Campus Plan 2050

Blueprint for Our Future

CAMPUS PLAN
2050

Land Acknowledgment

The University of Michigan is located on the traditional territory of the Anishinaabe people. In 1817, the Ojibwe, Odawa, and Bodewadami Nations made the largest single land transfer to the University of Michigan. This was offered ceremonially as a gift through the Treaty at the Foot of the Rapids so that their children could be educated. Through these words of acknowledgment, their contemporary and ancestral ties to the land and their contributions to the university are renewed and reaffirmed.

As part of this forward-focused plan, the university acknowledges and respects its history, traditions, and core values of integrity, respect, inclusion, equity, diversity, and innovation. By honoring these foundational principles, the institution strives to cultivate a thoughtfully created environment that honors its history and fosters a community that is inclusive and equitable for all. This commitment to both tradition and progress helps ensure the university remains a beacon of excellence and innovation in higher education.

Santa J. Ono, President

The University of Michigan is committed to pursuing solutions to the most pressing challenges of our time, to serving, to leading, and to becoming the defining public university. Our campus environment must evolve and develop to support and sustain that journey, responding to the call of Vision 2034 and to the academic, research, and outreach goals of the university for generations to come.

Campus Plan 2050 is the result of more than a year of engagement and deliberation with faculty, staff, students, alumni, and community partners to consider ideas for the future of the Ann Arbor campus. These contributions are inextricably woven into Campus Plan 2050 to guide the future of our physical campus and provide essential infrastructure. Our plan is essential for animating the impact areas of Vision 2034 — life-changing education; human health and well-being; democracy, civic and global engagement; and climate action, sustainability and environmental justice — through a physical environment that strengthens connections throughout the campus community and provides spaces and places for engagement and collaboration.

Long-term strategic investments in our physical environment will modernize existing academic facilities and develop new ones. Our 25-year plan identifies a range of zones for possible development and envisions new systems for thoughtful greenspaces, exciting mobility enhancements, and innovation districts offering vibrant spaces and amenities to nurture interdisciplinary discovery, entrepreneurship, and private-public partnerships.

Connectivity and collaboration are vital to our vision and foundational to our campus plan. The plan could bring bold new environmentally responsible transportation to link the five major campus areas in Ann Arbor though a possible automated transit system on an elevated guideway paired with a rapid transit bus system.

Sustainability is at the heart of it all. We will prioritize environmentally responsible practices in all aspects of campus development, from construction to transportation systems to efficient and renewable energy, eliminating direct on-campus greenhouse gas emissions by 2040 and becoming a model of sustainability and decarbonization through strategic investment and renewal.

This living plan represents our commitment to our vision, our ethos, and our mission. We will draw on more than 200 years of excellence and storied tradition to build and create, to aspire and achieve, and to create a future that exceeds our dreams.

Look to Michigan to meet tough challenges with bold innovation as we become the defining public university in service to humanity.

Santa J. Ono
President, University of Michigan

University of Michigan Mission

The mission of the University of Michigan is to serve the people of Michigan and the world through preeminence in creating, communicating, preserving, and applying knowledge, art, and academic values, and in developing leaders and citizens who will challenge the present and enrich the future.

Developed in parallel with the 10-year vision for the university (Vision 2034), Campus Plan 2050 offers guidance for the physical development of the Ann Arbor campus in support of the University of Michigan's mission and vision. The plan supports mission-driven needs; reinforces U-M's role in creating a welcoming, inclusive, and accessible place; promotes equitable experiences and amenities across the Ann Arbor campus; preserves and enhances connections to open space in the interest of health and well-being initiatives; guides investment in existing and new space to strengthen instruction, collaboration, and promote innovation; contributes to sustainability, resiliency, and climate action goals; and enhances mobility.

Vision 2034

The University of Michigan will be the defining public university, boldly exemplified by our innovation and service to the common good. We will leverage our interdisciplinarity and excellence at scale to educate learners, advance society, and make groundbreaking discoveries to impact the greatest challenges facing humanity.

Over the next 10 years, we will harness our unparalleled excellence and vast intellectual resources to make dramatic, focused, and demonstrable advancements in service to humanity.

Campus Plan 2050 offers physical planning for UM-Ann Arbor with the recognition that each of its five campuses does not function independently, but rather are part of a single campus. With advances in technology and the continued focus on research and interdisciplinary activities, collaboration is increasing across all units and campuses, resulting in greater opportunity for UM-Ann Arbor to better function as a unified campus.

Facilitated by a possible automated transit system (ATS) and bus rapid transit (BRT), Campus Plan 2050 supports the continued expansion of academic and research functions on a reimagined North Campus over the next 25 years — while ensuring that reinvestment in all campuses serves the community through recommendations responsive to the impact areas and core commitments of Vision 2034.

Impact Area 1

Life-Changing Education

Learning has the power to transform everything it touches — and does not merely happen inside of a classroom. Access to education and life-changing experiences expands knowledge and improves lives to create a positive impact on the future of our society. In the next decade, U-M will become the place where others turn to see what revolutionizing education can look like.

Impact Area 2

Human Health and Well-Being

Health and well-being is a fundamental human right. With this principle in mind, U-M aspires to become a model of excellence for meeting the public health challenges facing our society, as well as addressing the needs within our U-M campus communities. As an early adopter of the Okanagan Charter in the United States, U-M is committed to continuing to embed health into all aspects of our culture.

Impact Area 3

Democracy, Civic and Global Engagement

As the defining public institution, U-M promotes democratic ideals, such as freedom of expression, civil engagement, equal protection, and respect across differences. In the next decade, U-M will continue to focus on expanding our community's understanding of democratic practices and principles and work to enhance public conversation at U-M by nurturing spaces where respectful and meaningful dialogue can flourish.

Impact Area 4

Climate Action, Sustainability and Environmental Justice

U-M is uniquely positioned to demonstrate and lead climate change mitigation and adaptation through groundbreaking research, revolutionary education, campus operations, and creative programming designed to increase resilience and minimize avoidable impacts. U-M will utilize a multi-strategy approach to achieve carbon neutrality by 2040 through energy efficiency, electricity from renewables, and fossil-free heating and cooling strategies.

Core Commitments

To fully realize our vision as the defining public university, we will make strategic investments in core commitments designed to advance our mission and boldly affirm the critical role of higher education in society for generations to come.

Purpose-Driven Education and Student Experience

U-M will lead the way to deliver a holistic approach to supporting intellectual growth and well-being while also preparing learners for careers and diverse experiential opportunities that are valuable and meaningful.

Research, Scholarship, Discovery, and Artificial Intelligence

The research enterprise at U-M generates knowledge that advances society. In the coming years, U-M will be more committed than ever to investing in new learning, design, technologies, and approaches that empower transdisciplinary research at a tremendous scale.

Community Health, Support, Prevention, and Performance

U-M will broaden efforts for improved access to health and prevention services, enhance wellness support and prevention infrastructure, and cultivate greater interdisciplinarity within healthcare education to support an environment where people thrive.

Arts and Creative Expression

The arts and humanities are essential to the flourishing of a society and its people. U-M commits to supporting the creation of art and cutting-edge spaces essential to artistic innovation and rich public engagement.

Faculty and Staff Engagement and Experience

U-M will develop plans that support the faculty and staff through the employment cycle, infuse the Culture Journey values into our campus ethos, and create further consistency in the faculty and staff experience.

Innovation, Partnerships, and Economic Development

U-M aims to generate a pulse of innovation and growth that reverberates across the state through stronger community partnerships, the development of an innovation district, expansion of its research enterprise, and enhanced partnerships with national laboratories.

Campus Plan 2050: Blueprint for Our Future

The University of Michigan's mission and 10-year strategic vision (Vision 2034) set the stage for the creation of this comprehensive physical campus plan, designed to respond to the ever-changing needs of a growing academic community for the next 25 years. As the university continues to evolve, it becomes increasingly important to address critical needs such as engaging in extensive reinvestment, accommodating growth, ensuring accessibility, promoting sustainability and climate action, enhancing connectivity, and providing flexibility. Each of these needs will result in future considerations surrounding housing, dining, instructional spaces, research spaces, and more.

Campus Plan 2050 addresses numerous physical improvements across academic, research, clinical, and student life areas, including deferred maintenance, accessibility improvements, technology optimizations, and other updates. To meet contemporary instructional methods and address current space constraints, the plan calls for an increase in state-of-the-art classrooms. Emphasizing the need for better-configured and technologically advanced research spaces, the creation of collaborative facilities is crucial for supporting multidisciplinary and interdisciplinary research. Furthermore, the plan recognizes the importance of expanding and enhancing the student experience through new facilities, such as housing, recreation centers, and student centers, to respond to recent growth and unmet demand, ultimately fostering a stronger sense of community on campus. The plan emphasizes the importance of balancing parking needs across all campuses while integrating enhanced transit options into a unified approach.

These priorities reflect U-M's commitment to becoming the defining public university, meeting the diverse aspirations of its students, faculty, and staff while also tackling global challenges like carbon neutrality and democratic engagement.

Designed to align with and support Vision 2034, this plan integrates Vision's four impact areas into planning themes, adding a fifth theme focused on collaboration and connectivity. By exploring various development possibilities across all the Ann Arbor campuses, the plan stands as the most transformative and comprehensive effort to date. It provides a forward-focused, flexible physical framework for decision-making, enabling U-M to adapt to changing needs and opportunities.

Key strategies within this plan include: reinvesting in existing physical infrastructure, strategically investing in new developments, achieving our carbon neutrality goals, and enhancing connectivity across Ann Arbor's five campuses. By implementing these strategies, the university aims to create a sustainable, inclusive, and innovative environment that supports both the overarching mission and individual aspirations of U-M community members.

Campus Plan 2050 Planning Themes

- Life-Changing Education
- Human Health and Well-Being
- Democracy, Civic and Global Engagement
- Climate Action, Sustainability and Environmental Justice
- Collaboration and Connectivity

Figure 01. Ann Arbor Campus 2050
Current Conditions

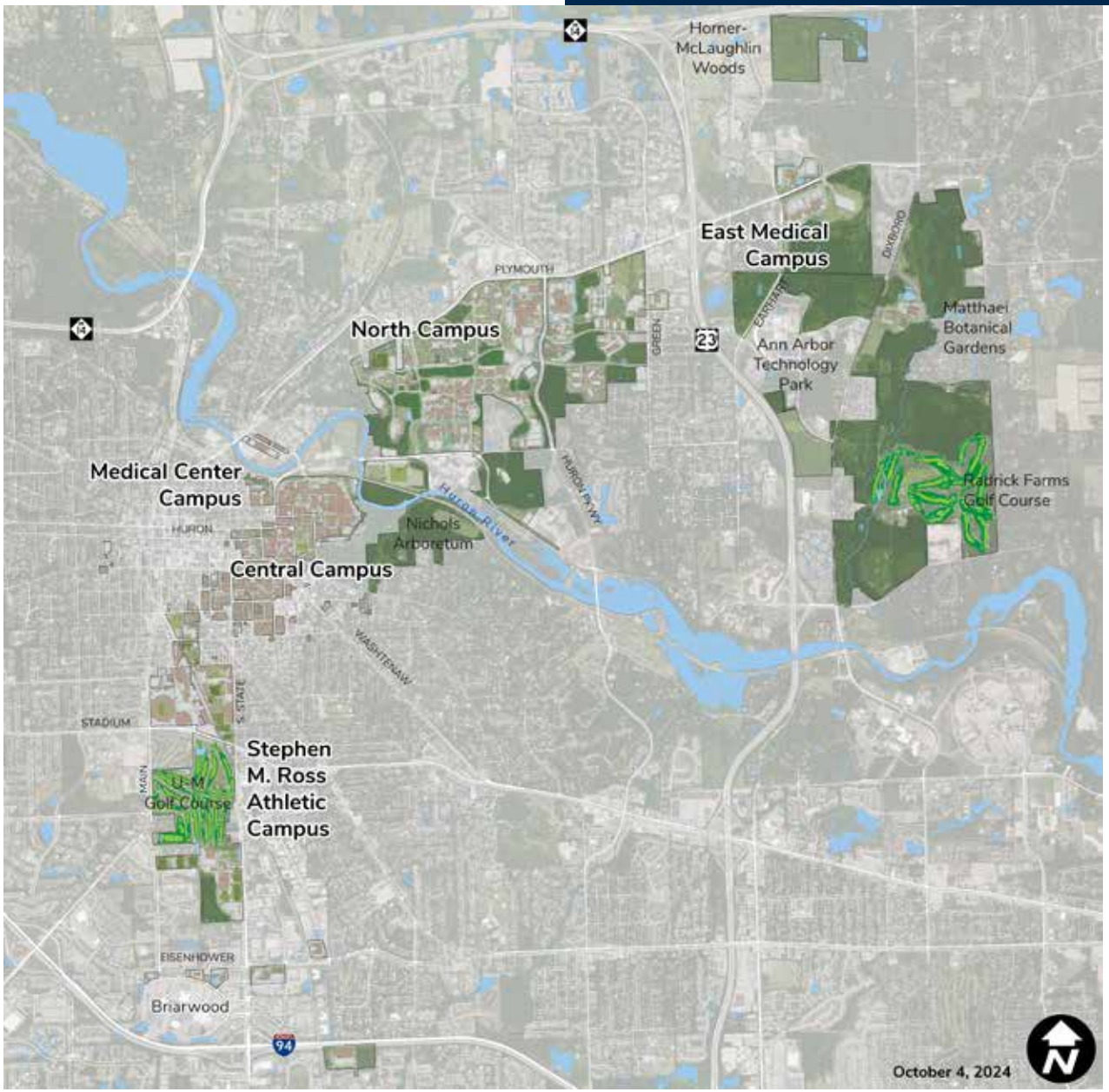
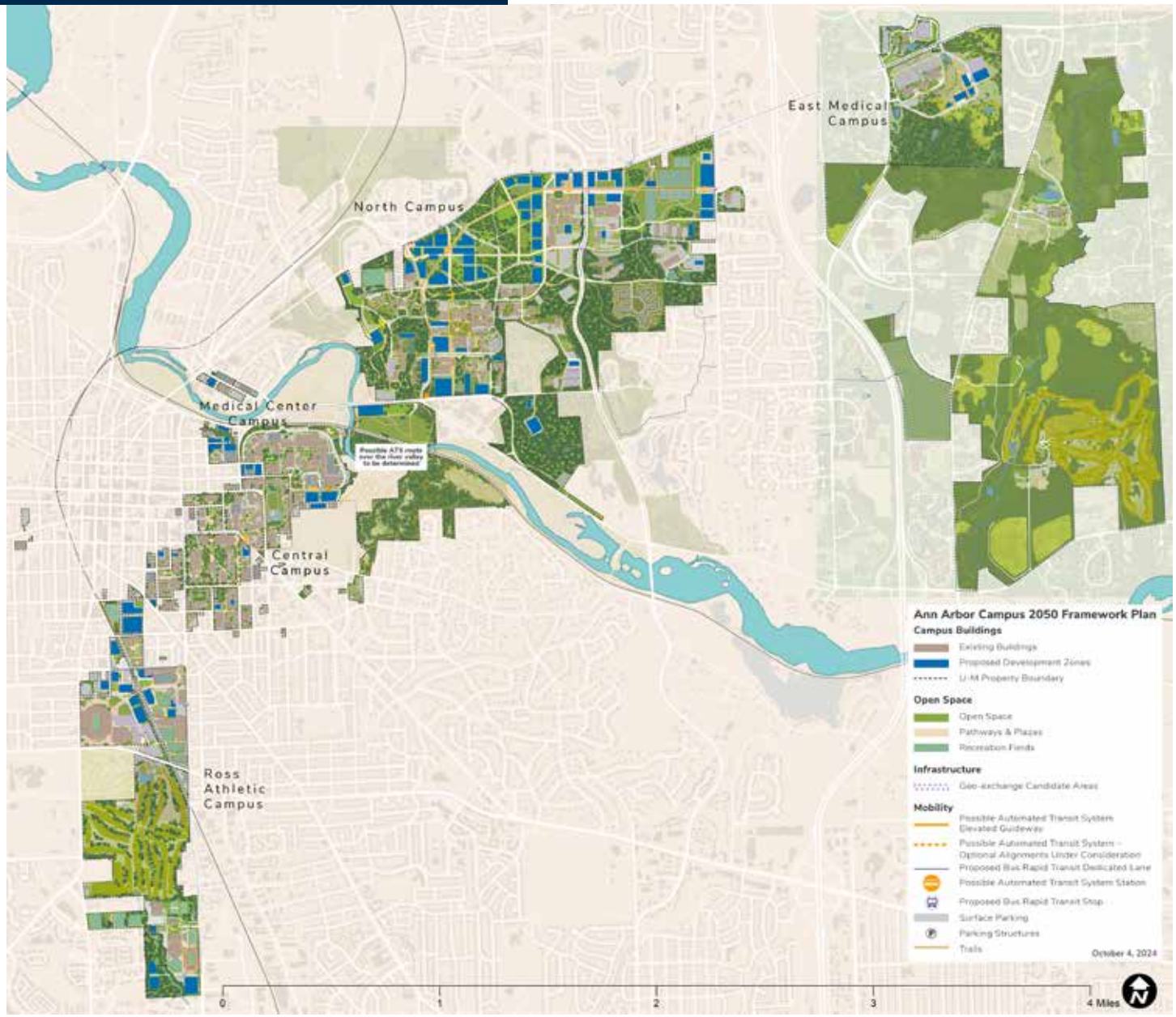
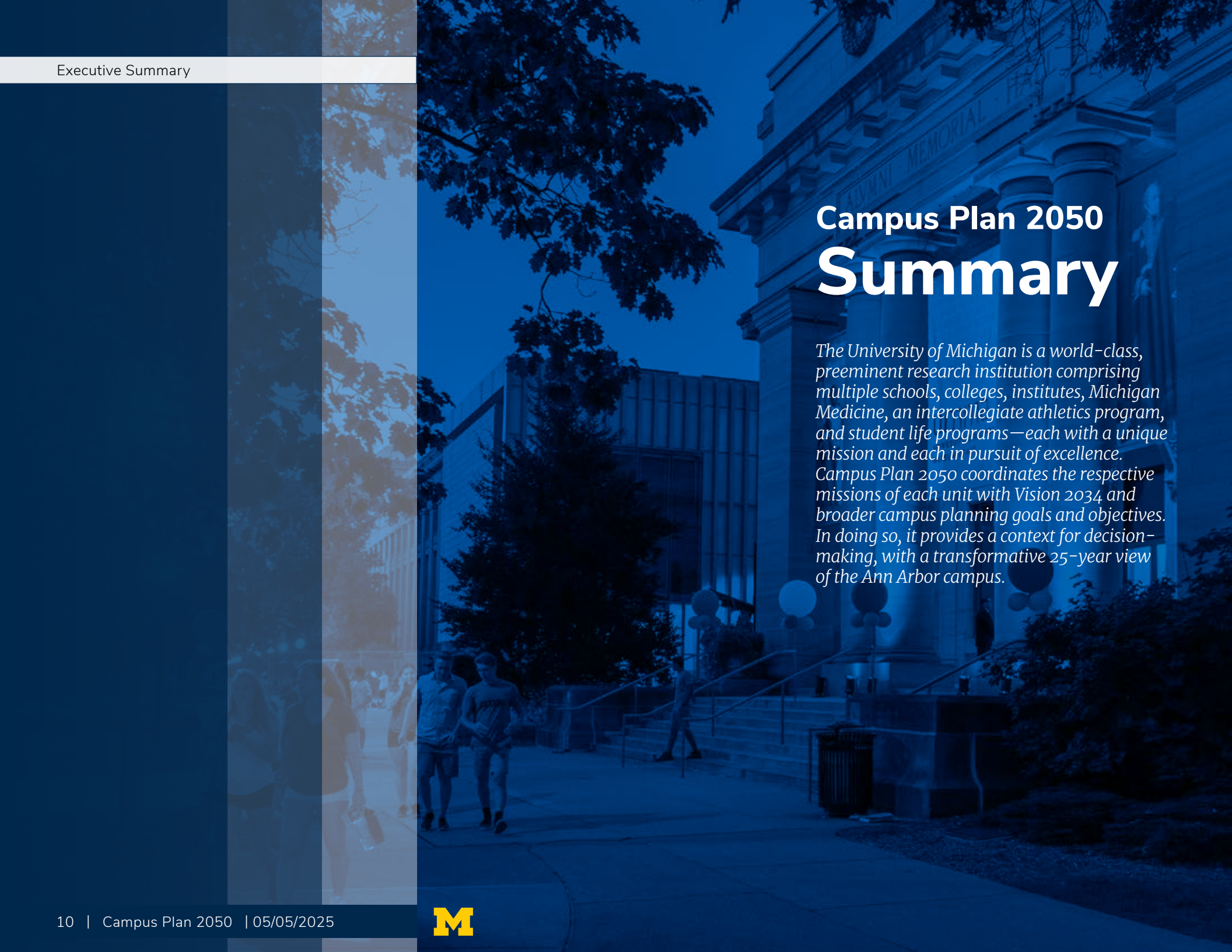


Figure 02. Ann Arbor Campus 2050 Framework Plan





Campus Plan 2050
Summary

The University of Michigan is a world-class, preeminent research institution comprising multiple schools, colleges, institutes, Michigan Medicine, an intercollegiate athletics program, and student life programs—each with a unique mission and each in pursuit of excellence. Campus Plan 2050 coordinates the respective missions of each unit with Vision 2034 and broader campus planning goals and objectives. In doing so, it provides a context for decision-making, with a transformative 25-year view of the Ann Arbor campus.

Summary Recommendations

The following recommendations for the built environment take into consideration current needs, future opportunities, existing facility conditions, the university's broader commitment to climate action by eliminating direct, on-campus greenhouse gas emissions by 2040, and addressing the embodied carbon in building materials. Along with guidance from Vision 2034, a significant amount of input from the engagement process easily coalesced into five planning themes. The recommendations are organized in response to those themes and summarized as follows:

Planning Theme 1: Life-Changing Education

Learning Environments

Deliver enhanced and new state-of-the-art classrooms, teaching labs, and other learning spaces supporting active learning and collaboration on Central, Medical Center, and North campuses.

Research and Innovation

Renovate and expand research space across UM-Ann Arbor in support of the research mission. Bring more contemporary, shared research spaces online to enable more multidisciplinary research so facilities will be infused with the necessary resources to support and enhance discovery.

Campus Life

Increase social and recreational space to support health and well-being and campus growth. Create welcoming and inclusive spaces.

Figure 03. Preliminary Illustration: Possible North Campus 2050 Innovation District looking northeast

Planning Theme 2: Human Health and Well-Being

Michigan Medicine

Renovate and replace aging structures and infrastructure on the Medical Center Campus and relocate select research activity to North Campus and select outpatient services to East Medical Campus and/or other regional health centers.

Athletics

Enhance the student-athlete and visitor experience with new and upgraded athletic facilities and amenities.

Accessibility

Enhance space inclusivity beyond code compliance, creating accessible spaces that prioritize physical, cultural, and health and wellness-focused design elements. U-M will implement holistic accessibility, supporting our diverse community in future campus improvements.

Planning Theme 3: Democracy, Civic and Global Engagement

Public Realm and Engagement

Create indoor and outdoor spaces that encourage civic, cultural, and global engagement. Renovate and establish student centers as hubs for connection, free speech, and community interaction. Expand amenities that build community and shared responsibility. Improve campus cohesion with welcoming gateways and better wayfinding for a more accessible, inviting experience. Foster environments that promote respectful discourse and bolster a strong sense of belonging and interaction.

Arts and Humanities

Incorporate the arts and humanities as central elements of the campus experience and create flexible environments for interdisciplinary collaboration. Expand performance and event spaces; enhance campus aesthetic and promote public art.

Figure 04. Preliminary Illustration: Proposed East Medical Campus Fleming Creek Trail looking southwest

Planning Theme 4: Climate Action, Sustainability and Environmental Justice

Climate Action

Implement campus-based climate action solutions that model a just energy transition and aim to benefit the broader community. Design and renovate buildings to consume less energy, replace infrastructure to transition from fossil fuels to electricity, and generate electricity from renewable energy. Implement large-scale installations of geo-exchange and ground source heat pumps to meet the heating and cooling needs of campus facilities, and integrate solar photovoltaics (PVs) at the site and building level. Prioritize building renovations based on the assessment of facility conditions and energy use intensity. Develop and promote opportunities to integrate research and learning as living lab experiences across building projects wherever feasible.

Figure 05. Geothermal drilling on Hayward Street

Sustainability

Create a campus that integrates and visibly demonstrates all dimensions of sustainability, making it a living and learning laboratory. This includes caring for water resources, maintaining healthy habitats and open spaces, implementing effective waste and procurement practices, and fostering healthy food systems. These efforts will cultivate an exceptional experience for students, faculty, staff, and visitors.

Environmental Justice

Showcase what a just energy transition looks like on a campus scale, emphasizing broader community benefits during the transition and ensuring justice in the sourcing and disposal of materials for construction and renovation.

Planning Theme 5: Collaboration and Connectivity

Connectivity

Enhance convenient and rapid connectivity to optimize the residential, academic, and research environments. This plan contemplates establishing a possible automated transit system (ATS) and bus rapid transit (BRT) to better link the Ann Arbor campuses, optimizing space utilization across the university.

Collaboration Networks

Develop a network of hubs created to foster collaboration across campus. These nodes will encourage interdisciplinary engagement, learning, research, and innovation, uniting diverse groups within the U-M community.

Workplace and Office

Develop policies and strategies to efficiently utilize office and workstation space including hybrid work models. Consider ways “to grow in place” within existing facilities with the goal of sustainably accommodating workplace needs.

Figure 06. Preliminary Illustration: Possible Mitchell Field Area redevelopment, view from East Medical Center Drive looking northeast

Reinvestment in Existing Facilities

Campus Plan 2050 offers planning guidance for the five Ann Arbor campuses, focusing on their roles in supporting the university's mission and improving connectivity within and between the campuses and the surrounding community.

As part of this plan, a significant focus is placed on deep reinvestment over the next 25 years in existing facilities. While new developments and the redevelopment of existing buildings are highlighted, maintaining and improving current structures remains fundamental. Future plans aim to address programmatic needs, deferred maintenance, and sustainability within these existing buildings. Moving forward, U-M hopes to uncover near- and long-term renovation needs and determine how to best coordinate such renovations.

Sustainable growth in the university's infrastructure will involve a balanced approach of creating new facilities and reinvesting in existing ones. This ensures a robust, adaptable, and forward-thinking campus environment. Continued engagement with various academic and non-academic units is essential to address evolving needs and identify opportunities for collaborations and synergies.

Of the 19 U-M schools and colleges, more than 10 have expressed needs to update their facilities. This accounts for units that have formally shared their proposed vision with leadership in recent years and serves as a snapshot of existing stated requests. These needs will most likely change over time.

The following provost-reporting units are those having formally informed leadership of a need to address their facilities: College of Literature, Science, and the Arts; Law School; Marsal Family School of Education; Matthaei Botanical Gardens and Nichols Arboretum; School of Dentistry; School for Environment and Sustainability; School of Music, Theatre & Dance; School of Public Health; School of Nursing; Stamps School of Art & Design; Taubman College of Architecture and Urban Planning; and the University Library.

Beyond academic facilities, there are several other potential projects from additional areas of campus, such as Student Life, Athletics, Michigan Medicine, and other necessary campus support buildings that will also require reinvestment in existing facilities through renovations in the future.

Figure 07. University of Michigan School of Kinesiology

Central Campus

Campus Plan 2050 maintains and enhances the historic integrity of Central Campus buildings and landscapes through reinvestment and the introduction of new programmatic uses, with the goal of contributing to a welcoming, equitable, and inclusive experience for students, faculty, staff, and visitors.

The established character and history of Central Campus, combined with limited available land area, reinforces the need to reinvest in existing structures. Campus Plan 2050 calls for the renovation of many existing buildings to respond to current and future programmatic needs, support energy efficiency and decarbonization goals, and address deferred maintenance. Redevelopment, renovation, and infill development can create dynamic, future-oriented spaces. Moreover, due to space constraints, major new projects will also be evaluated for suitability in other areas of campus. Today, one significant parcel between Madison Street, South Division Street, Hill Street, and South Fifth Avenue is in early planning for additional undergraduate housing.

Sustainable infrastructure recommendations for Central Campus include geo-exchange bores and ground source heat pump infrastructure on select sites and solar photovoltaic cell (PV) installations where optimal. The plan also recommends the use of stormwater management best practices suitable for urban conditions, especially in areas identified for major landscape improvements.

Mobility and connectivity improvements for Central Campus include the introduction of proposed BRT lanes and bicycle and pedestrian pathway improvements. The mobility system is enhanced by a new transit station that would service a possible ATS and BRT. The possible ATS system would include an elevated station at the Central Campus Transit Station providing connectivity to the Medical Center Campus and North Campus. In addition, a new Madison Transit Center is proposed at East Madison and Packard to support BRT.

Figure 08. Preliminary Illustration: Possible Central Campus 2050 looking northeast

Figure 09. Central Campus 2050 Framework Plan

Medical Center Campus

The Medical Center Campus is enhanced in Campus Plan 2050 as a world-class center for Michigan Medicine's clinical, research, and educational mission with the goal of creating a welcoming, inclusive experience for patients, families, and caregivers.

At just over 100 acres in size, but with about 10 million gross square feet (GSF), the Medical Center Campus is the most densely developed campus. With Central Campus directly to its south, city parkland to its north, the Huron River Valley and Nichols Arboretum to its east, and downtown Ann Arbor to its west, there is little room for expansion.

Campus Plan 2050 calls for the renovation of existing buildings and redevelopment of select sites in support of the mission and programs, and to address deferred maintenance issues. Redevelopment sites are prioritized to make way for future clinical and other development. In support of campus vibrancy and the user experience, new amenities and services are envisioned with landscape pathways, food service, retail, and services beneficial for the U-M community and visitors.

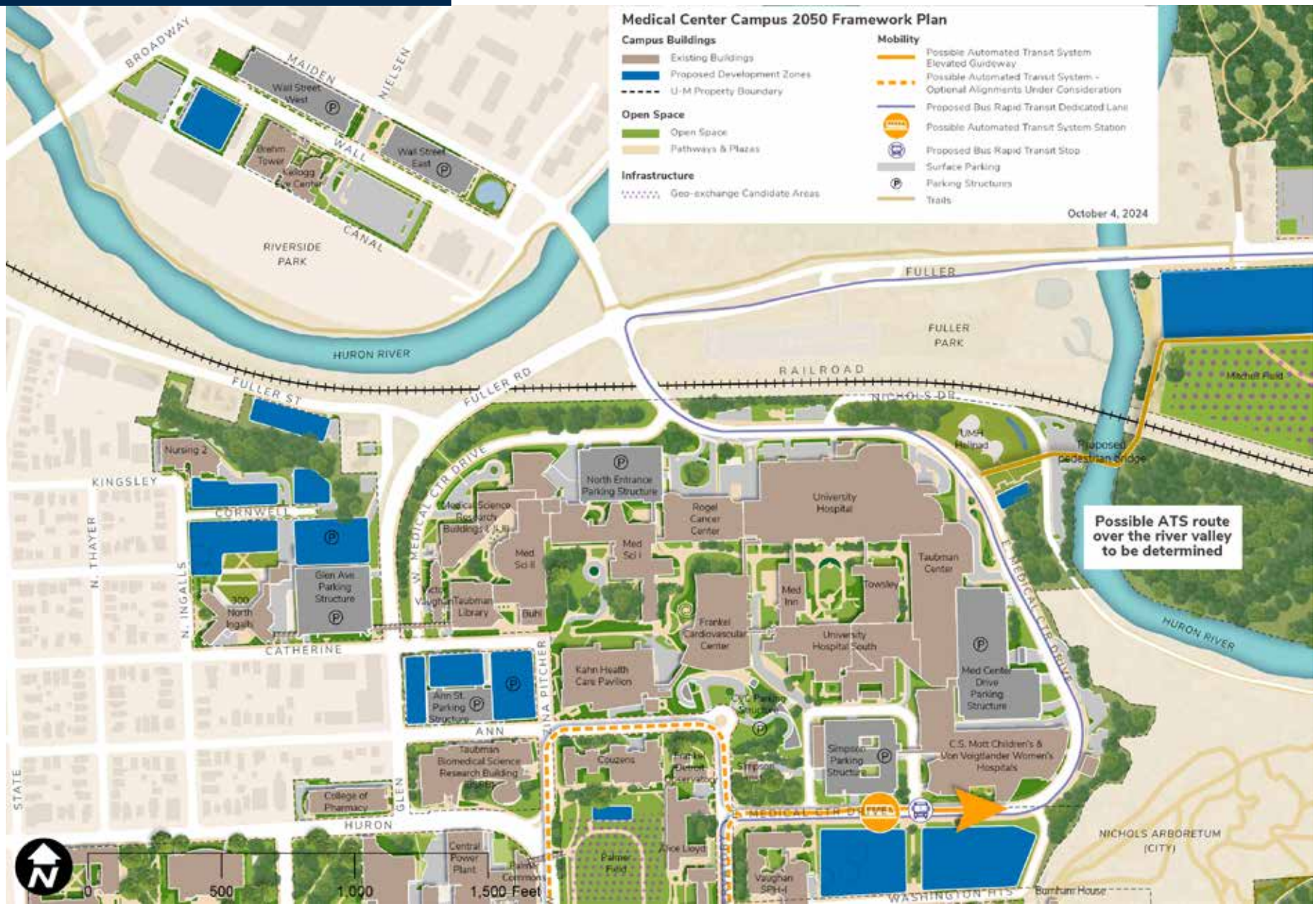
The dense development pattern on the Medical Center Campus limits the opportunities for the integration of geo-exchange and ground source heat pump areas and open space amenities. As a result, geo-exchange bores and ground source heat pumps are proposed for exploration in university-owned open areas of Mitchell Field, connected via a new pedestrian bridge over the rivers and railroad. The plan also recommends solar PVs on all existing and future parking structures, and on all future buildings as appropriate. A new parking structure on Zina Pitcher Place is anticipated to support needs associated with the new D. Dan and Betty Kahn Health Care Pavilion.

Campus Plan 2050 integrates proposed BRT lanes along East Medical Center Drive; a proposed pedestrian and bicycle bridge, leading from East Medical Center Drive's outer pedestrian path, over the Huron River and railway to connect with Mitchell Field; and a combined possible ATS and BRT transit station forming an important new gateway to the Medical Center Campus. The adjacent Arboretum and new redeveloped open spaces on Mitchell Field are integrated with the circulation facilities from the Medical Center Campus to provide access to nature.

The plan also recognizes and enhances important connections within the Wall Street and North Ingalls sub-campus areas, as well as the future North Campus Innovation District, as important geographic centers contributing to the Michigan Medicine enterprise. A new childcare center is envisioned near term in the North Ingalls Area.

Figure 10. Preliminary Illustration: Possible Medical Center Campus 2050 looking northeast

Figure 11. Medical Center Campus 2050 Framework Plan



Stephen M. Ross Athletic Campus

Campus Plan 2050 supports athletic excellence and provides a positive day-to-day and game day experience for students, student-athletes, and visitors on the Stephen M. Ross Athletic Campus.

The Ferry Field Area of the Ross Athletic Campus includes some of the most iconic and memorable athletic facilities of the university. The plan maintains the Ferry Field Area and its heritage facilities and calls for renovations of select facilities to address programmatic needs, improve energy efficiency, and address deferred maintenance. The proposed demolition of Weidenbach Hall and Cliff Keen Arena enables the restoration of the historic open gateway to Ferry Field from the northeast. The plan calls for the long-term expansion of athletics facilities in the Kipke Drive Area by relocating non-athletic uses to other campuses. The plan also enhances vibrancy and user experience by means of new pathways, an accessible pedestrian bridge over the railway connecting Ferry Field to Michigan Stadium, and a future dedicated TV fan zone and lawn east of the stadium to further enhance the football game day experience.

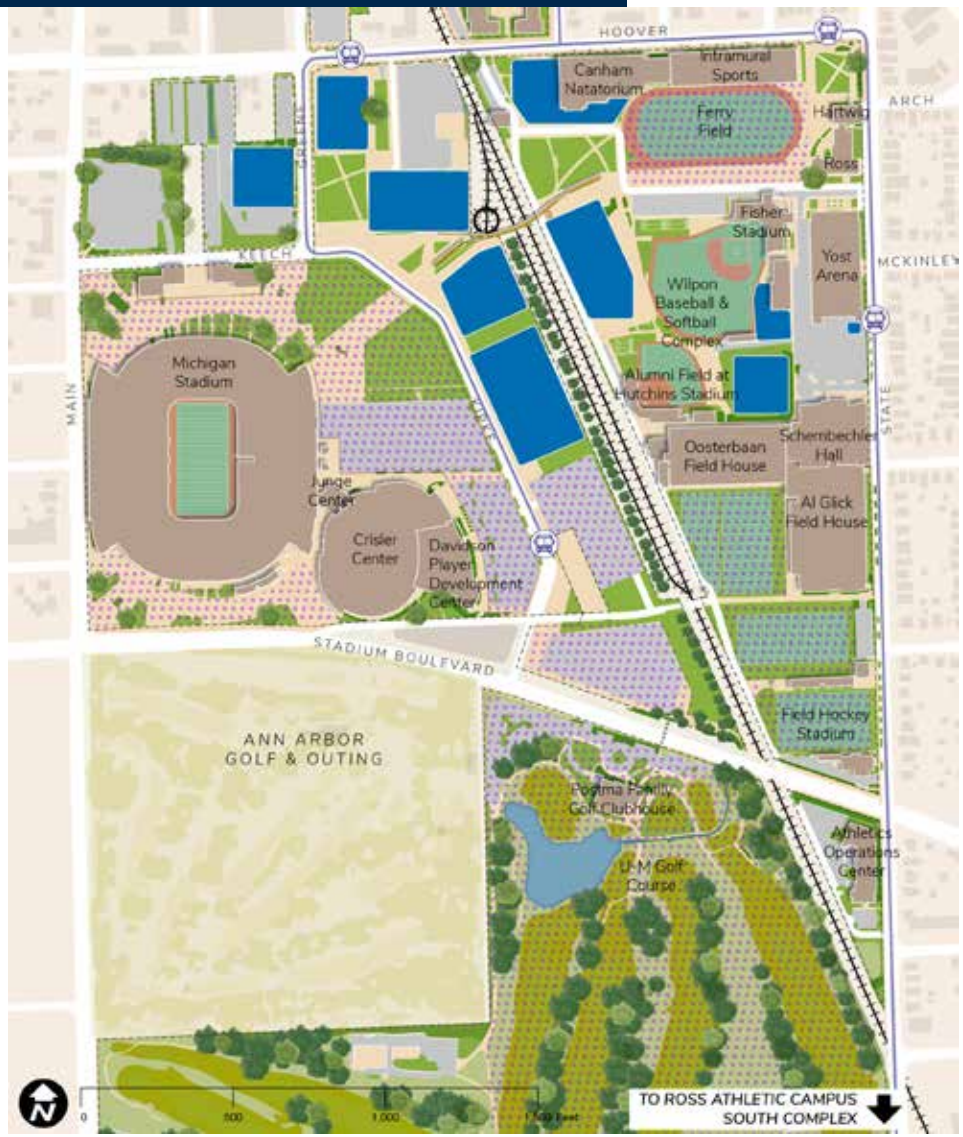
The proposed fan zone and lawn area east of Michigan Stadium contribute to the open space character of the campus. Geo-exchange bores and ground source heat pumps are integrated in open space and under plazas resulting in capacity in excess of that required for existing and future needs in the Ferry Field and Kipke Drive Areas. The plan also encourages stormwater strategies be implemented wherever feasible to ensure a resilient landscape.

Campus Plan 2050 integrates proposed BRT routes connecting the Kipke Drive Area to the future Madison Transit Center and other areas on Central Campus and beyond. Proposed BRT services connect the Ferry Field Area to the Ross Athletic Campus-South Complex (South Complex) and Wolverine Tower to the south.

Several future development zones are also identified for expansion in the South Complex Area. Finally, ongoing commuter parking areas located on the Ross Athletic Campus provide perimeter employee parking from the south with convenient and reliable transit service via proposed BRT into the Central and Medical Center campuses.

Figure 12. Preliminary Illustration: Proposed Stephen M. Ross Athletic Campus redevelopment looking north

Figure 13. Stephen M. Ross Athletic Campus 2050 Framework Plan



Map continues in Figure 14, Ross Athletic Campus-South Complex

Figure 14. Ross Athletic Campus - South Complex 2050 Framework Plan

East Medical Campus

Campus Plan 2050 designates the East Medical Campus as an inpatient and outpatient clinical center for Michigan Medicine.

Located in Ann Arbor Township, about two-thirds of this nearly 200-acre campus is undeveloped and covered with open fields and a high-quality, dense tree canopy. Campus Plan 2050 identifies expansion options for future facilities southeast of the existing complex of buildings within existing open fields. Existing structures on the East Medical Campus are 30 years old or less. The plan integrates geo-exchange bores and ground source heat pumps under existing and future parking areas to support long-term needs. Substantial solar PV installations are possible over existing and future parking as well as on future buildings.

The plan protects the Fleming Creek natural system and integrates it into the open space network of the campus, including new pathways providing opportunities for passive recreation in support of health and well-being initiatives. New stormwater management facilities are integrated to meet current and future needs. Combined, the creek and high-quality woodlands contribute to the biophilic qualities of East Medical Campus.

Campus Plan 2050 integrates proposed BRT services connecting East Medical Campus to the rest of the Ann Arbor campuses.

Figure 15. Preliminary Illustration: Proposed East Medical Campus 2050 looking northwest

Figure 16. East Medical Campus 2050 Framework Plan

North Campus

As U-M's largest Ann Arbor campus, North Campus is key to the future of the academic, research, innovation, student life, and partnership mission. It is here that opportunities exist to create a model of campus planning shaped by goals for life-changing education; accessibility; health, and well-being; arts and humanities; academic, research, and partnership innovation; environmental stewardship; sustainability and carbon neutrality; and mobility and connectivity.

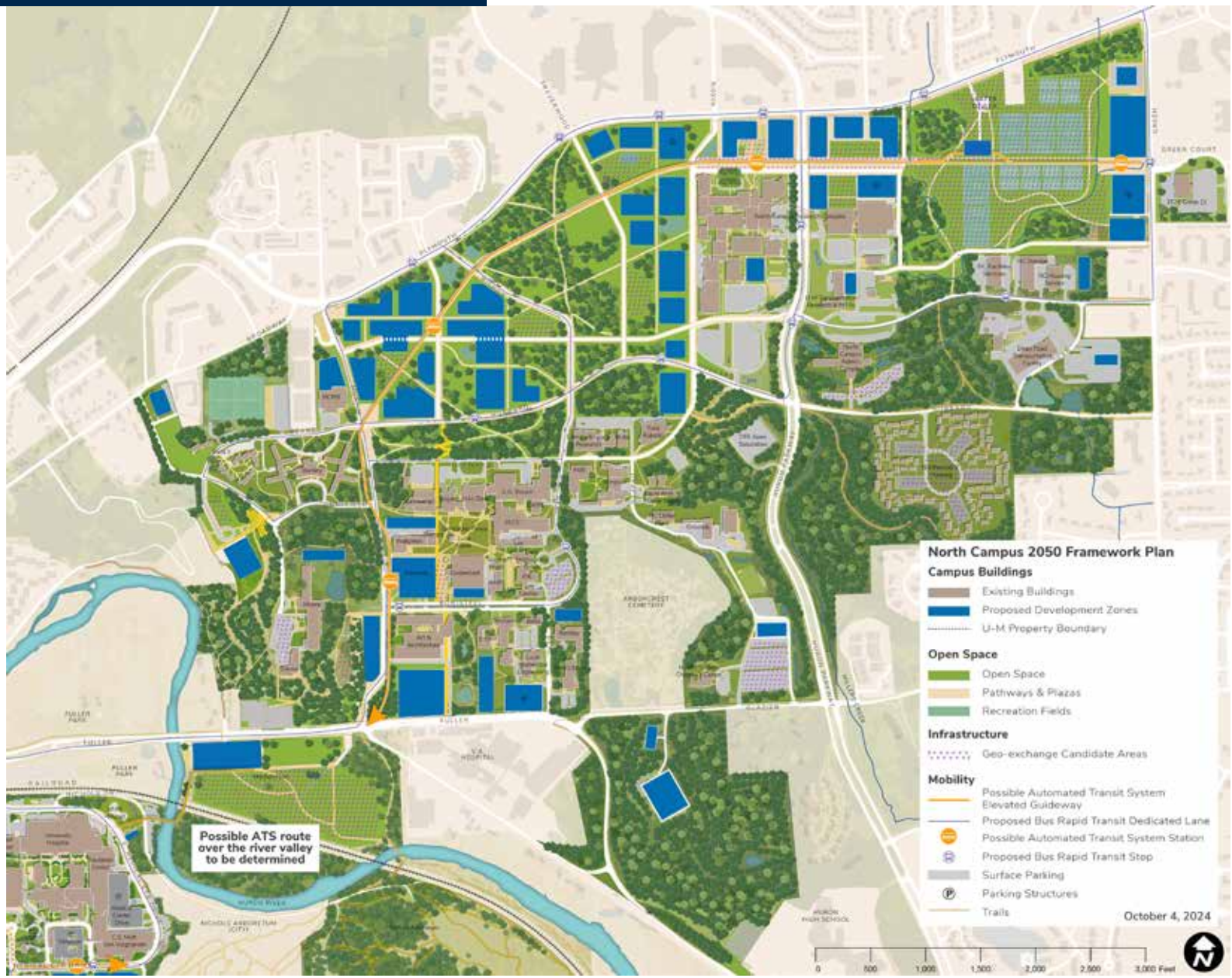
Campus Plan 2050 envisions the transformation of North Campus. The plan calls for strategic infill and reinvestment in existing buildings within the academic core in support of the mission, programmatic needs, and opportunities to improve energy efficiency. The plan also examines the long-term redevelopment potential of the Northwood Areas I-IV, combined with the North Campus Research Complex, as an Innovation District. The plan demonstrates a development approach responsive to density and land use efficiency goals that results in a vibrant public realm with strategic connectivity that promotes collegiality and collaboration between the North Campus academic core, the new Innovation District, the entire Ann Arbor campus, and the community at large.

Campus Plan 2050 celebrates and incorporates the existing natural features of North Campus, including its woodlands, streams, wetlands, and steep slopes. The plan also envisions a highly sustainable, carbon-neutral campus. In response, geo-exchange and ground source heat pumps and solar PV installations are sized to meet current and future energy needs. New buildings take into consideration embodied energy, while existing buildings undergo energy efficiency upgrades. Goals for biodiversity, carbon sequestration, and stormwater management inform the broader landscape, accessible pathways, and open space strategy for the campus.

The plan integrates new possible ATS services offering convenient connectivity between Central, Medical Center, and North campuses. The possible ATS is supplemented by an extensive proposed BRT network, which connects across the entire Ann Arbor campus. Both systems are coordinated with enhanced pathway and bicycle networks to reduce reliance on private vehicles and integrate with community networks, including the Huron River Valley network of parks, pathways, and ecosystems.

Figure 17. Preliminary Illustration: Possible North Campus 2050 redevelopment looking north

Figure 18. North Campus 2050 Framework Plan

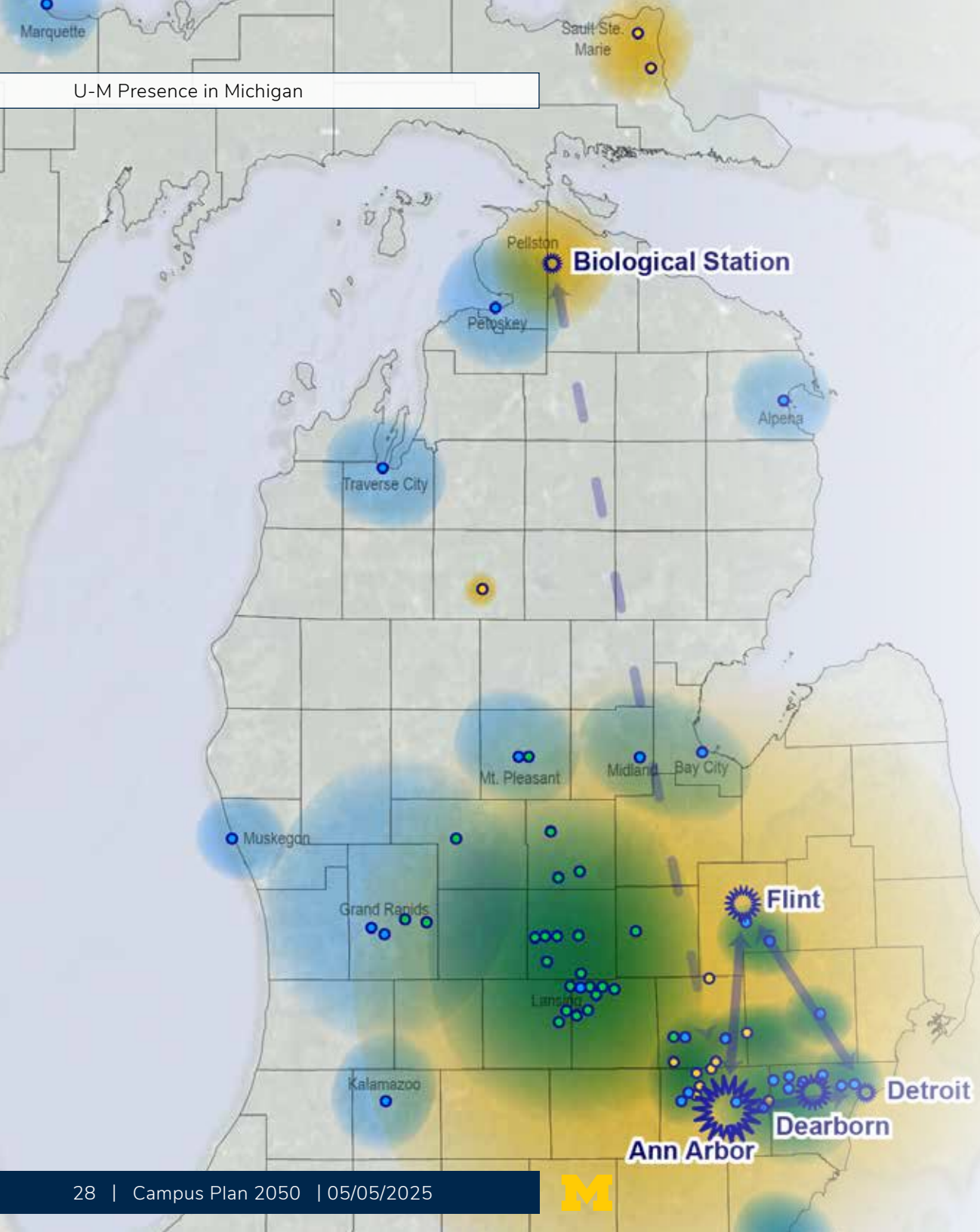


"The University of Michigan's plan for the future is guided by a deep awareness of its impact on the local community, as we continue to expand our mission in education, groundbreaking research, affordable healthcare, innovation, and driving economic growth for today and future generations."

—Chris Kolb, Vice President for Government Relations

II.

U-M Presence in Michigan



The University of Michigan's extensive land holdings across the state support its mission to serve the people of Michigan and the world. As the only public university in Michigan operating three campuses—in Ann Arbor, Flint, and Dearborn—U-M also leverages properties in Detroit, northern Michigan, and various natural areas, as well as clinical locations to advance its goals and provide opportunities for students, faculty, staff, and community members.

U-M profoundly impacts the state through its land holdings, which support community education, medical care, research initiatives, partnerships, economic contributions, and sustainability efforts, among other mission-driven objectives.

Figure 19. U-M land holdings and facilities in Michigan

UM-Ann Arbor

UM-Ann Arbor encompasses 3,200 acres, including its five campuses and additional properties. This large expanse of land is a robust center connecting academics, research, clinical care, student life, athletics, and a commitment to environmental stewardship, supporting the university's vision to serve the public good while preparing future leaders to address global challenges.

- Central Campus contains most of U-M's iconic heritage buildings and landscapes, and is closely associated with the history and traditions of the institution. It hosts student life experiences and residential housing, a diverse range of academic disciplines, and is a hub for collaborative learning and intellectual exchange.
- North Campus is planned with innovation and creativity in mind, providing student life experiences and housing, performing and visual arts spaces, specialized academic research facilities, and modern collaborative spaces that foster creativity and technological advancements.
- The Medical Center Campus is a densely developed area, containing Michigan Medicine centers, clinics, hospitals, and parking structures, as well as facilities for the Medical School. Combined with East Medical Campus, it is an epicenter of groundbreaking medical research, advanced patient care, and comprehensive medical education.
- East Medical Campus provides future opportunities across nearly 200 acres of land for an improved inpatient and outpatient experience, benefiting the wider community and beyond.
- The Stephen M. Ross Athletic Campus focuses on the university's commitment to athletics and physical well-being. It includes stadiums, training facilities, and recreational areas that support the development of student-athletes and promote overall campus health and wellness.

Additional properties making up this expanse of land include:

- Arbor Lakes
- Matthaei Botanical Gardens
- Radrick Farms
- Ann Arbor Technology Park (U-M's parcels)
- Horner-McLaughlin Woods
- Briarwood clinics
- Wolverine Tower
- Eisenhower Corporate Park West
- Research Museums Center
- West Ann Arbor Health Center
- Saginaw Forest

Additional impact is provided through a number of nearby leased facilities in the area.

Statewide Regional Health Centers

To support continued in- and outpatient needs of the state, Michigan Medicine has strategically distributed a series of facilities and health centers to bring clinical care directly to major regions of the state. This emphasizes its commitment to improving health outcomes across Michigan and expanding its reach as a leader in clinical care and medical innovation.

Patients come to Michigan Medicine hospitals and specialty centers for advanced care for a wide range of complex conditions and acute needs. At partner sites around the state, U-M clinicians provide cancer care, neurological care, children's specialty care, emergency care, cardiac care, and more. Michigan Medicine currently has healthcare facilities in 29 cities throughout Michigan, in the upper and lower peninsulas, included but not limited to these facilities in these population centers outside Ann Arbor:

- Alpena: Alpena Regional Medical Center
- Bay City: MyMichigan Health Park
- Brighton: Brighton Center for Specialty Care
- Flint: Hurley Children's Care
- Grand Rapids: Metro Health Hospital
- Kalamazoo: Bronson Children's Hospital
- Lansing: Sparrow Health System/Professional Building
- Marquette: UP Health System
- Petoskey: McLaren Northern Michigan
- Traverse City: Munson Medical Center

Sparrow Health System officially joined Michigan Medicine April 1, 2023. With the addition of Sparrow, Michigan Medicine now oversees more than 200 care sites. Additionally, leased facilities around the state contribute to further patient care.

Figure 20. Outpatient clinical care at regional health center

UM-Flint

The UM-Flint regional campus occupies a significant portion of downtown Flint, establishing a campus that harmonizes with the urban landscape. By situating academic buildings and research centers in proximity to cultural and industrial hubs, the university maximizes opportunities for real-world learning and community engagement.

There are limited residential options for students and the campus's riverside location by the Flint River adds a natural element, offering serene environments that enhance student life and well-being. Each of UM-Flint's units is strategically placed to facilitate specialized learning environments and encourage interdisciplinary collaboration. Additional remote facilities provide further impact in the Flint area as well.

UM-Flint includes the College of Arts, Science and Education; School of Management; College of Health Sciences; School of Nursing; and the College of Innovation and Technology.

Figure 21. UM-Flint campus

UM-Dearborn

The University of Michigan-Dearborn regional campus was established in 1959 to provide engineers, business people, and other needed workforce talent for the region. This historic site, which includes the home of Henry and Clara Ford, provides a tangible link to the region's rich industrial heritage and inspires a spirit of innovation and excellence.

UM-Dearborn is a top-ranked university with more than 8,100 students pursuing more than 100 undergraduate and graduate degrees across four colleges. UM-Dearborn is a practice-based university dedicated to opening the door to accessible higher education for all students while equipping them with applied knowledge and skills to excel and innovate in their chosen fields and make lasting impact in their communities, Michigan and the world.

UM-Dearborn includes the College of Arts, Sciences, & Letters; College of Business; College of Education, Health, & Human Services, and the College of Engineering & Computer Science.

Figure 22. UM-Dearborn campus

U-M Presence in Detroit

U-M was founded in the city of Detroit in 1817 before moving to its permanent home in Ann Arbor 20 years later. Today, Detroit remains a site of ongoing engagement and collaboration for the institution, including scholarly study, student learning opportunities, community-academic research partnerships, and programs serving the city through education, research, and service. Central to these efforts are the university's land holdings, which play a crucial role in the revitalization and development of Detroit, ensuring a lasting positive impact on the city and its residents.

The U-M Center for Innovation will play a key role in developing the next generation of entrepreneurs and skilled professionals after its planned opening in 2027. By offering cutting-edge educational programs, U-M expects to nurture local talent and stimulate economic development, contributing to Detroit's resurgence as a hub of innovation and industry.

The Horace H. Rackham Educational Memorial Building is a historical and cultural resource with exciting future education and community opportunities in Detroit. Its preservation and future use as a community asset underscore the university's commitment to honoring its past while looking forward to the future.

Additional impact in Detroit is provided through nearby leased facilities — one of greatest significance is The School at Marygrove.

Figure 23. U-M in Detroit

Figure 24. Horace H. Rackham Educational Memorial Building in Detroit

Figure 25. University of Michigan Center for Innovation rendering

Statewide Natural Areas

U-M owns a number of natural areas across the state that further scientific discovery and innovation, and provide an array of opportunities for health and well-being:

- Chase S. Osborne Preserve, Chippewa County
- Sugar Island Outlying Properties, Chippewa County
- Pellston Biostation, Cheboygan County and Emmet County
- Harper Preserve, Genesee County
- Edwin S. George Reserve, Livingston County
- Fresh Air Camp (North Star Reach), Livingston County
- St. Pierre Wetlands Preserve, Livingston County
- Missaukee Preserve, Missaukee County
- Ringwood Forest Reserve, Saginaw County
- Mud Lake Bog, Washtenaw County
- Newcomb Tract (Base Lake Farm), Washtenaw County
- Stinchfield Woods (Peach Mountain), Washtenaw County

Pellston Biostation

The U-M Biological Station (UMBS), established in 1909, has long been a crucible for scientific discovery and innovation. UMBS spans an impressive 10,000 acres of diverse, high-quality ecosystems, including forests, wetlands, and freshwater environments. This vast expanse of land provides a living laboratory where students, faculty, and researchers can engage hands-on with the natural world.

The 10,000 acres owned by the university serve not only as a research hub but also emphasize a commitment to environmental stewardship. This land offers unparalleled opportunities for studying a wide array of ecological processes and phenomena in their natural settings. By preserving and studying these ecosystems, UMBS contributes critical insights into biodiversity, climate change, and sustainable practices.

Figure 26. Pellston Biostation

"The enthusiasm and the level and breadth of participation from the community is what makes the plan so strong. The process recognized the unique mission and contribution of each of our five Ann Arbor campuses, and helped us integrate them into a plan that unifies UM-Ann Arbor with more connectivity and guides us in the highest and best use of land."

—Christopher Culley, Associate Vice President for Planning and Strategic Initiatives

III.

Introduction and Background

to Campus Planning

01.
The Ann Arbor Setting

The University of Michigan is a robust, preeminent research institution comprising multiple schools, colleges, research institutes, Michigan Medicine, an athletic department, and student life programs, each with a unique mission and each in pursuit of excellence. Campus Plan 2050 coordinates the respective missions of each unit with Vision 2034 and broader campus planning goals and objectives. In doing so, it provides a road map for decision making, with a transformative 25-year vision of the Ann Arbor Campus.

Campus Plan 2050 offers physical planning guidance for UM-Ann Arbor with the recognition that each of its five campuses does not function independently, but rather, they each are part of a unified campus. With rapid advances in technology and the growing focus on research and interdisciplinary activities, collaboration is increasing across units and campuses, resulting in the opportunity to capitalize on the highest and best use of all land across the Ann Arbor Campus. Leveraging the potential of possible automated transit system (ATS) services and dynamic bus rapid transit (BRT), Campus Plan 2050 envisions expanding academic and research functions to a reimagined North Campus over the next 25 years. A core component of this plan is the assumption that significant reinvestment will occur in numerous existing facilities throughout the same period. This plan ensures that reinvestment in all five campuses occurs to align with the university's mission and vision.

The Ann Arbor Setting

The Sense of Place

U-M and the City of Ann Arbor collectively form the quintessential college town. Known for its vibrant cultural life, Ann Arbor is a highly desirable community enhanced by one of the greatest research universities of the world. The result is a positive social, environmental, and economic climate, which makes Ann Arbor an attractive place to live, work, and study. This overall sense of place supports the mission and vision of the university.

Since relocating to Ann Arbor from Detroit in 1837, the U-M campus has evolved in conjunction with the city. It is this relationship between town and campus that shapes the U-M experience. It is here that place and experience merge to form the powerful collective memories that define the identity and character of the University of Michigan.

U-M's sense of place is not only shaped by this relationship with the City of Ann Arbor, but also by its position along the Huron River, and by the character of its campuses and sub-campus areas. This is influenced by the size and scale of a world-class institution operating across five Ann Arbor campuses, each contributing to the mission in unique ways. Campus Plan 2050 enhances and improves upon this sense of place while addressing the core impact areas and core commitments of Vision 2034.

The Uniqueness of the Institution

Campus Plan 2050 reinforces and enhances the qualities that contribute to U-M's status and uniqueness among its peers. These include:

» Academic and Research Excellence: UM-Ann Arbor is known for its consistent "skyline" of excellence across its colleges, schools, and research institutes, as evidenced by its high ranking among public institutions in the United States and its designation as one of the "Public Ivies." Academic and research units ranked in the top 20 nationally include the School of Social Work, College of Pharmacy, School of Public Health, Michigan Engineering, School of Information, and the Ford School of Public Policy. (The university's Law School and Medical School do not participate in U.S. News & World Report rankings.)

Figure 27. Ann Arbor Art Fair

» Athletic Success: Wolverine athletic teams are among the most successful in the country, as evidenced by the number of conference and national championships in football, hockey, basketball, and other sports. The 2023–2024 year was highlighted by national titles in football and cheerleading, a Big Ten record of seven conference championships, and one individual national title. This focus on excellence and success contributes to the reputation of U-M, the campus and community culture, and the overall experience of the U-M community and alumni.

» Campus Culture: Numerous organizations, events, programs, activities, and traditions shape the culture and overall campus experience for students, faculty, staff, researchers, alumni, and visitors. The richness of experiencing the university's many amenities and venues contributes to the uniqueness of U-M and the vibrancy of the campus and the Ann Arbor community. Performance venues including Hill Auditorium, Power Center, and Walgreen Drama Center host hundreds of concerts and performances a year. A rich array of museums such as the U-M Museum of Art and the Kelsey Museum of Archaeology are home to diverse and robust collections, drawing visitors and scholars alike. Two golf courses (one ranked by *Golf Digest* as the third-greatest college golf course in America) and dozens of athletic competition venues including the historic

Michigan Stadium draw fans and participants from around the globe. Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) see over 525,000 visitors a year—the Arboretum of more than 100 acres provides an on-campus natural respite and features the largest collection of heirloom peonies in North America, and the botanical gardens feature miles of trails, gardens, greenhouses, a conservatory, and research areas including the Campus Farm. Indoor and outdoor recreation facilities such as the Intramural Building, new Hadley Center, Palmer Field, the North Campus Recreation Building, and the Hubbard Recreation Fields contribute to student, faculty, and staff health and well-being. Finally, cherished iconic open spaces such as the Diag, Regents Plaza, Ingalls Mall, the Law Quad, and Gerstacker Grove each create a nexus for shared campus experience and formal and informal gathering.

» Quality of Life: Ann Arbor's reputation as a vibrant city with a high quality of living and a diverse offering of year-round dining, music, art, shopping, and theater options, contributes to the success and appeal of U-M. Additionally, the city is frequently ranked on a number of top 10 lists including Best Places to Live in Michigan, the Midwest, and America; Cities with the Best Public Schools; and Most Educated Cities in America. This mutually beneficial relationship reinforces the campus experience and the success of the institution and the place.

» Scale: As one of the largest and most distinguished public institutions in the country, the scale and impact of U-M's academic, research, clinical care, and outreach programs make the university an agent of progress and change nationally. The scale of the physical campus and the extensive resources contained across the Ann Arbor campus (including 11 inpatient and outpatient facilities, with the Kahn Pavilion expected to open in 2025) collectively support the mission of the university. Combined with the extensive land resources of the university, especially on North Campus, U-M is uniquely positioned for an even more influential, sustainable, and decarbonized future.

Figure 28. Ann Arbor Summer Festival

02.

The Planning Process

Campus Plan 2050 was developed with guidance and direction of U-M leadership and input received from the U-M and broader Ann Arbor communities.

Figure 29. Campus Plan 2050 engagement session

The Planning Process

U-M Leadership

Campus Plan 2050 was guided by a leadership team consisting of the Executive Vice President and Chief Financial Officer, the Provost and Executive Vice President for Academic Affairs, and the Executive Vice President for Medical Affairs and CEO of Michigan Medicine. The Associate Director of Planning and Communication and Associate Vice President for Planning and Strategic Initiatives served as co-chairs and directly supervised the preparation of Campus Plan 2050.

Committees

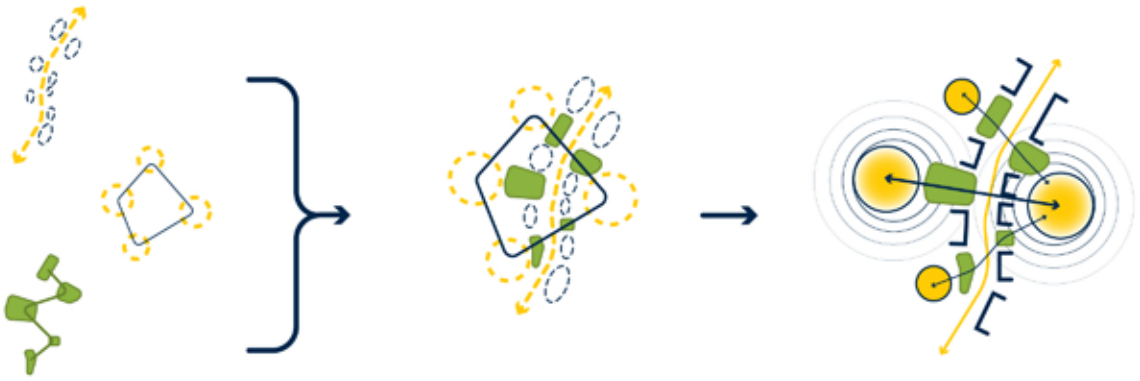
An Advisory Committee, representing diverse perspectives of the campus community, provided input at key points in the 16-month-long planning process. Six groups of technical experts from U-M were consulted on specific topics that informed the recommendations of Campus Plan 2050. The groups included Diversity, Equity, Inclusion, and Accessibility (DEIA); Arts and Humanities/Health and Well-Being; Climate Action, Sustainability, and Infrastructure; Landscape and Open Space; Space Planning, Development, and Land Use; and Mobility. A series of subject-matter experts also provided input on technical and planning considerations.

U-M and Ann Arbor Communities

Input from the campus and broader communities was received via a dedicated Campus Plan 2050 website as well as other online engagement tools and surveys. The website was utilized to distribute content and information regarding the development of the plan and to obtain comments and feedback. Four public open houses held on campus in October of 2023 further informed the development of the plan by offering members of the campus community and the public the opportunity to contribute to the planning process. A variety of online meetings and consultation sessions were held throughout the process, engaging a wide range of individuals from the university and Ann Arbor communities, and resulting in thousands of interactions. Throughout the entire process, additional feedback from Vision 2034 engagement events was shared, the results of which were used to shape this plan.

Focus Areas

- DEIA
- Arts & Humanities / Health & Wellness
- Climate Action, Sustainability & Infrastructure
- Landscape & Open Space
- Space, Development & Land Use
- Mobility



Spring '23

Discovery and Analysis

- Launch in person activities and online tools.
- Review past plans, analyze space, determine planning, and development frameworks.

Summer '23

Planning Scenarios

- Develop multiple space and land use scenarios informed by strategic visioning and development priorities.

Fall '23

Plan Development

- Develop 25-year draft campus plans.

Winter-Summer '24

Finalize Plan

- Finalize 25-year draft campus plans.

"Campus Plan 2050 demonstrates an extraordinary opportunity to unify the Ann Arbor campus by identifying transformative goals, objectives and planning principles which support Vision 2034, carbon reduction commitments for 2040, and long-term aspirations for a physical environment that delivers stewardship and excellence at every scale as one experiences our campus."

—Sue Gott, Associate Director for Planning and Communication

IV.

Planning Themes: Goals, Objectives, and Principles

01.
Life-Changing Education

Throughout the public engagement process for Campus Plan 2050, a significant amount of input coalesced into planning themes that easily aligned with Vision 2034's impact areas. In addition, the importance of collaboration and connectivity began to rise to the surface. The eventual five planning themes, as outlined on the following pages, helped guide the creation of goals, objectives, and principles, which, in turn, helped inform the physical recommendations of Campus Plan 2050.

Campus Plan 2050 supports life-changing education through a focus on enhancing the learning and research experience, campus vitality, renewal, and strategic investment.

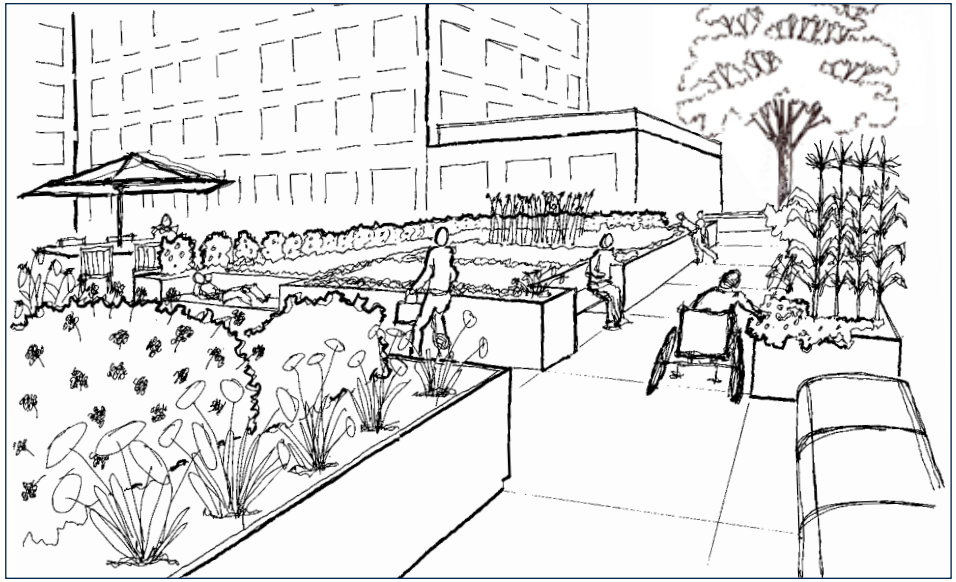


Figure 30. Campus residential complex with urban agriculture as a living lab

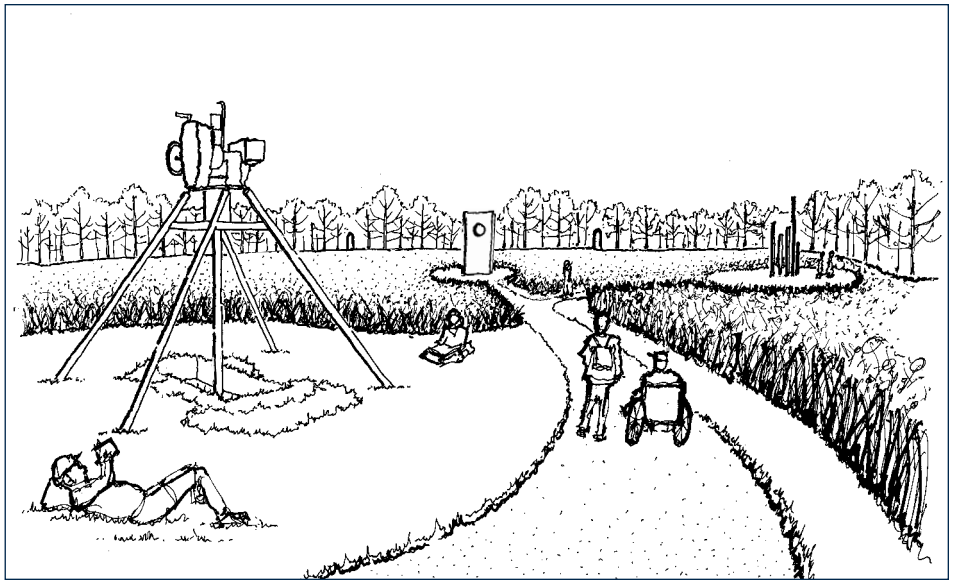


Figure 31. Temporary student and research installations

Planning Theme 1: Life-Changing Education

Goal 1: Offer amenities and services that enrich the teaching, learning, and research experiences on the Ann Arbor campus.

Objectives

» Promote mixed-use development enriched by robust amenities.

» Encourage social, recreational, and cultural interaction.

Goal 2: Promote collaborative environments.

Objectives

» Increase opportunities for interdisciplinary research and learning within facilities.

» Encourage the flexible use of space.

» Create new collaboration hubs that promote neighborhood engagement.

Goal 3: Enhance campus character.

Objectives

» Respect and enhance U-M's heritage historic buildings and structures while encouraging innovative, creative, high-performance facilities.

» Identify opportunities for redevelopment and infill to use existing land most efficiently and to increase density.

Goal 4: Support the university's mission-driven needs and plan for growth.

Objectives

» Rationalize campus space to meet current and projected needs for academic, research, and clinical requirements.

» Increase housing inventory to meet needs and replace aging facilities.

Life-Changing Education Principles

» Provide a variety of services and amenities of existing and proposed buildings to strengthen campus life and vitality.

» Provide equitable, welcoming, and accessible educational and research experiences on all campuses.

» Create both exterior and interior accessible human-scale spaces that encourage social, recreational, and cultural interaction.

» Establish a mix of land uses—arts and cultural, health and well-being, recreational, academic and research, residential, social, etc.

» Promote generous access to the arts and humanities on all campuses; identify opportunities for public art and interpretive signage and information.

» Provide open spaces at a variety of scales that are pleasant and accessible, and that enhance the user experience and well-being.

» Embed spaces with opportunities for collaboration, study, gathering, and reflection.

- Site living lab locations in areas that are accessible to housing, academic, and research uses.
- Respect and enhance the integrity of heritage historic buildings and structures during renovation and repurposing, improving energy efficiency through deep energy retrofits.
- Evaluate options for reuse or redevelopment of buildings reaching the end of their useful life relative to programmatic needs and the best use of the site. Maximize redevelopment; replace or renovate inefficient, low-density, outdated, and obsolete facilities with carbon-neutral, flexible, and adaptable buildings.
- Protect existing viewsheds and explore opportunities to create new, iconic views with redevelopment initiatives.
- Protect open spaces that have a special place in the life and history of the university.
- Optimize the density of future development in identified areas of the campuses to ensure efficient utilization of land and infrastructure.
- Respect surrounding areas and buildings in terms of height, massing, scale, setback, materials, and roof line where appropriate when planning new buildings, additions, and renovations with exterior impacts.
- Optimize capacity and maximize flexibility through efficient utilization of land.
- Prioritize highest and best use of available development zones based on its unique aspects (density, location, access, natural features).
- Utilize campus land to support the academic, research, clinical care, student life, athletics, and sustainability missions of the university.
- Plan with flexibility in anticipation of future programmatic requirements that cannot be predicted today.
- Incorporate a range of new civic spaces to strengthen the collegiality of the campus to meet a diverse range of needs and preferences.

02.
Human Health and Well-Being

Campus Plan 2050 supports a focus on goals, objectives, and principles related to health and well-being; accessibility; and the arts and humanities that span all aspects of campus planning.

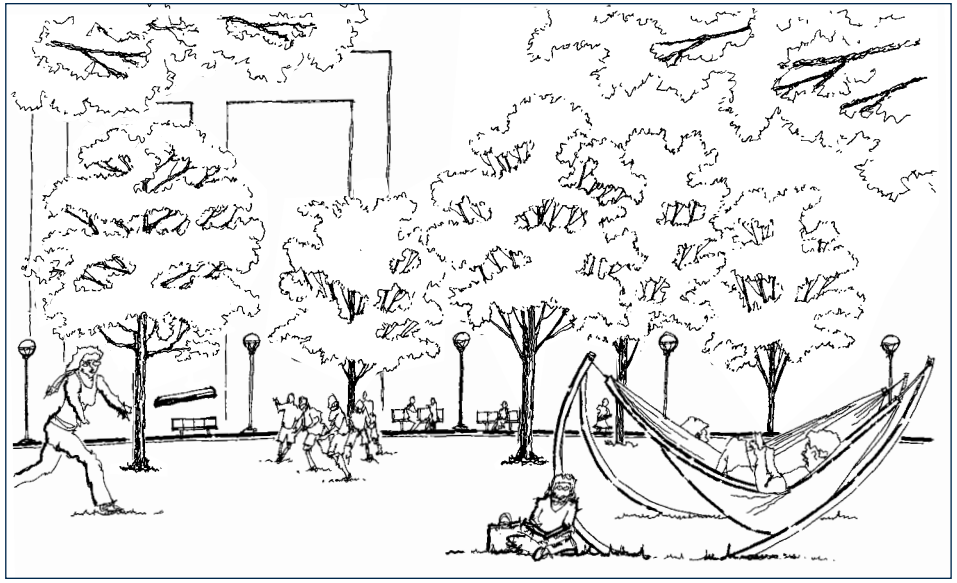


Figure 32. Space for informal recreation

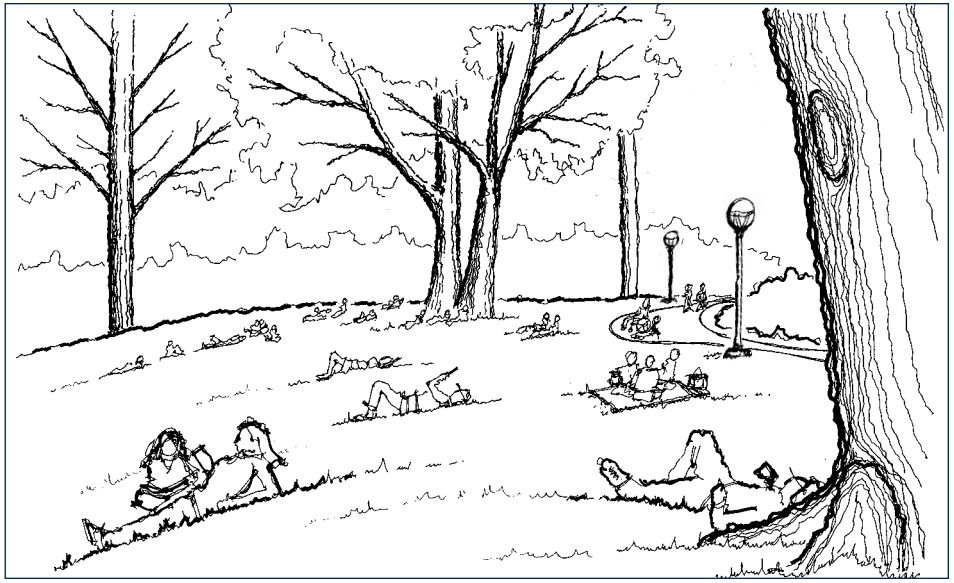


Figure 33. Outdoor space for socialization and well-being opportunities

Planning Theme 2: Human Health and Well-Being

Goal 1: Provide critical services to support students, faculty, and staff.

Objectives

» Invest in facilities and services that support the health and well-being of students, faculty, staff, and patients.

» Provide distributed access to wellness spaces.

Goal 2: Adapt campus spaces to improve the user experience and comfort.

Objectives

» Adapt outdoor spaces to maximize comfort and usability throughout all seasons.

» Integrate nature within study spaces.

» Improve daylighting in campus buildings.

Goal 3: Create an environment where students, faculty, staff, and patients have access to resources and activities that promote wellness.

Objectives

» Expand the network of both passive and active recreational spaces.

» Improve access to healthy food.

» Support campus food systems programming and food production.

Goal 4: Build foundations for resiliency and community on campus.

Objectives

» Encourage interaction through multiple scales and configurations of social spaces.

» Expand and enhance access to existing academic support services.

Goal 5: Foster an inclusive physical environment where individuals can thrive.

Objectives

» Adapt learning environments to support neurodiverse students.

» Improve wayfinding.

» Enhance physical accessibility and inclusivity.

» Expand access to recreational space.

Goal 6: Promote diverse representation within the built environment to inspire a sense of belonging.

Objectives

» Encourage dialogue and learning around diverse histories through public art.

» Create additional spaces for affinity and multicultural centers.

» Facilitate opportunities to highlight the natural and built beauty of the campuses.

Goal 7: Expand campus services and infrastructure needed to support a diverse campus community.

Objectives

» Meet basic needs of all students, faculty, and staff.

» Expand access to on-campus housing.

Goal 8: Distribute resources across a variety of needs that emphasize investment in equity-centered projects.

Objectives

Ensure equal and appropriate access across campus.

Human Health and Well-Being Principles

» Integrate places for well-being in campus buildings and landscapes; consider different scales for personal and community well-being. Examples include space for personal reflection, prayer and meditation, lactation, virtual counseling, study, gathering, and collaboration.

» Distribute access to well-being spaces across the Ann Arbor Campus.

» Visually and physically connect interiors with nature and open space. Incorporate greenery and other elements of biophilia within campus buildings.

» Integrate a network of accessible, equitable, and welcoming spaces and inclusive infrastructure on campus.

» Provide inclusive and accessible space for cultural events in campus buildings and landscapes.

» Utilize universal design principles to guide the creation of accessible routes and pedestrian pathways; exterior accessible routes from accessible parking spaces, transit stations and stops, and drop-off areas to main building entrances; prioritize accessible walkways over ramps in the landscape and eliminate stairs where possible.

» Consider sound attenuation in classrooms and study spaces.

» Enhance space for adaptive sports and fitness within recreation buildings.

» Locate benches along outer edges of major pedestrian routes at regular intervals to provide resting spots for the mobility impaired without creating obstructions to the public way.

» Consider the needs of all campus users in the selection and placement of site furnishings.

03.
Democracy, Civic and Global Engagement

Campus Plan 2050 supports Democracy, Civic and Global Engagement by identifying goals, objectives, and principles for the arts, humanities, and public realm that enhance collaboration, the campus experience, and connections to the Ann Arbor community.

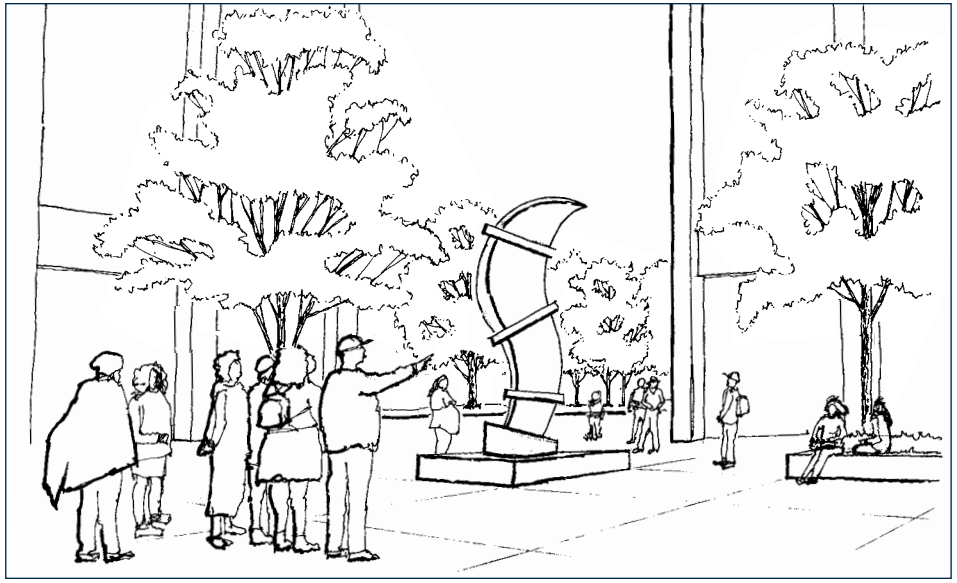


Figure 34. Public art in civic spaces

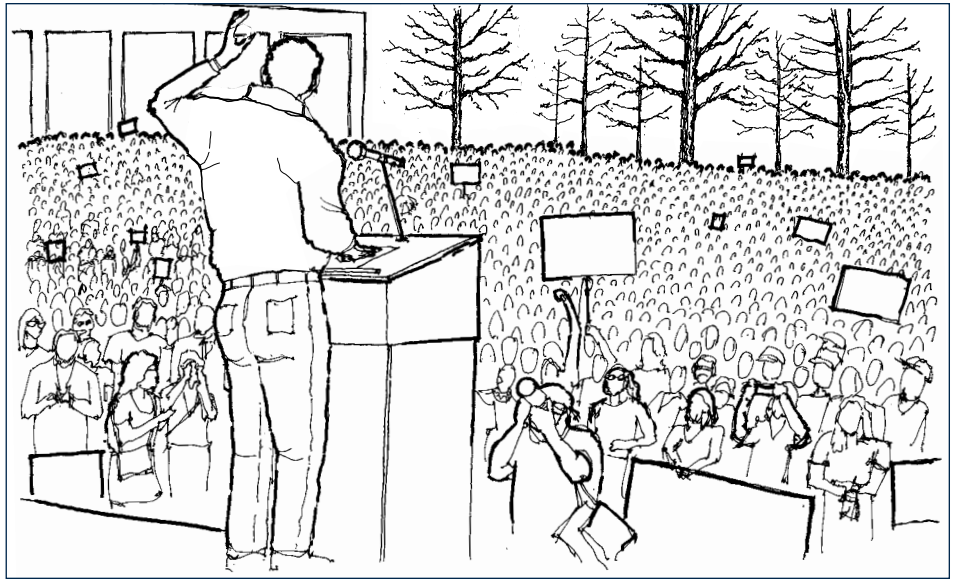


Figure 35. Gathering with engagement and civic discourse

Planning Theme 3: Democracy, Civic and Global Engagement

Goal 1: Make art and humanities a central element of the campus experience.

Objectives

» Incorporate art across key campus spaces.

» Support interdisciplinary collaboration by infusing more flexible shared spaces.

Goal 2: Foster a vibrant environment that offers a variety of opportunities and diverse daily experiences.

Objectives

» Expand campus performance and events spaces.

» Invest in and make improvements to facilities for art production and exhibition.

Goal 3: Make programmatic connections across and beyond campus boundaries.

Objectives

» Build art- and humanities-centered community partnerships by the creation of enabling spaces.

» Expand spaces that promote public access and engagement.

» Enhance living and learning spaces on campus to bring people together in shared built environments.

Goal 4: Reinforce U-M's role as a welcoming place.

Objectives

» Create campus gateways that strengthen a sense of arrival, place, brand, and identity.

» Increase opportunities for a diverse campus community to engage in a variety of campus locations.

» Create new public spaces that promote interaction among individuals and cultivate a sense of community on campus.

Goal 5: Create a vibrant and active public realm network.

Objectives

» Enliven street-level and ground-floor use of existing and proposed buildings.

» Activate campus to improve the user experience through increased density, amenities, and the arts.

» Improve active transportation networks to promote walking and bicycling.

» Renovate existing and develop new student life facilities as focal points for student connection.

Democracy, Civic and Global Engagement Principles

» Integrate public art in campus interiors, exterior landscapes, the public realm, and in the campus transit network as reasonable.

» Activate prominent open spaces and the ground-floor plane with public art, temporary exhibitions, and places for interdisciplinary events and gathering, and invest in existing arts facilities to meet current needs.

» Provide space for small-scale exhibition space with an emphasis on academic and student life buildings.

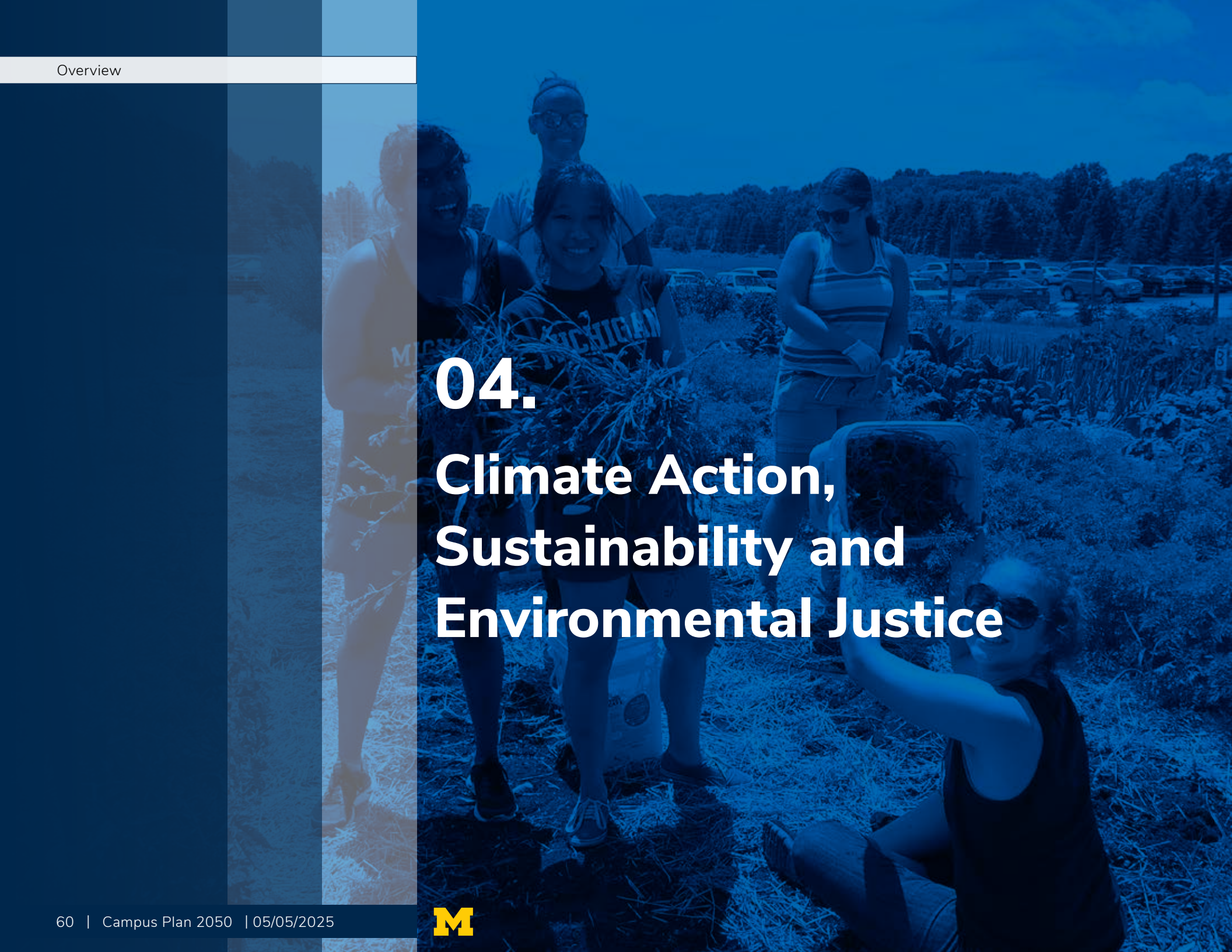
» Co-locate places for art exhibition and production with interdisciplinary programs.

» Enhance campus wayfinding to improve public access and visibility of campus museums, performance venues, and public spaces.

» Improve streetscapes and significant pathways that both pass through and interconnect the campuses; coordinate with the landscape framework.

- Create and support places for free speech, freedom of expression, and respectful discourse.
- Enhance the user experience with lighting and landscape management. Ensure adequate lighting levels are provided along pathways and bicycle routes.
- Incorporate trails through wooded areas as amenities, as applicable.
- Design circulation routes as part of the open space and landscape structure of all campuses.
- Enhance gateways to improve campus identity and sense of arrival, and promote natural buffer zones adjacent to perimeter properties where appropriate.
- Ensure that building entrances are positioned to reinforce context-specific arrival sequences and desire lines for all users.
- Strategically place university-standard site furnishings to activate and support outdoor gathering and collaboration spaces.

Figure 36. Gerstacker Grove, North Campus



04.

Climate Action, Sustainability and Environmental Justice

Campus Plan 2050 supports Climate Action, Sustainability and Environmental Justice by integrating strategies to advance carbon neutrality and sustainability through all aspects of campus planning. It aims to demonstrate at the campus scale what a just energy transition looks like, focusing on broader community benefits during the campus transition and ensuring justice considerations in the sourcing and disposal of materials for construction and renovation.

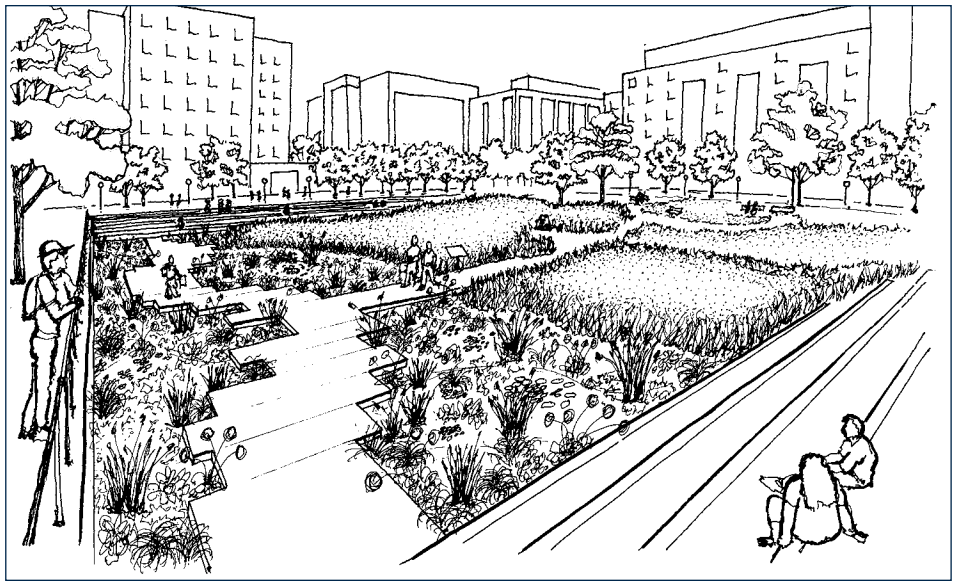


Figure 37. Sustainable infrastructure—an urban detention pond with appropriate natural buffer

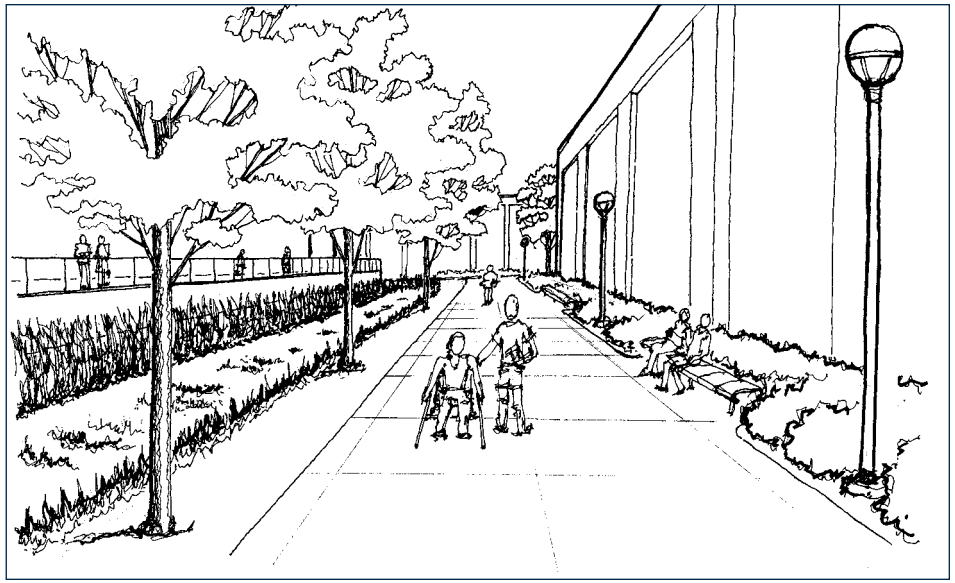


Figure 38. Outdoor environment with a bioswale and native planting

Planning Theme 4: Climate Action, Sustainability and Environmental Justice

Goal 1: Achieve carbon neutrality by 2040.

Objectives

» Continue to convert heating and cooling systems on campus to electric heat pumps and geo-exchange and coordinate with living lab opportunities.

» Reduce energy consumption across the building portfolio and university vehicle fleet.

» Continue to evaluate emerging technical options for eliminating natural gas as a fuel source.

» Evaluate cost of ongoing maintenance vs. total replacement in aging buildings and building operating systems.

» Maximize on-site renewable energy on campus including solar PV.

» Create opportunities to educate and inform the campus community about these practices.

Goal 2: Steward water resources on campus.

Objectives

» Continue to maximize water conservation strategies in buildings and landscape practices.

» Incorporate stormwater management best practices wherever possible.

» Evaluate stormwater management plans for potential water reuse opportunities.

Goal 3: Preserve habitat and quality open space.

Objectives

» Assure natural habitats are stewarded within the matrix of formal landscapes on the campus.

» To enhance planning, conduct a comprehensive ecological assessment of the campus with the objective of developing an integrative habitat stewardship and climate resilience plan.

Goal 4: Develop the campus as a living laboratory for sustainability education, research, and environmental justice.

Objectives

» Consider designating locations for cutting-edge research demonstrations of sustainable solutions in the built environment, in addition to visible demonstrations of current best-in-class practices.

» Develop processes by which students, faculty, and staff can engage together on applied problem-solving in planning and the built environment.

» Develop and incorporate environmental justice principles into campus growth spanning building design, construction, siting, and procurement processes.

» Identify high-traffic geo-exchange locations for installing signature, highly visible educational showcases, coordinated with living lab research and teaching interests.

Climate Action, Sustainability and Environmental Justice Principles

- Reserve campus land for sustainable infrastructure requirements and expansion including geo-exchange bores and ground source heat pumps, PV solar installations, future utility plants, and new electrical substations.
- Identify development strategies that align with mission-critical priorities and also advance carbon neutrality goals through operations and coordinated infrastructure systems.
- Conduct comprehensive energy and utility master planning studies to enable thoughtful sequencing and coordination of conversion projects.
- Pair infrastructure conversion efforts with other priorities such as accessibility, safety systems, and others.
- Develop a comprehensive climate resilience plan that informs all campus and development plans.
- Reduce unnecessary impervious surfaces to improve stormwater management; utilize porous pavement and other emerging technologies where appropriate.
- Plan stormwater facilities in response to flood zones, wetlands, etc. Integrate nature-based stormwater solutions to open space design to reduce stormwater impact, improve water quality, improve campus experience, and enhance biohabitat.
- Design landscapes with native and drought-tolerant species that require minimal irrigation.
- Evaluate options for water reuse including condensate water and stormwater harvesting for treatment and reuse for irrigation.

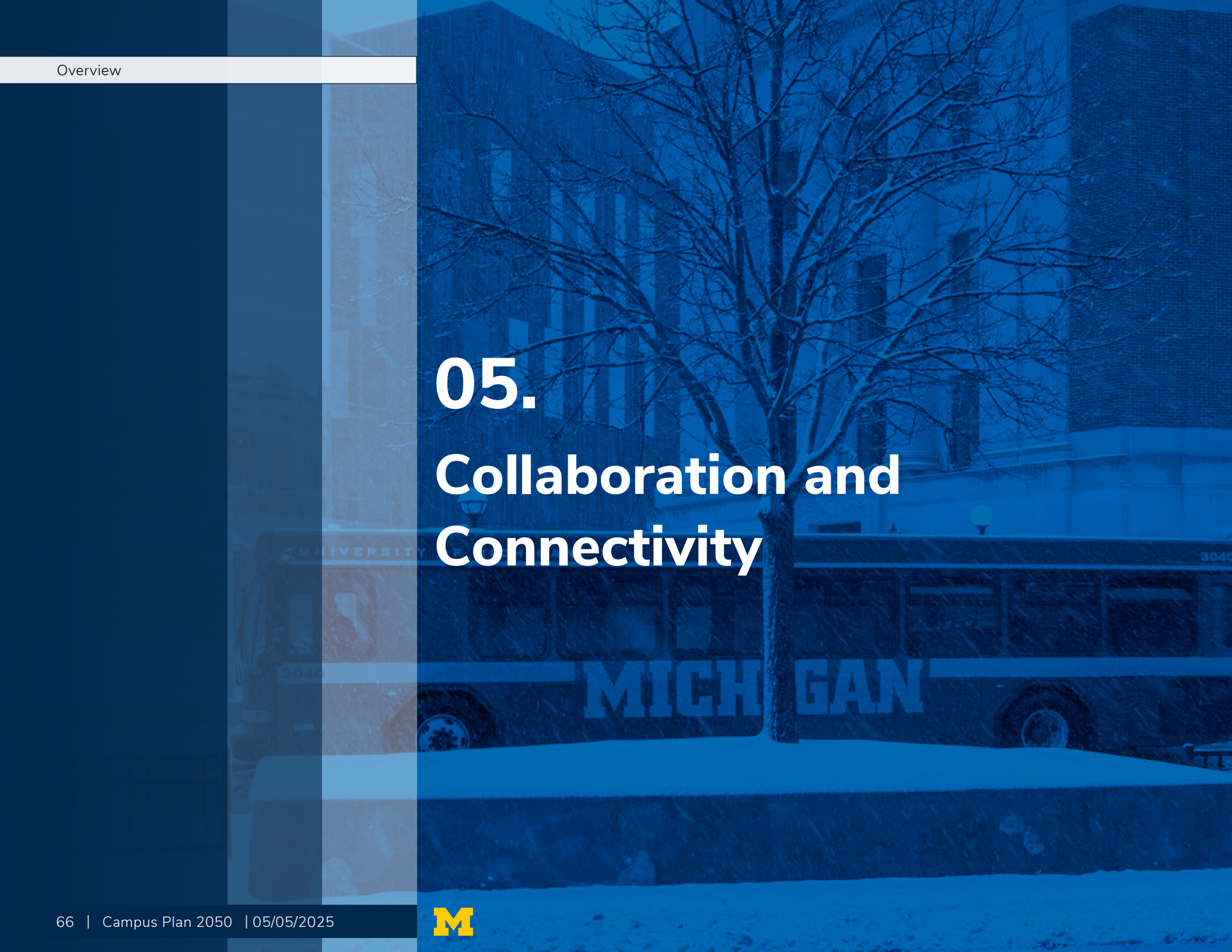
Natural Features

- Respect and incorporate important natural features and existing open spaces into the built environment; provide views and access to natural features; identify and respect the development challenges associated with important natural features.
- Integrate natural features such as woodland, wetland, and distinct topography into the framework for campus growth.
- Preserve existing high-quality woodlots and natural features where possible; minimize impacts to trees.
- Accommodate and improve natural streams and wetland systems; create a generous buffer area from new development.
- Offset tree loss by reforestation efforts and other appropriate strategies.

Open Space

- Optimize the quality and functionality of campus landscapes and open spaces; strengthen connections between open spaces to create a cohesive and unified campus.
- Create memorable spaces using natural systems and formal structure.
- Interweave the natural and built environment so that nature is integral to the campus experience.
- Plan spaces between buildings as defining areas of the campus landscape.
- Organize new developments to define, strengthen, and reinforce significant open spaces.
- Respect, enhance, and extend the established landscape character of the campuses and other significant open spaces, e.g., the Diag, the Grove.
- Incorporate enhanced civic open space, courtyards, and plazas in association with all future development as appropriate.
- Create a “working landscape” including comprehensive, integrated strategies for stormwater management, regional grounds, and waste management space needs.
- Consider demonstration projects that enhance the campus experience and performance. For example: urban agriculture and community gardens; energy, carbon, and water conservation projects; pollinator gardens and biodiversity enhancements; tree succession planning; and public art and design projects.

Figure 39. View of the Huron River



05.
Collaboration and Connectivity

Campus Plan 2050 supports Collaboration and Connectivity by creating multi-use spaces and hubs that encourage interaction and innovation among students, faculty, staff, and community members. It aims to boost interdisciplinary engagement across campus and improve sustainable mobility by leveraging emerging technologies such as a possible automated transit system (ATS) and bus rapid transit (BRT), alongside extensive and accessible pedestrian infrastructure.

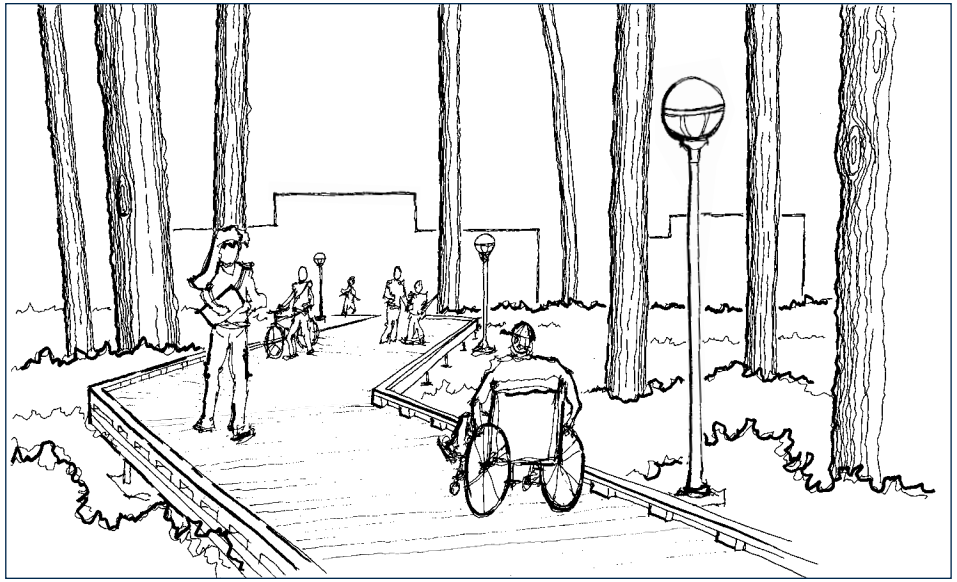


Figure 40. New pathways for connectivity and accessibility

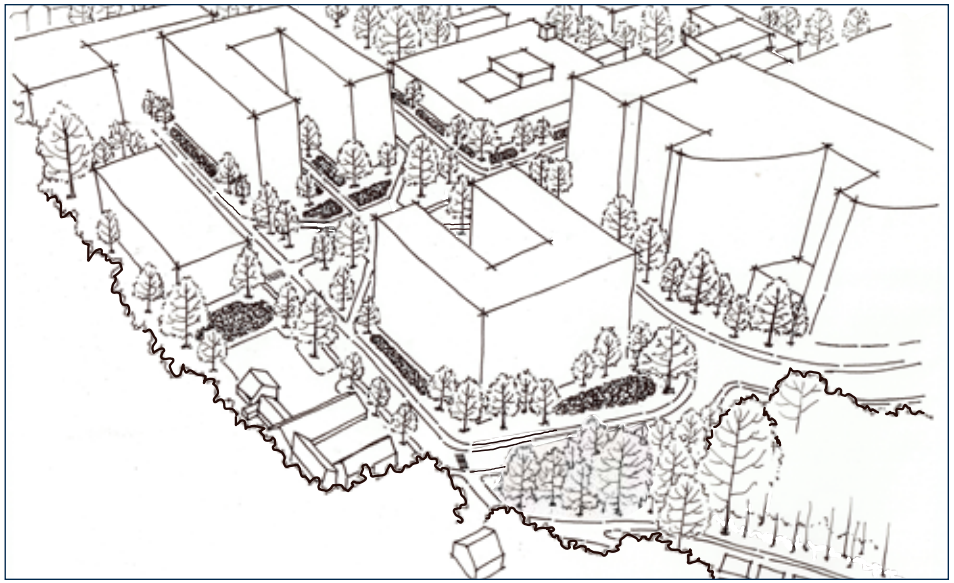


Figure 41. Natural systems interwoven with the built environment

Planning Theme 5: Collaboration and Connectivity

Goal 1: Enhance the sustainable mobility network across Ann Arbor.

Objectives

» Reduce the number of personal vehicle trips within campus.

» Eliminate gaps in the active transportation network for all modes of mobility.

» Ensure that an integrated mobility system emerges.

Goal 2: Enhance collaboration opportunities across campus by creating hubs of connection that enrich student experiences, stimulate creative expression, foster interdisciplinary academic and research activities, and drive innovation.

Objectives

» Increase opportunities for the U-M community to collaborate.

» Enhance existing collaboration nodes on campus to further foster a sense of community.

» Ensure that the U-M campus has optimal opportunities for innovation and connection.

Collaboration and Connectivity Principles

» Prioritize human-powered mobility; establish human-powered mobility zones and a comprehensive network of accessible routes and pedestrian pathways on each campus.

» Utilize universal design principles to guide the design and implementation of accessible routes and pedestrian pathways; eliminate physical barriers and stairs in the landscape where possible.

» Consider all needs including children, families, and the elderly in the design and layout of accessible routes and pathways as feasible.

» Utilize traffic calming techniques to enhance accessible routes and pathway networks.

» Coordinate the accessible routes and pathway networks with land use planning to enhance the user experience.

» Locate amenities, collaboration areas, and social spaces on the ground floors of buildings facing major pathways.

» Extend landscape corridors and pathways outward from the campus cores to link with existing community parks, trails, and woodland systems as feasible.

» Encourage additional bicycle use by creating more on-street routes connected to city-wide systems. Establish an integrated and comprehensive bicycle network across campuses; locate bicycle parking at major campus destinations, transit hubs/stops, and consider covered parking where appropriate.

» Connect the campus network with shared-use regional pathways and trails.

» Enhance the transit experience by concentrating amenities and services at centers/hubs of intermodal connectivity, locating transit stations and hubs at major destinations, and providing shelter, amenities, and information to the user.

» Coordinate transit and land use planning with a focus on the user experience.

» Coordinate campus transit routes and services with those provided by AAATA.

» Concentrate primary vehicular circulation on perimeter roads where possible.

» Plan for delivery, service, fire, and emergency access to interior areas of the campuses and human-powered mobility zones.

» Establish designated pickup and drop-off areas for ride-share services.

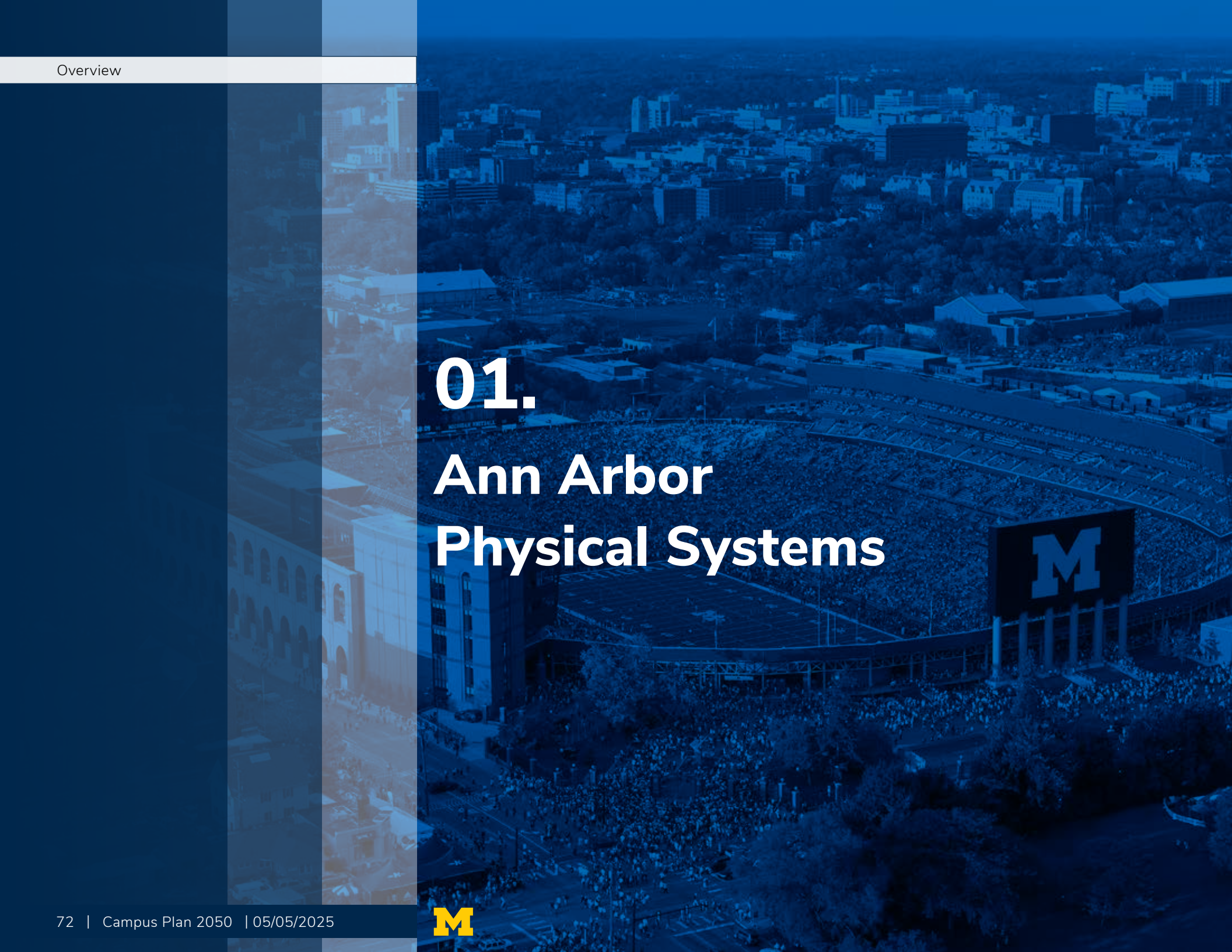
- Prioritize accessible routes, accessible pathways, bicycle routes, and transit over private vehicles.
- Accommodate parking at reasonable distances from major destinations; cluster regional parking on the perimeter of the campus connected to transit. Promote perimeter campus parking to capture vehicles before they enter the campus core.
- Plan parking structures to be as unobtrusive as possible, using perimeter locations, architectural screening, and activation of the street level as feasible.
- Provide adequate accessible parking in human-powered mobility zones.
- Integrate service, emergency, and limited convenience parking as appropriate.
- Provide adequate visitor/patient parking where programmatically driven.
- Incorporate transit centers and transit stations at key locations throughout campus to provide active transportation users with amenities and secure parking.
- Maximize the concentration of people, ideas, and resources to enable frequent, unexpected engagement opportunities.
- Create spaces that attract and include individuals from various backgrounds and disciplines to boost creativity, collaboration, and inclusion.
- Include coworking spaces, makerspaces, and more, complemented by nearby food service and retail options, with attention to well-being and the arts.

"The recommendations of this comprehensive plan offer guidance for every major area of UM-Ann Arbor relative to the functional role each plays in U-M's infrastructure and the achievement of its mission."

—Geoff Chatas, Executive Vice President and Chief Financial Officer

V.

Recommendations



01.
Ann Arbor Physical Systems

Campus Plan 2050 is informed by a deep understanding of the Ann Arbor campus and community needs and context, Vision 2034, and a number of other inputs during the planning process.

Campus Plan 2050 provides integrated and comprehensive system frameworks for development and change with the goal of unifying and improving connections across the Ann Arbor campus. The frameworks promote flexibility and adaptability in response to strategic priorities and implementation opportunities, and overlap with one another in the interest of integrated solutions.

The following physical system frameworks are included:

» Landscape and Sustainability

» Climate Action

» Transit

» Campus Arts

Figure 42. Gerstacker Grove gardens and building

Landscape and Sustainability System

Stormwater Infrastructure

Campus Plan 2050 integrates landscape improvements with stormwater, reforestation, food production, and connectivity goals. Stormwater recommendations focus on the management of water and soil resources utilizing functionally and aesthetically integrated best management practices (BMPs). BMPs address water quantity and quality requirements while simultaneously enhancing aesthetic qualities.

The management of stormwater on each campus involves three primary zones or circumstances, tailored to their specific contexts:

Developed Areas (e.g., Central Campus and the Medical Center Campus): These locations utilize existing underground conveyance systems and storage facilities for stormwater management. Generally, these systems will remain unchanged, except in areas slated for redevelopment, where Best Management Practices (BMPs) could be integrated with the landscape framework.

Stream Buffer Zones: Protection buffers ranging from 25 to 50 feet from the edge of embankments are proposed along all major sections of Fleming Creek, Millers Creek, the Huron River, Allen Creek, and Mallets Creek on the Ann Arbor Campus.

Natural Plantings: Additional native plantings are proposed for various areas across the campus to enhance stormwater management and ecological health. Suitable soils for infiltration should also be explored.

Landscape

The landscape system for Campus Plan 2050 is informed by the natural features and ecosystems of the campus and surrounding context as well as the formal landscapes and circulation networks that define the overall open space structure. It provides direction for improvements to streetscapes, enhancements to gateways, entrances, and wayfinding at existing and proposed locations, and provides site furnishing guidance to promote unity and contribute to the experience of the public realm.

The plan includes several types of landscapes:

The natural features of the plan include the Huron River Valley, wooded areas, wetlands, streams, and ponds located across the Ann Arbor campus with significant concentrations found on Ross Athletic Campus, Central Campus (Nichols Arboretum), North Campus, East Medical Campus, and the east Ann Arbor properties (Matthaei Botanical Gardens and Radrick Farms). These natural features are connected to the larger system of parks and nature areas in Ann Arbor and are important in terms of the ecosystem functions they provide relative to biodiversity and stormwater management. Campus Plan 2050 integrates these features into the open space structure of the campus by designating them as preserved land uses and by improving pathway connections to and through them. New pathways in wooded areas will require increased tree monitoring and maintenance to ensure the safety of public use.

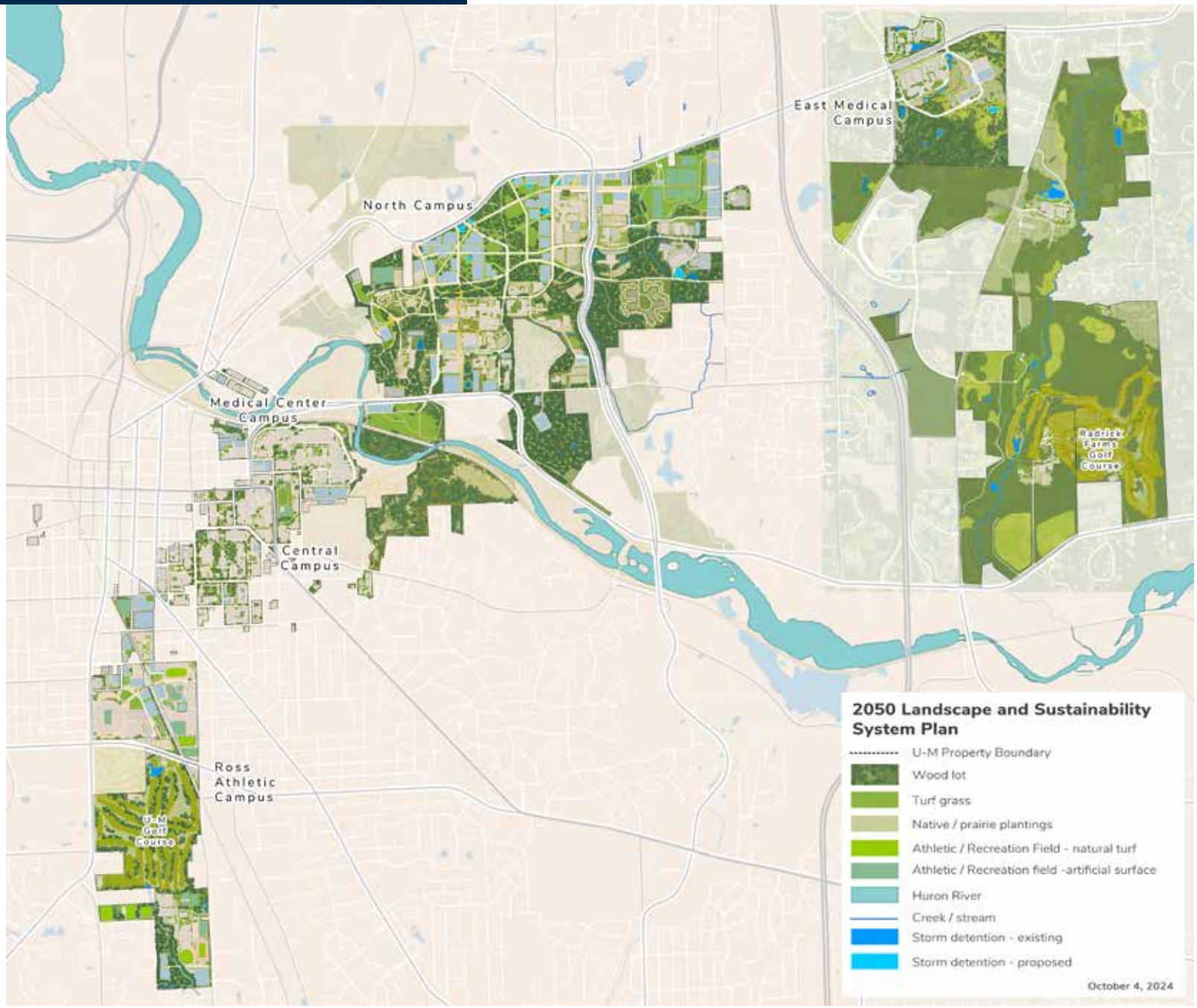
The plan aims to emphasize opportunities to increase biomass and ecosystem support wherever possible, and to limit the amount of lawn areas which do not promote stormwater infiltration.

Proposed areas of reforestation on North Campus enhance existing natural features in the interest of:

- Facilitating carbon sequestration, stormwater management, erosion control, water quality protection, and species diversity.
- Providing proximate areas of respite in support of health and well-being objectives.
- Heightening public awareness of the relationship between human settlements and the natural environment.
- Promoting wildlife movement corridors.

The formal or “structured” landscapes of the framework include memorable and iconic landscapes as well as the interstitial areas and circulation corridors. Formal landscape examples include the Diag, Ingalls Mall, and Palmer Field on Central Campus; Ferry Field on the Ross Athletic Campus; and Gerstacker Grove and the Wave Field on North Campus. Campus streetscapes and circulation corridors further define the open space structure along with significant stormwater management landscapes.

Figure 43. 2050 Landscape and Sustainability System Plan



The landscape and sustainability system offers guidance on preservation and enhancement of both natural and established formal landscape areas. Important viewsheds that exist are protected, and new viewsheds are created as part of the plan.

For more detail on landscape and viewsheds, see Section V. Campus Plan Frameworks.

Food production gardens and research areas provide opportunities for campus engagement, and for research and academic support activities. Nichols Arboretum and Matthaei Botanical Gardens contribute to these opportunities for recreation, exercise, teaching, and research activities. In the North Campus housing redevelopment areas, the plan identifies opportunities for food production gardens with the intent of fostering community engagement and well-being, and to promote the campus as a living lab.

The open space framework integrates campus gateways, entrances, and wayfinding strategies with streetscape and landscape enhancements with the goal of welcoming members of the campus and community. Recommended gateways offer opportunities for landscape features, signage, landmarks, public art, and other orientation elements, which, in combination, contribute to wayfinding on campus. The plan identifies opportunities along Plymouth Road at Green Road and Huron Parkway, Beal and Murfin intersections, and along Fuller Road at Bonisteel and Beal. A proposed future athletic facility located on South State Street in the Ross Athletic Campus-South Complex contributes to a new campus gateway along South State Street.

Campus Plan 2050 promotes the health and well-being of the campus population by reserving land for outdoor recreation fields and pathway networks. To that end, a proposed outdoor recreation complex on North Campus provides informal and programmed recreation activities. The recreation complex provides much-needed field space in addition to existing fields at Palmer Field on Central Campus and the Hubbard Street Recreation Fields on North Campus, among others. The proposed recreation complex is coordinated with the geo-exchange bores and ground source heat pumps proposed as part of the North Campus decarbonization strategy.

Pathways and Trails

Campus Plan 2050 illustrates a comprehensive and integrated network of pathways and trails designed to facilitate connectivity across the Ann Arbor campus, promote health and well-being goals, and promote access to nature in support of environmental justice. Proposed improvements include:

» Accessibility pathways in areas associated with new buildings or major site or landscape design projects. The plan embraces the principles of Universal Design to inform future design decisions to create an accessible, inclusive, and welcoming environment over time.

» New connections within each campus, between campuses and to adjacent areas. A key recommendation is the new pedestrian and bicycle bridge over the Huron River designed to facilitate pedestrian and bicycle connectivity between the Central, Medical Center, and North campuses. Additionally, a railway underpass is proposed to connect Nichols Arboretum with Mitchell Field. This underpass will also link to the Border-to-Border Trail, which runs along the Huron River from the city's Gallup Park. A third connection is proposed on the Ross Athletic Campus with a pedestrian bridge linking the Ferry Field Area to Kipke Drive over the existing railroad tracks to enhance connectivity and mobility.

Bicycles

Campus Plan 2050, informed by the City of Ann Arbor's focus on bicycle connectivity, provides a comprehensive network of campus bicycle facilities on U-M property linked to those of the community. The network includes connections within and between each campus. Major parking areas at transit stations and centers and major campus destinations such as unions, libraries, and academic buildings enhance the user experience and convenience. Where practical and appropriate for the context, covered bicycle parking may be considered to enhance the commuter experience. Potential locations also include parking structures, areas beneath the possible ATS guideways and transit stations, and future residential buildings, where applicable.

Figure 44. Bicycle on North Campus by the Reflecting Pond and the Lurie Engineering Center

Climate Action

The climate action system plan provides recommendations for on-campus geo-exchange and ground source heat pump infrastructure. It integrates decarbonization and land-based recommendations responsive to the climate action and sustainability goals and initiatives of the university. Through these changes, significant opportunities exist to make the U-M campus a living lab for learning and research, and to support the climate action, sustainability, and environmental justice impacts of U-M.

The plan supports U-M's sustainability and climate action goals by the large-scale installation of geo-exchange fields and ground source heat pumps to meet the heating and cooling needs of campus facilities and significant installation of solar PV infrastructure across all campuses to help meet electricity needs from renewable sources of energy.

Carbon Neutrality Goals:

- 2040 — eliminate direct, on-campus greenhouse gas emissions (Scope 1).
- 2025 — reduce emissions from purchased power (Scope 2) to net zero.
- 2025 — establish goals for a wide range of indirect emission sources (Scope 3).

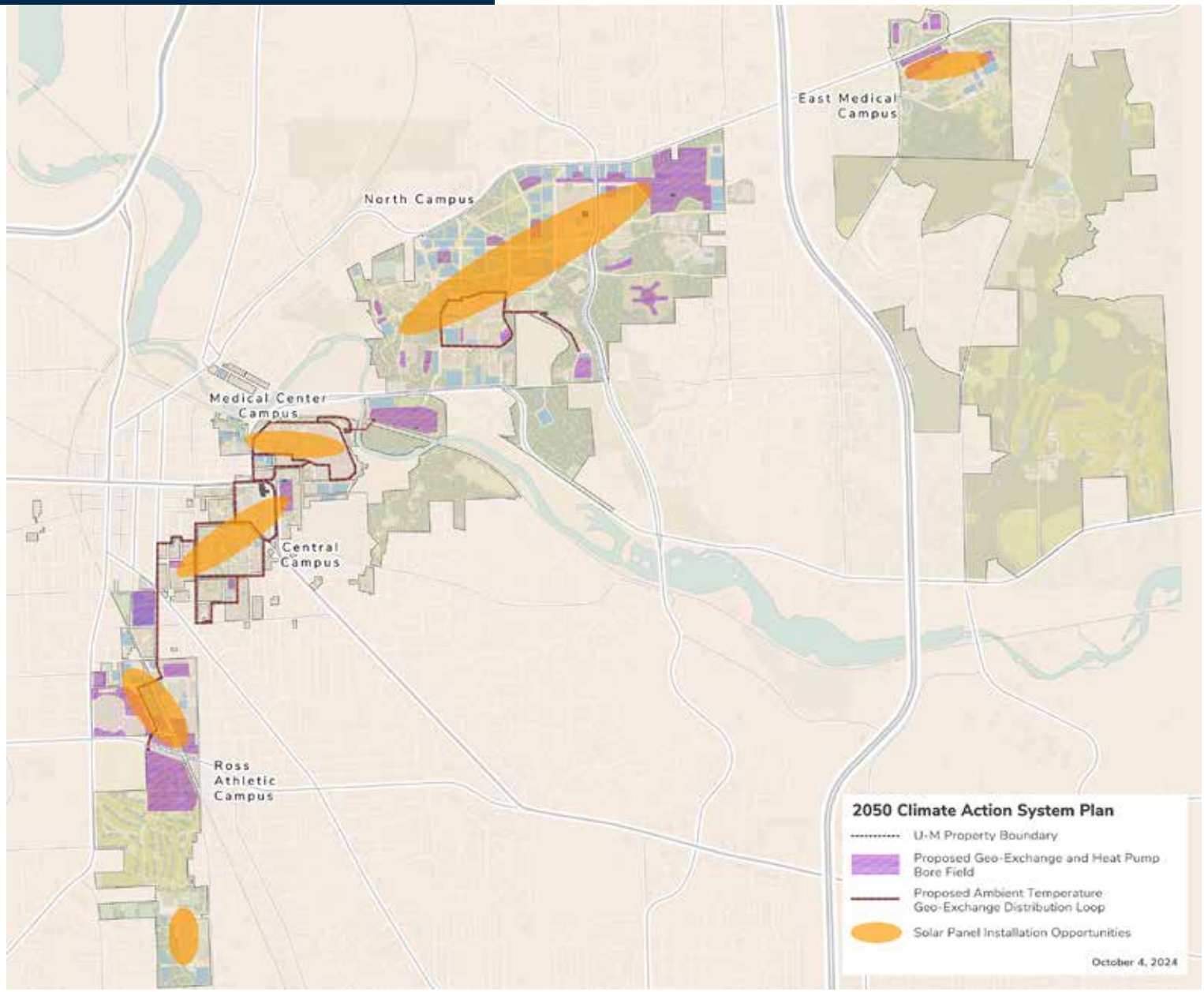
Building Performance

In addition to renewable energy, Campus Plan 2050 recommends deep energy retrofits on many existing buildings across all campuses beginning with those buildings utilizing the most energy, particularly heating, or for which renovations are planned.

Sustainable Infrastructure

The framework integrates geo-exchange and ground source heat pump infrastructure, solar photovoltaic installations, and building improvements in support of the university's climate action and sustainability goals, notably the goal of decarbonizing the campus by 2040. The plan involves significant integration with new interconnected systems, necessitating broad compatibility across various sub-campus areas. This will require robust coordination and thoughtful sequencing of development.

Figure 45. 2050 Climate Action System Plan



Geo-exchange

Campus Plan 2050 identifies candidate locations for large-scale geo-exchange bores and ground source heat pumps on the North, Ross Athletic, and East Medical campuses where larger tracts of land are available to meet existing and future heating and cooling needs. It also identifies land in Mitchell Field to partially address the needs of the Medical Center Campus.

The Central and Medical Center campuses lack the unencumbered land required for large-scale geo-exchange fields. Limited opportunities exist at Palmer Field, Regents Plaza, Phase II of the Central Campus Residential Development (South Division Street), the redevelopment of North Ingalls, and other select locations on Central Campus; however, none of the sites are large enough to meet the full heating and cooling demands of these campuses. The plan recommends exploring new and emerging technologies and practices related to geo-exchange and piloting these approaches on campus. These strategies could involve drilling boreholes beneath or adjacent to buildings and employing innovative drilling techniques, such as pyramid drilling, which may enable geo-exchange installation with a reduced surface area requirement.

The recommendations for decarbonizing campus heating/cooling and energy systems on the Ann Arbor campus include technologies and physical locations for district scale infrastructure, distribution networks, and building investments for realizing U-M's greenhouse gas emission reduction commitments:

» Eliminate Scope 1 on-campus greenhouse gas emissions by 2040.

» Eliminate Scope 2 greenhouse gas emissions by 2025.

The proposed infrastructure concept for Campus Plan 2050 is often referred to as a "5th-generation district heating and cooling system." It is a decentralized network with efficiencies that are new to district energy systems; it allows energy flow among buildings and within them, reduces distribution system size and associated losses, and replaces the historic use of steam to heat buildings with low temperature heat sources. Campus Plan 2050 integrates geo-exchange bores and ground source heat pumps in existing and proposed open spaces, under recreation fields and parking lots, and potentially under future buildings and parking structures.

The decarbonization strategy for Campus Plan 2050 emphasizes immediate actions to align infrastructure and building investments with the university's carbon neutrality goals. Key to this recommendation is the adoption of 5th-generation systems, known for their efficiency, particularly for North Campus, Ross Athletic Campus, and East Medical Campus. Smaller locations, such as Regents Plaza and Palmer Field, are potential sites on Central Campus. While implementing 5th-generation systems on Central Campus and the Medical Center Campus might be feasible, the high density and energy demands in these areas warrant further investigation due to the limited availability of geo-exchange bore sites within the campus boundaries.

Significant investment in reducing building energy demand is also a core recommendation of the plan. This will be achieved through energy conservation projects in existing buildings and converting heating systems to use low-temperature hot water instead of steam, integrated with scheduled building renovations.

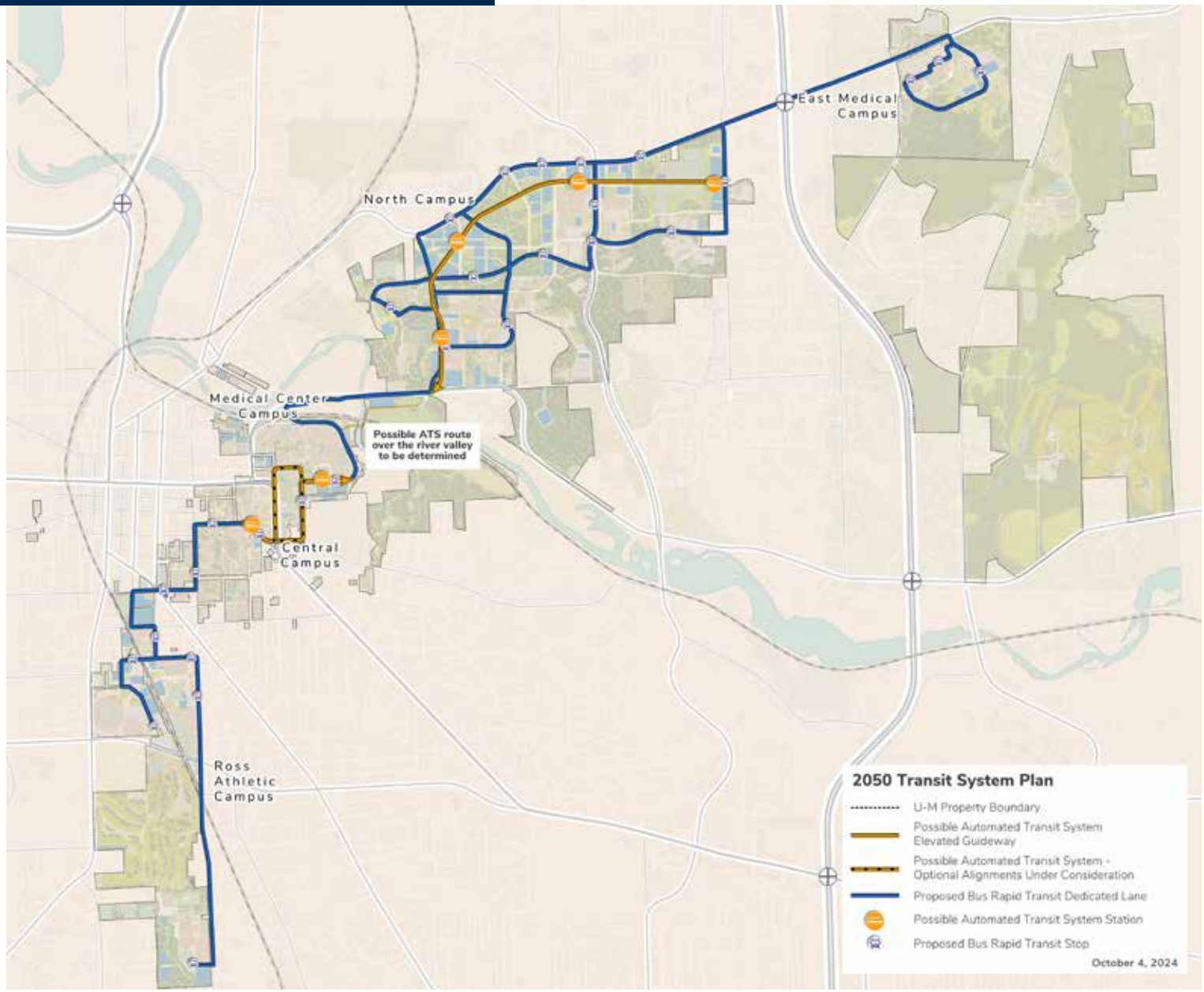
Figure 46. Underground stormwater basin in front of the University of Michigan Museum of Art

Transit System

Mobility and connectivity recommendations within the Campus Plan 2050 are based on a comprehensive and unified multi-modal system of accessible, pedestrian, bicycle, transit, and vehicular connections across the Ann Arbor campus. The system aligns with the pathway, bicycle, transit, and vehicular routes of the city grid; the major arterials of the road network in the Ann Arbor area; and the trail system of the Huron River Valley and Nichols Arboretum and Matthaei Botanical Gardens.

The plan also takes into consideration existing transportation infrastructure and identifies future project priorities and/or directions that will help the university coordinate multi-modal improvements and achieve an integrated system. The goal is to offer multiple travel choices, enhance multi-modal connectivity, and shift emphasis away from single-occupancy vehicle use. It proposes non-motorized or active transportation options (such as walking, bicycling, and hybrid work) and transit (possible ATS and BRT). It also supports U-M's climate action goals by facilitating non-motorized mobility. The plan proposes a concept for distributed parking stacked under new buildings, as appropriate, a distributed set of perimeter parking structures, as well as a more robust regional public (not U-M) transit system.

Figure 47. 2050 Transit System Plan



U-M's vision for a sustainable and accessible transportation network requires tackling interconnected challenges and exploring data-driven solutions. Moving away from reliance on personal vehicle travel toward a system that encourages walking, biking, and transit will offer the potential to reduce congestion, enhance community experience, and achieve emissions goals for U-M and the City of Ann Arbor. Achieving this vision in partnership with the City of Ann Arbor will include:

Transform Transit

» Enhance reliability, comfort, capacity, and efficiency by means of dedicated bus lanes, queue jumps, and tactical infrastructure deployment like signal modifications on key roads. This includes South State Street, North University Avenue, Observatory Street, East Medical Center Drive, Plymouth Road, and North Campus areas.

» Explore the implementation of a possible automated transit system (ATS) and bus rapid transit (BRT), to reduce congestion, enhance speed and reliability, and decrease the number of personal vehicles on campus. These two systems will be closely coordinated to ensure seamless integration and maximize efficiency.

Strengthen Non-Motorized Networks

» Complete missing connections in the pedestrian and bicycle networks to create seamless and convenient non-motorized travel options. This includes building additional bridges and underpasses to support connectivity where geography prevents physical connections.

» Enhance existing pathways based on user needs and demand; prioritize comfort, safety, and accessibility.

Promote Perimeter Campus Parking

» Create additional ADA-compliant accessible parking.

» Integrate remote parking options that connect directly to the improved transit, pedestrian, and bicycle networks.

» Encourage individuals to utilize remote parking and/or minimize the need for personal vehicle trips by implementing incentives and educational programs and by creating a seamless transit network that is an attractive and viable alternative to on-campus parking.

The mobility recommendations include new and improved infrastructure that provides and enhances multimodal transportation options within and between the U-M campus areas in support of Campus Plan 2050 goals. The recommendations include the following modes, in addition to traditional buses and personal vehicles:

» Proposed bus rapid transit (BRT) - a high-capacity public transportation system that utilizes dedicated lanes, priority signaling, and other infrastructure improvements to provide faster, more reliable bus service. A proposed BRT aims to offer a more flexible system at a lower cost in comparison to light rail or underground subways.

» Possible automated transit system (ATS) - a network of automated vehicles or guided transit systems that operate on dedicated tracks or guideways. These systems often use advanced technologies such as sensors, computer control, and automation to provide efficient and convenient transportation solutions, particularly in dense urban areas.

» Active transportation - any form of human-powered transportation, such as walking, cycling, or scootering that emphasizes physical activity as a means of transportation, promoting health and environmental sustainability. Active transportation infrastructure includes sidewalks, bicycle lanes, multi- or shared-use paths, cycle tracks, bridges, underpasses, and trails.

Figure 48. U-M electric bus

Campus Arts System

Art in all its forms pulses across U-M's five campus ecosystem, circulating among hubs of concentrated activity while infusing the entire campus with wonder, joy, and possibility.

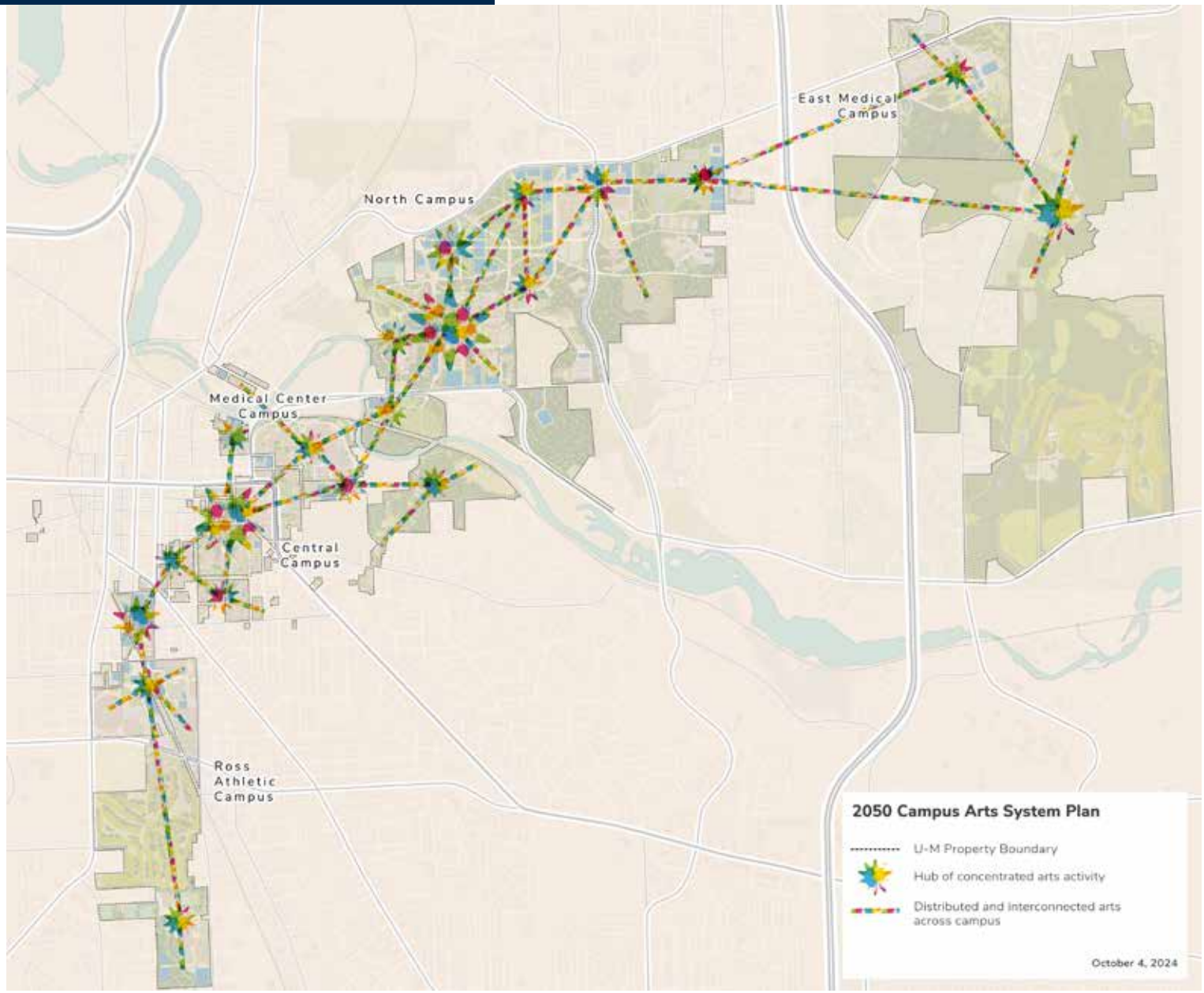
Envisioning a Campus Canvas for the Arts

From inspiring architecture and public sculpture to world-class concert venues, museums, teaching studios, galleries, and theaters, the five areas of the Ann Arbor campus are brought to life, day and night, with the energy, awe, and curiosity of the arts.

Ideas swirl and individuals connect with themselves and one another to appreciate a life made more meaningful and rewarding by the fascination created by color, pattern, sound and the inimitable personal insight of the artist. Rather than the domain of the few, art on the U-M campus is everywhere and for everyone, part of an environment that involves all of the human senses. The individual never walks across campus alone, but is connected to others through tradition and creative innovation.

Drawing from the U-M Arts Initiative and other campus initiatives, our integration of the arts will grow and evolve as an essential aspect of our identity.

Figure 49. 2050 Campus Arts System Plan



02.
Campus Framework Plans

"Looking forward to the next 25 years, our campus plan is setting a comprehensive, flexible framework for the ways we can evolve to support the university's greatest goals in research, education, and patient care."

—Geoff Chatas, Executive Vice President and Chief Financial Officer

The presence of the university and its five campuses in Ann Arbor, combined with the townscape of Ann Arbor and the natural setting of the Huron River Valley, establish a unique sense of place—one which benefits from the cooperative and collaborative planning initiatives between U-M and the City of Ann Arbor, Ann Arbor Township, and many other local, regional, and statewide partners.

Campus Plan 2050 provides planning guidance for each of the campuses relative to the functional role they play in supporting the mission of the university, and the connectivity within and between the campuses and the community. The plan focuses on the Ann Arbor campuses but with the recognition that the Flint and Dearborn campuses also play an important role in supporting the mission of the institution as well. Therefore, the shared vision, mission, and goals of the Ann Arbor, Flint, and Dearborn campuses, and Detroit, as well as connections through academics, research, innovation, technology, and clinical care, continue to be important considerations for the University of Michigan as a whole.

As part of the Campus Plan 2050, a significant focus is placed on deep reinvestment over the next 25 years in existing facilities. While new developments and the redevelopment of existing buildings are highlighted, maintaining and improving current structures remains fundamental. Future plans aim to address programmatic needs, deferred maintenance, accessibility, and sustainability within these existing buildings. Sustainable growth in the university's infrastructure involves a balanced approach of creating new facilities and reinvesting in existing ones. This ensures a robust, adaptable, and forward-thinking campus environment. Continued engagement with various academic and non-academic units is essential to address evolving needs and identify opportunities for collaborations and synergies.

The Planning Context

Ann Arbor, at its core, features the desirable qualities of a compact, pedestrian-scaled townscape integrated with the educational and cultural resources of a preeminent research university. Central Ann Arbor lies south of the Huron River Valley and is defined by the historic grid pattern of streets that interweave with the Ross Athletic, Central, and Medical campuses. The Huron River Valley and the associated parkland form a natural corridor through the city, providing an ecological, recreational, and contemplative amenity. The valley connects the Central and Medical Center campuses to North Campus.

The university functions across four locations or campuses within Ann Arbor and a fifth campus on the east side of the City of Ann Arbor in Ann Arbor Township. Within the city, U-M covers just over 2,000 acres, and in Ann Arbor Township, approximately 1,200 acres, including large acreage within the Matthaei Botanical Gardens, Radrick Farms, Ann Arbor Technology Park, Horner-McLoughlin Woods, and Saginaw Forest. The university's total acreage in the Ann Arbor area is approximately 3,200 acres.

Central Campus

Central Campus is located within the original street grid and is physically integrated with the townscape of Ann Arbor. The origins of the university when it first began operating in Ann Arbor can be traced to Central Campus, making it the campus most closely associated with the memorable heritage and character of the university. It is the primary setting for the undergraduate educational experience. Nichols Arboretum, a part of Central Campus, lies on the eastern edge of the campus. Recent land acquisitions along South Fifth and Division streets allow for a major expansion of undergraduate housing to the south.

Medical Center Campus

The Medical Center Campus lies to the northeast of Central Campus overlooking the Huron River Valley and Nichols Arboretum to the northeast. It occupies a pivotal location between Central and North campuses. Its importance to the clinical, research, and educational mission of Michigan Medicine results in a high degree of activity including a high influx of patients, families, caregivers, and visitors coming from many regional locations. It is the most densely developed of the five Ann Arbor campuses. The proposed addition of a pedestrian and bicycle bridge over the Huron River Valley connects and unifies these campuses physically and functionally.

Ross Athletic Campus

Ross Athletic Campus is also framed and defined by the Ann Arbor grid; it accommodates athletics, recreation, and support uses. Allen Creek and Malletts Creek are important natural features. Campus Plan 2050 examines opportunities for the relocation of non-athletic functions, especially around Michigan Stadium, with the goal of providing redevelopment opportunities in support of athletic needs.

North Campus

North Campus is located north of the Huron River Valley. In contrast to Central Campus, North Campus has a naturalistic quality defined by the steep slopes of the river valley, Millers Creek, and pre-settlement woodlots. It reflects the university's post-WWII growth and the subsequent suburban expansion of Ann Arbor to the northeast. Campus Plan 2050 focuses on the transformational redevelopment of key areas of North Campus in support of U-M's growth and to create a dense, walkable, vibrant Innovation District.

East Medical Campus

East Medical Campus lies east of US-23 on Plymouth Road in Ann Arbor Township, and is surrounded by low-density single-family dwellings, suburban office parks, and U-M's Ann Arbor Technology Park to the south. The overall character is defined by the presence of Fleming Creek and significant areas of high quality woodland. Campus Plan 2050 calls for additional inpatient and outpatient clinical services in support of Michigan Medicine's mission.

Other Ann Arbor Properties

The university also encompasses a number of properties in the Ann Arbor area that are not located on one of the five campuses. The most significant of these include the Arbor Lakes office complex just north of East Medical Campus, and undeveloped acreage in U-M's Ann Arbor Technology Park, south of and contiguous to the East Medical Campus, both of which offer opportunities for future development. Also, on

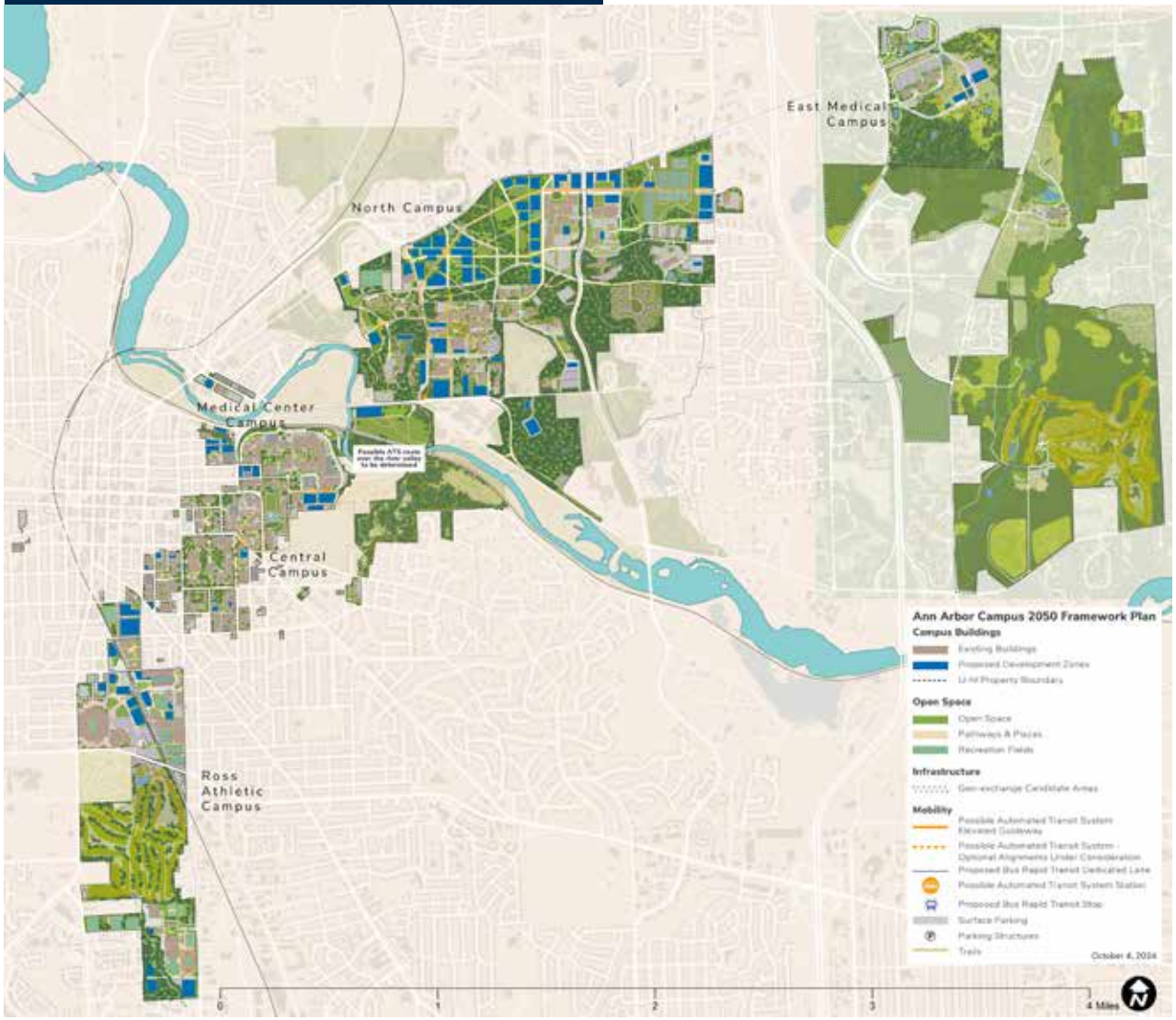
the east side of Ann Arbor, substantial acreage exists within the Matthaei Botanical Gardens and Radrick Farms Golf Course Areas. Just northeast of the city is the Horner-McLaughlin Woods, a nature reserve. Scattered properties located near the Central and Ross Athletic campuses include the Wolverine Tower office building, the Eisenhower Park West medical offices, the Research Museums Center storage facility located south of I-94, and the Briarwood complex of medical outpatient clinics. West of Ann Arbor, in Scio Township, is another health center serving the outpatient clinical mission.

Inter-Campus Mobility

Campus Plan 2050 places significant emphasis on improving mobility and connectivity across the Ann Arbor campus. To that end, the possible ATS system and BRT are important features of the plan. The density, development patterns, and mix of uses proposed for each campus enhance and contribute to the mobility connectivity goals.

Campus Plan 2050 identifies a network of complete streets accommodating pedestrians, bicycles, transit, and vehicles, acknowledging that the private car will continue to be an important means of campus access for people with mobility challenges; patients, staff, and commuters coming from remote locations, and visitors and patrons; and for emergency, service, delivery, and ride hailing services. The network enhances access to key accessibility and pedestrian zones by focusing vehicular circulation on peripheral roads and parking areas.

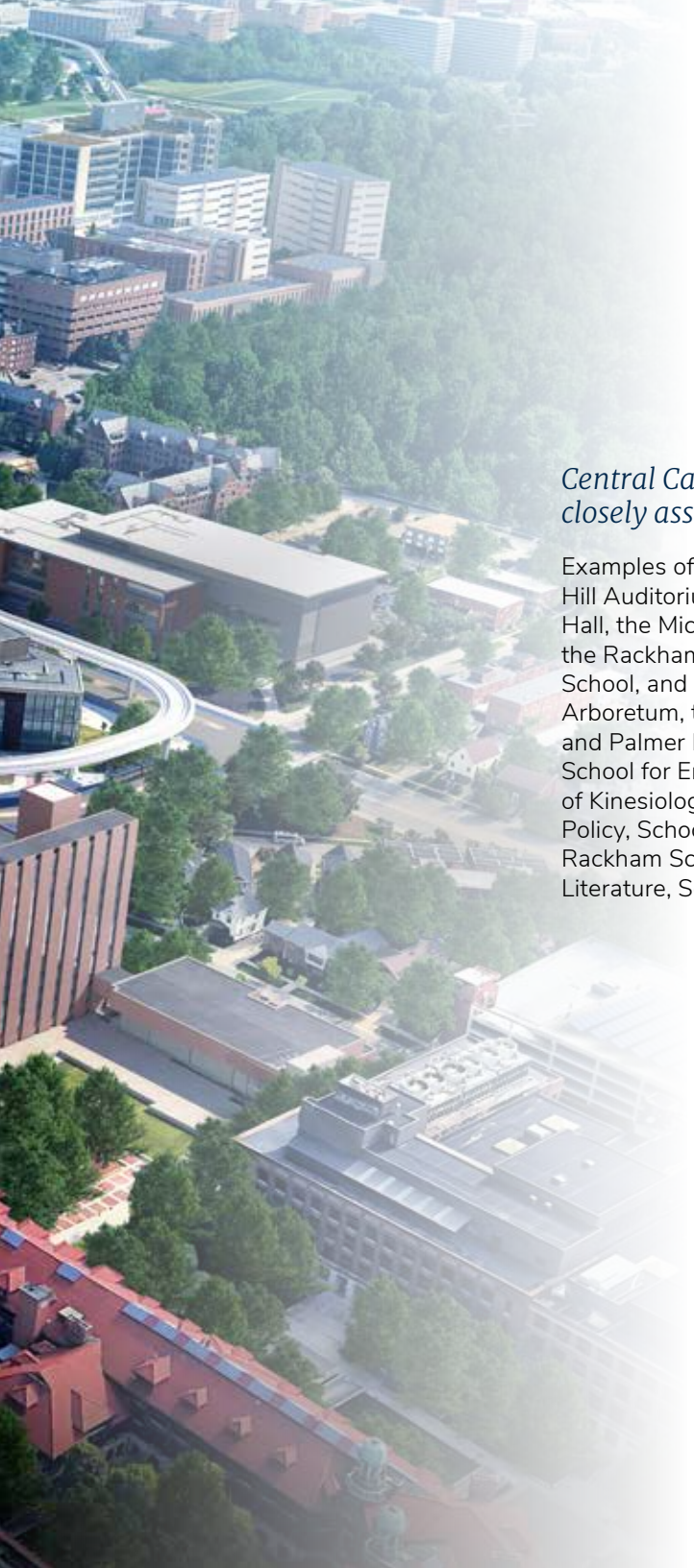
Figure 50. Ann Arbor Campus 2050 Framework Plan



» Central Campus

"Central Campus is home to some of the most iconic academic buildings and public spaces of the university. Our plan helps us protect and reinvest in the historic center of our university so it will continue to define the Ann Arbor campus for future generations."

—Laurie McCauley, Provost and Executive Vice President for Academic Affairs



Central Campus is the location of U-M's most iconic heritage buildings and landscapes, and is closely associated with the history and traditions of the institution.

Examples of key buildings of Central Campus include Hill Auditorium, Burton Memorial Tower, Angell Hall, the Michigan Union, the Michigan League, the Rackham Graduate School building, the Law School, and memorable open spaces such as Nichols Arboretum, the Diag, Ingalls Mall, Regents Plaza, and Palmer Field. Central Campus is home to the School for Environment and Sustainability, School of Kinesiology, Gerald R. Ford School of Public Policy, School of Public Health, College of Pharmacy, Rackham School of Graduate Studies, College of Literature, Science, and the Arts (LSA), Marsal Family School of Education, School of Social Work, Ross School of Business, Law School, and School of Dentistry. Principal libraries are also found on Central Campus, including the Harlan Hatcher Graduate Library and the Shapiro Undergraduate Library.

Central Campus is generally defined by East Huron Street and East Medical Center Drive on the north; Observatory and Church streets on the east; East Hoover Avenue on the south; and South Division and a railway on the west.

Possible view of Central Campus in 2050

History of Central Campus

Central Campus includes the original 40 acres of Ann Arbor land identified for the site of the university in 1837. This site, today known as "the Diag" or the original 40 acres, was located on the east side of the then-still-young town on land originally part of a larger farm containing an orchard and open fields. Beginning in 1840–41 with one large classroom/dormitory building and four faculty houses, the original 40 acres developed rapidly throughout the 19th century to a point of overcrowding. To accommodate the growth of the primary academic and research functions, clinical and athletic functions were relocated to nearby parcels in the 1890s. Beginning in 1907, the university initiated development of Nichols Arboretum, a significant natural area on the east edge of Central Campus. In the early 1910s, as older buildings were replaced and demand for space increased, the university purchased land adjacent to the original 40 acres. The most significant new facility to be built off the Diag area at this time was Hill Auditorium in 1913.

A building boom in the 1920s led to the acquisition of significant parcels in all directions around the original 40 acres to accommodate a number of new facilities. These included sites for landmark buildings such as the Michigan Union, the Michigan League, Lorch Hall, the School of Education, the Ruthven Museums, and the Law Quadrangle. Land acquisitions continued into the 1970s and further extended the campus, including a major expansion to the northeast, connecting with the Medical Center Campus. Construction of new facilities continued into the 21st century, resulting in a campus with mature grounds and a dense, cohesive environment that is both rich in history and traditions while also embracing new mission-driven development. Central Campus occupies approximately 300 acres.

History of Planning for Central Campus

The first campus plan was completed by esteemed New York architect Alexander Jackson Davis in 1838. Davis also designed several initial buildings in a High Gothic Revival style; however, none were implemented due to lack of funds. The placement of early buildings followed Davis's plan to some degree, as well as an 1840 plan developed by individuals who had worked in his firm. Other plans that may have been developed over the next 50 years would have been in response to specific building needs and were executed by faculty. Throughout the 19th century, the siting of buildings was reactionary based on specific needs, although there was recognition of the row of structures defining the west edge of South State Street and a similar, though less defined, row along the east. Buildings continued to face out to the city streets and the interior of the campus was considered to be a "backyard." This changed in 1883 when the first library building was constructed near the center of campus, leading to the development over the following decades of the space now known as the Diag.

In 1907, Emil Lorch, first director (later dean) of the College of Architecture, created a plan focusing on the replacement of older buildings and infill development. His plan was noteworthy for a mall extending north from the library into a central open space, which was shown as a heavily planted square. New/replacement buildings were proposed to define what is now known as Ingalls Mall. Although not officially adopted, Lorch's plan influenced the placement of buildings, reinforced the diagonal walk system, and informed the open structure of the campus. For example, the Chemistry Building and the Natural Science Building (Kinesiology) defined the edges of the emerging mall according to the plan. Lorch's original plan did not extend beyond the original 40 acres, but the idea of a mall as an organizing element did gain support when the university planned the location of Hill Auditorium, its first building in this area.

In the late 1910s, U-M initiated studies for a number of potential buildings in anticipation of state appropriations in the 1920s, plus a number that were funded by private donors. The result was the "Burton Building Boom," named for Marion Burton, president of the university when most of the buildings were in design or construction. To plan for these buildings, a committee was appointed that included noted Detroit architect Albert Kahn as supervising architect. Kahn's influence on the developing campus architecture was significant. He designed several of the buildings constructed before and during the boom

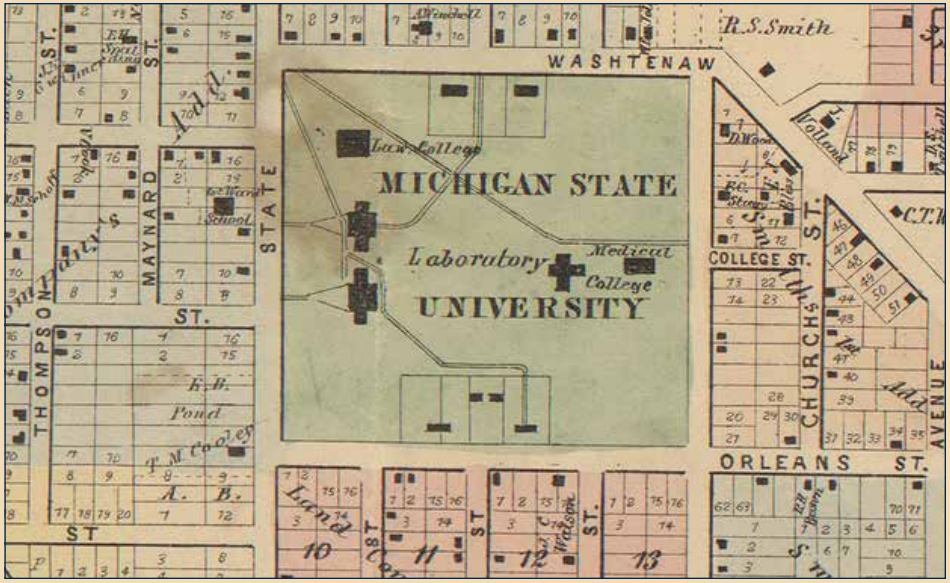


Figure 51. Campus Master Plan, 1841

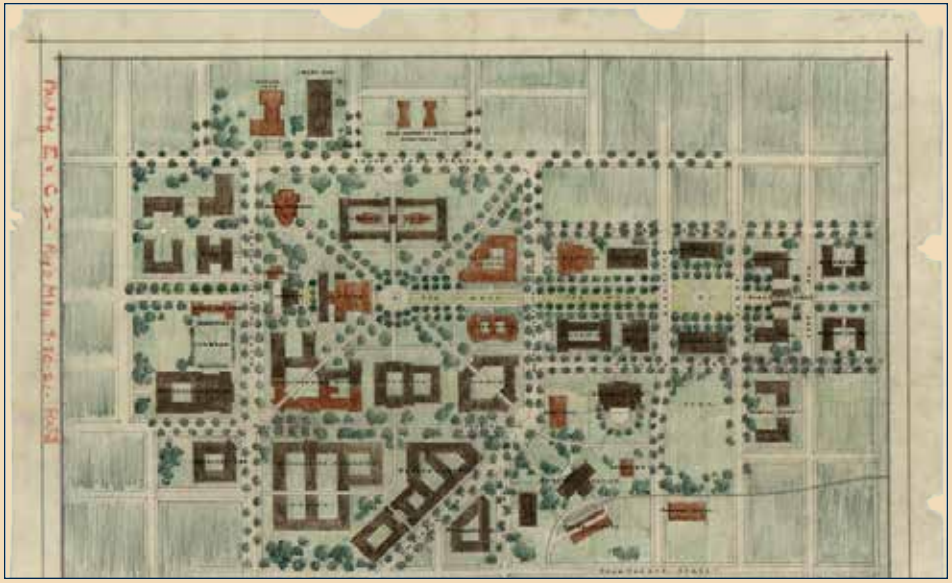


Figure 52. Burton Plan, 1921

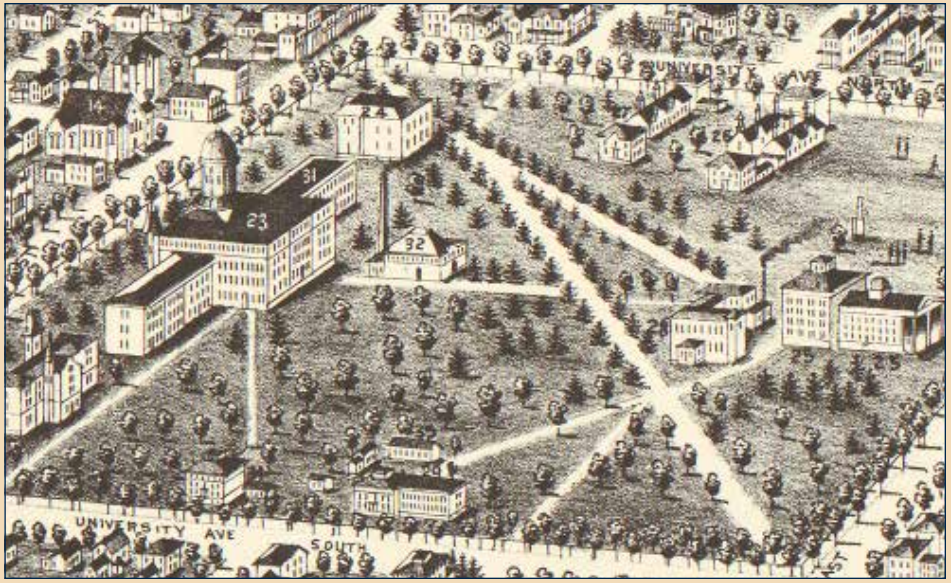


Figure 53. 1880 Depiction of the Diag

Figure 54. 1963 Central Campus Planning Study

and influenced the design of others. Working with university staff, at least two variations of a campus plan were prepared by the committee. These were simple illustrations, not master plans per se, but major steps toward realizing our modern configuration of Central Campus. The plans emphasized connectivity to other areas, reinforcement of axes, and enhancement of the campus landscape.

In the early 1940s, planning began for the development expected in the postwar years. The resulting document addressed potential building expansions and renovations. The Postwar Public Works Program, which included a campus plan identifying development sites and detailed descriptions of specific projects, was approved by the Regents and presented to the governor in 1943. The concepts of the plan guided the placement of facilities for a number of years, although some projects took many years to come to fruition. Primarily a programming document and not a campus plan, it addressed new buildings and additions but offered no direction on other campus design or planning elements.

As the campus continued to grow through the 1950s, it became clear that a master plan was needed. Work commenced on the first true master plan for Central Campus in the early 1960s. University staff worked with the firm of Johnson Johnson and Roy (JJR) on development of the 1963 Central Campus Planning Study. JJR, a respected local planning firm, became the university's primary planning consultant for most of the remainder of the 20th century. The 1963 plan looked at the Central Campus holistically and was the first to utilize a modernist framework plan approach. It created a physical framework allowing for a degree of program flexibility. The framework was defined by a strong system of walkways, open space, and perimeter streets linked to parking structures within sub-campus areas. It identified development zones and open space networks, and explored the relationship between the university and the city. The 1963 plan successfully guided the development of the campus over the course of the next 20 years.

By the mid-1980s, with a more densely developed campus, an update of the 1963 plan began. The resulting 1987 Central Campus Plan Update built on the framework elements as defined in 1963, redefined expansion areas, and provided additional emphasis on improved flow and connectivity. This included building and open space linkages, plazas and courtyards, walkways, service access, and vehicular and pedestrian circulation. For the first time in a master plan, the historic nature of the campus was acknowledged in a section entitled "Buildings and Spaces of Distinction." It described the landmark buildings and spaces fundamental to the U-M sense of place. The plan acknowledged that growth and change were inevitable, but in that process, heritage buildings and spaces of distinction needed to be respected and preserved.

The 1987 plan guided development for the following 20 years. In the late 1990s, planning studies of the Central Campus, as well as all other campuses, were undertaken by the firm of Venturi, Scott Brown and Associates. Although no formal master plans were developed, some of the studies informed projects developed over the following few years. In order to address the continuing needs on the Central Campus, the planning process continued and a master plan update, developed by university staff, was presented to the Regents in 2005. Although a central campus plan was not produced at that time, guiding concepts for continued growth were provided. The fundamental themes included student life, collaboration, adjacencies, and interdisciplinary work, and issues involving international studies and the preservation of knowledge. The physical planning principles included the preservation of future flexibility, site capacity, redevelopment, building conditions, and enhanced mobility.

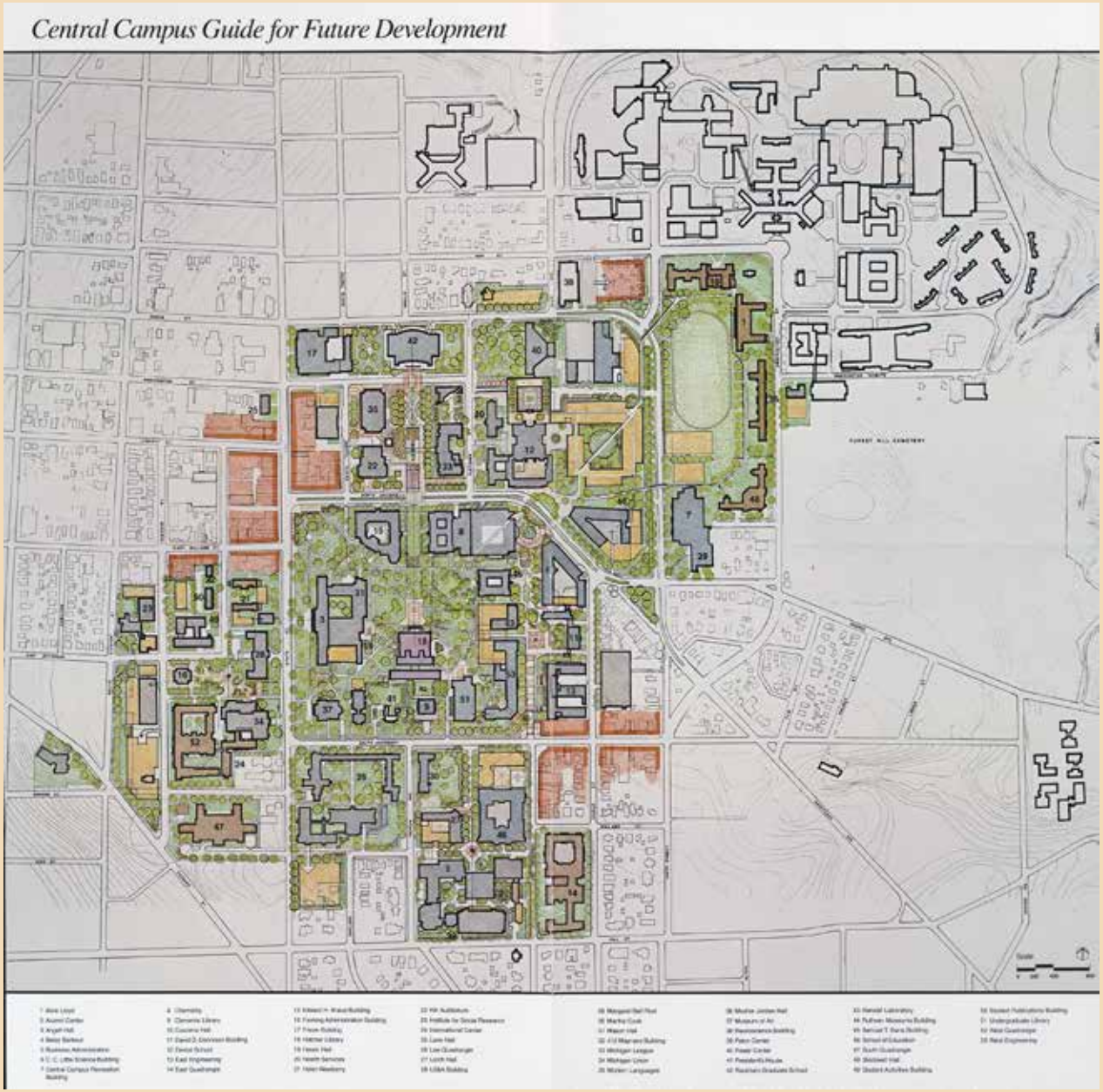
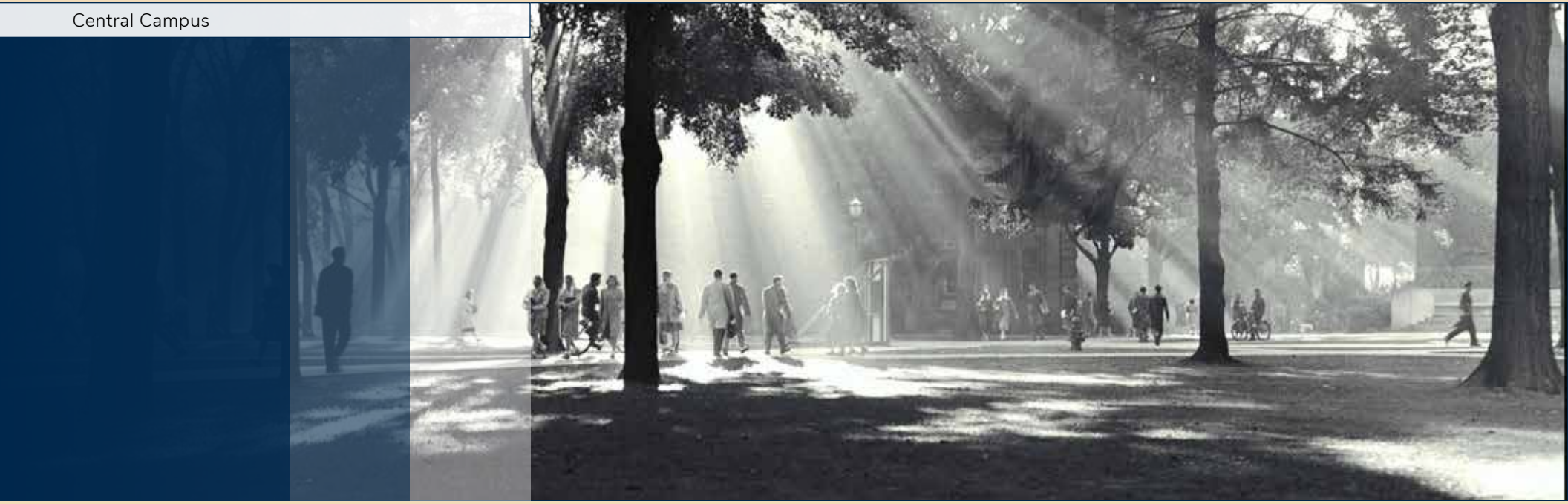


Figure 55. Central Campus study, 1987



Historic State of Central Campus

Encompassing the original 40-acre campus as well as the larger core area that developed into the mid-20th century, Central Campus has a deep history that is embodied in the built environment and cherished open spaces.

A collection of significant historic buildings in the core area establishes and enhances the atmosphere of Central Campus and embodies this important heritage. Traditional and beloved open spaces also define the history and sense of place, including the Diag, Ingalls Mall, and Palmer Field. An organizing element for the residence halls that surround the Hill Area, Palmer Field is an especially noted open space gifted to U-M in 1909 and is, therefore, a historic grounding element on the northeast side of the campus. As the heart of UM-Ann Arbor, the core areas of Central Campus and its landmark buildings and traditional open spaces must be treated with respect and care, requiring special consideration relative to the future uses, renovations, potential demolition, or new construction.

The University of Michigan Central Campus Historic District, listed on the National Register of Historic Places since 1978, includes approximately 27 buildings in the Diag, Ingalls Mall, and Monroe Mall / Law School Area. Ten of the buildings were designed by Albert Kahn, the university's supervising architect from 1920 to 1925.

Historic District Buildings

- President's House (1840)
- Tappan Hall (1894)
- West Hall (1901–1910)
- Dana Building (1904)
- Chemistry Building (1909)
- Museum of Art (Alumni Memorial Hall) (1910)
- Hill Auditorium (1913)
- School of Kinesiology Building (1915)
- Martha Cook Building (1915)
- Harlan Hatcher Graduate Library (1920)
- William L. Clements Library (1923)
- East Hall (1923)
- Marsal Family School of Education Building (1923–1930)
- Randall Laboratory for Physics (1924)
- Angell Hall (1924)
- The Law Quadrangle (1924–1933)
- 1100 North University Building (1925)
- Alexander G. Ruthven Building (1928)
- Lorch Hall (1928)
- Michigan League (1929)
- Burton Memorial Tower (1936)
- Horace H. Rackham School of Graduate Studies (1938)
- Haven Hall and Mason Hall (1952)
- Shapiro Undergraduate Library (1957)

Central Campus Recommendations

The established character and legacy of Central Campus, combined with limited available land area, reinforce the need to reinvest in existing structures. Campus Plan 2050 calls for the renovation of existing buildings to respond to current and future needs, to support energy efficiency and decarbonization goals, and to address deferred maintenance. Among other factors, the proposed renovations take into consideration the condition of buildings, energy consumption, and stated programmatic needs and opportunities. In most cases, existing programs and activities remain following renovation; however, there are a few buildings targeted for potential transformative change in building use and design.

Example recommendations for the Central Campus and each of its sub-campus areas support the Vision 2034 impact areas as follows:

Life-Changing Education

- Reinvestment in existing and proposed academic buildings and the libraries provides new learning environments and experiences.
- Renovation of Student Life spaces will support learning and engagement outside the classroom.
- Renovations and new construction address programmatic needs while enhancing the student experience by integrating new types of inclusive learning and social spaces.

Human Health and Well-Being

- The Hadley Family Recreation and Wellness Center and other potential new facilities will support health and wellness objectives by providing new state-of-the-art facilities.
- Investments in active mobility such as bicycle lanes and accessible pathways promote exercise.

Democracy, Civic and Global Engagement

- Hubs for collaboration will be identified, providing opportunities to create social engagement spaces for dialogue, engagement, and respectful discourse.
- New welcoming and inclusive spaces integrated in destination facilities contribute to access, opportunity, and success programs.
- Integration of public art in a variety of interior and exterior locations will stimulate engagement and contribute to health and well-being.

Climate Action, Sustainability and Environmental Justice

- Energy efficiency upgrades are planned for existing buildings
- Geo-exchange bores and ground source heat pumps will be installed at Palmer Field, Regents Plaza, and elsewhere to decrease energy consumption and emissions.
- A focus on accessible pathways, bicycle lanes, and transit contributes to sustainable mobility.
- Solar PV installations are recommended as part of building renovations and on existing parking facilities.
- Integrated solar is recommended for all future building additions and new construction.
- Recent investment in stormwater management infrastructure on Central Campus includes underground chambers installed on the north end of Ingalls Mall and under the Palmer parking structure and on the west side of the University of Michigan Museum of Art. Similar investments should continue where feasible.
- The potential of integrated stormwater management infrastructure is recommended for all future building and site projects on Central Campus.

Collaboration and Connectivity

- Proposed BRT lanes and streetscape improvements will be introduced, perhaps along such streets as South Division Street, East Madison Street, South State Street, North University Avenue, Observatory Street, and Washington Heights.
- Bicycle and pedestrian pathways will be improved.
- A new transit center at East Madison Street could be added, along with an enhanced transit station at the CCTC with a variety of amenities where possible ATS and BRT services are provided.
- The possible ATS system includes an elevated station at CCTC providing connectivity to the Medical Center Campus and North Campus.
- The Central Campus plan recognizes the importance of balancing parking needs with new development and reinvestment, while integrating enhanced transit options into a cohesive strategy.

Figure 56. Preliminary Illustration: Proposed State Street Transit Corridor looking north

Figure 57. 2050 Central Campus Overview

Planning Considerations for Central Campus

Campus Plan 2050 maintains the character-defining buildings and open spaces of the Central Campus.

Reinvestment in key buildings addresses programmatic requirements for current and future academic and research activities while improving inefficient buildings. The plan provides general direction for the remaining development sites. It also responds to the existing development patterns, history, open space, and circulation patterns of the context while encouraging contemporary, innovative expression in response to the needs of the academic and research units represented on Central Campus.

Based on an understanding of the existing context, the following themes guide the plan:

» Respect the historic core. As the original and most iconic of the U-M campuses, Central Campus embodies the rich history and heritage of the university, and is the focus of continued reinvestment with the aim of enhancing the overall sense of place. The plan recommends that existing buildings be upgraded to maintain their architectural integrity while ensuring that they also meet the current and future programmatic requirements of the U-M mission, the missions of the units they accommodate, and the wellness, accessibility, and climate action goals of the university. Renovations will respond to emerging programmatic needs and can create dynamic, future-oriented spaces within buildings, while also respecting the goal to preserve historic exterior character. The open spaces of Central Campus are the subject of continued improvement to enhance the existing positive character and for successional health planning of tree canopy.

- Infill sensitively. New development and redevelopment sites are identified to accommodate emerging programmatic needs. Potential infill development at 1100 North University Building and Lorch Hall, and adjacent to both the Student Activities Building and the Institute for Social Research, provides opportunities to complement the established architectural and landscape character while introducing new state-of-the-art facilities on Central Campus. The goal is to ensure that the quality and character of Central Campus is maintained but also enhanced by new facilities and renovations that contribute to the vibrancy of the experience. Given that the most historic part of campus is mostly built out already, infill opportunities are more limited.
- Enhance the context. The focus on improved accessibility, reinvestment, enhancement, and stabilization contributes to the overall character and sense of place. The plan calls for coordination and cooperation on matters of university and community importance, including streetscape planning, open-space preservation and enhancement, transpotation improvements, and utilities and infrastructure planning for improved capacities and distribution systems. The overall goal is to celebrate the town-gown relationship on Central Campus and focus on integration with the surrounding community. The planning of a possible ATS and BRT, and associated streetscape improvements are key features of the plan and important opportunities for collaboration with the city and the Ann Arbor community.
- Promote environmental stewardship and sustainability. The plan includes recommendations for protecting and enhancing the environmental and cultural resources of Central Campus, including the iconic landscapes, relationships with Nichols Arboretum, the Huron River Valley, and the historic buildings. Building renewal recommendations address programmatic needs, deferred maintenance, and the university's goals for accessibility, arts and humanities, civic engagement, sustainability, and climate action. Building renewal and limited new construction provide the opportunities for Central Campus to evolve in response to future needs and changing expectations.

Central Campus

Sub-Campus Areas

- *Ingalls Mall*
- *Palmer Drive*
- *Hill*
- *West State Street*
- *Diag*
- *Monroe Mall*
- *Elbel Field*
- *Oxford*
- *Nichols Arboretum*

Central Campus comprises dynamic and attractive sub-campus areas, each featuring a diverse array of use, buildings, and infrastructure. These elements collectively form the academic core of Central Campus, complemented by housing and dining facilities, public spaces, art, natural landscapes, and integrated research facilities.

Figure 58. 2050 Central Campus Sub-Campus Area Plan

Ingalls Mall Area

Functional Uses

The Ingalls Mall Area is located adjacent to and west of the city's State Street District. It is bound by Huron Street, South State Street, North University Avenue, and Fletcher Street; East Washington Street runs through its center. It houses a number of significant cultural, academic, and student life facilities as well as some of the most important open spaces on Central Campus. The units represented within the Ingalls Mall Area include the College of Literature, Science, and the Arts (LSA); Rackham Graduate School (Rackham); School of Music, Theatre & Dance (SMTD); Student Life; Alumni Association of the University of Michigan (Alumni Association); and the Thayer Street Parking Structure.

Development Opportunities

Given the developed and iconic status of the landscape and defining structures, no new development zones are proposed. However, continued reinvestment in facilities that support the performing arts, accommodate new research and learning models, and provide students a safe home away from home are vital. Buildings in the Ingalls Mall Area require renovation to address programmatic needs and accessibility challenges, and to complete energy performance upgrades in support of the sustainability and climate action goals of the university. Interior and exterior enhancements throughout the facilities will create a renewed user experience and present opportunities for integrating the arts and creative expression and providing welcoming and accessible spaces.

Landscape and Public Realm

The Ingalls Mall Area serves as an important functional and ceremonial north-south open space and non-motorized corridor through Central Campus. Heavily utilized for large-scale university events such as Festifall, farm stands, and unit-sponsored employee events as well as community gatherings like the Ann Arbor Summer Festival and Ann Arbor Art Fairs, the Ingalls Mall Area has facilitated civic engagement and social justice activities for decades. In support of these initiatives, the framework plan calls for continued upkeep and maintenance of the public realm, landscape enhancements, and maintenance of valued trees that contribute to the heritage of the space. The north-south viewshed along Ingalls Mall between the Rackham Building and the Diag to the south is perhaps the most iconic on campus and should be preserved and enhanced. Together, the Diag and Ingalls Mall provide the most significant areas for civic engagement on campus.

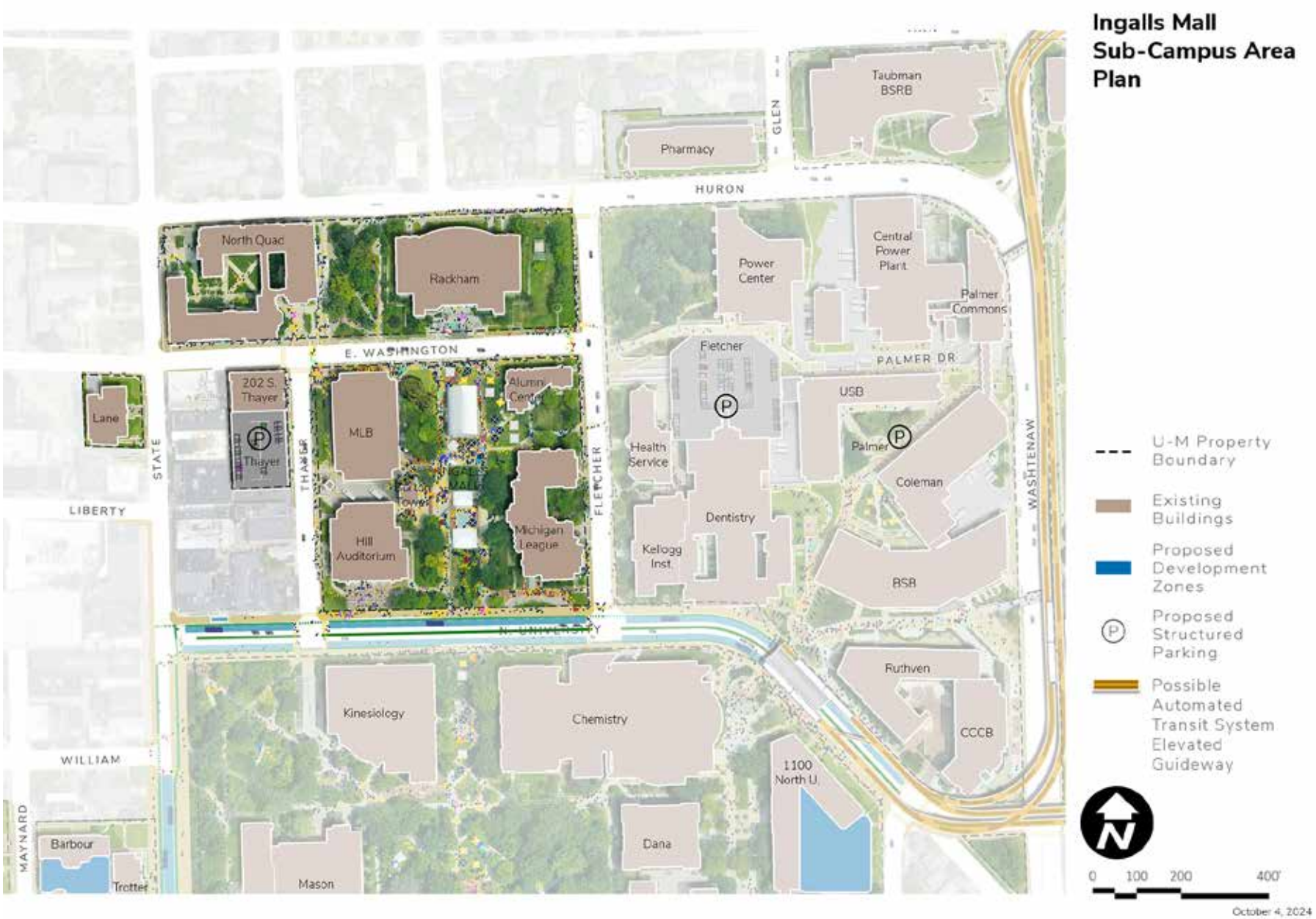
Mobility and Connectivity

Inclusive design and universal access are key considerations for all future building renovations, ensuring that any improvements contribute to the user experience and convenience. Changes to the road network in the Ingalls Mall Area focus on the introduction of proposed BRT and bicycle lanes on North University Avenue. The important north-south transit connectivity enhancement is anticipated to reduce travel time across campus in the hopes of increasing multidisciplinary collaboration opportunities for both faculty and students. The planned addition of bicycle lanes can improve individual health and well-being by reducing points of conflict between other modes.

Sustainability and Infrastructure

Existing underground infrastructure in the Ingalls Mall Area limits opportunities for geo-exchange and ground source heat pumps; however, subject to a structural evaluation, the introduction of solar PV should be considered for buildings with large flat roof areas. Recent stormwater management investments have improved the functionality of the space, and ongoing maintenance of its valued trees will continue to help both manage stormwater and reduce the heat island effect.

Figure 59. 2050 Ingalls Mall Sub-Campus Area Plan



Palmer Drive Area

Functional Uses

The Palmer Drive Area is located due east of the Ingalls Mall Area. It is bound by East Huron Drive, Fletcher Street, North University Avenue, Geddes Avenue, and Washtenaw Avenue. With a combination of cultural, academic, research, administrative, student support, and support functions, the Palmer Drive Area serves as a critical programmatic and non-motorized connectivity nexus between the Central Campus Core, the Palmer Field area, and the Medical Center Campus. It is a key center for life science-related academic and research activities and an important visitor destination. The units represented within the area include the School of Dentistry; College of Literature, Science, and the Arts (LSA); College of Pharmacy; Life Sciences Institute; University Health and Counseling (UHC); central administrative offices; the Central Power Plant, which is a co-generation system; the Fletcher Parking Structure; and the Palmer Drive Parking Structure, which is located under the life science buildings and associated plaza.

Development Opportunities

The Palmer Drive Area has been the focus of major construction and renovation projects over the past 20 years, and while several buildings require renovation to address programmatic and deferred maintenance issues and to complete energy performance upgrades in support of the sustainability and climate action goals of the university, no new development zones are proposed.

As reinvestment within the Palmer Drive Area occurs, the potential incorporation of hubs for future collaboration should be evaluated. A network of hubs could help establish a destination for collaboration among academic units at a location where convenient connections are possible to the Medical Center Campus and North Campus. Renovations associated with the hubs could also include gathering areas to increase public discourse, integration of public art to improve health and well-being, stormwater management features to enhance sustainability and increase resiliency, and spaces supporting U-M's accessibility goals.

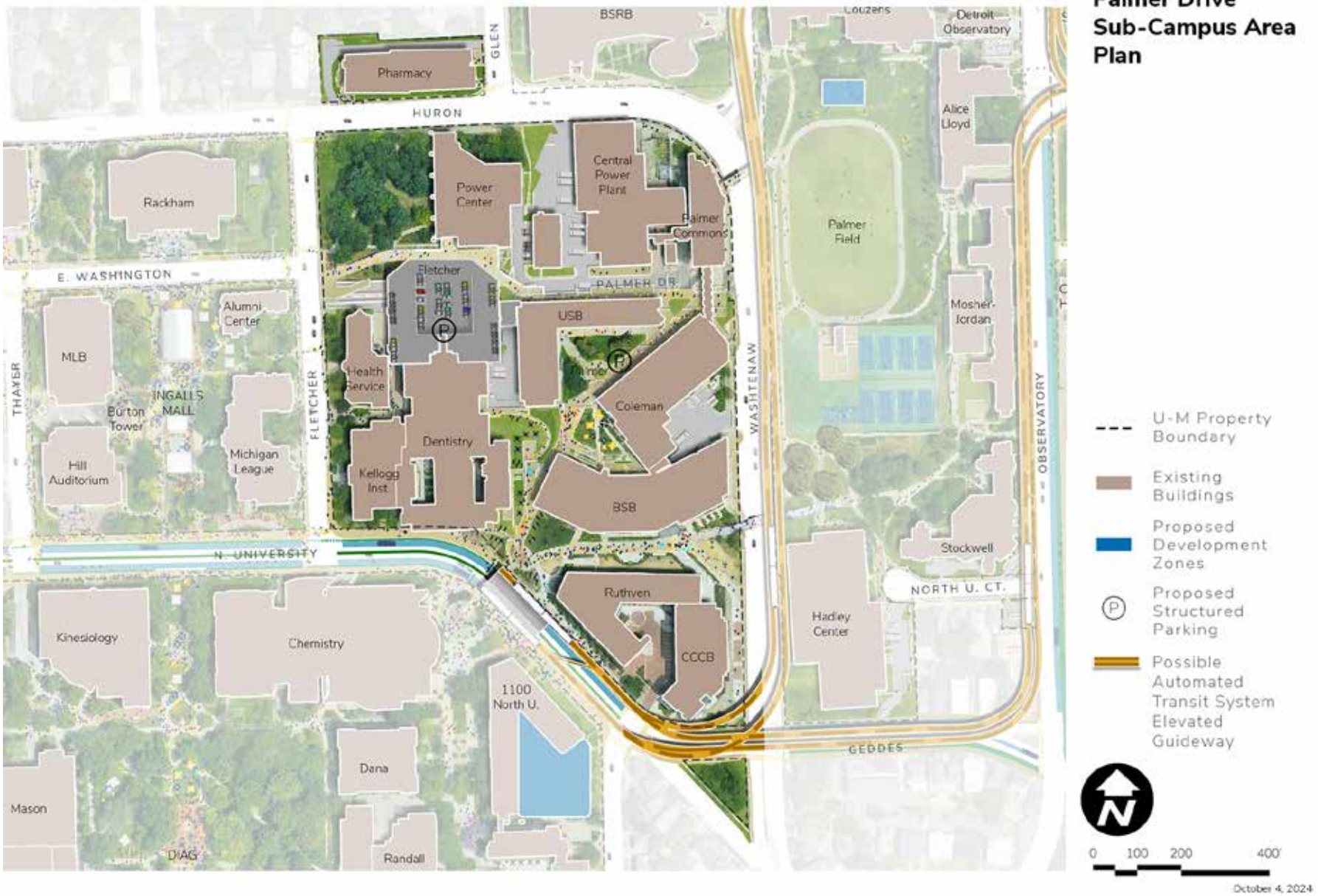
Landscape and Public Realm

The Palmer Drive Area includes open space adjacent to the Power Center, originally a burial ground in the early days of Ann Arbor Village (the graves were relocated to Forest Hill Cemetery beginning in the 1860s). Today, the open space includes dense tree cover which remains as part of the landscape structure in Campus Plan 2050, contributing to carbon neutrality and sustainability goals. This greenspace is celebrated in the plan.

The plaza located within the interior research and academic complex defined by the Undergraduate Science Building, Mary Sue Coleman Hall, and the Biological Sciences Building (BSB) is an opportunity to increase access to the arts by the placement of public art, as well as adding native plantings to increase biodiversity on campus and support sustainability goals.

The recent relocation of university central administration to the Alexander G. Ruthven Building (Ruthven), as well as other recent new buildings and renovations, have brought increased activity to the plaza area northwest of Ruthven and to the major mid-block crossing on North University. Views of the historic facades of Ruthven and its architectural counterpart, 1100 North University Building across North University, should be protected. The east-west linear open space between the BSB and Ruthven serves as an important accessible route connecting the Palmer Drive Area with Palmer Field via a bridge over Washtenaw Avenue. There are also key non-motorized pathways over the top of the Fletcher Street Parking Structure and the Palmer Drive Parking Structure and adjacent to Palmer Commons. These connect areas to the west and south with the Medical Center Campus via another pedestrian bridge over Washtenaw Avenue north of the Palmer pedestrian bridge. The expansive view of Palmer Field and the surrounding residence halls from atop the Life Sciences plaza should be preserved and enhanced.

Figure 60. 2050 Palmer Drive Sub-Campus Area Plan



Mobility and Connectivity

A key consideration for the Palmer Drive Area is the integration of the possible ATS and BRT station on North University Avenue public right of way. The possible ATS station requires careful design given its position between two Albert Kahn buildings, Ruthven and 1100 North University Building. Inclusive design and universal access will require elevators and escalators to connect the guideway level to the street. The design of this elevated "building" must take into account the scale, massing, and materials of the iconic buildings of the context. This location will be integral to the network of collaboration hubs between academic units at the Medical Center Campus and North Campus.

A new traffic signal at the heavily traversed pedestrian crossing west of the CCTC station is proposed to manage the flow of pedestrians and buses in the area, and to improve reliability of bus operations. A major bicycle parking facility is recommended at the CCTC to facilitate intermodal connectivity.

There is an opportunity to improve the area where East University Mall and North University meet, enhancing the adjacent plaza areas. See the Ingalls Mall Sub-Campus Area for additional details on the proposed changes to North University Avenue.

Sustainability and Infrastructure

Opportunities for geo-exchange and ground source heat pumps are limited in the Palmer Drive Area due to the presence of underground parking and the lack of unencumbered open space. Subject to a structural evaluation, the introduction of solar PV is recommended for buildings with large flat roof areas. Although the interior quad area constructed over the Palmer Drive Parking Structure limits the landscape and stormwater management opportunities in the area, options do exist to reduce the amount of maintained lawn and replace it with more native and pollinator plantings. These initiatives can help strengthen the existing stormwater infrastructure, particularly the large cistern located beneath the Palmer Drive Parking Structure. Over time, there is an opportunity to convert the Central Power Plant away from natural gas combustion as its primary fuel, potentially utilizing other emerging fuel technologies instead.

Figure 61. School of Dentistry, Biological Sciences Building, Alexander G. Ruthven Building on Central Campus

Hill Area

Functional Uses

The Hill Area is located at the northeast corner of Central Campus adjacent to the Medical Center Campus. It is generally bound by East Ann Street, Washtenaw Avenue, Geddes Avenue, and Observatory Street. The Hill Area includes student life, housing, dining and recreation, and academic use facilities in support of student engagement and health and well-being goals. The units represented within the Hill Area include Student Life; the School of Public Health; military officer education programs; the Bentley Historical Library, which oversees the Frankel Detroit Observatory; and some surface parking.

Development Opportunities

Potential future demolition of the Mary Markley Residence Hall would free up land for academic research and clinical expansion.

Proposed renovation and expansion of academic and research space is planned in response to modernization goals, and to serve potential future requirements and deferred maintenance issues.

The possible ATS and BRT station at this location offer connections to both Central Campus and North Campus units, creating numerous opportunities for the Hill Area to become another central hub for collaboration.

Landscape and Public Realm

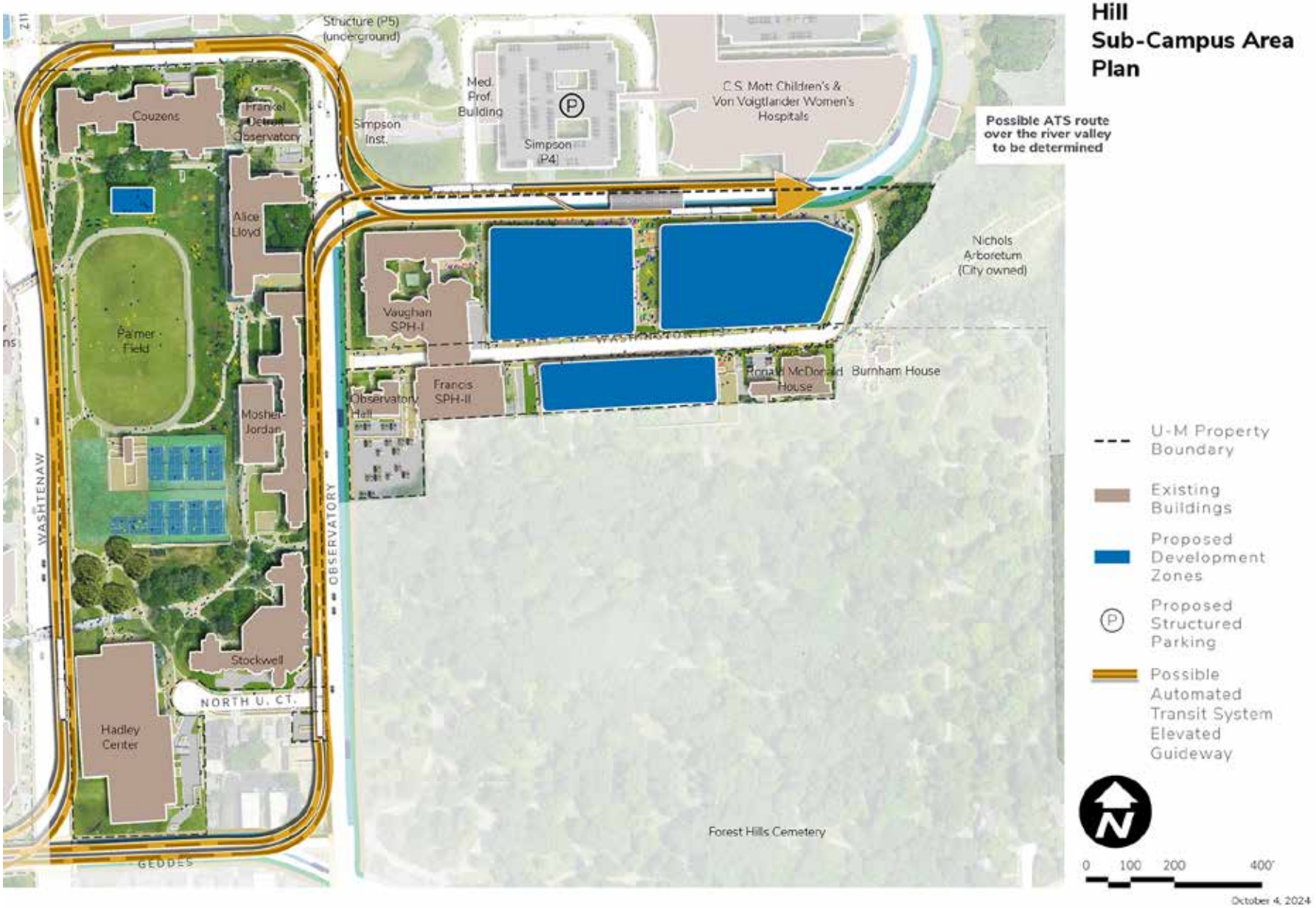
Landscape improvements in the Hill Area focus on Palmer Field, where geo-exchange bores and ground source heat pumps are proposed. The installation of the bores allows for subsequent and concurrent improvements to the heavily utilized recreation fields, surrounding pathways, and stormwater management features, enhancing carbon neutrality, sustainability, and health and well-being goals. In support of continuing campus and community engagement opportunities, consideration should be given to the ability of Palmer Field to continue to support large-scale events, including those during Welcome Week. As a key campus open space, the views across Palmer Field from all vantage points should be preserved and enhanced.

Campus Plan 2050 envisions the integration of the possible ATS and BRT station with public realm improvements, notably, the north-south landscape and pathway system linking Washington Heights to clinical uses north of East Medical Center Drive. This “corridor” of landscape is envisioned to include amenities supporting the needs of students, faculty, staff, and visitors to the Michigan Medicine facilities. It is also envisioned as a location to integrate public art. The Hill Area also serves as a key campus connection to Nichols Arboretum to the east, specifically the main visitor entrance at the east end of Washington Heights. The view along Washington Heights to this key Arb entrance should be enhanced, potentially incorporating the addition of trees and a more vegetated streetscape. Redevelopment of the Markley site and adjacent areas should include accommodating the ability of visitors to navigate to this key Arboretum access point to enjoy one of the best natural experiences in Ann Arbor.

Mobility and Connectivity

Major mobility and connectivity improvements in the Hill Area focus on the possible ATS and BRT routes along East Medical Center Drive and Observatory Street. These enhancements have the ability to dramatically increase multidisciplinary research and collaboration between faculty and students on Central, Medical Center, and North campuses. The introduction of these systems also allows for the integration of new landscape, accessible pathways, bicycle lanes, lighting, and signage, which will enhance safety and could encourage more cycling. Proposed changes on Observatory include maintaining the existing bicycle lane and general-purpose traffic lanes and including dedicated bus lanes for each direction of travel, potentially displacing on-street parking in support of enhanced transit and non-motorized mobility.

Figure 62. 2050 Hill Sub-Campus Area Plan



The sidewalk is maintained on both sides of the roadway within the available space with expansion occurring primarily to the west, reducing some of the greenspace in front of the U-M residence halls located west of Observatory Street. Dedicated bus lanes on East Medical Center Drive from Observatory Street eastward prioritize bus operations while accommodating vehicular traffic associated with visitors and patients. The Medical Center Campus Transit Station (MCCTS) is proposed as part of the street section redesign to accommodate bus lanes. Bus operations in this area could be further enhanced by potential implementation of queue jump lanes and traffic signal modernization. No specific alignment for the possible ATS along East Medical Center Drive and to the north over the railroad and Huron River has been confirmed. In addition, all recommendations along public right of way will require coordination and support from the City of Ann Arbor.

Sustainability and Infrastructure

Proposed geo-exchange bores and ground source heat pumps under Palmer Field and an accompanying new pumping facility at the north end of Palmer Field contribute to decarbonization goals while providing the opportunity to renew the fields, courts, and landscape in response to well-being goals. Renovation of surrounding buildings will be required for energy efficiency upgrades, including the ability to connect with the geo-exchange and ground source heat pump facility. Consideration should be given to interconnecting the geo-exchange and ground source heat pump infrastructure into a broader campus distribution network. An integrated stormwater management facility in the Palmer Field area could further contribute to the functionality of the area. Solar PV installations should be considered on existing and future buildings with flat roofs.

Figure 63. Event on Palmer Field

West State Street Area

Functional Uses

The West State Street Area is located west of the Diag Area and south of the city's State Street (Business) District. It is generally bounded by East William Street, South Division Street, East Madison Street, and South State Street. An additional parcel of land is due west of the West State Street Area and bound by Packard Street, South Fifth Avenue, and East Madison Street. Additional properties due south of the West State Street Area are bound by East Madison Street, Packard Street, and Monroe Street. The area encompasses a mix of academic, cultural, student life, and support facilities and is home to the College of Literature, Science, and the Arts; Student Life; surface parking; and the Thompson Street Parking Structure.

Development Opportunities

Like buildings in all sub-campus areas, renovation of buildings in the West State Street Area is needed to address universal access and climate action and sustainability goals, while also addressing needs associated with current programmatic uses.

Campus Plan 2050 identifies several infill development sites (listed below) with the capacity to accommodate academic and research programmatic expansion needs:

- Surface parking lots north of the Student Activities Building.
- Smaller infill site southwest of the Institute for Social Research on South Division and Jefferson.
- Surface parking lot defined by Thompson Street, East Madison Street, and Packard Street, which is identified for a future transit center.

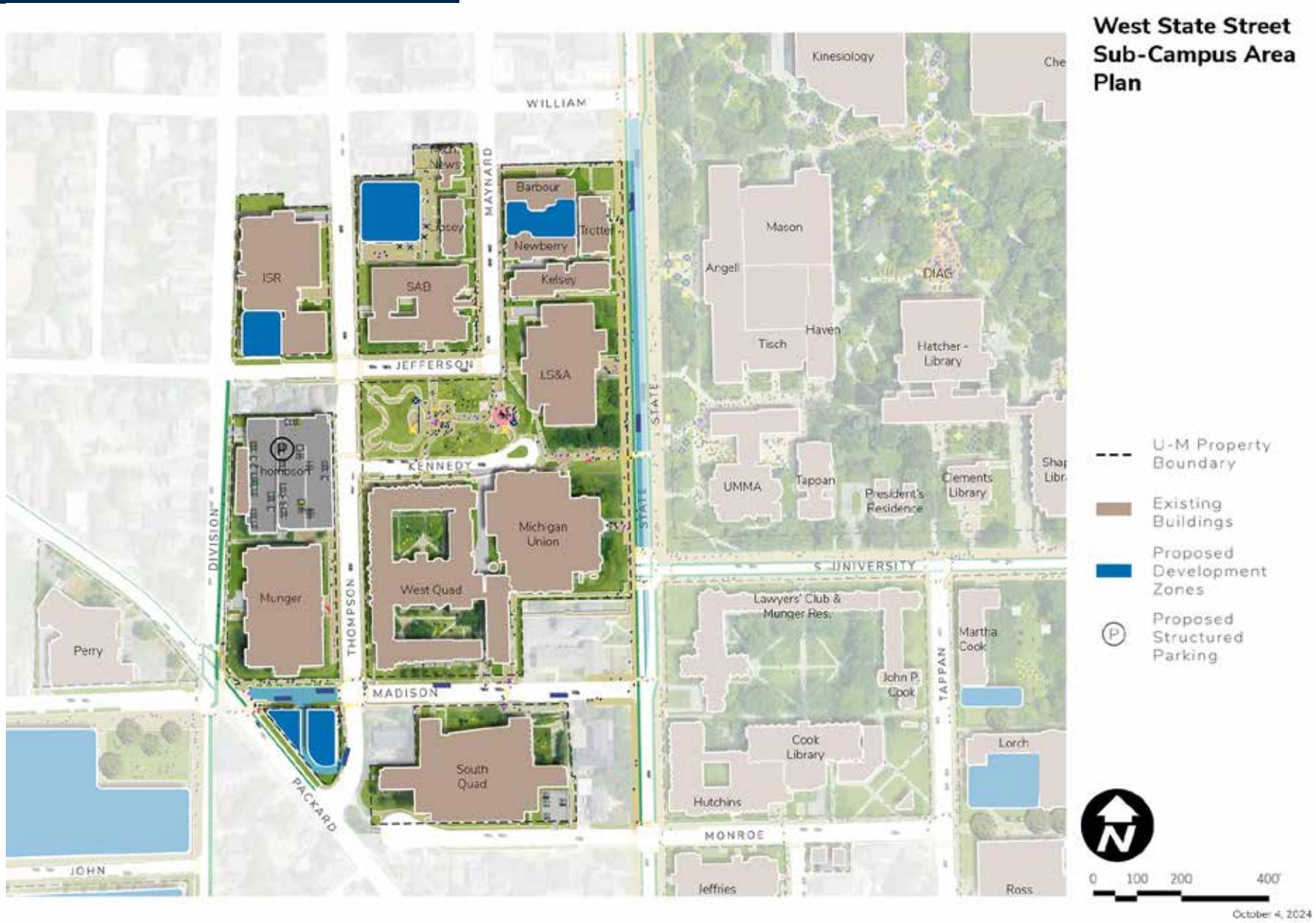
Landscape and Public Realm

Major landscape and public realm improvements in the West State Street Area focus on Regents Plaza and the site of the former Fleming Building. This site is identified as a new open space over new geo-exchange bores and ground source heat pumps to serve the immediate area. This space is envisioned as a key new community open space and amenity supporting the significant amount of student living in the neighborhood. The space should continue to support informal and programmed public gatherings to encourage engagement and provide enhanced biodiversity and native plantings within Central Campus as part of sustainability and health and well-being goals. Other landscape improvements include the streetscape along South State Street and East Madison where proposed BRT, bicycle, and pedestrian infrastructure is proposed. The iconic viewshed up and down State Street, flanked by historic university buildings, should be preserved and enhanced.

Mobility and Connectivity

Campus Plan 2050 envisions major transportation improvements in the West State Street Area including the introduction of proposed BRT lanes along East Madison Street and South State Street along with bicycle lanes, and accessible pathways. A transit center is proposed on the surface parking lot at the corner of Packard and East Madison where proposed BRT and other bus services connect the new Central Campus Residential Development, other adjacent residential halls, and the significant amount of nearby private student housing with the core of Central Campus, the Medical Center Campus, and North Campus. In support of this new transit center, pedestrian system upgrades including enhanced crossings, lighting, and signage are envisioned as well as potential adjustments to the road. A transit station has also been identified as potential locations for the incorporation of public art. The transit center is proposed along with a conversion of Madison Street from one-way mixed-traffic operation to two-way bus-only operation to support movement in and around the facility. This location provides direct access to proposed BRT services for students housed nearby in existing buildings and in the Central Campus Residential Development, along with staff and faculty needed to support operations in the area.

Figure 64. 2050 West State Street Sub-Campus Area Plan



Eventual modifications for South State Street focus on a coordinated effort with the City of Ann Arbor for the segment of public right of way between South University Avenue and William Street to potentially support bus-and-bicycle-only operation with dedicated lanes.

Sustainability and Infrastructure

Geo-exchange bores are proposed under Regents Plaza to partially meet the energy needs of the adjacent buildings. Other opportunities may exist for geo-exchange and ground source heat pumps on each of the identified development sites along with integrated solar PV. Consideration should be given to interconnecting geo-exchange and ground source heat pumps in this area with other parts of Central Campus as redevelopment occurs and opportunities arise for installing a looped system. Stormwater management best practices are recommended with proposed changes to the South State Street section and Regents Plaza.

Figure 65. The Michigan Union in the winter


Michigan Union

Diag Area

Functional Uses

Located in the "heart" of Central Campus, the Diag Area is bounded by North University Avenue, South State Street, South University Avenue, and Church Street. Home to some of the oldest structures on campus, and many of the university's main libraries, the buildings predominantly support academic activities; however, the President's House and the University of Michigan Museum of Art (UMMA) are also included. The units represented within the Diag Area include the School for Environment and Sustainability (SEAS); the School of Kinesiology; numerous departments associated with the College of Literature, Science, and the Arts (LSA); and University Libraries. The Church Street Parking Structure is also located on the east edge of this sub-campus area.

Development Opportunities

Campus Plan 2050 calls for the strategic reinvestment in all buildings located in the Diag Area with the goal of addressing academic and research programmatic needs to improve energy efficiency, deferred maintenance, and accessibility issues. One potential infill site exists on Church Street as an addition to the 1100 North University Building to meet future, mission-driven priorities.

Landscape and Public Realm

The Diag Area is the most memorable and treasured landscape of the U-M campus, defined by patterns of movement, the central foreground plaza to the Hatcher Library, and a dense canopy of trees. The central plaza area functions as the ceremonial and geographic heart of Central Campus, hosting significant numbers of programmed and unprogrammed student events, informal gatherings, and other major campus initiatives and gatherings in the furtherance of public discourse, campus engagement, and health and well-being. Views across the Diag, especially along the open space extending north to Ingalls Mall, should be carefully preserved and enhanced. In addition, the open lawn spaces along State Street in front of Angell Hall, Alumni Memorial Hall, UMMA's Maxine and Stuart Frankel and Frankel Family Wing, are frequently programmed for campus events and should continue to be protected for this use, as are the open spaces and plazas along the East University pedestrian mall. The iconic viewshed up and down State Street, flanked by historic university buildings, should be preserved and enhanced, along with the view looking north along the East University pedestrian mall toward the pedestrian and building nexus at North University Avenue. Campus Plan 2050 calls for the enhancement of the character and quality of the landscape and public realm, especially in areas where changes may be necessary in response to accessibility requirements.

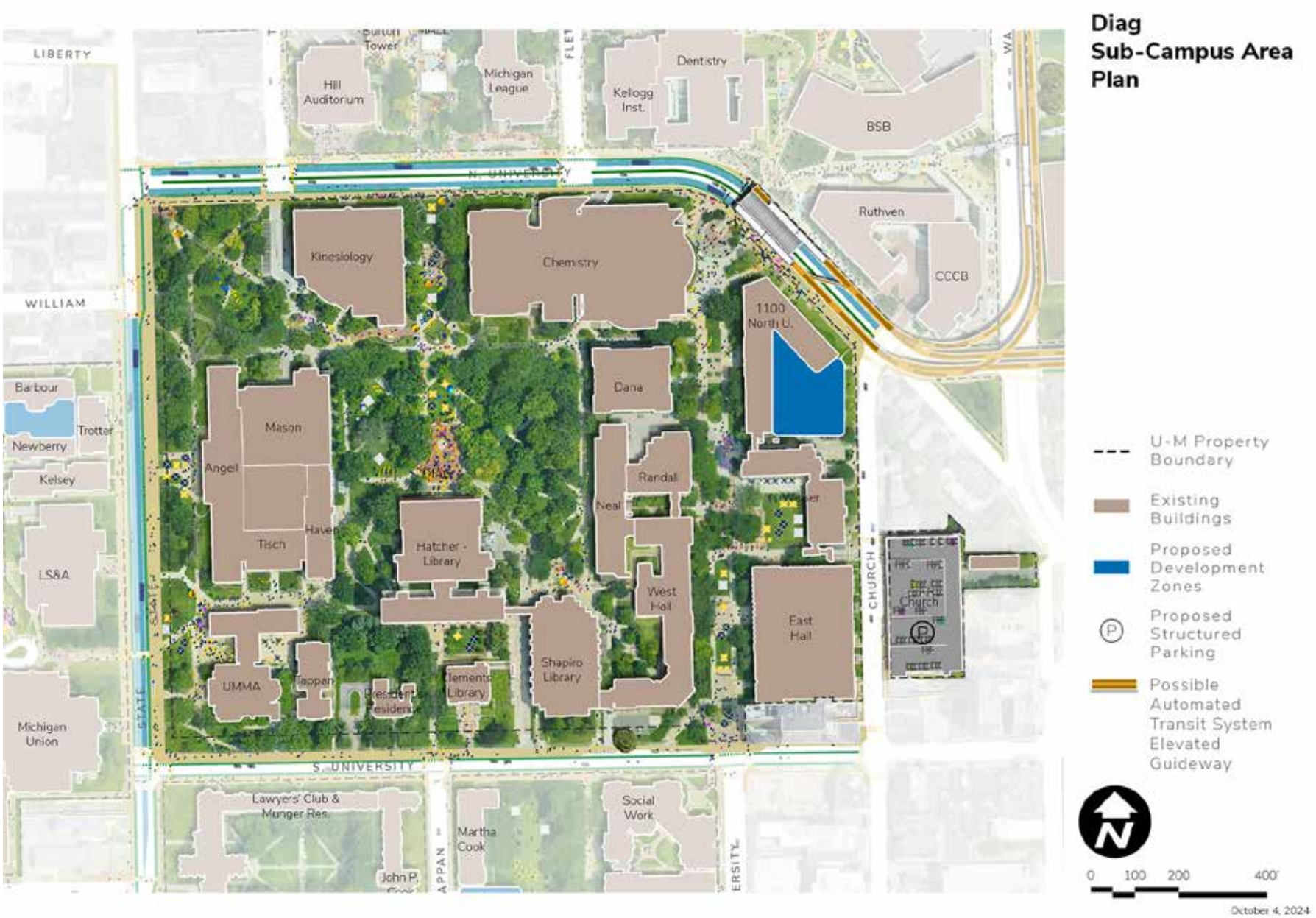
Landscape and public realm improvements are proposed on North University Avenue where a possible ATS and BRT station require changes to pathway, bicycle, and transit circulation and the introduction of an elevated guideway in support of safety, health and well-being, and enhanced connectivity. Public realm improvements are also seen as opportunities for creating a new destination and plaza with the potential for increased collaboration opportunities.

The high quality and age of the tree canopy within the Diag area enhances the character of the open spaces and should be enhanced and protected as possible when future renovations and utility infrastructure projects are planned. This includes successional planning of the urban tree canopy and an effort to diversify species for resiliency.

Mobility and Connectivity

Accessibility is a key consideration in the Diag Area given the number of historic buildings and the associated barriers. A comprehensive accessibility study will be considered with the goal of establishing an integrated approach for the Diag Area, among other areas. A key mobility consideration for the Diag Area includes the integration of the possible ATS and BRT station on North University Avenue. For details, see the Mobility and Connectivity discussion above for the Ingalls Mall Sub-Campus Area.

Figure 66. 2050 Diag
Sub-Campus Area Plan



The potential installation of proposed dedicated BRT along South State Street public right of way includes new bicycle lanes, accessible pathways, and landscape. With this comes the opportunity to improve the streetscape, stormwater functionality, and the foreground landscapes to the iconic Angell Hall and University of Michigan Museum of Art. See the West State Street Sub-Campus Area for details on the South State Street changes.

The plan indicates the potential installation of on-street metered parking on segments of South University Avenue, east of Shapiro Library, to provide visitor parking while including marked bicycle lanes adjacent to the parking stalls, providing connectivity between destinations along the street in coordination with the City of Ann Arbor.

Sustainability and Infrastructure

Opportunities for geo-exchange and ground source heat pumps are limited in the Diag Area due to existing underground infrastructure such as steam tunnels and the dense tree cover. Subject to further study, geo-exchange bores and ground source heat pumps may be possible along South State Street in conjunction with the installation of the proposed BRT lanes, bicycle lanes, and new pathways. Buildings in the Diag Area should be assessed for potential energy infrastructure upgrades, including connecting as feasible to a future looped campus geothermal distribution system. Subject to structural evaluation, it is recommended that solar PV be considered for existing buildings with large flat roof areas.

Figure 67.
Commencement on Diag

Monroe Mall Area

Functional Uses

Located directly south of the Diag Area, the Monroe Mall Area is bound by South University Avenue, South State Street, Hill Street (just past Forest Avenue), Forest Avenue, and East University Avenue. The Monroe Mall Area encompasses a mix of academic uses, including professional schools, as well as residential and support uses. The units represented within the Monroe Mall Area include the Law School, Marsal Family School of Education, School of Social Work; Gerald R. Ford School of Public Policy, Ross School of Business, Student Life, Towsley Children's House, Ginsberg Center for Community Service and Learning, and the Hill Street Parking Structure.

Development Opportunities

The Monroe Mall Area is defined by a combination of traditional and contemporary architecture with few opportunities for major development. Reinvestment in academic facilities to advance life-changing education is proposed. A limited number of infill sites are identified in the framework plan to accommodate additional facility renovations to address proposed expansions, programmatic needs, and deferred maintenance building conditions to improve energy efficiency.

Landscape and Public Realm

The Law Quad's iconic open space, defined by Tudor Gothic buildings, frequently hosts visitors with photo opportunities, programmed events, and informal student gatherings. Preservation and upkeep of this important space is encouraged. Other key open spaces include Martha Cook's iconic enclosed lawn, gardens, and adjacent canopy trees, which are all maintained in the plan.

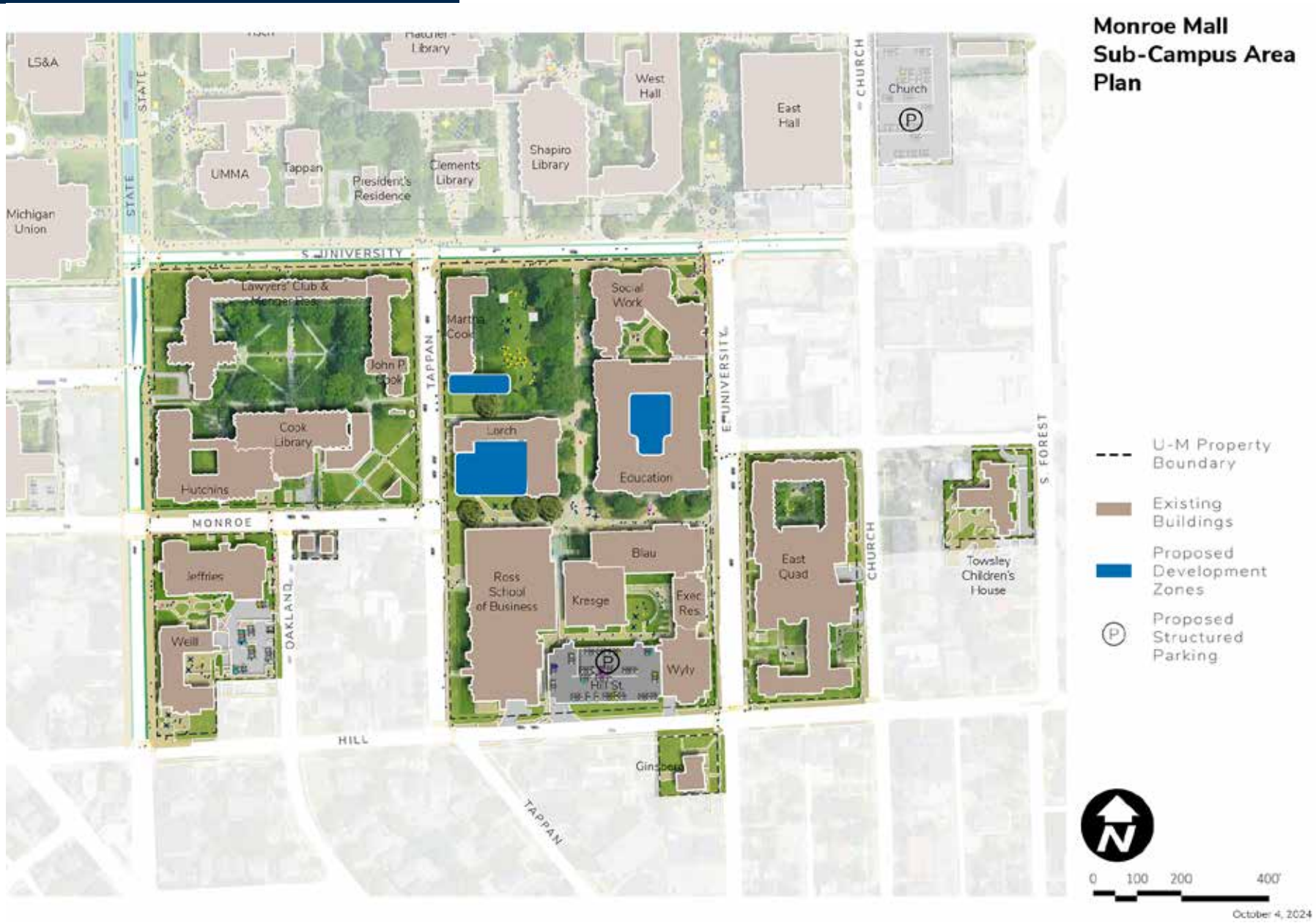
Mobility and Connectivity

The Monroe Mall Area features a well-defined system of pathways throughout including the east-west-running Monroe Mall north of the Ross School of Business as well as the north-south-running Haven Hall west of the School of Education and the School of Social Work. Both are important circulation and utility corridors to be maintained. Future enhancements should focus on ensuring accessible circulation and the safety of key street crossings.

Sustainability and Infrastructure

Given the historic nature of the Law School, geo-exchange and ground source heat pumps and solar PV require careful consideration. The Martha Cook lawn presents an opportunity to be used for geo-exchange and ground source heat pumps in conjunction with a building energy retrofit and/or addition. Opportunities may exist to integrate geo-exchange and ground source heat pumps and solar PV as part of planned additions and expansion. Building renovations should support energy efficiency and connection to a looped campus geo-exchange and ground source heat pump system.

Figure 68. 2050 Monroe Mall Sub-Campus Area Plan



Elbel Field Area

Functional Uses

The Elbel Field Area is located north of the Stephen M. Ross Athletic Campus and is bound by East Hoover Avenue, South Division Street, East Madison Street, the Ann Arbor Railroad, and Greene Street. It is home to athletic and band-related facilities with construction underway of new residential and dining facilities. Units represented in the Elbel Field Area include Student Life, Athletics, University Libraries, the Institute for Social Research, and the School of Music, Theatre & Dance.

Development Opportunities

The Elbel Field Area provides for a major expansion of undergraduate housing on Central Campus. Phase I of the Central Campus Residential Development is currently under construction on the former site of Elbel Field. It is laid out around a series of small quads defined by traditional Collegiate Gothic brick and stone buildings.

A replacement for the former Elbel Field marching band practice facility carrying the same name is located west of South Fifth Avenue and south of East Madison Street.

A second phase of housing is proposed north of Hill Street, east of Fifth Avenue.

West of the railroad line and east of Greene Street, the site of an existing university library book repository may be redeveloped in the future to support this area's needs.

Landscape and Public Realm

Development proposed for the Elbel Field Area feature courtyards within the new residential developments for passive recreation and gathering. Geo-exchange bores and a north-south universal access route connecting Hill Street to East Madison Street are envisioned as part of the public realm, helping to navigate the significant grade change between the development area and the State Street West Area to the north.

A key consideration for future development is the presence of Allen Creek which runs parallel to the railway, flowing northward to the Huron River. This culverted creek and its associated floodplains are designated as a County Drain by Washtenaw County.

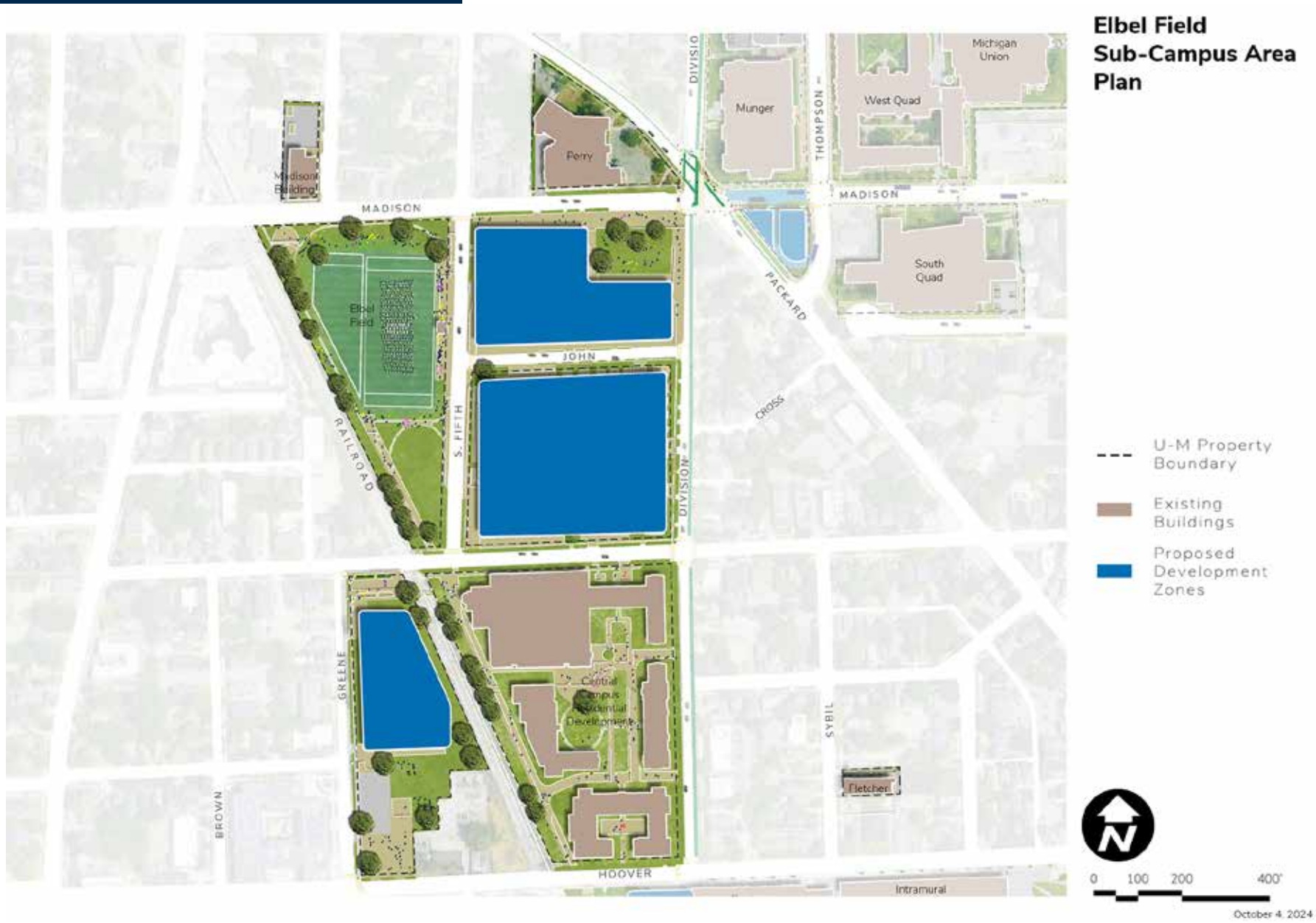
Phase II housing development should incorporate carefully considered open space at the corner of Madison and Division to act as a gateway at this busy circulation nexus.

Mobility and Connectivity

BRT routes and stops are proposed along East Madison Street, South Fifth Avenue, Hill Street, South Division Street (between Hill and Hoover), and East Hoover Avenue. The proposed BRT service combined with pathways and bicycle lanes along South Division Street provide convenient connections to the Central Campus core to the north and to the Ross Athletic Campus to the south. As noted, the integration of north-south universal access routes is necessary as part of the proposed Phase II housing, taking into consideration the change in elevation from John Street to East Madison Street.

The Madison Transit Center, proposed at the southeast corner of East Madison Street and Packard Street in the State Street West Area, is located to provide a variety of transit options to this new housing area. To facilitate access to the transit center, an expanded pathway will be investigated on the west side of South Division Street from East Hoover Avenue to East Madison Street supplemented by the accessible routes of the interior quads. Bicycle parking is recommended to serve the Central Campus Residential Development and the Madison Transit Center.

Figure 69. 2050 Elbel Field
Sub-Campus Area Plan



North-south pedestrian circulation is provided between East Hoover Avenue and East Madison Street east of the existing railroad tracks and west of Division Street, utilizing pathways integrated with the Central Campus Residential Development. These include new pedestrian crossings at Hill Street and East Hoover Avenue.

Sustainability and Infrastructure

Key considerations for future construction in the Elbel Field Area include the integration of geo-exchange bores and ground source heat pumps with Phase II of the Central Campus housing development. Stormwater management strategies are also important given the adjacent Allen Creek County Drain. A critical utility corridor for the campus geo-exchange and ground source heat pump distribution piping is identified, connecting large bore fields in the Ross Athletic Campus to the south with piping loops serving the more space-constrained areas of Central Campus to the north. Solar PV should be considered for incorporation on new buildings wherever feasible.

Figure 70. Conceptual rendering of the Central Campus housing and dining complex

Oxford Area

Functional Use

Located south of Nichols Arboretum and bounded by Oxford Road, Hill Street, Geddes Avenue, and private homes to the east, the Oxford Housing complex, operated and managed by Student Life, is made up of seven small apartment buildings. The Oxford Area also includes Student Life's 1443 Washtenaw Avenue Building and the Provost's Mike and Mary Wallace House.

Development Opportunities

Campus Plan 2050 calls for the renovation and upkeep of the Oxford Housing facilities and grounds to continue to provide housing. Explore potential site improvements at 1443 Washtenaw to introduce initiatives for access, opportunity, and success.

Landscape and Public Realm

Existing greenspaces provide support for the student experience and for student health and well-being, as well as passive recreation, collaboration, and engagement.

Mobility and Connectivity

The area is connected to other parts of Central Campus via an existing bus route, as well as the neighborhood sidewalk system. The close proximity via sidewalks to the Nichols Arboretum to the north is a key feature. A moderate amount of parking is integrated into the area, dedicated to serving the visitor, service, and ADA needs of the existing facilities.

Sustainability and Infrastructure

Integration of solar PV should be considered on existing buildings if feasible and during potential future redevelopment. Lack of unencumbered open space likely makes the addition of geo-exchange and ground source heat pumps impractical within the existing development, but the technology should be considered during potential future redevelopment.

Figure 71. 2050 Oxford
Sub-Campus Area Plan

Matthaei Botanical Gardens and Nichols Arboretum

Functional Use/Landscape and Public Realm

Located across the street from the Oxford Housing complex and bounded by Geddes Avenue to the south, the Huron River to the north, Forest Hill Cemetery and the Medical Center Campus to the west, and private, residential neighborhoods to the east, the 123-acre Nichols Arboretum (the Arb) is operated by the university as part of Matthaei Botanical Gardens and Nichols Arboretum (MBGNA) on both university and city-owned land.

Located on steep glacial topography descending toward the Huron River, the Arb includes a combination of diverse ecosystems and natural attractions, including specialty gardens, thematic areas, dispersed collections, culturally significant landscapes, natural areas, and active zones dedicated to ecosystem restoration. Connections with the Ann Arbor Parks and Recreation facilities and pathways along the Huron River make the Arb a popular destination for the campus and broader communities. Altogether, the Arb's many resources contribute to life-changing education under the broader programmatic oversight and management of MBGNA and in tandem with the large recreational and research facilities at Matthaei Botanical Gardens by offering opportunities for research; and further contribute to the health and well-being of the population through the advancement of environmental justice via access to the natural environment and fitness. Arts programming such as Shakespeare in the Arb is also integrated into the functional use of the Arboretum, further supporting the arts as well as health and well-being.

Development Opportunities

No development zones are proposed at the Nichols Arboretum.

Mobility and Connectivity

The recommendations of Campus Plan 2050 align with those of MBGNA's Master Plan, including enhancements to pedestrian and bicycle pathways. Specific improvements include a new railway underpass connecting the Nichols Drive pathway along the edge of the Huron River with the city's Gallup Park pathway (part of the Washtenaw County "Border-to-Border Trail"), and a pedestrian and bicycle bridge over the Arboretum and Huron River from East Medical Center Drive in the Medical Center Campus. The intent is to link the adjacent Medical Center Campus with the proposed passive recreation space envisioned on Mitchell Field and to the Huron River access point amenity near Fuller Road. In addition, the possible ATS guideway spans the railroad and Huron River, connecting the Medical Center and North campuses. Refer to the Matthaei Botanical Gardens and Nichols Arboretum Strategic Plan for additional details. No specific alignment for possible ATS has been confirmed.

Sustainability and Infrastructure

Continued emphasis on environmental stewardship is celebrated in this plan by respecting and reinforcing the mission of MBGNA and by various linkages proposed that increase access of this valuable resource to campus and the community.

Figure 72. 2050 Nichols Arboretum Sub-Campus Area Plan

» Medical Center Campus

"The renovation of existing buildings combined with a new hospital, innovative transportation options and more direct access to natural green spaces all paint a bright future for patients, faculty, and staff on our Medical Center Campus."

—Marschall S. Runge, Executive Vice President for Medical Affairs, Michigan Medicine Chief Executive Officer, and Dean of U-M Medical School

The Medical Center Campus occupies a bluff overlooking the Huron River Valley, north of the collegiate environment of Central Campus. Views of the river valley with North Campus vistas and adjacent Nichols Arboretum and Forest Hill Cemetery result in a context defined by the regional open space structure of Ann Arbor on the north and east, and the dynamic qualities of the townscape on the south and west. The topographic conditions of the site transition downward to the river valley with a significant embankment or bluff north and east of East Medical Center Drive.

View of Medical Center Campus illustrates new potential development east of the School of Public Health, and the possible new mobility improvements for transit, pedestrians, and bicycles

History of the Medical Center Campus

The Medical Center Campus includes three sub-campus areas:

- The Medical Center Core Area is defined generally by East and West Medical Center drives on the north, the Huron River and Nichols Arboretum on the east, East Medical Center Drive and Ann Street on the south, and Glen Avenue and North Ingalls on the west.
- The North Ingalls Area is bounded by Fuller Street on the north, Glen Avenue on the east, Catherine Street on the south, and North Ingalls Street on the west. It includes the Glen Avenue Parking Structure, the School of Nursing Buildings, and the 300 North Ingalls Building.
- The third area, known as the Wall Street Area, lies north of the Huron River and is bound on the northeast by Maiden Lane and on the southwest by Riverside Park and Canal Street (an alley). Wall Street runs through the center of the area. The district sits within a community neighborhood referred to as "Lower Town."

Today, the Core Medical Center Campus accommodates the Medical School with academic research facilities, and the Michigan Medicine clinics and hospitals and supporting facilities such as parking structures. The Core functions as the key location for inpatient clinical care for U-M. The North Ingalls area is home to the School of Nursing and Michigan Medicine support functions. The Wall Street Area includes the Kellogg Eye Center, Brehm Tower, parking structures, and development zones.

History of the Medical Center

Development of the Medical Center Campus began in the 1890s when U-M's existing hospital functions were relocated from Central Campus. Founded in 1850, the Medical School originally occupied a building on the original 40 acres. In 1869, in order to support the work of the Medical School, a former faculty house was converted for use as a hospital. It was the first hospital in the country to be owned and operated by a university. As the campus grew with pressing needs to accommodate academic units, the decision was made to relocate the hospital activities away from Central Campus. Beginning in 1889, land was purchased in the Catherine Street/Ann Street area northeast of campus for these functions. The first buildings in what would become the Catherine Street Hospitals complex were completed in 1891. Numerous additional clinical and support buildings were added to the complex thereafter, until the bulk of the clinical functions moved into a large new hospital in 1925. This hospital was in the south center of the developing campus. In the 1960s, the Medical School was also relocated to this area from Central Campus. Clinical and research functions grew with new facilities, including a replacement University Hospital in 1986, Cancer and Geriatrics Center in 1997, Cardiovascular Center in 2007, the new C.S. Mott Children's and Von Voigtlander Women's Hospitals in 2011, the Kahn Pavilion in 2025, and various research facilities between 1980–2005. Associated with Medical Center functions but geographically separated, the North Ingalls complex was purchased in 1977, and the development of related programs began in the Wall Street District in 1985. Today, the Medical Center Campus occupies approximately 100 acres overlooking the Huron River Valley and Nichols Arboretum.

History of Planning for the Medical Center Campus

Development of the Medical Center Campus in the early 20th century proceeded without specific plans for guiding the placement of facilities, although city streets provided a basic organizing element. Facilities were primarily situated along a few key streets for convenience and access. In the 1960s and 1970s, several planning studies were undertaken to guide development and the organization of the campus. A Physical Facility Planning Guide, completed in 1961, was the first physical master plan. Additional planning studies focused on open space, site, utility, and transportation factors. With the need arising in the late 1970s, planning commenced for a new university hospital. In preparation, an updated Medical Center Campus Master Plan was completed in 1980 and included newly acquired property in the North Ingalls area and on Wall Street. The plan studied the education, research, and clinical needs and the campus areas where development related to the different missions might occur. It also identified the location for the new hospital and provided options whether the old hospital remained or not. The plan also addressed circulation, parking, connectivity, utilities, site constraints, and open space.

As the clinical and research missions of Michigan Medicine continued to grow in the 1990s and early 2000s, an update of the master plan was undertaken, which included the newer East Medical Campus. This Master Plan Update was completed in 2005. The plan took into consideration ongoing changes in medical education, patient care, and research, and was intended to guide development for the next 15 years. The plan introduced concepts for transit stations, densification, and clearly defined open spaces. The Wall Street District was addressed in detail as a natural extension of the Medical Center Campus. The plan also emphasized connectivity with other campuses and the community.

Historic Status of the Medical Center

Although the current site of the Medical Center Campus has housed the clinical, medical education, and medical research activities of the university for more than 140 years, most of the structures and landscapes are of modern expression, from the 1960s on. Therefore, the campus, as seen today, does not yet reflect a historic site that is primarily unchanged, except for the Simpson Memorial Institute, an Albert Kahn building. The Simpson Memorial Institute, built in 1927, should be protected if possible, in keeping with the intent and terms of the Simpson gift, which reserves the building and site for use of the institute.

Figure 73. Simpson Memorial Institute, 1927

Figure 74. Aerial view of the Medical Center, 1955

Medical Center Campus Recommendations

Campus Plan 2050 calls for the renovation of existing buildings in support of the Medical Center Campus programs and mission, and the addressing of deferred maintenance issues. Potential renovations take into consideration the condition of the buildings as determined by energy consumption and stated programmatic needs and concerns. New redevelopment opportunities include the Mary Markley site, which will be demolished to make way for future clinical and/or other mission-driven development, a childcare facility, and continued renewal or replacement of facilities for mission-driven priorities, deep energy retrofits, and deferred maintenance.

Example recommendations for the Medical Center Campus and each of its sub-campus areas support the Vision 2034 impact areas as follows:

Life-Changing Education

- Expansion, redevelopment, and renovations in the North Ingalls sub-campus area provide the intent of creating a medical education cluster linking closely to the new Pharmacy building on Huron.
- Renovations and new construction address programmatic needs for more contemporary learning configurations while enhancing the student experience by integrating new types of inclusive learning, research, social spaces, and technology.
- Planned relocation of some medical research to the North Campus Research Complex will also free up space in the Medical Science and Medical Science Research Buildings for other purposes.

Human Health and Well-Being

- To deliver world-class clinical care, reinvestment in facilities will include converting University Hospital patient rooms to all single, as well as other renovations and equipment upgrades.
- To enhance campus vibrancy, an “amenity corridor” is proposed along East Hospital Drive, providing healthy food options, retail shops, and support services for clinical care staff, faculty, visitors, and patients, leading from the proposed new Medical Center Campus Transit Station (MCCTS) on East Medical Center Drive to the University Hospital and Taubman Health Care Center. This aims to promote the health and well-being of all users and increase the accessibility of amenities.
- Access to nature will be enhanced through improved pathways and trails connecting Nichols Arboretum and the Huron River Valley. This includes a proposed pedestrian and bicycle bridge leading to Mitchell Field.
- Welcoming experiences through improved accessibility and concentrated and distributed public art is encouraged.

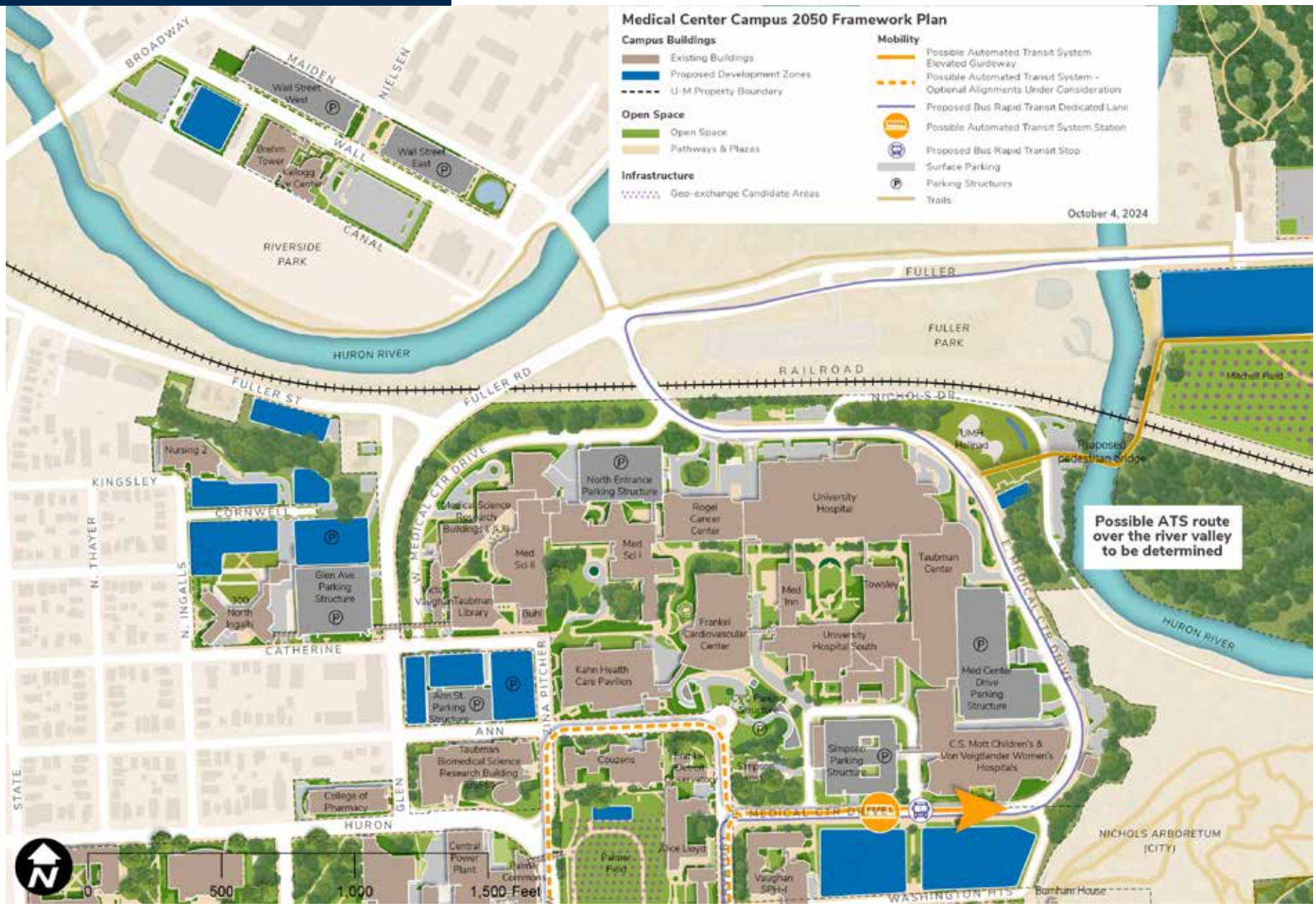
Democracy, Civic and Global Engagement

New opportunities for collaboration and public involvement should be explored in the areas adjacent to the MCCTS as part of the Markley redevelopment. The aim is to foster engagement and respectful discourse on health and well-being topics in academics, research, and outreach.

Climate Action, Sustainability and Environmental Justice

- Additional geo-exchange bores are recommended in conjunction with redevelopment of the Markley site, development around 300 North Ingalls, in the Wall Street Area, and connections to Mitchell Field.
- Solar PV installations are recommended on existing and future parking structures and buildings, as appropriate.
- Integrated stormwater management infrastructure is recommended for all redevelopment and development areas.

Figure 75. 2050 Medical Center Campus Overview



Collaboration and Connectivity

- Campus Plan 2050 integrates proposed BRT lanes and an expanded bicycle and pedestrian pathway along the outer edge of East Medical Center Drive.
- A proposed pedestrian and bicycle bridge leading from East Medical Center Drive over the Huron River and railway connects with new spaces on Mitchell Field. The reimagined Mitchell Field open space brings opportunities for natural spaces to support the health and well-being of patients, families, and staff.
- A combined possible ATS and BRT transit station, the Medical Center Campus Transit Station or MCCTS located south of the East Hospital – East Medical Center Drive intersection.
- The MCCTS integrates possible ATS guideway and ground-level BRT.
- The Medical Center Campus plan recognizes the importance of balancing parking needs with new development and reinvestment, while integrating enhanced transit options into a cohesive strategy.

Figure 76. Preliminary Illustration: Possible Mitchell Field Area redevelopment, view from East Medical Center Drive looking northeast

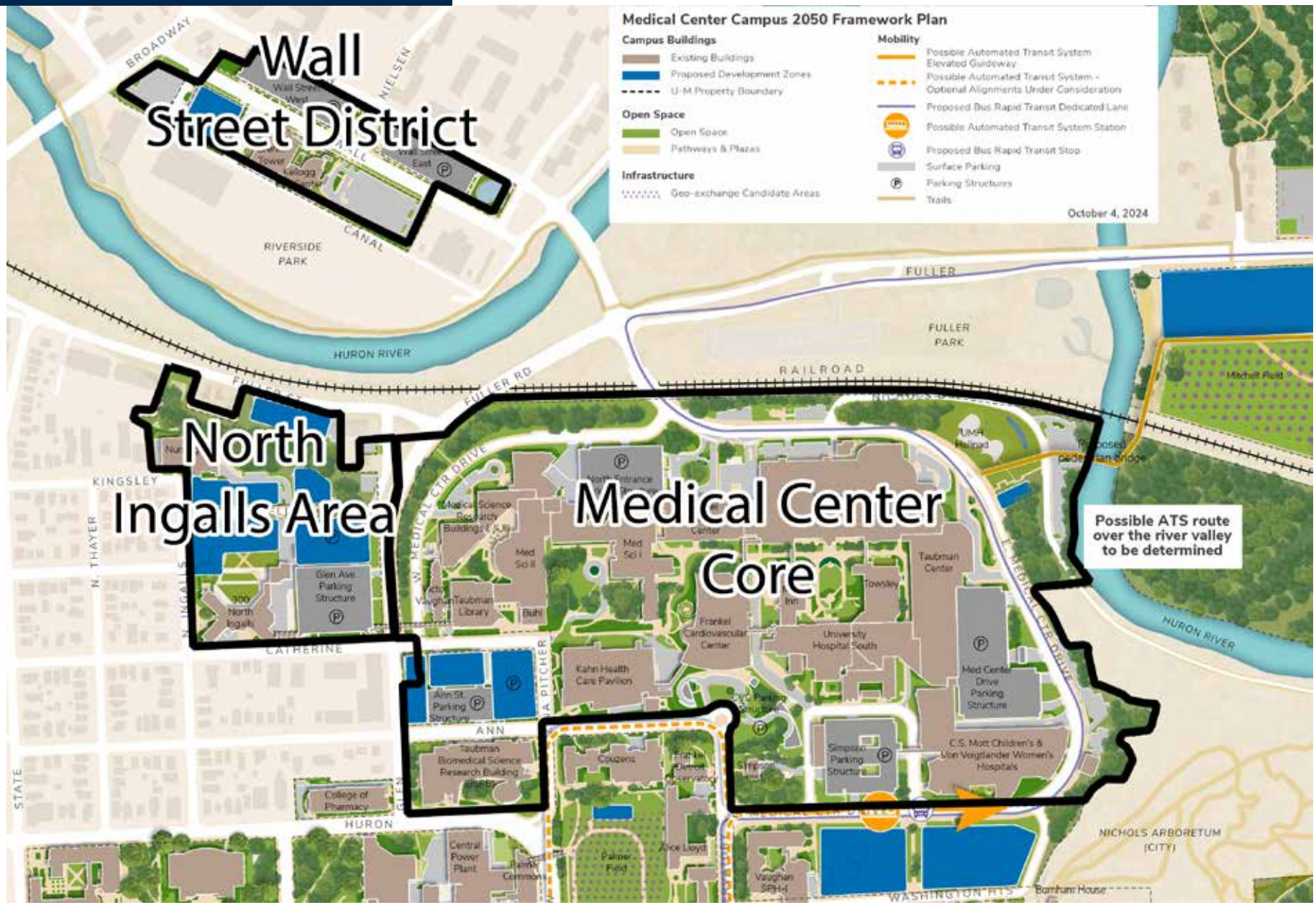
Medical Center Campus

Sub-Campus Areas

- *Wall Street*
- *North Ingalls*
- *Medical Center Core*

The Medical Center Campus comprises three sub-campus areas that form the hub of the medical enterprise, including the Medical School.

Figure 77. 2050 Medical Center Campus Sub-Campus Area Plan



Wall Street Area

Functional Use

The Wall Street District is located in the Huron River Valley adjacent to the city's Riverside Park. It is bounded by Maiden Lane, Canal Street, and East Broadway Street, and includes Wall Street at the center. The area functions as outpatient clinical care, research, and support for the Medical Center Campus core. The surrounding context is defined by a mix of mid-rise and garden apartment-style residential buildings, with the Huron River to the south. The units represented within the Wall Street District include Michigan Medicine, surface parking, and two parking structures.

Development Opportunities

The Wall Street Area functions as an outpatient clinical, research, and support area for the Medical Center and Central campuses. Limited infill development is proposed for additional facilities to serve Michigan Medicine.

Landscape and Public Realm

The gateway to the Wall Street Area from the east is defined by an open space and a stormwater management feature located at the southwest corner of Maiden Lane and Maiden Lane Court. Continued investments of a similar nature in the landscape along Wall Street and Maiden Lane are recommended. Particular attention should be paid to the patient experience, wayfinding, and navigation arriving at and through the university clinical facilities. Views to Riverside Park and the Huron River should be preserved and enhanced where possible.

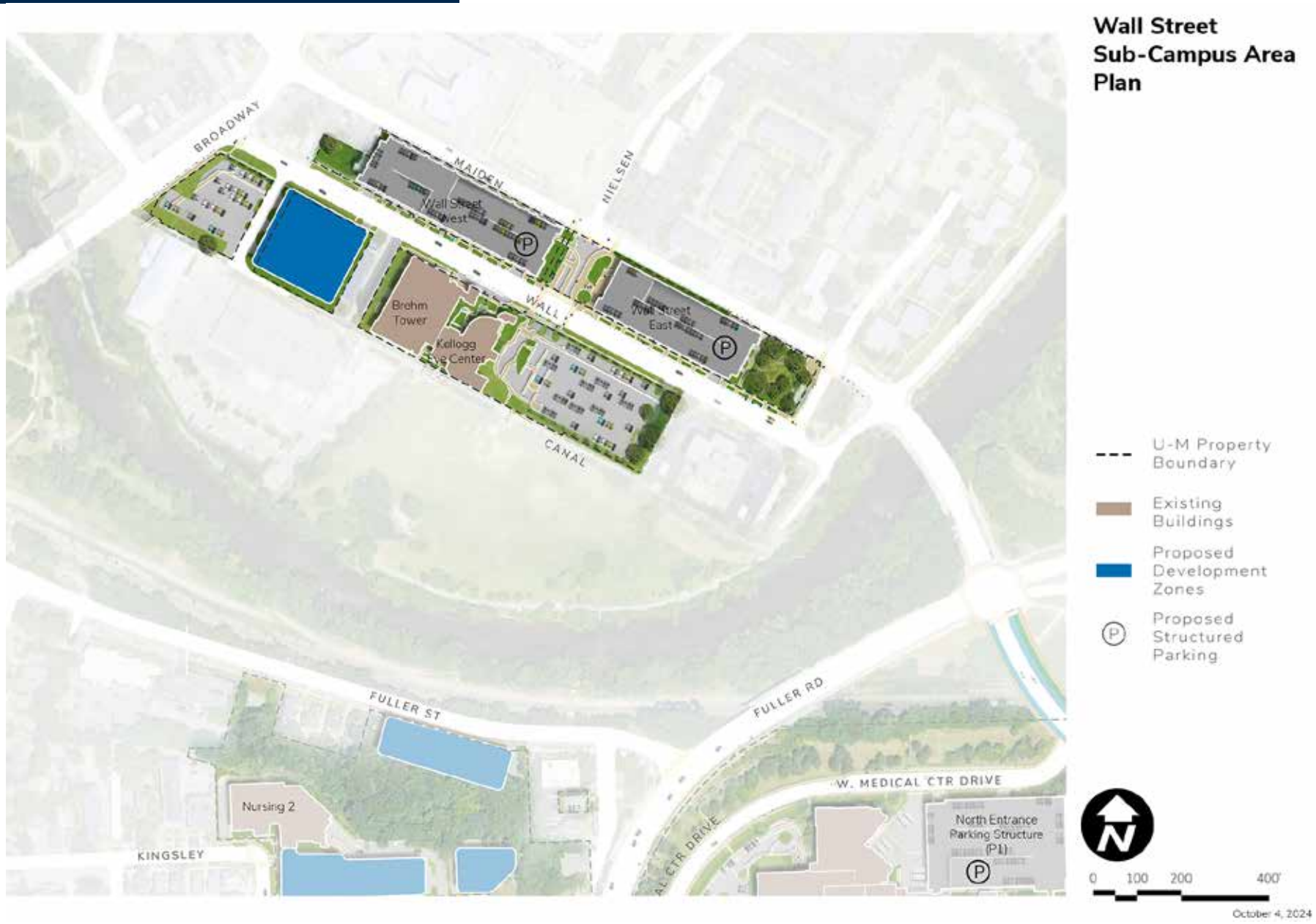
Mobility and Connectivity

As a key parking location for Michigan Medicine employees, bus services connect the Wall Street Area to the Medical Center Campus Core via Maiden Lane. Many employees choose to walk to the Medical Center Campus via Maiden Lane, crossing at Fuller Road, continuing uphill via the East Medical Center Drive bridge over the railway. Continued improvement to the pathways and the Fuller Road intersection crossing is recommended.

Sustainability and Infrastructure

The installation of geo-exchange bores and ground source heat pumps is recommended for consideration as part of future renovations of the Kellogg Eye Center. Land is available in adjacent parking areas to contribute to the energy needs of the building. The existing parking garages provide opportunities to be explored for rooftop solar installations. Integrated stormwater management infrastructure is recommended for all future site and building development in the Wall Street Area.

Figure 78. 2050 Wall Street Sub-Campus Area Plan



North Ingalls Area

Functional Use

Located south of the Wall Street Area and the Huron River and due west of the Medical Center Core, the North Ingalls Area is bounded by Catherine Street on the south, North Ingalls on the west, wooded slopes and Fuller Street on the north, and Glen Avenue on the east. Current facilities on site include academic, parking, office, and support. The units supported in the North Ingalls Area include Michigan Medicine, School of Nursing, Business and Finance, and the Glen Street Parking Structure.

Development Opportunities

Campus Plan 2050 recommendations focus on renewal and partial redevelopment in the North Ingalls Area to potentially accommodate housing and childcare for Michigan Medicine, future nursing and medical education facilities, and additional parking. There is the potential for redevelopment of the area along Fuller Street which hosts existing small support and clinical facilities.

Landscape and Public Realm

Given the density of existing and proposed development, open space in the North Ingalls Area is generally limited to the streetscapes of North Ingalls and Cornwell Place, where major redevelopment is envisioned. Other improvements include an outdoor play area for the proposed childcare center and a new open space north of the 300 North Ingalls Building (site of the existing 400 North Ingalls). This open space is envisioned as an amenity for the future staff and students of 300 North Ingalls, offering views into a new greenspace and potentially including geo-exchange bores, ground source heat pumps, and stormwater management features. The slopes to the north and east of Cornwell Place are very steep and reinforced in areas, likely restricting future redevelopment.

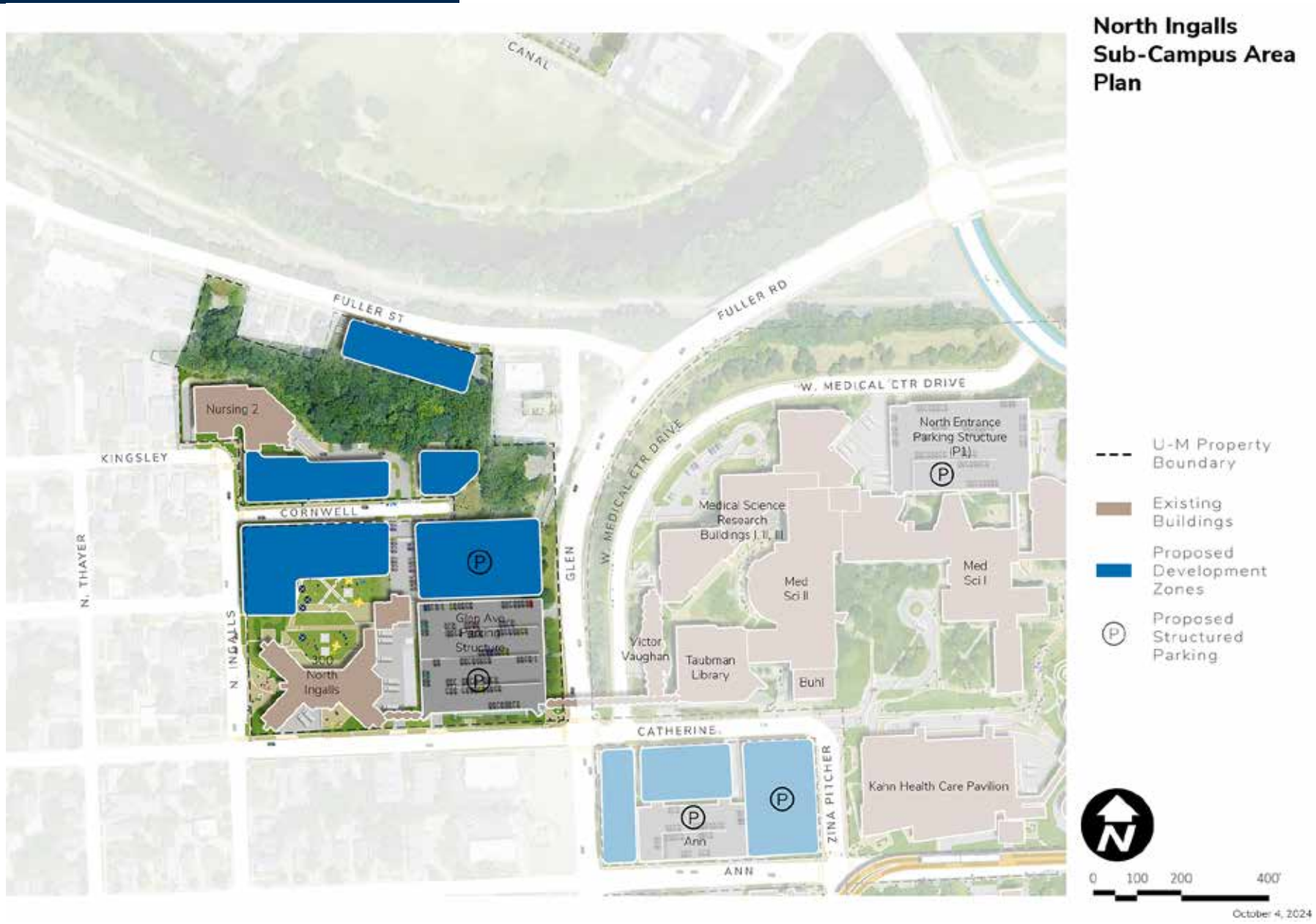
Mobility and Connectivity

A network of accessible pathways is proposed throughout the North Ingalls Area, especially along Cornwell Place. Accessible routes are also needed to the Glen Avenue Parking Structure, notably the elevator core, providing access to the pedestrian bridge level connecting the parking structure to the Taubman Health Sciences Library over Glen Avenue and West Medical Center Drive. With potential future expansion of the Glen Avenue Parking Structure, access, wayfinding, and safety improvements on Cornwell and nearby streets should be considered.

Sustainability and Infrastructure

Opportunities for geo-exchange bores, ground source heat pumps, and stormwater management features should be explored under the proposed buildings and open spaces. Integrated solar PV should be considered for all future construction and renovations.

Figure 79. 2050 North Ingalls Sub-Campus Area Plan



Medical Center Core Area

Functional Use

The Medical Center Core Area currently serves as the heart of Michigan Medicine clinical, research, and academic activities. The Core Area is generally bounded by East and West Medical Center Drive, Nichols Drive, East Ann Street, and Glen Avenue. Michigan Medicine and a number of parking structures are located within the Medical Center Core Area.

Development Opportunities

Campus Plan 2050 identifies potential renovation of existing facilities. Near-term renovations to University Hospital patient rooms are planned after the completion of the D. Dan and Betty Kahn Health Care Pavilion to convert patient rooms to single occupancy.

Recent investment in the Core Area includes the D. Dan and Betty Kahn Health Care Pavilion, a 12-story hospital with 264 private rooms capable of converting to intensive care; a state-of-the-art neurosciences center; and high-level, specialty care services for cardiovascular and thoracic patients, along with advanced imaging. Locating these services together enables healthcare providers to quickly respond to complex cases and deliver state-of-the-art treatments. Kahn Pavilion's new patient room capacity allows for the renovation of University Hospital to convert existing patient rooms from double to private occupancy. A new parking structure is proposed on Zina Pitcher Place to support staff growth and parking needs associated with the opening of the Kahn Pavilion. The existing Catherine Street Parking Structure as well as university-owned land along Glen Avenue may be potentially redeveloped in the future, offering sites for flexible uses supporting research, instruction, or replacement parking.

Landscape and Public Realm

The redevelopment of the Markley Hall site and the introduction of possible ATS and BRT, bicycle, and pedestrian routes on East Medical Center Drive allow for new greenspaces and stronger connections to the Nichols Arboretum and the Huron River Valley. An "amenity" corridor west of the Mott and Von Voigtlander Hospitals and the Taubman Health Care Center along East Hospital Drive provides an accessible pathway from the proposed Medical Center Campus Transit Station (MCCTS) to the University Hospital and Taubman Health Care buildings. The corridor is envisioned as a landscaped pathway potentially incorporating public art. Existing interior courtyards among the academic, research, and clinical buildings in the Core Area serve important roles as informal gathering spaces for staff, visitors, and patients in a tranquil and healing environment and provide relief from the surrounding building massing. These areas should continue to be maintained and enhanced to support this use. Significant views from East Medical Center Drive toward the Huron River, Mitchell Field, and North Campus should be preserved and enhanced.

Mobility and Connectivity

The introduction of a combined ATS and BRT transit station on East Medical Center Drive connects the Medical Center Campus to Central and North campuses via the possible elevated ATS guideway and BRT. Two potential alignments for the possible ATS system in this area will be evaluated. Integration of the possible ATS and elevated guideways are important considerations, especially for the adjacent Markley redevelopment site.

Conceptually, the open space structure of the Medical Center Campus emphasizes biophilic design principles by offering physical and visual connectivity to nature with the goal of establishing an environment for healing.

A proposed pedestrian and bicycle bridge linking the Medical Center and North campuses promotes connectivity to the Huron River in the Mitchell Field Area and provides access to nature. The bridge provides an alternative to travel via the existing road network between campuses for active transportation users. Planning for an accessible pedestrian bridge requires consideration of the elevation differences between Mitchell Field and East Medical Center Drive. This bridge is envisioned to include enough width for a shared use path supporting two-way bicycle and pedestrian travel, along with space for snow storage on either side.

Figure 80. 2050 Medical Center Core Sub-Campus Area Plan

Changes to East Medical Center Drive east and south of the Core Area require a widening of the street section to add proposed dedicated BRT lanes. In the near term, a new shared use path along the outside of East Medical Center Drive provides immediate improved connectivity for pedestrians and bicyclists traversing the area, linking to the new pedestrian and bicycle bridge. This new linkage provides convenient, safe, and accessible access to the Huron River path system, Mitchell Field open spaces, and North Campus.

Sustainability and Infrastructure

The integration of geo-exchange bores, ground source heat pumps, and stormwater management features should be examined as redevelopment occurs on the Markley site. Given the limited open space for bore fields within the Core Area, and awaiting further study, geo-exchange and ground source heat pump energy may be transferred from open areas in Mitchell Field, utilizing the proposed pedestrian and bicycle bridge as a utility piping connector.

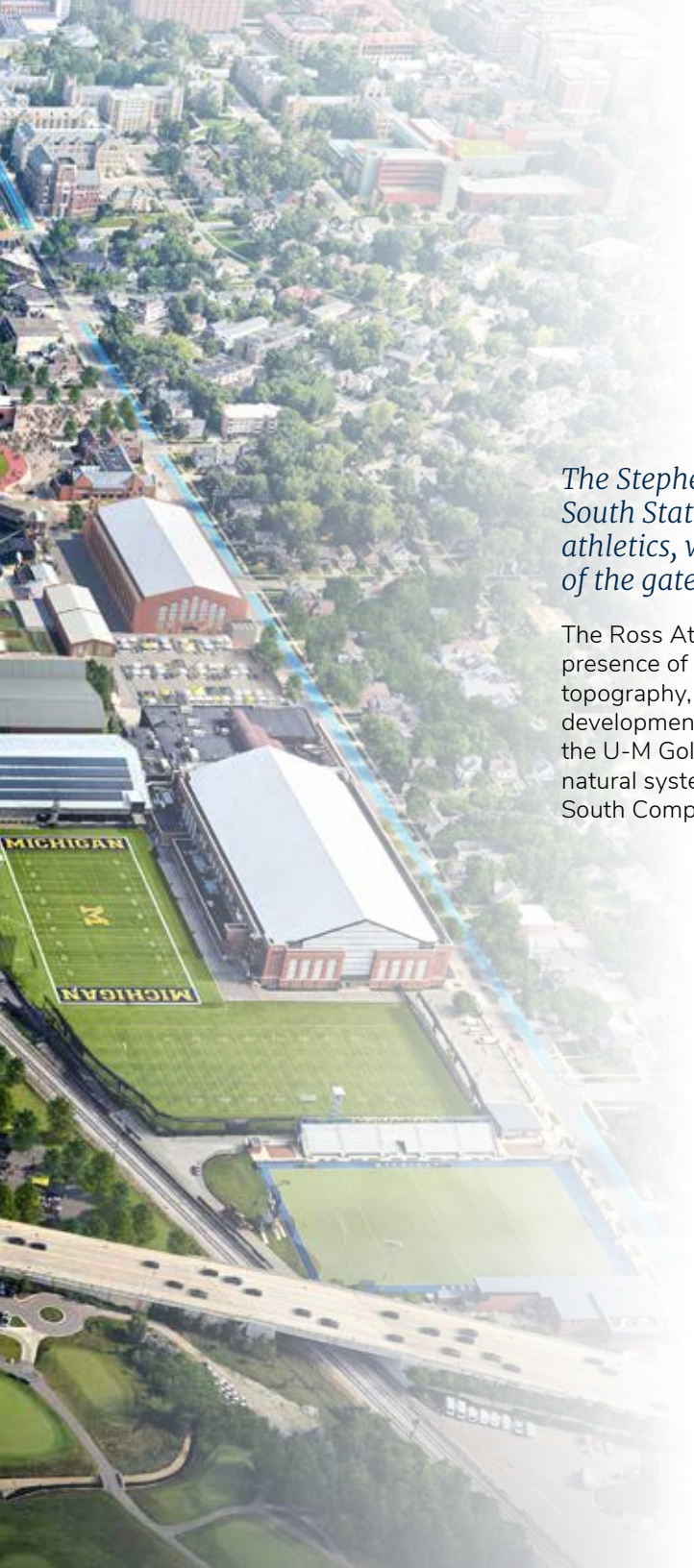
A geo-exchange and ground source heat pump support facility is shown east of East Medical Center Drive and adjacent to the proposed pedestrian and utility bridge to support this possibility, and would require coordination with the existing helipad operations. As buildings are renovated, deep energy retrofits should be incorporated with a goal to utilize geo-exchange and ground source heat pump energy in a distributed loop. Solar PV should be considered for existing parking structures, all new development, and existing flat roofs where feasible.

Figure 81. University Hospital

» Stephen M. Ross Athletic Campus

"The Ross Athletic Campus exemplifies Michigan's rich athletic history. Maintaining and investing in that history connects us to a vibrant legacy and helps prepare us to champion the next generations of extraordinary student-athletes."

—Warde Manuel, Donald R. Shepherd Director of Athletics



The Stephen M. Ross Athletic Campus defines the University of Michigan's presence along South State Street south of East Hoover Street. It currently functions as the primary location for athletics, while also accommodating a variety of support services. It is also an important part of the gateway experience into Ann Arbor and the university from the south.

The Ross Athletic Campus is characterized by the presence of Allen Creek and by its relatively flat topography, an important consideration for future development north of Stadium Boulevard. South of the U-M Golf Course, Malletts Creek is the defining natural system within the Ross Athletic Campus-South Complex (South Complex). The Ross Athletic Campus is intertwined with the street grid of Ann Arbor and surrounded by residential, institutional, and industrial/commercial land uses. It consists of three general areas—a northern core area (Ferry Field and Michigan Stadium), the U-M Golf Course, and the South Complex on South State Street.

View of the Ross Athletic Campus illustrates 2050 proposed new athletic facilities, new open space for a dedicated TV fan zone, and the proposed Central Campus Residential Development (Phases I and II).

History of the Stephen M. Ross Athletic Campus

The origins of the Ross Athletic Campus can be traced to 1890 when U-M purchased 10 acres of land on South State Street for a football field and spectator seating in grandstands. This site, called Regents' Field, also accommodated baseball and track and field. Additional land acquisitions enlarged the athletic area east of the railroad tracks, and the entire area was named Ferry Field in honor of a major land donor. It was expanded greatly with large land acquisitions primarily through the 1930s and extended west of the railroad tracks to South Main Street. Many athletic and intramural facilities were built between 1912–1930, including the Ferry Field Clubhouse (now Hartwig Building) in 1912, Yost Field House (ice arena) in 1923, Michigan Stadium in 1927, and the Intramural Sports Building in 1928, with the Golf Course being laid out in 1930. Initially referred to as the Athletic Campus and later South Campus, this area is now known as the Ross Athletic Campus. Today, it accommodates support services such as plant facilities in a former industrial complex on Hoover Avenue purchased in 1956. Some administrative support services were also located in this area in the 1960s–1970s in facilities such as the Administrative Services building, as well as in purchased properties. In 1987, the Institute for Continuing Legal Education was located in a new building on the Ross Athletic Campus, thereby adding a support unit of an academic program to this area. Large areas of commuter parking were also provided. The last large acquisition, in 1995, is contiguous to the south end of the golf course to accommodate soccer, tennis, and lacrosse facilities and is commonly called the South Complex. Today, the Ross Athletic Campus occupies just under 350 acres.

History of Planning on Ross Athletic Campus

Throughout most of the history of the Ross Athletic Campus, no formal plans guided development. Instead, the placement of buildings and other facilities responded to land availability and access for faculty, staff, and public spectators, and a basic pattern of functional organization emerged within the framework of city streets and the railroad tracks that transect the campus. In 1989, development of the first master plan was undertaken by Johnson, Johnson and Roy, culminating in the South Campus Planning Study in 1991. The plan identified development infill zones and types of developments for sub-campus areas with the goal of reinforcing existing use concentrations and promoting further development of functional and visual linkages. The plan also addressed pedestrian and vehicular circulation, parking, open space improvements, and linkages to Central Campus.

As the plans for athletic facilities evolved, a programming and facility planning effort was undertaken in 2002 to identify the future needs of the department and potential facility impacts. This effort guided some facility changes, renovations, and new buildings that were implemented in the next few years. To address evolving athletic needs, the South Campus Master Plan was updated by university staff. Although updates were presented to the Regents in 2003 and 2005, no published master plan was produced at that time. Several athletics facility plans further inform the development of Campus Plan 2050.

Historic Status of the Ross Athletic Campus

Much of the Ross Athletic Campus embodies the rich athletic history and traditions of U-M. In particular, this includes the Ferry Field Area east of the railroad tracks, the Michigan Stadium/Crisler Arena area to the west, and the U-M Golf Course to the south. The campus is home to several landmark buildings of considerable historic significance, including Michigan Stadium, Hartwig Building, Yost Ice Arena, and the Intramural Sports Building. In addition, the Michigan Golf Course, designed by Alister MacKenzie, is a significant historic landscape. Michigan Stadium, constructed in 1927, has been, during most of its existence, the largest university-owned stadium in the U.S. Yost Ice Arena, when originally constructed in 1923 as a field house, was the first building of its kind at any American university. Likewise, the Intramural Sports Building of 1928 was also the first of its kind. The buildings are visual landmarks that define the campus and, therefore, special consideration is required relative to future uses, renovations, or potential demolition. The Ferry Field Area itself is an important historic site.

Figure 82. Ferry Field Gate, ca. 1955

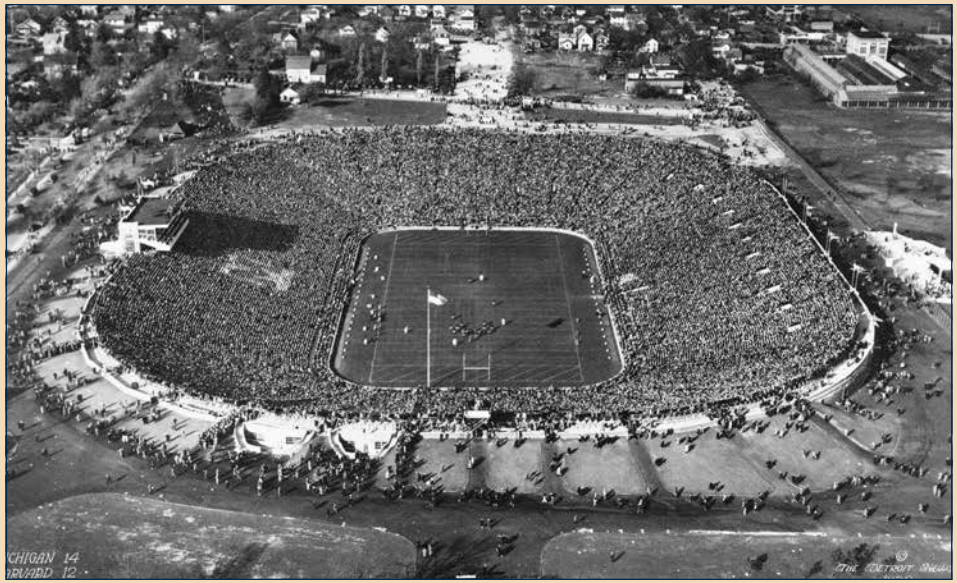


Figure 83. Michigan Stadium, 1929

Stephen M. Ross Athletic Campus Recommendations

Campus Plan 2050 builds upon recent strategic facility plans completed for Athletics. Key proposals include the infill development in the historic core around Ferry Field; major redevelopment of the Kipke Drive Area; and limited new development to the Ross Athletic Campus-South Complex (South Complex).

The Ferry Field Area of the Ross Athletic Campus includes some of the most iconic and memorable athletic facilities of the university. The plan maintains these facilities and calls for renovation of Canham Natatorium, the Intramural Sports Building (IMSB), Yost Ice Arena, and the Ross Academic Center to address programmatic needs, improve energy efficiency, and address deferred maintenance. The proposed demolition of Weidenbach Hall and Cliff Keen Arena enables the restoration of the historic open gateway to Ferry Field. Ferry Field is maintained in the plan as an informal greenspace, given its history, and will serve as a foreground to the memorable south facade of the IMSB.

Example recommendations for the Ross Athletic Campus and each of its sub-campus areas support the Vision 2034 impact areas as follows:

Life-Changing Education

» Potential new academic support, dining, and other amenities are recommended to be explored to enhance the student-athlete experience.

» Campus Plan 2050 also calls for the long-term expansion of athletics facilities and other support functions in the Kipke Drive Area by relocating administrative and operational uses.

Human Health and Well-Being

» Continued investment in the quality of the Ross Athletic Campus, its facilities, and services is proposed to meet the performance goals of student-athletes.

» Improved pedestrian and bicycle facilities are recommended to enhance safe multi-modal circulation and better connect to other Ann Arbor campuses, contributing to the health and well-being of the campus community.

Democracy, Civic and Global Engagement

» Improved accessible pathways and open spaces are encouraged by the plan to increase faculty, staff, and student engagement.

» The plan also enhances the vibrancy and user experience by means of an accessible bridge over the railway connecting Ferry Field to Michigan Stadium, and a dedicated TV fan zone and lawn east of the stadium to enhance the game day experience.

Climate Action, Sustainability and Environmental Justice

» Energy efficiency upgrades to existing buildings, in combination with geo-exchange bores and solar PV are recommended to support the climate action and sustainability goals of U-M.

» A new DTE substation is proposed to support electrification of Central Campus and the Ross Athletic Campus on the South Complex Area.

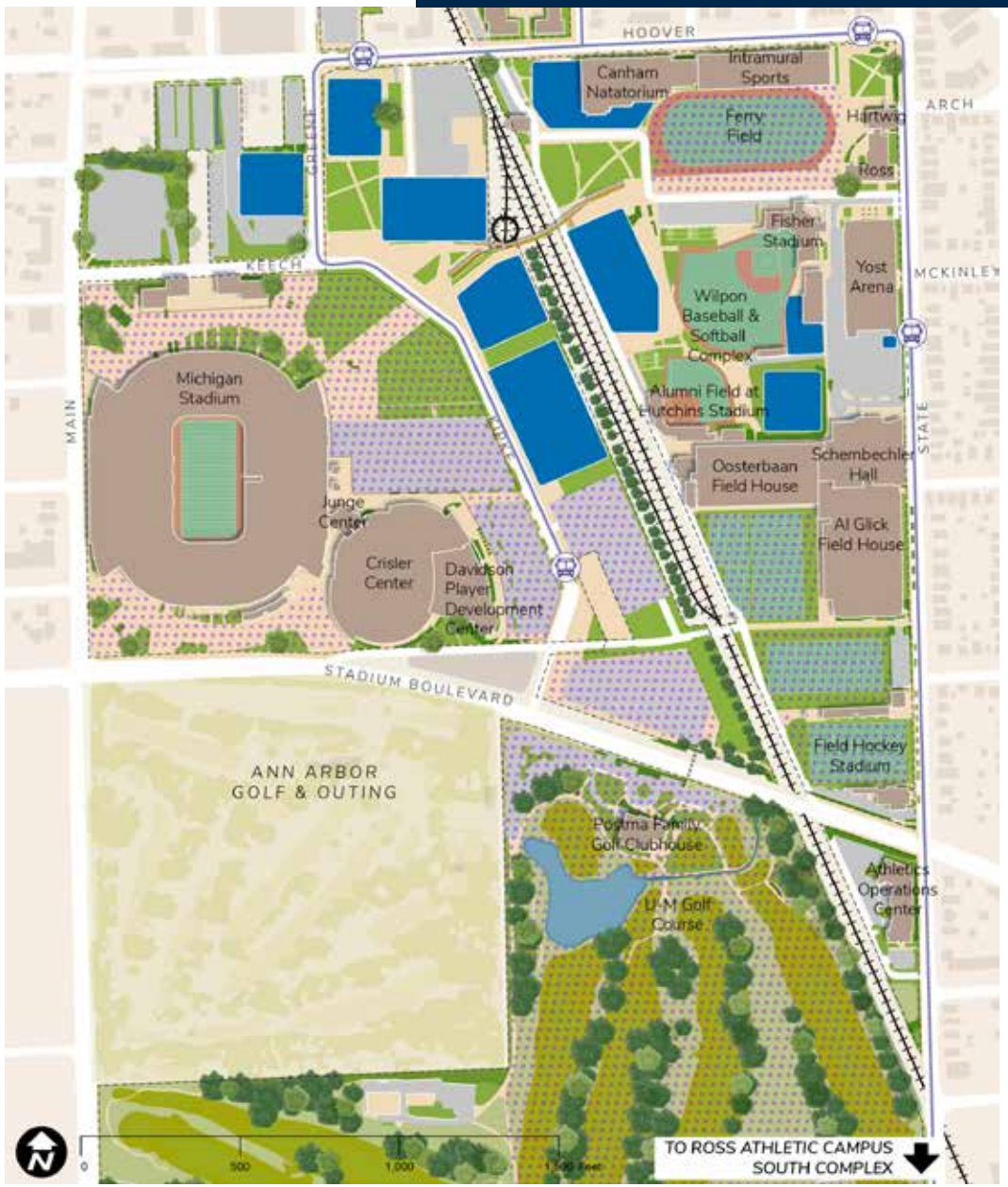
» The plan also identifies opportunities for new stormwater management facilities.

Collaboration and Connectivity

- Campus Plan 2050 integrates a proposed BRT system connecting the Ross Athletic Campus to the proposed Madison Transit Center and other areas on Central Campus and beyond.
- The proposed pedestrian bridge would provide a new means of east-west connectivity for the campus community.
- The Ross Athletic Campus plan recognizes the importance of balancing parking needs with new development and reinvestment, while integrating enhanced transit options into a cohesive strategy.

Figure 84. Michigan Marching Band marching to the stadium

Figure 85. 2050 Stephen M. Ross Athletic Campus Overview



Stephen M. Ross Athletic Campus 2050 Framework Plan

Campus Buildings
- Existing Buildings
- Proposed Development Zones
- U-M Property Boundary

Open Space
- Open Space
- Pathways & Plazas
- Recreation and Athletic Fields

Infrastructure
- Geo-exchange Candidate Areas

Mobility
- Proposed Bus Rapid Transit Dedicated Lane
- Proposed Bus Rapid Transit Stop
- Surface Parking
- Parking Structures

October 4, 2024

Figure 86. 2050 Stephen M. Ross Athletic Campus-South Complex

Ross Athletic Campus

Sub-Campus Areas

- *Kipke Drive*
- *Ferry Field*
- *South Complex*
- *Golf Course*

The Ross Athletic Campus consists of four sub-campus areas and serves as the primary hub for athletics. It also accommodates a variety of support services and plays a crucial role in the gateway experience into Ann Arbor and the university from the south.

Figure 87. 2050 Stephen M. Ross Athletic Campus Sub-Campus Area Plan

Figure 88. Preliminary Illustration: Possible Ross Athletic Campus at Kipke Drive looking southwest

Kipke Drive Area

Functional Use

Located in the northwest section of the Ross Athletic Campus, the Kipke Drive Area is defined by East Stadium Boulevard on the south, South Main on the west, East Hoover Avenue on the north, and a railway on the east. While a majority of the facilities are for athletic practice and competition, there are also academic, administrative, and support facilities that work with the following units: Athletics; Architecture, Engineering and Construction; Maintenance Services, F&O Operational Support; Human Resources; Equity, Civil Rights and Title IX; Parking; Information Technology Services; Environment, Health and Safety; Custodial and Grounds Services; and the Division of Public Safety and Security.

Development Opportunities

Campus Plan 2050 calls for considerable redevelopment in the area. The proposed land use changes accommodate identified and future athletic facility needs, including the demolition over time of all university support buildings in the Kipke Drive Area other than Michigan Stadium and its associated outbuildings, Junge Champions Center, Crisler Center, and Davidson Player Development Center to free up land for future athletic facilities. The plan identifies a number of future development sites for Athletics. Significant large surface parking areas are maintained to support Athletics, daily campus commuter parking, and flexibility for football game day tailgating.

Landscape and Public Realm

Campus Plan 2050 calls for comprehensive redevelopment of the Kipke Drive Area including improvements to the landscape and public realm. The goal is to improve the overall quality and appearance of the context in support of functional and operational needs of Athletics and to contribute to the fan experience. Key recommendations include a dedicated TV fan zone on the east side of Michigan Stadium, which is envisioned as a place for football game day TV broadcasts and associated activities. Located at the terminus of a new proposed pedestrian bridge over the railway, this lawn area is also envisioned as a foreground landscape to Michigan Stadium and as a place for day-to-day programmed activities. Views of the iconic east facade of Michigan Stadium should be preserved and enhanced, especially along the newly established pedestrian bridge corridor. The removal of the existing support facilities complex along Kipke Drive also provides an opportunity to introduce new green open spaces carefully coordinated with new development, allowing for an enhanced pedestrian environment and supporting stormwater management features and biodiversity of vegetation.

Mobility and Connectivity

Redevelopment in the Kipke Drive Area enables reconsideration of accessible pathways in support of day-to-day and game day needs. This includes the proposed non-motorized and pedestrian bridge over the railway connecting to the Ferry Field Area.

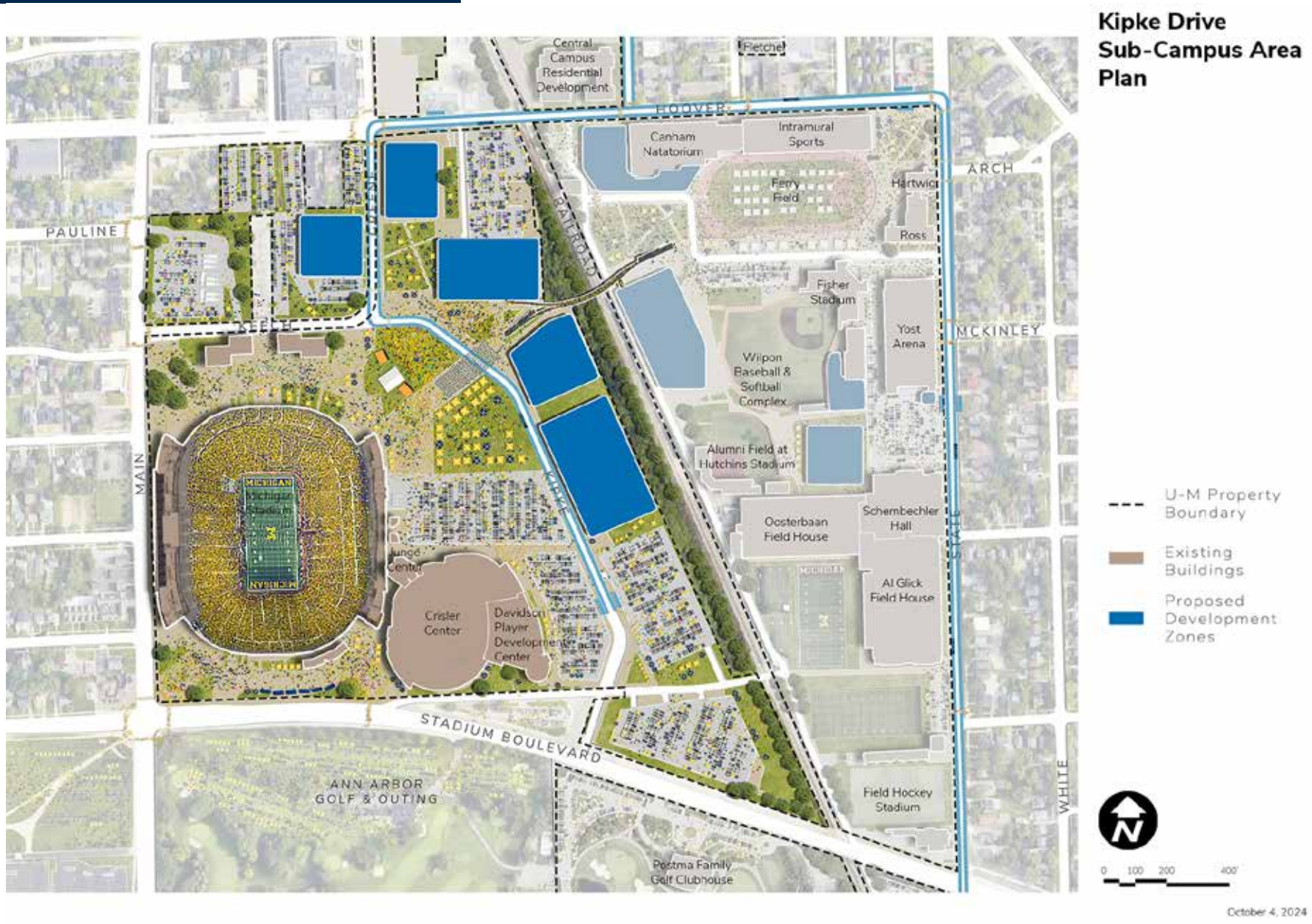
The integration of proposed BRT services and stops along Kipke Drive also facilitates upgrades to the public realm and allows enhanced connectivity to the remaining large surface parking lots with a commuter parking function.

Sustainability and Infrastructure

Geo-exchange bores are proposed under all major plazas in the Kipke Drive Area and in areas proposed for demolition and redevelopment, including large surface parking areas. Bores in this area are intended to support the energy needs of the Kipke Area with any surpluses potentially diverted to supply other campus needs. To that end, Kipke Drive is designated as a major utility corridor connecting the potential golf course geo-exchange and ground source heat pump field to Central Campus. Existing and new buildings in the area should be planned for conversion to take advantage of available geo-exchange and ground source heat pump energy. Solar PV panels are recommended on all future large span athletic facilities, and should be explored in select parking areas.

Installation of the geo-exchange and ground source heat pumps should be coordinated with upgrades to all plaza areas in support of accessibility, public art, and stormwater management goals. In addition to infrastructure adjacent to Allen Creek, stormwater management infrastructure is proposed in the plazas around Michigan Stadium and in other areas subject to demolition and redevelopment over the near and long term.

Figure 89. 2050 Kipke Drive Sub-Campus Area Plan



Ferry Field Area

Functional Use

Located due east of the Kipke Drive Area, the Ferry Field Area is defined by East Stadium Boulevard on the south, a railway on the west, East Hoover Avenue on the north, and South State Street on the east. The buildings include a mix of Athletics and support facilities, a facility for the Michigan Marching Band, and surface parking lots. The School of Music, Theatre & Dance, along with several athletic functions, are supported in this area.

Development Opportunities

In the Ferry Field Area, strategic demolition and redevelopment is proposed to improve accessible circulation and connectivity, as well as support new programmatic needs for Athletics. Proposed facilities and open spaces are defined by the Ferry Field open space and a new pathway leading from a restored open pedestrian gateway at East Hoover Avenue and South State Street to a non-motorized and pedestrian bridge proposed over the railway connecting to the Kipke Drive Area. Restoration of Ferry Field includes the installation of geo-exchange bores and potentially a new informal playing surface and track.

Landscape and Public Realm

A stadium at Ferry Field was the home of Michigan Football from 1906 to 1927, when Michigan Stadium opened, and served as the site of U-M's outdoor track and field activity until 2018. Today, the field itself is used for a variety of training purposes by multiple university teams as well as the public. It also serves as an informal open space on the Ross Athletic Campus defined by the iconic south facade of the Intramural Sports Building. The proposed demolition of Weidenbach Hall and the Cliff Keen Arena at the southwest corner of South State Street and East Hoover Avenue reestablishes views into the historic field, providing the opportunity to recreate the original Ferry Field gateway designed by Albert Kahn. New pathways connect the gateway to the proposed pedestrian bridge linking the Ferry Field Area to the dedicated TV fan zone and lawn area east of Michigan Stadium, creating a major fan connectivity corridor from the north on football game days as well as other events. The link also enhances daytime and weekday operations and campus circulation. Views to be preserved and enhanced include that of the historic Intramural Sports Building facade as well as the view from the newly established open gateway at State Street across Ferry Field toward Michigan Stadium. New greenspaces should support daily use as well as programmed and event-day uses, with efforts made to include areas promoting biodiversity.

Mobility and Connectivity

Mobility and connectivity improvements in the Ferry Field Area focus on new pathways and the pedestrian bridge connecting the area for the Kipke Drive area and Michigan Stadium west of the railway. Other improvements in the area include the addition of proposed BRT lanes and stops along East Hoover Avenue and South State Street. Major bicycle parking facilities are proposed near the Natatorium/Track, South Ferry Field, and Yost Ice Arena. The pedestrian circulation network should be carefully enhanced and developed to support ease of wayfinding and better separation of pedestrians and vehicular flow.

Sustainability and Infrastructure

In support of U-M's sustainability and climate action goals, geo-exchange bores are proposed under Ferry Field and the surrounding paved areas. Geo-exchange borings are also recommended under the baseball, softball, field hockey, and football practice fields and as feasible. Installation should be considered as each field requires major upgrades. Buildings in the area should be considered for energy retrofits to support connection to the geo-exchange and ground source heat pump system. Linking the geo-exchange and ground source heat pump infrastructure to the Kipke Drive Area via the proposed pedestrian bridge as a utility conduit should be considered. Subject to structural analysis and building compatibility, solar PV panels are recommended on existing flat-roofed buildings and on all future as feasible and prudent. As areas are redeveloped, consideration should be given to incorporate stormwater best practices given the proximity to Allen Creek.

Figure 90. 2050 Ferry Field Sub-Campus Area Plan

South Complex Area

Functional Use

The South Complex Area is located at the southern end of the Ross Athletic Campus. It is bounded generally by South Main Street to the west, the U-M Golf Course to the north, South State Street on the east, and private development to the south. It includes a range of athletic support and functional uses including tennis, gymnastics, wrestling, soccer, lacrosse, rowing, and indoor and outdoor track and field. Surface parking is also available.

Development Opportunities

Campus Plan 2050 identifies sites for three new Athletics facilities, a new parking structure, and a DTE substation.

Landscape and Public Realm

The South Complex Area is characterized by large Athletics competition facilities with several large competition and practice fields with small-scale pedestrian plazas and greenspaces intermixed. There is a tributary of Malletts Creek running through an undeveloped natural area on the western half of the site.

Mobility and Connectivity

A proposed parking structure in the South Complex Area is located to the west of Malletts Creek in an existing undeveloped area. A bridge over the creek is needed to provide access to the potential parking structure which will serve as a commuter parking location for campus, as an offset of displaced large surface parking by future development, and to support athletic events. A BRT transit center is proposed to connect the parking structure with transit service to the north part of the Ross Athletic Campus, Central Campus, as well as other campuses.

Sustainability and Infrastructure

Integrated solar PV, geo-exchange bores, and ground source heat pumps should be considered for the proposed parking structure and other new development. Integrated stormwater management approaches are encouraged to mitigate potential impacts to the adjacent tributary of Malletts Creek, focusing on maintaining or enhancing the quality of the creek area and surrounding wetlands by maintaining as large of setbacks from the creek edge as possible. Consideration should be given to optimizing green areas to promote biodiversity.

The integration of a new DTE substation is necessary in support of the electrification and climate action goals of the university. The proposed location requires careful planning relative to the potential flooding issues associated with the adjacent tributary of Malletts Creek, as well as planning for distribution cabling to campus to the north.

Figure 91. 2050 South Complex Sub-Campus Area Plan

U-M Golf Course

The golf course is defined by East Stadium Boulevard on the north, South State Street on the east, the South Complex on the south, and South Main Street and Ann Arbor Golf and Outing on the west. The predominant land use is the 18-hole University of Michigan Golf Course, designed by Alister MacKenzie, the architect of the Augusta National Golf Club in Augusta, Georgia. The golf course remains in Campus Plan 2050. Depending on the outcomes of future decarbonization studies, it may also be used for geo-exchange bores and ground source heat pumps required to decarbonize Central Campus. This requires careful study and consideration given the historic nature of the golf course.

Figure 92. U-M Golf Course looking north

Figure 93. 2050 U-M Golf Course Sub-Campus Area Plan

» East Medical Campus

"East Medical Campus provides a natural setting in the beautiful Ann Arbor area that fits well with our mission of providing patient care. How we choose to manage the resources there has the potential to benefit the people we serve."

—David C. Miller, President, University of Michigan Health System

East Medical Campus encompasses approximately 200 acres of land dedicated to expanding patient care for Michigan Medicine.

Located in Ann Arbor Township east of US-23 and south of M-14 at the intersection of Plymouth and Earhart roads, East Medical Campus is convenient to the Ann Arbor and regional patient base of Michigan Medicine. The surrounding context is characterized by residential development to the east and the commercial activities of Plymouth Road to the west and Ann Arbor Technology Park, Matthaei Botanical Gardens, Recreation Sports Rope Course, and Radrick Golf Course to the south and southeast. The recommendations for East Medical Campus create an environment and context that support the ideal patient care experience.

The East Medical Campus includes three existing facilities: the Rachel Upjohn Building, the East Ann Arbor Health and Geriatric Center, and the East Ann Arbor Ambulatory Surgery Center. Located along Kiefer Road, the existing facilities accommodate a number of outpatient services. The site is defined by extensive, high-quality wooded areas and the Fleming Creek corridor, which runs in a southwesterly direction through the site. In combination, the woods and creek establish a naturalistic character to the site, which supports human health and well-being, and are an important ecosystem within the Huron River Watershed.

View of the East Medical Campus illustrates a 2050 vision for new development for clinical care, a new parking structure, proposed open space and trail networks, and opportunity for solar PV installations.

History of East Medical Campus

In 1993–94 the university purchased approximately 390 acres of land northeast of Ann Arbor, outside the city limits in Ann Arbor Township, to expand and/or relocate ambulatory care programs. Approximately 200 acres of the land were designated as East Medical Campus and devoted to Michigan Medicine facilities. At the time of acquisition, the land was undeveloped and featured forested areas and wetlands and a segment of Fleming Creek. The first building, the East Campus Primary Care Facility, was completed in 1996. The remainder of the land purchased at that time is located in the Ann Arbor Technology Park, contiguous to the campus. This Technology Park land is not part of the East Medical Campus.

History of Planning on East Medical Campus

Planning for the first outpatient care building commenced immediately upon acquisition of the land, and, in order to site the facility, a master planning process was undertaken in 1994. The master plan was presented to the Regents late that year, although the plan was not finalized or published. It established a development framework focused on providing quality patient experience, supporting the clinical, education, and research mission of the university, and providing flexibility to accommodate future programs. Major factors addressed included linkages to the community and the Medical Center, pedestrian and vehicular circulation, and the site's natural characteristics and environment.

In 2005, the vision for East Medical Campus was updated as part of the Medical Center Master Plan. This plan continued to focus on the outpatient experience, emphasizing access, circulation, and wayfinding. Future development was clustered for ease of navigation and to minimize the impact on the fragile natural environment.

Historic Status of East Medical Campus

East Medical Campus is a modern campus developed initially in the 1990s and currently does not have any historic status.

Figure 94. East Medical Campus

East Medical Campus Recommendations

Buildings on the East Medical Campus are 30 years old or less. No major renovations are proposed in the near term other than potential energy efficiency upgrades or interior medical equipment upgrades.

Example recommendations for the East Medical Campus support the Vision 2034 impact areas as follows:

Life-Changing Education

Proposed BRT services will make the East Medical Campus more accessible to clinicians, students, and researchers engaged in internship, research, and outreach activities.

Human Health and Well-Being

- New development zones are proposed southeast of existing facilities to meet future inpatient and outpatient care requirements, with spaces available that support research and instruction requirements, as well.
- Trails and seating areas along Fleming Creek provide access to nature and a place of respite for patients, visitors, and employees.

Democracy, Civic and Global Engagement

- East Medical Campus is planned to make healthcare and the services of Michigan Medicine accessible to a diverse population.
- The outpatient and potentially future inpatient services and associated facilities provide opportunities for research, scholarship, and discovery collaboration in a clinical setting.

Climate Action, Sustainability and Environmental Justice

- Energy efficiency upgrades are proposed to existing buildings.
- Geo-exchange bores under existing and future parking areas are recommended to support current and long-term needs.
- Substantial solar PV installations over existing and future parking as well as on future buildings, are envisioned as well as solar panels along Plymouth Road relocated from the North Campus Research Complex area as they are displaced by other development.
- New stormwater management facilities integrated to meet current and future needs are encouraged as part of U-M's ongoing commitment to environmental stewardship.

Collaboration and Connectivity

- New BRT services are proposed connecting East Medical Campus to other campuses via Plymouth Road.
- A new parking structure supporting both the clinical facilities, as well as offering a remote commuter parking option linked to other campuses via proposed BRT is recommended to use existing land most efficiently.
- Outpatient and inpatient services at East Medical Campus will be explored as part of this plan making Michigan Medicine's clinical services accessible and convenient to the broader community.

Figure 95. 2050 East Medical Campus Overview

East Medical Campus

Functional Use

At just under 200 acres and approximately 250,000 GSF of built space, the East Medical Campus does not have any sub-campus areas. The clinical facilities are concentrated on the site south of Plymouth Road, much of which remains natural and undeveloped, with surface parking lots for outpatient and staff needs. North of Plymouth Road are the three Arbor Lakes support structures, which are not within the East Medical Campus. The units supported on East Medical Campus are U-M Health and Parking.

Development Opportunities

Structures on the East Medical Campus are 30 years old or less. No major renovations are proposed in the near term other than potential energy efficiency upgrades or interior medical equipment upgrades. Campus Plan 2050 does, however, identify expansion opportunities for future clinical facilities south and east of the existing complex of buildings, as well as a mechanical support building and a parking structure to support the clinics. Longer-term additional capacity may exist pending future studies.

Landscape and Public Realm

Fleming Creek and its associated wetlands and wooded areas are major natural features on the campus. The plan protects the creek system and integrates it into the open space network of the campus, including new pathways that connect with existing development. Along the pathways new seating and other potential amenities, possibly integrated with public art, are envisioned as an amenity for staff and visitors. Combined, the creek and wooded areas contribute to the biophilic qualities of East Medical Campus.

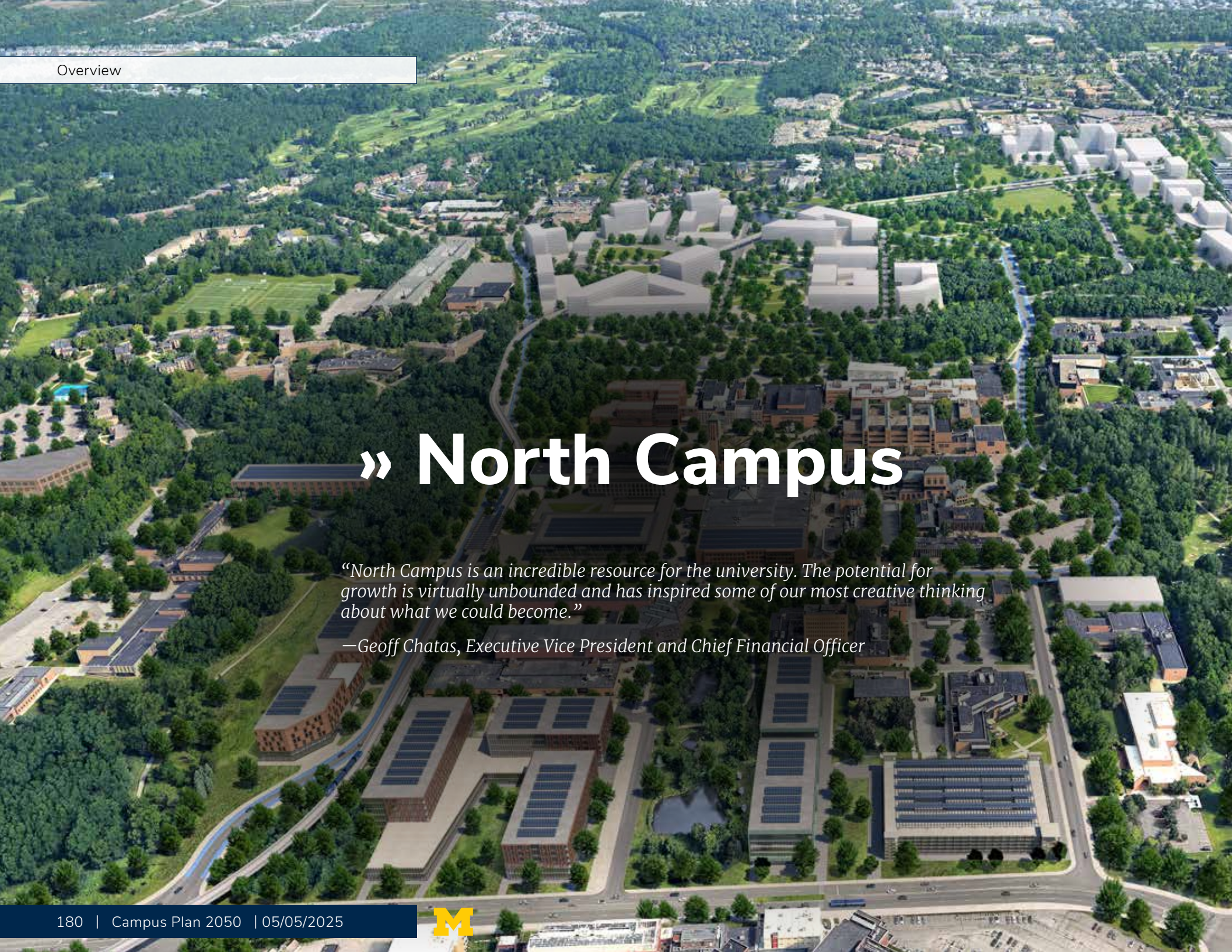
Mobility and Connectivity

Campus Plan 2050 integrates proposed BRT services connecting East Medical Campus to the rest of the Ann Arbor campus. A new parking structure can support both the clinical facilities as well as potentially offer a remote commuter parking option. Accessible paths provide convenient connections between facilities as well as access to nature, promoting a healthy, healing experience for patients, families, and staff.

Sustainability and Infrastructure

The plan integrates geo-exchange bores and ground source heat pumps under existing and future parking areas to support current and long term needs. Substantial solar PV installations are possible over existing and future parking as well as on future buildings, with solar panels along Plymouth Road. New stormwater management facilities are integrated to meet current and future needs. Care should be taken to maintain the quality and biodiversity of the natural areas including the wetland areas around Fleming Creek.

Figure 96. 205 East Medical Campus Sub-Campus Area Plan



» North Campus

"North Campus is an incredible resource for the university. The potential for growth is virtually unbounded and has inspired some of our most creative thinking about what we could become."

—Geoff Chatas, Executive Vice President and Chief Financial Officer

From its beginning as a research campus in the 1950s, North Campus has evolved to become a center of academic, research, and student activity at U-M.

North Campus is now home to the Stamps School of Art and Design, the Taubman College of Architecture and Urban Planning, Michigan Engineering, the School of Music, Theatre & Dance, and the School of Information. It includes academic, research, residential, recreation, and support space, as well as cultural and library facilities of universitywide significance such as the Walgreen Drama Center and the Duderstadt Center. It also includes the significant research facilities of the North Campus Research Complex and Mcity.

Campus Plan 2050 envisions the transformation of North Campus to create a highly sustainable, carbon-neutral, mixed-use academic, research, innovation, partnership, residential, and recreational area. It is envisioned not only as an enhanced home for current academic and research units, but also as a potential future home for academic and research units relocated from Central Campus.

This view of North Campus illustrates infill development and reinvestment in the academic core and NCRC as well as a new Innovation District which transforms Northwood I–IV and NCRC.

History of North Campus

North Campus was originally conceived as an expansion zone to accommodate the post-World War II growth of the university, a pattern of growth characterized by a great influx of students, many veterans with families, and a surge in engineering-related government-sponsored research. For the university, this translated into a need for more and larger research facilities, as well as housing for students with families. Land to accommodate these uses was not available on or near Central Campus, so the decision was made to acquire a large tract of land outside the city limits northeast of the Medical Center Campus. Between the early 1950s and the early 1970s, over 800 acres of land, mostly farmland and undeveloped sites, were purchased and assembled to establish a fourth campus, North Campus. The earliest buildings on the campus related to engineering research were completed in 1953–58. Housing for students with families was also constructed from the mid-1950s and onward.

Original plans for the new campus called for the relocation of several schools and colleges, and facilities for academic functions also began to appear on North Campus. The School of Music was the first to relocate entirely, in 1964 (now the School of Music, Theatre & Dance), followed by the College of Architecture and Design in 1974 (now the Taubman College of Architecture and Urban Planning and the Stamps School of Art and Design). Michigan Engineering relocated from Central Campus in the mid-1980s but had been conducting research on North Campus since the 1950s. To serve students attending these schools and colleges, undergraduate student housing was constructed in the 1960s. The built environment of North Campus has continued to grow over the years with the construction of additional academic, research, and student life facilities.

In 2009, U-M purchased the land and buildings at the intersection of Plymouth Road and Huron Parkway formerly owned by Pfizer. This acquisition included 174 acres of land and 28 buildings totaling more than 1.2 million gross square feet of space. The university had, in fact, previously owned most of this land, which had been sold in earlier years. The areas in the west and central part of the former Pfizer land containing all the buildings became the university's North Campus Research Complex (NCRC). To the east of the NCRC is a large area of undeveloped land other than the area occupied by Mcity, U-M's vehicle testing center. Today, North Campus encompasses approximately 900 acres.

Planning on North Campus began shortly after the first parcels were acquired, commencing in 1951 with the appointment of Eero Saarinen and Associates to develop a master plan. From the outset, the vision was to create a new campus with a full range of uses including academic and research facilities, a central library, residence halls and family housing, and a fine arts area. The 1956 plan established the broader functional use pattern evident today, including a central area of engineering facilities, a fine arts or music area to the west, research uses in the southeast corner, and the residential areas to the north. It also defined much of the current roadway network.

In the 1960s, a series of planning studies considered the future of North Campus in terms of design and integration with Central Campus, other locations of U-M activity, the Huron River Valley, surrounding land uses, and the concurrent planning underway by the City of Ann Arbor. By the 1980s, North Campus had achieved a critical mass of engineering and other academic facilities, the relocation of whole schools and colleges, and support facilities such as libraries. In general, the development was implemented in accordance with the 1956 plan; however, the pattern of development evolved in a less architecturally defined manner and with more emphasis on automobile circulation. The 1984 North Campus Planning Study provided a finer level of planning and design detail in the central academic core and placed emphasis on the setting, seeking to preserve these natural qualities.

In the 1990s, a number of planning studies were undertaken which examined transportation and the natural environment, and the role of North Campus in the context of the other campuses, and provided recommendations for improving identity, creating a sense of place, maintaining ecological integrity, and defining the context for future planning. In the mid-

2000s an update was undertaken, and the resulting master plan was completed in 2008. This plan is built on earlier plans, with an increased focus on creating strong connections, promoting campus vitality, optimizing development capacity, and respecting and incorporating the natural features.

Historic Status of North Campus

As North Campus has passed its 70th year of development, the campus and several of the original buildings have transitioned to historic status. This requires consideration relative to future uses, renovations, or potential demolition. Buildings with historic status include the Cooley Building (1953), the Michigan Memorial Phoenix Project Laboratory (1955), the Lay Automotive Laboratory (1955), the G. G. Brown Memorial Laboratories (1958), and the Moore Building (1964).

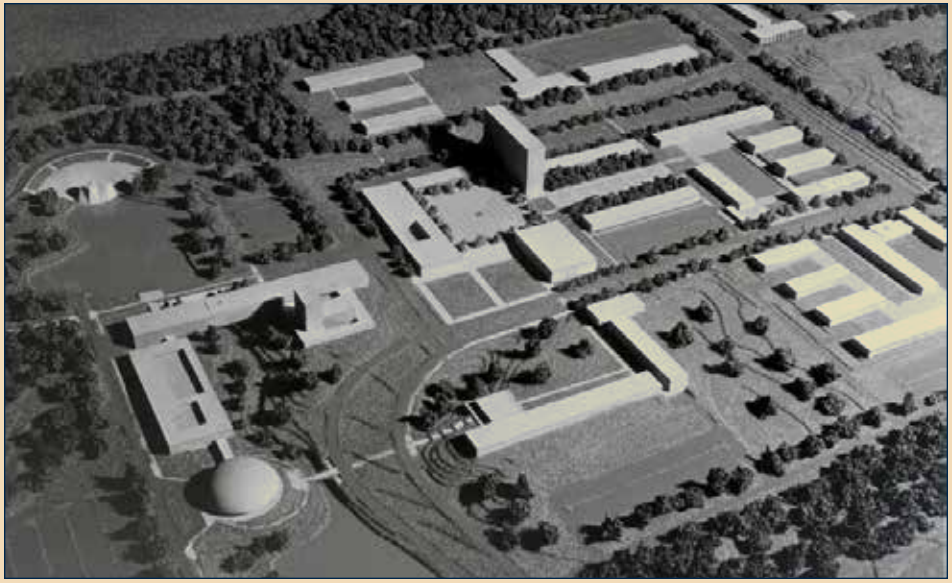


Figure 97. Saarinen Model of North Campus, 1954

Figure 98. Aerial View of North Campus, 1964

North Campus Recommendations

As U-M's largest land resource, North Campus is key to the future of the academic, research, innovation, student life, cultural, and partnership mission of the university. It is here that opportunities exist to create a model of campus planning to accommodate growth over the next 25 years and well beyond. Campus Plan 2050 calls for strategic reinvestment in existing buildings in support of the mission, programmatic needs, and opportunities to improve energy efficiency, and deferred maintenance.

The plan includes a number of new facilities to support mission-driven academic, research, and innovation goals. These include:

- An Innovation District featuring a research and innovation hub and a hotel and conference center.
- New housing.
- Developments that incorporate mixed-use areas, public art installations, various amenities, retail opportunities, and aim to promote higher density
- Significant geo-exchange and ground source heat pump infrastructure across North Campus..

Example recommendations for North Campus and each of its sub-campus areas support the Vision 2034 impact areas as follows:

Life-Changing Education

- One of the highest plan priorities is to reinvest in existing academic facilities to support purpose-driven education and research opportunities.
- New and expanded housing is recommended to enhance the student experience.
- New recreation facilities are proposed to contribute to student engagement.

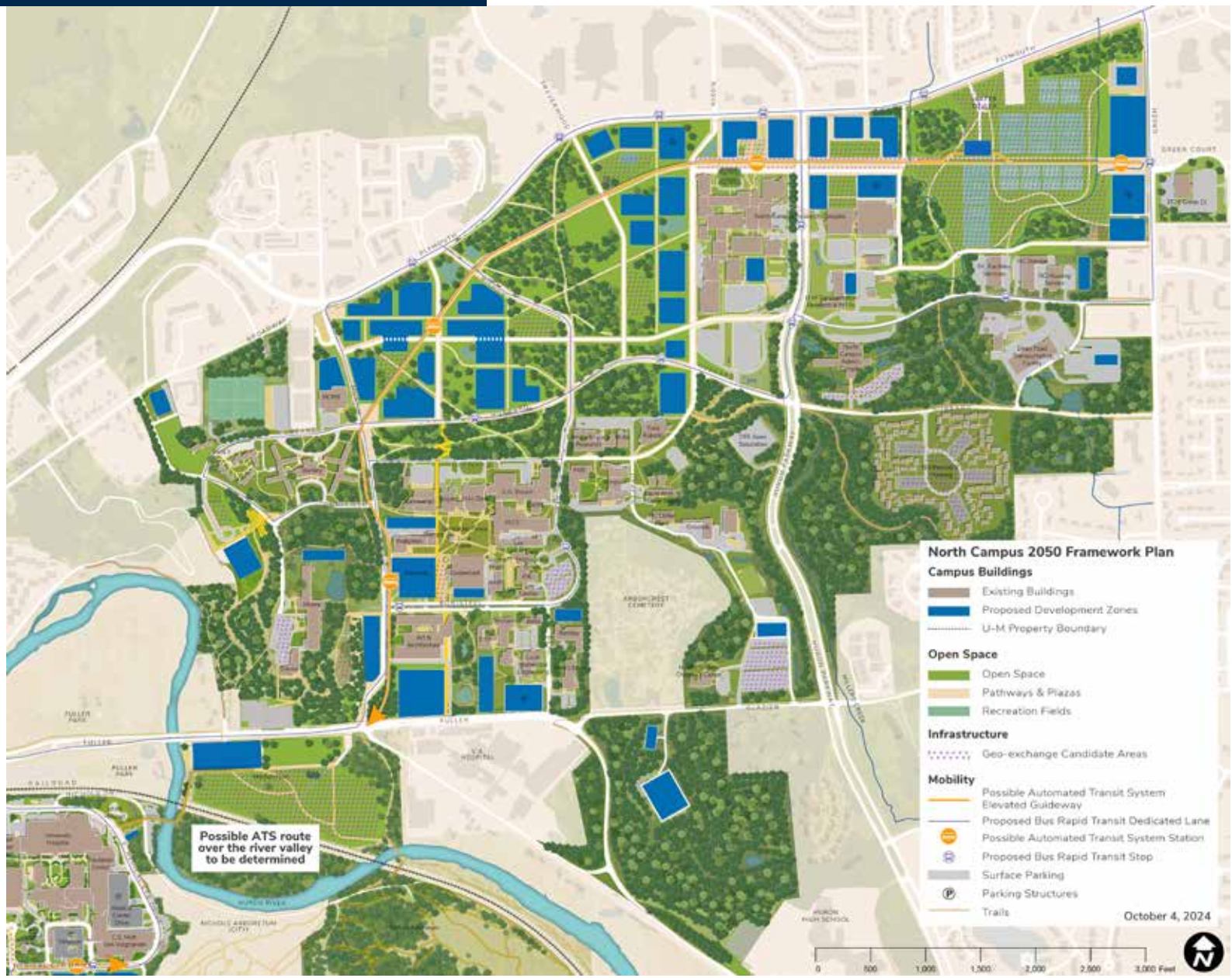
Human Health and Well-Being

- Expansion of recreation facilities will be explored to contribute to the health and well-being of North Campus users and residents.
- The recreation complex featured in the plan at Plymouth and Green contributes to intramural sports and daily recreational activities, and addresses significant shortfalls in field space.
- Access to an expanded trail and pathway network is proposed to provide access to nature and to create opportunities for exercise.

Democracy, Civic and Global Engagement

- A new or reimagined Pierpont Commons is encouraged to offer opportunities for new types of engagement space for a diverse student and staff population.
- Expanded libraries with potential collaboration spaces are included to create create welcoming spaces for respectful discourse.
- The proposed Innovation District and enhanced NCRC are high-priority recommendations that support research and scholarship partnerships.
- The proposed hotel and conference center is another major recommendation that would provide gathering spaces for the university, industry, and the broader community.
- The Research and Innovation Hub is a near-term priority to provide collaboration and research opportunities for U-M faculty, staff, and students, and provides access to partners.

Figure 99. 2050 North Campus Overview



Climate Action, Sustainability and Environmental Justice

» Geo-exchange and ground source heat pumps and solar PV installations are planned and should be sized to meet current and future energy needs of North Campus.

» All proposed buildings will strive to achieve carbon neutrality and maximize their impact on U-M's broader sustainability goals, including considerations of embodied energy.

» Energy efficiency upgrades for existing buildings is a high priority of the plan to meet university climate action goals.

» Biodiversity, carbon sequestration, and the management of stormwater and other natural systems are identified in the plan as important factors to manage carefully to yield a high-quality landscape and open space system.

» Integrated planning and working landscapes contribute to the environmental performance of the campus.

Collaboration and Connectivity

» The possible ATS system should be explored to offer convenient connectivity between Central, Medical Center, and North campuses with the aim of supporting programmatic, social, and operational connectivity.

» The possible ATS should be supplemented by an extensive BRT network to provide links within North Campus and beyond.

» Both possible transit systems should be coordinated with the pathway and bicycle networks to optimize campus circulation.

» The North Campus plan recognizes the importance of balancing parking needs with new development and reinvestment, while integrating enhanced transit options into a cohesive strategy.

Figure 100. Existing North Campus Aerial View Looking Northeast

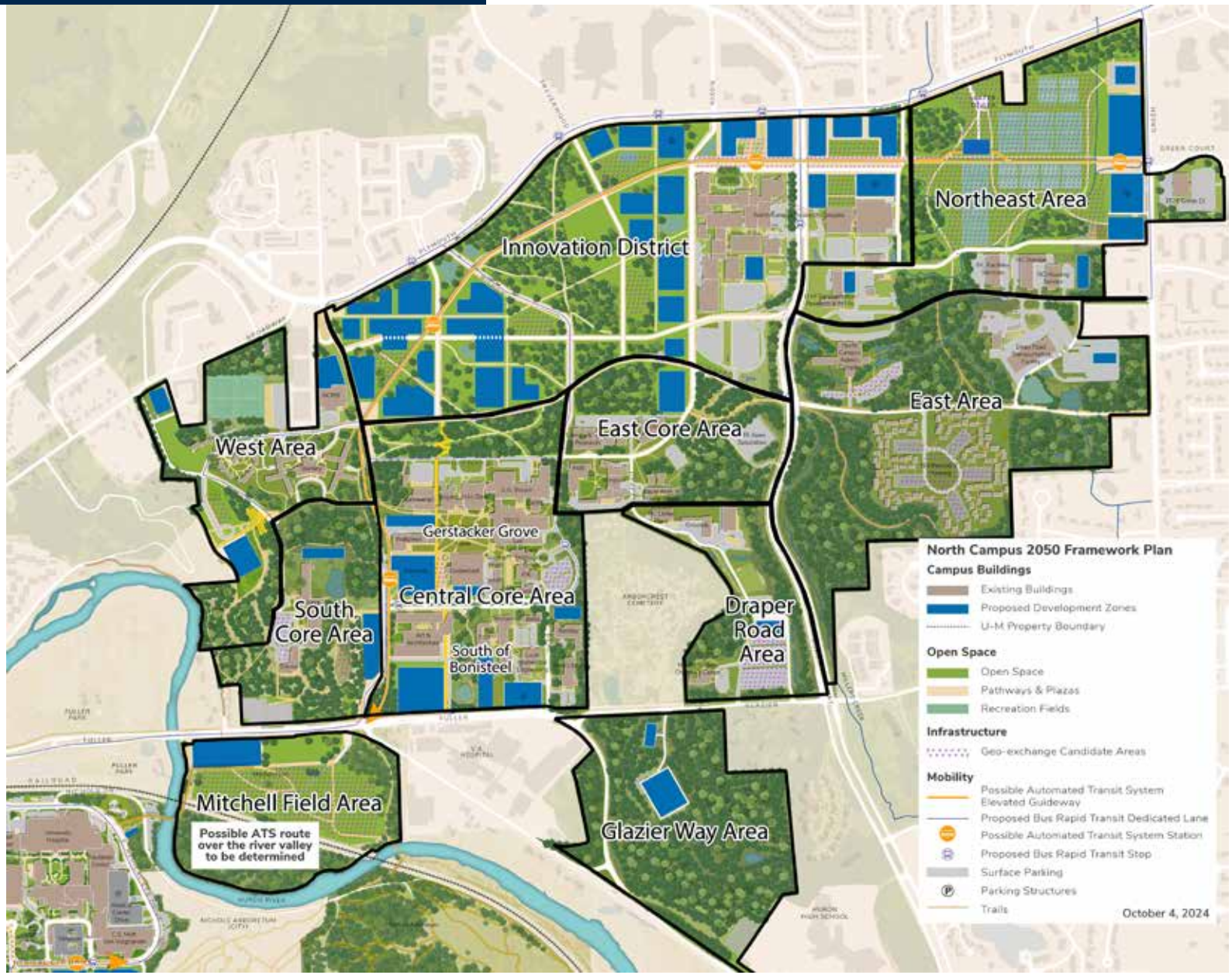
North Campus

Sub-Campus Areas

- *West Area*
- *Central Core – Gerstacker Grove*
- *Central Core – South of Bonisteel*
- *South Core*
- *Innovation District*
- *East Core*
- *Draper Road*
- *Northeast Area*
- *East Area*
- *Mitchell Field*
- *Glazier Way*

North Campus, as the largest Ann Arbor campus, is compelled by and features a wide range of functions. These include the academic core, housing and dining, access to nature and recreational opportunities, and a robust showing of innovation and research.

Figure 101. 2050 North Campus Sub-Campus Area Plan



West Area

Functional Use

The West Area is the northwest area of North Campus. It is surrounded by private housing to its north and west and bound by Broadway Street, Duffield Street, Baits Drive, the Huron River, and Murfin Avenue. Characterized as a "campus in the woods," its residential, recreation, and support facilities offer views of the Huron River Valley, the Medical Center Campus, and downtown Ann Arbor. Uses represented in the West Area include housing, and student recreation fields and facilities.

Development Opportunities

The West Area is designated for long-term redevelopment. The southernmost Baits I site offers a significant redevelopment opportunity given the potential views of the Huron River Valley and Ann Arbor to the southwest and should be reserved for a special and unique use. Expansion of the North Campus Recreation Building (NCRB) serves a portion of the projected increases in residential and daytime population on North Campus. The Stearns Building site near Broadway offers an opportunity for redevelopment. While not indicated in the 25-year plan, in the long term the Bursley Hall site could be redeveloped, including a major facility along Murfin Avenue.

Landscape and Public Realm

Redevelopment provides the opportunity to establish a new landscape and open space structure for the West Area, reinforcing the wooded nature of the context while potentially opening up views over the Huron River Valley from the Baits I redevelopment site. Overall, the wooded character is maintained in support of health and well-being. Future site and planning should be responsive to the topography and universal access goal. New trails in existing woodlots will require increased forest management to ensure safety of users and successional planning of the natural features.

Two recently completed recreation fields on Hubbard Street offer future opportunities to continue building this area of North Campus as a valuable student destination and can serve as a venue for a variety of campus purposes in the future.

Mobility and Connectivity

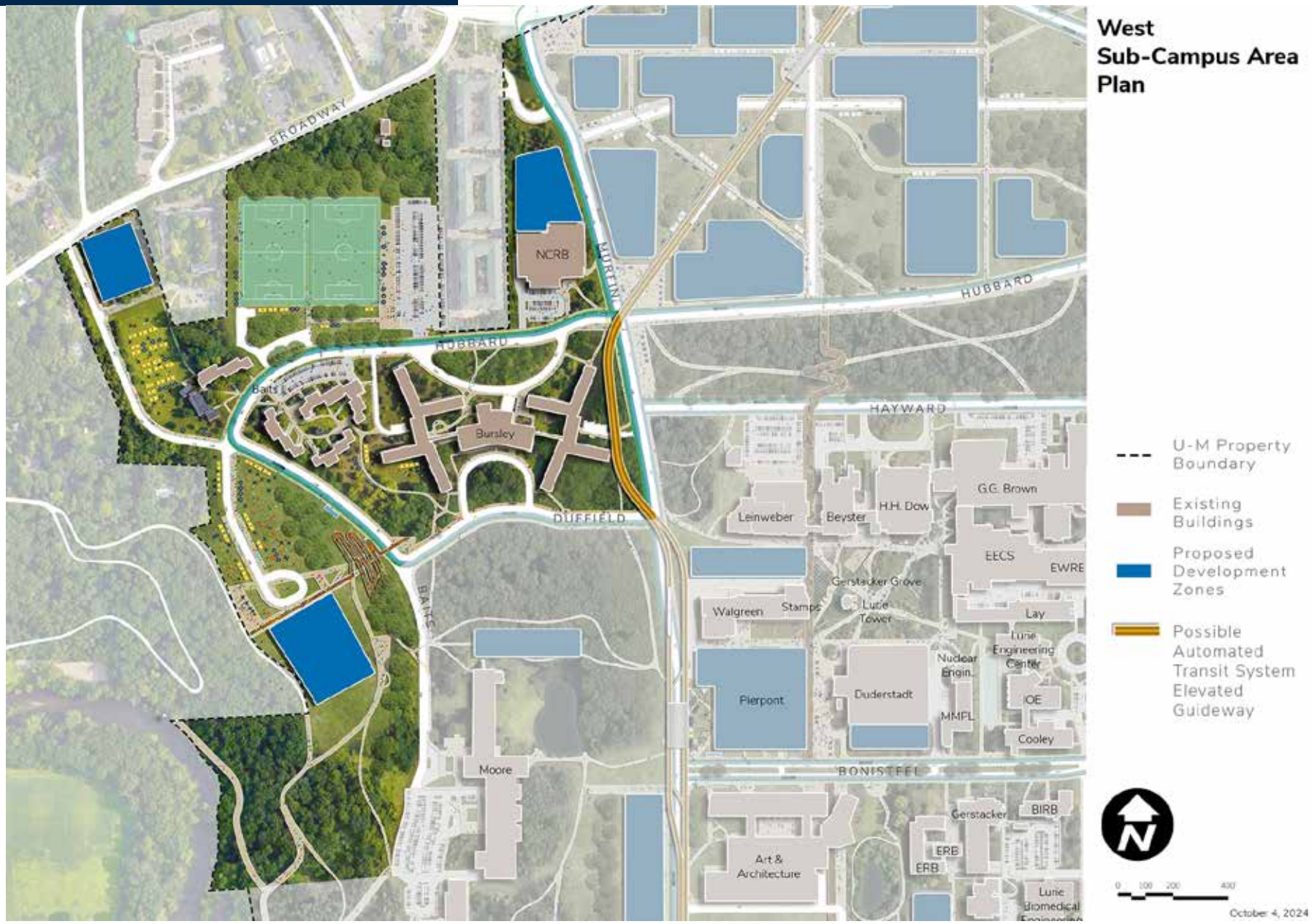
The pathway network envisioned for the West Area includes routes along Murfin Avenue, Duffield Street, and Hubbard Street linking to the existing trail system in the wooded areas along the west edge of North Campus. That system of trails situated along steep slopes near the Huron River provide the potential for an enhanced amenity linking campus to Cedar Bend Drive and Fuller Road to the south, and to the city's Island Drive Park to the west. There is potential to facilitate non-motorized connectivity to the elevated Baits I redevelopment site navigating the steep slopes from Duffield and Baits Drive. The pathway and trail network provides connections to the School of Music, Theatre & Dance facilities in the Core Area and to the Innovation District to the northeast. A proposed BRT loop is proposed along Hubbard Street, Baits Drive, and Duffield Street.

Sustainability and Infrastructure

Geo-exchange bores should be considered as feasible in the future landscape structure of the West Area, along with including solar PV where prudent on future buildings and assessing their feasibility on existing buildings. Stormwater management best practices should be followed and other strategies to build resiliency for future ecological conditions should be considered, including enhancing biodiversity.

Figure 102. View of the Medical Center Campus looking southwest over the Huron River

Figure 103. 2050 West Sub-Campus Area Plan



Central Core Area - Gerstacker Grove

Functional Use

The Central Core Area-Gerstacker Grove is bound by Hubbard Street, Murfin Avenue, Bonisteel Boulevard, and Beal Avenue. The area is characterized by the dense cluster of research and academic buildings surrounding the open space of the Gerstacker Grove as well as a high-quality woodland between Hayward and Hubbard connecting to the future Innovation District to the north. The units represented include Michigan Engineering; the School of Information; Student Life; the School of Music, Theatre & Dance; Duderstadt Center (Provost); and limited surface parking. The area, along with the Central Core-South of Bonisteel, the South Core, and the East Core, create the existing academic center of North Campus today.

Development Opportunities

The Central Core Area-Gerstacker Grove provides several opportunities for strategic infill development to serve academic, research, and amenity needs. Infill increases density and provides amenities that foster a stronger sense of campus life and vibrancy. Campus Plan 2050 illustrates several infill opportunities to accommodate future needs, including:

» North of Walgreen. It is anticipated this future building site would meet programmatic needs of a variety of academic requirements.

» New Pierpont Commons. This addition or redevelopment would meet the needs of a larger and more diverse population. In addition to current student life and food service space, potential uses include spaces for inclusive engagement, gallery spaces, and student performance spaces. As envisioned, the new Pierpont is integrated with the possible ATS and BRT station near the corner of Murfin and Bonisteel. This redevelopment also facilitates the creation of a new north-south pedestrian connection from the Grove to Bonisteel Boulevard contributing to a campuswide connection between the Innovation District to the north and Fuller Road to the south.

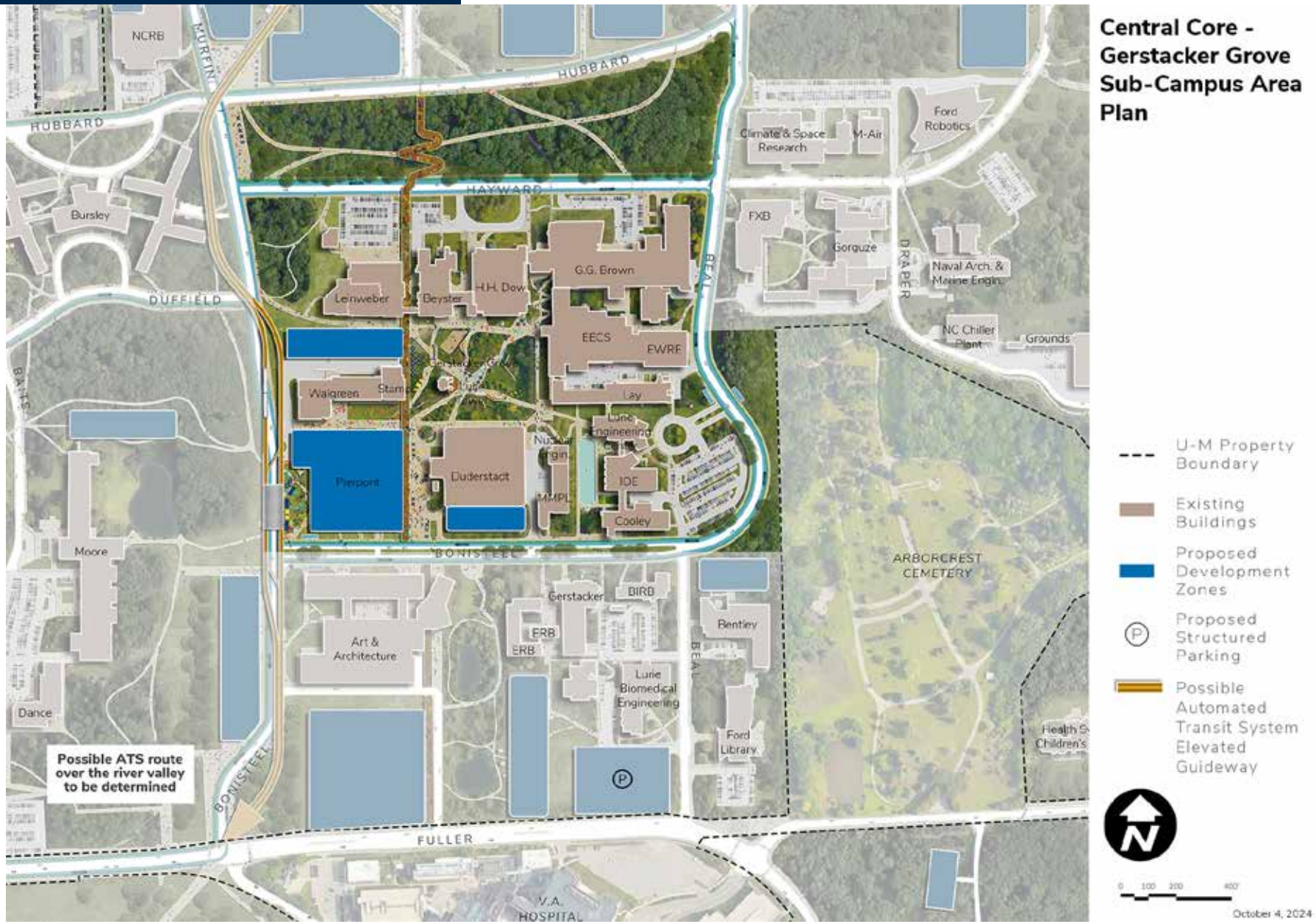
» Duderstadt Center and adjacent area. Strategic reinvestment, renovation, and addition to the south along Bonisteel provides additional space and a new entrance to the building along with limited surface parking.

Landscape and Public Realm

The area is envisioned as a primary civic, cultural, and social hub of North Campus defined by Gerstacker Grove as the central open space. The Grove knits the larger core area together and provides vitality, creating a sense of place and destination and is a vital space for programmed student events, displays, activities, and informal gatherings. The Grove will continue to function as a venue supporting community-building events, performances, engagement, and civic discourse. At the heart of the academic area of North Campus, it is critical that it remains respected and integrated into the evolving ethos of the university. The reflecting pool and fountain south of the Lurie Engineering Center are maintained in the plan as an iconic open space. The existing and extended pathway network is coordinated with landscape improvements with the goal of creating new green corridors.

Campus Plan 2050 suggests an opportunity to integrate the arts south of the Walgreen Drama Center on the currently vacant grass area. It is also envisioned that the high-quality woodlot north of Hayward Street be enhanced for better public use as an important psychological and functional link to the north, with the potential for public art integration enhancing the enjoyment of this space. Viewsheds are to be preserved and enhanced through this area including views into and across the Gerstacker Grove open space. In addition, enhancing views along the key north-south pedestrian corridor extending up into and through the woodland paths to the north provide visual cues to assist in wayfinding and navigation.

Figure 104. 2050 Central Core Area - Gerstacker Grove Area Plan



Mobility and Connectivity

Pedestrian circulation and transit access are prioritized in the Central Core Area through a well-defined system of pathways coordinated with internal building circulation patterns. The plan shows extension and enhancement of the existing north-south circulation spine running along the west edge of the Gerstacker Grove. This network of coordinated and linked sidewalks, plazas, and paths with amenities and opportunities for public art, connects from Fuller Road on the south all the way through the Gerstacker Grove, the woods between Hayward and Hubbard, and up through the Innovation District to Plymouth Road on the north.

A new pedestrian access point between a redeveloped Pierpont Commons and the Duderstadt Center encourages greater physical and visual north-south connectivity between the Gerstacker Grove and the area south of Bonisteel Boulevard. A series of accessible pathways are shown through the Hubbard-Hayward woods, bundled with the strategic placement of amenities to create welcoming, strong linkages through the area to future development in the Innovation District as a shared woodland amenity. Future linkages should be designed with universal access in mind. There is also a focus on improved bicycle lanes and infrastructure within the Innovation District.

Strong emphasis is also placed on enhancing the north-south pedestrian and vehicular connections along Murfin Avenue as well as an extension of Beal Avenue to Hubbard Street, further supporting possibilities for proposed BRT connectivity and more robustly linking the Central Core Area with the Innovation District and the East Core Area.

A transit station is proposed near the corner of Murfin and Bonisteel for possible ATS and BRT services linking North Campus internally and beyond to the Medical Center Campus and Central Campus.

The following street improvements are proposed.

» Murfin Avenue. Plans for Murfin Avenue include the integration of bus and possible ATS infrastructure near Pierpont Commons and routes along the entire corridor.

» Beal Avenue. The east side of the Central Core is extended northward in the plan to reconnect with the portion in the Innovation District and intersect with Plymouth Road to accommodate traffic and bus services.

Sustainability and Infrastructure

Geo-exchange bores supporting the Central Core Area are suggested in the Draper Road parking lot (NC51) along with other areas to supply the energy needs of the Central Core Area. Looped geo-exchange distribution should be established throughout the Core Area, connecting to buildings renovated for optimum energy efficiency. Consideration should be given to exploring geo-exchange and ground source heat pump technology including pyramidal boring along roadways and in open areas where traditional large bore fields are not possible. As part of future renovations, solar PV should be considered for all buildings with large expanses of flat roof, subject to structural analysis. Maintaining the quality and health of existing greenspaces is important, including promoting biodiversity.

Figure 105. Preliminary Illustration: Possible Pierpont Commons redevelopment on North Campus

Central Core Area - South of Bonisteel

Functional Use

The area south of Bonisteel is defined by Fuller Road on the south, Bonisteel on the west and north, and the Arborcrest Cemetery on the east. This area slopes downhill toward Fuller Road and includes a variety of academic and research buildings organized around a central stormwater feature. A network of pathways connects the facilities, which include academic, library, and support. Units located within this area include the Stamps School of Art and Design, the A. Alfred Taubman College of Architecture and Urban Planning, Michigan Engineering, Gerald R. Ford Presidential Library and Museum, University Libraries, and surface parking.

Development Opportunities

The area south of Bonisteel has additional infill development sites which include:

» Art and Architecture Building Expansion. A site south of the existing facility, which is currently surface parking, is available. Given its peripheral location on Fuller and the sloping topography, structured parking could be integrated on the lower levels of future development offsetting the loss of the existing surface parking lot.

» Parking Structure. A parking structure could be located on the northwest corner of Beal and Fuller to meet current and future demand; it could also be integrated with programs, similar to the site to the west of it on Fuller.

» Bentley Historical Library. An expansion site for an undefined purpose north of the existing building. This is a strategic site and care should be given to selecting highest and best use.

Landscape and Public Realm

The landscape and open space structure of the area focuses on the qualities of the central stormwater management system of ponds descending from Bonisteel to Fuller Road. Enhancements are proposed to the landscape surrounding the ponds, including the addition of a new potential plaza along Bonisteel Boulevard. The plaza and surrounding greenspace is positioned at the top of the hill with views downhill over the ponds.

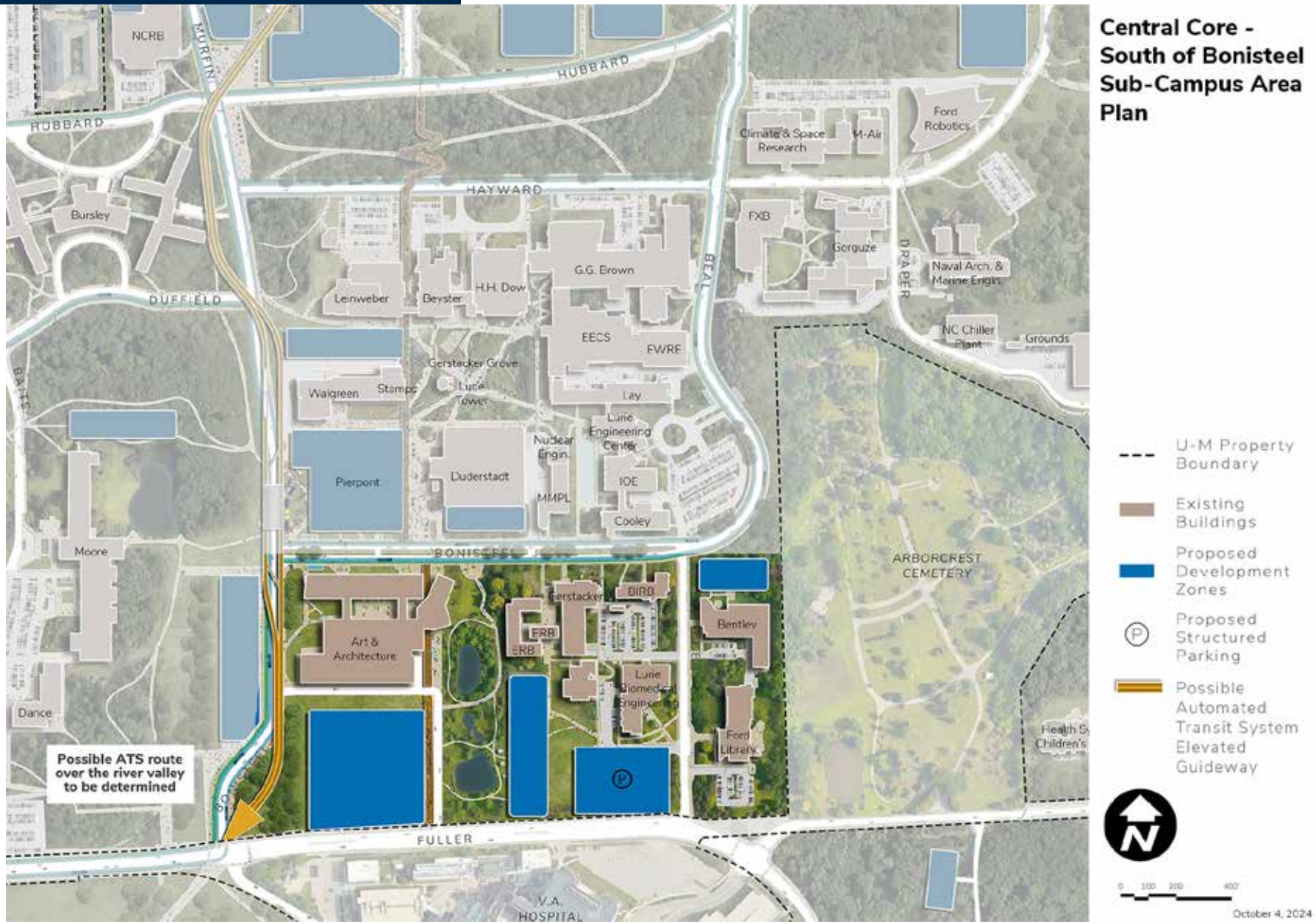
Surrounded by informal pathways, many with accessibility challenges, the area lacks landscape structure. Proposed development south of Art and Architecture and west of the Engineering Research Buildings would establish a formal structure and landscape expression along Fuller Road. Improved accessible pedestrian paths, lighting, and signage are proposed in this area. There is an opportunity to add public art strategically integrated along the pathways and greenspaces surrounding the stormwater ponds, adding interest and enhancing a sense of place. The pathways here should connect to new bus stops proposed along Fuller Road.

Mobility and Connectivity

Proposed BRT services along Bonisteel provide opportunities to improve the streetscape and enhance the landscape along this important east-west boulevard. The integration of parking structures south of Art and Architecture and the Engineering Research Buildings improves accessibility and helps redefine the Fuller Street edge. Universal design principles should guide the future pathway network to ensure accessibility.

The Bonisteel Boulevard gateway to North Campus, defined today by a pair of two-lane swooping roadways that transition uphill from Fuller Road, is reconfigured and realigned in the plan. Reconfiguration of Bonisteel in this area opens up land for additional development to the west of the road. Shared-use paths are proposed on the east and west sides of the reconfigured Bonisteel Boulevard from Fuller Road to Murfin Avenue.

Figure 106. 2050 South of Bonisteel Sub-Campus Area Plan



Further enhancement and reinforcement of the north-south, non-motorized spine running adjacent to Art and Architecture is recommended, as it is a part of the larger central circulation spine extending between Fuller and Plymouth. Shared use paths or bicycle lanes should be considered along other roadways.

Sustainability and Infrastructure

Geo-exchange and ground source heat pumps should be considered under all future development, as well as consideration for emerging technology such as pyramidal boring where larger open space for geo-exchange and ground source heat pumps is not available. The area should be planned to integrate into future looped geo-exchange and ground source heat pump systems on North Campus. Solar PV should be integrated into new development and considered on existing buildings where feasible to replace the solar PV array displaced by proposed development. Capacity upgrades should also be considered to the stormwater management ponds to compensate for proposed development, with an eye toward enhancing biodiversity in planted areas.

Figure 107. North Campus is recognized for design collaboration

Figure 108. Preliminary Illustration: Possible North Campus 2050 redevelopment looking north

South Core

Functional Use

This wooded area is the home to major facilities of the School of Music, Theatre & Dance including the E.V. Moore Building, Brehm Pavilion, and the Dance Building. There is a large commuter parking lot on the north side of Fuller Road.

Development Opportunities

The area west of realigned Murfin Avenue provides a significant opportunity for new programmatic uses along Bonisteel Boulevard and potentially along Fuller Road beyond 25 years. These sites offer opportunities to establish greater density, walkability, and an activity node near Fuller Road and create a new, vibrant gateway to North Campus. The site along Bonisteel requires strong architectural expression given it will help define the major gateway entry to North Campus. Development on Bonisteel also requires consideration of the steep topography and the associated accessibility challenges. With the potential of locating development on the current west segment of Bonisteel, changes to pedestrian, bicycle, and vehicular patterns in this area require consideration of the topography and accessibility goals.

There is an opportunity to carefully locate an expansion of the Moore Building to its north, allowing for more programmatic space while also drawing the facility closer to Murfin and the performing arts facilities established near the Gerstacker Grove.

Landscape and Public Realm

Landscape in the area west of Murfin is defined by the pond located in the clearing east of the E.V. Moore Building. Designed by Eero Saarinen to mimic the shape of a grand piano in the plan, the pond provides a tranquil setting surrounded by a system of pathways through the surrounding wooded areas. Views through and into this setting, including those of the historic east facade of the Moore Building, should be preserved and enhanced. Improvements to the pathway network are suggested, especially in areas where accessibility challenges exist. Stronger linkages are also proposed to connect the area to a possible new ATS and BRT station at Pierpont.

Mobility and Connectivity

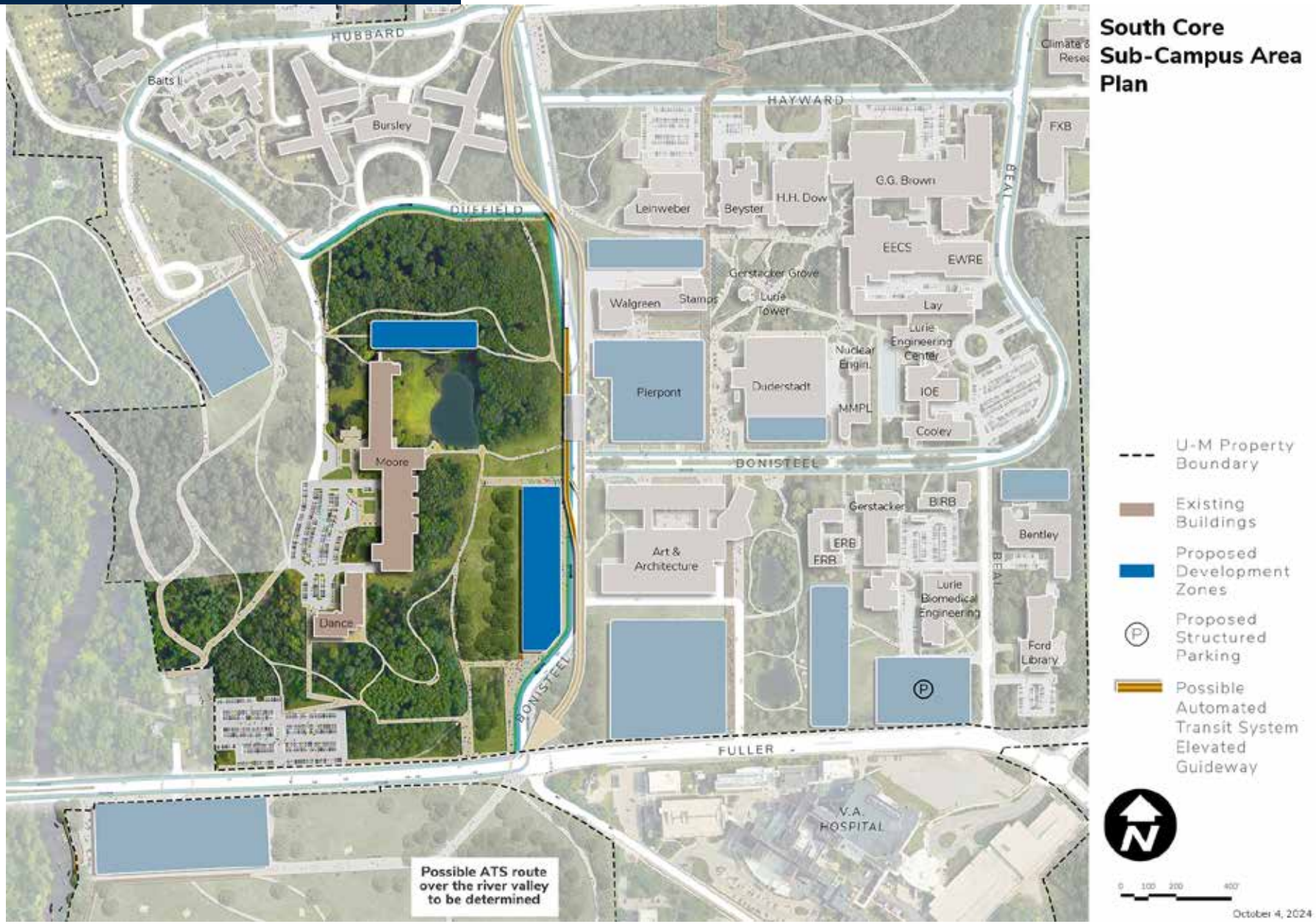
The existing pathways in the area are maintained and extended to connect with existing and proposed trails in the surrounding wooded areas, notably those located to the west of the E.V. Moore Building. An opportunity exists to connect pedestrians moving from Fuller Road and the large existing parking lot up the slope to the Dance Building, offering another connection into North Campus from the Mitchell Field area. Given the topography, careful consideration is needed to ensure universal access.

Sustainability and Infrastructure

Future development provides opportunities to concurrently integrate geo-exchange and ground source heat pumps, solar PV, stormwater management systems, and forestry management best practices.

Figure 109. Impressions by Jun Kaneko

Figure 110. 2050 South Core Sub-Campus Area Plan



Innovation District

Functional Use

The proposed area for the Innovation District is located in the north-central section of North Campus. It is bounded by Plymouth Avenue, Murfin Avenue, Hubbard Street, and Millers Creek, east of the North Campus Research Complex. Existing uses in the Innovation District include the 28 buildings and 2.1 million square feet of the North Campus Research Complex (NCRC), which includes research buildings, utility plants, and a solar PV array along Plymouth Road, as well as a parking structure and several large surface parking lots. The area also includes low-density housing areas known today as the Northwood Apartments I, II, III, and IV. Other uses include housing community centers, the North Campus Children's Center, and the City of Ann Arbor's Fire Station 5. The area is also characterized by areas of quality woodlots and mature trees drifting over gentle changes in topography throughout the existing low-density Northwood housing areas.

Campus Plan 2050 envisions a sustainable, carbon-neutral Innovation District that embodies U-M's core values and ambitions, with a strong focus on research and innovation. This district is planned as a multifaceted space encompassing academic, research, residential, mixed-use, recreational, amenity, and commercial and retail areas. The objective is to develop a densely populated, walkable, and lively district that bolsters the research activities at NCRC and facilitates other U-M research and partnership endeavors.

Development Opportunities

The proposed framework plan for the Innovation District introduces a grid pattern of streets to structure the public realm and guide future development. This framework designates proposed development parcels to support a variety of land uses, including academic, research, innovation, partnership, residential, and amenities. The aim is to offer a flexible structure that can adapt to U-M's evolving needs and priorities over time.

In creating the Innovation District, the framework plan is further shaped by the following aspirational ideas identified during the planning process:

» Inclusive Spaces: The Innovation District is envisioned as a welcoming, inclusive, and universally accessible environment designed to engage the broader campus community. New spaces that support U-M's focus on democracy, civic engagement, and global involvement are recommended throughout the Innovation District.

» Accessible, Pedestrian, Bicycle, and Transit Oriented: The Innovation District is envisioned as a universally accessible environment with well-designed pathways, bicycle routes, and integrated transit station. Major destination facilities and amenities are clustered around the possible ATS and BRT transit station to enhance the user experience.

» Public Realm: A vibrant and dynamic public realm is envisioned throughout the Innovation District, featuring transparent and active ground floor uses, the integration of art and cultural facilities, and a range of amenities for a diverse population of users, including residents.

» Aesthetic Expression: Facilities in the Innovation District should be inspirational and creative. New structural systems such as mass timber should be considered along with new facade materials that improve building envelope performance. Emphasis should be placed on innovation in architectural expression, materiality, and experience showcasing U-M's research. The overall aesthetic should be contemporary and reflective of the specific programs proposed for the buildings.

» Density: A higher density of development should be encouraged in the Innovation District with taller buildings along Plymouth Road in response to the increase in density proposed by the City of Ann Arbor. Higher density is needed to support the range of amenities and services envisioned for a walkable, transit-oriented environment. A range of uses within buildings should be promoted with residential facilities stacked above as feasible. Lower-level or below-grade structured parking should be considered in strategic locations with other uses stacked above.

Figure 111. 2050 Innovation District Sub-Campus Area Plan

Figure 112. Preliminary Illustration: Possible North Campus Innovation District

- Climate Response: Buildings in the Innovation District should be carbon neutral, high-performance structures that help meet U-M's climate action goals and objectives. Solar PV, geo-exchange bores, and ground source heat pumps should be integrated in the buildings and the landscapes. Buildings and open spaces should consider Michigan's climate with south facing and buffered outdoor spaces.

- Open Space and Landscape: The open space and landscape structure of the Innovation District should be responsive to existing natural features. It should integrate new open spaces to provide greenery, access to and integration of nature, and opportunities for social gathering and recreation. The landscape should be aesthetically pleasing and functional, integrating geo-exchange and ground source heat pumps and stormwater management infrastructure. Accessible pathways and bicycle lanes should be integrated for connectivity and in support of the health and well-being goals of U-M. Existing high-quality trees and wooded areas are shown as preserved, managed, and united in a cohesive central green amenity open space extending from Hubbard Street to and along the Plymouth Road edge, with circulation pathways strategically integrated connecting major destinations and following existing topography and open space.

- Integrated Arts, Humanities, and Technology: The Innovation District is envisioned to integrate new opportunities for the arts and creative expression. Galleries, performance areas, and public art should be integrated at key destinations, at transit stations, and in public spaces. Technology should be integrated to manage the environment and to support the academic and research activities of U-M.

In addition to the aspirations outlined above, specific development opportunities are identified in the plan around the existing North Campus Research Complex (NCRC). The east area of NCRC is transformed to establish an Innovation and Research Hub. The site's proximity to an array of academic and research programs on North Campus represents a tremendous opportunity to expand U-M's innovation ecosystem. If completed as envisioned, the Hub aims to catalyze research commercialization, entrepreneurship, and external partnerships, serving the people of Michigan and the global community. Located in a grouping of buildings proposed for the southeast corner of the Huron Parkway and Plymouth Road intersection, the Hub is envisioned as a key element in the broader Innovation District intended to foster interdisciplinary and collaborative research, and increase density, vitality, and activity in the North Campus area. Existing low-rise buildings are shown for possible redevelopment to further support research partnerships and strengthen collegiality.

The Research and Innovation Hub will offer space for public-private partnerships, startup and accelerator functions, and a variety of partner tenants. Programs range across U-M strengths in health sciences, therapeutic discovery, bioengineering, mobility, and energy technologies and more.

Campus Plan 2050 calls for continued investment and utilization of the NCRC west of Huron Parkway in support of the research mission. Future planning and renovation studies for the existing NCRC complex of buildings should take into consideration opportunities for improving east-west connectivity through the interior circulation routes of the existing buildings to improve more intuitive wayfinding. A new entrance on the west is recommended to connect with the research facilities and housing districts proposed in the Northwood area. Improvements to the southern entrance are also needed. The existing west ring road is shown as being realigned closer to the existing NCRC buildings, creating a stronger north-south circulation spine with development lining its west edges and connecting with the Core Areas and Hayward Street to the south.

Campus Plan 2050 enhances NCRC by establishing a new gateway defined by a hotel and conference center and possible ATS and BRT station at the southwest corner of Huron Parkway and Plymouth Road. The hotel and conference center would bolster U-M's collaboration and partnership goals, while enhancing the vibrancy and amenities of the Innovation District, which encompasses the NCRC and land in the Northwood area to the west. The possible ATS station and services link the NCRC and the hotel/conference center to various academic and research activities across North Campus, the Medical Center Campus, and Central Campus.

Landscape and Public Realm

The proposed location of the Innovation District is characterized by the significant wooded areas and trees of Northwood. The framework plan aims to integrate these natural features as much as possible, including the Hubbard/Hayward wooded area between the Innovation District and the Central Core Area. The proposed landscape and public realm of the Innovation District are shaped by the grid pattern of the framework plan and include the following:

» Diagonal Spine: A diagonal corridor following the possible ATS alignment creates a vibrant route through the Innovation District featuring ground-floor amenities and support services, well-designed accessible pathways, bicycle lanes, and landscape areas with integrated stormwater management. It will also include geo-exchange and ground source heat pump systems, along with a utility corridor.

» East-West Spine: An accessible pathway will connect a redesigned campus gateway at the southeast corner of Murfin Avenue and Plymouth Road to a possible ATS transit station and extend eastward to the NCRC. The pathway is planned to curve northeast, linking to an existing west entrance of the NCRC. Designed as a landscape corridor, it will feature pathways, bicycle lanes, and integrated stormwater infrastructure. Additionally, it will serve as a corridor for geo-exchange and ground source heat pump systems, as well as other utilities.

» Open Spaces: Several major open spaces define the land use pattern, each designed to enhance the campus's vibrancy and amenities. These spaces integrate geo-exchange and ground source heat pumps, as well as stormwater management features, contributing to the functionality of the Innovation District. These spaces include:

- A north-south open space serves as a gateway to the Innovation District from the established academic core to the south. This area functions as the central greenspace for the smaller district surrounding the possible ATS station.
- Greenspaces next to new developments on the west side of the NCRC will serve as amenities while also accommodating geo-exchange and ground source heat pumps, as well as stormwater management areas.

» Wooded Corridor: The trees along the ridgeline running diagonally from Hubbard Street to Plymouth Road are preserved and consolidated in the plan. This strategy aims to connect the wooded area between Hubbard Street and Hayward Street with the wooded areas to the south and Leslie Woods to the north of Plymouth Road.

- NCRC: As a former corporate campus, the NCRC does not have the typical “collegiate-like” open space layout. The internal courtyards between buildings offer visual connections to nature and small outdoor seating areas. The development of the hotel and conference facility, along with the possible elevated ATS guideway and station, offers an opportunity to create a new gateway landscape experience. Redevelopment will increase density, improve vibrancy and walkability, and create positive emphasis on the civic realm.

Figure 113. Preliminary Illustration: Possible North Campus 2050 Innovation District looking northeast

Landscape Development Opportunities

Within development parcels, small courtyards or open spaces provide greenery and access to nature for building occupants. Recommended for large academic, research, and housing buildings, these spaces should support small gatherings with a mix of green and hardscapes. Geo-exchange and ground source heat pumps, along with stormwater management infrastructure may be included. Courtyards should feature public art, event areas, amenities, and connections for utilities.

Landscape Corridors and Circulation

Major pathways, streetscapes, and circulation routes shape the open space and landscape character of the Innovation District. Defined by adjacent architecture, these routes serve as essential circulation and activity corridors. They should prioritize accessibility, pedestrian movement, and emergency and service access. Paving surfaces must be both attractive and durable to accommodate emergency access.

A blend of landscape and hardscape is recommended, considering access to utility easements and integrating stormwater management and geo-exchange and ground source heat pump infrastructure. Lighting, banners, signage, and wayfinding elements should be seamlessly incorporated, along with benches and other site furnishings that do not obstruct flow. Seating should cater to those with mobility impairments.

North-south connections should integrate enhanced corridors from the Central Core Area, including the circulation spine from Fuller Road through Gerstacker Grove, the Hubbard-Hayward woodlot, Beal Avenue, a realigned Hayward Street, and areas near the possible ATS station up to Plymouth Road.

In residential areas, small community gardens are proposed to support social engagement, health, and well-being at U-M. To minimize carbon footprint, traditional in-ground gardening is encouraged over raised beds or greenhouses. These gardens aim to allow campus residents to grow their own food and foster social interaction. Large-scale food production for the broader campus is not encouraged due to its costs, carbon emissions, labor requirements, and land availability.

Mobility and Connectivity

The framework plan for the Innovation District prioritizes accessibility and promotes pedestrian, bicycle, and transit mobility over single-occupancy vehicles. The proposed grid layout seamlessly integrates these modes of transport across the district, providing a range of flexible mobility options for users. Interior areas are dedicated to human mobility, featuring key corridors such as the diagonal, north-south, and east-west spines, as well as pathways within each grid block.

The framework plan incorporates the possible ATS guideway and two stations: the Innovation District Transit Station (IDTS) and the NCRC Transit Station (NCRCTS). Significant destinations and public art and amenities are planned around each station; for example, the NCRCTS is situated next to the proposed hotel and conference center at the NCRC.

The grid layout is shaped by a series of "complete" streets, designed to accommodate accessible pathways, bicycle lanes, and proposed BRT services, while limiting vehicular movement to the grid's street pattern. Parking structures, including potential underground or lower-level parking, are integrated into future development sites, with a focus on peripheral locations along Plymouth Road.

Pathway and bicycle connections are extended to adjacent sub-campus areas, including the West Area and the Central Core. New accessible routes through the Hayward-Hubbard woodlands facilitate connections to the Central Core, with a major route leading to the Leinweber Building at accessible slopes.

The framework plan also includes enhancements along Plymouth Road to support the city's Transit Corridor designation, potentially incorporating a dedicated bus lane. Bus routing and bicycle facilities are suggested along Hubbard Street. McIntyre Street will be realigned to provide an alternative north-south road intersecting Plymouth Road.

Potential modifications to Huron Parkway could accommodate bus-only lanes, as well as a new crosswalk south of the Plymouth Road intersection to link the hotel and conference center with the proposed Research and Innovation Hub. An enhanced west entrance is proposed to connect with the Innovation District to the west.

Sustainability and Infrastructure

Geo-exchange bores and ground source heat pumps are proposed across major open spaces in the Innovation District, along the possible ATS and landscape corridors, and within individual development sites. These zones should be interconnected when feasible, potentially linking to the Core Area, to create efficient and comprehensive systems that optimize system capacity.

New stormwater management features are also proposed throughout the Innovation District, including within each open space. These should be integrated with the geo-exchange and ground source heat pump systems. Stormwater elements should be designed as visual amenities wherever possible, utilizing the area's northward-sloping topography toward Plymouth Road to manage runoff from redevelopment. The eastern portion of the NCRC, near Millers Creek, should receive particular attention for stormwater management.

Utility corridors will be defined by the proposed grid layout, including the diagonal and east-west spines. Solar PV installation is recommended for all future construction, especially on parking structures, to support U-M's climate action goals. Additionally, promoting biodiversity should be a key consideration in planning new and renovated greenspaces.

East Core Area

Functional Use

The East Core Area is located to the south of the Innovation District. It is bounded by Hubbard Street, the walking paths connecting Hayward Street to Hubbard Street, Beal Avenue extending northward, parking lot NC-19, and Huron Parkway. It encompasses several academic and research facilities and surface parking lots. It functions as an extension of the academic and research heart of North Campus. The units represented within the East Core Area include Michigan Engineering and surface parking. The DTE APEX Electrical Substation, which provides dedicated high-voltage services to all of North Campus, is located within the East Core Area.

Development Opportunities

A long-term development zone is proposed in the East Core Area linking research activity from the Central Core Area (such as at Ford Motor Company Robotics Building) with future new research to the north in the proposed Innovation District. The focus for the remaining area is on renovation and renewal of existing facilities.

Landscape and Public Realm

The most notable yet hidden landscape feature in the East Core Area is the Wave Field, designed by Maya Lin. Completed in 1995, the Wave Field is a landform sculpture inspired by a naturally occurring oceanic wave phenomenon. The surrounding woodlands define the East Core Area. The framework plan includes reforestation as a way of linking the wooded areas north of Hayward Street with those to the east along Huron Parkway.

Mobility and Connectivity

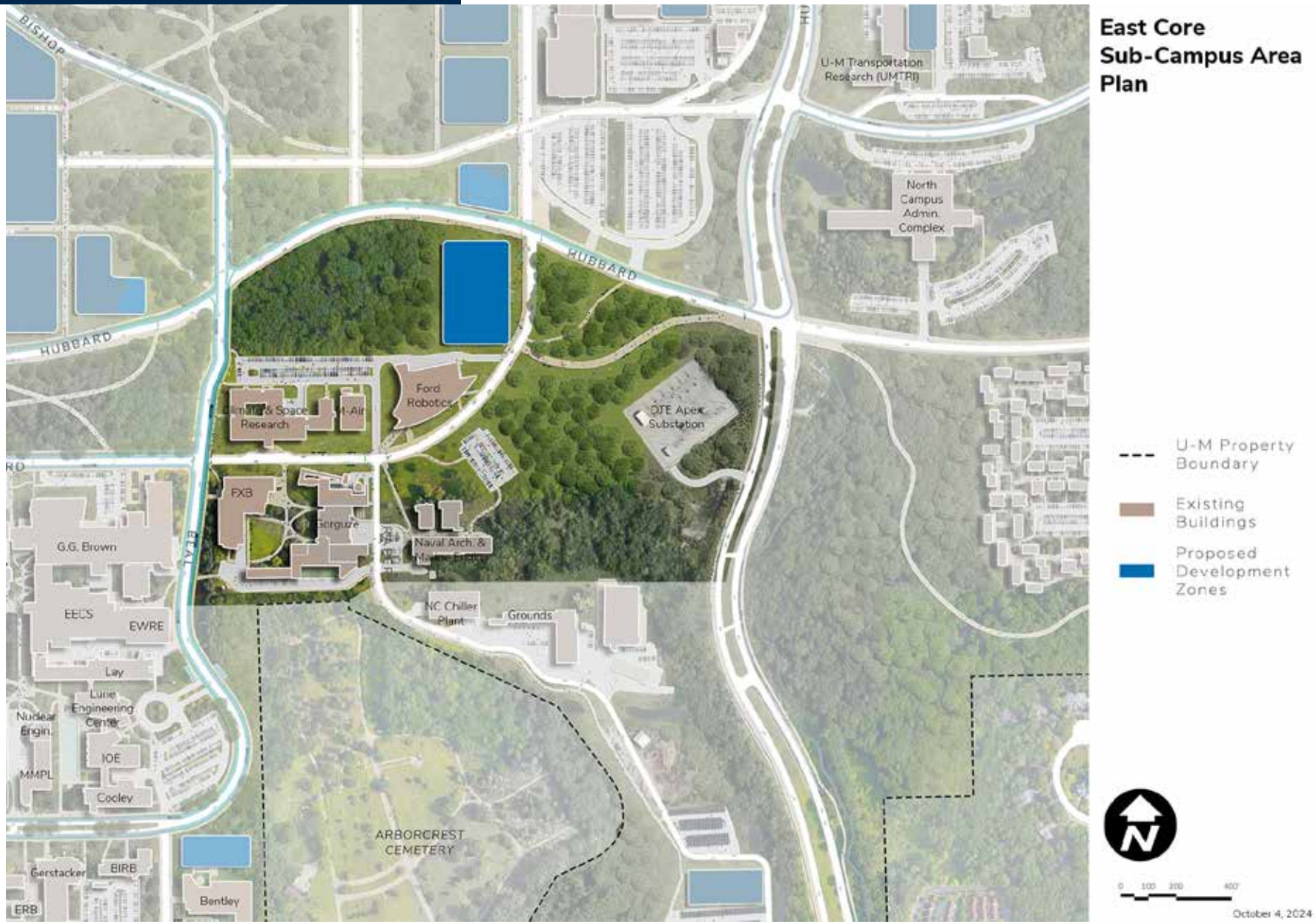
The East Core Area is connected to the adjacent Central Core Area and the Innovation District by means of new pathways proposed in the Hayward-Hubbard wooded areas with the goal of linking the academic and research activities with those of surrounding sub-campus areas. The existing Hayward-Hubbard intersection is reconfigured in the plan to align Hayward in a northerly direction, continuing as the new circulation road adjacent to the west side of NCRC. BRT lanes are proposed along existing and extended Beal Avenue in the East Core Area providing links to the proposed Pierpont Transit Station.

Sustainability and Infrastructure

Reforestation in the East Core Area promotes ecosystem connectivity with the Hayward-Hubbard wooded area. To that end, reforestation is proposed over the long term on existing surface parking lot NC-53 and portions of NC-46. The intended outcome is better woodlot connectivity between the East Core Area and the Innovation District-Northwood Area. Along with reforestation, additional stormwater management infrastructure should be considered as appropriate.

Major infrastructure proposed for the East Core Area includes a utility corridor extending from Draper Road westward toward the Central Core (south of the Engineering Programs Building). The purpose of the corridor is to connect the geo-exchange bores and ground source heat pump fields proposed under the existing surface parking lot at NC51 with the North Campus Chiller Plant and beyond the Central Core.

Figure 114. 2050 East Core Sub-Campus Area Plan



Draper Road Area

Functional Use

The Draper Road Area is located south of the East Core Area. It is defined by Glazier Way on the south, Huron Parkway on the east, and the edge of the privately owned Arborcrest Cemetery to the west. Currently, it is the location of service-related facilities including the North Campus Chiller Plant, several grounds-related facilities, a systems support facility, stormwater detention, a childcare center, and commuter parking. Draper Road connects Hayward Street to Glazier Way; it includes an unpaved section and currently is not open to the public. The units represented within the Draper Road Area include U-M Health and several support functions including surface parking.

Development Opportunities

One new development zone is identified on a large existing surface parking lot, providing an opportunity to add support services as needed.

Landscape and Public Realm

The landscape in this area is defined by natural buffers along both the cemetery to the west and Huron Parkway to the east, the large commuter parking lot, and storage areas supporting Grounds operations. Beyond the childcare center and commuter parking lot, the area is not intended for public use or access.

Mobility and Connectivity

The existing large parking lot functions as a remote commuter lot served by U-M transit. Bus circulation and service vehicle access to the area should be maintained while carefully considering how to optimally separate these uses from the childcare center operations.

Sustainability and Infrastructure

The Draper Road Area is reserved for operations and support services serving campuswide needs. One development site is shown to accommodate future needs. The NC 51 parking lot is designated for geo-exchange bores, ground source heat pumps, and potential solar PV installations to serve the energy needs of the Central Core. Distribution lines will be situated along Draper Road, integrating it into the campus utility and infrastructure corridor system. Future development should take into account the stormwater impacts on the Millers Creek drainage way, which runs adjacent to the site along Huron Parkway.

Figure 115. 2050 Draper Road
Sub-Campus Area Plan

Northeast Area

Functional Use

Located at the northeast corner of North Campus, the Northeast Area is generally defined by Plymouth Road on the north, Green Road on the east, Millers Creek on the west, and Baxter Road on the south. It houses research, academic, and support facilities. The units within the Northeast Area include Mcity; U-M Transportation Research Institute (UMTRI); Stamps School of Art and Design; Michigan Engineering; Student Life; and several major support functions.

Development Opportunities

The plan identifies this area largely as a proposed recreation and geo-exchange and ground source heat pump complex including a new parking structure, and possible ATS station and maintenance facility. The proposed development responds to broader campus needs and objectives.

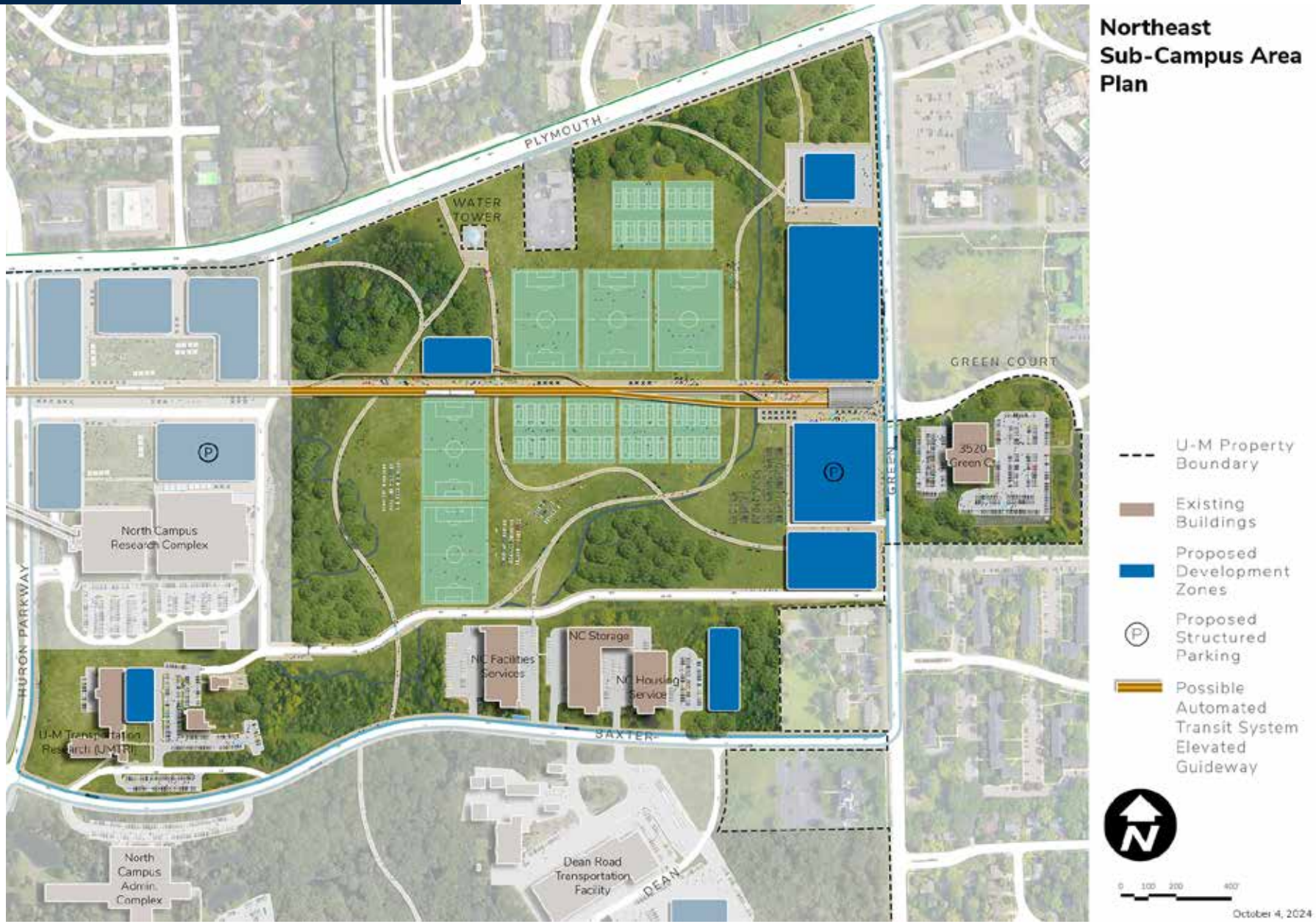
A new complex is proposed for intramural and recreation activities designed to support health, well-being, inclusion, and engagement objectives. The complex addresses the relocation of fields from Mitchell Field as well as anticipated student needs including adaptive sports. The intent is to create a destination fitness and recreation complex enabled by a possible ATS and BRT system. A major geo-exchange bore and ground source heat pump area beneath the fields and facilities of the new complex will supply the energy required for the complex itself and larger areas of NCRC and beyond in North Campus.

The location of a deck on Green Road positions parking where traffic can be “intercepted” before entering the campus. Peripheral parking connected to major destinations such as the Medical Center Campus serves the needs of the commuting population in an efficient and convenient manner. A new fire station near the southwest corner of Plymouth Road and Green Road is proposed to replace a facility currently located in the Northwood area.

Landscape and Public Realm

The eastern reaches of Millers Creek organize the land use and circulation patterns of the Northeast Area. Pathways and bicycle routes along the creek system and in the woods connect the area to the NCRC and areas south of Hubbard Street. The proposed recreation fields, support facilities, and pathway and trail network in combination provide the opportunity to create a major new campuswide amenity in support of the health and well-being goals of the university. Views providing visual connectivity between the recreation fields and development along Green Road and the Innovation District to the west should be preserved and enhanced. These trails and other opportunities for public access to nature contribute to the environmental justice goals of the university.

Figure 116. 2050 Northeast Sub-Campus Area Plan



Mobility and Connectivity

The Northeast Area is connected to the Innovation District, Pierpont Commons, the Medical Center Campus, and Central Campus by means of the elevated possible ATS system, making it an accessible location in support of campuswide health and well-being initiatives. The possible ATS station is integrated with a proposed parking deck to facilitate use by those working on the North, Medical Center, and Central campuses. The possible ATS system is supplemented by proposed BRT services linking the area to the remainder of the Ann Arbor Campus. The complex is also connected by the extensive pathway and trail networks with connections leading to the NCRC, Innovation District, and Central Core Areas. A service and storage facility for the possible ATS system is envisioned as part of the area.

A new internal support road is shown extending from the U-M Transportation Research Institute on the west to Green Road on the east, intended to support U-M service access to adjacent facilities, geo-exchange and ground source heat pumps, and recreation fields.

Baxter Road and Green Road are designated to support bus service extending into North Campus and continuing to East Medical Campus along Plymouth Road, and southwest to link the Medical Center, Central, and Ross Athletic campuses.

Sustainability and Infrastructure

The Northeast Area is critical for the large-scale geo-exchange and ground source heat pump system needed for existing and proposed facilities across North Campus. Installation of the system requires careful site planning relative to existing subsurface conditions near Millers Creek and the construction of the recreation complex. Designating utility corridors that connect the geo-exchange field and ground source heat pump infrastructure westward to the rest of North Campus is crucial for future site planning and implementation strategies. Other opportunities include an integrated stormwater management strategy designed to minimize the impact on Millers Creek. Coordination of the stormwater management strategy and proposed pathway and trail networks are important considerations for future landscape and site design recommendations, especially in the context of optimizing the quality of Millers Creek. Biodiversity should be promoted as areas are redeveloped. Solar PV opportunities include building rooftops as feasible, the parking structure proposed along Green Road, as well as other existing buildings and proposed future development as feasible.

Figure 117. Recreational sports

East Area

Functional Use

The East Area is located south of the Northeast Area. It is bounded by Baxter Road, Huron Parkway, Green Road, and private housing to the south. Facilities include family housing, support, grounds, and administrative uses. The units included within the East Area include Student Life, Michigan Medicine, and other support functions.

Development Opportunities

With minimal planned redevelopment, the East Area focus of the plan will include continued reinvestment in Northwood V housing to support the needs of families with children. This complex is an important housing complex within the Student Life portfolio and should be considered for reinvestment and potential capacity expansion including densification. It is expected that a new facility for Fleet Services will be developed near the Dean Road Transportation Facility and Baxter Road and is expected to accommodate the displacement of facilities in the Kipke Drive Area of the Ross Athletic Campus.

Landscape and Public Realm

Green buffers are maintained between university and adjacent land uses where appropriate, and in support of human health and well-being; democracy, civic, and global engagement; and environmental justice, the introduction of additional food production gardens is recommended within the existing outdoor spaces or on adjacent land near Northwood V housing. Views into the central greenspace of Northwood V should be preserved and enhanced over time. There is the opportunity to introduce additional recreation trails through wooded areas as an additional campus amenity, promoting health and well-being.

Mobility and Connectivity

The relocation of Fleet Services to the Dean Road area supports the overall strategy of co-locating university transit operations and support. Additional trails, sidewalks, and bicycle facilities should be considered, as both well-being and to facilitate non-motorized connections.

Sustainability and Infrastructure

The integration of geo-exchange bores and ground source heat pump fields is proposed in the existing central open space defined by the Stone Road loop and under existing surface parking lots. This should coincide with reinvestment in the Northwood V buildings and their conversion to more energy-efficient systems to take advantage of geo-exchange and ground source heat pump capacity. Stormwater management should be integrated as appropriate as part of the geo-exchange and ground source heat pump installation, and opportunities to continue to improve the quality of Millers Creek throughout this area should be explored.

Figure 118. 2050 East Sub-Campus Area Plan

Mitchell Field Area

Functional Use

Located in the Huron River Valley, the Mitchell Field Area is south of the Central Core Area and is generally defined by the Huron River on the south and west, Fuller Road on the north, and Fuller Court on the east. A railroad divides the area, isolating the wooded undeveloped parcel to the south. Home to recreation fields, support facilities, and parking, the units represented in the Mitchell Field Area are Student Life and surface parking. It is viewed as a significant area within the river valley open space network.

Development Opportunities

The framework plan identifies an opportunity for development along the Fuller Road edge near the river, potentially for housing, and integrated with a new riverfront amenity zone. Proposed integrated parking and ground-floor active uses contribute to the vitality of Fuller Road. No development is proposed for the parcel south of the railroad and north of the river given it is currently landlocked and within a flood zone.

Landscape and Public Realm

The existing recreation fields and parking on Mitchell Field are envisioned to be replaced over time with wooded and naturalized areas for passive recreation by users from both North Campus and the Medical Center Campus via the proposed pedestrian bridge. This planned relocation will provide an opportunity to integrate views of the Huron River Valley into the campus experience,

visually connecting the Arb, the Medical Center Campus, and North Campus.

A proposed pedestrian and bicycle bridge over the Huron River and railway provides opportunities to accentuate views northeast of the Lurie Tower on North Campus and the Huron River.

A proposed riverside terrace near Fuller Road allows for access for river-related recreational purposes, integrated with and supported by adjacent new building development.

Figure 119. Preliminary Illustration: Possible Fuller Road as seen from North Campus

Mobility and Connectivity

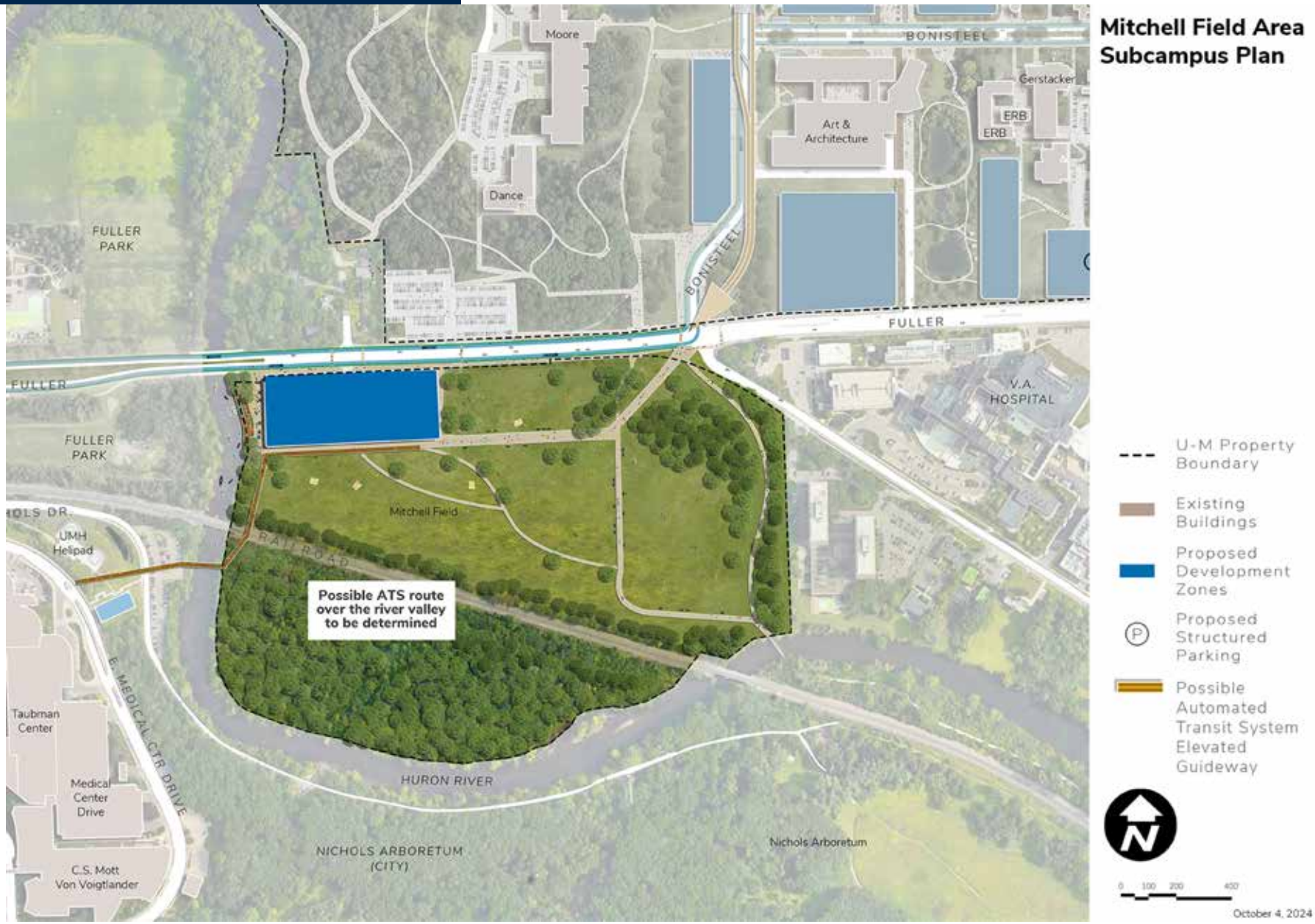
The framework plan highlights the Mitchell Field Area as an important open amenity space and connection between the Medical Center Campus, Central Campus (the Arb), and North Campus. This is achieved by means of a proposed pedestrian and bicycle bridge over the Huron River and railway connecting the Arb and the Medical Center Campus to Mitchell Field. A passive open-space environment south of Fuller Road links to the Arb and the Gallup Park Pathway network by means of an underpass under the railway. Combined with the bridge and underpass links, Mitchell Field serves as the connection between North, Central, and Medical Center campuses.

A proposed BRT route and potential stop on Fuller Road provides connections to North Campus and back to the Medical Center Campus and Central Campus. The possible ATS elevated guideway crosses the Mitchell Field Area but does not include a stop given the likely height of the guideway through this section. The existing shared-use path along Fuller Road is identified for potential rehabilitation and widening, in coordination with planning supporting the Washtenaw Border-to-Border Trail. No specific alignment for possible ATS has been confirmed.

Sustainability and Infrastructure

Mitchell Field includes over 30 acres of land designated for geo-exchange bores and ground source heat pumps to supply the energy needs of proposed development and partial needs for the Medical Center Campus and possibly portions of North Campus. The proposed pedestrian bridge could be used as a potential utility connector to the Medical Center Campus. Integrated solar PV is recommended for all future construction along Fuller Road.

Figure 120. 2050 Mitchell Field Sub-Campus Area Plan



Glazier Way

Functional Use

Located southeast of the Central Core Area, the Glazier Way Area is bounded by Glazier Way on the north, Fuller Road on the south, the VA Hospital to the west, and private residences and a public school to the east. The area is heavily wooded except for a remote support parking location at the center of the site and a sidewalk that runs adjacent to Fuller Road. This area is only used for support functions.

Development Opportunities

The area is designated for limited future operations and support uses.

Landscape and Public Realm

The area is largely wooded today, with public access limited to sidewalks along the perimeter roads. As a support area, it is not envisioned to adjust the landscape for public use.

Mobility and Connectivity

Existing public walks along perimeter roads should be maintained, while limiting any internal connectivity to authorized support functions.

Sustainability and Infrastructure

A potential DTE substation, which would be required for the electrification of campus operations and transportation, could be placed on the site.

Figure 121. 2050 Glazier Way Sub-Campus Area Plan

VI.

Acknowledgments

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