

US EPA ARCHIVE DOCUMENT

GREENING AMERICA'S CAPITALS

Greening the Allegan and Ottawa Parking Lots in the Capitol Complex Lansing, Michigan



GREENING
AMERICA'S
CAPITALS

Lansing, Michigan

Greening America's Capitals is a U.S. Environmental Protection Agency (EPA) program to help state capitals develop an implementable vision of distinctive, environmentally friendly neighborhoods that incorporate innovative green infrastructure strategies. In collaboration with U.S. Department of Housing and Urban Development (HUD) and the U.S. Department of Transportation (DOT) through the Partnership for Sustainable Communities, EPA provides design assistance to help support sustainable communities that protect the environment, economy, and public health and to inspire state leaders to expand this work elsewhere. Greening America's Capitals will help communities consider ways to incorporate sustainable design strategies into their planning and development to create and enhance interesting, distinctive neighborhoods that have multiple social, economic, and environmental benefits.

Lansing, Michigan, was chosen in 2013 as one of four state capital cities to receive this assistance along with Madison, Wisconsin; Montpelier, Vermont; and Olympia, Washington.

More information is available at: www2.epa.gov/smart-growth/greening-americas-capitals.



Cover image courtesy of Parker Rodriguez

ACKNOWLEDGMENTS

FEDERAL PARTNERS

Melissa Kramer, EPA Office of Sustainable Communities
Clark Wilson, EPA Office of Sustainable Communities
Christopher Choi, EPA Region 5
Tony Martin, Department of Housing and Urban Development Detroit Field Office
Terri Sanchez, Department of Housing and Urban Development Detroit Field Office
Andrea Dewey, Federal Highway Administration Michigan Division

STATE OF MICHIGAN

Joel Gordon, Michigan Department of Technology, Management and Budget
Bob Hall, Michigan Department of Technology, Management and Budget
Keith Paasch, Michigan Department of Technology, Management and Budget
Larry Scates, Michigan Department of Technology, Management and Budget
Jamie Uphaus, Michigan Department of Technology, Management and Budget

CITY OF LANSING

Bob Johnson, City of Lansing Planning and Neighborhood Development
Andy Kilpatrick, City of Lansing Public Service Department
Bill Rieske, City of Lansing Planning and Neighborhood Development
Sue Stachowiak, City of Lansing Planning and Neighborhood Development

CONSULTANTS

Greg Weykamp, Edgewater Resources
Suzie Fromson, Edgewater Resources
Dennis Carmichael, Parker Rodriguez
Mila Antova, Parker Rodriguez

TABLE OF CONTENTS

EXECUTIVE SUMMARY iv

I. INTRODUCTION I

II. WORKSHOP 3

III. PROJECT AREA ASSESSMENT 5

IV. STUDY AREAS 13

V. DESIGN OPTIONS 15

VI. NEXT STEPS 35

APPENDIX 40

EXECUTIVE SUMMARY

A 10-acre parking lot currently breaks up the continuity and grandeur of Michigan's capitol complex while creating a large area of impervious surface that contributes to water quality problems in the Grand River. The city hoped to build consensus around a vision for the site that incorporates green infrastructure to reduce flooding and water pollution; improves walkability and transportation options for residents, visitors, and workers; and spurs investment in nearby vacant and neglected property. In 2013, the city of Lansing applied to the U.S. Environmental Protection Agency (EPA) for technical assistance under EPA's Greening America's Capitals Program to help realize this concept. Based on the city's goals, EPA created a design team of federal agency staff and consultants to help the city and state create a vision for the site.

This report provides the city and state with a comprehensive vision for the project site based on community input gathered during a three-day workshop in Lansing to develop shared goals and explore design options. The report includes an analysis of the project area's existing physical conditions, which was used to inform potential site improvements. It illustrates potential improvements to the study area that could help realize the shared vision developed at the workshop. Finally, the report offers a series of steps the city and state could consider taking to implement design changes.

The design options in this report include:

- The use of green infrastructure to capture and manage rainwater where it falls, improving water quality and reducing flooding while offering other environmental, economic, and social benefits.
- The design of streets so that people walking, biking, driving, or using public transportation can get around safely and efficiently.
- The use of native plantings and landscapes to provide habitat and create natural areas for people to enjoy in the city.

Together, these design solutions could create a public space that improves the environment and public health and helps revitalize the surrounding area. As envisioned, the Michigan State Capitol Complex could become a model of environmental sustainability for the city and other communities throughout the state.

I. INTRODUCTION



Edgewater Resources

Figure 1: Capitol Building



Edgewater Resources

Figure 2: Hall of Justice

Lansing is the capital city of Michigan. The downtown area lies astride the Grand River. The Michigan State Capitol Building, about three blocks west of the river, was completed in 1878. Its classical dome is the central axis of a pedestrian promenade that extends west to the Hall of Justice. The city of Lansing has hoped to develop the area between the capitol building and the Hall of Justice as a public park since 1921. The city envisioned it as a green space surrounded by civic buildings, collectively creating an elegant campus in the center of the capital. However, a 10-acre parking lot in this area currently breaks up the continuity and grandeur of the capitol complex while creating a large area of impervious surface that contributes to water quality problems in the Grand River. Stormwater runoff from the parking lot and surrounding streets carries trash, road salt, gasoline, motor oil, heavy metals, and other pollutants. In addition, it can raise water temperatures to dangerous levels for fish and aquatic organisms, and heavy flow can erode river channels.

City planners applied to the U.S. Environmental Protection Agency (EPA) for technical assistance under the Greening America's Capitals Program to realize the long-term vision for the site as a green and sustainable public space.

The city's goals were to:

- Build on previous work to create a space that is uniquely Michigan.
- Build consensus among stakeholders, including the state government, which owns the land.
- Deploy green infrastructure that absorbs and filters rainwater where it falls to reduce flooding and improve water quality in the Grand River.
- Enhance walkability and transportation options.
- Provide an open space that would support the continued revitalization of nearby neighborhoods.
- Identify options for managing parking that could accommodate the needs of state workers and visitors while promoting more sustainable neighborhood design.

Based on these goals, EPA created a design team of federal agency staff from the U.S. Department of Housing and Urban Development and the Federal Highway Administration and landscape architects from Edgewater Resources and Parker Rodriguez to develop design options for the Capitol Complex.

I. INTRODUCTION

Figure 3: Downtown Lansing

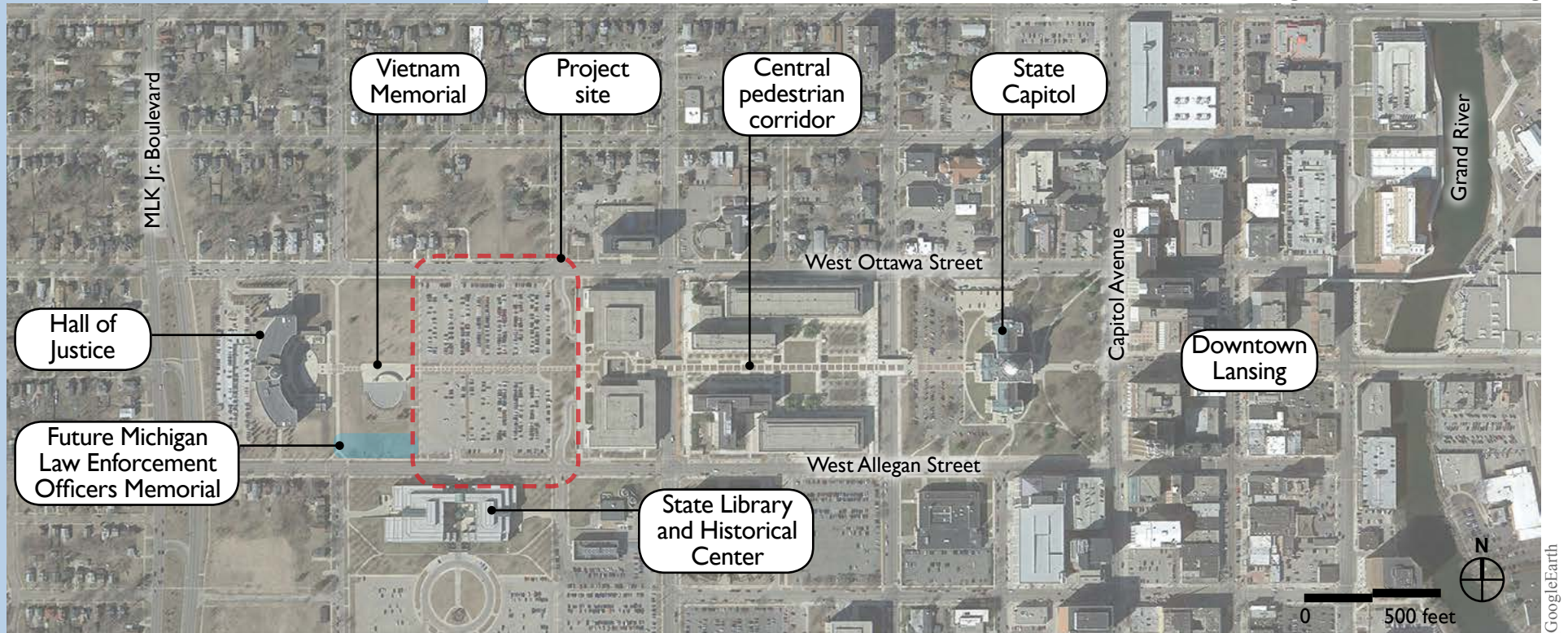


Figure 4: Parking Lots Looking Northeast



Figure 5: Pedestrian Promenade Leading to Hall of Justice



On November 12-14, 2014, the city of Lansing and the state of Michigan hosted a design workshop to present preliminary design options for the capitol complex to the community to get input and help refine the options. Attendees included representatives from the Michigan Department of Environmental Quality, the Capital Area Transportation Authority, the Michigan Department of Transportation, the Lansing Board of Water and Light, the Meridian Township Planning Commission, the Michigan Environmental Council, the Tri-County Regional Planning Commission, local military groups, local design and planning firms, the Eaton Conservation District, the Saginaw/Oakland Commercial Association, neighborhood groups, and property owners and residents.

Some of the challenges and opportunities that attendees discussed include:

- State employees who drive to work want a convenient place to park near their workplace.
- The existing bus service is not frequent enough and does not serve enough areas to attract a significant number of state employees to use it to commute to work.
- Many city and state employees in downtown Lansing have long commutes because of a real and perceived lack of appealing housing options close to downtown. Improving downtown neighborhoods and increasing the number and variety of housing units could increase the number of state employees who could walk, bike, or take transit to work and reduce the need for parking.
- Although the parking lot has an east-west sidewalk down the middle, people walking and biking lack good options for moving north-south through the site.
- Visitors leaving the Michigan State Library and Visitor Center want to cross Allegan Street directly outside the building where there is no crosswalk. The crosswalk on Allegan, east of the State Library is heavily used but long and poorly marked.
- The capitol building currently forms the western edge of downtown Lansing. Mixed-use development on Ottawa Street could bring more people west of the capitol, helping to revitalize the neighborhood and serving as a transition area between downtown and a nearby residential area.
- Residents would like a four-season park that has activities in both warm and cold weather.

Figure 6: Residents Gathered at the Capital Area District Library to Share Ideas for the Capitol Complex

II. WORKSHOP



Edgewater Resources

Figure 7: The Design Team Works to Incorporate Public Input Into Preliminary Sketches

- State employees currently use the pedestrian corridor through the parking lot for exercise during lunch breaks and would welcome better options for outdoor recreation opportunities, such as marked walking loops.
- Convenient and covered bike parking at street level would encourage more people to bike to the site, whether to get to work or to visit the park.
- Flexible outdoor spaces that could serve a variety of uses would help enliven the park. Attendees suggested creating space for picnicking, outdoor meetings with Wi-Fi, festivals, performances, public art, adult exercise, children's play areas, and a farmers market.
- Ottawa and Allegan streets are wider than necessary to accommodate existing traffic flow. The wide lanes and lack of traffic encourage drivers to speed.
- Many Vietnam Memorial visitors need handicapped-accessible parking next to the memorial.
- Designs need to allow frequent snow plowing and salt use in the winter.

After the public sessions on the first day of the workshop, the design team spent the second day discussing options for implementing improvements and revising and refining the plans and sketches to reflect community input. On the third day of the workshop, the team presented the revised design options in an open-house session attended by federal, state, and local government agency staff and members of the public. The workshop closed with a general consensus that the revised design options would meet the city's goals for the site.

III. PROJECT AREA ASSESSMENT

To understand the site's opportunities and constraints, the design team produced project area assessment diagrams, or base maps of existing conditions, including:

- **Prior Park Plans:** These images show past plans envisioning the project site as a public park.
- **Future Land Use Plan:** This map shows the future vision for the project site according to Lansing's 2012 Comprehensive Plan.
- **Circulation:** This map shows patterns of pedestrian and vehicular flow to help determine important corridors and areas of potential safety issues.
- **Existing Parking:** This map provides an overview of existing parking options for the entire downtown for visitors and state employees.
- **Impervious Surface, Overview:** This map shows areas of impervious surface throughout the downtown area, which affects runoff to the Grand River.
- **Impervious Surface, Detail:** To show greater detail, this map shows areas of impervious surface on the project site.
- **Hydrology:** To determine how stormwater flows through the site, this map shows general runoff direction and where drains are located.

III. PROJECT AREA ASSESSMENT

PRIOR PARK PLANS

As early as 1921, the city of Lansing envisioned the site as the location for a new Capitol building surrounded by public green space. The city's Comprehensive Plan noted,

"Lansing lacks downtown open spaces bearing a distinct relationship to both city and state properties. ...The intervening blocks between the present capitol grounds and the new site (Hall of Justice) should be developed as a mall, with subsidiary state buildings ranged on either side....Such a treatment would provide Lansing with a capitol setting of which the entire state would be proud."¹

The Michigan Capital Park Master Plan 1987 Update, prepared for the state of Michigan, also envisioned the site as a park showcasing Michigan culture and landscapes. The intent of the design was to "make the park a people's place, tied into the fabric of the city, expressing the character of Michigan, and of a high quality."² The plan noted that, "[t]he Michigan State Capitol Park should enhance and stabilize surrounding neighborhoods, contribute to the economic vitality of the State and downtown Lansing, and attract a great number of visitors."³

The state's most recent master planning process for the Capitol Complex (not yet published at press date) explored options for this parcel, one of which is developing the property as a park.

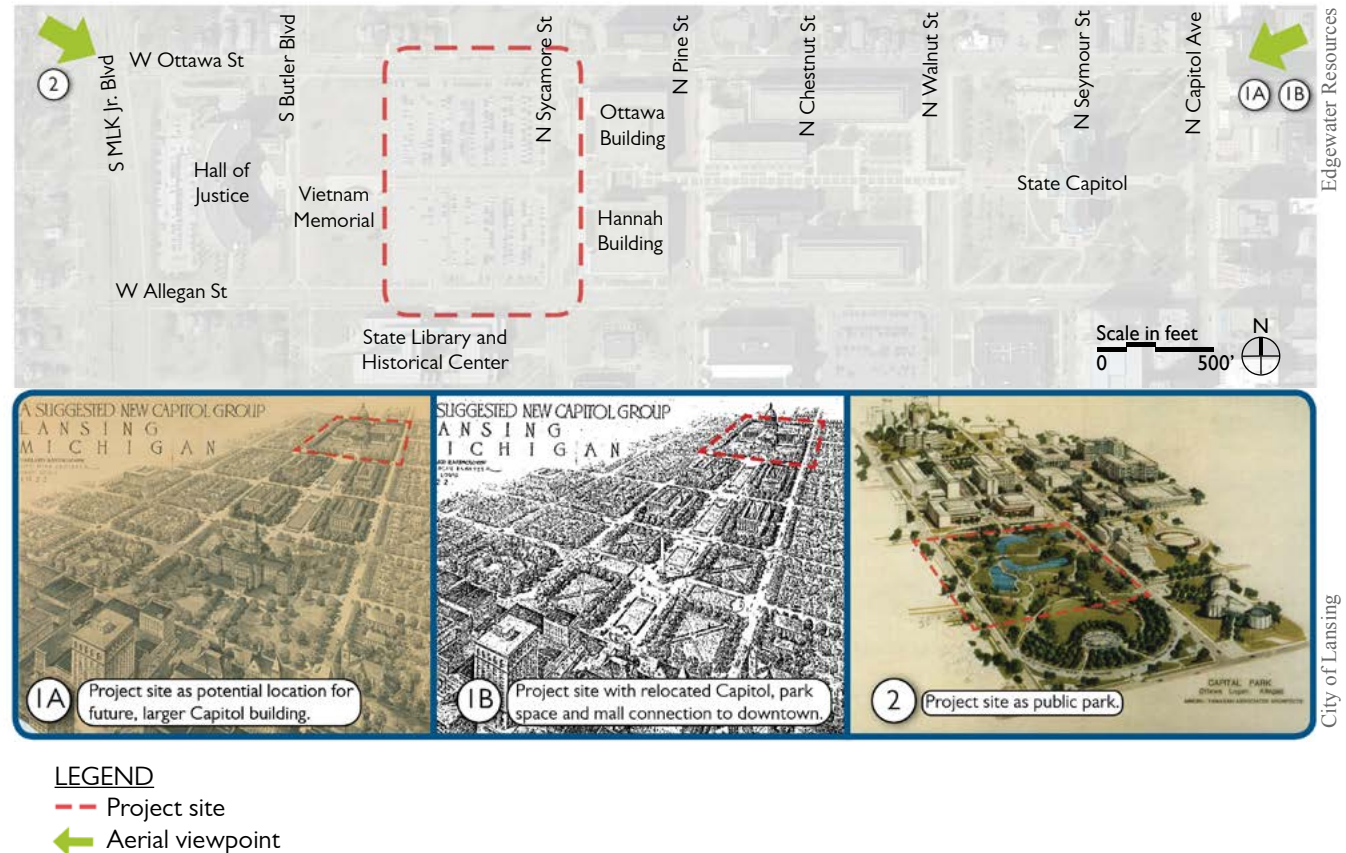


Figure 8: Prior Park Plans

¹ Bartholomew, Harland. *The Lansing Plan, A Comprehensive City Plan Report for Lansing, Michigan*. City of Lansing. 1921, Page 55. www.lansingmi.gov/media/view/THE_LANSING_PLAN_A_COMPREHENSIVE_CITY_PLAN_1921_CREATED_OCTOBER_12_1921/3638.

² Minoru Yamasaki and Associates. *Michigan Capital Park Master Plan 1987 Update*. State of Michigan. Page 52.

³ Ibid. Page 59.

III. PROJECT AREA ASSESSMENT

FUTURE LAND USE PLAN

Lansing's 2012 comprehensive plan designates the project site, along with the entire capitol complex, for institutional uses. The plan envisions the adjacent area to the north as a transitional, mixed-use zone between downtown and single-family residential neighborhoods to the west and north.

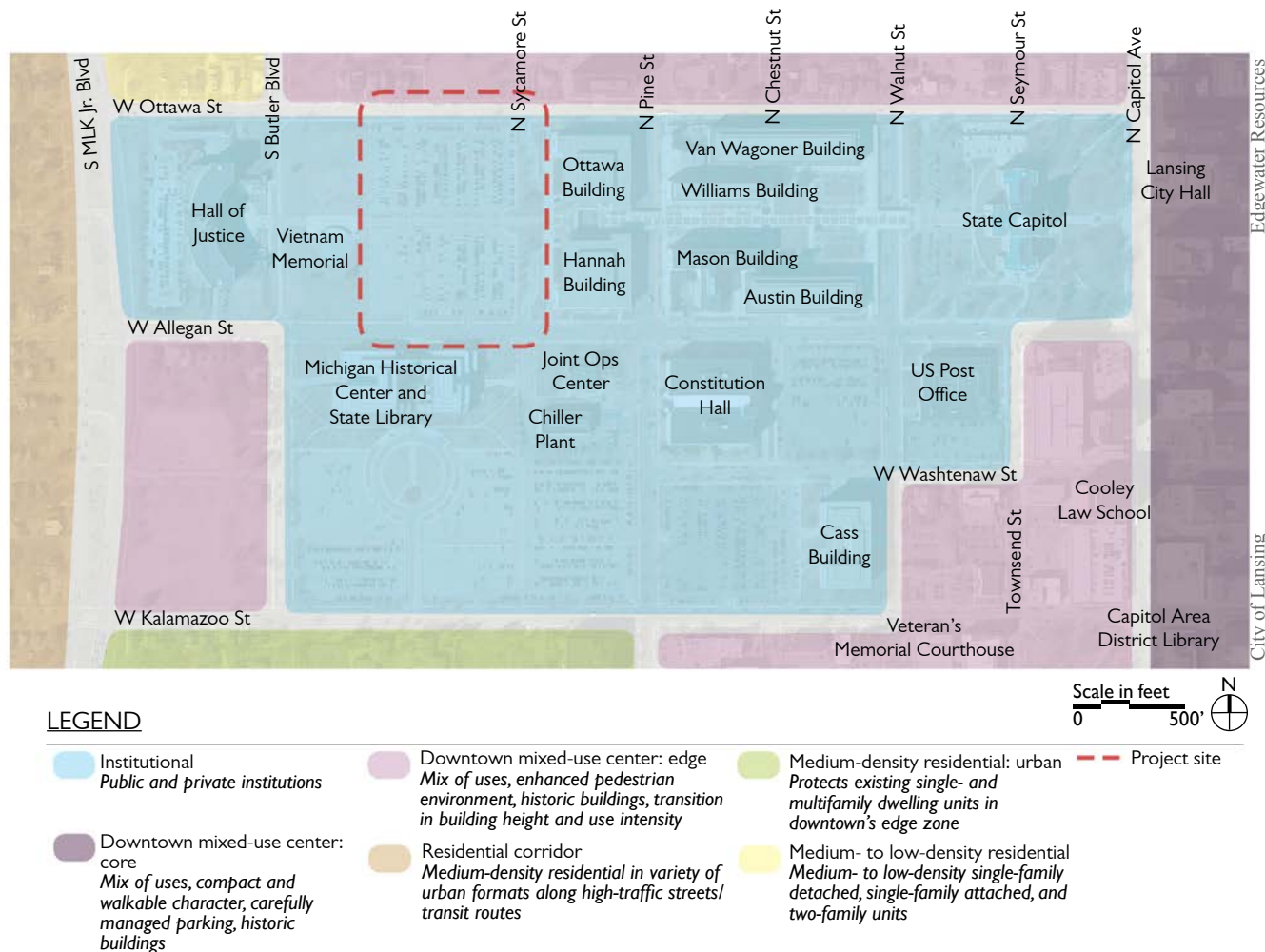


Figure 9: Future Land Use Plan

III. PROJECT AREA ASSESSMENT

CIRCULATION

The site is bounded to the north and south by one-way streets that connect downtown Lansing to I-496. These one-way routes are each three lanes wide and carry 3,000 to 5,000 vehicles per day.

The project site is within a 5-minute walk of the entire capitol complex. However, pedestrian crosswalks are lacking at important intersections, and others are at mid-block crossings that lack traffic signals. The east-west walkway through the site and the sidewalks along Allegan Street are important pedestrian routes for state employees and visitors. Multiple entries to the parking lot and service access roads break up the continuity of the sidewalks around the project site. In addition, these driveways provide few visual cues reminding drivers they are crossing a sidewalk and should use caution.

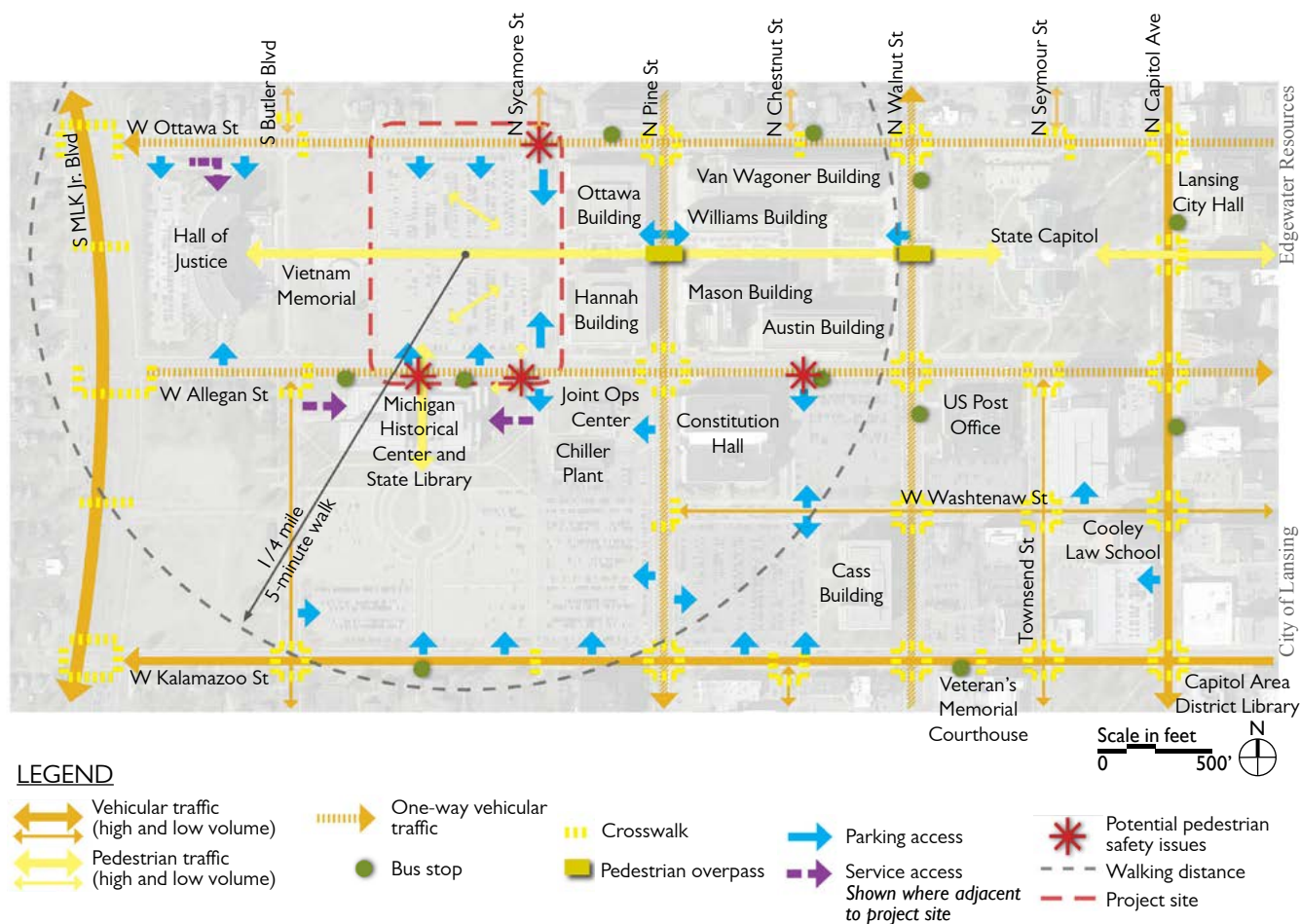


Figure 10: Circulation

III. PROJECT AREA ASSESSMENT

EXISTING PARKING

Within one-half mile (or a 10-minute walk) of most state employees, there are approximately 5,800 employee-designated parking spaces and 4,000 public parking spaces, excluding on-street, metered parking.

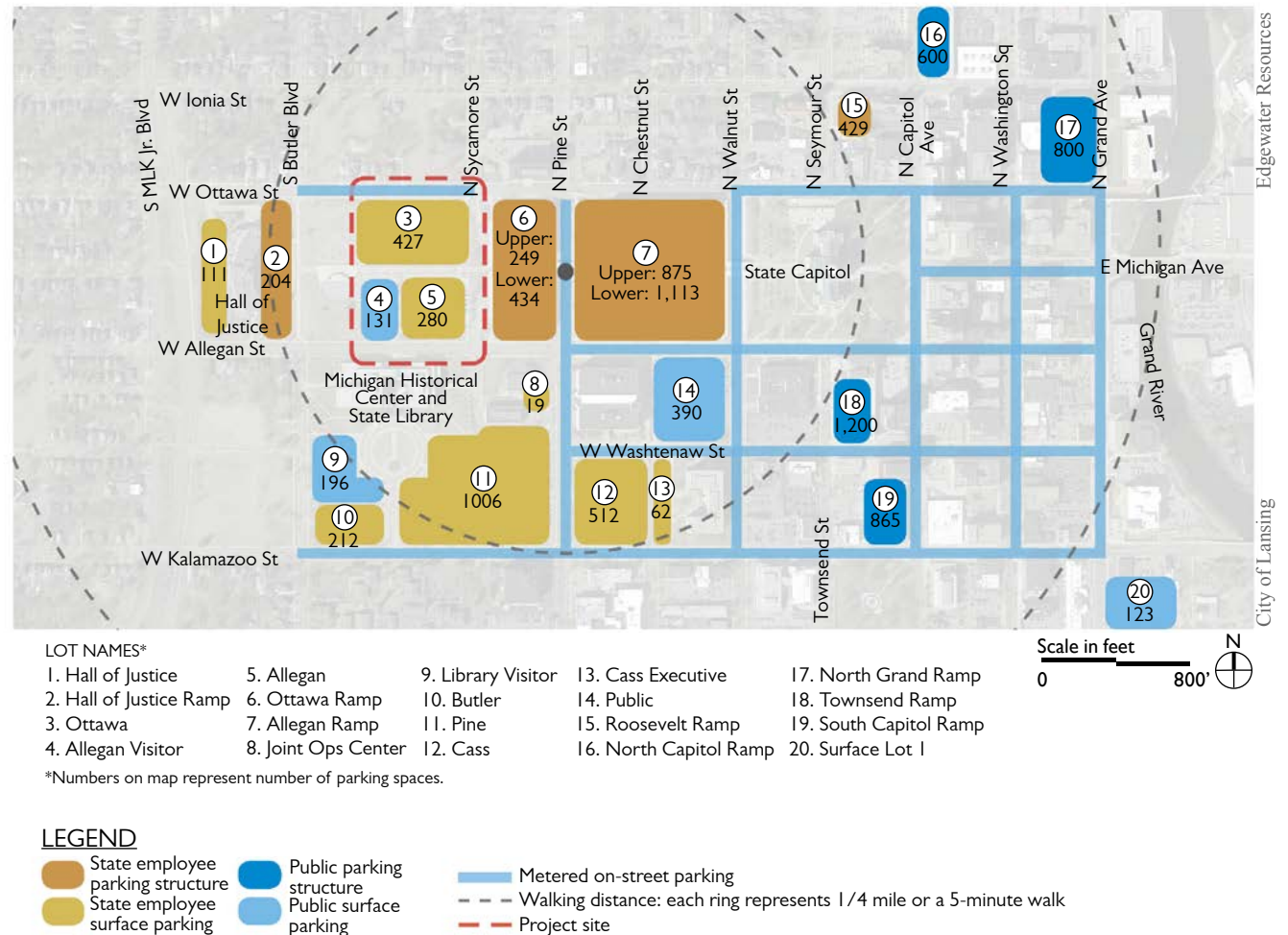


Figure II: Existing Parking

III. PROJECT AREA ASSESSMENT

IMPERVIOUS SURFACE, OVERVIEW

The project site is on the edge of downtown Lansing, an area with very little pervious surface. It is one of many surface parking lots in the Capitol Complex. Adjacent areas of green space are predominately lawn with some landscaped areas. Green space to the north of the project site is vacant land that the city would like to redevelop. Impervious cover generates large amounts of stormwater runoff that carries trash, bacteria, heavy metals, and other pollutants into the storm drain system and ultimately to nearby waterways, degrading water quality.

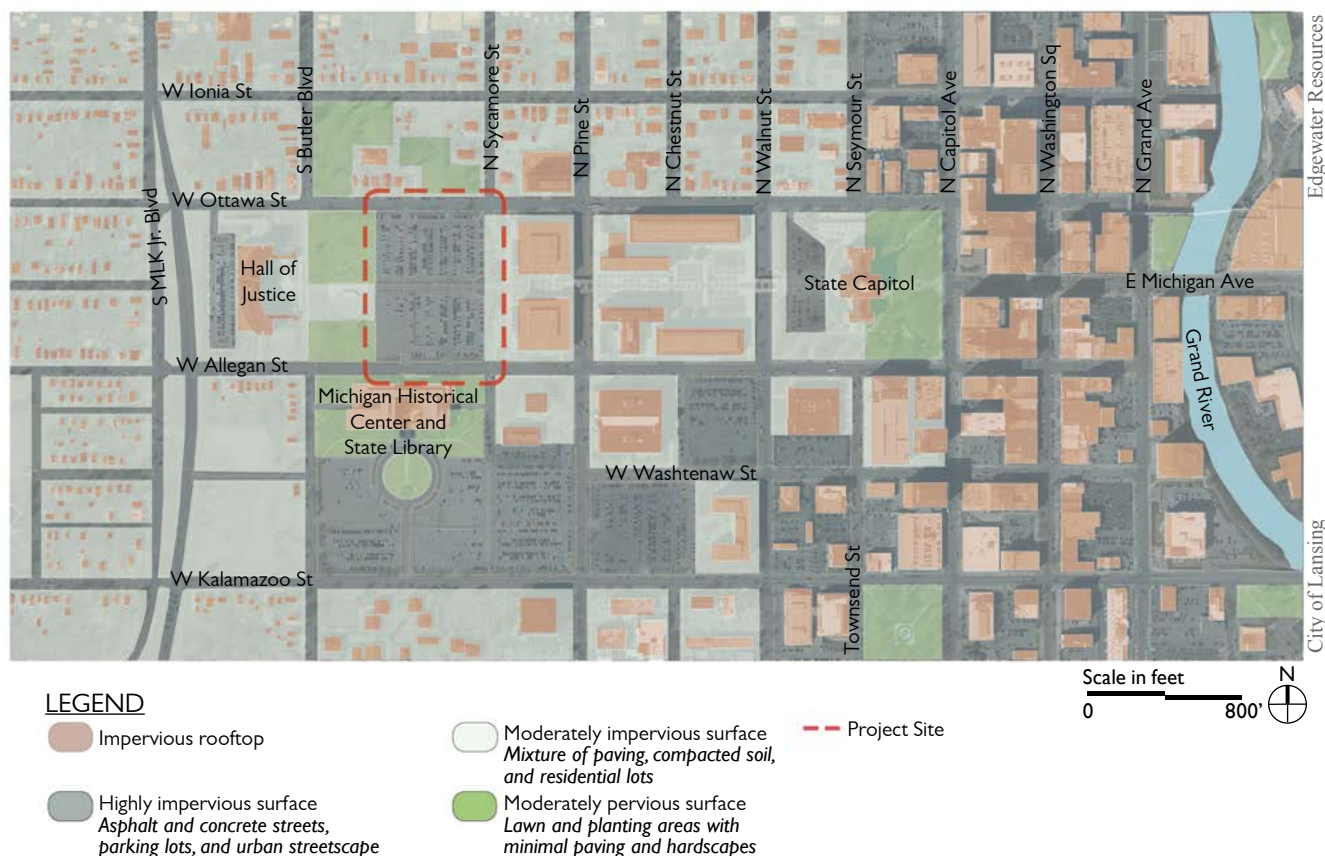


Figure 12: Impervious Surface, Overview

III. PROJECT AREA ASSESSMENT

IMPERVIOUS SURFACE, DETAIL

Between the parking lots and the Ottawa and Hannah buildings are small areas of turf, and the central promenade has narrow planting beds with shade trees. The Ottawa and Allegan sidewalks have planting beds with ornamental grasses and perennials running east-west. Aside from these areas, the project site is almost entirely impervious surface, either concrete or asphalt.

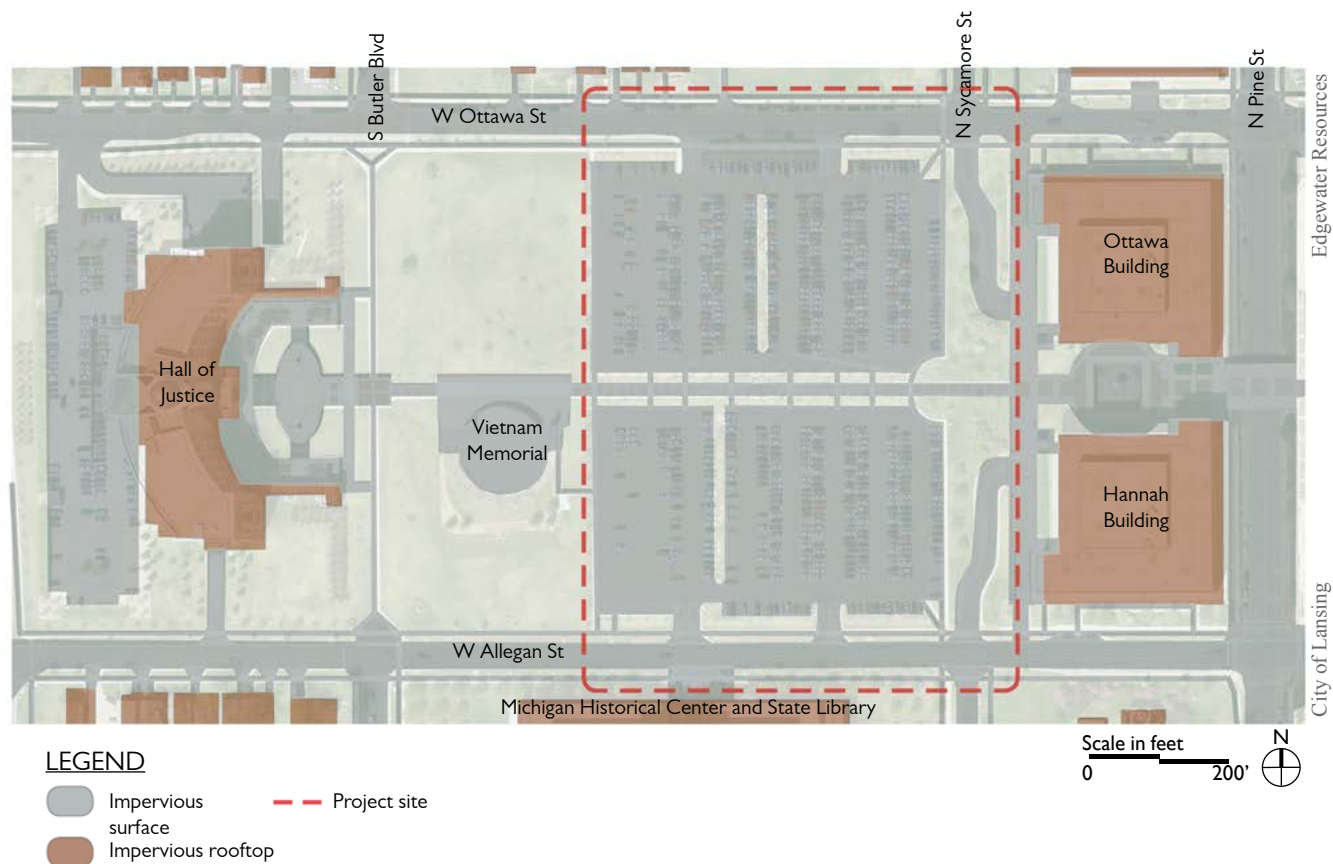


Figure 13: Impervious Surface, Detail

III. PROJECT AREA ASSESSMENT

HYDROLOGY

The parking lots in the site generally drain to inlets along the central corridor. Stormwater from streets and parking lot entry driveways flows to drains in the below-grade parking structure. This stormwater is piped, untreated, to the Grand River.

Heavy downpours now occur twice as frequently in the Midwest than they did a century ago. Climate change will likely cause this trend to continue, with precipitation becoming more intense throughout the year. Periods between precipitation events are also likely to increase, making both floods and droughts more common. These changes could strain the existing drainage and wastewater infrastructure and increase the likelihood of property damage.⁴

⁴EPA. "Climate Impacts in the Midwest." www.epa.gov/climatechange/impacts-adaptation/midwest.html. Accessed March 23, 2015.

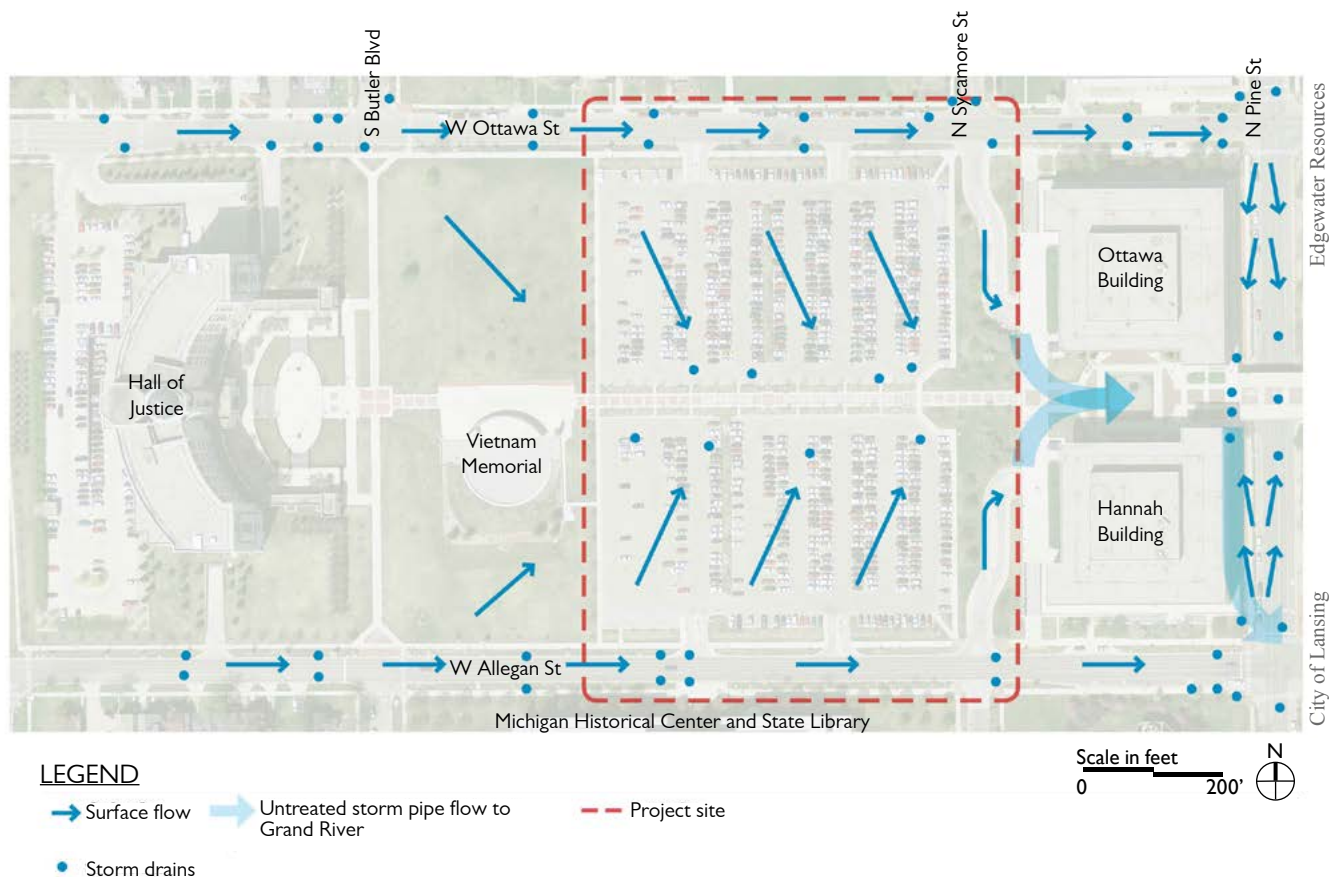


Figure 14: Hydrology

IV. STUDY AREAS

Figure 15 shows five areas in the project site that the design team selected in consultation with city and state staff to represent the site as a whole and demonstrate the chosen design strategies. These areas include:

1. West Ottawa Street (Figure 16)

The majority of Ottawa Street adjacent to the project site has three 12-foot lanes of westbound traffic and a metered parallel parking lane on the north side of the street. The speed limit is 35 miles per hour. Sidewalks on both sides of the street are fragmented by multiple residential driveways to the north and parking lot driveways to the south. The intersection of Sycamore and Ottawa streets has no pedestrian crosswalks. This study area was chosen as it represents a typical streetscape in the area, with potential for design modifications to improve pedestrian safety.

2. West Allegan Street Crosswalk (Figure 17)

Allegan Street adjacent to the project site has three 12-foot lanes of eastbound traffic and no parallel parking. The State Library and Historical Center has no designated crosswalk at the north entrance on Allegan Street. The speed limit is 35 miles per hour. This study area was chosen because there is currently no safe crosswalk here, yet many visitors and employees travel between the Capitol Building and the State Library and Historical Center every day.

3. Retaining Walls (Figure 18)

The concrete retaining walls to the east of the project site extend around the entire city block, and a similar retaining wall also surrounds the next city block to the east, creating a barrier between the state office buildings and the site around them. The walls vary in height and reach up to 15 feet tall. Stormwater along these walls drains to adjacent streets, which drain to inlets in the underground parking structures. These inlets carry the untreated water to the Grand River. This study area was chosen because design improvements to one section of wall could serve as a model elsewhere in the capitol complex, treating stormwater and creating a more inviting pedestrian experience.

4. Central Pedestrian Corridor (Figure 19)

The existing pedestrian corridor is 20 feet wide and approximately 1000 feet long, connecting the Hall of Justice and the Capitol Building. This corridor, an attractive combination of brick pavers and concrete, is heavily trafficked by pedestrians during normal business hours. The corridor is lined with shade trees of varying condition and has numerous benches and trash cans, but there is no discernible standard for type or style. Within the project site, the Ottawa and Allegan parking lots drain to inlets along this central corridor. Untreated stormwater is then carried to the Grand River. This study area was chosen because a park here could create a more inviting area for pedestrians while improving stormwater management. It could also create an incremental improvement to the parking lot that generates support for a larger vision while the state identifies long-term solutions to manage parking needs.

5. Allegan and Ottawa Parking Lots (Forever Park) (Figure 20)

These parking lots cover over 6 1/2 acres of asphalt and contain approximately 850 parking spaces, 130 of which are visitor parking spaces. The parking lots have no sidewalks or shade trees outside of the pedestrian corridor. This study area was chosen because the site is strategically located between the Capitol Building, Hall of Justice, and the State Library and Historical Center. A park here could benefit state employees, visitors, school children, and local residents. During the charrette, the design team referred to the design option for this site as the "Forever Park" to suggest a long-term vision for the site.

IV. STUDY AREAS



Figure 16: West Ottawa Street Looking East



Figure 17: West Allegan Street Crosswalk Looking West



Figure 18: Retaining Wall Looking Northeast

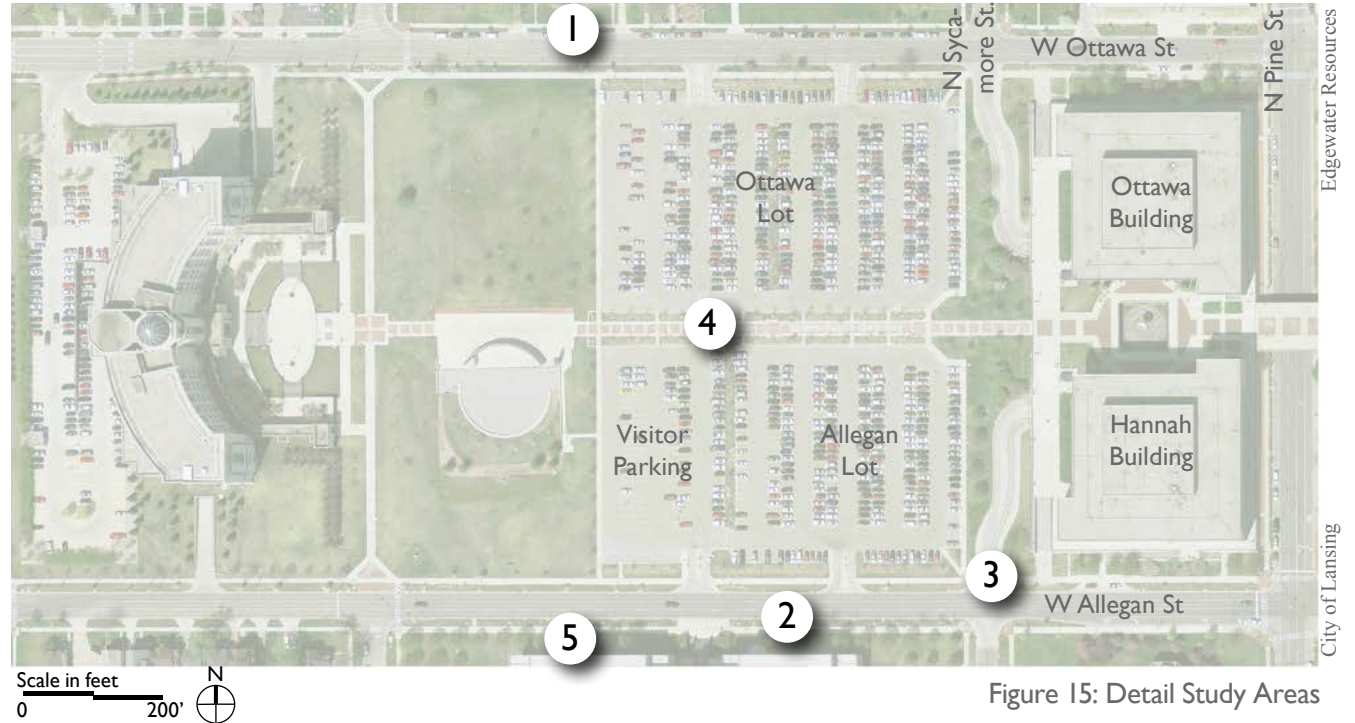


Figure 15: Detail Study Areas



Figure 19: Central Pedestrian Corridor Looking Toward State Capitol Building



Figure 20: Allegan and Ottawa Parking Lots (Forever Park)

V. DESIGN OPTIONS



Parker Rodriguez

Figure 21: Streetscape with Rain Garden



Parker Rodriguez

Figure 22: Outdoor Meeting Space with Porous Flooring



Parker Rodriguez

Figure 23: Plaza with Twining Vines on Architectural Features

INTRODUCTION

After assessing the site, the design team developed options that could meet the city's goals for a transformative park that showcases the city and state's efforts to create an environmentally sustainable civic space.

Central to these strategies is the use of green infrastructure, an approach to stormwater management that protects, restores, or mimics the natural water cycle. The natural processes of soils and vegetation can capture, slow down, and filter runoff, often allowing it to recharge ground water. Impervious surfaces from buildings and pavement prevent these natural processes from occurring. Instead, the rain and snowmelt run off, often flowing untreated into streams, rivers, and other water bodies. Runoff can carry pollutants such as oil, chemicals, and lawn fertilizers. In addition, the quantity and speed of flow can cause erosion, flooding, and damage to aquatic habitat, property, and infrastructure.

Green infrastructure includes strategies such as rain gardens, which are shallow, vegetated basins that collect and absorb runoff from rooftops, sidewalks, and streets (Figure 21). Porous paving and other surfaces infiltrate, treat, and/or store rainwater where it falls (Figure 22). Trees and other vegetation can be incorporated into almost any unpaved surface and help to intercept precipitation and filter the air while providing food and/or habitat for wildlife (Figure 23). Vines can grow in areas with limited space for root growth and can cover vertical surfaces with greenery. All of these techniques could be incorporated into the project site to help manage stormwater and provide other benefits that help meet the community's goals. For example, the community wants flexible, outdoor spaces that could accommodate outdoor meetings (Figure 22).

Green infrastructure can help the city of Lansing reduce flooding, increasing resilience to climate change impacts; manage stormwater to improve water quality in the Grand River; reduce summertime temperatures; and create an attractive and appealing public space that attracts new residents and development to the area.

OVERALL DESIGN CONCEPT

The design concept incorporates green infrastructure to manage stormwater from the parking lot by draining it through a central green corridor (Figure 24). Native vines on the walls surrounding the Ottawa and Hannah buildings could filter the air, reduce ambient air temperatures, and provide wildlife food and habitat while beautifying the area. A rain garden along the base of the wall could absorb stormwater from the adjacent parking entry. These improvements could help cleanse contaminated stormwater and reduce flow to the Grand River, helping the city and state achieve their goals for a more environmentally sustainable site.

Changes along Ottawa and Allegan streets could help the city and state achieve their goal for improved safety for people walking or biking. A bicycle lane on each street would provide cyclists with safer options for east-west travel. Removing one travel lane in each direction could add parking and slow speeding vehicles without increasing congestion because the roads have relatively little traffic. A new crosswalk on Allegan Street and a pedestrian connection through the parking lot would make walking around the Capitol Complex safer and more convenient. Widening the central park space with landscaping that showcases Michigan landscape types could make the site a more attractive public open space and help the city achieve its goal to catalyze residential and mixed-use development.

The design options could also be used elsewhere throughout the city and state at places with similar challenges. The following pages show existing conditions and design options for five study areas in the project site.

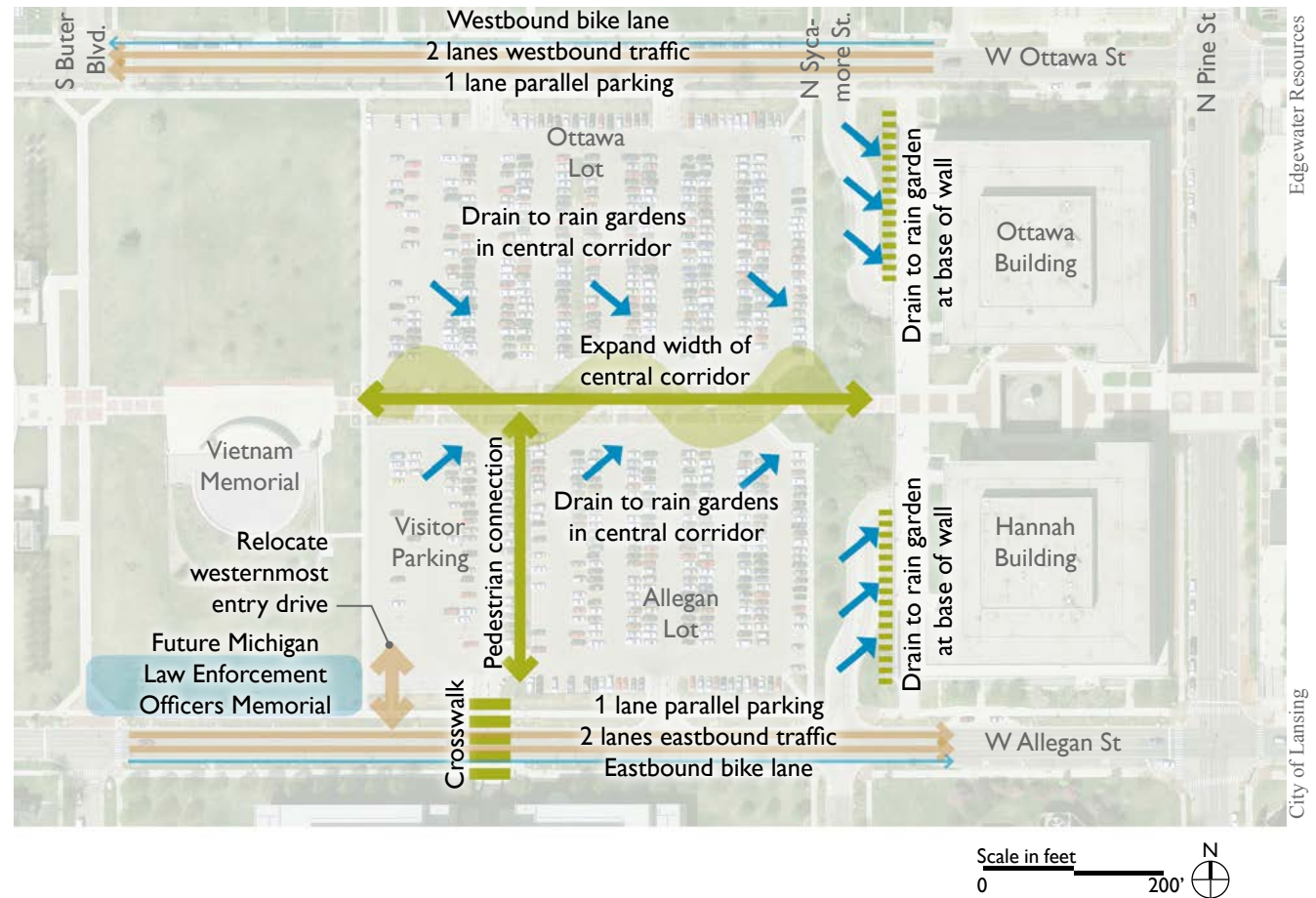


Figure 24: Overall Design Concept

V. DESIGN OPTIONS

WEST OTTAWA STREET

West Ottawa Street next to the project site is a state highway. It has three westbound traffic lanes and one lane of parallel parking to the north (Figure 25). The speed limit in this zone is 35 miles per hour. The street has no bicycle lanes, and sidewalks across driveways are not very visible to drivers.

The design concept could make this streetscape safer and more appealing to people walking and cycling (Figure 26). A westbound bicycle lane to the north has a 2-foot-wide buffer that separates cyclists from traffic. Moving the parallel parking to the south side of the street prevents drivers from opening their car doors into cyclists using the bicycle lane. The design option removes a travel lane that is not needed given current traffic volumes. This space could be used for an expanded tree lawn on the south side of the street that could be graded to accept stormwater that would enter through curb cuts and drain to rain gardens. Curb extensions at parking lot driveways could provide additional pervious areas to treat stormwater. New shade trees could help improve air quality, make walking more pleasant, and reduce temperatures during hot months. Where driveways cross sidewalks, paving with different colors and textures could signal to drivers that pedestrians might be present.

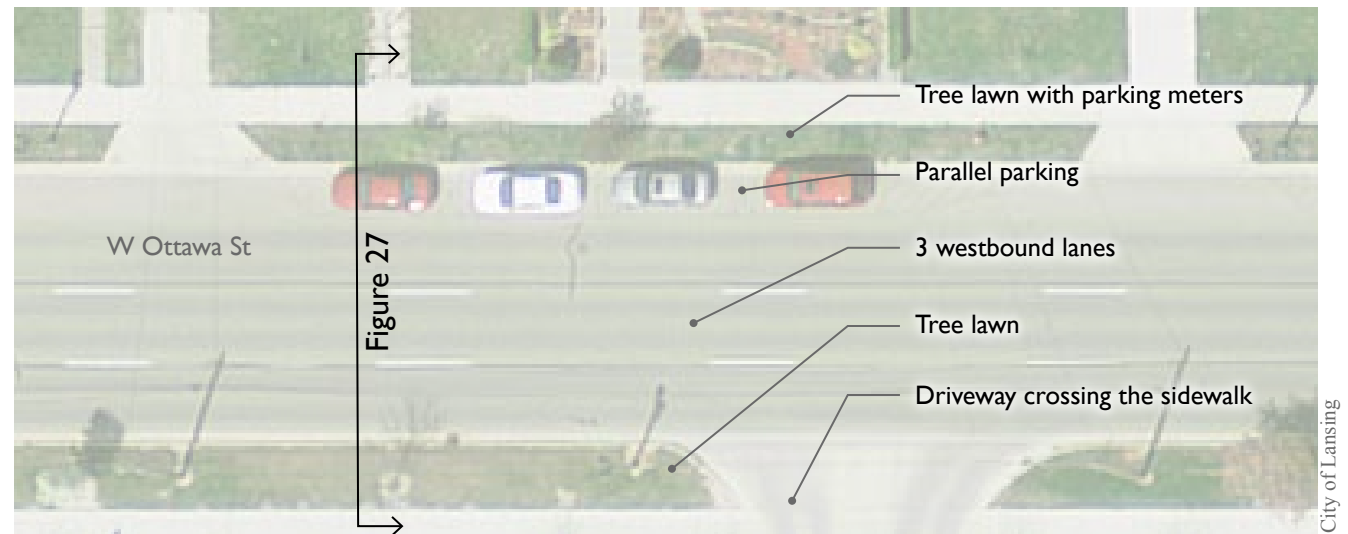


Figure 25: Existing Conditions

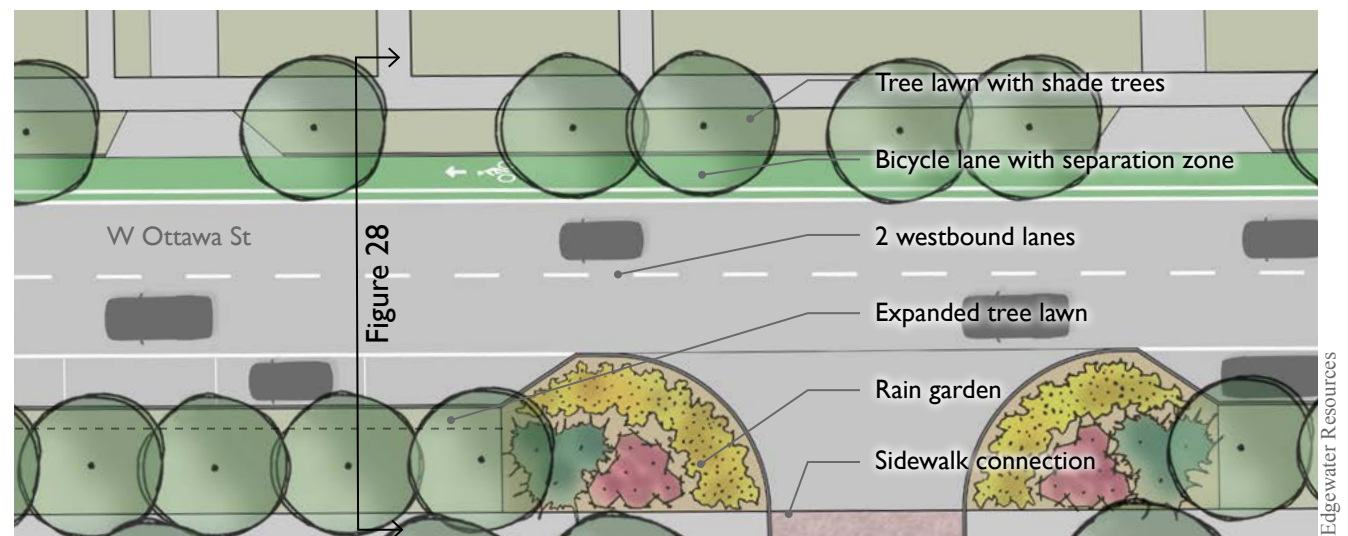


Figure 26: Design Option



V. DESIGN OPTIONS

WEST OTTAWA STREET

The existing street has three 11-foot-wide westbound lanes plus a 7-foot-wide parking lane on the north side for a total street width of 40 feet (Figure 27). Average daily traffic counts, according to Michigan Department of Transportation data, fall within the range of 2,001-5,000 vehicles. The 2013 annual average is 2,300 vehicles per day, so the street is wider than necessary for the amount of traffic. While both sides of the street have generous sidewalks, there are no dedicated bicycle lanes.

The street could be reconfigured to allow more transportation options by creating two 11-foot-wide travel lanes plus a 4-foot-wide bicycle lane separated from the travel lanes by a 2-foot-wide painted strip (Figure 28). Placing the parking lane on the south side of the street puts cyclists against the curb and away from opening car doors. Moving the south curb 5 feet north increases the size of the tree lawn on the south side of the road to create more pervious area and allow more space for tree roots to grow.

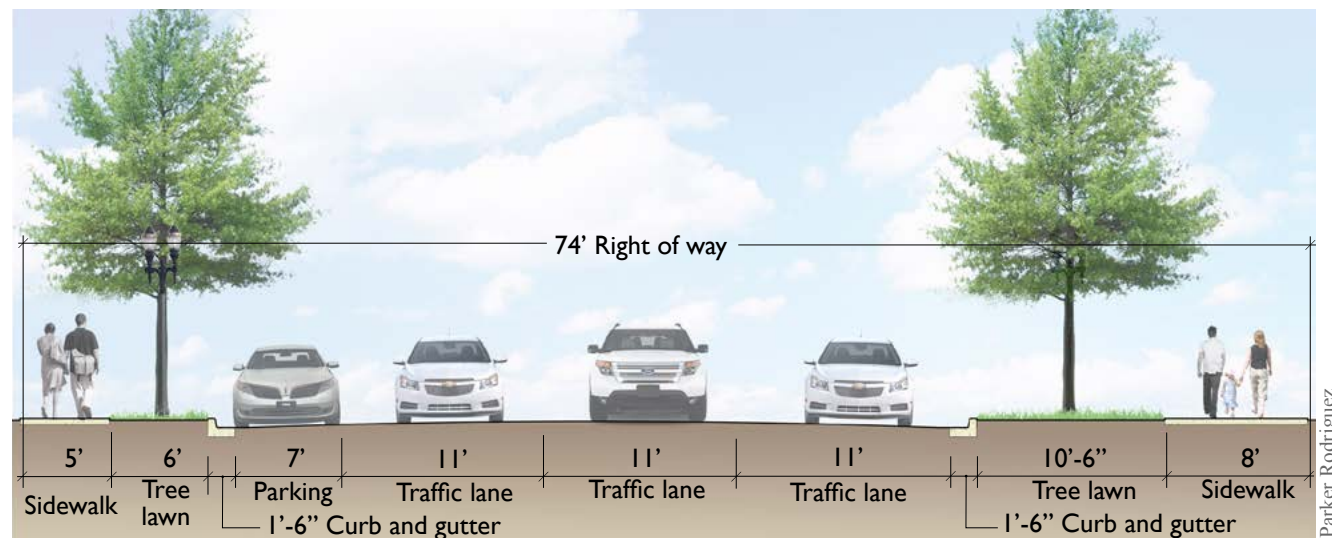


Figure 27: Existing Section

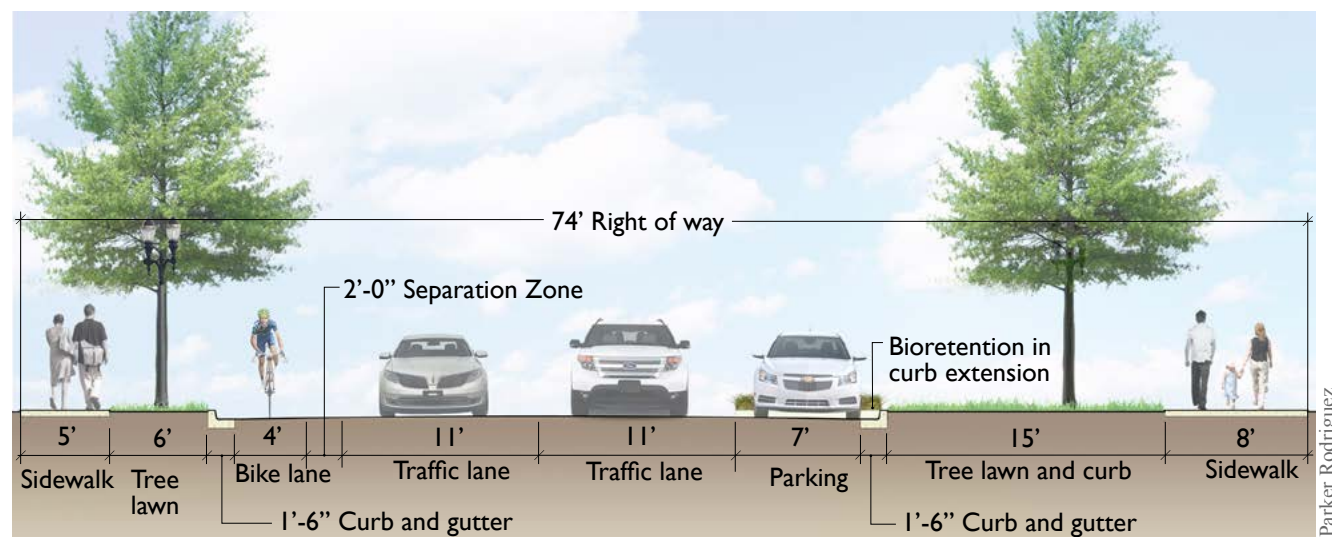


Figure 28: Section of Design Option

V. DESIGN OPTIONS

WEST OTTAWA STREET

Ottawa Street's three travel lanes provide more capacity than needed to carry existing traffic (Figure 29). People biking must share a lane with moving cars and travel beside parked cars, where they could be hit by opening doors. A parking lot entry driveway on the south side of the road disrupts the sidewalk, and drivers have few visual cues to look for people walking across it.

The design concept removes one travel lane, adds a dedicated bicycle lane on the north side, and relocates the parking lane to the south side of the road (Figure 30). A safe and appealing way to bicycle on Ottawa Street could encourage more people to bike, improving their health, lowering pollution levels, and reducing the need for parking. The design option shows a wider tree lawn on the north side as the pavement width is reduced from 40 feet to 35 feet. Rain gardens on both sides of the parking lot entry driveway could provide a visual and physical buffer to the on-street parking. They could collect stormwater runoff and cleanse it before releasing it into the storm drain system.



Edgewater Resources

Figure 29: Existing View Looking East



Parker Rodriguez

Figure 30: Design Option

V. DESIGN OPTIONS

WEST ALLEGAN STREET CROSSWALK

West Allegan Street next to the project site is a state highway. It has three eastbound traffic lanes and no parallel parking or bicycle lanes (Figure 31). The speed limit in this zone is 35 miles per hour. There is no crosswalk at the State Library and Historical Center's north entrance, where many employees, visitors, and school groups would like to cross the street.

The design option could make this streetscape safer for pedestrians and cyclists (Figure 32). An eastbound bicycle lane to the south with a 2-foot-wide buffer separates cyclists from traffic. New parallel parking to the north provides additional spaces for visitors.

Moving the entry driveway to the visitor parking lot to the west would allow a crosswalk at the State Library and Historical Center entrance and provide space on the north side of Allegan for groups to gather as they cross the street, before continuing north to the site's central corridor.

Curb bump-outs with rain gardens could both treat stormwater and reduce the width of the pedestrian crosswalk. An on-demand traffic light (activated by pedestrians) could make this crosswalk even more efficient and safer.

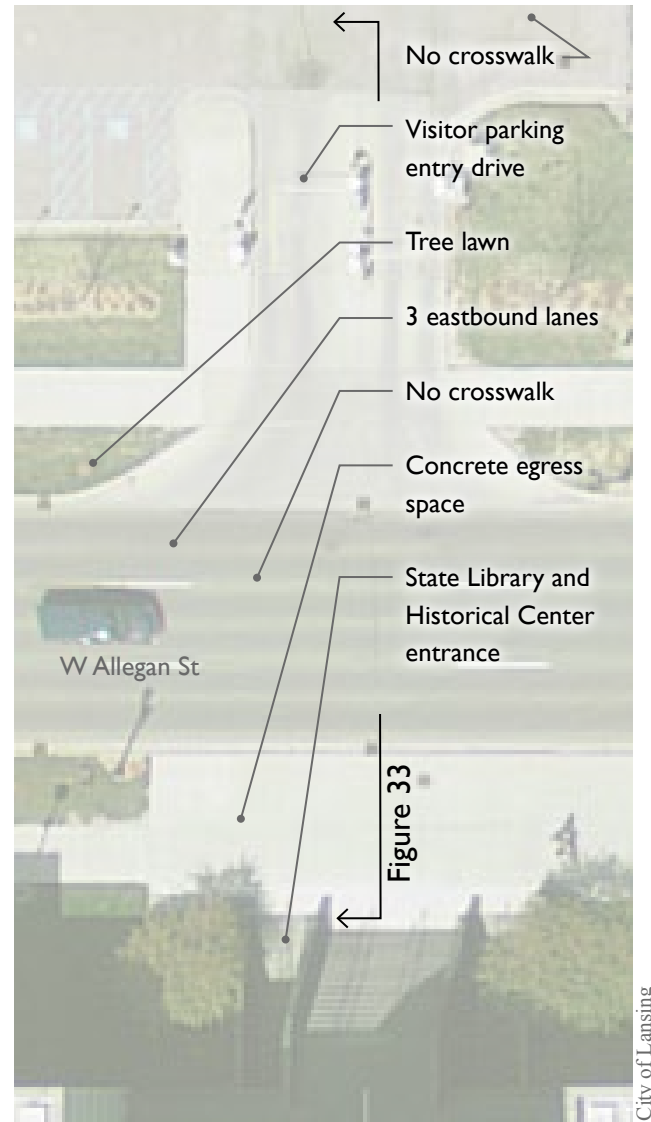


Figure 31: Existing Conditions

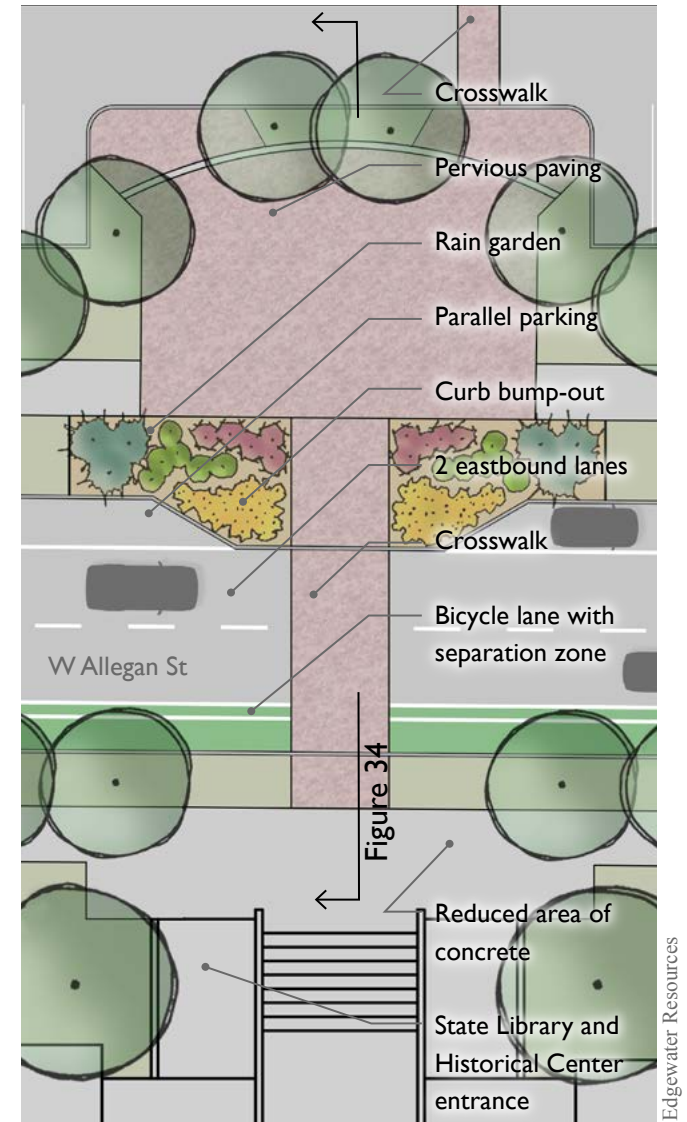


Figure 32: Design Option

V. DESIGN OPTIONS

**WEST ALLEGAN STREET
CROSSWALK**

The existing street has two 11-foot-wide and one 12-foot-wide eastbound travel lanes for a total street width of 34 feet (Figure 33). Average daily traffic counts, according to Michigan Department of Transportation data, fall within the range of 2,001-5,000 vehicles. The 2013 annual average is 3,100 vehicles per day, so the street is wider than necessary for the amount of traffic. While both sides of the street have generous sidewalks, there are no dedicated bicycle lanes.

Reconfiguring the street could allow more transportation options. The design option section shows two 11-foot-wide travel lanes plus a 4-foot-wide bicycle lane separated from the travel lanes by a 2-foot-wide painted strip. A 6-foot-wide parking lane on the north side adds space for visitor parking while retaining the existing curb (Figure 34).

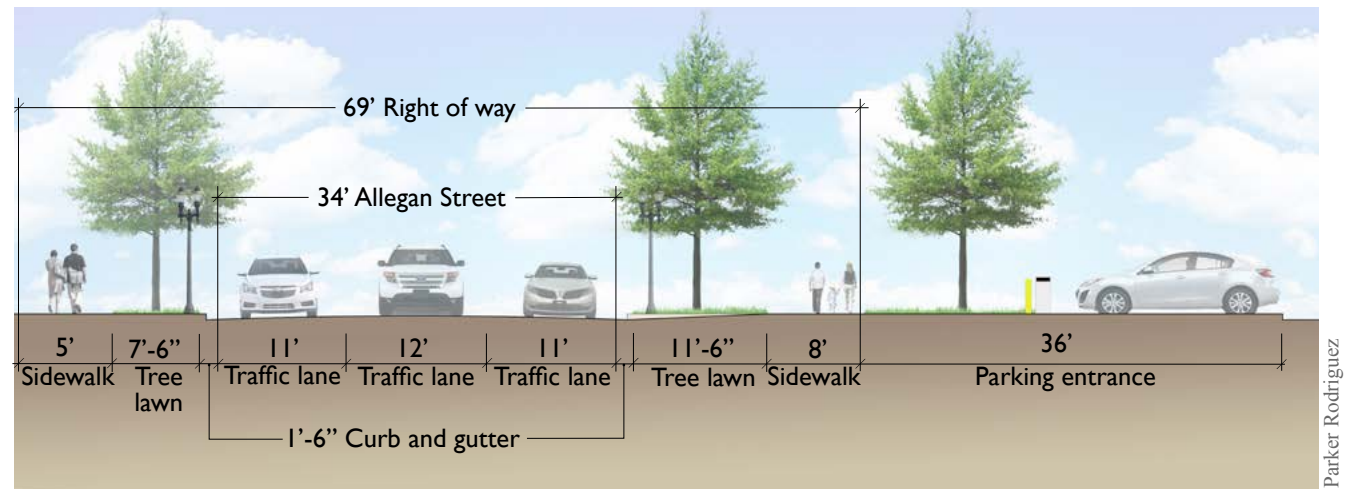


Figure 33: Existing Section

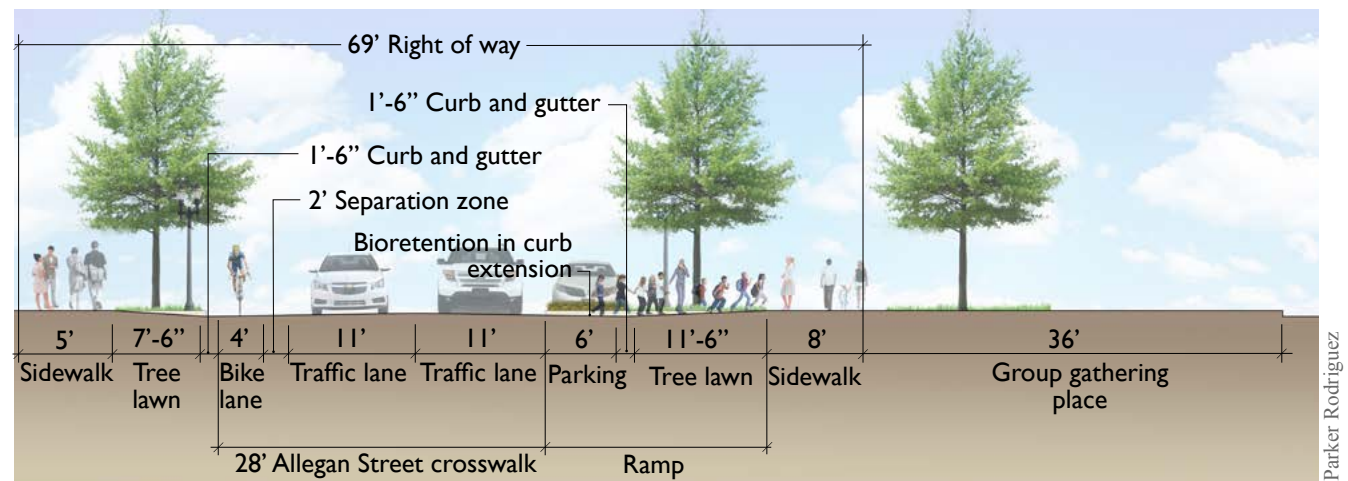


Figure 34: Section of Design Option

0 10 feet

V. DESIGN OPTIONS

WEST ALLEGAN STREET CROSSWALK

Three travel lanes on Allegan Street at the entry to the State Library and Historical Center provide more capacity than needed for existing traffic (Figure 35). A sidewalk extension through the tree lawn on the south or library side at the building entrance encourages people to cross the street here, even though there is no crosswalk. A driveway to the parking lot on the north side disrupts the sidewalk and gives drivers few visual cues that people might be walking there. The lawn along both sides of the road has few trees, offering little shade for people on the sidewalk.

The design concept for a reconfigured roadway at the entry to the State Library and Historical Center includes removing the 12-foot-wide travel lane and adding a dedicated bicycle lane and on-street parking on the north side of the street (Figure 36). A crosswalk aligned with the main entrance to the library, fitted with a pedestrian-activated traffic signal, would give the many visitors and employees who use this building a safer and more efficient way to cross the street. This crosswalk could be paved in a contrasting color to provide a visual cue to motorists and cyclists that people might be walking across the road. Rain gardens on both sides of the crosswalk next to the on-street parking spaces would reduce the distance to cross the street from 34 feet to 28 feet and buffer pedestrians from the parked cars. The rain gardens could collect stormwater runoff and cleanse it before releasing it into the storm drain system. New trees could help improve air quality, reduce ambient air temperatures, and shade people walking on the sidewalks.



Edgewater Resources

Figure 35: Existing View Looking West



Parker Rodriguez

Figure 36: Design Option

V. DESIGN OPTIONS

RETAINING WALL

Figure 37 shows the retaining walls to the east of the site, near the underground parking entry driveways. The driveways carry untreated stormwater down their slopes and into storm drains at the entrance to the parking garage. The retaining wall is a concrete structure that varies in height from approximately 6 to 12 feet, depending on the grade of adjacent lawn and sidewalks.

Green infrastructure improvements could help to cleanse stormwater before returning it to the storm drain system (Figure 38). Instead of stormwater flowing down the driveway into drains that empty into the Grand River, trench drains located periodically along the driveway could intercept it. These drains would carry stormwater under the sidewalk and release it to rain gardens at the base of the retaining walls. Planting these walls with native perennials and annual plants could help reduce ambient air temperatures and could incorporate public art into the capitol complex.

This design option could be a template for the nearly 2 miles of retaining walls throughout the capitol complex.

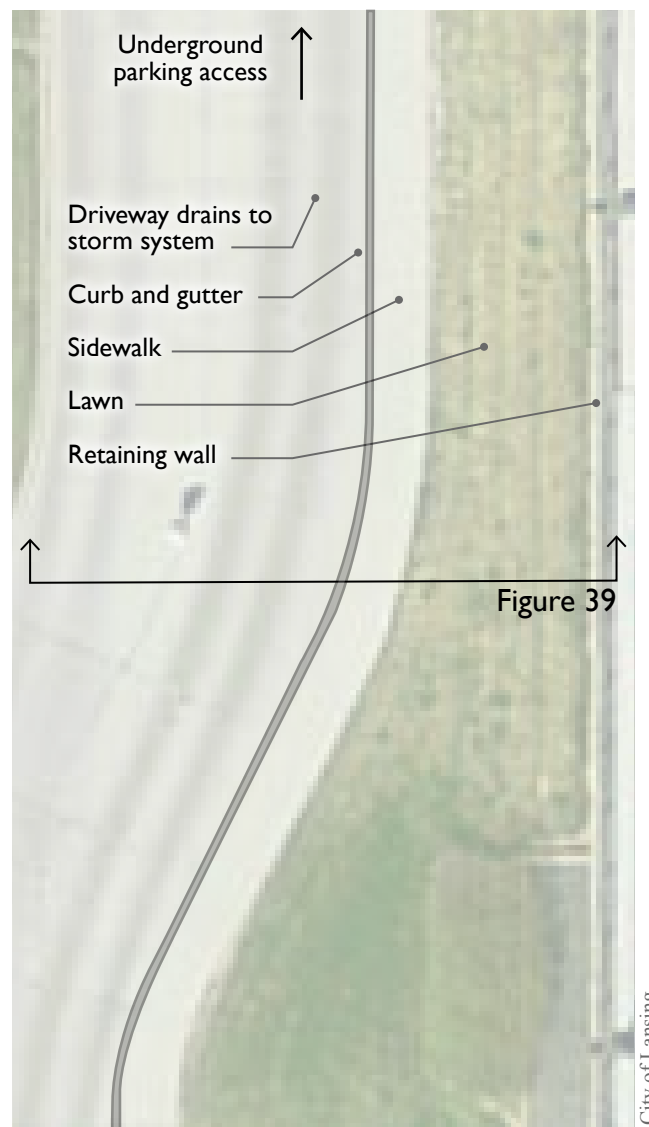


Figure 37: Existing Conditions

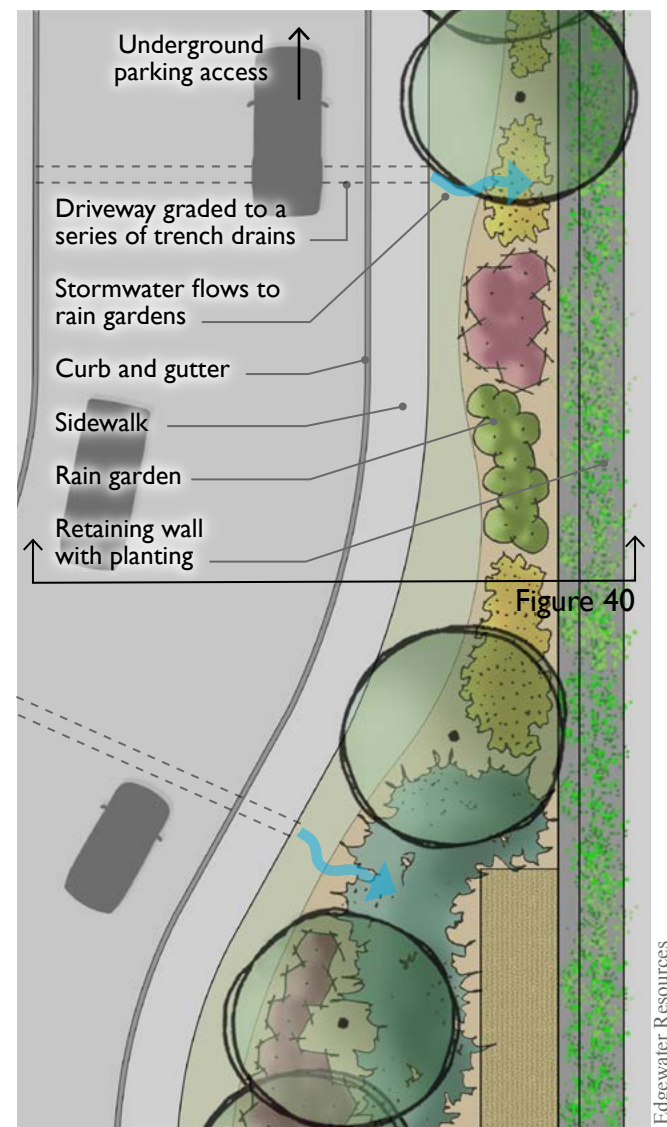


Figure 38: Design Option

V. DESIGN OPTIONS

RETAINING WALL

Figure 39 shows a typical cross section of the existing condition at the retaining walls to the east of the site, near the underground parking entry. This retaining wall is part of a series of walls in the capitol complex that are about 2 miles long in total, making adjacent sidewalks uninviting.

The design concept for the retaining wall would soften its appearance with plants, which would also improve air and water quality and reduce ambient air temperatures (Figure 40). A series of steel cables attached to the wall surface about every 2 feet would allow native, twining vines to climb up the cables without affecting the structure. Another option would be to replace sections of the wall with integral planting units that can be filled with soil and perennial or annual plants. Along the base of the existing wall is a gentle slope down to the parking garage entrance. A continuous bioswale, or vegetated drainage course, along the base of the wall would capture stormwater runoff and cleanse it before releasing it into the storm drain system.

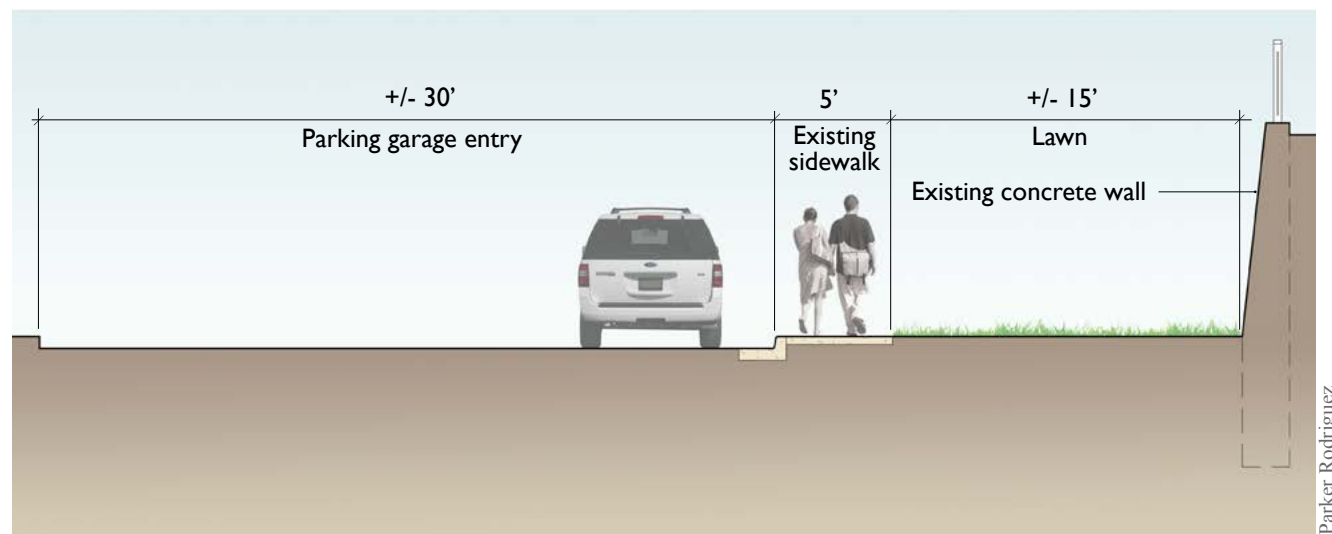


Figure 39: Existing Section

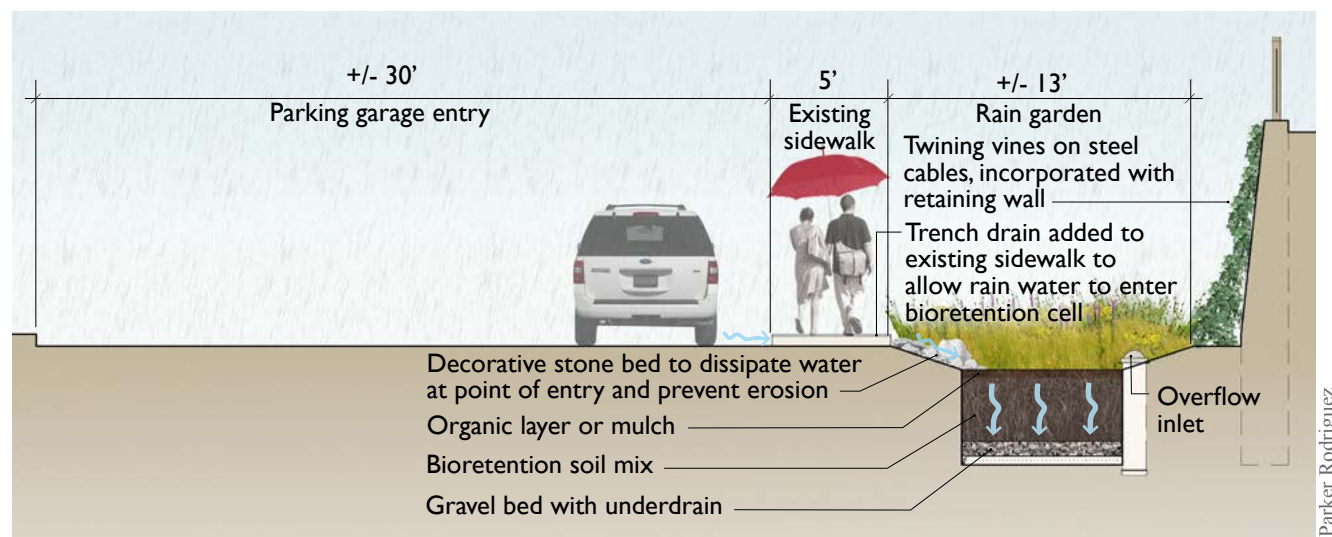


Figure 40: Section of Design Option

0 10 feet

V. DESIGN OPTIONS

RETAINING WALL

The concrete podium wall creates a barren base for the Ottawa and Hannah buildings (Figure 41). The blank sloping lawn down to the garage entrance is largely unused and contributes to the stark image of the complex for the thousands of employees that pass by each day on the way to and from work.

The design option would add a series of climbing vines on the concrete wall and a bioswale along its base (Figure 42). Collectively, these improvements will create an ecologically effective landscape that will cleanse the water, oxygenate the air, provide habitat, and reduce ambient air temperatures. Vines would twine around the steel cables and would not be placed in the immediate area of the entry, so they would not affect drivers' sight lines.



Edgewater Resources

Figure 41: Existing View Looking Northeast



Parker Rodriguez

Figure 42: Design Option

CENTRAL PEDESTRIAN CORRIDOR

The project site has approximately 850 parking spaces and 6.5 acres of impervious surface (Figure 43). The parking areas have few trees and no sidewalks except the central pedestrian corridor. The corridor has several different styles of site furniture that lack a uniform appearance.

The design concept would widen the central corridor to create a 180-foot-wide linear park (Figure 44). The park could showcase Michigan's various landscapes, which could educate employees and visitors alike (see Figure 45 for landscape typologies). Parking management strategies discussed in Section VI could allow the state to meet its needs for employee parking without the approximately 230 spaces (30 percent of current capacity) that the new pedestrian corridor would replace.

Bioswales running along the north and south edges of the park could collect runoff from the parking lots and drain to the detention basin to the east, cleansing water before returning it to the Grand River. Bioswales would also pick up litter and debris from the parking lots in a location with easy access for maintenance vehicles and space for snow storage in winter.

An expanded green connector running north-south between the Allegan and visitor parking lots could provide a pedestrian connection between the park and the State Library and Historical Center. Crushed stone paths that meet accessibility requirements would allow people to get to the park from the parking lots. Benches and light fixtures along the central corridor could showcase products manufactured in Michigan and could define small, flexible spaces that serve various purposes, such as picnic areas, meeting spaces, public art displays, or outdoor classrooms. New bicycle parking could encourage people to bike to the park or nearby buildings.

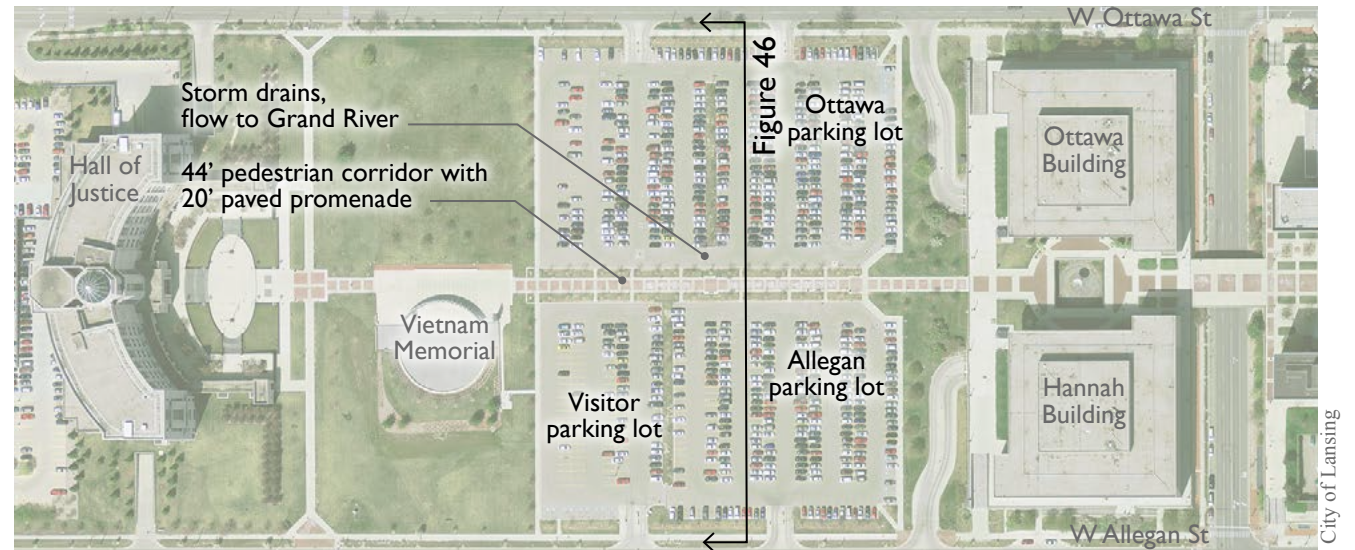


Figure 43: Existing Conditions

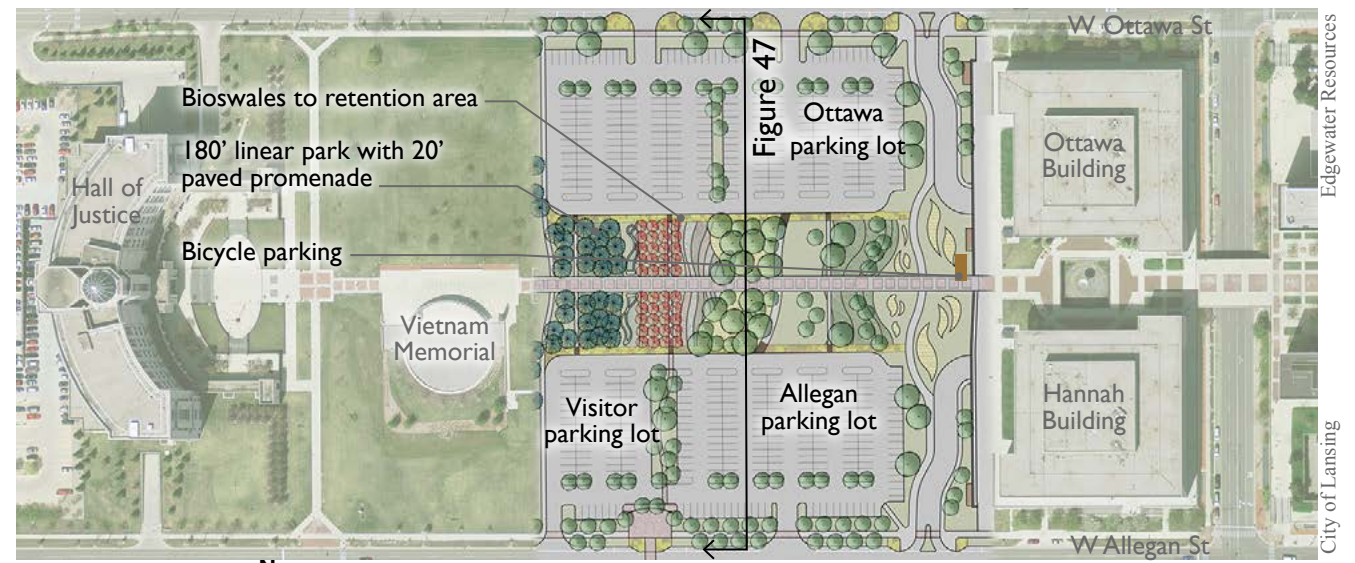


Figure 44: Design Option



V. DESIGN OPTIONS

CENTRAL PEDESTRIAN CORRIDOR

The landscape types include:

- A. Boreal forest: Dense evergreen forest with benches carved of stone and boulders native to Michigan.
- B. Terminal moraine: Masses of rock and sediment in shapes reminiscent of Michigan landscapes that were formed by ancient glaciers.
- C. Orchard: Grid of fruit trees with crushed stone paths.
- D. Agriculture: Bands of plants that reflect major Michigan crops such as corn, blueberries, wheat, and beans.
- E. Hardwood forest: Mixture of maples, oaks, beech, and other trees with spectacular fall color.
- F. Grassland: Turf and ornamental grasses, with some small trees creating a transition from forest to wetland.
- G. Wetland: Ornamental grasses and perennials able to accept overflow from marsh landscape.
- H. Marsh: Detention basin (low point at end of rain gardens) water feature with a hard edge on the east side, next to a sidewalk. The west side would be a soft edge where water can overflow during storms.
- I. Sand dune: Berms in shapes reminiscent of sand dunes, planted with native grasses to evoke the dune grass landscape on Michigan's west coast.

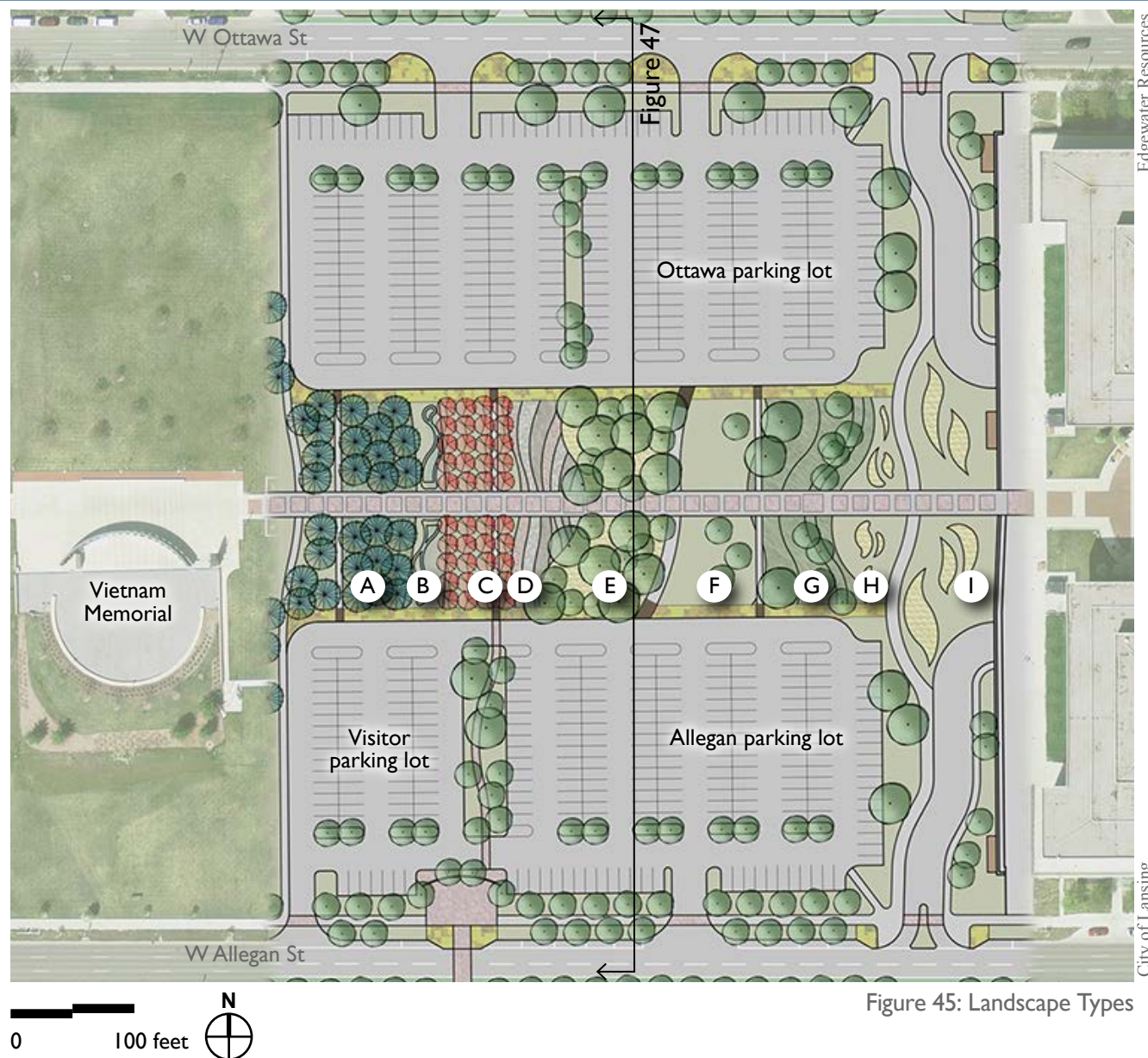


Figure 45: Landscape Types

V. DESIGN OPTIONS

CENTRAL PEDESTRIAN CORRIDOR

Figure 46 shows a cross section cut north-south through the existing parking lot, with the existing brick walkway in the center. This walkway is heavily used by state employees and visitors daily. Although it is wide and framed by shade trees, the pedestrian realm is so narrow compared to the parking area that moving between the Hall of Justice and the main part of the capitol complex feels like walking through a parking lot.

The design concept would create a park along the central pedestrian corridor in the parking lot (Figure 47). Widening the pedestrian realm by 70 feet on either side of the walkway creates a broader landscape zone that can support trees, shrubs, berms, and seating. This improvement would reduce the visual and environmental impact of the parking lot while decreasing its capacity by 30 percent (approximately 230 parking spaces). The pedestrian experience would be significantly improved, with natural areas for relaxation and play. The landscape improvements include a pair of bioswales along the edges of the parking areas that would direct stormwater runoff from the parking areas to the constructed wetland, cleansing it before releasing it into the storm drain system. The bioswales would provide measurable benefits to air and water quality, while making the pedestrian realm more attractive.

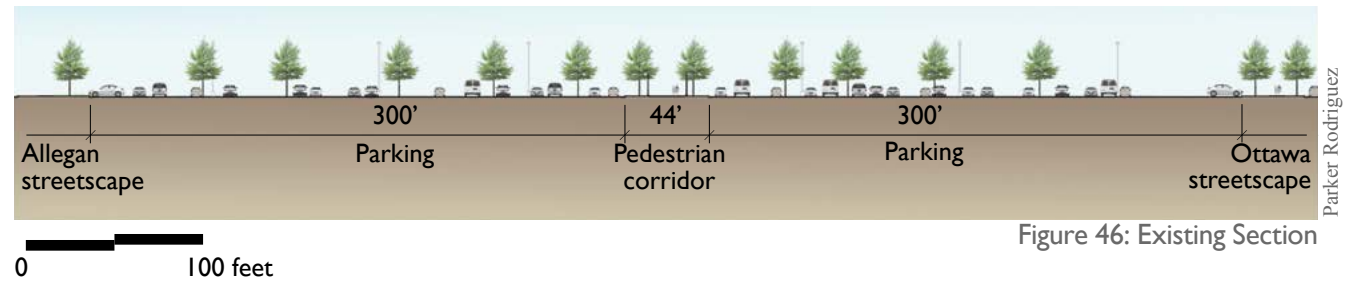


Figure 46: Existing Section

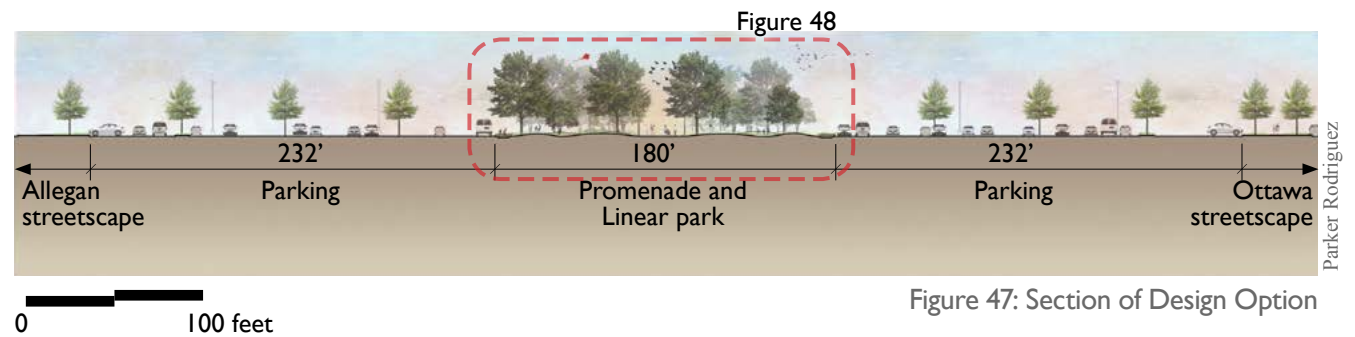


Figure 47: Section of Design Option

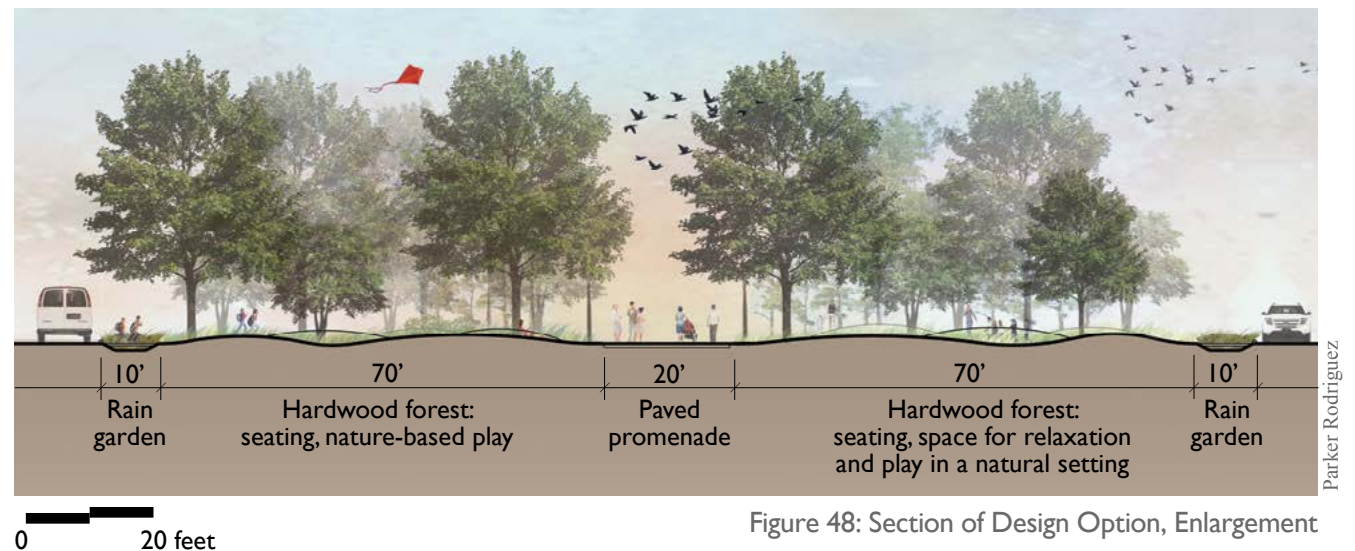


Figure 48: Section of Design Option, Enlargement

V. DESIGN OPTIONS

CENTRAL PEDESTRIAN CORRIDOR

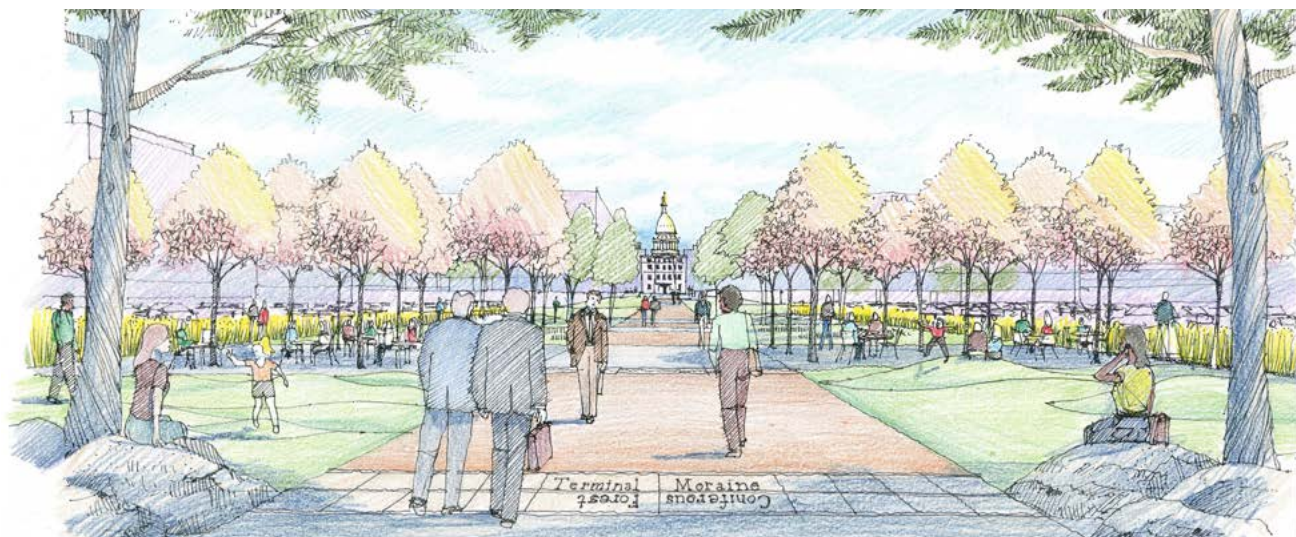
Figure 49 shows the existing view looking east toward the state capitol from the pedestrian walkway that bisects the parking lot. The pathway is generous and well paved, but even with the flanking rows of shade trees, the impression is one of an expansive parking lot with a slender pedestrian realm.

The landscape concept envisions a series of bands of plantings that epitomize Michigan's various landscape types to capture, in effect, a journey through the state (Figure 50). These bands are set perpendicular to the walkway, so that a pedestrian would experience the variety of Michigan landscapes in a five-minute walk. Besides providing a point of pride for employees and visitors, this type of narrative landscape could become an educational tool for visiting school children as they make their way through the capitol complex. The landscapes would provide biodiversity and habitat but would be figurative rather than fully functioning, distinct ecosystems, as they are so small. A variety of seating and gathering areas in the clusters of trees could allow employees to have meetings or meals outdoors in good weather. A detention basin at the low point of the parking lot, on its eastern edge, could receive and cleanse the large quantities of stormwater runoff that flows from the parking area.



Edgewater Resources

Figure 49: Existing View Looking East



Parker Rodriguez

Figure 50: Design Option

V. DESIGN OPTIONS

FOREVER PARK

Figure 51 shows the central pedestrian corridor park concept as described on page 26. The state could implement this plan while it seeks funding for a larger park and pursues strategies to address the existing parking needs.

The final Forever Park concept (Figure 52) illustrates how the central pedestrian corridor park could be expanded after the state acquires additional funding, implements parking management strategies that reduce the need for parking, and identifies other parking lots with available space that employees could use.

Expanding the central pedestrian corridor park to Allegan and Ottawa streets could make the site a truly grand public space with many flexible open lawn areas for various events, areas for outdoor meetings, and natural areas for relaxing and enjoying nature. Trails could provide quarter- and half-mile loops that employees could use for exercise. Civic Center Park in Denver, Colorado, exemplifies how a public park around the State Capitol can become the center of civic life for a city (see Appendix).

Parking along the west edge of the site, adjacent to the Vietnam Memorial (and planned future memorial sites), could accommodate memorial visitors and event parking. Bicycle parking near existing office buildings could serve park visitors and encourage state employees to bike to work.

Continued on next page.



Figure 51: Central Pedestrian Corridor Design Option

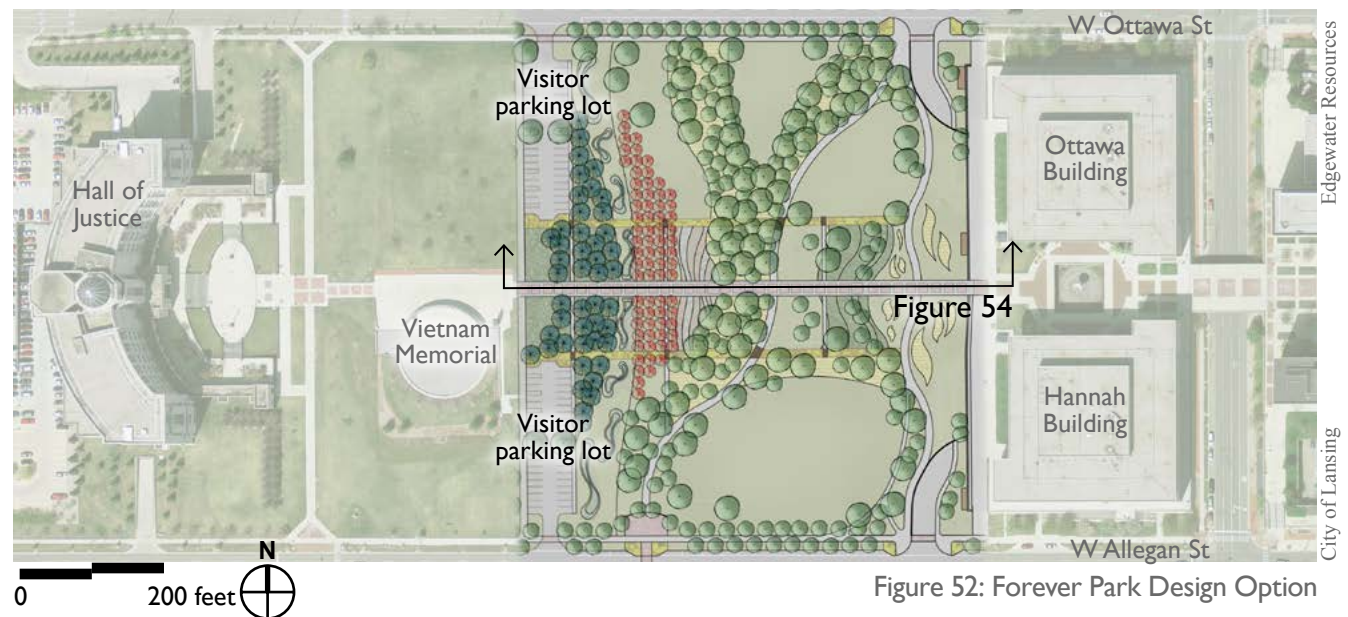


Figure 52: Forever Park Design Option

V. DESIGN OPTIONS

Continued from previous page.

The underground access drives at the east end of the site could duck below grade under a green roof structure, which would gradually raise the grade of the park to the level of the adjacent office buildings. A continuous landscape would provide employees easier access to the park and further reduce the amount of impervious cover.

The addition of a vibrant public space could help encourage revitalization by attracting new businesses to vacant land on Ottawa Street and new residents to the surrounding neighborhood. New development that would increase the variety and number of housing options and create amenities for residents that could encourage state and city employees to live closer to work, letting them walk or bike to their jobs. For example, Centennial Olympic Park in Atlanta, Georgia, has spurred \$1 billion in private investment within three blocks of the site. At 25 acres, it is less than twice the size of the Forever Park (see Appendix).



LEGEND

- | | | |
|---|--|-----------------------------------|
| A Visitor parking | D Bicycle parking | G Flexible-use lawn spaces |
| B Shade trees and native plantings | E Existing 20' promenade to remain | H Crosswalk |
| C Detention basin | F Green roof over parking access drives | |

Figure 53: Forever Park Design Option, Enlargement

V. DESIGN OPTIONS

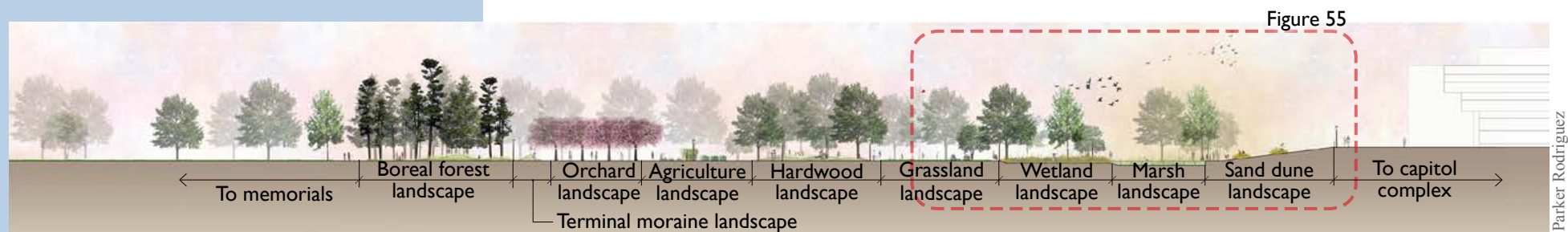


Figure 54: Forever Park Section

FOREVER PARK

Figure 54 shows a longitudinal section, cut east-west, through the park promenade, illustrating the concept of the Michigan landscape types along the walkway. West of the grassland, the elevation drops slightly and gradually to form the wetland and marsh landscapes, then rises gradually to form the dune landscape and merge into the green roof to the east. This sequence of spaces would epitomize the state's various landscapes, while also providing a variety of seating and recreational spaces for employees and visitors. The landscape types include dunes, wetlands, hardwood forest, agricultural fields, orchards, moraines, and coniferous forest. The area devoted to each landscape type would be larger than in the central pedestrian corridor park plan, increasing each one's ecological value and allowing people to better experience each as a separate space.

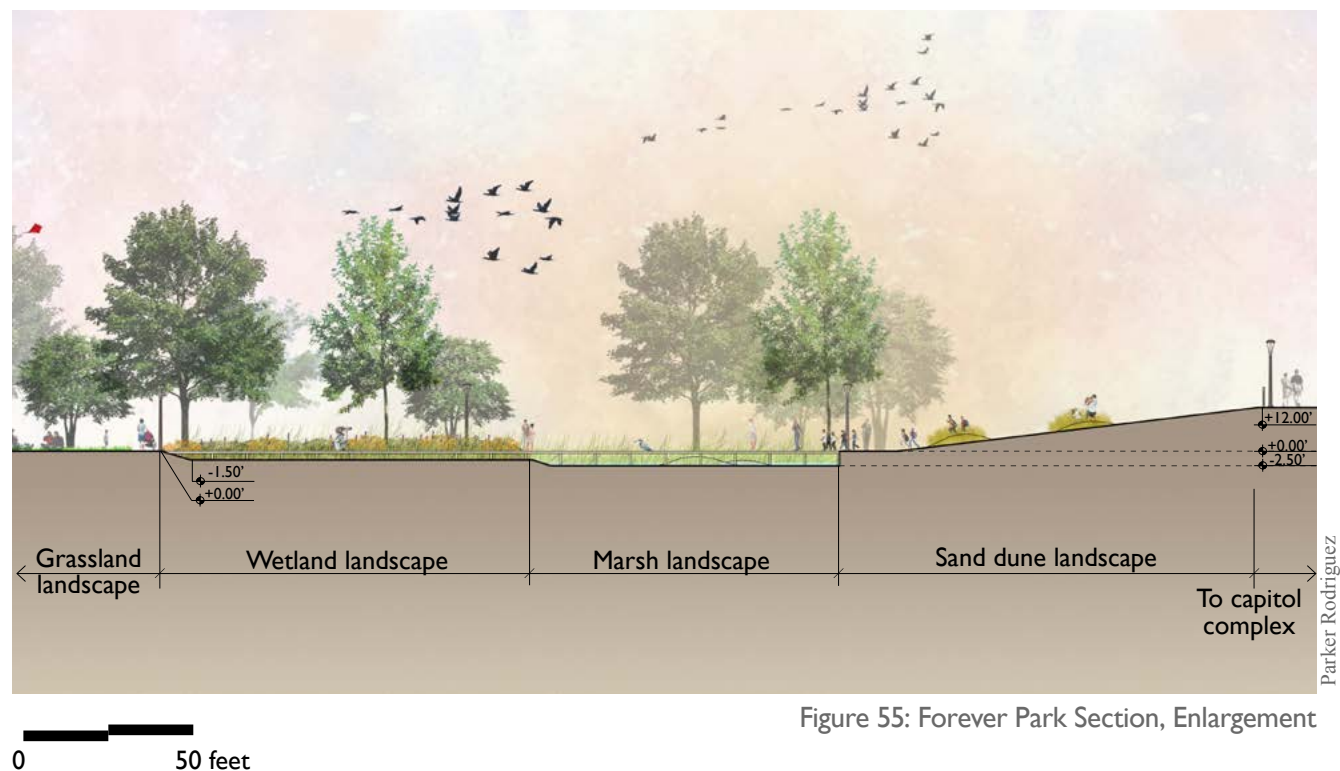


Figure 55: Forever Park Section, Enlargement

V. DESIGN OPTIONS

FOREVER PARK

The existing parking lot is a vast expanse of impervious surface that sends polluted stormwater to the Grand River (Figure 56). A park could transform the site, first as a smaller central corridor (Figure 57), and later as a larger, grander showcase of Michigan landscapes (Figure 58). The landscape bands that were part of the central pedestrian corridor park could expand to embrace the entire site, providing a new open space for recreation, events, and gatherings. This ambitious vision could catalyze the revitalization of this part of the capitol complex and the surrounding neighborhood. The park's ecological benefits include reducing impervious area, cleansing stormwater runoff, lowering ambient air temperatures, sequestering carbon dioxide, and increasing biodiversity. The park envisioned for the capitol complex site could become a transformative landscape that reshapes the destiny of its locale while improving the health of its residents.



GoogleEarth

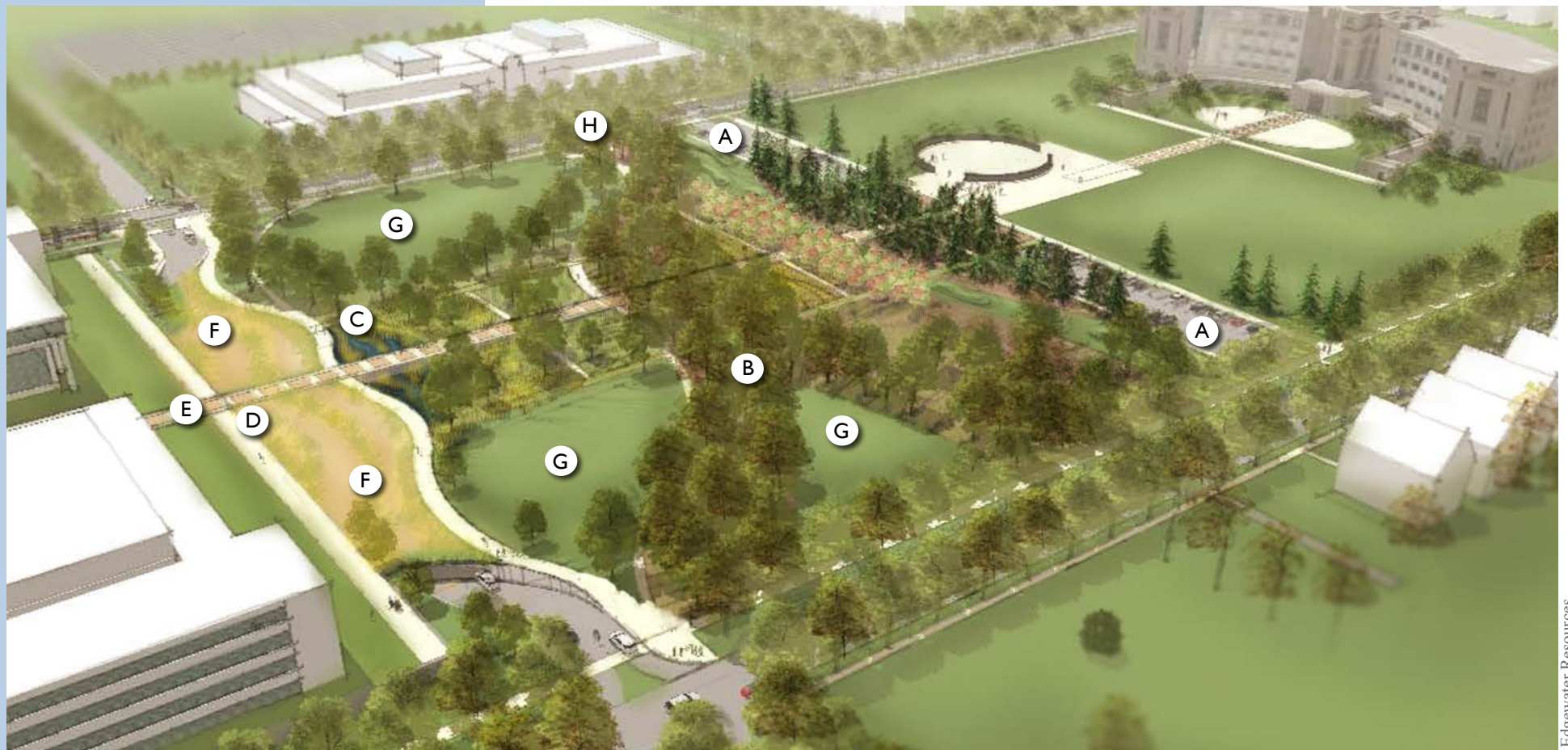
Figure 56: Existing Bird's Eye View



Edgewater Resources

Figure 57: Bird's Eye View of Central Pedestrian Corridor Park

V. DESIGN OPTIONS



Edgewater Resources

Figure 58: Bird's Eye View of Forever Park

LEGEND

- | | | |
|---|--|-----------------------------------|
| A Visitor parking | D Bicycle parking | G Flexible-use lawn spaces |
| B Shade trees and native plantings | E Existing 20' promenade to remain | H Crosswalk |
| C Detention basin | F Green roof over parking access drives | |

VI. NEXT STEPS

IMPLEMENTATION

The design options for the capitol complex vary from modest improvements to the public streets to profound changes to the character and use of the parking lots. A variety of strategies and funding sources could help implement the plan in stages over time as available resources allow. While the state of Michigan owns the streets and parking lots at the project site, both the state and the city of Lansing have much to offer to help implement the vision and much to gain by creating a better public space that helps protect the environment and improve public health. A collaborative partnership will be critical for setting priorities, identifying policy approaches and resources, and implementing the community's vision.

The following steps could help the city and state advance implementation:

Near-term steps (2015 to 2016)

- The city and state could establish a working group that meets regularly to establish priorities, discuss strategies for implementation, gather additional community input, and pursue funding. Close working relationships would facilitate implementation of the full plan because of the project's scale and complexity.
- The bicycle lane improvements involve restriping road pavement, with no changes to existing curbs, utilities, or street lights, making this change one of the least expensive and easiest to implement. Beginning with a small, easily achievable step could help build enthusiasm and momentum for implementing the plan while strengthening working relationships among city and state staff.
- The city could further explore the idea of allowing state employees to park on city streets in the neighborhoods surrounding the capitol complex during the work week. City representatives offered this suggestion during the workshop as a possible way the adjacent neighborhood could help meet state employee parking needs in exchange for a new public park open to residents. A temporary pilot project could help state employees and neighborhood residents understand potential impacts of a longer-term change and help the state evaluate the feasibility of removing up to 200 parking spaces from the existing parking lots to create the space for the central pedestrian corridor park concept.
- The state could implement the first phase of green walls by installing steel cables with twining vines on the complex walls facing the parking lot. This "living wall" could be installed with rain gardens at the base to serve as a model and provide a budget for greening walls throughout the capitol complex.

VI. NEXT STEPS

- The state could study the feasibility of a new crosswalk at the library entrance on Allegan Street by examining traffic counts, turning movements, and parking lot entry and exit counts to determine how traffic would be affected by the elimination of a traffic lane and addition of curb bump-outs and a traffic signal for pedestrians.
- Working in partnership, the state and city could explore options to reduce parking demand within the capitol complex. These options could include supporting mixed-use development on property adjacent to the downtown area, to provide housing options for employees who want to live closer to work. In addition, employee incentives for public transit and bike use and improvements to existing bus service could help reduce parking demand. Raising the cost of parking permits and eliminating any existing incentives (pre-tax pay deductions for parking) to better reflect the true cost of providing and maintaining parking would also help to reduce parking demand.

Mid-term steps (2017-2020)

- The state could begin implementing additional projects as the city and state identify funding sources. The state might begin construction of the central pedestrian corridor park if it concludes that it could remove 200 parking spaces from the parking lot. The state could also implement smaller projects. For example, green infrastructure funding might enable the state to begin greening the retaining wall around the Ottawa and Hannah buildings. Funding for streetscape improvements might enable the Michigan Department of Transportation to construct the crosswalk on Allegan Street and/or make other road improvements.
- The state could study how parking needs are changing as it implements new parking demand management strategies and as the workforce turns over. The state could begin studying the feasibility of removing all of the existing employee parking in the Allegan and Ottawa surface parking lots based on reduced demand and/or identification of available parking in other locations to enable construction of the Forever Park.

Long-term steps (2020 and beyond)

- Implementation of smaller projects should help generate community support for the longer-term vision and increase the chances of successfully competing for grants. Construction of the Forever Park could begin once the state has identified how to meet its needs for employee parking and how to fund the project.

VI. NEXT STEPS

FUNDING SOURCES

Federal Sources

EPA Clean Water Act Section 319 Grants can be applied to demonstration projects that reduce stormwater pollution. The rain gardens and living wall concept could be eligible for this funding. The grants are administered through the Michigan Department of Environmental Quality. More information is available at: www.michigan.gov/deq/0,4561,7-135-3307_3515-314500--,00.html.

The Michigan Water Pollution Control Revolving Fund provides low-cost loans and additional grant money for the planning, design, and construction of green infrastructure projects like the rain gardens and bioswales in the design options. More information is available at: www.michigan.gov/deq/0,1607,7-135-3307_3515_4143--,00.html.

Multiple Federal Transit and Federal Highway programs offer funding for bicycle and pedestrian projects that could be applied to the bicycle lanes and crosswalk projects on Allegan and Ottawa streets. For example, Michigan typically receives approximately \$26 million annually in Transportation Alternatives Program funds, which can be used for non-motorized transportation projects. Information about programs and potential eligibility is available at: www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm and www.fhwa.dot.gov/map21/factsheets/tap.cfm.

Community Development block grants through HUD could also provide potential sources of funding to develop affordable housing close to downtown Lansing for single employees and young families. Eligibility information is available at: portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs.

The Water Pollution Control Revolving Fund Loan Program is provided by EPA in conjunction with the Michigan Department of Environmental Quality. This program provides competitive awards for communities with an approved 319 or Clean Michigan Initiative watershed management plan and also a State Revolving Fund project plan for a specific project. Information is available at: water.epa.gov/grants_funding/cwsrf/cwsrf_index.cfm.

VI. NEXT STEPS

State Sources

Both Ottawa and Allegan streets are state roads and would qualify for road improvement funding from the Michigan Department of Transportation. Those dollars are typically budgeted years in advance, but the city and state could begin now to plan for future improvements. Having a solid plan developed with community input puts the project in a better position to compete for funding as it becomes available. More information is available at: www.michigan.gov/mdot/0,1607,7-151-9621_17216_18231---,00.html.

Act 51, the Michigan Transportation Fund, promotes safe and efficient travel for motor vehicle drivers, bicyclists, pedestrians, and other legal users of roads, streets, and highways. This program might have funding for road improvements. More information is available at: www.legislature.mi.gov/doc.aspx?mcl-Act-51-of-1951.

The Stormwater Asset Management and Wastewater grant program is provided by the Michigan Department of Environmental Quality to accelerate the statewide use of asset management practices that improve Michigan's water quality and public health. More information is available at: www.michigan.gov/deq/0,4561,7-135-3307_3515-314513---,00.html.

The National Endowment for the Arts has grant programs that support creative, economically competitive, healthy, resilient, and opportunity-rich communities. It might be a source of funding for public art. More information is available at: arts.gov/grants-organizations/our-town/introduction.

City Sources

Various local departments could be partners for the development and maintenance of the project, including Lansing's Public Service Department and the Parks Department. These departments have designated funds for services such as sanitary sewer and road maintenance. The city of Lansing's general fund might also be a funding source.

VI. NEXT STEPS

Private Sources

The Kresge Foundation is a Michigan-based foundation with a mission to support sustainable solutions in cities. In 2013, it awarded \$122 million in grants to cities and entities across the country. It has a particular interest in supporting issues around climate change and green infrastructure. The rain gardens and other landscape elements that reduce impervious surfaces might be eligible for funding for design or implementation. More information is available at: kresge.org/programs/environment.

Michigan companies such as Landscape Forms, Knoll, Dow Chemical, General Motors, and others in the areas of furniture design, solar power, and automotive technologies might be a source for funding, in-kind services, or product donation. In particular, these companies might be interested in funding the park concept of highlighting local Michigan products in the landscape as a source of state pride.

Global ReLeaf is a program through American Forests that helps communities with tree-planting projects. More information is available at:

www.americanforests.org/our-programs/global-releaf-projects/global-releaf-grant-application.

The Parks with Purpose Program is run through the Conservation Fund with the goal of addressing challenges facing urban conservation efforts. More information is available at:

www.conservationfund.org/type-of-place/parks-with-purpose.

The Fruit Tree Planting Foundation Program strategically donates orchards that will best serve communities for generations to follow, at such places as public schools and city parks. More information is available at: www.ftpf.org/accomplishments.htm.

The Alliance for Community Trees offers grants to support local tree-planting projects. More information is available at: actrees.org/what-we-do/grants-and-awards/planting-trees.

Crowdfunding is the practice of funding a project by raising contributions from a large number of people via the internet. Over \$770 million has been raised using sites such as gofundme.com and kickstarter.com. Crowdfunding might be an appropriate way to raise money for specific program items within a larger project, such as a recreation facility or public art. More information is available at: www.crowdfundingmi.com/#CrowdfundingMI.com.

The National Association of Realtors has a grant program for community placemaking (i.e., projects that make communities better places to live and work by transforming public spaces into vibrant community places). More information is available at:

www.realtor.org/topics/smart-growth/smart-growth-programs/placemaking.

COMPARISON COMMUNITIES

Atlanta, Georgia

Centennial Olympic Park is a 25-acre park that serves as the central public space for downtown Atlanta. It hosts countless festivals, events, and programs every year and is a daily respite for recreation and relaxation. It was the central meeting place for the 1996 Olympic Games and features artwork and fountains that commemorate the games, crystallizing the image of Atlanta as an Olympic city. The park was designed to pay homage to the Olympic theme, "Quilt of Leaves," with a grid of pathways and gardens that create a monumental quilt form in the landscape. These elements include a great lawn for performances, intimate water gardens for small gatherings, and perennial gardens for habitat.

The park, formerly an industrial area that was largely blighted and vacant, is now a green oasis in the city. Extensive tree canopy and porous surfaces for infiltration of rainfall replaced asphalt and rooftops. Many of the paved areas and walls in the project use locally sourced materials. The park has spurred a renaissance in downtown. In the 15 years following the Olympics, there has been over \$1 billion in private investment within three blocks of the site, including new museums, an aquarium, hotels, and residential towers embracing the edges of the park. The park's lasting legacy is as a place for residents and visitors to come together and enjoy a healthy place for people in the middle of the city.

Denver, Colorado

Civic Center Park, a 23-acre park with classically symmetrical sidewalks and lawn spaces, is known as the heart of civic life in Denver. Located just south of the central business district, the park connects the state capitol to the east and Denver's City and County Building to the west. The park is bordered to the north and south by numerous art and government institutions, as well as offices and restaurants. The park itself hosts numerous festivals, parades, and protests throughout the year. The park includes a Greek amphitheater, a war memorial, and the Voorhies Memorial Seal Pond. Flexible spaces in the park contain a variety of public art, a fountain, and formal gardens. Parking in the area is accommodated in several surface lots and parking structures within two blocks of the park, but the park itself has no parking.

The park was completed in 1919. Currently, city and county officials are studying proposals to make the park more accessible to pedestrians from surrounding neighborhoods, with improved crosswalks into the park and new bus stops. Food trucks park regularly at a plaza space in the park, providing lunch options for state employees and visitors. The adjacent area continues to see new development with recent additions such as the Denver Newspaper Agency, home of the Denver Post, just northeast of the park.



Leo Alvarez

Figure 59: Centennial Olympic Park



Kent Kanouse via flickr.com

Figure 60: Denver, Colorado Capitol

GREENING
AMERICA'S
CAPITALS

