle Hardy – MTech, CLSPS
Les Cook – MTech, Chancellor
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Main & Engineering Plans

- **Offices**
  - Only two full time faculty on ENGR 1st floor, balance are grad students
  - SAP lab inherited existing space at north end of ENGR level 1, overall size of suite and spaces do not need to be so big
  - Goal for swing strategy is to only move program once, but more critical for lab program and less critical for office program
    - Prefer only one swing move for offices
  - Office hub strategy might not be as necessary given low numbers needed to move
  - Design team to send over office package to Layne for further review/markup of vacant offices and assignment of occupied offices to clarify the swing move impacts

- **Classrooms**
  - Correction to plan graphic: additional classroom on 1st floor of ENGR, south side (trapezoidal space)
  - Design team to include all teaching spaces in the classroom utilization to see if there are rooms in the range of 15-30 WRH that could serve as swing/scheduled space
  - Meeting rooms and conference rooms not accounted for in the classroom utilization studies
    - Determined that class scheduling takes priority and the use of classrooms for meetings can adjust and re-schedule in other available spaces
    - Meetings are scheduled on 25Live, separate from registrar
  - Design team to send over a classroom package to Layne for further review/markup of reasonable classroom swing scheduling strategies

- **Computer Labs**
  - 3rd floor of Main is dedicated to EE computer circuits
  - SE 308 computer classroom is used by (extensively) students to do work outside of scheduled class time, not an ideal lab to use for swing computer classroom scheduling
  - NRB 226 is a somewhat specialty lab, and less optimal for using for swing computer classroom space
  - MTech to go through computer labs and review which computer class/labs are open to students and being used outside of scheduled time
  - Campus computer access considerations
    - Desire for consolidation of campus computer labs and more central/accessible location(s) for student computing outside of classroom use while also accommodating specialty software that certain degree programs utilize
    - LCME programs have specialized software on computers that must remain accessible to students
    - Students remoting into computers in the lab should also be considered
    - Laptops could be checked out which would not require students to access a campus lab computer
    - Question of how many students have their own laptops, are able to use software on their personal laptops, and/or can remote in

- **Research Labs**
  - Main 004 and 005 are not being used currently, currently used for storage
  - Biology has labs in MAIN basement but are currently not being utilized
    - Chem/Bio lab 003 is not currently in use (includes 2 ductless fume hoods), will not require swing space, but will need a home after the renovation
    - Biology needs a walk-in cold room in a convenient location to empty the environmental chamber in room 002
  - Small trapezoidal research space adjacent to the north tunnel (room 011) is vacant
  - MAIN 008 has research equipment that should be in use, and will be set up once the tunnel work to the west is complete
  - Civil engineering is meant to use 005 but currently does not, should expect Civil will start to use the space for light research in the next 3 semesters prior to start of renovations

  - Electrical research spaces on level 3 will need to move to a swing or permanent home
    - Can temporarily lose some space, but need more room in the future
  - Open question still for post-renovation use of Main and where labs will go in swing condition or one permanent move
  - Accessibility of equipment and transferring (clean) materials to and from labs is a challenge for all research spaces, but especially in the basement of Main
  - Design team to provide plan graphics with room numbers and square footages and study alternative swing or permanent move strategies for the research spaces – highest programmatic priority

- **Main Research Lab Move Strategies**
  - ELC 101 is a main room with other labs surrounding it that are used (electron microscope)
  - Larger equipment is coming in this year, unclear where it is ending up
  - MG 101 is open, potential lab space
  - ELC 201 is a physics lab, which has a dedicated set-up
  - MG 203 is full of computers (teaching lab)
  - SE 209 can be used as a lab, but would need climate control for that space to be functional for research purposes
  - Entire 2nd floor of SE is labs except for 209
  - Need conversation about ELC 101 for feasibility with Jerry Downey (Metals & Material Engr) – MTech to follow up with Jerry
    - ELC 101 is a central/interior space that is wrapped by smaller program rooms
  - Main basement is appreciated as lab space
    - Showcase space for labs to boost visibility and attractiveness
  - Plan graphic correction: clarify use of asterick to denote tiered seating
  - SAP suite can move to a smaller place, can move more than once, but it needs to remain a dedicated space and cannot be serve dual-purpose as a campus open computer space
    - Can move more than once
  - Design team to circulate potential labs swing/permanent spaces to be annotated and checked for feasibility by MTech, otherwise plan may need to consider temporary trailers

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MEETING NOTES # 4

Date:	01/15/2025 (12:00pm-1:30pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Leadership - Master Plan Options
Date/Location:	01/15/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Dan Stevenson – Montana U. System OCHE
Jack Skinner – MTech, LCME Interim Dean
Ron Muffick – MTech, VC of Admin and Finance
Tim Elgren – MTech, Provost
Joe Cooper – MTech, Vice Provost Student Success
Michelle Hardy – MTech, CLSPS
Les Cook – MTech, Chancellor
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Introduction

- Clarification on publishing master plan alongside strategic plan for public distribution
- AMD to distribute out Master Plan section by section for review in the coming weeks
    - Amanda and Melissa to look over as well for marketing/messaging overview
- Desire for second round of community open house
- AMD to confirm HPER expansion status with Layne
- COT Lineman indoor training just received funding at Highlands College
- Move library renovation to near-term (3-5 yrs) bucket
- Research Institute would be industry-included, on state land
- Change Athletics Training “Bubble” to “Facility”
- Question if grad enrollment and general enrollment numbers are broken out into programs
    - LCME projections are based on program-specific projections
    - Currently no program-specific planning set up for future enrollment, this is a topic to consider going forward for the school
- Currently MTech has higher admissions rates than prevailing trends
- Highlands College is below capacity and the facility is an area for high growth

Master Plan Options

- PARKING
    - Campus connector road along trail – Butte-Silver Bow discussion focused on federal funding, right of way, shared custody, trail retention
    - Butte-Silver Bow has Uptown master planning document which could include connection to campus
    - New connector road could be beneficial for fire safety
    - For next community open house, propose to invite county representatives and MDOT staff for their input
- HOUSING
    - Cost per bed is priority for realistic planning – B.1 and B.2 are more feasible in this respect
    - Question of whether new housing should include mixed use – similar to LLC or other uses
    - B.1 and B.2 as contiguous to existing housing core is desirable
        - Beneficial for student life
    - Highlands College construction management class has considered Tiny House village on site for Option A
    - Hesitation about housing on Leonard Field
        - Leonard Field is highly used on weekends by students and community and in general over the course of the week
        - An alternate space for these activities needs to be available if Leonard Field is going to be developed
    - Options B.1 and B.2 would eliminate parking but B.1 would retain some parking
    - B.1 is desirable, B.2 has more hesitancy
        - Main concern is large reduction in parking
        - B.1 is more realistic for short term as well
    - B.1 can be shown in Master Plan as main option with other Housing options remaining in Master Plan as alternate future options
    - 100 beds feels doable for near term, 300 is more of a stretch
    - Option C is not necessary as an option
    - B.1 = A, B.2 = B, A = C, remove option C
- ACADEMIC
    - Wedge area north of Option F was consideration for NRRC location, currently unoccupied
        - High pedestrian traffic area
        - AMD to add option for this space for academic building (30,000 sf is same as NRRC)
    - Potential for belowground parking under Options E and F to relieve pressure from building over existing parking on those sites
        - This idea is well liked and works with existing grade
    - Desire for data-based space management techniques for future academic programming in E and/or F
    - Design team to show solid block color for renovations and Option E and future Option F is dashed in (along with new option from above)

- RESEARCH
  - Option B (north pad between Centennial Hall and residential properties)
    - Scale back to reduce overall footprint
    - Discussed use as a research event complex and hosting industry partners
    - Concern raised with perception of housing being so close to a research facility (lab exhaust stacks, etc)
    - Proposed north academic/research area is currently parking for student housing. Would need to weigh impact of more remote parking strategy if this development moved forward
  - Options C and D create stronger research hub in the long-term
    - Look at other research parks as for-profit wings to state institutions on separate land
    - This is distinct from academic-research hub or research event space
    - Private sector interface is separate from academic sector
  - 1 acre pad for new public-private partnership needs to be considered
  - Option A can follow dashed graphic from Academic
  - Desire to move Option B to new site north of Option A
  - Will circle back to Research at next leadership meeting

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THINK ONE

MEETING NOTES # 4

Date:	01/15/2025 (1:45pm-3:00pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Leadership - Main and Engineering
Date/Location:	01/15/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Dan Stevenson – Montana U. System OCHE
Jack Skinner – MTech, LCME Interim Dean
Ron Muffick – MTech, VC of Admin and Finance
Tim Elgren – MTech, Provost
Joe Cooper – MTech, Vice Provost Student Success
Michelle Hardy – MTech, CLSPS
Les Cook – MTech, Chancellor
Dan Trudnowski – LCME Electrical Engineering
Bryce Hill – LCME Electrical Engineering
Mary Maclaughlin– LCME Geological Engineering
Amy Kuenzi – CLSPS Biology
Katie Hailer – CLSPS Chemistry
Jon Wirth – ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Budget
- General consensus on non-phased project delivery
- Renovation value requires LEED Silver, this is non-negotiable
- University project manager – this is under consideration and needs to be discussed further
- Recent upgrades to lines between Main & Engineering which mean less upgrades needed during project

- Phased construction costs should include reduced FFE and moving costs, this will be discussed further
- GCCM delivery method is recommended and supported by the design team
- Bidding will occur around January 2026
- Romney Hall was used as a precedent at $300/sf then accounted for inflation
- Concern with foundation upgrades
- Some costs set aside for swing space and remodels, particular concern with funds stretching far enough to cover research labs
- Other large cost is hazardous material management, which came in higher than originally budgeted
- GCCM on board will help manage cost and ensure projects stay in budget

Design Strategies

- Justification for connecting the two buildings for sharing accessibility amenities and to consider all design possibilities
- Side entrance for ADA on the north side of Main Hall would likely become the main entrance over time because of proximity to central courtyard
    - This is what has happened to rear entrances on all other buildings in central campus
- STUDY A
    - Concern with no offices in Main
    - Because Main has concrete floors, question of whether research should go there for stable floor purposes
        - Cost is an issue with this when compared to classrooms
    - Concern with no offices due to lack of eyes on the hall/theft
        - Offices within shops/labs might help alleviate this
    - Desire to look more in depth at Electrical Engineering space needs to confirm if the program needs are met
        - AMD/ThinkOne to follow up with specific EE programming meeting
- STUDY B
    - Trying office hub space for grad students and adjuncts is compelling, faculty will potentially be harder to implement
- STUDY C
    - Adding offices to Main comment from Study A follows here
    - Apprehension about office swing space and permanent moves
    - Question of placing an office hub in Main to circumvent inefficient space proportions for traditional office spaces

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THINK ONE

MEETING NOTES # 4

Date:	01/15/2025 (3:00pm-4:00pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	CLSPS
Date/Location:	01/15/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES

Ron Muffick – MTech, VC of Admin and Finance
Michelle Hardy – MTech, CLSPS
Amy Kuenzi – CLSPS Biology
Katie Hailer – CLSPS Chemistry
Janet Coe – CLSPS Nursing
Hilary Risser – CLSPS Math
Dawn Atkinson – CLSPS Writing
Mike Masters – CLSPS Int. Arts & Sciences
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Research

- Walk in cooler is low concern, University will manage relocation or removal
- SAP Lab (Engr 108)
    - Adjacent offices not part of required program (Engr 102A, 102B and 102C)
    - Swing space can work down to 600 sf as long as permanent condition is programmed back to 800 sf
    - Potential to swing back and take over classroom in Main in the renovation
- Chem/Bio Lab (Main 003)
    - Does not need a swing location, but will need final location once renovations are complete

Offices

- Main Hall houses the following CLSPS staff: 7 faculty plus 5 others and 1 adjunct meeting space
- Desire to not spread out faculty, swing included
- CBB 204E is occupied, AMD to remove from swing options
- MUS 306 is taken but 307 is available for shared PO, AMD to update swing options
- MILL, SUB, LIB will need an added networked printer/copier/scanner
    - This will be accounted for in the budget for swing upgrades
- Private offices needed for writing faculty (academic integrity for one-on-one meeting with students) with computers
    - This could be accommodated with office hub strategy in providing a mix of open and closed officing environments
- Half of faculty have desktops, other half have laptops with port connections
    - Requires IT coordination, currently up to faculty member preference
- Space below stairs in MUS (Room 108) could be space for student office hub, currently unused
- Some offices are used for storage for other disciplines/activities, these pieces need to be accounted for or managed by the University

Production Room

- Production room needs a swing space for recording distance learning (Tim E has more information)
    - Can be treated as an office, but current use is primarily storage of equipment
    - Can go in library
        - MTech to confirm feasibility of swing move to Library

Classrooms

- Seat counts seem inaccurate, MTech to validate capacities
    - CBB 105 is concern in particular
- Hours of classes could conflict, labs are generally scheduled 2-5pm and all other classes are 9am-1pm
- HSB 008 is now an office or testing room for students with accommodations
    - Off the table as classroom unless replacement space is found
- No concerns with swings for classrooms <40
- Need to bring Registrar back into discussions to ensure feasibility of classroom scheduling
- Some classes are less than 40 or larger than 60 in Main >40 classrooms, this would take more fine tuning

Computer Labs

- Mill 208 seems like a possibility for Engr 204 computer lab swing
- MG 102 computer lab is also used as overflow for teaching when Engr 204 is filled
    - Used half for teaching and half for learning
- Need for open labs for students to use to work separate from teaching computer labs
- NRB 226 is not functioning properly and technology needs to be fixed, previously have had comments that repairs are costly
    - Students currently need to share or use their own devices due to 4 computers needing repair

Closing Discussion

- Library as swing space
    - Stacks relocation presents logistical and cost challenges
    - Conversion to office hub or other swing program will compete with long term vision for learning commons
    - Further discussions with Library Director needed

This represents Anderson Mason Dale's understanding of the major points of discussion of the conference. If you have any additions or corrections, please notify this office promptly.

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THINK ONE ARCHITECTS

MEETING NOTES # 4

Date:	01/15/2025 (4:00pm-5:00pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	LCME
Date/Location:	01/15/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Ron Muffick – MTech, VC of Admin and Finance
Mary Maclaughlin – LCME Civil & Geological Engineering
Raja Nagisetty – LCME Environmental Engineering
Chris Ross – LCME Mining
Rick LaDaulecer – LCME Mechanical
Dave Gilkey – LCME SHIH
Bryce Hsu – LCME EE
Jerry Downey – LCME M&ME
Jack Skinner – LCME Interim Dean
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

GENERAL
- Main 303 and Main 314 are specialized teaching labs, not typical computer labs

RESEARCH
- Main 005: Civil
  - Main 005 was unused and recently offered to Civil Engineering
  - Civil planning to move equipment in and start using the space this semester, equipment would not be difficult to move out for construction
  - Civil department is growing and is in need of additional space
  - ELC 316 could be used by Civil instead to eliminate the additional move

- Construction and Swing Phasing
  - Spring semester 2026 will be first offline semester for Main and Engr
  - Evaluating whether swing moves should happen in the Summer of 2025 to minimize moves occurring over Winter Break in inclement weather with a more limited window of time

- EE Research Program (Main Level 3)
  - Remove MG 102 Computer Lab as a swing option for EE, no-go
  - Swing Proposals from EE (Bryce)
    - Main 314 specialty teaching lab can swing to share with ELC 201 Physics Lab, using the back 1/3 of the room
      - Displacing Physics Lab is not viable
      - EE and Physics can share adjacent storage room ELC 201A
    - Main 303 EE specialty teaching lab can swing to MG 008 and share with current program
      - Specialized equipment must stay on benches
    - Balance of EE Research Space
      - Relocate EE research to MG 101 (816 sf) for swing?
        - Classroom space with low utilization (2.67 hrs/wk)
        - Suitable for research?
        - MTech to confirm feasibility of MG 101 swing move
      - Relocate EE research to MG 002 (520 sf) shaker table lab as shared research space?
        - MTech to confirm feasibility of MG 002 swing move
      - EE needs additional 1,000 sf with ventilation for research (if MG 002 can be counted on for swing as noted above)
        - To be vetted further, preferably in ELC
        - Mill 209 could potentially suit? But not a great fit for research program

- Main 008: Mass Spec lab
  - Ideally suited for swing to ELC 225 given the ventilation system
    - Prefer to keep with current programming in ELC 225 rather than moving in Mass Spec equipment
  - Alternatively, swing NRRC 310
    - Would need budget for furniture to purchase new equipment benches
    - NRRC 310 can also fit shaker table and potential other miscellaneous equipment from Main basement if needed and if upgrades are accommodated
      - MTech to confirm feasibility of swing move to NRRC 310

- Main 009: Nano Lab
  - NRB 127 is the preferred solution for swing space

OFFICES
- EE Officing
  - EE faculty count: 5 faculty, 1 emeritus, 1 affiliate
  - Majority of EE offices are on Main Hall 2nd floor (5), remaining are on 3rd floor (2), okay with reducing from 7 to 6 offices for swing
  - Swing Strategy

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THINK ONE ARCHITECTS

- Use MG 003 to house 3 faculty
- Use MG 004a and 004b to house 1 faculty each, current assignment of these offices is for emeritus faculty
- Use MG 004 to house 2 grad students
- Need 1 more faculty office in MG, ELC (most likely?) or NRRC
  - MG 005 has IT storage which could be converted to office
    - MTech to confirm feasibility of MG 005 conversion to office
  - (2) NRRC 3rd floor has two labs which can be changed to faculty offices (Rooms 311 and 312?)
    - MTech to confirm feasibility of NRRC lab conversion to faculty offices, confirm specific rooms with Bryce

- Civil Officing
  - Needs space for admin

- Hub Office Strategy
  - LCME is open to locating grad students in an office hub, alongside research associates, and adjuncts
  - Adjuncts are often offsite so office hub works well
  - Hub could potentially be in Mill game room or top floor of Mill
  - Hub could possibly hold ASMT offices if needed (not preferred)
    - Student fees paid for ASMT infrastructure in Mill, needs to be considered when other programs move into that space

Classroom / Computer Labs

- NRRC 217 and other lab spaces might not show up as class space but still used as class lab
- AMD to remove CBB 001 from computer lab swing, tiered room not desired for swing
- Previous proposed swing strategy by EE for Main 314 eliminate the swing proposal for this specialty computer lab
- Class scheduling has trended towards Fridays being off, this will most likely need to change to accommodate proposed classroom swing strategy
- ENGR 106 and 208 Classrooms to MG 201 Classroom won't work due to table sizes in MG 201
  - MG 201 capacity is truly only 9 students, even though the room sizes are comparable
  - AMD to find alternate solution for ENGR 106 and 208 classrooms

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MEETING NOTES # 4

Date:	01/16/2025 (10:00am-12:00pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Leadership - Wrap Up
Date/Location:	01/16/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES

Dan Stevenson – Montana U. System OCHE
Layne Sessions – MTech, Director of Facilities
Nick Franz – Montana A&E
Jack Skinner – MTech, LCME Interim Dean
Ron Muffick – MTech, VC of Admin and Finance
Tim Elgren – MTech, Provost
Joe Cooper – MTech, Vice Provost Student Success
Michelle Hardy – MTech, CLSPS
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Master Plan

- HOUSING
  - Option A.1
    - Works from a parking perspective, only displacing 70 parking spaces, which would be backfilled by the new west surface lot
    - A.1 (126+ beds) is confirmed as first priority but still need another site to reach 300 beds by 2034
  - Option B
    - Likely a consideration for future housing beyond the 10-year planning horizon
    - Drainage around Option B is a minor concern but not insurmountable
  - Discussed the proposed housing redevelopment plans for the YMCA

        - Does not have any relation/influence on the university's housing needs or future planning

- ACADEMIC
    - Options E and F could include podium parking strategy, which would be +/- 200 parking spaces in play
        - Like the idea of covered parking on campus
    - Option E (Academic Event Center)
        - Includes 500+ capacity event hall and large active learning classrooms
        - Public facing building, attractive to donors

- RESEARCH
    - Option C (west addition to ELC) should be switched to A
    - Option A (adjacent to Centennial Hall), has resistance but could still be in play
    - AMD to revise the numbering: C becomes A, B remains B, A is removed
    - Ordering of A and B is dependent on the scale of the project and partnering opportunities
    - New space west of Option C, north of NRB could be alternate option
        - Variety of potential sites in this area
        - Useful to show these options in MP as study of various options for future research/academic building as future opportunities arise
    - Option E becomes +10 years

- ATHLETICS
    - Execution of Option C requires Option B to be completed first
        - Option C above structured parking depends on funding but is significantly more optimistic

- PUBLIC SPACES
    - Budgeting for pedestrian promenade
        - Dependent on the street section, propose block by block redevelopment as funds come available or as project(s) adjacent to Park St are renovated or developed
        - Design team will look at data from MSU's recent work on Grant St
    - AMD will share out Larimer St precedent in Denver as example of maintainable scored colored concrete, with traffic calming planters and curbless transition
    - Concern with retaining access to the center of campus by car especially in inclement weather
        - Added southern campus access road along the BA+P Trail would help alleviate concerns with reducing vehicular traffic along Park

- WORKING COMPREHENSIVE PLAN
    - Question of growth being too aggressive
    - Timeline feels more manageable at 10+ years
    - Athletics and other projects have a bearing on parking
    - West Research campus
        - First step is designating space and permission to use it before raising money and building it out
    - MP Priorities
        - Clear vision of DNA and overall future of campus

            - When opportunities arise, MP is used for orientation of goals for campus
        - Some logic to being restrained in what is shown to not dilute overall vision
        - Need to identify highest priorities within MP to create clear campaign of projects and sequential goals
        - Desire to remove chronological and instead let financial opportunity and programmatic growth lead the master plan
            - Look at triggers per category, what shows a need and let that define the priorities
            - AMD to prepare a summary of potential projects with scale, cost, time frame, and trigger(s) to help clarify vision without overwhelming
            - Need to show impending need for priority projects, rather than chronological "predictions"
    - Foundation and governor's office are pushing maintenance of existing projects rather than new growth, need to acknowledge this as a priority in addition to the facility growth
        - Include re-investment in existing buildings as integral part of Master Plan
    - Research institute to west should be more generic rather than defined for a specific program
        - Follows with multipurpose, flexible projects
    - Priority should be to take care of students
    - New faculty and transfers may be deterred by housing expense and insufficient support for campus life
        - Research institutions should make it easy for visiting scholars to be drawn to the school
    - Imperatives vs aspirations
        - Currently parking and housing are the campus priorities
        - Need to communicate aspirations before getting to them in a compelling way to industry partners, donors, etc.
        - End goal is to be a responsive university; to take advantage of opportunities as they arise and communicate goals with clear intentions for the overall campus and for each opportunity
    - New square footage needs strong case for building which Master Plan narrative will provide based on data
    - Need to be able to justify new (academic) projects, Master Plan analysis and research (class utilization) must support this narrative
    - Leave athletics and all categories on graphics to see which parcel has an intent to keep comprehensive vision functional
    - Priority term buckets can remain to illustrate which triggers have already been pulled and current priority buckets
- Designated space for research field can include new research development opportunity (1 acre)

Main & Engineering

- SWING SPACE RENOVATIONS AND SCHEDULING
    - Permanent solution should not include individual grad student offices, should be housed in a grad hub or other high-density strategy long-term
    - Next Steps once Swing Locations are locked in: deep dive on specifics of swing strategy and needed renovations for moves
    - Swing will need to occur this summer (2025) for least disruption to academic year

- GCCM is not on board yet so will need alternate solution for swing construction
  - $370,000 currently allocated for FFE and moving
- Highest priority is getting registrar involved for class relocation
- A&E may have jurisdiction over space moves, need to verify
  - Most likely MTech will oversee these
  - MTech Facilities cannot cover moving themselves because not enough resources
  - Entire move should be managed by a separate moving company
  - Additional questions of IT coordination with moving company
- By January 2026, buildings should be completely emptied
- Need to confirm if enough storage on campus or if unutilized classrooms in Highlands College can be used
  - Alternatively Conex's as well but limited space there
- Can remove old furniture but need to know if there is budget to replace furniture for move back
  - AMD/ThinkOne to investigate
- FFE is last priority for paying from state
- MU system A&E is looking at GCCMs currently, scheduling and cost can come when this progresses further
- MU system A&E can investigate further into predicted FFE costs

- DESIGN STUDIES
  - AMD/ThinkOne to work on internal physical model studies of options for connector
  - Main and Engr were approved as two separate projects, no legislative justification for a connector but initial thought is not currently justified
    - If strong case can be made for significant benefits of a connector then it might be entertained
  - Question if there has been any study for connecting both buildings via extension of existing roof (i.e. extending Engineering Hall roof to meet Main Hall facade)
    - Historic preservation intent is in conflict with this approach and not a viable option, new construction should be uniquely distinct from historic character and materiality

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THINK ONE ARCHITECTS

MEETING NOTES # 5

Date:	02/19/2025 (1:00pm-2:30pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Leadership - Master Plan & Swing Space
Date/Location:	02/19/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES

Jack Skinner – MTech, LCME Interim Dean
Ron Muffick – MTech, VC of Admin and Finance
Tim Elgren – MTech, Provost
Michelle Hardy – MTech, CLSPS
Les Cook – MTech, Chancellor
Layne Sessions – MTech, Facilities Director
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Opening Discussion

- House Bill 331 (sprinklered buildings) may have an implication for the campus
  - More detail regarding passage, timing and funding will need to be identified before determining if there is any impact to the master plan priorities
- MTech request for a campus-specific open house for students and faculty
  - 3pm or lunch meeting; faculty are more available after 3pm
  - Zoom format
  - Coordinate with MTech to identify preferred date/time

Master Plan

- Driving Principles
  - 5th bullet, remove the term "inclusivity"

- Master Plan Priorities
  - Eliminate "Sponsorship" category to support Foundation goals
- Reed House
  - Remove language suggesting potential for office swing from Main and Engineering Hall
    - Given timing of swing space needs, would put undo pressure on executing needed renovations
  - Reed House future use needs further consideration
    - Marketing and Communications are part of the Admissions Office, and perhaps should be collocated
    - The Master Plan can list opportunities for the building if MTech is not ready to commit to a given program or use
      - MTech to confirm the range of opportunities
    - Current front and rear entries are not accessible; the back porch could most readily be re-developed to provide ADA ramp
- COT Lineman Indoor Training Facility
  - MTech has wording for Lineman facility, will send to AMD
- Courtyard Redevelopment (NAC)
  - MTech okay with including NAC/SCJ renders from the 2023 study to suggest potential redevelopment
  - MTech okay with language for existing trees
- SUB Renovation
  - MTEch okay including NAC plans and renders for SUB renovation
- Research Innovation Campus (western expansion)
  - Energy, Environment and Innovation Field Campus (EEIFC)
    - MTech to hold further internal discussions with Robin to determine the appropriate write-up for the Innovation Campus in the Master Plan (i.e. retain EEIFC as standalone projects, or combined program/vision)
    - Robin's project is fully developed but not shared beyond their specific projects
  - The current Master Plan is casting the Research Innovation Campus as a more general concept, other ideas for that area may be too specifically limiting
  - Another Energy Center/Center of Excellence (Bob Morris), conceptual project that has same spot as Robyn
- Research Institute (on-campus expansion)
  - MTech is short approximately 30,000 sf of research space compared to peers
  - Need dedicated space for grad students to have access to equipment
    - Currently students find space wherever they can
    - Spatial need for academic research space
  - University priority for showcasing innovative tech and research (science on display), aligns with Research Institute vision
  - High-end equipment and research should be shared space, synergy with occupied space and research for grad students, industry space, can be combined into whatever space it needs to be (JS)
  - Need for purpose built research space for specific uses
- Park Street Improvements
  - Intent is phase the project, starting at statue and extending west for ¼ mile, terminating at Mining Museum Road

Swing Space Strategies

- Library
  - Conference spaces in Library are under consideration as office swing
    - Layne included these spaces in his walk-through list as possible office swing conversions
  - Library is one of the least used spaces on campus
    - Could be preferred option for accommodating office swing
    - Anecdotally less used than the Mill game room
  - On-site or site adjacent (Highlands College) storage/archive facility for books must be considered if larger scale office swing is to be considered
- ENGR 205 CAI Faculty Training Room
  - Assigned to Center for Academic Innovation (CAI), overseen by Kat McCormick
  - Computer station setups are used for training faculty
  - AMD/T1 to add this to swing space list
  - MTech to provide direction for CAI swing space/final location
- Classroom Swing
  - Classroom/Class Lab swing scheduling is making headway
    - Ron, Michelle, Layne met with Heather and Tyler recently
    - Scheduled follow up meeting with AMD/T1 on 3/12
  - The schedule for Fall 2025 goes on live March 14, with registration starting on March 31
- IT Swing Coordination
  - Need to discuss swing spaces with IT staff
  - IT staff have been invited to later Workshop 05 sessions, see CLSPS and LCME meeting notes
- Office Swing Strategies
  - AMD/T1 to remove Reed House from office conversion option
  - ROTC can potentially move to enrollment services
  - Office moves ideally happen before January, faculty would rather move in over the Summer if office needs no modifications
  - MUS 307 is empty, MUS 306 is about to be occupied by 5
- Mill Hub Test Fit
  - Intent is to house grad students and adjuncts
  - Faculty prefer that full-time dedicated admin have their own office, can be shared but not assigned to the Hub
  - AMD/T1 to look at increasing the density of seating and providing more individual office spaces as requested by MTech
    - MTech okay with smaller, more efficient offices (i.e. 80sf)
  - Game Room
    - Question of storage for game room furnishings and activities
    - Discussed future build-out of new game room in the SUB
      - Questioned whether game room program was necessary to continue as a student amenity
    - Current use includes informal meeting space for students and teachers which may need consideration for replacing elsewhere on campus
  - High priority concern for Hub viability is scheduling software for rooms
    - AMD to share out software used at other higher ed Hub spaces

- Swing Moves
  - All granular swing decisions need to be made by MTech by end of March
  - Any swing space modifications for classroom and class labs need to be complete by August 1st to not conflict with registrar room schedules
  - Layne to reach out to construction companies to start putting together budget and scheduling estimates
  - Lab swing space renovations are critical to be completed by end of Summer
  - Office swings are easier moves, but also preferred to be completed over summer as well
  - Hub build-out could extend through the Fall, with occupancy by December 2025
  - Students and departments can move smaller things on their own, but the main move should be coordinated with facilities and move company

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THINK ONE

MEETING NOTES # 5

Date:	02/19/2025 (2:30pm-3:30pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	CLSPS
Date/Location:	02/19/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES
Jennifer Simon – MTech, IT/CIO Director
Eric Luther – MTech, Computer Support Services Manager
Janet Coe - MTech, Nursing
Dawn Atkinson – CLSPS Writing
Mike Masters – CLSPS Int. Arts & Sciences
Amy Kuenzi – CLSPS Biology
Katie Hailer – CLSPS Chemistry
Heather Skocilich – MTech, Registrar
Tyler Regan – MTech, Registrar's office
Michelle Hardy – MTech, CLSPS
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

IAS
- Program needs confirmed as documented in the presentation
  - 7 faculty offices
  - 1 storage room (80sf is sufficient)
- Storage room should be adjacent to the offices
- Existing adjunct/faculty lounge (Engr 108A) used for equipment, supplies, break room amenities
- No departmental growth projected
- Faculty are concerned with books and moving to swing and back
- Shared administrative assistant with IAS, Writing Center and EE

  - Admin current housed in Main 104
  - If these departments are split up for swing or final, a separate Admin may be required

Chem/Bio

- Equipment that was in Main 003 lab can go into storage
- Departments do not need anything for that space during swing, currently used as storage
- Discussed potential for offices in CBB 204 to be converted into lab
  - Currently underutilized as offices (2/4 offices usually unoccupied)
  - Approx 650sf would not be sufficient for a 24-seat teaching lab, but could accommodate a faculty research lab
- If moving faculty into CBB 204 for swing or permanently, would need to find a new preferred location for the lab

SAP Lab

- Would like the SAP Lab to collocate with the balance of the Business department housed in ELC
- Do not have a room identified, would require some further domino moves to make room
- Later discussed in the Leadership Wrap Up on 2/20, that the Business department in it's entirety should be test fit for moving to Main Hall as part of the renovation

Writing Center

- Program needs confirmed as documented in the presentation
  - 5 faculty offices
  - 1 adjunct office
  - 1 storage room (80sf is sufficient)
- No departmental growth projected
- Currently use a storage closet in one of the offices
- Do not have a breakroom or access to a conference room, currently book a classroom when they have meetings
  - Shared conference room(s) and break room(s) will be accounted for in the renovations where offices are housed

General Notes

- Prefer that moves happen over summer, as opposed to winter break
- Swing decisions need to be finalized by end of March
- Move logistics
  - Moving company will move all office furnishings and all labeled boxes
- Shared break and conference rooms (non-dedicated) are acceptable across departments
- IT requested dedicated IT rooms that are accessible (not through offices or classrooms, et c)
- Concern with access to printers/copiers
- IT is currently at capacity for connections in ELC, already overwhelmed so anyone additional will require an increase to 10GB

Swing Space Options

- EE relocate to MG 003
  - Room is currently used by IT for computer support storage
  - IT would need to be assigned a new storage space if EE offices move to this location

  - MTech to review and confirm final arrangement
- Grad/Adjunct Office Hub
  - Majority of grad students are on desktops, money in department budgets for purchasing laptops is a concern
  - Desktop computers that some grad students use are dedicated to them and their research, sometimes need to be running programs overnight
    - Open computer lab could be solution, if way to secure computers that are running for long periods of time
    - Research computing should occur in research space
  - Research space is not being replaced by Hub; research should still occur in labs while grad meetings/office work would take place in the Hub
  - Concern with grad students not having dedicated space when they are on campus
  - New grad students coming in will have less of a problem with this
  - Intent to relocate the game room in lower level of SUB as part of bookstore consolidation

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THINK ONE ARCHITECTS

MEETING NOTES # 5

Date: 02/19/2025 (3:30pm-4:30pm)
Project #: 24-033
Project: Montana Technological University - Master Plan

Subject: LCME
Date/Location: 02/19/2025 Montana Tech Campus

Present: see below

Author: Mia Torrence
Distribution: file, attendees

ATTENDEES
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Eric Luther – MTech, Computer Support Services Manager
Jack Skinner – MTech, LCME Interim Dean
Mary Maclaughlin – MTech, Civil & Geological Engineering
Chris Ross – MTech, Mining
Rick LaDouceur – MTech, Mechanical
Jerry Downey – MTech, M&ME
Todd Hoffman – MTech, Petroleum Engineering
Kumar Ganesan – MTech, Environmental Engineering
Glenn Shaw – MTech, Geological Engineering
Dan Trudnowski – MTech, Electrical Engineering
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Electrical Engineering
- Office program needs confirmed as documented in the presentation
  - 5 tenure track
  - 1 emeritus
  - 1 research (affiliate)
  - 2 grad students
- No departmental growth projected
- Teaching lab in Main 314 has 17 stations with 2 students per station (34 total student stations)
- Teaching lab Main 303 is the Signal Systems Lab and has 20 student stations
- Do not anticipate growth for teaching labs
- Research Labs
  - 2 rooms are currently used for senior design projects (not technically research labs)
    - Senior Design Projects can be one room, don't need to be separate
  - Need 2 research rooms of equal size
  - AMD to review equipment spreadsheets from Jack to confirm which rooms are currently used for senior design projects and which are used for research
- Main 314 has a large stock room in the back EE uses for lab support
  - Meets needs currently, must be able to pull components in and out easily
  - This aligns with the 400sf of lab support space noted in the program

Mechanical Engineering
- Majority of the ME department is in SE or NRRC
- ME has 3 research associates housed in Engineering Hall
  - Located in Spreadsheet 2 from Jack

Civil Engineering and Remaining
- CE Engineers Without Borders student club room in assigned to Main 001B
- Main 010 is now vacant
- Curtis Link, Geophysics, should move back to ELC with rest of geophysics department

Emeritus
- Need to get granular with which emeritus will use offices, and which could share an office or otherwise
- MTech to review and identify requirements for each Emeritus faculty

General Notes
- David Berrick, DOWL
  - DOWL is a consulting company
  - David has a desktop, PhD student
- ELC has Business in it now, long term solution would have better departmental grouping with rest of CLSPS
- EE, ME, and Metallurgy should ideally be collocated
- Program options for Engr and Main
  - Extensive rearranging options
    - Move ME to Main and EE to Engr
      - Will allow growth for both programs
      - ME currently doesn't have room for growth because they are too spread out and SE is completely full
      - Moving ME out of S&E would allow for growth in S&E for Construction Management
    - Basement for research (open ended option)
  - Test fit Business department move to Main Hall, vacating ELC
    - Would allow LCME backfill of ELC space
    - Moving labs into ELC would create smaller labs given physical layout/structure of ELC
- Concern with windows in Main, for offices and classrooms especially

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- 3rd floor has limited windows set low to the ground around the perimeter, not ideal for office or classroom use

- LCME Swing
  - EE Senior Design Lab
    - Not good fit for sharing space with shaker table lab in MG
    - Could go to NRRC power lab
    - MTech to work on these swings
  - ME Instrument lab and ME Nanotech lab reconfirmed swing locations are good
  - MG 003 (IT storage) is no go or need to switch space if used as swing
    - Ideally need outdoor access for loading
    - Need easy access for computer switch outs
    - Other proposed MG swing spaces for EE from Bryce are conflicting with current use/space constraints, this needs further review by MTech
  - Next step is coordinating IT/Elec for swing space and walking spaces with IT
    - LCME has completed and returned equipment lists for EE and ME labs for swing on 2/19

Office Hub

- Currently have similar set up in Rick LaDouceur's lab, works fantastically
- Similar space in LLC (SSC 3rd floor) is highly used (undergrads mostly)
- Currently no brainstorming space for grad students, this fills that niche
- Example at Northwestern that is like this
- Concern with ratio of enclosed office space to open area
- Desire to increase efficiency of space

This represents Anderson Mason Dale's understanding of the major points of discussion of the conference. If you have any additions or corrections, please notify this office promptly.

MEETING NOTES # 5

Date:	02/20/2025 (10:00am-12:00pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Leadership Wrap Up- Main & Engineering
Date/Location:	02/20/2025 Montana Tech Campus
Present:	see below
Author:	Mia Torrence
Distribution:	file, attendees

ATTENDEES

Jack Skinner – MTech, LCME Interim Dean
Ron Muffick – MTech, VC of Admin and Finance
Tim Elgren – MTech, Provost
Michelle Hardy – MTech, CLSPS
Les Cook – MTech, Chancellor
Layne Sessions – MTech, Facilities Director
Joe Cooper – MTech, Vice Provost for Student Success & Dean of Students
Jon Wirth - ThinkOne
Bill Hanson – ThinkOne
Cynthia Ottenbrite – AMD
David Pfeifer – AMD
Mia Torrence - AMD

DISCUSSION

Mill Swing Space

- ASMT "Computer Center", Mill 208
  - ASMT cubicles are located in Mill 208, used jointly as their office and meeting room
  - MTech to look into swing move for ASMT to the Alumni Lounge
  - MTech to emphasize the computer lab swing from Engr 204 to ASMT space as a temporary solution for Main/Engr renovation duration
- Oredigger Media "Call Center", Mill 207
  - Underutilized space, assigned to Oredigger Media and other groups
  - Need a permanent home for Oredigger Media post-swing
  - Could use Call Center as office swing space
    - MTech to evaluate swing for Writing or IAS offices
      - Both Writing and IAS will likely require private offices
  - MTech to evaluate Susie (ROTC) and/or Kat (CAI) in Call Center

- Operational costs in the Mill are covered by student fees
  - University to review the arrangement and confirm swings can be authorized and accommodated through a temporary lease

Office Hub Review

- Veteran's Lounge "Technocrat", Mill 114a
  - To remain in the current space with connectivity to the proposed Hub
  - Will require separate entrance, especially after-hours and for duration of the Hub renovation work
    - Exterior door is currently egress only and would need to be replaced with new exterior entry
  - Long term – MTech should look for a new permanent home for Veteran's Lounge given current space constraints/inadequacies
- Adjunct professors fit in the hub well, grad students might be more varied
- CE and ME departments have inadequate faculty office spaces currently
  - Some offices in SE should go to faculty as opposed to other assignments
    - MTech to confirm if there are students or adjuncts in S&E that could be re-assigned to the Hub
- Currently all Chem/Bio grad students are in one large room with assigned cubicles
  - CLSPS perspective that grad students need a space to call their own
- Hub should be seen as a pilot project for volunteers to sign up for, relinquishing their assigned office space on campus to try a new way of officing/collaborating
- Departmental funding for laptops is a concern
- Support for the idea overall
- Inclination to densify the space
- Glazed partition for conference space preferred but open area is fine
- Acoustic and visibility/transparency considerations
  - Frosted glass is preferred at office/conference rooms
- Swing space construction to take place through Fall 2025, with occupancy by December
- Question of implementing this Hub strategy in the library in lieu of the Mill game room
  - MTech to review internally and provide feedback/direction for design team

Main & Engineering

- Budget
  - Design team would like to discuss different budget models with MB once his contract is in place
- Study B.2
  - Generally like the flow the connector creates between the two buildings
  - First floor doesn't cut off access between courtyard and Montrose, just re-routes through the new connector, which other examples on campus do as well
- Shared Program
  - Need to factor in single occupancy family restroom for each building
  - Need to accommodate break rooms and conference rooms if building will house faculty offices, and shared/common wellness/mother's room
  - Red spaces indicated on the plans at this level of programming are generically identified as collaboration areas, allocated for student study, student lounge, break rooms or conference rooms
- Programming
  - Design team to further refined EE research spaces in the Engr plans based on latest program information received in the LCME breakout

  - Design team to study option for Business department relocation to Main to provide backfill space in the ELC for LCME
    - Business department program includes 6 or 7 offices, plus the SAP lab
      - MTech to confirm counts
  - Main Hall renovation is an opportunity for modernized classrooms, this should be the priority
    - Noted caveat that most/all of the renovated classrooms will not, by code, be able to exceed 49 seats without providing two separate classroom entrances
    - Currently have 13 classrooms that hold 50+ students across campus, just not very efficiently scheduled and hard to make the scheduling of those spaces more efficient
    - The only space in Main, at present, that could accommodate 50+ seat classroom is in the basement
    - 3rd floor has more flexibility for larger classrooms given wood interior framing
      - Design team to study accommodating larger classrooms on the 3rd floor
  - Design team to complete test fit of Business and IAS in Main
    - Writing Center would permanently swing to the Library
      - MTech to confirm feasibility of Writing Center move to the Library
  - Design team to complete test fit of ME in Main
    - 8 faculty with 12-13 adjuncts
    - Up to 15 offices
    - Mech labs are already across campus, no plans for consolidating so would just need offices
    - MTech to determine where IAS would need to permanently relocate in this scenario
  - Students and student serving spaces should be the focus, while accommodating office needs
  - Main Hall is a chance for showcase academic space
  - Every discipline should teach there, not department specific
  - Writing Center could move to library, Business could relocate to Main, and ELC could be renovated/backfilled with LCME program
- Library to Learning Commons
  - Transition could happen in phases, with Phase 1 freeing up library space for permanent swing of the Writing Center
  - Could be a catalyst project to further the vision and momentum for evolving the space into a modern Learning Commons
  - Design team to look at Hamilton College Writing Center as precedent
- General
  - Storage spaces in basement of Main across from stairs has surface cracking in structural walls
    - Design team to re-review with structural consultant
  - Existing steam lines are routed in the basement crawl spaces
    - Lines should be re-routed if the wood floors were removed and replaced with concrete slab

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MEETING NOTES # 5

Date:	02/19/2025 (5:30pm-7:30pm)
Project #:	24-033
Project:	Montana Technological University - Master Plan
Subject:	Community Open House - Master Plan
Date/Location:	02/19/2025 Montana Tech Campus
Present:	see below
Author:	N/A
Distribution:	file, attendees

Online Survey Feedback

- I grew up in Butte and am a graduate of Montana Tech and also live in the neighborhood around the university. The presenters did a good job at the community meeting on February 19. Thank you! Comments: I am in favor of the proposed access road from Park Street to the current S shaped parking lot. I also would support the loss of some of the ground around Leonard Field for additional parking. I hope any plan preserves most of the trees in the little wooded area in between Leonard Field and the S shaped parking lot.
- Leonard Field may be historical but it is time to move on...PROGRESS!...this will make a fantastic Softball Field and extra parking. Butte would support softball and did 10 years ago. It could house Leonard Dome.

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