4
Campus Frameworks
FRAMEWORK VISION

Vision 2050 provides a flexible framework that meets the campus live-in needs and provides capacity for long-term development across the East Lansing Campus. Within the historic North Campus, emphasis is placed on infill development and adaptive reuse development at a scale that respects the park-like pedestrian-oriented setting. South of the East Cedar River, infill development along the Farm Lane and Shaw Lane corridors supports a more pedestrian-oriented precinct than what is present today. A spine of open space and public realm connects the precinct southward, towards the intersection of Trowbridge Road and Harrison Road. Immediately adjacent, the plan identifies a 240-acre district of research and partnership spaces on the former site of Spartan Village.

Stretching southeast from the Central Campus, a second spine of open space supports pedestrian mobility between the academic core and an expanded biomedical academic and research district. This emerging district could support both MSU- and affiliate-sponsored research and housing and amenities to provide a more vibrant, mixed-use district.

Notably, the plan protects and expands many agricultural and natural resources supporting learning and discovery on the East Lansing campus. South of Mount Hope Road, the plan minimizes the amount of new development, ensuring that future generations have access to the farmlands that continue to play a pivotal role in MSU’s academic and research mission.

The plan expands Baker Woodlot and preserves woodlands and wetlands elsewhere on campus, most notably along the East Cedar River and throughout the Agricultural Campus.
LAND USE FRAMEWORKS

**Academic Crescent**
The plan intentionally concentrates academic and research facilities along a crescent that connects the former Spartan Village, the intersection of Farm and Shaw, and Southeast Campus. This focused development pattern maximizes programmatic synergies, utilizes the university’s land to its highest and best potential, provides efficient accessibility to these resources, and minimizes costly extensions to supporting infrastructure. Proximity for class change and research collaboration is critical.

**Research Gateways**
In addition to university-sponsored research and academic growth, the plan anticipates sites for partnerships that advance its teaching, research, and outreach mission. These support new gateways to campus at its southeast, along Hagadorn Road, and its southwest, along Harrison Road.

**Campus Life Nodes**
The plan provides a flexible approach to the potential expansion or renewal of existing student housing and student life amenities. It concentrates improvements within or adjacent to MSU’s existing residential neighborhoods, ensuring efficient access to academic resources and amenities that support the development of the whole student. Given the success of the residential neighborhoods, the same intention to support the whole student should be considered within academic districts to promote student health and well-being throughout the day.

**Arts and Culture Corridor**
Creative inquiry and the arts are fundamental to advancing knowledge and developing a vibrant campus community. The plan identifies a corridor that connects the Wharton Center for the Performing Arts north to Kresge Art Center, the Auditorium, and Broad Art Museum. This spine not only unifies the university’s multiple facilities for visual and performing arts but also ties it to the vibrant retail and dining district along Grand River Avenue, thereby stitching the university’s artistic mission with East Lansing’s cultural context.
Vision 2050 provides for up to 27 million GSF of additional programmatic capacity within the East Lansing campus. Of this capacity, approximately 37% supports academic growth, 33% mixed-use, and 12% student housing. The plan supports existing programmatic distribution across campus, with academic and research functions extending along the Farm Lane corridor, southwest towards the intersection of Chestnut Road and Trowbridge Road, and southeast towards the Biomedical Discovery Neighborhood. Interspersed within these corridors are campus life amenities intended to provide a vibrant academic environment, and support for health and well-being.

To the east and west of the academic core, the plan recommends modest infill and redevelopment of existing housing stock as well as campus life hubs to amplify MSU’s successful neighborhoods model. Maintaining a density of students living adjacent to the academic core and adding density within the academic core is intended to reduce the perceived distances between these precincts and encourage students to remain in the academic neighborhoods throughout the day to foster meaningful connections.

Finally, the plan recommends potential partnership opportunity sites within the Southeast Campus and along Harrison Road and the former Spartan Village parcel. These mixed-use districts can flexibly meet various programmatic functions, including affiliated research, housing, retail, and dining.
Many parts of MSU’s campus benefit from an elegant open space network, from the legacy landscapes around East Circle and West Circle Drives, the network of open spaces and pathways that trace the Red Cedar River, and the more intimate gardens across the campus. Vision 2050 amplifies the existing diversity of open space to create a cohesive network of paths, gardens, plazas, and quads that promote non-motorized mobility across campus. Within each precinct, iconic and memorable open spaces provide visual connectivity between buildings and provide opportunities to showcase the university’s groundbreaking learning and discovery within the public realm. A clear hierarchy of labs and pedestrian paths, separated from the vehicular network, intuitively links the campus’s precincts together. Along the primary pedestrian corridors, more intimate parks and plazas adjacent to key buildings support outdoor gatherings and provide the campus community with places to find solace and connect with the natural environment.

While the primary pedestrian network largely works separately from the campus’s vehicular network, the campus’s streets and roads are equally important components of the campus identity. As a counterweight to the picturesque and park-like North Campus, the plan positions new facilities within three precincts south of the Red Cedar River to strategically reinforce street edges, creating precincts that feel slightly more urban and vibrant. The plan promotes impromptu connections and cross-programmatic connectivity through consistent streetscapes, modest increases in density, and the relocation of parking away from the heart of each precinct.
Interconnected Natural Areas

Vision 2050 establishes a framework that connects the East Lansing campus’s diversity of natural areas together into a more cohesive system of ecological resources. Strategic investments in the streetscape and public realm improve connections between major resources such as the Red Cedar River corridor and Baker Woodlot. Precinct-level stormwater management facilities ameliorate the impacts of major rain events on downstream areas of campus and the Red Cedar and Grand River watersheds. Corridors of native prairie grasses stitch together the Southern Agricultural Campus, introducing additional biodiversity within areas that could otherwise be a monoculture of crop species.
Holistic Water Management

Vision 2050 provides campus- and precinct-level recommendations for stormwater management strategies. The volume requirements and resultant footprint are governed by either the water quality volume or the retention volume. To determine which estimated footprint to use for this level of planning, the project team evaluated the key drivers. An increase in impervious coverage contributes to retention and water quality requirements. Underlying soil conditions determine the infiltrative capacity of the soil and affect the required footprint to achieve the retention volume. The size relative to the location in the outfall basin contributes to the detention requirements.

Using these filters, the team developed a stormwater classification ranking to estimate the complexity of the future stormwater management design. Individual building projects are evaluated by the university engineer and a technical working group to assess its ability to meet current stormwater management regulations onsite. If a project cannot meet its requirements onsite, due to existing development constraints or other unique project attributes, then the university has the option of utilizing a subwatershed facility in another location on campus per Environment Great Lakes and Energy agreements.
The plan recommends implementing three thematic landscape strategies across MSU’s campus to advance the public realm framework.

**Expand the Academic Experience**

The landscape should act as an extension of the learning and discovery happening within the campus’s buildings. Study terraces and outdoor classrooms next to major academic buildings encourage outdoor learning during the fall, spring, and summer seasons. Experimental plots and showcase spaces make visible groundbreaking student and faculty research and, by doing so, foster cross-disciplinary relationships. Outdoor recreation facilities and landscapes for wandering and discovery encourage the campus population to build healthy physical and mental wellbeing habits, which is critical to academic success and the wellbeing of the whole person.

Example locations of Open Spaces extending the learning experience.
Vision 2050: An Integrated Facilities and Land Use Plan for Michigan State University

All-season Open Spaces

Vision 2050 elevates the four distinct seasons from which MSU’s campus benefits. Vegetation and maintenance practices should highlight visual interest throughout the year, including during the winter season, and connect the campus back to the woodlands, prairies, and wetlands native to central Michigan. Careful programming of major outdoor spaces allows the campus community to unite around cultural celebrations and seasonal spectacles. Indoor and outdoor threshold spaces connect the campus’s natural environment to indoor programmatic spaces.

Example locations of All-season Open Spaces.
The scale of Michigan State University’s campus means it already enjoys many different types of outdoor spaces, including formal quads, ornamental gardens, and riparian corridors. Vision 2050 expands on the existing catalog of open spaces and heightens awareness of their differences. Along the Red Cedar River and elsewhere on campus, it recommends the introduction of landscapes that can accommodate flooding and ameliorate downstream impacts. The plan recommends expanding the campus’s existing woodlands and introducing pollinator gardens to appeal to the senses, support ecological biodiversity, and provide counterpoints to more formal campus landscapes.

Example locations of diverse landscapes.
MOBILITY SYSTEMS

Vision 2050 recommends a campus-wide mobility network that elevates and prioritizes pedestrian movement while supporting vehicular mobility. Much of today’s campus was planned and built immediately following World War II, with development patterns and mobility networks catering to automobile-centered mobility. As the University continues to grow and add density, the plan recommends the replacement of surface lots on high-value parcels, such as at the intersection of Farm Lane and Shaw Lane, with nearby structured parking. Additionally, it recommends prioritizing a pedestrian and bicycle network that more intuitively connects discreet precincts. Finally, it recommends future coordination between the university and CATA to better integrate transit across campus and to its surroundings with the goal of reducing the number of private automobile trips.
Street Typology

The plan identifies a clear hierarchy of street typologies to address different service levels across the campus. Campus connectors support vehicular circulation between the campus and its periphery as well as between each of the campus’s major precincts; with the goal of efficiently bringing vehicles to major parking locations. Within each precinct, interior routes support building-level service and accessibility but are not intended for through-traffic. Finally, within the historic campus core and portions of Central Campus, a number of roads are designated for limited vehicular access or as historic in nature; these routes should prioritize non-motorized mobility.

Parking Strategy

The plan recommends several strategic changes to the campus parking strategy. Centrally-located, strategic areas presently used for surface parking should be reclaimed to support uses that advance the university’s academic mission and support community life. Parking structures may be used to serve areas within denser areas of campus; larger surface parking areas may occur along the campus periphery or in areas less densely programmed. A more frequent, reliable shuttle service serving peripheral parking areas and connecting to major transit nodes on the campus interior would help to alleviate the demand for parking within the campus core. Smaller surface parking areas would remain within the campus core to meet accessibility and building servicing demands.
Bicycle and Micro-mobility Network

Bicycles (and to a lesser degree scooters) are already a popular way to get around campus. Bike racks and other facilities, including the bike lanes along the Red Cedar River, are well utilized. The size of the MSU campus is ideal for bikes and scooters, and improvements can be an important strategy for reducing parking demand. While the MSU Bike Center currently provides rentals, a more robust shared bicycle network on and near campus is needed, which could be managed by a third-party operator.

Investment in additional bike lanes and secure bike parking would attract new users by implementing new shared bike network on and near campus, and adding more bike lanes and secure bicycle parking.
With up to 28 million GSF of capacity for additional development, the plan provides a flexible framework for development potential on the East Lansing campus. While many parts of the plan are adaptable in terms of timing and programmatic specificity, it also accommodates capital projects currently in planning or anticipated within the next twenty years.

In examining the historic growth rate of the campus, MSU has seen a 50-year average GSF per year of approximately 182,000 gross square feet. While this number has varied slightly decade by decade, there is remarkable consistency in campus growth rates over time. Based on the 50-year average growth rate, MSU might expect to develop 2.5 to 4 million gross square feet over the next twenty years. With over 28 million in net new GSF for additional development, this suggests that the plan can accommodate more than sufficient growth for the next several decades.
Potential Demolition

The plan identifies facilities that may not appropriately serve MSU into the future. These facilities are suggested for potential demolition. This determination is based on a number of factors, including the cost to renovate as well as a higher and better use for the land these facilities currently occupy. Final determination should be made on a case-by-case basis relative to programmatic needs, and renovation vs. replacement costs.

Development Capacity

The plan can accommodate approximately 26 MGSF not including the USDA site which we do not currently own. Incremental and measured in nature, the plan recommends approximately 28 million GSF of net new capacity (accounting for both new and demolished facilities) within the East Lansing campus. Of this capacity, just over 51% is targeted within Southwest Campus, which includes landholdings south of Trowbridge Road, west of Farm Lane, and north of Mount Hope Road. This includes the redevelopment of Spartan Village but not the USDA site. An additional 24% of this development capacity is within Southeast Campus, to the east of Farm Lane. Central Campus, between Trowbridge Road and the Red Cedar River, accommodates a further 24% of development capacity. North Campus accommodates only 1% of net new space on campus, within this portion of campus, the plan focuses on replacing existing facilities that have reached the end of their useful lifespan and minimal interventions to expand capacity.
### North Campus

**Development Capacity Table**

<table>
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<th>SITE</th>
<th>EXISTING FOOTPRINT</th>
<th>ELIGIBLE FOOTPRINT</th>
<th>PRIMARY PROGRAM</th>
<th>POTENTIAL CAPACITY (GSF)</th>
<th>ASSIGNED DEMOLITION (ASF)</th>
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### Central Campus

- **Development Capacity Table**
- **Student Housing**
- **Student Housing + Hotel + Parking**
- **Mixed-Use + Parking**
- **Academic + Parking**
- **Campus Life + Athletics**
- **Athletics**
- **Parking**
- **Fee Hall Replacement**
- **Conrad Hall Removal**
- **IPF Replacement**
- **Academic Building on Parking lot 56 & Water Pump Station (in design)**
- **Plant and Environmental Science Building (in design)**
- **Stadium Tower on Central Services Demolition**
- **Vet Med Expansion and Partial Demolition**
- **Multi-cultural Center (under construction)**
- **Facility for Rare Isotope Beams Expansion**
- **School of Packaging Addition Phase II**
- **Landscape Services Replacement**
- **Bessey Hall Partial Replacement**
- **Giltner Hall Replacement**
- **Geography and Baker**
- **IM East Expansion**
- **Oyer Demolition**

### Natural Language Notes

- Potential buildings shown in mass model have height articulations, that vary in response to urban design conditions.
- Mechanical Space height and Area not accounted for.
- Structured parking not accounted for in Table. Approximate long-term parking is 45M SF.
- Demolished GSF calculated from MSU Facilities Information Tool (yellow cells), and contrasted with autoCAD base floor footprints and number of floors.
- Student Housing not accounted for in AssignAble SF. An average of 0.65 as a general planning assumption was used to calculate ASF for all program uses.
- Demolition ASF comes from the Space Utilization Tool provided by MSU.
- USDA Site and Glesney Lab areas not included in calculations.
| DEV SITE NAME | DEV SITE AREA (SF) | OLD FOOTPRINT (SF) | AVERAGE FLOORS (SF) | EOS BASEMENT | BASEMENT HAS NEW FOOTPRINT (SF) | DEMOLITION GSF (SF) | COMPLETION GSF (SF) | TOTAL DEVELOPMENT CAPACITY (SF) | PRIMARY PROGRAM | POTENTIAL CAPACITY (ASF)  | ASSESSED DEMOLITION (ASF)  | NEW CAPACITY (ASF)  | PROJECT DESCRIPTION |
|---------------|------------------|-------------------|-------------------|--------------|---------------------------------|-------------------|-------------------|----------------------|-----------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| MSU-17        | 190,700          | 134,000           | 4.0               | 1            | 378,000                         | 14,000            | 364,000           | 168,000              | Academic          | 159,000              | 159,000              | 159,000              | 159,000              | MSU Student Union Building |
| MSU-16        | 195,000          | 138,000           | 4.0               | 1            | 393,000                         | 15,000            | 378,000           | 183,000              | Academic          | 174,000              | 174,000              | 174,000              | 174,000              | MSU Student Union Building |
| MSU-15        | 160,000          | 104,000           | 4.0               | 1            | 264,000                         | 14,000            | 250,000           | 136,000              | Academic          | 127,000              | 127,000              | 127,000              | 127,000              | MSU Student Union Building |
| MSU-14        | 175,000          | 119,000           | 4.0               | 1            | 344,000                         | 16,000            | 328,000           | 168,000              | Academic          | 159,000              | 159,000              | 159,000              | 159,000              | MSU Student Union Building |
| MSU-13        | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-12        | 155,000          | 100,000           | 4.0               | 1            | 255,000                         | 15,000            | 240,000           | 128,000              | Academic          | 119,000              | 119,000              | 119,000              | 119,000              | MSU Student Union Building |
| MSU-11        | 135,000          | 84,000            | 4.0               | 1            | 229,000                         | 14,000            | 215,000           | 118,000              | Academic          | 110,000              | 110,000              | 110,000              | 110,000              | MSU Student Union Building |
| MSU-10        | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-9         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-8         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-7         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-6         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-5         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-4         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-3         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-2         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |
| MSU-1         | 130,000          | 84,000            | 4.0               | 1            | 214,000                         | 14,000            | 200,000           | 104,000              | Academic          | 95,000               | 95,000               | 95,000               | 95,000               | MSU Student Union Building |

**Development Capacity Table (continued)**

**Total Development Capacity**

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<th>TOTAL DEV SITE AREA (SF)</th>
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**Spartan Village Housing Replacement**
- All Housing & Laundry. Utilization projected to end after 2024
- Spartan Community Center Demolition
- RHS Services and University Services
- MSU Tennis Center Replacement
- Chilled Water Plant Expansion
- PV Field Replacement
- PV Field Replacement
- PV Field Replacement
- PV Field Replacement

(continued)
Potential Demolition

The plan identifies facilities that may not appropriately serve MSU into the future. These facilities are suggested for potential demolition. This determination is based on a number of factors, including the cost to renovate as well as a higher and better use for the land these facilities currently occupy. Final determination should be made on a case-by-case basis relative to programmatic needs, and renovation vs. replacement costs.

Development Capacity

The plan can accommodate approximately 26 MGSF not including the USDA site which we do not currently own. Incremental and measured in nature, the plan recommends approximately 28 million GSF of net new capacity (accounting for both new and demolished facilities) within the East Lansing campus. Of this capacity, just over 51% is targeted within Southwest Campus, which includes landholdings south of Trowbridge Road, west of Farm Lane, and north of Mount Hope Road. This includes the redevelopment of Spartan Village but not the USDA site. An additional 24% of this development capacity is within Southeast Campus, to the east of Farm Lane. Central Campus, between Trowbridge Road and the Red Cedar River, accommodates a further 24% of development capacity. North Campus accommodates only 1% of net new space on campus, within this portion of campus, the plan focuses on replacing existing facilities that have reached the end of their useful lifespan and minimal interventions to expand capacity.
Zoning Districts

The design guidelines divide the campus into ten distinct zone typologies. While some of these reflect the campus’ geographic evolution from north to south, others reflect the unique functions within each district and the contingent programmatic and design needs.

Protected Green Spaces

The existing East Lansing campus benefits from a network of both formal and informal green spaces. Some of these, like Peopled’s Park and the Historic North Circle, support a vibrant social life on campus. Others, such as Baker Woodlot and Red Cedar Natural Area, ensure that mature woodlands will remain on campus to support learning and discovery for future generations. And yet others are needed for the university’s formal athletics and recreation programs.

The design guidelines affirm the preservation of the campus’ most important outdoor green spaces and create a formal framework for their tactical expansion, ensuring that future generations of Spartans have access to the range of open spaces that support the campus’ diversity of outdoor programming.