



2019

UNIVERSITY OF MINNESOTA St. Paul Campus Strategic Facilities Plan



UMN Campus in Spring

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Aerial View of Campus

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The University of Minnesota is built within the traditional homelands of the Dakota people.

Source: Office of Equity and Diversity, Professor Darlene St. Clair



Aerial View of Fields on Campus

1: Executive Summary

Vision

The St. Paul campus will be a visible and visionary link between the University's land grant mission, the community, the state of Minnesota and the world.*

The St. Paul campus will serve faculty, staff, graduate and undergraduate students, private partners, those needing animal medical care, and other visitors with a personal or professional affiliation to the St. Paul campus. The St. Paul campus serves as the home to a diverse community of students, scholars, practitioners, and the general public interested in all aspects of the environment and life sciences, including the personal, economic, social and scientific.

*Source: St. Paul Strategic Facilities Plan Vision Statement

The St. Paul campus evokes wonder and embraces sustainable growth. Spaces like the Raptor Center and the Planetarium dazzle the mind, while only a few yards away agriculture scientists and researchers devise solutions for feeding our planet. And yet, when you really step back and take in the whole campus, you see that this near-palpable experience of wonder and growth is mixed with a sense of the profoundly familiar and relatable.

There's a sense of forward momentum here; the people that frequent this campus bring with them profound curiosity, big-picture ideas, and an appetite to learn and innovate. The momentum comes not only from the collection of academic pursuits but also from the physical motion of runners, dog walkers, lifelong learners and cyclists that populate the paths and sidewalks. There's a pervasive sense of wellness here, evident in the overarching ecosystem of the campus.

The campus is a hub of activity and a constant exchange of ideas that happens around the clock, from the early morning hours in a research lab into the evening at the bustling conference center. It's a confluence of voices that range from students to local residents, from industry partners to researchers. The confluence extends beyond the limits of the campus to the state at large.

Everywhere you look, you notice something that intrigues and energizes. There are open lawns, thriving fields of crops, native plants and flowers, and towering trees. The buildings themselves are designed, constructed and operated as sustainable assets, reflecting leading practices in the industry. However, the modern facades do not intimidate. Rather, they seem to invite campus visitors inside to find out more, to ask a question, to get involved. This extended invitation is for all members of the community to partner with us as we grapple with the social, economic and environmental challenges within our communities. This is the promise and potential of the St. Paul campus.

Purpose of the St. Paul Campus Strategic Facilities Plan

The strategic facilities plan is a framework for future growth and change. It will be adapted over time in response to strategic decisions and the mission-driven needs of the University. The plan is intended to accomplish the following:

- Support academic functions and sustain the financial health of the University of Minnesota
- Identify near- and long-term land use and required campus support facilities.
- Guide future capital investment decision-making, with the building blocks that can and will adapt to future academic research planning.
- Define development guidelines to influence function, design of future campus construction projects, transportation, and other infrastructure needs.
- Demonstrate to partners and neighbors the University's intent to influence an orderly evolution of the campus' character related to the use of the land and facilities
- Inform where the capus is best suited to grow or contract, in repsonse to future program changes.

At a Glance

- Nearly 1 in 5 Twin Cities campus undergraduate students attend class in St. Paul each semester.
- More than 4,000 FYE undergraduate, graduate, professional and non-degree students are enrolled at St. Paul.

- The campus encompasses 700 acres of land.
- The campus contains 4 million square feet of buildings.
- 3,000 people are on campus each day.

Key Ideas

Growth

- The overall population of the St. Paul campus of undergraduate and graduate students will remain approximately the same. While enrollment across colleges is anticipated to increase marginally through 2023, no significantly new population is anticipated on either the St. Paul or Minneapolis locations of the Twin Cities campus.
- There is potential for the St. Paul campus to accommodate increased activity. The campus can accommodate modest increases, no more than five percent of current population based on capacity markers (underutilization by schedule and seat count) for classroom, teaching lab, office, and some specialized spaces.

Facilities Needs and Efficiencies

- St. Paul has some of the worst building condition rankings in the University of Minnesota system. Reinvestment should target improved facilities to support the mission. There is little rationale to support net new growth.

Research-protected Land

- The extent and utilization of research lands is right-sized and an invaluable resource to the mission of the St. Paul campus.

Opportunities for Change

Campus Core

- St. Paul Student Center
- Buford Avenue Streetscape
- Continuing Education and Conference Center
- The Lawn and Outreach Facilities

Upper Campus

- Academic Spine
- Research Facility Renovation and New Construction

Lower Campus

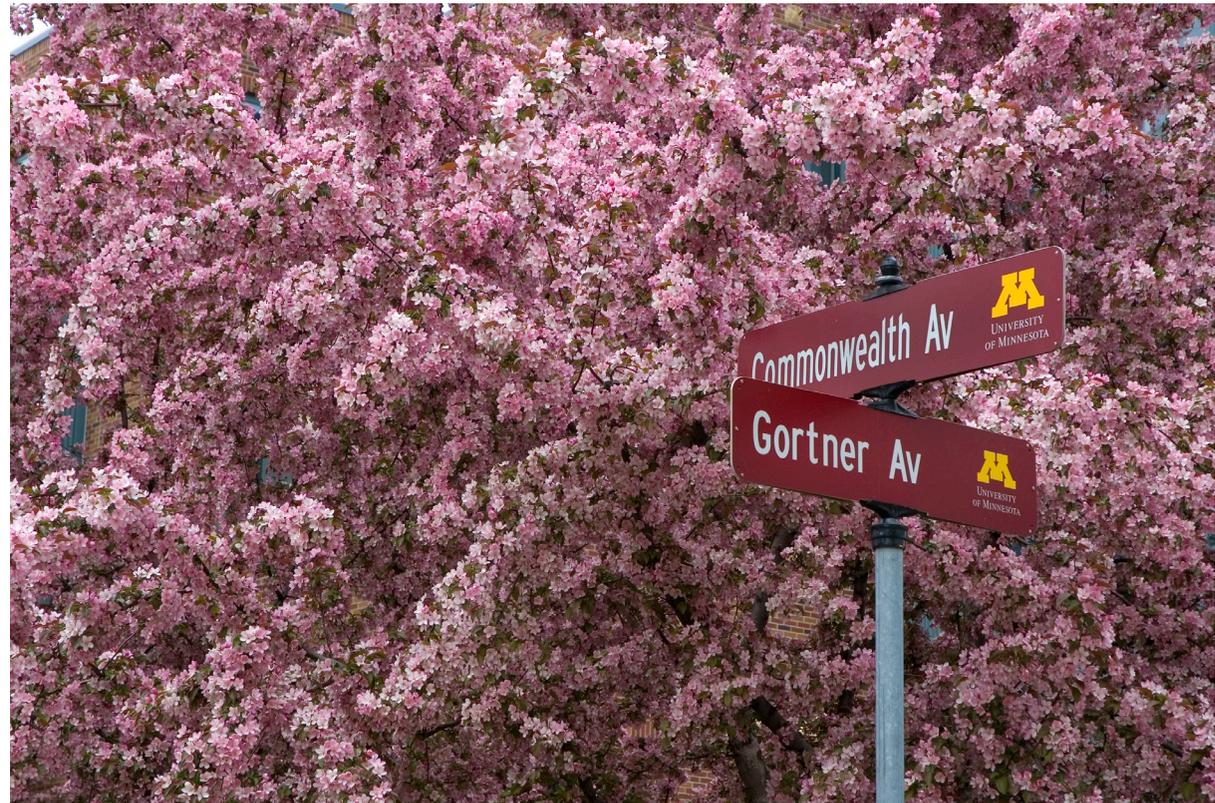
- Academic Spine
- Veterinary Medicine Renewal

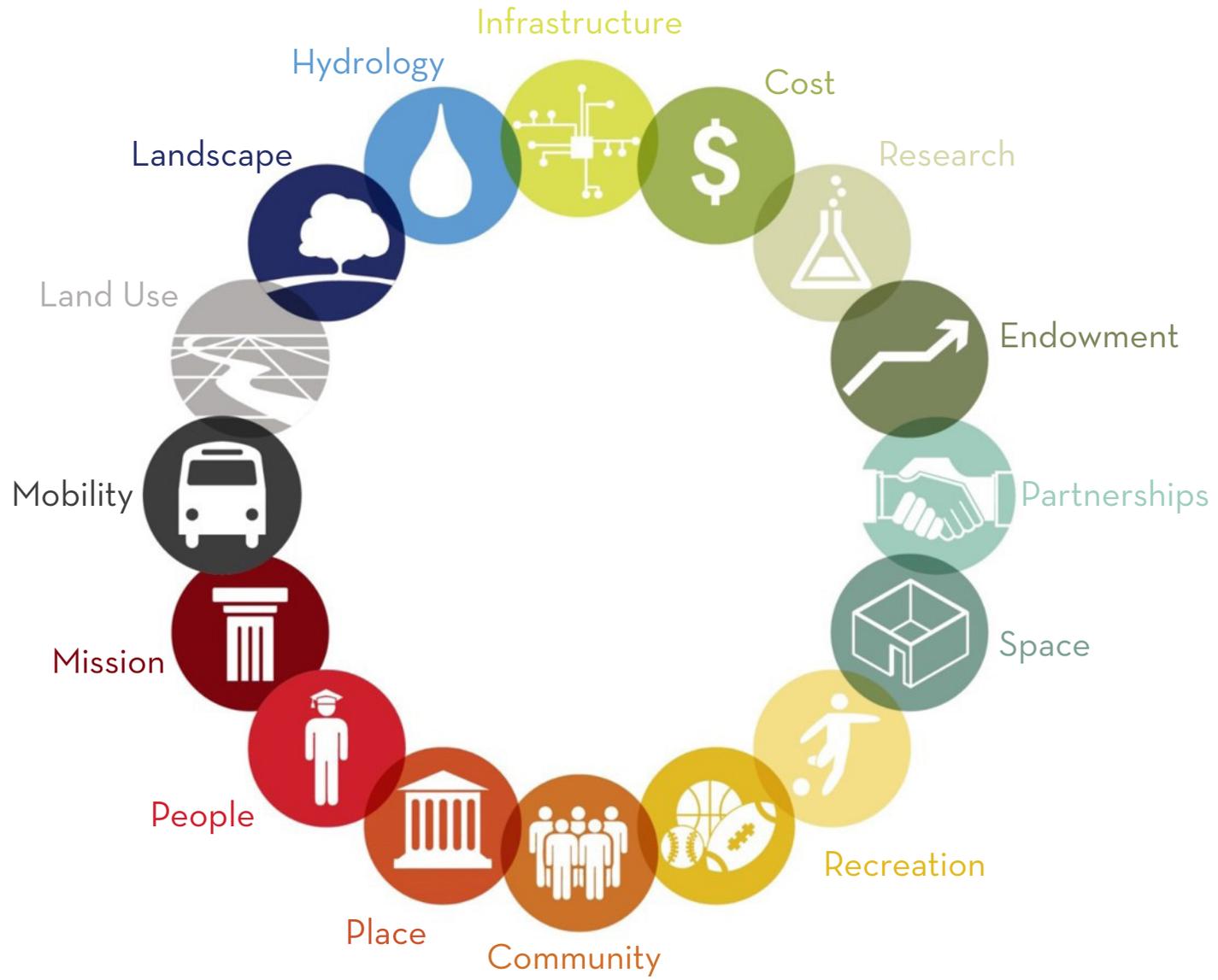
Northeast District

- Production and Processing Facilities
- Crop-based Ornamental Landscapes
- Parking Facility

South Campus

- Affordable Housing for Students w Families
- Other Mixed-use Development
- Parking Facilities





2: Overview

Vision

The vision for the campus defines what it should be as succinctly as possible.

The St. Paul campus will be a visible and visionary link between the University's land grant mission, the community, the state of Minnesota, and the world. It will proudly demonstrate the sustainable intersections of urban and rural environments, natural ecosystems and technology, and applied knowledge and academic discovery in a culture where all individuals are valued, respected, provided an opportunity to flourish, and unobstructed in their pursuit of excellence.



Field School

Mission / Themes

The mission statement addresses the question of why we exist. It is an action-oriented formulation of the function of the campus, and clarifies its reason for existence.

The St. Paul campus is a hub between the University and the world. It acts as a knowledge resource at the porous boundaries between academic disciplines and the community, with specific focus on all stages of research and discovery, teaching and learning, and outreach and public service in the areas of food, agriculture, environment, human development and service professions across multiple disciplines in their pursuit of excellence.

Distinctive Focus Area

St. Paul will be a campus that works towards the challenge of feeding a growing global population of 10 billion people a safe and nutritious diet while conserving and enriching our water, soil, forest, wetland, and prairie resources. These solutions must do so while confronting countervailing pressures of climate change, depleting non-renewable energy and earth minerals and chemicals, the status of our renewable resources, and land availability. The social justice challenges that flow from food as a basic human right are core to all subsequent social, artistic, educational, and industrial outcomes and a focus of the mission. On the St. Paul campus, this work will be done through advanced biological, social, physical, and engineering sciences in an ecosystem of goals aligned with the people and the plants we depend on for human and animal life, animals, soils, and our natural biomes.

Complex questions within these focus areas encourage engagement that crosses traditional boundaries between disciplines and community. The campus is-and will continue to be-a resource for teaching and learning in these specific areas for the Twin Cities campus, across all stages of learning and research activity.

Land-grant Mission

The University's land-grant mission responds to social, environmental, and economic challenges occurring at local, national, and global scales. Community interests as articulated to the University influence the intellectual agenda and make a compelling case for St. Paul to act as an interconnected hub between the University and the broader world.

The plan embraces the University's land-grant vision to promote education to all members of society and align efforts to solve grand challenges through the function and operation of the campus environment. The plan supports teaching, community outreach and extension programming to ensure the campus is a living land grant where the people of Minnesota can partner to address those grand challenges.

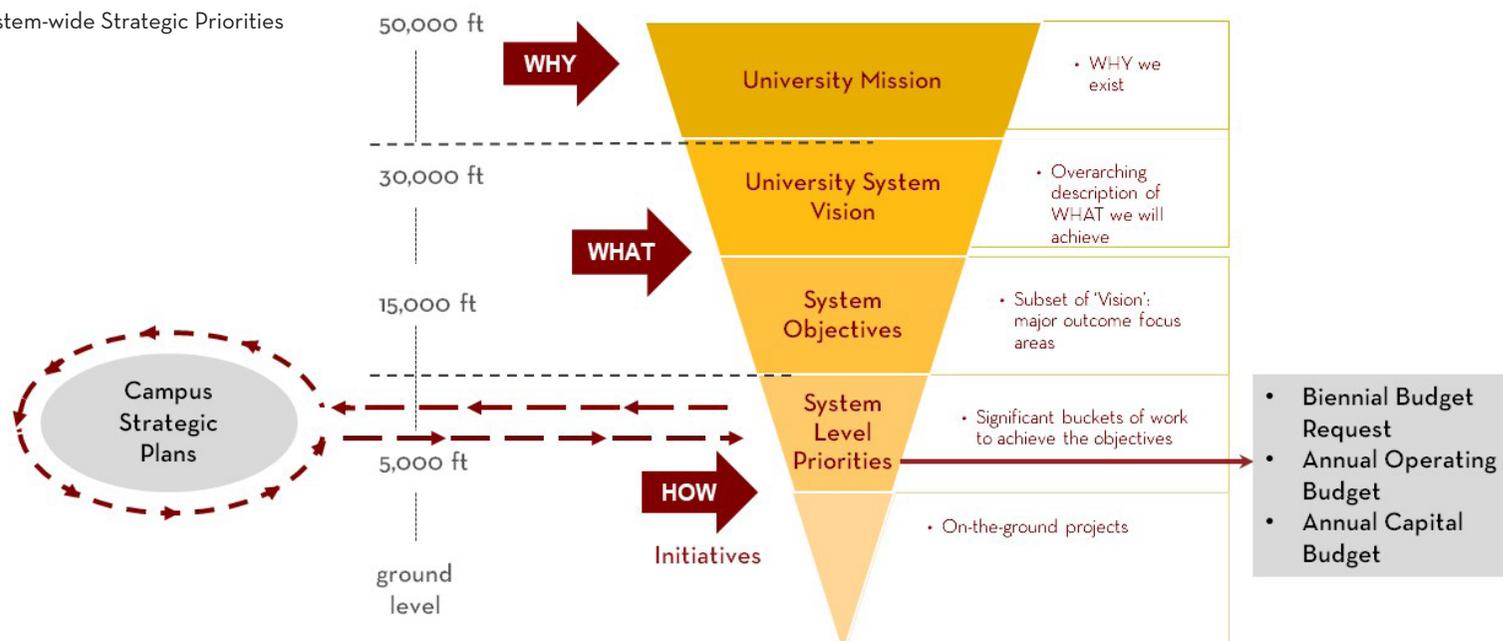
Partnerships and Consortium Efforts

The plan calls for investments in St. Paul's unique activity and knowledge base that reflect the University's interest in supporting partnerships and consortium efforts with parties in industry, not-for profit organizations, and other entities. Partnerships will be pursued in order to maximize capacity in research, teaching, or mission support activity and advance aligned interests for the institution and its local and state-wide community.



Farming on Campus

Figure 1: System-wide Strategic Priorities



System-wide Strategic Priorities

The 2018 System-wide Strategic Plan outlines a set of system-wide objectives, which are reflected in this plan document, particularly in the vision and mission sections of the plan. Notably, the Strategic Facilities Plan recommendations align under the System-wide Strategic Plan's objectives of the following:

Teaching and Learning

The Strategic Facilities Plan promotes a welcoming campus climate and learning environment for all University community members.

Research and Discovery

Renewed vitality within colleges and supported by facilities in St. Paul will help attract and retain talent to advance research in issues of importance to Minnesota and beyond.

Outreach and Public Service

The St. Paul campus is uniquely positioned to apply the University's strength as a land-grant research institution to enhance teaching and learning, as well as research.

Medicine and Health

The Strategic Facilities Plan recommends investments in veterinary science that will advance high-quality education, leading-edge research, and innovative veterinary services within the College of Veterinary Medicine.

Support the Mission

Recommendations for renewal, new construction, and responsiveness to needs will optimize the use of facilities and financial resources. The priorities include optimizing the use of facilities and financial resources.

Two important system-level priorities identified in the System-wide Strategic Plan are reflected in

the St. Paul Strategic Facilities Plan, specifically as follows :

Research and Discovery, SLP 1-Build Upon, Enhance- and Activate Research:

The System-wide Strategic Plan priorities include pursuing research partnership zones to support startups and research initiatives, and to increase interactions with business and private organizations.

Teaching and Learning-Deliver Education Across Distinct Campuses:

The plan's focus on renewing existing classrooms focused on traditional students as well as serving as the home base for many experiential and lifelong learning opportunities recommit the St. Paul campus to a leading role in this regard.

The System-wide Strategic Plan priorities note the importance of establishing campus-level priorities for capital investments, and operational objectives. The priorities and concepts will inform future Six Year Plans and Annual Capital Budgets.

Plan Purpose

The Strategic Facilities Plan was developed in order to respond to a long-standing desire to articulate the future of the St. Paul campus. In June of 2017, President Kaler, Provost Hanson, and Senior Vice President Burnett charged the deans of the St. Paul colleges to work with University Services and define the future of the campus to meet the following three outcomes:

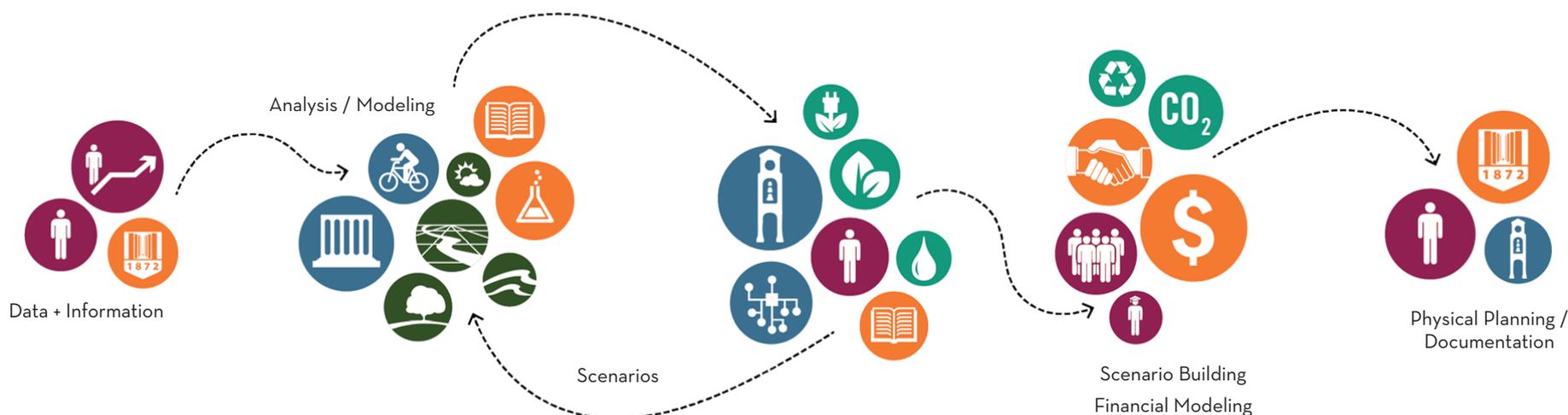
Spur the experiential impact of the St. Paul campus by investing in vibrancy, activity, unique features, and facilities to support the vision of the campus's future.

Demonstrate a cohesive vision for campus that can be shared to consolidate support at the legislature and throughout the state, to resolve uncertainty, to support partnership interests, and to showcase applied research and services on the campus.

Identify priorities and targets for reinvestment that directly align with each college's commitment to teaching and research, address deferred capital renewal, and enliven campus activity by supporting variety and efficiency in goods and services.



Figure 2: Plan Process



Plan Process

The Strategic Facilities Plan was developed over the last year with direct involvement of students, faculty, and collegiate leadership.

Stakeholder groups composed of collegiate representatives and support units, including Undergraduate Education, Housing and Residential Life, as well as, Student Unions and Activities, met regularly, on a near-monthly basis, between September 2017 and August 2018. Details of meeting dates and participants can be found in Appendix 9 of this report.

A survey was distributed to the entire Twin Cities campus through institutional channels so that individuals could have direct input on current conditions and opportunities for change on the St. Paul campus. Approximately 2000 responses were collected with this survey tool.

A second survey targeted to researchers within the

colleges and other academic research units focused on details of research collaboration that is currently occurring on campus. Details of both survey results have been published, and are available in Appendices 4 and 5 of this report.

A project website was in use between April 2018 and December 2018, making material available digitally and offering channels for feedback and comment. A summary of comments received from all sources is included in Appendix 10 of this report.

Plan Drivers

Three questions drove the approach and recommendations emerging from the planning process:

1. What is the academic future of the St. Paul campus? Which **academic programs** will be active on the St. Paul campus over the next 30 years?
2. Which academic facilities (current and future) can be shared and managed as **common resources** on the St. Paul campus?
3. What are the resulting **administrative and student services** needed to support campus life over this horizon?

Source: 2017 Charge Letter for the St. Paul Campus Strategic Facility Plan

Academic Programs

After considering enrollment trends and relationships to East Bank and West Bank activity, as well as the profiles for each of the St. Paul colleges, the working group of stakeholders concluded that while a few changes in academic program presence were anticipated, the overall population of the St. Paul campus related to undergraduate and graduate students would remain approximately the same.

While overall enrollment is anticipated to increase marginally through 2023, no significantly new population is anticipated on either the St. Paul or Minneapolis locations of the Twin Cities campus.

As future discussions of growth in teaching, learning, or research programs occur, the baseline analysis of 2017-2018 conditions showed there is potential for the St. Paul campus to accommodate increased activity. While current planning does not indicate growth, analysis suggests that current facilities could accommodate modest increases, no more than five percent of current population based on capacity markers (underutilization by schedule and seat count) for classroom, teaching lab, office, and some specialized spaces.

Optimization of Common Resources

The charge letter emphasized the need to optimize the alignment of campus building and land resources with the academic programs and research activities.

An investigation of existing building use and conditions revealed opportunities to improve overall utilization across campus facilities. While some buildings are underutilized, others are obsolete, or no longer meet the needs of the programs they accommodate. As future improvements and renovations are planned, the highest and best use of each facility should be considered, recognizing that it may make sense to downcycle or decommission facilities that do not meet the current or anticipated needs. Shared use of certain resources, such as research labs and core facilities, has the potential to reduce duplication, and support interdisciplinary engagement.

The preservation of agricultural land for teaching and research activity is central to the University's land-grant mission. An analysis of campus land examined landscape and open space typologies, current research activity, and characteristics such as plot sizes, soil conditions, topography, and hydrology patterns. The conclusion of this analysis is that research lands are being used at capacity, given standard practices in crop rotation and maintenance of soil integrity. The analysis provides data that will facilitate decisions concerning the optimal use of campus lands, including the calibration of agricultural plots with specialized research activity.

Services to Support Campus Life

Delivery of campus services is operationally challenging due to relative extensive land area that the campus occupies and the relatively small population. Existing services are not convenient to all parts of campus, but returning to the Minneapolis campus creates a travel-time penalty. The staffing and facility costs to operate duplicative services on both campuses to serve the same population who is mobile between sites creates a greater economic burden.

The working group identified improved campus life services as a priority to recruit and retain students and faculty. Potential strategies discussed in the planning process include the following:

- Increasing the size of the daily population on the St. Paul campus. There is little rationale to support net new growth in campus facilities for University programs. Opportunities for partnership may define future facilities requirements, as needed.
- Investing to improve amenities, such as the St. Paul Student Center and retail and dining options
- Repositioning housing to align with St. Paul student demographics, especially to undergraduates in their junior and senior years
- Concentrating amenities and programs to create a critical mass of activity at the campus core



Dusk on Campus



Graduation Day

3: Conditions & Assumptions

Population Baseline

More than 9,000—approximately 1 in 5—University of Minnesota, Twin Cities undergraduate, graduate, professional, and non-degree seeking students attend class in St. Paul each semester.

Student Population

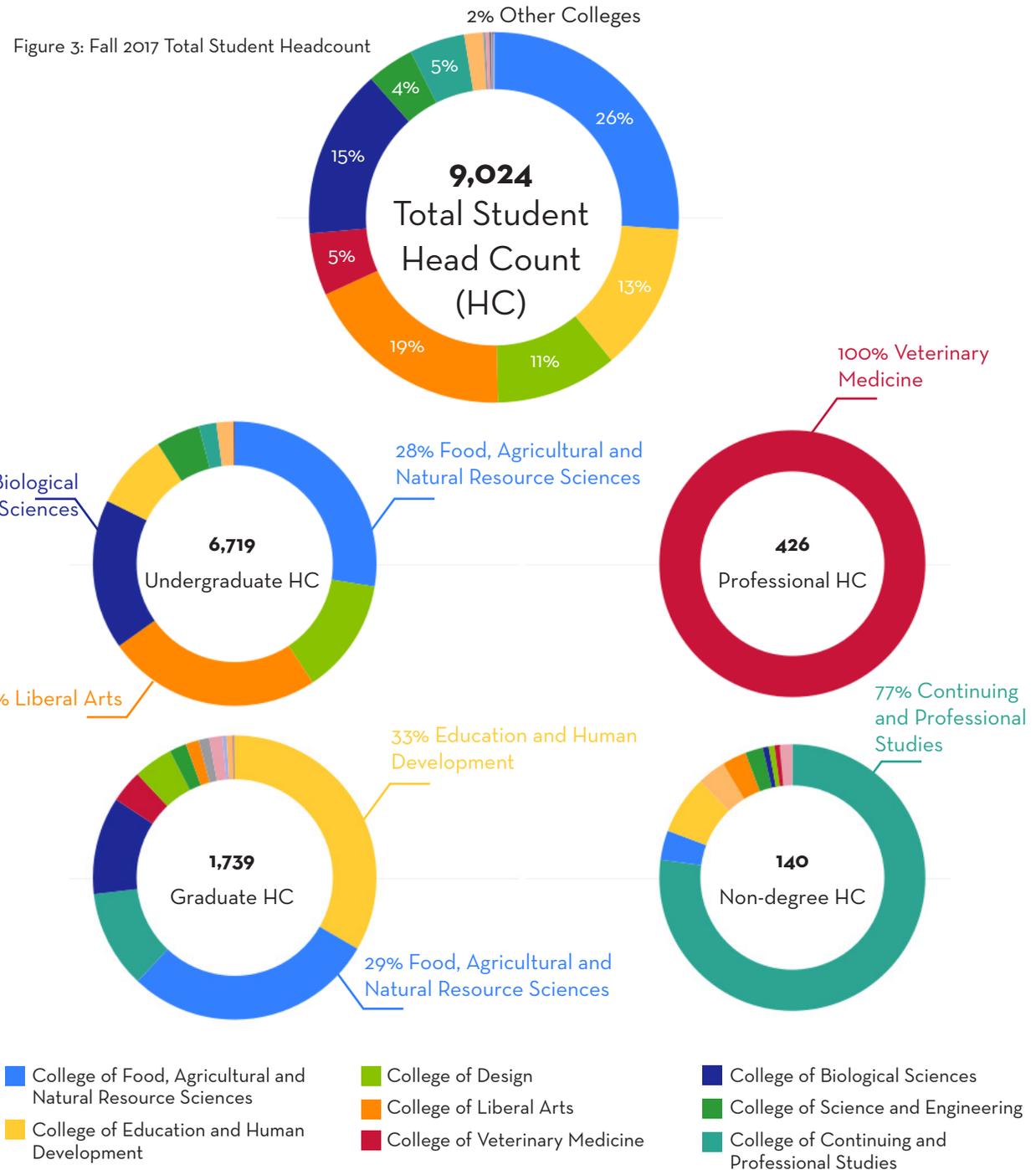
Among the University of Minnesota, Twin Cities population, student experience of the St. Paul campus varies greatly by college, degree program, and year of study. Many students will complete only a single course in St. Paul throughout their academic career. Others, such as doctoral students in veterinary medicine or upper division students in the Colleges of Biological Sciences; Food, Agricultural and Natural Resources Sciences; or education and human development CBS, CFANS or CEHD, will be in St. Paul near full time.

The plan considered three metrics to measure student population at the St. Paul Campus- college enrollment, student headcount, and student activity. The plan considered student headcount, measured by the number of students taking at least one course per semester on the St Paul campus, and student activity, measured by the number of contact hours completed in St Paul, to define the population of st

Student Headcount

Student headcount informs the demand for campus services and systems such as parking, transportation, dining, and retail. Using fall 2017 data, more than 9,000 students register for at least one class on the St. Paul campus. For the past three years the fall semester headcount has held constant, with a variation of fewer than 100 students. Spring semester enrollment is typically lower than fall enrollment by three to six percent, regardless of campus location.

As may be expected, the largest share of St. Paul campus students are registered in degree programs within the College of Food, Agricultural and Natural Resources Sciences (26 percent). However, nearly as many students are admitted to College of Liberal Arts degree programs (19 percent) and collectively, students admitted to colleges typically associated with the Minneapolis campus make up approximately one quarter of the student headcount.



Student Activity

FYE students are estimated based on a standard number of contact hours completed on the St. Paul campus. For undergraduate students, it is assumed that 15 credits represent one FYE. For graduate students, the assumption is 12 credits.

FYE informs demand for classroom space, study areas, teaching labs, as well as daily population student services, dining, retail, and housing.

The difference between headcount and FYE in St. Paul is attributable to the percent of time (credit hours) each student spends in St. Paul. There is wide variation by college, program, and year of study.

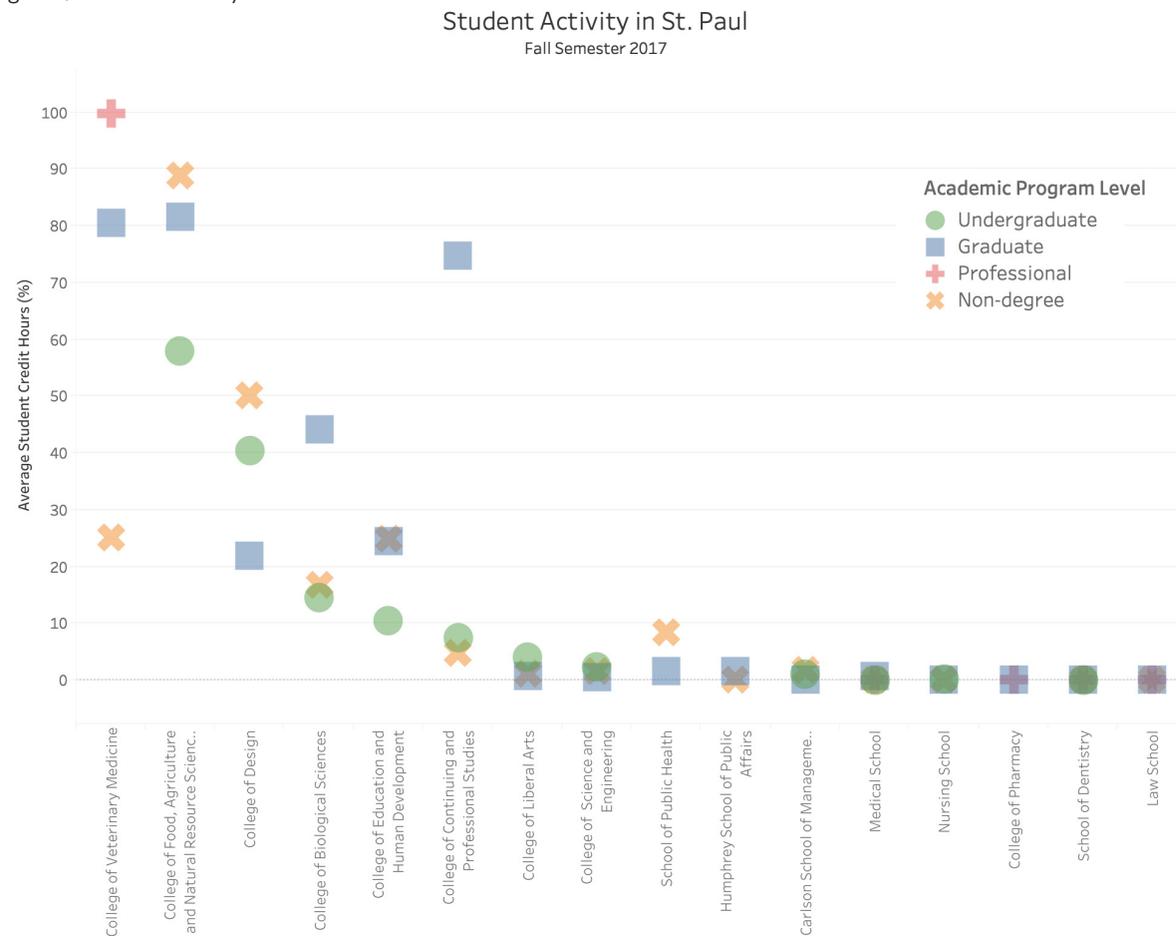
Few students in their first year as an undergraduate spend more than one third of their time in St. Paul. Students enrolled in programs based on the St. Paul campus typically show increased time in St. Paul as they advance in their academic career.

Staff and Faculty

Precise office or workplace locations are not readily available for all faculty and staff at the University. For the purposes of the Strategic Facilities Plan, population estimates have been determined based on the primary office location of University departments. Staff and faculty within departments located in St. Paul are assumed to represent the regular, daily population of the St. Paul Campus.

The estimated population of the St. Paul campus is 2,174 staff FTE and 520 faculty FTE.

Figure 4: Student Activity in St. Paul



Residents

Total standard capacity in Bailey Hall is 505 beds, with a total room count of 241. Approximately 97 percent of students living in Bailey Hall are new incoming first-year students.

Graduate students are housed on campus at Commonwealth Terrace Cooperative, which has 464 units, the majority being two-or three-bedrooms housing, for a population of approximately 1100 to 1500 adults and children.

Off-campus housing data are not available at this time to determine numbers of students living off-campus within immediate vicinity of the campus (less than a five minute walk).

Visitors

St. Paul is uniquely positioned to support outreach that has a broad impact across Minnesota. Influential K-12 programs as well as extension learning are based in St. Paul. Other cultural and scientific destinations are accessible to the general public as well.

- Bell Museum (1)-Since opening in July, the Bell has welcomed over 1,000 visitors daily. Total attendance through October is approximately 100,000-roughly double the total annual attendance in the old building. The museum has hosted over 100 external events bringing 7,000 additional visitors to campus who might not have otherwise come.
- Veterinary Medical Center (16)-the College of Veterinary Medicine has served the community by providing care to large and small animals in Minnesota with 45,000 patient visits per year.
- Raptor Center (15)-The Raptor Center reaches approximately 150,000 people annually through its unique public education programs and events.

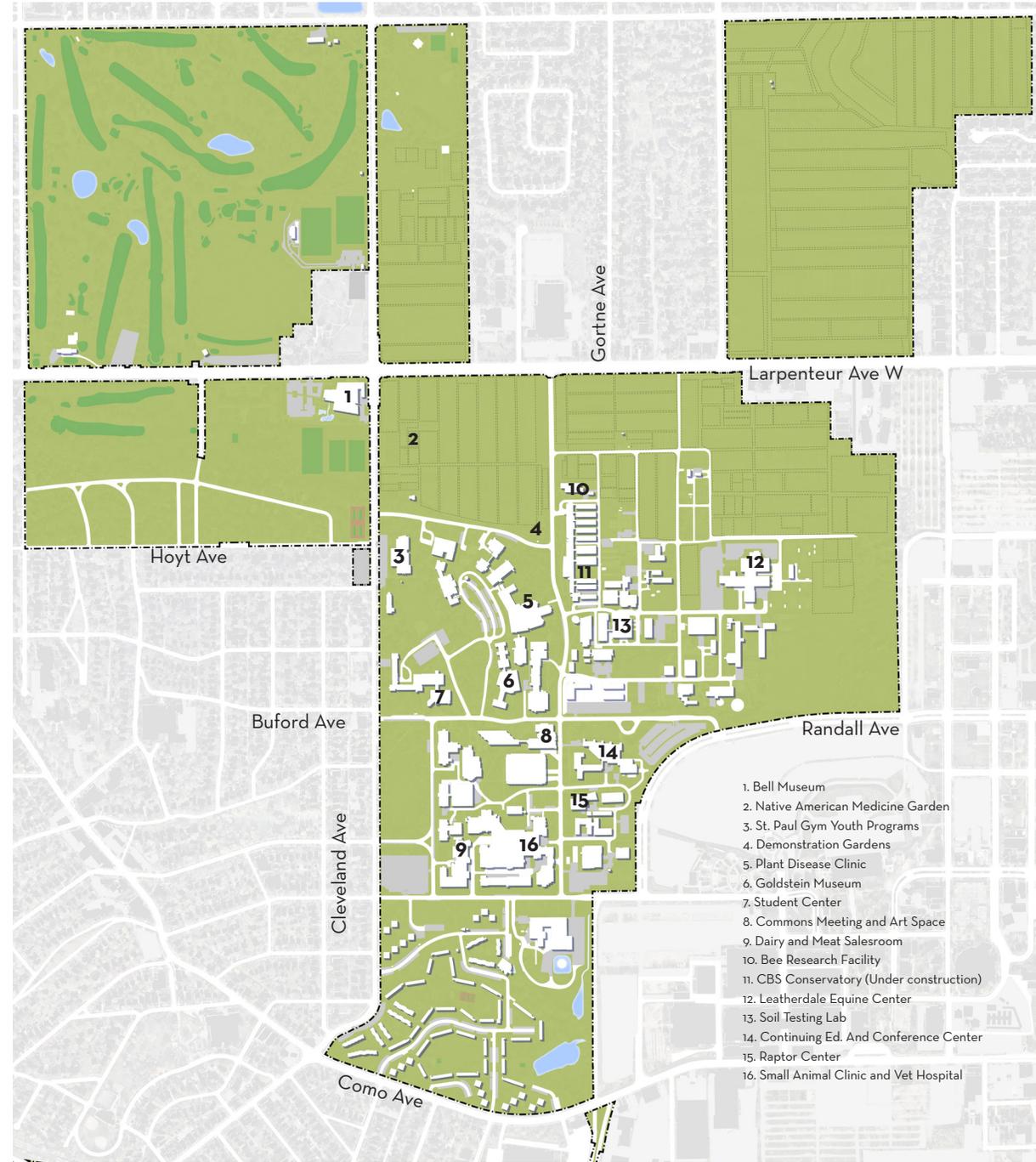


Figure 5: Outreach Destinations

- Soil Testing Lab and Plant Disease Clinics (13)-Over 100 tests are available to government agencies, private companies, and the general public.
- Biological Sciences Conservatory (11)-The conservatory is a biodiverse collection of plant species from around the world. It serves classes, researchers, and the surrounding community by making both plants and expertise available. Today the Conservatory hosts 1,000 student visitors and about 850 general public visitors annually. The facility offers approximately 450 K-12 tours annually. At the newly constructed facility coming online to visitors in summer 2019, these numbers are expected to continue to grow.
- Goldstein Museum of Design (6)-The museum is a resource for teaching and research, and a public bridge connecting the College of Design to the community, with complex narratives of historic and contemporary design.
- Continuing Education and Conference Center (14)-The conference center serves more than 60,000 learners annually through conferences, professional development courses, and lifelong learning courses.
- Horticultural Science Display and Trial Garden- The garden serves many purposes. Classes utilize the space to practice plant identification, learn horticultural techniques, grow material for floral designs, and observe insects. Nonprofit organizations use garden space for youth outreach, and student interns spend summers in the garden putting their classroom knowledge to use.
- Meat and Dairy Salesroom (9)-The salesroom offers items that are produced during class and research projects to fund research and maintenance of the facilities.
- Native American Medicine Garden (2)- Established in 1999 the gardens recognize that the University sits on the traditional lands of the Dakota Nation, and offers healing, food, and medicinal plants for students at the University as well as the public.
- Commons: Meeting and Art Space-The Institute on the Environment (IonE) houses a unique space that serves as a location where the community can gather for meetings or events, and display artistic works that celebrate the environment and sustainability.
- St. Paul Gymnasium (3)-Summer youth programs at the St. Paul Gym are structured as weekly day camps for ages five to fifteen. Programs operate from the middle of June through the end of August each year. Approximately 70 staff coordinate activities for 250 youth on an average day, and 3,000 over the summer. An additional 800 remain on the waitlist.
- The St. Paul Student Center (7) supports campus life with the Larson Gallery, a multipurpose theater, the Northstar ballroom, and a bowling alley.
- The Bee Laboratory (10) promotes the conservation, health, and diversity of bee pollinators through research, education, and hands-on mentorship.
- The Leatherdale Equine Center (12) offers undergraduate, graduate, and continuing education opportunities through collaboration and partnerships within the University and the equine community.

Increasing Activity

The plan considered multiple alternatives for increasing activity on the St. Paul campus. Options discussed include the following:

- Relocate another college, department, or program to St. Paul that would contribute to the vision and mission.
- Relocate an administrative unit or function to St. Paul that would contribute to the critical mass of activity.
- Add more University of Minnesota residential beds to create a desirable and themed residential experience.
- Invite corporate, government and not-for-profit partners to the campus.
- Redevelop the Commonwealth Terrace Cooperative into a mixed-use residential, retail, office, and research district that supports the mission of the St. Paul campus, and is sensitively integrated within the surrounding urban setting.
- Fulfill part of the requirements of liberal education on site. This would bring more students to St. Paul for class and lab work focused on St. Paul disciplines, perhaps focusing on sciences, targeting water, agriculture, food, environment, and natural resources.

Physical Environment

Buildings

Facility Condition Analysis

Like many land-grant institutions, the University of Minnesota’s facilities have been constructed over a long period of time, each representing different trends or phases in building construction and configuration.

Fifty-nine percent of campus space is in poor or critical condition,-the highest percentage of all University locations. The projected 10- year need for investment is nearly \$1.0 billion. St Paul buildings represent only 1 percent of the total Twin Cities built environment, yet account for 32% of the space rated in poor or critical condition.

In recent years, the University has taken steps to address the physical conditions on the St. Paul campus with a pattern of prioritizing funding toward St. Paul labs, nearly double what campus size alone would merit. Between 2017 and 2018, St. Paul was the largest campus recipient of HEAPR funds. Major investments were made in several facilities including Andrew Boss Laboratory of Meat Science, Ruttan Hall, Veterinary Medical Center, Biological Sciences and the Equine Center. Further reinvestment has taken place through the use of Repair and Replacement (R&R) funds, with 30 percent of Twin Cities campus R&R spending directed to St. Paul.

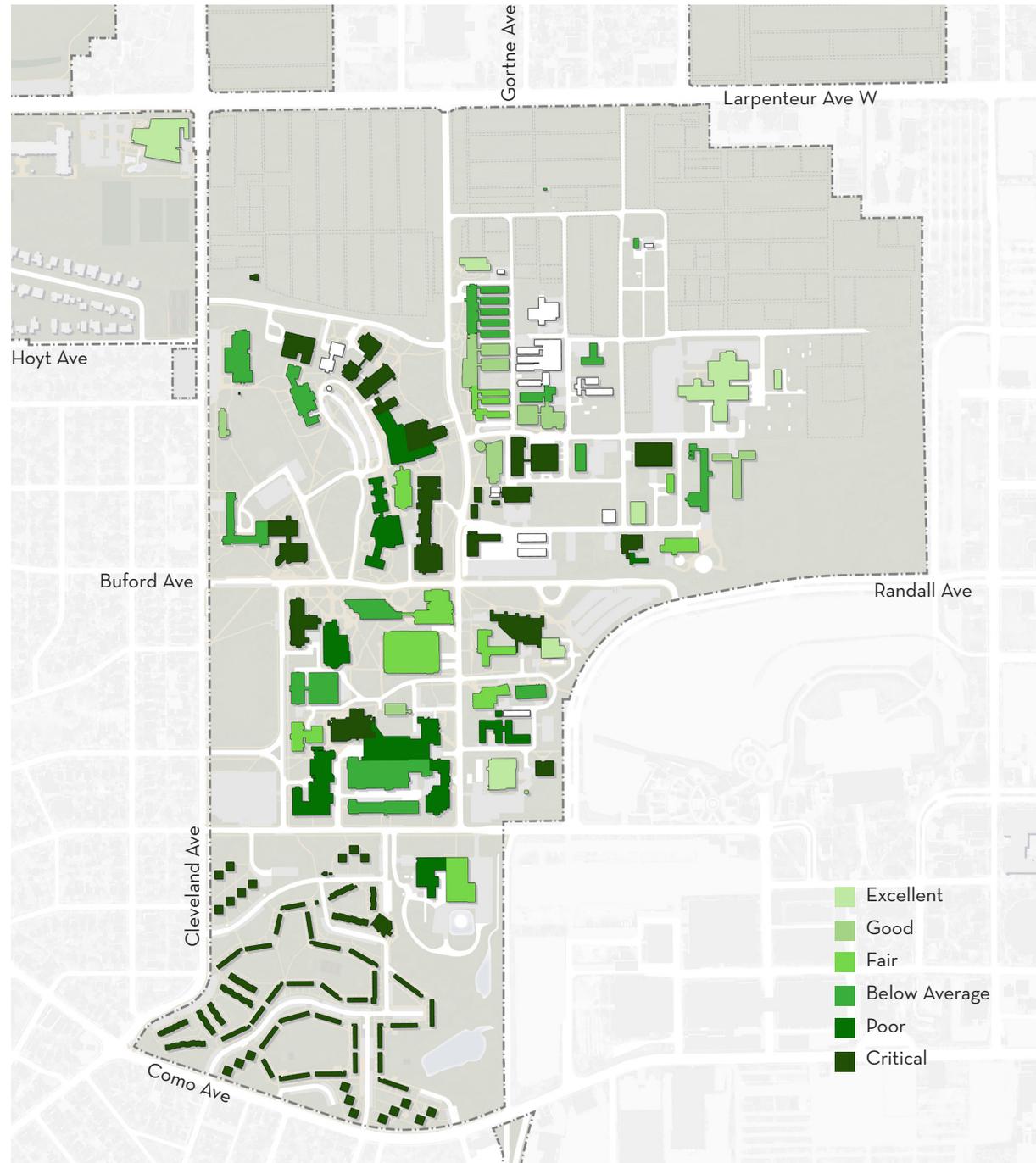


Figure 6: Facility Condition Analysis

Suitability

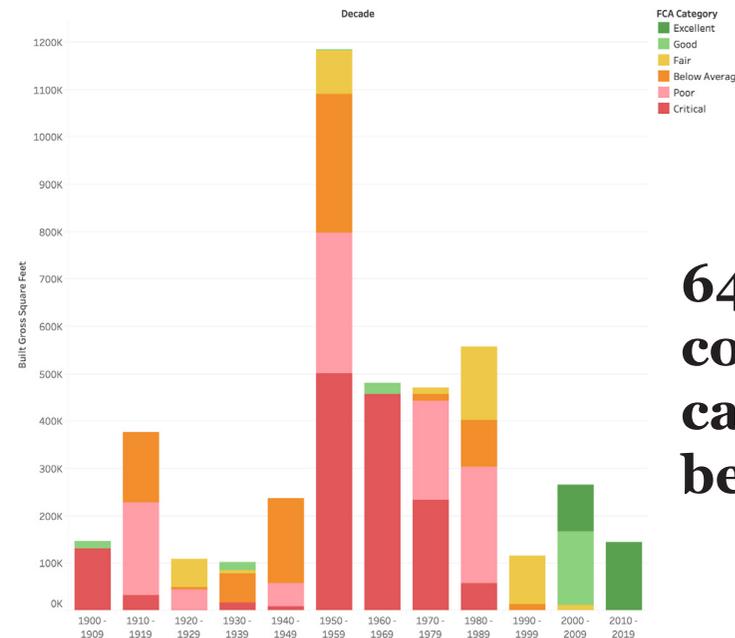
As part of the planning process, several buildings were assessed based on information provided by the University and walk-throughs conducted by the planning team in December 2017.

A representative group of buildings was selected for in-depth review and building tours by the planning team. The suitability of each building was recorded and compared to data provided by the University. Suitability is a measure of how a building's functions are matched to its physical features and systems. A complete summary of the methodology and findings are included in Appendix 2. The suitability of buildings was assessed in comparison to other higher education facilities across four major categories, defined below:

- **Structure:** The structural system, bay spacing, floor-to-floor heights, flexibility of interior partitions, and fenestration coverage impact contribute to the flexibility and adaptability of existing facilities.
- **Mechanical, Electrical, and Plumbing (MEP) Systems:** The condition and capacity of existing heating, ventilation, and air conditioning (HVAC); plumbing; electrical; and fire protection systems impact the suitability of a building to support intensive lab and research equipment, and maintain a suitable learning environment.
- **Circulation and Layout:** The circulation and layout of a facility is assessed for location and capacity of elevators and pathways for material deliveries. Stairways and corridors are measured for adequacy to support a variety of occupancies.
- **Special Features:** Core facilities and major assets are recorded for value and ability to relocate. Historical significance is assessed for contribution to the campus environment and development restrictions.

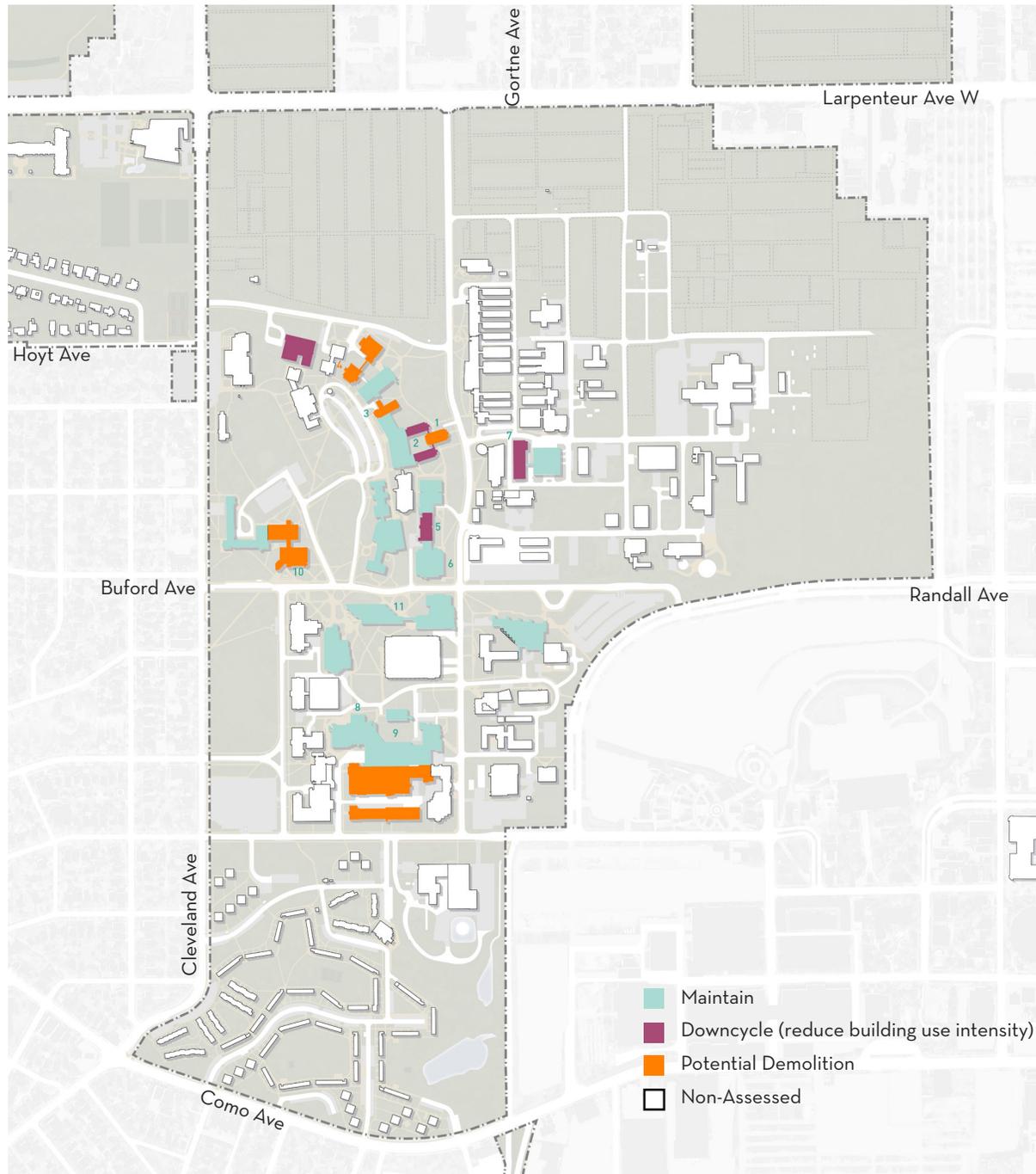
Based on this assessment, it is recommended that space in the following buildings would be replaced in either renovated or new facilities over the years ahead: Hodson, Christensen, Snyder, and Veterinary Science. The long-term strategy for new buildings and renovation requires future study to determine how shared core facilities would best be provided. Shared facilities include equipment, service functions, greenhouses, and the like. Strategies for sharing teaching labs among CBS, CVM, and CFANS should also be considered.

Figure 7: Condition and History of Construction



64% of all construction on campus occurred between 1950-1989

Structure	40%
Structural System	5%
Floor to Floor Height	13%
Structural Bay Spacing	11%
Fenestration Coverage	4%
Partition Flexibility	7%
MEP Systems	19%
Roof Penthouse Capacity	7%
HVAC Shaft Distribution	5%
Plumbing Supply Capacity	5%
Plumbing Supply Distribution	2%
Circulation Layout	30%
Elevator Capacity	7%
Loading Handling	5%
Stair Corridor Capacity Arr.	5%
Overall Planning Dimensions	13%
Special Features	11%
Core Facilities Major Assets	7%
Historic Limitations	4%



1. Christensen Lab: Potential demolition
2. Stakman & Hayes Halls: Discontinue lab use
3. Borlaug Hall: Maintain for labs
4. Hodson Hall: Critical condition, potential demolition
5. Snyder Hall: Downcycle to office use
6. Biological Sciences: Prioritize and maintain
7. Crop Research: Downcycle
8. Animal Science/Vet Med Building: Prioritize and Maintain
9. Veterinary Science/Vet Med South: Consider partial or full demolition
10. St. Paul Student Center: Replace at site TBD
11. Magrath Library: Prioritize and maintain

Figure 8: Suitability Analysis

Land Area

The St. Paul campus occupies 705 acres in three primary zones: core campus, research fields and the golf course. Each represents approximately one quarter of the campus land area. Other uses include recreation space, athletics, crop production, gardens, wetlands and housing.

Soil and Topography

Land Use	Percentage
Recreation	1%
Athletic	1%
Garden/Nursery	2%
Pasture	2%
Feed Production	2%
Wetland	2%
On-campus Residential	6%
Off-campus Residential	6%
Golf Course	22%
Core Campus	26%
Research Plots	27%
Other	3%

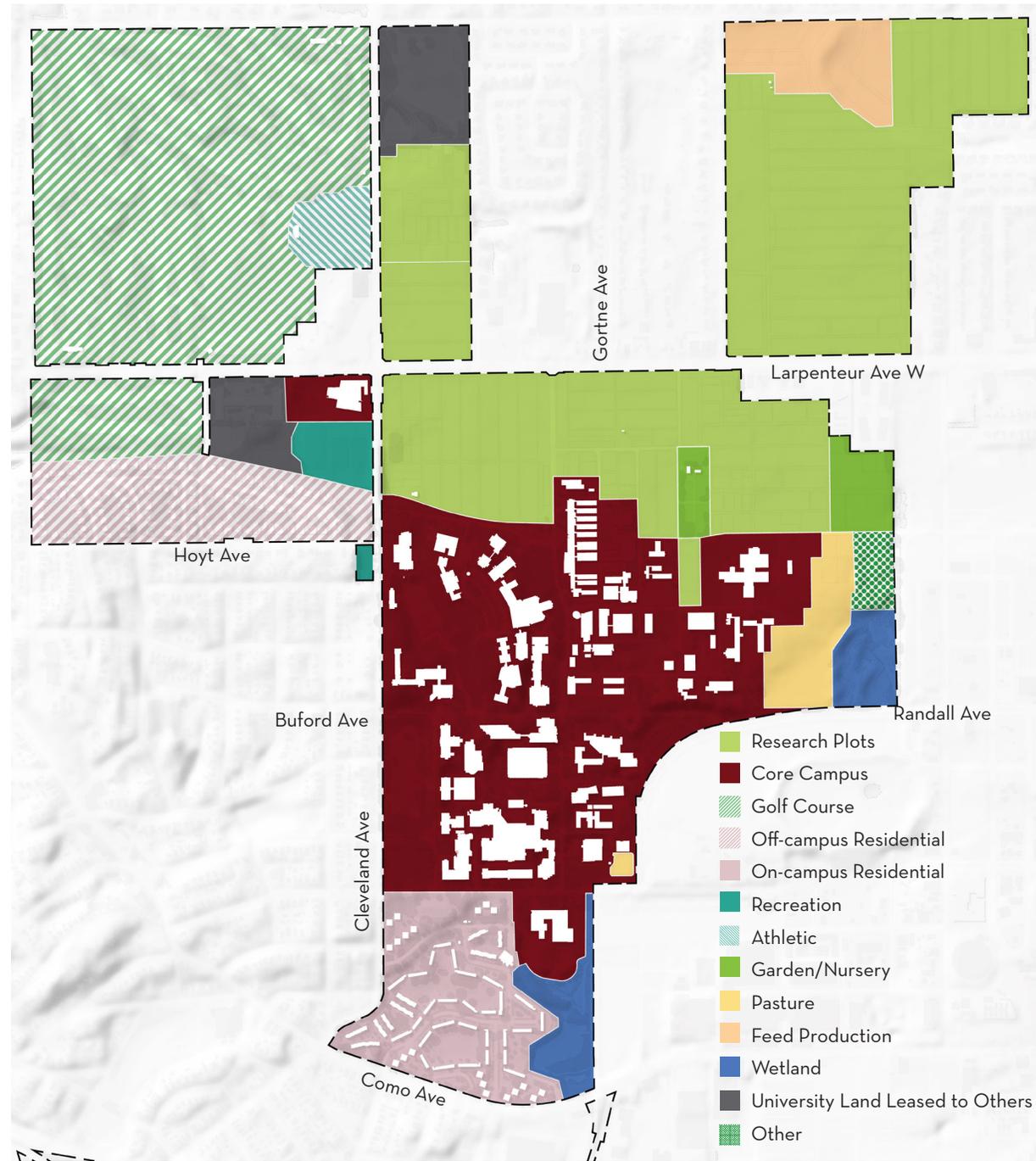


Figure 9: Campus Land Use

The St. Paul campus is composed of a range of soil types that generally reflect the original prairie grass setting in which the campus was developed. Waukegan Silt Loam is the predominant soil type, and characterizes most of the agricultural lands, as well as the developed areas of the campus. The University's golf course contains a greater mix of soil types, including Santiago, Richmond, and Freer Silt Loam, as well as Kingsley Sandy and Hayden Fine Sandy Loam. These specific soil types are not good candidates for long-term agricultural research.

While campus agriculture plots are generally flat, there are grade changes across the campus with a peak elevation of 1,016 feet near Folwell Avenue, and a low point of 890 feet at the Sarita Wetlands. Within the campus core, there is a 118-foot grade change from the highest elevation to Buford Avenue, including a 40-foot grade change at Gortner Lab.

Circulation and Parking

- Brill Silt Loam
- Freon Silt Loam
- Freer Silt Loam
- Richwood Silt Loam
- Santiago Silt Loam
- Waukegan Silt Loam
- Chetek Sandy Loam
- Hayden Fine Sandy Loam
- Kingsley Sandy Loam
- Nessel Fine Sandy Loam
- Prebish Loam
- Cathro Muck
- Urban Land
- Urban Land - Chetek Complex
- Urban Land - Hayden-Kingsley Complex
- Urban Land - Kingsley Complex
- Urban Land - Waukegan Complex
- Udorthents
- Water

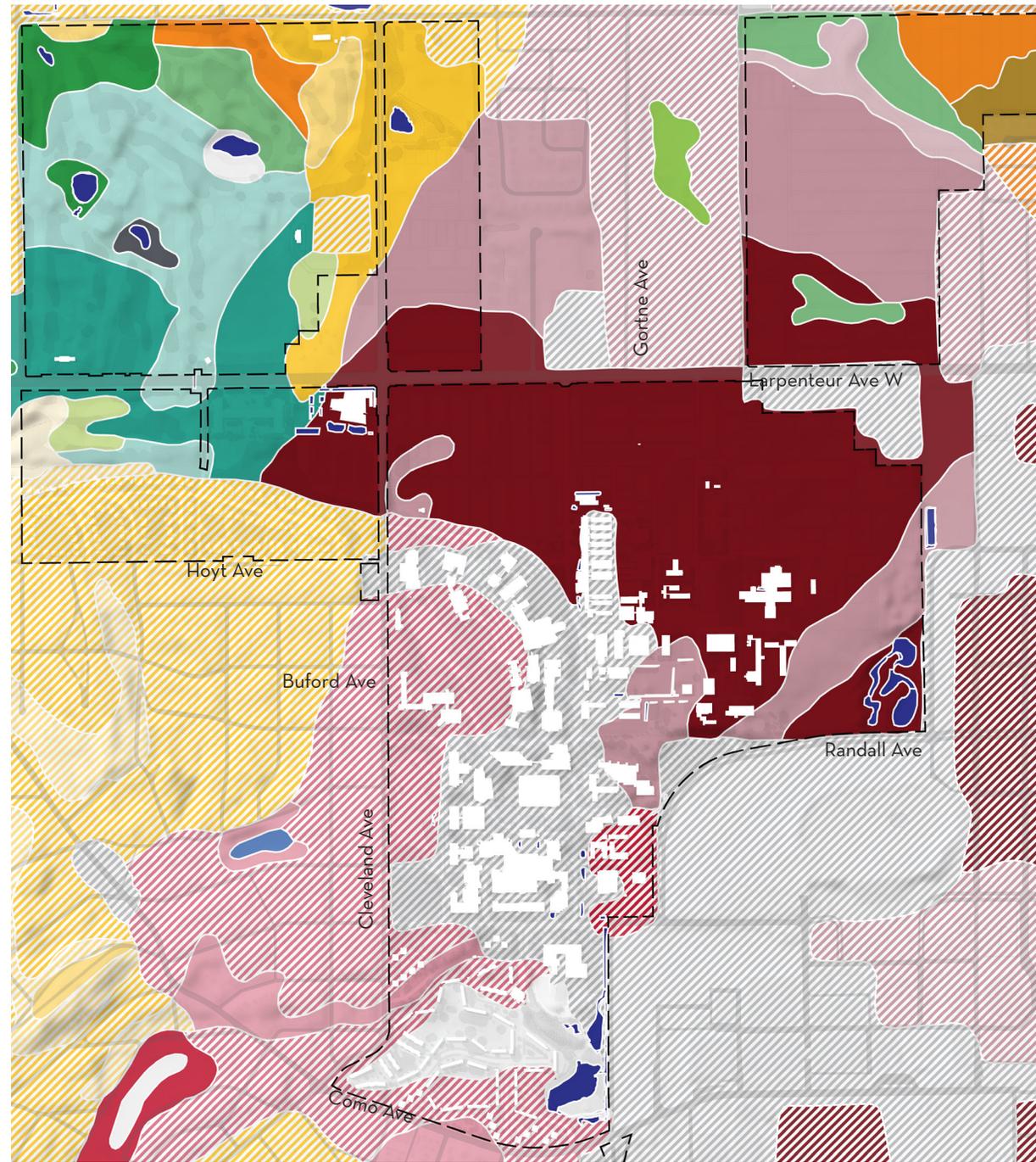


Figure 10: Soil Usage (See figure 9 for additional land use information)



Aerial View of Campus Looking Northeast

Vehicular Circulation

Cleveland, Larpenteur, Gortner, and Commonwealth Avenues are regional collector roads, which provide access to the St. Paul campus. Several local roads extend through the campus, including Eckles, Folwell, and Buford Avenues, facilitating internal navigation. Additional driveways and service routes provide access to the campus core, agricultural plots located within the Northeast Quadrant, academic and research uses south of Buford, and through Commonwealth Terrace Cooperative. The intersection of Buford and Gortner Avenues serves as a campus crossroads, where several key campus destinations are clustered.

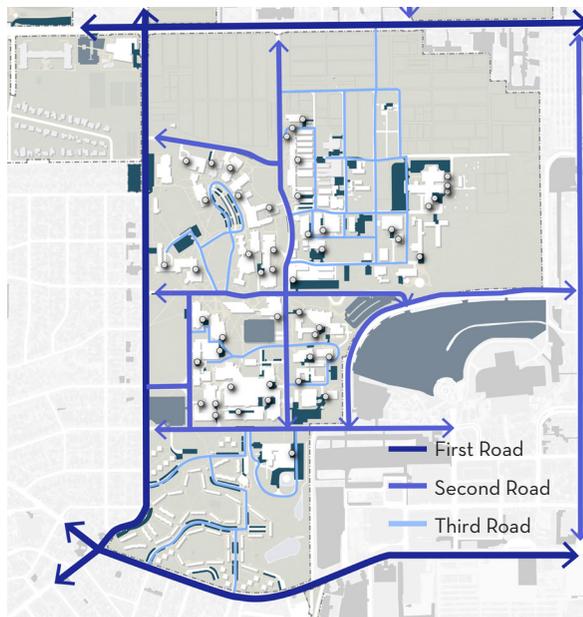


Figure 11: Vehicular Circulation

Pedestrian Circulation

Pedestrian circulation generally occurs along the campus road system, and via a network of pedestrian pathways that provide access to campus buildings and destinations. Pedestrian routes are strongest within the campus core, and the area south of Buford and west of Gortner, but less well defined within the Northeast Quadrant, and east of Gortner. External pedestrian routes are supplemented by the Gopher Network, an internal system of corridors and tunnels connecting key campus building clusters.

There are gaps within both the external pedestrian system and the Gopher Network in some areas, such as through Buford Circle, and between the academic core and academic and research uses south of Buford Avenue. The connectivity constraints in these areas hinder pedestrian movements overall, reduce opportunities for casual collisions that facilitate collaboration, and makes transfer of research-related materials, samples, and other supplies more challenging when work occurs in adjacent buildings.

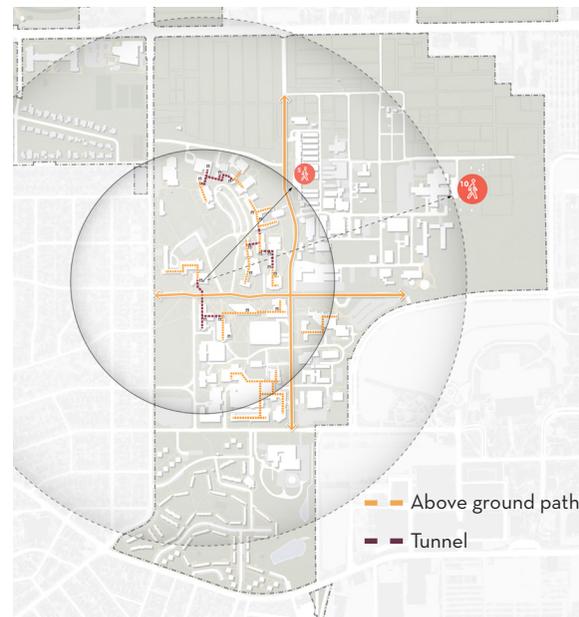


Figure 12: Pedestrian Circulation

Bicycling

Bicycle facilities on the St. Paul campus are generally considered to be adequate following recent improvements. The addition of striped bicycle lanes along Gortner Avenue and Commonwealth Avenue, provide clearly defined and safe routes through the campus. Campus topography is an obstacle for reaching Upper Buford Circle from Gortner Avenue and research fields. While bicycle travel along Cleveland Avenue continues to be a concern, the University is participating in a shared initiative with the city and county to reconstruct the road, and improve bicycle infrastructure.

While bicycle travel along Cleveland Avenue continues to be a concern due to limited space and constrained sight lines, the University is participating in a shared effort with the City of Falcon Heights and Ramsey County to reconstruct the road and improve bicycle infrastructure.

Zap data on bike ridership collected at four locations on the campus, and summarized in the following table, highlights bicycle traffic numbers over the past four years.



Figure 13: Bicycling Circulation

Transit

The Campus Connector service between Minneapolis and St. Paul operates at five-minute intervals during the academic year. The estimated travel time between the farthest stops on the East Bank and St. Paul campus is 15 minutes. Primary stops are located at the St. Paul Student Center and the intersection of Buford and Gortner Avenues.

The St. Paul Circulator operates every 15 minutes between 7 a.m. and 6 p.m. on weekdays. There is no service on weekends or holiday breaks or during intersession. The Circulator connects riders from the Bell Museum to the Commonwealth Terrace Cooperative in a looped route around Cleveland, Como, and Gortner Avenues. Stops serving Commonwealth Terrace Cooperative along Como and at the St. Paul Student Center generate the highest number of riders.

Metro Transit provides regional bus service to the St. Paul campus edges along Cleveland Avenue and

Larpenteur Avenue via Routes 3, 61, and 87. In 2016, Metro Transit began new rapid bus service along Snelling Avenue with the potential to serve the St. Paul campus with appropriate connections. The nearest rapid transit stop to the St. Paul campus is within one mile. A transfer to local service brings riders directly to campus

Paratransit

The Parking and Transportation Services Department (PTS) provides curb-to-curb transport service free of charge to students, staff, or faculty members with short- or long-term physical disabilities. The paratransit service operates on the Twin Cities campus weekdays, except on University holidays. A total of 898 rides occurred on the St. Paul campus in FY2018.

The highest volume of stops occur at Peters Hall, McNeal Hall, and the Biological Sciences Center on the St. Paul campus. Drop-off and pickup locations provide connections to primary building entries.

Parking

Overall capacity for parking on the St. Paul campus is sufficient today. Demand for new facilities is expected as new activity occurs, based on location and convenience. Parking in the core of campus next to destinations is highly utilized, particularly the surface lot facilities which are the overwhelming facility found in St. Paul. As other parts of campus develop, particularly the Northeast District, and as more outreach-oriented activities are added, demand for parking will also increase., for short term and day-long options

Target occupancy for parking facilities is 85 percent. Daily maximum occupancy regularly exceeds 80 percent, Monday through Friday, in the high demand facilities at Gortner Ramp, Lot 106 at Buford Circle and Lot 101 at Commonwealth and Cleveland. Highest occupancy typically occurs on weekdays between 10 am and 1:30 pm.

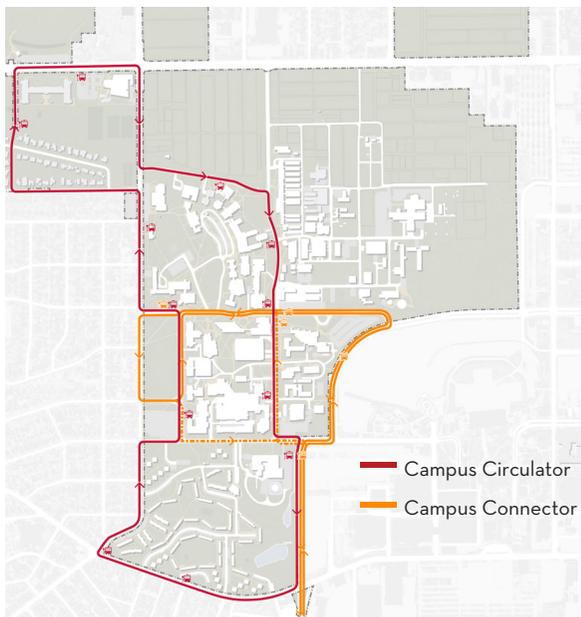


Figure 14: Transit

Bus Riders by Route	2015	2016	2017	2018
Gortner & Commonwealth Avenues (measured on Gortner)	293	273	680	573
Buford & Cleveland Avenues (measured on Buford)	766	605	676	676
Biological Sciences Center (measured on Gortner)	772	890	900	666
Commonwealth & Eckles Avenue (measured on Commonwealth)	339	225	262	291

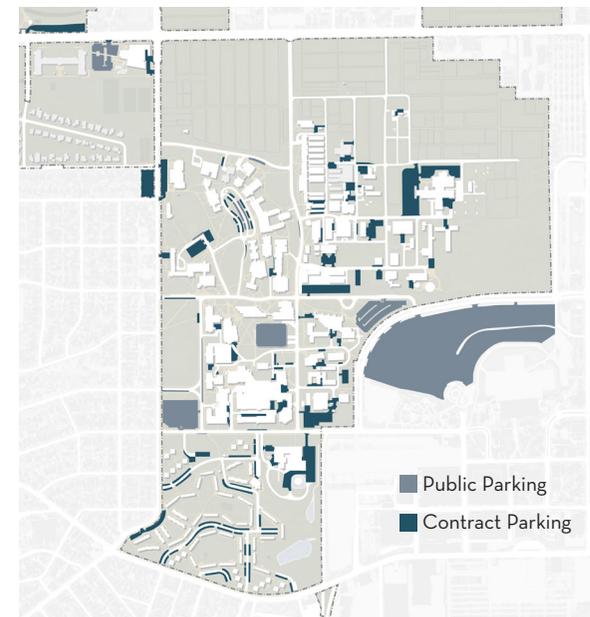


Figure 15: Parking

Academic Programs*

College of Design

Enrolled Student Headcount	1,665
Undergrad Student Credit Hours	28,133
Grad and Prfl Student Credit Hours*	5,082
Faculty FTE	65
Staff FTE	95

The College of Design offers 8 undergraduate majors, 23 graduate degree options, and 10 research, creative scholarship, and engagement centers. The college’s mission is to lead, innovate, and educate in a full range of design fields.

College of Design academic programs in the Department of Design, Housing, and Apparel are currently based on the St. Paul campus in McNeal Hall. The department enrolls more than 600 students, representing approximately 500 FYE undergraduate students on the St. Paul campus and 34 FYE graduate students.

The College of Design plans to vacate McNeal Hall and consolidate its St. Paul programs onto the East Bank, in close proximity to the School of Architecture and the Department of Landscape Architecture in Rapson Hall. The shift may also result in a decrease in the vibrancy of the campus given the studio culture of this population—a culture defined by extended studio hours and project-based work. The shift will also include the college’s Goldstein Museum of Design.

Important next steps for the College’s potential consolidation in Minneapolis are: to complete an assessment of potential for co-location of College

*Data from Fall 2017

of Design units on East Bank. This should include a study of multiple building options, program definition, test fit, and capital and operating costs. A similar assessment of CEHD units that would relocate to St. Paul (McNeal Hall), including program definition, test fit, and capital and operating costs, is recommended.

College of Biological Sciences

Enrolled Student Headcount	2,458
Undergrad Student Credit Hours	46,035
Grad and Prfl Student Credit Hours*	3,927
Faculty FTE	104
Staff FTE	249

Sciences

The mission of the College of Biological Sciences (CBS) is to improve human welfare and global conditions by advancing knowledge of the mechanisms of life through breakthrough discoveries and to prepare today’s students to create the biology of tomorrow. The college offers eight undergraduate majors and five graduate programs.

With a high demand for admission, only 10 percent of the students who apply for admission are accepted into the college. Wet-lab facility availability, instructors and teaching assistant availability, and enrollment growth all place stress on basic sciences units that provide service courses to students, including math, chemistry, and physics.

Enrollment in the college’s undergraduate programs is approved to grow from 2,500 today to 2,800. Longer-term growth may increase enrollment to 3,200 students. Hiring for 20 staff and 20 faculty will coincide with the increase in student population.

College of Food, Agricultural and Natural Resource Sciences

Enrolled Student Headcount	2,718
Undergrad Student Credit Hours	50,380
Grad and Prfl Student Credit Hours*	8,452
Faculty FTE	247
Staff FTE	755

The College of Food, Agricultural and Natural Resource Sciences (CFANS) consists of 13 academic departments and 10 research and outreach centers across Minnesota, plus the Minnesota Landscape Arboretum and the Bell Museum and Planetarium. The college offers degrees in 13 undergraduate and 13 graduate majors plus more than 25 minors.

The college’s vision is to advance Minnesota as a global leader in food, agriculture, and natural resources through extraordinary education, science-based solutions, and dynamic public engagement that nourishes people and enhances the environment in which we live.

Undergraduate enrollment is anticipated to increase by over 500 students in the next 10 years. The estimated impact to the St. Paul campus is approximately 260 FYE students. No significant changes are planned for enrollment in graduate programs. Hiring of 27 new FTE Staff and 14 FTE faculty is projected.

*Source: Office of Institutional Research Employee and Student Headcounts and Student Credit Hours- Fall 2017

College of Veterinary Medicine

Enrolled Student Headcount	503
Undergrad Student Credit Hours	2,686
Grad and Prfl Student Credit Hours*	22,690
Faculty FTE	151
Staff FTE	525

The mission of the College of Veterinary Medicine (CVM) is to build a globally diverse and inclusive community to improve the health of animals, humans, and the environment. This is accomplished by discovering and disseminating new knowledge and skills, educating current and future veterinarians and scientists, and providing innovative veterinary services.

The CVM continues its focus on conducting groundbreaking and impactful research at the interface of humans, animals, and the environment.

There is increased emphasis on experiential learning, including active learning in smaller group settings, community-based service learning opportunities, and more hands-on clinical skills development.

The CVM program is anticipated to increase by 40 students over the next 10 years. Graduate student enrollment is anticipated to grow by 25 students. Approximately 50 new staff and 16 FTE faculty will be added.

College of Education and Human Development

Enrolled Student Headcount	4,823
Undergrad Student Credit Hours	90,823
Grad and Prfl Student Credit Hours*	32,665
Faculty FTE	152
Staff FTE	580

The mission of the College of Education and Human Development (CEHD) is to contribute to a just and sustainable future through engagement with the local and global communities to enhance human learning and development at all states of the life span.

CEHD is concentrated primarily in the historic Knoll district of the East Bank campus with select programs on the St. Paul campus. The St. Paul campus is home to the college's School of Social Work, the Department of Family Social Science, and five research centers.

Enrollment in Family Social Science is anticipated to increase by 50 students in the next 10 years.

CEHD plans to relocate two Minneapolis-based programs to the St. Paul campus. It is proposed that these units will occupy space vacated by the College of Design in McNeal Hall. Programs moving to St. Paul include the Institute for Community Integration, a research center currently located in Pattee Hall, and an academic unit, the Department of Curriculum and Instruction, currently in Peik Hall. Enrollment in Curriculum and Instruction includes more than 500 graduate students and approximately 170 undergraduate students.

College of Continuing and Professional Studies

Enrolled Student Headcount	4,718
Undergrad Student Credit Hours	85,308
Grad and Prfl Student Credit Hours*	2,549
Faculty FTE	1
Staff FTE	201

The College of Continuing and Professional Studies (CCAPS) (formerly College of Continuing Education), provides high-quality continuing education and lifelong learning opportunities for professional development, personal enrichment, career transitions, and academic growth. The college primarily serves non-traditional students and adult learners. Through its offerings, CCAPS aims to be agile in response to changing workforce needs.

CCAPS serves undergraduate and graduate students working toward degrees or certificates with six undergraduate majors, six minors, and six master's programs across the Twin Cities campus. Many undergraduate students take coursework online or in Minneapolis. Graduate programs, administration, and staff are housed at St. Paul. The unique enrollment mix of students and non-traditional students in the college make predictions of enrollment growth challenging.

About 5,000 individuals participate in professional development courses annually, and the Continuing Education and Conference Center hosts about 60,000 people annually. The number of degree-seeking students is anticipated to grow between 10-15 percent over the next 10 years. The number of non-credit learners is anticipated to remain steady during that time.

University of Minnesota Extension

Enrolled Student Headcount	-
Undergrad Student Credit Hours	-
Grad and Prfl Student Credit Hours	-
Faculty FTE	-
Staff FTE	528

University of Minnesota Extension maintains a strong and vital presence throughout the state, taking research and education from the University into people’s lives and addressing Minnesota’s most pressing issues—water quality, food safety and security, childhood obesity, rural economic development, farm profitability, family finances, youth development, renewable energy, and natural disasters.

Extension partners with hundreds of local, regional, state, and national agencies and organizations to identify needs, discover solutions, and empower individuals and communities to make better decisions. Working in all parts of the state—urban, suburban, and rural—Extension provides the front door to the University for many Minnesotans.

The University of Minnesota Extension Dean’s Office, as well as the associate deans for the four Centers (Agriculture, Food and Natural Resources; Family Development; Youth Development; and Community Vitality), the statewide Director for the Regional Sustainable Development Partnerships, and the Extension support units (Communications, Finance and Planning, Government Relations, IT, Human Resources, and International Programs) all reside on the St. Paul campus. This placement is extremely important to build, encourage, and maintain educational and research opportunities with partner colleges on the St. Paul campus, especially those with shared faculty. Extension has about 200 faculty and staff working on the St. Paul campus.

More than 65 percent of Extension’s 800 researchers, educators, and community-based staff live and work in greater Minnesota. By locating faculty and staff throughout the state in 15 regional offices, 87 county offices, and at the University’s research and outreach centers and campuses, Extension makes University research and knowledge readily available to the people of greater Minnesota. Extension’s community networks enable citizens and stakeholders to provide feedback to campus Extension and research faculty, which leads to new research opportunities.

Campus Life

Average Daily Visitors (Weekdays)	2,486
Average Weekend Visitors	2,003
Average Annual Bookings	854
Annual Visitors	250,389

Student Center

Student Unions and Activities provides a place with convenient services for a diverse community to get involved, experience events, and develop skills to enhance the social, educational, and cultural environment of the University of Minnesota.

At the University of Minnesota, the first gathering place for students was Shevlin Hall (built in 1906) where women organized a meeting space for themselves, and the male students were granted space to house the beginnings of the Minnesota Union. The Farm Union and Village Union developed later to serve growing communities across campus. These buildings have since then been repurposed or closed. Today, Student Unions and Activities operates campus-life facilities in multiple locations

including the West Bank Skyway and the students centers in St. Paul and on the East Bank.

The St. Paul Student Center opened in 1959 and is located across Buford Avenue from where the original Ag Union was located. St. Paul Student Center was built to serve the student population on the St. Paul campus, which was significantly smaller than the population on the Minneapolis campus. Construction started in 1958 and by December 1959 a few sections of the union were completed and occupied. The St. Paul Student Center was completed in 1960 and underwent a major renovation from 1978 to 1980 to double its space.

St. Paul Gymnasium

Annual Visitors	128,290
Annual Youth Program Participants	3,000

The mission of the University’s Recreation and Wellness Department is to enrich the campus experience and encourage healthy lifestyles. The St. Paul Gymnasium supports fitness programs, youth programs, intramural sports, aquatic programs, and daily use by students, staff, and faculty.

Fitness programs which provide group exercise classes, personal training, and university fitness classes are convenient to St. Paul campus users, but limited in their offerings due to lack of multi-purpose space. Members report overcrowding prompts transfers to the East Bank center despite the inconvenience of travel.

Intramural sports, sport clubs, special events and rentals, and the membership base of students, staff, and faculty who use the space on a daily basis are all affected by limited space.

Overcrowded conditions at the St. Paul Gym also affect daily users and summer youth programming. Currently the St. Paul Gym youth program summer day camps host 2,800 to 3,000 participants per 10-week session each year. Participants in Minnesota

Sport Schools, Kids' University, and Discovering U spend approximately two to three hours each day in their specialty area with the remainder of the day spent in recreational activities. There are currently 24 University partners and an additional 28 community partners who support the program. Waitlist-based demand from an additional 600 to 1,100 children suggests that expanded facilities to support these programs could be successful. In their current configuration, youth recreation programs are a revenue generator for the department.

Libraries

Location	Print Volumes	Annual Visitors
Magrath Library	430,000	140,851
Natural Resources Library	115,000	18,070
Vet Med Library	69,000	17,300

The University of Minnesota Libraries system has a rich history serving the classic roles of providing collections, tools for information access, and services in support of teaching, learning, and research. There are currently three libraries on the St. Paul campus: the C. Peter Magrath Library, the Natural Resources Library, and the Veterinary Medical Library. The three locations offer a vibrant, ever-expanding set of information services and resources to students, faculty, and members of the greater community.

Current physical library facilities have not benefited from updates in many years, and are suffering from significant collections overcrowding, thereby reducing the space available to users. If additional collections storage space were to be created, the Libraries system envisions transforming some of its spaces currently occupied by collections into highly utilized contemporary learning and scholarship spaces that will be vibrant hubs for student engagement and academic success.

Graduate students are the heaviest users of print materials, accounting for 34 percent of all circulation, followed by faculty and staff at 27 percent, and undergraduates at 23 percent.

Consistent with the University's land-grant status, the Libraries system also welcomes and supports the research of non-University users; 11 percent of St. Paul Libraries workstation logins in FY2017 were from non-University visitors. In FY2017 the St. Paul libraries led 162 course-integrated sessions, 42 workshops, 7 community outreach events (science research training for middle schoolers, Friends of the Libraries events on environmental and agricultural topics, etc.) and 8 orientations and tours. More than 6,000 individuals participated in the events.

Housing Bailey Hall

Bailey Hall on the St. Paul campus was built in two phases (1956 and 1978). The total standard capacity in Bailey Hall is 505 beds, with a total room count of 241. Approximately 97 percent of students living in Bailey Hall are new incoming first-year students. The remaining three percent of students include upper division students and new transfer students. Bailey Hall currently provides six Living Learning Community options for students.

Historically, Bailey Hall has not been a preferred housing option for first-year or returning students. Incoming first-year students have the opportunity to indicate their six highest preference residence halls on their housing application. Very few students (typically 70 to 80 per year) select Bailey as one of their top six preferred halls. Additionally, the largest number of housing assignment complaints received come from students who are assigned to Bailey, with approximately 40 to 45 percent of first-year students

requesting a hall change after receiving their housing assignment.

The University's goal of accommodating 90 percent of all incoming first-year students in University housing requires the ongoing use of Bailey Hall, as the 505 beds are a critical component of the University's housing supply. Until the West Bank and East Bank housing supply allows for all incoming first year students to be housed in Minneapolis, Bailey will need to house incoming first-year students.

In conjunction with the University's housing supply on the Minneapolis campus, Bailey is needed to achieve the University's goal to accommodate 90 percent of the total first-year student population in campus residence halls, 25 percent of second-year students, and 10 percent of new incoming transfer students.

Student Preferences and Concerns

Surveys conducted by Housing and Residential Life suggest that most first-year students would prefer to live on the Minneapolis campus where there is a wider range of student activities and amenities. The consistent perception in the survey responses is that the St. Paul campus does not serve the majority of the first-year student population, and does not contain the appropriate unit typology to serve the upper division and graduate students who would be interested in living on the St. Paul campus.

The primary student concerns about being assigned to Bailey Hall include the following:

- Co-location with peers -All other University-managed or -owned residence halls and apartment facilities are located on the East Bank campus, with one residence hall located on the West Bank campus. Bailey students indicate they feel isolated, and don't feel part of student life on campus.
- Extra travel time is required to attend classes on the East or West Bank

- Lack of Social activities and events are lacking on the St. Paul campus.
- Off-campus dining and shopping options within walking distance of campus are limited.
- Weekend hours for the Campus Connector are an issue.

Commonwealth Terrace Cooperative

Land area: 42 acres

Housing density: 11 units/acre

Building Type	Total Units	Total Buildings
2-Bedroom Buildings	202	28
1-Bedroom Buildings	160	20
2-and 3-Bedroom Buildings	102	9

Commonwealth Terrace Cooperative was built in four phases between 1954 and 1978, and is comprised of 464 units in 58 buildings. A community center is located on the site and houses a community child care center, managed through a service agreement between Commonwealth Terrace Cooperative and the child care provider.

The maximum capacity of Commonwealth Terrace Cooperative is 1,560 residents. Individual unit occupancy varies by family composition, and is estimated at 1,100 - 1,500 adults and children at any one time. It is the oldest family student housing facility and cooperative at the University. Residency is limited to seven years.

Commonwealth Terrace Cooperative maintains high occupancy and is an attractive option for students, especially international students with families. Cost and the family-friendly environment-including the community center, green space, and playground-are key factors for students choosing to live here. Future redevelopment will incorporate housing options the address needs of graduate and professional student family housing.

Off Campus

The St. Paul campus is surrounded by Minnesota State Fair property to the east, Falcon Heights to the north and the St. Anthony Park neighborhood of St. Paul to the south and west. The majority of residential properties in the neighborhoods are single-family homes.

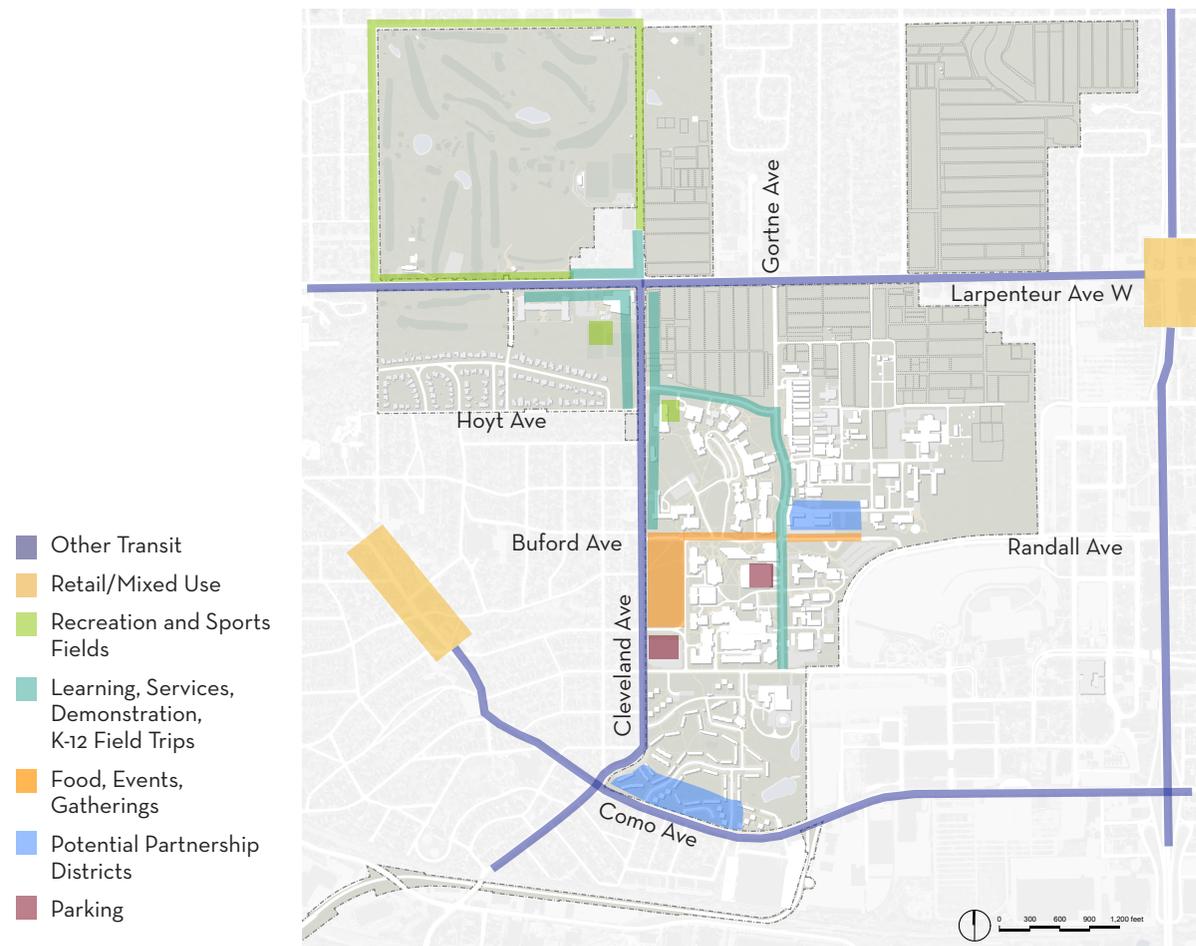


Figure 16: Community Destinations

Some off-campus, privately-owned housing is available near the campus for student rentals. Options include traditional apartment dwellings, single-family or duplex homes, and fraternity and sorority houses along Cleveland Avenue. Rental housing markets are changing in the adjacent neighborhoods. The St. Anthony Park neighborhood expressed goals to support the development of affordable housing in its Proposed Addendum to the St. Paul Comprehensive Plan (final draft May 2018). There may be additional opportunities in the future to support established demand from students and staff based on the St. Paul campus in the surrounding neighborhoods.

Space Summary

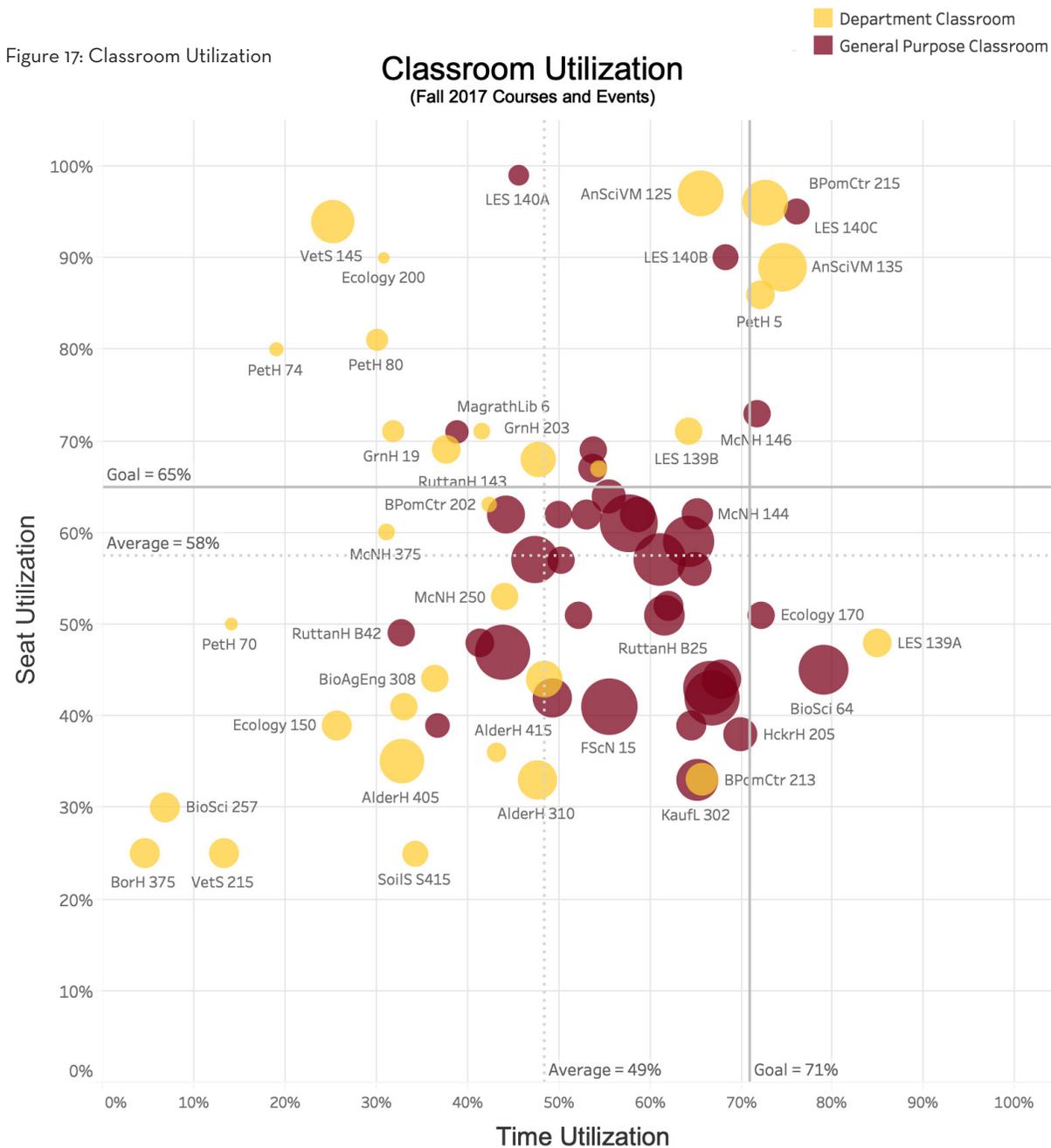
The analysis of space needs examined instructional space utilization at the St. Paul campus, as well as research space and office needs.

Instructional Space

The purpose of the instructional space utilization assessment was to gain a common understanding of existing instructional space use through an examination of current classroom and lab space utilization, as well as the fit of the current room supply to courses delivered.

- The utilization and right-sizing assessments were based on fall 2017 course schedule data, and a 45-hour academic week, from 8 a.m. to 5 p.m., Monday to Friday.
- The analysis included all instructional space on the St. Paul campus.
- The Office of Classroom Management's (OCM) classroom utilization goal is 71 percent. Classroom utilization is calculated by dividing the total hours a classroom is scheduled by the total hours the

Figure 17: Classroom Utilization



classroom was available. Seat utilization is the average percentage of seats occupied in the classroom when the class is in use. OCM’s seat utilization goal is 65 percent.

Based on a review of OCM Management scheduling data, it is estimated that 2,100 - 2,300 students are scheduled to be on the St. Paul campus during peak hours. Peak hour, in departmental and general-purpose classrooms generally occurs on Wednesdays and Thursdays around noon. This represents a relatively small student population dispersed across the campus, with major concentrations of scheduled activity in Ruttan Hall, McNeal Hall, Biological Sciences and Animal Science / Veterinary Medicine. The peak-hours population is an important consideration given the desire to make the campus a more vibrant place, and to ensure that a wider range of amenities and food services can be supported.

The analysis found that most classrooms fall below the utilization target range with an average overall utilization of 49 percent; however general-purpose classrooms show greater utilization at 84 percent during peak periods. Seat utilization is higher on average in departmental classrooms, at 73 percent compared to general-purpose classrooms at 52 percent.

The analysis also found that biological science and design labs operate at or above the utilization target of 18 to 24 hours per week, but that most labs fall below target of 80 percent. However, lab configuration or specialization may require lower utilization targets in some disciplines.

The CEFPI national space planning guidelines recommend an average lab utilization target of 25 percent - 50 percent depending on the type of lab. Labs that can accommodate more diverse course offerings, such as computer labs, generally record utilization rates towards the higher end of the range, while labs with highly specialized equipment, such as science labs, tend to record utilization rates at the

lower end. In recent years, there has been a move towards more flexible labs that can accommodate a range of course types, yielding higher overall levels of utilization. However, these labs typically require more generous support spaces for equipment storage, and set-up and clean-up between courses

Research

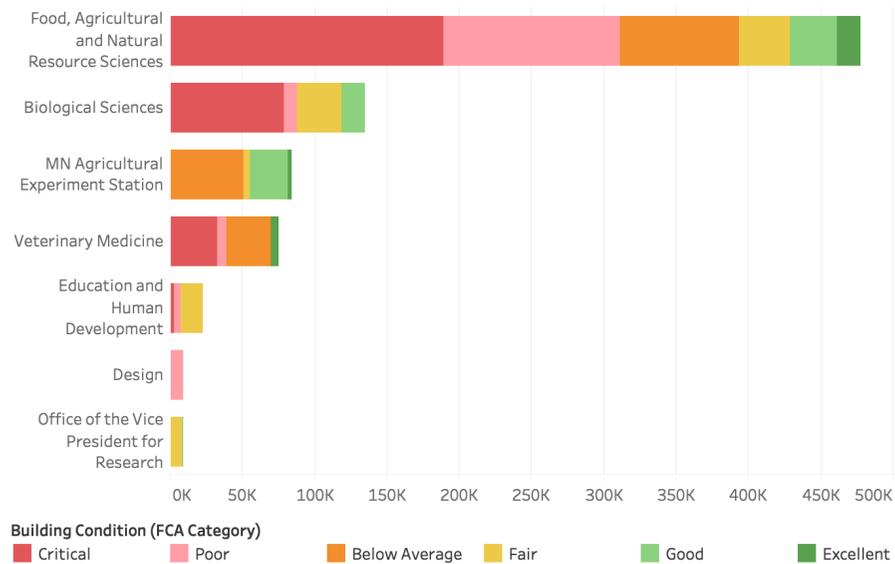
The built environment for research on the St. Paul campus comprises a variety of spaces from modern, flexible laboratories and BSL-3 environments to field support structures and animal barns. Research activities, including departmental research, organized research and sponsored research, occupy more than one third of the built environment in St. Paul compared to only 17.4 percent in Minneapolis.

Research laboratories comprise 24.5 percent of the space on the St. Paul campus, excluding residential.

This concentration reinforces the role of the St. Paul campus as a key center for University research activity and is unique among Big 10 institutions. Space data from Big 10 institutions collected in 2017 shows research laboratories as a share of non-residential space in the range of 9 to 20 percent.

Data was not available at the time of this study to assess the productivity of research space on the St. Paul campus. Typical measures of research productivity include grant awards and research expenditures per square foot of built research environment. In the case of the St. Paul campus, the utilization of land area is an additional element necessary to a complete understanding of the research environment. A review of research productivity will be an important component of future planning initiatives

While St. Paul buildings contain less than one third of all research space across the Twin Cities campus,



Source: U-Space extract 01/29/2019. FCA Data 2018. Includes St. Paul campus space in function codes 21 Organized Research, 22 Departmental Research and 23 Sponsored Research assigned to CFANS, CBS, CVM, CEHD, CDES, CCAPS, MAES and OVPR.

St. Paul accounts for 45 percent of research space in poor or critical condition buildings. Key laboratory buildings including Biological Sciences and Gortner Laboratory for CBS, Animal Science / Vet Med for CVM are in critical condition. These facilities are integral to the research mission of the colleges.

The total area of the CFANS research portfolio in critical condition exceeds the portfolio of research space for any other St. Paul college. Addressing the needs in poor and critical condition research buildings, especially in the upper campus area will be a focus of study following this strategic facilities plan.

Office

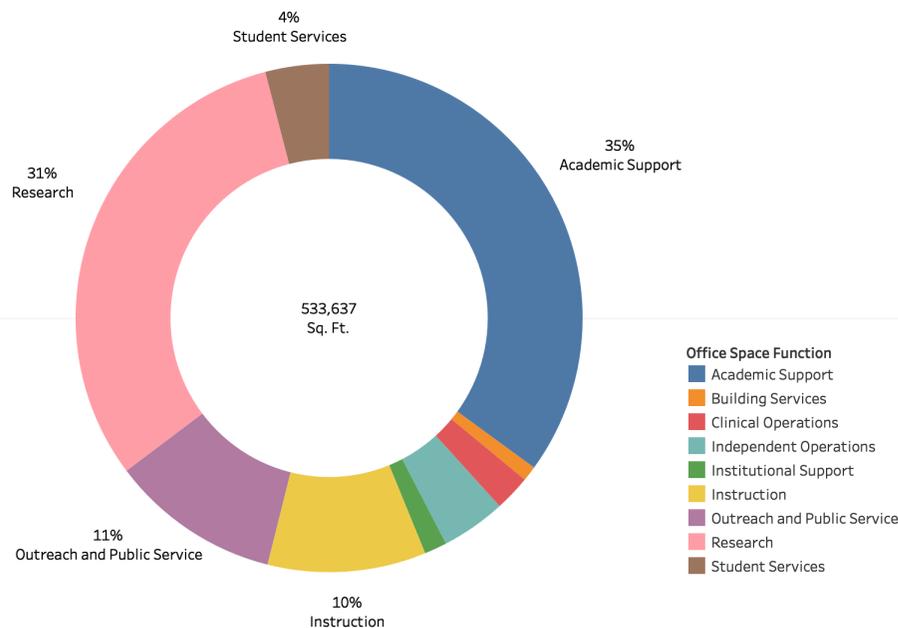
Office space comprises approximately 534,000 square feet of non-residential space on the St. Paul campus. At nearly 25 percent of the built environment, office space requires considerable inputs of energy to heat and cool as well as funds to maintain. Research activities and academic support are the primary drivers for the use of office space on the St. Paul campus.

Rethinking the workplace, through efficiency, teaming and culture can help advance the teaching, research and outreach mission of the University. By aligning the configuration of space with the activities and functional needs of individuals and teams, unnecessary space can be eliminated and the overall portfolio reduced on a per-person basis. The ability to collaborate should be made easier by providing

more ready access to the kinds of spaces people need with easy-to-use technology consistently embedded in them. The future University workplace should help build community among students, staff and faculty with improvements to promote psychological and physical well-being.

University Design Guidelines approach space optimization through uncovering then solving the specific problems of the University in the 21st Century. The guidelines offer flexibility and choice in the creation of new workspaces and provide for spaces that are task-oriented rather than hierarchical. Key considerations in the design of new workspace include the need for privacy, areas for collaboration, and opportunities for spontaneous interaction. Workstyles such as “Mobile,” “Resident,” describe how people work and the types of space best suited to support that work.

Further consideration needs to be given to how well Office space in St. Paul is utilized throughout the year.



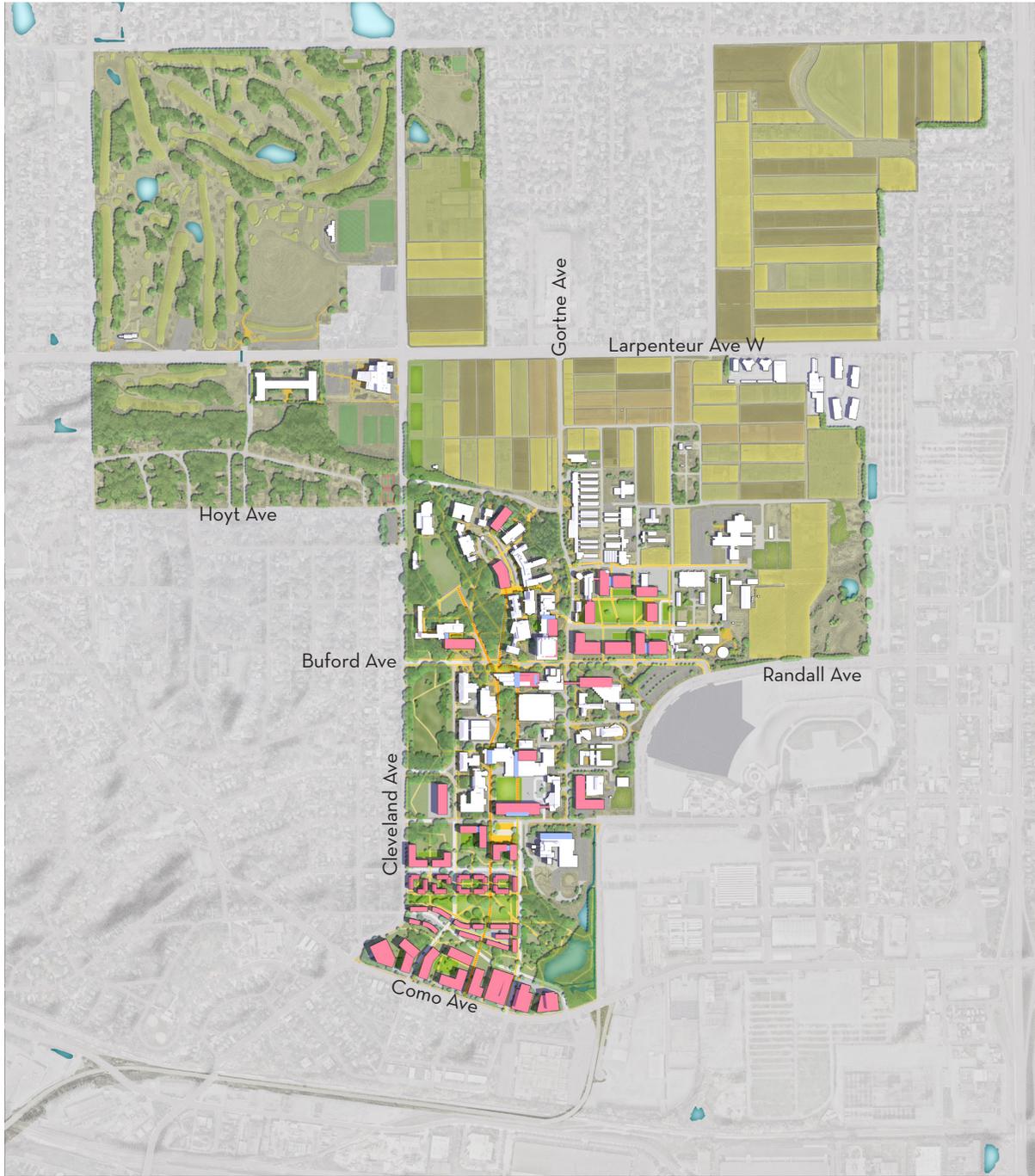


Figure 18: Plan Framework

4: Plan Framework

Plan Principles

The Strategic Facilities Plan defines objectives and principles to guide the evolution of specific zones, and the campus as a whole. The plan will be used to guide investments in building renovation and potential new construction as well as open space, public art, parking, and transit investments, as examples. The plan principles were developed in response to the core values and aspirations embedded in the mission and vision. Each of the recommendations for change associated with commitments to the future of the St. Paul campus can be categorized into one of these principles which in turn will influence project scoping, stakeholder engagement, and decision making.

1. Create a discovery district focused on food, water, and the environment.
2. Promote regenerative campus design.
3. Reuse existing buildings in support of the academic and research mission.
4. Maintain an ecosystem of buildings—a system where activities in one building contribute to collaboration and innovation in adjacent buildings.
5. Support interdisciplinary research and innovation.
6. Create experiential learning and public engagement environments.
7. Locate collaboration and social hubs to serve a variety of population groups.
8. Establish a destination for University of Minnesota students and the broader community.
9. Construct catalyst projects and quick wins.
10. Maintain and enhance the agricultural land of the campus.

Plan Concepts

North/South Corridors



Figure 19: North/South Corridors

The circulation and open space structure of the campus consists of a series of landscape and circulation spines. Three north-south circulation themes are introduced, building upon existing street and landscape corridors present on the campus. These include the Cleveland Avenue community spine, the Gortner Avenue research spine, and a new central or academic spine, passing between the two east and west boundaries.

The community spine connects the new Bell Museum, at the corner of Larpenteur and Cleveland Avenues, to the established core of the campus by means of improved sidewalks and the streetscape along Cleveland. It extends the positive landscape qualities of the Lawn to the south connecting with the Sarita Wetlands in the southeast corner of the

campus with the intent of providing an organizational concept, for the potential redevelopment of the Commonwealth Terrace Cooperative site.

The research spine follows Gortner Avenue extending from Larpenteur to Commonwealth. New gateway features and an enhanced streetscape are imagined along this corridor.

The alignment of the central academic spine is informed by various components of the central open space structure and internal roadways of the campus. It consists of two parallel pedestrian routes and is introduced to provide better north to south pedestrian connectivity between the Veterinary Medicine Complex on the south and research areas north of Buford Avenue. The idea is to enliven the central spine as an arts walk by including sculpture and amenities related to the mission of the St. Paul campus.

The eastern pathway of the central spine alignment connects the Veterinary Medicine Complex with McNeal Hall. It follows existing pedestrian routes and, where needed, moves through buildings to facilitate north-to-south and exterior-to-interior movement. It includes concepts for moving north to south through the Veterinary Medicine Complex and through the Magrath Library. In both instances, interior reconfiguration of the buildings is proposed to accommodate circulation and to introduce new spaces in response to academic, research, and collaboration needs.

The western pathway of the academic spine connects the Bell Museum and the St. Paul Gymnasium to Como Avenue. It is primarily an exterior route with one internal segment passing through the Animal Science/Veterinary Medicine Building.

Civic Spine



Figure 20: Civic Spine

Buford Avenue, the main east-west route at the midpoint of the campus, is reimagined as a main street or civic spine of the campus featuring new development and streetscape improvements. Buford Avenue would be reconstructed to support all types of traffic (vehicle, transit, bikes, and pedestrians). Its location at midpoint of campus, when combined with a different physical character, will enhance the pedestrian experience and unify the campus. It connects the Cleveland Avenue gateway to the Continuing Education Complex on the east side of campus. It will remain the key transit corridor through the campus with an enhanced transit node near the central spine (Magrath Library/McNeal Hall area) to support passenger waiting and student amenity spaces.

Partnership Districts



Figure 21: Partnership Districts

Research

This area of the St. Paul campus is targeted to engage local businesses, industry partners, nonprofit organizations, and other private organizations with programs and colocation opportunities. These activities will occur when they expand and align with the teaching, research, and outreach activities unique to the St. Paul campus. Examples of such activities could include supporting start-up and research initiatives or specific processing, prototyping, manufacturing, and other to-be-defined activities with a strategic relationship to the University's mission.

Community

Mixed-use development can be explored with non-University partners to achieve essential objectives related to affordability, financial stability, and quality of life. The University's goals for maintaining a family

student housing community may be aligned with the addition of mixed uses including retail and other services. Development would not move forward until essential objectives can be met.

Strategic Additions and Renovations

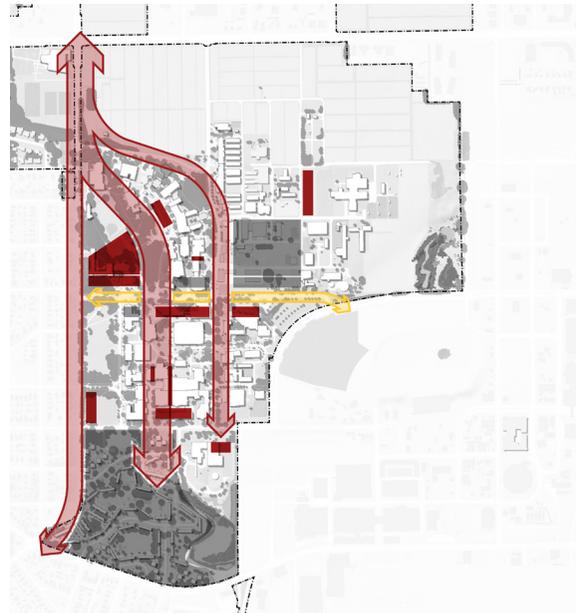


Figure 22: Strategic Additions and Renovations

Building renewal and new construction are considered part of a coordinated approach to solving complex and complementary space needs.

The plan calls for a limited number of single-purpose, newly constructed buildings. The larger share of University-assigned capital investment will be directed to multipurpose buildings that are shared by departments and closely aligned with core mission activities. Initiatives that prove their ability to creatively join education, research, and outreach, and catalyze renewal in existing structures are most likely to succeed, and will have the greatest impact.

Renewal

Investment in the renewal of buildings on the St. Paul campus is assumed to continue, informed by the University's building-by-building strategy tool. In considering future renovation, a comprehensive approach should be developed to facilitate the relocation of programs and units and to renovate entire floors of existing buildings.

The decision to renovate and renew facilities should consider the following:

- The historic value of the building,
- The condition and suitability of the space for current activities,
- The intrinsic adaptability of the building to varying degrees of rearrangement
- The cost of renovation versus the expected life of the building and long-term maintenance costs

New Construction and Additions

The decision to build new or expand existing facilities should consider the following:

- The complexity or cost of renovating existing buildings to achieve the program objectives, provide some degree of adaptability to the space, and meet University sustainability and design guidelines
- Options to enhance utilization or renovate existing to better suit needs, before building new space.
- The potential to demolish existing facilities of comparable scale to avoid creating unnecessary surplus space
- Strategic Facilities Plan goals to preserve open space and agricultural research, and topographic, open space, and access conditions

Demolition and Removal

Buildings that are rated poor or critical condition, and are obsolete in their design with little reuse potential typically bring significant financial and operational burden to the University. Removing these buildings is a critical component of the University's sustainable financial capital investment strategy. All activities currently located in buildings targeted for demolition will be accommodated in new or renovated space on the St. Paul campus.

The decision to demolish facilities should consider the following:

- The historic value of the building
- Physical, environmental, and adaptive reuse potential, including financial ROI
- Overall building condition and performance, with particular attention to buildings in poor or critical condition
- Opportunities to reduce long-term operating costs and capture savings
- Potential to achieve academic goals, improve space relationships among buildings, and enhance appreciation of natural features.

Leveraging Landscape



Figure 23: Leveraging Landscape

Existing Open Space

The St. Paul campus is characterized by its well-preserved open spaces. The Strategic Facilities Plan maintains and enhances these popular areas, including spaces such as the Lawn, Borlaug Woods, and the horticultural garden. The research land, forests, lawn, and hydrology of the St. Paul campus defines the open space structure.

Research Lands

The Unique Identity of the St. Paul Campus.

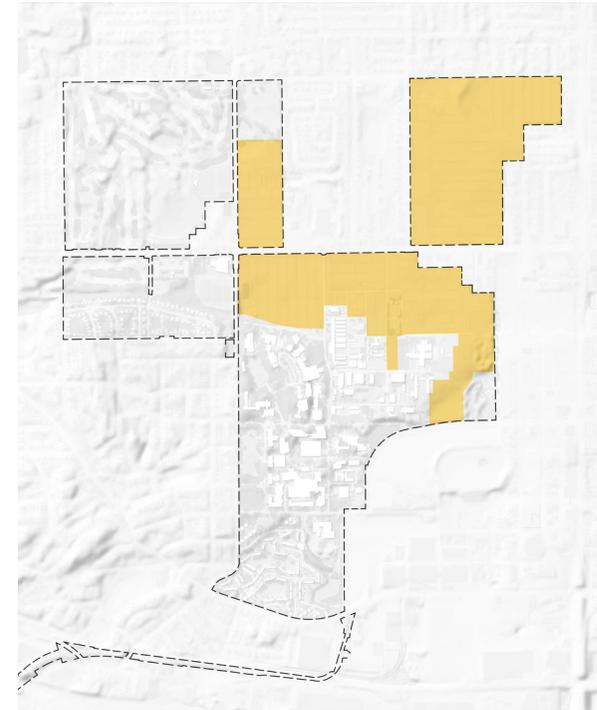


Figure 24: Research Lands

Based on soil condition mapping, these lands are highly productive and valuable for ongoing research. They also serve longitudinal research value stemming from their use for research since the Agricultural Experiment Station/University Farm was established in 1882, with a purchase of 155 acres. This quality and area of arable land within a metropolitan area is a remarkable asset, which creates a unique opportunity for the institution to advance its land-grant mission in fields related to food, agriculture, environment, and education.

Gardens that serve important cultural and outreach purposes are another important feature of the St. Paul campus. These areas include the Demonstration Garden, the Native American Medicine Gardens and

the Student Organic Garden (Cornucopia), and are identified in the plan as acreage that should remain undeveloped, due to their contribution to campus life.

Review of current cultivation needs concluded that all mapped research plot acreage is required to sustain the current field-plot requirements among researchers. The same is true for animal housing supporting related research. However, some lands not in use for research are considered less critical to the University's core mission.

Forests

The Lungs of the St. Paul Campus

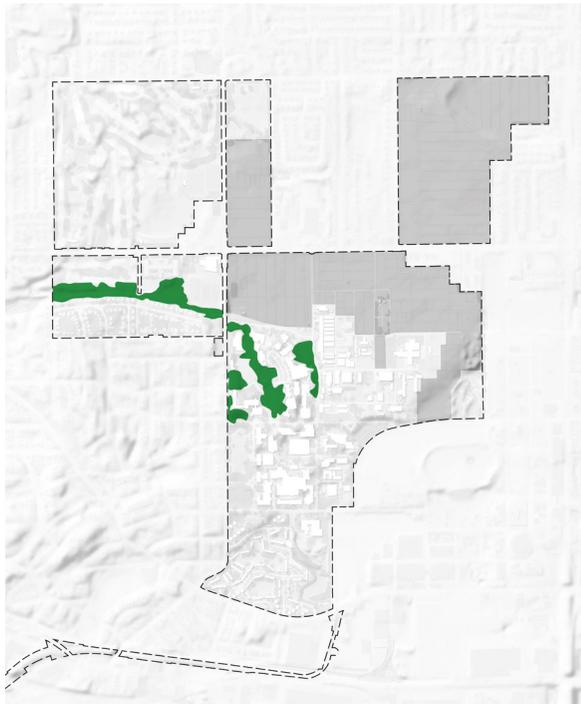


Figure 25: Forests

The last area of undeveloped woodland on the campus stretches from the northwestern edge of the campus, close to the old streetcar route, to the Sarita Wetland at the south edge. Some of

these forested areas have not been touched by development to date and hold both ecological and aesthetic value. As an integral feature in support of teaching and learning mission, they also hold research and educational value.

Lawn

The Social Life of the St. Paul Campus

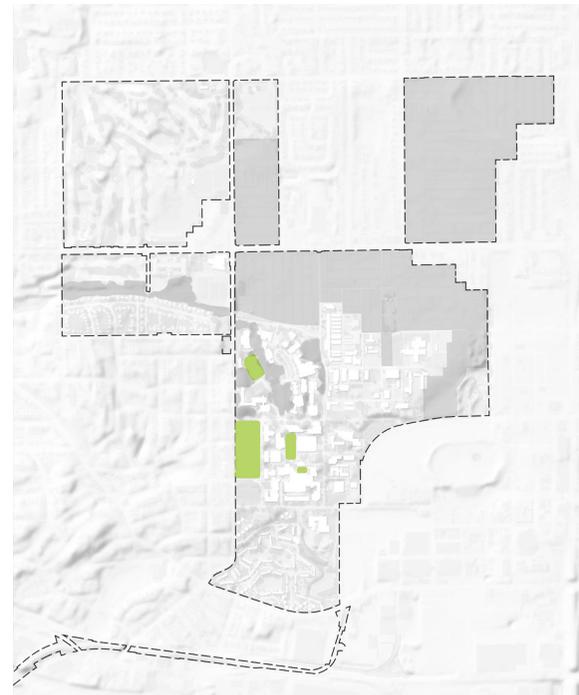


Figure 26: Lawn

The formal open spaces of the Lawn and the Bowl date back from the original plans for a village called St. Anthony Park, prepared in 1874 by Horace W.S. Cleveland. This site was acquired for University purposes in 1881, and further developed by through the 1930s, as both the City of St. Paul and the village of St. Anthony continued to evolve around it. The development of formal open spaces, at the Bowl and the Lawn, reflects the aesthetic of campus development initially defined in 1910, and increasingly

refined through the 1930s. The contrast between the carefully cultivated Lawn or Bowl, for recreation and passive viewing, and the beaux arts architecture of surrounding buildings, including the St. Paul Gymnasium, Coffey Hall, Biosystems and Agricultural Engineering, and Haecker Hall, creates a memorable architectural and landscape experience.

As a landmark for events and a signature entry from the community corridor along Cleveland Avenue, the Lawn will continue in this function to support activities that are directly tied to the vision and mission of the St. Paul campus.

Water

The Hydrology of the St. Paul Campus

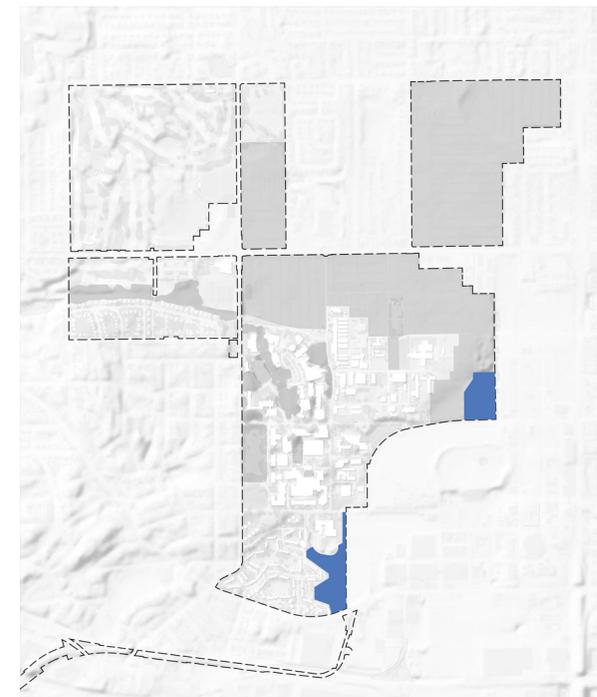


Figure 27: Water

Engineered water features are some of the most recent additions to the campus landscape and open space framework. Visible stormwater management

features along Gortner Avenue help to communicate best practices to the University community.

The link to larger bodies such as Sarita Wetland have value that is functional, regulatory, and educational. While the need to treat stormwater and surface water is defined by state policy and a thoughtful engineering response, the design and development of these features is informed by art and social interactions.

In the case of the Sarita Wetland, the plan recommends enhancing the ecological conditions and accessibility of the Sarita Wetland with the goal of increasing use of the wetland area for educational, research, and passive recreational use, including walking and jogging pathways. As part of the greater vision for the redevelopment of the Commonwealth Terrace Cooperative, significant improvements to the Sarita Wetland would increase accessibility and enhance its role as an amenity for the campus and broader community.

Demonstration and Interpretative Planting

The distinctive landscape of the St. Paul campus can serve as a demonstration tool to make the campus setting more engaging, educational and attractive. A few strategic locations are identified for this treatment.

The first opportunity is developing a crop quad of small test plots in the informal open space just north of the Ben Pomeroy Student-Alumni Learning Center, adjacent to the centrally-located Gortner Avenue parking facility. Another location with potential is on the ‘shoulders’ of primary entry corridors to campus, along Gortner and Cleveland Avenues. With these central locations, these plots make a bold statement about the future of agriculture on the campus, as well as the University’s

commitment to the State of Minnesota.

Other opportunities to incorporate agriculture into the social hubs of the campus may include hydroponics in prominent gathering spaces on campus such as the St. Paul Student Center, or test kitchens with campus-grown produce, given the increasing popularity in food science and nutrition programs. Wellness programs that can be hosted in the natural surroundings of some of St. Paul’s most unique features (forest, lawns, and waterbodies) are a prime example of managing the landscape and experience of place to advance the vision and mission of the St. Paul campus.

Arts Walk and Other Programming Opportunities

Campus life can be enriched by building on the presence and iconic status of public art on campus, such as the Lawn’s bull sculptures. The arts walk along the academic pedestrian spine, will strengthen the open space network and serve as an opportunity to celebrate the themes of food, water, and the environment through pieces of art or interpretive signage. The walk could also increase the visibility of academic work and research around campus.

The Strategic Facilities Plan identifies several opportunities for programming open space across campus to create a variety of memorable spaces. Ideas range from organizing a communal meal on the Lawn highlighting the crops grown on campus, to investing in winter landscapes and art installations to celebrate the region’s seasonality and increase campus activity in the colder months.

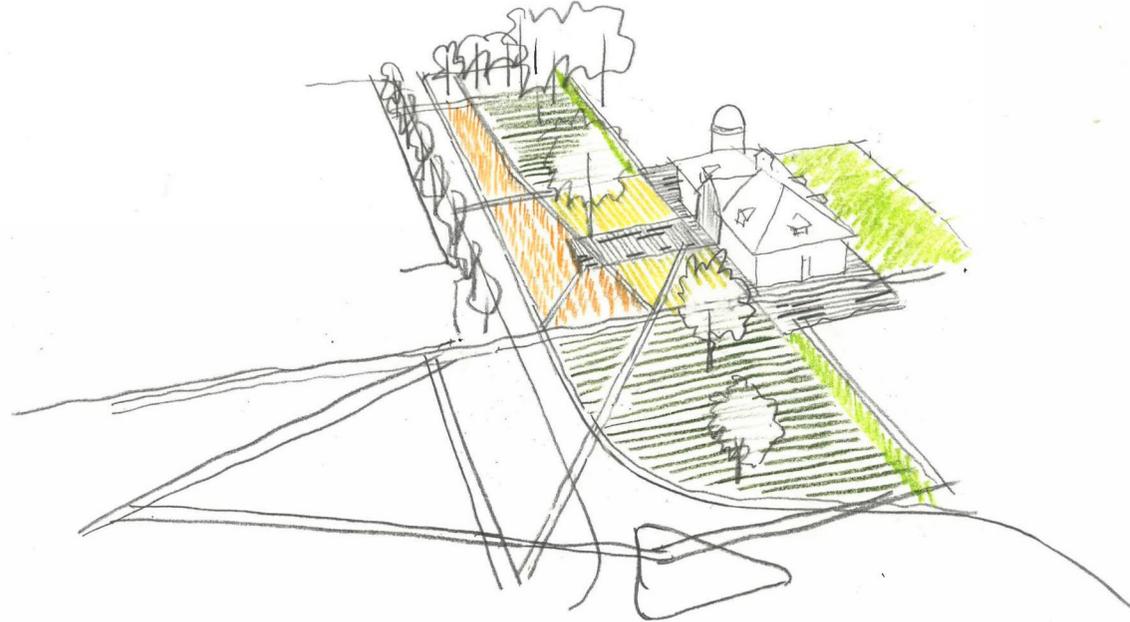


Figure 28: Potential “Crop Quad”



Figure 29: Arts Walk Precedents



Figure 30: Illustrative Framework Plan

5: Physical Plan

How Will the Plan Be Used?

The Strategic Facilities Plan will provide guidance about the physical qualities of the St. Paul campus that will enable decision-makers to define the appropriate response to changing needs and circumstances as the mission and specific needs of the University evolve over time. As a framework, it does not commit to specific projects with defined square footage and capital costs or timelines. The objectives and opportunities for change described in this section are intended to provide flexibility and consistency as to how the campus vision and mission will be realized, based on an informed and integrated understanding of the physical systems and uses of campus land, buildings, landscapes, and infrastructure.

Land Use and Circulation

Research Protected Land

Key areas of the campus that are dedicated to research or part of the open space structure should remain free of development. Strategic enhancements and interventions can be considered, as long as they improve the quality of these spaces and do not detract from their function and purpose.

Flat topography and soil conditions make the land suitable for agriculture. Over the years, the land has been divided into the active research parcels that are present on the campus today. The proximity of these parcels relative to research laboratories and the student population makes this land tremendously valuable to the mission of CFANS, CVM, and other colleges with land or horticulturally based research. It is recommended that this land be protected from future development that is not related to agricultural and veterinary uses.

Today there are over 180 acres in active research over the campus, plus an additional 55 acres in support functions, such as animal housing, storage, and forage production. This land is divided into research plots assigned to individual research projects and colleges. The land hosts a mix of both conventional and organic production systems. Typical cultivation in the plots include traditional Minnesota crops like corn, soybean, wheat, barley, and alfalfa, as well as more specialty crops including tomatoes, peppers, and industrial hemp.

Iconic Open Space

The St. Paul campus is noted for its vast areas of open spaces and naturally occurring features, such as the edge of existing bluffs, wooded ravines, or the restored Sarita Wetland. The rolling topography of the campus heavily influenced the first arrangements of buildings, which were located on a ridge facing the area known today as the Lawn. Later 19th-century buildings were sited on the ridge to the north oriented towards the Bowl. These iconic open spaces provide a grounding for all of the principal purposes of the University and should be held as open spaces in perpetuity.

Athletics and Recreation

The golf course occupies approximately 135 acres in the northwest quadrant of the St. Paul campus. It serves as a recreational and athletics destination for cross country teams as well as golf teams. The land and buildings support daily practices and regular events. Women's soccer is established at Robbie Stadium, and is also used for training and events during soccer season. Recreational and athletics uses are expected to continue, as the underlying soil conditions and the topography of the golf course land suggest this site is not optimal for agricultural purposes.

Animal Teaching Facilities

Future animal teaching and housing facilities should be maintained on the St. Paul campus. To that end, a site for new animal teaching facilities is identified on land directly south of the Leatherdale Equine Center parking lot. Future programming and planning are required to determine the type, size, and configuration for the facilities.

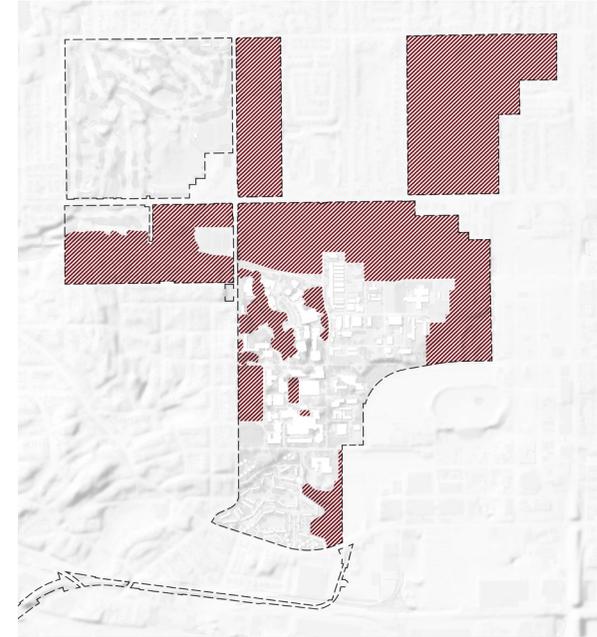


Figure 31: Protected Land and Open Space

Circulation

The Strategic Facilities Plan concepts emphasize continued investment in existing travel corridors used by pedestrians, bikes, vehicles, and transit, and the development of new paths such as the central academic spine. Service corridors that support building use, such as deliveries, will also be maintained. A minimal number of changes are expected to the street network in St. Paul, due to the limited growth scenario and the topography and nearly fully-developed status of the core campus.

To support evolution of the campus, amenities such as convenient parking, attractive human-scaled pedestrian environments, connections between buildings such as tunnels or skyways where appropriate, and comfortable transit waiting facilities are all anticipated as part of ongoing investment in the St. Paul campus.

The three primary corridors—community, research and academic—will be strengthened wherever a concentration of activity occurs, such as a cluster of high occupancy research buildings and around the St. Paul Student Center or Continuing Education and Conference Center, which offers on-campus food, retail, social, and study space destinations. As time passes, these corridors should maintain patterns of investment around key paths to maintain vibrancy, support foot traffic, and improve the quality of the walking experience.

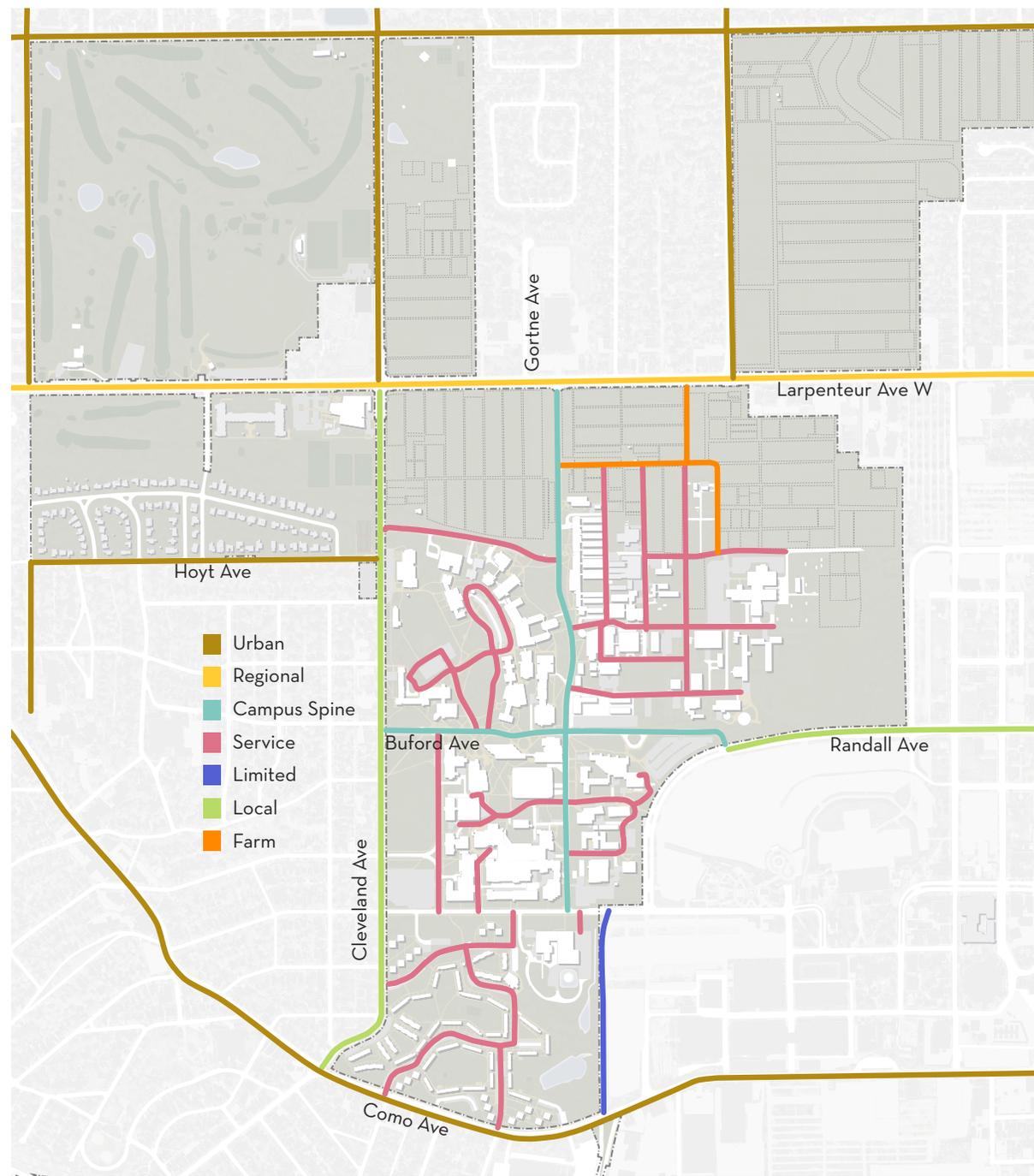


Figure 32: Road Types

Campus Opportunities

The following opportunities for change are examples of solutions to current and future campus needs. These concepts are intended to provide flexibility and consistency as to how campus vision and mission will be realized. Projects will be implemented in accordance with the University's capital improvement processes.

Campus Core

Buford Avenue is the east/west civic spine of campus. With strong anchors at either end, and student life, transit, and community amenities concentrated throughout, Buford will continue to serve as a gateway. Needed investments will transform this corridor into a 'complete street', with planting, pedestrian accommodation, and vehicle, transit, and bike facilities that encourage all forms of mobility and balance improvements to support all modes of travel.

Within the campus core, change is identified for the St. Paul Student Center site and civic spaces along Buford Avenue, as well as for Magrath Library, the Learning and Environmental Sciences (LES) building and the Continuing Education and Conference Center.

Outreach Facility Options and the Lawn

A new outreach facility will provide a hub on the St. Paul campus for the surrounding community and state of Minnesota. The outreach facility could be constructed as a farmer's market or seasonal-use facility to support events and programming, or to offer cheese, meat, and ice cream products produced on the St. Paul campus. It could support community use (on a rental basis) or support staging and hosting community events.

A potential outreach facility could be located on the SC 101 parking lot bounded by Eckles, Commonwealth, Cleveland, and Carter Avenues. The site offers good access from the community spine along Cleveland Avenue and is located between the established core of the campus and

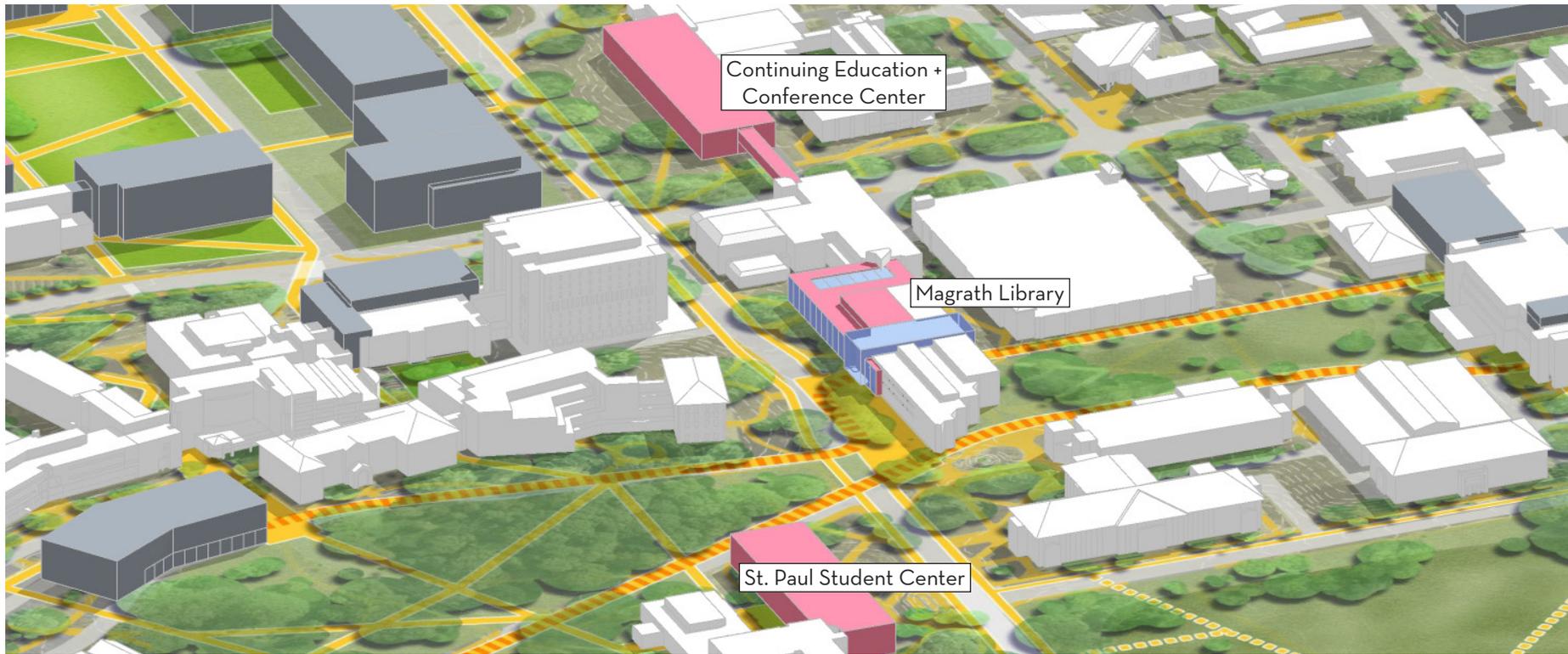


Figure 33: Campus Core Looking Southeast

the redevelopment imagined for the Commonwealth Terrace Cooperative site. It also offers convenient parking.

A second site identified as a potential outreach facility is the current St. Paul Student Center location. Overlooking the Lawn and poised next to the transit spine on Buford, close to the community corridor on Cleveland Avenue, it is a prominent location well-suited to social activity and removed from the academic core of campus. However, it has less convenience and ease of service compared to the southerly location south of the Lawn on Eckles.

Magrath Library

Magrath is optimally located at the heart of campus, yet the interior design and façade do not contribute to a welcoming student hub. The plan suggests renovating the library to create a large-scale common space at the center of the building. This space will increase the building's transparency and create a new entry to facilitate north/south

pedestrian movement. Such a space would serve as a collaboration and knowledge hub along the campus central spine and create a more welcoming entrance into the library from the north and south.

St. Paul Student Center

The idea of reinventing the St. Paul Student Center as a multi-purpose campus center is based on location potential. In order to concentrate study, gathering and amenities where most of the population is located on a daily basis, between students, researchers, instructors, and staff the location of this center should shift east. The goals is to create a destination surrounded by major academic buildings and with convenient access to parking at the Gortner Ramp-important St. Paul Student Center activity outside of daily use patterns. There are two components to determining the future of the St. Paul Student Center. First, to define the right mix and scale of activities and functions and the needed space. Second, to determine the appropriate

location and physical connections to serve resident students and daily campus workers, visitors, and students. Decisions made about the nature of services and the location of such a center will be motivated by the goal of increasing the vibrancy and vitality of student life on the St. Paul campus and ensuring a financially sustainable strategy to support campus life.

One proposed aspect of the plan is to determine whether student life functions and gathering spaces could be relocated from the existing location to a renovated and expanded building between Magrath Library and the LES Building. In order to understand the potential, a first step would be a study to determine the program scope for a successful student center on the St. Paul campus. The work would consider how to include existing programs in the St. Paul Student Center, combining student services (Boynton Health, Counseling, Career, One Stop, and others) in one location, with retail components such as food, bookstores, and

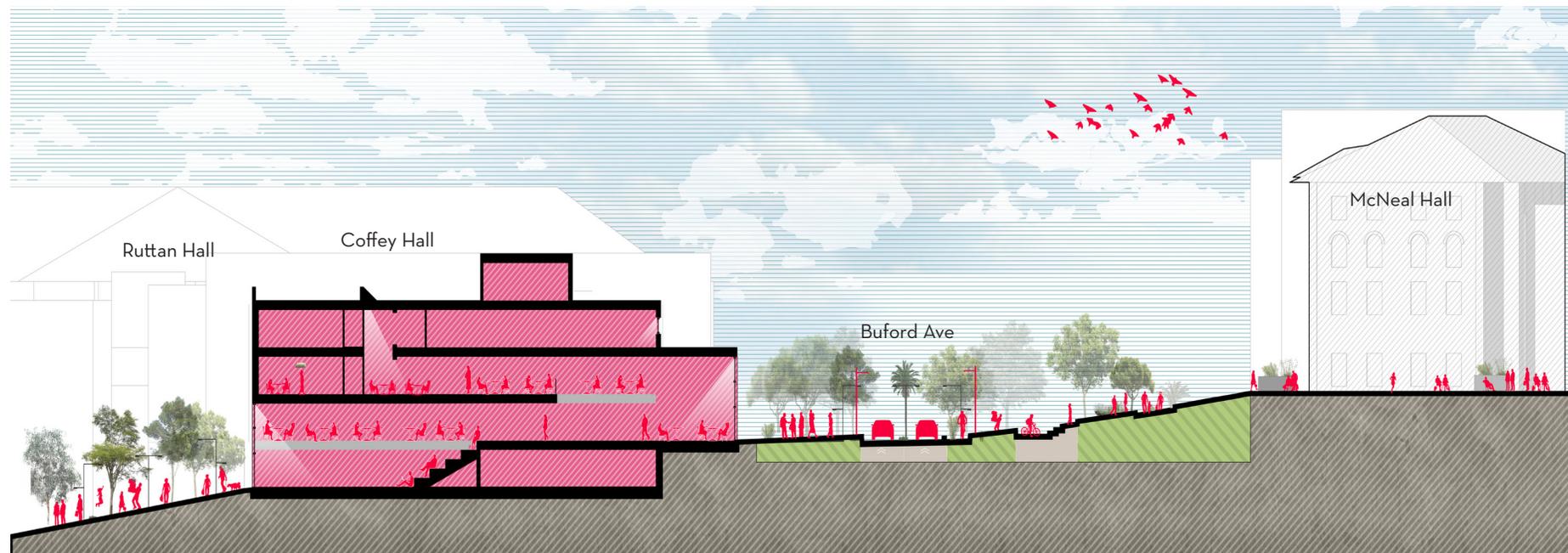


Figure 34: Magrath Library Looking West

collaboration with CFANS for a meat, cheese, and dairy store, as well as potential academic partnership with others to operate a fermentation lab and brewery. This study should also review the economic and physical impacts resulting from combining facilities and functions with the Continuing Education and Conference Center.

Once a recommended program is developed, a second step in the work effort would look at the best location for the St. Paul Student Center either in its current location or other locations. This phase of work would consider how a renovated library, needed additional space, and a renovated LES building could be reimagined as a hub for student activities. The hub of activity could be extended further east to bridge over Gortner Avenue to connect LES to the Continuing Education and Conference Center. Combined, these facilities are imagined as a new type of campus commons located at the heart of scheduled activity on the campus.

Continuing Education and Conference Center

Expansion of the Continuing Education and Conference Center to the north will link the facility to the campus civic spine. It will provide a new welcoming entry from the street and may include additional breakout and conference spaces as well

as new dining options for the campus community. Renovated food service at this location could assist in achieving efficiencies in the food service operations, if a new student center is located east of its current location. Connectivity to the facility via the potential bridge over Gortner would make it more accessible for pedestrian connections and movement of materials between storage, prep, and server locations. This change will occur when program needs and financial feasibility can be verified.

Bailey Hall

Bailey Hall is a unique and important housing option for approximately 500 first-year students who choose to attend the Twin Cities campus. Bailey will continue to be supported as an important choice for a small number of first-year students on the Twin Cities campus. Expanded living and learning communities could strengthen the programmatic association of students with the St. Paul colleges. In the long term, the potential to reconfigure Bailey Hall as a residence hall destination with different food service accommodations may be considered. Renovation could support continued use by undergraduates but focus on upper division cohorts, or first-year students who are comfortable living in apartment-style University housing.

Alternatives considered for Bailey Hall include the following:

- Creating a more appealing destination undergraduate residence hall by including new living-learning communities as well as other program activities
- Renovating the facility to meet the needs of upper division and graduate students with independent living arrangements
- Constructing a new facility designed for upper division and graduate students.

Of the three options, only the first requires a dining facility, which could be combined with other food service and food prep kitchens on campus to improve efficiencies, offer a broad choice to campus users, and reduce financial burden.

If demand from students is evident and the financial feasibility of housing redevelopment on the site is confirmed, potential demolition and reconstruction of Bailey Hall would likely be defined by additional market and project feasibility studies, to determine the best approach for housing on the campus. Any housing options will need to be considered in the context of the surrounding area, relative to off-campus housing options within a five- to ten minute walk of the core campus area of Buford and Gortner Avenues.

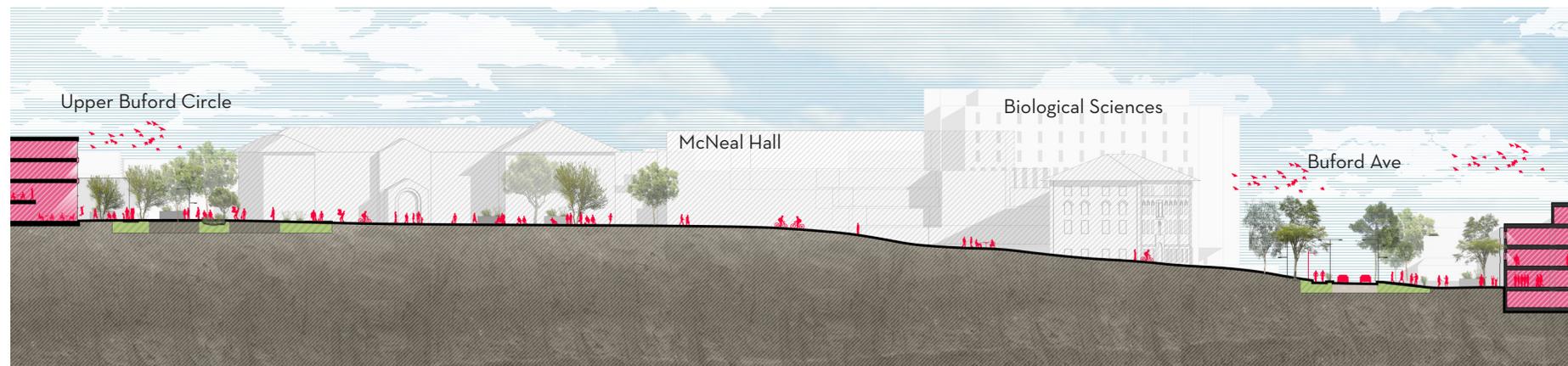


Figure 35: Lower Buford Circle Looking East

Upper Campus

The Strategic Facilities Plan identifies potential new and replacement facilities in response to the deferred maintenance and programmatic needs of CBS and CFANS.

New Academic Research Facility

One new academic research and collaboration building is proposed in the area of Upper Buford Circle. This centrally located facility is imagined as an academic and research building at the heart of the north area. The new facility will allow for the demolition of obsolete and underperforming space.

Hodson Hall Replacement

This building is recommended for potential demolition and replacement on the current site as the floor plan of the building is inefficient and the condition of the building is critical. In addition, the

building makes poor use of a strategic site that, if redeveloped, can connect the fields to the buildings located on Upper Buford Circle. Final decisions regarding potential demolition will be made after a comprehensive and inclusive assessment of relocation options is complete.

Christensen Lab

This building occupies a prominent site along Gortner Avenue. It was designed for research labs in the 1950s. The building is in poor condition and lacks the mechanical systems and structure appropriate to its current use. This building is recommended for potential demolition and replacement. Final decisions regarding potential demolition will be made after a comprehensive and inclusive assessment of relocation options is complete.

Biological Sciences Renovations

This building is a critical hub for CBS. It would benefit from a floor-by-floor renovation given the infrastructure condition and asbestos abatement challenges. Any renovation should consider the opportunity to enhance interdisciplinary research among St. Paul campus colleges.

Snyder Hall Addition

Adding to the eastern side of Snyder would create new space for CBS, and provide swing space for buildings targeted for wholesale renovation. An addition to Snyder should preserve the broad lawn along Gortner Avenue. This addition to Snyder would also improve connections east-west across Gortner Avenue to the proposed Northeast District, where University and industry research partnerships are proposed. A feasibility study is needed to verify program needs for new space.

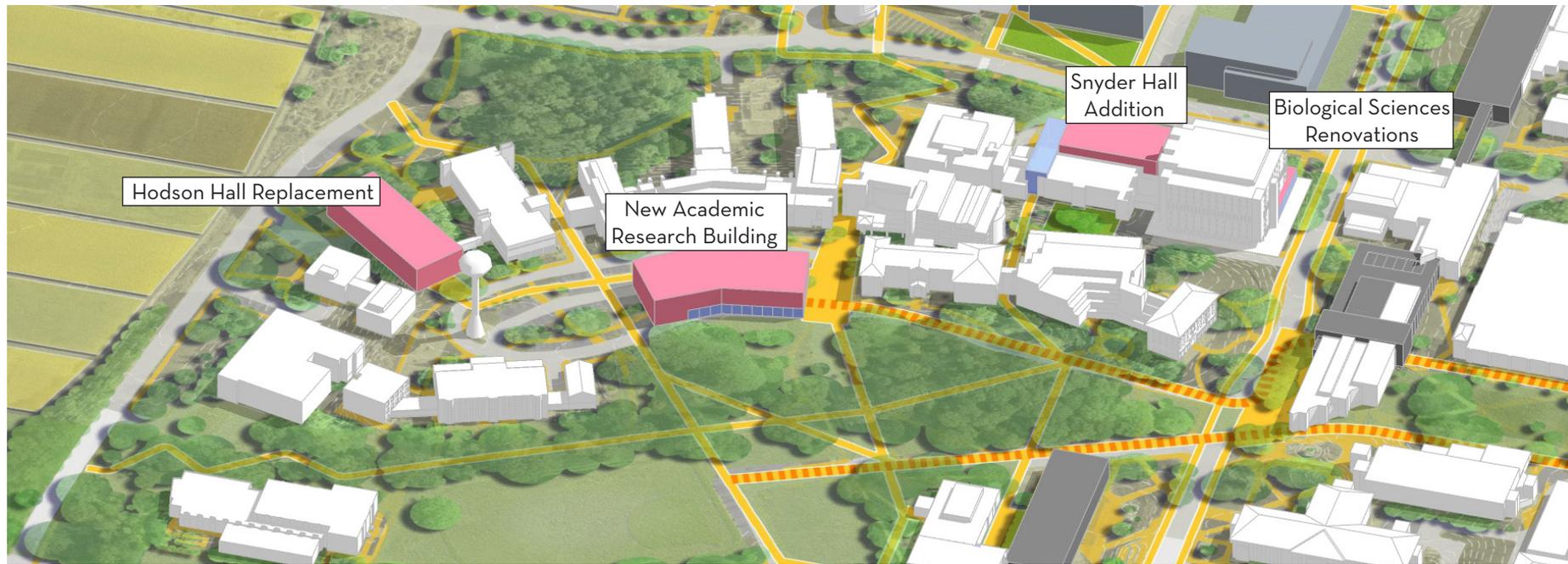


Figure 36: Upper Campus Looking East

Lower Campus

Three potential facilities are proposed as part of a long-term strategy to address deferred maintenance issues, and accommodate growth as well as evolving programmatic needs. A new research building to replace the existing critical condition Veterinary Science building is the first target. Demolition and replacement of the Veterinary Medical Center would follow. Independent of these investments but a high priority for student experience, is relocation of the Veterinary Medicine Library currently housed in the Veterinary Science building, with a student commons, close to the present day Animal Science/ Veterinary Medicine building and removing Veterinary Medicine South (116,000 GSF) and Veterinary Science.

New Veterinary Research Facility

This project would replace research labs currently located in the Veterinary Science Building and provide space for future faculty and programmatic needs. The future location of this facility is proposed for the northeast corner of Gortner and Commonwealth Avenues, adjacent to the recently completed BSL2 / BSL3 building.

Animal Science/Veterinary Medicine Addition

In order to provide needed student learning space, an addition to the east side of the facility could accommodate labs on the upper floors and a new library and student commons on the ground floor. Some of these uses are currently accommodated in the Veterinary Science building. The result would be to create a new entrance to Veterinary Medicine from the north along the proposed central academic

spine of the campus. An expansion of this building would create large, flexible classroom space and specialized research space that is not achievable in the existing building.

New Animal Hospital

A new animal hospital to replace the existing uses in Veterinary Medicine South is recommended on the site of the Veterinary Science building. This site will provide a new front door to the Veterinary Medicine area of campus with good connectivity and options for parking. This prominent site presents an opportunity to renew and replace portions of the Veterinary Medical Center. A new animal hospital is considered a long-term capital investment. As part of building a new animal hospital, the Veterinary Science building is recommended for potential demolition and replacement. Veterinary Science houses research labs, teaching labs, the Veterinary Medical Library, and administrative offices for the

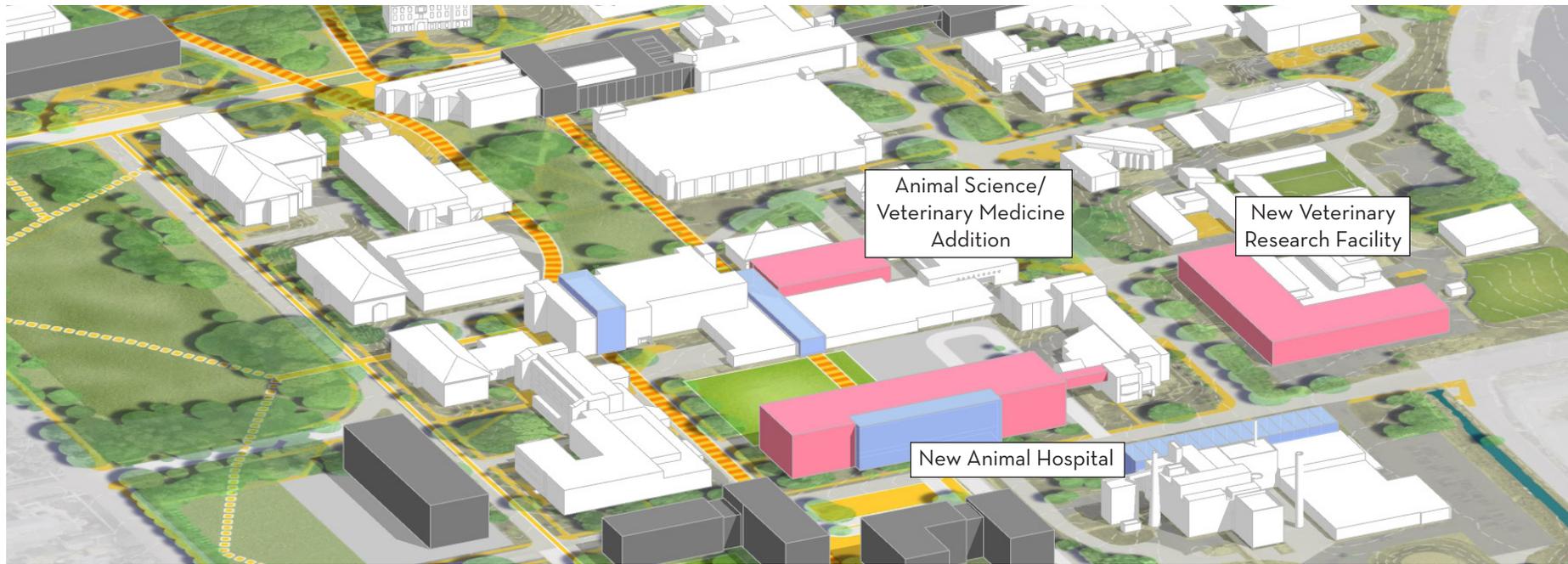


Figure 37: Lower Campus Looking Northeast

College of Veterinary Medicine. It is an essential component of the college's space portfolio, yet it is in poor condition and is not well suited to its current use. Careful planning and coordination will ensure current activities are served in new locations.

Northeast District

The original Northeast District Plan (2001) mapped an area for research-based partnerships. A few partnership facilities were created after this plan was defined, primarily focused on support of University and private-sector research activities in more traditional research environments. This plan calls for land to be reserved so that built facilities serving both institutional and private-sector partners

will be focused on disciplines and activities specific to St. Paul. In this way, partnership facilities will complement the ongoing East Bank initiatives and other research facility investments planned elsewhere on the St. Paul campus.

Facilities that support startup and research initiatives in the area of food, water, and the environment will be advanced in this location. Investments made in this area will extend interactions with business and private organizations that have aligned interests and objectives with the mission of the University and the St. Paul campus. Several redevelopment sites are defined around a central open space or quad, where crop demonstration planting might occur. In addition to research partnership facilities, build

out would prompt construction of a parking garage at the northeast corner of Gortner and Buford. Parking would be developed to serve the needs of the Northeast District, as well as the existing research and outreach facilities east of Gortner, and offer replacement for parking spaces displaced by development along Upper Buford Circle. Public-facing facilities and functions are proposed for the ground floor and elevation for a new parking facility to activate the corner of Gortner and Buford. Animal teaching facilities displaced by this effort will be relocated to a dedicated animal teaching facility on the St. Paul campus. Seed processing storage and field equipment storage will also require a new, consolidated seed facility to support ongoing research.

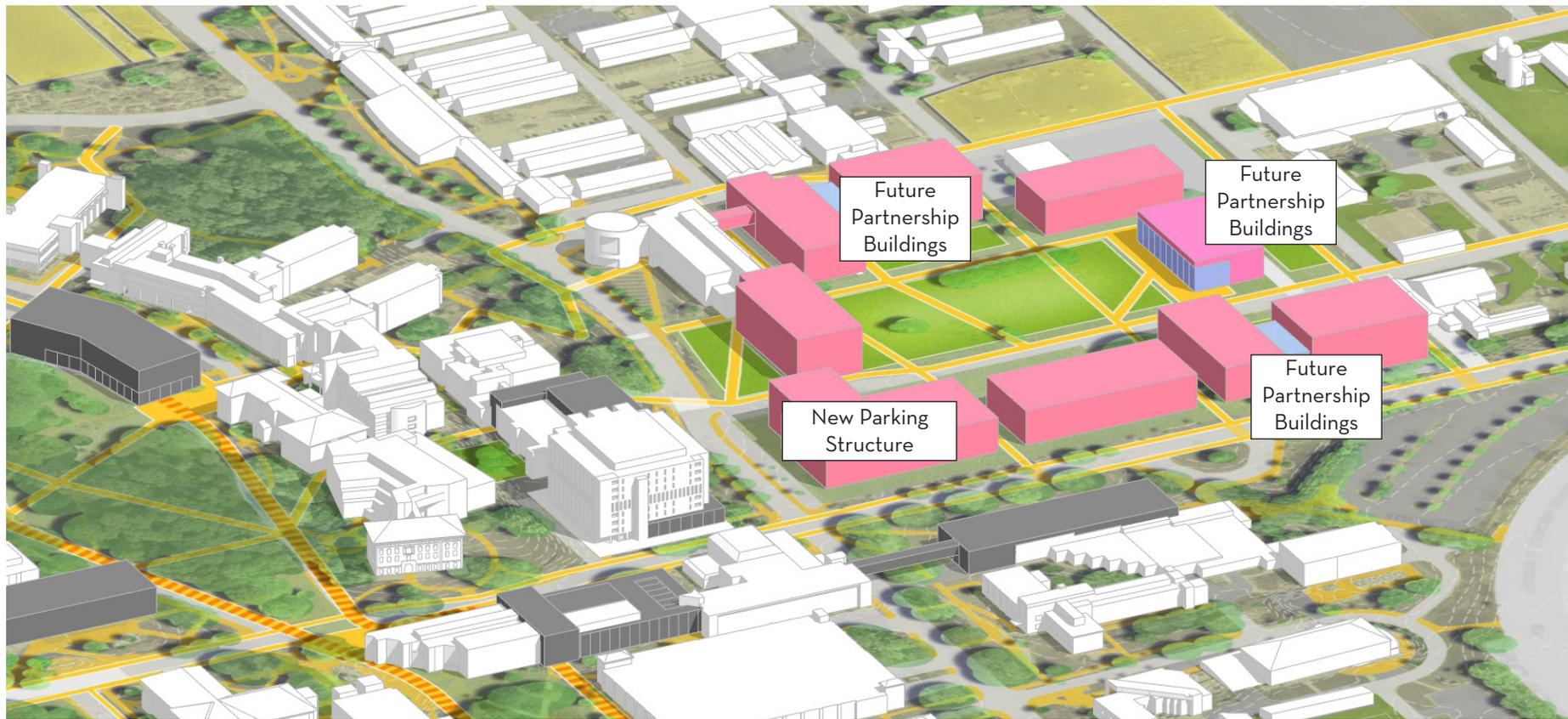


Figure 38: Northeast District Looking Northeast

South Campus

The South Campus, including the Commonwealth Terrace Cooperative, is identified as an opportunity for redevelopment given the current condition and configuration of existing buildings. Future planning will explore alternatives for affordable student housing, neighborhood retail, and childcare, and analyze potential for alumni, staff, and faculty housing. The study will include a focus on the safety and livability issues for graduate and post-doc families.

Higher education institutions, such as UC Davis in California and Simon Fraser University in Burnaby, British Columbia, have successfully utilized P3 partnerships to generate new sources of revenue through financial agreements. Redevelopment opportunities are subject to future market and site planning studies in association with the private sector. Plans for development, especially retail along Como Avenue, will need to be coordinated with adjacent cities, including both the City of Falcon Heights and the City of St. Paul.

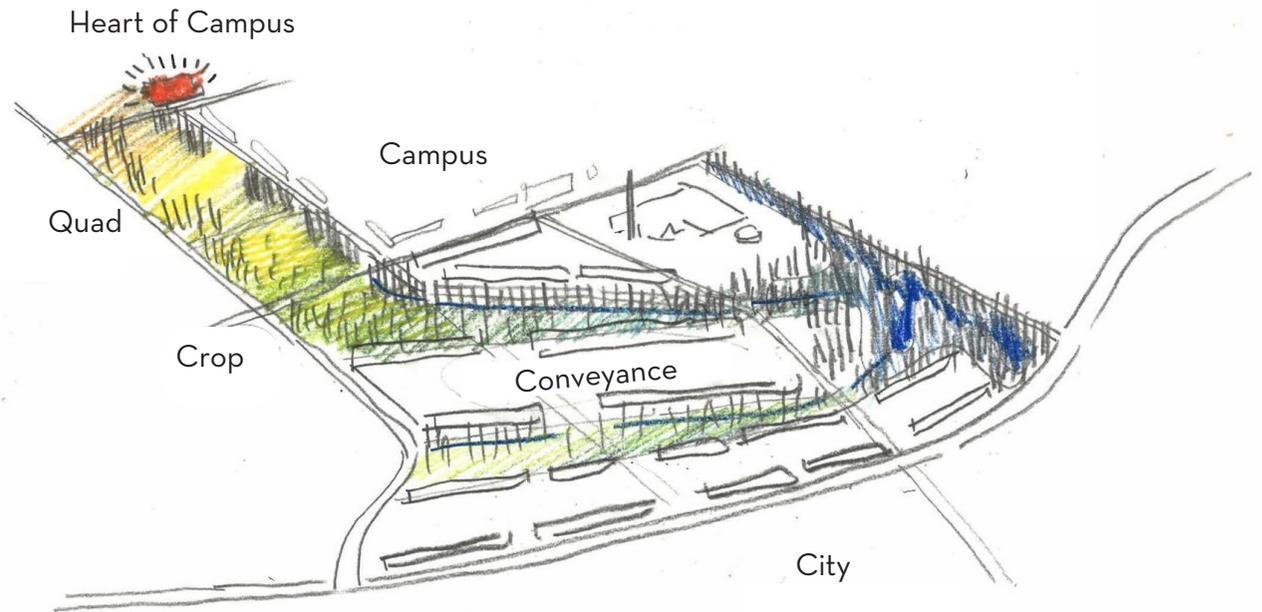


Figure 39: South Campus Open Space Network

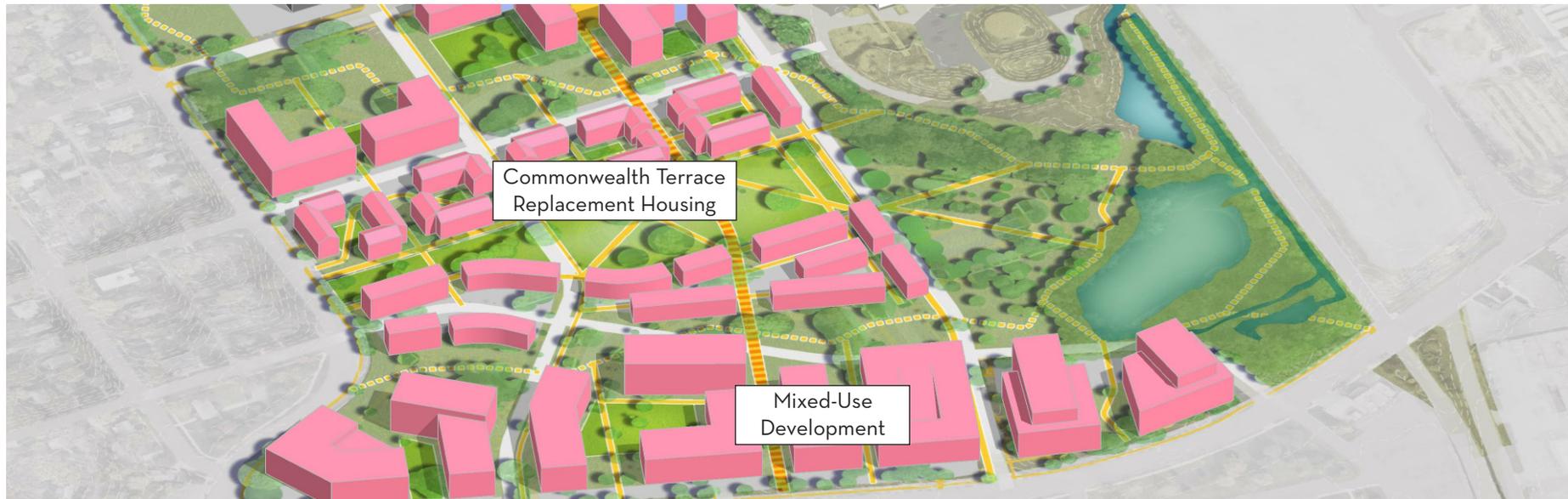


Figure 40: South Campus Looking North East

Capital Improvement Process

Timeline

The Strategic Facilities Plan assumes a long horizon for change of 20 years or more, with immediate implementation on high-priority projects within a five-year timeframe. The plan defines concepts for change for all areas of the campus, with the expectation that specific recommendations will require further exploration and discussion. Some of the recommended changes are small in scale; others are transformative and must happen through a

series of incremental steps over time. Still others are dependent on the involvement of other parties to spur significant change, such as partners within the Northeast District. The plan does not define project-level details for facilities, either in physical form or in cost, for most concepts outlined in the document.

Given all the unknowns associated with future events, the fundamental principles defined in the vision, mission, and plan objectives will serve as guidance for ongoing decision-making. Most projects that will follow from these initial concepts are yet to be defined. This flexibility is intended so that the decision-making process for future projects can uphold the intent of the plan to determine what remains consistent with high-level parameters shared among stakeholders and decision-makers. See Implementation and Next Steps on page 60 for additional detail regarding likely next steps, and related timelines.

CAPITAL IMPROVEMENT PROCESS					
	Proposal and Project Definition	Planning and Feasibility	Predesign	Resource Acquisition	Implementation
STAGE	RRC Portfolio Plan → Project Request	Feasibility → Six Year Plan	Predesign	Resource Acquisition → Annual Capital Budget	Design → Construction
APPROVAL	Chancellor/ VP/Dean for Sponsoring Unit	Capital Strategy Group	Capital Oversight Group	Capital Oversight Group/ Board of Regents	Capital Oversight Group
KEY QUESTIONS	- What is the problem?	- How big is the problem-scope, scale, alternatives? - Is this a problem we should be trying to solve? - Is this the most important problem to solve? - What is the funding strategy? - What are the priorities? - Order of magnitude cost estimating.	- What are we going to do. - How much will it cost? - Who is going to pay?	- Do we have funding? - Are we approved to spend?	- On Budget? - On Schedule?

Figure 41: Capital Improvement Process, 2017

Six-Year Plan/Annual Capital Budget

The University's capital improvements program includes all capital projects, regardless of size, financed with state and University funds, and all departmentally funded projects exceeding \$1.0 million. It is approved annually by the Board of Regents. This long-range planning tool uses a six-year horizon to forecast capital investments that support the University's mission.

The capital improvements program is an annual process that assesses capital needs, opportunities, and resources, evaluates the conformity of potential projects with academic priorities and facility investment strategies, and establishes priorities for project implementation based on the direction provided by senior University leadership.

Every year, the annual capital budget tool is assembled for Board of Regents approval. It serves as authorization to engage in design and construction for qualified capital investments. It includes all capital projects for which funding is available.

The current Six-year Capital Plan includes major capital improvements planned for calendar years 2019 through 2024 (FY2020 to FY2025.) St. Paul projects recorded in the current Six-year Capital Plan include the St. Paul Student Center and St. Paul Research Labs capital investment. For more information, see the University of Minnesota Budget Office website at: http://finance.University of Minnesota.edu/budget_capital.html

Project Development

As capital projects are defined based on opportunities described in this plan, the University's formal capital project process will engage users, occupants, sponsoring units, and adjacent neighbors in the development of all details of a project. Below is a sample of the engagement channels and processes used in a typical University of Minnesota project development process:

Advisory Committees-

Project advisory committees are responsible for directing the progress of a project, with input from focus groups, community meetings, and survey tools. Advisory committee members typically represent primary user groups as well as collegiate administration and operations staff. Participation in these committees is typically defined by invitation in a project charge, and approved by University leadership.

Focus Groups and Surveys

Targeted stakeholder groups representing students, faculty, and staff are often convened over the life of a project to provide detailed review and insight appropriate to the study. Focus group members are typically invited to participate by student groups, departments, or colleges. The discussions and conclusions of these meetings provide important input to project planning and design.

Often, project teams create surveys for users to understand priorities and opportunities for change. The responses are directly integrated into the planning, programming, and design process.

Online and physical space surveys are used to gather broad input and concerns, to improve knowledge of existing conditions, and to ratify the project objectives by confirming the needs and constraints experienced by users.

Community Meetings

Community or open house meetings help to identify issues and opportunities, gather input on preliminary strategies, and provide opportunities for feedback plan recommendations. Projects that are developed at the campus edge, or create significant impacts on the surrounding area, are the subject of detailed planning with members of the community.

Project Websites and Email Updates

Project websites provide a resource for regular status updates and project timelines. As a project moves into construction, photographic progress is accessible through these pages. Supportive project information related to project details (program, budget, schedule) is also available.

Email subscriptions are often popular with a large population of users, community members, or other interested parties. These updates are often used to communicate project progress and notices for construction activity, and to make available other relevant information about an in-progress capital project. The responses are directly integrated into the planning, programming, and design process.

Planning and Design Phases

Feasibility

The planning and feasibility phase seeks to define the need and order of magnitude cost and operational impact of new or remodeled physical facilities. Through this effort, the University is able to answer questions of priority, timing, scope of work, and funding strategy.

Key components of the feasibility study include the following:

- General statement of the goals and objectives of the unit
- Full description of the activities and methodologies of the unit, including both present and projected situations in the immediate and long term
- Student, faculty, staff, and visitor populations served, in the immediate and long term
- Preliminary description of physical program and alternatives, including special equipment and design requirements
- Assessment in impact to existing utilities, campus systems, and activities
- Order of magnitude cost estimate after verification of the program need and financial and operating cost impacts to the unit and the University, including faculty, staff, and program operations, research revenue and expenses, tuition generated by the program, and other revenues and expenses

Predesign

The predesign phase establishes what new facilities will be required to fulfill present and projected needs and how available resources can be used to meet needs. The opportunity to apply concepts of regenerative design practices can be pursued at this stage in a project's development. The predesign phase of work engages the question of balancing first cost against full life-cycle cost of facilities. During predesign, the unit's objectives, space requirements, and operational plan will be translated into a facility program in sufficient detail to bring the project to the Board of Regents for approval for the Annual Capital Budget, and to direct the design team throughout the project design process.

Key components of the predesign include the following:

- In-depth review of the unit's functional requirements
- Examination of existing facilities inventory
- Space standards, planning documents, and building standards applicable to the project
- Total project budget and project schedule

Design and Construction

The design phase refines and builds upon the scope, conceptual design, scale, and relationships among the components of the project. The project quality, scope, budget, and schedule is confirmed and refined prior to construction. The project program will be reviewed in detail and alternative design solutions discussed, thereby providing a reasonable basis for developing a cost analysis of the project.

The construction phase of the project is to build, based on the agreed-upon drawings and specifications, at the quality level defined in construction documents and in alignment with the budget, schedule, and scope approved by the University.

Implementation and Next Steps

The Strategic Facilities Plan is a framework for future growth and change. It will be adapted over time in response to strategic decisions and the mission-driven needs of the University. The plan defines concepts for change for all areas of the campus, with the expectation that specific recommendations will require further exploration and discussion. Some of the recommended changes are small in scale; others are transformative and must happen through a series of incremental steps over time. Still others are dependent on the involvement of other parties to spur significant change, such as partners within the Northeast District. The plan does not define project-level details for facilities, either in physical form or in cost, for most concepts outlined in the document.

The fundamental principles defined in the vision, mission, and plan objectives will serve as guidance for ongoing decision-making. Most projects that will follow from these initial concepts are yet to be defined. This flexibility is intended so that the decision-making process for future projects can uphold the intent of the plan to determine what remains consistent with high-level parameters shared among stakeholders and decision-makers. The short-term timeline (within 0-2 years) focuses on undertaking feasibility studies and assessments of the first priority projects emerging from the planning activity.

Academic Initiatives: Next Steps

Criteria for Reinvestment and Demolition Strategy

The plan advocates a regenerative approach to building renewal across the St. Paul campus. It considers the highest and best use of each building as a primary organizing principle. Given the age of the building stock and poor condition of many facilities, it is vital that space solutions serve multiple departments and uses. The phasing of upgrades is intended to result in better space utilization, a more dynamic campus, and the capacity for growth within the existing buildings. This also requires management of space use across colleges and departments, an increase in the amount of centrally scheduled space, and coordination of investment in resources for research. The intended payoff is a more financially sustainable and strategically planned ecosystem of buildings and space.

Guidelines for Accommodating Displaced Units or Functions

The following guidelines are established to minimize disruption to units impacted by capital investment projects on the St. Paul campus:

- Phase investments to ensure departments need to move once only. Temporary space is discouraged.
- Co-locate faculty, staff, and functions based on understanding of work flow and interactions where possible.
- Engage colleges and those directly affected as part of the project process, through typical space planning efforts.

- Involve stakeholders in planning for impacts, including options, flexibility in timing, and accommodation possibilities.

Academic Program Relocation Strategy

The St. Paul Strategic Facilities Plan supports the long-term goals of the College of Design and College of Education and Human Development to shift programs between the St. Paul and East Bank campuses. Two parallel planning efforts are needed to advance these goals focused on McNeal Hall in St. Paul, and on the Armory, 10 Church Street, and Rapson Hall on the East Bank campus.

The studies will include multiple building options, program definition, test fit, and capital and operating costs.

Upper Campus Space Assessment

An assessment of existing teaching and research facilities areas is a first step to prioritizing the opportunities for change outlined in this report for the Upper Campus. The study will address critical factors such as functionality, quality of space, key adjacencies, and use of specialized and other support functions. Existing facilities will be selected for study based on condition, collegiate priority, and space type/ need. The objective is to understand existing and future space needs for the population of researchers accommodated in existing buildings.

Building Renewal Investment Prioritization

This study will review and prioritize reinvestment in existing academic and research buildings in the Upper Campus. All funding sources such as: HEAPR, R&R, programmatic sources, state bonding, and University debt, will be considered as potential resources.

Feasibility Study: St. Paul Capital Renewal 2022 SYP Project

The focus of this investment will be determined pending the outcomes of the Upper Campus Space Assessment and Building Renewal Investment Prioritization efforts. The feasibility study for this project will confirm scope, program requirements, impacts (including displacement), location, budget, and schedule to define the St. Paul Capital Renewal placeholder identified for funding in 2022 in the approved Six-year Capital Plan

Feasibility Study: Veterinary Science

This study will determine scope, program requirements, impacts, location, budget, and schedule to replace the existing Veterinary Science building.

Feasibility Study: Animal Teaching

This study will determine scope, program requirements, impacts, location, budget, and schedule for a facility that will support long-term needs for animal teaching and outreach on the St. Paul campus. A long-term strategy for animal teaching is necessary to advance planning for the research partnership area in the Northeast District.

Partnership Districts: Next Steps

Concept Development and Market Analysis: South Campus

This study will explore in greater depth the concept for renewed and affordable housing at Commonwealth Terrace Cooperative, enhanced wetlands with trails and shared outdoor spaces, and

requirements for neighborhood services and retail. The University will solicit interest from potential development partners for affordable housing, small-scale retail, and services. Demand, typology, and amenities for housing on campus and in the neighborhoods surrounding the St. Paul campus will be considered.

Concept Development and Market Analysis: Northeast District

This study will determine the level of interest and market demand for colocation opportunities with businesses, private organizations, and nonprofits to support startup and research initiatives and interdisciplinary research teams. In addition, the study will define site capacity and infrastructure needs and develop a preliminary outline for displacement impacts including seed processing, seed storage, non-university entities, and equipment storage.

Campus Life Initiatives: Next Steps

Wayfinding and Welcoming Initiatives

Unique outreach activity and relative ease of access to the St. Paul campus offers an opportunity to make the visitor experience outstanding. Faculty and staff across multiple St. Paul units continue to coordinate efforts to improve visitor experience. Short-term priorities will focus on expanding coordinated and targeted communication to visitors. Ongoing work to create comprehensive signage is also desired. Maintaining investments in support infrastructure targeted at visitor experiences (convenient and valued amenities, wayfinding, appropriate meeting spaces, and access to parking and transit) will

continue to be a priority for the St. Paul campus, so it can realize its potential as a regional destination for multiple types of activity.

Feasibility Study: Student Center

This effort will determine program scope, demand for services, facility requirements, business case, and capital cost. Alternative food, beverage, and retail offerings will also be considered. Depending scope of building program, a site evaluation would follow to determine best locations for a new student Center.

Bailey Hall and Student Housing

This study will determine scope and budget for limited renewal of Bailey Hall. The University will conduct a survey of St. Paul-based undergraduate housing choices. The study will include a market- survey of the private sector, off-campus housing supply to understand opportunities for undergraduate residency near the St. Paul campus.

Food Service Operations

This study will determine the feasibility of consolidation based on consumer interest, current and future demand levels, economics of food purchasing, and capital and operating costs.

Feasibility Study: St. Paul Gymnasium

This planning effort will incorporate findings of the Strategic Facilities Plan to complete a feasibility study for renovation or expansion of the St. Paul Gymnasium. All current activities and events for University Recreation & Wellness; fitness programs, youth programs, intramural sports, aquatic programs and daily use by students, staff, and faculty, will be supported by the study.

