CITY OF MINNEAPOLIS

Stadium Village Public Realm and Connectivity Study

Prepared for Hennepin County, City of Minneapolis, University of Minnesota and the Prospect Park Neighborhood

March 2012

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EXECUTIVE SUMMARY

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CHAPTER **1**

Stadium Village is one of 18 new stations that make up the Central Corridor LRT that will link the downtowns of Minneapolis and St. Paul. Ridership on the transit line is forecasted to be over 40,000 per weekday by 2030. This significant infrastructure improvement will profoundly impact development potential in the Stadium Village station area for years to come.

The purpose of the Stadium Village Station Area Public Realm and Connectivity Framework Plan is to illustrate the intent of the design principles, project goal and objectives and to offer recommendations to guide the evolution of the public realm and connectivity within the Stadium Village Station Area.

The public realm environment associated with the Stadium Village is comprised of the streets, public spaces, and infrastructure that define the framework for future public and private development and improvements to be made. The character and design of the public realm will be one of the determining factors for the success of the Stadium Village Station area. The design of the Public Realm must encourage diverse urban experiences and create a good and flexible environment for people to gather, congregate, and visit in order reinforce the sense of community. The design should also foster social and economic interactions, create an attractive destination with strong businesses, vibrant neighborhoods, and beautiful places; and result in streets that are safe, comfortable, and convenient for motorists, pedestrians, bicyclists, and transit users.

Plan Goals and Objectives

The goals and objectives have been defined through the previous planning studies and have driven the creation of the Stadium Village Public Realm and Connectivity Plan..

Project Goal:

Develop recommendations for policies, design standards, and public and private investments needed to create safe, connected, attractive, high quality public areas along this section of the LRT route.

Objectives:

- Investigate how this area is connected - particularly in terms of bicycle and pedestrian facilities, but also with regard to natural systems, including linkages to water and open space.
- Provide recommendations for improving multi-modal (particularly LRT, pedestrian and bicycle) circulation within the project area while improving open space linkages, community greening, and additional open space areas to serve as places for commuters and community to gather and enjoy
- Use high quality and visually striking design to reinforce strong identity and promote a "sense of place" that recognizes the importance of this area to all of its key stakeholders.
- Recognize the intensity and variability of activity in this area and design the public realm to serve multiple public and private purposes appropriate for both a major public event and a quiet summer day.
- Define a hierarchy of streetscape and gateway improvements within the district.

Public Realm Design Principles, Goals and Objectives

The design principles, goals and objectives serve as a foundation on which the Stadium Village Station Area Public Realm and Connectivity plan and recommendations are based. These principles are essential to create a safe, comfortable, pleasant and pedestrian-friendly multi-modal public realm environment that helps the creation of vibrant and interconnected civic spaces and adds to the economic vitality of the Stadium Village area.

These principles, applicable to both public and private development, will be combined with the goals, objectives, to drive the creation of the public realm and connectivity plan.

Define a Framework & Hierarchy of Vibrant Public Spaces and Linkages

- Provide flexible parks, open spaces and plazas for a variety of uses and a focus for community gatherings and provide an increased link between the broader neighborhood and LRT.
- Create pedestrian friendly linkages within a 5 to 10 minute walk of the station areas.
- Open spaces, public realm & streets provide a framework for future redevelopment

Integrate a Network & Hierarchy of Street Treatments

- Treat streets as part of the public realm system… not as barriers.
- Accommodate alternative forms of transportation throughout the study area.
- Define a hierarchy of treatments for approach routes, commercial and residential streets .
- Balance vehicular, bicycle, and pedestrian needs.

Encourage Compact Mixed-Use Developments

- Place new buildings to reinforce public realm, open spaces, and pedestrian accessibility
- Reinforce a compact urban development pattern through proper placement, alignment, and building proportions
- Design excellence is the foundation of successful and healthy communities.

Foster Environmental and Economic Sustainability

- Include green infrastructure components such as urban forest, stormwater BMP's, and other Low Impact Development techniques within the public realm where feasible.
- Encourage people to walk, bike, and use public transit to reduce traffic congestion, protect the environment and encourage physical activity.

General Public Realm Recommendations

The following public realm design recommendations provide guidance to prioritize public investments, the expansion of the public realm and the enhancement of City streets.

Land Use

The objectives for the land use recommendations are to promote a compact mixed-use development pattern along the corridors within the study area and increase density and housing opportunities to encourage an active public realm. The public realm should evolve as redevelopment along the streets occurs or as City of Minneapolis/University of Minnesota infrastructure projects occur.

Recommendations:

- Preserve the unique character of the University of Minnesota campus and Prospect Park Neighborhood. As the neighborhood and the campus continue to evolve, and reinvestment is enhanced by the LRT, there should be an emphasis on preserving the unique character of the Prospect Park neighborhood.
- As the opportunities for infill development emerge, the new development should reinforce the urban pattern by extending the street grid and placement of buildings to define the streets.
- Redevelopment at the intersection of Huron Boulevard/ University Avenue and Washington Avenue should be designed as signature buildings and gateway into the Stadium Village Station Area
- The placement of buildings to reinforce the street edge will enhance the public realm by creating more walkable streets and increased access to the LRT stations.
- Create transitions between University Avenue and the Prospect Park neighborhood to the south by encouraging medium to high density mixed-use residential facing towards University Avenue.
- Encourage mixed-use blocks and new buildings to activate the streets and create safe and more pedestrian activity along 27th Avenue, 29th Avenue, Huron Boulevard, Washington Avenue, University Avenue and 4th Street.
- Discourage one-story building forms along the main corridor within the study area.
- A majority of LRT users will be walking or cycling to the LRT stations, creating an opportunity to enhance first floor uses to activate and enhance the experience of pedestrians and transit users.

Built Form

The placement, scale and character of buildings is one of the most important components of the built environment that will shape the different street corridors and determine the long term success as an attractive destination with strong businesses, human scale, vibrant neighborhoods and an attractive place for investment. The primary objective with this section is to promote design excellence in all aspects of the corridor and to design new development to fit into its surroundings and respond to neighborhood transitions with building massing and architecture. The intent is to reinforce a compact urban development pattern with well-designed, attractive, functional, safe buildings that reinforce a distinct identity for the Stadium Village Station Area.

Recommendations

- Concentrate density and intensity along 27th Avenue, 29th Avenue, Huron Boulevard, Washington Avenue, University Avenue and 4th Street
- Encourage buildings on Huron Boulevard, Washington Avenue, and University Avenue to contribute to the character of the streetscape, face the street with attractive entrances that welcome pedestrians, and have windows that overlook the street to create a sense of security.
- Encourage buildings fronting University Avenue to step down to meet the existing neighborhoods scale.
- All new or redeveloped sites within the district should include mandatory streetscaping and expansion of the "frontage" zone to expand the public realm area.
- Buildings should be sited to support good connectivity to the center or neighborhood destinations that are nearby.
- Define guidelines and standards for site design, building massing, façade treatments, building materials, signs and sustainable design practices.
- The setback between buildings and the sidewalk should be designed to enhance the pedestrian experience, whether setbacks are attractive landscaped yards that provide privacy for building occupants or shopfronts at the sidewalk that display merchandise to passing pedestrians. In no cases should cars, parked or moving, be placed between the sidewalk and the buildings.
- Engage business owners along each of the major roadways to establish commercial and retail spaces at sidewalk level of buildings. Along with the enhanced sidewalk level expression each building should expand the "frontage" zone in order to create an expanded space for display and sale of goods, exhibition of art, or as outdoor seating areas for cafes or restaurants.

Public Realm and Streetscape Improvements

The Stadium Village streets and other public spaces should be designed as an interconnected network of human-scale outdoor rooms in which the safety and comfort of pedestrians and bicyclists is priority. The main purpose of streets is to let people move about, and every street should provide safety, convenience, and comfort for pedestrians and bicyclists. The following are recommendations for the design of Public Realm and Streetscape Improvements for the Stadium Village study area.

Recommendations

- Design the Public Realm to encourage diverse urban experiences and create a high quality and flexible environment for people to gather, congregate, and visit in order reinforce the sense of community.
- Allocate wisely within the limited space of the ROW: define the right proportions, unique spaces, and appropriate amenities to create a comfortable, inviting and memorable space where people want to spend time.
- Streetscape layouts should emphasize wholeness: the layout should focus on the entire block (s) rather than piecemeal and consider the larger context of the urban pattern and design and function of the street as a public space
- Streetscape design and elements should be coordinated to maximize ecological, economic, and social benefits while creating a contextualized sense of place
- Define opportunities for "flexible" public spaces or pocket parks: sidewalk areas, extension zones, or on private ROW (developed in conjunction with a redevelopment project) to provide a diversity of elements and spaces for public use/ enjoyment


Como
Neighborhood
Future Granary Road
5th Street
4th Street
University Avenue
University of
Minnesota
6th Street
23rd Avenue
Proposed
Granary
Park
4th Street
Washington Avenue
25th Avenue
26th Avenue
27th Avenue
InterCampus Transit Way
LEGEND
Project Limits
Erie Street
Essex Street
29th Avenue
Delaware Street
Malcolm Avenue
Arthur Avenue
Oak Street
Huron Boulevard
Ontario Street
27th Avenue
University Avenue
Tower
Park
Clarence Avenue
Bedford Street
Luxton
Park
Mississippi
River
Prospect Park
Neighborhood
N
0
300
600

- Develop guidelines for streetscape improvements on private property. These improvements should include parking lot buffers, clearly defined building entries, streetscape furniture (benches, bicycle racks, lighting, etc) and stormwater management BMP's
- Enhance streets through investment on the public realm. The completion of the LRT through the Stadium Village area provides a unique opportunity to improve the streets and public realm with a distinctive and consistent streetscape palatte.
- Streetscape improvements should be integrated into infrastructure planning and Capital Improvement Plan (CIP) to ensure that any incremental repair to streets or sidewalk repairs will include the upgrade of the public realm.

Pedestrian, Bicycle and multi-modal connectivity

One of the most important objectives defined in the planning study is to make the Stadium Village Station Area as interconnected, comfortable and accessible to pedestrians and bicycles. Walking and biking to many are preferred modes of transportation and a major force for fostering a livable community. This Plan promotes a safe and inviting pedestrian and bicycle experience to and from the station areas by creating a hierarchy of pedestrian scaled streetscape treatments and by strengthening the connections between nearby points of interests, neighborhoods, University of Minnesota Campus, trails and open spaces. Street and streetscape improvements, described in later sections, will play a large role in improving the public realm and the environment for pedestrians.

Pedestrian Recommendations

- Allow for safe and comfortable pedestrian movements along the street to and from the LRT stations to the adjacent neighborhoods and campus.
- Improve intersections to provide safe and accessible areas for pedestrian and bicycle crossings. These intersections are to include alternative paving materials, improved signalization, signage and other traffic calming techniques.
- Provide new sidewalk connections along 4th Street, 29th Avenue, Malcolm Avenue and 25th Avenue
- Provide improved sidewalk connections along Huron Boulevard, 27th Avenue, Essex Street, 25th Avenue, and 26th Avenue.
- Provide new multi-use trail link along railroad ROW between Huron Boulevard and 27th Avenue and at the intersection of 29th Avenue/ University Avenue into the Prospect Park neighborhood
- Provide a minimum of 8'-0" wide sidewalks throughout the corridor where feasible
- Incorporate streetscape elements such as more street trees, planters, monuments, public art, kiosks and benches to create a more inviting and comfortable sidewalk environment and promote more sidewalk activity.
- Sidewalk bump outs are also recommended where possible to decrease cross walk distances, moderate vehicular speeds, provide more sidewalk space for large numbers of pedestrians waiting to cross streets, and to define parking bays.

Bicycle Recommendations

- Improve connections at the edges of the station areas to facilitate bicycle travel to adjacent neighborhoods, the broader campus area and regional bicycle facilities.
- Include provisions for bicycle facilities and improved infrastructure. This should be included at or near the Stadium Village and 29th Avenue LRT stations. This may include bicycle racks, bicycle lockers, and/or other amenities to promote bicycle circulation to and from the LRT.
- Improve the connections and facilities along 27th Avenue to reinforce the "missing link" of the Grand Rounds.
- Provide a safe (dedicated) east/west on street shared bike route along 4th Street to connect 23rd Avenue to Malcolm Boulevard.
- Provide a north to south pedestrian and bicycle links to the future Granary road along 25th Avenue, 27th Avenue, 29th Avenue and Malcolm Avenue.
- Provide improved on-street bicycle route along 26th Avenue from Essex Street to University Avenue.
- Provide improved on-street bicycle route along University Avenue from 25th Avenue to 29th Avenue.
- Provide improved on-street bicycle route along Essex Street from Huron Boulevard to the Luxton Park area.


Como Neighborhood
Future Granary Road
University of Minnesota
Mississippi River
Prospect Park Neighborhood
Proposed Granary Park
Tower Park
LEGEND
New/ Enhanced On Street Bicycle Lane
New On Street Shared Lane
Multi-Use Trail
Improved Pedestrian Connection
Primary Intersection
Secondary Intersection
Project Limits
Existing Bicycle Facilities (bike lanes, signed bike routes, shared lanes)
Central Corridor LRT Route

- Work with the neighborhoods to identify inter-neighborhood bicycle routes. Improve bicycle and pedestrians connections across Highway 94, nearby neighborhoods, and the recreational trails along the riverfront
- Encourage expansion of the NICE ride bike share to other areas within the study area
- Encourage centralized bicycle parking (such as on-street bicycle corrals) at convenient locations for bicyclists to park their bikes and walk to places throughout the project area. This new bicycle parking should be located in close proximity to open spaces/ parks, and new redevelopment areas, adjacent to the LRT station areas and near bicycle corridors.
- The width of traffic lanes should be reduced where possible to provide more space for wider sidewalks.

Public Open Space, Parks and Plazas

To enhance the reconstruction of the LRT route and priority public realm improvements at the station areas, a public realm strategy should be put into place to enhance and green the streets within the district over time. A systematic program of gradual street improvements has the inherent ability to change the overall character of the project area to create an enjoyable and connected network of green pedestrian streets.

The success of future public realm improvements will be dependent on the opportunity to create these flexible spaces that will be able to accommodate a wider range of civic functions and activities that are district in character and tie to unique characteristics of the University and adjacent neighborhoods.

The primary objectives for the open space system is to create stronger connections between existing amenities to create a public space network and provide better meeting places for all types of activities such as outdoor festivals, seating areas, coffee and lunch breaks, and art displays.

Recommendations

- Create several small urban gathering spaces/pocket parks along 27th Avenue, 29th Avenue, Huron Boulevard, Washington Avenue, University Avenue and 4th Street.
- Create several small neighborhood park/amphitheater spots along University Avenue at Tower Park.
- Create a new festival plaza adjacent to the TCF Stadium at the northwest corner of University Avenue and 23rd Avenue.
- Create a "convertible street" plaza along the extension of Washington Avenue and University Avenue. This space will provide for normal traffic operations for a majority of the time but can be closed for programmed community/ University events.
- Where existing sidewalks are less than 10' wide, setback buildings a minimum of 5-6 feet (within the frontage zone) to create wider sidewalks for outdoor seating and streetscape amenities.
- Create a wayfinding system for the station areas, public transit, businesses, parks, and University of Minnesota campus that is not only informative but also contributes to the area's design character.

Green Infrastructure

Green Infrastructure is the creation of the interconnected network of sustainable practices to enhance the built environment and contribute to the overall health of natural ecosystems. Green infrastructure includes the expanded urban forest to provide shade and shelter, protection of healthy soils and promote clean water through the utilization of best management practices (BMPs) for stormwater.

Recommendations

- Green corridors should be developed on all side streets connecting to the LRT route and primary street corridors (4th Street, University Avenue, 25th Avenue, 27th Avenue, 29th Avenue and Huron Boulevard). The green corridors will be developed with street tree plantings, sustainable infrastructure projects, streetscape enhancements and public art projects.
- Enhance the "urban forest" with trees, understory plantings, and above ground planting areas.
- Define opportunities for stormwater management and reuse underutilized public ROW space.


Como Neighborhood
Future Granary Road
5th Street
4th Street
University Avenue
6th Street
23rd Avenue
Proposed Granary Park
University of Minnesota
Washington Avenue
4th Street
25th Avenue
26th Avenue
27th Avenue
Intercampus Transit Way
29th Avenue
Malcolm Avenue
Delaware Street
Arthur Avenue
University Avenue
Clarence Avenue
Bedford Street
Tower Park
Luxton Park
Essex Street
Erie Street
Huron Boulevard
Oak Street
Ontario Street
27th Avenue
Mississippi River
Prospect Park Neighborhood
LEGEND
Pocket Park / Urban Plaza
Open Space
Stormwater Management Areas
MWMO Bridal Veil Creek - Urban Sub-watershed Stormwater Retrofit Assessment Areas
Project Limits
N
0
300
600

CHAPTER 2

STUDY PURPOSE & BACKGROUND

Study Purpose and Background

Hennepin County (County), the City of Minneapolis (City), and the University of Minnesota (University) are collaborating on a joint planning study of the Central Corridor Light Rail Transit (LRT) Stadium Village station area. The joint planning effort will address a range of issues, including planning and development, parking, infrastructure, and public realm improvements.

As part of this larger planning effort, this document identifies recommendations for policies, design standards, and public and private investments needed to create safe, connected, attractive, high quality public realm areas along this section of the LRT route and within the defined project area. The public realm environment associated with the Stadium Village is comprised of the streets, public spaces, and infrastructure that define the framework for future private development and improvements to be made.

Stadium Village is one of 18 new stations that make up the Central Corridor LRT that will link the downtowns of Minneapolis and St. Paul. Ridership on the transit line is forecasted to be over 40,000 per weekday by 2030. This significant infrastructure improvement will profoundly impact development potential in the Stadium Village station area for years to come.

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Objectives:

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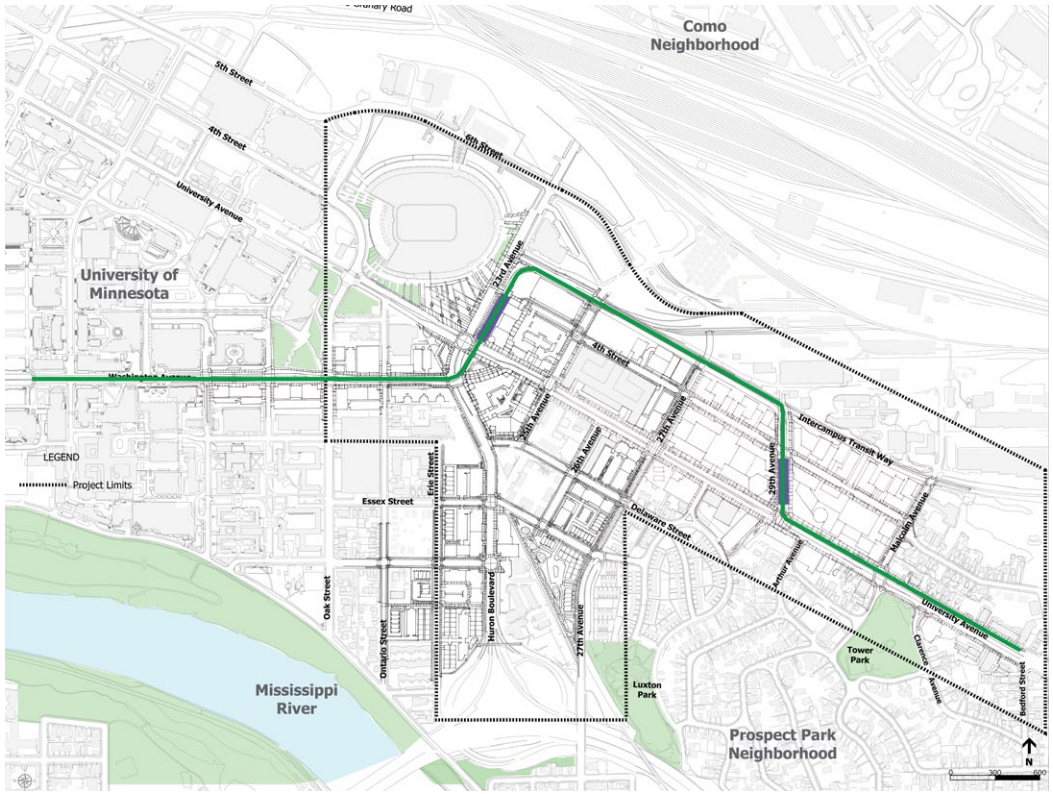
- Define a hierarchy of streetscape and gateway improvements within the district.

Report Structure

The report is organized according to the planning steps needed to complete the study. The first section is an evaluation of the existing built and environmental characteristics of Stadium Village. The second section provides general guidelines and recommendations for the improvement of the public realm. The third and final section provides strategies, costs and funding sources for the implementation of the public realm recommendations.



Study Area

The Minneapolis Plan describes Transit Station Areas as areas with unique opportunities and challenges within ½ mile of regional transit stations. Density, urban design and public infrastructure are especially critical in these areas. Transit Station Areas are designed with the pedestrian, bicyclist, and/or transit user in mind and are intended to serve individuals who are more likely to use transit.

In the case of Stadium Village there are several variables that affect what might be defined as the public realm and connectivity study area. The study area has defined edges to the north, in the form of the TCF Stadium and the BNSF rail yards. The western edge of the study area is the University of Minnesota campus, the southern edge is Interstate 94 and the eastern edge is the historic Prospect Park neighborhood. The study area also sits directly between two LRT stations which located within a ½ mile of the Stadium Village station: the East Bank station to the west and the 29th Avenue station to the east. This study recognizes these effects and takes them into consideration when considering the design of the public realm for the Stadium Village station area.

Relationship to Market and Parking Study

The Public Realm and Connectivity Study is the last of three studies that look at the long term planning and development opportunities for the Central Corridor Light Rail Transit (LRT) Stadium Village station area. The two previous studies looked at the market opportunities and parking implications of the new LRT route. The key findings for each of these two studies is defined below.

Market Study

The market study has a significant impact on the overall recommendations for the improvement of the public realm and connectivity of the project area. The identified redevelopment opportunities within the study area will ultimately shape and define the public realm and inform the opportunities for overall connectivity. The following are the key findings from the Market Study.

Retail Key Findings

- Retail demand greatly exceeds supply in Stadium Village
- A little over 100,000 square feet of existing retail in Study Area
- Current retail offerings are heavily concentrated in restaurants, bars and other food establishments (~70%).
- Spending power of Study Area residents, workers, and visitors could support an additional 50,000 square feet of retail today.
- Forecasted growth in the Study Area and impact of LRT could increase supportable retail by an additional 20,000 to 30,000 square feet through 2020.
- Vast majority of retail is dependent on pedestrian accessibility.
- Preserve key areas for retail growth (ground floor spaces in highest trafficked areas).
- Key categories for growth will include restaurants, apparel, electronics/communications, and grocery.
- Expanding retail offerings will be as important an "amenity" as improvements to public realm.
- Due to land and space constraints within Stadium Village some retailers may capitalize on demand by operating in station areas one or two stops from Stadium Village.

Office Key Findings

- Office demand in Stadium Village is heavily dependent on the University or the State of Minnesota and not on the office needs of the broader open market.
- Nearly all of the multi-tenant office space in Stadium Village is filled by the University or the State.
- Broader office market conditions are currently weak which will delay absorption of new market-driven office space in Stadium Village.
- The 29th Avenue, Westgate, and Raymond Avenue stations are much stronger office submarkets because of highway accessibility and visibility.
- Forecasted growth in Metro area office-based jobs suggests that new office development in Stadium Village could reach 40,000 square feet provided available supply decreases in other competitive submarkets.
- Calculated office demand does not include the University of Minnesota's expansion plans
- Office demand will be strongest from users with local markets, such as lawyers, financial planners, dentists, chiropractors, etc.

Land Use	Demand (Sq Ft/Units)	Demand (Acres)	Potential Acreage Ripe for Redevelopment
Retail	**70,000-80,000**	**3.2-3.7**	**16.38**
Office	**20,000-40,000**	**1.8-2.4**	**Same as Retail**
Industrial	**2,500**	**<1**	**n/a**
Residential	**750 units**	**12.5**	**19.23**
Total	**--**	**17.5-18.6**	**35.61**

Industrial Key Findings

- Remnants of industrial uses are along Huron Blvd and 27th Avenue, though significantly more industrial exists further east and north outside of the Stadium Village study area.
- Very little job growth is forecast for industrial-based jobs in the next 10 years.
- Calculated demand for industrial space is nominal (<2,500 square feet).
- Industrial uses typically do not locate near LRT stops because rents support higher uses.
- The University may spur some forms of industrial uses that function more like office spaces (e.g., laboratories, high-tech manufacturing, etc.).

Housing Key Findings

- The market for student housing is very strong, and is currently outbidding most other uses for available sites.
- There are over 250 student housing units currently planned, proposed, or under construction in Stadium Village.
- Although University enrollment has plateaued, demand for student housing remains high and no one can predict when saturation will occur until it shows up as rising vacancy rates.
- A University District Alliance study found demand for 2,300 non-student housing units through 2020 among the neighborhoods surrounding the University, including Stadium Village.
- More amenities in Stadium Village, especially retail choices, will increase demand for housing.

Stadium Village Development Issues and Opportunities Key Findings

Area 1 Key Findings

- The intersection at University Avenue, Washington Avenue, Huron Boulevard and 23rd Avenue has the potential to be a landmark location due to development opportunities, visibility and future University plaza.
- There may be an opportunity to intensify development by pushing parking north of 4th Street which will also preserve scarce retail opportunities.
- Stronger retail linkages between Area 1 and Washington Avenue will strengthen both areas.

Area 2 Key Findings

- Also located at potential landmark location corners
- Area east of Huron has key retail anchor potential
- Superior visibility with some access challenge

Area 3 Key Findings

- Pedestrian dominated retail
- Some limited opportunities for infill or intensification
- Adequate parking spaces overall, but shortage of quick turnover or street parking for customers

Area 4 Key Findings

- Will continue to see student housing pressure unless demand is relieved elsewhere.
- Area west of Ontario could be attractive for non-student housing, in addition to student housing.
- Standards should be reviewed to ensure that new multi-family meets the City's and neighborhood's intent regarding size of buildings, buffering between uses, etc.

Area 5 Key Findings

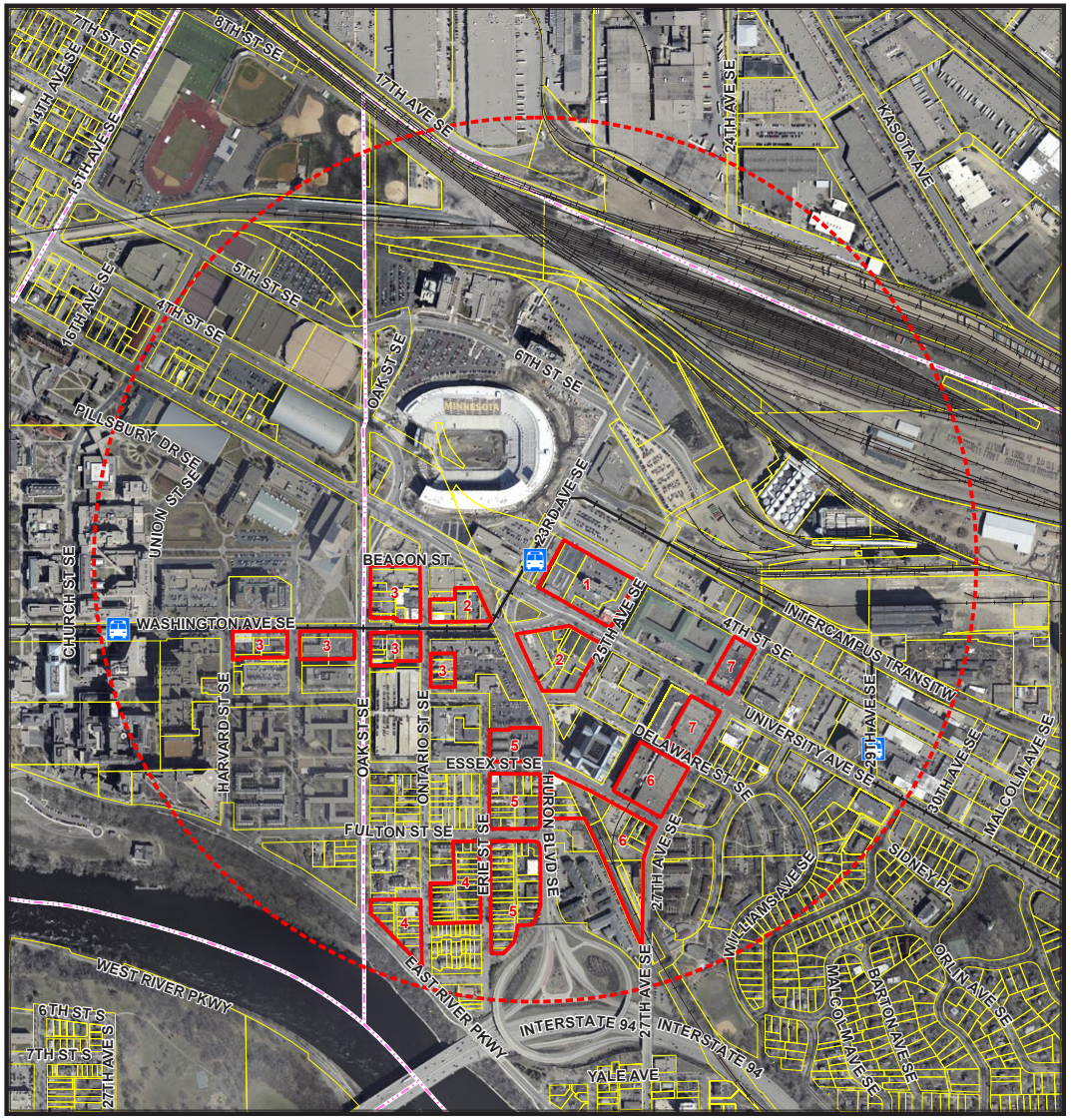
- Will also continue to see student housing pressure unless demand is relieved elsewhere
- Could also see additional pressure from a developer wanting to redevelop a site on Huron Boulevard with added depth either for student housing or housing that takes advantage of highway & river proximity
- This development pressure could be delayed until the Class B & C apartment buildings in this area begin to see vacancy due to newer, higher amenity construction.

Area 6 Key Findings

- This remnant of the industrial history for this area is increasingly beginning to feel out of place as non-industrial development pushes eastward.
- This is the largest potential redevelopment site in the Stadium Village area. However, it lacks non-residential attributes and is one of the more remote sites in the study area.

Area 7 Key Findings

- These two sites would be attractive due to their simplified ownership pattern and University Avenue access/visibility.
- Development pressure could come in the form of intensification/ change of use or redevelopment.
- Depending on the timing of surrounding development, the character of these parcels could relate to either the Stadium Village or the 29th Avenue transit oriented development areas.



Stadium Village Planning Area

Parking Study

The primary purpose of the parking study for the Stadium Village Station Area was to inform the transportation element of the Stadium Village Station Area Plan and to make recommendations that will support safe, efficient, and convenient parking and traffic circulation under the following scenarios

One of the key objectives of this plan is to provide a convenient and adequate parking supply without allowing it to dominate the streetscape.

Key Findings of the Study:

- Segment 1 — No on-street parking is provided in Segment 1, and none of the off-street stalls in Segment 1 will be affected by LRT.
- Segment 2 — 113 on-street spaces will be lost. No off-street stalls will be lost in Segment 2.
- Segment 3 — Eight on-street spaces will be lost in Segment 3, and no off-street stalls will be lost.
- Segment 4 — 70 on-street spaces will be lost in Segment 4, and 52 off-street stalls will be lost.
- In total, 190 on-street (42 percent of 456 spaces) will be lost, and 52 off-street stalls (1 percent of 4,990 stalls) will be lost due to LRT implementation. The most significant losses in parking supply will be in Segments 2 and 4, two locations in the study area where commercial uses are located, and parking is needed to meet the highest levels of demand in the study area.
- On-street parking utilization both in Segments 2 and 4 was found to be high, where typically 75 percent or more of the parking spaces were occupied.
- Segment 2, today with 135 on-street spaces will lose 113 spaces, a loss of 84 percent.
- Segment 4, today with 85 on-street spaces will lose 70 spaces; a loss of 82 percent.
- 266 on-street spaces will remain in the study area after LRT is implemented. Twenty-two on-street spaces will remain in Segment 2, and 15 on-street spaces will remain in Segment 4.
- A comparison of non-event day and event day parking showed that the occupancy of on-street spaces was generally consistent, with very little change between non-event and event day utilization rates. The majority of event day parking takes place in University of Minnesota parking ramps near the event venues and in Dinkytown. This leads to the conclusion that on-street parking is not as significant a factor on event days as was previously thought.
- With LRT there will be an estimated 1,830 fewer daily auto trips in the study area by 2030 (and therefore, a similar reduction in daily parking demand).

Long Term Parking Recommendations

- With reduction in daily auto usage, parking demand will not be as critical in the long-term as it is now.
- Accommodating TOD will be the critical need:

  - Establish a Stadium Village-specific parking ratio that reflects reduced reliance on private auto use.

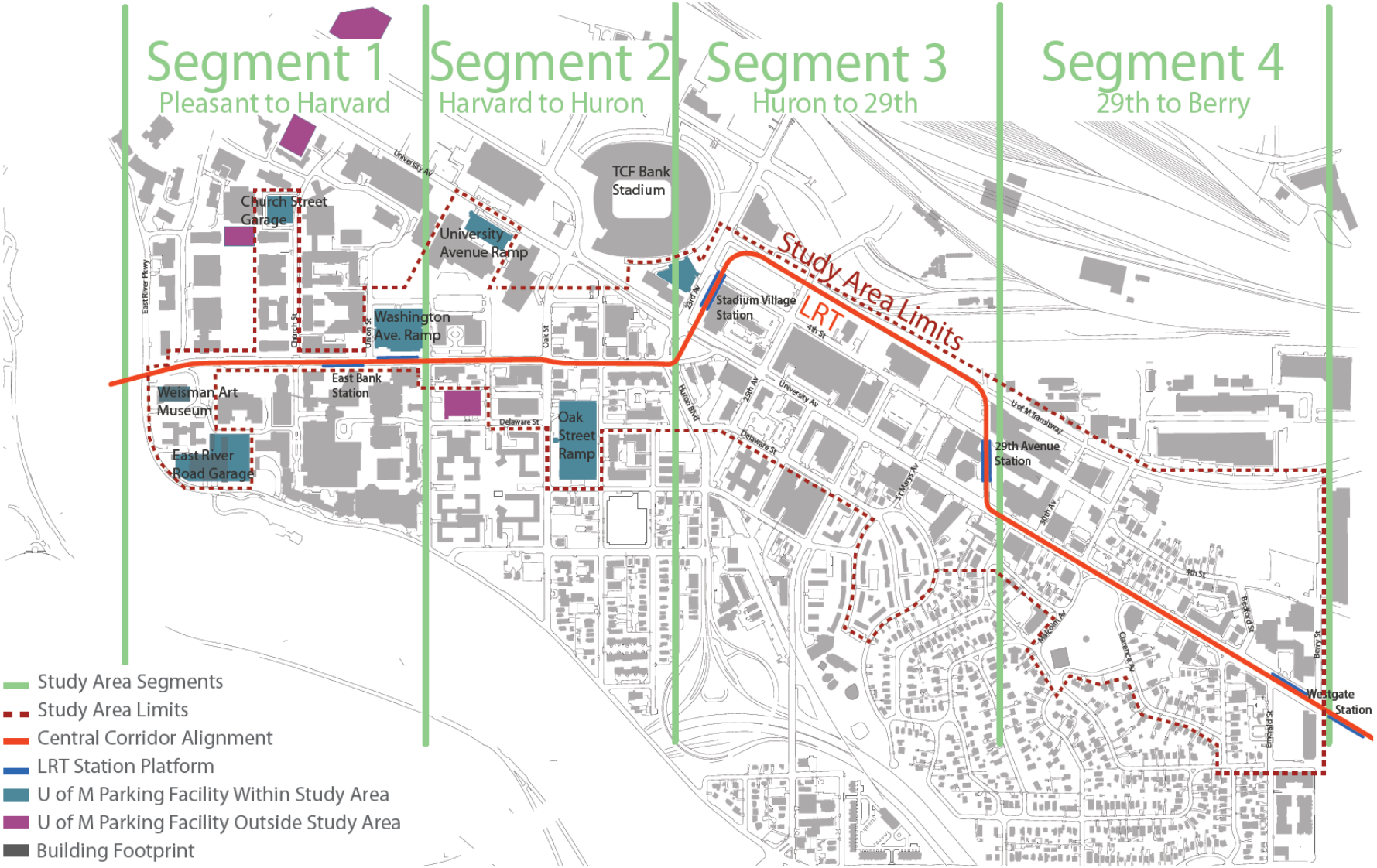
  - As the south side of Washington Avenue, between Harvard and Walnut Streets, is redeveloped, integrate off-street parking with the redevelopment.

  - Acquire underutilized uses for redevelopment and develop surface parking lots, parking ramps, or underground parking garages that would be associated with a block's redevelopment.

  - Consistent with mixed-use TOD redevelopment in Segment 4, develop centralized district parking facilities that are integrated within the TOD.

Study Area Segments

The study area was divided into four segments based on the physical location of CCLRT tracks and stations, an assessment of land uses adjacent to the tracks, and expected travel/parking behavior. From west to east the four study area segments are:



Planning Process

Public Involvement

Public involvement and coordination between public agencies was a critical component of the Stadium Village Public Realm and Connectivity study planning process. The planning process utilized a Task Force for guidance and facilitated a series of meetings with key City departments including Public Works, CPED, University of Minnesota and Hennepin County.

Other groups that provided input into the plan included the Minneapolis Park and Recreation Board and the Prospect Park and East River Road Neighborhood (PPERRIA).

The PPERRIA community residents and leaders are the specific users and have the most relevant knowledge of how the streets and sidewalks operate for bicyclists and pedestrians. The planning process was designed to allow the broader membership of the PPERRIA residents.

Public Works staff as well as the broader community stakeholders had opportunities at each stage in the process to participate in the formulation of recommendations and creation of the final concept plans.

Task Force Meetings

The role of the Task Force was to provide insight into City policies, nuances to neighborhood livability, provide project guidance and review suggested recommendations.

The project Task Force was comprised of individuals from CPED Planning staff, University of Minnesota and Hennepin County staff and PPERRIA community residents. The Task Force meetings were held on the following dates:

- November 25th, 2011
- January 24th, 2012
- February 23rd, 2012

Additional Technical Input Meetings

A series of additional technical and policy meetings were held with Public Works staff and Minneapolis Park and Recreation Board staff during the planning process.

These technical input meetings occurred at key stages in the planning process to allow for technical and policy related feedback prior to making recommendations to the Task Force.

Background Studies

For the purpose of the Stadium Village Public Realm and Connectivity study the following documents were reviewed and the most pertinent information from these studies have been documented for further consideration.

- 2001 Southeast Minneapolis Industrial (SEMI) / Bridal Veil Revised Master Plan 2004 NRP Phase I Plan Review Prospect Park/East River Road Neighborhood
- 2006 University Avenue SE / 29th Avenue SE Transit Corridor Development Guidelines
- 2006 Open Space Protection Opportunities Guidebook
- 2006 Mississippi River Critical Area Plan City of Minneapolis
- 2007 Southeast Minneapolis Industrial/University Research Park (SEMI/URP)
- 2007 Parking and Transportation Master Plan University of Minnesota
- 2007 Moving Forward Together: University of Minnesota Minneapolis Area Neighborhood Impact Report and Appendices
- 2008 Keeping the Promise: Completing the Grand Rounds
- 2008 ACCESS MINNEAPOLIS: Design Guidelines for Streets and Sidewalks, Pedestrian Facility Design
- ACCESS MINNEAPOLIS 2010 Bicycle Master Plan
- 2008 Metropolitan Council Missing Link Development Study - Grand Rounds
- 2009 Twin Cities Campus Master Plan University of Minnesota
- 2009 University District Zoning and Planning Regulatory Review
- 2009 The Minneapolis Plan for Sustainable Growth City of Minneapolis
- 2009 East Gateway District Master Plan University of Minnesota
- 2011 Stadium Village Station Area Small Area Plan

CHAPTER 3

URBAN DESIGN ANALYSIS

This chapter provides an urban analysis of current conditions within the Stadium Village Station area, and summarizes the pertinent information from previous planning studies that were used to create the Stadium Village Station Public Realm and Connectivity planning document.

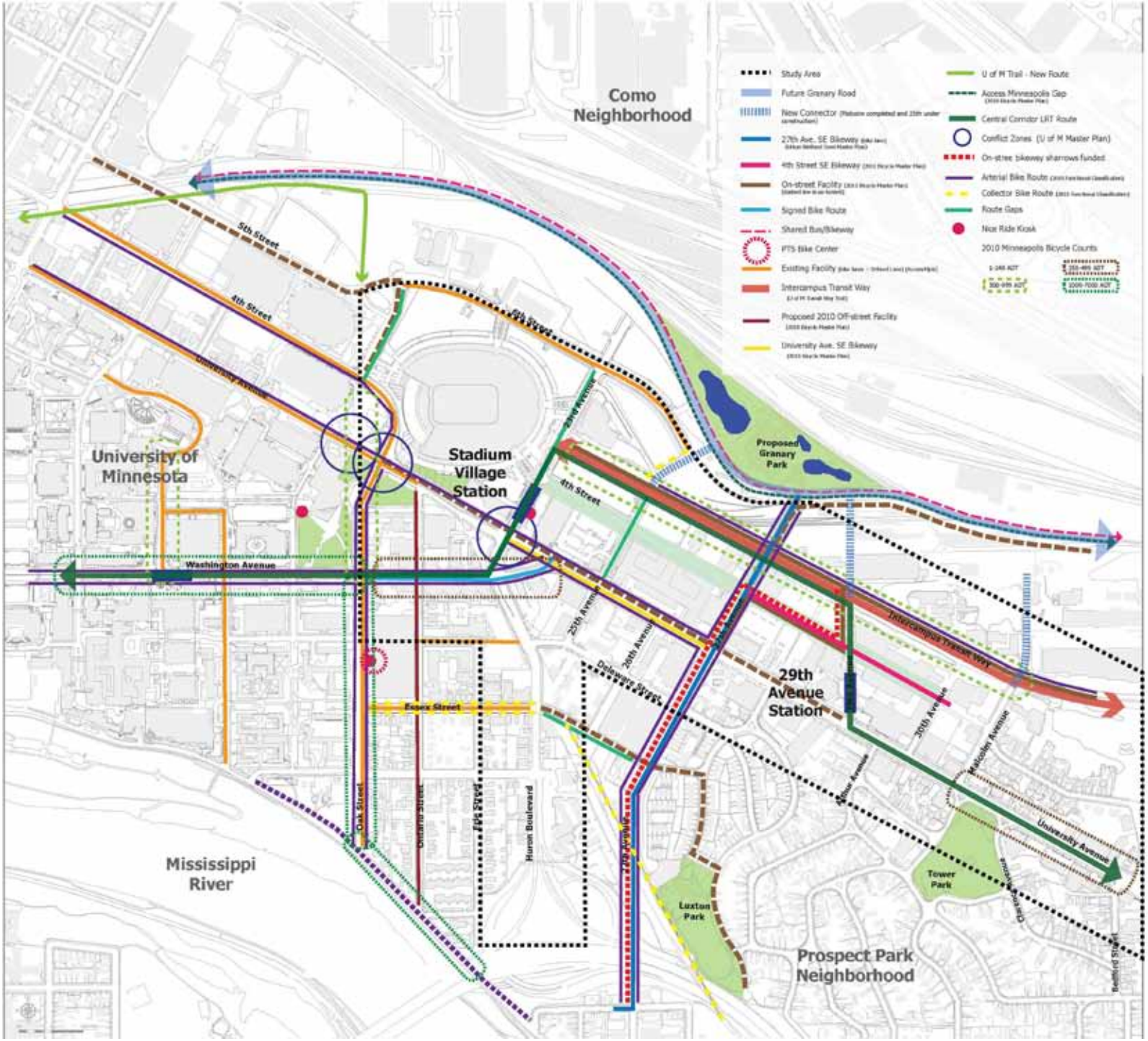
Bicycle Access and Connectivity

Bicycle circulation and access within the Stadium Village study area has been analyzed as part of many planning studies. The intent of the analysis is to overlay all of the existing bicycle facilities with future planned facilities to define bicycle system "gaps". The bicycle system "gaps" are the areas where facilities currently do not exist or are not planned for as part of the larger system. Recommendations for improved bicycle circulation and connectivity are defined later in Chapter 4.

Some of the major bicycle facility improvements to consider include;

- 25th Avenue – Important link to connect student housing near Deleware Street to University the future Granary Road
- 26th Avenue - Important link to connect student housing near Essex Street to University Avenue
- 27th Avenue One of the most important bicycle routes to define facility improvements for occurs along 27th Avenue which has been defined as a critical piece of the "missing link" in the Minneapolis Grand Rounds system.
- 4th Street – Future mixed-use residential area and important parallel bike facility to University Avenue
- Essex Street- Important bicycle link from core campus area to Prospect Park neighborhood and Luxton Park area
- Connections along 25th Avenue, 27th Avenue and Malcolm Avenue to a future Granary Road.

There are currently no bicycle routes located along University Avenue between 23rd Street and Malcolm Avenue which is a problem given the large draws for bicyclists such as the University of Minnesota and the trail along the Mississippi River. Bicyclists can frequently be seen on riding in outside drive lanes along the roadway to commute along the corridor.


Como Neighborhood
University of Minnesota
Stadium Village Station
29th Avenue Station
Prospect Park Neighborhood
Mississippi River
Proposed Granary Park
Tower Park
Luxton Park
Study Area
Future Granary Road
New Connector
27th Ave. SE Bikeway
4th Street SE Bikeway
On-street Facility
Signed Bike Route
Shared Bus/Bikeway
PTS Bike Center
Existing Facility
Intercampus Transit Way
Proposed 2010 Off-street Facility
University Ave. SE Bikeway
U of M Trail - New Route
Access Minneapolis Gap
Central Corridor LRT Route
Conflict Zones (U of M Master Plan)
On-street bikeway sharrows funded
Arterial Bike Route
Collector Bike Route
Route Gaps
Nice Ride Kiosk
2010 Minneapolis Bicycle Counts
5th Street
4th Street
University Avenue
Washington Avenue
2nd Avenue
25th Avenue
26th Avenue
Delaware Street
Essex Street
Oak Street
Ontario Street
Huron Boulevard
29th Avenue
30th Avenue
Malcolm Avenue
Minor Avenue
Intercampus Transit Way
Chestnut Avenue
Bedford Street

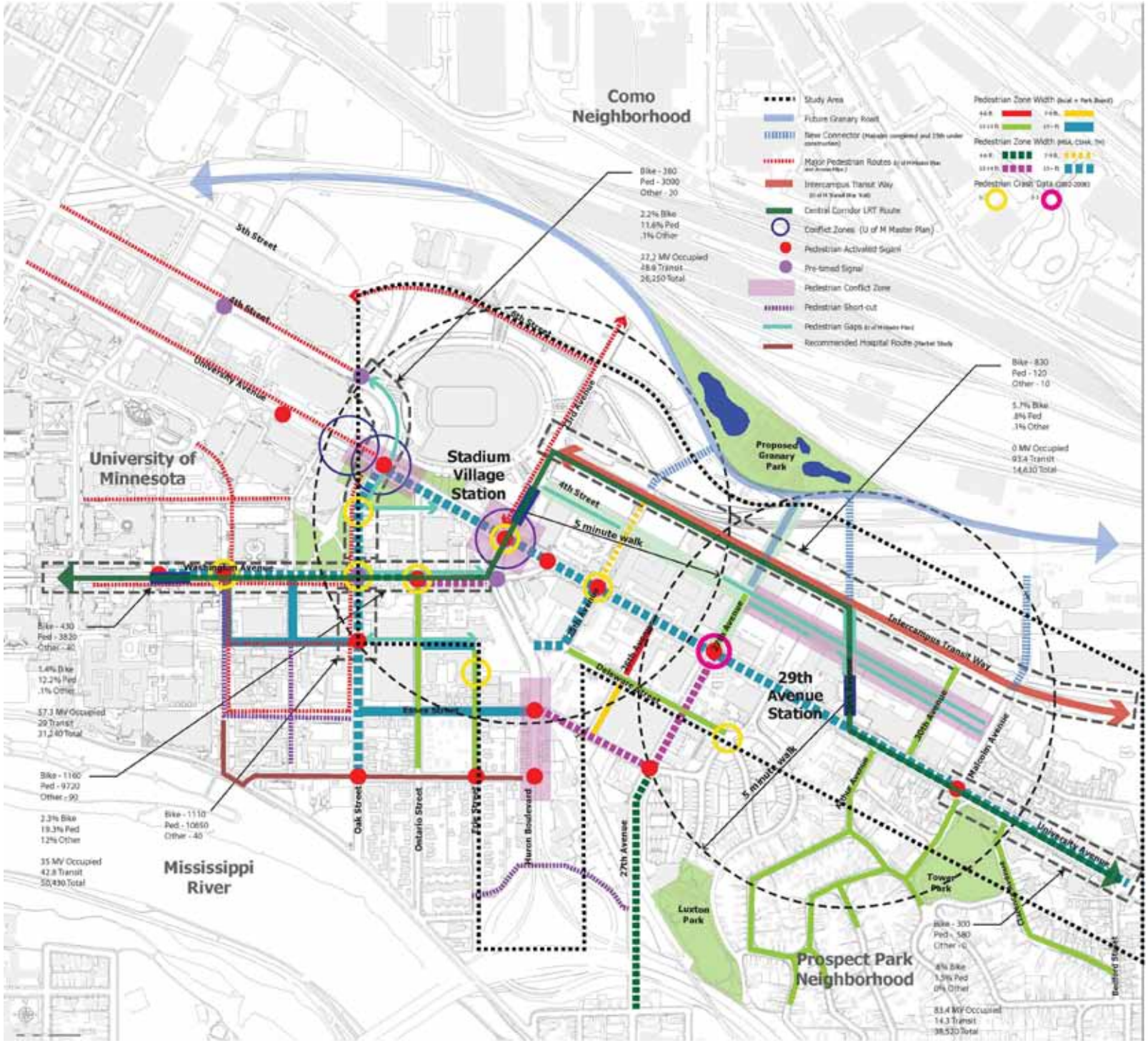
Pedestrian Connectivity

The analysis of the overall pedestrian connectivity within the Stadium Village area looked at the previously prepared planning studies to define deficiencies in pedestrian facilities, pedestrian counts, pedestrian/ automobile conflict zones, overall width of existing sidewalks, and sidewalk "gaps".

The future LRT station and route will promote more walking access to the station area and broader community. The LRT will deliver more people into the stadium village area and the high-quality public realm that is developed will assist in attracting and supporting increased levels of activity.

Primary recommendations to the pedestrian facilities should occur within a 5 minute walking radius of the station area (approximately 1240 ft or four blocks).

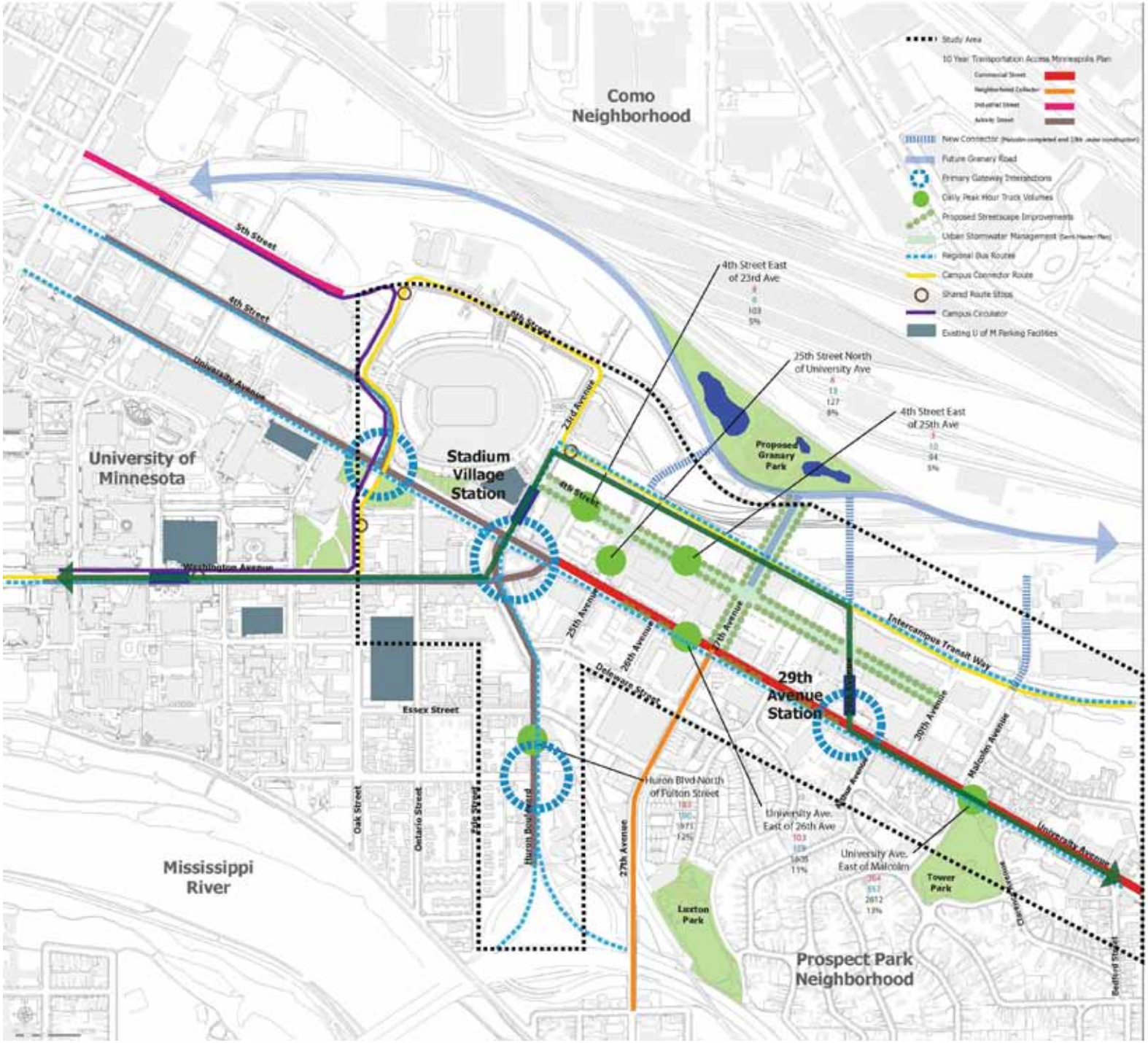
Primary areas of concern related to pedestrian facilities occur along Huron Boulevard, 27th Avenue, 4th Street, 29th Avenue and adjacent connections in to the neighborhoods and University of Minnesota campus area. There are limited facilities along many of these roadways and that hinders the creation of a friendly, walkable street corridor even though they have significant pedestrian demand due to the proximity to the University of Minnesota.


Como Neighborhood
University of Minnesota
Stadium Village Station
29th Avenue Station
Prospect Park Neighborhood
Mississippi River
Proposed Granary Park
Luxton Park
Tower Park
Study Area
Future Granary Road
New Connector
Major Pedestrian Routes
Intercampus Transit Way
Central Corridor LRT Route
Conflict Zones (U of M Master Plan)
Pedestrian Activated Signal
Pre-timed Signal
Pedestrian Conflict Zone
Pedestrian Short-cut
Pedestrian Gaps
Recommended Hospital Route
Pedestrian Zone Width
Pedestrian Zone Width
Pedestrian Crash Data
Bike - 380
Ped - 3090
Other - 20
2.2% Bike
11.6% Ped
.1% Other
17.2 MV Occupied
48.6 Transit
26,250 Total
Bike - 830
Ped - 120
Other - 10
5.7% Bike
.8% Ped
.1% Other
0 MV Occupied
93.4 Transit
14,630 Total
Bike - 430
Ped - 3820
Other - 40
1.4% Bike
12.2% Ped
.1% Other
57.1 MV Occupied
29 Transit
31,340 Total
Bike - 1160
Ped - 9720
Other - 90
2.3% Bike
19.3% Ped
12% Other
35 MV Occupied
42.8 Transit
50,430 Total
Bike - 1110
Ped - 10650
Other - 40
Bike - 300
Ped - 580
Other - 0
4% Bike
1.5% Ped
0% Other
83.4 MV Occupied
14.3 Transit
38,520 Total
5th Street
4th Street
University Avenue
Washington Avenue
5 minute walk
Oak Street
Ontario Street
Fifth Street
Huron Boulevard
27th Avenue
Delaware Street
Essex Street
30th Avenue
Jefferson Avenue
Talmage Avenue
Bedford Street

Vehicular and Parking

The analysis of the overall vehicular access and parking within the Stadium Village area looked at the previously prepared planning studies to define current street classification, street role within the transportation system, current campus and regional bus routes, automobile ADT's, truck traffic and volumes and hierarchy of intersections. It should be noted that the ongoing Granary Road study could have a major impact on future traffic circulation and ADT's within the project area, as well as future connectivity to Granary Road along 25th Avenue, 27th Avenue and 29th Avenue.

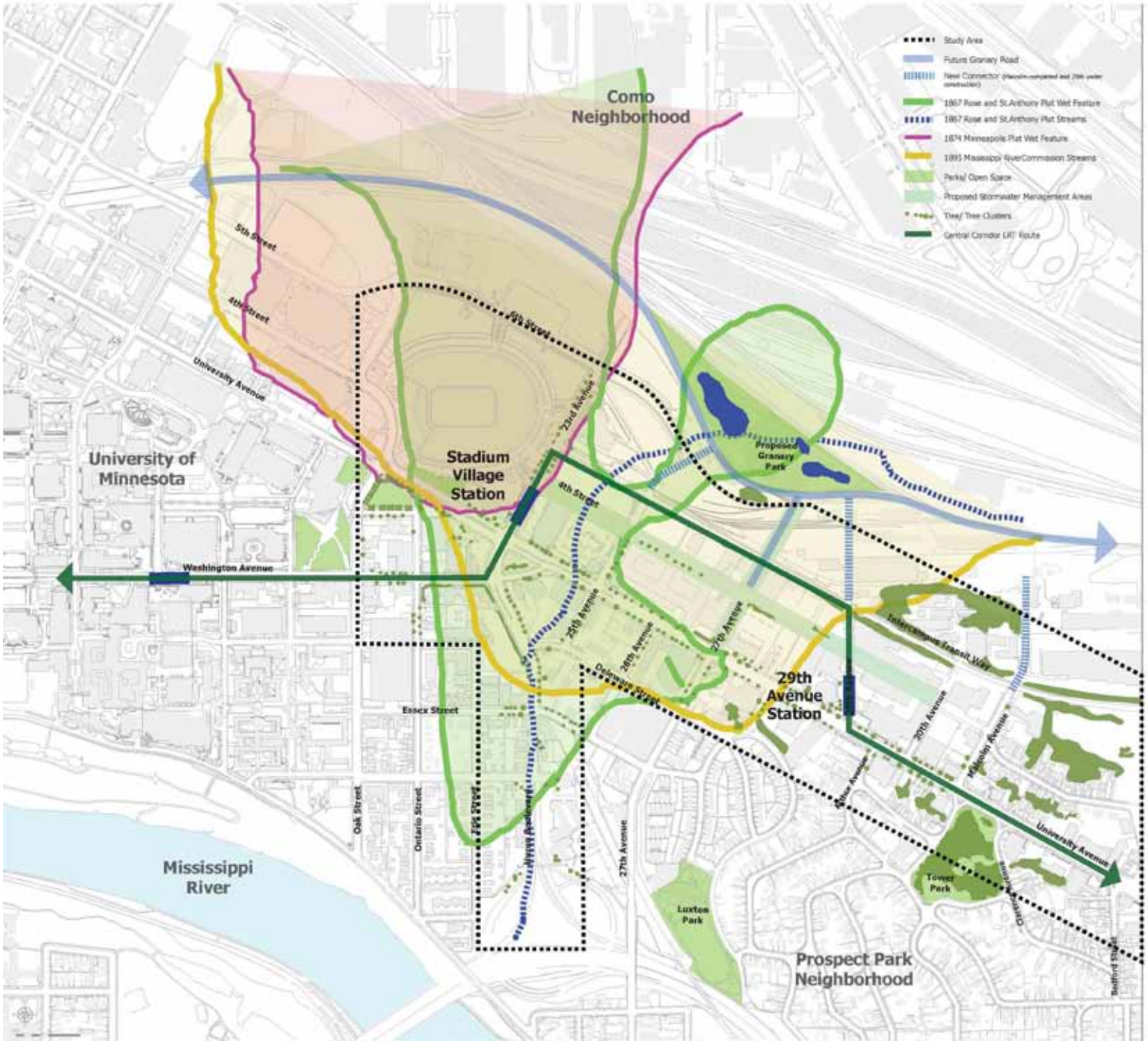
Historically, there has been an emphasis throughout the project area to accommodate the automobile. This has resulted in wide streets, damaged infrastructure and poor bicycle and pedestrian conditions. Because of the restricted right-of-way along many streets and high levels of pedestrian traffic within the project area, it will be necessary to minimize streetscape and infrastructure clutter along some sidewalk areas.


Como Neighborhood
5th Street
4th Street
University Avenue
Washington Avenue
University of Minnesota
Stadium Village Station
23rd Avenue
4th Street
4th Street East of 23rd Ave
25th Street North of University Ave
4th Street East of 25th Ave
Proposed Granary Park
25th Avenue
26th Avenue
27th Avenue
Delaware Street
Intercampus Transit Way
29th Avenue Station
30th Avenue
Malcolm Avenue
University Avenue
Essex Street
Oak Street
Ontario Street
Huron Blvd
Huron Blvd North of Fulton Street
University Ave. East of 26th Ave
University Ave. East of Malcolm
Tower Park
Luxton Park
Prospect Park Neighborhood
Mississippi River
Study Area
10 Year Transportation Access Minneapolis Plan
New Connector
Future Granary Road
Primary Gateway Intersections
Daily Peak Hour Truck Volumes
Proposed Streetscape Improvements
Urban Stormwater Management
Regional Bus Routes
Campus Connector Route
Shared Route Stops
Campus Circulator
Existing U of M Parking Facilities

Natural Resource and Systems

The analysis of the existing natural resources and systems identifies areas of existing mature trees, existing parks and open spaces, historic wetlands, creeks and rivers, watershed areas and stormwater opportunity areas. Below is listed the historic plats that identify water resources within the project area.

- 1867 Rose and St. Anthony Plat Wet Feature
- 1867 Rose and St. Anthony Plat Streams
- 1874 Minneapolis Plat Wet Feature
- 1895 Mississippi River Commission Streams


Study Area
Future Granary Road
1867 Rose and St.Anthony Plat Wet Feature
1867 Rose and St.Anthony Plat Streams
1874 Minneapolis Plat Wet Feature
1891 Mississippi RiverCommission Streams
Parks/ Open Space
Proposed Stormwater Management Areas
Central Corridor LRT Route
Como Neighborhood
University of Minnesota
Stadium Village Station
Proposed Granary Park
29th Avenue Station
Prospect Park Neighborhood
Mississippi River
Luxton Park
Tower Park
5th Street
4th Street
University Avenue
23rd Avenue
Washington Avenue
25th Avenue
26th Avenue
27th Avenue
Delaware Street
Essex Street
Oak Street
Ontario Street
Fulton Avenue
Interchange Transit Way
20th Avenue
Holmes Avenue
Huron Avenue
Orange Avenue
Bedford Street

Existing Land Use and Guidance

The Stadium Village area has a large number of zoning districts which have can have a patchwork appearance in some areas due to the amount and speed of change which has occurred in this area. Most zoning designations are related to the current residential and commercial land uses with several overlay districts in common use. However, there are still some remnants that remain from the area's industrial past.

Zoning Districts

R1A - Single-family District

The R1A Single-family District is established to provide for an environment of predominantly low density, single-family dwellings and cluster developments on lots with a minimum of five thousand (5,000) square feet of lot area per dwelling unit. In addition to residential uses, institutional and public uses and public services and utilities may be allowed.

R2B - Two-family District

The R2B Two-family District is established to provide for an environment of predominantly low density, single and two-family dwellings and cluster developments. In addition to residential uses, institutional and public uses and public services and utilities may be allowed.

R4 - Multiple-family District

The R4 Multiple-family District is established to provide an environment of predominantly medium density apartments and congregate living arrangements, single-family and two-family dwellings and cluster developments, on lots with a minimum of five thousand (5,000) square feet of lot area and at least one thousand two hundred fifty (1,250) square feet of lot area per dwelling unit. In addition to residential uses, institutional and public uses and public services and utilities may be allowed.

R5 - Multiple-family District

The R5 Multiple-family District is established to provide an environment of high density apartments, congregate living arrangements and cluster developments on lots with a minimum lot area of five thousand (5,000) square feet and at least seven hundred (700) square feet of lot area per dwelling unit. In addition to residential uses, institutional and public uses and public services and utilities may be allowed.

R6 - Multiple-family District

The R6 Multiple-family District is established to provide an environment of high density apartments, congregate living arrangements and cluster developments on lots with a minimum of five thousand (5,000) square feet of lot area and at least four hundred (400) square feet of lot area per dwelling unit. In addition to residential uses, institutional and public uses and public services and utilities may be allowed.

OR1 - Neighborhood Office Residence District

The OR1 Neighborhood Office Residence District is established to provide a small scale mixed use environment of low to moderate density dwellings and office uses. This district may serve as a transition between neighborhood commercial centers and the surrounding residential uses.

OR2 - High Density Office Residence District

The OR2 High Density Office Residence District is established to provide a mixed use environment of moderate to high density dwellings and large office uses, with additional small scale retail sales and services uses designed to serve the immediate surroundings. This district may serve as a transition between downtown and surrounding moderate to low density residential neighborhoods.

C1 - Neighborhood Commercial District

The C1 Neighborhood Commercial District is established to provide a convenient shopping environment of small scale retail sales and commercial services that are compatible with adjacent residential uses. In addition to commercial uses, residential uses, institutional and public uses, parking facilities, limited production and processing and public services and utilities are allowed.

C2 - Neighborhood Corridor Commercial District

The C2 Neighborhood Corridor Commercial District is established to provide an environment of retail sales and commercial services that are larger in scale than allowed in the C1 District and to allow a broader range of automobile related uses. In addition to commercial uses, residential uses, institutional and public uses, parking facilities, limited production and processing and public services and utilities are allowed.

C3A- Community Activity Center District

The C3A Community Activity Center District is established to provide for the development of major urban activity and entertainment centers with neighborhood scale retail sales and services. In addition to entertainment and commercial uses, residential uses, institutional and public uses, parking facilities, limited production and processing and public services and utilities are allowed.

I1 - Light Industrial District

The I1 Light Industrial District is established to provide clean, attractive locations for low impact and technology-based light industrial uses, research and development, and similar uses which produce little or no noise, odor, vibration, glare or other objectionable influences, and have little or no adverse effect on surrounding properties.

I2 - Medium Industrial District

The I2 Medium Industrial District is established to provide locations for medium industrial uses and other specific uses which have the potential to produce greater amounts of noise, odor, vibration, glare or other objectionable influences than uses allowed in the I1 District and which may have an adverse effect on surrounding properties.

PO Pedestrian Oriented Overlay District

The PO Pedestrian Oriented Overlay District is established to preserve and encourage the pedestrian character of commercial areas and to promote street life and activity by regulating building orientation and design and accessory parking facilities, and by prohibiting certain high impact and automobile-oriented uses.

IL Industrial Living Overlay District

The IL Industrial Living Overlay District is established to encourage the rehabilitation and reuse of existing industrial structures and to provide for limited residential and retail uses in the I1 and I2 Industrial Districts where such uses are compatible with other uses in the area.

Landuse Designations

Activity and Growth Centers

- Mix of uses with citywide and regional draw. High intensity of uses, including employment, commercial, office, and residential uses.
- High density (50-120 du/acre) and very high density (120-200 du/acre), dependent on context

Community Corridor

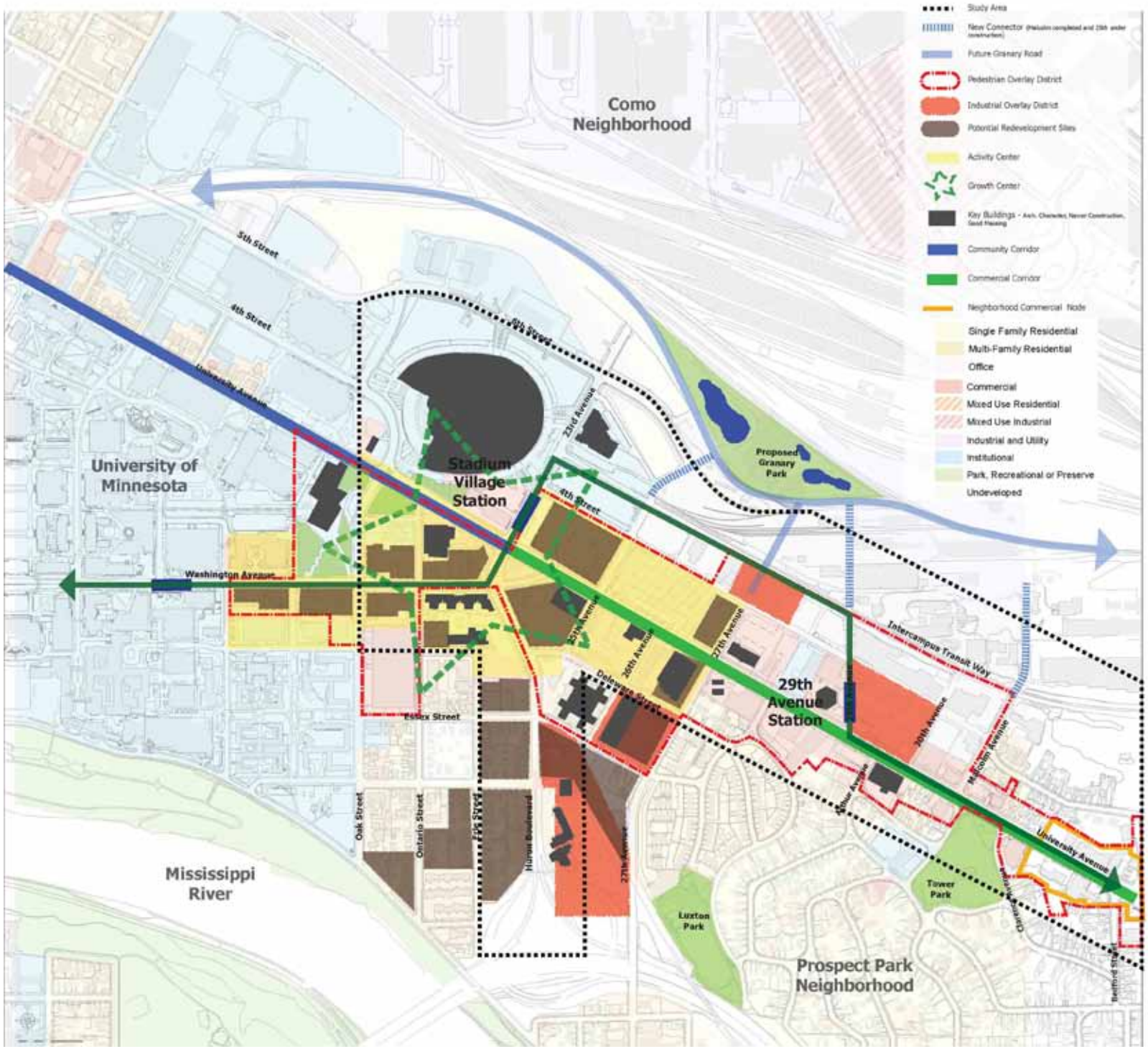
- Primarily residential with intermittent commercial uses clustered at intersections in nodes. Commercial uses, generally small-scale retail sales and services, serving the immediate
- Medium density (20-50 du/acre), transitioning to low density in surrounding areas

Commercial Corridor

- Historically have been prominent destinations. Mix of uses, with commercial uses dominating
- High density (50-120 du/acre), transitioning down to medium density in surrounding areas

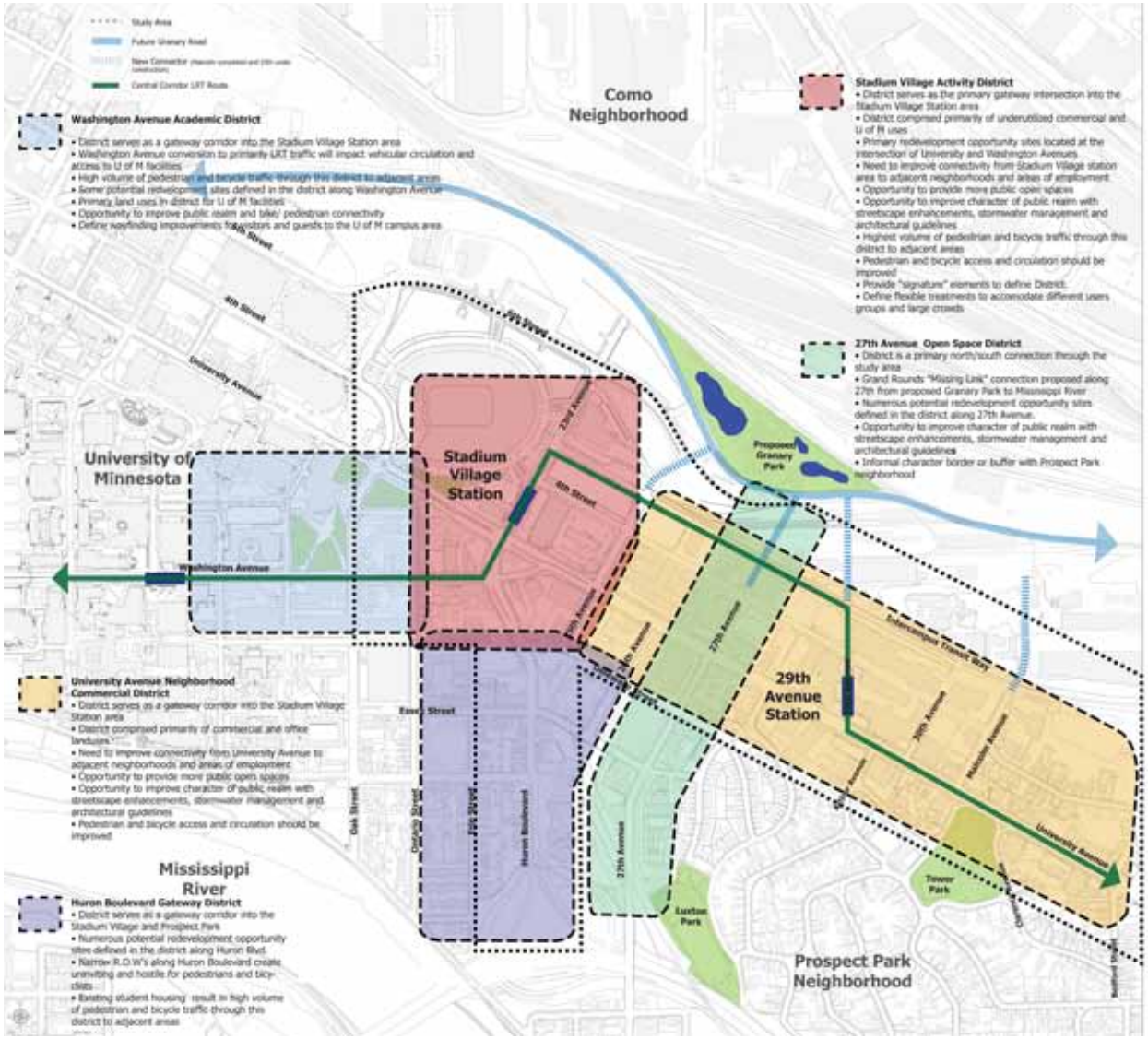
Neighborhood Commercial Corridor

- Generally provide retail or service uses on at least three corners of an intersection. Serve the surrounding neighborhood, with a limited number of businesses serving a larger area. Mix of uses occurs within and among structures
- High density (50-120 du/acre), transitioning down to medium density in surrounding areas


Study Area
New Connector
Future Granary Road
Pedestrian Overlay District
Industrial Overlay District
Potential Redevelopment Sites
Activity Center
Growth Center
Key Buildings
Community Corridor
Commercial Corridor
Neighborhood Commercial Node
Single Family Residential
Multi-Family Residential
Office
Commercial
Mixed Use Residential
Mixed Use Industrial
Industrial and Utility
Institutional
Park, Recreational or Preserve
Undeveloped
Como Neighborhood
5th Street
4th Street
University Avenue
University of Minnesota
Stadium Village Station
23rd Avenue
Proposed Granary Park
Washington Avenue
25th Avenue
26th Avenue
27th Avenue
Intercampus Transit Way
29th Avenue Station
30th Avenue
Essex Street
Oak Street
Ontario Street
Fulton Street
Huron Boulevard
Mississippi River
Luxton Park
Tower Park
Prospect Park Neighborhood
Bedford Street

Character Districts

The Stadium Village Station Public Realm and Connectivity study area is divided into five main districts, each possessing its own distinct character defined by the development patterns, mix of land uses, architecture, and open spaces. The character and unique aspects of each district is listed below.



Stadium Village District

This is the primary area within the study that includes the new Stadium Village Station and University of Minnesota TCF Stadium. This area contains the primary gateway intersection within the project area located at University Avenue and Washington Avenue. The existing land uses in the area are primarily commercial, some office/research and University of Minnesota support services. The proposed stadium village station is located just north of the Washington Avenue/ University Avenue intersection.

Most of the development pressures within the study area are focused on the underutilized parcels in this area. A summary of these parcels and their redevelopment potential have been identified within the market research companion document associated with this planning study. With the completion of the LRT route and the station, there will be increased pedestrian and multi-modal circulation that will occur to and from the station as well to the broader area.

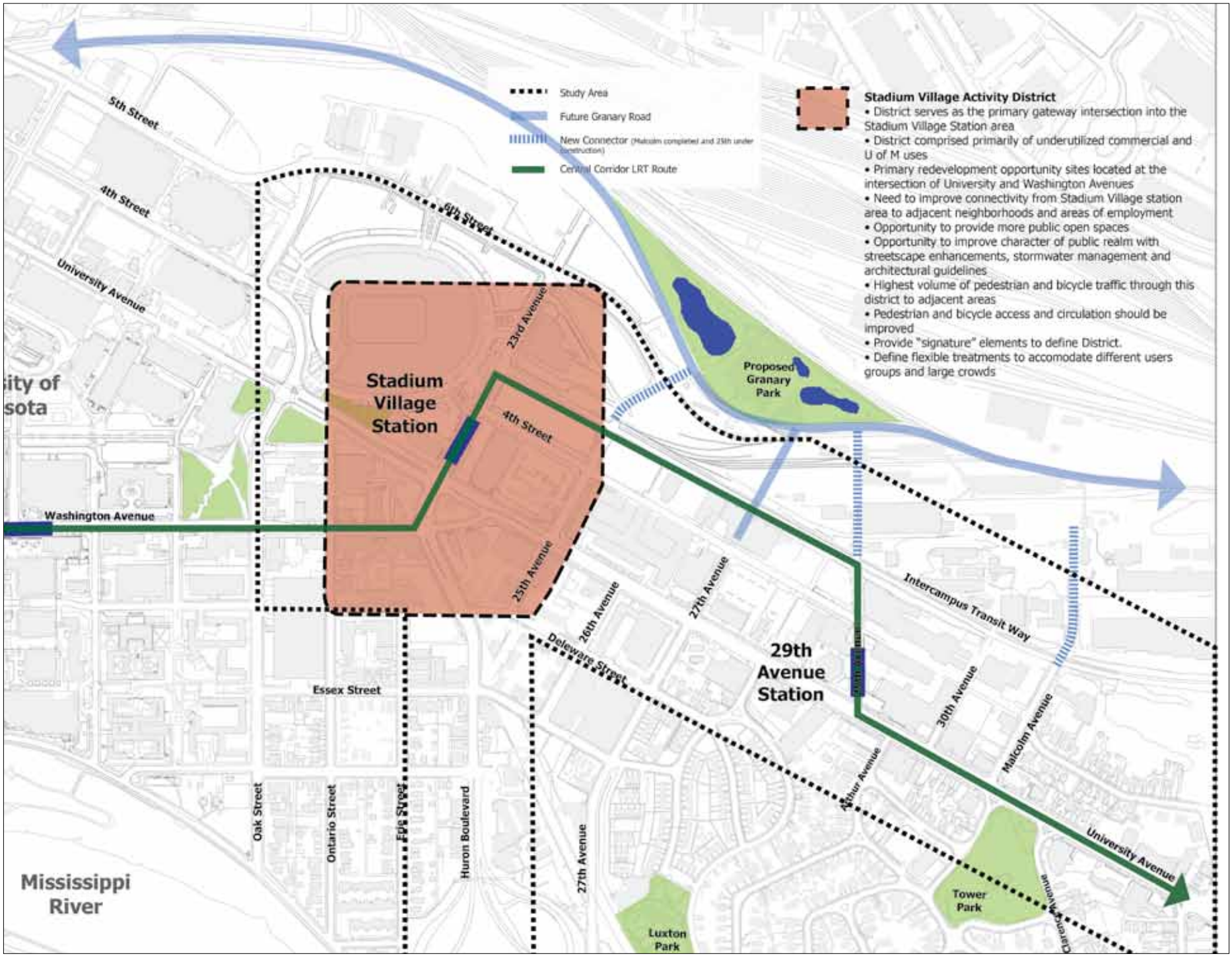
Because of the close proximity to TCF stadium and other University of Minnesota athletic facilities, there is a large surge of pedestrian activity on any given athletic or concert event day throughout the year.

The need for additional open spaces within this area is critical to the overall success of the area to support the variety of events that are currently being supported. A large part of this need will be accommodated on the TCF stadium site when the existing office building at the north-west corner of 23rd Avenue and University Avenue is demolished, but there are also opportunities for additional new plazas/ open spaces. These should be designed in a manner that is flexible to support a variety of different uses and user groups.

Because the intersection of University Avenue/ Washington Avenue / 23rd Avenue serves as the primary gateway from the east and west edges of campus it is important to provide larger scale "signature" elements to create a distinct sense of place and destination for the area. The "signature" elements could be buildings, monuments/ signage, public artwork, or enhanced public realm areas.

Highlights of the opportunities and constraints within this District are identified below:

- District serves as the primary gateway intersection into the Stadium Village Station area
- District comprised primarily of underutilized commercial and University of Minnesota uses
- Primary redevelopment opportunity sites located at the intersection of University and Washington Avenues
- Need to improve connectivity from Stadium Village station area to adjacent neighborhoods and areas of employment
- Opportunity to provide more public open spaces
- Opportunity to improve character of public realm with streetscape enhancements, stormwater management and architectural guidelines
- Highest volume of pedestrian and bicycle traffic through this district to adjacent areas
- Pedestrian and bicycle access and circulation should be improved
- Provide "signature" elements to define District.
- Define flexible streetscape treatments


Study Area
Future Granary Road
New Connector (Malcolm completed and 25th under construction)
Central Corridor LRT Route
Stadium Village Activity District
• District serves as the primary gateway intersection into the Stadium Village Station area
• District comprised primarily of underutilized commercial and U of M uses
• Primary redevelopment opportunity sites located at the intersection of University and Washington Avenues
• Need to improve connectivity from Stadium Village station area to adjacent neighborhoods and areas of employment
• Opportunity to provide more public open spaces
• Opportunity to improve character of public realm with streetscape enhancements, stormwater management and architectural guidelines
• Highest volume of pedestrian and bicycle traffic through this district to adjacent areas
• Pedestrian and bicycle access and circulation should be improved
• Provide "signature" elements to define District.
• Define flexible treatments to accomodate different users groups and large crowds
5th Street
4th Street
University Avenue
6th Street
23rd Avenue
Stadium Village Station
4th Street
Proposed Granary Park
Washington Avenue
25th Avenue
26th Avenue
27th Avenue
Intercampus Transit Way
Delaware Street
29th Avenue Station
30th Avenue
Malcolm Avenue
Essex Street
Oak Street
Ontario Street
Fifth Street
Huron Boulevard
27th Avenue
Arthur Avenue
University Avenue
Tower Park
Luxton Park
Mississippi River

University Avenue Neighborhood Commercial District

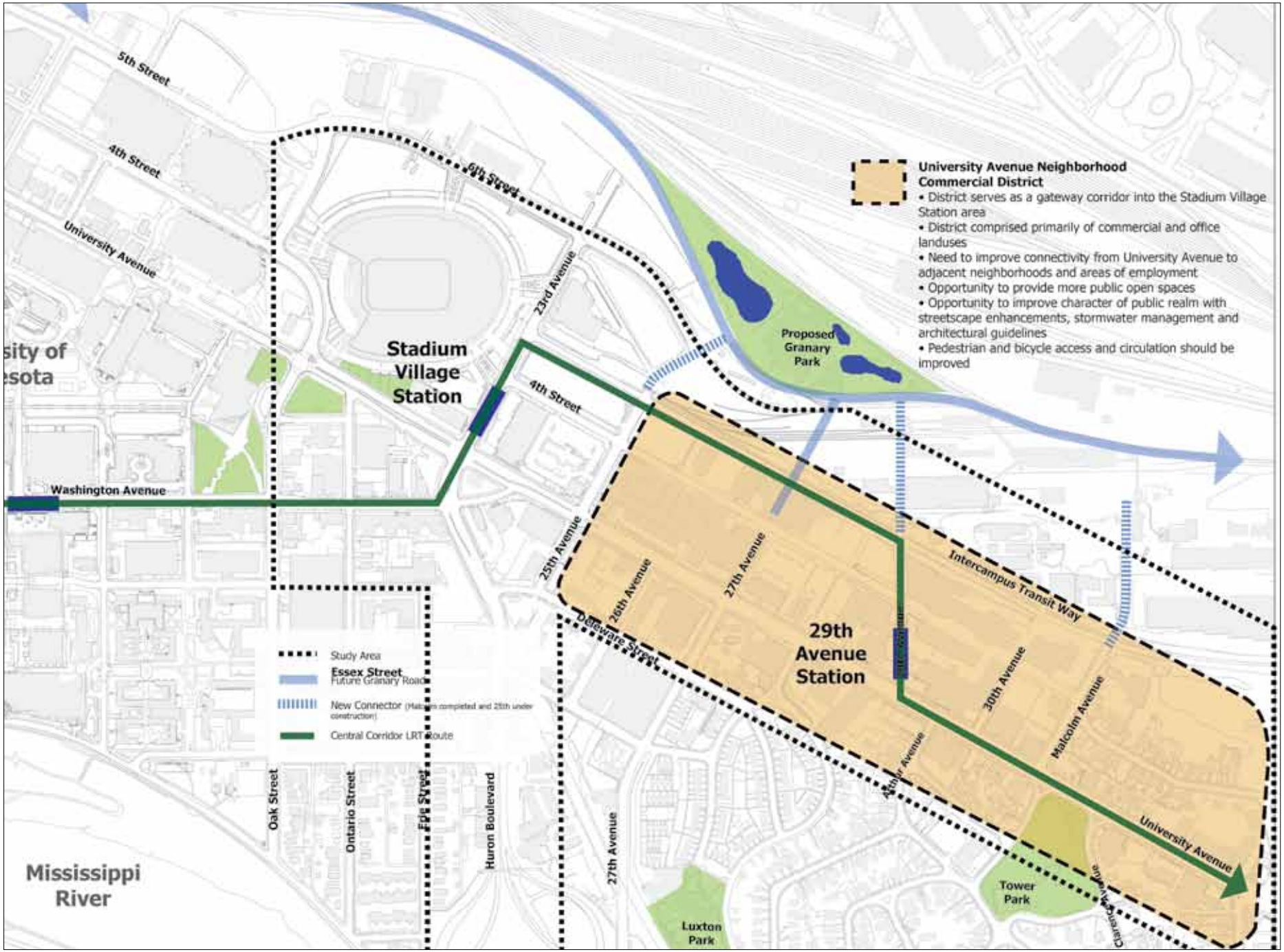
University Avenue is the main gateway corridor into the Prospect Park Neighborhood from the east and the City of St. Paul. This street corridor divides the Prospect Park neighborhood into two halves and will be the location of the LRT route from 28th Avenue east to the City of Minneapolis boundary. The Prospect Park LRT station is located at the intersection of 29th Avenue and University Avenue. This station will become a focal point for the neighborhood and will serve as a catalyst for the redevelopment of adjacent parcels. A new mixed-use node is envisioned for the area adjacent to this Station area with vibrant commercial, residential, and civic uses as well as an improved public realm.

This existing street corridor supports a wide variety of land uses including commercial, office, industrial and residential. Each block along the corridor is uniquely different and adds to the distinct character of the neighborhood.

With the completion of the LRT route, the corridor will transform from an automobile dominated environment to one that has the opportunity to support new transit oriented mixed-use redevelopment and greater pedestrian and bicycle access and circulation.

Highlights of the opportunities and constraints within this District are identified below:

- District serves as a gateway corridor into the Prospect Park neighborhood District comprised primarily of commercial and office land uses
- Need to improve connectivity from University Avenue to adjacent neighborhoods and areas of employment
- Opportunity to provide more public open spaces throughout the District and along University Avenue
- Opportunity to improve character of public realm with streetscape enhancements, stormwater management and architectural guidelines
- Pedestrian and bicycle access and circulation should be improved along University Avenue and into adjacent areas
- University Avenue - 23rd Avenue to Malcolm Avenue: This corridor represents a significant opportunity area for university and neighborhood expansion.
- University Avenue - 23rd Avenue to 27th Avenue: Along the corridor there is a mix of private commercial and university uses. This area serves as the gateway into the Stadium Village Station Area.
- University Avenue - 27th Avenue to Malcolm Avenue: This section of the corridor has been identified as a potential redevelopment area containing a combination of commercial, residential and hospitality uses. This area has been studied in greater detail by the Prospect Park Neighborhood as part of their 2011 29th Station Area plan.

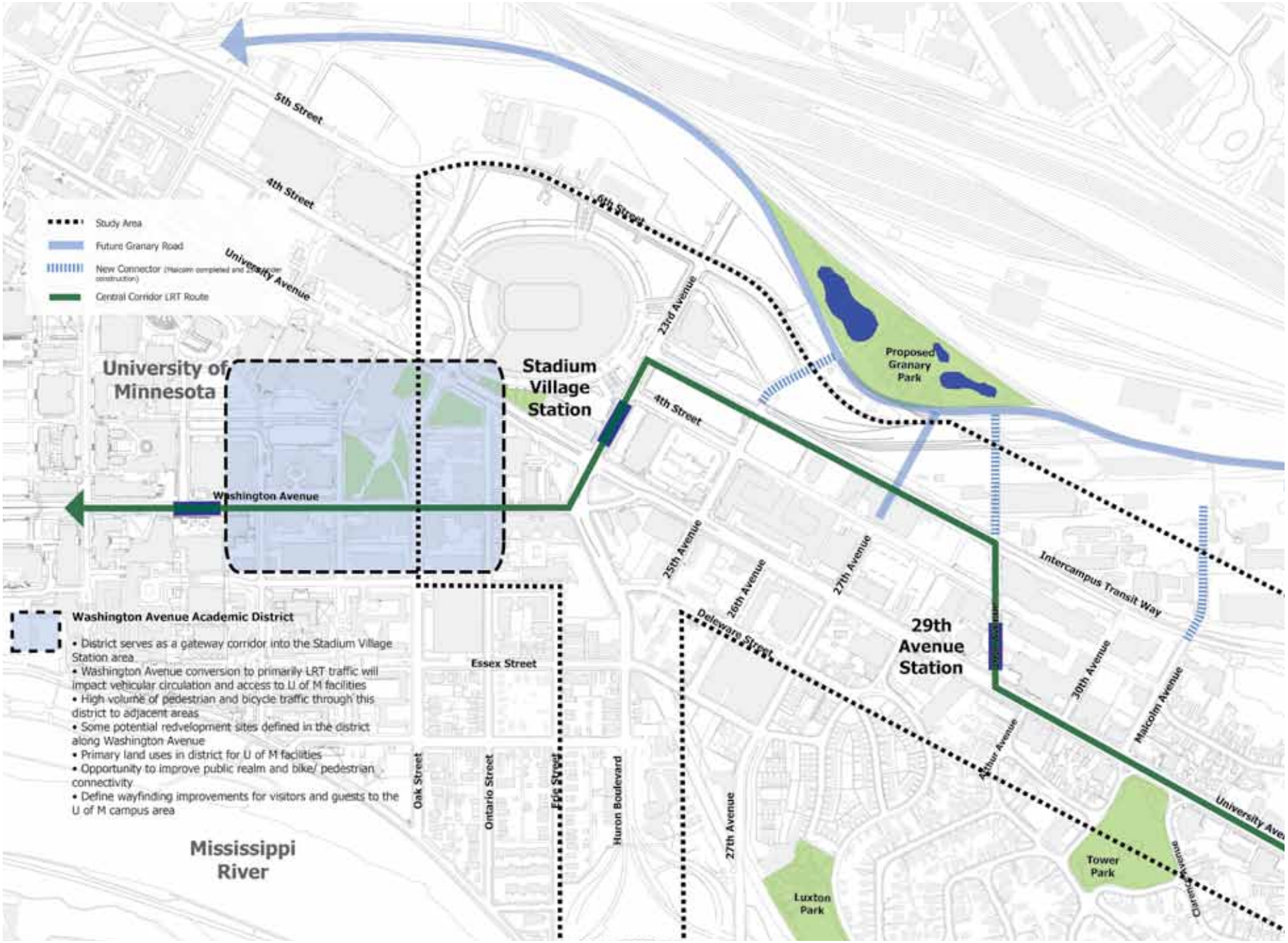

University Avenue Neighborhood Commercial District
• District serves as a gateway corridor into the Stadium Village Station area
• District comprised primarily of commercial and office landuses
• Need to improve connectivity from University Avenue to adjacent neighborhoods and areas of employment
• Opportunity to provide more public open spaces
• Opportunity to improve character of public realm with streetscape enhancements, stormwater management and architectural guidelines
• Pedestrian and bicycle access and circulation should be improved
5th Street
4th Street
University Avenue
6th Street
23rd Avenue
Stadium Village Station
Proposed Granary Park
4th Street
Washington Avenue
25th Avenue
26th Avenue
27th Avenue
Intercampus Transit Way
29th Avenue Station
Delaware Street
30th Avenue
Malcolm Avenue
Arthur Avenue
University Avenue
Study Area
Essex Street
Future Granary Road
New Connector
Central Corridor LRT Route
Oak Street
Ontario Street
Fulton Street
Huron Boulevard
27th Avenue
Mississippi River
Luxton Park
Tower Park
Cleveland Avenue

Washington Avenue Academic District

Washington Avenue serves as a gateway corridor from the west and directly connects the University of Minnesota to Downtown Minneapolis and the western portions of the City. The land uses that exist along Washington Avenue are primarily University of Minnesota facilities, pedestrian oriented commercial uses and multi-family residential buildings. The conversion of Washington Avenue to primarily LRT traffic (between the river and Walnut Street) will impact vehicular circulation to the central core of the campus and access to University of Minnesota medical facilities.

Highlights of the opportunities and constraints within this District are identified below:

- Some potential redevelopment sites defined in the district along Washington Avenue
- Opportunity to improve public realm and bike/ pedestrian connectivity throughout the District to support University users
- Define way finding improvements for visitors and guests to the University of Minnesota campus area
- District serves as a gateway corridor into the Stadium Village Station area from the west and Downtown Minneapolis
- Washington Avenue conversion to primarily LRT traffic will impact vehicular circulation and access to University of Minnesota facilities
- High volume of pedestrian and bicycle traffic through this district to adjacent areas creates auto/bike/pedestrian conflicts some primary land uses in district for University of Minnesota facilities

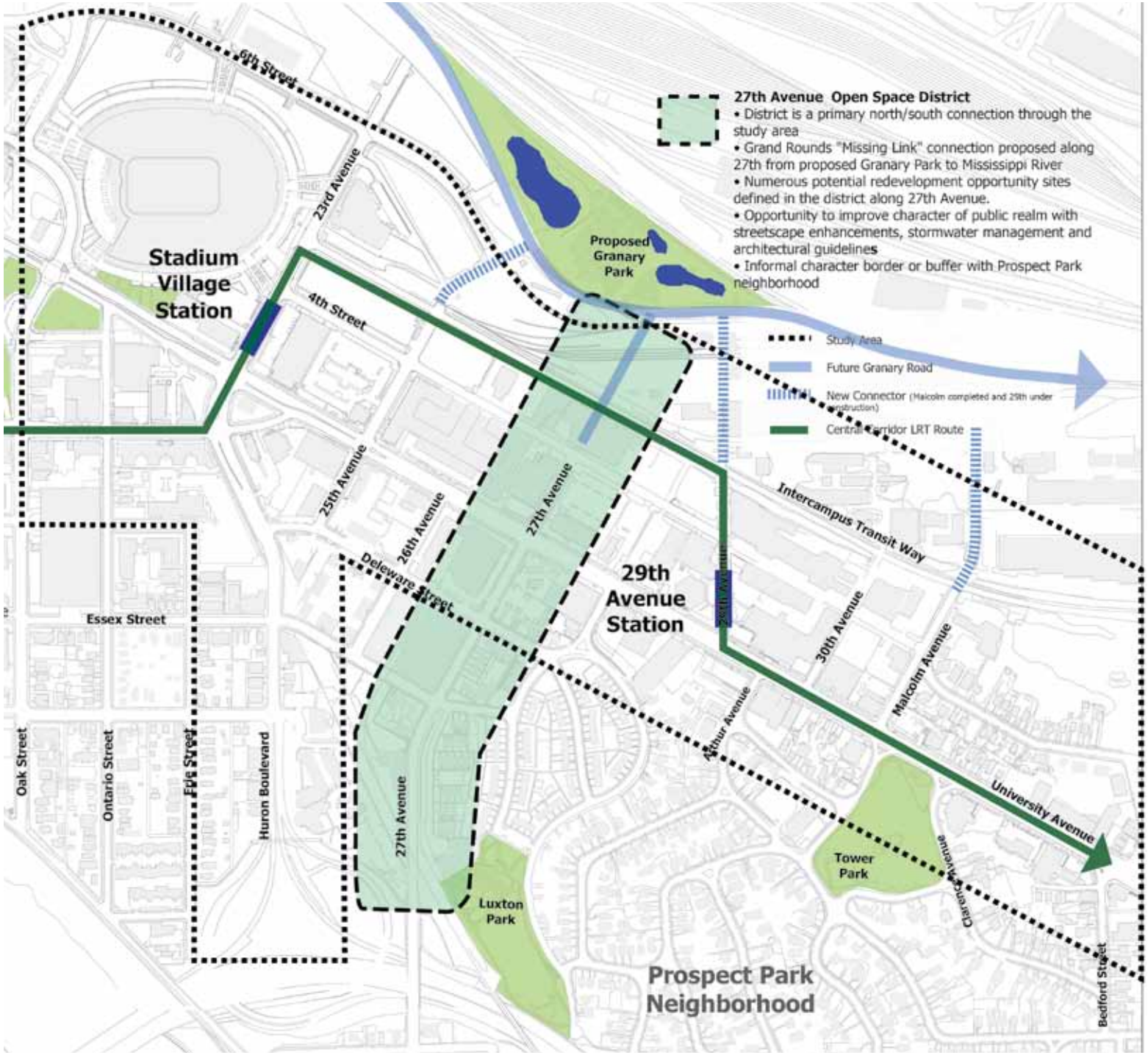

Study Area
Future Granary Road
New Connector (Malcolm completed and 29th under construction)
Central Corridor LRT Route
5th Street
4th Street
University Avenue
University of Minnesota
Stadium Village Station
23rd Avenue
Proposed Granary Park
Washington Avenue
25th Avenue
26th Avenue
27th Avenue
Intercampus Transit Way
Delaware Street
29th Avenue Station
30th Avenue
Malcolm Avenue
Arthur Avenue
Essex Street
Oak Street
Ontario Street
Erie Street
Huron Boulevard
Mississippi River
Luxton Park
Tower Park
Washington Avenue Academic District
• District serves as a gateway corridor into the Stadium Village Station area
• Washington Avenue conversion to primarily LRT traffic will impact vehicular circulation and access to U of M facilities
• High volume of pedestrian and bicycle traffic through this district to adjacent areas
• Some potential redvelopment sites defined in the district along Washington Avenue
• Primary land uses in district for U of M facilities
• Opportunity to improve public realm and bike/ pedestrian connectivity
• Define wayfinding improvements for visitors and guests to the U of M campus area

27th Avenue Open Space District

The 27th Avenue corridor represents the opportunity to provide a critical link from the University of Minnesota campus and Prospect Park neighborhood with an enhanced connection to the Mississippi River. This corridor has also been defined as a critical connective piece of the missing link for the Grand Rounds trail. This link would begin at the proposed Granary Road Park and extend south along the Avenue to the River Road. The existing corridor is characterized by the single and multi-family residential uses that exist along the east side of the road and the varied industrial and commercial uses along the west side of the road. Many of the parcels along the west edge of the roadway have been identified as redevelopment priority projects by the companion market research study.

Highlights of the opportunities and constraints within this District are identified below:

- District is a primary north/south connection through the study area
- Grand Rounds "Missing Link" connection proposed along 27th from proposed Granary Park to Mississippi River
- Numerous potential redevelopment opportunity sites defined in the district along 27th Avenue.
- Opportunity to improve character of public realm with streetscape enhancements, stormwater management and architectural guidelines
- Informal character


27th Avenue Open Space District
• District is a primary north/south connection through the study area
• Grand Rounds "Missing Link" connection proposed along 27th from proposed Granary Park to Mississippi River
• Numerous potential redevelopment opportunity sites defined in the district along 27th Avenue.
• Opportunity to improve character of public realm with streetscape enhancements, stormwater management and architectural guidelines
• Informal character border or buffer with Prospect Park neighborhood
Study Area
Future Granary Road
New Connector (Malcolm completed and 29th under construction)
Central Corridor LRT Route
Stadium Village Station
29th Avenue Station
Proposed Granary Park
Prospect Park Neighborhood
Luxton Park
Tower Park
6th Street
4th Street
23rd Avenue
25th Avenue
26th Avenue
27th Avenue
29th Avenue
30th Avenue
Malcolm Avenue
Arthur Avenue
Claremont Avenue
Intercampus Transit Way
University Avenue
Delaware Street
Essex Street
Oak Street
Ontario Street
Erie Street
Huron Boulevard
Bedford Street

Huron Boulevard Gateway District

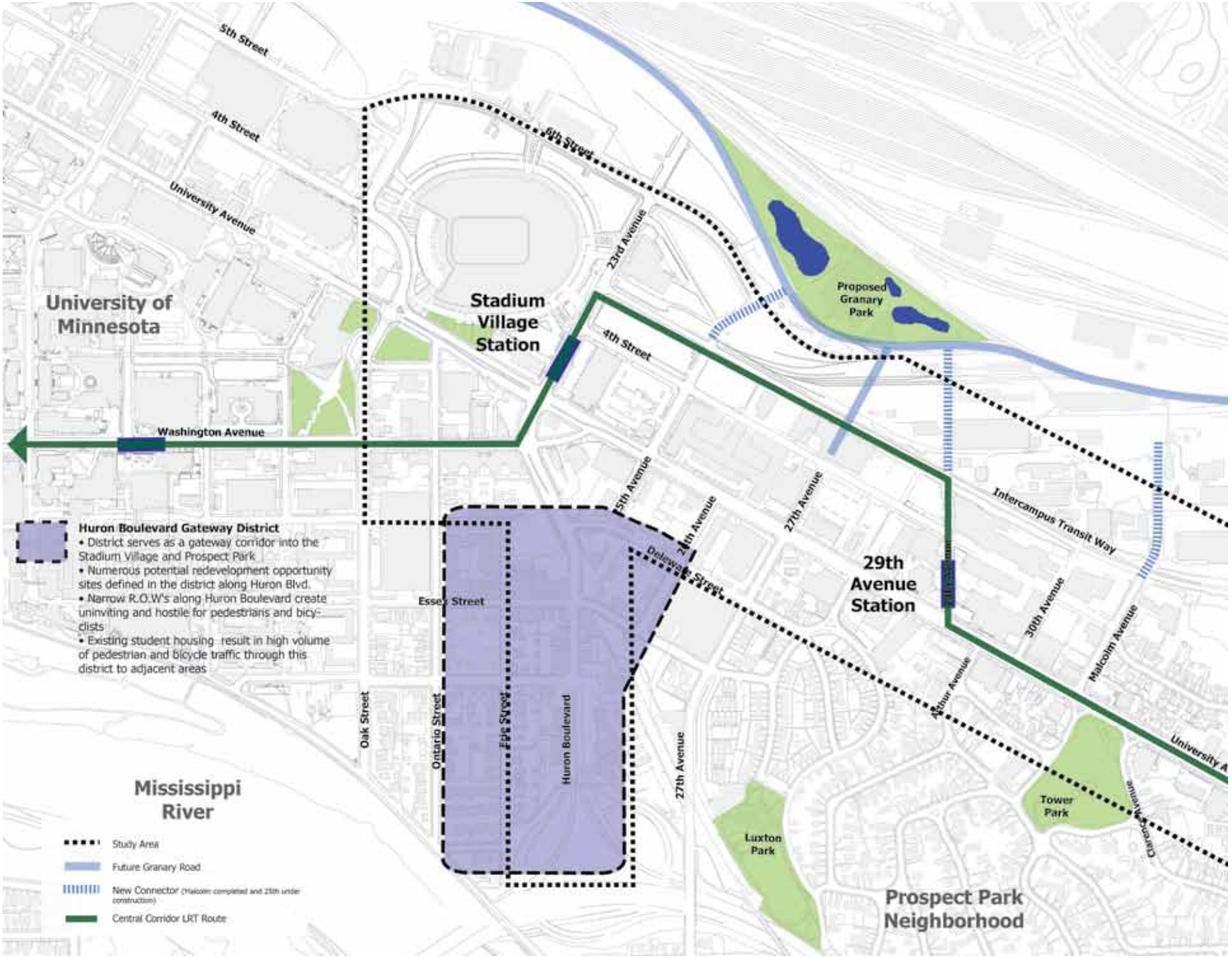
Huron Boulevard serves as the southern gateway corridor into the Stadium Village study area.

As vehicles exit off of Highway 94 into the area, they are immediately met with a more compact urban development pattern with increased pedestrian and bicycle interactions. The intersection of Huron Boulevard and Fulton Street is a critical intersection because it marks the unofficial boundary to the University of Minnesota campus area.

This intersection will play an increased role in the future with the completion of the LRT route because it will serve as the major point of entry into the southern portion of the University of Minnesota campus and the most direct link to the University of Minnesota hospital and clinic facilities. The current development pattern along Huron is varied with some areas designed as more compact and urban in nature and others more suburban in nature with many buildings set back from the right-of-way edge and parking predominates along the street edges. This section of Huron is very hostile to pedestrians and bicyclists because the row widths vary throughout the corridor and the large volume of traffic that utilizes Huron Boulevard daily.

Highlights of the opportunities and constraints within this District are identified below:

- Significant truck traffic and heavy truck traffic volumes
- Pedestrian activated signals at Fulton and Essex Streets
- Identified pedestrian conflict zone between Fulton Street and Essex Street
- District serves as a gateway corridor into the Stadium Village and Prospect Park
- Numerous potential redevelopment opportunity sites defined in the district along Huron Blvd. (market research study)
- Narrow R.O.W's along Huron Boulevard create uninviting and hostile for pedestrians and bicyclists
- Existing student housing result in high volume of pedestrian and bicycle traffic through this district to adjacent areas
- Limited gateway presence at I-94 and transition from highway interchange environment to the dense pedestrian district


5th Street
4th Street
University Avenue
University of Minnesota
Stadium Village Station
23rd Avenue
6th Street
Proposed Granary Park
4th Street
Washington Avenue
15th Avenue
24th Avenue
27th Avenue
Intercampus Transit Way
29th Avenue Station
30th Avenue
Malcolm Avenue
Delaware Street
Essex Street
Oak Street
Ontario Street
Fir Street
Huron Boulevard
27th Avenue
Arthur Avenue
University A
Tower Park
Cleveland Avenue
Luxton Park
Prospect Park Neighborhood
Mississippi River
Huron Boulevard Gateway District
• District serves as a gateway corridor into the Stadium Village and Prospect Park
• Numerous potential redevelopment opportunity sites defined in the district along Huron Blvd.
• Narrow R.O.W's along Huron Boulevard create uninviting and hostile for pedestrians and bicyclists
• Existing student housing result in high volume of pedestrian and bicycle traffic through this district to adjacent areas
Study Area
Future Granary Road
New Connector (Malcolm completed and 25th under construction)
Central Corridor LRT Route

Synthesis- Issues and Opportunities

The overall synthesis and opportunities graphics takes the most relevant information from all the different analyses to create one overall graphic that prioritizes the project issues and opportunities. This graphic is used to identify how the future design recommendations will respond to the overall project goals and objectives.

The graphic identifies primary public realm improvements along Huron Boulevard, University Avenue, and Washington Avenue. Green corridor improvements are proposed along 4th Street and 27th Avenue.

Primary corridor improvements include;

- Stormwater BMP's
- Bike and Pedestrian Enhancements
- Public Open Space/Pocket Parks
- Enhanced Pedestrian Lighting
- Streetscape Amenities
- Public Art
- Outdoor Seating Areas
- Green Corridor Improvements include;
- Stormwater BMP's
- Bike and Pedestrian Enhancements
- Public Open Space/Pocket Parks
- Enhanced Pedestrian Lighting
- Streetscape Amenities

Primary gateway improvements will occur at the intersection of

1. Washington Boulevard and University Avenue
2. University Avenue and 29th Avenue.

Primary gateway improvements include;

- Building and Architecture Guidelines
- Intersection Improvements
- Bike and Pedestrian Enhancements
- Enhanced Pedestrian Lighting
- Streetscape Amenities
- Monument/Signage

Secondary gateway improvements will occur at the following intersections:

- Huron Boulevard and Fulton Street
- Huron Boulevard and Essex Street
- Huron Boulevard and Delaware Street
- Washington Avenue and Oak Street
- University Avenue and 25th Avenue
- Washington Avenue and 27th Avenue
- Washington Avenue and Malcolm Avenue

Secondary gateway improvements include;

- Intersection Improvements
- Bike and Pedestrian Enhancements
- Enhanced Pedestrian Lighting
- Streetscape Amenities

Primary Streetscape treatments identified for:

- University Avenue
- Huron Boulevard
- 27th Avenue
- 29th Avenue

These improvements include:

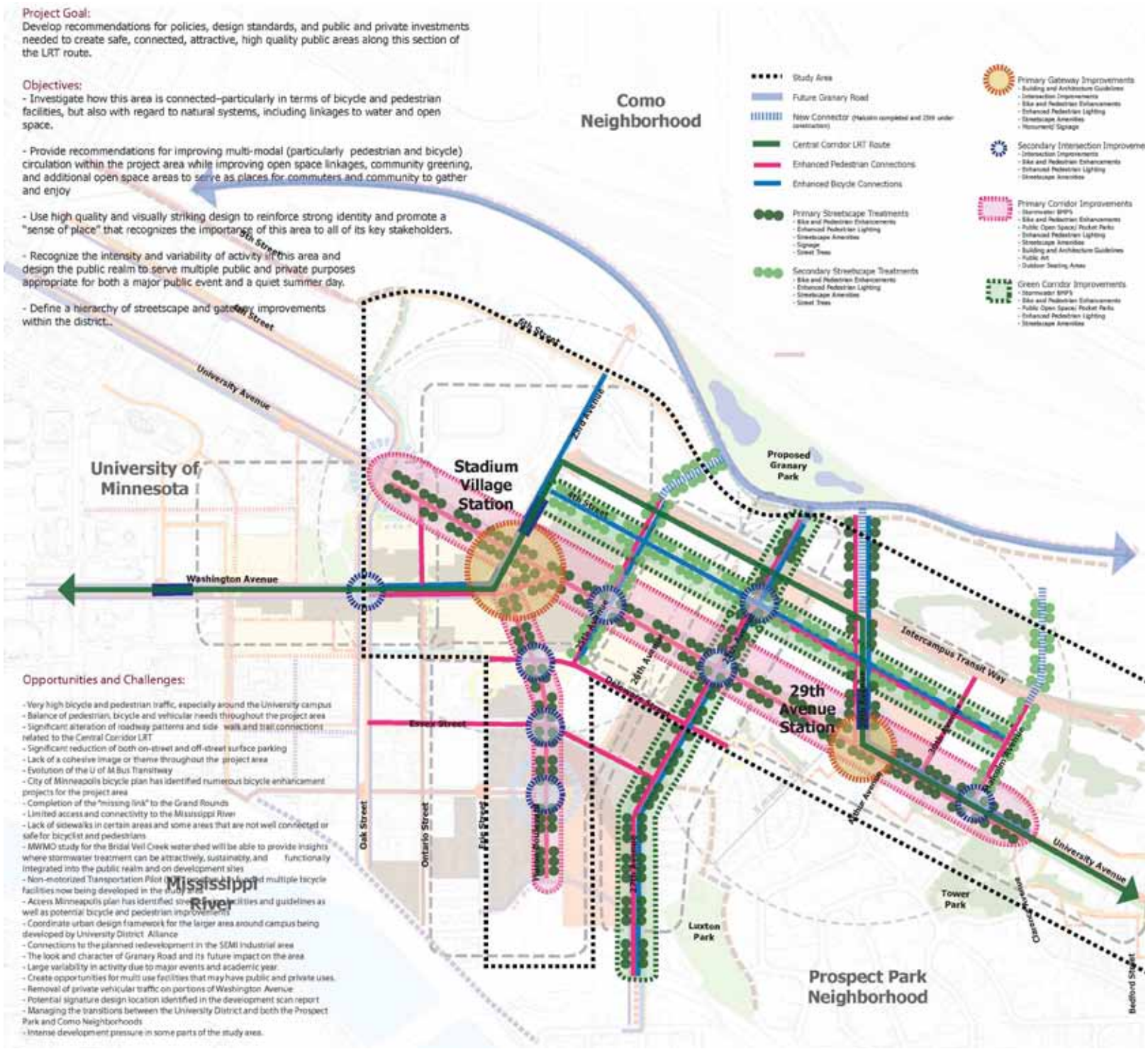
- Bike and Pedestrian Enhancements
- Enhanced Pedestrian Lighting
- Streetscape Amenities
- Signage
- Street Trees

Secondary Streetscape treatments identified for:

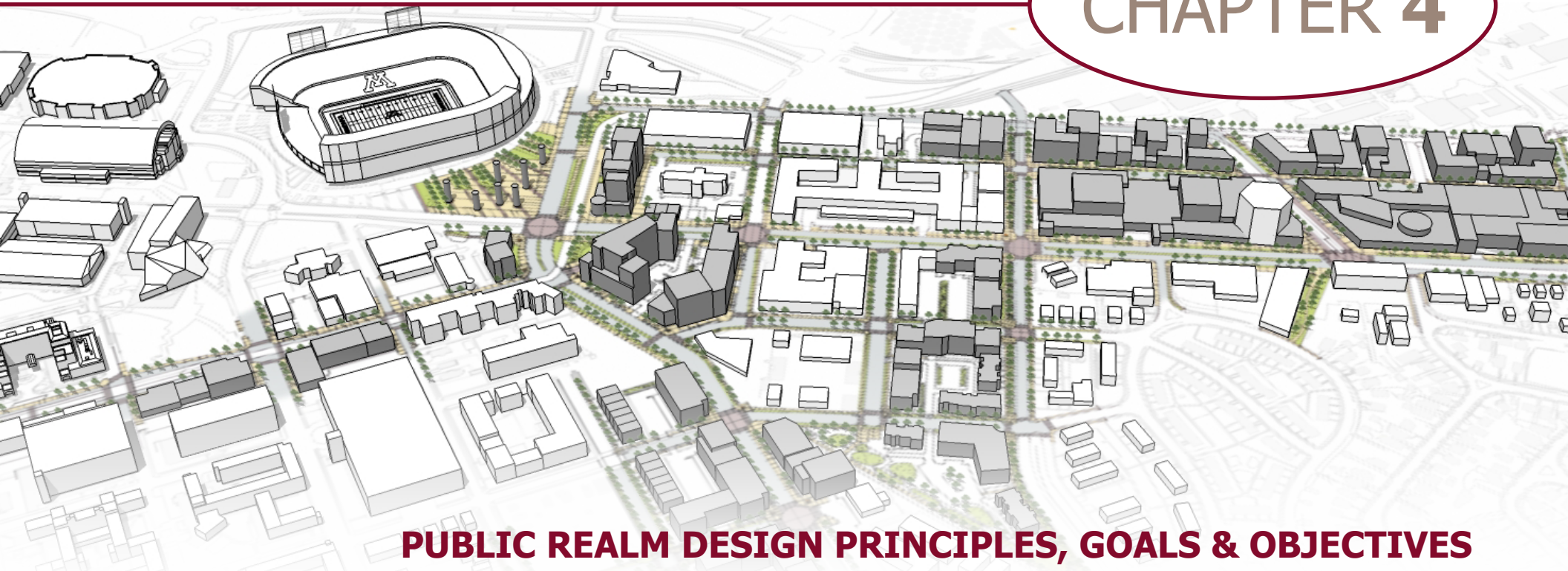
- 4th Street
- 25th Avenue
- Malcolm Avenue

These improvements include:

- Bike and Pedestrian Enhancements
- Enhanced Pedestrian Lighting
- Streetscape Amenities
- Street Trees


Project Goal:
Develop recommendations for policies, design standards, and public and private investments needed to create safe, connected, attractive, high quality public areas along this section of the LRT route.
Objectives:
- Investigate how this area is connected–particularly in terms of bicycle and pedestrian facilities, but also with regard to natural systems, including linkages to water and open space.
- Provide recommendations for improving multi-modal (particularly pedestrian and bicycle) circulation within the project area while improving open space linkages, community greening, and additional open space areas to serve as places for commuters and community to gather and enjoy
- Use high quality and visually striking design to reinforce strong identity and promote a "sense of place" that recognizes the importance of this area to all of its key stakeholders.
- Recognize the intensity and variability of activity in this area and design the public realm to serve multiple public and private purposes appropriate for both a major public event and a quiet summer day.
- Define a hierarchy of streetscape and gateway improvements within the district..
Como Neighborhood
Study Area
Future Granary Road
New Connector
Central Corridor LRT Route
Enhanced Pedestrian Connections
Enhanced Bicycle Connections
Primary Streetscape Treatments
Secondary Streetscape Treatments
Primary Gateway Improvements
Secondary Intersection Improveme
Primary Corridor Improvements
Green Corridor Improvements
University of Minnesota
Stadium Village Station
Proposed Granary Park
Washington Avenue
University Avenue
5th Street
4th Street
2nd Avenue
15th Avenue
16th Avenue
17th Avenue
19th Avenue
20th Avenue
21st Avenue
23rd Avenue
26th Avenue
27th Avenue
29th Avenue Station
Intercampus Transit Way
Essex Street
Oak Street
Ontario Street
Fulton Street
Mississippi River
Luxton Park
Tower Park
Prospect Park Neighborhood
Bedford Street
Opportunities and Challenges:
- Very high bicycle and pedestrian traffic, especially around the University campus
- Balance of pedestrian, bicycle and vehicular needs throughout the project area
- Significant alteration of roadway patterns and side walk and trail connections related to the Central Corridor LRT
- Significant reduction of both on-street and off-street surface parking
- Lack of a cohesive image or theme throughout the project area
- Evolution of the U of M Bus Transitway
- City of Minneapolis bicycle plan has identified numerous bicycle enhancement projects for the project area
- Completion of the "missing link" to the Grand Rounds
- Limited access and connectivity to the Mississippi River
- Lack of sidewalks in certain areas and some areas that are not well connected or safe for bicyclist and pedestrians
- MWMO study for the Bridal Veil Creek watershed will be able to provide insights where stormwater treatment can be attractively, sustainably, and functionally integrated into the public realm and on development sites
- Non-motorized Transportation Pilot Project and multiple bicycle facilities now being developed in the study area
- Access Minneapolis plan has identified streetscape facilities and guidelines as well as potential bicycle and pedestrian improvements
- Coordinate urban design framework for the larger area around campus being developed by University District Alliance
- Connections to the planned redevelopment in the SEMI industrial area
- The look and character of Granary Road and its future impact on the area
- Large variability in activity due to major events and academic year.
- Create opportunities for multi use facilities that may have public and private uses.
- Removal of private vehicular traffic on portions of Washington Avenue
- Potential signature design location identified in the development scan report
- Managing the transitions between the University District and both the Prospect Park and Como Neighborhoods
- Intense development pressure in some parts of the study area.

CHAPTER 4



PUBLIC REALM DESIGN PRINCIPLES, GOALS & OBJECTIVES

Public Realm Design Principles, Goals and Objectives

The design principles, goals and objectives serve as a foundation on which the Stadium Village Station Area Public Realm and Connectivity plan and recommendations are based. These public realm design principles have been derived through working meetings with the steering committee and stakeholder input and common tenets for livable communities. These principles are essential to create a safe, comfortable, pleasant and pedestrian-friendly multi-modal public realm environment that has vibrant and interconnected civic spaces and adds to the economic vitality of the Stadium Village station area.

Many of the design principles presented in this chapter strive to form a positive image of the varied districts within the Stadium Village Station Area through improvement of the public realm and streetscape. The design of parks and open space, street corridors, sidewalks, signs, landscaping, streetscapes, and the interrelationship between differing land uses all shape the public realm. These principles, applicable to both public and private development, will be combined with the goals, objectives, to drive the creation of the public realm and connectivity plan.

Define a Framework & Hierarchy of Vibrant Public Spaces and Linkages

- Provide flexible parks, open spaces and plazas for a variety of uses and a focus for community gatherings and provide an increased link between the broader neighborhood and LRT.
- Create pedestrian friendly linkages within a 5 to 10 minute walk of the station areas
- Open spaces, public realm & streets provide a framework for future redevelopment

Integrate a Network & Hierarchy of Street Treatments

- Treat streets as part of the public realm system… not as barriers
- Accommodate alternative forms of transportation throughout the study area
- Define a hierarchy of treatments for approach routes, commercial and residential streets
- Balance vehicular, bicycle, and pedestrian needs

Encourage Compact Mixed-Use Developments

- Place new buildings to reinforce public realm, open spaces, and pedestrian accessibility
- Reinforce a compact urban development pattern through proper placement, alignment, and building proportions
- Design excellence is the foundation of successful and healthy communities.

Foster Environmental and Economic Sustainability

- Include green infrastructure components such as urban forest, stormwater BMP's, and other Low Impact Development techniques within the public realm where feasible.
- Encourage people to walk, bike, and use public transit to reduce traffic congestion, protect the environment and encourage physical activity.

Stadium Village Station Area Public Realm and Connectivity Project Goal and Objectives

The goals and objectives outlined in this section have evolved from the discussions with the project steering committee as well as in response to the analysis of background information and existing conditions. The goals and objectives have been refined and approved by the Stadium Village Station Area Steering Committee and drive the creation of design alternatives for the Stadium Village Station Area Public Realm and Connectivity Plan.

GOAL:

Develop recommendations for policies, design standards, and public and private investments needed to create safe, connected, attractive, high quality public areas along this section of the LRT route.

Objective 1

Investigate how this area is connected–particularly in terms of bicycle and pedestrian facilities, but also with regard to natural systems, including linkages to water and open space.

Objective 2:

Provide recommendations for improving multi-modal (particularly pedestrian and bicycle) circulation within the project area while improving open space linkages, community greening, and additional open space areas to serve as places for commuters and community to gather and enjoy

Objective 3:

Use high quality and visually striking design to reinforce strong identity and promote a "sense of place" that recognizes the importance of this area to all of its key stakeholders.

Objective 4:

Recognize the intensity and variability of activity in this area and design the public realm to serve multiple public and private purposes appropriate for both a major public event and a quiet summer day.

Objective 5:

Define a hierarchy of streetscape and gateway improvements within the district.

Stadium Village Station Area Public Realm and Connectivity Framework Plan

The purpose of the Stadium Village Station Area Public Realm and Connectivity Framework Plan is to illustrate the intent of the design principles, project goal and objectives and to offer recommendations to guide the evolution of the public realm and connectivity within the Stadium Village Station Area.

The public realm environment associated with the Stadium Village is comprised of the streets, public spaces, and infrastructure that define the framework for future private development and improvements to be made. The character and design of the public realm will be one of the determining factors for the success of the Stadium Village area. The design of the Public Realm must encourage diverse urban experiences and create a good and flexible environment for people to gather, congregate, and visit in order reinforce the sense of community. The public realm includes all of the fundamental elements that reinforce the community: streets, parks, plazas, infrastructure and public buildings.....this is the framework for how development happens.

The following recommendations are intended to direct future public realm design decisions so that it creates an attractive setting for businesses and for the many diverse uses of the Stadium Village area. It will establish a visual image that is flexible, sustainable, distinct, appealing and comfortable.

Placemaking

This public realm framework plan responds to the unique character and urban qualities of the Stadium Village Station Area and overlays the proposed LRT route and associated improvements, streetscape enhancements, opens spaces/public parks, redevelopment opportunity sites, pedestrian and bicycle connections, and stormwater management systems to foster a genuine and memorable place. Improvements within the project area should focus on the creation of a high-quality public realm that will balance the needs of a wide range of users and accommodating pedestrians, cyclist, transit and vehicular movements. It will also contribute to the positive experiences of the transit users.

The primary components of the Stadium Village Station Area Public Realm

- Land use
- Built Form
- Open Space/ Public parks and plazas
- Pedestrian, Bicycle and multi-modal connectivity
- Green Infrastructure

Public Realm and Streetscape Improvements

Creation of a high quality public realm will contribute to a positve experience of users.

Mixed use blocks will support an enhnaced public realm

General Public Realm Recommendations

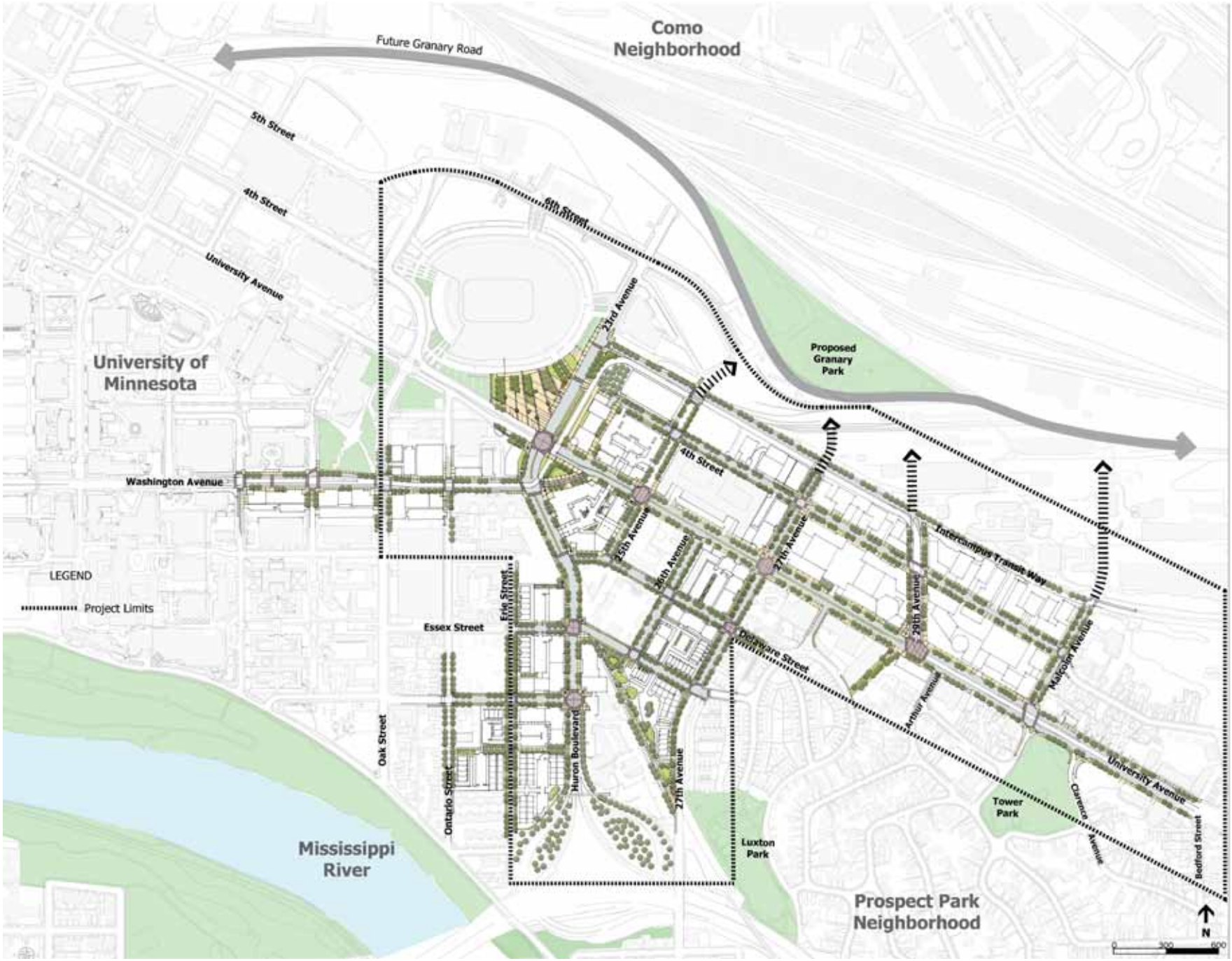
The following public realm design recommendations provide guidance to prioritize public investments, the expansion of the public realm and the enhancement of City streets.

Land Use

The objectives for the land use recommendations are to promote a compact mixed-use development pattern along the corridors within the study area and increase density and housing opportunities to encourage an active public realm. The public realm should evolve as redevelopment along the streets occurs or as City of Minneapolis/University of Minnesota infrastructure projects occur.

Recommendations:

- Preserve the unique character of the University of Minnesota campus and Prospect Park Neighborhood. As the neighborhood and the campus continue to evolve, and reinvestment is enhanced by the LRT, there should be an emphasis on preserving the unique character of the Prospect Park neighborhood.
- As the opportunities for infill development emerge, the new development should reinforce the urban pattern by extending the street grid and placement of buildings to define the streets.
- Redevelopment at the intersection of Huron Boulevard/ University Avenue and Washington Avenue should be designed as signature buildings and gateway into the Stadium Village Station Area
- The placement of buildings to reinforce the street edge will enhance the public realm by creating more walkable streets and increased access to the LRT stations.
- Create transitions between University Avenue and the Prospect Park neighborhood to the south by encouraging medium to high density mixed-use residential facing towards University Avenue.
- Encourage mixed-use blocks and new buildings to activate the streets and create safe and more pedestrian activity along 27th Avenue, 29th Avenue, Huron Boulevard, Washington Avenue, University Avenue and 4th Street.
- Discourage one-story building forms along the main corridors within the study area.
- A majority of LRT users will be walking or cycling to the LRT stations, creating an opportunity to enhance first floor uses to activate and enhance the experience of pedestrians and transit users.

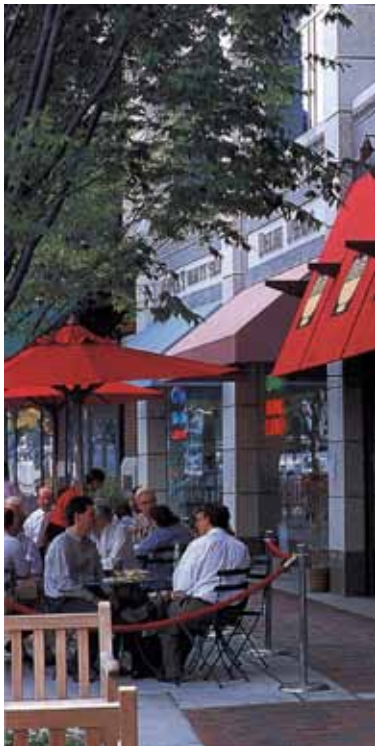

Como Neighborhood
Future Granary Road
5th Street
4th Street
University Avenue
University of Minnesota
Washington Avenue
6th Street
23rd Avenue
Proposed Granary Park
4th Street
25th Avenue
26th Avenue
27th Avenue
Intercampus Transit Way
29th Avenue
Malcolm Avenue
LEGEND
Project Limits
Essex Street
Erie Street
Delaware Street
Arthur Avenue
Oak Street
Ontario Street
Huron Boulevard
27th Avenue
Luxton Park
Tower Park
Clarence Avenue
University Avenue
Bedford Street
Mississippi River
Prospect Park Neighborhood
N
0
300
600

Built Form

The placement, scale and character of buildings is one of the most important components of the built environment that will shape the different street corridors and determine the long term success as an attractive destination with strong businesses, human scale, vibrant neighborhoods and an attractive place for investment. The primary objective with this section is to promote design excellence in all aspects of the corridor and to design new development to fit into its surroundings and respond to neighborhood transitions with building massing and architecture. The intent is to reinforce a compact urban development pattern with well-designed, attractive, functional, safe buildings that reinforce a distinct identity for the Stadium Village Station Area.

Recommendations

- Concentrate density and intensity along 27th Avenue, 29th Avenue, Huron Boulevard, Washington Avenue, University Avenue and 4th Street
- Encourage buildings on Huron Boulevard, Washington Avenue, and University Avenue to contribute to the character of the streetscape, face the street with attractive entrances that welcome pedestrians, and have windows that overlook the street to create a sense of security.
- Encourage buildings fronting University Avenue to step down to meet the existing neighborhoods scale.
- All new or redeveloped sites within the district should include mandatory streetscaping and expansion of the "frontage" zone to expand the public realm area.
- Buildings should be sited to support good connectivity to the University of Minnesota or neighborhood destinations that are nearby.
- Define guidelines and standards for site design, building massing, façade treatments, building materials, signs and sustainable design practices.
- The setback between buildings and the sidewalk should be designed to enhance the pedestrian experience. These setbacks can be designed as attractive landscaped yards that provide privacy for building occupants or shopfronts at the sidewalk that display merchandise to passing pedestrians. In no cases should parking lots, be placed between the sidewalk and the buildings.
- Engage existing commercial uses along each of the major roadways to establish commercial and retail spaces at sidewalk level of buildings. Along with the enhanced sidewalk level expression each building should expand the "frontage" zone in order to create an expanded space for display and sale of goods, exhibition of art, or as outdoor seating areas for cafes or restaurants.



Public Realm and Streetscape Improvements

The Stadium Village streets and other public spaces should be designed as an interconnected network of human-scale outdoor rooms. The main purpose of streets is to let people move about, and every street should provide safety, convenience, and comfort for pedestrians and bicyclists. The following are recommendations for the design of Public Realm and Streetscape Improvements for the Stadium Village study area.

Recommendations

- Design the Public Realm to encourage diverse urban experiences and create a high quality and flexible environment for people to gather, congregate, and visit in order reinforce the sense of community.
- Allocate wisely within the limited space of the ROW: define the right proportions, unique spaces, and appropriate amenities to create a comfortable, inviting and memorable space where people want to spend time.
- Streetscape layouts should emphasize wholeness: the layout should focus on the entire block (s) rather than piecemeal and consider the larger context of the urban pattern and design and function of the street as a public space.
- Streetscape design and elements should be coordinated to maximize ecological, economic, and social benefits while creating a contextualized sense of place.
- Define opportunities for "flexible" public spaces or pocket parks: sidewalk areas, extension zones, or on private ROW (developed in conjunction with a redevelopment project) to provide a diversity of elements and spaces for public use/ enjoyment.
- Develop guidelines for streetscape improvements on private property. These improvements should include parking lot buffers, clearly defined building entries, streetscape furniture (benches, bicycle racks, lighting, etc) and stormwater management BMP's.
- Enhance streets through investment on the public realm. The completion of the LRT through the Stadium Village area provides a unique opportunity to improve the streets and public realm with a distinctive and consistent streetscape palatte.
- Streetscape improvements should be integrated into infrastructure planning and City of Minneapolis CIP to ensure that any incremental repair to streets or sidewalk repairs will include the upgrade of the public realm.

Pedestrian, Bicycle and multi-modal connectivity

One of the most important objectives defined in the planning study is to make the Stadium Village Station Area as interconnected, comfortable and accessible pedestrian and bicycle as possible. Walking and biking to many are preferred modes of transportation and a major force for fostering a livable community. This Plan promotes a safe and inviting pedestrian and bicycle experience to and from the station areas by creating a hierarchy of pedestrian scaled streetscape treatments and by strengthening the connections between nearby points of interests, neighborhoods, University of Minnesota Campus, trails and open spaces. Street and streetscape improvements, described in latter sections, will play a large role in improving the public realm and the environment for pedestrians.

Pedestrian Recommendations

- Allow for safe and comfortable pedestrian movements along the street to and from the LRT stations to the adjacent neighborhoods and campus.
- Improve intersections to provide safe and accessible areas for pedestrian and bicycle crossings. These intersections to include alternative paving materials, improved signalization, signage and other traffic calming techniques.
- Provide new sidewalk connections along 4th Street, 29th Avenue, Malcolm Avenue and 25th Avenue.
- Provide improved sidewalk connections along Huron Boulevard, 27th Avenue, Essex Street, 25th Avenue, and 26th Avenue.
- Provide new multi-use trail link along railroad ROW between Huron Boulevard and 27th Avenue and at the intersection of 29th Avenue/ University Avenue into the Prospect Park neighborhood.
- Provide a minimum of 8’-0” wide sidewalks throughout the corridor where feasible.
- Incorporate streetscape elements such as additional street trees, monuments, public art, kiosks and benches to create a more inviting and comfortable sidewalk environment and promote more sidewalk activity.
- Sidewalk bump outs are also recommended where possible to decrease cross walk distances, moderate vehicular speeds, provide more sidewalk space for large numbers of pedestrians waiting to cross streets, and to define on-street parking bays.


Como Neighborhood
Future Granary Road
5th Street
4th Street
University Avenue
6th Street
23rd Avenue
University of Minnesota
Proposed Granary Park
Washington Avenue
5 minute walk
4th Street
25th Avenue
26th Avenue
27th Avenue
Intercampus Transit Way
Walnut Street
Erie Street
Essex Street
Delaware Street
Fulton Street
Huron Boulevard
Oak Street
Ontario Street
33th Avenue
Arthur Avenue
Malcolm Avenue
5 minute walk
Tower Park
Clarence Avenue
University Avenue
Bedford Street
Luxton Park
Mississippi River
Prospect Park Neighborhood
N
LEGEND
New/ Enhanced On Street Bicycle Lane
New On Street Shared Lane
Multi-Use Trail
Improved Pedestrian Connection
Primary Intersection
Secondary Intersection
Project Limits
Existing Bicycle Facilities (bike lanes, signed bike routes, shared lanes)
Central Corridor LRT Route
Existing/ proposed NICE Ride kiosks

Bicycle Recommendations

- Improve connections at the edges of the station areas to facilitate bicycle travel to adjacent neighborhoods, the broader campus area and regional bicycle facilities.
- Include provisions for bicycle facilities and improved infrastructure. This should be included at or near the Stadium Village and 29th Avenue LRT stations. This may include bicycle racks, bicycle lockers, and/or other amenities to promote bicycle circulation to and from the LRT.
- Improve the connections and facilities along 27th Avenue to reinforce the "missing link" of the Grand Rounds.
- Provide a safe (dedicated) east/west on street shared bike route along 4th Street to connect 23rd Avenue to Malcolm Boulevard.
- Provide a north to south pedestrian and bicycle links to the future Granary road along 25th Avenue, 27th Avenue, 29th Avenue and Malcolm Avenue.
- Provide improved on-street bicycle route along 26th Avenue from Essex Street to University Avenue.
- Provide improved on-street bicycle route along University Avenue from 25th Avenue to 29th Avenue.
- Provide improved on-street bicycle route along Essex Street from Huron Boulevard to the Luxton Park area.
- Work with the neighborhoods to identify inter-neighborhood bicycle routes. Improve bicycle and pedestrians connections across Highway 94, nearby neighborhoods, and the recreational trails along the riverfront.
- Encourage expansion of the NICE ride bike share to other areas within the study area.
- Encourage centralized bicycle parking (such as on-street bicycle corrals) at convenient locations for bicyclists to park their bikes and walk to places throughout the project area. This new bicycle parking should be located in close proximity to open spaces/ parks, and new redevelopment areas, adjacent to the LRT station areas and near bicycle corridors.
- The width of traffic lanes should be reduced where possible to provide more space for wider sidewalks.

Public Open Space, Public Parks and Plazas

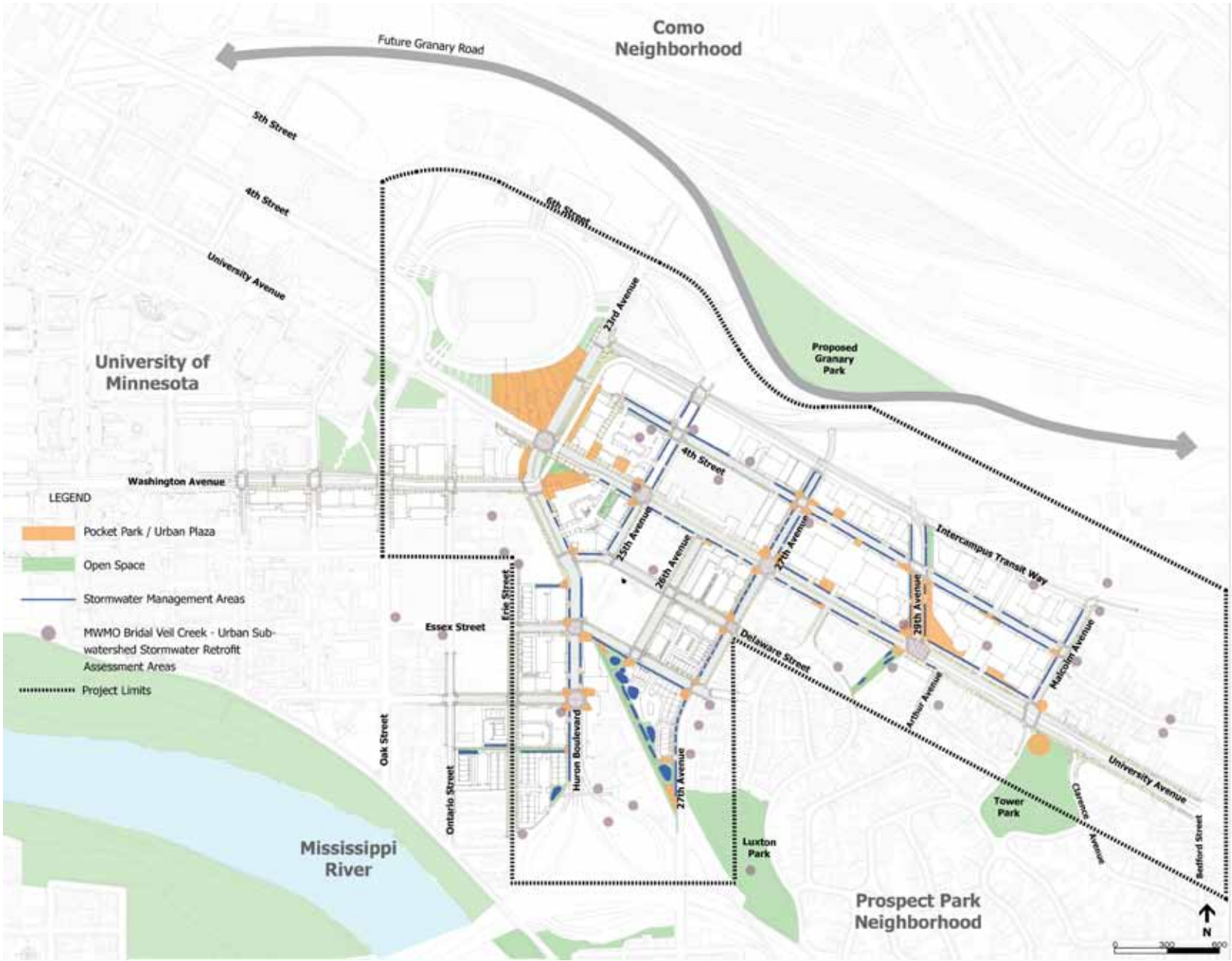
To enhance the reconstruction of the LRT route and priority public realm improvements at the station areas, a public realm strategy should be put into place to enhance and green the streets within the district over time. A systematic program of gradual street improvements has the inherent ability to change the overall character of the project area to create an enjoyable and connected network of green pedestrian streets.

The success of future public realm improvements will be dependent on the opportunity to create these flexible spaces that will be able to accommodate a wider range of civic functions and activities that are district in character and tie to unique characteristics of the University and adjacent neighborhoods.

The primary objectives for the open space system is to create stronger connections between existing amenities to create a public space network and provide better meeting places for all types of activities such as outdoor festivals, seating areas, coffee and lunch breaks, and art displays.

Recommendations

- Create several small urban gathering spaces/ pocket parks along 27th Avenue, 29th Avenue, Huron Boulevard, Washington Avenue, University Avenue and 4th Street.
- Create several small neighborhood park/amphitheater spots along University Avenue at Tower Park.
- Create a new festival plaza adjacent to the TCF Stadium at the northwest corner of University Avenue and 23rd Avenue.
- Create a "convertible street" plaza along the extension of Washington Avenue and University Avenue. This space will provide for normal traffic operations for a majority of the time but can be closed for programmed community/ University events.
- Where existing sidewalks are less than 10' wide, setback buildings a minimum of 5- 6 feet (within the frontage zone) to create wider sidewalks for outdoor seating and streetscape amenities.
- Create a wayfinding system for the station areas, public transit, businesses, parks, and University of Minnesota campus that is not only informative but also contributes to the area's design character.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Future Granary Road
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Tower Park
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Bedford Street
Luxton Park
Mississippi River
Prospect Park Neighborhood
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LEGEND
Pocket Park / Urban Plaza
Open Space
Stormwater Management Areas
MWMO Bridal Veil Creek - Urban Sub-watershed Stormwater Retrofit Assessment Areas
Project Limits

Green Infrastructure

Green Infrastructure is the creation of the interconnected network of sustainable practices to enhance the built environment and contribute to the overall health of natural ecosystems. Green infrastructure includes the expanded urban forest to provide shade and shelter, protection of healthy soils and promote clean water through the utilization of best management practices (BMPs) for stormwater.

Recommendations

- Green corridors should be developed on all side streets connecting to the LRT route and primary street corridors (4th Street, University Avenue, 25th Avenue, 27th Avenue, 29th Avenue and Huron Boulevard). The green corridors will be developed with street tree plantings, sustainable infrastructure projects, streetscape enhancements and public art projects.
- Enhance the "urban forest" with trees, understory plantings, and above ground planting areas.
- Define opportunities for stormwater management and reuse underutilized public ROW space.

Public Realm Evolution

The public realm areas within the Stadium Village Station Study area are ever evolving and will be shaped by many different investment decisions and projects in the future. The completion of the LRT route within the study area will define the first layer of public realm improvements in the form of standard streetscape and infrastructure enhancements. As new commercial, office and residential redevelopment opportunities are realized adjacent to the LRT route the public realm will have the opportunity to evolve to the next stage.

To allow for a logical and orderly evolution of the public realm and to reinforce the desired image and character of the community, a series of "zones" has been defined which establish guidelines for the specific areas within the public realm. The public realm zones identified below are similar to the pedestrian zones established in the ACCESS Minneapolis, Chapter 10 Pedestrian Facility Design Manual (Page 10-11) but are more specific to the existing conditions along the streets and roadways within the Stadium Village area.

The Public realm zones developed for the Stadium Village area are defined below:

- **Frontage zone:** the area directly adjacent to property lines where the transition between public sidewalk and private buildings occur. Building setbacks will balance the need for a consistent street wall while providing opportunities for wider sidewalks, public gathering areas, private amenity spaces or outdoor dining. Adjacent buildings should promote a mix of ground floor uses to activate the public realm
- **Pedestrian zone:** the area for designated pedestrian travel along the street. Sidewalk widths respond to adjacent uses, adjacent building form, roadway characteristics and adjacent ground floor uses. This zone is recommended to be a minimum of 8'-0" wide where feasible.
- **Amenity zone:** the area located between the pedestrian zone and the street which is designated for trees, landscaping, stormwater management, transit stops, lighting and streetscape furnishings.
- **Edge zone:** the area directly adjacent to the street to allow for vehicle and transit access
- **Extension zone:** the mid-block and corner bump out areas. The plan recommends utilizing these areas for additional public space and amenities.

The following graphics identify the recommended evolution for public realm improvements within the project area.

Existing Conditions

This illustration represents the typical existing conditions of the public and private realms along any of streets or roadways within the project area. Many different land use development patterns exist including more dense and compact developments up the edge of the right-of-way and other types of development that are setback from the right-of–way edge with parking between the building and street edge. The existing sidewalks within the study area are generally 5'-6' wide and there is typically a grass boulevard between the sidewalk and street curb. The grass boulevards within the project area typically contain overstory street trees, roadway lighting and a variety of above and below ground utilities. The trees throughout the project area can be characterized as mature with many of the trees being Green Ash, which is susceptible to the impending EAB epidemic. Many of the trees can be characterized in poor condition, with irregular growth habits, visible signs of stress and poor canopy structure.

Existing Condition - with or without redevelopment

Proposed LRT Public Realm/ Roadway Improvements

The second illustration represents the typical public realm improvements proposed as part of the LRT route. The typical public realm improvements that have been proposed include:

- bump-outs to define on-street parallel parking areas
- grass boulevard areas with equally spaced street tree plantings
- new pedestrian level lighting
- new concrete sidewalk placed at the edge of the right-of-way line
- new concrete "carriage" walks from the sidewalk to the back of curb area where parallel parking is located

Proposed LRT Public Realm/Roadway Improvements

Short-Term Improvements: Private improvements after LRT Improvements

The short term improvements illustration introduces the idea of defined pedestrian realm zones. Four of the five zones are represented in the graphic to start to define potential public realm improvements prior to the completion of the LRT route and associated improvements. This graphic focuses on the improvement of private property (frontage zone) areas to show how existing uses can maximize private property to enhance the public realm. Some of the potential improvements that are identified include the creation of outdoor dining/ display areas adjacent to existing commercial uses and the opportunity to provide parking lot buffering with vegetation or structure (wall or metal fencing).

Short-term Improvements - Private improvements after LRT Improvements

Long Term Improvements: Scenario A

The Scenario A illustration defines the potential evolution of improvements to the public realm up and beyond improvements implemented as part of the LRT route. The recommendations for the public realm are focused within the amenity zone of the public realm. The proposed improvements within the amenity zone that are identified include the expansion of hardscaped areas to create seating and gathering spaces, the definition of ground level planting areas that can provide additional "greening" or can serve to capture, store and cleanse stormwater from adjacent areas. The expanded hardscape will allow for the inclusion of additional pedestrian amenities including structured bench seating, trash receptacles and bicycle racks.

Long-term Improvements Scenario A

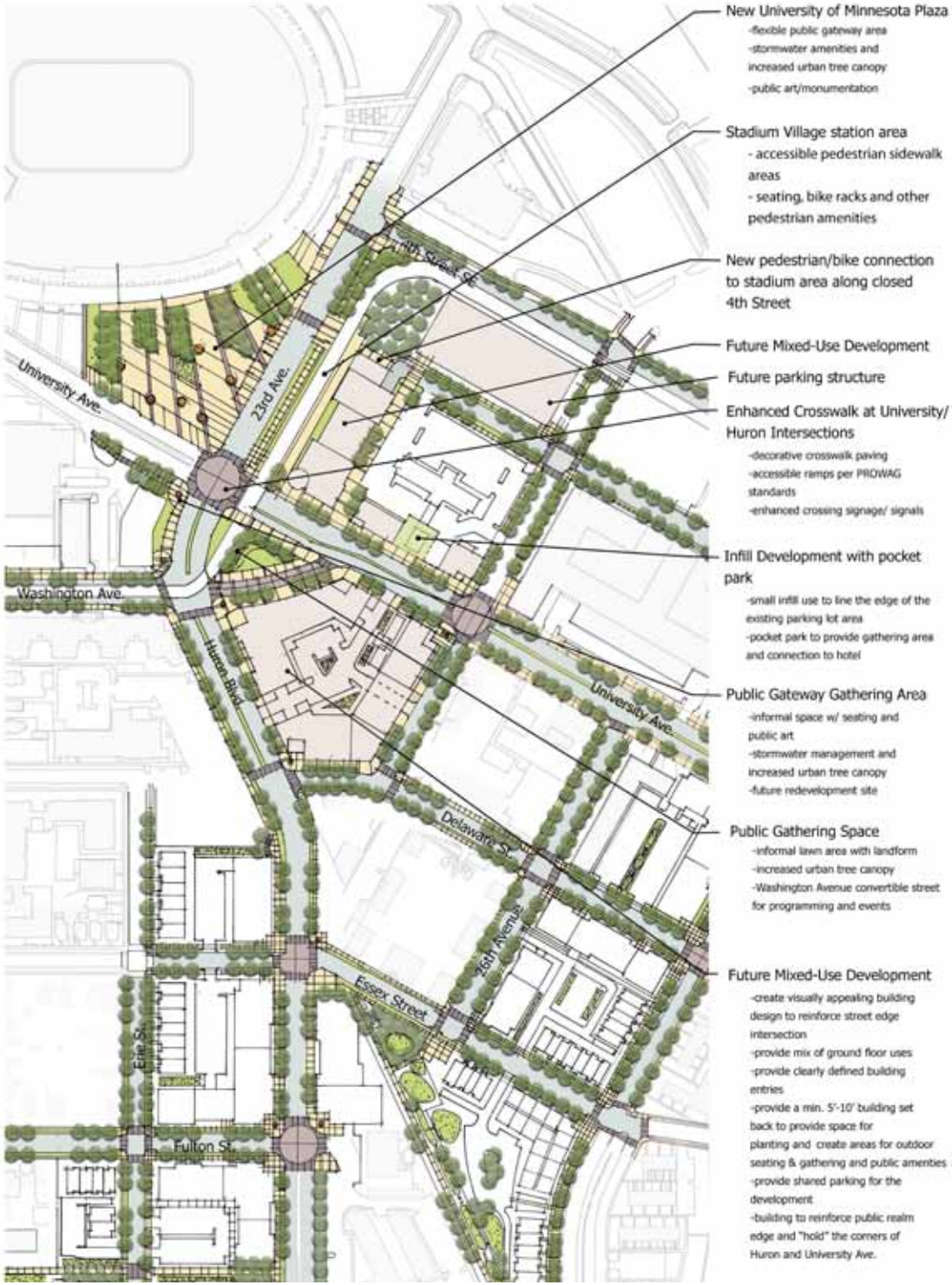
Long Term Improvements: Scenario B

Scenario B illustrates the enhancement of the public realm with additional hardscape and planting areas within the amenity zone. This scenario identifies the opportunity to expand and enhance the public realm by coordinating these types of improvements with potential redevelopment projects. As redevelopment plans are developed for underutilized parcels along the street corridors, the opportunity exists to enhance the public realm areas by defining appropriate setbacks and building placement on the individual sites.

New buildings on redevelopment sites have the opportunity to not only shape the edge of a corridor but with proper building placement can enhance and expand the public realm area. Side yard setbacks of buildings is equally as important to provide solar access to the building, expand areas for stormwater management, creation of additional areas for pocket parks/open space and mitigate shadow patterns that affect adjacent properties.

The public realm is improved and there becomes less reliance on parking, the opportunity exists to utilize parking stalls on street and on private parking lots to expand bicycle parking and facilities.

Long-term Improvements Scenario B


New University of Minnesota Plaza
-flexible public gateway area
-stormwater amenities and increased urban tree canopy
-public art/monumentation
Stadium Village station area
- accessible pedestrian sidewalk areas
- seating, bike racks and other pedestrian amenities
New pedestrian/bike connection to stadium area along closed 4th Street
Future Mixed-Use Development
Future parking structure
Enhanced Crosswalk at University/ Huron Intersections
-decorative crosswalk paving
-accessible ramps per PROWAG standards
-enhanced crossing signage/ signals
Infill Development with pocket park
-small infill use to line the edge of the existing parking lot area
-pocket park to provide gathering area and connection to hotel
Public Gateway Gathering Area
-informal space w/ seating and public art
-stormwater management and increased urban tree canopy
-future redevelopment site
Public Gathering Space
-informal lawn area with landform
-increased urban tree canopy
-Washington Avenue convertible street for programming and events
Future Mixed-Use Development
-create visually appealing building design to reinforce street edge intersection
-provide mix of ground floor uses
-provide clearly defined building entries
-provide a min. 5'-10' building set back to provide space for planting and create areas for outdoor seating & gathering and public amenities
-provide shared parking for the development
-building to reinforce public realm edge and "hold" the corners of Huron and University Ave.
4th Street SE
University Ave.
23rd Ave.
Washington Ave.
Huron Blvd
University Ave.
Delaware St.
26th Avenue
Essex Street
Erie St.
Fulton St.

Districts

The framework plan in the previous section identified the major character districts within the Stadium Village project area. This section defines in greater detail the elements that make up the Public realm in each district.

Stadium Village Station Area District

This district serves as the location for the Stadium Village LRT Station and plays a critical role in the study area, unifying the commercial and University uses within the study area. This district has the greatest opportunity to evolve into a mixed use urban village providing more housing choices, restaurants, businesses that serve the University of Minnesota and adjacent neighborhoods, while improving overall multi-modal connectivity.

More detailed public realm recommendations for the District include:

- Create a distinctive entrance to the Stadium Village Station Area by framing the edges with signature mixed use buildings with building heights that are substantial enough to frame the intersection in a compatible manner with the mass of TCF Stadium.
- Redevelopment should help to frame the corridor and provide mixed use buildings with ground floor commercial uses to satisfy the unmet commercial needs on the few remaining sites suitable for retail development in this area.
- Provide for Type 1 Streetscape treatments throughout the district area.
- Most significant development pressures will be felt within this area.
- Define opportunities for new public plazas/open spaces.
- Scale down the perceived size of the street rights-of-way in the Station Area (Intersection of University Avenue/ Washington Avenue/23rd Avenue) by improving the streetscape and promoting building height.

Intersection Treatments:

- Opportunity to enhance the intersection at University Avenue/ Washington Avenue/ 23rd Avenue with primary intersection treatments

Pocket parks/ open spaces:

- It is recommended that each of the four corners of the intersection should incorporate an enhanced public plaza/open space.
- The University of Minnesota TCF plaza at the north/west corner of the intersection could serve as a larger plaza to support game day events or larger neighborhood events.
- The LRT station on the north east corner of the intersection should be extended to University Avenue and a variety of active and passive spaces should be created.
- The redevelopment of the area directly adjacent the station will play a critical role in the overall character and success of the public realm.
- The future use and building should support an expanded public realm and should provide for a wide variety of activities from small gatherings, outdoor dining to intimate tree canopied seating areas.

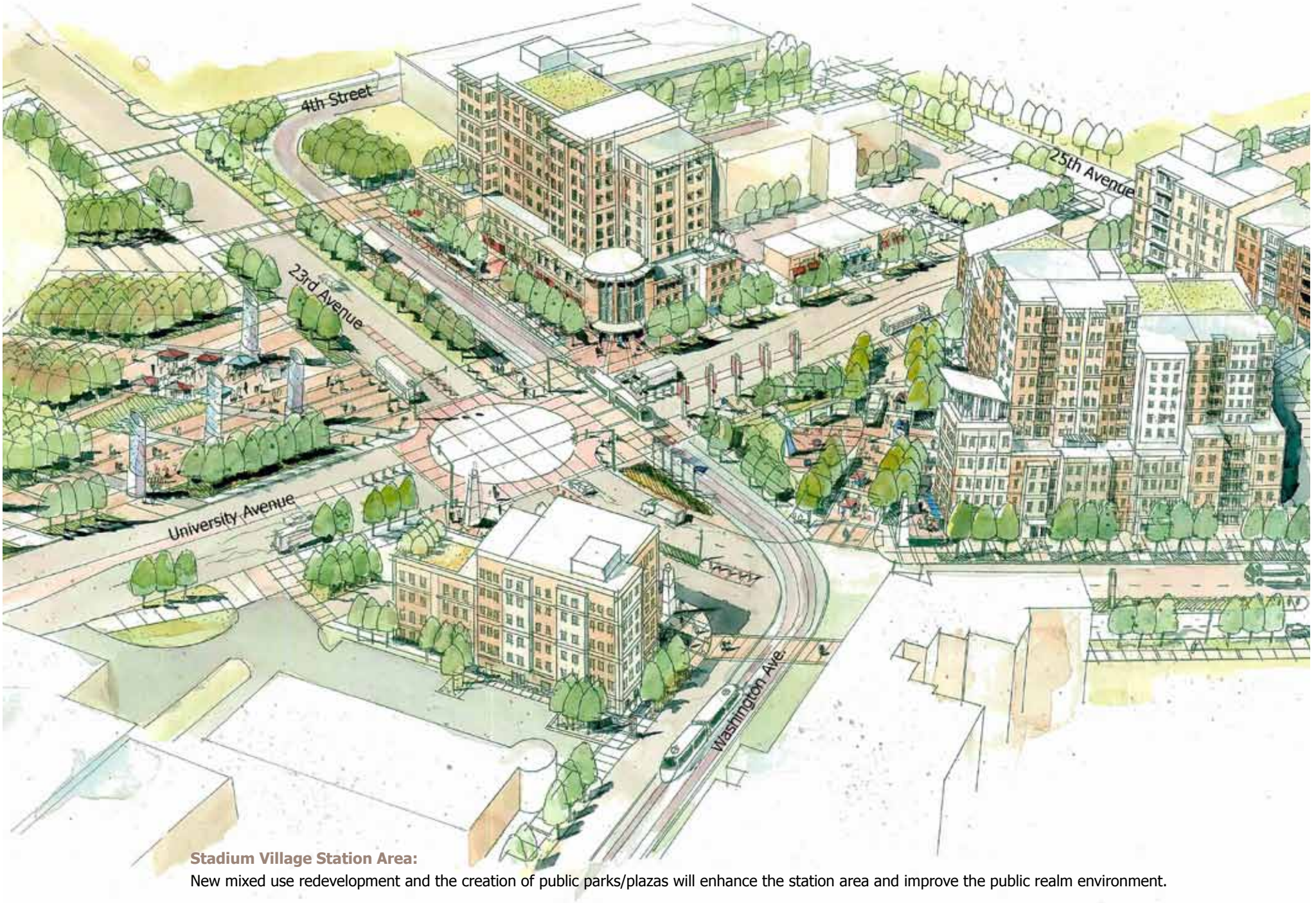
- On the south/ east corner of the intersection a new mixed-use redevelopment should anchor the site and reinforce the edge of the approach routes from the east along University Avenue and the south along Huron Boulevard. The small extension of University Avenue that fronts the redevelopment site should be redesigned as a "convertible" street that can be closed on game days or for neighborhood events. The small triangle park that sits between University Avenue and Washington Avenue should be redesigned to provide more programmed events and additional active/ passive open space. The design of this triangle park should be coordinated with the "convertible" street to create a unique and memorable urban plaza in the middle of this area.
- The public right-of-way along the south/west corner of the street should be expanded and designed as a linear public plaza. This space will be defined by a new mixed-use building that will reinforce the street edge and frame the views from the south and east. This linear plaza should contain a variety of active and intimate spaces for different uses and events.

Bicycle Facilities:

- The highest volume of pedestrian and bicycle traffic with the project areas occurs near the proposed station location. It is imperative to improve the connectivity for pedestrians and bicycles to this area and complete links and gaps to adjacent neighborhoods and areas of employment
- Bicycle improvements should extend to the north along 23rd Avenue and the east along 4th Street.
- Additional bicycle facilities should be provided in and around this area to support the LRT Station. Additional bicycle racks, bicycle lockers, wayfinding signage and possible bicycle maintenance kiosk should be provided.

Stormwater Management:

- With the completion of the LRT station and future redevelopment opportunities the need to incorporate stormwater management facilities is an important consideration. Each of the previously defined public plaza/ open space areas should incorporate and utilize a wide variety of stormwater BMP's identified later in this document.



Stadium Village Station Area:
New mixed use redevelopment and the creation of public parks/plazas will enhance the station area and improve the public realm environment.

Huron Boulevard Gateway District

Public Realm Recommendations:

The primary objective for this district is to create a distinctive entrance to the Stadium Village Station Area by framing the edges with signature mixed use buildings, strengthening connections to the University of Minnesota, including street level land uses, define opportunities for new public plazas/open spaces, completing bicycle trail links, and scaling down the perceived size of Huron Boulevard by improving the streetscape.

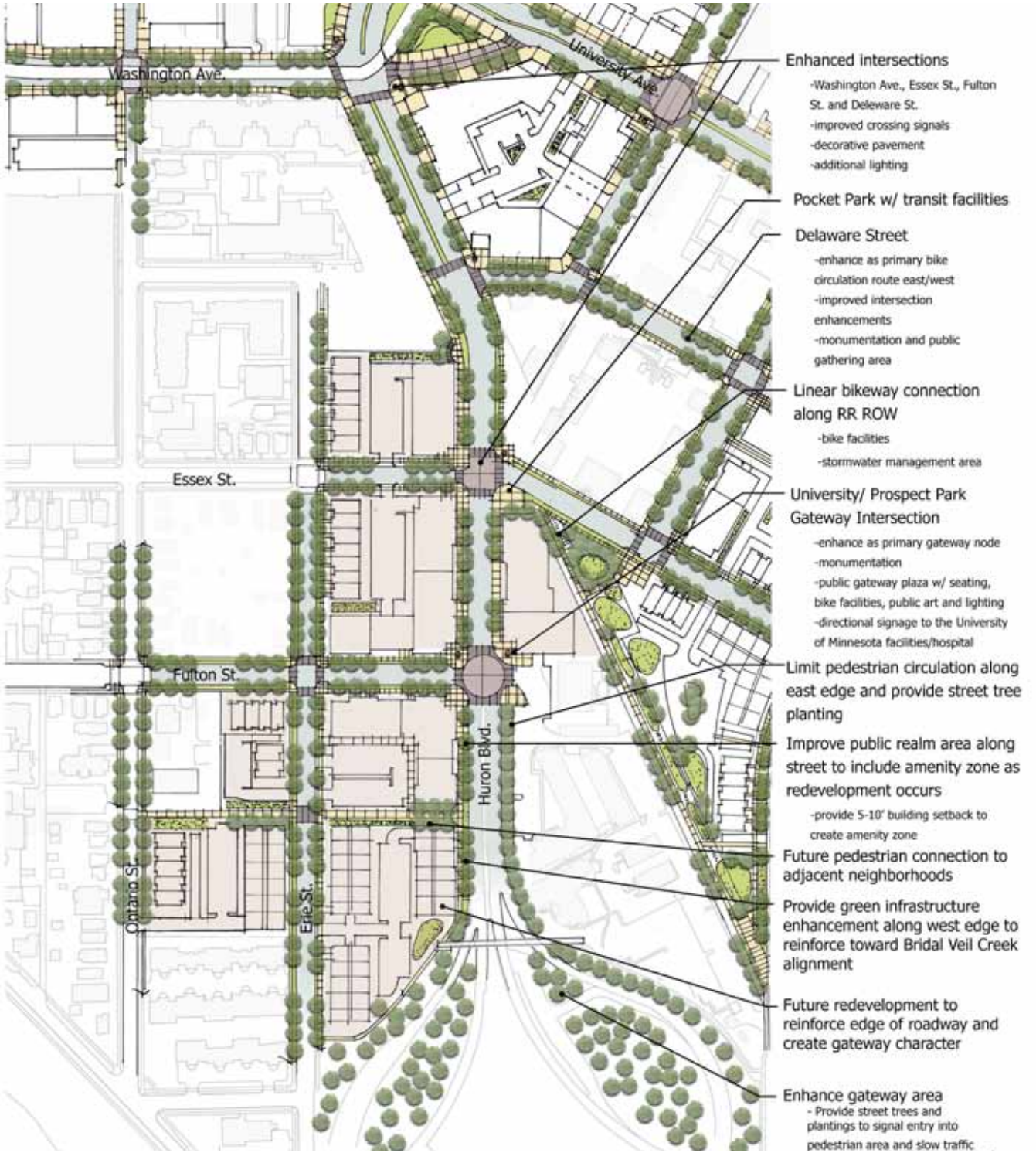
More detailed public realm recommendations for the District include:

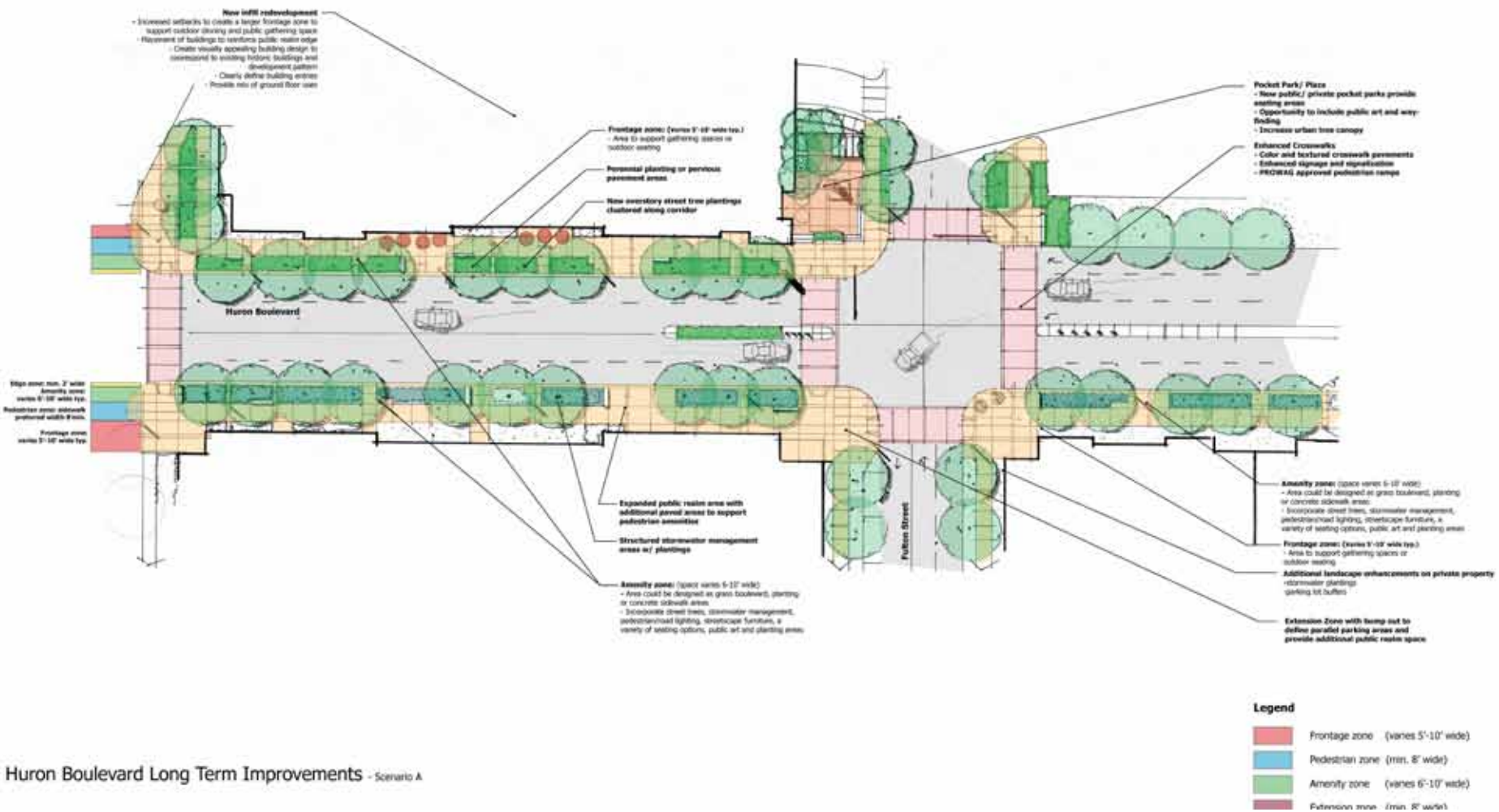
Huron Boulevard (Highway 94 to Fulton Street):

- Increase landscape enhancements along both sides of the entry corridor to Fulton Street. This increased landscaping will create more street enclosure and help to slow traffic prior to the intersection at Fulton Street .
- Improve wayfinding and signage to direct patrons to the University Hospital/clinic via I-94 and Fulton to ease the pressure on University and Washington.
- Improve wayfinding for Prospect Park Neighborhood businesses .
- Provide for Type 1 Streetscape treatments along both sides of the roadway. South of Fulton Street, provide new streetscape treatments on the west side of the street and improve connectivity to adjacent neighborhoods to the west.
- As redevelopment occurs on the western edge of the corridor, create a new mid-block pedestrian connection From Huron Boulevard to Erie Street.

Huron Boulevard (Fulton Street to Essex Street):

- Redevelopment along the eastern edge of the corridor should create a wider frontage zone in order to provide for a wider public realm area.
- Provide for Type 1 Streetscape treatments along both sides of the roadway.


Washington Ave.
University Ave.
Essex St.
Fulton St.
Huron Blvd.
Ontario St.
Erie St.
Enhanced intersections
-Washington Ave., Essex St., Fulton St. and Deleware St.
-improved crossing signals
-decorative pavement
-additional lighting
Pocket Park w/ transit facilities
Delaware Street
-enhance as primary bike circulation route east/west
-improved intersection enhancements
-monumentation and public gathering area
Linear bikeway connection along RR ROW
-bike facilities
-stormwater management area
University/ Prospect Park Gateway Intersection
-enhance as primary gateway node
-monumentation
-public gateway plaza w/ seating, bike facilities, public art and lighting
-directional signage to the University of Minnesota facilities/hospital
Limit pedestrian circulation along east edge and provide street tree planting
Improve public realm area along street to include amenity zone as redevelopment occurs
-provide 5-10' building setback to create amenity zone
Future pedestrian connection to adjacent neighborhoods
Provide green infrastructure enhancement along west edge to reinforce toward Bridal Veil Creek alignment
Future redevelopment to reinforce edge of roadway and create gateway character
Enhance gateway area
- Provide street trees and plantings to signal entry into pedestrian area and slow traffic



Huron Boulevard Long Term Improvements - Scenario A

Graphic represents the typical proposed public realm improvements to occur along Huron Boulevard. New infill development should provide for expanded "frontage" zone and slope edge of street corridor. Public streetscape should enhance pedestrian experience and define opportunities for new public plazas/pocket parks.

Before:
Expansive pavement area is un-inviting for pedestrians and overall street lacks distinctive character.

After:
New mixed use developments shape gateway corridor and enhance pedestrian experience.

Before:
Roadway feels expansive and sidewalk area is narrow. Parking defines the edge of the public realm.

After:
New mixed use developments create ground floor uses to activate street level. Streetscape improvements create seating area and improve pedestrian experience.

Huron Boulevard (Essex to University Avenue):

- Provide for Type 1 Streetscape treatments along both sides of the roadway to include monuments/ signage, wayfinding, open space/ plazas and public artwork
- Because the intersection at University Avenue serves as the primary gateway from the east and west edges of campus it is important to provide "signature" elements to signal or welcome visitors into the area.
- Create "signature" redevelopment at three of the four corners of the intersection of University Avenue/ Washington Avenue /23rd Avenue

Intersection Treatments:

- Opportunity to enhance the intersections at Fulton Street, Essex Street, Delaware Street and Washington Avenue with primary intersection treatments

Pocket parks/ open spaces:

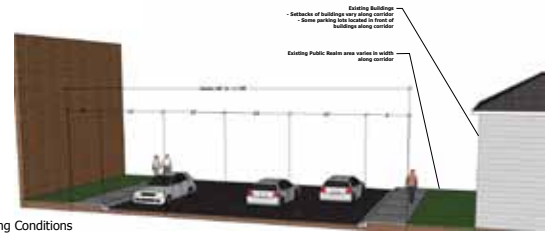
- Pocket parks have been identified for numerous locations along Huron Boulevard, including at most of the primary intersections along the corridor and many mid-block areas. These small, active spaces, if designed correctly become the "linking" nodes along a street frontage and reinforce the overall pedestrian circulation system. These pocket parks should be designed as modular spaces that provide a flexible variety of open space functions

Bicycle Facilities:

- There are no specific bicycle facility recommendations along Huron Boulevard other than improvement of the intersection crosswalk areas. Many of the cross-streets along the corridor will serve as the primary bicycle circulation routes that intersect Huron Boulevard. Both Essex and Delaware Streets will provide on-street bicycle facilities to connect to the adjacent campus or neighborhoods.

Stormwater Management:

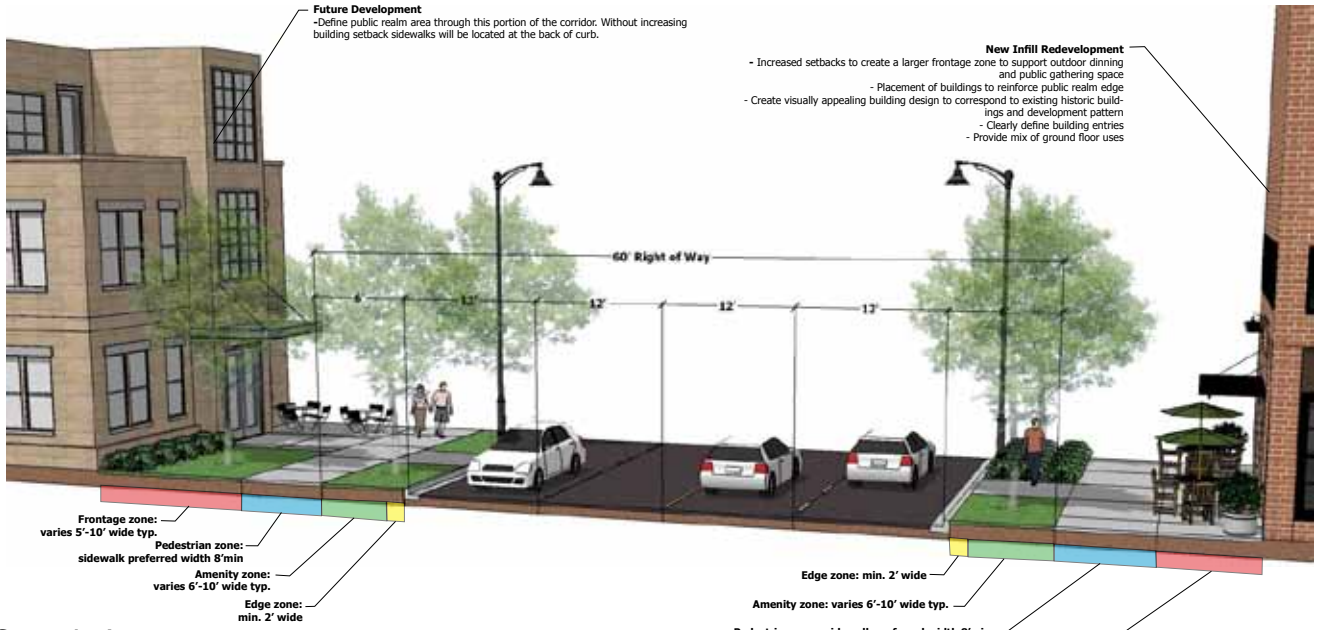
- Huron Boulevard is in close proximity to the historic location of the Bridal Veil Creek alignment from the former wetlands in the SEMI area to the Mississippi River. The close proximity to the former creek alignment offers the unique opportunity to manage and interpret stormwater along the corridor. The plan recommends that an urban stormwater BMP be developed along the roadway frontage on the west edge of the street to capture, cleanse and possibly infiltrate stormwater from the street and public realm areas along the street.



Existing Conditions

Legend

Frontage zone	(varies 5'-10' wide)
Pedestrian zone	(min. 8' wide)
Amenity zone	(varies 6'-10' wide)
Extension zone	(min. 8' wide)
Edge zone	(min. 2' wide)



Scenario A - Fulton Street to Essex Street

Scenario B - Essex Street to University Avenue

27th Avenue Open Space District

Public Realm Recommendations:

The primary objective for this district is to create a green corridor along 27th Avenue and complete the "missing link" of the Grand Rounds. The corridor will link future redevelopment and infrastructure improvements along the north edge of the study area to residential areas and the Mississippi River in the south. Opportunities for new infill residential should frame the edges of the roadway, strengthening connections to the adjacent neighborhoods, define opportunities for new public plazas/ open spaces, and provide enhanced streetscape.

More detailed public realm recommendations for the District include:

27th Avenue (Proposed Granary Road to University Avenue):

- Support redevelopment on both sides of the roadway. Redevelopment should help to frame the corridor and provide mixed use buildings with ground floor commercial uses.
- Creation of a linear stormwater treatment system along the west side of the street
- Improve on-street bicycle facilities along 27th to create stronger link to Mississippi river
- Provide for Type 1 Streetscape treatments along both sides of the roadway.

27th Avenue (University Avenue to I-94 Bridge):

- Proposed Mixed use residential redevelopment along the western edge of the corridor should create a wider frontage zone in order to provide for a wider public realm area.
- Improve on-street bicycle facilities along 27th to create stronger link to Mississippi river
- Provide for Type 2 Streetscape treatments along both sides of the roadway.

Intersection Treatments:

- Opportunity to enhance the intersection at University Avenue with primary intersection treatments
- Improve the intersection at Delaware Street, 4th Street, and Essex Street as secondary intersection

Pocket parks/ open spaces:

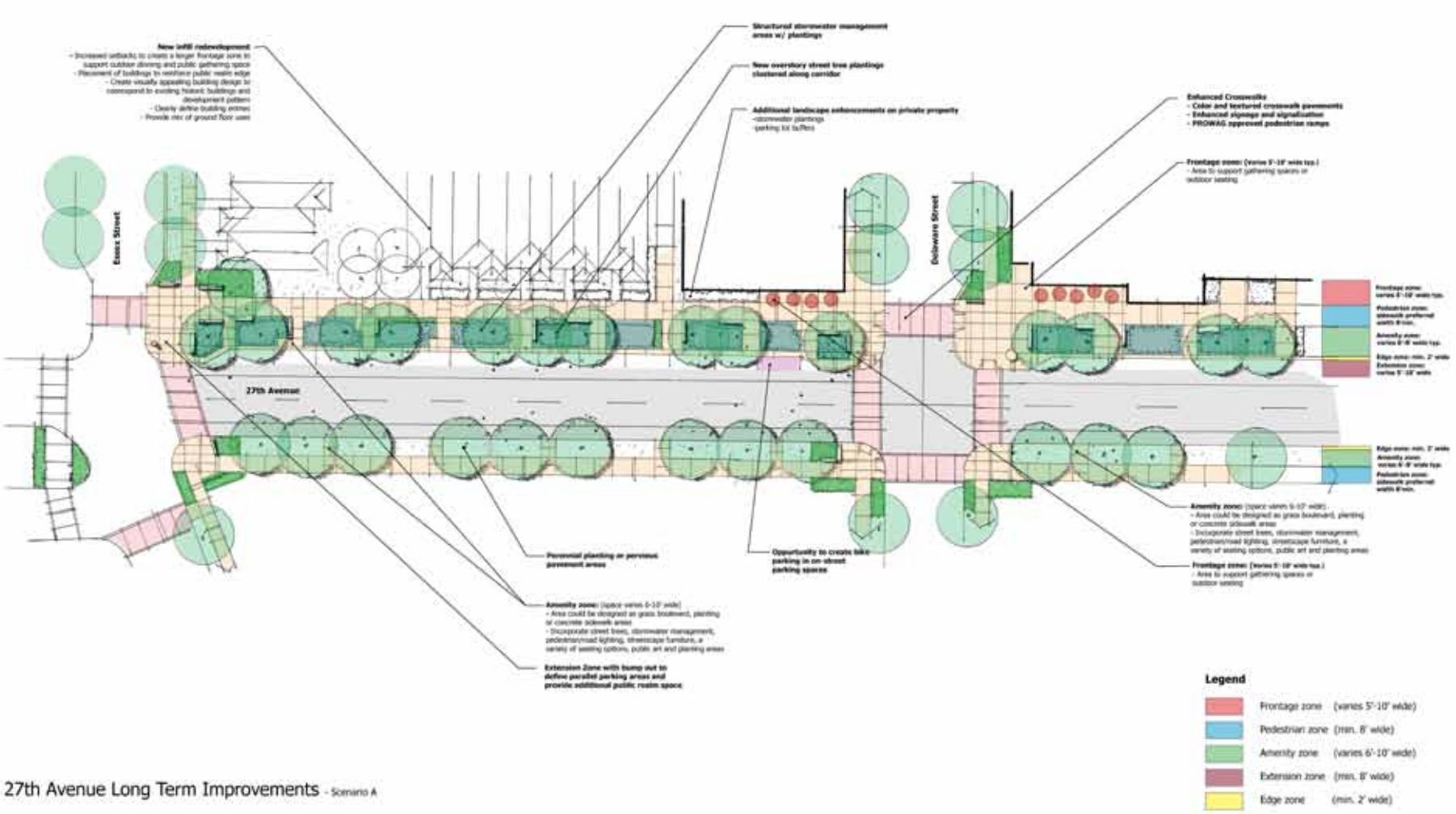
- Potential pocket parks along this corridor could occur at both the 4th Street and University Avenue intersections. Additional public open spaces/ pocket parks should be located on the west side of the corridor at every intersection south of University Avenue.

Bicycle Facilities:

- Completion of the "missing link" of the Grand Rounds. Because this corridor has been identified as the primary connection through the study area for the "missing link", it is necessary to upgrade the existing bicycle facilities and public realm to create a desirable and safe corridor for multi-modal circulation. It is recommended that a colored on-street bicycle lane be added to the roadway with additional signage on the road surface and within the boulevard areas. At each intersection along the roadway consideration should be given to adding a bicycle "box" to improve crossings and automobile/bicycle interactions.

Stormwater Management:

- This roadway will serve as one of the primary "green" corridors that should incorporate a more extensive urban tree canopy and enhanced urban stormwater BMP's to manage stromwater from both the roadway and boulevard areas.



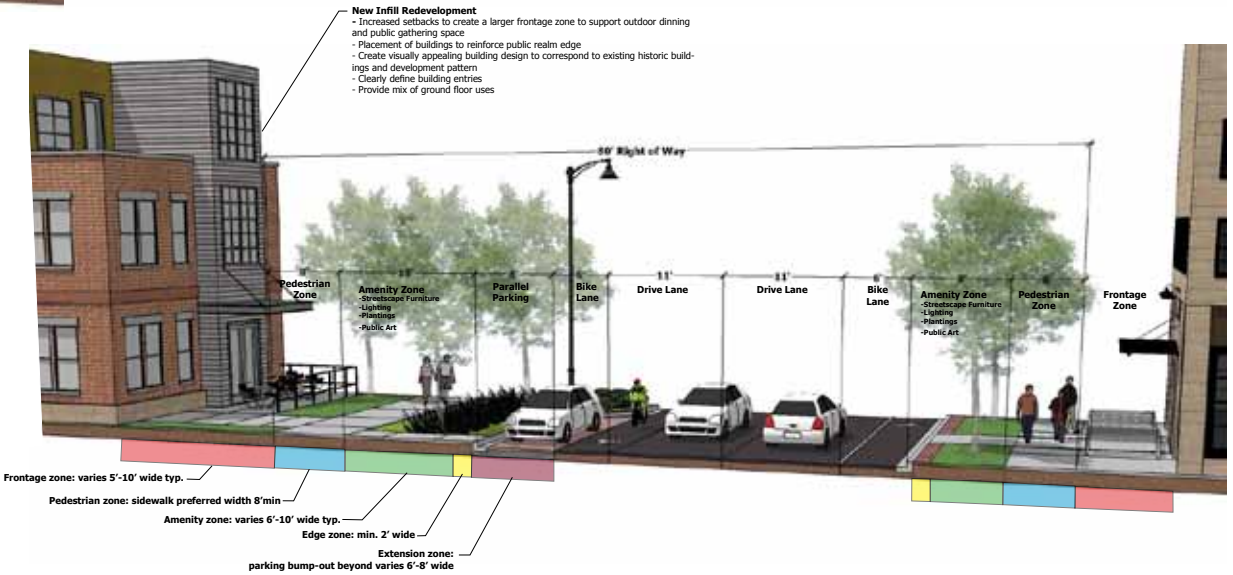
27th Avenue Long Term Improvements - Scenario A

Graphic represents the typical proposed public realm improvements for 27th Avenue. New infill development should be placed to reinforce the western edge of street and provide for expanded "frontage zone". A stormwater treatment system is proposed for western edge of the street and proposed streetscape improvements will enhance the pedestrian experience.

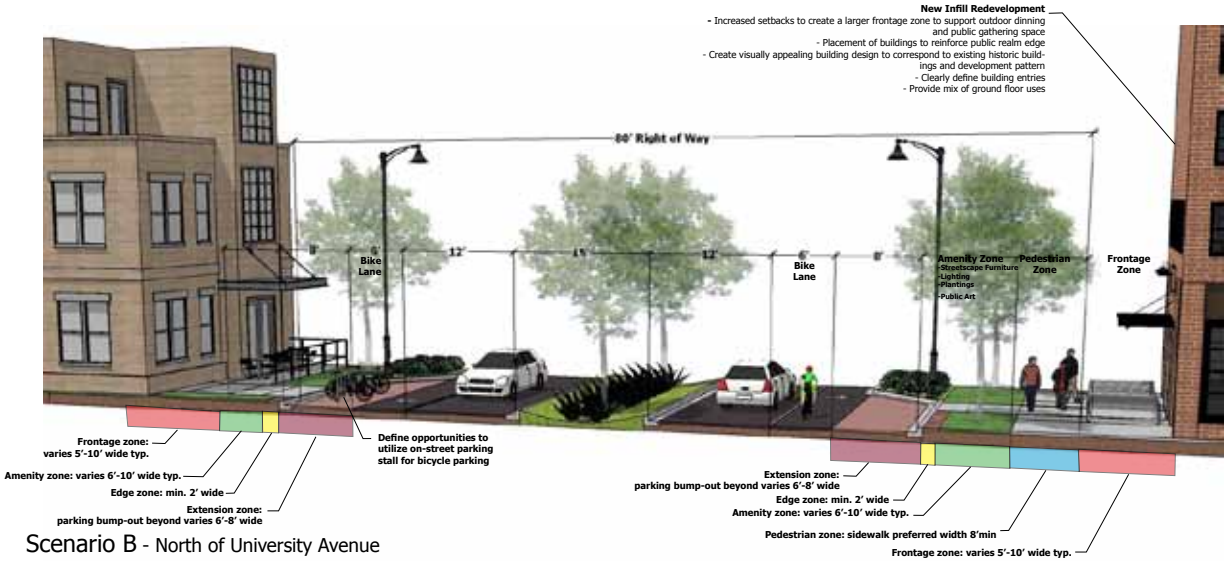
Existing Conditions

Legend

- Frontage zone (varies 5′-10′ wide)
- Pedestrian zone (min. 8′ wide)
- Amenity zone (varies 6′-10′ wide)
- Extension zone (min. 8′ wide)
- Edge zone (min. 2′ wide)



Scenario A - South of University Avenue



Scenario B - North of University Avenue

Before:
Current raodway provides for limited pedestrian and vehicular circulation.

After:
Future redevelopment will support an improved public realm which will support pedestrian circulation and complete the "missing link" of the Grand Rounds.

27th Avenue

Washington Avenue Academic District

The primary objective for this district is to create a distinctive entrance to the Stadium Village Station Area from the western portions of the City and the University of Minnesota core campus by framing the southern edge of the roadway with mixed use buildings, strengthening connections to the broader University of Minnesota, and improve the public realm with streetscape enhancements

More detailed public realm recommendations for the District include:

Washington Avenue (Walnut Street to Huron Boulevard):

- Increase landscape enhancements where possible along both sides of the entry corridor to Huron Boulevard.
- Improve wayfinding and signage to direct visitors to University of Minnesota facilities and Prospect Park Neighborhood businesses.
- Redevelopment should help to frame the corridor and provide mixed use buildings with ground floor commercial uses.

Intersection Treatments:

- No major intersection enhancements have been recommended as part of this study due to the extensive streetscape improvements associated with the LRT project.

Pocket parks/ open spaces:

- Numerous public plazas and open spaces exist along this stretch of roadway. As part of the completion of the LRT route additional informal public space will be created in the central median of the LRT route

Bicycle Facilities:

- Current and proposed bicycle facilities will be improved as part of the LRT project.

Stormwater Management:

- Because of the limited amount of ROW and proposed streetscape improvements defined as part of the LRT route project, significant stormwater management may not be feasible.

University Avenue Neighborhood Commercial District

The primary objective for this district is to create a distinctive entrance to the Stadium Village Station Area from the east by framing the both sides of the roadway with mixed use buildings, strengthening connections to the University of Minnesota, including street level land uses, define opportunities for new public plazas/ open spaces, completing bicycle trail links, increase the urban forest, scale down the perceived size of University Avenue and improve the public realm with streetscape enhancements

University Avenue

More detailed public realm recommendations for the District include:

University Avenue (23rd Avenue to 27th Avenue):

- Create a distinctive entrance to the Stadium Village Station Area by framing the edges with signature mixed use buildings
- Redevelopment should help to frame the corridor and provide mixed use buildings with ground floor commercial uses.
- Provide for Type 1 Streetscape treatments along both sides of the roadway.
- Increase landscape enhancements along both sides of the entry corridor to 27th Avenue. This increased landscaping will create more street enclosure and help to slow traffic
- Define opportunities for new public plazas/ open spaces
- Complete bicycle links and pedestrian gaps
- Scale down the perceived size of the Intersection of University Avenue/ Washington Avenue/ 23rd Avenue by improving the streetscape.
- Improve wayfinding and signage to direct visitors to the University of Minnesota facilities and Prospect Park Neighborhood businesses
- Redevelopment along the southern edge of the corridor (at the 27th Avenue intersection) should create a wider frontage zone in order to provide for a wider public realm area.

University Avenue (27th Avenue to 29th Avenue):

- Redevelopment along the northern edge of the corridor should create a wider frontage zone in order to provide for a wider public realm area.
- Provide for Type 1 Streetscape treatments along both sides of the roadway.
- Complete bicycle links and pedestrian gaps
- Define opportunities for new public plazas/ open spaces
- Improve the new center median with landscape enhancements

University Avenue (29th Avenue to Bedford Street):

- Create a distinctive entrance to the 29th Street Station Area by providing new expanded public realm at the intersection of 29th Avenue and University Avenue. Frame the edge of the public realm with signature mixed use buildings
- Provide for Type 1 Streetscape treatments along both sides of the roadway to include monuments/ signage, wayfinding, open space/ plazas and public artwork
- Mixed use redevelopment along the northern edge of the corridor from 27th Avenue to Malcolm Avenue. Development guidelines should promote ground floor commercial uses and the creation of a wider frontage zone in order to provide for a wider public realm area.

Before:
Existing business and residential define the edge of the corridor but do not support a high quality public realm.

After A:
Improvements from LRT route will provide enhanced streetscape, boulevard trees and lighting.

After B:
Future redevelopment and streetscape upgrades will create a more attractive and active public realm.

Intersection Treatments:

Primary intersection improvements have been identified for 23rd Avenue/ Huron Boulevard, 25th Avenue, 27th Avenue, 29th Avenue and Malcolm Avenue.

Pocket parks/ open spaces:

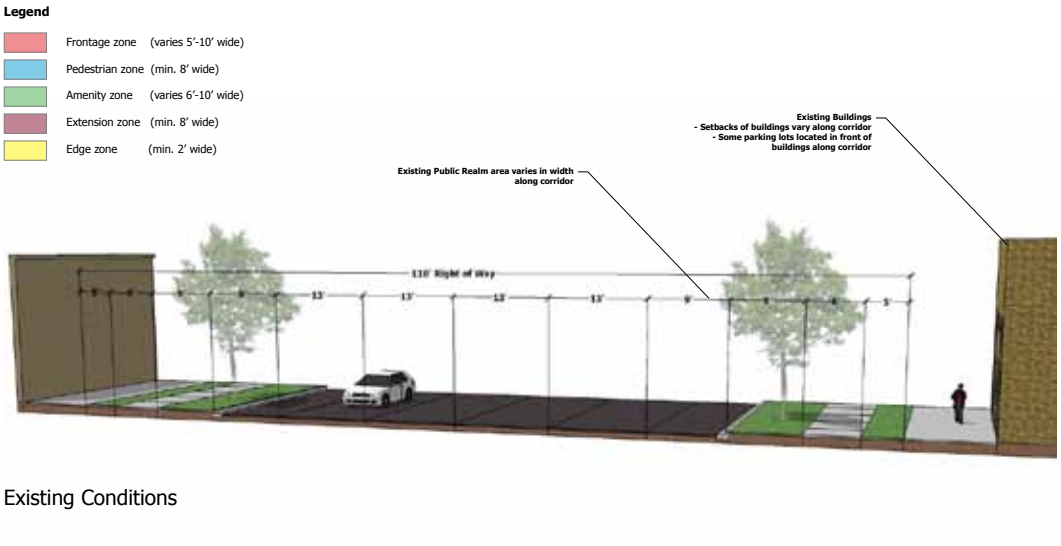
- The recommendations for the improvement of the public realm along 4th Street recommends the creation of a flexible streetscape to create a variety of seating and gathering spaces along the street edge. Some small area of respite should be created within the public realm or on private property along the street at approximately every half- block.

Bicycle Facilities:

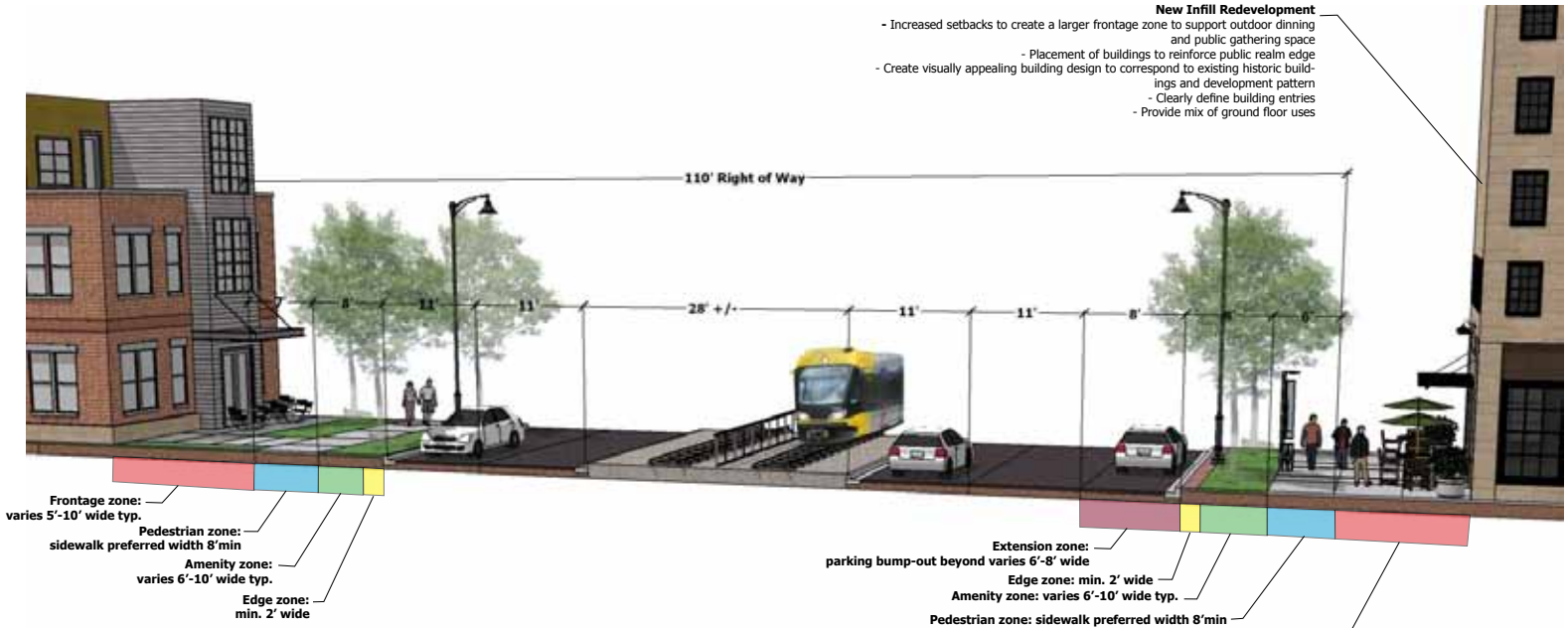
- Improved bicycle facilities have been recommended for the section of roadway from 25th Avenue to 29th Avenue. This on-street bicycle facility will allow for access to the LRT station on 29th Street and other preferred bicycle routes along 4th Street and the Intercampus Transit way. The remainder of the roadway from 29th Avenue to the end of the area is not recommended for on-street bicycle facilities because of the limited amount of street width and ROW. The on-street bicycle facility

Stormwater Management:

- It is recommended that any future redevelopment that happens along University Avenue should consider the integration of urban stormwater BMP's into the frontage zone or public realm areas.



Existing Conditions



Scenario A - East of 29th Street

Scenario B - West of 29th Street

4th Street

The 4th Street corridor will be a focus for future infill redevelopment. The 29th Avenue streets will be a focus for development efforts but 4th Street will provide a critical link to adjacent parks of the Prospect Park neighborhood.

More detailed public realm recommendations for the District include:

- On-street Parking: It is recommended as part of the public realm and connectivity study as well as the parking study for the Stadium Village area that on-street parking is maximized along the entire stretch of 4th Street. There is an opportunity to consider utilizing either parallel or angled parking along the street to maximize parking quantities. Parking along 4th Street should be intended for use by the nearby businesses and residences and not for long term University parking that could be better accommodated in parking decks and surface lots.
- It is recommended that future redevelopment along 4th Street focus mixed-use developments at the intersections and residential uses in the mid-block areas. A mix of residential types is recommended to provide an appropriate density and mix of residents within the neighborhood.

Intersection Treatments:

- Primary intersection treatments have been defined for the intersection of 4th Street and 29th Avenue. This is the only intersection along 4th Street that the LRT route crosses and will create an area of potential bicycle/pedestrian and vehicular conflict.
- Secondary intersection treatments have been defined for the other intersections along the roadway including; 25th Avenue, 27th Avenue and Malcolm Avenue.

Pocket parks/ open spaces:

- The recommendations for the improvement of the public realm along 4th Street recommends the creation of a flexible streetscape to create a variety of seating and gathering spaces along the street edge. Some small area of respite should be created within the public realm or on private property along the street at approximately every half- block.

Bicycle Facilities:

- It is recommended that 4th Street become a parallel bicycle facility to University Avenue that can link to a broader circulation system including the Intercampus Transit Way and the proposed Grand Rounds missing link along 27th Avenue. The recommended facility for 4th Street is a shared roadway with "sharrow" pavement markings and shared roadway signage.

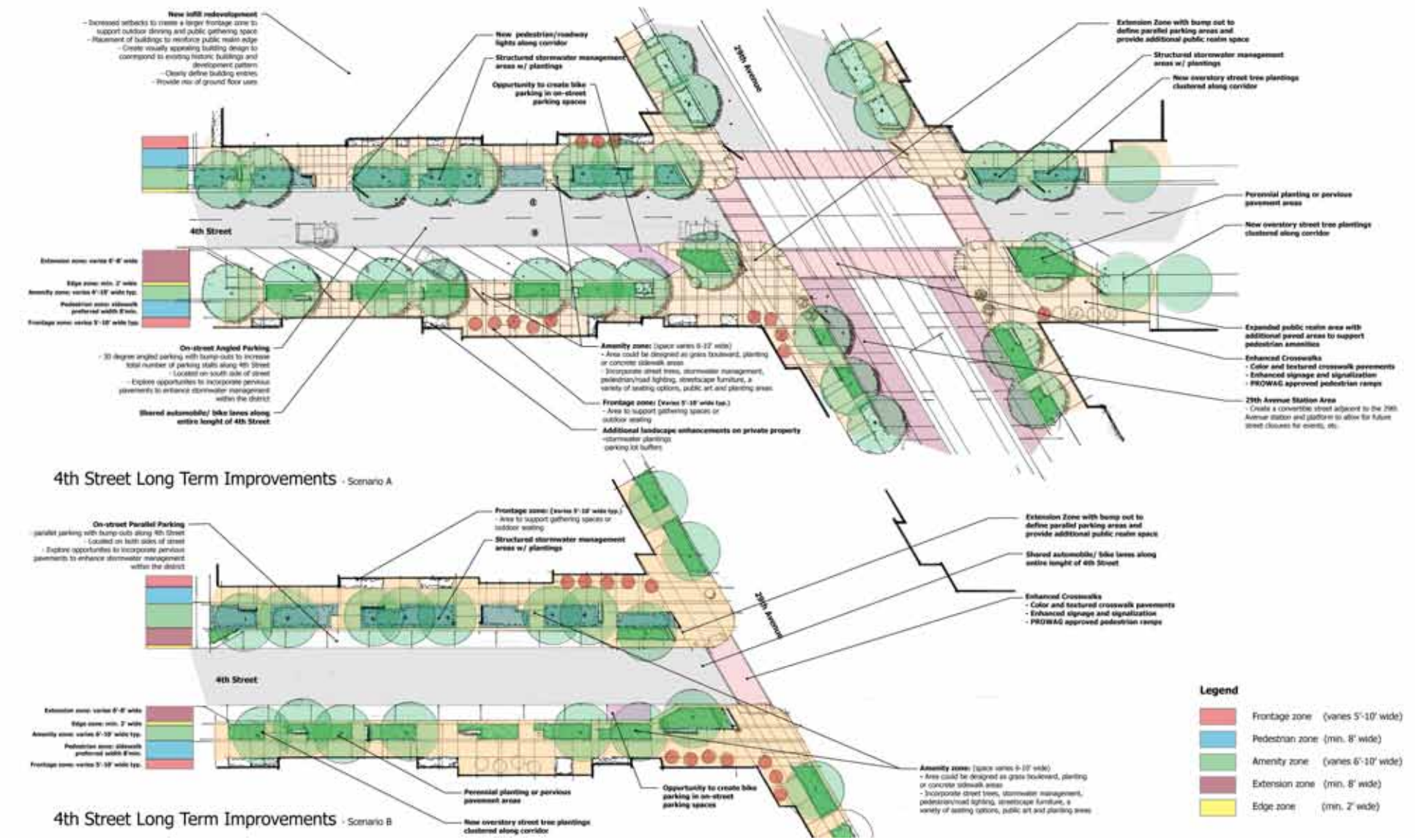
Stormwater Management:

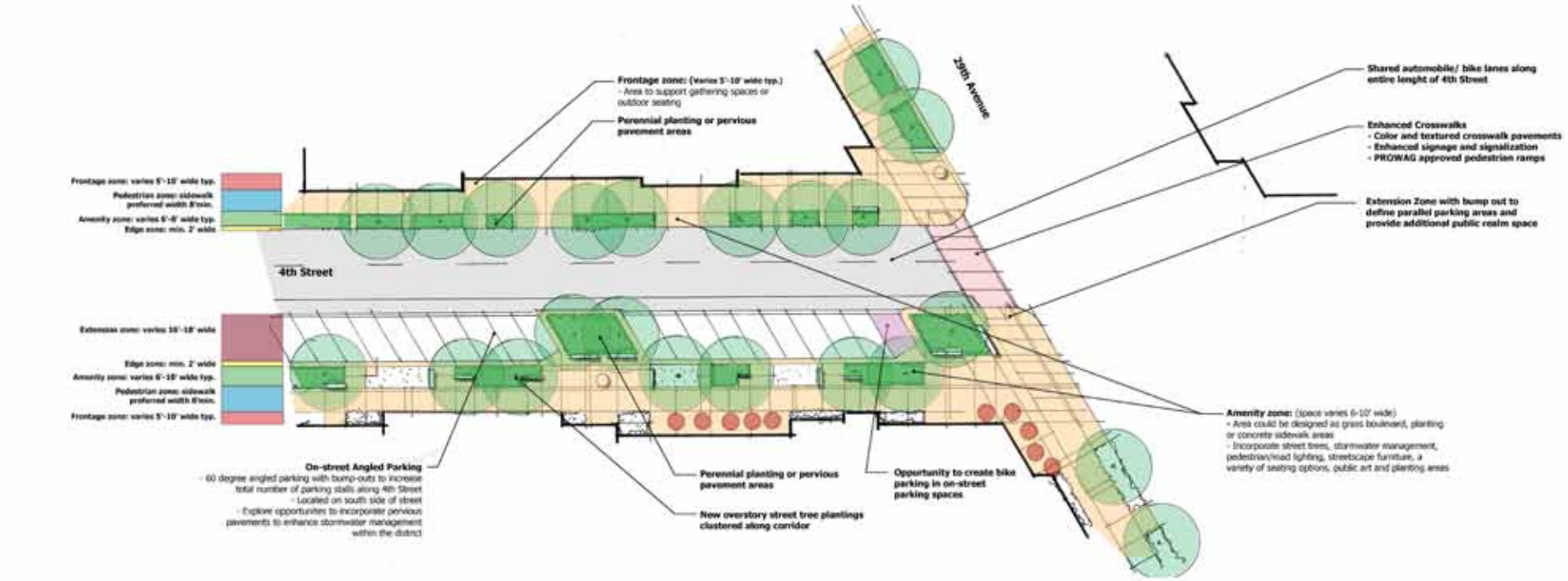
- 4th Street has been identified in many previous planning studies as a roadway that should be considered for enhanced stormwater management functions. The SEMI master plan identify the length of 4th Street from 23rd Avenue to 30th Avenue as a area for urban stormwater management.

Before:
Land uses along 4th Street support vehicular traffic and provide for little or no pedestrian and bicycle circulation.

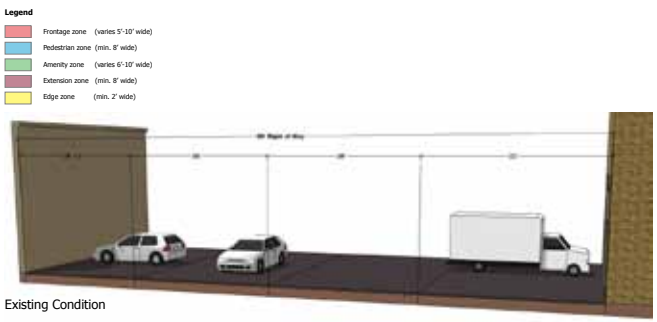
After:
Future redevelopment will support an improved public realm that will balance the needs of all modes of travel.

4th Street


New infill redevelopment
- Increased setbacks to create a larger frontage zone to support outdoor dinning and public gathering space
- Placement of buildings to reinforce public realm edge
- Create visually appealing building design to correspond to existing historic buildings and development pattern
- Clearly define building entries
- Provide mix of ground floor uses
New pedestrian/roadway lights along corridor
Structured stormwater management areas w/ plantings
Opportunity to create bike parking in on-street parking spaces
29th Avenue
Extension Zone with bump out to define parallel parking areas and provide additional public realm space
Structured stormwater management areas w/ plantings
New overstory street tree plantings clustered along corridor
4th Street
Perennial planting or pervious pavement areas
New overstory street tree plantings clustered along corridor
Expanded public realm area with additional paved areas to support pedestrian amenities
Enhanced Crosswalks
- Color and textured crosswalk pavements
- Enhanced signage and signalization
- PROWAG approved pedestrian ramps
29th Avenue Station Area
- Create a convertible street adjacent to the 29th Avenue station and platform to allow for future street closures for events, etc.
On-street Angled Parking
- 30 degree angled parking with bump-outs to increase total number of parking stalls along 4th Street
- Located on south side of street
- Explore opportunities to incorporate pervious pavements to enhance stormwater management within the district
Shared automobile/ bike lanes along entire lenght of 4th Street
Amenity zone: (space varies 6-10' wide)
- Area could be designed as grass boulevard, planting or concrete sidewalk areas
- Incorporate street trees, stormwater management, pedestrian/road lighting, streetscape furniture, a variety of seating options, public art and planting areas
Frontage zone: (Varies 5'-10' wide typ.)
- Area to support gathering spaces or outdoor seating
Additional landscape enhancements on private property
-stormwater plantings
-parking lot buffers
4th Street Long Term Improvements - Scenario A
On-street Parallel Parking
- parallel parking with bump-outs along 4th Street
- Located on both sides of street
- Explore opportunities to incorporate pervious pavements to enhance stormwater management within the district
Frontage zone: (Varies 5'-10' wide typ.)
- Area to support gathering spaces or outdoor seating
Structured stormwater management areas w/ plantings
Extension Zone with bump out to define parallel parking areas and provide additional public realm space
Shared automobile/ bike lanes along entire lenght of 4th Street
Enhanced Crosswalks
- Color and textured crosswalk pavements
- Enhanced signage and signalization
- PROWAG approved pedestrian ramps
29th Avenue
4th Street
Amenity zone: (space varies 6-10' wide)
- Area could be designed as grass boulevard, planting or concrete sidewalk areas
- Incorporate street trees, stormwater management, pedestrian/road lighting, streetscape furniture, a variety of seating options, public art and planting areas
Perennial planting or pervious pavement areas
Opportunity to create bike parking in on-street parking spaces
New overstory street tree plantings clustered along corridor
4th Street Long Term Improvements - Scenario B
Legend
Frontage zone (varies 5'-10' wide)
Pedestrian zone (min. 8' wide)
Amenity zone (varies 6'-10' wide)
Extension zone (min. 8' wide)
Edge zone (min. 2' wide)



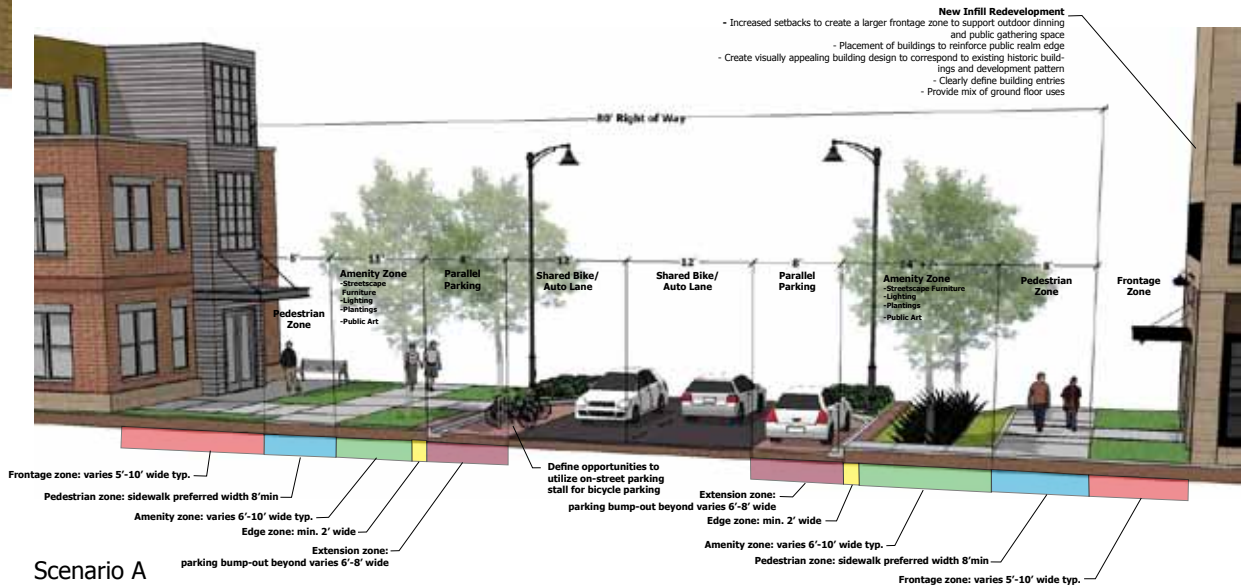
4th Street Long Term Improvements - Scenario C



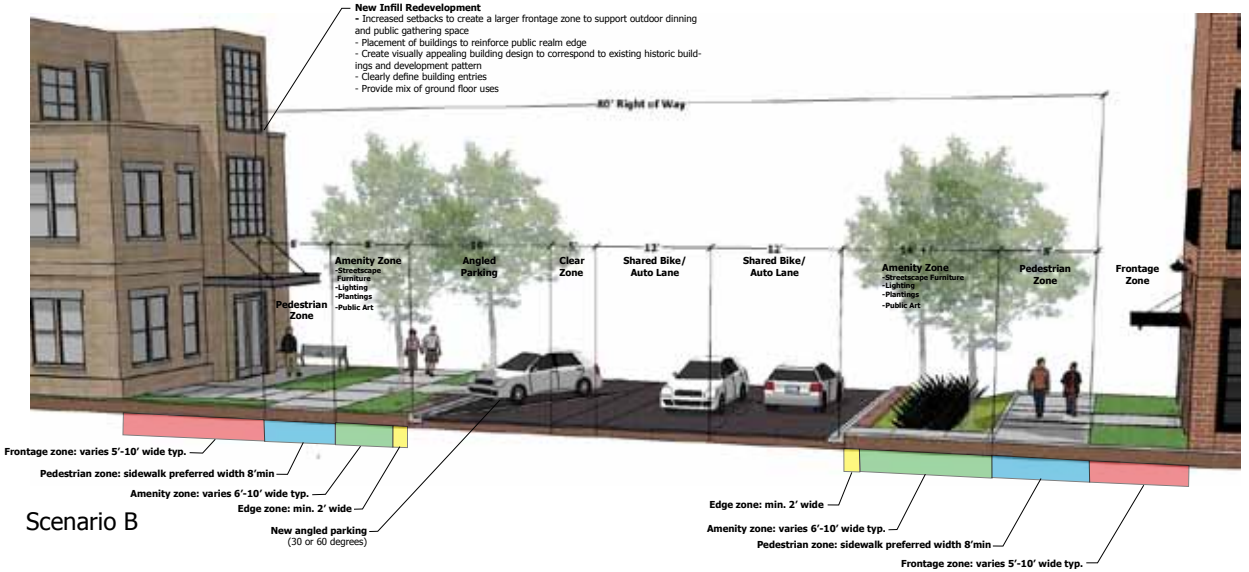
Existing Condition

Legend

- Frontage zone (varies 5'-10' wide)
- Pedestrian zone (min. 8' wide)
- Amenity zone (varies 6'-10' wide)
- Extension zone (min. 8' wide)
- Edge zone (min. 2' wide)



Scenario A



Scenario B

CHAPTER 5

STREETSCAPE IMPROVEMENTS

Streetscape Improvements

The right proportions, unique spaces, and appropriate amenities can make the public realm a comfortable, inviting and memorable space where people want to spend time. The quality, function and scale of the streets have a great deal to do with shaping the character of the streets within the study area. A goal of the Stadium Village Public Realm plan is to provide an integrated system of streets, bikeways, transit lines, and pedestrian paths throughout the Stadium Village Station area. The intent of this section is to present ideas and to define a range of costs for the streetscape for budgeting purposes and inclusion in the City of Minneapolis Capital Improvement Plan (CIP).

Design Principles:

- Reinforce Identity of Each District. The design concept for the Stadium Village Station area is to celebrate the diversity and history of the area by designing the street environment to respond to the opportunity for redevelopment, unique business and neighborhood needs, as well as the qualities of each character district.
- Provide Continuity throughout the Stadium Village Station Area. The design is intended to provide a thread of continuity throughout the study area, yet have some elements that change as you progress from district to district.
- Provide a Flexible Palette of Streetscape Elements. The design the streetscape should be adaptable to a variety of site conditions and at the same time provide an armature for layers of change and activity. Vertical streetscape elements should be emphasized such as lighting, trees, transit shelters, identification signs, and artwork, to create a sense of enclosure and human scale, define edges, and create a positive identity for each roadway within the study area. Elements should be functional and simple in design and able to withstand the snow, salt, sandblasting from snow plows, vandalism, and other urban conditions. The streetscape elements should contribute to a sense of safety and comfort and promote walking and biking throughout the area.

Streetscape Types

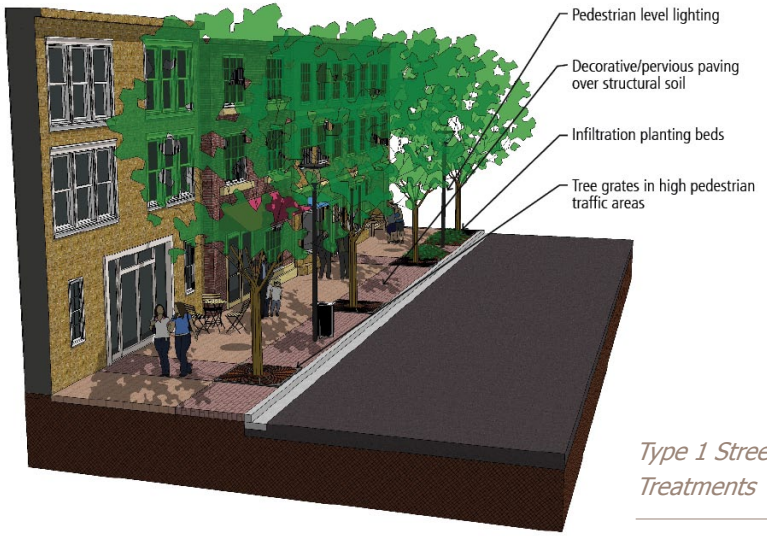
Three types of streetscape treatments have been created to emphasize and respond to the existing roadway design, as well as the role and function of each district. A preliminary cost estimate has been produced that provides a range of costs associated with the different street types. The cost estimate can be found in Chapter 6.

Below are the identified types of streetscape treatments.

Type 1:

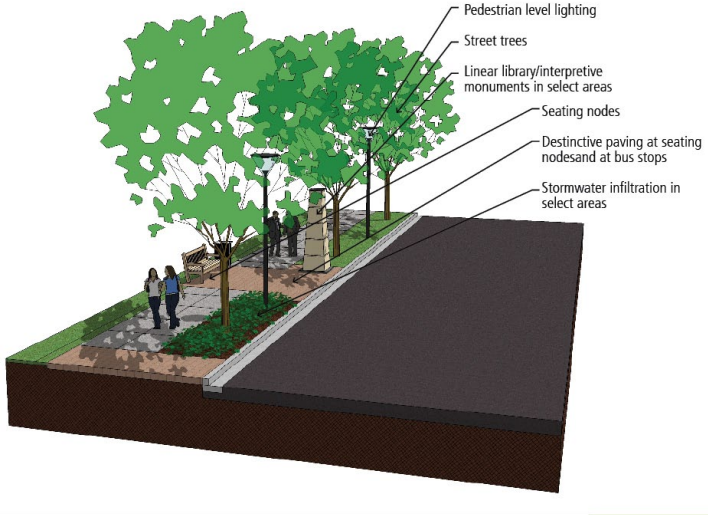
This streetscape type is located in the areas where wider sidewalks are desired. These segments are anticipated to have the most intense urban redevelopment and heaviest pedestrian activity. To accommodate intense sidewalk activity the streetscape treatments include:

- Primarily decorative paving from the back of curb to the building faces.
- Street trees with a variety of ground layer treatments including walkable surfaces such as tree grates or pervious paving in highly traveled or café spaces, to larger open planting areas and/or raised planters.
- Space is also available for other elements such as, pedestrian level lighting, benches, public art, kiosks, transit shelters, etc.



Type 1 Streetscape Treatments

Type 2 Streetscape Treatments



Streetscape ents

Type 2:

This streetscape type is located in areas where the Right-of-Way is restricted and may only accommodate an 10'-12' foot wide sidewalk. These segments are located in areas that currently have significant sidewalk activity which will increase as redevelopment occurs. To accommodate this type of activity the streetscape treatments include:

- Primarily decorative paving from the back of curb to the building faces.
- Street trees with ground layer with walkable ground layer treatments such as tree grates or pervious paving.
- Space is also available for other elements such as, lighting, benches, public art, kiosks, transit shelters, etc.

Type 3:

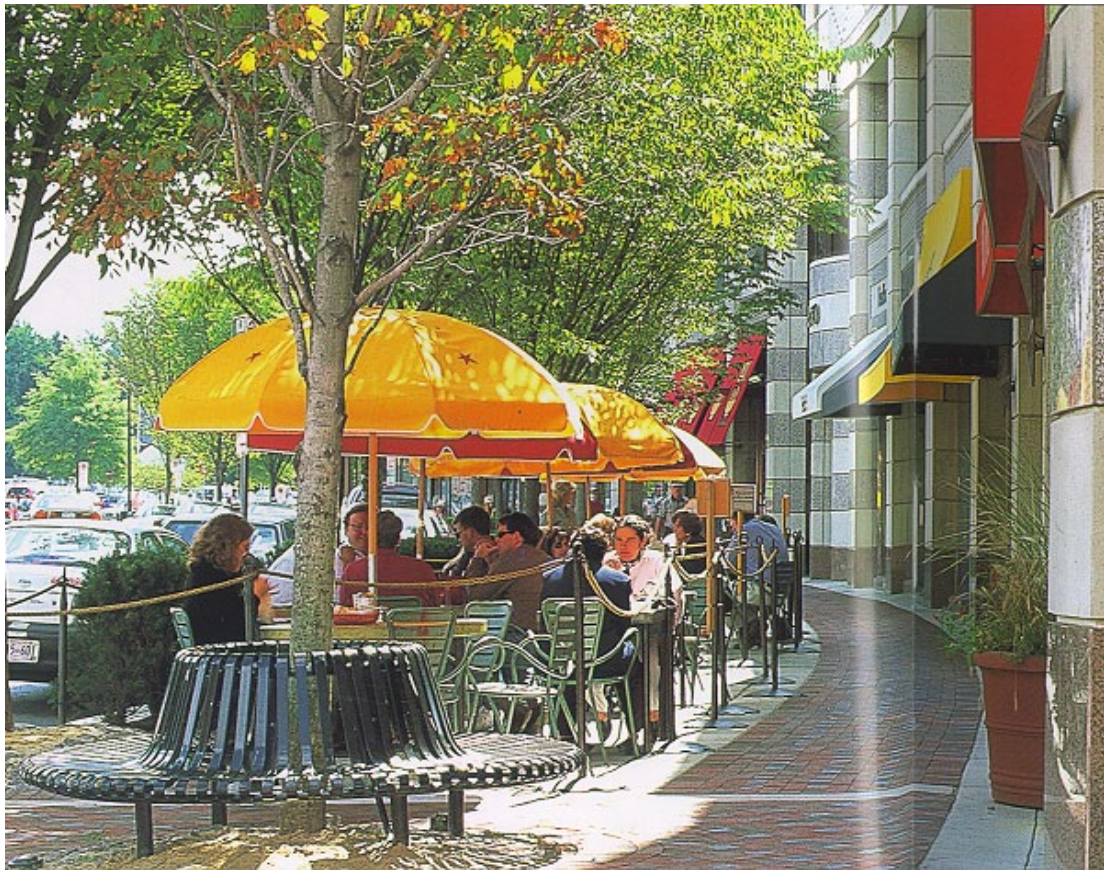
This streetscape type is located primarily in less urbanized or residential areas. These streets are anticipated to have less intense urban redevelopment and pedestrian activity. This treatment includes:

- Recommended 8' foot walks primarily of concrete with select areas of more decorative paving materials.
- 6' to foot wide boulevards with street trees and a variety of ground layer treatments including grass, small rain gardens, and/ or perennial planting beds.
- Space is also available for other elements such as, pedestrian level lighting, benches, public art, kiosks, transit shelters, a linear library, etc.

Streetscape Elements

The combination, quality, function and scale of the streetscape elements have a great deal to do with shaping the character and identity of the Stadium Village Station Area. Prior to defining specific streetscape elements, consideration should be given to the following streetscape design & implementation steps:

- Define program, streetscape theme, and design components.
- Create an advisory group to guide the creation of a Streetscape Plan and the design of each component for the Stadium Village Station area.
- Define capitol costs, budget, and funding sources.
- Define maintenance expectations, strategy and funding sources.
- Design streetscape components to meet budgets, phasing, and maintenance requirements.
- Prepare short and long term plans and "Kit of Parts" or a Design Manual to guide future phases of streetscape improvements.
- Prepare design development and construction documents as needed by each defined phase.
- Coordinate streetscape improvements with Public Works staff and future redevelopment projects within the study area.



The recommendations on the following pages are for specific streetscape improvements to enhance the public realm.

Intersection Treatments

Intersection improvements within the Stadium Village Station area should consider the needs of all travel modes. While vehicular traffic flow should be carefully considered, creating safe crossings and accommodating the high volume of pedestrians and bicycles as much as possible in the available right-of way take precedence.

Design Principles

The following principles should be incorporated into the planning of pedestrian crossing improvements:

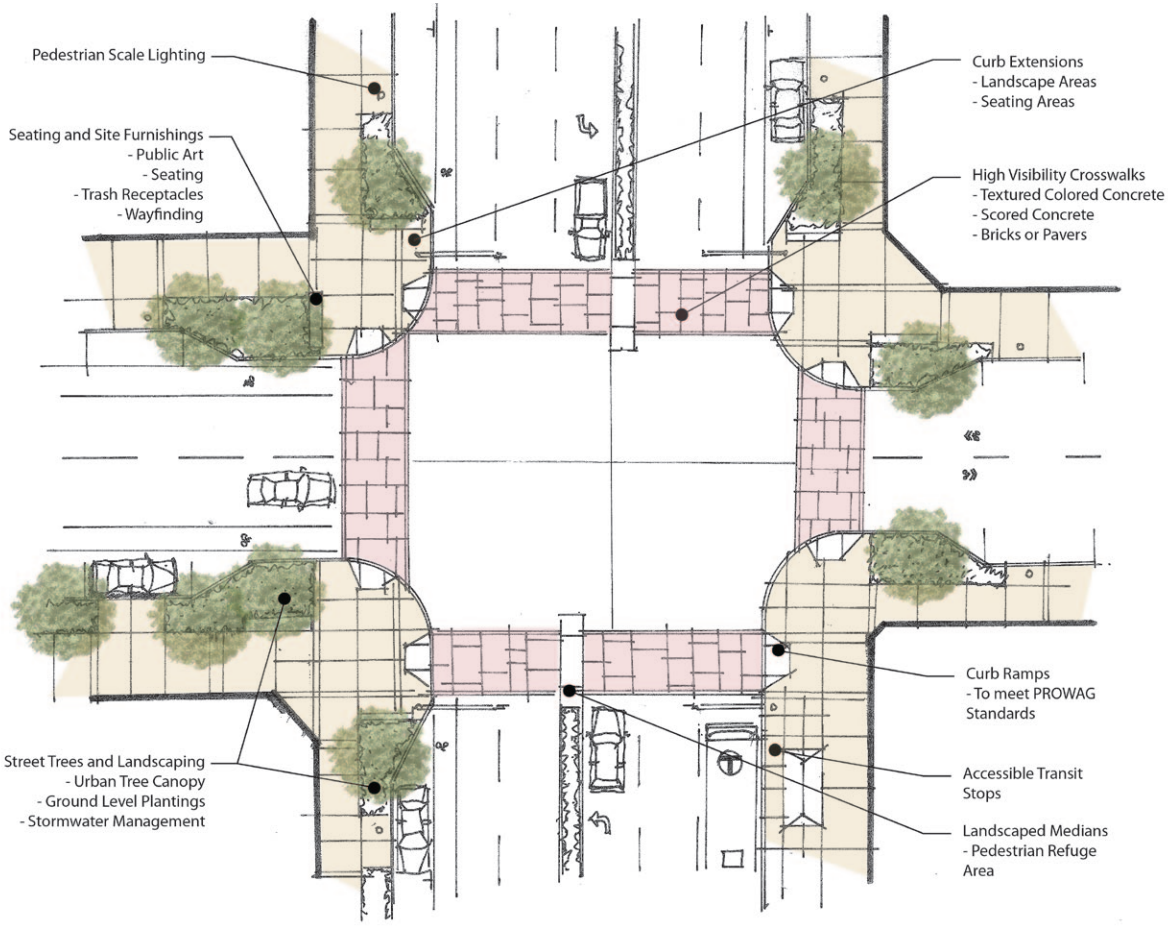
- Pedestrian Safety - Pedestrian safety and convenience measures should be considered as key components of the improvement to the public realm. Pedestrians within the Stadium Village area should have safe and convenient crossing opportunities. For the safety of pedestrians and bicyclists in the Stadium Village area, various pedestrian safety enhancement measures, such as curb extensions, no right-turns on red signals, enhanced pedestrian crossings and improved signalization should be implemented. Pedestrian crossings must meet accessibility standards and guidelines.
- System-wide Level of Service - A system-wide analysis should be conducted of the Stadium Village Station Area to maintain acceptable vehicular circulation and the accessibility of all vehicles. As certain key streets and intersections within the study area may experience reduced vehicular capacity due to the LRT route and certain predetermined pedestrian safety measures, an acceptable system-wide level of service should be maintained through careful network design and analysis. Street designs within the study area should be reviewed closely on a case by case basis, in conjunction with the entire street network, surrounding uses and the overall city transportation network.
- Transit Access - It is required that the LRT and potential realigned bus routes (and bus stop locations in the street network) be identified in coordination with the Metro Transit and city staff. All street intersections on the bus routes should be designed to allow adequate bus access.

Intersection Design

Most conflicts between roadway users occur at intersections, where the different modes of travel will cross paths. Good intersection design provides clear indication to those approaching the intersection what they must do and who has to yield.

The following principles apply to all users of intersections:

- Good intersection designs are compact.
- Simple right-angle intersections are best for all users since many intersection problems are worsened at skewed and multi-legged intersections.
- Free-flowing vehicular movements should be avoided.
- Access management practices should be used to remove additional vehicular conflict points near the intersection.
- Signal timing should consider the safety and convenience of all users and should not hinder bicycle or foot traffic with overly long waits or insufficient crossing times



Elements of Good Intersection Design

Intersection Design Elements

The following six elements should be considered in intersection designs:

Curb Ramps

Curb ramps provide pedestrian access between the sidewalk and roadway for people using wheelchairs, strollers, bicycles, and pedestrians who have trouble stepping up and down high curbs.

Curb ramps must be installed at all intersections within the Stadium Village Station area where pedestrian crossings exist per Public Right of Way Accessibility Guidelines (PROWAG). For specific design guidelines related to curb ramps refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.3.3 Curb Ramps, Page 10-25.

Advanced Stop Bar Markings

Stop bar markings extend across all approach lanes to indicate where vehicles must stop in compliance with a pedestrian crosswalk at an intersection. These markings reduce vehicle encroachment into the crosswalk and improve drivers' view of pedestrians.

Advance stop lines should be considered at all primary signal-controlled intersections with marked crosswalks. Detailed guidelines for stop and yield lines can be found in the MUTCD and ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.5.3.6, Advanced Stop Bar markings and Locations, Page 10-45.

Stadium Village Intersection Treatments

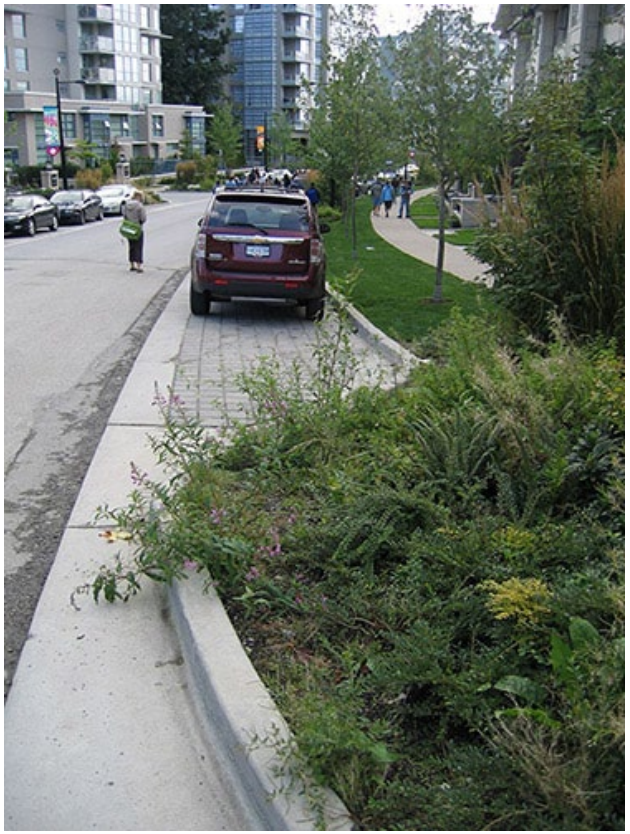
Two types of distinctive intersection treatments have been defined for the Stadium Village Station Area. The intersection treatments are defined below:

Primary Intersection Treatments

Where appropriate, the defined intersections that receive primary intersection treatments should include; accessible curb ramps, advanced stop bar markings, curb extensions at intersections, count down pedestrian signals, special intersection paving, and bollards. The opportunity to incorporate planters, or other fixed objects should be considered where necessary to protect pedestrians and prevent vehicles from driving onto the sidewalk.

Secondary Intersection Treatments

Where appropriate, the intersections that receive secondary treatments should include; accessible curb ramps, curb extensions at intersections, count down pedestrian signals, and high visibility crosswalk markings.



Curb extensions or bump-outs

Curb extensions or bump-outs should extend the sidewalk into the parking lane to narrow the roadway and provide additional pedestrian space at key intersections. Curb extensions can be used at street corners and at mid-block locations. Curb extensions are often no wider than the crosswalk, but can be lengthened to create public spaces, landscaped areas, or transit waiting areas. When on-street parking is provided, curb extensions should be provided at all intersections.

On streets with designated bike lanes or bike routes, such as 27th Avenue and University Avenue, curb extensions should not encroach on cyclists' space. On lower-speed and volume streets where bikes can travel in mixed flow with vehicles such as 4th Street, extensions should not be constructed beyond bicycle and vehicle travel lanes. Consideration should be given to retrofit existing curb extensions with stormwater facilities to aid in urban stormwater management.

Mid-block Bulb-Outs

Mid-block bulb-outs should be considered on 4th Street to provide additional sidewalk space for landscaping, seating, stormwater treatment, and amenities, and improve safety at midblock crossings by shortening crossing distances and enhancing visibility for pedestrians waiting to cross the street. Mid-block curb extensions should use special paving or an edging treatment to distinguish the space as a plaza space separate from the amenity or pedestrian zones

Accessible and Countdown Pedestrian signals

Accessible pedestrian signals (APS) provide information in non-visual format (such as audible tones, verbal messages, and/or vibrating surfaces). APS should be provided at all signalized intersections within the Stadium Village Station area. It should be prioritized at intersections that are difficult to cross, such as at 29th Avenue and 4th Street, 29th Avenue and University Avenue and Washington Avenue and University Avenue. For specific design guidelines related to APS refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.5.5.5 Accessible pedestrian signals, Page 10-49.

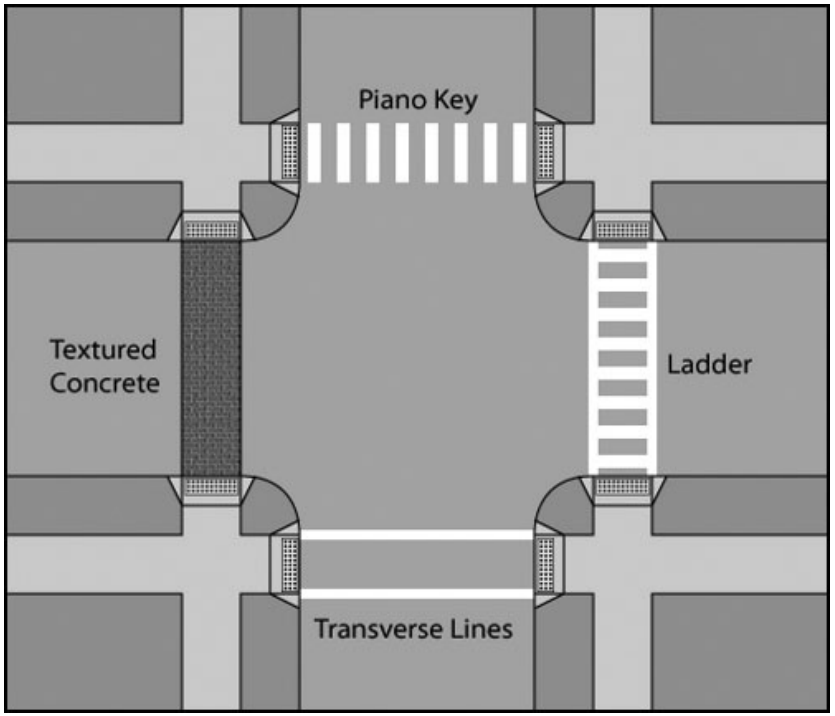
Pedestrian countdown signals are designed to enhance the effectiveness of pedestrian signals at clearing the crosswalk before a signal changes direction. Pedestrian countdowns should be provided at all signalized intersections per the 2009 MUTCD guidelines which require countdown signals at all pedestrian crosswalks. For specific design guidelines related to countdown signals refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.5.5.3 Countdown timers, Page 10-47.

Special Intersection Paving and Crossing Treatments

A hierarchy of crossing treatments should be applied to intersection and mid-block crossings based on the location within the Stadium Village Station area and the presence of pedestrians and bicyclists. Special intersection paving treatments can break the visual uniformity of streets, highlight pedestrian and bicycle crossings as an extension of the public realm, and announce key locations. For specific design guidelines related to textured or colored pavement crosswalks refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.5.3.5, Textured or colored pavement crosswalks, Page 10-45.

The hierarchy and appropriate locations include the following applications:

- Standard Markings - All crossings should be identified with parallel lines;
- Enhanced Markings - Ladder striping should be added for crossings of streets in the edge and edge zone;
- Special intersection paving treatments include integrated colors, textures, and scoring patterns. A dark gray or other appropriate colors may be applied to the paving in crosswalks within core or transition zone;



- Special Pavers - A distinctly patterned paver may be applied to distinguish intersection crosswalks and mid-block crossings in the core or transition zone.

High Visibility Crosswalk Markings

High visibility crosswalk marking is an added feature beyond the use of the standard or enhanced pavement markings, colored pavement, or special pavers. High visibility crosswalk markings can be in the form of signage, special pavement markings, flashers, or in-ground lights. High visibility crosswalk markings should be provided at all mid-block crossings and at intersection crossings where no traffic control is provided. When used, the minimum enhancement should include a stop bar and ladder style markings, which are perpendicular lines that accompany the standard parallel markings to delineate the pedestrian crossing areas.

Bikeway Designs

The following principles inform the recommendations made regarding the design of bicycle facilities within the Stadium Village project area.

- Bicyclists should have safe, convenient, and comfortable access to all destinations within the Stadium Village area.
- Every street is a bicycle street, regardless of bikeway designation.
- Street design should accommodate all types, levels, and ages of bicyclists.
- Bicyclists should be separated from pedestrians.
- Bikeway facilities should take into account vehicle speeds and volumes. Provide shared use on low volume, low-speed roads and separation on higher volume, higher-speeds roads.
- Bikeway treatments should provide clear guidance to enhance safety for all users.
- Since most bicycle trips are short, a complete network of designated bikeways should define a grid of roughly ½ mile around the station areas.

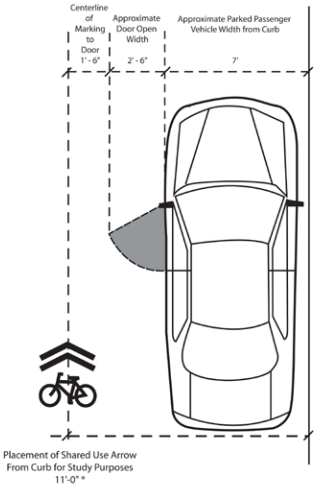
Bikeway Types

A designated bikeway network provides a system of facilities that offers enhancement or priority to bicyclists over other roadways in the network. However, it is important to remember that all streets within the Stadium Village project area should safely and comfortably accommodate bicyclists, regardless of whether the street is designated as a bikeway. Several types of bikeways proposed for the project area are listed below.

Shared Roadways

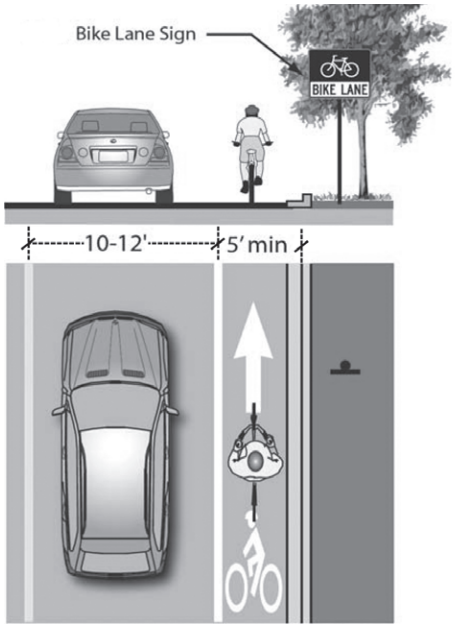
A shared roadway is a street in which bicyclists ride in the same travel lanes as other traffic. There are no specific dimensions for shared roadways. On narrow travel lanes, motorists have to cross over into the adjacent travel lane to pass a cyclist. Shared roadways work well and are common on low-volume, low-speed neighborhood residential streets.

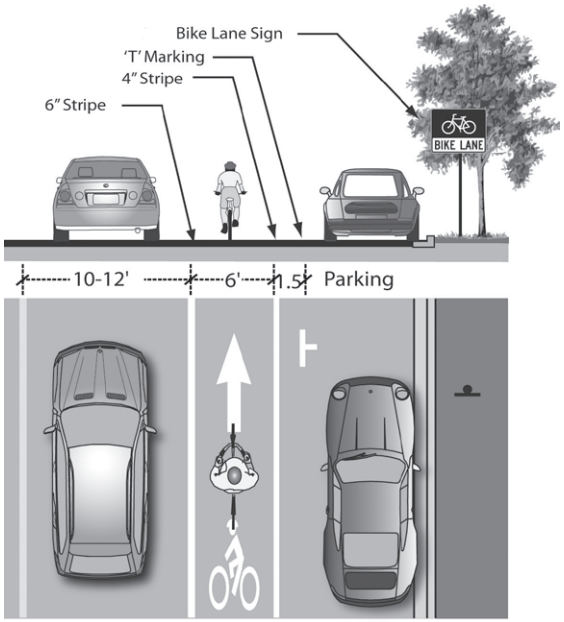
- Sharrows: Shared-lane marking stencils (commonly called "sharrows") may be used as an additional treatment for shared roadways. The stencils can serve a number of purposes: they remind bicyclists to ride further from parked cars to prevent collisions with car doors, they make motorists aware of bicycles potentially in the travel lane, and they show bicyclists the correct direction of travel.
- Sharrows installed next to parallel parking should be a minimum distance of 11 feet from the curb. Installing farther than 11 feet from the curb may be desired in areas with wider parking lanes or in situations where the sharrow is best situated in the center of the shared travel lane to promote cyclists taking the lane.



Bike Lanes

Portions of the traveled way designated with striping, stencils, and signs for preferential use by bicyclists, bike lanes are appropriate on avenues and boulevards. They may be used on other streets where bicycle travel and demand is substantial. Where on-street parking is provided, bike lanes are striped on the left side of the parking





Shared Use Paths

Shared use paths are facilities separated from motor vehicle traffic by an open space or barrier, either within the highway right-of-way or within an independent right-of-way. Bicyclists, pedestrians, joggers, and skaters often use these paths.

Shared-use paths are appropriate in areas not well served by the street system, such as in long, relatively uninterrupted corridors like waterways, utility corridors, and rail lines.

Shared use paths should be a minimum of 8 feet wide with 2 feet of graded shoulder on each side. This width is suitable in rural or small-town settings. Wider pavement may be needed in high-use areas. Where significant numbers of pedestrians, bicyclists, skaters, and other users use the paths, either wider pavement or separate walkways help to eliminate conflicts. Most important in designing shared use paths is good design of intersections where they cross streets. These crossing should be treated as intersections with appropriate treatment.

Bus and transit stops

Bus and transit stops are critical elements of the public realm that enhance the experience of boarding a bus or light rail train. The bus and transit stops within the Stadium Village area should be well connected to the local network of sidewalks and bicycle facilities to allow a convenient connection to residential neighborhoods, University of Minnesota campus, places of employment and shopping.

The public realm streetscapes should be designed benefit pedestrians while supporting the transit operations. A higher level of streetscape treatments and amenities should occur at the bus and transit stops. Transit stops should be located in places that are active and visible to maximize personal security of waiting transit riders. Shelters should be located in the furnishings zone wherever possible.

For specific design guidelines for bus and transit stops refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Page 10-34.






The design of good public plazas/pocket parks should include seating, landscaping, public art and other amenities to support active and social environments.

Pocket Parks/ Plazas

Pocket parks/plazas are small active public spaces created within the existing public right-of-way. They can be located in curb bump-outs, intersections, between buildings or in the amenity zone on sufficiently wide sidewalks. Pocket parks/ plazas should be designed to include seating areas, play areas, landscaping, public art, stormwater management or other elements to encourage active and social uses. The pocket parks/plazas defined for the Stadium Village Station area will provide important public space in areas with a future high-density land use and areas currently deficient of public spaces and will become the "linking" nodes along a street frontage and reinforce the overall pedestrian circulation system

Pocket Parks/plazas should be landscaped or use special paving to differentiate their active open space function from the normal sidewalk. These spaces should also be designed to serve as stormwater management areas.

A general rule of thumb for the design of pocket parks/plazas located within the pedestrian zone should be a minimum of 20 feet long and approximately 15 feet wide. Specific size of pocket parks/plazas should be determined based on the width of the public right-of-way and the needs of the surrounding street and neighborhood.

Convertible streets function as pedestrian space during programmed events.

Convertible Streets

Convertible streets are right-of-ways paved as one single surface and grade so that the entire space is shared between pedestrians, bicyclists and vehicles. Convertible streets function as a pedestrian oriented plaza or open space where pedestrians are encouraged full use of the entire space for programmed events. Two specific streets have been identified as streets that should be designed as convertible streets. These two streets are the extension of Washington Avenue between Huron Boulevard and University Avenue, and the section of 29th Avenue between University Avenue and 4th Street adjacent to the proposed LRT station platform.

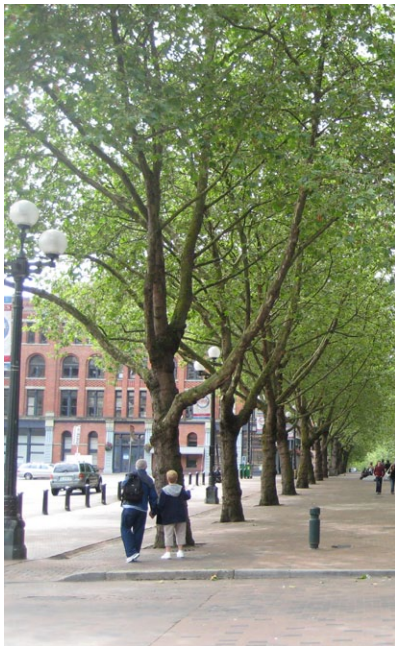
Convertible streets are appropriate to areas where pedestrian volume and neighborhood use of street space outweighs vehicular traffic needs, but where auto access is necessary and can be accommodated at a very slow pace. Incorporate streetscape features into the public realm of these designated street areas to allow for easy conversion to public uses such as farmers' markets, public gatherings and music events.

Urban Forest and Tree Canopy

The urban forest includes all trees, shrubs, and other understory plantings within the public right-of-way and on private property. Plantings with in the public right-of-way of the Stadium Village area will enhance the physical, cultural and ecological aspects of the project area. A street within the study area that lined with trees and ground plantings looks and feels narrower and more enclosed, which encourages drivers to slow down and to pay more attention to their surroundings. These plantings provide a physical and a psychological barrier between pedestrians and motorized traffic, increasing safety as well as making walking in the public realm more enjoyable.

Street trees and landscaping are the main components of the urban forest and they contribute to the overall improvement of the urban environment. Street trees and other landscaping should be used to create a distinct character for streets within the Stadium Village Station Area. Trees and landscaping should be designed in harmony with street lighting and sidewalk amenities and the building context. New plantings added to existing streets should be designed in context with existing trees and planting.

Selection of planting material should be used to enhance the identity of particular streets. Plant material selection should account for performance in the urban environment, including drought tolerance and hardiness. Any plant species selected for planting should be adapted to soil and microclimate conditions and should serve an intended functional or aesthetic role. Native plants and trees should be used when a native species is suited to the site and will serve the roles for which the planting is intended



Urban tree canopy should create more enclosure to provide a safe environment for pedestrians.

Urban tree canopy should be planted to support positive tree growth.

Street Trees

Street trees are the most important organizing element of the public realm environment. Appropriate tree species selection, tree location and design of the plantings areas within the amenity zone will ensure the healthy growth and longevity of trees, enhance streetscape character, and maximize the City's investment.

Principles for Street Tree plantings:

- Look for opportunities to reclaim space in the urban environment for street tree plantings. Traffic circles, medians, islands, and curb extensions can provide space for trees and landscaping.
- Street trees are typically planted in sidewalk cut outs or in boulevard areas. Where boulevard areas or planting strips of sufficient width occur between sidewalks and streets, it is not necessary to create independent cut-out for trees.
- Trees and/or other landscaping should be added to existing sidewalks wherever existing width is sufficient to accommodate tree growth and still provide the recommended pedestrian sidewalk width
- In addition to landscaping, street trees are strongly encouraged in sidewalk boulevard areas planting strips if they are of minimum of 6' - 8' depending on tree size.
- As an important element along sidewalks, street trees must be provided with conditions that allow them to thrive, including adequate uncompacted soil (minimum of 3'-0" of soil depth), water, and air.
- If trees are planted in constrained areas, provisions should be made to connect these smaller areas below the surface to form larger effective areas for the movement of air, root systems, and water through the soil. Space for roots and above ground growth is the main constraint to the urban forest achieving the maximum growth potential.
- Trees and landscaping should be kept out of the Edge Zone to protect them from car doors and overhangs and allow pedestrians to access their vehicles without conflict.
- Careful siting of trees and landscaping around existing above and below-grade utilities is important.
- Engineered soils such as 'Swedish" soils should be utilized to promote better tree health while protecting paved surfaces from root damage. The design of planting areas should consider including appropriate conditions for improved stormwater detention and infiltration.

- The selection of tree species and their placement in the public right-of-way should be consistent with the goals of a particular street. Appropriate tree species selection should consider: Form, mature size, color, and texture to reflect the urban design goals of a street
- Street tree spacing should be determined by the expected mature size of the tree. Generally, trees with the Stadium Village Station Area should be planted at a spacing of 25 feet to a maximum of 30 feet on-center. We recommended that the trees be planted in clusters of 3 to 5 trees to create a continuous tree canopy along the street. The recommended spacing should be considered a general target to allow for trees to adjusted to local street conditions such as set backs utilities, driveways, bus/transit stops, and building entrances.
- Street lighting should be coordinated with tree selection, placement, and pruning, so that canopies do not sit directly below street lighting.
- Consider how a mature tree canopy will affect street lighting or views of signage and building fronts

Best practices to support urban trees and stormwater management functions

Ground Level/ Understory Landscaping

Ground level and understory landscaping includes sidewalk planting strips, raised planters and landscaping in stormwater management areas. This simple and inexpensive addition of green space to the public realm area adds aesthetic, habitat, stormwater management and ecological value to the city's right of way. Ground level/ understory planting strips and sidewalk landscaping are suitable for all of the streets within the Stadium Village Station area.

Principles for Ground level plantings:

- The planting strips should be located along sidewalks in the Amenity zone and Extension zones.
- Planting strips can also be located at street corners, in on-street parking areas and within the Frontage Zone of buildings.
- More formal ground level plantings are recommended for the primary street corridors and intersection within the planning study area.
- Planting strips should be a minimum of 5' wide along a street where trees are to be planted. Narrower planting strips less than 4' wide may be used for other types of plants (e.g., shrubs, ground cover, and grass). The same planting strips used for plants can also be designed to detain, cleanse, and infiltrate stormwater.
- Native or drought tolerant landscaping should be considered anywhere ground level/ understory landscaping projects are implemented.

Planting Along the Frontage Zone (private property)

On streets where there is not enough sidewalk space to install sidewalk landscaping in the Amenity Zone or where sidewalk width allows, planting in the Frontage Zone should be considered.

- Larger building setbacks from the property line will allow for planting strips that may contain ground level plantings and trees.
- Where the adjacent land use is a parking lot, shrub hedges, grasses or other tall perennial plantings should be used to screen these uses from sidewalk view.
- Create urban gardens (large potted plants and hanging baskets) should be used in the areas where ROW restrictions occur.

Stormwater Management

Impervious surfaces throughout the Stadium Village Station area prevent rainfall from absorbing into the ground. Instead, this rainfall collects into runoff, accumulating chemicals, oil, metals, bacteria and other by-products of urban life. Left untreated, this polluted runoff contaminates the ecosystems of the Mississippi river and adjacent lakes.

Additionally, the hardening of the city's surfaces keeps water from recharging groundwater aquifers, causing subsidence and other problems. In addition, high quantities of runoff may also cause flooding and contribute to combined sewer discharges during large storm events.

The tools presented in this section can help mitigate these environmental problems by removing or delaying the runoff stream and treating associated pollutants before stormwater is discharged into sewers and storm drains and, ultimately, to receiving water bodies such as the Mississippi River. For these reasons, wherever it is possible to do so, water should be directed to stormwater features first, before entering catch basins. In addition to the ecological benefits that stormwater management tools can provide, these tools can be used to make the city's streets more beautiful and enjoyable places to be.

This section presents stormwater management tools. These facilities have stormwater management benefits and contribute to streetscape aesthetics. The facilities are classified into broad types to help the user identify appropriate stormwater mitigation strategies for use within the range of public realm recommendations.

Choice of stormwater management BMP's should be based on the context of the surrounding public realm. In addition to its impact on stormwater quality and quantity, the recommended stormwater facilities can improve the urban ecology, can add aesthetic value to the area by providing additional landscaping, create a visually appealing streetscape design, enhance community spaces on streets and create a more sustainable and attractive urban environment.

The stormwater management BMP's identified in this Chapter are flexible and can be integrated into a variety of different locations and types of spaces on any of the roadways within the Stadium Village Station area. Opportunity sites include: the entire roadway, corner and mid-block curb extensions, on-street parking-lane and sidewalk planter areas and strips, pocket parks/ plazas, along roadway and edges of open spaces, integrated into the front building edge, street trees, and even a simple stand alone raised planter. Stormwater can also be used within landscaping or educational and art features. The designers of these facilities should look for opportunities to combine artistic elements, public art, and educational opportunities with stormwater management.

The following sections describe in more detail many opportunities to place, construct, and retrofit systems to include stormwater management tools into both new and existing streets.

When integrating a stormwater treatment into a new or existing streetscape, designers should consider the objective of the installation. Where streetscape conditions allow, stormwater measures can be designed for conveyance, detention (peak rate control), retention (volume reduction), infiltration (groundwater recharge), and nutrient and sediment removal.

Streetscape geometry, topography, and climate determine the types of controls that can be implemented. The initial step in selecting a stormwater tool is determining the available open space and constraints. Although the size of a selected stormwater facility is typically controlled by the available area of opportunity, the standard design storm should be used to determine the appropriate size, slope, and materials of each facility.

After identifying the appropriate stormwater facilities for a site, an integrated approach using several stormwater tools is encouraged. To increase water quality and functional hydrologic benefits, several stormwater management tools can be used in succession—called a treatment train approach.

Landscaping should be chosen to fit the specific type of stormwater facility and should be appropriate for the local climate and soils. In general, all landscape-based stormwater facilities should be planted with hearty, drought-resistant and water tolerant plantings that can survive periodic drought and inundation. Native, deep-rooted plantings or Mediterranean plants have been proven most effective.

Subsurface utility locations and building laterals are critical in determining the appropriateness of a particular facility, and must be factored into design considerations.

Flow-Through and Infiltration Planters

Flow-through and infiltration planters are stormwater facilities that double as landscape features, but are designed to combine stormwater runoff control and treatment with aesthetic landscaping and architectural detail. These systems reduce the downstream potential for combined sewer overflows as well as improve water quality. Infiltration planters provide on-site retention and volume reduction through infiltration and groundwater recharge. Flow through planters provide runoff attenuation and rate control by delaying peak flows. Flow through and infiltration planters are generally distinguished from rain gardens by having engineered soil and an under drain.

Infiltration planters are landscaped reservoirs used to collect, filter, and infiltrate runoff from roofs, streets, and sidewalks. This is achieved by allowing pollutants to settle or filter out as the water percolates through the planter soil media and into the ground. In addition to providing pollution reduction, flow rates and volumes can also be managed with infiltration planters. Planters should be integrated into streetscape design. Numerous design variations of shape, wall treatment, and planting can be used to fit the character of a particular streetscape.

Flow-through planters are identical to infiltration planters, except that water is discharged through an outflow device instead of being infiltrated into the ground. They are particularly valuable as receiving bodies for roof runoff from downspouts when placed adjacent to buildings. Filtration and stormwater attenuation are the main design functions of the flow through planter. Because they include a waterproof lining, flow-through planters are extremely versatile and can be incorporated into foundation walls along a building frontage. They may also be placed in the Furnishings Zone to receive runoff from streets and sidewalks through curb breaks.

Swales

Street swales are long narrow landscaped depressions primarily used to collect and convey stormwater and improve water quality. They remove sediment and reduce nutrient concentrations within runoff though natural treatment prior to discharge into another stormwater management facility or the sewer network. In addition to providing pollution reduction, swales also reduce runoff volumes and peak flow rates by detaining stormwater.

Swales add significant landscaping to street corridors and reduce impervious surface. Under some circumstances, rainwater infiltrates into the ground while being conveyed along the length of a swale.

Bio infiltration swales (or bio retention swales) typically include a subsurface infiltration trench below amended soil. Filtration benefits of swales can be substantially improved by planting deep-rooted grasses and forbs and by minimizing the slope. Appropriately selected vegetation can improve infiltration functions, protect the swale from rain and wind erosion and enhance overall aesthetics. Species should be selected that will not require irrigation after establishment.

Rain Gardens

Rain gardens are landscaped detention or bio-retention features in a street designed to provide initial treatment of stormwater runoff. Rain gardens are similar to flow through and infiltration planters, but generally do not have engineered soils or under drains.

Surface runoff is directed into shallow, landscaped depressions prior to discharge to the city collection system. These planted areas are designed to incorporate many of the pollutant removal and infiltration functions that operate in natural ecosystems, and can provide any or all of the major stormwater management functions: detention, retention, infiltration, and pollutant filtration.

Rain gardens improve water quality by reducing sediment, nutrient runoff, and temperature impacts through natural treatment. Rain gardens can slow down the runoff and delay discharge, thus reducing and attenuating peak runoff rate within the city sewer. Furthermore, they can increase infiltration potential of a site and can provide retention through infiltration for groundwater recharge, thereby reducing total runoff volume.

The use of proper plantings combines landscaping with effective stormwater treatment, thereby reducing runoff rates and improving runoff water quality while contributing to neighborhood aesthetics and habitat value.

Rain gardens can be implemented in a sidewalk furnishings zone of at least 4 feet in width and in a variety of streetscape configurations including: curb extensions, medians, pork chops, traffic circles and roundabout center islands, parking lane planters, and other geometries that create space for landscaping. Rain gardens can also be used within various land use contexts in front of a home or building to capture rooftop runoff from disconnected downspouts.

Street Lighting

Street lighting is a key organizing streetscape element that defines the nighttime visual environment in urban settings. Quality streetscape lighting helps define a positive urban character and support nighttime activities. The quality of visual information is critical for both traffic safety and pedestrian safety and security. Lighting should be designed not only for vehicular traffic on the roadways, but also for pedestrians on sidewalks and pedestrian paths.

Street lighting includes roadway and pedestrian level lighting in the public right-of-way. Street lighting fixtures illuminate both roadway and sidewalk and are typically 20′ to 30′ high. Pedestrian-scale lighting fixtures, typically 12′ to 15′ high, illuminate pedestrian-only walkways and provide supplemental light for the sidewalk.

Pedestrian-scale fixtures should be installed along all roadways and areas with high pedestrian activity within the Stadium Village Station area. Pedestrian and street lighting poles should be located within the Amenity Zone, adjacent to sidewalks and close to the street curb edge. In public realm areas with wider sidewalks, the pedestrian level lighting poles can be located closer to sidewalk areas and street lighting can remain closer to the curb. Pedestrian level lighting poles should be located between street lighting poles. Light poles should have a consistent spacing with regard to trees and other street poles. Light fixtures should not be located directly adjacent to street tree canopies that may block the light. The rhythm of the lighting poles should be consistent along each roadway. On wide streets, such as University Avenue, Huron Boulevard and Washington Avenue, lighting fixtures should be located on both sides of the street, and can be staggered or parallel depending upon lighting level and uniformity considerations.

All lighting poles should be coordinated with other streetscape elements. For detailed standards for lighting, refer to the 2009 Minneapolis Street Lighting Policy.

Site Furnishings

Site furnishings provide important amenities for pedestrians by adding functionality and vitality to the pedestrian realm. They include: benches and seating, bicycle racks, bollards, gateway monuments, public art, trash receptacles, wayfinding signage, and other elements.

Site furnishings define the public realm as an area for pedestrians and create a more comfortable and visually interesting environment. Site furnishings should be focused on areas with a large amount of pedestrian activity and in areas where pedestrians may linger and enjoy the public realm.

Site furnishings should be considered secondary to street trees and lighting. Street tree and lighting placement should define the major rhythm of design elements along the street, and site furnishings should be placed in relation to trees and lighting, after the best locations for these elements have already been located.

For specific design guidelines related to placement of site furnishings refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.2.5 Placement of elements in the pedestrian zone, Page 10-12.

Public Realm Seating

Public seating is an important component of the public realm because it creates a comfortable, useable, and active public environment where people can rest, socialize, or simply people-watch. Public realm seating is critical to create social places where people can sit and congregate, which is an ingredient in creation of a of great and successful public space.

Public realm seating should be designed complement and visually reinforce design of other streetscape elements. Seating should be located under trees where possible to provide shade and comfort and to integrate multiple elements. Many of the proposed seating locations as recommended in this study utilize seat walls that can also be incorporated into other streetscape elements in the Amenity zone, such as at planter edges and stormwater management areas.

In areas where the public realm is constrained, it is recommended that seating be designed into the Frontage Zone. This seating can be incorporated in to the building form, such as seat-walls, to encourage pedestrian activity and to activate the front of larger commercial or mixed-use developments.

Bicycle Racks

Bicycle racks are an important element of the streetscape, both as an aesthetic aspect of the streetscape and as a functional element for those who travel by bike. Bicycle rack placement should be frequent in active commercial districts. Racks should be provided near major destinations such as schools, libraries, transit stops, major shopping and service destinations, and other locations with high pedestrian traffic. Racks should be located in either the furnishings zone or on curb extensions where possible. Bike racks placed in the sidewalk furnishings and planting zone should be parallel to the curb so that bikes parked at them do not project into the sidewalk throughway or edge zone.

For specific design specifications related to bicycle parking refer to ACCESS Minneapolis plan, Chapter 4 Bicycle Facility Design Guidelines, Chapter 5, Page 160-170.

On-street bike parking

Where sufficient demand exists or where sidewalk space is constrained, replacing an on-street vehicle parking space with bicycle parking should be considered. Bicycle parking may also be provided in the parking lane where there is not enough room to park a car, such as between driveways or between a hydrant and a crosswalk. Bike racks should be placed such that parked bikes are perpendicular to the curb. This plan has identified the opportunity for on-street parking along 4th Street and 27th Avenue.

The on-street bike parking area should be protected from vehicles via a curb, bollards or other devices at the edge of the parking lane. On-street bicycle parking would preclude street sweeping, and additional maintenance should be accounted for.

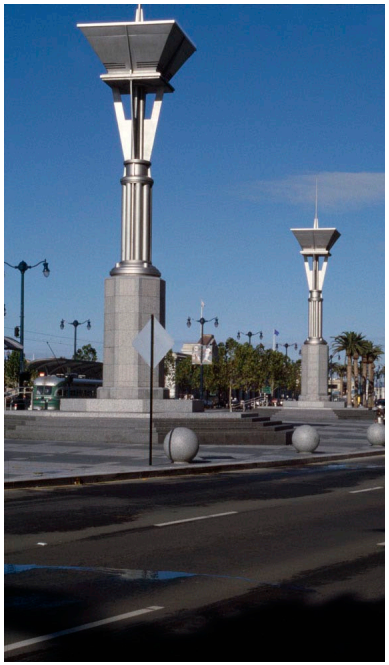
NICE Ride Bike sharing

There currently exists two NICE Ride kiosks within the Stadium Village Station planning area. With the completion of the LRT route, opportunities to locate additional NICE Ride bike kiosks within the Stadium Village Station area should be studied.

Bollards

Bollards are primarily a safety element to separate pedestrians or streetscape elements from vehicles.

Bollards can be designed to relate to other streetscape elements and should be located to define pedestrian spaces.



Gateway Monuments

Gateway monuments are typically larger structures that denote an entrance into a special area, neighborhood or district. These monuments should function as a major visual element that can be designed to reinforce a desired character or image of a district or neighborhood. Gateway monuments should be located within the Amenity area of the public realm. The primary locations within the study area recommended for Gateway monuments include:

- The intersection of Huron Boulevard and Fulton Street
- The intersection of Huron Boulevard, Washington Avenue and University Avenue
- The intersection of 29th Avenue and University Avenue

Public Art

Public art is an important aspect of the public realm design for the Stadium Village Station Area. Public art has the ability to create a unifying element within the study area while enhancing the pedestrian's experience within the public realm. It is recommended that a public art budget be included as part of any future public improvement projects for the area.

Future public art should be located on streets and in public spaces with high volumes of pedestrian traffic to enhance a pedestrian's experience and denote a unique and special place for people to enjoy. The primary locations within the study area recommended for public art include:

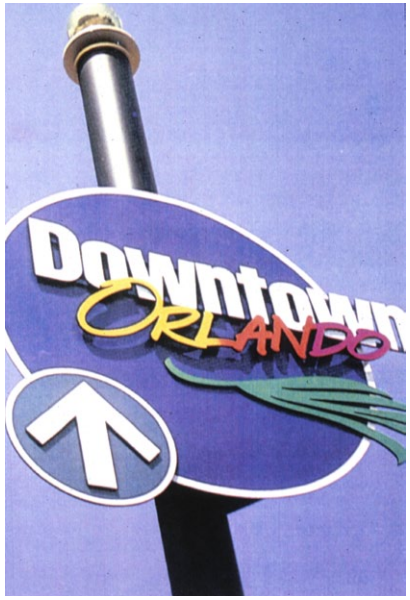
- The intersection of Huron Boulevard and Fulton Street
- The intersection of Huron Boulevard, Washington Avenue and University Avenue
- The intersection of 27th Avenue and University Avenue
- The intersection of 29th Avenue and University Avenue

Public art should also be considered in the design of utilitarian streetscape elements such as benches, trash receptacles, way-finding signage and lighting. Public art should be considered during the planning and design phase of projects to define opportunities to integrate art with other public realm improvements and streetscape elements. It is recommended that a public art budget be included as part of any future public improvement projects for the area.

Way-Finding Signage

Way-finding signage should be designed to direct and orient pedestrians, bicyclists and visitors to key destinations within the Stadium Village Station area. The design of the signage should be integrated into proposed streetscape elements to create a distinct identity and reinforce the desired image of the neighborhood and campus. Way-finding signage will also play a key role in directing future transit users to the transit stations and destinations within the area. Way-finding signage should be located along the major corridors, at intersections, adjacent to public plazas/ open spaces and locations of high pedestrian activity throughout the study area.

For specific design guidelines related to Wayfinding refer to ACCESS Minneapolis plan, Chapter 10 Pedestrian Facility Design, Section 10.7 Wayfinding, Page 10-57.



Public Realm Improvements on Private Property

Throughout the Stadium Village project area most of the buildings are constructed to the public right-of-way line. This is the classic urban relationship between the building, sidewalk and the street. It is because of this physical arrangement and the density it creates that urban areas have a unique vitality and special charm that cannot be replicated in suburban settings. Many businesses routinely use the public right-of-way to carry out their daily commercial tasks and the design and character of the frontage zone has an impact on how the Stadium Village area is perceived as a whole.

The following guidelines have been developed to offer the private property owner guidance in preserving and fostering the unique character of the streetscape within the Stadium Village area.

Outdoor Dining

Outdoor dining guidelines are intended to create a festive and vibrant atmosphere where people can eat outside and to provide additional places for dining.

- Location – Outdoor dining should be located next to the building. The sidewalk (frontage zone) area needs to be of sufficient width to allow for a clear walkway of 6 feet around the dining area.
- Landscaping – A minimum of 50% of the perimeter of the dining area should be landscaped. The landscape may be at ground level, in free-standing pots or in baskets attached to railing or building.
- Size – The size of the dining area is determined by the width of the storefront. In no case should the dining area encroach on adjacent storefronts.
- The design of the furniture can vary. However, the tables should be no larger than 3 feet wide with detached coordinating chairs. Picnic tables are not acceptable. All furniture should be constructed of durable materials specifically made for commercial use and properly maintained.
- Nothing may be chained to the street lights or other streetscape elements.

New Construction

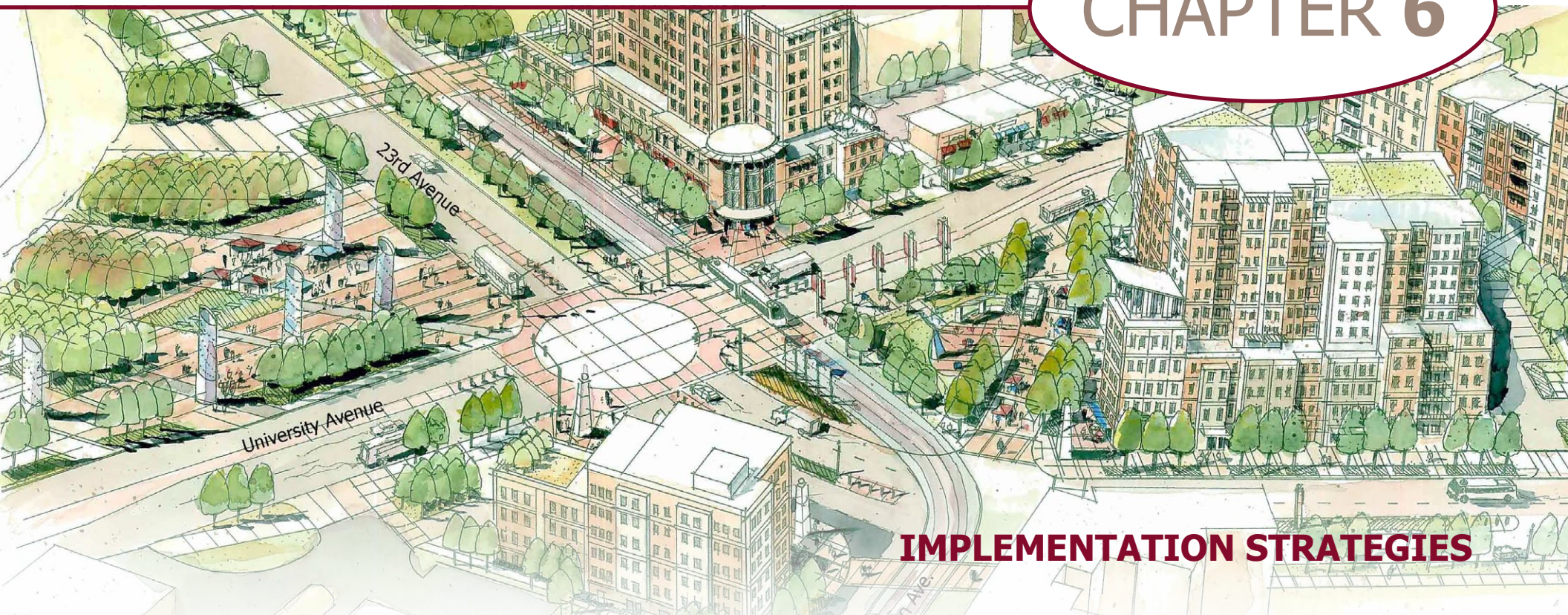
For redevelopment of buildings or new construction the streetscape should be considered as a part of the total project.

- Building to building context - New construction, especially in-fill projects, should be planned in relation to the surrounding buildings. Using common elements from the façade and architecture of neighboring buildings will create a harmonious feel to the streetscape. Building size, height and materials all factor into a coherent sense of place.
- The building at the street level - New construction should be planned to relate positively to the street within the elements of the building structure. The first level should have a human scale with attention to items including the building entries, first floor storefronts, lighting, signage and windows.
- Major building entries should be highlighted
- Streetscape - Buildings should also relate to the street in the treatment of the streetscape.

Parking Lot Screening

Private parking lot screening is one of the most effect ways for a private landowner to improve the character of the public realm. The intent is to provide a visual and physical separation between parking lots and the sidewalk areas (pedestrian zones). One of the objectives of the streetscape is to provide solutions for the treatment of parking lot edges that are flexible and may adapt to a variety of site conditions and budget constraints. To enhance the image of the area, parking lot buffers are proposed along all the parking lot frontage. The buffers can be a combination of low walls or decorative railings, hedges and trees.

CHAPTER 6



IMPLEMENTATION STRATEGIES

Implementation Strategies

The best plans are of little value if they are not implemented. Implementation of the opportunities outlined in this document is dependent on proactive leadership of the community and an orchestrated collaboration between the city officials and departments, Hennepin County, University of Minnesota, Prospect Park Neighborhood residents, property owners, the business community, and developers.

The Stadium Village Station area will be greatly affected by the completion of the LRT route and subsequent private investment and redevelopment which is estimated to follow. Even with a strong commitment, it will take several years before many of the recommendations for the improvement of the public realm take shape. Although the City's role in this process is an important one, the success of this effort will not be possible without the full support and participation of landowners, citizens, Hennepin County, University of Minnesota and the development community.

A concerted effort has been made throughout this project to involve a broad cross-section of the community. Business owners, residents, and community leaders have been invited to provide input and guidance. Their participation has improved the study and their continued participation and support will be critical in sustaining the community's commitment over time. The optimum results for this effort will only come if this study is also embraced by the private sector and if it guides both public and private investment over time.

The following Chapter identifies:

- Primary recommendations for implementation strategies.
- A phasing strategy for the improvement of the public realm.
- Capital project costs and maintenance related costs based on the study recommendations identified in Chapter 4.
- Potential funding sources for implementing the recommendations.

DESIGN AND PLANNING TOOLS

A goal of the Stadium Village Public Realm and Connectivity study is to create a "sense of place" and an attractive focus to the City of Minneapolis and the University of Minnesota. The design of the public realm including; streetscape, buildings, open spaces and landscaping, must all work together to reinforce a strong, cohesive and memorable identity. This section focuses on establishing the design and planning tools recommended to foster a built environment that reflects the values and expectations of the participants in this planning process.

Recommendations:

Incorporate this document as part of the Small Area Plan for the Prospect Park Neighborhood and adopt as an addendum to Minneapolis's Comprehensive Plan.

This design framework plan should be adopted as part of the Minneapolis Comprehensive Plan. The Comprehensive Plan is the city's central statement of policy and could be amended by reference to this document without having to make extensive changes to the land use, transportation, parks and other chapters of the Comprehensive Plan. This plan is intended to be flexible and could be reviewed and amended as circumstances change.

Implement Public Improvements

The public improvements associated with the Stadium Village Public Realm and Connectivity study will act as a catalyst for reinvestment, and represent a positive step toward ensuring a vital long-term business climate and livability for the Stadium Village area. This section includes action steps that should be considered to integrate the improvements into an ongoing and community building strategy and to gain the most benefit from streetscape and other public improvements.

Define Regulatory Tools

Utilize the large demand for development in this area to encourage the creation of key public realm elements such as the use of density bonuses for creation of public plazas or other key public realm features.

Coordinate Objectives with all City Departments

The planning, engineering, and inspections departments should refer to the guidelines and associated public/private improvements and amenities when reviewing individual development proposals within the study area. Each proposed development should comply with the design recommendations, reinforce the desired character of development, and contribute to creating a cohesive, pedestrian friendly, memorable, and economically viable place.

Developers should work with City staff and refer to the Stadium Village Public Realm and Connectivity study prior to generating design concepts, in order to better understand how their property fits into the context of the framework plan and expectations for public / private amenities.

Place projects in the Capital Improvement Plans

City departments should refer to the recommendations in this document to coordinate, design, and budget for capitol improvements and to define public/private partnerships to finance and maintain public realm improvements. City departments should refer to the designs for the individual areas as a basis from which to develop more detailed plans. Investment in the creation of a consistent and high-quality public realm will help to attract new private investment and establish excellence in site, architecture, connectivity and open space design for new uses drawn to the area over time.

Coordinate Staging and Funding Sources

The city should share the redevelopment and public improvements objectives with other agencies and private entities that may be potential sources of funding.

Coordinate Staging and Funding with Redevelopment Projects

The key redevelopment sites defined in the Stadium Village market research study will play an important role in defining potential improvements that shape and enhance the public realm. Through the development approval process for these redevelopment sites the recommendations identified in his study should be utilized to ensure the desired improvements to the public realm are coordinated and implemented. Each major development parcel has associated street, streetscape, open space and utility improvements that should be coordinated to reinforce the objectives of the Public Realm and Connectivity Plan. Many of the associated public improvements can be phased in as the private parcel develops.

The opportunity to create development partnership on projects by the City or University of Minnesota shall be defined during the redevelopment approval process. The redevelopment of these sites should define opportunities to locate buildings that will contribute to the creation of an expanded public realm, pocket parks or other community open spaces.

This study also identifies the opportunities to minimize conflict between automobiles and pedestrian/ cyclists. These bicycle and pedestrian improvements should be considered when the redevelopment sites

Define a Maintenance Strategy for Each Project

It is desirable to achieve the highest levels of safety, security and comfort within the Stadium Village project area. Budget and long term maintenance are critical considerations when making the investment in the enhancement of the public realm. The capital investments in the Stadium Village public realm should not be a viewed as a short-term project, but one that will need a long term commitment to have a lasting positive impact.

The urban environments in which we live (which include pollution, salt spray, heat island effect and vandalism) take a toll on our public realm and infrastructure improvements. Materials, furnishings, and plantings used in streetscape projects are selected for their durability as well as ease of maintenance, servicing, and replacement. But no matter how durable original materials are, or how well they are installed, they will not last without regular maintenance. This is especially true in the case of landscape plantings which require regular and active maintenance to keep them thriving and attractive.

Potential City budget constraints make it important to prioritize the wish list of public realm amenities. While the City is responsible for the maintenance of certain items, the community also plays a critical maintenance role. It is important to consider the affordability of the maintenance required for desired streetscape items, as well as to

clarify who will be responsible for maintenance, before making the final selection of streetscape elements.

A strategy should be created that defines a funding source, such as a special maintenance assessment district that assigns responsibility for maintenance of the various streetscape or park components. Responsibilities may be delegated between the City staff, property owners, volunteers, or a private contractor.

Potential Planning Projects

The following is a list of potential planning projects to support development of high-density residential and commercial areas within the Stadium Village Project area.

1. Detailed study of the block at the Stadium Village Station Area with the University land, the hotel, multi-modal center, transit way, potential air rights development, joint venture possibilities with hotel, etc. This study should also provide more detailed pre-design plans for on-street bicycle improvements along 23rd Avenue and streetscape improvements within the area.
2. Detailed study of 4th Street (23rd Avenue to Malcolm Avenue): more detailed, pre-design plans for street related improvements to support redevelopment, access to transit, on-street bicycle facility improvements, stormwater management opportunities, infrastructure study to support development, detailed parking and trip generation.
3. Detailed study of 27th Avenue Corridor (4th Street to I-94 bridge): more detailed, pre-design plans for street related improvements to support redevelopment, on-street bicycle facility improvements, detailed public realm design, open space/ pocket park design, stormwater management opportunities, infrastructure study to support development.
4. Detailed study of 29th Avenue Station Area (Intercampus Transit Way to University Avenue): pre-design plans for street related improvements to support redevelopment, access to transit, bicycle facility improvements, stormwater management opportunities, infrastructure study to support development.
5. Detailed study of Huron Boulevard (I-94 to University Avenue): pre-design plans for redevelopment opportunity sites, access to transit, detailed public realm design, open space/ pocket park design, bicycle facility improvements, stormwater management opportunities, infrastructure study to support development.
6. Detailed study of connectivity to Granary Road: RR crossings, detailed public realm design, bicycle facility improvements, stormwater management opportunities, infrastructure study to support future development.

Recommended Projects and Phasing

The following is a list of potential recommended projects to support the goals and objectives for the Stadium Village Station Area. The list of projects has been developed to assist the City of Minneapolis in defining a strategy for the implementation of the public realm and connectivity recommendations for each district defined as part of this plan.

The prioritization and phasing for the recommended projects is an on-going and ever evolving process and somewhat dependent on the issues and timing associated with potential neighborhood redevelopment opportunities and possible multi-jurisdictional public projects. The City of Minneapolis should stay proactive and search for creative opportunities and possible public/ private partnerships to enhance or rehabilitate the public realm.

The prioritization and phasing of the recommended projects included many factors such as:

- Redevelopment efforts, proposed building rehabilitations and other planning projects, etc.
- Future funding sources, CIP schedule, proposed utility work, etc.
- When public funds become available for improvement of the public realm , the priority should be placed on the streets (4th Street, University Avenue, Washington Avenue and Huron Boulevard) that lead to the Stadium Village station areas and other key destinations.

The following is a list of potential recommended projects:

Stadium Village Public Realm and Connectivity Study

Public Realm Improvement Projects	Project Extents	Description of Improvements	Comments	Agency Involvement
Short Term Improvements				
27th Avenue	4th Street to I-94 bridge	Reconstruction of the street	• Accommodate (2) lanes of traffic, on-street bicycle lanes (opportunity to create a bike boulevard), and on-street parking. • Opportunity to upgrade utility infrastructure to support future mixed-use redevelopment along 27th Avenue • Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone). • Primary streetscape enhancements	MNDOT(Minnesota Department of Transportation), MPRB (Minneapolis Parks and Recreation Board, Minneapolis Public Works Department (MPWD), Hennepin County, CPED (Minneapolis Planning and Economic Development), Prospect Park East River Road Neighborhood Association (PPERIA)
27th Avenue	4th Street to I-94 bridge	Bike Lanes or Bike Boulevard and Signage	Incorporate wayfinding and signage to support Grand Rounds	MPRB, MPWD
27th Avenue	4th Street to I-94 bridge	Intersection Improvements	Improve the intersections of 27th Avenue/ 4th Street, 27th Avenue/Delaware Street, 27th Avenue/ Essex Street with secondary improvements.	MPWD, Hennepin County, MNDOT
University Avenue	23rd Avenue to 29th Avenue	Bike Lanes and Signage		MPRB, MPWD
University Avenue	Malcolm Avenue	Wayfinding Signage	Incorporate wayfinding and signage for the U of M and Prospect Park Businesses	MPWD, PPERIA
University Avenue	University Avenue	Landscape center median		MPRB, MPWD, PPERIA
University Avenue	23rd Avenue to 29th Avenue	Intersection Improvements	Improve the intersection of University/ Washington Avenue with primary streetscape improvements	MPWD, MNDOT, Hennepin County, University of Minnesota (U of M)
University Avenue	23rd Avenue to 29th Avenue	Intersection Improvements	Improve the intersection of University Avenue/ 29th Avenue with primary streetscape improvements	MPWD, Hennepin County, MNDOT
University Avenue	23rd Avenue to 29th Avenue	Intersection Improvements	Improve the intersection of University Avenue/ 27th Avenue with primary streetscape improvements	MPWD, Hennepin County, MNDOT
Washington Avenue Convertible street	Washington Avenue/ University Avenue	Construct convertible street section between University Avenue/ Washington Avenue	• Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone). • Primary Streetscape Enhancement	MPWD, Hennepin County, MNDOT, PPERIA, U of M, CPED
Triangle Park	Washington Avenue/ University Avenue	Create urban plaza/park between Washington Avenue/University Avenue/23rd Avenue		MPWD, Hennepin County, MNDOT, PPERIA, U of M, CPED
Triangle Park Multi-Use Trail	Washington Avenue/ University Avenue	Construct a wider multi-use trail to connect LRT station to Washington Avenue		MPWD, Hennepin County, MNDOT
29th Avenue Convertible street	University Avenue to Intercampus Transit Way	Construct convertible street section adjacent to LRT tracks	Primary Streetscape Enhancement	MPWD, Hennepin County, MNDOT, PPERIA, Met Council
Huron Boulevard	I-94 to University Avenue	Intersection Improvements	Improve the intersections of Huron Boulevard/ Fulton Street with primary streetscape improvements	MPWD, Hennepin County, MNDOT, PPERIA, Met Council, U of M
Huron Boulevard	I-94 to University Avenue	Intersection Improvements	Improve the intersections of Huron Boulevard/Washington Avenue with primary streetscape improvements	MPWD, Hennepin County, MNDOT, PPERIA, Met Council, U of M
Huron Boulevard	Fulton Street	Wayfinding Signage	Incorporate wayfinding and signage for the U of M and Prospect Park Businesses	MPWD, PPERIA, U of M
23rd Avenue	6th Street to University Avenue	New Sharrows and Signage		MPRB, MPWD, Hennepin County
23rd Avenue	University Avenue to Washington Avenue	Bike Lanes and Signage	Provide on-street bike lane (south bound) to connect University Avenue to Washington Avenue	MPRB, MPWD, Hennepin County
25th Avenue	Delaware Street to Intercampus Transit Way (and future Granary Road)	New Sharrows and Signage		MPRB, MPWD, Hennepin County, U of M
26th Avenue	Essex Street to University Avenue	New Sharrows and Signage		MPRB, MPWD, Hennepin County

Mid-Term Improvements				
Reconstruction of 4th Street	23rd Avenue to Malcolm Avenue	Reconstruction of the street	Accommodate (2) lanes of traffic, shared on-street bicycle lanes, and on-street parking. Parking type, weather angled, parallel or a combination should be studied in greater detail.	MNDOT, MPWD, CPED, PPERIA, Hennepin County, CPED
4th Street	23rd Avenue to Malcolm Avenue	New Sharrows and Signage		MPRB, MPWD, Hennepin County
4th Street	23rd Avenue to Malcolm Avenue	Streetscape Enhancements		MPRB, MPWD, Hennepin County
University Avenue	23rd Avenue to Malcolm Avenue	Intersection Improvements	• Improve the intersections of University Avenue/ Malcolm Avenue with secondary streetscape improvements • Improve the intersections of University Avenue/ 25th Avenue with primary streetscape improvements	MPWD, Hennepin County, MNDOT, PPERIA, Met Council, U of M
University Avenue	23rd Avenue to Malcolm Avenue	Streetscape Enhancements	• Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone). • Primary streetscape enhancements	MPWD, Hennepin County, MNDOT, PPERIA, Met Council, U of M
Essex Street	Huron Boulevard to 27th Avenue	Bike Lanes and Signage		MPRB, MPWD, Hennepin County
29th Green Corridor	University Avenue to Williams Avenue	Shared Use Trail and stormwater improvements	Urban greenway connection	MPRB, MPWD, PPERIA
Long-Term Improvements				
Huron Boulevard	I-94 to University Avenue	Reconstruction of the street	• Define opportunities to reduce traffic lanes define locations for a landscaped center median • Opportunity to upgrade utility infrastructure to support future mixed-use redevelopment along Huron Boulevard • Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone) • Primary streetscape enhancements	MNDOT, MPWD, CPED, PPERIA, Hennepin County, U of M, Met Council, CPED
Huron Boulevard	I-94 to University Avenue	Intersection Improvements	Improve the intersections of Huron Boulevard/Essex Street with primary streetscape improvements	MPWD, Hennepin County, MNDOT, PPERIA, Met Council, U of M
Huron Boulevard	I-94 to University Avenue	Intersection Improvements	Improve the intersections of Huron Boulevard Delaware Street with primary streetscape improvements	MPWD, Hennepin County, MNDOT, PPERIA, Met Council, U of M
25th Avenue	University Avenue to Intercampus Transitway	Streetscape Enhancements		MPRB, MPWD, Hennepin County
Malcolm Avenue	University Avenue to Intercampus Transit Way (and future Granary Road)	New Sharrows and Signage		MPRB, MPWD, Hennepin County, U of M
Malcolm Avenue	University Avenue to Intercampus Transitway	Streetscape Enhancements		MPRB, MPWD, Hennepin County
Huron Linear Stormwater Park	Huron Boulevard to 27th Avenue	Create linear park		MPRB, MPWD, PPERIA
Huon Linear Stormwater Park	Huron Boulevard to 27th Avenue	Create linear shared use trail		MPRB, MPWD, PPERIA
Huron Boulevard Interchange Landscape	Huron Blvd to I-94 Interchange	Landscape Enhancements		MPRB, MPWD, Hennepin County
TCF Gateway Plaza	Intersection of University Avenue and 23rd Avenue	New Gateway Festival Plaza	Create new U of M and community festival plaza	MPRB, MPWD, PPERIA, U of M, Hennepin County
Huron Green Corridor	Huron Boulevard to Erie Street	Shared Use Trail and stormwater improvements	Urban greenway connection	MPRB, MPWD, PPERIA

Cost Estimates (Capital and Maintenance)

Capital Costs

As part of the Stadium Village Public Realm and Connectivity study a detailed cost estimate has been prepared that identifies various enhancements that are associated with the recommended public realm and connectivity projects. A description of items included in some of the cost catagories is found below.

Urban Plaza Costs:

The urban plaza area is calculated as a percentage of the streetscape area. Streetscapes with higher level improvements are estimated to have more space dedicated to urban plazas. The plaza costs are averaged across several sample areas, and include items such as standard concrete, decorative paving, trees, planting beds, irrigation, site furniture, and features such as arbors or public art.

Stormwater Improvements:

The stormwater improvements occur within the amenity zone, between the public sidewalk and the back of curb. The stormwater costs do not reflect the total amount of improvement costs, but show an upgrade to the streetscape costs. The cost to develop a basic streetscape amenity zone into a stormwater improvement zone includes additional excavation, soils for infiltration, plantings, draintile and geotextile fabric. The basic stormwater upgrades are below infrastructure upgrades, "Swedish" soil rock planting medium/stormwater storage and monitoring devices. The high stormwater upgrades include at-grade curb planters, soil medium, plant materials, below grade infrastructure upgrades and monitoring devices.

Miscellaneous Cost:

The miscellaneous cost category shows a pre-calculated cost for improvements found in a few specific locations, such as convertible streets, landscaped medians, trails, parks, greenways and large feature plazas. This category also includes wayfinding signage for the Grand Rounds or the University of Minnesota and Prospect Park businesses. See Appendix X for detailed cost estimates.

Maintenance Costs

Maintenance costs associated with any specific Public Realm or Connectivity project is a little more difficult to define. Public realm and street maintenance involves street cleaning, snow removal, pavement replacement (overlays), decorative pavement replacement, pedestrian street lighting, sidewalk sweeping, landscape watering/ weeding/replacement and trash pickup.

Segment	Improvement Description	Comments	Streetscape Improvements	Street Reconstruction	Type 1 Streetscape Improvements	Type 2 Streetscape Improvements	Type 3 Streetscape Improvements	Public Realm Urban Plaza Improvements	Private Property Improvements	ROW Acquisition	Outside ROW Improvements	Bikeway Improvements	Roadway Re-Striping	Shared Lane Markings	High-Visibility Crosswalks	Warning Signs	Pedestrian-Activated Push Button	Bicycle Loop Detectors	Stormwater Improvements	Basic Upgrade	High Upgrade	Annual Maintenance	Miscellaneous Cost (Wayfinding Signage, Medians, Parks)	Subtotal	Engineering/ Design	Construction Mangement	Contingency	Cost Opinion
				$5.50	$20	$17	$11	$14	$12	$7		$3.02	$0.80	$140	$100	$600	$2,500		$5	$10	$0.48				15%	10%	15%	
				SF	SF	SF	SF	SF	SF	SF		LF	LF	LF	EA	EA	EA		SF	SF	SF							
SHORT TERM IMPROVEMENTS																												
27th Avenue																												
4th Street to I-94 Bridge	Reconstruction of the street	• Accommodate (2) lanes of traffic, on-street bicycle lanes (opportunity to create a bike boulevard), and on-street parking. • Opportunity to upgrade utility infrastructure to support future mixed-use redevelopment along 27th Avenue • Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone). • ROW Aquisition • Primary streetscape enhancements		82312		39632		4970		7665	5548										17130	39632			$1,517,181	$227,577	$151,718	$227,577	**$2,124,053**
4th Street to I-94 Bridge	Bike Lanes or Bike Blvd and Signage	Incorporate wayfinding and signage to support Grand Rounds										3029			4								$65,000	$74,548	$11,182	$7,455	$11,182	**$104,367**
4th Street to I-94 Bridge	Intersection Improvements	Improve the intersections of 27th Avenue/ 4th Street, 27th Avenue/Delaware Street, 27th Avenue/ Essex Street with secondary improvements.												487										$68,180	$10,227	$6,818	$10,227	**$95,452**
University Avenue																												
23rd to 29th Avenue	Bike Lanes and Signage											4150			4								$12,933	$1,940	$1,293	$1,940	**$18,106**
23rd to 29th Avenue	Intersection Improvements	• Improve the intersection of University/ Washington Avenue with primary streetscape improvements • Improve the intersection of University Avenue/ 29th Avenue with primary streetscape improvements • Improve the intersection of University Avenue/ 27th Avenue with primary streetscape improvements												578		12	3						$95,620	$14,343	$9,562	$14,343	**$133,868**
Malcolm Avenue	Wayfinding Signage	Incorporate wayfinding and signage for the U of M and Prospect Park Businesses																				$65,000	$65,000	$9,750	$6,500	$9,750	**$91,000**
University Avenue	Landscape Center Median																				18675	$112,050	$121,014	$18,152	$12,101	$18,152	**$169,420**
Washington Avenue Convertible Street																												
Washington Avenue/ University Avenue	Construct Convertible Street Section between University Avenue/ Washington Avenue	• Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone) • Primary streetscape enhancement			13456														4810		13456	$88,116	$387,745	$58,162	$38,774	$58,162	**$542,843**
Washington Avenue/ University Avenue	Triangle Park Multi-Use Trail	Construct a wider multi-use trail to connect LRT station to Washington Avenue																				$2,460	$2,460	$369	$246	$369	**$3,444**
Washington Avenue/ University Avenue	Triangle Park	Create an urban plaza/park between Washington Ave, University Ave and 23rd Ave						8964													8964		$129,799	$19,470	$12,980	$19,470	**$181,718**
29th Avenue Convertible Street																												
University Avenue to Intercampus Transit Way	Construct convertible street section adjacent to LRT tracks	Primary streetscape enhancement			25764																25764	$579,864	$1,107,511	$166,127	$110,751	$166,127	**$1,550,515**
Huron Boulevard																												
I-94 to University Avenue	Intersection Improvements	• Improve the intersection of Huron Boulevard/ Fulton Street with primary streetscape improvements • Improve the intersection of Huron Boulevard/Washington Avenue with primary streetscape improvements												392		8	2						$64,680	$9,702	$6,468	$9,702	**$90,552**
Fulton Street	Wayfinding Signage	Incorporate wayfinding and signage for the U of M and Prospect Park Businesses																				$65,000	$65,000	$9,750	$6,500	$9,750	**$91,000**
23rd Avenue																												
6th Street to University Avenue	New Sharrows and Signage												2240		2								$1,992	$299	$199	$299	**$2,789**
University Avenue to Washington Avenue	Bike Lanes and Signage											360			2								$1,287	$193	$129	$193	**$1,802**
25th Avenue																												
Delaware Street to Intercampus Transitway (& future Granary Rd)	New Sharrows and Signage												1570		4								$1,656	$248	$166	$248	**$2,318**
26th Avenue																												
Essex Street to University Avenue	New Sharrows and Signage												1276		2								$1,221	$183	$122	$183	**$1,709**

Segment	Improvement Description	Comments	Streetscape Improvements Street Reconstruction	Type 1 Streetscape Improvements	Type 2 Streetscape Improvements	Type 3 Streetscape Improvements	Public Realm Urban Plaza Improvements	Private Property Improvements ROW Acquisition	Outside ROW Improvements	Bikeway Improvements	Roadway Re-Striping	Shared Lane Markings	High-Visibility Crosswalks	Warning Signs	Pedestrian-Activated Push Button	Bicycle Loop Detectors	Stormwater Improvements	Basic Upgrade	High Upgrade	Annual Maintenance	Miscellaneous Cost (Wayfinding Signage, Medians, Parks)	Subtotal	Engineering/ Design	Construction Mangement	Contingency	Cost Opinion
			$5.50	$20	$17	$11	$14	$12	$7	$3.02	$0.80	$140	$100	$600	$2,500	$5	$10	$0.48					15%	10%	15%	
			SF	SF	SF	SF	SF	SF	SF	LF	LF	LF	EA	EA	EA	SF	SF	SF								
MID TERM IMPROVEMENTS																										
4th Street																										
23rd Avenue to Malcolm Avenue	Reconstruction of the Street	Accommodate (2) lanes of traffic, shared on-street bicycle lanes, and on-street parking. Parking type, weather angled, parallel or a combination should be studied in greater detail.	134595																	$127,795	$868,068	$130,210	$86,807	$130,210	**$1,215,295**
23rd Avenue to Malcolm Avenue	Streetscape Enhancements	• Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone) • Primary streetscape enhancements			58490	43850	8789		5021									26795	102340		$1,951,942	$292,791	$195,194	$292,791	**$2,732,719**
23rd Avenue to Malcolm Avenue	New Sharrows and Signage									5160			6								$16,183	$2,427	$1,618	$2,427	**$22,656**
University Avenue																										
23rd to Malcolm Avenue	Intersection Improvements	• Improve the intersection of University Avenue/ 25th Avenue with primary streetscape improvements • Improve the intersection of University Avenue/ Malcolm Avenue with secondary streetscape improvements										483		4	1						$72,520	$10,878	$7,252	$10,878	**$101,528**
23rd to Malcolm Avenue	Streetscape Enhancements	• Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone). • Primary streetscape enhancements		75828	10425		17666		11481							45400		86253		$2,289,883	$343,482	$228,988	$343,482	**$3,205,836**
Essex Street																										
Huron Boulevard to 27th Avenue	Bike Lanes and Signage									1242			4								$4,151	$623	$415	$623	**$5,811**
29th Green Corridor																										
University Avenue to Williams Avenue	Shared Use Trail and Stormwater Improvements	Urban greenway connection																		$39,786	$39,786	$5,968	$3,979	$5,968	**$55,700**
LONG TERM IMPROVEMENTS																										
Huron Boulevard																										
I-94 to University Avenue	Reconstruction of the Street	• Define opportunities to reduce traffic lanes define locations for a landscaped center median • Opportunity to upgrade utility infrastructure to support future mixed-use redevelopment along Huron Boulevard • Design of public realm to include expanded sidewalk areas (pedestrian zone) and stormwater management facilities (amenity zone) • ROW Aquisition • Primary streetscape enhancements	101184	40680	11680	7560	10517	12864	6952							29900		59920	$552,340	$2,732,698	$409,905	$273,270	$409,905	**$3,825,777**
I-94 to University Avenue	Intersection Improvements	• Improve the intersection of Huron Boulevard/Essex Street with primary streetscape improvements • Improve the intersection of Huron BoulevardDelaware Street with primary streetscape improvements										318		8	2					$54,320	$8,148	$5,432	$8,148	**$76,048**
25th Avenue																										
University Avenue to Intercampus Transitway	Streetscape Enhancement				15392		1834		1278									15392		$303,666	$45,550	$30,367	$45,550	**$425,132**
Malcolm Avenue																										
University Avenue to Intercampus Transitway	New Sharrows and Signage										1076		4							$1,261	$189	$126	$189	**$1,765**
University Avenue to Intercampus Transitway	Streetscape Enhancement					18896	785		718									18896		$232,936	$34,940	$23,294	$34,940	**$326,111**
Huron Linear Stormwater Park																										
Huron Boulevard to 27th Avenue	Create Linear Park																			$91,005	$91,005	$13,651	$9,101	$13,651	**$127,407**
Huron Boulevard to 27th Avenue	Shared Use Trail																			$27,932	$27,932	$4,190	$2,793	$4,190	**$39,105**
Huron Boulevard Interchange Landscaping																										
Huron Boulevard and I-94 Interchange	Trees and Groundcover																			$89,829	$89,829	$13,474	$8,983	$13,474	**$125,761**
TCF Gateway Plaza																										
Intersection of University Avenue and 23rd Avenue	New Gateway Festival Plaza	Create new U of M and community festival plaza																		$2,223,839	$2,223,839	$333,576	$222,384	$333,576	**$3,113,375**
Huron Green Corridor																										
Huron Boulevard to Erie Street	Shared Use Trail and Stormwater Improvements	Urban greenway connection																		$45,173	$45,173	$6,776	$4,517	$6,776	**$63,242**

Potential Funding Sources

This section is intended to provide a preliminary assessment of state and federal funding options that the City could consider for the recommended public realm and connectivity improvements for the Stadium Village Public Realm and Connectivity study.

Because there are many factors that could initiate improvements to the public realm, this list is to serve as a starting point to begin to evaluate potential funding sources as a specific project is programmed for implementation. It should be noted, that in most cases, grant and loan financing provided by State and federal government must be applied for by the City of Minneapolis requiring coordination between City departments. Additionally, many funders require a City match and programming in the city's CIP.

The overall recommended funding sources for future Heritage Street reconstruction projects are listed below:

- Special Assessments
- Corridors of Opportunities Grant
- Metropolitan Council Livable Communities Demonstration Account (LCDA) Development Grants
- MNDOT STP, Transportation Enhancement Program
- MNDOT – Municipal State Aid
- MWMO and other Clean Water Stormwater Funding

A description of all grants and funding sources follows:

Federal Transportation Funding Sources

Metropolitan & Statewide Planning (5303, 5304, 5305)

- Increase the safety of the transportation system for motorized and no motorized users
- Increase the accessibility and mobility of people and for freight
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Promote efficient system management and operation
- Emphasize the preservation of the existing transportation system

Additional Federal Funding Sources:

Program	Source	Focus	Link
5 Star Restoration Program	EPA	Wetland and stream education projects	http://www.epa.gov/owow/wetlands/restore/5star/
Bikes Belong Grants	Bikes Belong	Corridor improvements, trails	http://www.bikesbelong.org/grants/
Trans, Community & System Preservation Program	FHWA	Transit oriented development, traffic calming, improve transp. efficiencies and reduce the impact on the env.	http://www.fhwa.dot.gov/tcsp/
Kodak American Greenway Awards	Various	Greenways, blueways, trails and natural areas	http://www.conservationfund.org/kodak_awards
Bus Livability Grants	FTA	Construct bus related facilities and purchase equipment, inc. buses	http://www.gpo.gov/fdsys/pkg/FR-2011-06-27/pdf/2011-16015.pdf
Rivers, Trails and Conservation Assistance Program	National Parks Service	Planning assistance for the establishment or preservation of greenways, rivers, trails, watersheds, and open space	http://www.nps.gov/ncrc/programs/rtca/contactus/cu_apply.html
TIGER III	USDOT	Road, rail, transit and port projects	http://www.dot.gov/tiger/
Water Sustainability and Climate	NSF	Cutting edge water sustainability	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503452
Fed. Brownfields EPA (Various)	EPA	Brownfield assessment, revolving loan, cleanup, planning	http://www.epa.gov/brownfields/grant_info/index.htm
National Transportation Enhancements Clearinghouse	FHWA	Expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of transp. inf.	http://www.enhancements.org/Te_basics.asp
CDBG Entitlement Communities Grants	HUD	Larger metropolitan cities and counties for a wide range of activities	http://www.hud.gov/offices/cpd/communitydevelopment/programs/entitlement/
Green Refinance Plus Program	FHA	Energy efficient rehabs of MF properties more than 10 years old	http://portal.hud.gov/hudportal/documents/huddoc?id=GreenRefiPlusFactSheet.pdf
Smart Growth Grants	EPA	Support activities that improve the quality of development and protect human health and the environment	http://www.epa.gov/smartgrowth/grants/index.htm
Sustainable Communities Regional Planning Grant	HUD	Improve regional planning efforts to integrate housing and transp.; modernize land use and zoning	http://portal.hud.gov/hudportal/documents/huddoc?id=ascrp01nofa.pdf

State Funding Sources

Tax Increment Financing (TIF)

Tax increment financing (TIF) is the primary development finance tool available to Minnesota cities. TIF is simple in concept, but complex in its application. Through tax increment financing, the property taxes created by new development (or redevelopment) are captured and used to finance activities needed to encourage the development. The challenge in using TIF lies with the complex and ever-changing statutory limitations.

Uses

Tax increment financing can be used to finance all of the important implementation actions facing the City: land acquisition, site preparation, parking, and public improvements. In addition, TIF creates a means to borrow money needed to pay for redevelopment costs. The City can issue general obligation bonds without an election of 20% or more of the debt is supported by tax increment revenues. These bonds are not subject to any debt limit.

Purpose of Minneapolis TIF Policy

This Tax Increment Policy has been approved by the Minneapolis City Council for the following purposes:

- to guide staff in forming recommendations regarding the use of tax increment financing and negotiating contract terms with developers;

- to provide a framework within which the City Council and Mayor can evaluate and compare proposed uses of tax increment financing; and

- to inform the public of the City's position on the use of tax increment financing and the process through which decisions regarding the use of the tool are made.

Development Objectives

The City uses tax increment financing to accomplish these major objectives:

7. Expand the Minneapolis economy to create more living-wage jobs, with an emphasis on providing job opportunities for the unemployed and underemployed.
8. Attract and expand new and existing services, developments and employers in order to position Minneapolis and the region to compete in the economy of the 21st century.

I. Increase the city's property tax base and maintain its diversity. Clean contaminated land to provide sites for uses that achieve City redevelopment objectives.

J. Provide an array of housing choices that meet the needs of current residents and attract new residents to the city, with an emphasis on providing affordable housing.

K. Eliminate blighting influences throughout the city.

L. Support neighborhood retail services, commercial corridors and employment hubs.

M. Support redevelopment efforts that enhance and preserve unique urban features and amenities, including downtown, the riverfront and historic structures.

General Guidelines in the Use of Tax Increment Financing

A. The City of Minneapolis will comply with all requirements of the Minnesota Tax Increment Financing Act, as amended. The City will undertake a rigorous analysis to ensure that the proposed project satisfies the "but for" test embodied within the Tax Increment Financing Act.

B. The City of Minneapolis will use tax increment financing only when a clearly identified city development objective is served and only to the degree necessary to accomplish that development objective.

C. Tax increment financing will only be used in cases where the City has the financial capacity to provide the needed public assistance, the Council deems it fiscally prudent to provide such assistance and the developer can clearly demonstrate that the development will be able to meet its financial and public purpose commitments.

D. The City of Minneapolis will recapture the public subsidy to the maximum extent feasible after allowing the developer a reasonable return.

E. Alternatives, such as "pay as you go" financing and reimbursing front-end public redevelopment costs with tax increment revenues, are preferable to bond financing and are to be considered and used when appropriate. The City will not issue general obligation tax increment bonds except when all net bond proceeds are used to directly pay public costs or refinance debt that was previously issued to pay for such costs, and the taxable development that will generate the tax increment used to pay all or a portion of the debt service on the bonds is either fully constructed and assessed by the City Assessor or is underway and subject to the terms and conditions of a development agreement with the City.

F. Only those public improvements and public redevelopment costs directly associated with or needed to service the proposed development plan or project should be financed through tax increment.

G. The City will analyze each potential new tax increment financing district and recommend whether it should be included in or excluded from the fiscal disparity contribution. The impact of the fiscal disparity election on the City's general tax base will be analyzed using the methodology prescribed by the Minnesota Department of Revenue and will be reported to the City Council in a manner understandable to the general public prior to approval of the proposed use of tax increment financing.

H. As part of the annual budget process, the City will identify tax increment revenues deemed to be excess tax increment and will make related recommendations for decertification of parcels or districts and report on the total value of captured tax capacity expressed in both dollars and as a percentage of total tax capacity.

Online information from the City of Minneapolis at www.ci.minneapolis.mn.us/cped

Tax Abatement

Tax abatement acts like a simpler and less powerful version of tax increment financing. With TIF, the city controls the entire property tax revenue from new development. Under the abatement statute

(Minnesota Statutes, Sections 469.1812 through 469.1815), the city, county, and school district have independent authority to grant an abatement.

Uses

The City of Minneapolis will use Tax Abatement to support the substantial rehabilitation of historic properties. The City Council must find that the expected benefits to the City of the proposed abatement agreement at least equal the costs to the City of the proposed agreement. The City Council must also find that the abatement is in the public interest because it will facilitate at least one of the following **objectives:**

1. Increase or preserve tax base;
2. Provide employment opportunities in the City of Minneapolis;
3. Provide or help acquire or construct public facilities;
4. Help redevelop or renew blighted areas;
5. Help provide access to services for residents of the City of Minneapolis;
6. Finance or improve public infrastructure; or
7. Phase in a property tax increase on the parcel resulting from an increase of 50 percent or more in one year on the estimated market value of the parcel, other than increase attributable to the improvement of the parcel.

Evaluation Criteria

The following criteria will be considered in the evaluation of any proposal to use tax abatement for historic properties:

1. The extent to which the proposed use of tax abatement is consistent with the City goals, development priorities, Comprehensive Plan and zoning codes.

2. The extent of the direct and indirect public benefits and costs generated by the tax abatement and redevelopment shall be determined and quantified to the degree possible.

3. The extent to which other government jurisdictions support the project, including but not limited to participation in the public abatement agreement.

4. The extent to which other public assistance is being provided to the project.

Uses

Abatement in Minnesota works more like a rebate than an abatement. The city (and other units abating taxes) adds a tax levy equal to the amount of taxes to be abated. The revenue from the abatement levy can be returned to the property owner or retained and used to finance development activities. Tax abatement can be used to finance the key redevelopment actions in the downtown: land acquisition, site preparation, and public improvements.

Tax abatement is perhaps best suited as an incentive for reinvestment in existing property. While TIF deals with only the value from new development, abatement can apply to both new and existing value. This power provides the means to encourage rehabilitation of commercial buildings and housing. The City could agree to abate all or part of the municipal share of taxes to encourage reinvestment tied to the plan.

The statute grants the authority to issue general obligation bonds supported by the collection of abated taxes. The proceeds of the bonds may be used to pay for (1) public improvements that benefit the property, (2) land acquisition, (3) reimbursement to the property owner for improvements to the property, and (4) the costs of issuing the bonds. These bonds can be issued without an election and are not subject to the debt limit.

Limitations

State law places several important limitations on the use of tax abatement:

- In 2003, the State Legislature increased the total taxes abated by a political subdivision in any year to an amount that may not exceed the greater of 10% of the current levy or $200,000.
- If one political subdivision declines to abate, then the abatement levy can be made for a maximum of 15 years. If the city, county, and school district all abate, then the maximum period drops to 10 years.
- The duration of the abatement can be extended to 20 years if it is for a "qualified business" as defined in the statute. This provision is targeted towards industrial development applications.
- Taxes cannot be abated for property located within a tax increment financing district.

Special Assessments

Public improvements are often financed using the power to levy special assessments (Minnesota Statutes Chapter 429). A special assessment is a means for benefiting properties to pay for all or part of the costs associated with improvements, and to spread the impact over a period of years. This tool can be applied to both the construction of new improvements and the rehabilitation of existing improvements.

Uses

Special assessments can be used to finance all of the public improvements resulting from the plan. Eligible improvements include sanitary sewer, water, storm sewer, streets, sidewalks, street lighting, park, streetscape, and parking.

Special assessments provide a means to borrow money to finance public improvements. Minnesota Statutes Chapter 429 conveys the power to issue general obligation improvement bonds to finance the design and construction of public improvements. Important factors in the use of improvement bonds include:

- A minimum of 20% of the cost of the improvement must be assessed against benefited properties.
- Beyond the 20% threshold, any other legally available source of municipal revenue may be used to pay debt service on improvement bonds.
- Improvements bonds are not subject to any statutory debt limit.
- Improvement bonds may be issued without voter approval.

Limitations

The amount of an assessment cannot exceed the benefit to property as measured by increased market value. There are also practical considerations. In growth areas, cities must decide how to allocate costs between current and future development. Assessment policies must consider how to make this allocation and the financial resources needed to carry future costs until development occurs. For reconstruction, the challenge becomes determining how much benefiting property owners should pay for enhancing an existing improvement. Within this limitation, several factors will shape the amount of the assessment.

- The amount of the assessment must be 20% or more of the improvement cost to allow the issuance of bonds.
- Local improvement policies and/or decisions made on previous projects often create parameters for assessments. Likewise, assessment decisions should be made with consideration of the potential implications for future similar projects.
- The assessment must strike a balance between equity and feasibility. Properties that benefit from improvements should pay a fair share of the costs. The assessment must be affordable for both the property owner and the city. Reducing the assessment to the property requires the city to allocate other revenues to the project.

MNDOT – Municipal State Aid

Many of the streets in the study area are part of the City's Municipal State Aid System. The City receives state aid for the construction and maintenance of the local streets. This aid can only be used for streets designated for inclusion in the local state aid street system. These revenues can also be pledged to pay debt service on bonds issued for the construction and maintenance of state aid streets (M.S. 162.18).

Projects will need to follow MnDOT's standard State Aid eligibility process and the City's general practice.

Corridor of Opportunities

Local Implementation Capacity (LIC) grants are intended to provide early support for the development of high density residential and commercial centers designed to maximize access by transit and walking or biking. Funding is focused on the need for development related planning activities. "

Metropolitan Council Livable Communities Demonstration Account (LCDA)

LCDA Pre-Development grants - site-specific surface water management

LCDA Development Grants

Grant funds may be used for basic and place making public infrastructure. This includes local public streets: new streets, street realignment, reconstruction of an existing street grid, street extensions or connections. Note that these elements are eligible only when performed on local public streets. County roads are ineligible.

• Street lighting and street signs, when awarded in conjunction with one of the eligible items in Section 1(A) of the LCDA application or to retrofit an existing street grid with these elements

• Permanent public pedestrian features, including sidewalks and benches, when awarded in conjunction with one of the eligible items in this section I-A or to retrofit an existing public local street with these elements

Award limits

Council-established guidelines state that up to 40% of the total funds available in a grant cycle is available to projects located in Minneapolis and/or Saint Paul. The Council reserves the right to consider awarding more than 40% under certain conditions. There are no award limits for individual Development grants. In the past two years, awards have averaged $559,000.

Match requirements

There are no match requirements for LCDA Development grants.

Grant terms

2011 LCDA Development grant terms will be three years in length, with the possibility of an administratively-approved two-year extension with the submission of adequate proof of progress.

Federal Surface Transportation Program (STP)

Like the federal TE program, the federal STP program also is administered by Mn/DOT and solicits projects every two years. This competitive program typically favors projects that involve new construction/reconstruction resulting in operational or safety improvements. However, transportation enhancements and construction to accommodate other transportation modes (i.e. walking, biking, streetcars, buses) are also eligible to receive funding under this program. Another eligible project type under the STP program that could be applicable is modification of public sidewalks to comply with American with Disabilities Act (ADA) standards.

The next solicitation for federal STP funds is the summer of 2013. Projects selected for funding would be programmed in 2017 and 2018. Once again, it bears repeating that the STP program is highly competitive and projects selected for funding are typically roadway improvement projects focusing on safety and mobility improvements.

Information available at www. metrocouncil.org/planning/transportation

Minnesota Governmental Funding

Total Maximum Daily Load (TMDL) Grants

Transportation Revolving Loan Fund. The Transportation Revolving Loan Fund provides financing to state, local and other government entities for transportation projects approved by the Minnesota Department of Transportation - Transportation Economic Development Program (TED)

Street Reconstruction

A relatively new municipal power is the ability to issue bonds to finance street reconstruction projects (M.S. 475.58). To use this authority, the streets to be reconstructed must be part of a "street reconstruction plan" that describes the streets to be reconstructed, the estimated costs, and any planned reconstruction of other city streets over the next five years. The issuance of the bonds must be

approved by a vote of all of the members of the governing body following a public hearing. The issuance is subject to a reverse referendum provision. The city must hold an election prior to

issuance if petitioned by voters within 30 days of the public hearing. Unlike most municipal debt, these bonds are subject to the debt limit.

Department of Employment and Economic Development (DEED) Development and Redevelopment Grants and Loans

The Minnesota Department of Employment and Economic Development (DEED) offers a number of different financial and technical resources grants to communities and businesses for the

purpose of fostering business growth and addressing revitalization needs. Eligible activities include certain redevelopment projects, streets improvements supporting certain economic development projects, housing and commercial rehabilitation, and cleanup of contaminated sites.

DEED has recently implemented a "one-stop shopping" application for a variety of funding programs intended to foster and promote economic development. The "Business Development/Infrastructure Application" is a process that allows eligible applicants to apply for multiple funding sources through just one application. There is an opportunity that future private or public redevelopment plans along 3rd Street N could conceivably be eligible for DEED administered grants. Once these development plans are firm, DEED staff should be consulted to determine potential eligibility for funding through these grant and loan programs.

Minnesota Transportation Revolving Loan Fund (TRLF)

Minnesota's TRLF operates in much the same way as a commercial bank, offering loans and other types of financial assistance to eligible borrowers to finance transportation projects. (The term "other

financial assistance" means loan guarantees, lines of credit, credit enhancements, equipment financing leases, bond insurance, and other forms of financial assistance.) Project types eligible to be funded through the TRLF include streetscaping and other enhancement items, pre-design studies, acquisition of right-of-way, road and bridge maintenance, repair, improvement, or construction, rail safety projects, signs, guardrails, and protective structures used in connection with these projects.

If a determination is made to pursue TRLF funding, the project sponsors should work with the following organizations to ensure eligibility for funding:

1) Mn/DOT District representatives who oversee the district's Area Transportation Partnership (ATP); and

2) The Minnesota Public Facilities Authority (PFA) who essentially serves as the "banking authority" for the program.

Utility Revenues

The city operates three municipal utilities: water, sanitary sewer and storm water. The revenues from the operation of these utilities are available to pay for capital improvements in support of community development initiatives.

State Law (Minnesota Statutes, Section 444.075) gives the authority to pledge these revenues to general obligation bonds for utility system improvements.

Special Service District/ Improvement District

A special service district is a tool for financing the construction and maintenance of public improvements within a defined area. Minnesota Statutes, Sections 428A.01 through 428A.10 govern the creation and use of special service districts. This legislation is currently scheduled to sunset in 2009. A special service district provides a means to levy taxes (service charge) and provide improvements and service to a commercial area.

Uses

A special service district can be applied to both commercial and industrial areas. The district can provide an alternative means of financing the construction of any of the public improvements discussed previously with special assessments. The service district approach avoids the benefits test imposed by special assessments; the test for the district is that the amount of service charges imposed must be reasonably related to the special services provided. The costs of parking, streetscape, or storm water improvements, for example, may be better spread across a district than through assessments to individual properties.

An important use of the special service district is the maintenance of public improvements. Some of the improvements described in the plan require a level of maintenance above the typical public improvement. Items such as banners and planted materials must be maintained and replaced. Higher levels of cleaning and snow removal may be needed. Without a special service district, these costs are typically borne through the General Fund of the city or a private group such as a chamber of commerce.

Limitations

The use of a special service district is subject to some important constraints:

- The process to create a special service district and to levy taxes must be initiated by petition of property owners and is subject to owner veto. The use of a special service district requires a collaboration of property owners and the city. There are two separate steps in the process: (1) adoption of an ordinance establishing the service district and (2) adoption of a resolution imposing the service charges. Neither step can be initiated by the city; the city must be petitioned to undertake the processes to create a special service district and to impose service charges. At a minimum, the petitions must be signed by owners representing 25% of the area that would be included in the district, and 25% of the tax capacity subject to the service charge.
- The actions of the City Council to adopt the ordinance and the resolution are subject to veto of the property owners. To veto the ordinance or the resolution, objections must be filed with the City Clerk within 45 days of initial City Council action to approve. The objections must exceed 35% of area, tax capacity, or individual/business organizations in the proposed district.
- The service charge applies solely to non-residential property. State Law limits the application of a service charge to only property that is classified for property taxation and used for commercial, industrial, or public utility purposes, or is vacant land zoned or designated on a land use plan for commercial or industrial use. Other types of property may be part of the service district, but may not be subject to the service charge.

Housing Improvement Area

The City has the power to establish a special taxing district to make improvements in areas of owner-occupied housing (Minnesota Statutes, Sections 428A.11 through 428A.21). The housing improvement area is similar in concept to the special service district. It is a special taxing district that can be used to finance a variety of improvements. However, there is an important

administrative difference with the housing improvement area. The City has the ability to assign the procedures for imposing "fees" and administering the area to another "authority," such as the HRA or EDA.

A housing improvement area is a defined collection of parcels. The area may cover a single housing project or a broader area within the downtown. The city has the power to levy a "fee" on the housing units in the area. This fee may work like a property tax or may be spread using another approach determined by the city. The fee can be collected through the property tax system.

Uses

The statute allows each city to define the nature of housing improvements. This tool can be used to finance any form of public improvement, including streetscape, parking, and trails. A housing improvement area can also be used for private improvements that are part of new or existing housing developments.

Limitations

The city does not have the unilateral power to establish a housing improvement area. The process must be initiated by petition of property owners. In addition, the actions to establish the area and impose the fees are subject to veto by the property owners. These potential complications become moot if the area is set up at the beginning of the development process. Typically, there is a single property owner at this stage of the process. In existing neighborhoods, this tool allows residents to take the initiative to improve local parks.

Capital Improvement Bonds

Capital improvement bonds are the newest capital finance power for Minnesota cities. This authority was granted by the State Legislature in 2003. Through this authority, the City can issue bonds to finance the acquisition or betterment of a city hall, a public safety facility, or a public works facility. The statute does not define the precise nature of public safety or public works facilities. This debt authority is subject to several procedural requirements and limitations:

• The bonds must be issued pursuant to an approved capital improvements plan.

• The issuance is subject to a reverse referendum petition. The total principal and interest due in any year on all outstanding capital improvement bonds may not equal or exceed 0.05367% of taxable market value of the city.

MWMO Stormwater Grants - Stewardship Fund Program

Water pollution comes from many different sources, including our everyday activities. How we care for our yards and grounds, wash and maintain our cars, and even dispose of pet waste can contribute to water pollution in the Mississippi River. The hard surfaces of our driveways, sidewalks, and pathways increase the amount of stormwater entering the storm drains. There are many choices we can make to reduce these harmful impacts on water quality.

Projects funded through the Stewardship Fund Program should achieve the following:

• Improve water quality or improve water and natural resource management. Projects may reduce pollution (both point and non-point source) entering surface and groundwater, prevent flooding, lessen the effects of drought, increase the capacity of the watershed to store water, and/or restore or maintain habitat and native plant communities.

• Build community understanding, knowledge, and initiative related to water and natural resource issues and solutions. Projects should educate and engage people in the watershed regarding watershed issues, resulting in awareness and changed behaviors. Organizations receiving grants will increase their capacity to lead and promote water quality efforts.

$250,000 is available annually through these grants:

• Planning Grants for up to $10,000 each are available annually to complete planning in order to develop a full application for an Action Grant or significant water quality project with another funder.

• Action Grants for up to $50,000 each are available annually to complete a significant watershed stewardship project.

Additional State of Minnesota Funding Sources:

Program	Source	Focus	Link
Solar Energy Legacy Grants	DNR	Solar energy projects for parks and trails of regional or statewide significance	http://www.dnr.state.mn.us/grants/recreation/se_legacy.html
TOD Grants	Met Council	Catalyze Transit Oriented Development in and around light rail transit, commuter rail, and high-frequency bus transit stations	http://www.metrocouncil.org/services/livcomm/TOD.htm
Community Forest Bonding Grants	DNR	Planting a Diverse Community Forest, Removal and Replacement of EAB-Infested Public Ash Trees, and Replacement of Trees Lost to Storms	http://www.dnr.state.mn.us/grants/forestmgmt/commforestbondgrant/index.html
Federal Recreational Trail	DNR	Motorized and non-motorized trails	http://www.dnr.state.mn.us/grants/recreation/trails_federal.html
Clean Water Revolving Fund	PFA	Wastewater and stormwater	http://www.pca.state.mn.us/index.php/water/water-types-and-programs/wastewater/wastewater-financial-assistance/wastewater-and-stormwater-financial-assistance.html?menuid=&redirect=1
Outdoor Recreation	DNR	Local outdoor recreation park facilities	http://www.dnr.state.mn.us/grants/recreation/outdoor_rec.html
Natural and Scenic Area	DNR	Acquisition of natural and scenic areas	http://www.dnr.state.mn.us/grants/land/natural_scenic.html
Local Trail Connections	DNR	Trail connections between people and desirable locations	http://www.dnr.state.mn.us/grants/recreation/trails_local.html
Regional Trail	DNR	Regionally significant trails	http://www.dnr.state.mn.us/grants/recreation/trails_regional.html
LCCMR	LCCMR	Funding recommendations to the state legislature for enhancing Minnesota's natural resources	http://www.lccmr.leg.mn/process/process_main.html
Highway Safety Improvement Program (HSIP)	DOT	Significant reduction in serious injury on public roads, bikeways and trails	http://www.metrocouncil.org/planning/transportation/regsolicit.htm
Contamination Cleanup and Investigation Grant Program	DEED	Brownfield clean up	http://www.positivelyminnesota.com/Government/Financial_Assistance/Site_Cleanup_Redevelopment_Funding/Contamination_Cleanup_Investigation_Grant_Program.aspx
Livable Communities Demonstration Account Development Grants	Met Council	Connect housing, employment, transit, infrastructure, mixed use etc.;	http://www.metrocouncil.org/grants/lcda/LCDAPreAppGuide2011.pdf
Livable Communities Demonstration Account Predevelopment Grants	Met Council	Connect housing, employment, transit, mixed use etc.; planning, surface water mgmt; design; testing	http://www.metrocouncil.org/grants/predev/LCDAPreDevGuide2011.pdf
Surface Transportation Program (STP)	Met Council	STP, CMAQ, Enhancements, and Bridge Replacement Improvement	http://www.metrocouncil.org/planning/transportation/regsolicit.htm
TMDL Grant/Phosph Reduction Grant	PFA	Assist with the cost of wastewater treatment or stormwater treatment necessary to meet wasteload reduction requirements	http://www.positivelyminnesota.com/Government/Public_Facilities_Authority/PFA_Infrastructure_Funds_Programs/index.aspx
Redevelopment Grant Program	DEED	Redevelopment of blighted properties	http://www.positivelyminnesota.com/Government/Financial_Assistance/Site_Cleanup_Redevelopment_Funding/Redevelopment_Grant_Program.aspx
Transportation Economic Development Program (TED)	DEED/ DOT	Highway improvement to support economic development	http://www.positivelyminnesota.com/Government/Financial_Assistance/Business_Development_Funding/Transportation_Economic_Development_Program.aspx
Parks and Trails Legacy Grant Program	DNR	Parks and Trails of regional or statewide significance	http://www.dnr.state.mn.us/grants/recreation/pt_legacy.html
Parks and Trails Legacy Grant Program	DNR	To support parks and trails of regional or statewide significance.	http://www.dnr.state.mn.us/grants/recreation/pt_legacy.html
Local Trail Connections Program	DNR	To promote relatively short trail connections between where people live and desirable locations	http://www.dnr.state.mn.us/grants/recreation/trails_local.html
Regional Trail Grant Program	DNR	To promote development of regionally significant trails outside the seven-county metropolitan area	http://www.dnr.state.mn.us/grants/recreation/trails_regional.html
Contamination Cleanup and Investigation Grant Program	DEED	Brownfield clean up	http://www.positivelyminnesota.com/Government/Financial_Assistance/Site_Cleanup_Redevelopment_Funding/Contamination_Cleanup_Investigation_Grant_Program.aspx
Environmental Assistance Grants	PCA	Landfill abatement, contaminated stormwater pond sediment, composting, greenhouse gas reduction	
Surface Water Assessment Grant	PCA	Water monitoring projects that support the state condition monitoring strategy	
Bicycle Rack Cost Share Program	City of Minneapolis	Putting bicycle racks at private buildings of all types in Minneapolis.	http://www.ci.minneapolis.mn.us/bicycles/bikeparking-rack.asp
Bioscience Business Development Program	DEED	Public infrastructure to support economic development	http://www.positivelyminnesota.com/Government/Financial_Assistance/Business_Development_Funding/Bioscience_Business_Development_Program.aspx
McKnight Initiative Foundation	McKnight Found.	North Central Minnesota—stewardship of locally valued open spaces	http://www.mcknight.org/greatermn/index.aspx
Petrofund	Commerce	Investigation and clean up costs for LUST's	http://www.state.mn.us/portal/mn/jsp/content.do?id=-536881377&subchannel=null&sc2=null&sc3=null&contentid=536884689&contenttype=EDITORIAL&programid=536884614&agency=Commerce
Statewide Health Improvement Program (SHIP)	Health	Projects that reduce obesity and support physical activity in daily routines such as walking, biking or using recreation facilities	http://www.health.state.mn.us/healthreform/ship/
Transportation Revolving Loan Fund	DOT	Projects that will not get funded via traditional funding mechanisms	http://www.dot.state.mn.us/planning/program/trlf.html